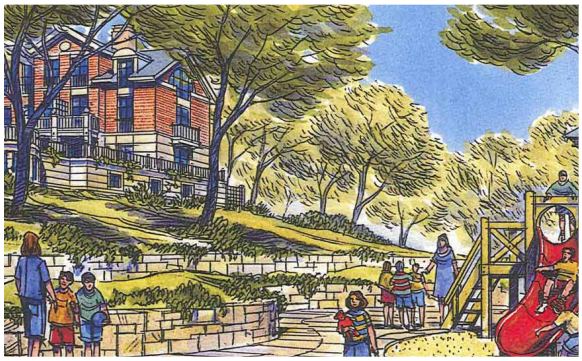

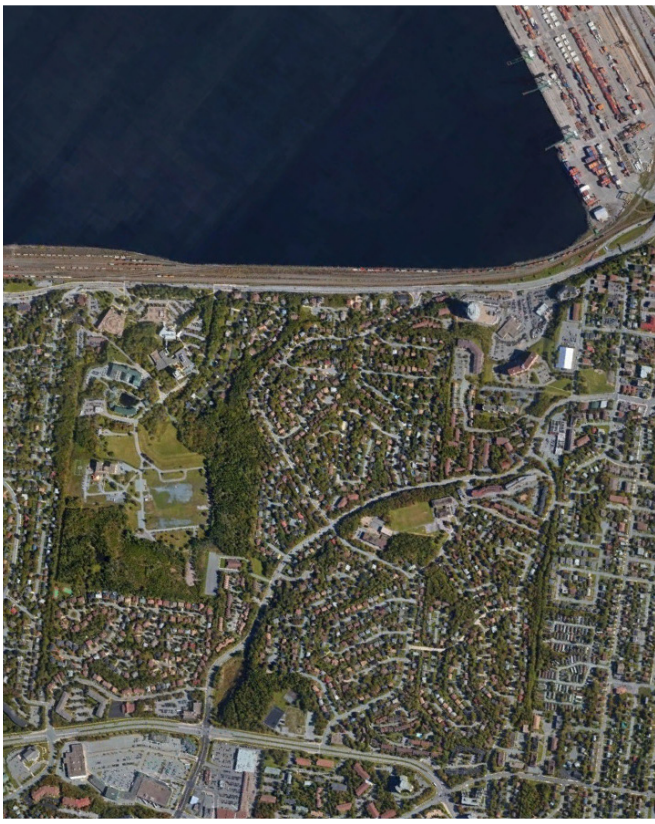

Seton Ridge
Transportation Impact Analysis

Final Report

November 2018

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TABLE OF CONTENTS

FIGURES

TABLES

APPENDICIES

EKISTICS PLANNING & DESIGN

1. INTRODUCTION

The Seton Ridge development is a strategic infill development located adjacent to Mount Saint Vincent University (MSVU) on lands that were previously home to the Sisters of Charity Motherhouse. The original motherhouse was established in 1873, reconstructed in 1959 following a 1951 fire, and its use was discontinued in 2001. Through a variety of redevelopment concepts and alternatives, the Seton Ridge development has been successfully progressing through the various development stages to see the lands developed as a LEED based and transit oriented, sustainable, efficient and accessible modern development.

HRM: Transportation Impact Studies are prepared to ensure developments are consistent with the objectives and policies of the Municipal Planning Strategies / Municipal Development Plans and the Regional Plan.

The development is well situated within Halifax's transportation framework connecting directly to Lacewood Drive and the Bedford Highway. The lands are about 5 km from Citadel Hill / downtown Halifax; 3 km from the MacKay Bridge; 4 km from the Macdonald Bridge; 3.5 km from the Armdale Rotary; and, 2 km from Highway 102. It connects to a variety of active transportation infrastructure and the new road through the development has been identified as a probable new transit route.

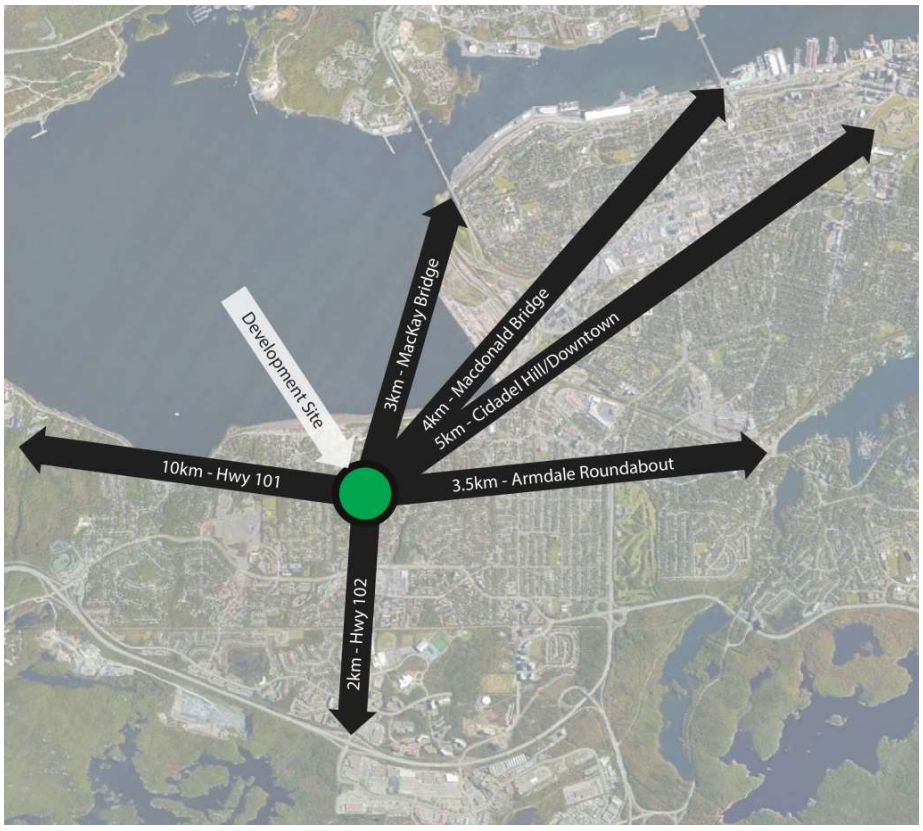


Figure 1-1: Development Location

1.1 Study Objectives

The objective of the study is to ensure the compatibility of the development with both existing and planned transportation infrastructure in the areas around the development. To do this, the study focuses on:

- Developing a clear definition and understanding of existing transportation conditions on the road, active transportation and transit networks as well as other complementary activities that impact the transportation network;
- Predict the magnitude and orientation of new traffic generated by the development and consider other network growth and changes relevant to the development's operation; and,
- Evaluate the impact of the new operational environment on the existing and future transportation network, and identify strategic infrastructure improvements required to ensure the development remains compatible with the short and long term intent of Halifax's regional transportation plans.

1.2 Study Area

For the purposes of this study, the project north arrow has been oriented perpendicular to the Bedford Highway as shown in the figure to the right. The Seton Ridge development is located on the south side of the Bedford Basin on a parcel of land bounded by the Bedford Highway to the north, Bayview Road and Lacewood Drive to the east, Dunbrack Street to the south, and Flamingo Drive to the west. Inside these boundaries, there are a variety of residential streets, Mount Saint Vincent University (MSVU), and the Shannex Caritas retirement residence.

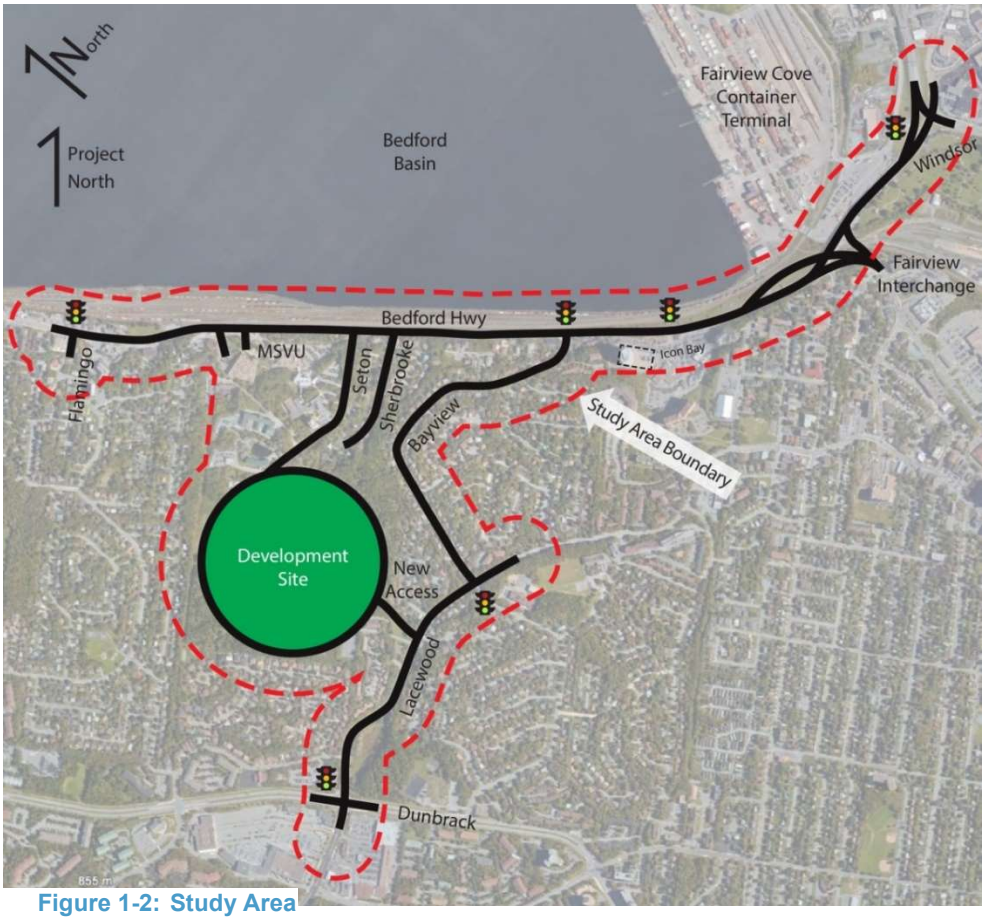


Figure 1-2: Study Area

The study will address impacted transportation infrastructure within the study area boundaries shown in the figure to the right.

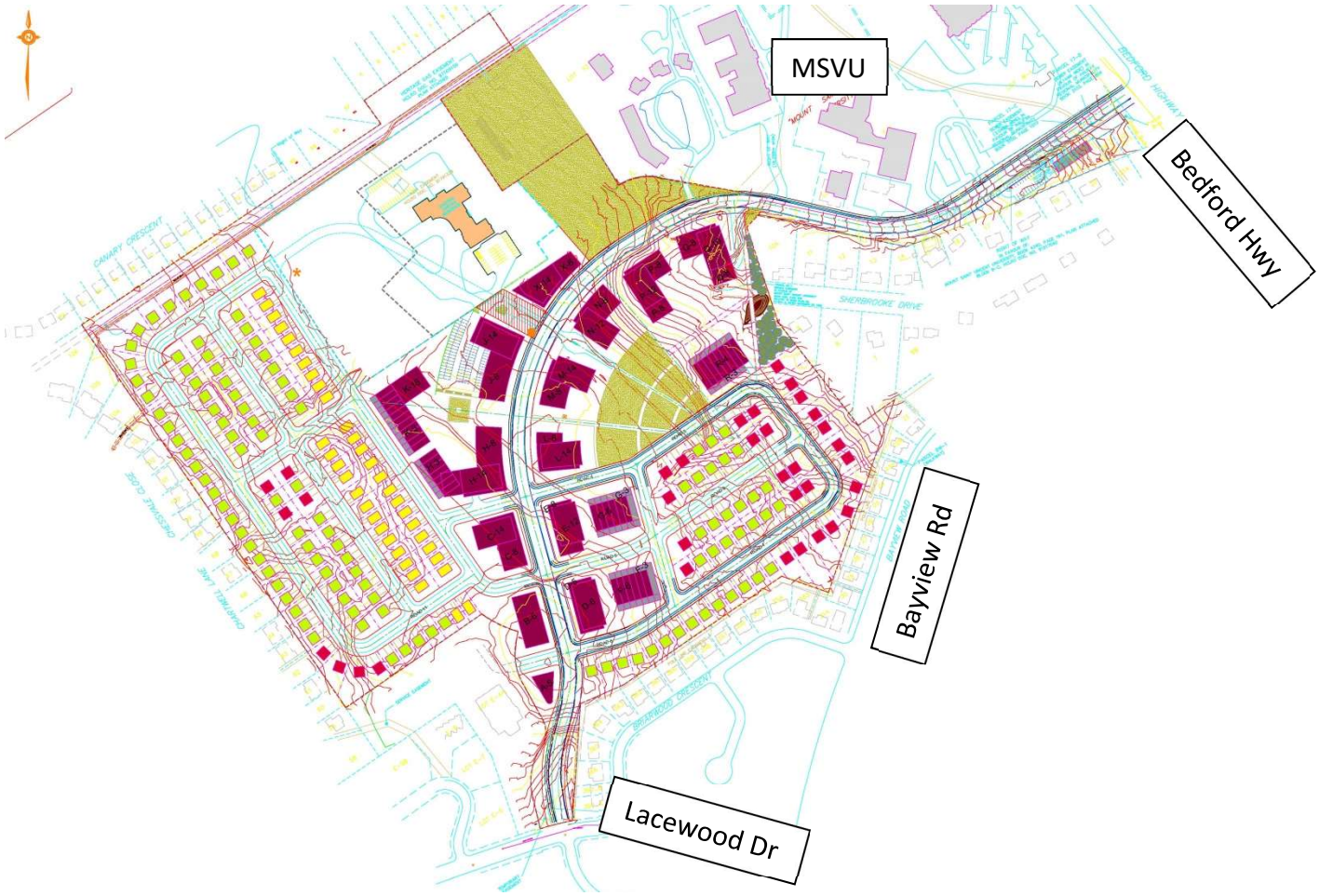
1.3 Proposed Development

The proposed development has evaluated at a number of different development levels typically ranging from about 1,800 units to 2,500 units. For the purposes of this study, the maximum potential unit count was used to evaluate network operations. The development scenario is comprised of the following elements:

Table 1-1: Summary of Development

	2,500 Unit Scenario
Total Property Area	~ 60 acres
Single Family Detached Housing	179 Units
Low Rise Townhouses	6 Units
Multi-story Apartments	2,315 Units
Retail Areas	89,000 ft^2 (8,300 m^2)
Office Space	46,000 ft^2 (4,280 m^2)
Community Centre	6,458 ft^2 (600 m^2)
Parkland Area	~ 9 Acres (3.7 ha)

Figure 1-3: Preliminary Site Drawing



1.4 Adjacent Properties

1.4.1 Shannex Development

The Shannex Caritas facility was built in 2008 for the Sisters of Charity and currently includes 101 suites. HRM has advised that Shannex anticipates adding a senior's complex with approximately 500 units plus staff. Traffic from this site will connect to the main road corridor through the Seton Ridge development.

1.4.2 Mount Saint Vincent University (MSVU)

MSVU was original established by the Sisters of Charity in 1873. Today, just over 4,000 on-campus and distance learning students attend MSVU from across Canada and more than 50 countries. There are just over 500 full and part time faculty and staff on the 40 acre campus including approximately 400 on-site student dorms. Access to the campus includes a primary and secondary driveway on the Bedford Highway and 7 driveways connecting to Seton Road.

1.5 Previous and Ongoing Studies

1.5.1 Bedford-Halifax Mainland North Corridor Transportation Study

This study was prepared to assess the ability of the Bedford Highway (~19,600 Average Annual Weekday Traffic - AAWT), Highway 102 (~45,000 AAWT), and Northwest Arm / Dunbrack Street (~20,000 AAWT) to accommodate traffic growth from 5 key development areas including: Paper Mill Lake (600 units); Mill Cove (3,600 units); Birch Cove (440 units); Rockingham South (982 units); and, Seaton Ridge (1,800 units). The study considered various population and transit scenarios and accounted for active transportation related impacts.

The report suggests a variety of network improvements including a North-South transit corridor through the Seton Ridge lands, reversible lanes on Bedford Highway (1 for buses only) between the Fairview Interchange and Seton Drive, new bus lanes to create a 6-lane segment of Lacewood Drive (2 dedicated to buses), and other improvements to accommodate transit oriented growth throughout the area. Results of the modeling analysis suggest a 25 – 27% transit modal share (increase of 4% from the "status quo" analysis) and an overall network wide transit

usage estimate in the range of 7.5%. In general, the report heavily favours network improvements that support transit capacity increases as opposed to the accommodation cars.

According to Statistics Canada reports (2006 data), approximately 23 percent (12% public transit, 11% walk / cycle) of the employed labour force 15 years and over in HRM walks, bicycles or takes transit to work. The report specifically identifies the high quality and accessibility of the Mainland North Linear Parkway, which passes between the Lacewood commercial area and the West End Plaza commercial area. This is accessible from Rockingham South and can connect Seton Ridge (to Canary Crescent and from there via mostly low-volume streets to connect to Radcliffe Drive and the Linear Trail).

The report identifies modal share in the 2026 target for the Inner Suburban Area is 17% transit, 77% auto and 6% AT. It also promotes higher density and cluster development to help reduce per capita automobile ownership use and increase the use of alternate travel modes. The report states:

> *"We note, for example, the Motherhouse project which is being planned to incorporate Leadership in environmental and Energy Design (LEED-ND) principles which are intended to result in more "green" developments. By using clustering and density in the overall design, and by employing modern building technologies and approaches, projects such as this should operate more economically, result in more trips being satisfied in the local neighbourhood, and contribute less to carbon emissions. The approach could be a model for all of the projects considered in this study."*

1.5.2 Icon Bay Development - 50 Bedford Highway

The Icon Bay development was addressed in a 2009 traffic study (February 2009 report and July 2009 addendum). The study assumed 150 condominium units, 104 hotel rooms and a consolidated access driveway shared between the development and the adjacent car dealerships. The current space has eliminated the hotel rooms in favour of commercial space on the lower floors of the development.

The consolidated driveway forms a Tee-intersection with the Bedford Highway and includes semi-actuated traffic signals and pedestrian signals across the driveway parallel to Bedford Highway. It was noted that this development or the associated traffic signals were not identified in the Bedford-Halifax Mainland North Corridor Transportation Study.

The following points from the study are relevant:

- Bedford highway has average weekday traffic volumes around 40,000 vehicles per day (2,600 and 3,000 vehicles per hour during the AM and PM peak hours respectively).
- A 0.5% background traffic growth rate was used.
- Traffic generation included 45 entering / 64 exiting trips during the AM peak and 67 entering / 51 exiting trips during the PM peak.
- Traffic distribution assumed a split of 40% north (away from downtown) / 60% south for background traffic and 25% north / 75% south for site traffic.
- The analysis made adjustments to saturated flow rates and permitted left turn factors at Bedford Highway with Bayview.
- The analysis shows high v/c ratios at Bayview and long northbound queues on Bedford Highway (presumably from Windsor Street).
- The report notes that the long queue lengths on Bedford Highway will increase with the addition of another set of traffic signals (at the combined driveway).
- The July addendum adds further analysis details related to the installation of traffic signals and the impacts of the left turn lane at the new driveway.

1.5.3 Bedford Highway Functional Plan

This study started in September 2018 with a planned end date of March 2019. The overall goal to "Develop a Functional Plan for the Bedford Highway that will provide a corridor-wide vision that directly informs how the transportation infrastructure is reinstated as part of routine capital projects, as well as enable the strategic preservation (and acquisition) of right-of-way to facilitate future works."

HRM's *Municipal Planning Strategy* (2014) identifies upgrades to the Bedford Highway, including widening to four traffic lanes between Bayview Road and Kearney Lake Road, as a 'Future Potential' project. Other network improvements such reversable lanes, transit lanes, intersection upgrades and other options have been evaluated to different degrees, though the request for proposals states that no meaningful progress has been made to move any initiatives forward.

The RFP cites the 2017 Integrated Mobility Plan and notes that the Bedford Highway is a proposed "Transit Priority Corridor" and endorses further consideration of the potential for commuter rail service along CN's Bedford -Halifax corridor. Further, the IMP discourages further investment in additional roadway infrastructure in favour of encouraging non-auto modes.

2. EXISTING CONDITIONS

2.1 Adjacent Roadways

2.1.1 Bedford Highway

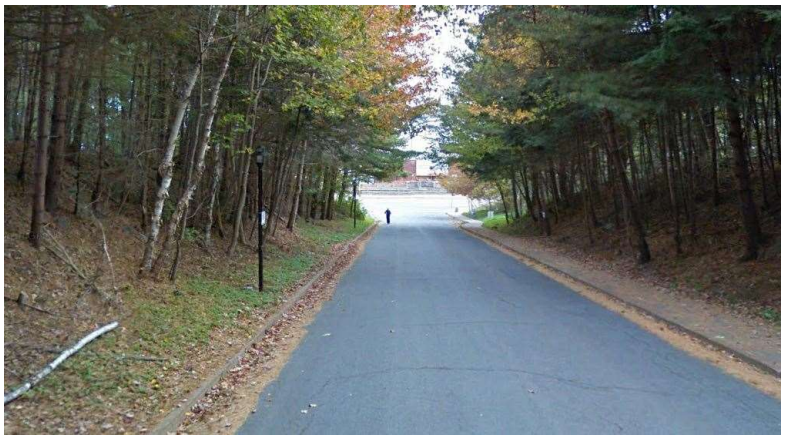
The Bedford Highway is a major arterial roadway extending from the Windsor Street intersection 12 km west (northwest) to Highway 102. The corridor complements Highways 102, Highway 118 and Windmill Road as primary northwest-southeast commuter routes to the downtown Halifax and Dartmouth areas. Between Windsor and Bayview, the cross section varies between 2 and 4 lanes in each direction, narrowing to two lanes in each direction just west of Bayview. Between Sherbrooke and Seton Road, the cross section is further reduced to two outbound (westbound) lanes and a single inbound lane.

The posted speed limit is 60 km/h east of Sherbrooke Street and 50 km/hr west of Sherbrooke Street. The cross section includes curb/gutter on both sides of the road, sidewalks on the south side of the roadway that terminate at Seton Road. Localized sidewalk is present on the north side of the Bedford Highway in select locations to support transit stops on the westbound lanes. The main CN Bedford-Halifax corridor runs immediately adjacent and parallel to the Bedford Highway, which constrains any potential for widening the right-of-way to the north.

2.1.2 Lacewood Drive

Lacewood Drive is a four-lane undivided urban road, providing access to a number of residential and commercial developments, though the roadway is generally access controlled eliminating individual residential driveways in most areas. Lacewood Drive intersects with Bayview Road (at Clayton Park) and Dunbrack Street, both of which have signalized intersections and continues west to Bayers Lake and east towards Joseph Howe Drive. The posted speed limit is 50 km/h and the roadway has an urban cross-section including curbs, gutters, grassed boulevard and sidewalks on both sides of the road.

2.1.3 Seton Road



Seton Road is two-lane undivided local urban roadway that intersects the Bedford Highway at its north end. It is just over 7 meters wide along most of its length and widening to 3 lanes at its intersection with the Bedford Highway. It has curb/gutter on both sides of the road and a sidewalk along the south side located directly on the back of the curb. Seton Road provides access to Mount Saint Vincent University through 7 driveways, the Shannex Caritas facility and former Motherhouse lands. It has a posted speed limit of 50 km/h and approximately 10 – 12% grade approaching the Bedford Highway.

2.1.4 Bayview Road

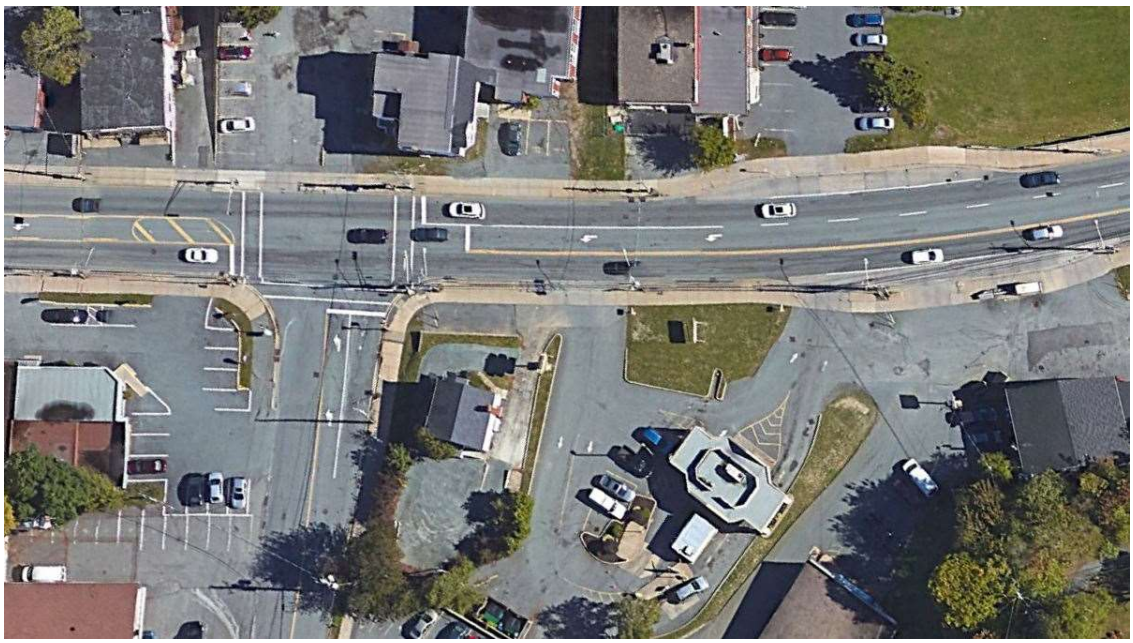
Bayview Road is a two-lane undivided collector roadway that is primarily residential in nature including many residential driveways. Bayview Road has an urban cross section including curb/gutters and sidewalks on both sides of the road. The road is signalized at Bedford Hwy and Lacewood Drive, has a posted speed limit of 50 km/h and includes 2 stop-controlled intersections between the Bedford Highway and Lacewood Drive. The road climbs steadily at an average grade of approximately 6 % over the kilometer between Bedford Highway and Lacewood Drive. Bayview supports high commuter traffic volumes between Lacewood Drive (west of Bayview) and the Bedford Highway (east of Bayview).

2.2 Existing Intersections

2.2.1 Flamingo Drive and Bedford Highway

The Flamingo Drive intersection is a signalized (actuated, coordinated) T-intersection with a driveway connection on the north side and is located approximately 730 metres west of Seton Road. There are single through lanes on Bedford Highway in each direction with a dedicated westbound left turn lane to Flamingo. Flamingo includes a dedicated left turn lane and a shared lane with the through lane providing access to a commercial driveway across Bedford Highway and the right turn movement directly entering the single Bedford Highway inbound (eastbound) lane. The intersection has three pedestrian actuated crosswalks connecting to continuous sidewalks on each side of the Bedford Highway and the east side of Flamingo Drive. Bus stops complete with laybys are present on both sides of Bedford Highway just east of Flamingo Drive.

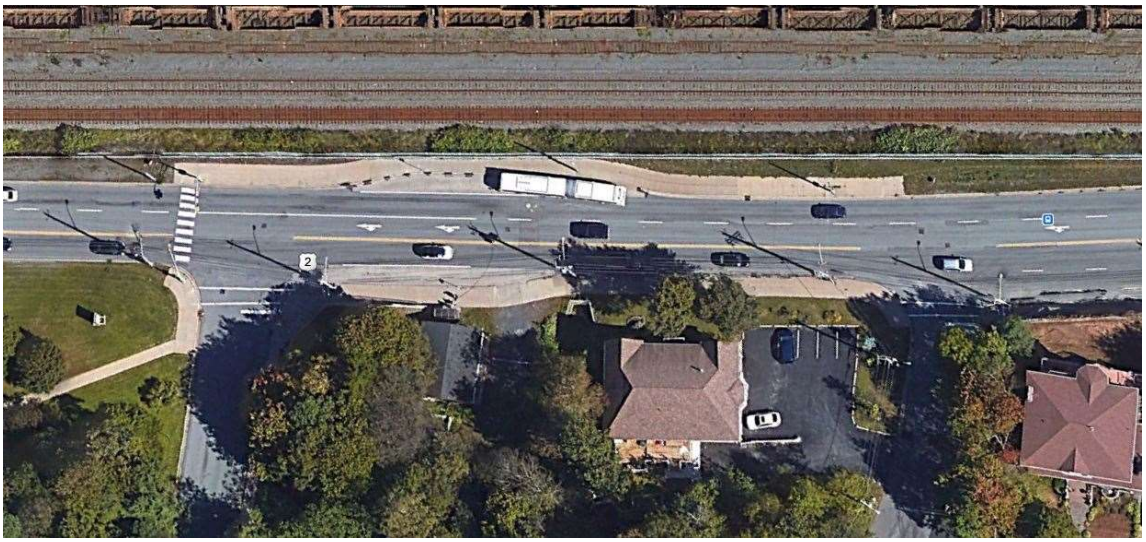
Figure 2-1: Flamingo Drive and Bedford Highway Intersection



2.2.2 Bedford Highway and Seton Road / Sherbrooke Drive

The intersections of Seton Road and Sherbrooke Drive at the Bedford Highway are located approximately 100 metres apart and are both unsignalized with stop control on the minor road. The Bedford Highway includes two westbound (outbound) lanes (1 through and 1 shared through/left turn) at both intersections. Bedford Highway has a single eastbound lane approaching the Seton and Sherbrooke intersections with a second eastbound lane being added east of Sherbrooke increasing the capacity of the roadway heading towards Bayview Drive. An actuated pedestrian crossing signal is present across Bedford Highway on the west side of Seton Road which services pedestrians to and from the transit stop located in a layby on the north side of Bedford Highway. A transit stop is also present in a layby on south sides of the Bedford Highway between the Seton and Sherbrooke intersections complete with sidewalks to the crosswalk.

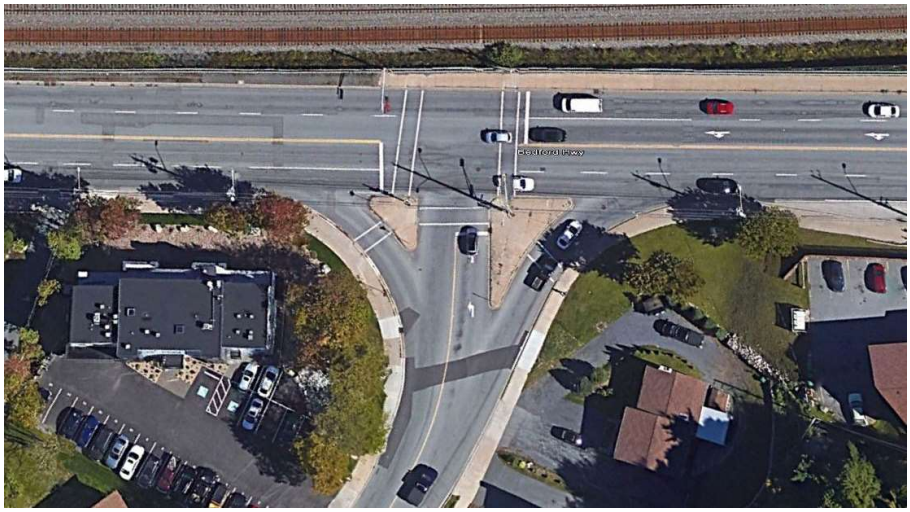
Figure 2-2: Bedford Highway and Seton Road



2.2.3 Bayview Road and Bedford Highway

This intersection is configured as a three leg, signalized (actuated, coordinated) intersection with right-turn channelization onto and off-of Bayview Road. Bedford Highway includes four undivided lanes (2 in each direction) through the intersection and contains three pedestrian actuated crosswalks on each leg of the intersection. Sidewalks are present on all sides of the intersection (the north sidewalk only connects to the transit stop) and transit stops complete with lay-bys are located east of the intersection. This intersection experiences high traffic volumes on the westbound left turn movement from westbound Bedford Highway to southbound Bayview during the PM peak and a northbound right turn to eastbound Bedford Highway during the AM peak.

