Appendix E.1
Highway 50 Mayfield Road Widening Justification Memo, Safety and Collision Assessment and Synchro Outputs

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File: 2.0
Project # 4956

Memorandum

To: Solmaz Zia-Region of Peel
Cc:
From: Stephen Keen, Barry McLaughlin
Date: March 25, 2010
Re: **Highway 50 (Mayfield Rd to Castlemore Rd/Rutherford Rd) and Mayfield Rd (Highway 50 to Coleraine Dr) Future Road Needs**

1. INTRODUCTION

The study area includes the Highway 50 corridor from Castlemore Road/Rutherford Road to Mayfield Road/Albion-Vaughan Road, and Mayfield Road between Highway 50 and Coleraine Drive. Both Highway 50 and Mayfield Road are subject to traffic growth pressures as a result of residential, business and industrial development in the general area, as well as traffic passing through.

Currently Highway 50 is a five lane road with two through lanes of traffic in each direction and a centre two way turning lane; through the entire study area with the exception of the functional areas of some intersections which have left and/or right turn storage lanes. Mayfield Road is a two lane road with left and/or right turn storage lanes at certain intersections in the north eastern part of Brampton including the study area.

Highway 50 is the current main north-south corridor at the Peel-York municipal boundary moving commuter and truck traffic between north western Toronto, north eastern Mississauga, and south eastern Brampton up to the Caledon, Simcoe and Dufferin areas and vice versa.

There are a number of industrial land uses along the corridor including the Sears terminal and a multimodal freight terminal beside it. Both Mayfield Road and Highway 50 are important truck routes as illustrated by the truck percentages shown in the table below (**Table 1**).

Table 1: Truck Volumes

Count location	Truck Volumes Peak Direction Peak Hour		Truck Percentage	
	AM Peak	PM Peak	AM Peak	PM Peak
Mayfield Road West of Highway 50	179	142	16%	27%
Highway 50 South of Mayfield Road/Albion-Vaughan Road	187	164	8%	7%
Highway 50 South of Countryside Drive/Nashville Road	149	89	7%	6%
Highway 50 South of Coleraine Drive/Major Mackenzie Drive	371	290	18%	18%
Highway 50 North of Castlemore Road/Rutherford Road	196	204	9%	11%

A number of studies have been conducted encompassing the study area that have investigated future traffic patterns along with transportation requirements. These include:

1. City of Brampton Transportation & Transit Master Plan (TTMP) Sustainable Update (2009);
2. Peel-Highway 427 Extension Area Transportation Master Plan (TMP) – Final Report (2009);
3. Caledon Transportation Needs Study Update (2009);
4. York Region Transportation Master Plan Update (2009); and
5. Western Vaughan Transportation Improvements Individual Environmental Assessment (2009).

Reports #1, 2, 3, 4 and 5 have followed a Master Planning process that satisfies Phase 1 and 2 of the EA planning process for the transportation network within their respective study areas. Studies 1, 2, and 4 have explicitly included Highway 50 in their study areas. Studies 1, 2, 3 have included Mayfield Road. Findings from these studies relevant to this Class EA study are summarized in the following section.

2. PREVIOUS MASTER PLAN STUDIES

2.1 Brampton TTMP Update

The Brampton TTMP Sustainable Update was initiated in response to the Places to Grow Act legislation from the Province of Ontario, new growth forecasts, the 2020 Vision Plans released by Metrolinx, and transportation plans initiated by other jurisdictions. This update of the 2004 TTMP followed principles outlined in the Sustainable Planning Guidelines report by Transportation Canada, and followed the Municipal Class Environmental Assessment process.

This study followed 12 principles for sustainable planning including integration with land use planning, environment and health concerns, transportation demand management, performance measurement, and public involvement. The study considered four alternative networks: No road or transit improvements; transit improvements only; road and transit improvements from 2004 TTMP; and Enhanced Transportation Network. The fourth option, *Enhanced Transportation Network*, was chosen as the recommended network plan.

As part of the recommended plan, the Brampton TTMP[1] identified Highway 50 as needing a 6 lane cross section by 2014, and Mayfield Road is identified as needing 4 lanes by 2014 and 6 lanes by 2031 Taken directly from the City of Brampton TTMP[2], the chart below (**Table 2)** displays the lane configurations that currently exist and what will be required in future horizon years for north-south roads in the vicinity of Highway 50. The nearest north south corridors to Highway 50 are The Gore Road, Clarkway Drive and Coleraine Drive. The table illustrates the need to widen Highway 50 and all the parallel roadways in order to accommodate future traffic growth. This analysis assumes that Highway 427 is extended as far as Major Mackenzie Drive. Similarly, the Brampton TTMP Update identified the need for additional traffic lanes on Mayfield Road (**Table 3**).

[1] Page 108, Brampton TTMP: Sustainable Update 2009. HDR | iTRANS, (2009).
[2] See footnote 1.

Table 2: Northeast Brampton (N-S) Road Improvements (TTMP)

Corridor	Road Section	Current Configuration	Needs by 2014 (assumed Hwy 427 opening)	Needs by 2021	Needs by 2031
The Gore Road	Healey to Mayfield	2	2	2	2**
	Mayfield to Countryside	2	4*	4*	4*
	Countryside to Castlemore	2	4	4	6
Clarkway Drive - Humber Station Road	Healey to Mayfield	2	2	2	2
	Mayfield to Countryside	2	4 (SP47)	4 (SP47)	4 (SP47)
	Countryside to Castlemore	2	4 (SP47)	4 (SP47)	4 (SP47)
Coleraine Drive	Mayfield to Countryside	2	4	4	4
	Countryside to Major Mackenzie	2	4	4	4
Highway 50	Healey to Mayfield	4	4	4	4
	Mayfield to Countryside	4	6	6	6
	Countryside to Major Mackenzie	4	6	6	6
	Major Mackenzie to Castlemore	4	6	6	6

Table 3: Mayfield Road Improvements (TTMP)

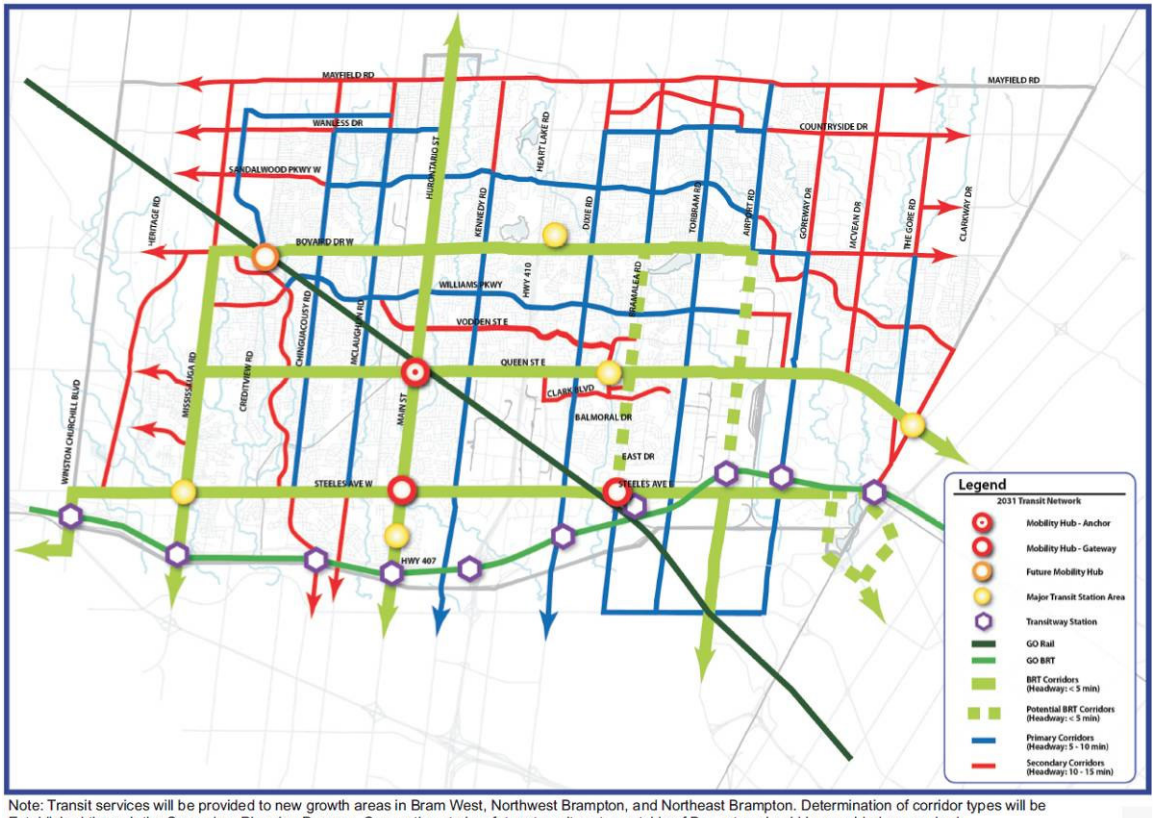
Corridor Road Section	Current Configuration	Needs by 2014 (assumed Hwy 427 opening)	Needs by 2021	Needs by 2031
The Gore to Clarkway	2	4	4	6
Clarkway to Major Mackenzie Ext	2	4	4	6
Major Mackenzie Ext to Highway 50	2	4*	4*	4*

According to the Brampton TTMP, transit is an integral part of satisfying future transportation needs in the City of Brampton. Alongside making an environment safe for and inviting to pedestrians, the TTMP aims to make transit first priority for moving people around the city. Increasing the modal share of transit is a desired outcome. *"TTMP policies promote an integrated and efficient transportation system to support a vibrant economy and high quality of*

life. Proposed transit nodes and corridors will be supported with higher density land use and a compact urban form supportive of sustainable travel through walking, cycling, and transit."[3]

Below in **Exhibit 1** is a map of the Ultimate Transit Network in Brampton plans for 2031. It shows a system based on Bus Rapid Transit corridors (green lines), Primary corridors (blue lines) and Secondary Corridors (red lines). Currently there are no plans for Northeast Brampton however routes are planned for the future and the exhibit shows potential secondary corridors connecting to the study area.

Exhibit 1: Brampton TTMP Ultimate Transit Network



Note: Transit services will be provided to new growth areas in Bram West, Northwest Brampton, and Northeast Brampton. Determination of corridor types will be Established through the Secondary Planning Process. Connections to key future transit routes outside of Brampton should be provided as required.

[3] Page 71, Brampton TTMP: Sustainable Update 2009. HDR iTRANS, (2009).

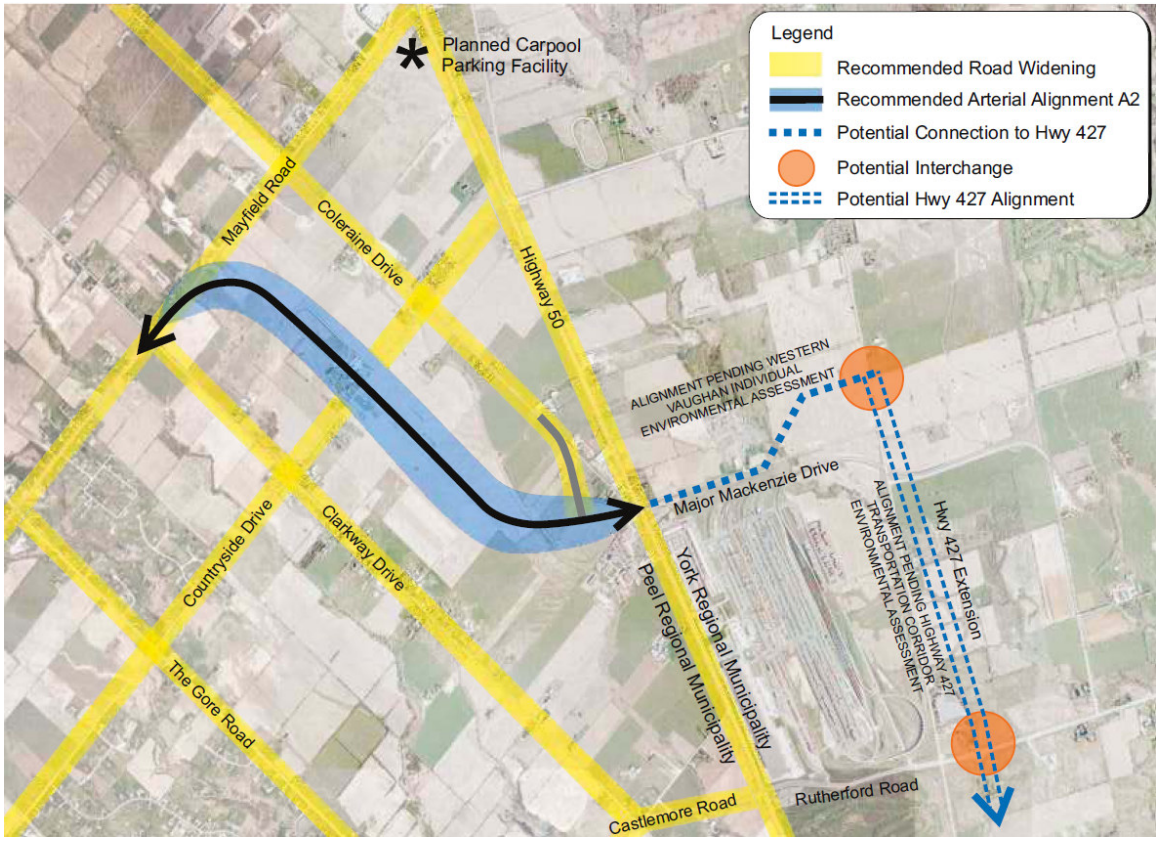
2.2 Peel-Highway 427 Extension Area Transportation Master Plan

The Peel-427 Extension Area TMP was undertaken to assess future roadway requirements and evaluate alternatives to serve the Highway 427 transportation corridor. The existing road network was evaluated as were options for connecting the extension of Highway 427 to the network with an existing or new arterial connection. A variety of options were considered including connections from the extension to Mayfield Road, Countryside Drive/Nashville Road, and Major Mackenzie. These options included various alignments as well as with, and without, the widening of local arterials. The option chosen in the end was a Major Mackenzie connection as well as the widening of a number of major arterials.

The Peel-427 Transportation Master Plan noted that even with the addition of new east-west connections, the extension of Highway 427 and added north south collector roads, some of the roads in the network would still require more lane capacity[4]. *"The network improvements alternative involving solely constructing new road alignments in the study area such as an extension of Major Mackenzie to the west, connections of Mayfield Road to Major Mackenzie Drive, extending Mayfield Road to a new Highway 427 interchange will provide a strategic links to better facilitate access to Highway 427 for traffic originating within the Region of Peel. However new links on their own will not address the problem statement and meet the future capacity needs."* In **Exhibit 2** a schematic drawing s shown of the preferred network associated with the extended Highway 427. Both Mayfield Road and Highway 50 are highlighted as arterials requiring widening in the future once the highway is extended.

[4] Page 48, Peel-Highway 427 Extension Transportation Master Plan (Final Report). HDR-iTRANS (2009).

Exhibit 2: Preferred Option for 427 Extension Connection



For transit in the study area, the Highway 427 study states the following[5]:
"An important future inter-regional transit connection is to the Highway 427 rapid transit corridor. The ongoing 427 Transportation Corridor EA includes the identification and protection of a 60 metre transit right-of-way and transit stations to be located along the west side of the proposed freeway extension. Expansion of regional transit service should be considered for any newly widened corridor and new or realigned road links in the study area, including: a Bus Rapid Transit corridor on Castlemore Road and primary transit corridors on Mayfield Road, The Gore Road and Highway 50."

[5] Page V (Exec Summary), Peel-Highway 427 Extension Transportation Master Plan (Final Report). HDR-iTRANS (2009).

2.3 York Region Transportation Master Plan

The York Region Transportation Master Plan[6] was created with the purpose of being the foundation for transportation improvement strategies for the next 2 decades. Building on a previous TMP, this project follows the Class Environmental Assessment process. The TMP used 11 rules of sustainability in the process of evaluating transportation solutions. Before the TMP was initiated a survey of the public was conducted and sustainability was found to be important to respondents in the improvement of transportation in the Region. The process involved cooperation with other governing bodies and municipalities, as well as public consultation.

The preferred solutions include the widening of Highway 50 to six lanes south of Highway 7, and north of Castlemore Road/Rutherford Road in our study area. Please see **Exhibit 3** which was extracted from this report. In the exhibit the widening of roads to 6 lanes is highlighted in yellow.

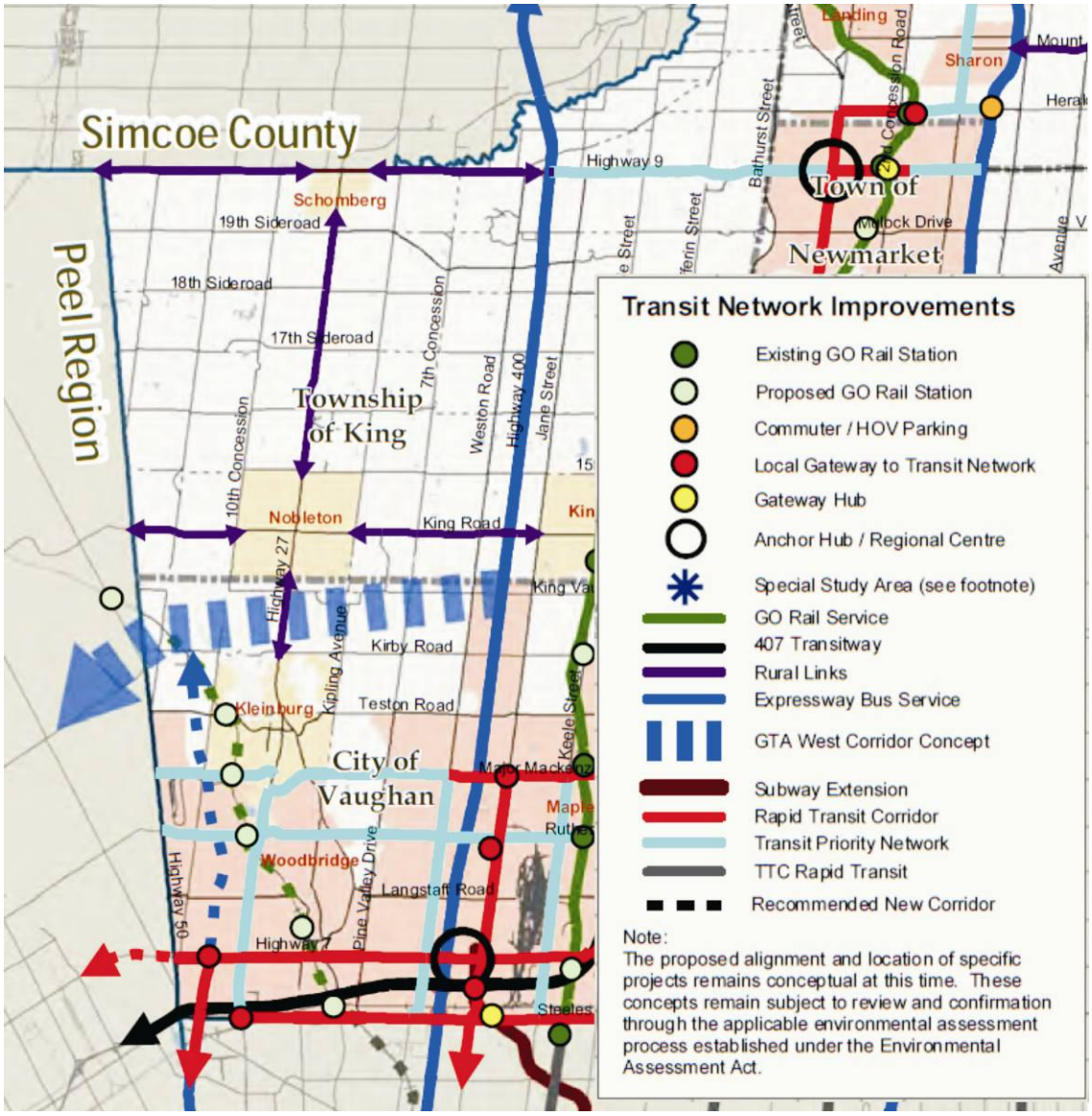
The York TMP states that the direction of York Region is to continue to coordinate local YRT and VIVA services with adjacent transit systems in Brampton, Toronto and Durham Region. Also the report notes the intent to install bike racks on busses and request changes to the Public Vehicles Act so that busses crossing municipal boundaries can have bike racks is stated in this report.

Exhibit 3: Road Improvements from York Region TMP

[6] York Region Transportation Master Plan Update. York Region (2009)

Encouraging transit use includes building an environment in which transit is a viable option. The York Region TMP includes Transit Oriented Development as an essential part of increasing the use of transit. Highway 50 is directly connected to corridors that are already defined as important for the Regional Centers and Corridors plan including Highway 7, Major Mackenzie Drive and Rutherford Road. Highway 50 is also shown to be a potential transit priority corridor in the TMP (**Exhibit 1**), and many planned transit routes connect to the highway (**Exhibit 4**).

Exhibit 4: Western York Region Transit Improvements



2.4 Caledon Transportation Needs Study

The Caledon Transportation Needs Study Update[7] is a study that was initiated to assess the future traffic needs of the town. The study was conducted as collaboration between the Town of Caledon and the Region of Peel. Some major factors influencing this study are the Provincial Places to Grow Act, Metrolinx transportation system plans, the Highway 427 extension, and transportation network improvements of nearby municipalities. This study also takes into account the planned carpool lot at the corner of Mayfield Road/Albion-Vaughan Road and Highway 50.

While this report makes no recommendations for the street network south of Bolton, it does include the following excerpt which gives details of assumed changes to the network that will affect roads within their municipal boarder[8]:

- *Widening of sections of Mayfield Road from Hurontario Street to Dixie Road is currently underway and the overall widening program between Winston Churchill Blvd and Highway 50 will be carried out in a number of different phases through to about year 2025. The planned improvements will have Mayfield Road widened to four full lanes from Winston Churchill Blvd to Chinguacousy Road, to six full lanes from Chinguacousy Road to The Gore Road and to four full lanes from The Gore Road to Highway 50.*
- *Widening of Highway 50 to six full lanes south of George Bolton Parkway to Highway 7 in several phases from the present time to about year 2015.*

The Caledon Transportation Needs Study Update highlights the importance of increasing transit coverage for the area in the following statement: *"Supporting the development of improved inter-regional public transit services and investigating opportunities for local transit services in Bolton in the short term and in Mayfield West in the longer term. GO Transit has recently improved services and will be studying future GO Rail service. The need for and feasibility of local transit service requires further investigation."*[9]

[7] Caledon Transportation Needs Study Update. Paradigm Transportation Solutions Ltd (2009)
[8] Page 28, Caledon Transportation Needs Study Update. Paradigm Transportation Solutions Ltd (2009)
[9] Exec Summary, Caledon Transportation Needs Study Update. Paradigm Transportation Solutions Ltd (2009)

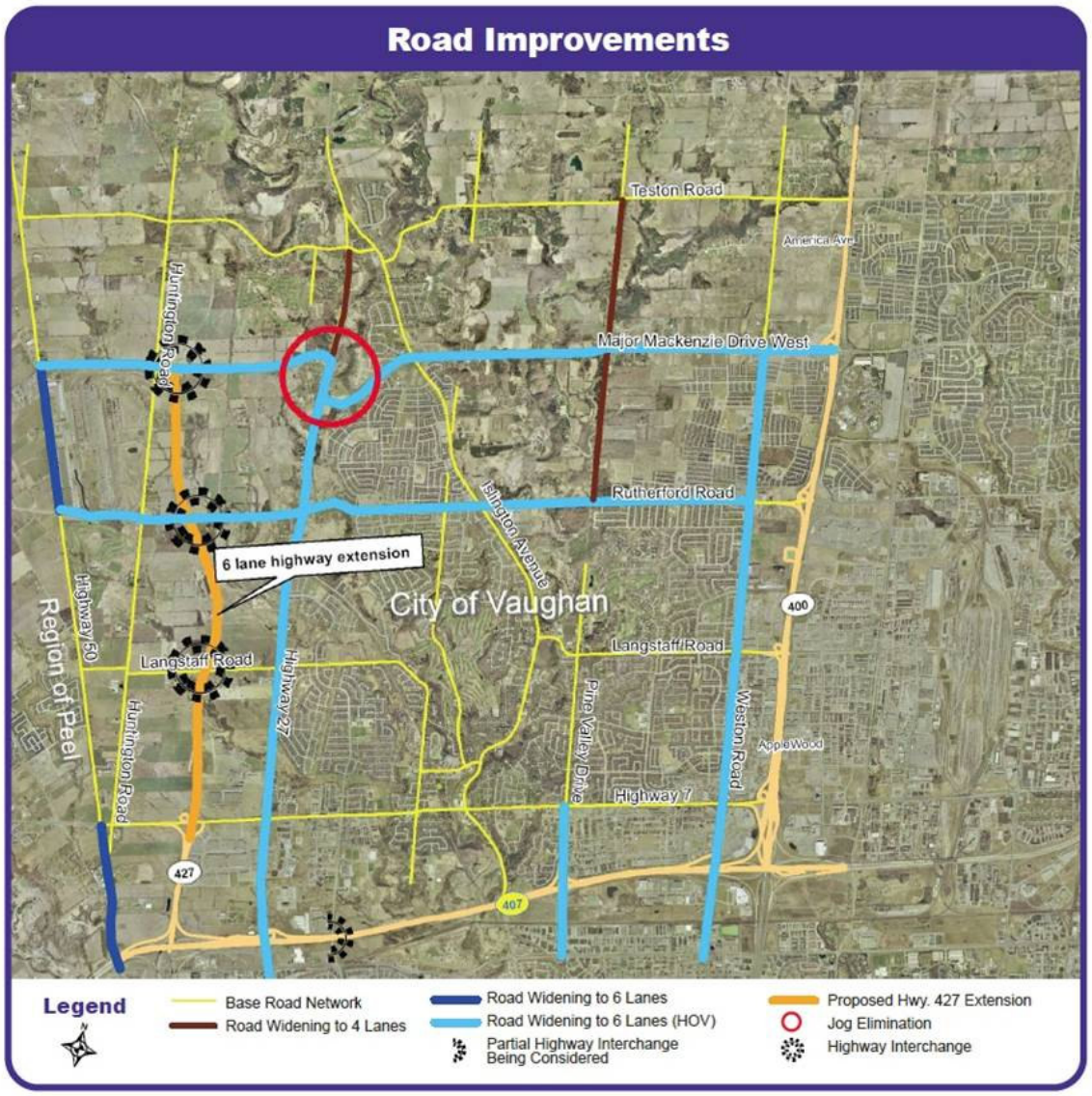
2.5 Western Vaughan Transportation Improvements Individual Environmental Assessment

The Western Vaughan Transportation Improvements Individual Environmental Assessment is currently in progress and approaching completion. The study area includes part of the Highway 50 and Mayfield Road EA study area. This study follows the environmental assessment process including coordination with other governing bodies and the inclusion of public participation. The alternatives included measures such as transportation demand management, increased road capacity, increased transit, and various combinations of measures.

The chosen solution includes a comprehensive list of measures for improving the transportation network. Relevant to this project, the road widening aspects of the plan includes two sections of Highway 50—south of Highway 7, and between Castlemore Road/Rutherford Road and Major Mackenzie Road. These improvements can be seen in **Exhibit 5** below which contains blue highlighted lines for roads widened to 6 lanes. Major Mackenzie Drive, Rutherford Road, and Highway 50, all of which connect to or are contained within the Highway 50 and Mayfield Road EA, are marked for widening. The Western Vaughan EA also suggests the addition of new transit services operated by GO Transit to Highway 50.

Within the Western Vaughan area four roads are marked to have high occupancy vehicle lanes added to them. These same roads—Major Mackenzie Drive, Rutherford Road, Highway 27, and Highway 427 are marked for transit oriented improvements to facilitate transit services. Highway 50 is not included in this list.

Exhibit 5: Road Improvements from Western Vaughan EA



2.6 SP-47 Highway 427 Industrial Area

One more area study has recently commenced, the SP-47 Highway 427 Industrial Secondary Plan Area study is at the stage of gathering data and beginning analysis. It will examine road requirements at the collector and access level of the road network including connections to the arterial network.

3. SUMMARY OF MASTER PLAN FINDINGS

The Master EA approach followed in the above studies satisfies Phases 1 and 2 of the EA process and effectively allows this EA for Highway 50 and Mayfield Road to proceed to Phase 3. The common findings of the various Master EAs are summarized in the rest of this section.

3.1 Roads

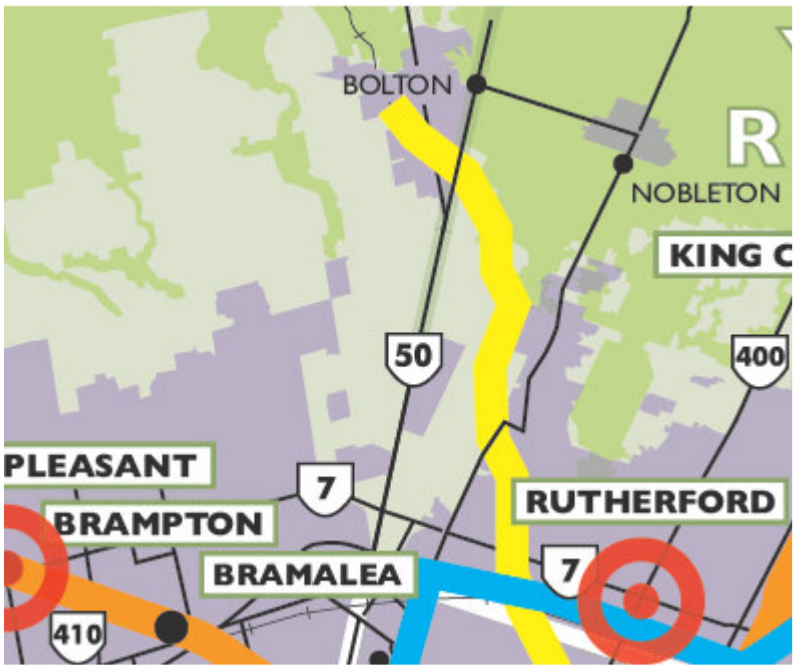
The various Master Planning EA projects highlighted in the previous section have all resulted in the recommendation for Highway 50 to be widened to 6 lanes in order to accommodate future traffic growth. Similarly, Mayfield Road is identified as needing 4 lanes by 2021 and 6 lanes by 2031.

3.2 Transit

Currently transit service in the area is limited. GO Transit operates a bus route on Highway 50 between Caledon and Malton GO station. This is a peak hour service with three AM runs and four PM runs. Also, PMCL and Greyhound bus lines operate service off peak once a day between Brampton and Toronto that has stops along Highway 50 in this study area. With development in the area vary sparse at the moment, Brampton Transit does not operate a bus route on or near this study area. The carpool lot being built at the corner of Highway 50 and Mayfield Road/Albion-Vaughan Road will contain space for GO busses to stop and pick up passengers as well as spaces for those passengers to park. Also in the future a GO Train Station is planned for Bolton which will change the dynamic in the area as seen in the excerpt from the GO Transit 2020 plan below (**Exhibit 6**). A GO station in Bolton will likely have the effect of increasing local transit usage.

While specific recommendations concerning Highway 50 and Mayfield Road are absent from the Master EAs; each outlines a desire to promote the use of transit and increase transit modal share. It is clear that neither Highway 50 nor Mayfield Road is foreseen as rapid transit corridors. In order to improve the attractiveness of public transit, service can be made more reliable through the implementation of bus priority measures (e.g. queue jump lanes) at intersections. As such additions to the roadway may well cause the need for a larger property envelope, appropriate protection for transit priority measures will be considered in Phase 3 of this study.

Exhibit 6: GO 2020 Plans



3.3 Active Transportation

The Brampton TTMP has identified that "Active transportation is a key component of a sustainable transportation system. Whether it be walking or cycling to work, for leisure, exercise, or to access public transportation, the proper infrastructure must be in place before people will consider active modes of transportation." In this report the types of active transportation facilities that the City of Brampton has, and is planning to put in is accounted for in the following excerpt[10]:

> *The routing plan, revised in 2006, proposes 510 kilometres of trails utilizing three classes of pathways, including:*
> 1. *Class I – Three metre wide multi-use trail; Boulevard trails alongside roads (i.e. Bovaird Drive) – 211 kilometres; Valleyland trails through parkland areas – 168 kilometres*
> 2. *Class II – Bike Lanes – 71 kilometres*
> 3. *Class III – Sign Routes – 60 kilometres*

[10] Page 35, Brampton TTMP: Sustainable Update 2009. HDR iTRANS, (2009).

To date, the City has approximately 83 kilometres of trails, 17 kilometres of Class I boulevard trails and 65 kilometres of Class I valleyland trails. The Works and Transportation department installed Brampton's first Class II bike lane on Birchbank Drive in southern Bramalea in 2005

The York Region TTMP also encourages transportation demand management including the use of active transportation and alternative forms like transit.

The following three points about the implementation of active transportation in York Region were made in the report[11]:

1. *Encourage the study and implementation of local municipal pedestrian and cycling master plans*
2. *Promote and support local bike-sharing programs as demonstration projects.*
3. *Partner with Metrolinx and other to implement Regional bike-sharing programs*

Also the report suggests reviewing requirements for regional roads to see sidewalks constructed on both sides of the road. Another measure mentioned is designing sidewalks to connect directly to bus stops along these streets. These measures make a street pedestrian friendly.

Generally, the lower tier area municipal levels of government are more concerned with the implementation of sidewalks. In this regard, the City of Brampton has requested a 3.0 metre multiuse trail on the west side of Highway 50 and south side of Mayfield Road.

Accordingly, a trail will be accommodated in the development of design options in Phase 3 of this study.