Figure 2-3: Bayview Road and Bedford Highway Intersection



2.2.4 50 Bedford Highway at Bedford Highway

This intersection was recently reconfigured and signalized (actuated, coordinated) to accommodate the new Icon Bay Development as well as consolidate access to the existing car dealerships. Bedford Highway now has two through lanes in each direction with a dedicated westbound left turn lane into the new development and dealerships. The roadway is undivided though there are painted medians in the vicinity of the intersection to allow the transition for the dedicated left turn lane and to maintain consistent through lane movements in each direction. The signalized intersection has a crosswalk across the driveway, but not across Bedford Highway as there are no sidewalks on the north side of the road. Sidewalks are present along the south side of the Bedford Highway.

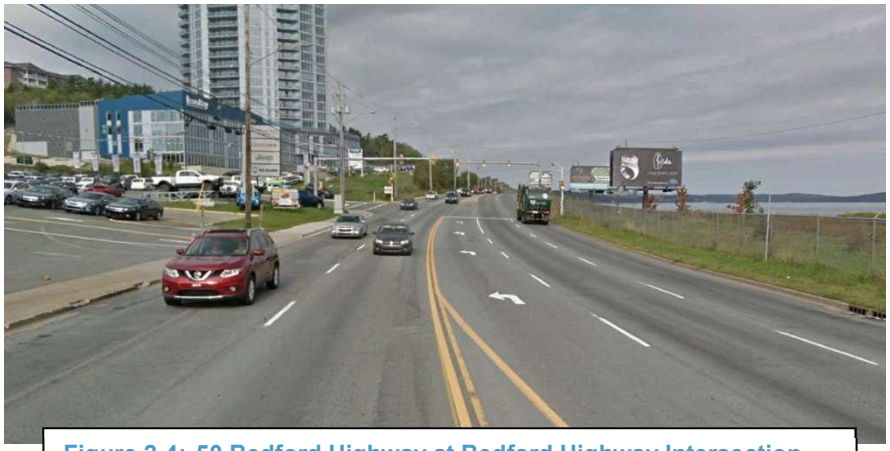


Figure 2-4: 50 Bedford Highway at Bedford Highway Intersection

2.2.5 Bayview Road/Clayton Park Drive and Lacewood Drive

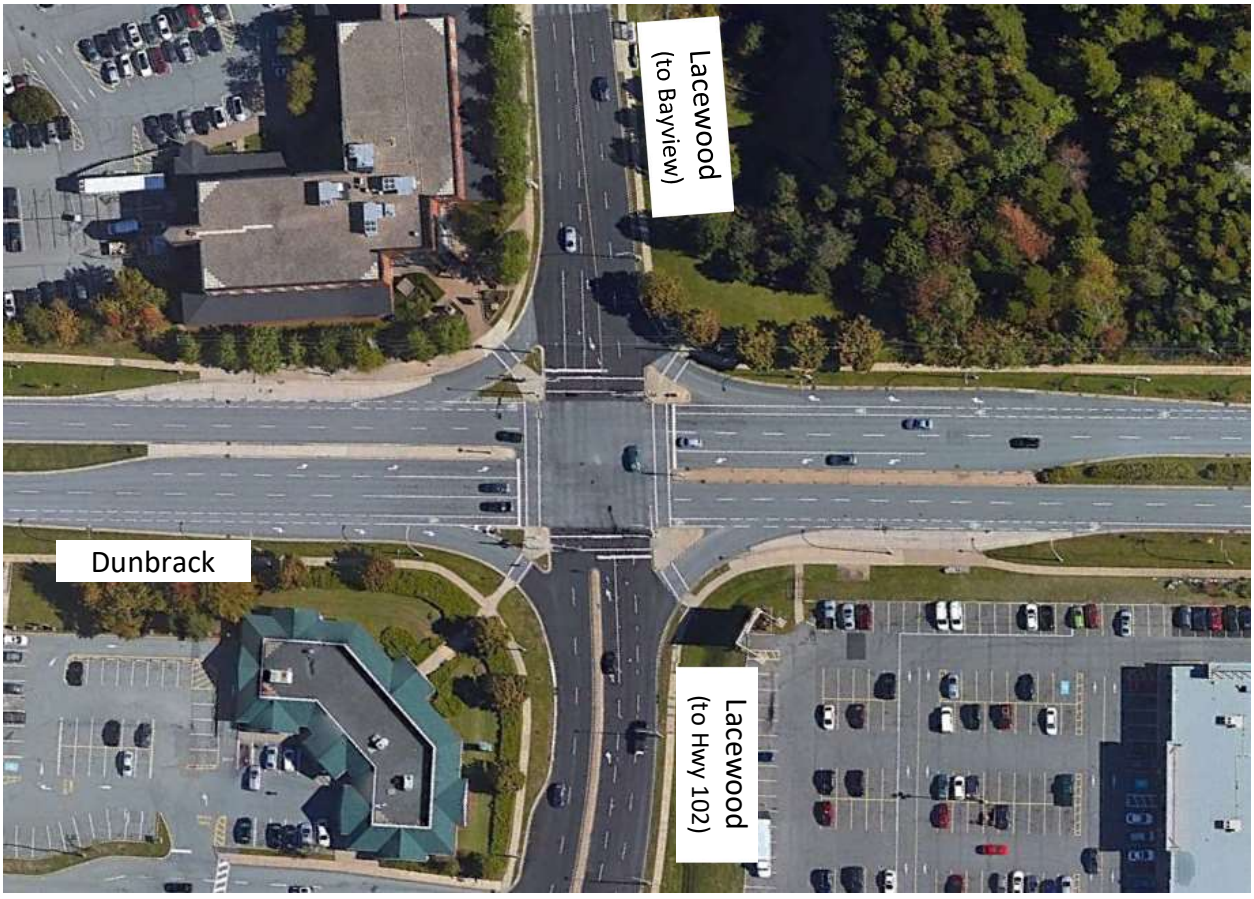
This intersection is currently configured as a four-leg, signalized (pretimed) intersection. The four-lane undivided cross section on Lacewood Drive includes shared through/right and shared through/left lanes. The single lanes on lanes on Bayview Road and Clayton Park Drive are shared left/though/right movements and the intersection contains four non-actuated pedestrian crosswalks over each leg of the intersection. The intersection has basic fixed time signal operations suited to various peak and off-peak traffic scenarios.

Figure 2-5: Bayview Road and Lacewood Drive Intersection

2.2.6 Lacewood Drive and Dunbrack Street

This signalized (actuated, coordinated) intersection has two through lanes on each leg of the intersection all with single dedicated left turn lanes. There is right-turn channelization in all four quadrants of the intersection and the eastbound and westbound movements on Dunbrack also include dedicated right turn lanes leading to the channelization. The Dunbrack cross section includes painted bike lanes in both directions and the intersection has four pedestrian actuated crosswalks. Curb/gutter, sidewalks and grassed boulevards are present on all legs of the intersection and concrete medians are present on 3 of the 4 legs of the intersection.

Figure 2-6: Lacewood Drive and Dunbrack Street Intersection



2.3 Active Transportation

Seton Ridge's sustainable approach to development is intended to promote significant areas of greenspace, a reduced dependence on cars, walkable streets, direct connections to transit, integration with adjacent properties, and a variety of other initiatives that promote active transportation use. The internal road, trail and park network is expected to provide ample infrastructure to serve the active transportation community and provide connections to adjacent properties such as MSVU.

The development's proximity to the downtown core and key employment areas in Halifax is expected to help promote the use of active transportation modes. The 2006 Active Transportation Functional Plan and the more recent *Making Connections: 2014-19 Halifax Active Transportation Priorities Plan*, provides a variety of data supporting active transportation use. The documents suggest the following modal share in the Seton Ridge and adjacent areas.

Table 2-1: Modal Share - Journey to Work/School Dataset (1996-2001)

Area	Pedestrian Modal Share	Cyclist Modal Share
Fairview (includes Seton)	~ 8 – 10%	~1%
Halifax - Chebucto	~ 25 – 30%	~ 3 – 4%
Halifax – Citadel	~ 50 – 55%	~ 2 – 3%
Halifax - Needham	~ 30 – 35%	~ 3 – 5%

In a more general sense, information from the HRM website notes the following modals shares in the regional centre and the suburban areas of HRM (in 2011), noting that the proposed development is just 1.5 km from the boundary of the regional centre.

Table 2-2: Modal Share – 2011 HRM Modal Share Estimates

Mode	Regional Centre%	Suburban%
Car as Driver (%)	44.43	72.2
Car as Passenger (%)	6.50	8.56
Public Transit (%)	19.34	13.73
Walked (%)	24.74	3.79
Bicycle (%)	3.53	0.39
Other Methods (%)	1.46	1.32

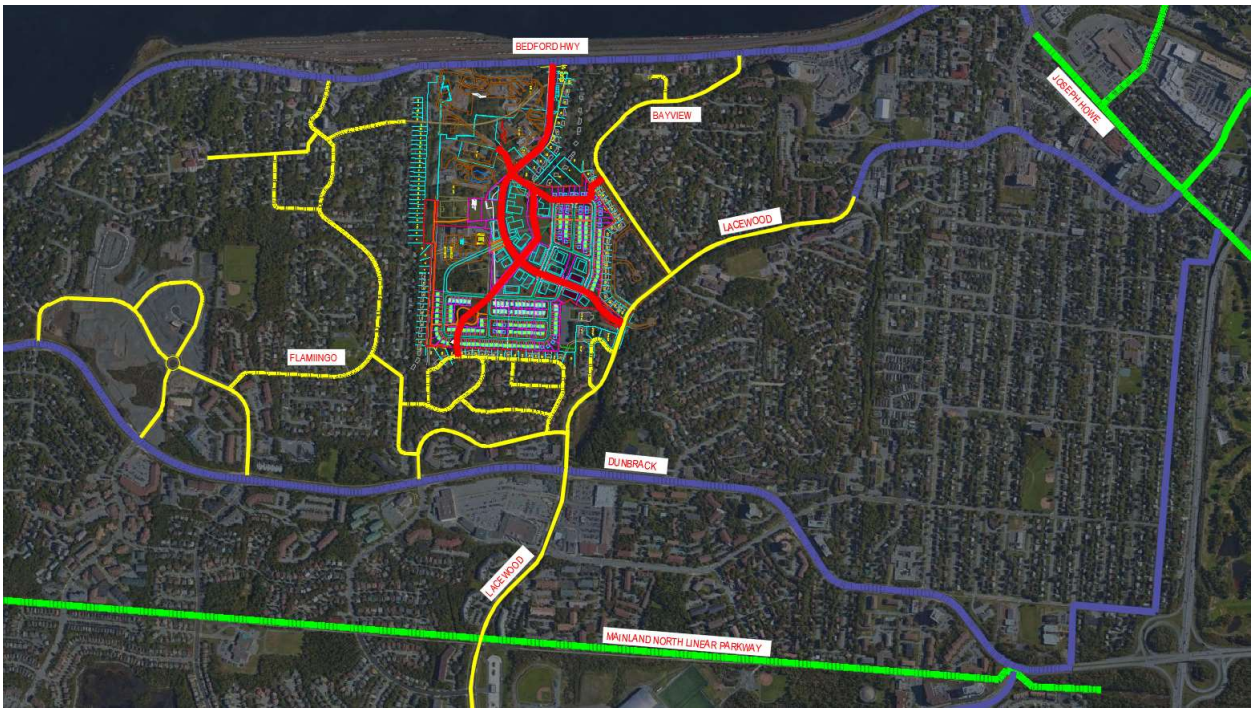
Through our discussions with HRM and review of available information, we noted a number of issues that will help contribute positively towards active transportation use in the near future. These included:

- Further development of the Chain of Lakes Trails systems which include nearby connections along, Bedford Highway, Joseph Howe Drive, candidate bike routes on Dunbrack Street and more;
- Relatively close proximity and reasonable connectivity to the Mainland North Linear Parkway;
- Significant investment in general new construction and renewals of sidewalk throughout HRM;

- Aggressively pursuing more bike lanes and more recently successfully implementing a wide variety of bike lane projects; and,
- A continued commitment to promoting routes, connections and technologies that support active transportation use.

The figure below shows a general outline of key active transportation connections in the areas surrounding the proposed development.

Figure 2-7: Key Active Transportation Connections



2.3.1 Existing Pedestrian Volumes

Various pedestrian traffic counts have been carried out between 2009 and 2017 in the vicinity of the study and generally show relatively low pedestrian and cyclist volumes that are not expected to have any significant impact on the transportation modelling or analysis. The exception that warrants some further consideration are the pedestrian crossings on Seton Road which support student related traffic traveling to MSVU. It is also recognized that the development area itself is placing a high priority on the accommodation of active transportation users around and through the development. Additional details on pedestrian activities in these areas are addressed in the analysis sections of this report.

2.4 Transit

The existing transit routes figure shown to the right (taken from the Halifax Transit System Wide Route Map) shows the proposed development located in the middle of a relatively robust transit network. This includes 7 routes on Bedford Highway, 4 routes on Lacewood Drive, 4 routes on Dunbrack Street and 2 routes on Flamingo Drive.

Figure 2-8: Development Location

Direct feedback from Halifax Transit indicates that final route plans are not complete at this time, but the Seton Ridge development is likely to include a peak express route starting with 4-6 peak trips and growing based on demand. It is also likely that a local route will be assigned directly along Seton Road that will connect to the Lacewood Terminal and provide approximately 30-minute frequency. Further correspondence with Halifax Transit also suggested that:

- The opening of the Lacewood Terminal has increased Halifax Transit's capacity to introduce more service in the area starting in 2018/19. This is expected to include increased frequencies and number of peak trips;
- New express routes from West Bedford etc., will route through Clayton Park to avoid the Bayers Road area which is expected to increase transit trips on the road network in the next few years;
- Through the Integrated Mobility Plan, Halifax Transit is discussing higher order transit options, such as BRT and light rail transit, though no decisions have been made for this he area; and,
- The two lay-by lanes that are located immediately east of Seton Road on the Bedford Highway are not critical points in the bus network (the stops immediately to the west are critical time points for Transit) therefore Halifax Transit is open to discussion regarding the removal or relocation of these laybys.

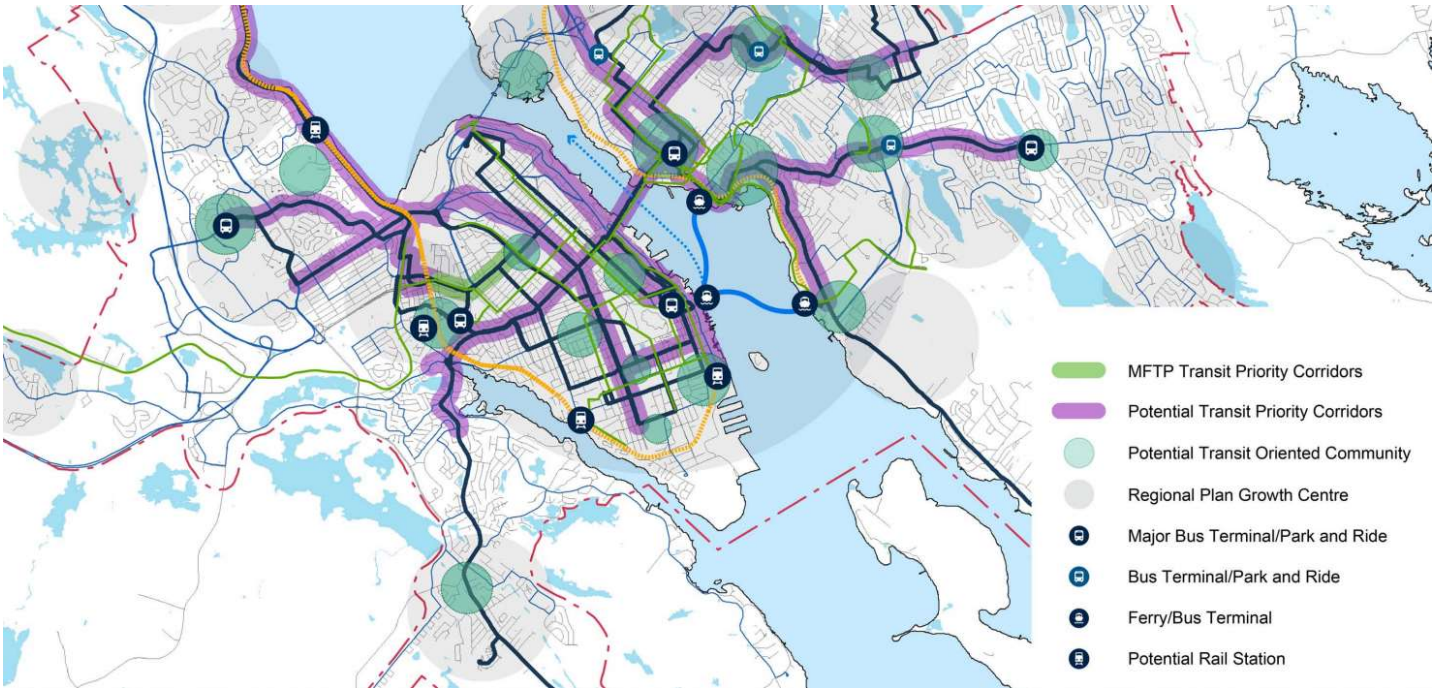
The table below shows data extracted from the 2006 census data. While the information is dated, it provides an indication of the levels of transit ridership in different areas of HRM. Most notable are the areas around the Seton Ridge development that hover in the range of 15% transit usage.

Table 2-3: Transit Mode to Work (2006 Census)

Location	Vehicle	Transit	Walk
Upper Sackville	92%	6.3%	0.8%
Lower Sackville	82.2%	11.8%	4.2%
Bedford	86.1%	7.2%	4.9%
Dartmouth East	80.7%	12.9%	3.9%
Dartmouth North	65.3%	22.9%	8.7%
Dartmouth South	69.8%	18.2%	9.3%
Halifax Chebucto	48.1%	15.7%	30.4%
Halifax Citadel	31.5%	9.7%	54.6%
Halifax Needham	42.9%	16.7%	33.5%
Halifax County	75.8%	11.9%	10.1%

The recent *"Moving Forward Together Plan"* from Halifax Transit suggests some minor modifications to route plans in the area and the Integrated Mobility Plan show Seton Ridge as a "Potential Transit Oriented Community" located adjacent to 2 "Potential Transit Priority Corridors" (Bedford Highway and Lacewood Drive). Also note that the figure below shows a "Potential Rail Station" located between Flamingo Drive and Mount St. Vincent University.

Figure 2-9: Integrated Mobility Plan – Transit Infrastructure



2.5 Existing Parking

There is limited parking capacity on the existing roadways in the vicinity of the development. Parking is not permitted along the Bedford Highway, Lacewood Drive or Seton Road. Parking is not restricted on Bayview Drive, though few people park along the curb lanes due to the high volume of traffic on Bayview and the availability of individual driveways for residences. The most significant parking consideration outside of the future on-site parking required for the development are the various Mount Saint Vincent University parking lots connecting to the Bedford Highway and Seton Road.

MSVU parking is generally either permitted, metered or pay and display (P&D). Permits are reserved for faculty, staff and students and account for approximately 25% of the available lots at the University. The metered parking is available for anyone but restricted to a one, two- or four-hour durations and accounts for approximately 25% of the lot space. The pay and display parking, also available to anyone, can range from a few minutes to a full day and accounts for approximately 35% of the available lot space. An 80-vehicle parking lot located up Seton Road past the steam plant accounts for the final 15% of the available parking space. Regulations state that there is no cost or permit required to park on campus or in the additional lot on Saturdays. Other adjacent developments also have parking areas reserved for private use.

3. TRAFFIC

3.1 Analysis Assumptions

3.1.1 Study Horizons

The base year for this updated Seton Ridge transportation study was established as 2018 with a 10-year future analysis horizon in 2028. It is expected that significant buildout of the site will take place within the first 5-years of development following approval, and for analysis purposes, the study assumes full buildout of the development during this 10-year period. Extending the analysis past this time period is not expected to add any benefit due to the low average annual growth rate combined with many of the other expected network initiatives such as improved transit and recommendations from the ongoing Bedford Highway Corridor Study that are expected to positively impact the transportation network.

3.1.2 Peak Hours to be Analyzed

The proposed development is predominantly residential in nature and connects directly to 2 primary commuter corridors – Bedford Highway and Lacewood Drive. Residential and office-based developments typically experience their highest traffic volumes during weekday AM and PM peak hours of traffic and retails components of the development are not significant enough to warrant consideration of alternate peak periods. The highest traffic volumes for MSVU are also expected during the same periods therefore the analysis focuses on the AM and PM weekday peak hours.

3.1.3 Background Traffic Growth Rate

The original traffic study for this development used a 2% background annual traffic growth rate over the 10-year study horizon. This number is considered high based on recent work on other transportation studies, consultation with HRM and other local transportation professionals, and recent work carried out by HRM with respect to long term traffic modelling for the regional planning process. Recent HRM work has suggested that a 0.5% annual growth rate is more representative of actual growth and recent correspondence with HRM suggested that a 0.5% annual growth rates is appropriate for the 10-year period captured in this study.

3.1.4 Seasonal Adjustment Factors

The most recent seasonal adjustment factors were provided by HRM for the 2012 Average Annual Weekday Traffic (AAWT). These factors were applied to all counts to bring traffic count data to a common design hour volume which was then used to develop the baseline volumes for analysis purposes. A copy of these factors is included in Appendix B of this report.

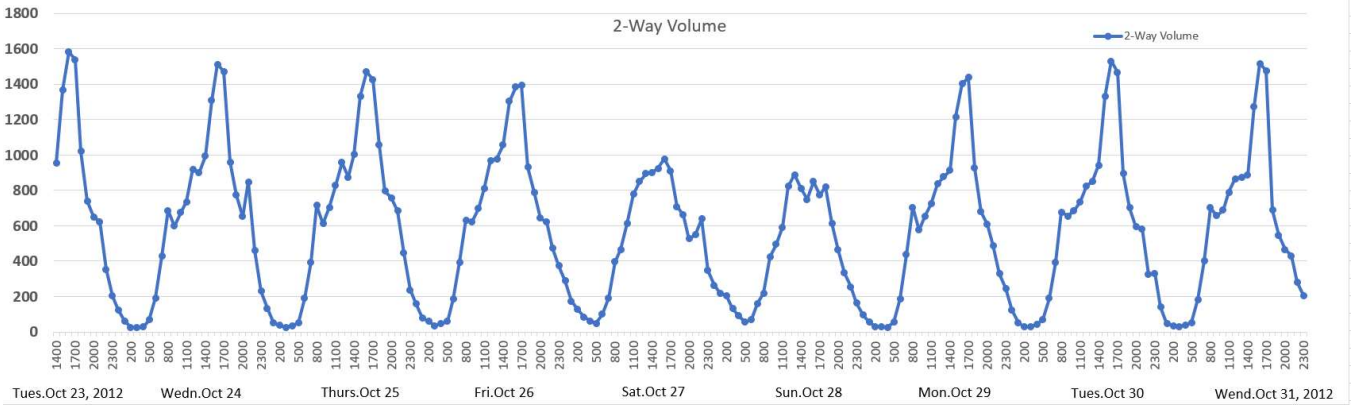
3.2 Existing Traffic

Existing traffic volumes were generated for the study area based on intersection turning movement counts and road section count data provided by HRM and collected independently using Miovision automated count technologies. Traffic volume data used in the original traffic impact study for the Seton Ridge development were updated based on the most recent data available from 2017 and 2018, which included an updated 2018 count at the Seton Road intersection with the Bedford Highway.

Count data was adjusted to a 2018 base year using appropriate seasonal adjustment factors and a 0.5% average annual growth rate for background traffic. Traffic count data and the seasonal adjustment factors are provided in Appendix B of this report. Existing traffic and future traffic projections are provided in Appendix E.

The following figure shows typical two-way traffic volume variations on Bedford Highway in October 2012 between the Fairview Overpass and Flamingo Drive. The data suggests significantly higher volumes are present on Bedford Highway during the weekdays as opposed to weekends and that the highest traffic volumes are consistently experienced during the PM peak hours.

Figure 3-1: Road Counts – Bedford Hwy between Fairview OP and Flamingo



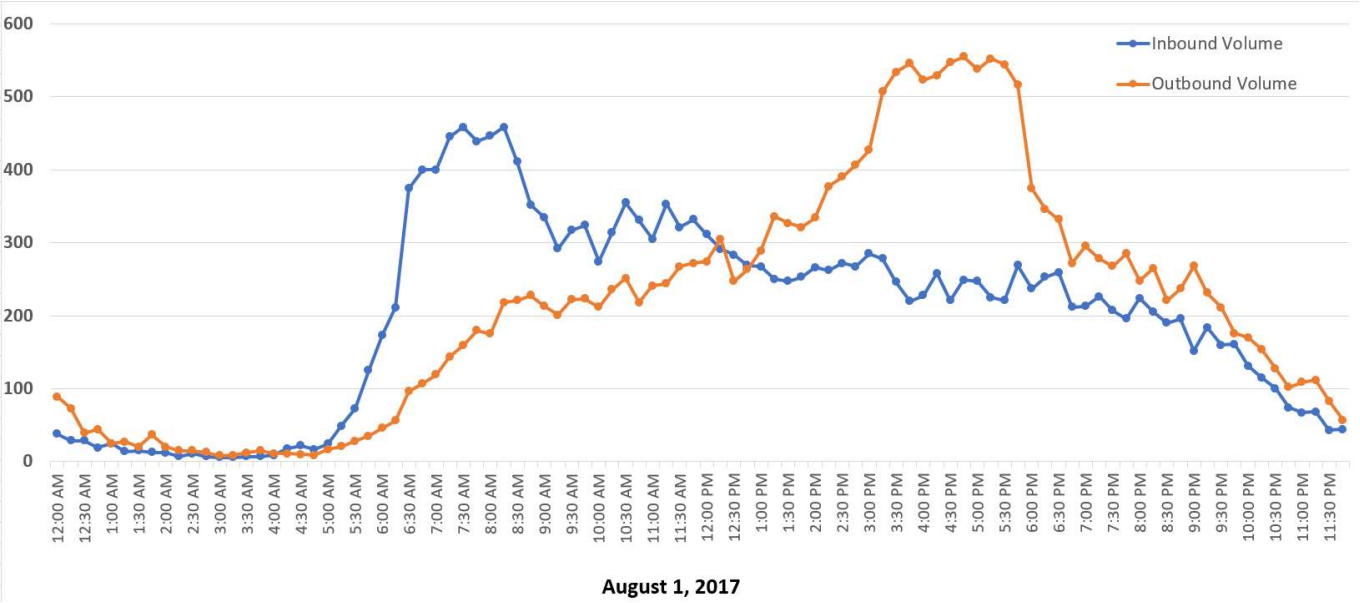
Another count at the same location between the Fairview Overpass and Flamingo from August 2017 showed the vehicular distribution statistics shown in the table below.

Table 3-1: Vehicle Distribution on Bedford Highway

MOTORVEHICLES	TOTALS	%	% Class
MOTORCYCLES	508	1.3%	96.9%
CARS	34350	86.6%	
LIGHT GOODS VEHICLES	3576	9.0%	
BUSES	409	1.0%	1.0%
SINGLE-UNIT TRUCKS	552	1.4%	
ARTICULATED TRUCKS	270	0.7%	2.1%
TOTALS	39665		
AAWT	40855		
AADT	36492		
BICYCLES ON ROADWAY	88		

The following figure from the same roadway count shows the volumes variations in in 15-minute intervals for each direction on the Bedford Highway on Tuesday August 1, 2017. Of note in this graph is the distinct nature of the AM and PM peak hours and the duration over which the peak hours extend.

Figure 3-2: Directional Road Counts – Bedford Hwy between Fairview OP and Flamingo



3.3 Future Traffic Volumes

3.3.1 Scenario 1 - 2028 Background Traffic Only

The 2018 base year volumes as noted above were adjusted to a 2028 scenario with only background traffic growth added to the network by applying an average annual background traffic growth rate of 0.5% per year for the 10-year horizon year. This assignment of traffic has assumed that there are no significant changes to the road network over the next 10 years that would noticeably impact existing traffic patterns. This, in our opinion, represents a worst-case scenario with respect to traffic on the Bedford Highway and Lacewood Drive given a variety of transportation related improvements that are likely or could potentially occur over the time horizon of this study.

These include:

- Construction of the Burnside-Sackville Connector (Highway 107 Extension) to relieve congestion on Windmill Road and spillover effects to the Bedford Highway;
- Improved transit initiatives to increase transit modal share;
- Initiatives and new corridor to promote increases in active transportation travel modes;
- Significant residential construction in downtown Halifax and Dartmouth to help reduce suburban commutes;
- Increases in ridesharing programs and initiatives, and alternative modes of travel including autonomous vehicle technologies;
- Potential future commuter rail to help reduce passenger car travel; and,
- Future potential upgrades to Highway 102, Bayers Road and Bedford Highway corridors.

3.3.2 Scenario 2 – 2028 Background Traffic plus Development Traffic

The 2028 background + development traffic scenario includes the Scenario 1 background traffic, plus the new traffic expected from the proposed Seton Ridge development, as well as any other traffic diversions that may result from the construction of the thoroughfare through the development. The additional Seton Ridge traffic was determine using the trip generation, distribution and assignment assumptions detailed in the following sections for the highest 2,500 unit scenario.

Once Bedford Highway and Lacewood Drive are connected through the development, there is potential for some existing traffic to divert through the development. During the peak hours, it is expected that such diversions would occur primarily due to real or perceived time saving by travelling through the development between a given origin and destination. While this is difficult to estimate, the study has assumed a 10% diversion of traffic from Bayview Road to Seton Road through the development. The 10% diversion was based on the critical turn movements that could potentially view the route through the development as more convenient than using Bayview Road. Generally, the diversion volumes are quite low and are summarized in Appendix E of this report.

3.4 Trip Generation

New trips generated from the site are composed of three main elements including:

- Traffic related to the construction of the new Seton Ridge Development;
- Traffic related to the potential expansion of the Shannex Caritas complex; and,
- Reductions in trip generation resulting from approved modal share trip reduction factors.

Traffic related to Mount Saint Vincent University is expected to remain relatively consistent therefore has not been considered further in this study. Initial trip generation numbers were

produced based on information contained in the Institute of Transportation Engineers Trip Generation Guide without any reduction factors applied. Trip reduction factors related to transit and active transportation modal share were then applied as discussed in greater detail in the following sections.

Table 3-2: Seton Ridge Preliminary Trips Generation Estimates – 2,500 Unit Scenario

				AM PEAK		PM Peak	
Land Use	**Trip Code**	**# Units**	**Units**	**In**	**Out**	**In**	**Out**
Single Family Detached Housing	210	179	units	34	101	112	65
Residential Condo/ Townhouse	230	6	units	1	4	4	2
Apartments (High Rise)	222	1712	units	129	385	365	234
Apartments (Mid Rise)	223	603	units	56	125	136	99
SubTotal		**1803**		**220**	**615**	**617**	**400**
Recreational Community Centre	495	6.5	/1,000 sq.ft	9	4	9	9
Retail Area	820	89.4	/1,000 sq.ft	53	33	159	173
General Office	710	46	/1,000 sq.ft	63	9	12	57
SubTotal				**125**	**46**	**180**	**239**
Care Facility (Shannex)	253	500	Units	18	12	47	38
SubTotal				**18**	**12**	**47**	**38**
			SubTotal Trips	**363**	**673**	**844**	**677**
			Internal Capture (NCHRP)*	-19	-19	-83	-83
			Pass-by Trips (ITE)**	0	0	-44	-44
			TOTAL NEW TRIPS	**344**	**654**	**717**	**550**

** Internal Capture Rates are based on NCHRP Methodologies contained in Report 684 - Enhancing Internal Trip Capture Estimation for Mixed-Use Developments.*

*** Pass-by Trip estimations are based on standard ITE methodologies as defined in ITE's latest edition of the Trip Generation Handbook.*

3.5 Trip Reduction Factors

Given the location and nature of the Seton Ridge, the total trips generated by the ITE trip generation guide were further reviewed to ensure that the estimates are reasonable. Trip generation estimates contained in the ITE guides were developed during an era when most new development was single use, stand alone, highway oriented, and suburban. As such, they do not typically do a good job of representing well designed, mixed use developments, particularly when they are highly oriented toward transit and/or active transportation use. There were a variety of reduction factors to consider and several discussions have been held with HRM staff to help refined the trip reduction factors to appropriate values for this study.

3.5.1 Active Transportation Reductions

The development is in an area that typically sees 8 – 10% pedestrian modal share and is very close adjacent areas that see values as high as 50% such as in the downtown core areas. It is not reasonable to assume people from Seton Ridge will walk downtown, though it does suggest

a propensity for people to walk. Similarly, cycling traffic in the Seton Ridge area is around 1% with values in adjacent areas being as high as 5%. Going forward, the Integrated mobility Plan has indicated a goal of doubling pedestrian and cycling modal share by 2026. Based on various discussions and correspondence with HRM staff, an overall active transportation trip reduction value of 10% was agreed to and applied to this study.

3.5.2 Transit Related Reductions

HRM's Integrated Mobility Plan identifies both Lacewood Drive and Bedford Highway adjacent to Seton Ridge as a *"Potential Transit Priority Corridor"* and Seton Ridge itself as a *"Potential Transit Oriented Community"*. This development approach has certainly been reflected in the marketing and design work completed to date for the development. Discussions with Halifax Transit have indicated that a transit route directly through the development is likely and overall improved service in the area is expected as a result of implementing initiatives in *the Moving Forward Together* plan. Based on various discussions and correspondence with HRM staff, an overall transit trip reduction value of 15% was agreed to and applied to this study. As discussed with HRM, the reduction was only applied in the peak direction of travel based on the specific land use characteristics.

3.5.3 Other Considerations

There are a variety of other factors that are likely to help reduce the traffic impact from this site, through it has been discussed and agreed with HRM that no additional trip reduction factors would be applied to the ITE trip generation rates. For discussion purposes, the following items are likely to have an overall impact on the Seton Ridge development.

- Additional On-Site Synergies – the ITE Trip Generation Guide accounts for some on-site synergies naturally on a site where complementary land uses are present as indicated in the initial trip generation estimates. That said, it is likely that there will be a number of additional synergies on-site, particularly with the close proximity of MSVU and the adjacent retirement communities.
- Nature of the Development – Seton Ridge is being developed and promoted as a modern LEED based sustainable development that is highly transit and active transportation friendly. This suggests an increased likelihood that people moving into the area are more likely to seek transit and active transportation opportunities or ride sharing opportunities rather than being oriented to making single passenger car trips.
- Technology Impacts – no reduction has been applied for the new technologies entering the world of transportation such as ride sharing companies/technologies (Uber/Lyft etc.) or autonomous driving vehicles. It is not yet clear on what specific impacts these technologies will have, though it is certainly prudent to monitor the impacts of such technologies and services.

- Alternative Transportation Modes – There is continued interest in alternative travel modes such commuter rail and higher order transit services. Should such alternatives be adopted, they are expected to have a significant positive impact on travel in these critical corridors.

3.5.4 Trip Reduction Summary

Based on the discussions above, an additional trip reduction of 25% was applied to the ITE trip generation rates to represent new traffic generated by the development. The table below summarizes the final trip generation values used in the analysis. The specific calculations used to determine the 10% and 15% reduction factors is provided in spreadsheet form in Appendix D of this report.

Table 3-3: Final Trip Generation Estimates – 2,500 Unit Scenario

	AM PEAK		PM Peak	
	In	Out	In	Out
ITE New Trips	**344**	**654**	**717**	**550**
10% AT Reduction	-34	-65	-71	-55
15% Transit Reduction	-19	-95	-99	-22
TOTAL NEW TRIPS	**291**	**494**	**547**	**473**

3.6 Trip Distribution and Assignment

Trip distribution and assignment was estimated based on the relative distributions of traffic presently on the road network. The distribution also considered the general location of input land uses, which shows that the vast majority of commercial, business and institutional land uses are situated to the east of the site towards the downtown core of Halifax and the majority of residential origins and destinations are situated to the west.

In the vicinity of the proposed development, the most recent counts during the AM peak show approximately 65% of traffic traveling inbound on the Bedford Highway and 35% travelling outbound. PM peak trip distribution along Bedford Highway shows 36% traveling inbound and 64% traveling outbound. For the purposes of this study, peak direction traffic was assumed to account for 65% of trips and off-peak traffic to account for 35% of trips.

On Lacewood Drive, AM peak distribution showed approximately 41% in the outbound direction and 59% in the inbound direction. PM peak trip distribution shows 61% going outbound and 39% going inbound. For the purposes of this study, peak direction traffic was assumed to account for 60% of trips and off-peak traffic to account for 40% of trips.

Results on both corridors suggest that the majority of commuters are destined to major employment nodes (Downtown Halifax, Burnside, etc.) during the AM peak and travel outbound from these areas during the PM peak hours. That said, volumes in the off-peak direction are still significant and are attributed to destinations such as the Bayers Lake Business Park or access to alternate commuter routes such as Highway 102.

At upstream and downstream intersections, trips related to the development were distributed in a similar manner to the distribution of existing trips the intersection. The only exception to this was the Lacewood / Bayview intersection where using the current intersection distribution would result in illogical route choices.

Figure 3-3 below shows a summary of the general trip distribution assumptions for the proposed development. The more detailed assignment of trips based on these distribution assumptions is provided in Appendix D of this report.

Figure 3-3: Trip Distribution Assumptions

4. TRANSPORTATION ANALYSIS

The transportation analysis was completed for the existing 2018, future 2028 time horizon with background traffic only, and for the 2028 horizon with the proposed 2,500 unit development scenario in place. The road network was modeled using the Synchro / SimTraffic traffic analysis suite of simulation tools to determine the characteristics of the road network before and after the development.

Key performance criteria considered in this report include volume to capacity ratios (V/C ratios, movement delay (seconds per vehicle), queues (measured in meters) and other associated measures that allows the detailed evaluation of intersection and road section performance. Where appropriate, the analysis also included evaluating the impacts of coordination between adjacent traffic signals. This specifically included the Bedford Highway corridor between Seton Road and 50 Bedford Highway, as well as Lacewood Drive between the Bayview intersection and the new Seton Ridge access to Lacewood Drive.

4.1 Development Scenarios for Analysis

Intersection capacity analysis was conducted at the intersections of:

- Bedford Highway and Bayview Road;
- Bedford Highway and Sherbrooke Drive (limited due to low volumes on Sherbrooke);
- Bedford Highway and Seton Road;
- Bedford Highway and MSVU Driveway;
- Bedford Highway and Flamingo Drive;
- Bedford Highway and 50 Bedford Highway;
- Lacewood Drive and Bayview Road;
- Lacewood Drive and the new access to Seton Ridge; and,
- Lacewood Drive and Dunbrack Street.

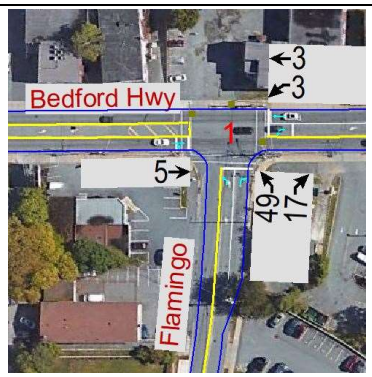
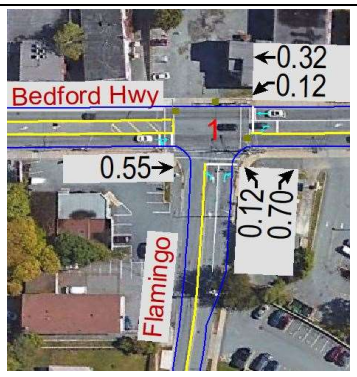
The analysis was completed for AM and PM peak conditions for the following scenarios:

- Background traffic only (2018);
- Projected 2028 horizon year volumes – background traffic only; and,
- Projected 2028 horizon year volumes – with full build-out of 2,500 units and traffic diversion resulting from the new route through the development.

The analysis for each intersection is presented individually for the AM and PM peak hour using modelled graphics of the intersection to allow clear representation of the progress of performance through each scenario. Results are shown for three main categories – volume, delay and volume to capacity (V/C) ratio. Detailed SYNCHRO and SimTraffic reports for each scenario are included in Appendix F of this report for reference.

4.2 Flamingo Dr. / Bedford Hwy

4.2.1 AM Peak

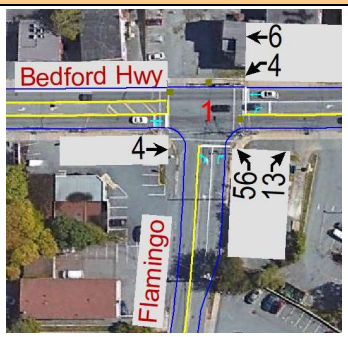
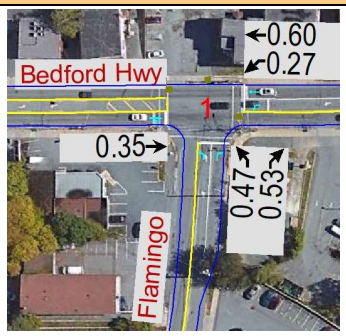
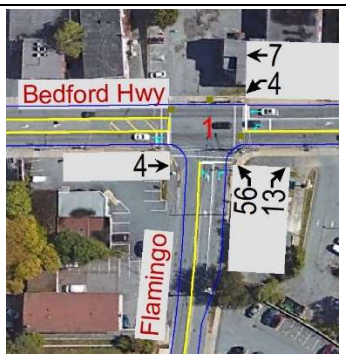
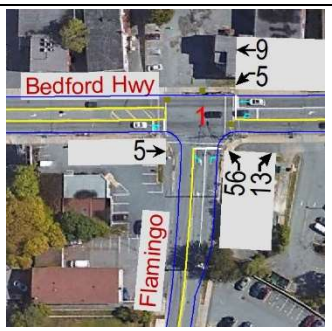
	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

The existing intersection includes a single through lane in each direction on Bedford Highway, a dedicated westbound left turn lane, and separate right and left turn lanes on Flamingo Drive. These lanes with traffic signals allow this intersection to operate at a good level of service throughout all future AM peak scenarios. The existing signals are actuated-coordinated signals and currently operate with no dedicated westbound left turn phase. This provides an adequate level of service and acceptable queues during the AM peak hours due to relatively low left turn volumes for this movement. 2028 queues with development is shown in figure to the right. Consideration may be given in the future to adding a dedicated left turn movement should conditions warrant.

Intersection: 1: Flamingo & Bedford Hwy

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (m)	73.6	21.9	57.8	64.0	45.0
Average Queue (m)	46.7	10.5	29.2	13.3	27.8
95th Queue (m)	72.7	21.3	57.1	49.0	49.7
Link Distance (m)	225.1	223.6	223.6	169.5	

4.2.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

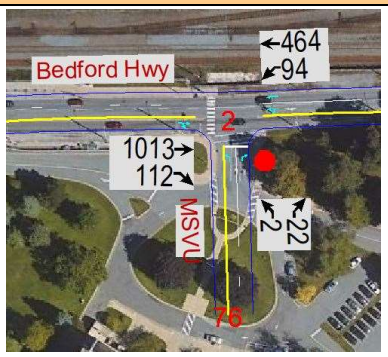
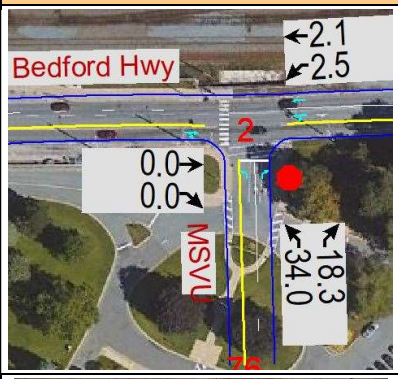
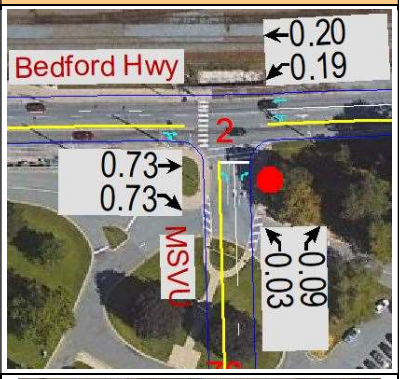
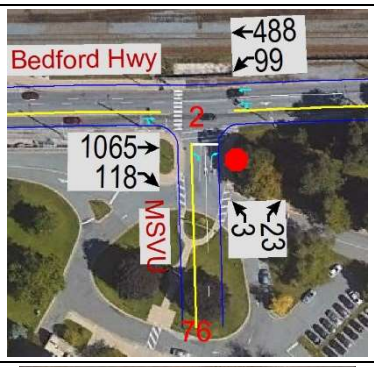
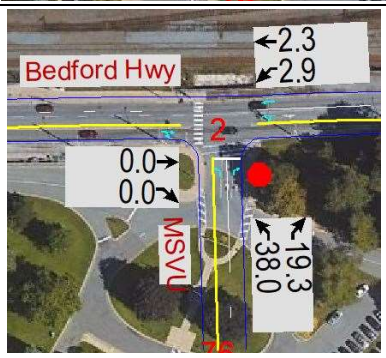
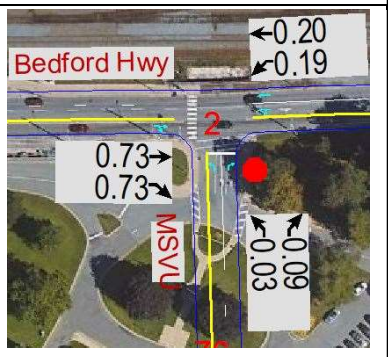
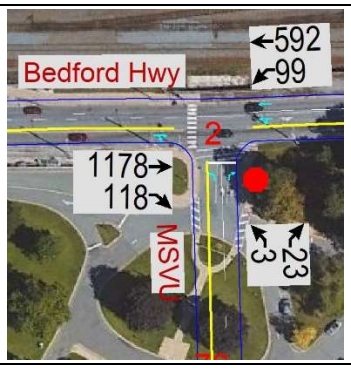
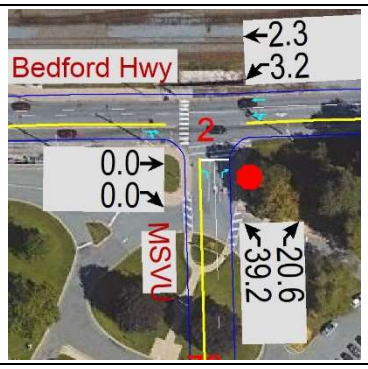
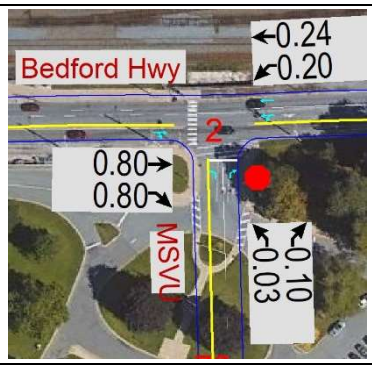
Heavier outbound PM peak volumes through this intersection result in higher capacity utilization though a significant amount of green time can be attributed to this movement due to relatively low volumes on Flamingo Drive and in the eastbound direction on the Bedford Highway. The existing traffic signal timings were maintained for all scenarios (2018 existing conditions, 2028 background traffic, and 2028 development traffic) without any significant deterioration of service. The figure to the right shows the 2028 queuing statistics from SimTraffic for the full development scenario. Results show 95% queues lengths close to 100 meters in the peak outbound direction though this is similar to background only results and is considered reasonable for peak hour traffic. Future consideration of a dedicated westbound left turn phases could be considered though is not a requirement for the proposed development.

Intersection: 1: Flamingo & Bedford Hwy

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (m)	74.8	39.8	107.0	50.2	32.9
Average Queue (m)	36.9	20.8	55.9	21.2	18.3
95th Queue (m)	69.4	35.2	98.6	41.6	31.3
Link Distance (m)	225.1	223.6	223.6	169.5	

4.3 Bedford Highway and MSVU Driveway

4.3.1 AM Peak

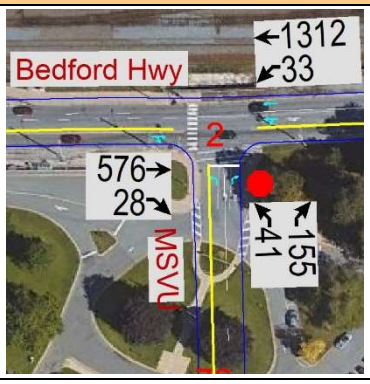
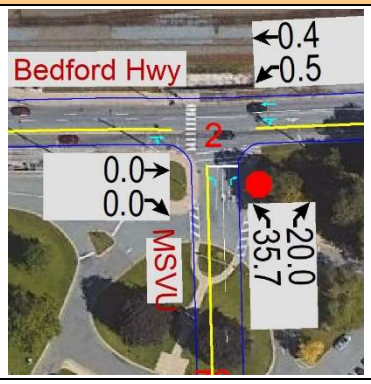
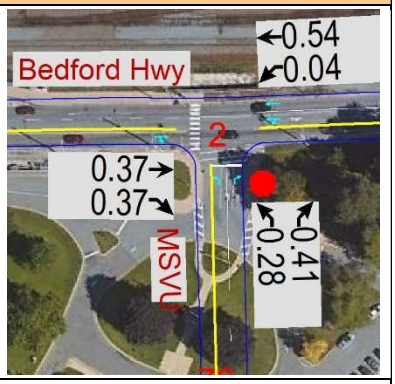
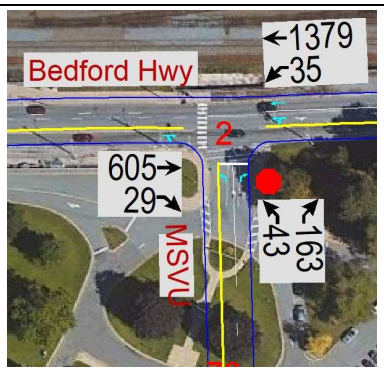
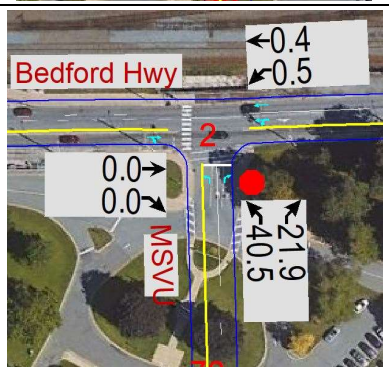
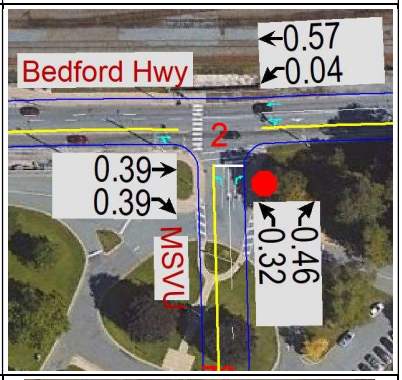
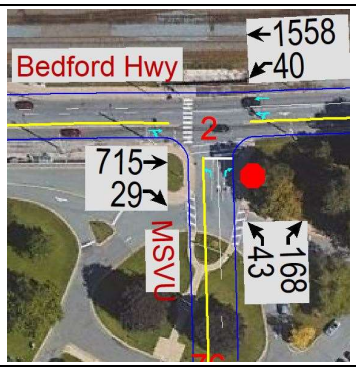
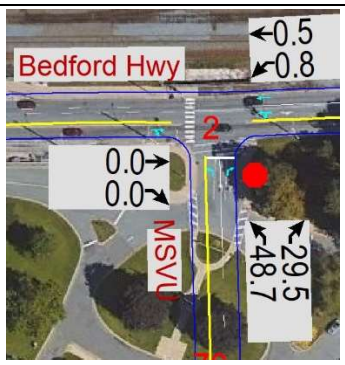
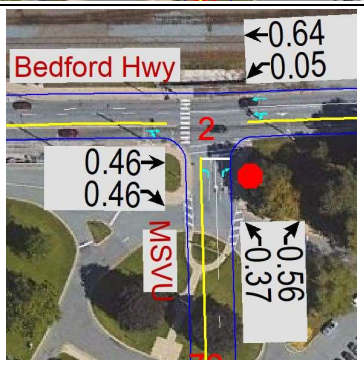
	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

Exiting volumes from the MSVU driveway are relatively low during the AM peak and therefore experience limited delay and queuing, though heavy two-way volumes on the Bedford Highway can make the left turn movement challenging. This is similar to many driveways along the Bedford Highway and the proposed development has very little impact on operations at this intersection.

Intersection: 2: MSVU & Bedford Hwy

Movement	EB	WB	WB	NB	NB
Directions Served	TR	LT	T	L	R
Maximum Queue (m)	3.4	73.1	41.3	4.4	15.7
Average Queue (m)	1.1	27.1	3.2	0.9	6.1
95th Queue (m)	5.2	58.0	20.6	5.2	15.0
Link Distance (m)	225.3	239.0	239.0	50.3	50.3

4.3.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

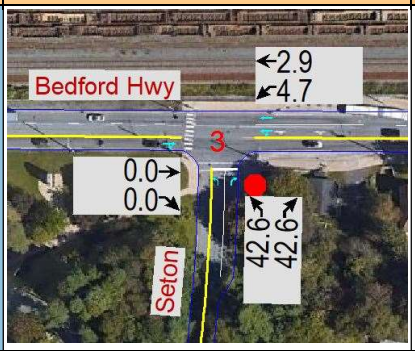
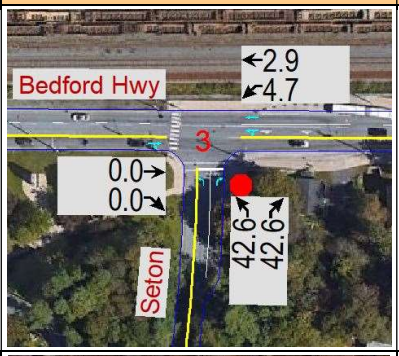
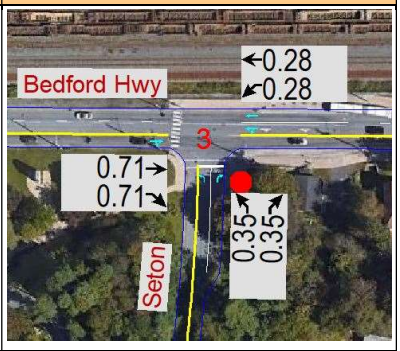
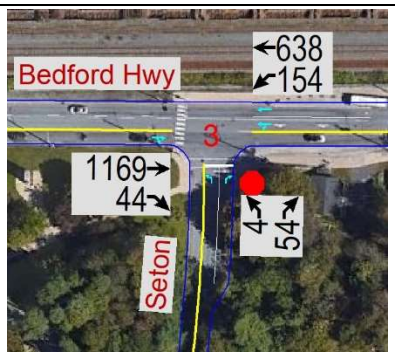
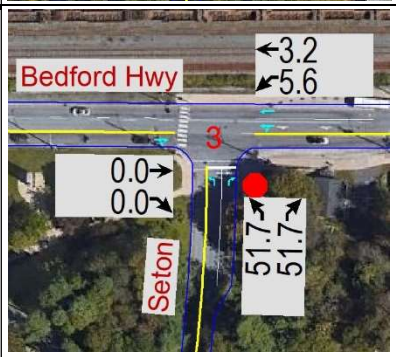
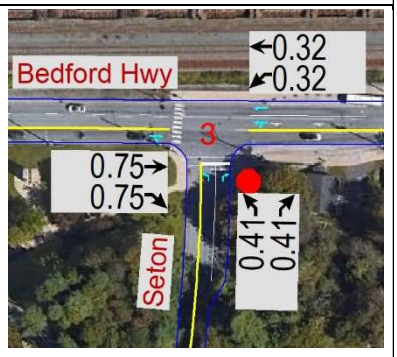
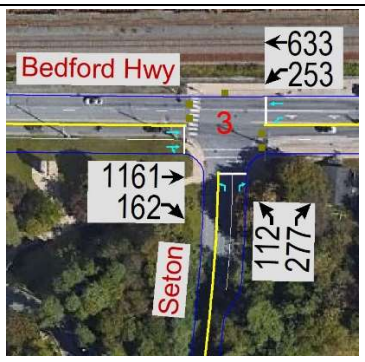
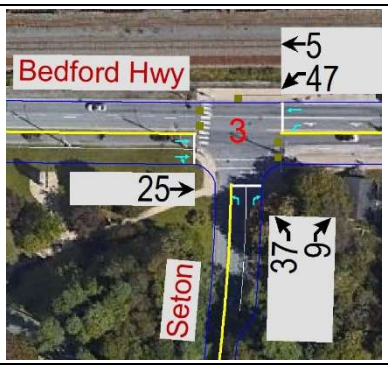
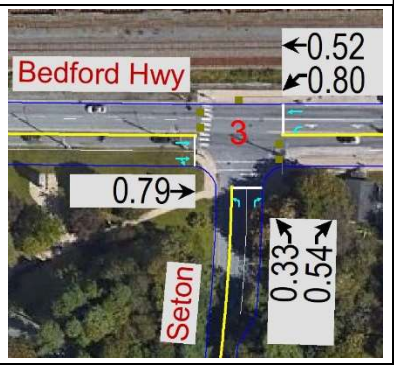
Existing volumes during the PM peak hour are higher and therefore the intersection experiences higher level of delays and queuing on the MSVU driveway. The presences of traffic signals at the Seton Road intersection benefits this intersection as it creates additional gaps in outbound traffic which requires an exiting left turn movement to only navigate gaps across the single inbound through lane. While the V/C ratio remains low, peak hour delays can still be significant. Under these circumstances, some drivers may elect to navigate to Seton Road and exit the site using the new traffic signals at the Seton / Bedford Highway intersection.

Intersection: 2: MSVU & Bedford Hwy

Movement	EB	WB	WB	NB	NB
Directions Served	TR	LT	T	L	R
Maximum Queue (m)	28.6	22.8	17.2	29.7	30.3
Average Queue (m)	7.4	7.3	3.5	12.0	15.7
95th Queue (m)	23.6	18.6	13.8	28.4	26.5
Link Distance (m)	225.3	238.8	238.8	50.3	50.3

4.4 Seton Rd / Bedford Hwy Intersection

4.4.1 AM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
	Modifications Required: - *Addition of additional easbound lane through intersection connecting to Sherbrooke.* - *Installation of actuated / coordinated traffic signals and controller.*		
2028 – Development			

This intersection is currently unsignalized with stop control on Seton Road approaching the Bedford Highway. Existing traffic volumes on Seton Road are relatively low and primarily associated with traffic from MSVU meaning higher inbound volumes in the AM peak and higher outbound volumes during the PM peak. Background only traffic growth progressively increases delays for turning movements at the intersection - particularly when making a left turn onto Seton Road from the Bedford Highway and from Seton to the Bedford Highway.

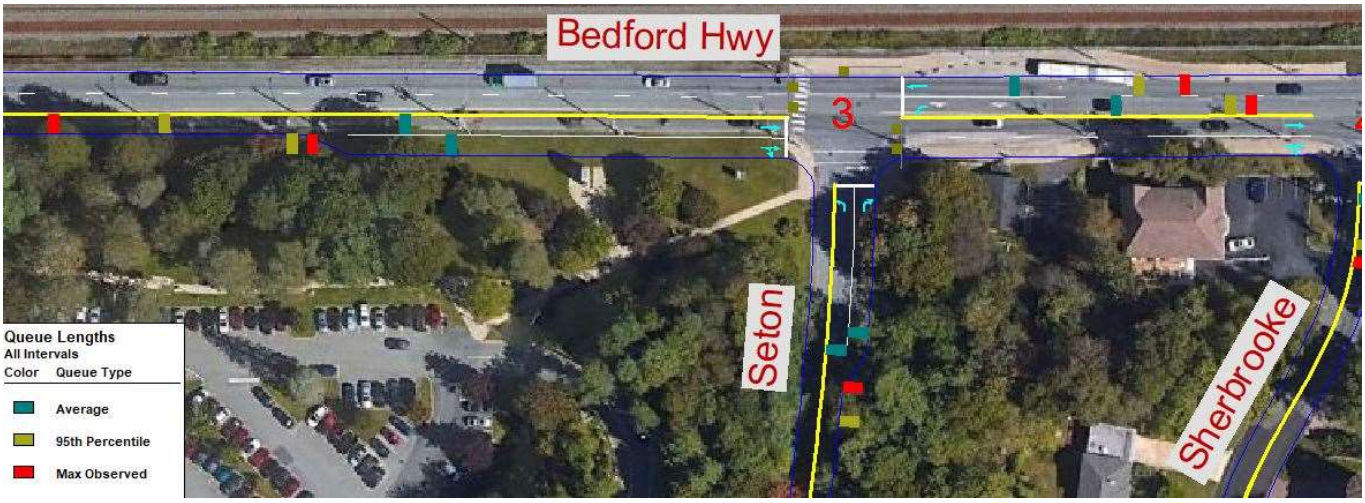
With the development in place, delays become excessive and both the AM and PM peak scenario drives a number of required infrastructure upgrades to maintain adequate operations at the intersection. This includes traffic signals as shown in the 2028 Development scenario as

well as the addition of an eastbound lane that should be initiated upstream (west) of the Seton Road intersection and extend through to Sherbrooke Street. This additional lane is a logical extension of the 4-lane cross section that currently exists east of Sherbrooke Drive. This configuration is shown graphically in Figures above and is discussed in greater detail in the Conclusions section of this report.