[11]Page 90, York Region Transportation Master Plan Update. York Region (2009)

4. EFFECT OF HIGHWAY 427 EXTENSION ON HIGHWAY 50 AND MAYFIELD ROAD

In previous sections the proposed plans for the street network in the study area once Highway 427 is extended was discussed. In this section the Brampton TTMP model (EMME/2) has been used to test the effects of the highway extension on travel demand along Highway 50 and Mayfield Road. The EMME/2 model was re-run with and without the Highway 427 and associated extension of Major Mackenzie Drive.

Table 4: Network Comparison: With and Without Highway 427 Ext.

	2011		2021 & 2031 Link Capacity*	Without Highway 427		With Highway 427	
Highway 50 Section	**Capacity***	**Volume**		**2021 Volume**	**2031Volume**	**2021 Volume**	**2031Volume**
Peak Hour Peak Direction							
Mayfield Rd / Albion-Vaughan Rd to Countryside Dr / Nashville Road	1,800	1,954	2,700	2,389	2,149	2,473	2,305
Countryside Dr / Nashville Road to Major Mackenzie / Coleraine Dr / (Major Mack Ext)	1,800	1,826	2,700	2,371	2,246	2,532	2,478
Major Mackenzie / Coleraine Dr / (Major Mack Ext) to Castlemore Rd / Rutherford Rd	2,700	2,301	2,700	2,768	2,947	2,363	2,376
	2011			**Without Highway 427**		**With Highway 427**	
Mayfield Road Section	**Capacity**	**Volume**	**2021 & 2031 Link Capacity**	**2021 Volume**	**2031Volume**	**2021 Volume**	**2031Volume**
Highway 50 to Coleraine Dr	1,100	649	1,800	914	782	861	715

* Link capacity of 900 vph/lane
NOTE: Model forecasts have not been corrected for calibration errors, so should not be taken as absolute forecasts, but rather reflect differences between the two network scenarios.

According to the modelling results shown in **Table 4** above, the addition of the Highway 427 Extension will lower future traffic volumes on Highway 50 south of Major Mackenzie Drive by 570 vehicles; however, the forecast volumes still exceed the capacity of a 4 lane roadway. North of Major Mackenzie Drive, the impact of the Highway 427 extension has the effect of slightly increasing traffic volumes on Highway 50 and has a negligible impact on Mayfield Road.

The model results indicate the widening of Mayfield Road and Highway 50 are required regardless of whether Highway 427 is extended or not.

5. HIGHWAY 50 ACCESS AND SP 47 NETWORK STUDY

5.1 Background

Access management is important because Highway 50 carries large volumes of through traffic, but at the same time major land uses have property alongside the highway and need to be accessible to users. The Highway 50 Access and SP 47 Network Study Technical Report by iTRANS Consulting noted that standards set in the early 1990s by Peel Region require 300 to 400 meters or better between full moves intersections along this Highway. It was stated: "The City of Brampton Economic Development and Communications (EDC) office indicated that the ideal pattern of development in the business park should be supported and anchored by key access points from the perimeter of arterial roads, Highway 50, Mayfield Road, Castlemore Road, and Clarkway Drive." (iTRANS, 2006)

When looking at the required new arterials in the area to serve growing industrial land uses, residential land uses, and the Highway 427 extension, the standards must be kept in mind to balance both local and commuter (through) traffic needs. Another issue is jurisdiction since this is a boundary road. With regards to that issue; "It is recognized that Highway 50 is a boundary road under the jurisdiction of both Peel and York Regions, but which by agreement between them is managed by the Region of Peel. Hence, the Peel access by-law and policy govern the operations of Highway 50. Priority for full-moves access opportunities should be given to arterial and collector roads to ensure that intersection spacing provides sufficient opportunity for northbound and southbound left-turns from Highway 50 serving inter and intra-regional travel."[12]

The demand for new arterials in the SP 47 area is coming from the Brampton Economic Development and Communications office (EDC). To serve the business/industrial parks to be developed on the Peel side of Highway 50 the following is proposed by the EDC:

EDC indicated that a minimum of three new east-west collector roads will be required to service the employment lands. These collector roads would logically be situated 1) midway between Countryside and Mayfield Road, 2) south of Countryside Road, and 3) in the vicinity of Major Mackenzie Drive where a westward extension is designated in the Official Plan.

The EDC also indicated that direct access to 400-series highways is a foundation of viable and long-term business park development. Two east-west major corridor

[12] Page 3, Highway 50 Access and SP 47 Network Study Technical Report. HDR iTRANS (2006)

connections to Highway 427 are anticipated and expected to be required to meet York and Peel transportation demands, one in the vicinity of Mayfield Road and a second in the vicinity of Major Mackenzie Drive.[13]

5.2 Desirable Access

Immediately below is shown a table summarizing research that has identified the impact of access frequency on traffic operations.

Signals Per Kilometre	Increase in Travel Time (%)	Signals Per Kilometre	Crashes per million VkmT
		0	2.21
		1	2.21
2	N/A	2	4.31
3	14.4	3	4.31
4	25.6	4	4.68
5	36.8	5	4.68
6	30.4	6	5.69
7	54.4	7	5.69
8	62.4	8	5.69

Source: FWHA "Benefits of Access Management Brochure"

The table indicates that as traffic signals are introduced along a corridor the travel time along it increases. For example, the table indicates an increase from 2 to 4 traffic signals increases travel time by 25.6%. Highway 50 is seen as a major corridor carrying large volumes of through traffic and is not meant for direct access. The research seems to indicate that a traffic signal frequency of 2 or 3 per kilometre is appropriate before travel time and hence level of service begins to deteriorate.

Similarly, the table also indicates that any more than 2 traffic signals per kilometre then the collision rate increases significantly.

The Highway 50 corridor in this study area is 5.5 km in length. There are two major intersections between the study limits, Countryside Dr./Nashville Rd. and Major Mackenzie Drive giving an average spacing of 1.8 kms. The actual distance between intersections along Highway 50 is shown below:

[13] Page 5, Highway 50 Access and SP 47 Network Study Technical Report. HDR iTRANS (2006)

Mayfield to Countryside/Nashville	1.4 kms
Countryside/Nashville to Major Mackenzie	2.1 kms
Major Mackenzie to Castlemore/Rutherford	1.9 kms

Based on the discussion above, it would appear that a traffic signal every kilometre would be ideal in terms of moving traffic, which would mean that two additional signalized intersections would be allowed along this stretch of roadway. Of course unsignalized driveways would not be advisable in such a major arterial; rather access would be achieved from the roads connecting into Highway 50.

6. OPERATIONAL ANALYSIS

This section deals with determining the future functional requirements for Highway 50 and Mayfield Road.

An operational assessment of the study area road network was conducted for the years 2021 and 2031 using forecasts derived from Peel Region's EMME/2 model and traffic count information.

Travel demand forecasting were developed with the assistance of the City of Brampton EMME/2 model used for its 2009 Transportation and Transit Master Plan (TTMP). The model simulates PM peak hour auto demand and PM peak period transit demand. Assumed road and transit networks are as per the 2009 TTMP Update. The model is based on the "GTA Simplified Model" developed by Peter Dalton for the City of Brampton. This particular version of the model was developed based on 2006 Transportation Tomorrow Survey travel patters and was calibrated to City-wide screenlines. No extra detail was required to be added to the model for the purposes of the Highway 50 and Mayfield Road EA, and thus the TTMP model was utilized "as is".

The assessment was made for two scenarios—one scenario where four lanes of through traffic are maintained on Highway 50 and Mayfield Road and one where six lanes of through traffic are provided. Below in **Exhibit 1** and **Exhibit 2** are the network configurations for four lanes and six lanes on Highway 50 and Mayfield Road, respectively. For both the four and six lane analyses assumptions were made about the required turning storage lanes needed for each intersection. The assumptions remain the same in both scenarios in order to accurately test the effects of an extra lane in each direction on Highway 50. In (**Section 7**) a recommended street network will be presented that attempts to solve all remaining operational problems not alleviated by the simple addition of a through lane in each direction.

For reference, an exhibit displaying the current network traffic conditions created from the most recent counts available for each intersection is included just after the lane configuration diagrams (**Exhibit 5 and 6**). Existing traffic is shown in **Exhibit 7**. Also at the start of the 2021 and 2031 analyses are the 2021 and 2031 traffic counts exhibits (**Exhibit 8 and 9**).

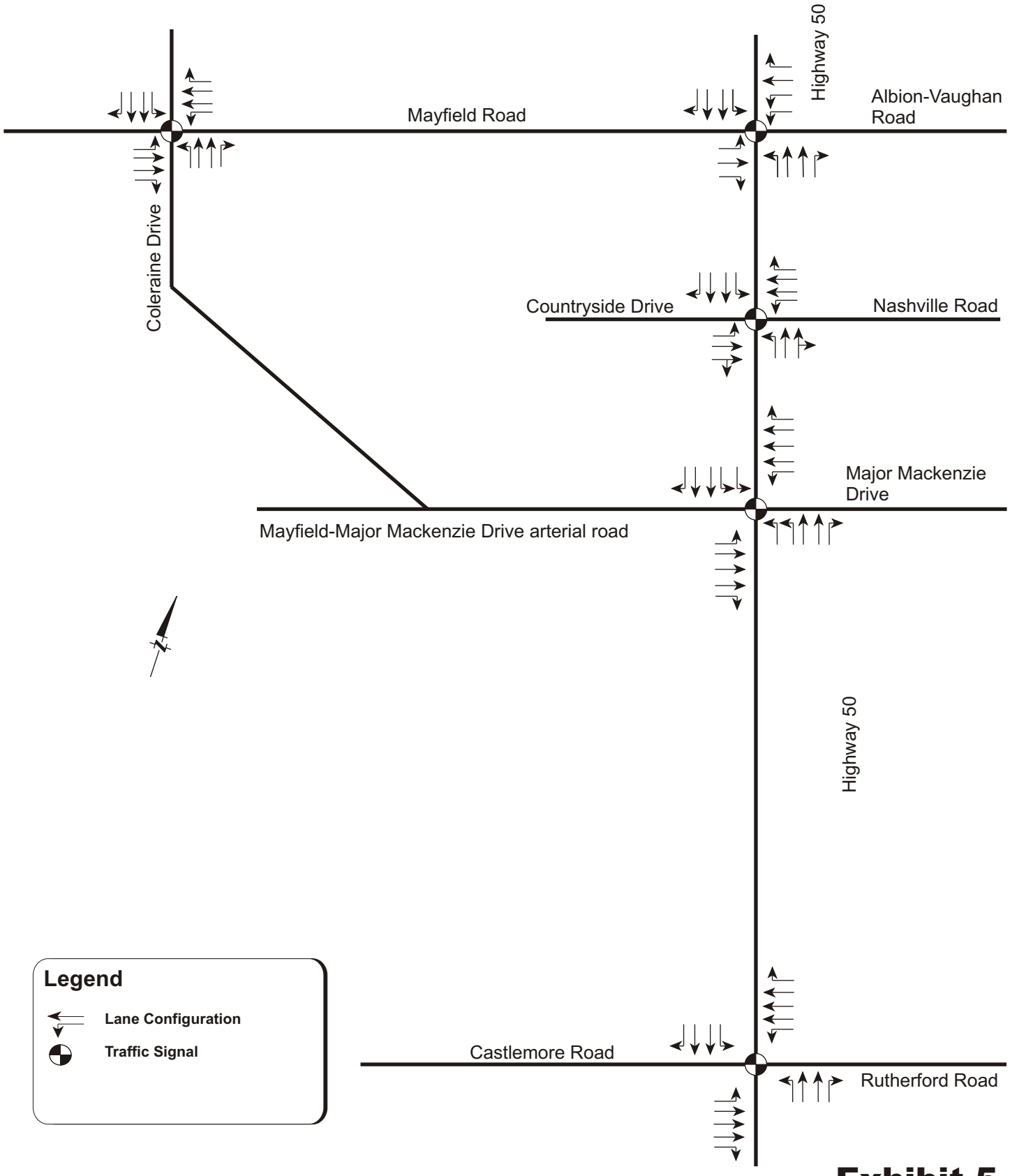


Exhibit 5

2021 & 2031Lane Configurations (4 Lanes)

Not To Scale

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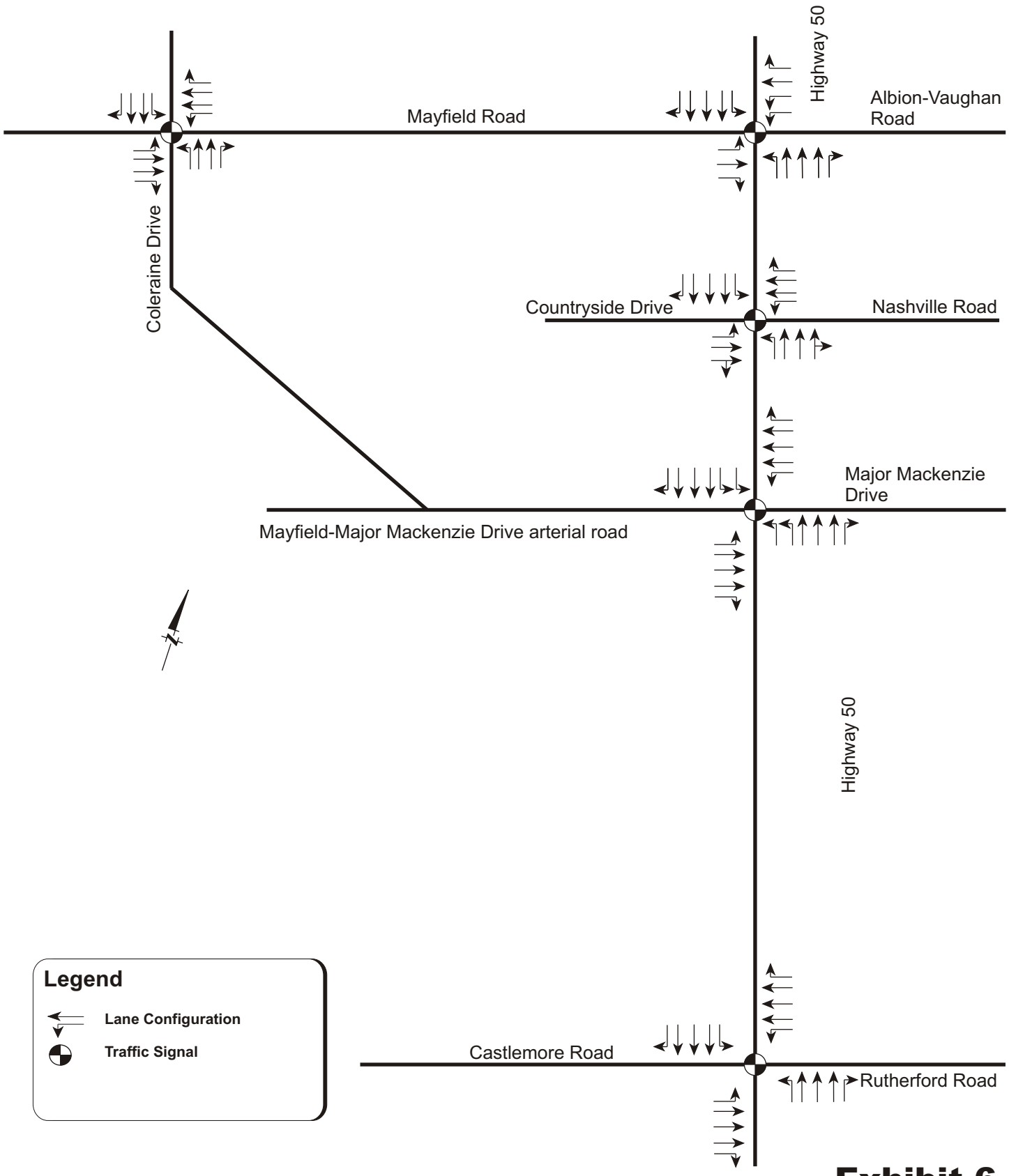

Exhibit 6

2021 & 2031 Lane Configurations (6 Lanes)

Not To Scale

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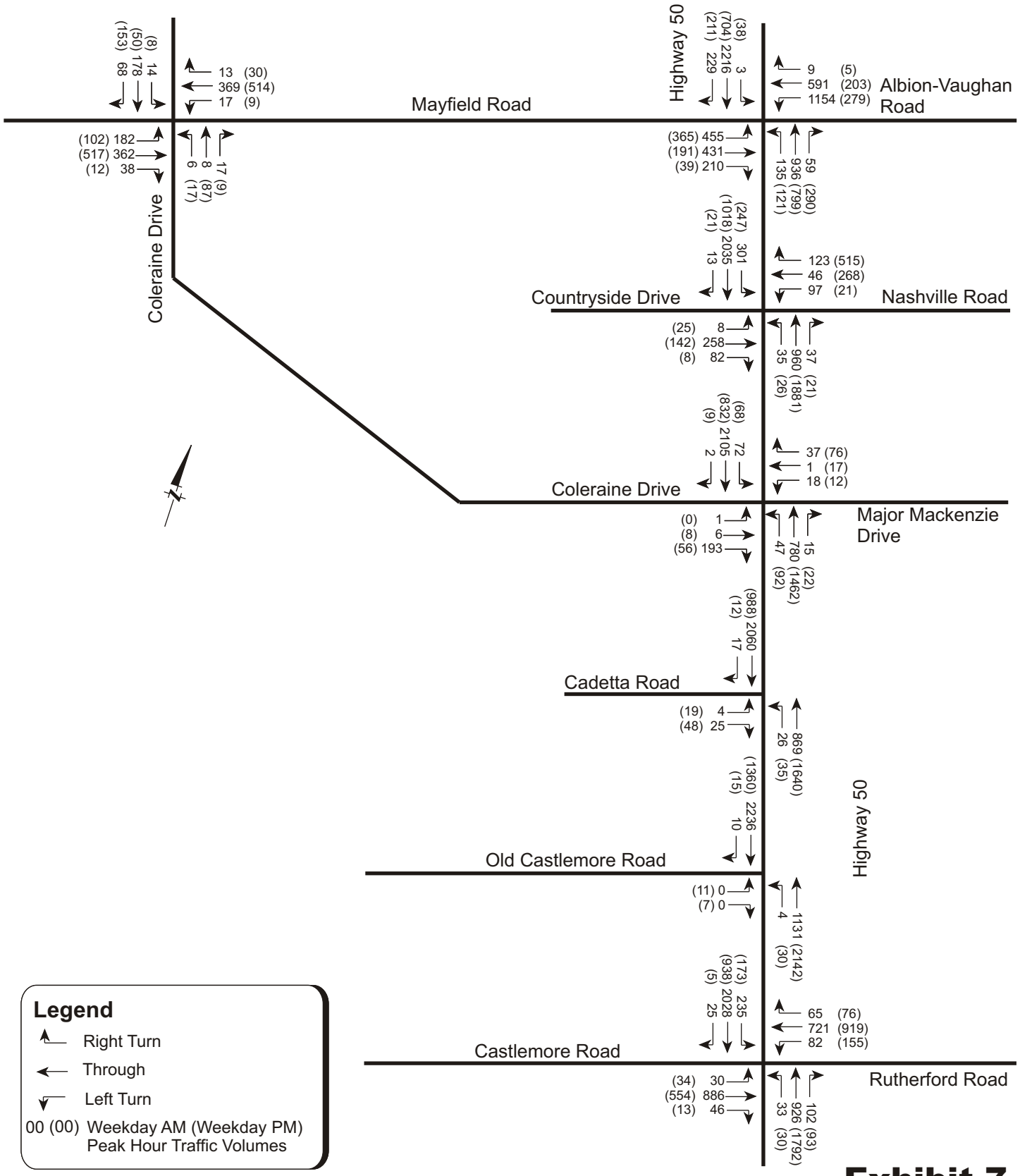

Exhibit 7

Existing Traffic Volumes

Not To Scale

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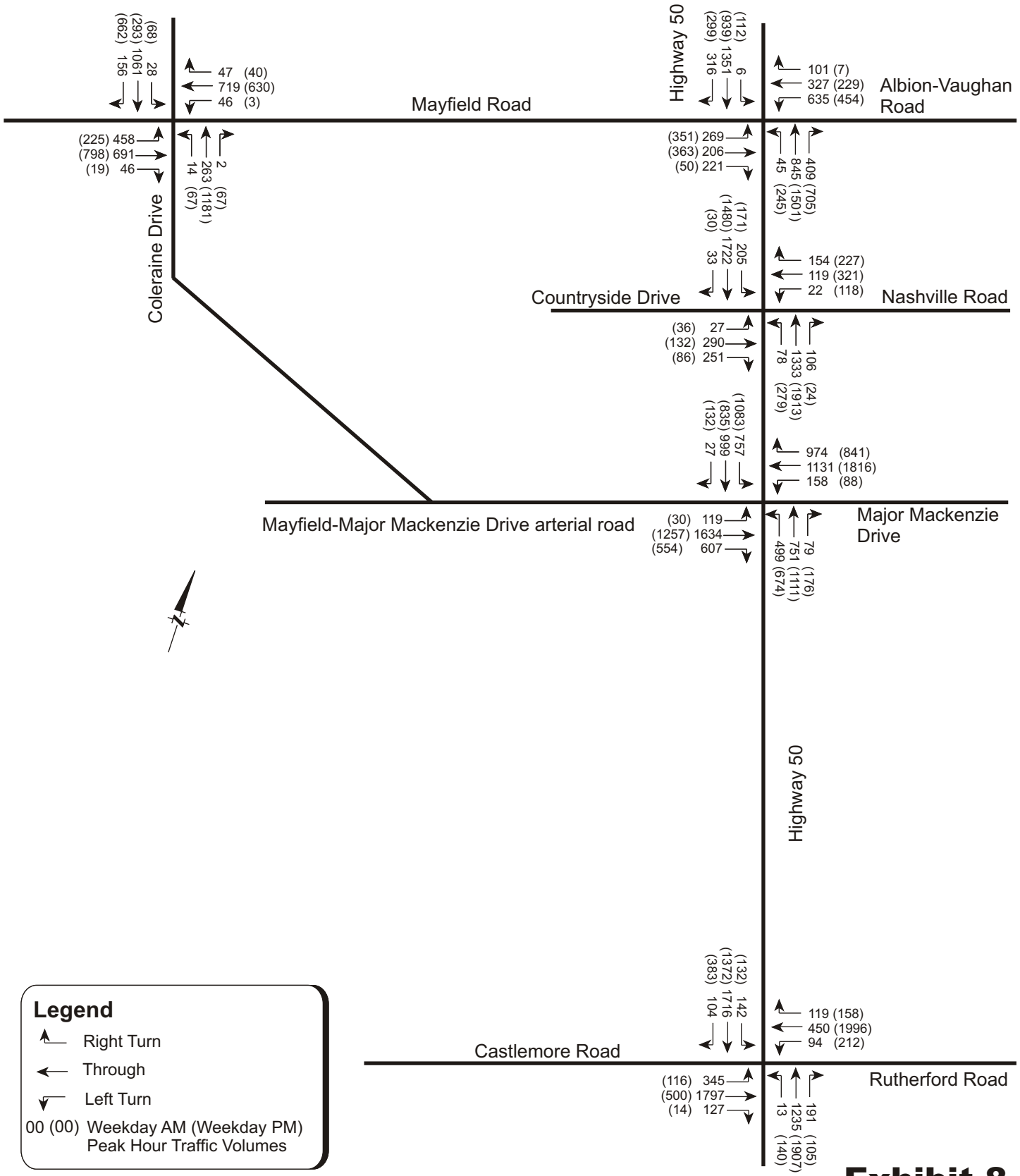

Exhibit 8

2021 Total Traffic

Not To Scale

March 2010

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Project # 4956

6.1 2021 Analysis

This section analyses the network with a four lane configuration on Highway 50 as seen in **Exhibit 7** for the year 2021.

6.1.1 Four Lane Scenario - 2021

The functional layout of the four-lane scenario is illustrated in **Exhibit 5**.

The following summarizes the operational results for Mayfield Road/Albion-Vaughan Road and Highway 50. Please note that westbound double left turns are included because of the high volume.

Table 5: Mayfield Road/Albion-Vaughan Road & Highway 50

Mayfield Road/Albion-Vaughan Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	33.3	D	44.8
Eastbound Left	D	48.4	D	54.7
Eastbound Through	E	64.6	F	87.9
Eastbound Right	D	37.7	B	12.5
Westbound Left	E	57.6	F	83.7
Westbound Through	E	60.2	E	56.8
Westbound Right	A	9.8	C	22.4
Northbound Left	B	17.3	D	54.4
Northbound Through	B	19.2	D	47.1
Northbound Right	A	3.1	B	10.2
Southbound Left	B	14.3	C	33.9
Southbound Through	C	34.0	D	38.5
Southbound Right	A	3.5	A	4.8

Under 2021 traffic conditions with four lanes for through traffic, the intersection of Mayfield Road/Albion-Vaughan Road and Highway 50 is expected to operate with an overall level of service of "C" and "D" during the weekday AM and PM peak hours, respectively. The largest delay can be seen for the EB through and WB left movements in the PM peak hour at 87 and 83 seconds.

The following summarizes the operational results for Countryside Drive/Nashville Road and Highway 50.

Table 6: Countryside Drive/Nashville Road & Highway 50

Countryside Drive/Nashville Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	25.5	D	37.0
Eastbound Left	D	35.1	D	36.6
Eastbound Through-Right	D	38.3	C	29.6
Westbound Left	D	36.8	D	43.4
Westbound Through	D	43.3	D	47.7.
Westbound Right	B	11.3	B	11.8
Northbound Left	C	21.8	D	54.1
Northbound Through-Right	C	23.4	D	37.7
Southbound Left	D	42.0	E	67.3
Southbound Through	C	21.5	C	32.2
Southbound Right	A	7.8	B	11.5

Under 2021 traffic conditions with four lanes for through traffic, the intersection of Countryside Drive/Nashville Road and Highway 50 is expected to operate with an overall level of service of "C" and "D" during the weekday AM and PM peak hours, respectively. Delay is shown to be within reasonable limits for all turns.

The following summarizes the operational results for Major Mackenzie Drive and Highway 50. Please note that north and southbound double left turns are included because of the high volumes.

Table 7: Major Mackenzie Drive & Highway 50

Major Mackenzie Drive and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	E	55.3	**F**	81.6
Eastbound Left	C	21.3	C	24.6
Eastbound Through	D	41.4	D	42.5
Eastbound Right	C	21.6	B	11.1
Westbound Left	**F**	102.7	D	39.3
Westbound Through	C	26.5	**F**	110.8
Westbound Right	E	57.4	D	36.7
Northbound Left	E	74.2	E	72.8
Northbound Through	**F**	86.6	**F**	114.1
Northbound Right	B	11.0	B	13.2
Southbound Left	**F**	81.3	**F**	177.2
Southbound Through	E	77.9	D	41.7
Southbound Right	B	11.1	A	6.0

Under 2021 traffic conditions with four lanes for through traffic, the intersection of Major Mackenzie Drive and Highway 50 is expected to operate with an overall level of service of "E" and "F" during the weekday AM and PM peak hours, respectively. The individual movements at the intersection that are expected to be experiencing a poor level of service are: WB left, NB through and SB left in the AM, and WB and NB through, and SB left in the PM.

The following summarizes the operational results for Castlemore Road/Rutherford Road and Highway 50.

Table 8: Castlemore Road/Rutherford Road & Highway 50

Castlemore Road/Rutherford Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	E	65.1	**F**	119.0
Eastbound Left	D	42.9	D	39.6
Eastbound Through	**F**	117.0	D	47.3
Eastbound Right	A	7.3	B	19.4
Westbound Left	E	75.3	D	54.9
Westbound Through	D	44.4	**F**	180.3
Westbound Right	A	9.6	A	6.7
Northbound Left	B	14.6	D	42.5
Northbound Through	D	39.1	**F**	183.5
Northbound Right	A	4.7	A	4.9
Southbound Left	E	62.5	D	49.8
Southbound Through	E	57.8	D	50.1
Southbound Right	A	5.4	B	10.2

Under 2021 traffic conditions with four lanes for through traffic, the intersection of Castlemore Road/Rutherford Road and Highway 50 is expected to operate with an overall level of service of "E" and "F" during the weekday for AM and PM peak hours, respectively. The individual movements at the intersection are expected to have a poor LOS are EB in the AM, and WB through and NB through in the PM.

The following summarizes the operational results for Coleraine Drive and Mayfield Road.

Table 9: Coleraine Drive & Mayfield Road

Coleraine Drive and Mayfield Road	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	37.0	C	29.4
Eastbound Left	D	45.4	C	29.8
Eastbound Through	C	23.5	C	23.9
Eastbound Right	A	6.5	A	9.6
Westbound Left	B	17.7	B	19.7
Westbound Through	D	53.9	D	43.8
Westbound Right	B	16.3	B	13.0
Northbound Left	C	21.5	B	18.0
Northbound Through	C	28.0	D	39.6
Northbound Right	B	18.5	B	13.2
Southbound Left	C	21.4	C	30.4
Southbound Through	D	40.3	C	24.5
Southbound Right	B	12.8	B	10.0

Under 2021 traffic conditions with four lanes for through traffic, the intersection of Coleraine Drive and Highway 50 is expected to operate with an overall level of service of "D" and "C" during the weekday for AM and PM peak hours, respectively. No movements at the intersection are expected to have a poor LOS or large delays.

6.1.2 Six Lane Scenario - 2021

This section analyses the network with a four lane configuration on Highway 50 as seen in **Exhibit 6** for the year 2021.

The following summarizes the operational results for Mayfield Road/Albion-Vaughan Road and Highway 50. Please note that westbound double left turns are included because of the high volume.

Table 10: Mayfield Road/Albion-Vaughan Road & Highway 50

Mayfield Road/Albion-Vaughan Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	27.2	D	36.1
Eastbound Left	C	25.4	C	31.2
Eastbound Through	D	45.4	E	56.8
Eastbound Right	C	23.4	B	10.7
Westbound Left	D	45.0	E	58.5
Westbound Through	D	38.4	D	44.5
Westbound Right	A	7.3	B	19.7
Northbound Left	C	23.1	D	49.3
Northbound Through	C	22.6	D	36.0
Northbound Right	A	4.4	B	12.5
Southbound Left	C	20.8	C	33.4
Southbound Through	C	31.1	D	42.7
Southbound Right	A	4.9	A	7.0

Under 2021 traffic conditions with six lanes for through traffic, the intersection of Mayfield Road/Albion-Vaughan Road and Highway 50 is expected to operate with overall level of service of "C" and "D" during the weekday AM and PM peak hours, respectively. There are no serious delay issues with the movements of this intersection.

The following are the operational summary results for Countryside Drive/Nashville Road and Highway 50.

Table 11: Countryside Drive/Nashville Road & Highway 50

Countryside Drive/Nashville Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	21.9	C	26.3
Eastbound Left	C	29.2	D	35.1
Eastbound Through-Right	C	30.0	C	28.9
Westbound Left	C	30.9	D	40.3
Westbound Through	D	37.7	D	45.0
Westbound Right	A	9.6	A	9.2
Northbound Left	B	17.3	D	39.2
Northbound Through-Right	C	22.4	C	23.0
Southbound Left	C	30.7	C	34.3
Southbound Through	B	18.0	C	24.3
Southbound Right	B	10.1	B	12.5

Under 2021 traffic conditions with six lanes for through traffic, intersection of Countryside Drive/Nashville Road and Highway 50 is expected to operate with an overall level of service of "C" during the weekday AM and PM peak hours. There are no delay issues at this intersection.

The following are the operational summary results for Major Mackenzie Drive and Highway 50. Please note that north and southbound double left turns are included because of the high volumes.

Table 12: Major Mackenzie Drive & Highway 50

Major Mackenzie Drive and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	46.7	E	57.1
Eastbound Left	C	22.3	C	22.3
Eastbound Through	D	45.9	D	40.1
Eastbound Right	B	15.3	A	6.3
Westbound Left	**F**	89.2	C	31.5
Westbound Through	C	27.3	E	70.9
Westbound Right	D	38.4	B	17.4
Northbound Left	**F**	81.9	E	58.3
Northbound Through	E	60.4	**F**	94.7
Northbound Right	B	13.0	C	20.2
Southbound Left	E	74.5	**F**	99.2
Southbound Through	D	47.7	D	40.4
Southbound Right	B	12.2	A	7.3

Under 2021 traffic conditions with six lanes for through traffic, the intersection of Major Mackenzie Drive and Highway 50 is expected to operate with overall level of service of "D" and "E" during the weekday AM and PM peak hours, respectively. The WB and NB left turns in the AM , as well as the NB through and SB left in the PM are expected to have a poor LOS and larger than average delays.

The following summarizes the operational results for Castlemore Road/Rutherford Road and Highway 50. . Note that Castlemore Road/Rutherford Road is assumed to have 6 lanes also in this scenario.

Table 13: Castlemore Road/Rutherford Road & Highway 50

Castlemore Road/Rutherford Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	38.2	E	61.9
Eastbound Left	C	31.2	C	34.7
Eastbound Through	D	53.2	E	41.0
Eastbound Right	A	5.1	A	18.5
Westbound Left	E	65.9	C	42.2
Westbound Through	D	39.7	C	92.0
Westbound Right	A	8.7	A	5.4
Northbound Left	B	18.2	D	42.9
Northbound Through	D	36.1	C	77.9
Northbound Right	A	6.1	A	6.0
Southbound Left	D	42.8	C	49.3
Southbound Through	C	33.4	D	36.1
Southbound Right	A	5.1	A	15.0

Under 2021 traffic conditions with six lanes for through traffic, the intersection of Castlemore Road/Rutherford Road and Highway 50 is expected to operate with overall level of service of "D" and "E" or better during the weekday AM and PM peak hours, respectively. The NB left in the PM, is expected to have a poor LOS.

The following summarizes the operational results for Coleraine Drive and Mayfield Road.

Table 14: Coleraine Drive & Mayfield Road

Coleraine Drive and Mayfield Road	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	37.0	C	29.4
Eastbound Left	D	45.4	D	39.4
Eastbound Through	C	23.5	C	27.8
Eastbound Right	A	6.5	B	12.6
Westbound Left	B	17.7	C	22.5
Westbound Through	D	53.9	D	47.6
Westbound Right	B	16.3	B	14.1
Northbound Left	C	21.5	B	15.3
Northbound Through	C	28.0	C	34.5
Northbound Right	B	18.5	B	11.1
Southbound Left	C	21.4	C	28.1
Southbound Through	D	40.3	C	21.6
Southbound Right	B	12.8	A	9.6

Under 2021 traffic conditions with six lanes for through traffic, the intersection of Coleraine Drive and Highway 50 is unchanged and expected to operate with an overall level of service of "D" and "C" during the weekday for AM and PM peak hours, respectively. No movements at this intersection are expected to have a poor LOS or large delays.

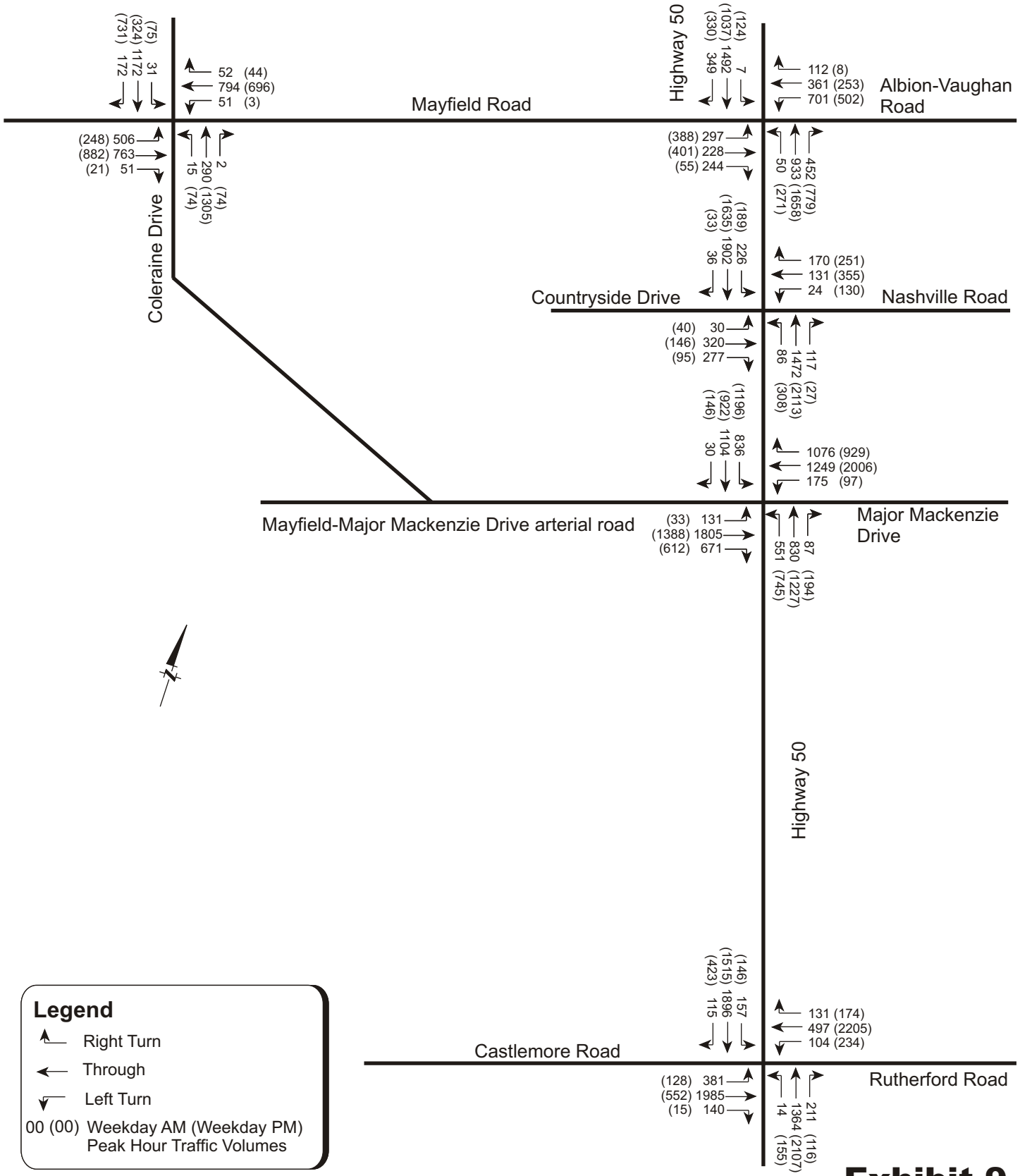

Exhibit 9

2031 Total Traffic

Not To Scale

March 2010

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Project # 4956

6.2 2031 Assessment

6.2.1 Four Lane Scenario - 2031

The functional layout of the four-lane scenario is illustrated in Exhibit 5.

The following summarizes the operational results for Mayfield Road/Albion-Vaughan Road and Highway 50.

Table 15: Mayfield Road/Albion-Vaughan Road & Highway 50

Mayfield Road/Albion-Vaughan Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	40.4	E	63.6
Eastbound Left	E	78.6	E	79.5
Eastbound Through	E	70.6	**F**	113.3
Eastbound Right	D	43.8	B	12.0
Westbound Left	E	70.0	**F**	107.9
Westbound Through	E	67.0	E	77.8
Westbound Right	A	9.5	C	22.9
Northbound Left	B	17.2	**F**	81.3
Northbound Through	C	20.0	E	79.9
Northbound Right	A	3.1	B	15.2
Southbound Left	B	13.9	D	35.9
Southbound Through	D	43.2	D	44.1
Southbound Right	A	3.6	A	4.8

Under 2031 traffic conditions with four through lanes for Highway 50, the intersection of Mayfield Road/Albion-Vaughan Road and Highway 50 is expected to operate with an overall level of service of "D" and "E" during the weekday AM and PM peak hours, respectively. The individual movements at the intersection that are expected to have a poor LOS for this scenario are the EB through, WB left and NB left in the PM.

The following summarizes the operational results for Countryside Drive/Nashville Road and Highway 50.

Table 16: Countryside Drive/Nashville Road & Highway 50

Countryside Drive/Nashville Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	32.2	E	59.3
Eastbound Left	D	35.2	D	36.3
Eastbound Through-Right	D	51.9	C	30.1
Westbound Left	D	35.8	D	43.8
Westbound Through	D	43.9	D	48.3
Westbound Right	B	11.4	B	12.9
Northbound Left	C	23.2	E	74.0
Northbound Through-Right	C	25.9	**F**	80.4
Southbound Left	E	71.2	E	72.1
Southbound Through	C	28.5	D	44.0
Southbound Right	A	8.4	B	11.5

Under 2031 traffic conditions with four through lanes for Highway 50, the intersection of Countryside Drive/Nashville Road and Highway 50 is expected to operate with overall level of service of "C" and "E" during the weekday AM and PM peak hours, respectively. The NB through-right movement at the intersection is expected to have a poor LOS in the PM.

The following summarizes the operational results for Major Mackenzie Drive and Highway 50. Please note that north and southbound double left turns are included because of the high volumes.

Table 17: Major Mackenzie Drive & Highway 50

Major Mackenzie Drive and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	**F**	87.9	**F**	109.1
Eastbound Left	C	32.5	C	24.9
Eastbound Through	**F**	87.0	D	49.5
Eastbound Right	C	31.2	C	13.7
Westbound Left	**F**	131.7	E	41.8
Westbound Through	C	32.0	**F**	139.1
Westbound Right	**F**	117.2	E	57.9
Northbound Left	**F**	125.3	E	71.3
Northbound Through	**F**	105.4	**F**	173.1
Northbound Right	B	10.5	C	16.6
Southbound Left	**F**	133.0	**F**	247.4
Southbound Through	**F**	100.6	D	60.0
Southbound Right	B	10.5	B	6.4

Under 2031 traffic conditions with four through lanes for Highway 50, the intersection of Keele Street and King-Vaughan Road is expected to operate with an overall level of service of "F" during the weekday AM and PM peak hours. Many movements for traffic in all directions at this intersection are expected to have a poor LOS with large average delays.

The following summarizes the operational results for Castlemore Road/Rutherford Road and Highway 50.

Table 18: Castlemore Road/Rutherford Road & Highway 50

Castlemore Road/Rutherford Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	**F**	93.3	**F**	158.3
Eastbound Left	D	51.2	D	45.5
Eastbound Through	**F**	166.6	D	46.5
Eastbound Right	A	9.0	B	17.7
Westbound Left	**F**	92.5	E	67.3
Westbound Through	D	48.8	**F**	222.1
Westbound Right	B	10.4	A	6.4
Northbound Left	B	14.7	D	50.9
Northbound Through	D	50.7	**F**	256.6
Northbound Right	A	4.7	A	5.6
Southbound Left	**F**	84.0	E	61.3
Southbound Through	**F**	95.7	**F**	84.6
Southbound Right	A	6.1	B	13.2

Under 2031 traffic conditions with four through lanes for Highway 50, the intersection of Castlemore Road/Rutherford Road and Highway 50 is expected to operate with an overall level of service of "F" during the weekday AM and PM peak hours. The individual movements at the intersection expected to have a poor LOS and large delays are EB through, WB and SB left in the AM, and the WB, NB and SB through in the PM.

The following summarizes the operational results for Coleraine Drive and Mayfield Road.

Table 19: Coleraine Drive & Mayfield Road

Coleraine Drive and Mayfield Road	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	44.1	C	32.7
Eastbound Left	E	58.7	D	49.6
Eastbound Through	C	23.8	C	30.1
Eastbound Right	A	6.5	B	13.3
Westbound Left	B	17.5	C	23.0
Westbound Through	E	63.1	D	52.8
Westbound Right	B	16.9	B	15.8
Northbound Left	C	22.3	B	15.0
Northbound Through	C	29.1	D	37.0
Northbound Right	B	19.0	B	11.0
Southbound Left	C	22.3	D	35.1
Southbound Through	D	51.1	C	21.5
Southbound Right	B	14.8	B	14.0

Under 2031 traffic conditions with four through lanes on Mayfield Road, the intersection of Coleraine Drive and Mayfield Road is expected to operate with an overall level of service of "D" and "C" during the weekday AM and PM peak hours, respectively. No movements are expected to have serious LOS problems or large delays.

6.2.2 Six Lane Scenario - 2031

The functional layout of the six-lane scenario is illustrated in **Exhibit 6**.

The following are the operational summary results for Mayfield Road/Albion-Vaughan Road and Highway 50. Please note that westbound double left turns are included because of the high volume.

Table 20: Mayfield Road/Albion-Vaughan Road & Highway 50

Mayfield Road/Albion-Vaughan Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	30.8	D	43.5
Eastbound Left	C	32.0	D	43.0
Eastbound Through	D	51.3	E	60.8
Eastbound Right	C	32.3	B	10.1
Westbound Left	D	50.2	**F**	105.2
Westbound Through	D	43.0	D	54.4
Westbound Right	A	7.3	C	20.6
Northbound Left	C	23.0	E	57.0
Northbound Through	C	23.6	D	36.5
Northbound Right	A	4.3	C	20.7
Southbound Left	C	20.3	D	38.7
Southbound Through	D	35.7	D	43.5
Southbound Right	A	4.8	A	6.6

Under 2031 traffic conditions with six through lanes for Highway 50, the intersection of Mayfield Road/Albion-Vaughan Road and Highway 50 is expected to operate with an overall level of service of "D" during the weekday AM and PM peak hours. The movement with LOS and delay issues at this intersection is WB left.

The following summarizes the operational results for Countryside Drive/Nashville Road and Highway 50.

Table 21: Countryside Drive/Nashville Road & Highway 50

Countryside Drive/Nashville Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	C	24.8	C	29.2
Eastbound Left	C	30.4	D	36.0
Eastbound Through-Right	D	35.2	C	29.6
Westbound Left	C	31.3	D	42.9
Westbound Through	D	37.7	D	46.4
Westbound Right	A	9.1	A	9.2
Northbound Left	C	22.9	D	46.0
Northbound Through-Right	C	25.7	C	25.8
Southbound Left	D	37.9	D	40.8
Southbound Through	B	20.0	C	27.5
Southbound Right	A	9.8	B	13.3

Under 2031 traffic conditions with six through lanes for Highway 50, the intersection of Countryside Drive/Nashville Road and Highway 50 is expected to operate with an overall level of service of "C" or better during the weekday AM and PM peak hours. There are no major delay issues with this intersection.

The following summarizes the operational results for Major Mackenzie Drive and Highway 50. Please note that north and southbound double left turns are included because of the high volumes.

Table 22: Major Mackenzie Drive & Highway 50

Major Mackenzie Drive and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	E	61.6	E	78.2
Eastbound Left	C	22.5	C	23.0
Eastbound Through	D	46.9	D	42.8
Eastbound Right	A	5.1	A	7.9
Westbound Left	**F**	101.7	D	40.7
Westbound Through	C	25.1	**F**	104.4
Westbound Right	E	68.5	C	32.9
Northbound Left	**F**	105.5	E	56.8
Northbound Through	E	73.3	**F**	111.8
Northbound Right	B	12.8	C	23.5
Southbound Left	**F**	87.8	**F**	171.3
Southbound Through	E	79.3	D	47.1
Southbound Right	B	13.0	A	8.8

Under 2031 traffic conditions with six through lanes for Highway 50, the intersection of Major Mackenzie Drive and Highway 50 is expected to operate with overall level of service "E" during the weekday AM and PM peak hours. The individual movements at the intersection that are expected to some delay are: WB, NB and SB left for the AM, and WB and NB through, and SB left in the PM.

The following summarizes the operational results for Castlemore Road/Rutherford Road and Highway 50. Note that Castlemore Road/Rutherford Road is assumed to have 6 lanes also in this scenario.

Table 23: Castlemore Road/Rutherford Road & Highway 50

Castlemore Road/Rutherford Road and Highway 50	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	47.6	**F**	88.9
Eastbound Left	D	37.9	D	38.2
Eastbound Through	**F**	71.7	D	44.0
Eastbound Right	A	5.8	B	19.0
Westbound Left	E	68.0	D	51.5
Westbound Through	D	42.3	**F**	126.5
Westbound Right	A	9.3	A	5.2
Northbound Left	B	19.0	D	44.3
Northbound Through	D	44.0	**F**	132.1
Northbound Right	A	7.7	A	6.1
Southbound Left	D	47.2	E	60.6
Southbound Through	D	40.1	D	43.9
Southbound Right	A	5.1	B	19.1

Under 2031 traffic conditions with six through lanes for Highway 50, the intersection of Castlemore Road/Rutherford Road and Highway 50 is expected to operate with overall level of service "D" and "F" during the weekday AM and PM peak hours, respectively. The individual movements at the intersection expected to have poor LOS and large delays are EB, through in the AM, and WB and NB through in the PM.

The following summarizes the operational results for Coleraine Drive and Mayfield Road.

Table 24: Coleraine Drive & Mayfield Road

Coleraine Drive and Mayfield Road	Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Avg. Delay	LOS	Avg. Delay
Overall	D	44.0	C	32.7
Eastbound Left	E	58.0	D	49.6
Eastbound Through	C	23.8	C	30.1
Eastbound Right	A	6.5	B	13.3
Westbound Left	B	17.5	C	23.0
Westbound Through	E	63.1	D	52.8
Westbound Right	B	16.9	B	15.8
Northbound Left	C	22.3	B	15.0
Northbound Through	C	29.1	D	37.0
Northbound Right	B	19.0	B	11.0
Southbound Left	C	22.3	D	35.1
Southbound Through	D	51.1	C	21.5
Southbound Right	B	14.8	B	14.0

Under 2031 traffic conditions with four through lanes on Mayfield Road the intersection of Coleraine Drive and Mayfield Road remains unchanged and is expected to operate with an overall level of service of "D" and "C" during the weekday AM and PM peak hours, respectively. No movements are expected to have poor LOS or large delays.

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7. FUNCTIONAL REQUIREMENTS AT INTERSECTIONS

Below is a summary of the conclusions derived from the above analyses.

7.1 Operational Analysis Conclusions

The four lane road configuration for Highway 50 does not allow the intersections with Mayfield Road/Albion-Vaughan Road, Major Mackenzie, or Castlemore Road/Rutherford Road to operate at an acceptable level of service. Providing six lanes for through traffic on Highway 50 improves the level of service and reduces delay for these intersections.

7.2 Recommended Network

Based on the above findings the six lane configuration for Highway 50 produced acceptable delays and the best levels of service. However, even with six through lanes on Highway 50 and four lanes on Mayfield Road, there are still some operational problems remaining. These are discussed below.

7.2.1 Coleraine Drive and Mayfield Road Intersection

This intersection is shown to work reasonably well in 2031 with 4 through lanes on Mayfield Road. No further refinements were made.

7.2.2 Mayfield Road/Albion-Vaughan Road and Highway 50 Intersection

This intersection is shown to work reasonably well in 2031 with 6 through lanes on Highway 50, and westbound double left turns on Albion-Vaughan Road. No further refinements were made.

7.2.3 Countryside Drive/Nashville Road and Highway 50 Intersection

This intersection is shown to work well in 2031 with 6 through lanes on Highway 50. No further refinements were made.

7.2.4 Major Mackenzie Drive and Highway 50 Intersection

With north and southbound double left turns and six through lanes on Highway 50, this intersection is shown to operate close to capacity by 2031; however, no further improvements are reasonable for this intersection.

7.2.5 Castlemore Road/Rutherford Road and Highway 50

The 2031 analysis for this intersection reveals a LOS E in both peaks and several movements have a LOS of F. The current design for this intersection is based on forecasts for 2014 and does not include double left turns. Consideration was given to adding double left turns; however, the largest left turn volume is 381 northbound in the AM peak hour. This barely justifies a double left turn. The main reason for the delays is the high through volumes on all four legs of the intersection. Therefore, no further refinements were made.

7.3 Recommended Network

Exhibit 10 illustrates the final recommended network to satisfy 2031 traffic forecasts for the study area.

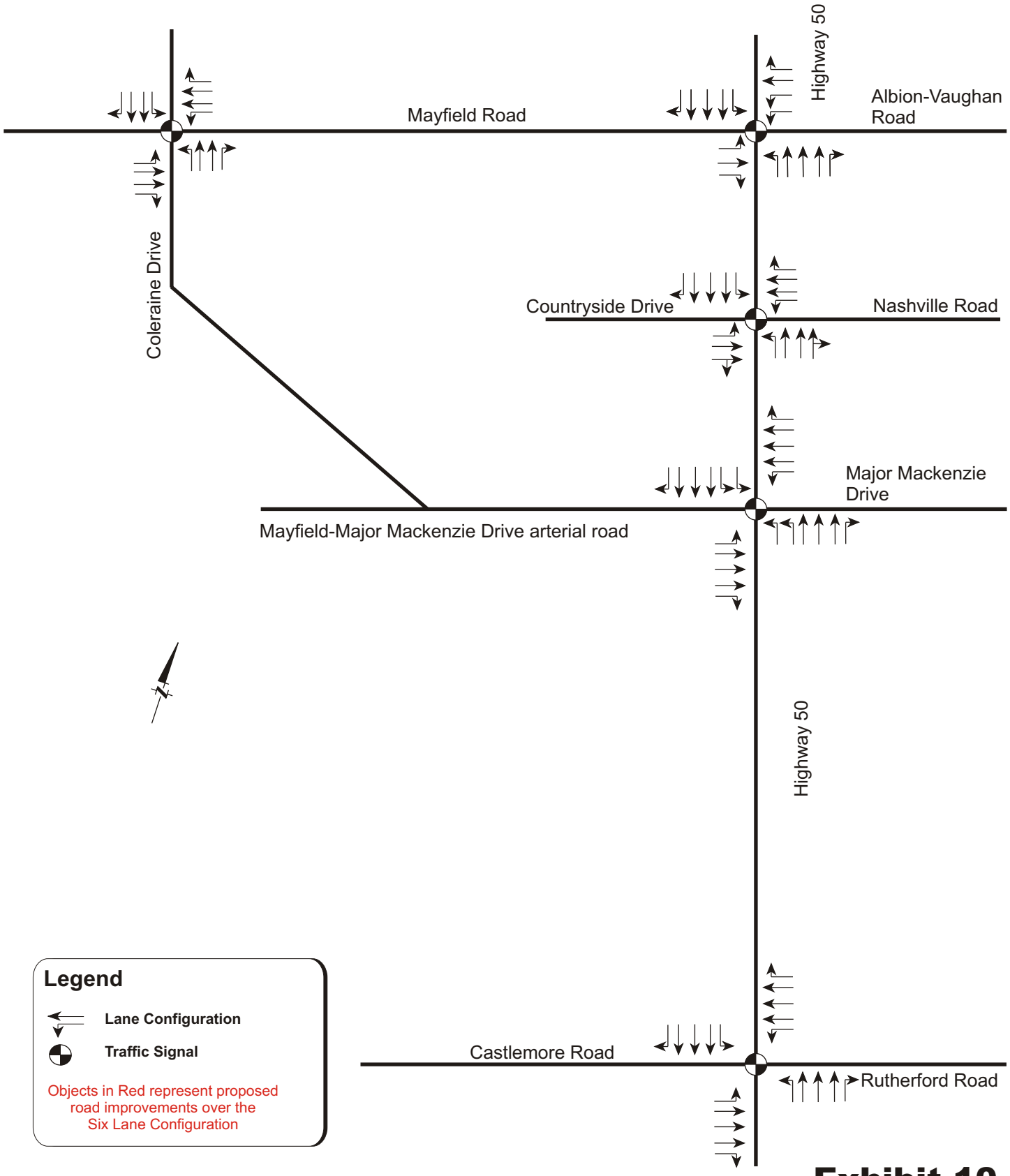


Exhibit 10

Recommended Lane Configurations

Not To Scale

March 2010

HDR | iTRANS

Project # 4956

7.4 Roundabout Considerations

A rudimentary testing of two-lane roundabouts at each of the main intersections was undertaken. Each intersection was assumed to be a double lane roundabout with a 60 m inscribed circle diameter and 11m circulatory lane width. A 10% truck factor was assumed for each intersection. Using the *Sidra* software, roundabouts were not found to provide a reasonable level of service as can be seen in **Table 26** below.

Table 26: Roundabout LOS Summary

Intersection	2031 AM Peak	2031 PM Peak
Mayfield/Coleraine	F	E
H50/Mayfield	F	F
H50/Countryside	A	F
H50/Major Mackenzie	F	F
H50/Castlemore	F	F

While some refinement to the generic design assumed may improve the LOS slightly, it is not prudent to plan roundabouts to be close to capacity, particularly when recent US research has found that European and Australian roundabout software currently over estimates capacity in North America.

File: 2.0
Project # 4956

Memorandum

To: Solmaz Zia – Region of Peel
Cc:
From: Steve Keen & Barry McLaughlin
Date: March 1, 2010
Re: **Highway 50 EA**
Safety & Collisions Assessment

1. INTERSECTION COLLISIONS

The Region of Peel provided a total of 3 years of collision data from January 2005 to December 2007 along Highway 50 between Mayfield Road and Castlemore Road and along Mayfield Road between Highway 50 and Colerain Road. During this time, a total of 165 collisions were recorded for the 7 intersections and 6 mid block sections within the study area. 134 of these collisions occurred at the intersections in the study area. The summary does not reference pedestrian or cyclist related collisions or information on vehicle type (transit vehicles or trucks). All collision locations were identified by the nearest intersection. **Table 1** summarizes the collision data by location per year.

Table 1: Summary of Collisions per Year by Intersection

Intersection	Exposure[1]	Number of Collisions				Total per Intersection	Collision Rate[2]
		Unknown	2005	2006	2007		
Castlemore Rd / Rutherford Rd	18.2	0	15	7	12	34	0.62
Old Castlemore Rd	12.7	0	0	0	3	3	0.08
Cadetta Rd	10.5	0	0	0	3	3	0.10
Coleraine Dr	10.8	0	8	10	4	22	0.68
Countryside Dr	14.9	0	8	8	8	24	0.54
Mayfield Rd	17.7	0	12	13	13	38	0.72
Coleraine Dr @ Mayfield Rd	5.1	0	6	2	2	10	0.66
Total per Year		**0**	**49**	**40**	**45**	**134**	

Note: 1. Million vehicles entering per year estimated
2. Collisions per million vehicles entering

The Castlemore Road/Rutherford Road and Mayfield Road intersections accounted for 72 (54%) of the 134 reported collisions that occurred at or near intersections along the Highway 50 study corridor. An average of 44.7 collisions per year was observed along the study corridor at or near intersections between 2005 to 2007.

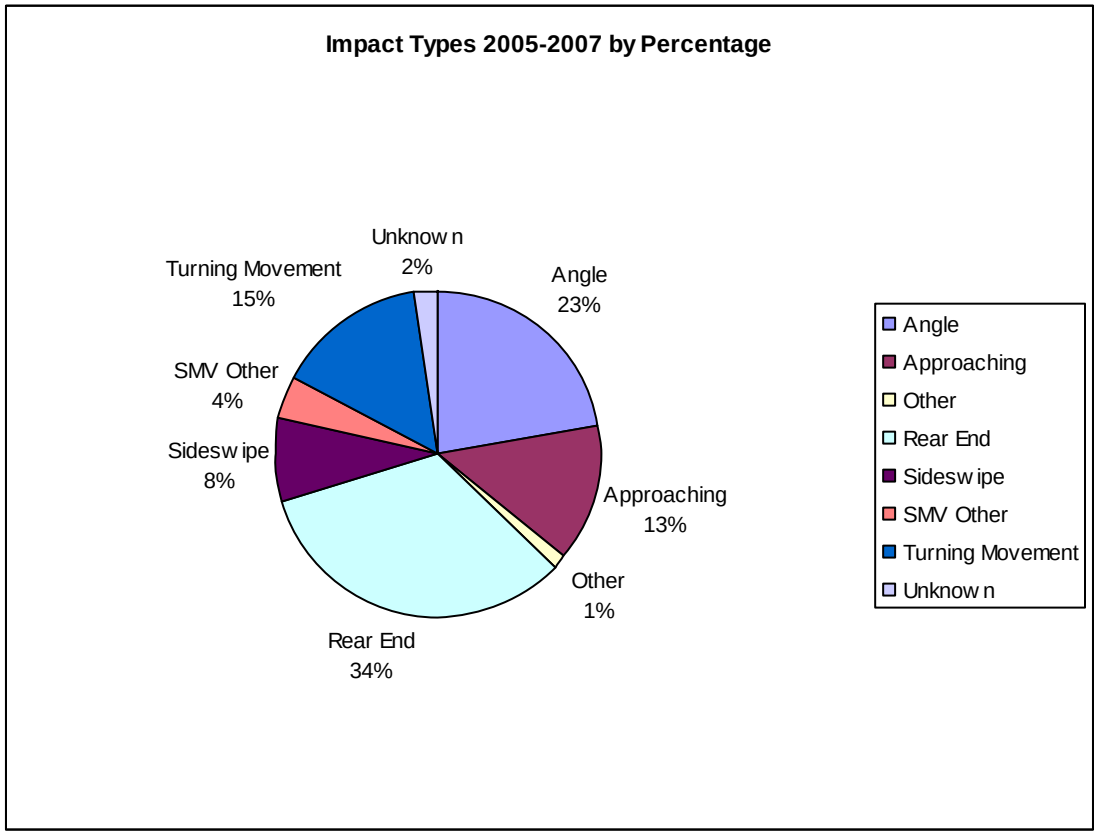
1.1 Intersection Collision Characteristics

The impact type and level of severity of all collisions recorded at intersections during the 3 year period are detailed in this section. Initial impact type is summarized in **Table 2** and **Exhibit 1.**

Table 2: Summary by Initial Impact

Impact Type	Frequency	Percentage
Angle	30	23%
Approaching	18	13%
Other	2	1%
Rear End	44	34%
Sideswipe	11	8%
SMV Other	6	4%
Turning Movement	20	15%
Unknown	3	2%
TOTAL	**134**	**100%**

Exhibit 1: Impact Type by Percentage



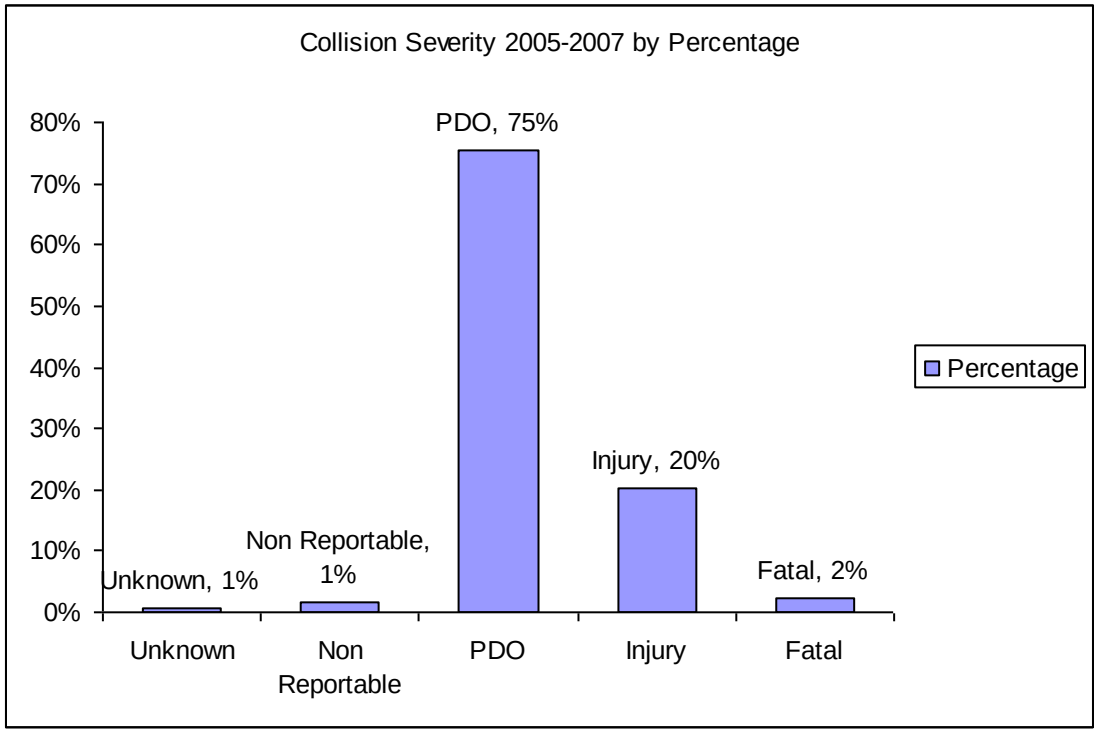
As illustrated in **Table 2** and **Exhibit 1,** rear end collisions (33%) and angle collisions (22%) were the most prevalent collision-types recorded, followed by turning movement (15%) and approaching collisions (13%).

Table 3 summarizes the severity of collisions according to location while **Exhibit 2** shows the overall percentages of the various levels of severity seen in the intersection collisions.

Table 3: Summary of Collisions by Severity (2005 – 2007)

Intersection	Severity of Collisions					
	Unknown	Non Reportable	PDO	Injury	Fatal	TOTAL
Castlemore Rd / Rutherford Rd	0	0	28	6	0	**34**
Old Castlemore Rd	0	0	2	1	0	**3**
Cadetta Rd	0	0	2	1	0	**3**
Coleraine Dr	1	0	14	5	2	**22**
Countryside Dr	0	2	19	3	0	**24**
Mayfield Rd	0	0	28	9	1	**38**
Coleraine Dr @ Mayfield Rd	0	0	8	2	0	**10**
Total per Type	**1**	**2**	**101**	**27**	**3**	**134**

Exhibit 2: Collision Severity at Intersections by Percentage



Property Damage Only (PDO) collisions were the most common collision-severity-type at or near intersections, accounting for 75% of the recorded collisions. This was followed by non fatal injury collisions at 20%. Three fatal collisions (2%) were also recorded at or near intersections

Table 4, **Table 5**, and **Table 6** summarize the collision data by road surface, environmental, and daylight conditions per year respectively.

Table 4: Summary of Collisions (2005-2007) by Intersection - Road Surface Conditions

Intersection	Road Surface Conditions				
	Unknown	Dry	Wet	Loose Snow	Ice
Castlemore Rd / Rutherford Rd	0	24	8	2	0
Old Castlemore Rd	0	3	0	0	0
Cadetta Rd	0	3	0	0	0
Coleraine Dr	0	16	5	1	0
Countryside Dr	0	18	3	3	0
Mayfield Rd	1	32	3	1	1
Coleraine Dr @ Mayfield Rd	0	9	1	0	0
Total	**1**	**105**	**20**	**7**	**1**

The majority of intersection collisions occurred with dry road surface conditions (78%), followed by wet surface conditions (15%), then by loose snow surface conditions (5%).

Table 5: Summary of Collisions (2005-2007) by Intersection - Environmental Conditions

Intersection	Environmental Conditions						
	Unknown	Clear	Rain	Snow	Drifting Snow	Strong Wind	Fog, Mist, Smoke, Dust
Castlemore Rd / Rutherford Rd	0	26	2	6	0	0	0
Old Castlemore Rd	0	3	0	0	0	0	0
Cadetta Rd	0	3	0	0	0	0	0
Coleraine Dr	0	16	3	1	1	1	0
Countryside Dr	0	20	1	3	0	0	0
Mayfield Rd	2	32	2	1	0	0	1
Coleraine Dr @ Mayfield Rd	0	9	0	1	0	0	0

Total	**2**	**109**	**8**	**12**	**1**	**1**	**1**

The majority of intersection collisions occurred during clear environmental conditions (81%), followed by snow (9%) and by rain (6%).