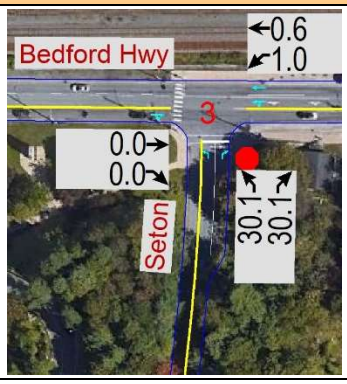
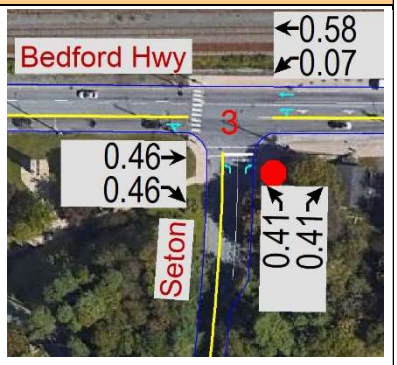
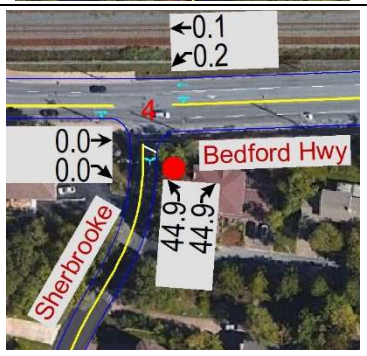
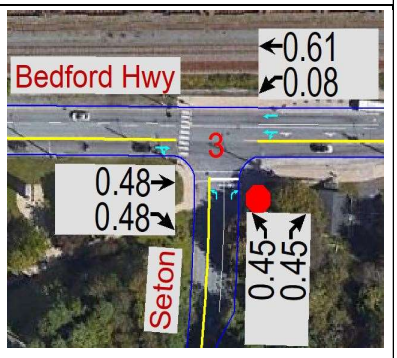
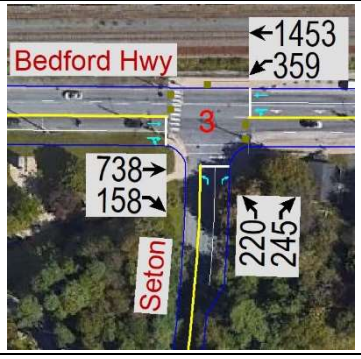
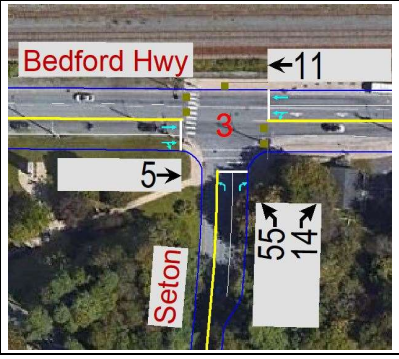
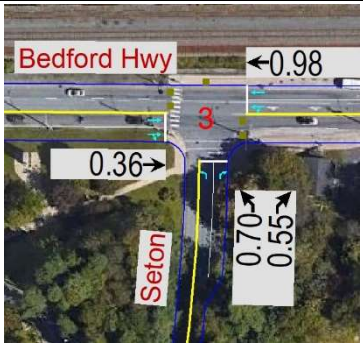
Queuing during the AM peak hour is minimal when the development is not present as volumes on Seton Road are low and free flow conditions exist on the Bedford Highway. The queuing statistics for the Seton Road intersection under the 2500-unit development scenario is shown to the right. These statistics include the addition of traffic signals and the extension of the 4-lane cross section upstream of Seton Road.

Intersection: 3: Seton & Bedford Hwy

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	126.4	87.5	65.7	52.7	71.7	37.5
Average Queue (m)	70.8	63.9	40.0	18.6	29.0	26.3
95th Queue (m)	110.3	92.9	60.8	40.1	65.1	42.2
Link Distance (m)	239.0		74.8	74.8	133.4	



4.4.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
	Modifications Required: - *Addition of additional easbound lane through intersection connecting to Sherbrooke.* - *Installation of actuated / coordinated traffic signals and controller.*		
2028 – Development			

The PM peak volumes show increases to all movement at this intersection and again require the installation of traffic signals and eastbound lane capacity upgrades to function adequately. The PM peak has some advantages for inbound traffic as right turning volumes exiting Seton Road enter the lower volume eastbound movement on the Bedford Highway.

The eastbound right turn movement to Seton Road is supported by the new shared through/right lane in addition to the existing single through lane. The left turn from Bedford Highway to Seton Road operates primarily as a dedicated left turn lane during the PM peak hours due to the volume of traffic making this maneuver. A protected left turn signal phase is recommended for this movement to help eliminate turning vehicles from the shared lane.

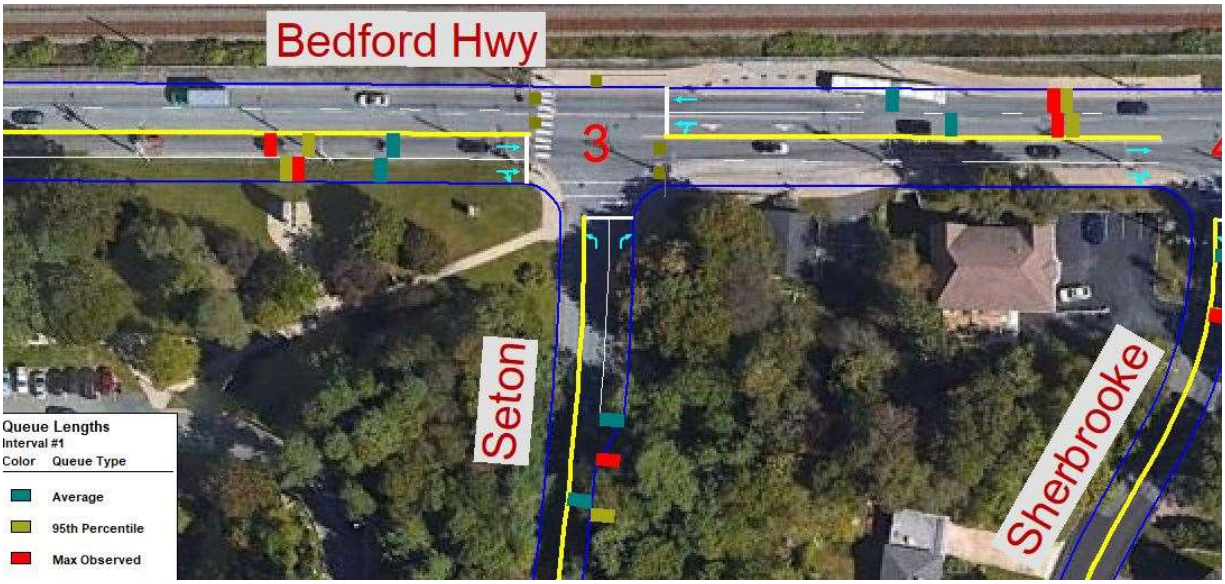
Maintaining this median lane as a shared/through lane (as opposed to a full time dedicated left turn) will provide some benefits to operations during the off-peak hours.

The existing signals along the Bedford Highway adjacent to the study area are fully actuated and coordinate and it is recommended that Seton Road signals be incorporated into this coordinated signal corridor. Coordination with traffic signals at Bayview (well-spaced at approximately 600 meters to the south) and the Icon Bay intersection (300 meters further) using common cycle lengths is recommended to help promote progression along this corridor. It is recommended that the signal installation be designed as fully-actuated signals including vehicle detection for Seton Road queues and for passage and presence on the outbound Bedford Highway Lanes. More advanced detection and signal phasing techniques could be considered for the westbound left turn lane in order to vary the length of the protected left turn phase to better manage queuing on the Bedford Highway.

Intersection: 3: Seton & Bedford Hwy

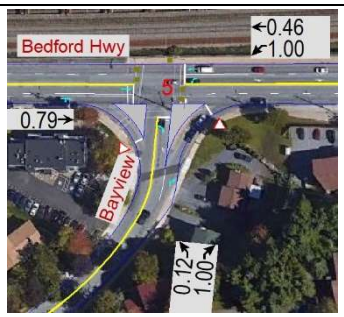
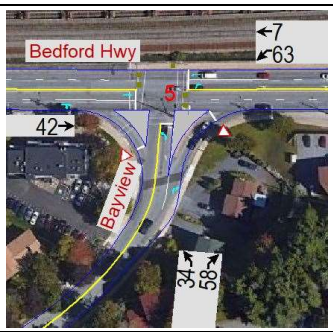
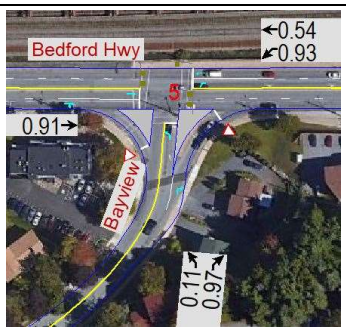
Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	34.6	40.6	78.1	78.4	79.5	37.5
Average Queue (m)	19.9	24.8	48.7	39.6	51.4	32.0
95th Queue (m)	35.2	39.6	75.6	74.7	84.4	47.2
Link Distance (m)	238.8		75.0	75.0	134.2	

Similar to the AM peak, queues are low relatively low with no development in place. Under the full development scenario, PM peak queues on Seton are limited to about 80 meters (under 10 vehicles) and queues on Bedford Highway can be maintained at about the same level depending on the signal timing split assigned to each critical signal phase. The inbound lanes during the PM peak are only about 40% utilized under the signal timing scenario representing in the existing figures suggesting that additional protected green time could be attributed to the westbound left turn movement to further reduce queues. Such considerations should be addressed in greater detail during the detailed design of the intersection and associated traffic signals.



4.5 Bayview / Bedford Hwy

4.5.1 AM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
	Modifications Required: - *None required assuming diverion occurs (accounted for in development scenario below).* - *With no diversion, 2-3 second increase to westbound left turn protected phase required.*		
2028 – Development			

This fully actuated and coordinated signalized intersection operates at acceptable levels of service during the AM peak hour, though high volumes on all legs will continue to keep the intersection utilization quite high under all development and non-development scenarios. The northbound right turn from Bayview to Bedford Highway is approaching or at capacity. Similarly, the westbound left turn is shown near capacity due the demand for green time related to the inbound through movement.

The two inbound (eastbound) lanes accommodate the heavier inbound traffic volumes during the AM peak hour and combines with the other major movement of right turn traffic from Bayview Road merging onto the Bedford Highway. This allows the majority of traffic signal green time to be assigned to the inbound Bedford Highway through movements keeping capacity utilization at reasonable levels. Even in the AM peak, there is enough outbound (westbound) left

turn volumes from Bedford Highway to Bayview that the shared through-left lane often becomes a de facto left turn lane limiting through movements to a single lane.

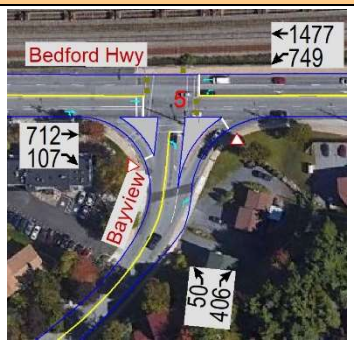
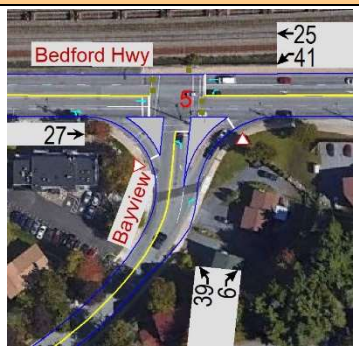
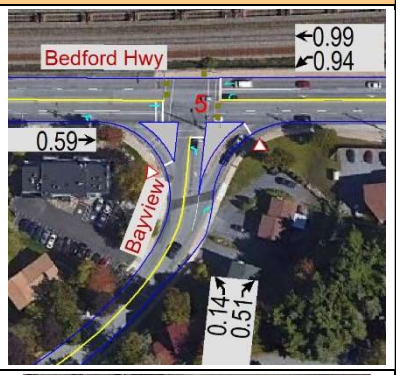
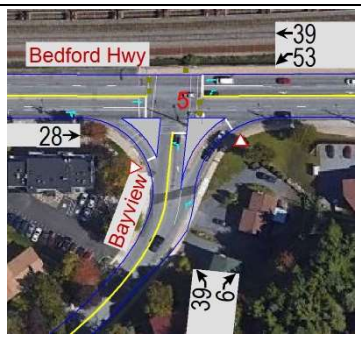
Delay at the intersection are moderate with the highest delays experienced by the westbound left turn movements to Bayview as they utilize a short protected left turn movement and navigate the heavy inbound traffic volumes during the permitted left turn phase.

Queues during the AM peak period for the 2500-unit scenario are shown in the figure to the right. While queues can be long, significant green time is assigned to both the inbound and outbound movements resulting in limited stopped delay on the Bedford Highway.

Intersection: 5: Bayview & Bedford Hwy

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (m)	223.8	227.9	138.3	47.0	141.8	50.0
Average Queue (m)	165.3	168.7	76.6	25.7	75.6	45.5
95th Queue (m)	269.1	272.8	126.3	42.5	145.7	66.3

4.5.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
	Modifications Required: - *Extending westbound left turn protected phase in order to utilize some through capacity of westbound shared lane (lane assignment modified below). Penalizes inbound traffic, though adequate excess capacity is available to limited impact to delays experienced.*		
2028 – Development			

The PM peak hour at this intersection represents the most challenging situation in the study area. During the PM peak hour, the outbound movements on Bedford Highway currently operate near or at capacity including the westbound through movement and the westbound left turn to Bayview. Under current signal timing, the high volume of left turns means the shared through left lane acts as a dedicated left turn lane limiting through movements to a single westbound lane.

In the 2028 scenarios with the development in place, three dynamics impact this intersection.

1) The addition of traffic to and from the proposed Seton Ridge development, which accounts for about 7% of the total traffic through this intersection under the full development scenario;

2) Traffic that diverts from Bayview Road to Seton Road once the connection is opened. This primarily impacts westbound left turning traffic that experiences significant delays that may elect to travel through the Bayview intersection and make a left turn at the less congested Seton Road intersection; and,

3) Traffic that is likely to select alternate routes to avoid congestion at this intersection or on the Bedford Highway corridor in general. The figures on the previous page show that background traffic alone pushes the westbound movement to a volume to capacity ratio of over 1.0. Under these conditions, it is likely that some drivers will elect to use alternate route and therefore reduce volumes on the corridor closer to capacity. Such reductions have not been included in this study.

To provide additional capacity under the current intersection configuration, the westbound protected left turn phase needs to be extended such that left turn traffic clears the intersection and some through traffic can also utilize the shared lane. Such a configuration would require a protect left turn phase in the range of 40 – 45 seconds. This increases delay in the inbound direction, though the existing inbound traffic distributed over the existing two lanes means these movements can be accommodated with limited increases in delay (approximately 9 seconds as shown in the figures above).

Given that the Seton Ridge development contributes a relatively small percentage of traffic to this intersection, there are no specific infrastructure improvements required at this intersection to support the Seton Ridge development. Operations of the Bayview intersection need to part of a larger discussion of the overall Bedford Highway corridor. A more detailed discussion on current and future operations at this intersection is provided in the Discussion and Conclusion Sections of this report.

Queues during the PM peak can be significant and consistent with any intersection operating at or near capacity, there are opportunities for the queues to build quickly if input volumes exceed capacity. This regularly occurs today and is expected to continue to some extent in the future regardless of this development.

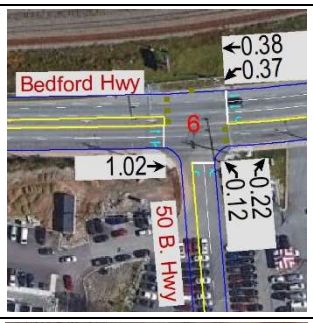
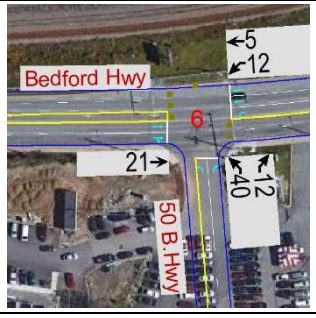
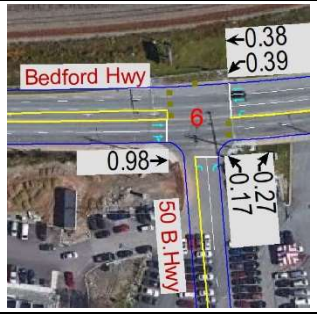
Coordination of the traffic signals between Bayview and 50 Bedford Highway is considered an important element of operations along this corridor and can have a significant impact on the driver experience through these intersections. Peak direction coordination in the PM peak hour should promote free flow conditions through the Bayview intersection by managing queues at the signals at 50 Bedford Highway. Signal coordination parameters should be addressed in greater detail during design stages of this project.

Intersection: 5: Bayview & Bedford Hwy

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	LT	T	L	R
Maximum Queue (m)	104.3	107.8	290.7	291.3	35.3	32.2
Average Queue (m)	69.3	74.1	277.9	275.9	12.6	4.8
95th Queue (m)	102.9	105.7	290.4	293.8	29.5	26.7
Link Distance (m)	310.5	310.5	278.9	278.9	170.7	

4.6 Driveway at 50 Bedford Highway

4.6.1 AM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 –			

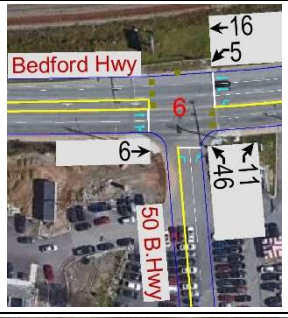
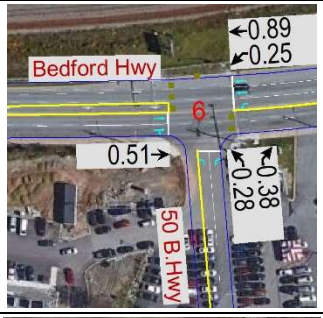
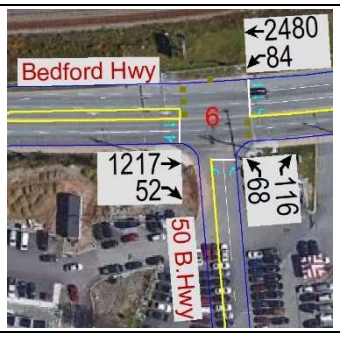
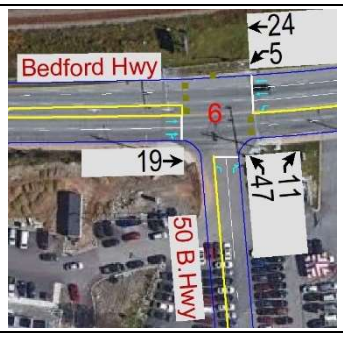
Recently installed traffic signals at 50 Bedford Highway are located approximately 300 meters from the Bayview Road signals. The intersection includes two full through lanes in each direction and a dedicated left turn lane in the outbound direction. This arrangement provides this intersection with significantly more capacity than Bayview Drive and any of the other intersections along the Bedford Highway considered in this study.

The figures above show that the high inbound volumes on the Bedford Highway are nearing capacity (v/c = 0.97) based on existing signal timings and background growth is likely to push the eastbound movement over capacity. As there is significant excess capacity on the outbound and northbound driveway movements, minor traffic signal modifications will maintain operations through this intersection at acceptable measures of performance. Similar the previous section, coordination between these traffic signals and Bayview is important.

Intersection: 6: 50 B.Hwy & Bedford Hwy

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	TR	L	T	T	L	R
Maximum Queue (m)	144.4	221.3	37.6	36.3	51.2	22.1	34.8
Average Queue (m)	109.7	118.3	17.0	16.6	27.0	10.4	14.6
95th Queue (m)	146.3	184.9	31.7	32.0	46.7	21.4	29.3
Link Distance (m)	278.9	278.9		243.6	243.6	89.4	89.4

4.6.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

During the PM peak hour, the highest volumes are in the outbound direction. With the westbound left turn available, the outbound through movement operates relatively efficiently with minimal delay through all scenarios. The inbound movement also operate with little delay and under capacity due to the long green times afforded the east and westbound movements. Minimal green time is required for the northbound movement, though left turn delays can be longer due to the green time assignments to the Bedford Highway.

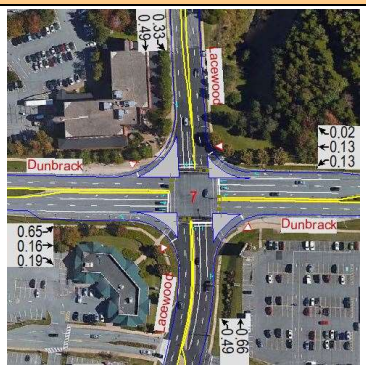
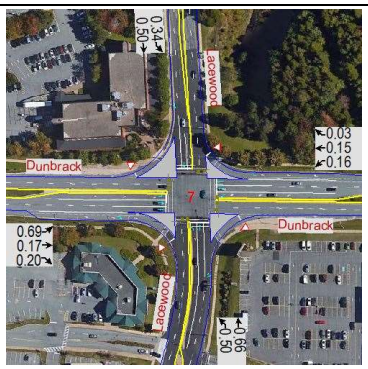
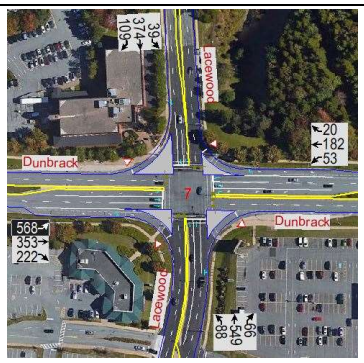
Generally, any queues that accumulate at this intersetion in the PM peak are related to operations at the Bayview interection when it operates beyond its avaiable capacity.

Intersection: 6: 50 B.Hwy & Bedford Hwy

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	TR	L	T	T	L	R
Maximum Queue (m)	147.3	147.9	57.3	259.3	256.1	31.0	28.8
Average Queue (m)	73.6	75.8	36.4	250.7	250.0	14.6	13.8
95th Queue (m)	127.0	130.6	74.9	257.1	255.2	29.4	23.6
Link Distance (m)	278.9	278.9		243.6	243.6	89.4	89.4

4.7 Dunbrack / Lacewood

4.7.1 AM Peak

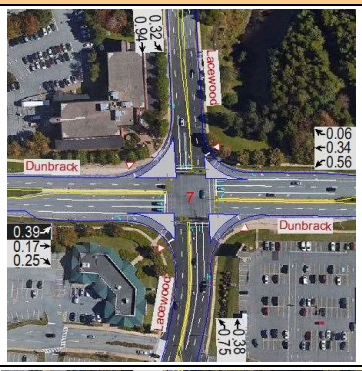
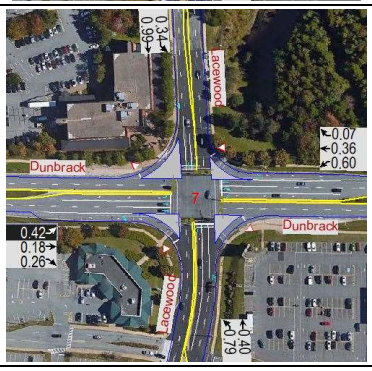
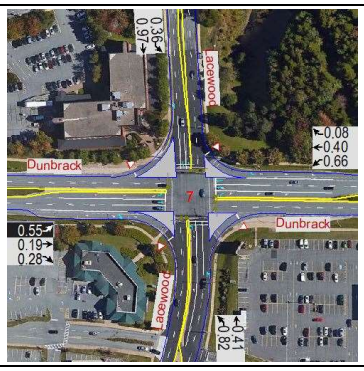
	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

The Dunbrack / Lacewood intersection is a large, 4-leg, multi lane intersection with auxiliary lanes for turn movements, right turn channelization and traffic signals. While it carries significant traffic volumes, it is robust enough to operate through all scenarios with limited deterioration of service. Development related traffic at this intersection accounts for less than 5% of the overall traffic through the intersection and there is significant excess capacity to accommodate this new traffic during the AM peak period.

Intersection: 7: Lacewood & Dunbrack

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	L	T	TR	L	T	TR
Maximum Queue (m)	79.6	116.4	33.0	27.6	44.4	40.4	41.1	68.2	50.3	27.4	41.2	48.3
Average Queue (m)	65.5	28.2	17.4	11.0	21.3	9.5	19.3	45.0	37.3	10.7	23.4	28.6
95th Queue (m)	87.9	79.3	32.5	23.1	34.9	24.4	32.2	66.8	57.7	22.7	39.9	48.1
Link Distance (m)		254.3	254.3		356.6	356.6		171.4	171.4		192.8	192.8

4.7.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
	Modifications Required: - *Redistributed 4 seconds of green time to southbound Lacewood Drive from other movements (approx. 3.5 sec. from east/west movements and 0.5 sec. from northbound left turn).*		
2028 – Development			

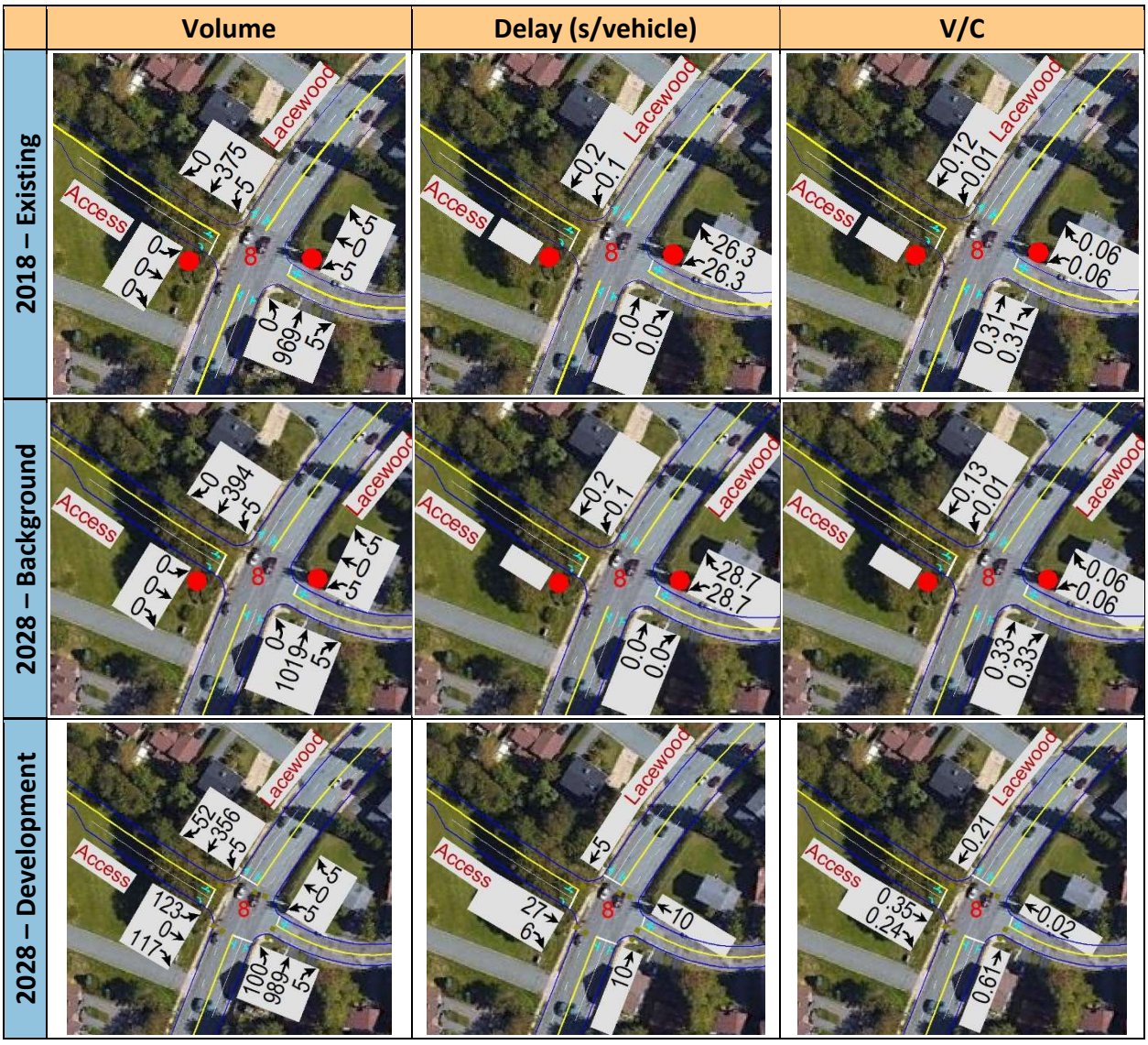
Similar to the AM peak, new development traffic contributes only a small portion of the overall traffic at this intersection and there is excess capacity to accommodate new traffic. The highest volumes on southbound Lacewood Drive during the PM peak requires minor modifications to signal timings to maintain a v/c less than 1.0 though there is some excess green time on other movements at the intersection provides some flexibility in signal timing.

Intersection: 7: Lacewood & Dunbrack

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	L	T	TR	L	T	TR
Maximum Queue (m)	43.6	40.9	29.1	57.5	60.7	51.1	71.7	73.4	62.4	69.8	114.3	122.0
Average Queue (m)	23.7	22.4	11.7	32.4	35.7	24.2	41.7	39.5	25.6	25.6	78.4	87.3
95th Queue (m)	40.5	38.5	24.3	53.3	58.9	48.7	69.4	67.8	53.3	64.6	115.9	124.7
Link Distance (m)		254.3	254.3		356.6	356.6		171.4	171.4		192.8	192.8

4.8 Seton Ridge Access / Lacewood Dr.

4.8.1 AM Peak



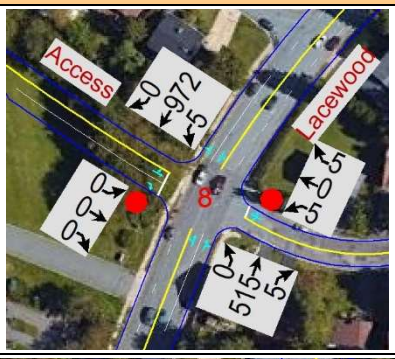
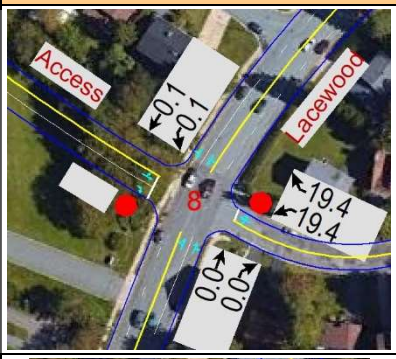
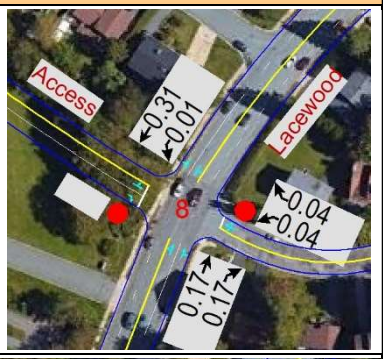
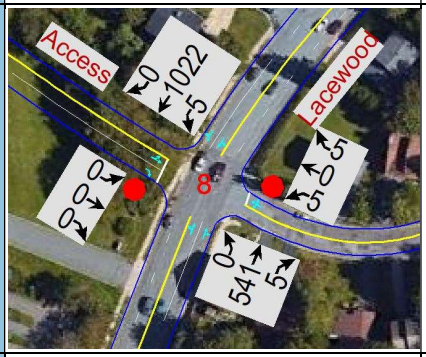
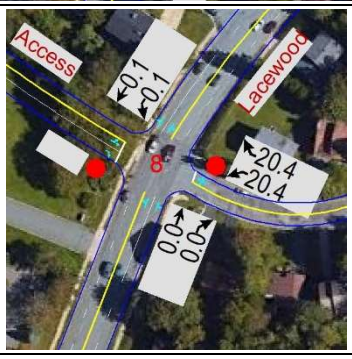
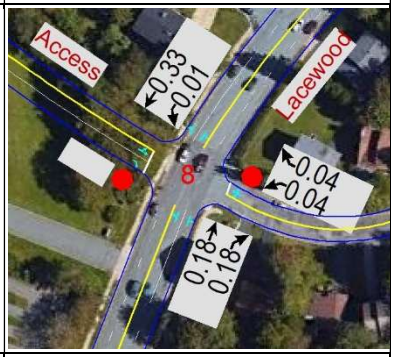
***Note: Some volumes reduced during the 2028 development scenario due to pass-by trips and diverted trips.*

The existing T-intersection will become a 4-leg intersection once the developments second access point is built. Modelling results suggest the intersection can operate for a period of time as a stop-controlled intersection but will require traffic signals part-way through the development of the overall site. The specific timing will depend on a wide variety of factors including recommendations from the ongoing Bedford Highway Functional Plan, location of development, traffic growth, transit uptake and more.