Table 6: Summary of Collisions (2005-2007) by Intersection - Daylight Conditions

Intersection	Daylight Conditions								
	Unknown	**Dawn**	**Dawn, artificial**	**Daylight**	**Daylight, artificial**	**Dusk**	**Dusk, artificial**	**Dark**	**Dark, artificial**
Castlemore Rd / Rutherford Rd	0	1	1	22	0	0	1	8	1
Old Castlemore Rd	0	0	0	3	0	0	0	0	0
Cadetta Rd	0	0	0	2	0	0	0	1	0
Coleraine Dr	0	0	0	18	0	0	0	4	0
Countryside Dr	0	0	0	20	1	0	0	2	1
Mayfield Rd	2	3	0	28	0	1	0	4	0
Coleraine Dr @ Mayfield Rd	0	0	0	10	0	0	0	0	0
Total	**2**	**4**	**1**	**103**	**1**	**1**	**1**	**19**	**2**

The majority of intersection collisions occurred during daylight conditions (77%), followed by dark (14%).

2. MID-BLOCK COLLISIONS

This section summarizes collision data provided by the Region of Peel between January 2005 and December 2007, for the five mid block sections in the study area. The summary does not reference pedestrian or cyclist-related collisions or information on vehicle type (transit vehicles or trucks). **Table 7** summarizes the collision data by location and severity.

Table 7: Mid Block Summary of Collisions 2005-2007 by Intersection

Mid Block	Severity of Collisions					
	Unknown	**Non Reportable**	**PDO**	**Non-Fatal Injury**	**Fatal**	**TOTAL**
From Castlemore Rd / Rutherford Road to Old Castlemore Rd / Sears Entrance	0	0	8	1	0	**9**
From Sears Entrance to	0	0	1	0	0	**1**

Cadetta Rd						
From Cadetta Rd to Coleraine Dr	0	0	2	0	0	**2**
From Colerain Dr to Countryside Dr	0	0	3	1	0	**4**
From Countryside Dr to Mayfield Rd	0	0	3	3	0	**6**
From Highway 50 to Colerain Rd on Mayfield Rd	0	0	7	1	1	**9**
TOTAL BY TYPE	**0**	**0**	**24**	**6**	**1**	**31**

Note: 1. Million vehicles entering per year estimated
2. Collisions per million vehicles entering

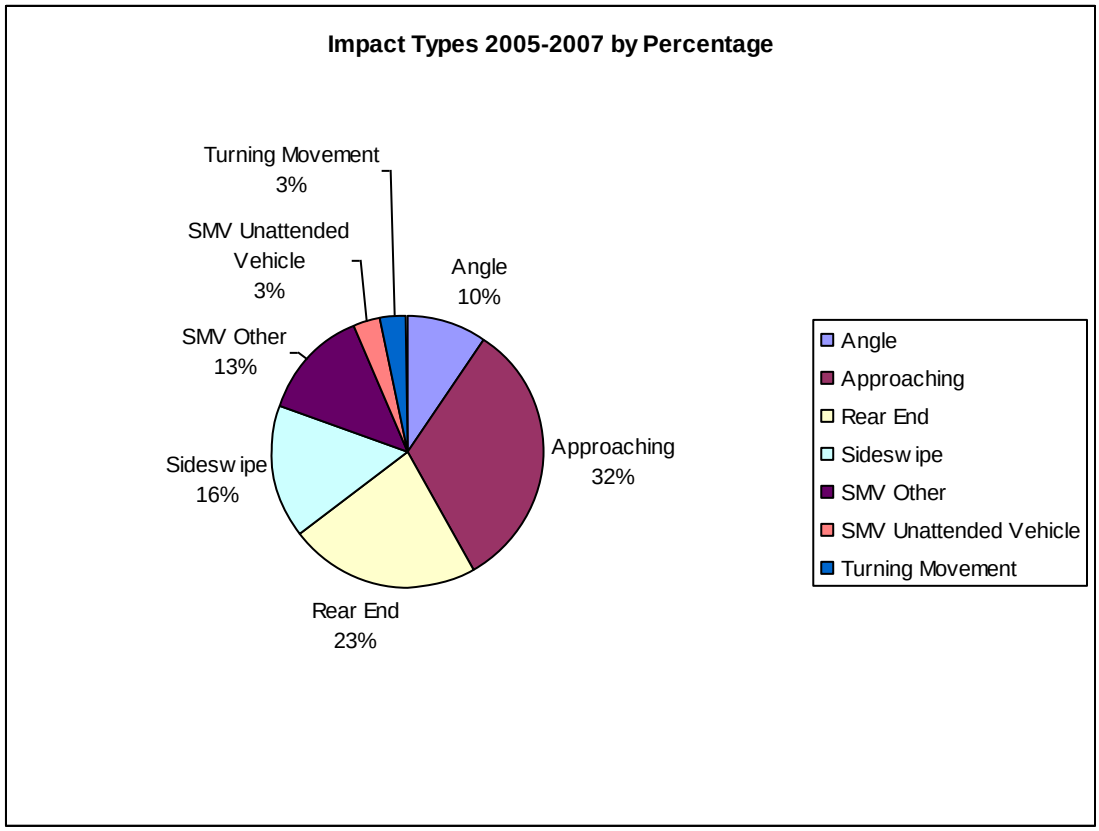
All of the recorded collisions on mid block sections were classified under PDO, Non-Fatal Injury and Fatal. There were 24 PDO collisions, 6 non-fatal injury collisions and one fatal collision. The one fatal collision occurred along the Mayfield Road segment between Highway 50 and Colerain Road. The mid block sections with the highest number of collisions were along Mayfield Road between Highway 50 and Colerain Road, and along Mayfield Road between Castlemore and Old Castlemore Road. A total of 9 collisions were recorded on each of these two sections, accounting for 58% of all mid block collisions.

Table 8 and **Exhibit 3** summarize the total number of collisions on mid block sections during the study period by impact type.

Table 8: Mid Block Summary by Initial Impact

Impact Type	Frequency	Percentage
Angle	3	10%
Approaching	10	32%
Rear End	7	23%
Sideswipe	5	16%
SMV Other	4	13%
SMV Unattended Vehicle	1	3%
Turning Movement	1	3%
Total	**31**	**100%**

Exhibit 3: Mid Block Impact Type by Percentage



Overall, Approaching collisions (32%) and Rear-End collisions (23%) were the most prevalent types of collision recorded on mid-block sections, followed by sideswipe collisions (16%).

Table 9Table 4, **Table 10**, and **Table 11** summarize the midblock collision data by road surface, environmental, and daylight conditions per year respectively.

Table 9: Summary of Midblock Collisions (2005-2007) - Road Surface Conditions

Intersection	Road Surface Conditions				
	Unknown	Dry	Wet	Loose Snow	Ice
From Castlemore Rd / Rutherford Road to Old Castlemore Rd / Sears Entrance	0	5	3	1	0
From Sears Entrance to Cadetta Rd	0	0	0	0	1
From Cadetta Rd to Coleraine Dr	0	0	1	0	1
From Colerain Dr to	0	4	0	0	0

Countryside Dr					
From Countryside Dr to Mayfield Rd	0	4	0	0	2
From Highway 50 to Colerain Rd on Mayfield Rd	0	3	3	3	0
Total	**0**	**16**	**7**	**4**	**4**

Dry road surface conditions were the most prevalent road surface conditions for midblock collisions (51%) followed by wet conditions (23%), then by loose snow and ice (13% each).

Table 10: Summary of Midblock Collisions (2005-2007) by Intersection - Environmental Conditions

Intersection	Environmental Conditions							
	Unknown	**Clear**	**Rain**	**Snow**	**Drifting Snow**	**Strong Wind**	**Fog, Mist, Smoke, Dust**	**Freezing Rain**
From Castlemore Rd / Rutherford Road to Old Castlemore Rd / Sears Entrance	0	6	1	1	1	0	0	0
From Sears Entrance to Cadetta Rd	0	0	0	1	0	0	0	0
From Cadetta Rd to Coleraine Dr	0	0	1	1	0	0	0	0
From Colerain Dr to Countryside Dr	0	3	0	1	0	0	0	0
From Countryside Dr to Mayfield Rd	0	3	0	2	1	0	0	0
From Highway 50 to Colerain Rd on Mayfield Rd	0	2	1	1	2	0	1	2
Total	**0**	**14**	**3**	**7**	**4**	**0**	**1**	**2**

The majority of midblock collisions occurred during clear conditions (45%), followed by snow (23%).

Table 11: Summary of Midblock Collisions (2005-2007) - Daylight Conditions

Intersection	**Daylight Conditions**

	Unknown	Dawn	Dawn, artificial	Daylight	Daylight artificial	Dusk	Dusk artificial	Dark	Dark, artificial
From Castlemore Rd / Rutherford Road to Old Castlemore Rd / Sears Entrance	1	2	0	4	0	0	0	2	0
From Sears Entrance to Cadetta Rd	0	0	0	0	0	0	0	1	0
From Cadetta Rd to Coleraine Dr	0	0	0	0	0	0	0	2	0
From Colerain Dr to Countryside Dr	0	0	0	2	1	0	0	1	0
From Countryside Dr to Mayfield Rd	0	0	0	3	0	1	0	1	1
From Highway 50 to Colerain Rd on Mayfield Rd	0	2	0	4	0	0	0	3	0
Total	**1**	**4**	**0**	**13**	**1**	**1**	**0**	**10**	**1**

The majority of midblock collisions occurred during daylight conditions (42%), followed by dark conditions (32%), then by dawn conditions (13%).

3. FATAL COLLISIONS

A total of four fatal collisions were recorded in the study area during the selected time period of 2005 to 2007. Three of these collisions happened at intersections and one of them happened on a mid block section of road. Two collisions occurred at the intersection of Coleraine Drive and Highway 50—one angle collision and one rear end collision. One collision with unknown type and direction details occurred at the intersection of Highway 50 and Mayfield Road. The fourth collision was a mid block single motor vehicle collision on Mayfield Road between Coleriane Drive and Highway 50.

4. COLLISION SUMMARY

There were a total of 165 collisions at intersections and on mid block sections in this study area along Highway 50. The most common impact types appear to be rear end, angle and approaching collisions. The most common severity level is property damage only and there was only one recorded fatal collision in the time period. The intersections of Castlemore Road and Highway 50, and Mayfield Road and Highway 50, along with adjacent mid block sections, are the locations with the highest volume of collisions in the study area.

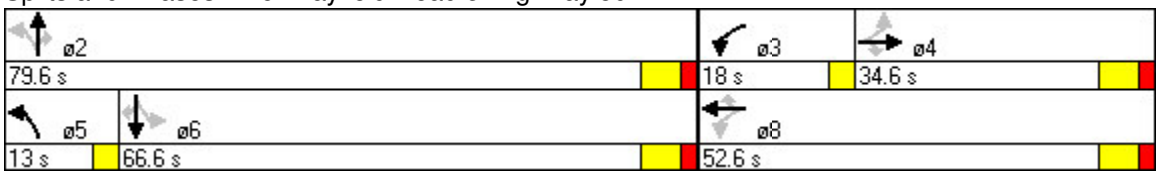
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	75.0		75.0	130.0		80.0	85.0		175.0	45.0		138.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1779	1096	1755	1830	1228	1170	3017	1192	1372	3174	1183
Flt Permitted	0.169			0.116			0.060			0.284		
Satd. Flow (perm)	298	1779	1096	214	1830	1228	74	3017	1192	410	3174	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			129			8			59			141
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		80			70			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			11.2			66.5			16.6	
Volume (vph)	455	431	210	1154	591	9	135	936	59	3	2216	229
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	8%	49%	4%	5%	33%	56%	21%	37%	33%	15%	38%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	455	431	210	1154	591	9	135	936	59	3	2216	229
Lane Group Flow (vph)	455	431	210	1154	591	9	135	936	59	3	2216	229
Turn Type	Perm		Perm	pm+pt		Perm	pm+pt		Perm	Perm		Perm
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	4	4	4	3	8	8	5	2	2	6	6	6
Minimum Initial (s)	12.0	12.0	12.0	5.0	12.0	12.0	5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	33.6	33.6	33.6	8.0	33.6	33.6	8.0	32.6	32.6	32.6	32.6	32.6
Total Split (s)	34.6	34.6	34.6	18.0	52.6	52.6	13.0	79.6	79.6	66.6	66.6	66.6
Total Split (%)	26.2%	26.2%	26.2%	13.6%	39.8%	39.8%	9.8%	60.2%	60.2%	50.4%	50.4%	50.4%
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6	4.6	3.0	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes			Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	30.6	30.6	30.6	48.6	48.6	48.6	75.6	75.6	75.6	62.6	62.6	62.6
Actuated g/C Ratio	0.23	0.23	0.23	0.37	0.37	0.37	0.57	0.57	0.57	0.47	0.47	0.47

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	6.59	1.05	0.59	4.77	0.88	0.02	1.15	0.54	0.08	0.02	1.47	0.36
Control Delay	2556.7	105.7	25.3	1716.7	54.8	14.9	161.8	19.0	3.3	19.0	246.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2556.7	105.7	25.3	1716.7	54.8	14.9	161.8	19.0	3.3	19.0	246.2	10.0
LOS	F	F	C	F	D	B	F	B	A	B	F	A
Approach Delay		1107.8			1148.0			35.3			223.9	
Approach LOS		F			F			D			F	
Queue Length 50th (m)	~214.2	~121.9	18.2	~551.4	143.0	0.2	~31.2	76.3	0.0	0.4	~417.4	12.8
Queue Length 95th (m)	#279.6	#185.3	45.6	#632.2	#207.7	4.0	#73.5	94.5	6.1	2.3	#457.8	31.2
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0		75.0	130.0		80.0	85.0		175.0	45.0		138.0
Base Capacity (vph)	69	412	353	242	673	457	117	1725	707	194	1503	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	6.59	1.05	0.59	4.77	0.88	0.02	1.15	0.54	0.08	0.02	1.47	0.36

Intersection Summary

Area Type: Other
Cycle Length: 132.2
Actuated Cycle Length: 132.2
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 6.59
Intersection Signal Delay: 593.6 Intersection LOS: F
Intersection Capacity Utilization 168.7% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50



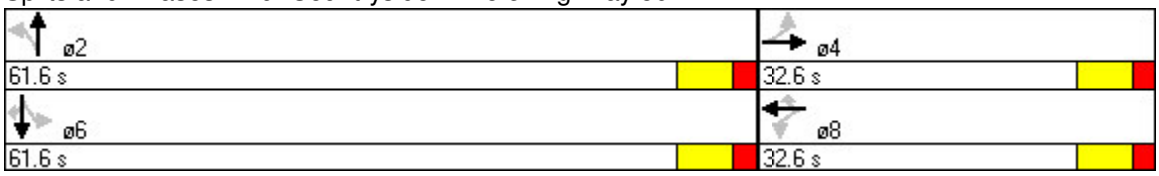
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		70.0	0.0		0.0	90.0		25.0
Storage Lanes	0		0	0		1	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2	15.2	15.2	15.2		15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.968				0.850		0.994				0.850
Flt Protected		0.999			0.967		0.950			0.950		
Satd. Flow (prot)	0	1807	0	0	1729	1361	1659	3358	0	1674	3380	1396
Flt Permitted		0.993			0.460		0.069			0.232		
Satd. Flow (perm)	0	1797	0	0	823	1361	121	3358	0	409	3380	1396
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				123		7				5
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	8	258	82	97	46	123	35	960	37	301	2035	13
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	3%	1%	10%	2%	20%	10%	8%	9%	9%	8%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	258	82	97	46	123	35	960	37	301	2035	13
Lane Group Flow (vph)	0	348	0	0	143	123	35	997	0	301	2035	13
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	4	4		8	8	8	2	2		6	6	6
Minimum Initial (s)	12.0	12.0		12.0	12.0	12.0	20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	32.6	32.6		32.6	32.6	32.6	26.6	26.6		26.6	26.6	26.6
Total Split (s)	32.6	32.6	0.0	32.6	32.6	32.6	61.6	61.6	0.0	61.6	61.6	61.6
Total Split (%)	34.6%	34.6%	0.0%	34.6%	34.6%	34.6%	65.4%	65.4%	0.0%	65.4%	65.4%	65.4%
Yellow Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	Max
Act Effct Green (s)		23.4			23.4	23.4	57.7	57.7		57.7	57.7	57.7
Actuated g/C Ratio		0.26			0.26	0.26	0.65	0.65		0.65	0.65	0.65

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.72			0.66	0.27	0.45	0.46		1.14	0.93	0.01
Control Delay		38.2			44.7	6.5	32.9	9.3		119.5	24.7	5.7
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		38.2			44.7	6.5	32.9	9.3		119.5	24.7	5.7
LOS		D			D	A	C	A		F	C	A
Approach Delay		38.2			27.0			10.1			36.7	
Approach LOS		D			C			B			D	
Queue Length 50th (m)		52.5			21.8	0.0	2.8	41.4		~61.9	150.6	0.5
Queue Length 95th (m)		81.3			42.4	12.0	#18.7	62.0		#71.0	#243.0	2.7
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)						70.0				90.0		25.0
Base Capacity (vph)		553			250	499	78	2176		265	2188	905
Starvation Cap Reductn		0			0	0	0	0		0	0	0
Spillback Cap Reductn		0			0	0	0	0		0	0	0
Storage Cap Reductn		0			0	0	0	0		0	0	0
Reduced v/c Ratio		0.63			0.57	0.25	0.45	0.46		1.14	0.93	0.01

Intersection Summary

Area Type: Other
Cycle Length: 94.2
Actuated Cycle Length: 89.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 29.3 Intersection LOS: C
Intersection Capacity Utilization 115.3% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Countryside Drive & Highway 50



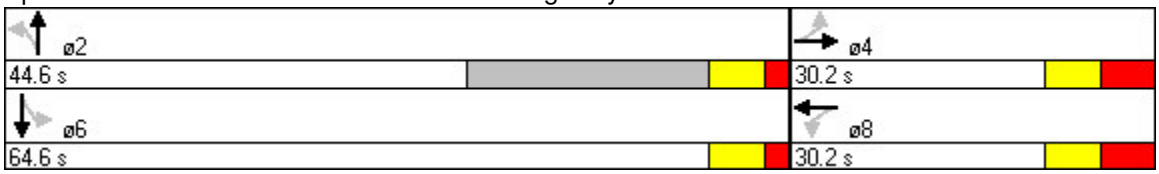
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2		15.2	15.2		15.2	15.2	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.870			0.911			0.997				
Flt Protected					0.984		0.950			0.950		
Satd. Flow (prot)	0	1640	0	0	1342	0	1825	3278	0	1807	3412	0
Flt Permitted		0.999			0.878		0.066			0.314		
Satd. Flow (perm)	0	1638	0	0	1198	0	127	3278	0	597	3412	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			37			4				
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			335.4			2091.9	
Travel Time (s)		11.5			12.9			15.1			94.1	
Volume (vph)	1	6	193	18	1	37	47	780	15	72	2105	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	88%	0%	0%	0%	10%	64%	1%	7%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	6	193	18	1	37	47	780	15	72	2105	2
Lane Group Flow (vph)	0	200	0	0	56	0	47	795	0	72	2107	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		2	2		6	6	
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	30.2	30.2		30.2	30.2		23.0	23.0		23.0	23.0	
Total Split (s)	30.2	30.2	0.0	30.2	30.2	0.0	44.6	44.6	0.0	64.6	64.6	0.0
Total Split (%)	31.9%	31.9%	0.0%	31.9%	31.9%	0.0%	47.0%	47.0%	0.0%	68.1%	68.1%	0.0%
Yellow Time (s)	4.6	4.6		4.6	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0		2.0	2.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)		21.1			21.1		63.2	63.2		63.2	63.2	
Actuated g/C Ratio		0.23			0.23		0.68	0.68		0.68	0.68	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.52			0.19		0.54	0.35		0.18	0.90	
Control Delay		33.1			14.6		38.0	7.0		7.4	20.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		33.1			14.6		38.0	7.0		7.4	20.0	
LOS		C			B		D	A		A	B	
Approach Delay		33.1			14.6			8.7			19.6	
Approach LOS		C			B			A			B	
Queue Length 50th (m)		28.1			2.6		3.6	26.2		3.9	138.7	
Queue Length 95th (m)		48.2			11.7		#24.3	43.1		11.1	#247.2	
Internal Link Dist (m)		200.3			227.0			311.4			2067.9	
Turn Bay Length (m)							50.0			50.0		
Base Capacity (vph)		450			350		87	2246		409	2336	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.44			0.16		0.54	0.35		0.18	0.90	

Intersection Summary

Area Type: Other
Cycle Length: 94.8
Actuated Cycle Length: 92.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 17.5 Intersection LOS: B
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Coleraine Drive & Highway 50



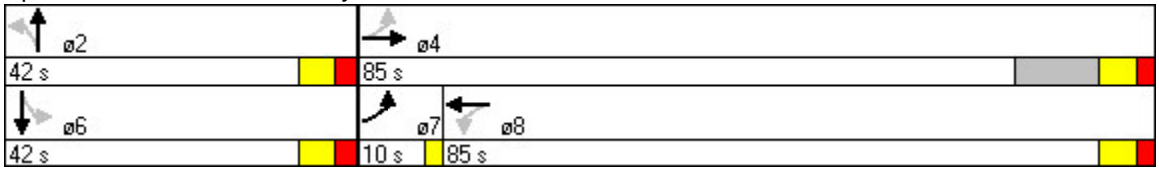
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2		15.2	15.2		15.2	15.2	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.986			0.995			0.898			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3300	0	1825	3424	0	1722	2872	0	1127	3255	0
Flt Permitted	0.482			0.516			0.541			0.740		
Satd. Flow (perm)	890	3300	0	991	3424	0	980	2872	0	878	3255	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			4			17			41	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	182	362	38	17	369	13	6	8	17	14	178	68
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	10%	0%	0%	6%	8%	6%	8%	17%	62%	2%	22%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	182	362	38	17	369	13	6	8	17	14	178	68
Lane Group Flow (vph)	182	400	0	17	382	0	6	25	0	14	246	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		8	8		2	2		6	6	
Minimum Initial (s)	5.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	33.0		33.0	33.0		33.0	33.0		33.0	33.0	
Total Split (s)	10.0	85.0	0.0	85.0	85.0	0.0	42.0	42.0	0.0	42.0	42.0	0.0
Total Split (%)	7.3%	62.0%	0.0%	62.0%	62.0%	0.0%	30.7%	30.7%	0.0%	30.7%	30.7%	0.0%
Yellow Time (s)	2.0	4.6		4.6	4.6		4.2	4.2		4.2	4.2	
All-Red Time (s)	0.0	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	26.7	26.7		16.8	16.8		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.37	0.37		0.23	0.23		0.52	0.52		0.52	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.46	0.33		0.07	0.48		0.01	0.02		0.03	0.14	
Control Delay	20.4	16.6		22.5	26.1		9.3	5.6		9.6	8.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.4	16.6		22.5	26.1		9.3	5.6		9.6	8.0	
LOS	C	B		C	C		A	A		A	A	
Approach Delay		17.8			25.9			6.4			8.1	
Approach LOS		B			C			A			A	
Queue Length 50th (m)	17.2	19.2		1.8	23.6		0.4	0.3		0.9	6.8	
Queue Length 95th (m)	30.7	29.1		6.5	35.5		2.2	2.0		3.6	13.6	
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)												
Base Capacity (vph)	397	2198		586	2028		513	1510		459	1722	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.46	0.18		0.03	0.19		0.01	0.02		0.03	0.14	

Intersection Summary

Area Type: Other
Cycle Length: 137
Actuated Cycle Length: 72.7
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 18.1 Intersection LOS: B
Intersection Capacity Utilization 41.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 17: Mayfield Road & Coleraine Drive



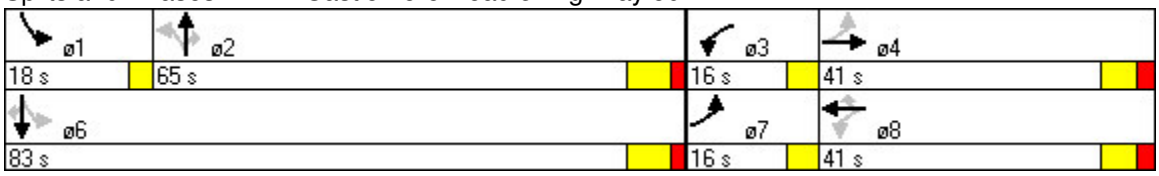
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		0.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		0	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.993				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1706	3553	0	1055	1865	1484	1772	3259	1034	1534	3411	1445
Flt Permitted	0.108			0.108			0.066			0.169		
Satd. Flow (perm)	194	3553	0	120	1865	1484	123	3259	1034	273	3411	1445
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				65			102			20
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			555.3	
Travel Time (s)		25.1			30.2			13.0			25.0	
Volume (vph)	30	926	46	82	721	65	33	926	102	235	2028	25
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	2%	2%	73%	3%	10%	3%	12%	58%	19%	7%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	30	926	46	82	721	65	33	926	102	235	2028	25
Lane Group Flow (vph)	30	972	0	82	721	65	33	926	102	235	2028	25
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phases	7	4		3	8	8	2	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	35.7		8.5	35.7	35.7	37.4	37.4	37.4	8.0	37.4	37.4
Total Split (s)	16.0	41.0	0.0	16.0	41.0	41.0	65.0	65.0	65.0	18.0	83.0	83.0
Total Split (%)	11.4%	29.3%	0.0%	11.4%	29.3%	29.3%	46.4%	46.4%	46.4%	12.9%	59.3%	59.3%
Yellow Time (s)	4.0	4.2		4.0	4.2	4.2	5.4	5.4	5.4	3.0	5.4	5.4
All-Red Time (s)	0.0	2.5		0.0	2.5	2.5	2.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	44.2	37.0		51.8	44.9	44.9	61.5	61.5	61.5	79.0	79.0	79.0
Actuated g/C Ratio	0.31	0.27		0.37	0.32	0.32	0.44	0.44	0.44	0.57	0.57	0.57

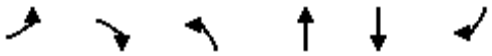
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	1.03		0.69	1.20	0.12	0.60	0.64	0.20	0.85	1.05	0.03
Control Delay	32.3	85.4		59.6	144.8	8.8	78.4	33.0	5.2	44.0	63.6	6.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	85.4		59.6	144.8	8.8	78.4	33.0	5.2	44.0	63.6	6.3
LOS	C	F		E	F	A	E	C	A	D	E	A
Approach Delay		83.8			126.6			31.8			61.0	
Approach LOS		F			F			C			E	
Queue Length 50th (m)	5.2	~151.3		15.2	~253.5	0.0	7.0	105.0	0.0	32.2	~322.1	0.6
Queue Length 95th (m)	12.1	#193.4		#35.8	#335.8	11.1	#26.6	127.8	10.7	#64.2	#363.3	4.8
Internal Link Dist (m)		534.8			647.0			264.8			531.3	
Turn Bay Length (m)	120.0			166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	187	948		125	602	523	55	1442	514	281	1939	830
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	1.03		0.66	1.20	0.12	0.60	0.64	0.20	0.84	1.05	0.03

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 139
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 70.3 Intersection LOS: E
Intersection Capacity Utilization 114.0% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50

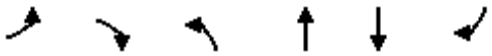




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	4	25	26	869	2060	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	25	26	869	2060	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)					335	
pX, platoon unblocked	0.41	0.41	0.41			
vC, conflicting volume	2555	1038	2077			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3339	0	2186			
tC, single (s)	7.8	8.7	5.0			
tC, 2 stage (s)						
tF (s)	4.0	4.2	2.7			
p0 queue free %	0	93	52			
cM capacity (veh/h)	1	353	54			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	29	26	434	434	1373	704
Volume Left	4	26	0	0	0	0
Volume Right	25	0	0	0	0	17
cSH	4	54	1700	1700	1700	1700
Volume to Capacity	7.66	0.48	0.26	0.26	0.81	0.41
Queue Length 95th (m)	Err	14.0	0.0	0.0	0.0	0.0
Control Delay (s)	Err	123.7	0.0	0.0	0.0	0.0
Lane LOS	F	F				
Approach Delay (s)	Err	3.6			0.0	
Approach LOS	F					

Intersection Summary			
Average Delay	97.7		
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	4	1131	2236	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	4	1131	2236	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2810	1118	2246			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2810	1118	2246			
tC, single (s)	6.8	6.9	5.6			
tC, 2 stage (s)						
tF (s)	3.5	3.3	3.0			
p0 queue free %	100	100	95			
cM capacity (veh/h)	14	205	81			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	0	4	566	566	1118	1118	10
Volume Left	0	4	0	0	0	0	0
Volume Right	0	0	0	0	0	0	10
cSH	1700	81	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.05	0.33	0.33	0.66	0.66	0.01
Queue Length 95th (m)	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	51.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	F					
Approach Delay (s)	0.0	0.2			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

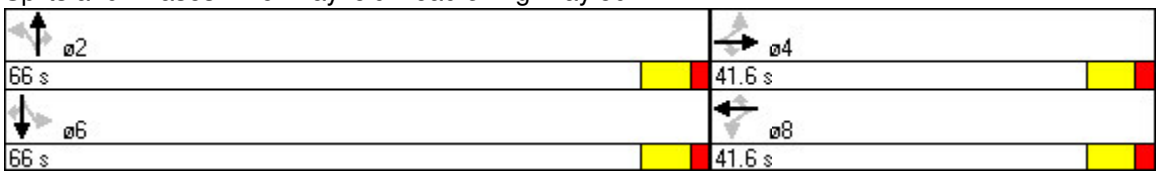
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	75.0		75.0	130.0		80.0	85.0		175.0	45.0		138.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	1865	938	1615	1700	1166	1003	2370	892	1259	3017	1512
Flt Permitted	0.548			0.564			0.336			0.294		
Satd. Flow (perm)	885	1865	938	959	1700	1166	355	2370	892	390	3017	1512
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39			5			290			211
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	367	191	39	279	203	5	121	799	290	38	704	211
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	19%	3%	74%	13%	13%	40%	82%	54%	83%	45%	21%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	367	191	39	279	203	5	121	799	290	38	704	211
Lane Group Flow (vph)	367	191	39	279	203	5	121	799	290	38	704	211
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	4	4	4	8	8	8	2	2	2	6	6	6
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	20.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	33.6	33.6	33.6	33.6	33.6	33.6	32.6	32.6	32.6	32.6	32.6	32.6
Total Split (s)	41.6	41.6	41.6	41.6	41.6	41.6	66.0	66.0	66.0	66.0	66.0	66.0
Total Split (%)	38.7%	38.7%	38.7%	38.7%	38.7%	38.7%	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%
Yellow Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	37.6	37.6	37.6	37.6	37.6	37.6	62.0	62.0	62.0	62.0	62.0	62.0
Actuated g/C Ratio	0.35	0.35	0.35	0.35	0.35	0.35	0.58	0.58	0.58	0.58	0.58	0.58

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.19	0.29	0.11	0.83	0.34	0.01	0.59	0.58	0.46	0.17	0.41	0.22
Control Delay	145.5	26.9	8.3	54.8	27.9	14.2	29.3	16.8	3.8	13.1	13.5	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	145.5	26.9	8.3	54.8	27.9	14.2	29.3	16.8	3.8	13.1	13.5	2.0
LOS	F	C	A	D	C	B	C	B	A	B	B	A
Approach Delay		98.6			43.2			14.9			10.9	
Approach LOS		F			D			B			B	
Queue Length 50th (m)	~93.0	28.7	0.0	53.2	31.1	0.0	15.3	53.0	0.0	3.5	40.4	0.0
Queue Length 95th (m)	#148.5	46.6	7.0	#99.1	50.3	2.5	39.7	71.1	11.3	9.4	53.0	9.3
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0		75.0	130.0		80.0	85.0		175.0	45.0		138.0
Base Capacity (vph)	309	652	353	335	594	411	205	1366	637	225	1738	961
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.29	0.11	0.83	0.34	0.01	0.59	0.58	0.46	0.17	0.41	0.22

Intersection Summary

Area Type: Other
Cycle Length: 107.6
Actuated Cycle Length: 107.6
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 33.4 Intersection LOS: C
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50



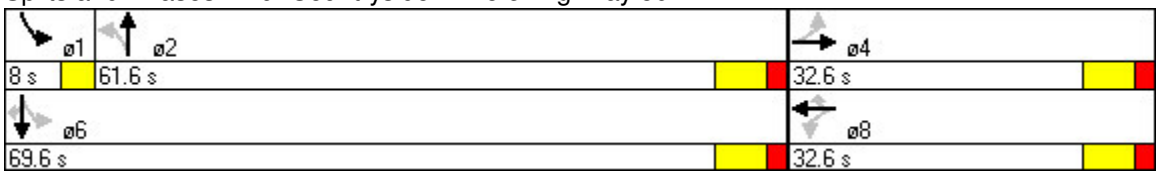
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		70.0	0.0		0.0	90.0		25.0
Storage Lanes	0		0	0		1	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2	15.2	15.2	15.2		15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.994				0.850		0.998				0.850
Flt Protected		0.993			0.996		0.950			0.950		
Satd. Flow (prot)	0	1866	0	0	1847	1570	1755	3370	0	1772	3318	1633
Flt Permitted		0.891			0.970		0.264			0.065		
Satd. Flow (perm)	0	1674	0	0	1799	1570	488	3370	0	121	3318	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				101		2				17
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	25	142	8	21	268	515	26	1881	21	247	1018	21
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	11%	3%	4%	4%	8%	16%	3%	10%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	25	142	8	21	268	515	26	1881	21	247	1018	21
Lane Group Flow (vph)	0	175	0	0	289	515	26	1902	0	247	1018	21
Turn Type	Perm			Perm		Perm	Perm			pm+pt		Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	4	4		8	8	8	2	2		1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	32.6	32.6		32.6	32.6	32.6	26.6	26.6		8.0	26.6	26.6
Total Split (s)	32.6	32.6	0.0	32.6	32.6	32.6	61.6	61.6	0.0	8.0	69.6	69.6
Total Split (%)	31.9%	31.9%	0.0%	31.9%	31.9%	31.9%	60.3%	60.3%	0.0%	7.8%	68.1%	68.1%
Yellow Time (s)	4.6	4.6		4.6	4.6	4.6	4.6	4.6		3.0	4.6	4.6
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	Max
Act Effct Green (s)		28.6			28.6	28.6	57.6	57.6		65.6	65.6	65.6
Actuated g/C Ratio		0.28			0.28	0.28	0.56	0.56		0.64	0.64	0.64

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.37			0.57	1.01	0.09	1.00		1.74	0.48	0.02
Control Delay		32.1			36.9	72.1	11.5	44.0		379.5	10.4	3.5
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		32.1			36.9	72.1	11.5	44.0		379.5	10.4	3.5
LOS		C			D	E	B	D		F	B	A
Approach Delay		32.1			59.5			43.6			81.2	
Approach LOS		C			E			D			F	
Queue Length 50th (m)		27.5			49.2	~87.1	2.2	~187.8		~42.3	49.9	0.3
Queue Length 95th (m)		46.4			75.9	#154.4	6.4	#250.7		#87.9	63.7	2.8
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)						70.0				90.0		25.0
Base Capacity (vph)		470			503	512	275	1900		142	2130	1054
Starvation Cap Reductn		0			0	0	0	0		0	0	0
Spillback Cap Reductn		0			0	0	0	0		0	0	0
Storage Cap Reductn		0			0	0	0	0		0	0	0
Reduced v/c Ratio		0.37			0.57	1.01	0.09	1.00		1.74	0.48	0.02

Intersection Summary

Area Type: Other
Cycle Length: 102.2
Actuated Cycle Length: 102.2
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.74
Intersection Signal Delay: 57.7 Intersection LOS: E
Intersection Capacity Utilization 104.3% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Countryside Drive & Highway 50



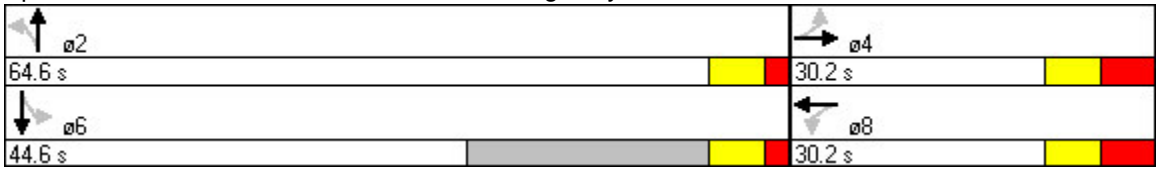
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2		15.2	15.2		15.2	15.2	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.882			0.902			0.998			0.998	
Flt Protected					0.994		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1644	0	1807	3413	0	1789	3311	0
Flt Permitted					0.968		0.296			0.112		
Satd. Flow (perm)	0	1694	0	0	1601	0	563	3413	0	211	3311	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56			51			3			2	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			335.4			2091.9	
Travel Time (s)		11.5			12.9			15.1			94.1	
Volume (vph)	0	8	56	12	17	76	92	1462	22	68	832	9
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	27%	6%	1%	1%	6%	55%	2%	10%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	8	56	12	17	76	92	1462	22	68	832	9
Lane Group Flow (vph)	0	64	0	0	105	0	92	1484	0	68	841	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		2	2		6	6	
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	30.2	30.2		30.2	30.2		23.0	23.0		23.0	23.0	
Total Split (s)	30.2	30.2	0.0	30.2	30.2	0.0	64.6	64.6	0.0	44.6	44.6	0.0
Total Split (%)	31.9%	31.9%	0.0%	31.9%	31.9%	0.0%	68.1%	68.1%	0.0%	47.0%	47.0%	0.0%
Yellow Time (s)	4.6	4.6		4.6	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0		2.0	2.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)		18.1			18.1		72.4	72.4		72.4	72.4	
Actuated g/C Ratio		0.18			0.18		0.77	0.77		0.77	0.77	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.18			0.31		0.21	0.57		0.42	0.33	
Control Delay		11.0			18.6		5.8	6.7		15.5	4.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		11.0			18.6		5.8	6.7		15.5	4.7	
LOS		B			B		A	A		B	A	
Approach Delay		11.0			18.6			6.7			5.5	
Approach LOS		B			B			A			A	
Queue Length 50th (m)		1.1			7.4		4.5	55.8		4.1	24.0	
Queue Length 95th (m)		10.8			20.6		10.9	76.2		17.8	33.6	
Internal Link Dist (m)		200.3			227.0			311.4			2067.9	
Turn Bay Length (m)							50.0			50.0		
Base Capacity (vph)		469			441		433	2622		162	2544	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.14			0.24		0.21	0.57		0.42	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 94.8
Actuated Cycle Length: 94.3
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 6.9 Intersection LOS: A
Intersection Capacity Utilization 74.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 12: Coleraine Drive & Highway 50



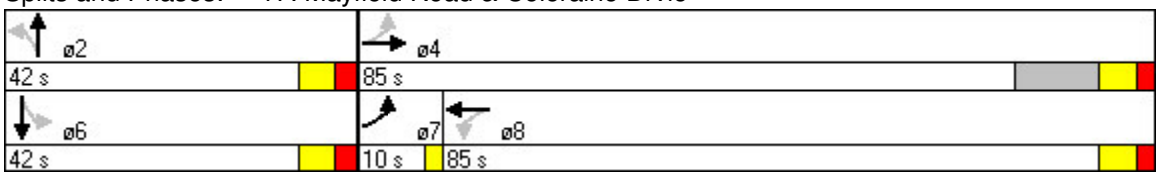
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2		15.2	15.2		15.2	15.2	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.997			0.992			0.986			0.887	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1547	3470	0	1825	3388	0	1825	3567	0	1276	3166	0
Flt Permitted	0.393			0.456			0.587			0.692		
Satd. Flow (perm)	640	3470	0	876	3388	0	1128	3567	0	930	3166	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			8			8			153	
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	102	517	12	9	514	30	17	87	9	8	50	153
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	18%	5%	0%	0%	5%	39%	0%	1%	0%	43%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	102	517	12	9	514	30	17	87	9	8	50	153
Lane Group Flow (vph)	102	529	0	9	544	0	17	96	0	8	203	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		8	8		2	2		6	6	
Minimum Initial (s)	5.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	33.0		33.0	33.0		33.0	33.0		33.0	33.0	
Total Split (s)	10.0	85.0	0.0	85.0	85.0	0.0	42.0	42.0	0.0	42.0	42.0	0.0
Total Split (%)	7.3%	62.0%	0.0%	62.0%	62.0%	0.0%	30.7%	30.7%	0.0%	30.7%	30.7%	0.0%
Yellow Time (s)	2.0	4.6		4.6	4.6		4.2	4.2		4.2	4.2	
All-Red Time (s)	0.0	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	28.0	27.8		20.2	20.2		38.4	38.4		38.4	38.4	
Actuated g/C Ratio	0.37	0.37		0.27	0.27		0.52	0.52		0.52	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.41		0.04	0.59		0.03	0.05		0.02	0.12	
Control Delay	17.9	17.4		20.4	26.2		11.5	10.3		11.5	3.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.9	17.4		20.4	26.2		11.5	10.3		11.5	3.9	
LOS	B	B		C	C		B	B		B	A	
Approach Delay		17.5			26.1			10.5			4.2	
Approach LOS		B			C			B			A	
Queue Length 50th (m)	9.2	27.5		1.0	35.4		1.2	3.2		0.6	1.7	
Queue Length 95th (m)	18.4	38.7		4.2	49.8		4.8	7.8		3.0	7.6	
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)												
Base Capacity (vph)	307	2306		526	2038		583	1847		480	1710	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.33	0.23		0.02	0.27		0.03	0.05		0.02	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 137
Actuated Cycle Length: 74.3
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 18.3 Intersection LOS: B
Intersection Capacity Utilization 48.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 17: Mayfield Road & Coleraine Drvie



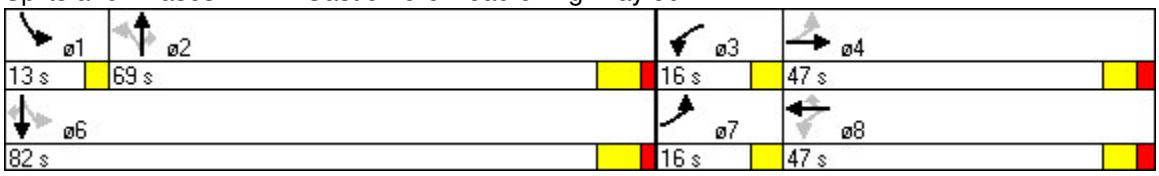
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		0.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		0	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (m)	15.2	15.2		15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.997				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3563	0	1043	1847	1237	1825	3318	1002	1630	3288	1633
Flt Permitted	0.093			0.273			0.266			0.058		
Satd. Flow (perm)	169	3563	0	300	1847	1237	511	3318	1002	99	3288	1633
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				67			88			5
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			555.3	
Travel Time (s)		25.1			30.2			13.0			25.0	
Volume (vph)	34	554	13	155	919	76	30	1792	93	173	938	5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	2%	8%	75%	4%	32%	0%	10%	63%	12%	11%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	34	554	13	155	919	76	30	1792	93	173	938	5
Lane Group Flow (vph)	34	567	0	155	919	76	30	1792	93	173	938	5
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Detector Phases	7	4		3	8	8	2	2	2	1	6	6
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	35.7		8.5	35.7	35.7	37.4	37.4	37.4	8.0	37.4	37.4
Total Split (s)	16.0	47.0	0.0	16.0	47.0	47.0	69.0	69.0	69.0	13.0	82.0	82.0
Total Split (%)	11.0%	32.4%	0.0%	11.0%	32.4%	32.4%	47.6%	47.6%	47.6%	9.0%	56.6%	56.6%
Yellow Time (s)	4.0	4.2		4.0	4.2	4.2	5.4	5.4	5.4	3.0	5.4	5.4
All-Red Time (s)	0.0	2.5		0.0	2.5	2.5	2.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None		None	None	None	Max	Max	Max	None	Max	Max
Act Effct Green (s)	41.7	34.2		49.9	43.1	43.1	65.1	65.1	65.1	78.2	78.2	78.2
Actuated g/C Ratio	0.30	0.25		0.37	0.32	0.32	0.48	0.48	0.48	0.57	0.57	0.57

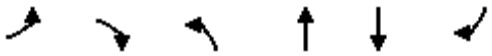
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.26	0.63		0.89	1.57	0.17	0.12	1.13	0.18	1.09	0.50	0.01
Control Delay	32.7	48.6		78.9	299.5	11.0	23.4	101.4	5.7	131.7	19.2	8.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	48.6		78.9	299.5	11.0	23.4	101.4	5.7	131.7	19.2	8.2
LOS	C	D		E	F	B	C	F	A	F	B	A
Approach Delay		47.7			250.7			95.6			36.6	
Approach LOS		D			F			F			D	
Queue Length 50th (m)	5.9	71.6		30.8	~366.5	1.8	4.7	~310.4	0.7	~41.3	82.2	0.0
Queue Length 95th (m)	13.1	90.7		#69.7	#452.5	13.8	11.8	#360.2	11.0	#90.8	103.2	2.0
Internal Link Dist (m)		534.8			647.0			264.8			531.3	
Turn Bay Length (m)	120.0			166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	183	1058		175	584	436	244	1584	525	158	1884	938
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.54		0.89	1.57	0.17	0.12	1.13	0.18	1.09	0.50	0.01

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 136.4
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.57
Intersection Signal Delay: 113.1 Intersection LOS: F
Intersection Capacity Utilization 124.2% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50

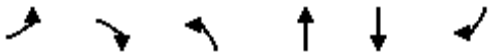




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	48	35	1640	988	12
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	48	35	1640	988	12
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)					335	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	1884	500	1000			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1878	419	946			
tC, single (s)	7.1	7.4	5.6			
tC, 2 stage (s)						
tF (s)	3.7	3.6	3.0			
p0 queue free %	59	90	91			
cM capacity (veh/h)	46	492	376			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	67	35	820	820	659	341
Volume Left	19	35	0	0	0	0
Volume Right	48	0	0	0	0	12
cSH	132	376	1700	1700	1700	1700
Volume to Capacity	0.51	0.09	0.48	0.48	0.39	0.20
Queue Length 95th (m)	18.2	2.3	0.0	0.0	0.0	0.0
Control Delay (s)	57.6	15.5	0.0	0.0	0.0	0.0
Lane LOS	F	C				
Approach Delay (s)	57.6	0.3			0.0	
Approach LOS	F					

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	11	7	30	2124	1360	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	11	7	30	2124	1360	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2482	680	1375			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2482	680	1375			
tC, single (s)	8.3	8.3	4.4			
tC, 2 stage (s)						
tF (s)	4.2	4.0	2.3			
p0 queue free %	0	97	93			
cM capacity (veh/h)	8	266	441			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	18	30	1062	1062	680	680	15
Volume Left	11	30	0	0	0	0	0
Volume Right	7	0	0	0	0	0	15
cSH	13	441	1700	1700	1700	1700	1700
Volume to Capacity	1.36	0.07	0.62	0.62	0.40	0.40	0.01
Queue Length 95th (m)	22.2	1.7	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	776.7	13.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B					
Approach Delay (s)	776.7	0.2			0.0		
Approach LOS	F						

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

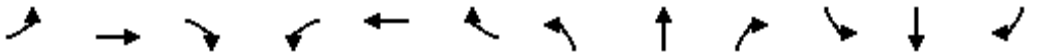
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		175.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	1740	1101	3429	1789	1174	1439	3305	1493	1668	3433	1452
Flt Permitted	0.277			0.950			0.074			0.219		
Satd. Flow (perm)	491	1740	1101	3429	1789	1174	112	3305	1493	385	3433	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			101			409			316
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	269	206	221	635	327	101	45	845	409	6	1351	316
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	8%	45%	1%	5%	36%	24%	8%	7%	7%	4%	10%
Adj. Flow (vph)	269	206	221	635	327	101	45	845	409	6	1351	316
Lane Group Flow (vph)	269	206	221	635	327	101	45	845	409	6	1351	316
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	21.0	22.0	22.0	29.0	30.0	30.0	12.0	57.0	57.0	12.0	57.0	57.0
Total Split (%)	17.5%	18.3%	18.3%	24.2%	25.0%	25.0%	10.0%	47.5%	47.5%	10.0%	47.5%	47.5%
Maximum Green (s)	18.0	16.0	16.0	26.0	24.0	24.0	9.0	51.0	51.0	9.0	51.0	51.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	35.6	18.5	18.5	24.8	26.1	26.1	63.0	61.3	61.3	60.3	54.3	54.3
Actuated g/C Ratio	0.31	0.16	0.16	0.21	0.23	0.23	0.53	0.53	0.53	0.49	0.47	0.47
v/c Ratio	0.82	0.74	0.76	0.87	0.81	0.30	0.29	0.48	0.42	0.02	0.84	0.37
Control Delay	48.4	64.6	37.7	57.6	60.2	9.8	17.3	19.2	3.1	14.3	34.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	64.6	37.7	57.6	60.2	9.8	17.3	19.2	3.1	14.3	34.0	3.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	E	D	E	E	A	B	B	A	B	C	A
Approach Delay		49.8			53.9			14.1			28.2	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	44.6	46.9	19.4	74.5	73.6	0.0	4.7	60.5	0.0	0.6	148.6	0.0
Queue Length 95th (m)	#82.8	#80.5	#57.7	#102.1	#117.5	14.1	10.3	93.7	16.8	2.6	180.5	15.4
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		175.0	45.0		138.0
Base Capacity (vph)	338	285	293	764	415	350	161	1751	983	280	1610	848
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.72	0.75	0.83	0.79	0.29	0.28	0.48	0.42	0.02	0.84	0.37

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 115.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 33.3 Intersection LOS: C
Intersection Capacity Utilization 79.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50



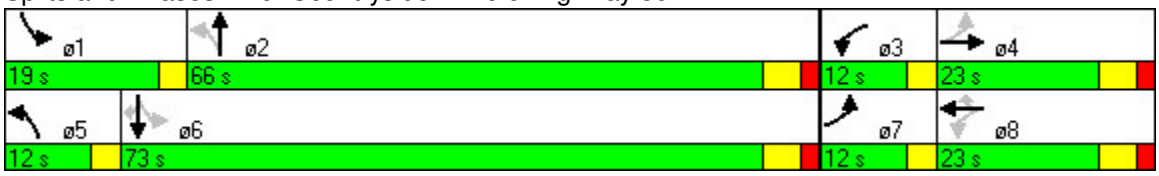
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.930				0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1566	3253	0	1623	3500	1331	1623	3267	0	1638	3305	1365
Flt Permitted	0.656			0.200			0.063			0.069		
Satd. Flow (perm)	1081	3253	0	342	3500	1331	108	3267	0	119	3305	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		156				154		10				11
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	27	290	251	22	119	154	78	1333	106	205	1722	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	3%	1%	10%	2%	20%	10%	8%	9%	9%	8%	17%
Adj. Flow (vph)	27	290	251	22	119	154	78	1333	106	205	1722	33
Lane Group Flow (vph)	27	541	0	22	119	154	78	1439	0	205	1722	33
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	12.0	22.0		12.0	22.0	22.0	12.0	22.0		12.0	22.0	22.0
Total Split (s)	12.0	23.0	0.0	12.0	23.0	23.0	12.0	66.0	0.0	19.0	73.0	73.0
Total Split (%)	10.0%	19.2%	0.0%	10.0%	19.2%	19.2%	10.0%	55.0%	0.0%	15.8%	60.8%	60.8%
Maximum Green (s)	9.0	17.0		9.0	17.0	17.0	9.0	60.0		16.0	67.0	67.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	24.1	20.6		23.5	18.3	18.3	72.3	63.9		80.9	71.6	71.6
Actuated g/C Ratio	0.21	0.18		0.20	0.16	0.16	0.63	0.57		0.72	0.64	0.64
v/c Ratio	0.10	0.74		0.14	0.21	0.45	0.43	0.77		0.75	0.81	0.04
Control Delay	35.1	38.3		36.8	43.3	11.3	21.8	23.4		42.0	21.5	7.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	35.1	38.3		36.8	43.3	11.3	21.8	23.4		42.0	21.5	7.8

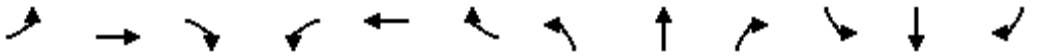
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	D		D	D	B	C	C		D	C	A
Approach Delay		38.1			26.1			23.3			23.4	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	4.8	40.7		3.9	12.8	0.0	4.5	128.2		26.7	152.5	1.8
Queue Length 95th (m)	12.1	#67.9		10.4	21.5	18.2	18.7	177.0		#61.5	214.8	6.5
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)				70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	261	742		165	618	362	188	1869		298	2114	877
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.10	0.73		0.13	0.19	0.43	0.41	0.77		0.69	0.81	0.04

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 112
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 25.5 Intersection LOS: C
Intersection Capacity Utilization 80.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Countryside Drive & Highway 50





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1566	949	5129	1597	3463	3245	974	3429	3336	1597
Flt Permitted	0.181			0.085			0.148			0.133		
Satd. Flow (perm)	340	5129	1566	85	5129	1597	539	3245	974	480	3336	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			340			457			79			27
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	119	1634	607	158	1131	974	499	751	79	757	999	27
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	88%	0%	0%	0%	10%	64%	1%	7%	0%
Adj. Flow (vph)	119	1634	607	158	1131	974	499	751	79	757	999	27
Lane Group Flow (vph)	119	1634	607	158	1131	974	499	751	79	757	999	27
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	47.0	47.0	19.0	54.0	54.0	16.0	30.0	30.0	24.0	38.0	38.0
Total Split (%)	10.0%	39.2%	39.2%	15.8%	45.0%	45.0%	13.3%	25.0%	25.0%	20.0%	31.7%	31.7%
Maximum Green (s)	9.0	41.0	41.0	16.0	48.0	48.0	13.0	24.0	24.0	21.0	32.0	32.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	53.0	44.0	44.0	63.0	51.0	51.0	40.0	27.0	27.0	51.0	35.0	35.0
Actuated g/C Ratio	0.44	0.37	0.37	0.52	0.42	0.42	0.33	0.22	0.22	0.42	0.29	0.29
v/c Ratio	0.46	0.87	0.77	0.99	0.52	1.03	1.01	1.03	0.28	1.05	1.03	0.06
Control Delay	21.3	41.4	21.6	102.7	26.5	57.4	74.2	86.6	11.0	81.3	77.9	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	41.4	21.6	102.7	26.5	57.4	74.2	86.6	11.0	81.3	77.9	11.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	C	F	C	E	E	F	B	F	E	B
Approach Delay		35.3			45.1			77.5			78.3	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	13.7	129.8	57.4	29.1	70.6	~180.3	~45.5	~99.5	0.0	~84.7	~132.1	0.0
Queue Length 95th (m)	23.6	149.9	106.5	#72.7	84.1	#258.0	#81.1	#137.4	12.6	#122.7	#172.6	6.9
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	259	1881	790	160	2182	942	496	730	280	720	973	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.87	0.77	0.99	0.52	1.03	1.01	1.03	0.28	1.05	1.03	0.06

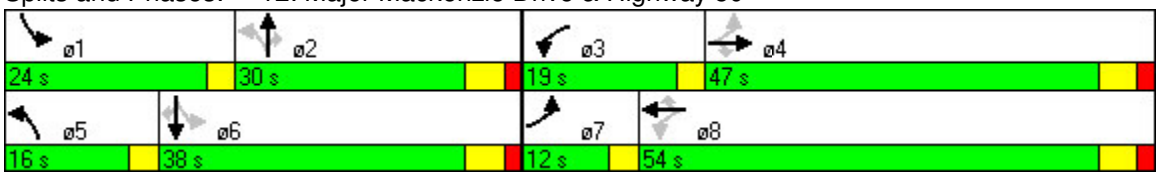
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 55.3 Intersection LOS: E
Intersection Capacity Utilization 97.7% ICU Level of Service F
Analysis Period (min) 15

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

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

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



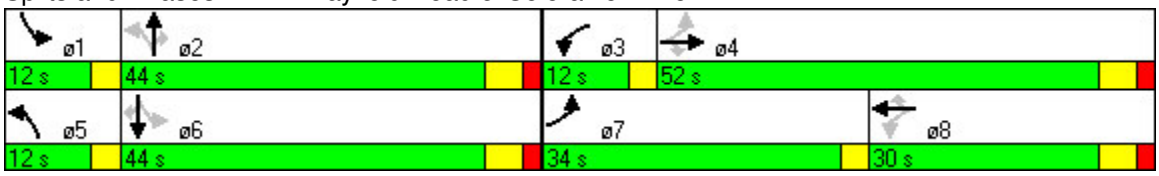
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	3245	1597	1785	3368	1479	1684	3305	1365	1102	3500	1309
Flt Permitted	0.133			0.389			0.098			0.538		
Satd. Flow (perm)	240	3245	1597	731	3368	1479	174	3305	1365	624	3500	1309
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			46			36			2			97
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	458	691	46	46	719	47	14	263	2	28	1061	156
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	10%	0%	0%	6%	8%	6%	8%	17%	62%	2%	22%
Adj. Flow (vph)	458	691	46	46	719	47	14	263	2	28	1061	156
Lane Group Flow (vph)	458	691	46	46	719	47	14	263	2	28	1061	156
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	34.0	52.0	52.0	12.0	30.0	30.0	12.0	44.0	44.0	12.0	44.0	44.0
Total Split (%)	28.3%	43.3%	43.3%	10.0%	25.0%	25.0%	10.0%	36.7%	36.7%	10.0%	36.7%	36.7%
Maximum Green (s)	31.0	46.0	46.0	9.0	24.0	24.0	9.0	38.0	38.0	9.0	38.0	38.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	60.3	51.2	51.2	35.5	27.1	27.1	42.7	37.6	37.6	43.5	40.1	40.1
Actuated g/C Ratio	0.54	0.46	0.46	0.31	0.24	0.24	0.36	0.34	0.34	0.38	0.36	0.36
v/c Ratio	0.86	0.46	0.06	0.15	0.87	0.12	0.08	0.23	0.00	0.10	0.84	0.29
Control Delay	45.4	23.5	6.5	17.7	53.9	16.3	21.5	28.0	18.5	21.4	40.3	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	23.5	6.5	17.7	53.9	16.3	21.5	28.0	18.5	21.4	40.3	12.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C	A	B	D	B	C	C	B	C	D	B
Approach Delay		31.2			49.7			27.6			36.5	
Approach LOS		C			D			C			D	
Queue Length 50th (m)	72.9	51.4	0.0	4.1	76.1	1.8	1.8	23.2	0.0	3.7	103.2	8.0
Queue Length 95th (m)	#149.3	81.2	7.1	11.4	#125.3	11.9	5.7	33.5	1.9	9.3	#160.1	26.0
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	540	1498	762	316	825	390	178	1191	493	272	1288	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.46	0.06	0.15	0.87	0.12	0.08	0.22	0.00	0.10	0.82	0.29

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 110.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1668	5029	1566	1032	4980	1452	1733	3187	1011	1500	3336	1413
Flt Permitted	0.301			0.174			0.075			0.078		
Satd. Flow (perm)	529	5029	1566	189	4980	1452	137	3187	1011	123	3336	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			119			191			92
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	345	1797	127	94	450	119	13	1235	191	142	1716	104
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	2%	2%	73%	3%	10%	3%	12%	58%	19%	7%	13%
Adj. Flow (vph)	345	1797	127	94	450	119	13	1235	191	142	1716	104
Lane Group Flow (vph)	345	1797	127	94	450	119	13	1235	191	142	1716	104
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	26.0	40.0	40.0	12.0	26.0	26.0	12.0	56.0	56.0	12.0	56.0	56.0
Total Split (%)	21.7%	33.3%	33.3%	10.0%	21.7%	21.7%	10.0%	46.7%	46.7%	10.0%	46.7%	46.7%
Maximum Green (s)	23.0	34.0	34.0	9.0	20.0	20.0	9.0	50.0	50.0	9.0	50.0	50.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	49.0	37.0	37.0	32.8	23.8	23.8	61.1	53.0	53.0	64.0	60.4	60.4
Actuated g/C Ratio	0.41	0.31	0.31	0.27	0.20	0.20	0.48	0.44	0.44	0.53	0.50	0.50
v/c Ratio	0.81	1.16	0.22	0.82	0.45	0.31	0.08	0.88	0.35	0.84	1.02	0.14
Control Delay	42.9	117.0	7.3	75.3	44.4	9.6	14.6	39.1	4.7	62.5	57.8	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	117.0	7.3	75.3	44.4	9.6	14.6	39.1	4.7	62.5	57.8	5.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	F	A	E	D	A	B	D	A	E	E	A
Approach Delay		99.6			42.5			34.3			55.4	
Approach LOS		F			D			C			E	
Queue Length 50th (m)	59.7	~183.3	1.3	14.2	34.8	0.0	1.4	136.6	0.0	18.7	192.4	1.3
Queue Length 95th (m)	#90.5	#212.8	15.0	#42.4	45.9	15.4	4.4	168.6	13.3	#55.5	#293.7	11.5
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	431	1551	565	115	990	383	180	1408	553	169	1680	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.16	0.22	0.82	0.45	0.31	0.07	0.88	0.35	0.84	1.02	0.14

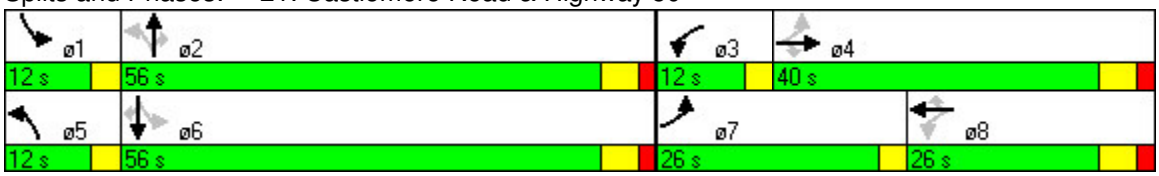
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.16
Intersection Signal Delay: 65.1 Intersection LOS: E
Intersection Capacity Utilization 105.7% ICU Level of Service G
Analysis Period (min) 15

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

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

Splits and Phases: 21: Castlemore Road & Highway 50



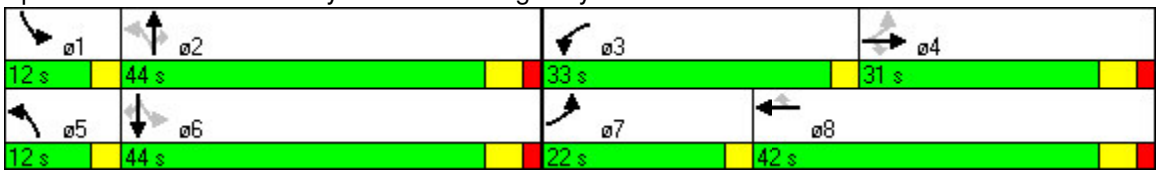
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		85.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	1740	1101	3429	1789	1174	1439	4749	1493	1668	4932	1452
Flt Permitted	0.483			0.950			0.098			0.217		
Satd. Flow (perm)	856	1740	1101	3429	1789	1174	148	4749	1493	381	4932	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148			101			409			316
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	269	206	221	635	327	101	45	845	409	6	1351	316
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	8%	45%	1%	5%	36%	24%	8%	7%	7%	4%	10%
Adj. Flow (vph)	269	206	221	635	327	101	45	845	409	6	1351	316
Lane Group Flow (vph)	269	206	221	635	327	101	45	845	409	6	1351	316
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	22.0	31.0	31.0	33.0	42.0	42.0	12.0	44.0	44.0	12.0	44.0	44.0
Total Split (%)	18.3%	25.8%	25.8%	27.5%	35.0%	35.0%	10.0%	36.7%	36.7%	10.0%	36.7%	36.7%
Maximum Green (s)	19.0	25.0	25.0	30.0	36.0	36.0	9.0	38.0	38.0	9.0	38.0	38.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	38.4	22.0	22.0	25.4	31.0	31.0	47.7	46.5	46.5	46.2	42.1	42.1
Actuated g/C Ratio	0.37	0.21	0.21	0.24	0.29	0.29	0.44	0.44	0.44	0.41	0.40	0.40
v/c Ratio	0.61	0.57	0.64	0.77	0.62	0.24	0.27	0.40	0.46	0.02	0.68	0.41
Control Delay	24.5	45.4	23.4	45.0	38.4	7.3	23.1	22.6	4.4	20.8	31.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	45.4	23.4	45.0	38.4	7.3	23.1	22.6	4.4	20.8	31.1	4.9

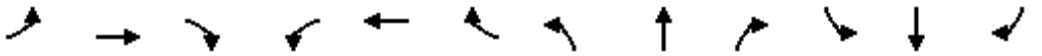
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	C	D	D	A	C	C	A	C	C	A
Approach Delay		30.4			39.4			16.9			26.1	
Approach LOS		C			D			B			C	
Queue Length 50th (m)	35.9	42.2	14.1	67.4	63.2	0.0	5.5	44.5	0.0	0.7	97.9	0.0
Queue Length 95th (m)	54.0	66.4	41.4	91.7	92.6	12.2	13.1	70.5	21.2	3.3	123.3	18.8
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		85.0	45.0		138.0
Base Capacity (vph)	477	444	391	949	623	475	171	2101	889	257	1975	771
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.46	0.57	0.67	0.52	0.21	0.26	0.40	0.46	0.02	0.68	0.41

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 105.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 27.2 Intersection LOS: C
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Mayfield Road & Highway 50



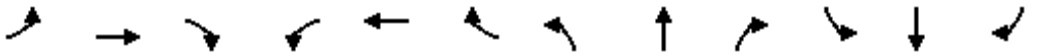


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2		15.2	15.2	15.2	15.2	15.2		15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.930				0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1566	3253	0	1623	3500	1331	1623	4694	0	1638	4749	1365
Flt Permitted	0.667			0.196			0.085			0.080		
Satd. Flow (perm)	1099	3253	0	335	3500	1331	145	4694	0	138	4749	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		166				154		12				13
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	27	290	251	22	119	154	78	1333	106	205	1722	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	3%	1%	10%	2%	20%	10%	8%	9%	9%	8%	17%
Adj. Flow (vph)	27	290	251	22	119	154	78	1333	106	205	1722	33
Lane Group Flow (vph)	27	541	0	22	119	154	78	1439	0	205	1722	33
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	12.0	22.0		12.0	22.0	22.0	12.0	22.0		12.0	22.0	22.0
Total Split (s)	14.0	29.0	0.0	14.0	29.0	29.0	15.0	50.0	0.0	27.0	62.0	62.0
Total Split (%)	11.7%	24.2%	0.0%	11.7%	24.2%	24.2%	12.5%	41.7%	0.0%	22.5%	51.7%	51.7%
Maximum Green (s)	11.0	23.0		11.0	23.0	23.0	12.0	44.0		24.0	56.0	56.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	26.1	22.4		25.1	19.8	19.8	61.1	51.9		70.2	60.3	60.3
Actuated g/C Ratio	0.24	0.22		0.23	0.19	0.19	0.58	0.50		0.68	0.58	0.58
v/c Ratio	0.09	0.65		0.12	0.18	0.41	0.36	0.61		0.65	0.62	0.04
Control Delay	29.2	30.0		30.9	37.7	9.6	17.3	22.4		30.7	18.0	10.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	29.2	30.0		30.9	37.7	9.6	17.3	22.4		30.7	18.0	10.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	C		C	D	A	B	C		C	B	B
Approach Delay		29.9			22.5			22.1			19.2	
Approach LOS		C			C			C			B	
Queue Length 50th (m)	4.1	34.3		3.4	11.4	0.0	4.5	69.2		21.9	79.5	1.6
Queue Length 95th (m)	10.9	61.1		9.4	20.3	16.9	16.9	123.9		51.7	131.5	7.7
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)	70.0			70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	312	926		206	842	437	251	2368		411	2774	803
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.09	0.58		0.11	0.14	0.35	0.31	0.61		0.50	0.62	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 21.9		Intersection LOS: C	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: Countryside Drive & Highway 50