Intersection: 8: Lacewood & Access

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	LT	TR
Maximum Queue (m)	34.6	17.9	8.3	57.8	60.5	24.6	31.6
Average Queue (m)	17.3	9.4	2.9	34.4	36.2	10.7	13.5
95th Queue (m)	32.1	18.8	9.3	54.5	56.6	22.1	24.8
Link Distance (m)			84.8	174.4	174.4	201.0	201.0

4.8.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

**Note: Some volumes reduced during the 2028 development scenario due to pass-by trips and diverted trips.*

There are higher overall volumes on Lacewood Drive during the PM peak hour, meaning operations to and from the new development driveway deteriorate faster than during the AM peak. Traffic signals are again recommended for this intersection partway through development to facilitate efficient operations. There are no specific upgrades required on Lacewood Drive or Cedarbrea Lane to accommodate the new driveway, through care should be taken during the detailed design of the roadway and intersection to ensure appropriate horizontal and vertical alignments of the intersection approaches given the grades and adjacent properties in the area. Finally, it is recommended that the exit lanes from the development include separate left and right turn lanes.

Intersection: 8: Lacewood & Access

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	LT	TR
Maximum Queue (m)	33.2	34.6	8.3	51.0	41.7	34.4	36.9
Average Queue (m)	16.3	18.4	1.4	26.7	16.4	17.8	20.6
95th Queue (m)	30.8	31.0	6.4	49.6	37.4	33.0	37.8
Link Distance (m)			84.8	174.4	174.4	201.0	201.0

4.9 Bayview / Lacewood

4.9.1 AM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

***Note: Some volumes reduced during the 2028 development scenario due to pass-by trips and diverted trips.*

Traffic models show that this intersection operates at an acceptable level of service during the AM peak hour with reasonable volume to capacity ratios and delays. Traffic signals run on basic 2 phase operations with no turn phases used or required. All models during the AM and PM peak hours maintain the same fixed time signal timing that are present today and shows that the intersection can operated throughout all scenarios with little deterioration of service.

Intersection: 9: Clayton Park/Bayview & Lacewood

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (m)	59.7	63.8	47.8	39.9	33.4	36.6
Average Queue (m)	38.0	37.9	22.6	11.3	18.8	17.2
95th Queue (m)	59.0	58.5	45.0	32.0	35.2	29.1
Link Distance (m)	201.0	201.0	203.7	203.7	154.1	147.5

4.9.2 PM Peak

	Volume	Delay (s/vehicle)	V/C
2018 – Existing			
2028 – Background			
2028 – Development			

***Note: Some volumes reduced during the 2028 development scenario due to pass-by trips and diverted trips.*

Similar to AM peak, traffic models suggest that the intersection operates at an acceptable level of service during the PM peak under all scenarios. The most notable challenge during the PM peak is accommodating the heavy volume of outbound traffic on Bayview, of which the majority of vehicle make a right turn onto Lacewood Drive. This movement operates near 80% capacity utilization in the background only scenario and benefits from the trips diverted through the Seton Ridge development.

Intersection: 9: Clayton Park/Bayview & Lacewood

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR	LTR	LTR
Maximum Queue (m)	58.2	44.3	52.0	43.7	24.5	92.2
Average Queue (m)	30.5	22.9	36.4	25.9	10.1	45.7
95th Queue (m)	53.9	40.2	51.4	44.0	22.2	81.4
Link Distance (m)	201.0	201.0	203.7	203.7	154.1	147.5

5. DISCUSSIONS/CONCLUSIONS

The Seton Ridge Development is a significant infill development that is in close proximity to the downtown core areas of Halifax. It is intended as a LEED based, transit oriented and sustainable development that is well positioned to support many of the transportation related initiatives put forward by HRM through documents such as the Regional Plan, Integrated Mobility Plan (IMP), Moving Forward Together and Active Transportation Plans. The development connects to two major transportation corridors allowing traffic to be distributed to both Lacewood Drive and the Bedford Highway. These two connections provide access to a wide variety of route options to various destinations throughout HRM.

While a significant amount of traffic to and from the site is still expected to take place using passenger vehicles, there are wide variety of initiatives throughout the region that support and promote shifts to alternate travel modes. The proposed Seton Ridge development is positioned to capitalize on these initiatives by providing numerous convenient options for travel by bus and active transportation modes. The IMP identifies both Bedford Highway and Lacewood Drive as *Potential Transit Priority Corridors* and Halifax Transit has indicated it is highly likely that Seton Road will be an important link in their transit network. This suggests that the quality of the design to date and the location of the development are conducive to such considerations. It also indicates a willingness of HRM to actively support new strategic developments that fit the direction of the overall Regional Plan.

The development's proximity to the downtown core, the Burnside Industrial Park and the Bayers Lake Business Park make these common destinations very accessible by all modes of travel. The development's initiatives to promote sustainable transportation and development practices in combination with HRMs transit and AT initiatives create an environment that has the potential to significantly reduce the number of individual passenger vehicles on the roadway. Should commuter rail become a reality in the near future, the IMP identifies a *Potential Rail Terminal/Station* immediately adjacent to the site to support future commuter rail service between Bedford and Halifax.

It is recognized that the Bedford Highway can be a congested traffic corridor, as can many primary commuter corridors throughout HRM. Fundamentally, the purpose of this study is not to determine whether we can pump more traffic through adjacent intersections. Rather, it is an evaluation of whether the proposed development is a positive and strategic addition to the region's urban development. This study suggests that the Seton Ridge development is extremely well positioned to be a positive addition for the following reasons:

- It is located near the downtown core areas and has numerous commuter route options to support commuter movements;

- The area is already transit oriented and current initiatives suggest in will become further transit orient in the near future;
- It is an infill development in an area that is already predominantly residential and has direct access to Bedford (multiple routes), peninsular Halifax (multiple routes), and Dartmouth (via the MacKay Bridge);
- It is at the northwestern extent of the Bedford Highway where strategic capacity increases can still be implemented in a relatively cost-effective manner. Areas further northwest of MSVU become substantially more difficult and expensive to upgrade.

The traffic generated by the development contributes a relatively small number of trips to the overall traffic on the road network given the distribution of trips over several different access points and directions. In general, the impacts related to the development traffic have far less impact than the capacity challenges faced on portions of the network today and under the natural expected background traffic growth. The analysis of the nine impacted intersections surrounding the development show that development traffic can be accommodated during both the critical AM and PM peak traffic periods.

The only capacity challenge noted through this study is the outbound traffic movements during the PM peak period at the Bedford Highway and Bayview Road intersection. The analysis shows that the intersection is currently operating at or near capacity and in theory will start to exceed capacity through the simple addition of background traffic growth. In reality, drivers start to select alternate routes for entering and exiting the city as congestion builds in the corridor. It is expected that the addition of traffic related to the development will have no noticeable impact on corridor operation as it will likely simply displace some traffic to alternate routes. It is also quite possible that traffic destined to and from the development will elect to use the less congested Lacewood Drive intersections as opposed to making route choices that end up on the Bedford Highway.

5.1 The Bedford Highway Corridor

Bedford Highway has long been identified as a challenge for commuter traffic given its constrained cross section and requirements to carry significant traffic loads. Challenges associated with expanding the cross section and adding capacity increases as you move further away from peninsular Halifax. As a result, the proposed development is well positioned at a location on the Bedford Highway corridor that allows it to take advantage of some relatively minor upgrading opportunities that will improve the capacity and operations in the vicinity of the development.

The most significant of these is the ability to expand the cross section from three lanes to four lanes for approximately 100 meters between Sherbrooke Street Seton Road intersection. This extends the four-lane capacity of the roadway to Seton Road and it is recommended to carry the 4-lane cross section approximately 80 to 100 meters upstream of the Seton Road

intersection. Combined with new traffic signals at this location, this intersection becomes an efficient entrance to the Seton Ridge development, MSVU and the Shannex care facilities.

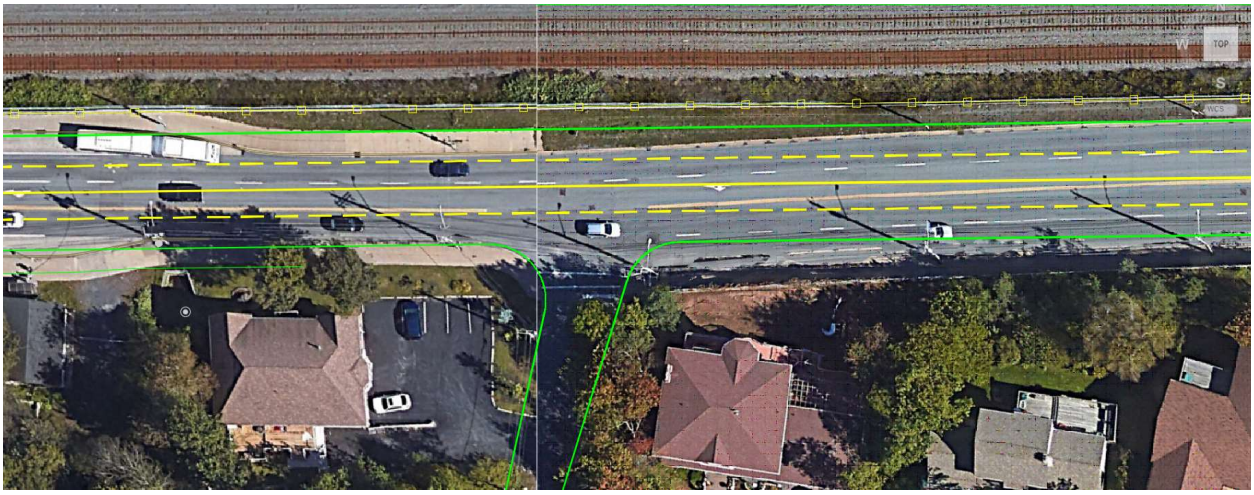
The Seton Road intersection is protected from excessive traffic loading as the Bayview intersection effectively reduces peak westbound volumes inputs to a single lane due to the high volume of left turns at Bayview. To the west, the single available lane for eastbound traffic limits vehicles coming from that directly. It is expected then that the Seton Road intersection will always operate at better levels of service than the Bayview intersection given the similar infrastructure at both intersections and lower traffic volumes at Seton Road.

Widening the Bedford Highway to 4-lanes on either side of Seton Road must respect the retaining wall on the south side of the roadway and the restrictions created by the rail right-of-way to the north. It will require the relocation or removal of the two transit lay-by lanes currently in place on the Bedford Highway just east of Seton Road. Halifax Transit has indicated that they do not require these laybys and are open to discussions regarding their removal or relocation.

The required addition of traffic signal at the Seton Road intersection allows the intersection to operate at acceptable measure of performance for the foreseeable future and benefits pedestrian traffic crossing the Bedford Highway and Seton Road from the nearby transit stops.

To evaluate the feasibility of expanding the cross section at the Seton Road intersection, a proof-of-concept level design was carried out to confirm that the required infrastructure can be accommodated within the right-of-way. Figure 5-1 shows the 4-lane cross section being initiated to the west of Seton Road and carrying through to connect to the 4-lane cross section east of Sherbrooke. As can be seen, this effectively “straightens” Bedford Highway by removing changes in horizontal alignment required to accommodate the bus layby lanes.

Figure 5-1: Four Lane Cross Section – Bedford Highway at Seton Road



As noted previously, the traffic at this intersection is limited by what can be accommodated through the Bayview Road intersection. Assuming no additional capacity is required, there is little need to expand the cross section beyond the 4-lanes noted above.

With respect to the remainder of the corridor, the following points and recommendation are relevant:

- No improvements are required at the Flamingo Road intersection to accommodate development traffic. The intersection should be monitored to determine the possible benefit of adding a short protected westbound left turn phase.
- No improvements are required at the MSVU intersection. As a stop-controlled intersection, left turn movements from the driveway can experience significant delay. The addition of traffic signals at Seton Road significantly improves the ability to make this left turn movement and they also provide an alternative exit point for drivers wishing to turn left onto the Bedford Highway.
- The Bayview intersection is one of the primary bottlenecks along the Bedford Highway but effectively meters the ability of additional traffic to progress outbound on Bedford Highway. In this respect, it supports a variety of goals and initiates that are intended to put less emphasis on passenger vehicle travel and encourage alternative travel modes such as transit, active transit and ridesharing. For these reasons, and in the absence of a formal plan for the overall Bedford Highway corridor, it is recommended that this intersection remain in its current configuration.
- No improvements are required at the signalized driveway at 50 Bedford Highway.
- It is recommended that all signalized intersections along Bedford Highway remain actuated and coordinated. More advanced operational monitoring and left turn queue management technologies may provide significant benefits along the

corridor to enhance progression and the reduction of lost capacity due to left turn queueing.

5.2 The Lacewood Drive Corridor

Lacewood Drive has lower traffic volumes than Bedford Highway and therefore has more excess capacity to accommodate new traffic from the development. It is likely that over time, volumes to and from the development will balance themselves between Bedford Highway and Lacewood Drive based on the delays experienced at each of the intersections and the conveniences of each travel route for specific drivers.

Traffic signals will be required at the intersection Lacewood Drive with Cedarbrae Lane and the new access road to the Seton Ridge development. The signals should be fully actuated and coordinated with the existing signals at Bayview Road. It is feasible that this intersection could operate as a stop-controlled intersection for a period following the start of construction, though it is recommended that the necessary signal bases and associated infrastructure be installed when the new access road is constructed. No infrastructure upgrades are required at the Dunbrack or Lacewood Drive intersection.

5.3 Detailed Design Considerations

As the detailed design progresses for the roads internal to the Seton Ridge Development, a number of guiding principles should be considered and implemented as appropriate.

5.3.1 Complete Streets Approach

The development is intended as an urban residential and transit-oriented development. As such, roadway design should adopt the complete street approaches as defined in HRM's Integrated Mobility Plan. This approach should ensure the design of the roadways, intersections, active transportation corridors and roadside environments all contribute to slower speeds, minimal short-cutting traffic, safe and efficient travel for all users, and accommodation of all users (multi-modal and multi-functional corridors).

5.3.2 Transportation Demand Management

The development should adopt Transportation Demand Management (TDM) principles as defined in HRM's Integrated Mobility Plan to improve the efficiency of the transportation system on the internal and connecting roadways. As noted in the IMP, major roads in HRM operate at or near capacity during the peak times. Shifting travel times, extending the peak periods, or reducing trips through effective TDM policies, programs and services helps reduce overall congestion on the network. This study has assumed minimal impacts from TDM principles, but it is expected that some TDM initiatives will be pursued for this development that are likely to result in better conditions than are represented in this report.

There is also an inherent level of transportation demand management that occurs on congested corridors throughout HRM that can be classified as the management of congestion-based travel. This results in drivers making alternate decisions when faced with congested conditions on a corridor. For example, if the Bedford Highway is free flowing and Highway 102 is delayed as a result of congestion, some drivers will elect to alter their route to use the Bedford Highway, or visa-versa. This is particularly relevant today with the availability of real time information through various social media platforms. In the past, such changes in travel would typically occur over a period of days or weeks once a noticeable trend was identified.

5.3.3 Detailed Design Next Steps

This Transportation Impact Study identifies the major infrastructure elements required to support the full build out of the Seton Ridge development. The content and analysis contained in the body and appendices of this report are intended to provide the designer with proof of concept level guidance that can be directly inform the initial stages of detailed design. That said, a Transportation Impact Study is not intended to be, nor should it be construed as being a detailed design document. The detailed design process requires the consideration of a wide variety of addition factors, interactions and trade-offs that are far beyond the scope of a transportation study such as this.

As this project progresses, it is recommended that the detailed design of roadways, intersections, traffic signals, transit and AT facilities be carried out under a separate work flow. This will allow HRM to review the proposed design details in an appropriate context, with an adequate level of professional attention and vigor, and in a timeframe that is consistent with the requirements of the development.

We trust that this report satisfies the HRM requirements for the preparation of Transportation Impact Studies. Should there be any questions or comments regarding the content of the study, please do not hesitate to contact the undersigned.

Sincerely,

Roger N. Boychuk, P.Eng.
Senior Transportation Engineer

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EKISTICS PLANNING & DESIGN

APPENDIX A

Site Statistics

REVISED NC ZONE (combination of mid-rise and tower)									
		RETAIL	OFFICE	TOTAL RES GFA M2	UNITS @1000 SQFT AVG AT 80% FPE	TOTAL FLOORS	Mid-Rise TOTAL	High-Rise TOTAL
BUILDING	A	0	0	11000	95	Mid-Rise	95	
	B	0	0	20000	172	HighRise		172
	C	0	0	20000	172	HighRise		172
	D	1851	0	20000	172	HighRise		172
	E	0	0	8000	69	Mid-Rise	69	
	F	0	0	15000	129	HighRise		129
	G	2382	2382	20000	172	HighRise		172
	H1	1895	1895	20000	172	HighRise		172
	H2	0	0	7000	60	Mid-Rise	60	
	H3	0	0	7000	60	Mid-Rise	60	
	I	2185	0	20000	172	HighRise		172
	J	0	0	16000	138	HighRise		138
	K	0	0	16000	138	HighRise		138
	L	0	0	16000	138	HighRise		138
	M	0	0	16000	138	HighRise		138
	N	0	0	6000	52	Mid-Rise	52	
	O	0	0	13000	112	Mid-Rise	112	
	P	0	0	12000	103	Mid-Rise	103	
	Q	0	0	6100	52	Mid-Rise	52	
TOTAL GFA		8313	4277	269100	2315		603	1712

SINGLE FAMILY HOMES	185
TOTAL UNITS	2500

Single Family Breakdown

PURPLE LOTS	27
GREEN LOTS	98
YELLOW LOTS	21
CYAN LOTS	33
TOWNHOUSE UNITS	6
TOTAL	185

EKISTICS PLANNING & DESIGN

APPENDIX B

Traffic Counts

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-328

MANUAL TRAFFIC COUNTS

INTERSECTION: BEDFORD HIGHWAY AT FLAMINGO DRIVE

WEATHER: CLOUDY/RAINY
RECORDER: KS

DAY	DATE	MONTH	YEAR
WED	23	AUG	2017

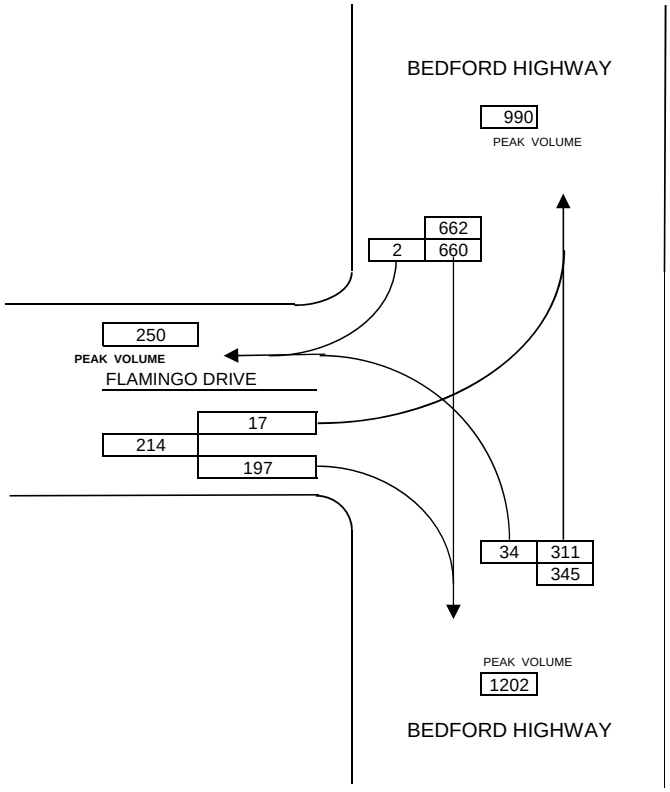
STREET:					FLAMINGO DRIVE			BEDFORD HIGHWAY			BEDFORD HIGHWAY			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
07:00:00 AM	07:15:00 AM	0	0	0	6	0	46	0	154	0	7	78	0	291
07:15:00 AM	07:30:00 AM	0	0	0	5	0	52	0	166	0	6	80	0	309
07:30:00 AM	07:45:00 AM	0	0	0	3	0	51	0	168	0	9	77	0	308
07:45:00 AM	08:00:00 AM	0	0	0	3	0	48	0	172	2	12	76	0	313
TOTAL		0	0	0	17	0	197	0	660	2	34	311	0	1221
PEAK			0			214			662			345		
15 MIN PEAK			0			228			696			352		
PEAK HOUR FACTOR			0			0.94			0.95			0.98		
TWO WAY TOTALS			0			250			990			1202		FACTOR
														1.02
														1245

DAY	DATE	MONTH	YEAR
WED	23	AUG	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
08:00:00 AM	08:15:00 AM	0	0	0	5	0	41	0	165	0	11	84	0	306
08:15:00 AM	08:30:00 AM	0	0	0	7	0	50	0	157	0	11	89	0	314
08:30:00 AM	08:45:00 AM	0	0	0	4	0	53	0	158	0	12	90	0	317
08:45:00 AM	09:00:00 AM	0	0	0	2	0	51	0	143	0	7	88	0	291
TOTAL		0	0	0	18	0	195	0	623	0	41	351	0	1228
PEAK			0			213			623			392		
15 MIN PEAK			0			228			660			408		
PEAK HOUR FACTOR			0			0.93			0.94			0.96		
TWO WAY TOTALS			0			254			992			1210		FACTOR
														1.02
														1253

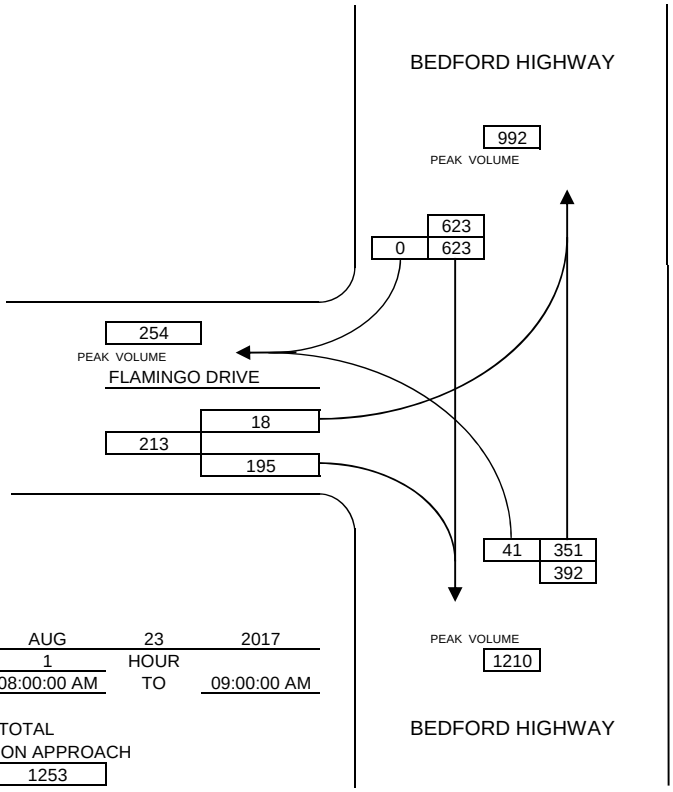
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : BEDFORD HIGHWAY AT FLAMINGO DRIVE



DATE: AUG 23 2017
TIME: 1 HOUR
FROM: 07:00:00 AM TO 08:00:00 AM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 1245



DATE: AUG 23 2017
TIME: 1 HOUR
FROM: 08:00:00 AM TO 09:00:00 AM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 1253

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-328

MANUAL TRAFFIC COUNTS

INTERSECTION: BEDFORD HIGHWAY AT FLAMINGO DRIVE

WEATHER: CLOUDY/RAINY
RECORDER: KS

DAY	DATE	MONTH	YEAR
WED	23	AUG	2017

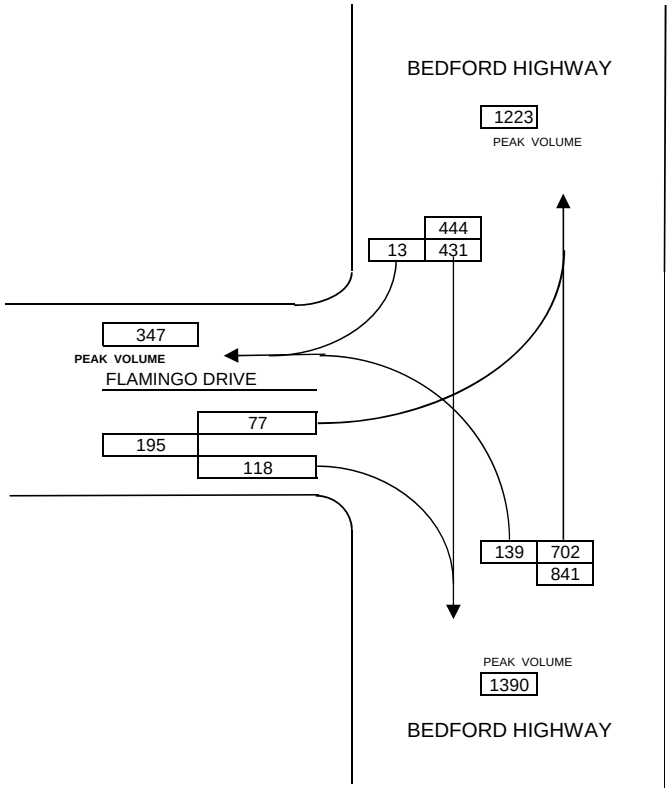
STREET:					FLAMINGO DRIVE			BEDFORD HIGHWAY			BEDFORD HIGHWAY			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
04:00:00 PM	04:15:00 PM	0	0	0	20	0	19	0	82	7	31	147	0	306
04:15:00 PM	04:30:00 PM	0	0	0	26	0	28	0	113	3	33	169	0	372
04:30:00 PM	04:45:00 PM	0	0	0	17	0	35	0	121	2	34	189	0	398
04:45:00 PM	05:00:00 PM	0	0	0	14	0	36	0	115	1	41	197	0	404
TOTAL		0	0	0	77	0	118	0	431	13	139	702	0	1480
PEAK			0			195			444			841		
15 MIN PEAK			0			216			492			952		
PEAK HOUR FACTOR			0			0.9			0.9			0.88		
TWO WAY TOTALS			0			347			1223			1390		FACTOR
														1.02
														1510

DAY	DATE	MONTH	YEAR
WED	23	AUG	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
05:00:00 PM	05:15:00 PM	0	0	0	21	0	35	0	116	6	42	212	0	432
05:15:00 PM	05:30:00 PM	0	0	0	20	0	39	0	108	4	46	208	0	425
05:30:00 PM	05:45:00 PM	0	0	0	20	0	37	0	119	4	39	214	0	433
05:45:00 PM	06:00:00 PM	0	0	0	29	0	40	0	123	7	44	221	0	464
TOTAL		0	0	0	90	0	151	0	466	21	171	855	0	1754
PEAK			0			241			487			1026		
15 MIN PEAK			0			276			520			1060		
PEAK HOUR FACTOR			0			0.87			0.94			0.97		
TWO WAY TOTALS			0			433			1432			1643		FACTOR
														1.02
														1789

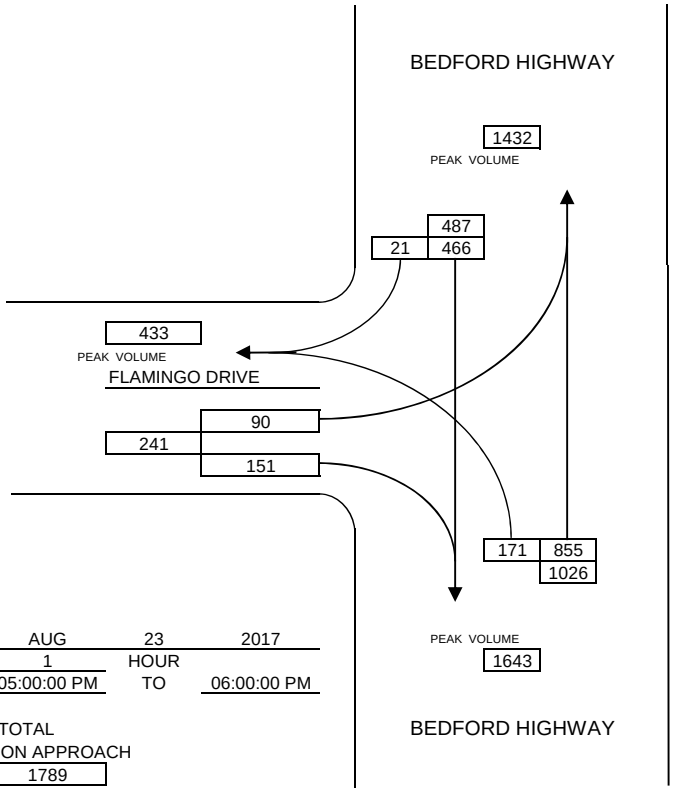
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : BEDFORD HIGHWAY AT FLAMINGO DRIVE



DATE: AUG 23 2017
TIME: 1 HOUR
FROM: 04:00:00 PM TO 05:00:00 PM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 1510



DATE: AUG 23 2017
TIME: 1 HOUR
FROM: 05:00:00 PM TO 06:00:00 PM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 1789

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 18-TM-074

MANUAL TRAFFIC COUNTS

INTERSECTION: BEDFORD HIGHWAY AT MSVU

WEATHER: OVERCAST
RECORDER: JOSHUA SPINNEY

DAY	DATE	MONTH	YEAR
TUES	11	SEPT.	2018

STREET:					MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
07:00:00 AM	07:15:00 AM				0		1		341	2	1	82		427
07:15:00 AM	07:30:00 AM				0		1		336	7	3	97		444
07:30:00 AM	07:45:00 AM				0		4		335	0	8	80		427
07:45:00 AM	08:00:00 AM				0		4		325	7	7	122		465
TOTAL					0		10		1337	16	19	381		1763
PEAK					10				1353			400		
4(15 MIN PEAK)					16				1372			516		
PEAK HOUR FACTOR					0.63				0.99			0.78		AAWT
TWO WAY TOTALS					45				1734			1747		FACTOR
														1
														1763

DAY	DATE	MONTH	YEAR
TUES	11	SEPT.	2018

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
08:00:00 AM	08:15:00 AM				0		4		305	12	11	110		442
08:15:00 AM	08:30:00 AM				1		8		260	26	20	109		424
08:30:00 AM	08:45:00 AM				1		6		225	31	40	118		421
08:45:00 AM	09:00:00 AM				0		4		223	43	23	127		420
TOTAL					2		22		1013	112	94	464		1707
PEAK					24				1125			558		
4(15 MIN PEAK)					36				1268			632		
PEAK HOUR FACTOR					0.67				0.89			0.88		AAWT
TWO WAY TOTALS					230				1591			1593		FACTOR
														1
														1707

Intersection Peak Hour

					MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:15 - 8:15	Car				0		13		1283	26	29	381		1740
	Truck				0		0		18	0	0	28		46
	Bicycle				0		0		4	0	0	0		4
	Vehicle Total				0		13		1305	26	29	409		1790
	Approach Factor					0.81			0.97			0.84		FACTOR
														1
														1790

Peak Hour Pedestrians

		NE			NW			SW			SE			Total
7:15 - 8:15		Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
	Pedestrians		12	12	1	0	1	0	0	0	1		2	15

Car traffic

Interval starts	N/A			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00				0		1		331	2	1	75		410
7:15				0		1		331	7	3	85		427
7:30				0		4		332	0	8	76		420
7:45				0		4		320	7	7	115		453
8:00				0		4		300	12	11	105		432
8:15				1		8		252	26	20	105		412
8:30				1		6		220	31	40	111		409
8:45				0		4		214	43	23	119		403
TOTAL				2		32		2300	128	113	791		3366

Truck traffic

Interval starts	0			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00				0		0		10	0	0	7		17
7:15				0		0		5	0	0	12		17
7:30				0		0		3	0	0	4		7
7:45				0		0		5	0	0	7		12
8:00				0		0		5	0	0	5		10
8:15				0		0		8	0	0	4		12
8:30				0		0		5	0	0	7		12
8:45				0		0		9	0	0	8		17
TOTAL				0		0		50	0	0	54		104