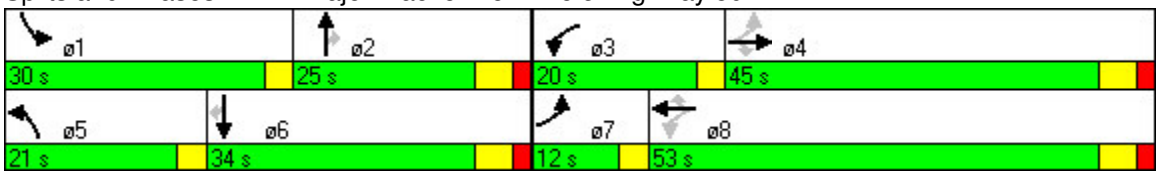
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1566	949	5129	1597	3463	4663	974	3429	4794	1597
Flt Permitted	0.183			0.089			0.950			0.950		
Satd. Flow (perm)	344	5129	1566	89	5129	1597	3463	4663	974	3429	4794	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			431			569			79			27
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	119	1634	607	158	1131	974	499	751	79	757	999	27
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	88%	0%	0%	0%	10%	64%	1%	7%	0%
Adj. Flow (vph)	119	1634	607	158	1131	974	499	751	79	757	999	27
Lane Group Flow (vph)	119	1634	607	158	1131	974	499	751	79	757	999	27
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	45.0	45.0	20.0	53.0	53.0	21.0	25.0	25.0	30.0	34.0	34.0
Total Split (%)	10.0%	37.5%	37.5%	16.7%	44.2%	44.2%	17.5%	20.8%	20.8%	25.0%	28.3%	28.3%
Maximum Green (s)	9.0	39.0	39.0	17.0	47.0	47.0	18.0	19.0	19.0	27.0	28.0	28.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	51.0	42.0	42.0	62.0	50.0	50.0	18.0	22.0	22.0	27.0	31.0	31.0
Actuated g/C Ratio	0.42	0.35	0.35	0.52	0.42	0.42	0.15	0.18	0.18	0.22	0.26	0.26
v/c Ratio	0.47	0.91	0.73	0.94	0.53	0.98	0.96	0.88	0.33	0.98	0.81	0.06
Control Delay	22.3	45.9	15.3	89.2	27.3	38.4	81.9	60.4	13.0	74.5	47.7	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	45.9	15.3	89.2	27.3	38.4	81.9	60.4	13.0	74.5	47.7	12.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	B	F	C	D	F	E	B	E	D	B
Approach Delay		36.8			36.4			65.7			58.6	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	14.0	133.5	34.8	28.7	71.8	122.1	60.9	63.7	0.0	91.9	80.9	0.0
Queue Length 95th (m)	24.1	#154.6	81.1	#70.6	85.4	#226.4	#93.5	#84.4	13.4	#131.1	97.7	7.2
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	254	1795	828	168	2139	997	519	855	243	772	1238	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.91	0.73	0.94	0.53	0.98	0.96	0.88	0.33	0.98	0.81	0.06

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 46.7 Intersection LOS: D
Intersection Capacity Utilization 91.4% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



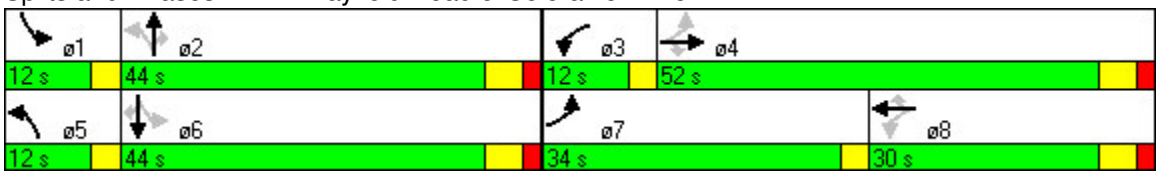
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	3245	1597	1785	3368	1479	1684	3305	1365	1102	3500	1309
Flt Permitted	0.133			0.389			0.098			0.538		
Satd. Flow (perm)	240	3245	1597	731	3368	1479	174	3305	1365	624	3500	1309
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			46			36			2			97
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	458	691	46	46	719	47	14	263	2	28	1061	156
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	10%	0%	0%	6%	8%	6%	8%	17%	62%	2%	22%
Adj. Flow (vph)	458	691	46	46	719	47	14	263	2	28	1061	156
Lane Group Flow (vph)	458	691	46	46	719	47	14	263	2	28	1061	156
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	34.0	52.0	52.0	12.0	30.0	30.0	12.0	44.0	44.0	12.0	44.0	44.0
Total Split (%)	28.3%	43.3%	43.3%	10.0%	25.0%	25.0%	10.0%	36.7%	36.7%	10.0%	36.7%	36.7%
Maximum Green (s)	31.0	46.0	46.0	9.0	24.0	24.0	9.0	38.0	38.0	9.0	38.0	38.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	60.3	51.2	51.2	35.5	27.1	27.1	42.7	37.6	37.6	43.5	40.1	40.1
Actuated g/C Ratio	0.54	0.46	0.46	0.31	0.24	0.24	0.36	0.34	0.34	0.38	0.36	0.36
v/c Ratio	0.86	0.46	0.06	0.15	0.87	0.12	0.08	0.23	0.00	0.10	0.84	0.29
Control Delay	45.4	23.5	6.5	17.7	53.9	16.3	21.5	28.0	18.5	21.4	40.3	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	23.5	6.5	17.7	53.9	16.3	21.5	28.0	18.5	21.4	40.3	12.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C	A	B	D	B	C	C	B	C	D	B
Approach Delay		31.2			49.7			27.6			36.5	
Approach LOS		C			D			C			D	
Queue Length 50th (m)	72.9	51.4	0.0	4.1	76.1	1.8	1.8	23.2	0.0	3.7	103.2	8.0
Queue Length 95th (m)	#149.3	81.2	7.1	11.4	#125.3	11.9	5.7	33.5	1.9	9.3	#160.1	26.0
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	540	1498	762	316	825	390	178	1191	493	272	1288	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.46	0.06	0.15	0.87	0.12	0.08	0.22	0.00	0.10	0.82	0.29

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 110.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



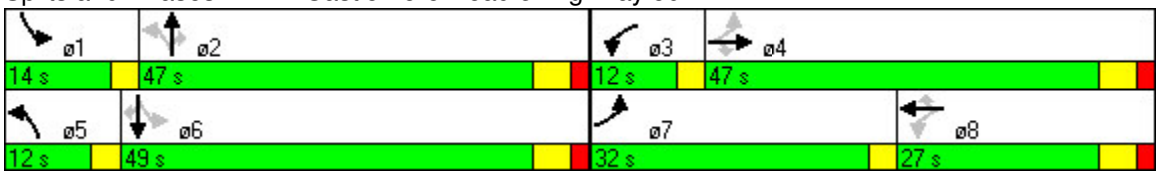
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1668	5029	1566	1032	4980	1452	1733	4580	1011	1500	4794	1413
Flt Permitted	0.310			0.167			0.091			0.100		
Satd. Flow (perm)	544	5029	1566	181	4980	1452	166	4580	1011	158	4794	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127			119			191			104
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	345	1797	127	94	450	119	13	1235	191	142	1716	104
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	2%	2%	73%	3%	10%	3%	12%	58%	19%	7%	13%
Adj. Flow (vph)	345	1797	127	94	450	119	13	1235	191	142	1716	104
Lane Group Flow (vph)	345	1797	127	94	450	119	13	1235	191	142	1716	104
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	32.0	47.0	47.0	12.0	27.0	27.0	12.0	47.0	47.0	14.0	49.0	49.0
Total Split (%)	26.7%	39.2%	39.2%	10.0%	22.5%	22.5%	10.0%	39.2%	39.2%	11.7%	40.8%	40.8%
Maximum Green (s)	29.0	41.0	41.0	9.0	21.0	21.0	9.0	41.0	41.0	11.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	56.0	44.0	44.0	38.3	29.3	29.3	52.1	44.0	44.0	57.7	53.3	53.3
Actuated g/C Ratio	0.47	0.37	0.37	0.32	0.24	0.24	0.41	0.37	0.37	0.48	0.44	0.44
v/c Ratio	0.72	0.97	0.19	0.77	0.37	0.27	0.08	0.74	0.39	0.72	0.81	0.15
Control Delay	31.2	53.2	5.1	65.9	39.7	8.7	18.2	36.1	6.1	42.8	33.4	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	53.2	5.1	65.9	39.7	8.7	18.2	36.1	6.1	42.8	33.4	5.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	E	D	A	B	D	A	D	C	A
Approach Delay		47.2			37.8			32.0			32.6	
Approach LOS		D			D			C			C	
Queue Length 50th (m)	53.2	151.3	0.0	12.7	32.5	0.0	1.6	91.5	0.0	18.5	115.7	0.0
Queue Length 95th (m)	78.0	#186.4	12.3	#42.2	45.4	15.3	5.0	108.8	15.8	#46.0	#171.7	10.9
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	504	1846	655	122	1218	445	180	1680	492	199	2131	686
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.97	0.19	0.77	0.37	0.27	0.07	0.74	0.39	0.71	0.81	0.15

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.9
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 38.2 Intersection LOS: D
Intersection Capacity Utilization 91.4% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		175.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	1789	1109	3148	1740	1479	1332	3336	1566	1716	3275	1452
Flt Permitted	0.292			0.950			0.112			0.093		
Satd. Flow (perm)	528	1789	1109	3148	1740	1479	157	3336	1566	168	3275	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			50			7			520			299
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	351	363	50	454	229	7	245	1501	705	112	939	299
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	5%	44%	10%	8%	8%	34%	7%	2%	4%	9%	10%
Adj. Flow (vph)	351	363	50	454	229	7	245	1501	705	112	939	299
Lane Group Flow (vph)	351	363	50	454	229	7	245	1501	705	112	939	299
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	23.0	28.0	28.0	21.0	26.0	26.0	25.0	59.0	59.0	12.0	46.0	46.0
Total Split (%)	19.2%	23.3%	23.3%	17.5%	21.7%	21.7%	20.8%	49.2%	49.2%	10.0%	38.3%	38.3%
Maximum Green (s)	20.0	22.0	22.0	18.0	20.0	20.0	22.0	53.0	53.0	9.0	40.0	40.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	45.0	25.0	25.0	18.0	23.0	23.0	67.9	56.0	56.0	53.7	44.8	44.8
Actuated g/C Ratio	0.38	0.21	0.21	0.15	0.19	0.19	0.57	0.47	0.47	0.45	0.37	0.37
v/c Ratio	0.89	0.97	0.18	0.96	0.69	0.02	0.86	0.96	0.70	0.59	0.77	0.41
Control Delay	54.7	87.9	12.5	83.7	56.8	22.4	54.4	47.1	10.2	33.9	38.5	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	87.9	12.5	83.7	56.8	22.4	54.4	47.1	10.2	33.9	38.5	4.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	F	B	F	E	C	D	D	B	C	D	A
Approach Delay		67.7			74.1			37.2			30.7	
Approach LOS		E			E			D			C	
Queue Length 50th (m)	63.4	85.6	0.0	55.4	50.7	0.0	39.7	175.8	29.4	11.6	103.8	0.0
Queue Length 95th (m)	#104.4	#144.9	10.5	#87.1	78.0	4.1	#80.6	#228.6	74.1	29.2	129.6	18.0
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		175.0	45.0		138.0
Base Capacity (vph)	396	373	271	472	334	289	300	1558	1008	192	1224	730
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.97	0.18	0.96	0.69	0.02	0.82	0.96	0.70	0.58	0.77	0.41

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.9
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 44.8 Intersection LOS: D
Intersection Capacity Utilization 93.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50

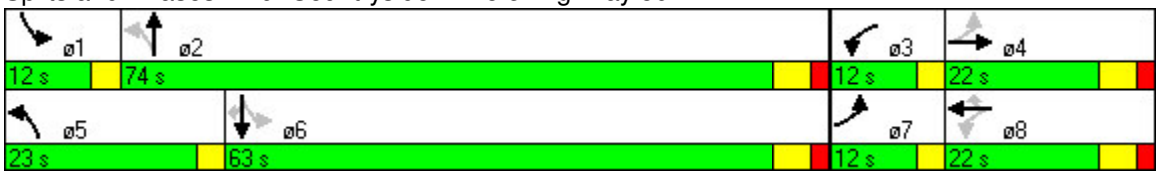
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.941				0.850		0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3319	0	1608	3466	1536	1716	3296	0	1733	3245	1597
Flt Permitted	0.338			0.490			0.063			0.067		
Satd. Flow (perm)	635	3319	0	829	3466	1536	114	3296	0	122	3245	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86				212		2				10
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	36	132	86	118	321	227	279	1913	24	171	1480	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	0%	11%	3%	4%	4%	8%	16%	3%	10%	0%
Adj. Flow (vph)	36	132	86	118	321	227	279	1913	24	171	1480	30
Lane Group Flow (vph)	36	218	0	118	321	227	279	1937	0	171	1480	30
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	12.0	22.0		12.0	22.0	22.0	12.0	22.0		12.0	22.0	22.0
Total Split (s)	12.0	22.0	0.0	12.0	22.0	22.0	23.0	74.0	0.0	12.0	63.0	63.0
Total Split (%)	10.0%	18.3%	0.0%	10.0%	18.3%	18.3%	19.2%	61.7%	0.0%	10.0%	52.5%	52.5%
Maximum Green (s)	9.0	16.0		9.0	16.0	16.0	20.0	68.0		9.0	57.0	57.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	25.2	16.4		26.7	21.4	21.4	83.1	71.1		70.7	61.7	61.7
Actuated g/C Ratio	0.21	0.14		0.23	0.18	0.18	0.71	0.61		0.60	0.53	0.53
v/c Ratio	0.17	0.41		0.48	0.51	0.50	0.84	0.97		0.87	0.87	0.04
Control Delay	36.6	29.6		43.4	47.7	11.8	54.1	37.7		67.3	32.2	11.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.6	29.6		43.4	47.7	11.8	54.1	37.7		67.3	32.2	11.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		D	D	B	D	D		E	C	B
Approach Delay		30.6			34.7			39.7			35.4	
Approach LOS		C			C			D			D	
Queue Length 50th (m)	6.5	14.5		22.3	37.3	3.0	48.1	224.4		24.9	163.3	2.3
Queue Length 95th (m)	14.9	26.2		38.7	52.4	26.0	#89.6	#290.8		#65.7	#205.5	7.2
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)				70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	217	598		248	631	453	349	1994		197	1704	844
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.17	0.36		0.48	0.51	0.50	0.80	0.97		0.87	0.87	0.04

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Countryside Drive & Highway 50



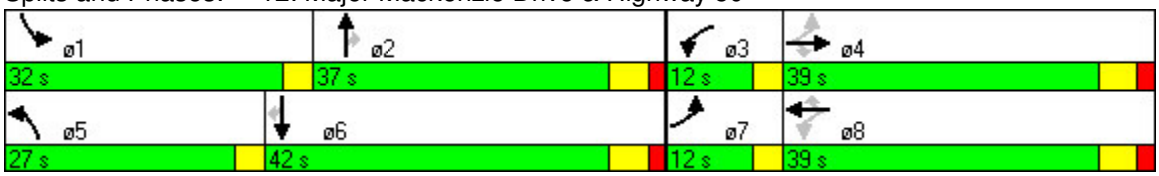
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1597	1405	4839	1581	3429	3368	1030	3395	3245	1413
Flt Permitted	0.111			0.111			0.950			0.950		
Satd. Flow (perm)	209	5129	1597	164	4839	1581	3429	3368	1030	3395	3245	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			467			537			139			132
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	30	1257	554	88	1816	841	674	1111	176	1083	835	132
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	27%	6%	1%	1%	6%	55%	2%	10%	13%
Adj. Flow (vph)	30	1257	554	88	1816	841	674	1111	176	1083	835	132
Lane Group Flow (vph)	30	1257	554	88	1816	841	674	1111	176	1083	835	132
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	39.0	39.0	12.0	39.0	39.0	27.0	37.0	37.0	32.0	42.0	42.0
Total Split (%)	10.0%	32.5%	32.5%	10.0%	32.5%	32.5%	22.5%	30.8%	30.8%	26.7%	35.0%	35.0%
Maximum Green (s)	9.0	33.0	33.0	9.0	33.0	33.0	24.0	31.0	31.0	29.0	36.0	36.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	43.0	36.1	36.1	43.9	38.5	38.5	24.0	34.1	34.1	29.1	39.1	39.1
Actuated g/C Ratio	0.35	0.31	0.31	0.37	0.33	0.33	0.20	0.29	0.29	0.25	0.33	0.33
v/c Ratio	0.16	0.80	0.68	0.58	1.15	0.96	0.96	1.14	0.44	1.29	0.77	0.24
Control Delay	24.6	42.5	11.1	39.3	110.8	36.7	72.8	114.1	13.2	177.2	41.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	42.5	11.1	39.3	110.8	36.7	72.8	114.1	13.2	177.2	41.7	6.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	B	D	F	D	E	F	B	F	D	A
Approach Delay		32.8			85.8			90.8			111.0	
Approach LOS		C			F			F			F	
Queue Length 50th (m)	4.3	100.4	15.2	13.1	~194.5	92.2	82.1	~163.4	6.5	~169.9	93.7	0.0
Queue Length 95th (m)	10.3	118.1	54.0	#25.2	#225.0	#183.7	#119.7	#204.4	26.6	#210.1	118.0	13.4
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	190	1573	814	153	1583	879	701	975	397	838	1078	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.80	0.68	0.58	1.15	0.96	0.96	1.14	0.44	1.29	0.77	0.24

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117.6
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.29
Intersection Signal Delay: 81.6 Intersection LOS: F
Intersection Capacity Utilization 115.0% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



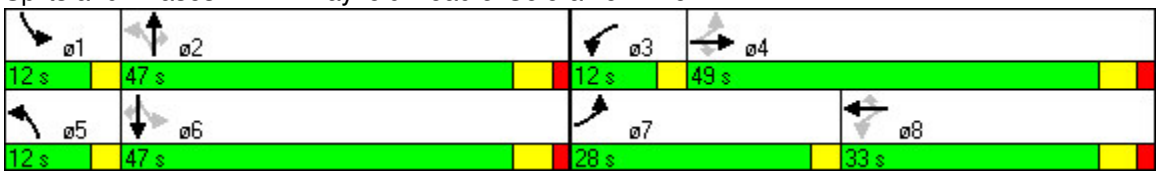
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1513	3400	1597	1785	3400	1149	1785	3535	1597	1248	3570	1551
Flt Permitted	0.159			0.309			0.519			0.091		
Satd. Flow (perm)	253	3400	1597	581	3400	1149	975	3535	1597	120	3570	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			17			37			39			555
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	225	798	19	3	630	40	67	1181	67	68	293	662
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	18%	5%	0%	0%	5%	39%	0%	1%	0%	43%	0%	3%
Adj. Flow (vph)	225	798	19	3	630	40	67	1181	67	68	293	662
Lane Group Flow (vph)	225	798	19	3	630	40	67	1181	67	68	293	662
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	28.0	49.0	49.0	12.0	33.0	33.0	12.0	47.0	47.0	12.0	47.0	47.0
Total Split (%)	23.3%	40.8%	40.8%	10.0%	27.5%	27.5%	10.0%	39.2%	39.2%	10.0%	39.2%	39.2%
Maximum Green (s)	25.0	43.0	43.0	9.0	27.0	27.0	9.0	41.0	41.0	9.0	41.0	41.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	50.5	48.5	48.5	35.2	27.4	27.4	48.0	41.8	41.8	48.1	41.9	41.9
Actuated g/C Ratio	0.47	0.45	0.45	0.30	0.26	0.26	0.44	0.39	0.39	0.44	0.39	0.39
v/c Ratio	0.64	0.52	0.03	0.01	0.72	0.12	0.14	0.86	0.10	0.47	0.21	0.70
Control Delay	29.8	23.9	9.6	19.7	43.8	13.0	18.0	39.6	13.2	30.4	24.5	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	23.9	9.6	19.7	43.8	13.0	18.0	39.6	13.2	30.4	24.5	10.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	C	A	B	D	B	B	D	B	C	C	B
Approach Delay		25.0			41.9			37.2			15.5	
Approach LOS		C			D			D			B	
Queue Length 50th (m)	31.3	64.9	0.3	0.4	69.5	0.5	8.1	131.8	4.0	8.4	23.7	16.2
Queue Length 95th (m)	55.1	97.8	5.1	2.0	92.9	9.3	16.8	#178.9	13.8	19.2	35.2	62.3
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	400	1601	761	278	951	348	494	1444	675	148	1459	962
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.50	0.02	0.01	0.66	0.11	0.14	0.82	0.10	0.46	0.20	0.69

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 107.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 29.4 Intersection LOS: C
Intersection Capacity Utilization 80.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



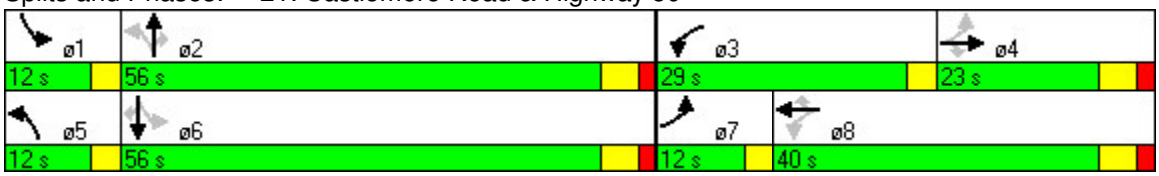
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	5029	1479	1020	4932	1210	1785	3245	980	1594	3216	1597
Flt Permitted	0.200			0.233			0.075			0.075		
Satd. Flow (perm)	355	5029	1479	250	4932	1210	141	3245	980	126	3216	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			14			158			105			238
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	116	500	14	212	1996	158	140	1907	105	132	1372	383
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	2%	8%	75%	4%	32%	0%	10%	63%	12%	11%	0%
Adj. Flow (vph)	116	500	14	212	1996	158	140	1907	105	132	1372	383
Lane Group Flow (vph)	116	500	14	212	1996	158	140	1907	105	132	1372	383
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	23.0	23.0	29.0	40.0	40.0	12.0	56.0	56.0	12.0	56.0	56.0
Total Split (%)	10.0%	19.2%	19.2%	24.2%	33.3%	33.3%	10.0%	46.7%	46.7%	10.0%	46.7%	46.7%
Maximum Green (s)	9.0	17.0	17.0	26.0	34.0	34.0	9.0	50.0	50.0	9.0	50.0	50.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	31.3	22.3	22.3	49.0	37.0	37.0	62.0	53.0	53.0	62.0	53.0	53.0
Actuated g/C Ratio	0.26	0.19	0.19	0.41	0.31	0.31	0.52	0.44	0.44	0.52	0.44	0.44
v/c Ratio	0.60	0.54	0.05	0.83	1.31	0.33	0.71	1.33	0.21	0.75	0.97	0.46
Control Delay	39.6	47.3	19.4	54.9	180.3	6.7	42.5	183.8	4.9	49.8	50.1	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	47.3	19.4	54.9	180.3	6.7	42.5	183.8	4.9	49.8	50.1	10.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	D	B	D	F	A	D	F	A	D	D	B
Approach Delay		45.2			157.5			165.9			42.0	
Approach LOS		D			F			F			D	
Queue Length 50th (m)	17.1	40.3	0.0	36.7	~221.7	0.0	16.5	~307.0	0.0	16.5	162.2	20.6
Queue Length 95th (m)	#33.6	52.4	5.9	#73.7	#251.0	15.1	#45.2	#349.0	10.0	#47.2	#212.7	45.4
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	192	933	286	264	1521	482	196	1433	491	175	1420	838
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.54	0.05	0.80	1.31	0.33	0.71	1.33	0.21	0.75	0.97	0.46

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.33
Intersection Signal Delay: 119.0 Intersection LOS: F
Intersection Capacity Utilization 118.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50



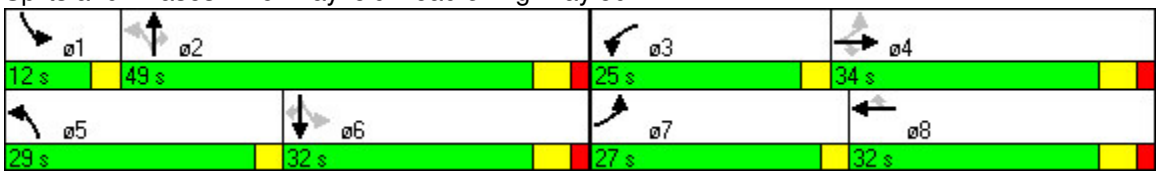
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		85.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	1789	1109	3148	1740	1479	1332	4794	1566	1716	4706	1452
Flt Permitted	0.372			0.950			0.125			0.138		
Satd. Flow (perm)	672	1789	1109	3148	1740	1479	175	4794	1566	249	4706	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			50			7			546			299
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	351	363	50	454	229	7	245	1501	705	112	939	299
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	5%	44%	10%	8%	8%	34%	7%	2%	4%	9%	10%
Adj. Flow (vph)	351	363	50	454	229	7	245	1501	705	112	939	299
Lane Group Flow (vph)	351	363	50	454	229	7	245	1501	705	112	939	299
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	27.0	34.0	34.0	25.0	32.0	32.0	29.0	49.0	49.0	12.0	32.0	32.0
Total Split (%)	22.5%	28.3%	28.3%	20.8%	26.7%	26.7%	24.2%	40.8%	40.8%	10.0%	26.7%	26.7%
Maximum Green (s)	24.0	28.0	28.0	22.0	26.0	26.0	26.0	43.0	43.0	9.0	26.0	26.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	51.2	29.4	29.4	21.0	28.7	28.7	58.0	46.1	46.1	42.2	33.2	33.2
Actuated g/C Ratio	0.44	0.25	0.25	0.18	0.24	0.24	0.49	0.39	0.39	0.36	0.28	0.28
v/c Ratio	0.72	0.81	0.16	0.80	0.54	0.02	0.82	0.80	0.75	0.56	0.71	0.48
Control Delay	31.2	56.8	10.7	58.5	44.5	19.7	49.3	36.0	12.5	33.4	42.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	56.8	10.7	58.5	44.5	19.7	49.3	36.0	12.5	33.4	42.7	7.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	E	B	E	D	B	D	D	B	C	D	A
Approach Delay		42.0			53.5			30.6			34.0	
Approach LOS		D			D			C			C	
Queue Length 50th (m)	54.1	79.8	0.0	53.1	47.3	0.0	41.6	114.9	29.1	14.2	75.5	0.0
Queue Length 95th (m)	78.9	#123.0	9.8	#71.9	72.8	3.8	#76.2	134.1	80.4	28.7	93.6	22.5
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		85.0	45.0		138.0
Base Capacity (vph)	506	466	326	585	436	376	331	1881	946	202	1331	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.78	0.15	0.78	0.53	0.02	0.74	0.80	0.75	0.55	0.71	0.48

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50

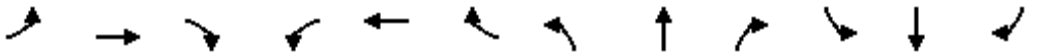


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2		15.2	15.2	15.2	15.2	15.2		15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.941				0.850		0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3319	0	1608	3466	1536	1716	4736	0	1733	4663	1597
Flt Permitted	0.371			0.465			0.080			0.075		
Satd. Flow (perm)	697	3319	0	787	3466	1536	145	4736	0	137	4663	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		86				227		2				13
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	36	132	86	118	321	227	279	1913	24	171	1480	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	0%	11%	3%	4%	4%	8%	16%	3%	10%	0%
Adj. Flow (vph)	36	132	86	118	321	227	279	1913	24	171	1480	30
Lane Group Flow (vph)	36	218	0	118	321	227	279	1937	0	171	1480	30
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	12.0	22.0		12.0	22.0	22.0	12.0	22.0		12.0	22.0	22.0
Total Split (s)	12.0	22.0	0.0	13.0	23.0	23.0	29.0	65.0	0.0	20.0	56.0	56.0
Total Split (%)	10.0%	18.3%	0.0%	10.8%	19.2%	19.2%	24.2%	54.2%	0.0%	16.7%	46.7%	46.7%
Maximum Green (s)	9.0	16.0		10.0	17.0	17.0	26.0	59.0		17.0	50.0	50.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	25.0	16.3		28.1	22.3	22.3	78.4	62.2		69.6	56.3	56.3
Actuated g/C Ratio	0.21	0.14		0.25	0.20	0.20	0.69	0.55		0.61	0.49	0.49
v/c Ratio	0.16	0.40		0.45	0.47	0.47	0.76	0.75		0.63	0.64	0.04
Control Delay	35.1	28.9		40.3	45.0	9.2	39.2	23.0		34.3	24.3	12.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	35.1	28.9		40.3	45.0	9.2	39.2	23.0		34.3	24.3	12.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		D	D	A	D	C		C	C	B
Approach Delay		29.7			32.0			25.0			25.1	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	6.2	14.1		21.3	35.8	0.0	42.3	124.3		21.1	93.2	2.0
Queue Length 95th (m)	14.7	26.2		38.2	51.8	21.6	70.4	151.9		44.7	119.7	7.8
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)	70.0			70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	232	614		266	680	484	434	2589		316	2306	796
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.16	0.36		0.44	0.47	0.47	0.64	0.75		0.54	0.64	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 113.8			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 74.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Countryside Drive & Highway 50



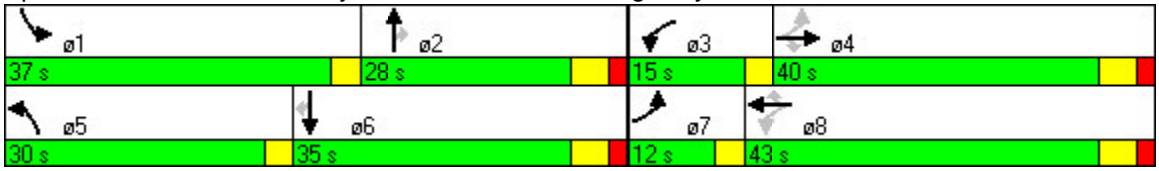
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1597	1405	4839	1581	3429	4839	1030	3395	4663	1413
Flt Permitted	0.108			0.100			0.950			0.950		
Satd. Flow (perm)	203	5129	1597	148	4839	1581	3429	4839	1030	3395	4663	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			550			658			129			132
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	30	1257	554	88	1816	841	674	1111	176	1083	835	132
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	27%	6%	1%	1%	6%	55%	2%	10%	13%
Adj. Flow (vph)	30	1257	554	88	1816	841	674	1111	176	1083	835	132
Lane Group Flow (vph)	30	1257	554	88	1816	841	674	1111	176	1083	835	132
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	40.0	40.0	15.0	43.0	43.0	30.0	28.0	28.0	37.0	35.0	35.0
Total Split (%)	10.0%	33.3%	33.3%	12.5%	35.8%	35.8%	25.0%	23.3%	23.3%	30.8%	29.2%	29.2%
Maximum Green (s)	9.0	34.0	34.0	12.0	37.0	37.0	27.0	22.0	22.0	34.0	29.0	29.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	44.5	37.7	37.7	49.3	42.2	42.2	26.2	25.0	25.0	34.1	32.9	32.9
Actuated g/C Ratio	0.37	0.32	0.32	0.41	0.36	0.36	0.22	0.21	0.21	0.29	0.28	0.28
v/c Ratio	0.16	0.76	0.62	0.50	1.04	0.85	0.88	1.08	0.55	1.10	0.64	0.27
Control Delay	22.3	40.1	6.3	31.5	70.9	17.4	58.3	94.7	20.2	99.2	40.4	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	40.1	6.3	31.5	70.9	17.4	58.3	94.7	20.2	99.2	40.4	7.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	C	E	B	E	F	C	F	D	A
Approach Delay		29.6			53.2			75.5			69.4	
Approach LOS		C			D			E			E	
Queue Length 50th (m)	4.0	99.1	0.7	12.3	~179.7	43.1	79.3	~108.9	9.3	~152.0	64.4	0.0
Queue Length 95th (m)	9.7	116.7	27.6	23.8	#210.6	#138.6	#108.9	#137.4	32.5	#192.2	79.2	14.7
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	191	1649	887	186	1742	990	785	1033	322	986	1307	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.76	0.62	0.47	1.04	0.85	0.86	1.08	0.55	1.10	0.64	0.27

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117.3
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 57.1 Intersection LOS: E
Intersection Capacity Utilization 105.8% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



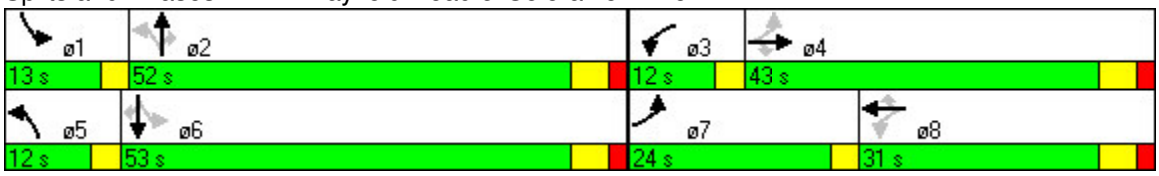
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1513	3400	1597	1785	3400	1149	1785	3535	1597	1248	3570	1551
Flt Permitted	0.136			0.233			0.543			0.080		
Satd. Flow (perm)	217	3400	1597	438	3400	1149	1020	3535	1597	105	3570	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			15			36			41			534
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	225	798	19	4	630	40	67	1181	67	68	293	662
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	18%	5%	0%	0%	5%	39%	0%	1%	0%	43%	0%	3%
Adj. Flow (vph)	225	798	19	4	630	40	67	1181	67	68	293	662
Lane Group Flow (vph)	225	798	19	4	630	40	67	1181	67	68	293	662
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	24.0	43.0	43.0	12.0	31.0	31.0	12.0	52.0	52.0	13.0	53.0	53.0
Total Split (%)	20.0%	35.8%	35.8%	10.0%	25.8%	25.8%	10.0%	43.3%	43.3%	10.8%	44.2%	44.2%
Maximum Green (s)	21.0	37.0	37.0	9.0	25.0	25.0	9.0	46.0	46.0	10.0	47.0	47.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	47.8	45.8	45.8	34.1	26.2	26.2	51.2	45.0	45.0	52.6	45.7	45.7
Actuated g/C Ratio	0.44	0.42	0.42	0.29	0.24	0.24	0.46	0.41	0.41	0.48	0.42	0.42
v/c Ratio	0.71	0.56	0.03	0.02	0.77	0.13	0.13	0.81	0.10	0.46	0.19	0.69
Control Delay	39.4	27.8	12.6	22.5	47.6	14.1	15.3	34.5	11.1	28.1	21.6	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	27.8	12.6	22.5	47.6	14.1	15.3	34.5	11.1	28.1	21.6	9.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C	B	C	D	B	B	C	B	C	C	A
Approach Delay		30.0			45.5			32.3			14.3	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	35.2	71.8	0.5	0.5	73.8	0.7	7.6	128.1	3.6	7.9	22.7	18.9
Queue Length 95th (m)	#63.9	106.7	5.8	2.6	95.1	9.7	15.0	156.3	12.5	19.0	32.2	62.2
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	346	1477	703	238	889	327	534	1562	729	155	1605	991
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.54	0.03	0.02	0.71	0.12	0.13	0.76	0.09	0.44	0.18	0.67

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 108.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 29.4 Intersection LOS: C
Intersection Capacity Utilization 80.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



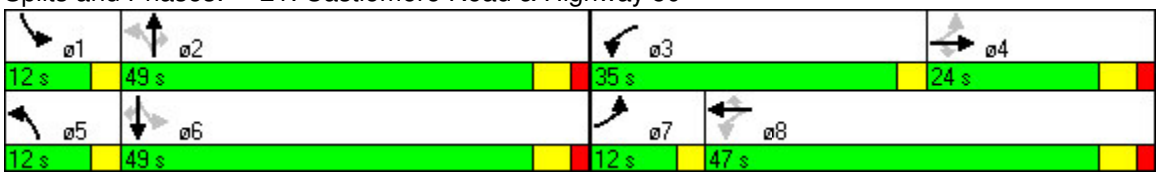
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	5029	1479	1020	4932	1210	1785	4663	980	1594	4621	1597
Flt Permitted	0.190			0.244			0.087			0.087		
Satd. Flow (perm)	337	5029	1479	262	4932	1210	163	4663	980	146	4621	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			14			158			105			209
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	116	500	14	212	1996	158	140	1907	105	132	1372	383
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	2%	8%	75%	4%	32%	0%	10%	63%	12%	11%	0%
Adj. Flow (vph)	116	500	14	212	1996	158	140	1907	105	132	1372	383
Lane Group Flow (vph)	116	500	14	212	1996	158	140	1907	105	132	1372	383
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	24.0	24.0	35.0	47.0	47.0	12.0	49.0	49.0	12.0	49.0	49.0
Total Split (%)	10.0%	20.0%	20.0%	29.2%	39.2%	39.2%	10.0%	40.8%	40.8%	10.0%	40.8%	40.8%
Maximum Green (s)	9.0	18.0	18.0	32.0	41.0	41.0	9.0	43.0	43.0	9.0	43.0	43.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	37.9	28.9	28.9	56.0	44.0	44.0	55.0	46.0	46.0	55.0	46.0	46.0
Actuated g/C Ratio	0.32	0.24	0.24	0.47	0.37	0.37	0.46	0.38	0.38	0.46	0.38	0.38
v/c Ratio	0.56	0.41	0.04	0.77	1.10	0.29	0.71	1.07	0.24	0.75	0.77	0.52
Control Delay	34.7	41.0	18.5	42.2	92.0	5.4	42.9	77.9	6.0	49.3	36.1	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	41.0	18.5	42.2	92.0	5.4	42.9	77.9	6.0	49.3	36.1	15.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	B	D	F	A	D	E	A	D	D	B
Approach Delay		39.3			81.7			72.1			32.8	
Approach LOS		D			F			E			C	
Queue Length 50th (m)	15.3	36.5	0.0	32.7	~195.9	0.0	18.0	~181.8	0.0	17.0	102.6	29.4
Queue Length 95th (m)	#33.5	51.9	5.8	57.7	#225.2	13.7	#45.1	#211.1	11.2	#47.0	121.0	57.8
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	207	1212	367	305	1808	544	196	1787	440	176	1771	741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.41	0.04	0.70	1.10	0.29	0.71	1.07	0.24	0.75	0.77	0.52

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 61.9 Intersection LOS: E
Intersection Capacity Utilization 102.5% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50



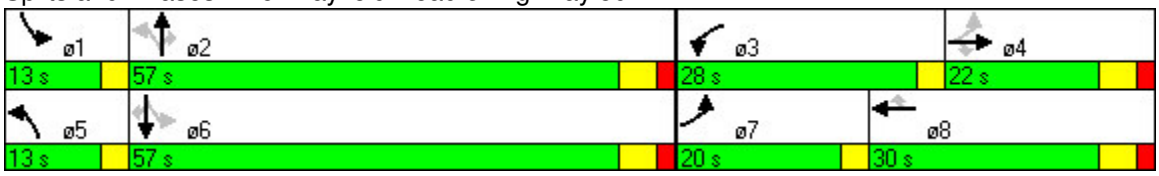
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		175.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	1740	1101	3429	1789	1174	1439	3305	1493	1668	3433	1452
Flt Permitted	0.211			0.950			0.074			0.183		
Satd. Flow (perm)	374	1740	1101	3429	1789	1174	112	3305	1493	321	3433	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			141			112			452			349
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	297	228	244	701	361	112	50	933	452	7	1492	349
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	8%	45%	1%	5%	36%	24%	8%	7%	7%	4%	10%
Adj. Flow (vph)	297	228	244	701	361	112	50	933	452	7	1492	349
Lane Group Flow (vph)	297	228	244	701	361	112	50	933	452	7	1492	349
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	13.0	22.0	22.0	13.0	22.0	22.0	13.0	22.0	22.0	13.0	22.0	22.0
Total Split (s)	20.0	22.0	22.0	28.0	30.0	30.0	13.0	57.0	57.0	13.0	57.0	57.0
Total Split (%)	16.7%	18.3%	18.3%	23.3%	25.0%	25.0%	10.8%	47.5%	47.5%	10.8%	47.5%	47.5%
Maximum Green (s)	17.0	16.0	16.0	25.0	24.0	24.0	10.0	51.0	51.0	10.0	51.0	51.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	35.9	18.9	18.9	25.1	26.9	26.9	63.8	61.8	61.8	60.3	54.1	54.1
Actuated g/C Ratio	0.31	0.16	0.16	0.21	0.23	0.23	0.54	0.53	0.53	0.48	0.46	0.46
v/c Ratio	0.97	0.81	0.82	0.96	0.88	0.31	0.31	0.53	0.45	0.03	0.94	0.41
Control Delay	78.6	70.6	43.8	70.0	67.0	9.5	17.2	20.0	3.1	13.9	43.2	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	70.6	43.8	70.0	67.0	9.5	17.2	20.0	3.1	13.9	43.2	3.6

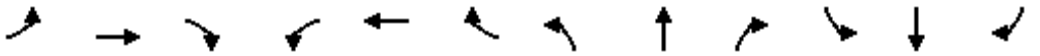
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	E	D	E	E	A	B	C	A	B	D	A
Approach Delay		65.2			63.3			14.6			35.6	
Approach LOS		E			E			B			D	
Queue Length 50th (m)	55.1	52.5	24.2	85.1	82.9	0.0	5.2	67.9	0.0	0.7	175.4	0.0
Queue Length 95th (m)	#112.4	#93.2	#68.6	#123.4	#136.1	14.5	11.0	105.0	17.3	2.8	#227.8	16.0
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		175.0	45.0		138.0
Base Capacity (vph)	306	283	297	734	413	357	170	1746	1002	261	1588	859
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.81	0.82	0.96	0.87	0.31	0.29	0.53	0.45	0.03	0.94	0.41

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 40.4 Intersection LOS: D
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50





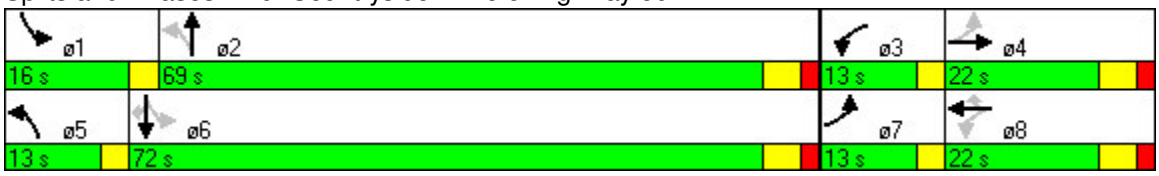
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.930				0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1566	3253	0	1623	3500	1331	1623	3267	0	1638	3305	1365
Flt Permitted	0.633			0.211			0.061			0.058		
Satd. Flow (perm)	1043	3253	0	360	3500	1331	104	3267	0	100	3305	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		154				170		11				11
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	30	320	277	24	131	170	86	1472	117	226	1902	36
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	3%	1%	10%	2%	20%	10%	8%	9%	9%	8%	17%
Adj. Flow (vph)	30	320	277	24	131	170	86	1472	117	226	1902	36
Lane Group Flow (vph)	30	597	0	24	131	170	86	1589	0	226	1902	36
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	13.0	22.0		13.0	22.0	22.0	13.0	22.0		13.0	22.0	22.0
Total Split (s)	13.0	22.0	0.0	13.0	22.0	22.0	13.0	69.0	0.0	16.0	72.0	72.0
Total Split (%)	10.8%	18.3%	0.0%	10.8%	18.3%	18.3%	10.8%	57.5%	0.0%	13.3%	60.0%	60.0%
Maximum Green (s)	10.0	16.0		10.0	16.0	16.0	10.0	63.0		13.0	66.0	66.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	24.8	19.1		24.5	18.9	18.9	75.2	66.2		82.3	72.4	72.4
Actuated g/C Ratio	0.21	0.17		0.21	0.17	0.17	0.64	0.58		0.72	0.63	0.63
v/c Ratio	0.12	0.89		0.14	0.23	0.47	0.46	0.84		0.91	0.91	0.04
Control Delay	35.2	51.9		35.8	43.9	11.4	23.2	25.9		71.2	28.5	8.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	35.2	51.9		35.8	43.9	11.4	23.2	25.9		71.2	28.5	8.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	D		D	D	B	C	C		E	C	A
Approach Delay		51.1			26.3			25.7			32.6	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	5.3	55.3		4.2	14.2	0.0	5.9	159.7		38.4	215.8	2.3
Queue Length 95th (m)	12.9	#89.5		11.0	23.6	19.2	21.1	200.4		#87.9	#287.7	7.0
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)	70.0			70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	262	670		180	582	363	197	1894		247	2091	868
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.11	0.89		0.13	0.23	0.47	0.44	0.84		0.91	0.91	0.04

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 114.5
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 32.2 Intersection LOS: C
Intersection Capacity Utilization 92.5% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Countryside Drive & Highway 50



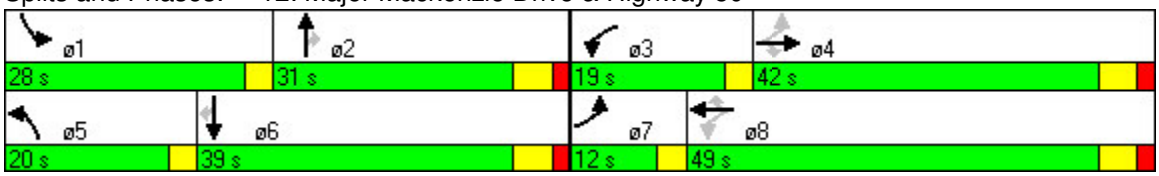
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1566	949	5129	1597	3463	3245	974	3429	3336	1597
Flt Permitted	0.129			0.095			0.950			0.950		
Satd. Flow (perm)	242	5129	1566	95	5129	1597	3463	3245	974	3429	3336	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			374			474			87			30
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	131	1805	671	175	1249	1076	551	830	87	835	1104	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	88%	0%	0%	0%	10%	64%	1%	7%	0%
Adj. Flow (vph)	131	1805	671	175	1249	1076	551	830	87	835	1104	30
Lane Group Flow (vph)	131	1805	671	175	1249	1076	551	830	87	835	1104	30
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	42.0	42.0	19.0	49.0	49.0	20.0	31.0	31.0	28.0	39.0	39.0
Total Split (%)	10.0%	35.0%	35.0%	15.8%	40.8%	40.8%	16.7%	25.8%	25.8%	23.3%	32.5%	32.5%
Maximum Green (s)	9.0	36.0	36.0	16.0	43.0	43.0	17.0	25.0	25.0	25.0	33.0	33.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	48.0	39.0	39.0	58.0	46.0	46.0	17.0	28.0	28.0	25.0	36.0	36.0
Actuated g/C Ratio	0.40	0.32	0.32	0.48	0.38	0.38	0.14	0.23	0.23	0.21	0.30	0.30
v/c Ratio	0.62	1.08	0.88	1.09	0.64	1.19	1.12	1.10	0.30	1.17	1.10	0.06
Control Delay	32.5	87.0	31.2	131.7	32.0	117.2	125.3	105.4	10.5	133.0	100.6	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	87.0	31.2	131.7	32.0	117.2	125.3	105.4	10.5	133.0	100.6	10.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	F	C	F	C	F	F	F	B	F	F	B
Approach Delay		69.9			75.6			107.3			113.0	
Approach LOS		E			E			F			F	
Queue Length 50th (m)	16.7	~174.3	74.0	~38.3	86.8	~233.0	~77.2	~116.4	0.0	~120.6	~155.6	0.0
Queue Length 95th (m)	30.3	#203.8	#148.8	#83.2	102.2	#312.3	#111.2	#155.3	13.2	#158.8	#196.6	6.9
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	213	1667	761	160	1966	904	491	757	294	714	1001	500
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.08	0.88	1.09	0.64	1.19	1.12	1.10	0.30	1.17	1.10	0.06

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 87.9 Intersection LOS: F
Intersection Capacity Utilization 106.8% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



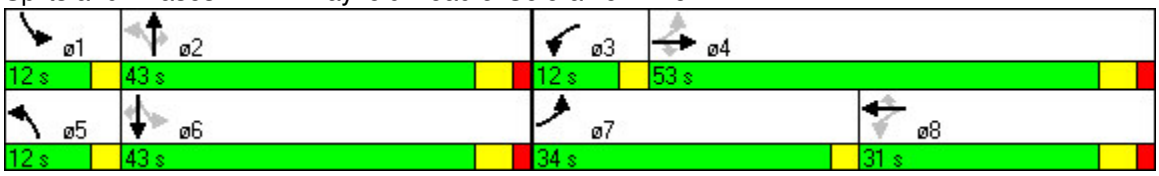
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	3245	1597	1785	3368	1479	1684	3305	1365	1102	3500	1309
Flt Permitted	0.129			0.362			0.100			0.511		
Satd. Flow (perm)	233	3245	1597	680	3368	1479	177	3305	1365	593	3500	1309
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49			37			2			95
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	508	763	51	51	794	52	15	290	2	31	1172	172
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	10%	0%	0%	6%	8%	6%	8%	17%	62%	2%	22%
Adj. Flow (vph)	508	763	51	51	794	52	15	290	2	31	1172	172
Lane Group Flow (vph)	508	763	51	51	794	52	15	290	2	31	1172	172
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	34.0	53.0	53.0	12.0	31.0	31.0	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (%)	28.3%	44.2%	44.2%	10.0%	25.8%	25.8%	10.0%	35.8%	35.8%	10.0%	35.8%	35.8%
Maximum Green (s)	31.0	47.0	47.0	9.0	25.0	25.0	9.0	37.0	37.0	9.0	37.0	37.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	62.2	52.9	52.9	36.6	28.1	28.1	42.7	37.6	37.6	43.6	40.1	40.1
Actuated g/C Ratio	0.55	0.47	0.47	0.32	0.25	0.25	0.36	0.33	0.33	0.37	0.36	0.36
v/c Ratio	0.95	0.50	0.07	0.17	0.95	0.13	0.09	0.26	0.00	0.12	0.94	0.33
Control Delay	58.7	23.8	6.5	17.5	63.1	16.9	22.3	29.1	19.0	22.3	51.1	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	23.8	6.5	17.5	63.1	16.9	22.3	29.1	19.0	22.3	51.1	14.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	C	A	B	E	B	C	C	B	C	D	B
Approach Delay		36.5			57.9			28.7			45.9	
Approach LOS		D			E			C			D	
Queue Length 50th (m)	86.6	57.4	0.2	4.4	85.4	2.4	2.0	26.1	0.0	4.2	121.4	10.7
Queue Length 95th (m)	#176.1	90.1	7.7	12.1	#141.8	13.0	6.1	37.3	1.9	10.2	#193.0	30.9
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	537	1521	775	305	838	396	176	1151	476	259	1245	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.50	0.07	0.17	0.95	0.13	0.09	0.25	0.00	0.12	0.94	0.33

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 112.8
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 44.1 Intersection LOS: D
Intersection Capacity Utilization 92.5% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



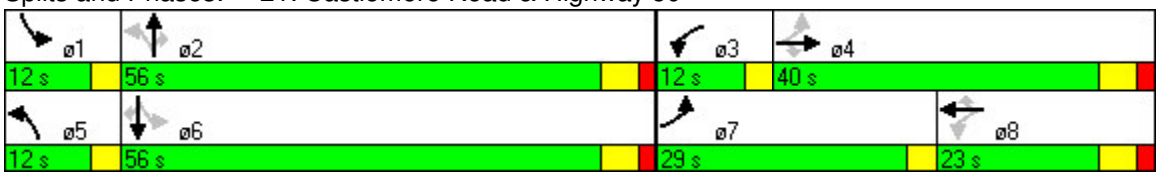
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1668	5029	1566	1032	4980	1452	1733	3187	1011	1500	3336	1413
Flt Permitted	0.235			0.200			0.075			0.075		
Satd. Flow (perm)	413	5029	1566	217	4980	1452	137	3187	1011	118	3336	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			118			131			211			92
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	381	1985	140	104	497	131	14	1364	211	157	1896	115
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	2%	2%	73%	3%	10%	3%	12%	58%	19%	7%	13%
Adj. Flow (vph)	381	1985	140	104	497	131	14	1364	211	157	1896	115
Lane Group Flow (vph)	381	1985	140	104	497	131	14	1364	211	157	1896	115
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	29.0	40.0	40.0	12.0	23.0	23.0	12.0	56.0	56.0	12.0	56.0	56.0
Total Split (%)	24.2%	33.3%	33.3%	10.0%	19.2%	19.2%	10.0%	46.7%	46.7%	10.0%	46.7%	46.7%
Maximum Green (s)	26.0	34.0	34.0	9.0	17.0	17.0	9.0	50.0	50.0	9.0	50.0	50.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	49.0	37.0	37.0	29.9	20.9	20.9	61.1	53.0	53.0	64.0	60.4	60.4
Actuated g/C Ratio	0.41	0.31	0.31	0.25	0.17	0.17	0.48	0.44	0.44	0.53	0.50	0.50
v/c Ratio	0.88	1.28	0.25	0.90	0.57	0.36	0.08	0.97	0.37	0.94	1.13	0.15
Control Delay	51.2	166.6	9.0	92.5	48.8	10.4	14.7	50.7	4.7	84.0	95.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	166.6	9.0	92.5	48.8	10.4	14.7	50.7	4.7	84.0	95.7	6.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	F	A	F	D	B	B	D	A	F	F	A
Approach Delay		140.3			48.1			44.3			90.1	
Approach LOS		F			D			D			F	
Queue Length 50th (m)	67.8	~217.1	3.6	15.9	40.1	0.0	1.5	161.6	0.0	23.3	~255.9	2.4
Queue Length 95th (m)	#118.0	#246.1	18.1	#48.7	52.2	16.8	4.6	#212.3	14.1	#66.1	#339.9	13.7
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	438	1551	564	115	866	361	180	1408	564	167	1679	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	1.28	0.25	0.90	0.57	0.36	0.08	0.97	0.37	0.94	1.13	0.15

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 93.3 Intersection LOS: F
Intersection Capacity Utilization 114.9% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50



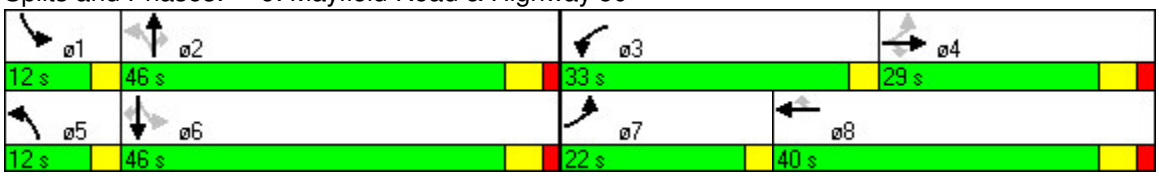
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		85.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	1740	1101	3429	1789	1174	1439	4749	1493	1668	4932	1452
Flt Permitted	0.402			0.950			0.093			0.191		
Satd. Flow (perm)	713	1740	1101	3429	1789	1174	141	4749	1493	335	4932	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			112			452			349
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			70			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			11.2			66.5			16.6	
Volume (vph)	297	228	244	701	361	112	50	933	452	7	1492	349
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	8%	45%	1%	5%	36%	24%	8%	7%	7%	4%	10%
Adj. Flow (vph)	297	228	244	701	361	112	50	933	452	7	1492	349
Lane Group Flow (vph)	297	228	244	701	361	112	50	933	452	7	1492	349
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	22.0	29.0	29.0	33.0	40.0	40.0	12.0	46.0	46.0	12.0	46.0	46.0
Total Split (%)	18.3%	24.2%	24.2%	27.5%	33.3%	33.3%	10.0%	38.3%	38.3%	10.0%	38.3%	38.3%
Maximum Green (s)	19.0	23.0	23.0	30.0	34.0	34.0	9.0	40.0	40.0	9.0	40.0	40.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	40.4	23.0	23.0	27.9	33.4	33.4	51.9	50.5	50.5	50.4	43.6	43.6
Actuated g/C Ratio	0.36	0.20	0.20	0.25	0.30	0.30	0.45	0.45	0.45	0.41	0.39	0.39
v/c Ratio	0.73	0.64	0.73	0.83	0.68	0.26	0.30	0.44	0.49	0.03	0.78	0.45
Control Delay	32.0	51.3	32.3	50.2	43.0	7.3	23.0	23.6	4.3	20.3	35.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	51.3	32.3	50.2	43.0	7.3	23.0	23.6	4.3	20.3	35.7	4.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	C	D	D	A	C	C	A	C	D	A
Approach Delay		37.8			43.9			17.5			29.8	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	41.9	48.7	22.6	80.6	73.5	0.0	6.5	53.0	0.0	0.9	117.3	0.0
Queue Length 95th (m)	62.4	75.1	53.6	102.6	106.3	12.9	13.8	77.3	22.1	3.6	136.9	19.1
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		85.0	45.0		138.0
Base Capacity (vph)	426	394	357	902	573	452	166	2127	918	237	1909	776
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.58	0.68	0.78	0.63	0.25	0.30	0.44	0.49	0.03	0.78	0.45

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 112.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 85.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 6: Mayfield Road & Highway 50



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.930				0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1566	3253	0	1623	3500	1331	1623	4694	0	1638	4749	1365
Flt Permitted	0.650			0.154			0.080			0.075		
Satd. Flow (perm)	1071	3253	0	263	3500	1331	137	4694	0	129	4749	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		166				170		13				14
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	30	320	277	24	131	170	86	1472	117	226	1902	36
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	14%	3%	1%	10%	2%	20%	10%	8%	9%	9%	8%	17%
Adj. Flow (vph)	30	320	277	24	131	170	86	1472	117	226	1902	36
Lane Group Flow (vph)	30	597	0	24	131	170	86	1589	0	226	1902	36
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	12.0	22.0		12.0	22.0	22.0	12.0	22.0		12.0	22.0	22.0
Total Split (s)	12.0	29.0	0.0	12.0	29.0	29.0	13.0	53.0	0.0	26.0	66.0	66.0
Total Split (%)	10.0%	24.2%	0.0%	10.0%	24.2%	24.2%	10.8%	44.2%	0.0%	21.7%	55.0%	55.0%
Maximum Green (s)	9.0	23.0		9.0	23.0	23.0	10.0	47.0		23.0	60.0	60.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	28.4	23.3		28.3	23.2	23.2	62.8	54.0		73.8	64.1	64.1
Actuated g/C Ratio	0.25	0.21		0.25	0.21	0.21	0.56	0.49		0.67	0.58	0.58
v/c Ratio	0.10	0.73		0.14	0.18	0.41	0.43	0.69		0.71	0.69	0.04
Control Delay	30.4	35.2		31.3	37.7	9.1	22.9	25.7		37.9	20.0	9.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	30.4	35.2		31.3	37.7	9.1	22.9	25.7		37.9	20.0	9.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D		C	D	A	C	C		D	B	A
Approach Delay		35.0			22.3			25.6			21.7	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	4.9	50.1		3.9	13.3	0.0	7.2	109.2		34.6	124.3	2.4
Queue Length 95th (m)	11.9	70.4		10.2	21.9	17.7	21.1	137.5		59.9	144.3	7.6
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)	70.0			70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	305	887		173	817	441	210	2316		384	2776	804
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.10	0.67		0.14	0.16	0.39	0.41	0.69		0.59	0.69	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.7			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 24.8		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Countryside Drive & Highway 50

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1566	949	5129	1597	3463	4663	974	3429	4794	1597
Flt Permitted	0.162			0.083			0.950			0.160		
Satd. Flow (perm)	304	5129	1566	83	5129	1597	3463	4663	974	577	4794	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			516			87			30
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	131	1805	117	175	1249	1076	551	830	87	836	1104	30
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	88%	0%	0%	0%	10%	64%	1%	7%	0%
Adj. Flow (vph)	131	1805	117	175	1249	1076	551	830	87	836	1104	30
Lane Group Flow (vph)	131	1805	117	175	1249	1076	551	830	87	836	1104	30
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	48.0	48.0	21.0	57.0	57.0	21.0	25.0	25.0	26.0	30.0	30.0
Total Split (%)	10.0%	40.0%	40.0%	17.5%	47.5%	47.5%	17.5%	20.8%	20.8%	21.7%	25.0%	25.0%
Maximum Green (s)	9.0	42.0	42.0	18.0	51.0	51.0	18.0	19.0	19.0	23.0	24.0	24.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	54.0	45.0	45.0	66.0	54.0	54.0	18.0	22.0	22.0	48.0	27.0	27.0
Actuated g/C Ratio	0.45	0.38	0.38	0.55	0.45	0.45	0.15	0.18	0.18	0.40	0.22	0.22
v/c Ratio	0.53	0.94	0.18	0.99	0.54	1.07	1.06	0.97	0.35	1.08	1.02	0.08
Control Delay	22.5	46.9	5.1	101.7	25.1	68.5	105.5	73.3	12.8	87.8	79.3	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	46.9	5.1	101.7	25.1	68.5	105.5	73.3	12.8	87.8	79.3	13.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	F	C	E	F	E	B	F	E	B
Approach Delay		42.9			49.1			81.8			81.9	
Approach LOS		D			D			F			F	
Queue Length 50th (m)	14.3	148.7	0.0	33.2	76.6	~210.4	~73.5	71.8	0.0	~97.5	~101.3	0.0
Queue Length 95th (m)	24.3	#180.8	11.7	#79.2	90.2	#289.6	#107.6	#99.3	14.2	#136.3	#129.8	7.7
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	248	1923	660	176	2308	1002	519	855	250	777	1079	383
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.94	0.18	0.99	0.54	1.07	1.06	0.97	0.35	1.08	1.02	0.08

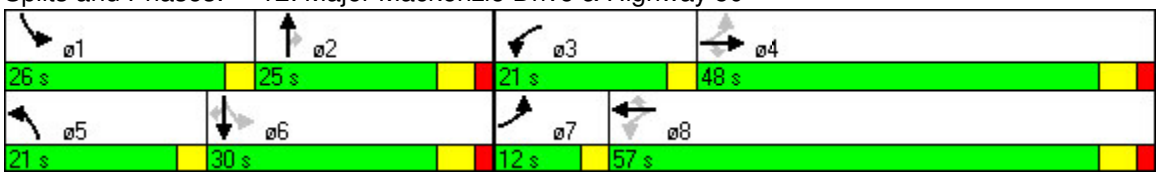
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 61.6 Intersection LOS: E
Intersection Capacity Utilization 99.9% ICU Level of Service F
Analysis Period (min) 15

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

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

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



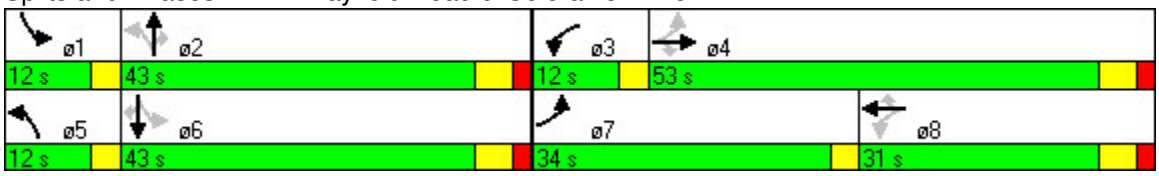
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	3245	1597	1785	3368	1479	1684	3305	1365	1102	3500	1309
Flt Permitted	0.129			0.362			0.100			0.511		
Satd. Flow (perm)	233	3245	1597	680	3368	1479	177	3305	1365	593	3500	1309
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49			37			2			95
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	506	763	51	51	794	52	15	290	2	31	1172	172
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	10%	0%	0%	6%	8%	6%	8%	17%	62%	2%	22%
Adj. Flow (vph)	506	763	51	51	794	52	15	290	2	31	1172	172
Lane Group Flow (vph)	506	763	51	51	794	52	15	290	2	31	1172	172
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	34.0	53.0	53.0	12.0	31.0	31.0	12.0	43.0	43.0	12.0	43.0	43.0
Total Split (%)	28.3%	44.2%	44.2%	10.0%	25.8%	25.8%	10.0%	35.8%	35.8%	10.0%	35.8%	35.8%
Maximum Green (s)	31.0	47.0	47.0	9.0	25.0	25.0	9.0	37.0	37.0	9.0	37.0	37.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	62.2	52.9	52.9	36.6	28.1	28.1	42.7	37.6	37.6	43.6	40.1	40.1
Actuated g/C Ratio	0.55	0.47	0.47	0.32	0.25	0.25	0.36	0.33	0.33	0.37	0.36	0.36
v/c Ratio	0.94	0.50	0.07	0.17	0.95	0.13	0.09	0.26	0.00	0.12	0.94	0.33
Control Delay	58.0	23.8	6.5	17.5	63.1	16.9	22.3	29.1	19.0	22.3	51.1	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	23.8	6.5	17.5	63.1	16.9	22.3	29.1	19.0	22.3	51.1	14.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	C	A	B	E	B	C	C	B	C	D	B
Approach Delay		36.2			57.9			28.7			45.9	
Approach LOS		D			E			C			D	
Queue Length 50th (m)	86.0	57.4	0.2	4.4	85.4	2.4	2.0	26.1	0.0	4.2	121.4	10.7
Queue Length 95th (m)	#175.1	90.1	7.7	12.1	#141.8	13.0	6.1	37.3	1.9	10.2	#193.0	30.9
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	537	1521	775	305	838	396	176	1151	476	259	1245	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.50	0.07	0.17	0.95	0.13	0.09	0.25	0.00	0.12	0.94	0.33

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 112.8
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 44.0 Intersection LOS: D
Intersection Capacity Utilization 92.4% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



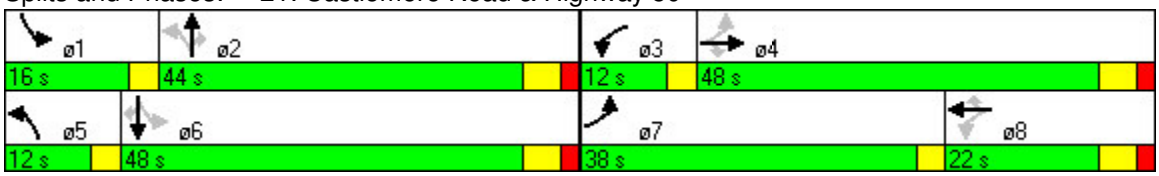
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1668	5029	1566	1032	4980	1452	1733	4580	1011	1500	4794	1413
Flt Permitted	0.222			0.211			0.098			0.091		
Satd. Flow (perm)	390	5029	1566	229	4980	1452	179	4580	1011	144	4794	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			131			202			115
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	381	1985	140	104	497	131	14	1364	211	157	1896	115
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	7%	2%	2%	73%	3%	10%	3%	12%	58%	19%	7%	13%
Adj. Flow (vph)	381	1985	140	104	497	131	14	1364	211	157	1896	115
Lane Group Flow (vph)	381	1985	140	104	497	131	14	1364	211	157	1896	115
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	38.0	48.0	48.0	12.0	22.0	22.0	12.0	44.0	44.0	16.0	48.0	48.0
Total Split (%)	31.7%	40.0%	40.0%	10.0%	18.3%	18.3%	10.0%	36.7%	36.7%	13.3%	40.0%	40.0%
Maximum Green (s)	35.0	42.0	42.0	9.0	16.0	16.0	9.0	38.0	38.0	13.0	42.0	42.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	57.0	45.0	45.0	36.5	27.5	27.5	49.2	41.0	41.0	56.6	52.0	52.0
Actuated g/C Ratio	0.48	0.38	0.38	0.31	0.23	0.23	0.39	0.34	0.34	0.47	0.43	0.43
v/c Ratio	0.81	1.05	0.21	0.80	0.43	0.30	0.08	0.87	0.44	0.74	0.91	0.17
Control Delay	37.9	71.7	5.8	68.0	42.3	9.3	19.0	44.0	7.7	47.2	40.1	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	71.7	5.8	68.0	42.3	9.3	19.0	44.0	7.7	47.2	40.1	5.1