Bicycle traffic

Interval starts	0			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00				0		0		1	0	0	0		1
7:15				0		0		0	0	0	0		0
7:30				0		0		0	0	0	0		0
7:45				0		0		2	0	0	0		2
8:00				0		0		2	0	0	0		2
8:15				0		0		1	0	0	2		3
8:30				0		0		1	0	0	0		1
8:45				0		0		1	0	0	1		2
TOTAL				0		0		8	0	0	3		11

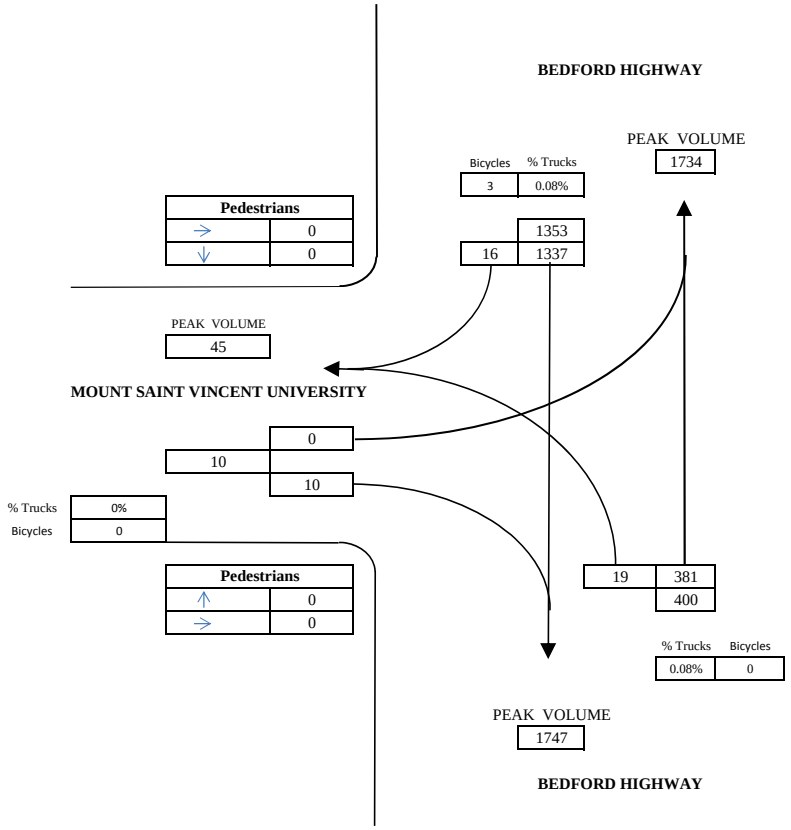
Pedestrian volumes

Interval starts	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
7:00		0	0	0	0	0	0	0	0	0		0	0
7:15		2	2	0	0	0	0	0	0	0		0	4
7:30		3	3	0	0	0	0	0	0	1		1	8
7:45		3	3	0	0	0	0	0	0	0		1	8
8:00		4	4	1	0	1	0	0	0	0		0	10
8:15		6	6	3	0	3	0	0	0	0		0	18
8:30		27	27	0	0	0	0	0	0	0		0	54
8:45		17	17	0	0	0	0	0	0	0		0	34
TOTAL	0	62	62	4	0	4	0	0	0	1	0	2	136

VEHICULAR GRAPHIC SUMMARY SHEET

BEDFORD HIGHWAY AT MSVU

DATE: TUES SEPT. 11 2018
FROM: 07:00 AM TO 08:00 AM

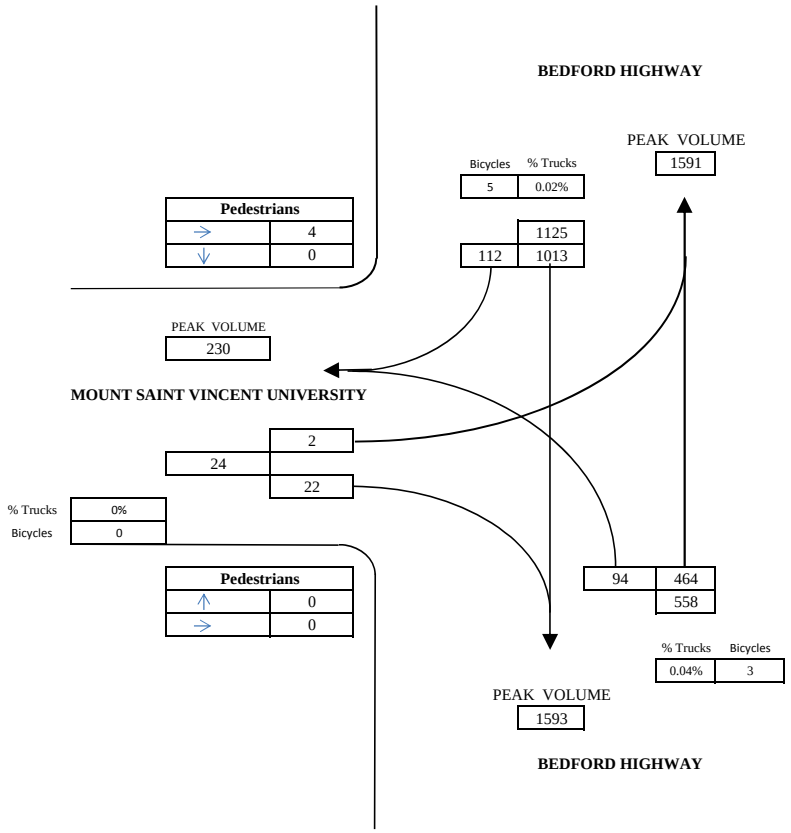


FACTORED TOTAL INTERSECTION APPROACH VOLUME 1763

Pedestrians	
←	8

Pedestrians	
←	1

DATE: TUES SEPT. 11 2018
FROM: 08:00 AM TO 09:00 AM



FACTORED TOTAL INTERSECTION APPROACH VOLUME 1707

Pedestrians	
←	54

Pedestrians	
←	0

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 18-TM-074

MANUAL TRAFFIC COUNTS

INTERSECTION: BEDFORD HIGHWAY AT MSVU

WEATHER OVERCAST/SHOWERS
RECORDER JOSHUA SPINNEY

DAY	DATE	MONTH	YEAR
TUES	11	SEPT.	2018

STREET:			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
04:00:00 PM	04:15:00 PM				12		46		153	12	11	295		529
04:15:00 PM	04:30:00 PM				19		69		126	10	10	336		570
04:30:00 PM	04:45:00 PM				9		26		154	2	7	355		553
04:45:00 PM	05:00:00 PM				1		14		143	4	5	326		493
TOTAL					41		155		576	28	33	1312		2145
PEAK					196				604			1345		
4(15 MIN PEAK)					352				660			1448		
PEAK HOUR FACTOR					0.56				0.92			0.93		AAWT
TWO WAY TOTALS					257				1957			2076		FACTOR
														1
														2145

DAY	DATE	MONTH	YEAR
TUES	11	SEPT.	2018

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
05:00:00 PM	05:15:00 PM				1		14		190	5	3	333		546
05:15:00 PM	05:30:00 PM				1		5		146	2	4	296		454
05:30:00 PM	05:45:00 PM				3		3		127	4	1	297		435
05:45:00 PM	06:00:00 PM				5		6		193	2	1	317		524
TOTAL					10		28		656	13	9	1243		1959
PEAK					38				669			1252		
4(15 MIN PEAK)					60				780			1344		
PEAK HOUR FACTOR					0.63				0.86			0.93		AAWT
TWO WAY TOTALS					60				1922			1936		FACTOR
														1
														1959

Intersection Peak Hour

			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:15-7:15	Car				30		122		603	21	25	1335		2140
	Truck				0		1		10	0	0	15		26
	Bicycle				0		1		1	0	1	5		8
	Vehicle Total				30		124		614	21	26	1355		2174
	Approach Factor					0.44			0.81			0.95		FACTOR
														1
														2174

Peak Hour Pedestrians

		NE			NW			SW			SE			Total
6:15-7:15		Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
	Pedestrians		3	3	39	0	39	0	0	0	0		0	42

Car traffic

Interval starts	N/A			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00				12		45		147	12	11	288		515
16:15				19		68		124	10	10	333		564
16:30				9		26		148	2	7	352		544
16:45				1		14		142	4	5	323		489
17:00				1		14		189	5	3	327		539
17:15				1		6		143	2	4	292		448
17:30				3		3		122	4	1	294		427
17:45				5		6		189	2	1	309		512
TOTAL				51		182		1204	41	42	2518		4038

Truck traffic

Interval starts	0			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00				0		1		6	0	0	7		14
16:15				0		1		2	0	0	3		6
16:30				0		0		6	0	0	3		9
16:45				0		0		1	0	0	3		4
17:00				0		0		1	0	0	6		7
17:15				0		0		3	0	0	4		7
17:30				0		0		5	0	0	3		8
17:45				0		0		4	0	0	8		12
TOTAL				0		2		28	0	0	37		67

Bicycle traffic

Interval starts	0			MOUNT SAINT VINCENT UNIVERSITY			BEDFORD HIGHWAY			BEDFORD HIGHWAY			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00				0		0		0	0	0	1		1
16:15				0		1		0	0	1	2		4
16:30				0		0		0	0	0	1		1
16:45				0		0		1	0	0	2		3
17:00				0		0		0	0	0	0		0
17:15				0		0		0	0	0	1		1
17:30				0		0		0	0	0	1		1
17:45				0		0		0	0	0	0		0
TOTAL				0		1		1	0	1	8		11

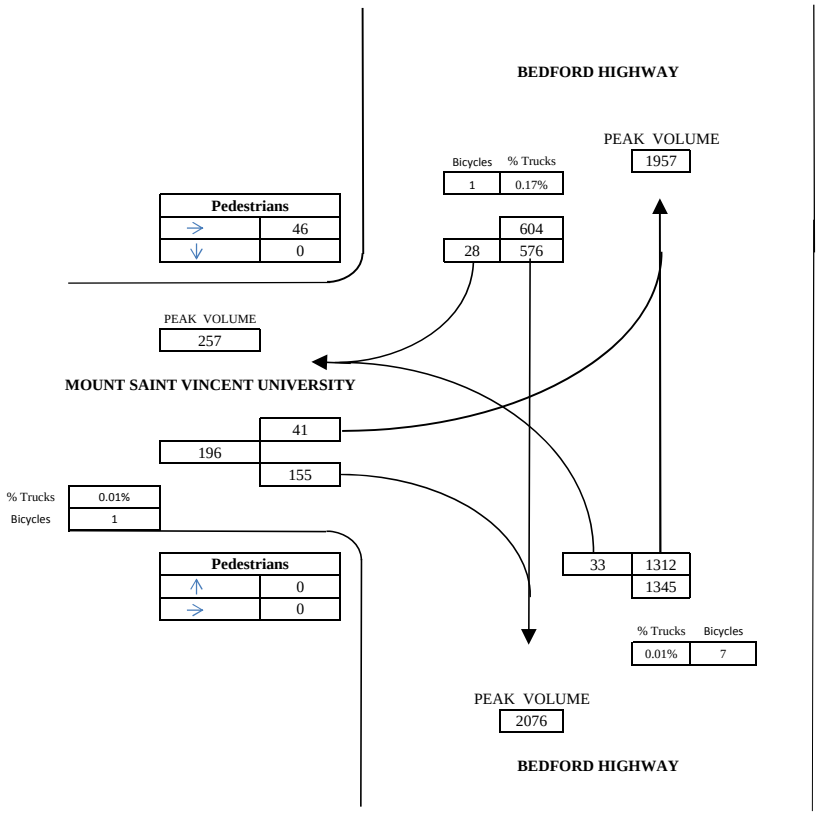
Pedestrian volumes

Interval starts	NE			NW			SW			SE			Total
	Left	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	
16:00		3	3	9	0	9	0	0	0	0		0	24
16:15		3	3	23	0	23	0	0	0	0		0	52
16:30		0	0	12	0	12	0	0	0	0		0	24
16:45		0	0	2	0	2	0	0	0	0		0	4
17:00		0	0	2	0	2	0	0	0	0		0	4
17:15		4	4	0	0	0	0	0	0	0		0	8
17:30		0	1	3	0	3	0	0	0	0		0	8
17:45		2	2	6	0	6	0	0	0	0		0	16
TOTAL	0	12	13	57	0	57	0	0	0	0	0	0	140

VEHICULAR GRAPHIC SUMMARY SHEET

BEDFORD HIGHWAY AT MSVU

DATE: TUES SEPT. 11 2018
FROM: 04:00 PM TO 05:00 PM

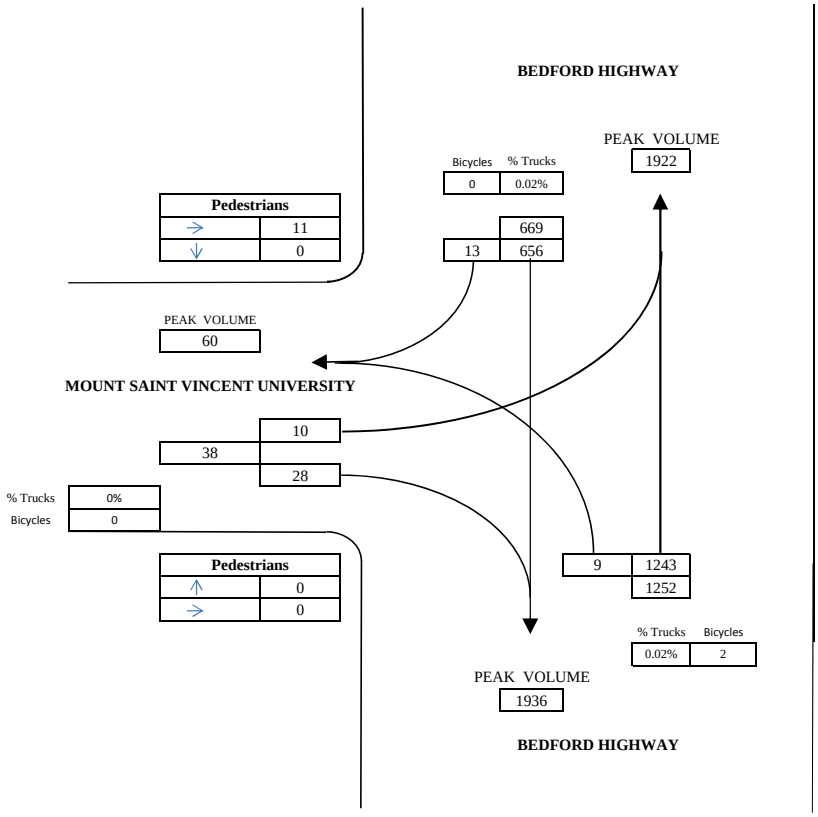


FACTORED TOTAL INTERSECTION APPROACH VOLUME 2145

Pedestrians	
←	6

Pedestrians	
←	0

DATE: TUES SEPT. 11 2018
FROM: 05:00 PM TO 06:00 PM



FACTORED TOTAL INTERSECTION APPROACH VOLUME 1959

Pedestrians	
←	6

Pedestrians	
←	0

Ekistics Plan + Design
1 Starr Lane

Dartmouth, Nova Scotia, Canada B2Y4V7
(902) 461-2525 roger@ekistics.net
Ekistics

Count Name: Seton Ridge - 2018 Peak Hours
Site Code:
Start Date: 10/18/2018

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Bedford Highway WB Westbound					Seton Road Northbound					Bedford Highway EB Eastbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
8:00 AM	135	15	0	0	150	7	2	0	2	9	11	324	0	1	335	494
8:15 AM	132	27	0	0	159	14	0	0	8	14	14	304	0	26	318	491
8:30 AM	162	59	0	0	221	16	0	0	8	16	10	273	0	9	283	520
8:45 AM	197	50	0	0	247	16	1	0	11	17	8	243	0	7	251	515
Total	626	151	0	0	777	53	3	0	29	56	43	1144	0	43	1187	2020
Approach %	80.6	19.4	0.0	-	-	94.6	5.4	0.0	-	-	3.6	96.4	0.0	-	-	-
Total %	31.0	7.5	0.0	-	38.5	2.6	0.1	0.0	-	2.8	2.1	56.6	0.0	-	58.8	-
PHF	0.794	0.640	0.000	-	0.786	0.828	0.375	0.000	-	0.824	0.768	0.883	0.000	-	0.886	0.971
Lights	593	151	0	-	744	53	2	0	-	55	42	1112	0	-	1154	1953
% Lights	94.7	100.0	-	-	95.8	100.0	66.7	-	-	98.2	97.7	97.2	-	-	97.2	96.7
Buses	11	0	0	-	11	0	0	0	-	0	0	14	0	-	14	25
% Buses	1.8	0.0	-	-	1.4	0.0	0.0	-	-	0.0	0.0	1.2	-	-	1.2	1.2
Trucks	21	0	0	-	21	0	1	0	-	1	1	16	0	-	17	39
% Trucks	3.4	0.0	-	-	2.7	0.0	33.3	-	-	1.8	2.3	1.4	-	-	1.4	1.9
Bicycles on Road	1	0	0	-	1	0	0	0	-	0	0	2	0	-	2	3
% Bicycles on Road	0.2	0.0	-	-	0.1	0.0	0.0	-	-	0.0	0.0	0.2	-	-	0.2	0.1
Pedestrians	-	-	-	0	-	-	-	-	29	-	-	-	-	43	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Ekistics Plan + Design
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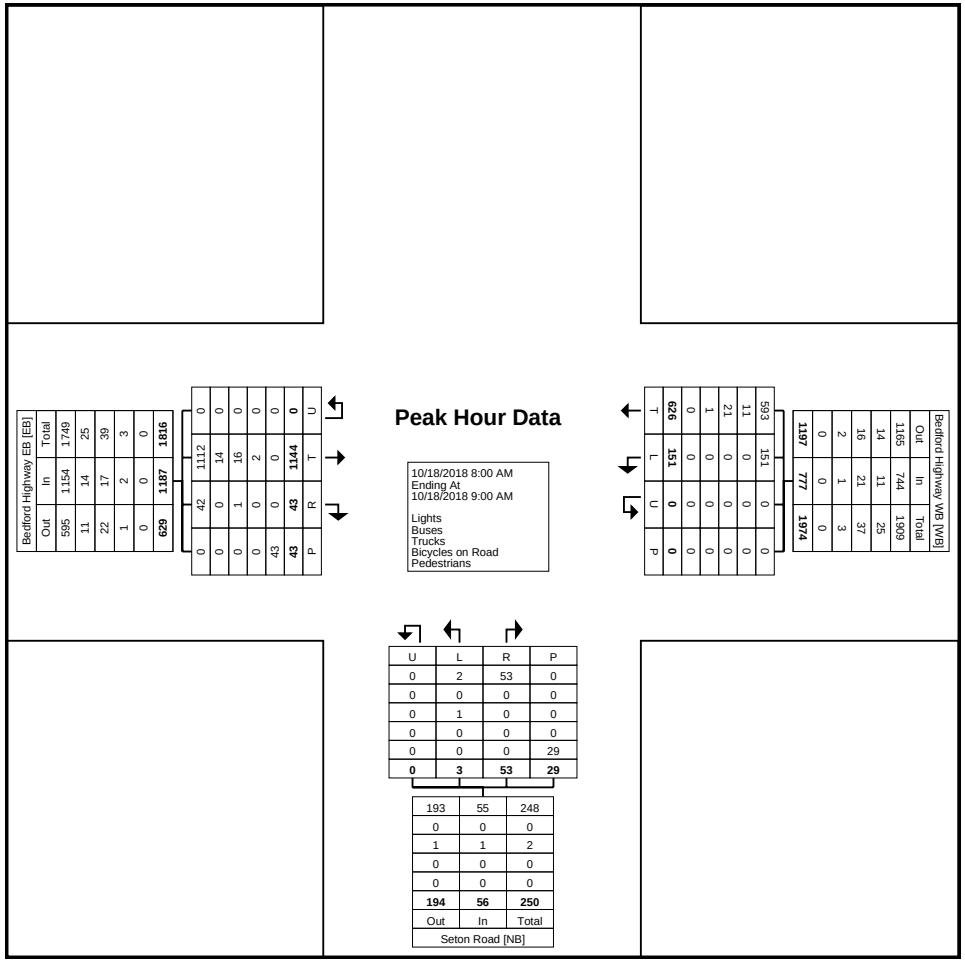
Count Name: Seton Ridge - 2018 Peak Hours
Site Code:
Start Date: 10/18/2018



Turning Movement Peak Hour Data Plot (8:00 AM)

Ekistics Plan + Design
1 Starr Lane

Dartmouth, Nova Scotia, Canada B2Y4V7
(902) 461-2525 roger@ekistics.net
Ekistics

Count Name: Seton Ridge - 2018 Peak Hours
Site Code:
Start Date: 10/18/2018

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Bedford Highway WB Westbound					Seton Road Northbound					Bedford Highway EB Eastbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
4:00 PM	338	16	0	0	354	24	6	0	10	30	6	195	0	7	201	585
4:15 PM	366	17	0	0	383	42	6	0	14	48	9	214	0	2	223	654
4:30 PM	383	11	0	0	394	34	3	0	6	37	4	158	0	5	162	593
4:45 PM	356	10	0	0	366	15	2	0	5	17	4	176	0	2	180	563
Total	1443	54	0	0	1497	115	17	0	35	132	23	743	0	16	766	2395
Approach %	96.4	3.6	0.0	-	-	87.1	12.9	0.0	-	-	3.0	97.0	0.0	-	-	-
Total %	60.3	2.3	0.0	-	62.5	4.8	0.7	0.0	-	5.5	1.0	31.0	0.0	-	32.0	-
PHF	0.942	0.794	0.000	-	0.950	0.685	0.708	0.000	-	0.688	0.639	0.868	0.000	-	0.859	0.916
Lights	1410	52	0	-	1462	115	17	0	-	132	23	724	0	-	747	2341
% Lights	97.7	96.3	-	-	97.7	100.0	100.0	-	-	100.0	100.0	97.4	-	-	97.5	97.7
Buses	15	0	0	-	15	0	0	0	-	0	0	10	0	-	10	25
% Buses	1.0	0.0	-	-	1.0	0.0	0.0	-	-	0.0	0.0	1.3	-	-	1.3	1.0
Trucks	15	2	0	-	17	0	0	0	-	0	0	9	0	-	9	26
% Trucks	1.0	3.7	-	-	1.1	0.0	0.0	-	-	0.0	0.0	1.2	-	-	1.2	1.1
Bicycles on Road	3	0	0	-	3	0	0	0	-	0	0	0	0	-	0	3
% Bicycles on Road	0.2	0.0	-	-	0.2	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.1
Pedestrians	-	-	-	0	-	-	-	-	35	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Ekistics Plan + Design
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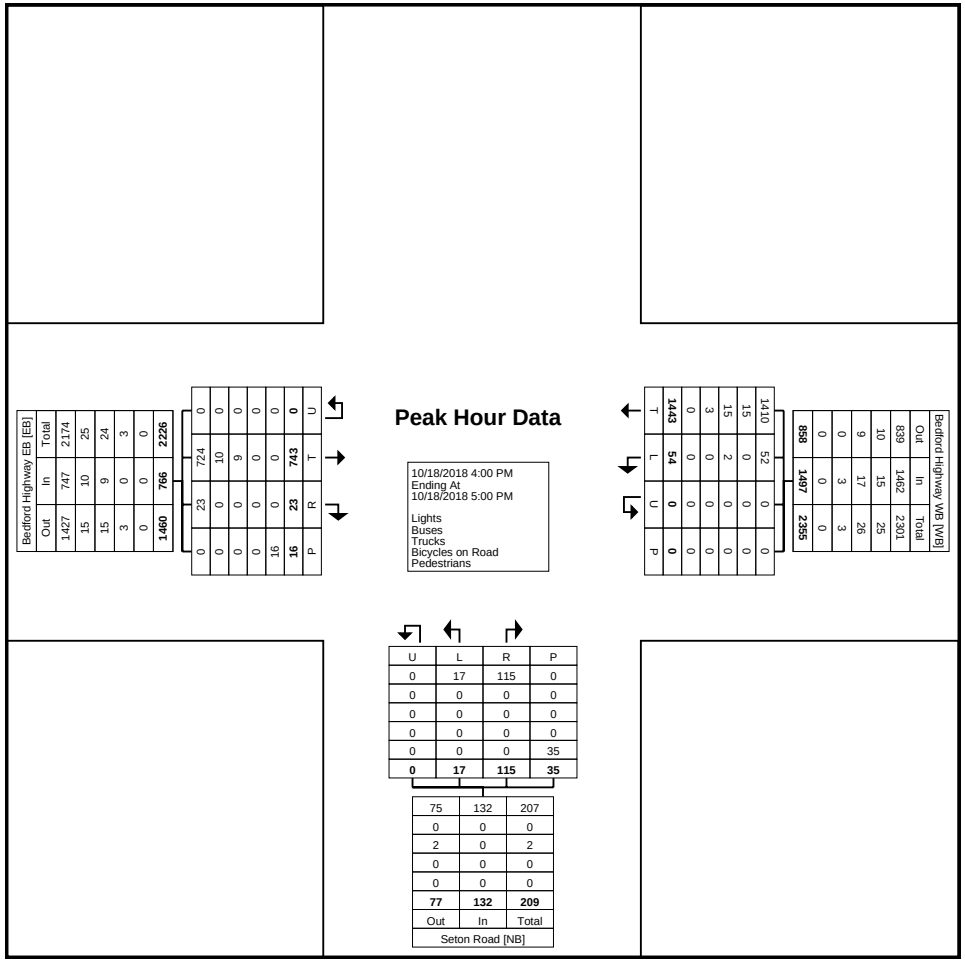
(902) 461-2525 roger@ekistics.net
Ekistics

Count Name: Seton Ridge - 2018 Peak Hours
Site Code:
Start Date: 10/18/2018



Turning Movement Peak Hour Data Plot (4:00 PM)

Ekistics Plan + Design
1 Starr Lane

Dartmouth, Nova Scotia, Canada B2Y4V7
(902) 461-2525 roger@ekistics.net
Ekistics

Count Name: Seton Road Gap
Site Code:
Start Date: 10/18/2018

Combined Direction

Start Time	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.0 - 99.0	Total
4:30 PM	65	5	1	0	0	0	0	0	0	0	0	0	0	0	71
4:45 PM	80	14	1	1	1	0	0	0	0	0	0	0	0	0	97
5:00 PM	78	18	4	3	0	0	0	0	0	0	0	0	0	0	103
5:15 PM	55	9	5	1	2	1	0	0	0	0	0	0	0	0	73
Total	278	46	11	5	3	1	0	0	0	0	0	0	0	0	344
Total %	80.8	13.4	3.2	1.5	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

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Ekistics

Count Name: Seton Road Gap
Site Code:
Start Date: 10/18/2018

Westbound (Westbound)

Start Time	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.0 - 99.0	Total
4:30 PM	82	10	1	2	1	1	0	0	0	0	0	0	0	0	97
4:45 PM	93	16	4	1	1	1	1	0	0	0	0	0	0	1	118
5:00 PM	79	19	4	4	3	3	0	1	0	1	1	0	0	0	115
5:15 PM	65	17	4	4	2	1	2	0	0	0	0	0	0	1	96
Total	319	62	13	11	7	6	3	1	0	1	1	0	0	2	426
Total %	74.9	14.6	3.1	2.6	1.6	1.4	0.7	0.2	0.0	0.2	0.2	0.0	0.0	0.5	100.0

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Ekistics

Count Name: Seton Road Gap
Site Code:
Start Date: 10/18/2018

Eastbound (Eastbound)

Start Time	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.0 - 99.0	Total
4:30 PM	42	28	7	3	5	10	2	1	0	2	2	0	1	2	105
4:45 PM	62	14	8	3	4	3	0	3	2	0	2	1	1	4	107
5:00 PM	68	11	15	6	3	3	3	0	0	0	0	1	0	3	113
5:15 PM	62	17	5	3	5	4	0	3	0	1	1	1	1	4	107
Total	234	70	35	15	17	20	5	7	2	3	5	3	3	13	432
Total %	54.2	16.2	8.1	3.5	3.9	4.6	1.2	1.6	0.5	0.7	1.2	0.7	0.7	3.0	100.0

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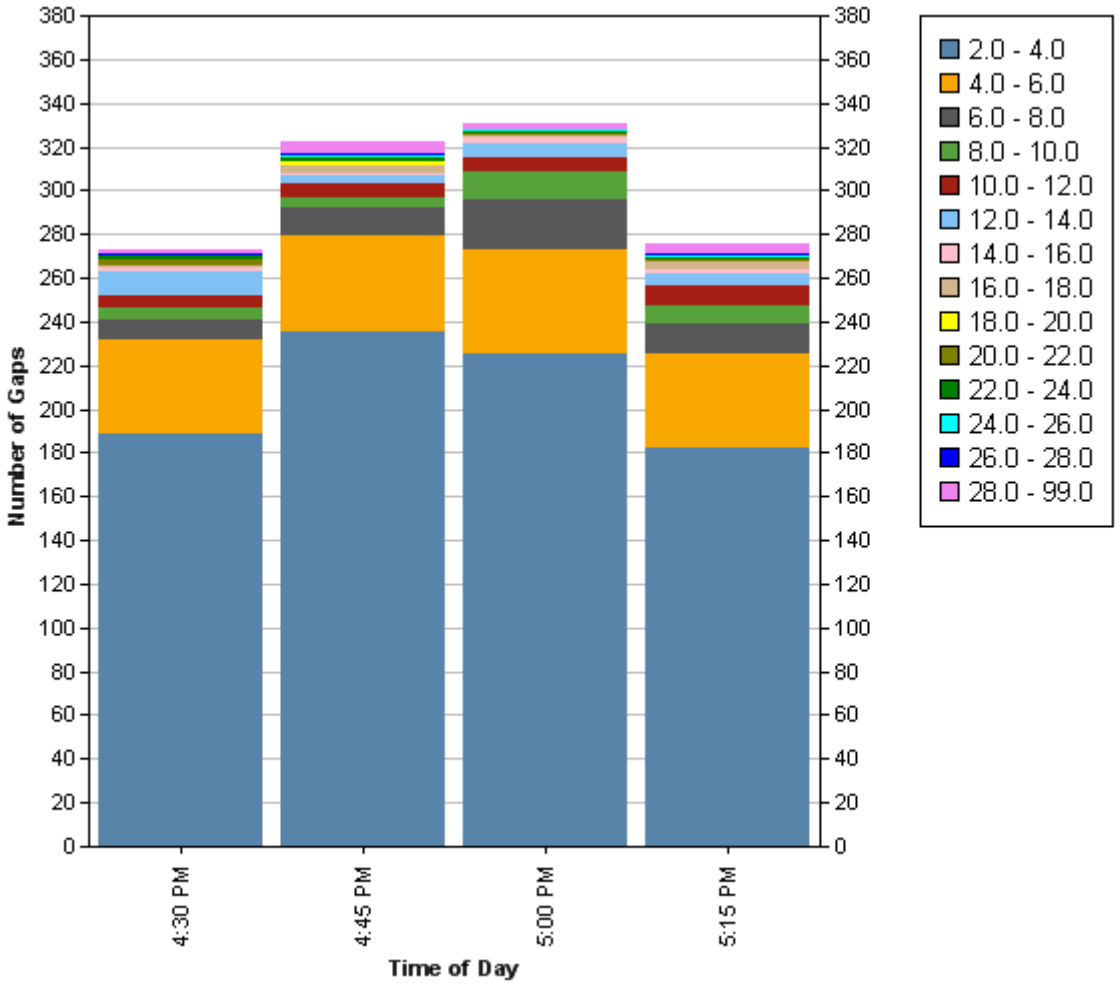
Ekistics