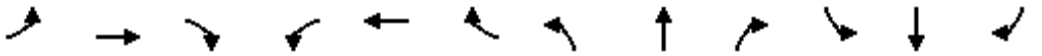
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	E	A	E	D	A	B	D	A	D	D	A
Approach Delay		62.8			40.1			39.0			38.7	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	59.4	~187.0	1.3	13.9	36.7	0.0	1.7	109.7	1.4	22.4	138.3	0.0
Queue Length 95th (m)	93.6	#216.1	14.1	#48.4	52.8	17.0	5.3	129.3	19.9	#53.2	#207.8	11.7
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	524	1892	671	130	1145	435	181	1570	479	215	2083	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.05	0.21	0.80	0.43	0.30	0.08	0.87	0.44	0.73	0.91	0.17

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.6
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 47.6 Intersection LOS: D
Intersection Capacity Utilization 99.1% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50





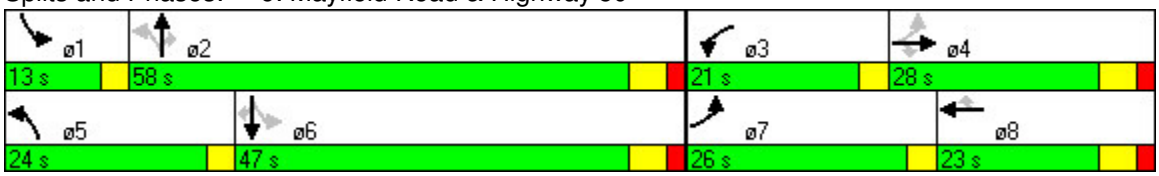
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		175.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	1789	1109	3148	1740	1479	1332	3336	1566	1716	3275	1452
Flt Permitted	0.174			0.950			0.085			0.091		
Satd. Flow (perm)	314	1789	1109	3148	1740	1479	119	3336	1566	164	3275	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55			8			511			330
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	388	401	55	502	253	8	271	1658	779	124	1037	330
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	5%	44%	10%	8%	8%	34%	7%	2%	4%	9%	10%
Adj. Flow (vph)	388	401	55	502	253	8	271	1658	779	124	1037	330
Lane Group Flow (vph)	388	401	55	502	253	8	271	1658	779	124	1037	330
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	13.0	22.0	22.0	13.0	22.0	22.0	13.0	22.0	22.0	13.0	22.0	22.0
Total Split (s)	26.0	28.0	28.0	21.0	23.0	23.0	24.0	58.0	58.0	13.0	47.0	47.0
Total Split (%)	21.7%	23.3%	23.3%	17.5%	19.2%	19.2%	20.0%	48.3%	48.3%	10.8%	39.2%	39.2%
Maximum Green (s)	23.0	22.0	22.0	18.0	17.0	17.0	21.0	52.0	52.0	10.0	41.0	41.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	46.0	25.0	25.0	18.0	20.0	20.0	68.0	55.2	55.2	53.8	44.0	44.0
Actuated g/C Ratio	0.38	0.21	0.21	0.15	0.17	0.17	0.57	0.46	0.46	0.45	0.37	0.37
v/c Ratio	1.00	1.08	0.20	1.06	0.87	0.03	0.97	1.08	0.78	0.62	0.86	0.45
Control Delay	79.5	113.3	12.0	107.9	77.8	22.9	81.3	79.9	15.2	35.9	44.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	113.3	12.0	107.9	77.8	22.9	81.3	79.9	15.2	35.9	44.1	4.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	F	B	F	E	C	F	E	B	D	D	A
Approach Delay		91.2			97.1			61.4			34.7	
Approach LOS		F			F			E			C	
Queue Length 50th (m)	76.7	~105.2	0.0	~67.1	58.8	0.0	52.0	~230.4	53.6	13.0	118.1	0.0
Queue Length 95th (m)	#139.8	#165.0	10.9	#100.5	#103.4	4.4	#105.2	#273.0	111.4	33.0	146.2	18.5
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		175.0	45.0		138.0
Base Capacity (vph)	389	373	275	472	290	253	280	1535	997	203	1201	741
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	1.08	0.20	1.06	0.87	0.03	0.97	1.08	0.78	0.61	0.86	0.45

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 63.6 Intersection LOS: E
Intersection Capacity Utilization 101.5% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Mayfield Road & Highway 50



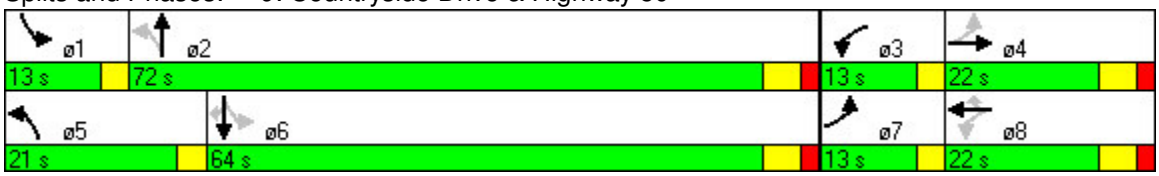
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.941				0.850		0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3319	0	1608	3466	1536	1716	3296	0	1733	3245	1597
Flt Permitted	0.292			0.454			0.062			0.066		
Satd. Flow (perm)	549	3319	0	768	3466	1536	112	3296	0	120	3245	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95				226		2				10
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	40	146	95	130	355	251	308	2113	27	189	1635	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	0%	11%	3%	4%	4%	8%	16%	3%	10%	0%
Adj. Flow (vph)	40	146	95	130	355	251	308	2113	27	189	1635	33
Lane Group Flow (vph)	40	241	0	130	355	251	308	2140	0	189	1635	33
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	13.0	22.0		13.0	22.0	22.0	13.0	22.0		13.0	22.0	22.0
Total Split (s)	13.0	22.0	0.0	13.0	22.0	22.0	21.0	72.0	0.0	13.0	64.0	64.0
Total Split (%)	10.8%	18.3%	0.0%	10.8%	18.3%	18.3%	17.5%	60.0%	0.0%	10.8%	53.3%	53.3%
Maximum Green (s)	10.0	16.0		10.0	16.0	16.0	18.0	66.0		10.0	58.0	58.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	25.7	16.4		27.8	21.9	21.9	82.1	69.1		71.1	61.0	61.0
Actuated g/C Ratio	0.21	0.14		0.24	0.19	0.19	0.70	0.59		0.61	0.52	0.52
v/c Ratio	0.19	0.44		0.51	0.55	0.53	0.95	1.10		0.90	0.97	0.04
Control Delay	36.3	30.1		43.8	48.3	12.9	74.0	80.4		72.1	44.0	11.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.3	30.1		43.8	48.3	12.9	74.0	80.4		72.1	44.0	11.5

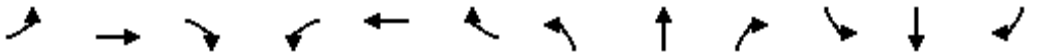
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		D	D	B	E	F		E	D	B
Approach Delay		31.0			35.4			79.6			46.3	
Approach LOS		C			D			E			D	
Queue Length 50th (m)	7.1	16.1		24.5	41.5	5.1	57.3	~306.0		29.0	192.4	2.6
Queue Length 95th (m)	15.8	28.4		41.8	57.8	29.9	#113.3	#350.5		#73.0	#251.2	7.8
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)	70.0			70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	220	605		253	645	470	324	1938		210	1686	835
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.18	0.40		0.51	0.55	0.53	0.95	1.10		0.90	0.97	0.04

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 117.5
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 59.3 Intersection LOS: E
Intersection Capacity Utilization 97.9% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Countryside Drive & Highway 50





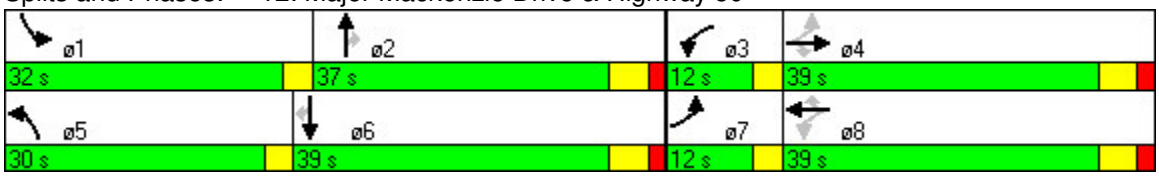
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1597	1405	4839	1581	3429	3368	1030	3395	3245	1413
Flt Permitted	0.111			0.111			0.950			0.950		
Satd. Flow (perm)	209	5129	1597	164	4839	1581	3429	3368	1030	3395	3245	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			494			541			136			146
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	33	1388	612	97	2006	929	745	1227	194	1196	922	146
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	27%	6%	1%	1%	6%	55%	2%	10%	13%
Adj. Flow (vph)	33	1388	612	97	2006	929	745	1227	194	1196	922	146
Lane Group Flow (vph)	33	1388	612	97	2006	929	745	1227	194	1196	922	146
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	39.0	39.0	12.0	39.0	39.0	30.0	37.0	37.0	32.0	39.0	39.0
Total Split (%)	10.0%	32.5%	32.5%	10.0%	32.5%	32.5%	25.0%	30.8%	30.8%	26.7%	32.5%	32.5%
Maximum Green (s)	9.0	33.0	33.0	9.0	33.0	33.0	27.0	31.0	31.0	29.0	33.0	33.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	44.6	36.0	36.0	46.2	40.8	40.8	27.0	34.0	34.0	29.0	36.0	36.0
Actuated g/C Ratio	0.36	0.30	0.30	0.38	0.34	0.34	0.22	0.28	0.28	0.24	0.30	0.30
v/c Ratio	0.18	0.90	0.74	0.62	1.22	1.04	0.97	1.29	0.50	1.46	0.95	0.28
Control Delay	24.9	49.5	13.7	41.8	139.1	57.9	71.3	173.1	16.6	247.4	60.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	49.5	13.7	41.8	139.1	57.9	71.3	173.1	16.6	247.4	60.0	6.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	B	D	F	E	E	F	B	F	E	A
Approach Delay		38.4			111.1			124.1			155.5	
Approach LOS		D			F			F			F	
Queue Length 50th (m)	4.7	114.7	21.5	14.5	~229.0	~150.7	90.2	~193.3	10.4	~198.4	111.6	0.0
Queue Length 95th (m)	11.2	#136.0	68.6	#31.6	#259.0	#228.2	#127.8	#235.1	33.0	#239.1	#151.9	14.7
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	190	1539	825	157	1647	895	772	954	389	820	974	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.90	0.74	0.62	1.22	1.04	0.97	1.29	0.50	1.46	0.95	0.28

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.46
Intersection Signal Delay: 109.1 Intersection LOS: F
Intersection Capacity Utilization 125.1% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



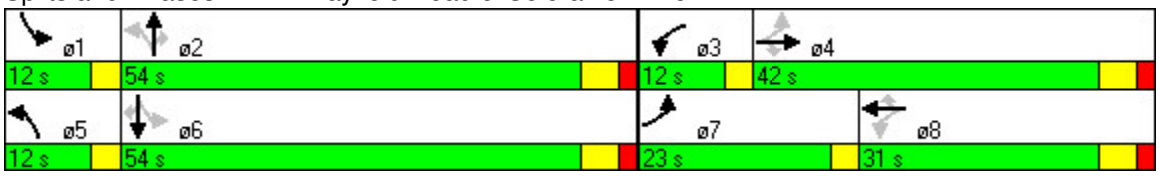
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1513	3400	1597	1785	3400	1149	1785	3535	1597	1248	3570	1551
Flt Permitted	0.129			0.159			0.510			0.078		
Satd. Flow (perm)	205	3400	1597	299	3400	1149	958	3535	1597	102	3570	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			15			36			43			514
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	248	882	21	3	696	44	74	1305	74	75	324	731
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	18%	5%	0%	0%	5%	39%	0%	1%	0%	43%	0%	3%
Adj. Flow (vph)	248	882	21	3	696	44	74	1305	74	75	324	731
Lane Group Flow (vph)	248	882	21	3	696	44	74	1305	74	75	324	731
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	23.0	42.0	42.0	12.0	31.0	31.0	12.0	54.0	54.0	12.0	54.0	54.0
Total Split (%)	19.2%	35.0%	35.0%	10.0%	25.8%	25.8%	10.0%	45.0%	45.0%	10.0%	45.0%	45.0%
Maximum Green (s)	20.0	36.0	36.0	9.0	25.0	25.0	9.0	48.0	48.0	9.0	48.0	48.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	49.0	47.0	47.0	35.0	27.3	27.3	54.8	48.2	48.2	54.8	48.2	48.2
Actuated g/C Ratio	0.44	0.42	0.42	0.29	0.24	0.24	0.48	0.43	0.43	0.48	0.43	0.43
v/c Ratio	0.81	0.62	0.03	0.02	0.84	0.14	0.14	0.86	0.10	0.55	0.21	0.76
Control Delay	49.6	30.1	13.3	23.0	52.8	15.8	15.0	37.0	11.0	35.1	21.5	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	30.1	13.3	23.0	52.8	15.8	15.0	37.0	11.0	35.1	21.5	14.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C	B	C	D	B	B	D	B	D	C	B
Approach Delay		34.0			50.5			34.5			17.6	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	42.8	83.3	0.8	0.4	83.6	1.5	8.3	144.7	4.2	8.6	24.9	42.3
Queue Length 95th (m)	#84.2	122.4	6.6	2.3	#114.5	11.1	16.0	175.6	13.3	#22.4	34.8	96.9
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	321	1421	676	200	853	315	523	1575	735	139	1591	976
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.62	0.03	0.02	0.82	0.14	0.14	0.83	0.10	0.54	0.20	0.75

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 112.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 32.7 Intersection LOS: C
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



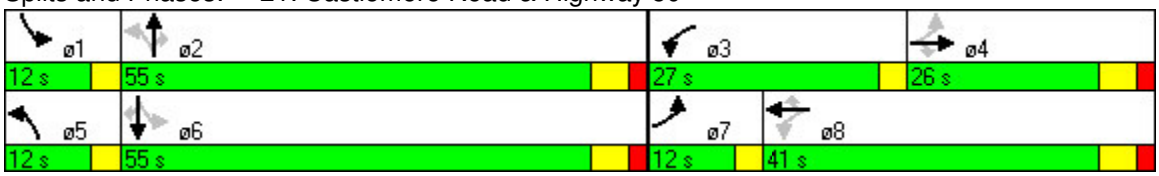
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	5029	1479	1020	4932	1210	1785	3245	980	1594	3216	1597
Flt Permitted	0.174			0.230			0.077			0.077		
Satd. Flow (perm)	308	5029	1479	247	4932	1210	145	3245	980	129	3216	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			15			174			110			227
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	128	552	15	234	2205	174	155	2107	116	146	1515	423
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	2%	8%	75%	4%	32%	0%	10%	63%	12%	11%	0%
Adj. Flow (vph)	128	552	15	234	2205	174	155	2107	116	146	1515	423
Lane Group Flow (vph)	128	552	15	234	2205	174	155	2107	116	146	1515	423
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	26.0	26.0	27.0	41.0	41.0	12.0	55.0	55.0	12.0	55.0	55.0
Total Split (%)	10.0%	21.7%	21.7%	22.5%	34.2%	34.2%	10.0%	45.8%	45.8%	10.0%	45.8%	45.8%
Maximum Green (s)	9.0	20.0	20.0	24.0	35.0	35.0	9.0	49.0	49.0	9.0	49.0	49.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	32.3	23.3	23.3	50.0	38.0	38.0	61.0	52.0	52.0	61.0	52.0	52.0
Actuated g/C Ratio	0.27	0.19	0.19	0.42	0.32	0.32	0.51	0.43	0.43	0.51	0.43	0.43
v/c Ratio	0.69	0.57	0.05	0.91	1.41	0.35	0.79	1.50	0.24	0.83	1.09	0.52
Control Delay	45.5	46.5	17.7	67.3	222.1	6.4	50.9	256.6	5.6	61.3	84.6	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.5	46.5	17.7	67.3	222.1	6.4	50.9	256.6	5.6	61.3	84.6	13.2

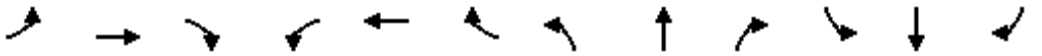
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	D	B	E	F	A	D	F	A	E	F	B
Approach Delay		45.7			193.9			230.9			68.5	
Approach LOS		D			F			F			E	
Queue Length 50th (m)	18.7	43.6	0.0	41.0	~255.6	0.0	20.2	~362.0	0.8	20.0	~211.0	31.0
Queue Length 95th (m)	#40.8	56.1	5.9	#88.2	#284.3	15.7	#53.9	#403.8	11.7	#56.0	#253.3	59.4
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	186	975	299	257	1562	502	197	1406	487	175	1394	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.57	0.05	0.91	1.41	0.35	0.79	1.50	0.24	0.83	1.09	0.52

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 158.3 Intersection LOS: F
Intersection Capacity Utilization 129.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Castlemore Road & Highway 50





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		0.0	130.0		80.0	85.0		85.0	45.0		138.0
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1716	1789	1109	3148	1740	1479	1332	4794	1566	1716	4706	1452
Flt Permitted	0.268			0.950			0.114			0.125		
Satd. Flow (perm)	484	1789	1109	3148	1740	1479	160	4794	1566	226	4706	1452
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			55			8			487			330
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1376.3			217.1			1478.4			367.8	
Travel Time (s)		61.9			9.8			66.5			16.6	
Volume (vph)	388	401	55	502	253	8	271	1658	779	124	1037	330
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	5%	44%	10%	8%	8%	34%	7%	2%	4%	9%	10%
Adj. Flow (vph)	388	401	55	502	253	8	271	1658	779	124	1037	330
Lane Group Flow (vph)	388	401	55	502	253	8	271	1658	779	124	1037	330
Turn Type	pm+pt		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	28.0	35.0	35.0	21.0	28.0	28.0	29.0	52.0	52.0	12.0	35.0	35.0
Total Split (%)	23.3%	29.2%	29.2%	17.5%	23.3%	23.3%	24.2%	43.3%	43.3%	10.0%	29.2%	29.2%
Maximum Green (s)	25.0	29.0	29.0	18.0	22.0	22.0	26.0	46.0	46.0	9.0	29.0	29.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	51.9	31.1	31.1	18.0	25.2	25.2	61.0	49.0	49.0	43.7	34.7	34.7
Actuated g/C Ratio	0.44	0.26	0.26	0.15	0.21	0.21	0.51	0.41	0.41	0.37	0.29	0.29
v/c Ratio	0.85	0.86	0.17	1.05	0.69	0.03	0.87	0.84	0.84	0.64	0.76	0.50
Control Delay	43.0	60.8	10.1	105.2	54.4	20.6	57.0	36.5	20.7	38.7	43.5	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	60.8	10.1	105.2	54.4	20.6	57.0	36.5	20.7	38.7	43.5	6.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	E	B	F	D	C	E	D	C	D	D	A
Approach Delay		49.3			87.5			34.0			34.9	
Approach LOS		D			F			C			C	
Queue Length 50th (m)	64.6	89.5	0.0	~67.1	55.6	0.0	48.4	127.5	67.5	15.0	84.3	0.0
Queue Length 95th (m)	#105.9	#139.4	10.0	#100.5	84.1	4.2	#91.1	147.9	133.0	#36.9	101.5	22.7
Internal Link Dist (m)		1352.3			193.1			1454.4			343.8	
Turn Bay Length (m)	75.0			130.0		80.0	85.0		85.0	45.0		138.0
Base Capacity (vph)	466	477	336	476	368	319	330	1973	931	195	1370	656
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.84	0.16	1.05	0.69	0.03	0.82	0.84	0.84	0.64	0.76	0.50

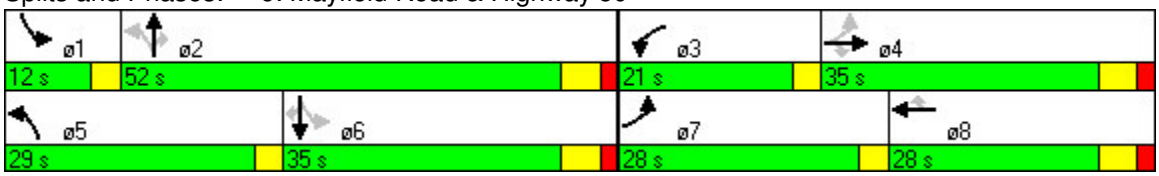
Intersection Summary

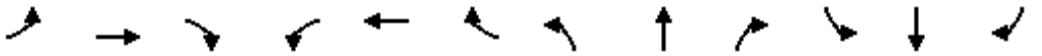
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 43.5 Intersection LOS: D
Intersection Capacity Utilization 87.7% ICU Level of Service E
Analysis Period (min) 15

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

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

Splits and Phases: 6: Mayfield Road & Highway 50



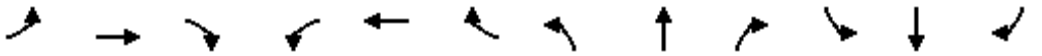


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	70.0		0.0	70.0		70.0	70.0		0.0	90.0		25.0
Storage Lanes	1		0	1		1	1		0	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.941				0.850		0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	3319	0	1608	3466	1536	1716	4735	0	1733	4663	1597
Flt Permitted	0.324			0.432			0.071			0.075		
Satd. Flow (perm)	609	3319	0	731	3466	1536	128	4735	0	137	4663	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		95				251		2				13
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		209.2			310.6			2091.9			1478.4	
Travel Time (s)		10.8			16.0			94.1			66.5	
Volume (vph)	40	146	95	130	355	251	308	2113	27	189	1635	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	0%	11%	3%	4%	4%	8%	16%	3%	10%	0%
Adj. Flow (vph)	40	146	95	130	355	251	308	2113	27	189	1635	33
Lane Group Flow (vph)	40	241	0	130	355	251	308	2140	0	189	1635	33
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Detector Phases	7	4		3	8	8	5	2		1	6	6
Minimum Initial (s)	6.0	9.0		6.0	9.0	9.0	6.0	9.0		6.0	9.0	9.0
Minimum Split (s)	12.0	22.0		12.0	22.0	22.0	12.0	22.0		12.0	22.0	22.0
Total Split (s)	12.0	22.0	0.0	13.0	23.0	23.0	29.0	66.0	0.0	19.0	56.0	56.0
Total Split (%)	10.0%	18.3%	0.0%	10.8%	19.2%	19.2%	24.2%	55.0%	0.0%	15.8%	46.7%	46.7%
Maximum Green (s)	9.0	16.0		10.0	17.0	17.0	26.0	60.0		16.0	50.0	50.0
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Recall Mode	None	None		None	None	None	None	Max		None	Max	Max
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	25.1	16.4		28.3	22.5	22.5	79.8	63.2		69.2	55.5	55.5
Actuated g/C Ratio	0.21	0.14		0.25	0.20	0.20	0.69	0.55		0.60	0.48	0.48
v/c Ratio	0.19	0.43		0.51	0.52	0.50	0.81	0.82		0.70	0.73	0.04
Control Delay	36.0	29.6		42.9	46.4	9.2	46.0	25.8		40.8	27.5	13.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.0	29.6		42.9	46.4	9.2	46.0	25.8		40.8	27.5	13.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C		D	D	A	D	C		D	C	B
Approach Delay		30.5			33.1			28.3			28.6	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	7.1	16.0		24.4	41.1	0.0	52.2	152.7		26.1	114.1	2.5
Queue Length 95th (m)	15.8	28.4		41.8	57.2	22.7	83.0	176.5		51.4	138.2	8.6
Internal Link Dist (m)		185.2			286.6			2067.9			1454.4	
Turn Bay Length (m)	70.0			70.0		70.0	70.0			90.0		25.0
Base Capacity (vph)	218	616		256	677	502	430	2596		301	2246	776
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.18	0.39		0.51	0.52	0.50	0.72	0.82		0.63	0.73	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 115.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 80.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 9: Countryside Drive & Highway 50



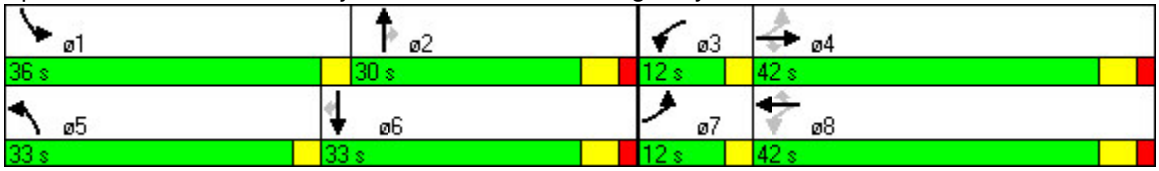
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Storage Lanes	1		1	1		1	2		1	2		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1785	5129	1597	1405	4839	1581	3429	4839	1030	3395	4663	1413
Flt Permitted	0.103			0.103			0.950			0.950		
Satd. Flow (perm)	194	5129	1597	152	4839	1581	3429	4839	1030	3395	4663	1413
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			572			626			126			138
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		70			70			80			80	
Link Distance (m)		224.3			251.0			1967.3			2091.9	
Travel Time (s)		11.5			12.9			88.5			94.1	
Volume (vph)	33	1388	612	97	2006	929	745	1227	194	1196	922	146
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	27%	6%	1%	1%	6%	55%	2%	10%	13%
Adj. Flow (vph)	33	1388	612	97	2006	929	745	1227	194	1196	922	146
Lane Group Flow (vph)	33	1388	612	97	2006	929	745	1227	194	1196	922	146
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	42.0	42.0	12.0	42.0	42.0	33.0	30.0	30.0	36.0	33.0	33.0
Total Split (%)	10.0%	35.0%	35.0%	10.0%	35.0%	35.0%	27.5%	25.0%	25.0%	30.0%	27.5%	27.5%
Maximum Green (s)	9.0	36.0	36.0	9.0	36.0	36.0	30.0	24.0	24.0	33.0	27.0	27.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	48.1	39.0	39.0	49.2	43.8	43.8	29.5	27.0	27.0	33.0	30.5	30.5
Actuated g/C Ratio	0.39	0.32	0.32	0.41	0.36	0.36	0.25	0.22	0.22	0.28	0.25	0.25
v/c Ratio	0.17	0.83	0.68	0.62	1.14	0.95	0.88	1.13	0.59	1.28	0.78	0.32
Control Delay	23.0	42.8	7.9	40.7	104.4	32.9	56.8	111.8	23.5	171.3	47.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	42.8	7.9	40.7	104.4	32.9	56.8	111.8	23.5	171.3	47.1	8.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	D	A	D	F	C	E	F	C	F	D	A
Approach Delay		32.0			80.5			85.0			110.2	
Approach LOS		C			F			F			F	
Queue Length 50th (m)	4.5	110.4	6.5	13.9	~218.9	97.2	87.0	~122.5	13.4	~184.1	74.6	1.4
Queue Length 95th (m)	10.7	129.0	40.2	#31.5	#248.1	#195.9	#117.0	#151.6	38.8	#224.8	90.8	17.5
Internal Link Dist (m)		200.3			227.0			1943.3			2067.9	
Turn Bay Length (m)	100.0		100.0	100.0		100.0	100.0		100.0	100.0		100.0
Base Capacity (vph)	190	1667	905	157	1767	974	854	1089	329	934	1185	462
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.83	0.68	0.62	1.14	0.95	0.87	1.13	0.59	1.28	0.78	0.32

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 78.2 Intersection LOS: E
Intersection Capacity Utilization 117.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Major Mackenzie Drive & Highway 50



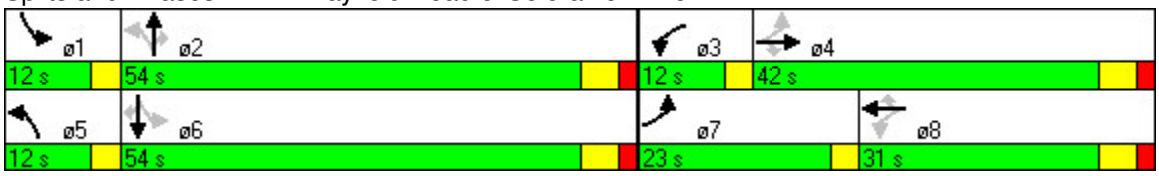
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1513	3400	1597	1785	3400	1149	1785	3535	1597	1248	3570	1551
Flt Permitted	0.129			0.159			0.510			0.078		
Satd. Flow (perm)	205	3400	1597	299	3400	1149	958	3535	1597	102	3570	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			15			36			43			514
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		455.5			1376.3			378.7			328.9	
Travel Time (s)		20.5			61.9			19.5			16.9	
Volume (vph)	248	882	21	3	696	44	74	1305	74	75	324	731
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	18%	5%	0%	0%	5%	39%	0%	1%	0%	43%	0%	3%
Adj. Flow (vph)	248	882	21	3	696	44	74	1305	74	75	324	731
Lane Group Flow (vph)	248	882	21	3	696	44	74	1305	74	75	324	731
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	23.0	42.0	42.0	12.0	31.0	31.0	12.0	54.0	54.0	12.0	54.0	54.0
Total Split (%)	19.2%	35.0%	35.0%	10.0%	25.8%	25.8%	10.0%	45.0%	45.0%	10.0%	45.0%	45.0%
Maximum Green (s)	20.0	36.0	36.0	9.0	25.0	25.0	9.0	48.0	48.0	9.0	48.0	48.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	49.0	47.0	47.0	35.0	27.3	27.3	54.8	48.2	48.2	54.8	48.2	48.2
Actuated g/C Ratio	0.44	0.42	0.42	0.29	0.24	0.24	0.48	0.43	0.43	0.48	0.43	0.43
v/c Ratio	0.81	0.62	0.03	0.02	0.84	0.14	0.14	0.86	0.10	0.55	0.21	0.76
Control Delay	49.6	30.1	13.3	23.0	52.8	15.8	15.0	37.0	11.0	35.1	21.5	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	30.1	13.3	23.0	52.8	15.8	15.0	37.0	11.0	35.1	21.5	14.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C	B	C	D	B	B	D	B	D	C	B
Approach Delay		34.0			50.5			34.5			17.6	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	42.8	83.3	0.8	0.4	83.6	1.5	8.3	144.7	4.2	8.6	24.9	42.3
Queue Length 95th (m)	#84.2	122.4	6.6	2.3	#114.5	11.1	16.0	175.6	13.3	#22.4	34.8	96.9
Internal Link Dist (m)		431.5			1352.3			354.7			304.9	
Turn Bay Length (m)	50.0		50.0	50.0		50.0	50.0		50.0	50.0		50.0
Base Capacity (vph)	321	1421	676	200	853	315	523	1575	735	139	1591	976
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.62	0.03	0.02	0.82	0.14	0.14	0.83	0.10	0.54	0.20	0.75

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 112.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 32.7 Intersection LOS: C
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 17: Mayfield Road & Coleraine Drive



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (m)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1684	5029	1479	1020	4932	1210	1785	4663	980	1594	4621	1597
Flt Permitted	0.211			0.182			0.089			0.091		
Satd. Flow (perm)	374	5029	1479	195	4932	1210	167	4663	980	153	4621	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			15			174			116			203
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		558.8			671.0			288.8			1967.3	
Travel Time (s)		25.1			30.2			13.0			88.5	
Volume (vph)	128	552	15	234	2205	174	155	2107	116	146	1515	423
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	2%	8%	75%	4%	32%	0%	10%	63%	12%	11%	0%
Adj. Flow (vph)	128	552	15	234	2205	174	155	2107	116	146	1515	423
Lane Group Flow (vph)	128	552	15	234	2205	174	155	2107	116	146	1515	423
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phases	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0	6.0	9.0	9.0
Minimum Split (s)	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0	12.0	22.0	22.0
Total Split (s)	12.0	22.0	22.0	38.0	48.0	48.0	13.0	48.0	48.0	12.0	47.0	47.0
Total Split (%)	10.0%	18.3%	18.3%	31.7%	40.0%	40.0%	10.8%	40.0%	40.0%	10.0%	39.2%	39.2%
Maximum Green (s)	9.0	16.0	16.0	35.0	42.0	42.0	10.0	42.0	42.0	9.0	41.0	41.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	35.8	26.8	26.8	57.0	45.0	45.0	55.0	45.0	45.0	53.0	44.0	44.0
Actuated g/C Ratio	0.30	0.22	0.22	0.48	0.38	0.38	0.46	0.38	0.38	0.44	0.37	0.37
v/c Ratio	0.61	0.49	0.04	0.84	1.19	0.31	0.73	1.20	0.26	0.83	0.89	0.59
Control Delay	38.2	44.0	19.0	51.5	126.5	5.2	44.3	132.1	6.1	60.6	43.9	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	44.0	19.0	51.5	126.5	5.2	44.3	132.1	6.1	60.6	43.9	19.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	D	B	D	F	A	D	F	A	E	D	B
Approach Delay		42.4			111.7			120.2			40.0	
Approach LOS		D			F			F			D	
Queue Length 50th (m)	16.7	42.2	0.0	39.6	~229.7	0.0	20.4	~221.2	0.0	19.9	122.0	40.8
Queue Length 95th (m)	#40.5	58.6	6.2	#70.4	#258.4	14.2	#50.2	#250.3	12.0	#55.9	142.7	73.4
Internal Link Dist (m)		534.8			647.0			264.8			1943.3	
Turn Bay Length (m)	120.0		100.0	166.0		166.0	126.0		143.0	110.0		105.0
Base Capacity (vph)	210	1121	342	314	1850	563	211	1749	440	176	1694	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.49	0.04	0.75	1.19	0.31	0.73	1.20	0.26	0.83	0.89	0.59

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 88.9 Intersection LOS: F
Intersection Capacity Utilization 111.8% ICU Level of Service H
Analysis Period (min) 15

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

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

Splits and Phases: 21: Castlemore Road & Highway 50