Count Name: Seton Road Gap
Site Code:
Start Date: 10/18/2018



HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-009

MANUAL TRAFFIC COUNTS

INTERSECTION: BAYVIEW ROAD AT BEDFORD HIGHWAY

WEATHER: SUNNY
RECORDER: AA

DAY	DATE	MONTH	YEAR
WEDNESDAY	21	JUNE	2017

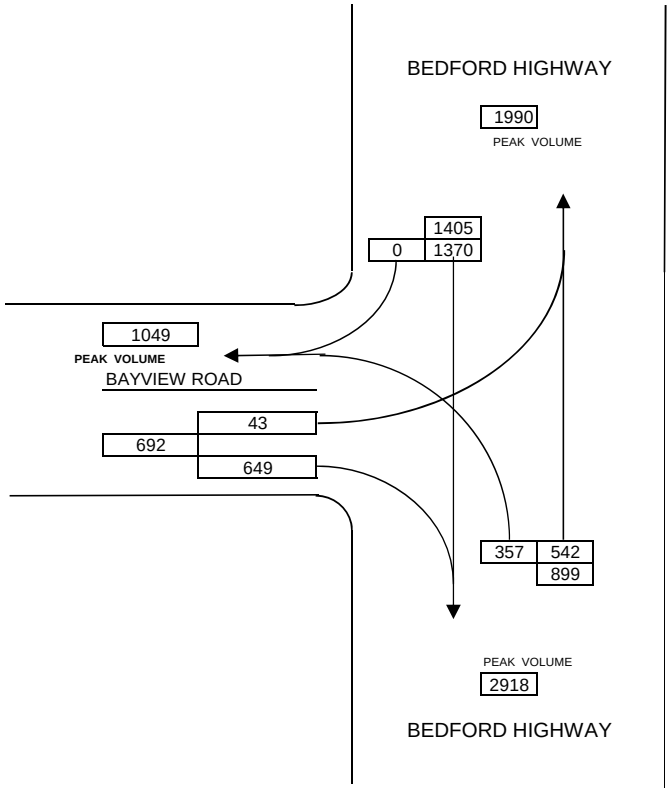
STREET:					BAYVIEW ROAD			BEDFORD HIGHWAY			BEDFORD HIGHWAY			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
07:00:00 AM	07:15:00 AM	0	0	0	6	0	188	6	349	0	68	101	0	718
07:15:00 AM	07:30:00 AM	0	0	0	9	0	139	8	352	0	74	109	0	691
07:30:00 AM	07:45:00 AM	0	0	0	17	0	126	13	308	0	143	223	0	830
07:45:00 AM	08:00:00 AM	0	0	0	11	0	196	8	361	0	72	109	0	757
TOTAL		0	0	0	43	0	649	35	1370	0	357	542	0	2996
PEAK			0			692			1405			899		
15 MIN PEAK			0			828			1476			1464		
PEAK HOUR FACTOR			0			0.84			0.95			0.61		
TWO WAY TOTALS			35			1049			1990			2918		FACTOR
														0.99
														2966

DAY	DATE	MONTH	YEAR
WEDNESDAY	21	JUNE	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
08:00:00 AM	08:15:00 AM	0	0	0	17	0	184	6	342	0	62	97	0	708
08:15:00 AM	08:30:00 AM	0	0	0	9	0	201	11	341	0	66	84	0	712
08:30:00 AM	08:45:00 AM	0	0	0	14	0	177	8	354	0	74	91	0	718
08:45:00 AM	09:00:00 AM	0	0	0	13	0	161	11	332	0	63	84	0	664
TOTAL		0	0	0	53	0	723	36	1369	0	265	356	0	2802
PEAK			0			776			1405			621		
15 MIN PEAK			0			840			1448			660		
PEAK HOUR FACTOR			0			0.92			0.97			0.94		
TWO WAY TOTALS			36			1041			1814			2713		FACTOR
														0.99
														2774

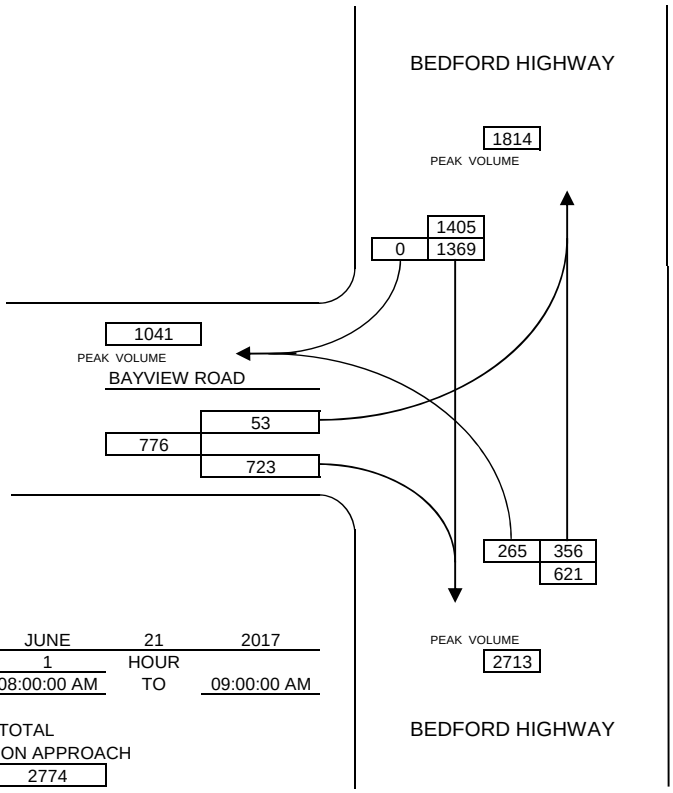
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : BAYVIEW ROAD AT BEDFORD HIGHWAY



DATE: JUNE 21 2017
TIME: 1 HOUR
FROM: 07:00:00 AM TO 08:00:00 AM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 2966



DATE: JUNE 21 2017
TIME: 1 HOUR
FROM: 08:00:00 AM TO 09:00:00 AM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 2774

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-009

MANUAL TRAFFIC COUNTS

INTERSECTION: BAYVIEW ROAD AT BEDFORD HIGHWAY

WEATHER: SUNNY
RECORDER: AA

DAY	DATE	MONTH	YEAR
WEDNESDAY	21	JUNE	2017

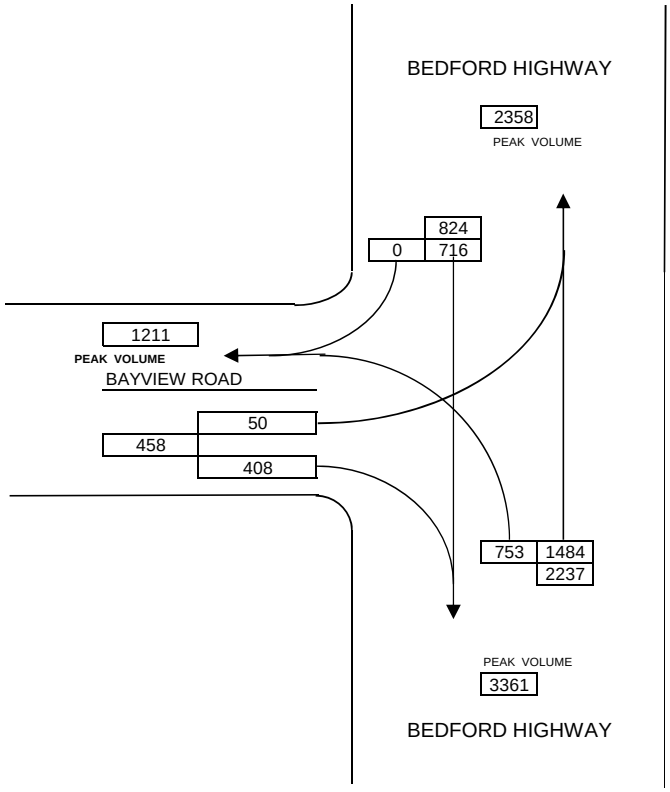
STREET:					BAYVIEW ROAD			BEDFORD HIGHWAY			BEDFORD HIGHWAY			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
04:00:00 PM	04:15:00 PM	0	0	0	12	0	105	23	185	0	196	402	0	923
04:15:00 PM	04:30:00 PM	0	0	0	15	0	97	33	176	0	180	352	0	853
04:30:00 PM	04:45:00 PM	0	0	0	9	0	98	28	181	0	191	361	0	868
04:45:00 PM	05:00:00 PM	0	0	0	14	0	108	24	174	0	186	369	0	875
TOTAL		0	0	0	50	0	408	108	716	0	753	1484	0	3519
PEAK			0			458			824			2237		
15 MIN PEAK			0			488			836			2392		
PEAK HOUR FACTOR			0			0.94			0.99			0.94		
TWO WAY TOTALS			108			1211			2358			3361		FACTOR
														0.99
														3484

DAY	DATE	MONTH	YEAR
WEDNESDAY	21	JUNE	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
05:00:00 PM	05:15:00 PM	0	0	0	18	0	109	31	163	0	182	377	0	880
05:15:00 PM	05:30:00 PM	0	0	0	13	0	103	37	172	0	193	364	0	882
05:30:00 PM	05:45:00 PM	0	0	0	9	0	111	24	177	0	184	406	0	911
05:45:00 PM	06:00:00 PM	0	0	0	11	0	101	27	173	0	184	381	0	877
TOTAL		0	0	0	51	0	424	119	685	0	743	1528	0	3550
PEAK			0			475			804			2271		
15 MIN PEAK			0			508			836			2360		
PEAK HOUR FACTOR			0			0.94			0.96			0.96		
TWO WAY TOTALS			119			1218			2383			3380		FACTOR
														0.99
														3515

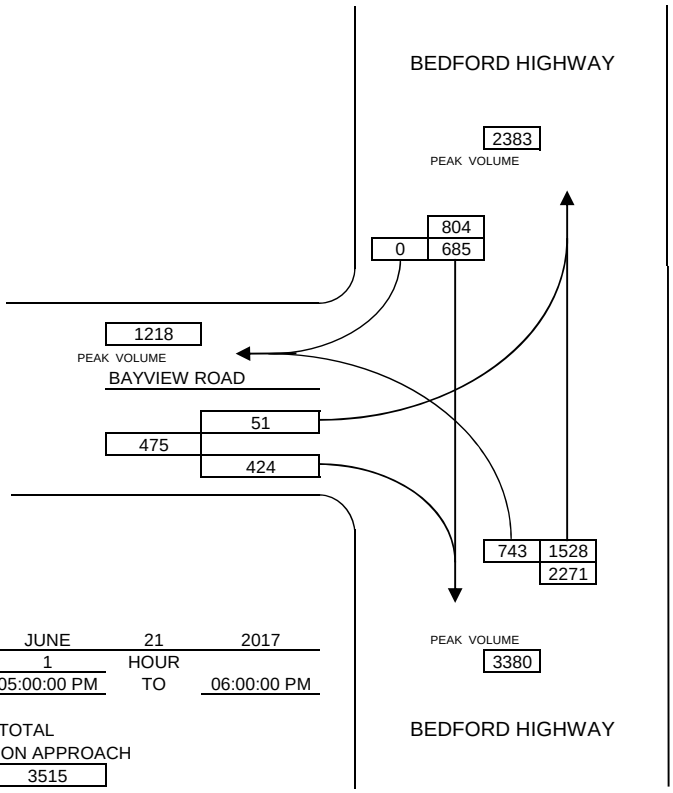
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : BAYVIEW ROAD AT BEDFORD HIGHWAY



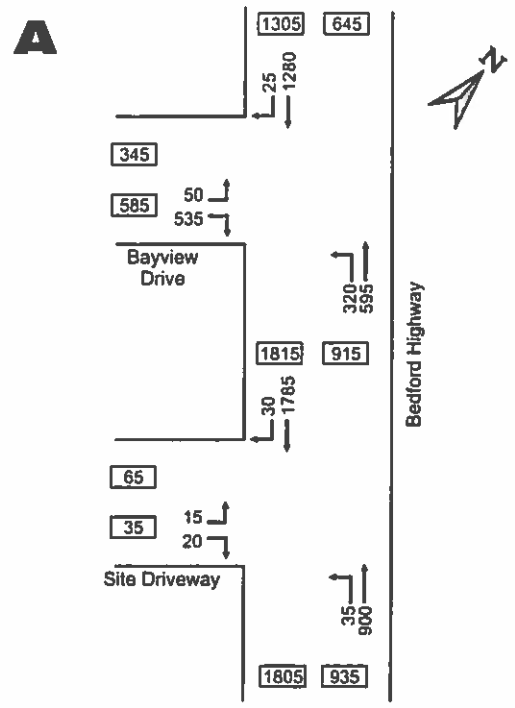
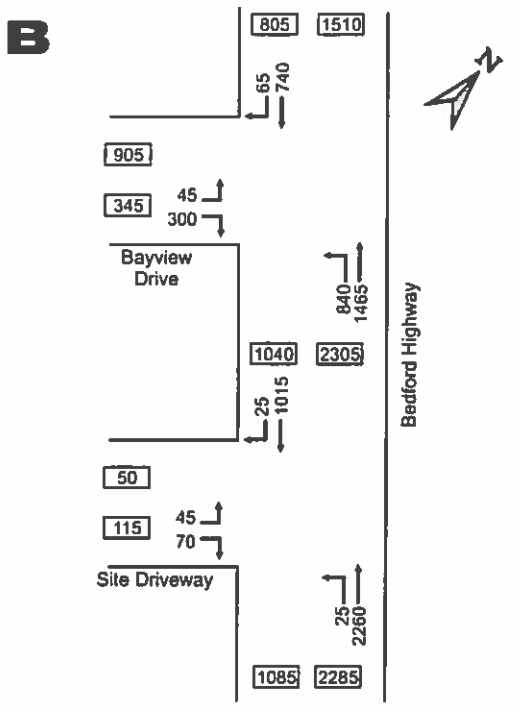
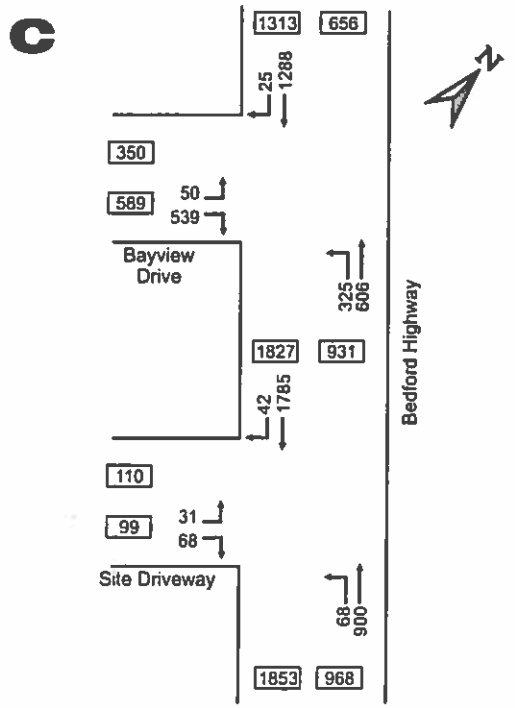
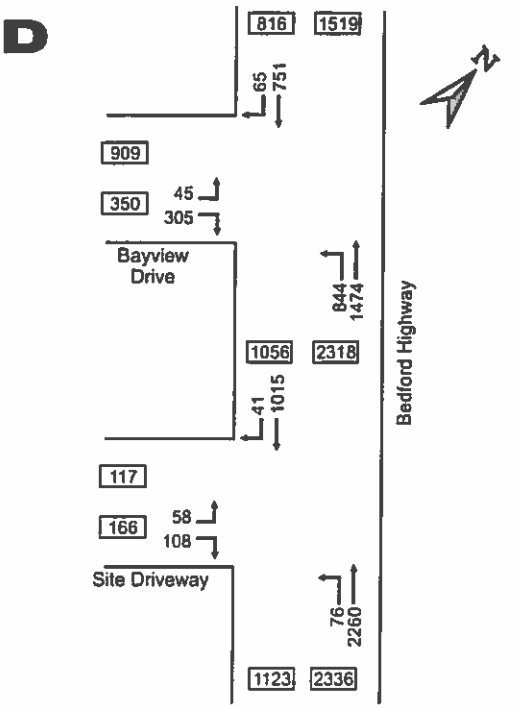
DATE: JUNE 21 2017
TIME: 1 HOUR
FROM: 04:00:00 PM TO 05:00:00 PM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 3484



DATE: JUNE 21 2017
TIME: 1 HOUR
FROM: 05:00:00 PM TO 06:00:00 PM

FACTORED TOTAL
INTERSECTION APPROACH
VOLUME 3515

	AM Peak Hour	PM Peak Hour
Projected 2012 Peak Hours without Site Generated Traffic		
Projected 2012 Peak Hours with Site Generated Traffic		

Atlantic Road & Traffic Management Traffic Engineering Specialists	Traffic Impact Study - Proposed Condominium and Hotel Development, 50 Bedford Highway, Halifax, NS	Figure A-5
	Projected 2012 Peak Hour Volumes	January 2009

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-062

MANUAL TRAFFIC COUNTS

INTERSECTION: DUNBRACK STREET AT LACEWOOD DRIVE

WEATHER: CLEAR
RECORDER: SS

DAY	DATE	MONTH	YEAR
TUESDAY	15	AUGUST	2017

STREET:		LACEWOOD DRIVE			LACEWOOD DRIVE			DUNBRACK STREET			DUNBRACK STREET			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
07:00:00 AM	07:15:00 AM	6	32	14	11	105	17	68	52	21	6	35	14	381
07:15:00 AM	07:30:00 AM	6	59	14	26	120	16	84	56	18	15	7	5	426
07:30:00 AM	07:45:00 AM	10	57	15	22	154	18	105	90	31	8	43	15	568
07:45:00 AM	08:00:00 AM	7	85	18	11	99	17	136	93	29	9	40	6	550
TOTAL		29	233	61	70	478	68	393	291	99	38	125	40	1925
PEAK			323			616			783			203		
15 MIN PEAK			440			776			1032			264		
PEAK HOUR FACTOR			0.73			0.79			0.76			0.77		
TWO WAY TOTALS			1234			986			1039			591		FACTOR
														1.03
														1983

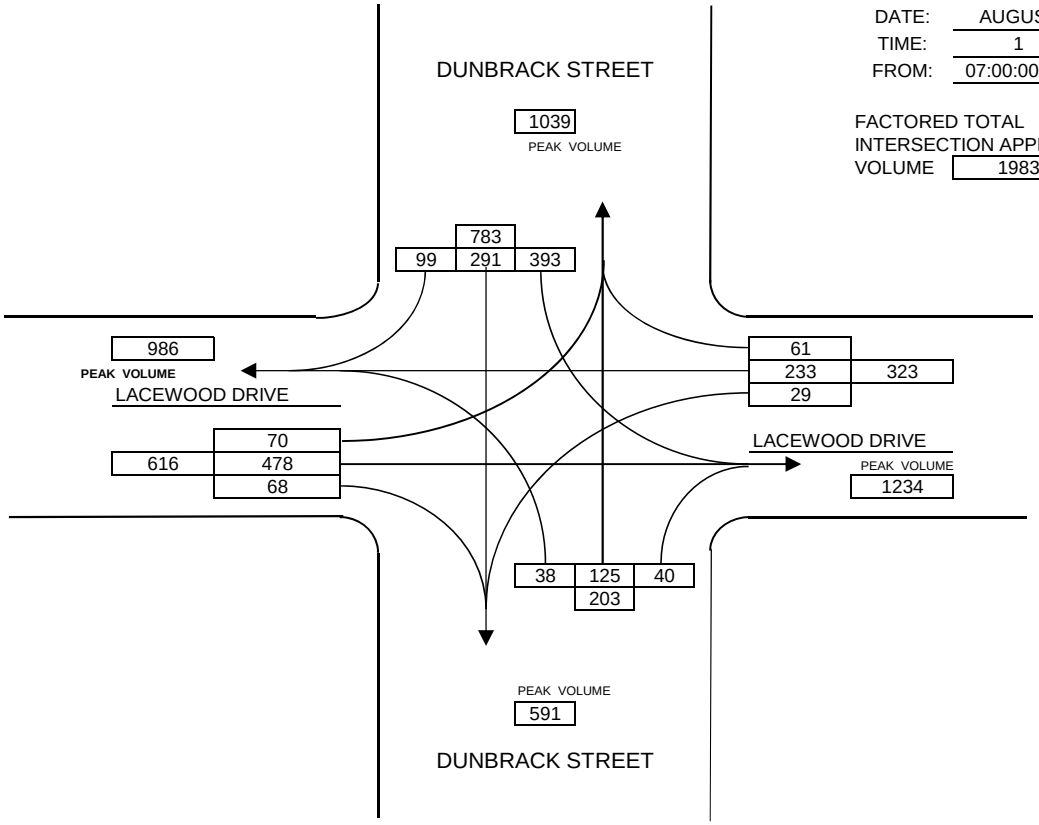
DAY	DATE	MONTH	YEAR
TUESDAY	15	AUGUST	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
08:00:00 AM	08:15:00 AM	10	71	28	28	120	22	104	72	36	16	53	9	569
08:15:00 AM	08:30:00 AM	9	81	19	16	128	19	192	95	51	12	40	8	670
08:30:00 AM	08:45:00 AM	3	76	21	20	125	14	97	86	62	10	40	11	565
08:45:00 AM	09:00:00 AM	9	67	18	18	107	6	102	75	57	11	36	-12	494
TOTAL		31	295	86	82	480	61	495	328	206	49	169	16	2298
PEAK			412			623			1029			234		
15 MIN PEAK			436			680			1352			312		
PEAK HOUR FACTOR			0.94			0.92			0.76			0.75		
TWO WAY TOTALS			1403			1173			1366			654		FACTOR
														1.03
														2367

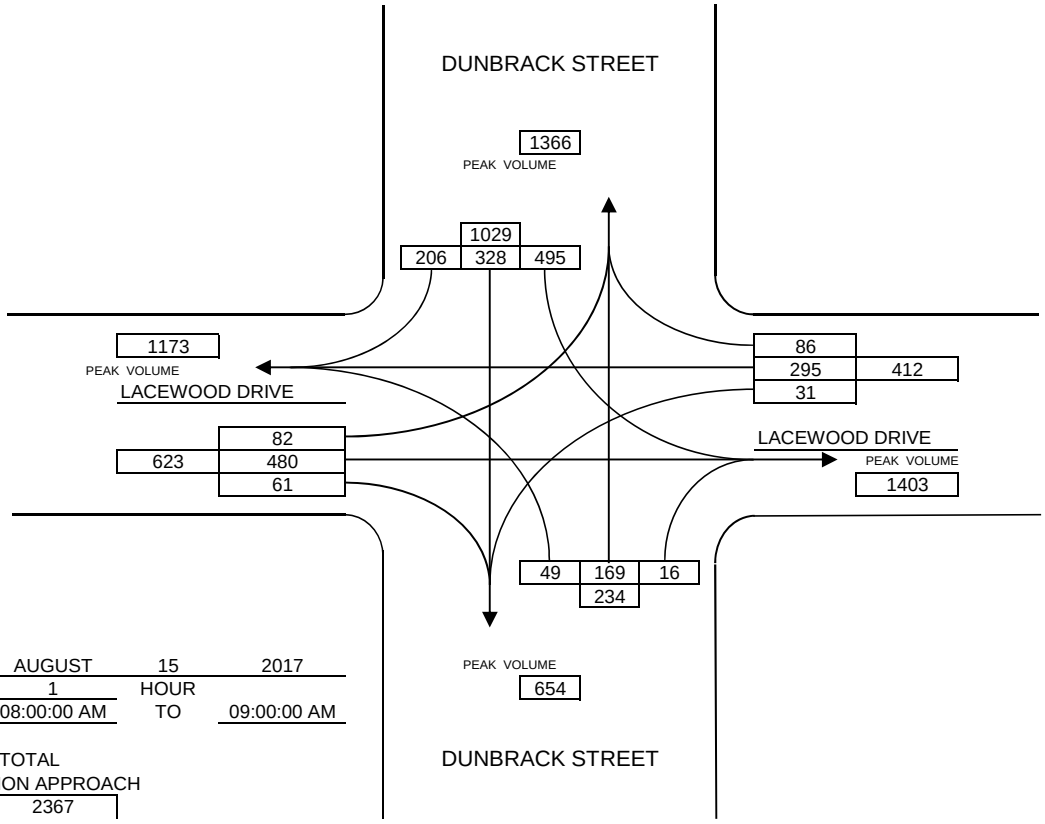
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : DUNBRACK STREET AT LACEWOOD DRIVE

DATE: AUGUST 15 2017
TIME: 1 HOUR
FROM: 07:00:00 AM TO 08:00:00 AM



FACTORED TOTAL INTERSECTION APPROACH VOLUME 1983



DATE: AUGUST 15 2017
TIME: 1 HOUR
FROM: 08:00:00 AM TO 09:00:00 AM

FACTORED TOTAL INTERSECTION APPROACH VOLUME 2367

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-062

MANUAL TRAFFIC COUNTS

INTERSECTION: DUNBRACK STREET AT LACEWOOD DRIVE

WEATHER: CLEAR
RECORDER: SS

DAY	DATE	MONTH	YEAR
TUESDAY	15	AUGUST	2017

STREET:		LACEWOOD DRIVE			LACEWOOD DRIVE			DUNBRACK STREET			DUNBRACK STREET			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
04:00:00 PM	04:15:00 PM	19	166	58	52	110	34	37	47	43	43	75	6	690
04:15:00 PM	04:30:00 PM	10	174	53	41	118	34	28	73	62	52	90	12	747
04:30:00 PM	04:45:00 PM	24	190	53	54	104	34	41	58	49	38	84	6	735
04:45:00 PM	05:00:00 PM	16	203	60	57	108	38	37	49	44	39	82	9	742
TOTAL		69	733	224	204	440	140	143	227	198	172	331	33	2914
PEAK			1026			784			568			536		
15 MIN PEAK			1116			812			652			616		
PEAK HOUR FACTOR			0.92			0.97			0.87			0.87		
TWO WAY TOTALS			1642			1887			1327			972		FACTOR
														1.03
														3001

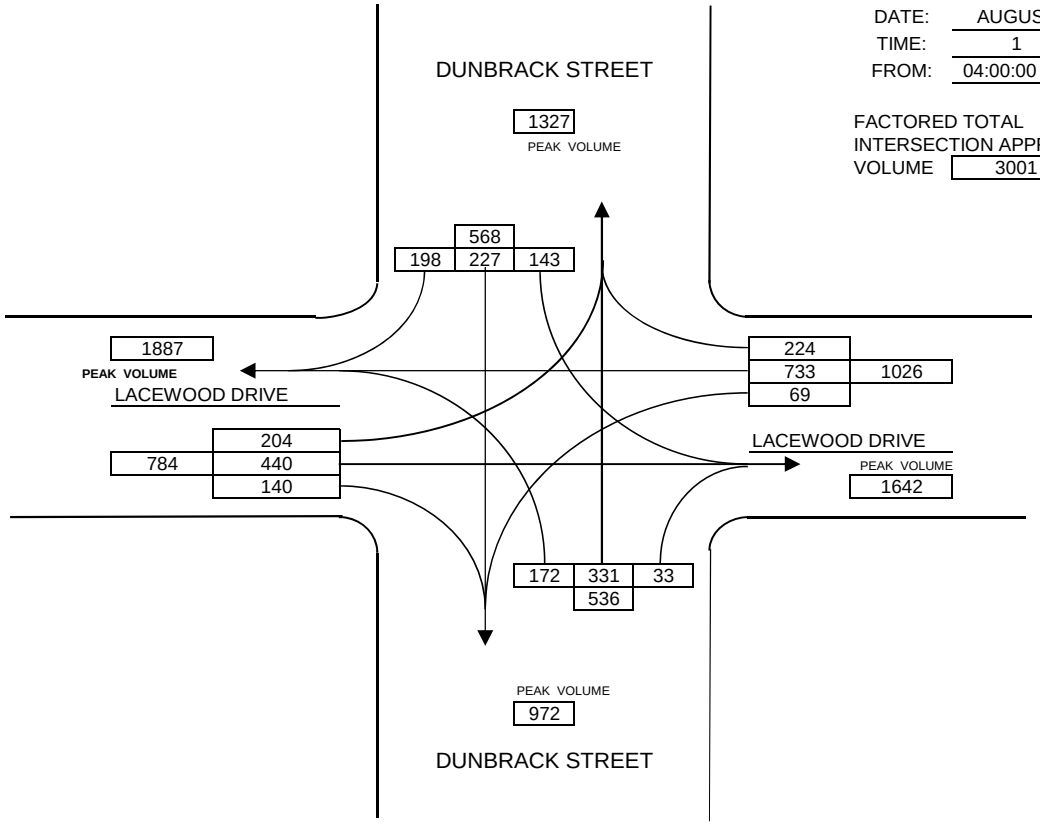
DAY	DATE	MONTH	YEAR
THURSDAY	15	JUNE	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
05:00:00 PM	05:15:00 PM	28	209	75	52	117	32	24	54	24	23	71	4	713
05:15:00 PM	05:30:00 PM	27	169	79	50	107	24	54	79	57	34	105	3	788
05:30:00 PM	05:45:00 PM	22	157	69	51	98	28	47	72	47	18	95	3	707
05:45:00 PM	06:00:00 PM	19	154	52	45	105	26	39	64	33	27	87	5	656
TOTAL		96	689	275	198	427	110	164	269	161	102	358	15	2864
PEAK			1060			735			594			475		
15 MIN PEAK			1248			804			760			568		
PEAK HOUR FACTOR			0.85			0.91			0.78			0.84		
TWO WAY TOTALS			1666			1687			1425			950		FACTOR
														1.03
														2950

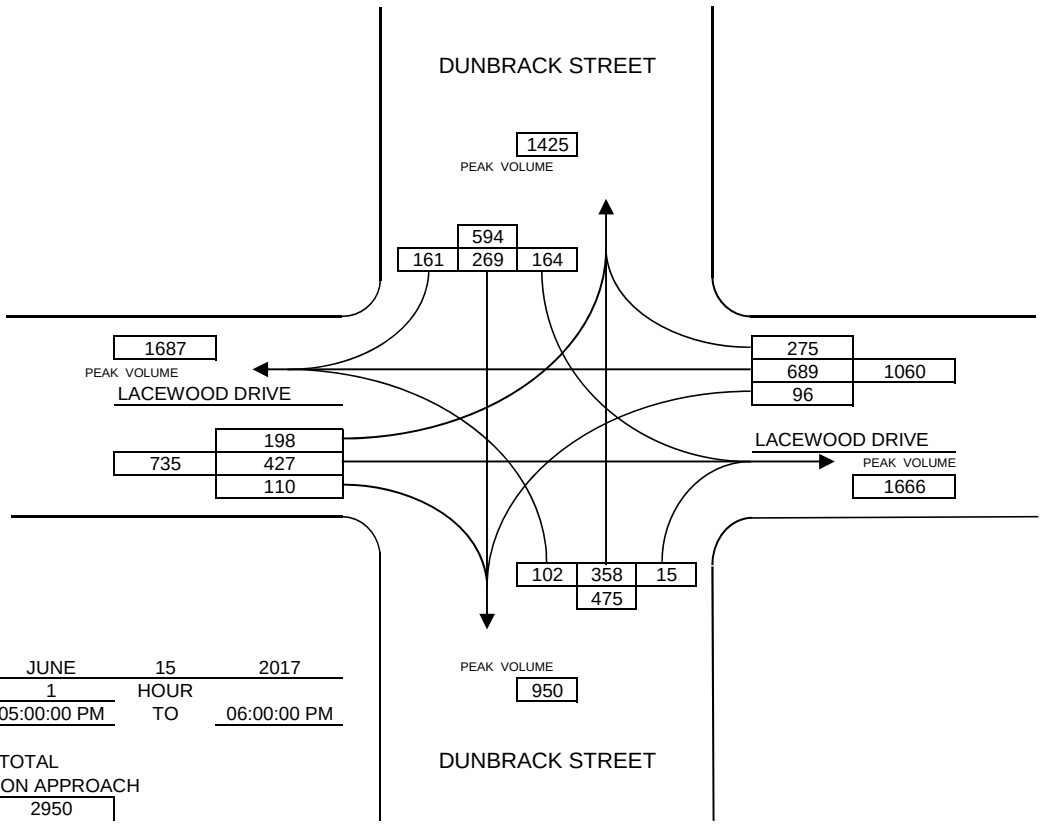
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : DUNBRACK STREET AT LACEWOOD DRIVE

DATE: AUGUST 15 2017
TIME: 1 HOUR
FROM: 04:00:00 PM TO 05:00:00 PM



FACTORED TOTAL INTERSECTION APPROACH VOLUME 3001



DATE: JUNE 15 2017
TIME: 1 HOUR
FROM: 05:00:00 PM TO 06:00:00 PM

FACTORED TOTAL INTERSECTION APPROACH VOLUME 2950

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC & RIGHT OF WAY

CODE NO. 17-TM-151

MANUAL TRAFFIC COUNTS

INTERSECTION: BAYVIEW ROAD AT CLAYTON PARK DRIVE & LACEWOOD DRIVE

WEATHER: Cloudy
RECORDER: Saqib

DAY	DATE	MONTH	YEAR
Wednesday	31	May	2017

STREET:		LACEWOOD DRIVE			LACEWOOD DRIVE			BAYVIEW ROAD			CLAYTON PARK DRIVE			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
07:00:00 AM	07:15:00 AM	0	38	1	84	132	4	0	3	45	2	12	6	327
07:15:00 AM	07:30:00 AM	2	37	0	82	155	9	5	3	56	4	14	12	379
07:30:00 AM	07:45:00 AM	3	46	2	73	193	5	1	4	64	3	15	18	427
07:45:00 AM	08:00:00 AM	1	42	0	60	183	10	6	3	49	4	10	10	378
TOTAL		6	163	3	299	663	28	12	13	214	13	51	46	1511
PEAK			172			990			239			110		
15 MIN PEAK			204			1084			276			144		
PEAK HOUR FACTOR			0.84			0.91			0.87			0.76		
TWO WAY TOTALS			893			1380			592			157		FACTOR
														1
														1511

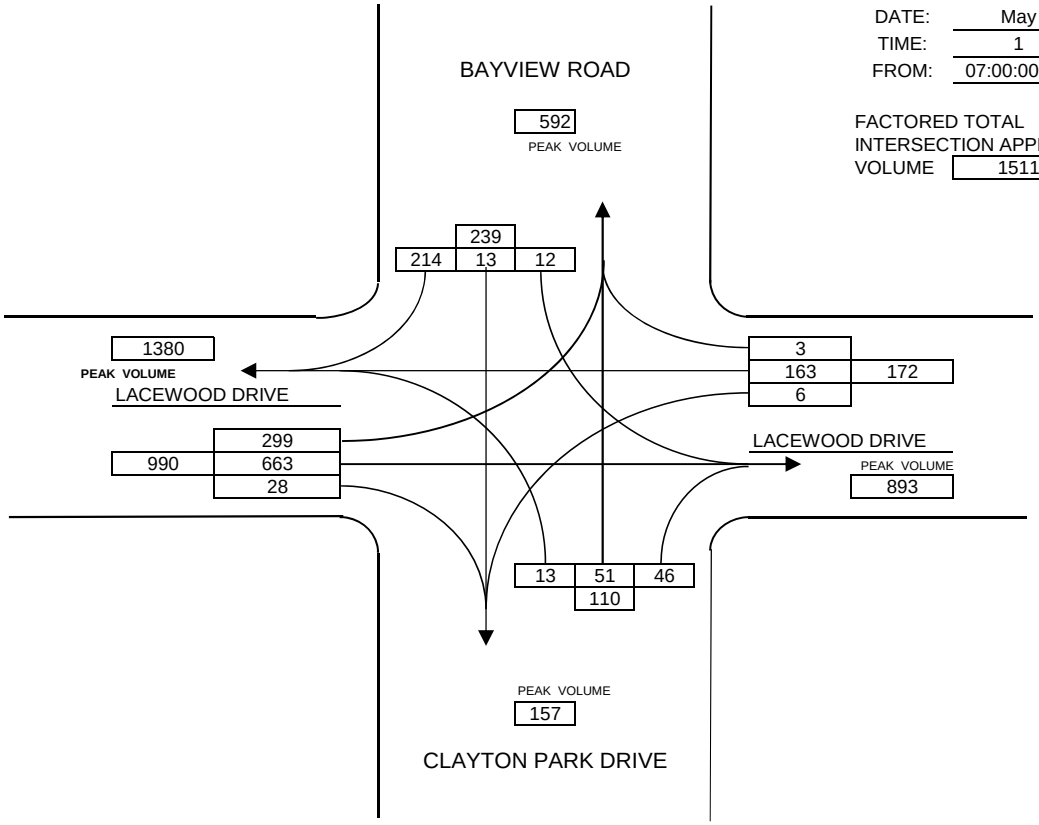
DAY	DATE	MONTH	YEAR
Wednesday	31	May	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
08:00:00 AM	08:15:00 AM	3	38	0	71	187	7	3	5	44	3	12	7	380
08:15:00 AM	08:30:00 AM	8	41	2	67	159	9	4	3	51	5	16	12	377
08:30:00 AM	08:45:00 AM	8	41	0	65	162	14	1	4	51	11	18	21	396
08:45:00 AM	09:00:00 AM	7	42	1	57	152	9	2	2	54	7	12	13	358
TOTAL		26	162	3	260	660	39	10	14	200	26	58	53	1511
PEAK			191			959			224			137		
15 MIN PEAK			204			1060			232			200		
PEAK HOUR FACTOR			0.94			0.9			0.97			0.69		
TWO WAY TOTALS			914			1347			545			216		FACTOR
														1
														1511

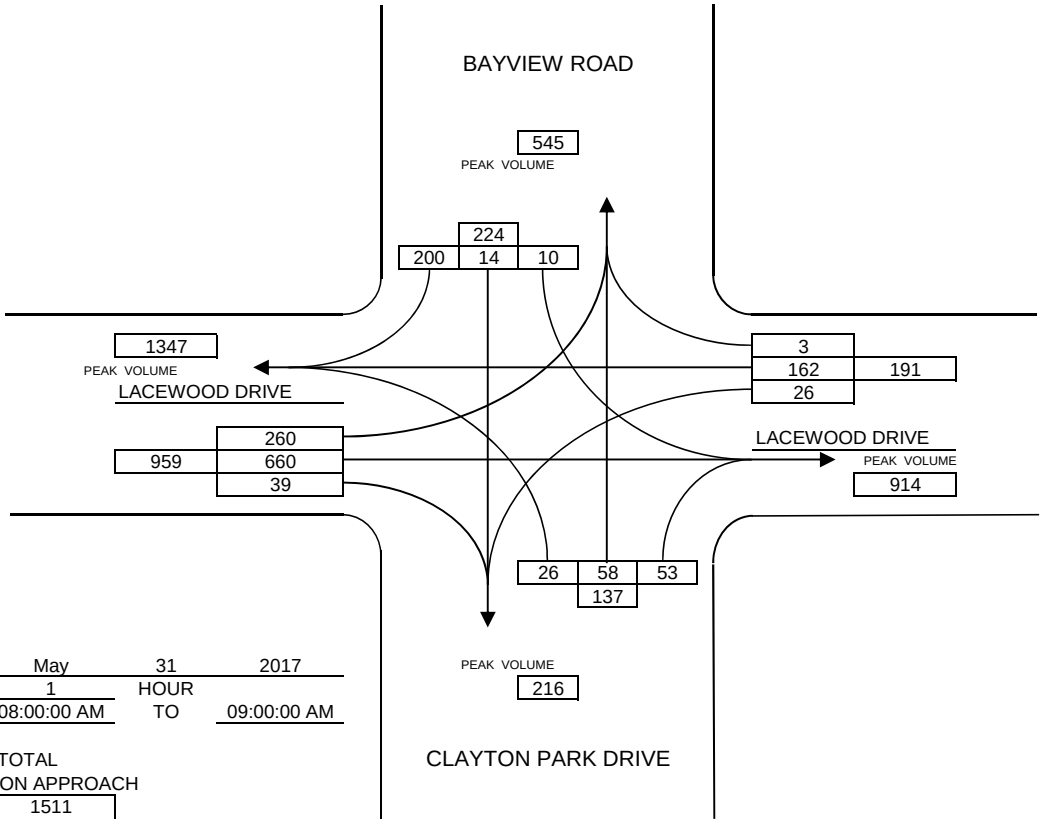
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : BAYVIEW ROAD AT CLAYTON PARK DRIVE & LACEWOOD DRIVE

DATE: May 31 2017
TIME: 1 HOUR
FROM: 07:00:00 AM TO 08:00:00 AM



FACTORED TOTAL INTERSECTION APPROACH VOLUME 1511



DATE: May 31 2017
TIME: 1 HOUR
FROM: 08:00:00 AM TO 09:00:00 AM

FACTORED TOTAL INTERSECTION APPROACH VOLUME 1511

HALIFAX REGIONAL MUNICIPALITY
TRANSPORTATION & PUBLIC WORKS
TRAFFIC MANAGEMENT

CODE NO. 17-TM-151

MANUAL TRAFFIC COUNTS

INTERSECTION: BAYVIEW ROAD AT LACEWOOD DRIVE

WEATHER: SUNNY & CLEAR
RECORDER: KS

DAY	DATE	MONTH	YEAR
MON	10	JULY	2017

STREET:		LACEWOOD DRIVE			LACEWOOD DRIVE			BAYVIEW ROAD			CLAYTON PARK DRIVE			
TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
04:00:00 PM	04:15:00 PM	2	92	8	49	58	14	3	6	108	6	6	4	356
04:15:00 PM	04:30:00 PM	3	74	9	35	56	8	4	4	123	2	5	0	323
04:30:00 PM	04:45:00 PM	4	125	10	48	71	13	5	7	125	3	8	1	420
04:45:00 PM	05:00:00 PM	6	116	11	49	59	14	4	6	133	2	8	1	409
TOTAL		15	407	38	181	244	49	16	23	489	13	27	6	1508
PEAK			460			474			528			46		
15 MIN PEAK			556			528			572			64		
PEAK HOUR FACTOR			0.83			0.9			0.92			0.72		
TWO WAY TOTALS			726			1383			774			133		FACTOR
														1.07
														1614

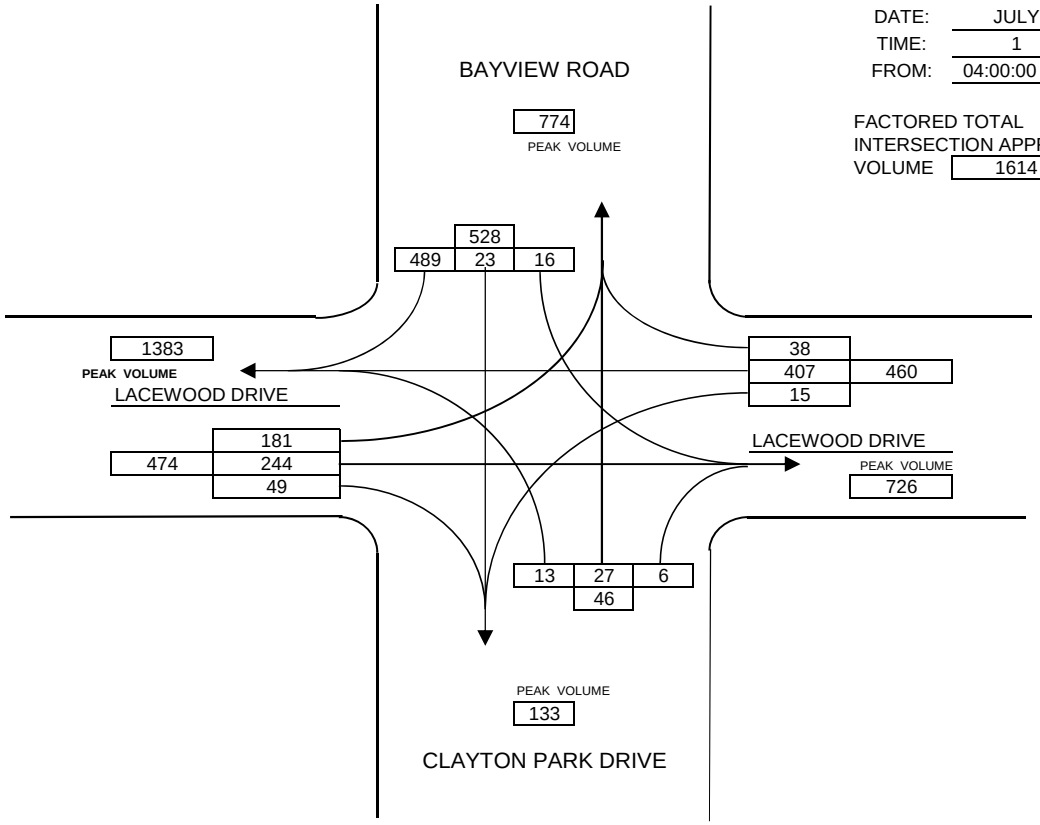
DAY	DATE	MONTH	YEAR
MON	10	JULY	2017

TIME:		FROM THE EAST			FROM THE WEST			FROM THE NORTH			FROM THE SOUTH			TOTAL
15 MIN INTERVALS		L	S	R	L	S	R	L	S	R	L	S	R	
05:00:00 PM	05:15:00 PM	3	76	7	52	55	12	4	7	108	2	8	2	336
05:15:00 PM	05:30:00 PM	2	78	11	48	54	11	5	6	118	4	9	0	346
05:30:00 PM	05:45:00 PM	4	95	7	41	49	8	4	5	108	2	8	1	332
05:45:00 PM	06:00:00 PM	2	78	8	35	57	7	3	4	104	1	7	0	306
TOTAL		11	327	33	176	215	38	16	22	438	9	32	3	1320
PEAK			371			429			476			44		
15 MIN PEAK			424			476			516			52		
PEAK HOUR FACTOR			0.88			0.9			0.92			0.85		
TWO WAY TOTALS			605			1203			717			115		FACTOR
														1.07
														1412

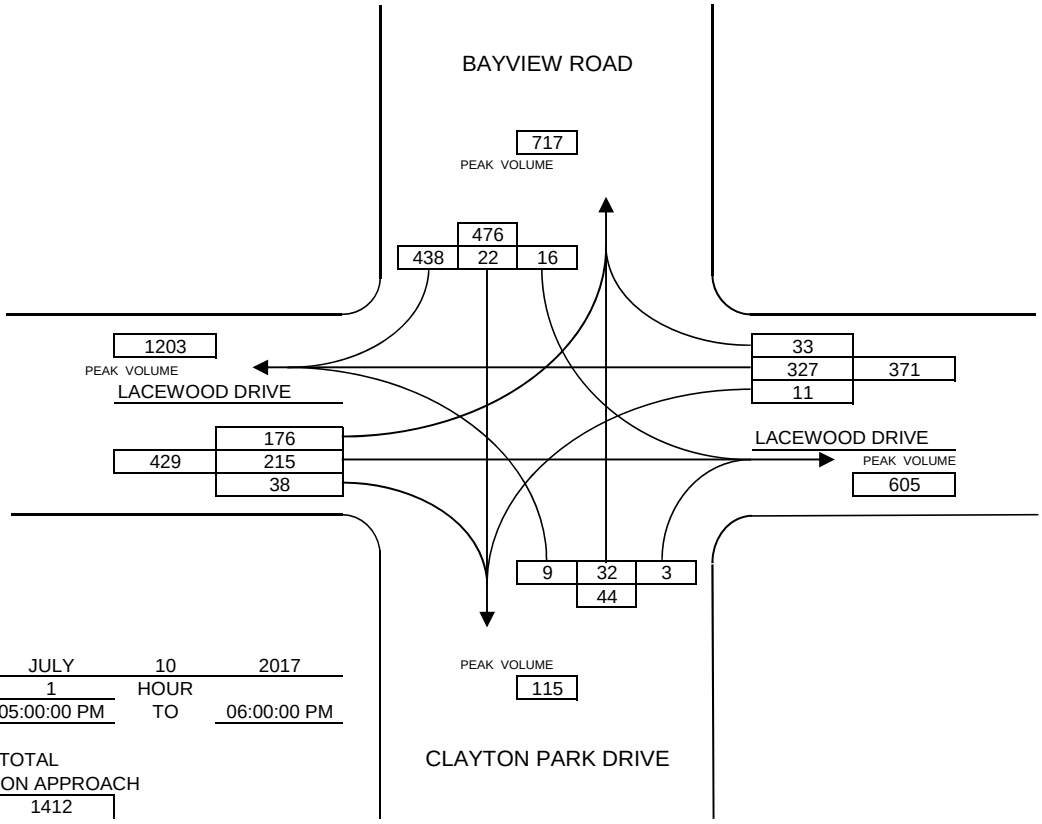
VEHICULAR GRAPHIC SUMMARY SHEET

INTERSECTION : BAYVIEW ROAD AT LACEWOOD DRIVE

DATE: JULY 10 2017
TIME: 1 HOUR
FROM: 04:00:00 PM TO 05:00:00 PM



FACTORED TOTAL INTERSECTION APPROACH VOLUME 1614



DATE: JULY 10 2017
TIME: 1 HOUR
FROM: 05:00:00 PM TO 06:00:00 PM

FACTORED TOTAL INTERSECTION APPROACH VOLUME 1412

AAWT FACTORS 2012					
DAY	Monday	Tuesday	Wednesday	Thursday	Friday
MONTH					
January	1.08	1.05	1.03	0.99	1.02
February	1.03	1.00	0.99	0.97	0.95
March	1.04	1.01	1.00	0.95	0.97
April	1.07	1.04	1.02	0.98	0.96
May	1.04	1.01	1.00	0.96	0.96
June	1.05	1.02	0.99	0.97	0.97
July	1.07	1.03	1.00	0.99	1.00
August	1.07	1.03	1.02	1.02	1.02
September	1.05	1.00	1.00	0.97	0.96
October	1.04	1.01	0.98	0.97	0.95
November	1.04	1.01	0.99	0.97	0.94
December	1.04	0.99	1.01	0.94	0.92

EKISTICS PLANNING & DESIGN

APPENDIX C

Traffic Signal Timing/Phasing

Signal Timing Report

Time Generated: 2018-01-11 11:29:06

Region: Halifax **Signal ID:** 099 **Location:** Bedford Hwy at Flamingo

Phase	Units	1	2 - SB	3	4 - EB	5	6 - NB	7	8
Walk	Sec	0	7	0	7	0	7	0	0
Ped Clear	Sec	0	15	0	10	0	15	0	0
Min Green	Sec	0	10	0	7	0	10	0	0
Passage	Sec	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	25	0	20	0	25	0	0
Maximum 2	Sec	0	40	0	0	0	40	0	0
Yellow Change	Sec	3.0	4.1	3.0	3.5	3.0	4.1	3.0	4.0
Red Clearance	Sec	1.0	2.0	1.0	2.5	1.0	2.0	1.0	2.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn
[P2] Options	Bit	Non Lock Det Sim Gap Disable	Enabled Auto Flash Exit Non Lock Det Min Veh Recall Ped Recall Dual Entry	Non Lock Det Sim Gap Disable	Enabled Auto Flash Entry Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Enabled Auto Flash Exit Non Lock Det Min Veh Recall Ped Recall Dual Entry	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable
[P2] Ring	Ring	0	1	0	1	0	2	0	0
[P2] Concurrency	Phase (,)	()	(6)	()	()	()	(2)	()	()

Phase	Units	9	10	11	12	13	14	15	16
Walk	Sec	0	7	0	7	0	7	0	7
Ped Clear	Sec	0	15	0	15	0	15	0	15
Min Green	Sec	4	15	4	15	4	15	4	15
Passage	Sec	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0
Maximum 1	Sec	15	45	15	45	15	45	15	45
Maximum 2	Sec	15	45	15	45	15	45	15	45
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Signal Timing Report

Time Generated: 2018-01-11 11:29:11

Region: Halifax **Signal ID:** 099 **Location:** Bedford Hwy at Flamingo

Coord Param	Units	Value
Operational Mode	Enum	Automatic
Correction Mode	Enum	shortway
Maximum Mode	Enum	maxInhibit
Force Mode	Enum	fixed

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	0	120	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	1	2	3	1	5	6	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Pattern	Units	9	10	11	12	13	14	15	16
Cycle Time	Sec	0	0	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	1	1	1	1	1	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1

Signal Timing Report

Time Generated: 2018-01-11 11:29:14

Region: Halifax **Signal ID:** 099 **Location:** Bedford Hwy at Flamingo

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	maxVehRecall	none	none	none	maxVehRecall	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	8	none	none	none	8	none	none
Split 2 - Time	Sec	0	94	0	26	0	94	0	0
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

Signal Timing Report

Time Generated: 2018-01-11 11:29:18

Region: Halifax **Signal ID:** 099 **Location:** Bedford Hwy at Flamingo

Coord Split	Units	9	10	11	12	13	14	15	16
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	Units	Value
Daylight Saving	Enum	enableDaylightSavingNode
Standard Time Zone	Sec	-14400
Pattern Sync	Sec	0

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	0	0	J----------	-F----------	---A--------	---A--------
Day of Week	Bit	S-----S	-MTWTF-	0	0	SMTWTFS	-M-----	-----F-	-M-----
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	0	0	1----------0--------	----------0----------	----------4----------	----------7----------
Day Plan	Number	1	2	30	0	1	1	1	1

HALIFAX

Signal Timing Report

Time Generated: 2018-01-11 11:29:21

Region: Halifax **Signal ID:** 099 **Location:** Bedford Hwy at Flamingo

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	----M-------	------J-----	-------A----	--------S---	---------O--	----------N-	----------D	----------D
Day of Week	Bit	-M-----	SMTWTFS	-M-----	-M-----	-M-----	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	--------------------2--------	1--------------------	------7---------------	---4------------------	--------9-------------	----------1----------	5------	-6-----
Day Plan	Number	1	1	1	1	1	1	1	1

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	8	22	0	0	0	0	0
Plan 1 Minute	Min	1	0	30	0	0	0	0	0
Plan 1 Action	Number	4	1	4	0	0	0	0	0
Plan 2 Hour	Hour	0	6	9	15	18	22	0	0
Plan 2 Minute	Min	1	15	15	30	30	30	0	0
Plan 2 Action	Number	4	2	1	2	1	4	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	9	10	11	12	13	14	15	16
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

Signal Timing Report

Time Generated: 2017-01-27 13:57:23

Region: Halifax **Signal ID:** 027 **Location:** Bedford Hwy at Bayview Rd

Phase	Units	1 - NBLT	2 - SB	3	4 - EB	5	6 - NB	7	8
Walk	Sec	0	7	0	7	0	0	0	0
Ped Clear	Sec	0	7	0	13	0	0	0	7
Min Green	Sec	7	12	5	7	7	12	5	5
Passage	Sec	3.0	5.0	0.0	3.0	0.0	5.0	0.0	0.0
Maximum 1	Sec	15	50	0	17	0	50	0	0
Maximum 2	Sec	0	40	0	0	0	40	0	0
Yellow Change	Sec	4.0	4.1	3.0	3.5	3.0	4.1	3.0	3.0
Red Clearance	Sec	0.0	1.7	1.0	2.5	1.0	1.7	1.0	1.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Auto Flash Exit Non Lock Det Min Veh Recall Ped Recall Dual Entry Act Rest In Walk	Non Lock Det	Enabled Auto Flash Entry Non Lock Det	Non Lock Det	Enabled Auto Flash Exit Non Lock Det Min Veh Recall Dual Entry	Non Lock Det	Non Lock Det
[P2] Ring	Ring	1	1	0	1	0	2	0	0
[P2] Concurrency	Phase (,)	(6)	(6)	(0)	(0)	(0)	(1,2)	(0)	(0)

Phase	Units	9	10	11	12	13	14	15	16
Walk	Sec	0	10	0	10	0	10	0	10
Ped Clear	Sec	0	16	0	16	0	16	0	16
Min Green	Sec	5	5	5	5	5	5	5	5
Passage	Sec	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Maximum 1	Sec	35	35	35	35	35	35	35	35
Maximum 2	Sec	40	40	40	40	40	40	40	40
Yellow Change	Sec	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Non Lock Det	Non Lock Det	Non Lock Det	Non Lock Det	Non Lock Det	Non Lock Det	Non Lock Det	Non Lock Det
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Signal Timing Report

Time Generated: 2017-01-27 13:57:29

Region: Halifax **Signal ID:** 027 **Location:** Bedford Hwy at Bayview Rd

Coord Param	Units	Value
Operational Mode	Enum	Automatic
Correction Mode	Enum	shortway
Maximum Mode	Enum	maxInhibit
Force Mode	Enum	floating

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	90	100	110	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	0	0	0	0	0	0	0	0

Coord Pattern	Units	9	10	11	12	13	14	15	16
Cycle Time	Sec	0	0	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	9	10	11	12	13	14	15	16
Sequence	Sequence	0	0	0	0	0	0	0	0

HALIFAX

Signal Timing Report

Time Generated: 2017-01-27 13:57:35

Region: Halifax **Signal ID:** 027 **Location:** Bedford Hwy at Bayview Rd

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	19	45	0	26	0	64	0	0
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	13	61	0	26	0	74	0	0
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	34	50	0	26	0	84	0	0
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

Signal Timing Report

Time Generated: 2017-01-27 13:57:39

Region: Halifax **Signal ID:** 027 **Location:** Bedford Hwy at Bayview Rd

Coord Split	Units	9	10	11	12	13	14	15	16
Split 1 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	Units	Value
Daylight Saving	Enum	3
Standard Time Zone	Sec	-14400
Pattern Sync	Sec	0

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	0	0	0	0	0	0
Day of Week	Bit	S-----S	-MTWTF-	0	0	0	0	0	0
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	0	0	0	0	0	0
Day Plan	Number	1	2	0	0	0	0	0	0

Signal Timing Report

Time Generated: 2017-01-27 13:57:43

Region: Halifax **Signal ID:** 027 **Location:** Bedford Hwy at Bayview Rd

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	0	0	0	0	0	0	0	0
Day of Week	Bit	0	0	0	0	0	0	0	0
Day of Month	Bit	0	0	0	0	0	0	0	0
Day Plan	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	10	19	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	5	1	5	0	0	0	0	0
Plan 2 Hour	Hour	0	6	9	11	15	18	20	0
Plan 2 Minute	Min	0	30	15	0	0	0	0	0
Plan 2 Action	Number	5	2	4	1	3	1	5	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	9	10	11	12	13	14	15	16
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

HALIFAX

Signal Timing Report

Time Generated: 2017-02-02 14:57:14

Region: Halifax **Signal ID:** 460 **Location:** Bedford Hwy NS at Civic 50

Phase	Units	1 - NBL	2 - SB	3	4 - EB	5	6 - NB	7	8
Walk	Sec	0	7	0	5	0	5	0	5
Ped Clear	Sec	0	18	0	7	0	7	0	7
Min Green	Sec	7	7	5	7	5	7	5	5
Passage	Sec	1.0	0.5	5.0	1.0	5.0	0.5	5.0	5.0
Maximum 1	Sec	10	58	35	14	35	58	35	35
Maximum 2	Sec	40	40	40	40	40	40	40	40
Yellow Change	Sec	4.0	4.1	3.0	3.5	3.0	4.1	3.0	3.0
Red Clearance	Sec	0.0	1.7	1.0	2.5	1.0	1.7	1.0	1.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn
[P2] Options	Bit	Enabled Non Lock Det	Enabled Auto Flash Entry Auto Flash Exit Non Lock Det Dual Entry	Non Lock Det	Enabled Non Lock Det	Non Lock Det	Enabled Auto Flash Entry Auto Flash Exit Non Lock Det Dual Entry	0	0
[P2] Ring	Ring	1	1	0	1	0	2	0	0
[P2] Concurrency	Phase (,)	(6)	(6)	(0)	(0)	(0)	(1,2)	(0)	(0)

Phase	Units	9	10	11	12	13	14	15	16
Walk	Sec	0	10	0	10	0	10	0	10
Ped Clear	Sec	0	16	0	16	0	16	0	16
Min Green	Sec	5	5	5	5	5	5	5	5
Passage	Sec	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Maximum 1	Sec	35	35	35	35	35	35	35	35
Maximum 2	Sec	40	40	40	40	40	40	40	40
Yellow Change	Sec	4.0	4.1	3.0	3.0	3.0	3.0	3.0	3.0
Red Clearance	Sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	0	0	0	0	0	0	0	0
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

HALIFAX

Signal Timing Report

Time Generated: 2017-02-02 14:57:18

Region: Halifax **Signal ID:** 460 **Location:** Bedford Hwy NS at Civic 50

Coord Param	Units	Value
Operational Mode	Enum	Automatic
Correction Mode	Enum	shortway
Maximum Mode	Enum	maxInhibit
Force Mode	Enum	floating

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	90	100	110	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	1	2	3	4	5	6	7	8
Sequence	Sequence	0	0	0	0	0	0	0	0

Coord Pattern	Units	9	10	11	12	13	14	15	16
Cycle Time	Sec	0	0	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	9	10	11	12	13	14	15	16
Sequence	Sequence	0	0	0	0	0	0	0	0

HALIFAX

Signal Timing Report

Time Generated: 2017-02-02 14:57:20

Region: Halifax **Signal ID:** 460 **Location:** Bedford Hwy NS at Civic 50

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	13	56	0	21	0	69	0	0
Split 1 - Coord	Enum	false	true	false	false	false	true	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	13	63	0	24	0	76	0	0
Split 2 - Coord	Enum	false	true	false	false	false	true	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	18	71	0	21	0	89	0	0
Split 3 - Coord	Enum	false	true	false	false	false	true	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

Signal Timing Report

Time Generated: 2017-02-02 14:57:24

Region: Halifax **Signal ID:** 460 **Location:** Bedford Hwy NS at Civic 50

Coord Split	Units	9	10	11	12	13	14	15	16
Split 1 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted	phaseOmitted
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	Units	Value
Daylight Saving	Enum	3
Standard Time Zone	Sec	-14400
Pattern Sync	Sec	0

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	0	0	0	0	0	0
Day of Week	Bit	S-----S	-MTWTF-	0	0	0	0	0	0
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	0	0	0	0	0	0
Day Plan	Number	1	2	0	0	0	0	0	0

Signal Timing Report

Time Generated: 2017-02-02 14:57:27

Region: Halifax **Signal ID:** 460 **Location:** Bedford Hwy NS at Civic 50

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	0	0	0	0	0	0	0	0
Day of Week	Bit	0	0	0	0	0	0	0	0
Day of Month	Bit	0	0	0	0	0	0	0	0
Day Plan	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	10	19	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	5	1	5	0	0	0	0	0
Plan 2 Hour	Hour	0	6	9	11	15	18	20	0
Plan 2 Minute	Min	0	30	15	0	0	0	0	0
Plan 2 Action	Number	5	2	4	1	3	1	5	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	9	10	11	12	13	14	15	16
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

HALIFAX
REGIONAL MUNICIPALITY

EAGLE DATABASE

Intersection Name		Intersection No.	Controller Serial No.
Dunbrack @ Lacewood		053	127150
Controller Make	**Model**	**Firmware Rev. No.**	
Eagle	M51	3.33SEd	

Master Location Dunbrack @ Lacewood **Phone #** 457-0845

Revision

NO	Date Y	M	D	Description	Field Chg By	Supervisor Approval	Manager Approval
5	16	09	19	Impliment Phase 5 from 0700 - 2100 Weekdays	WJH		

PHASE DESCRIPTION

Ph1	Not In Use	Ph5	SB PP LT - Dunbrack St
Ph2	SB - Dunbrack St	PH6	NB - Dunbrack St
Ph3	EB PP LT - Lacewood Dr	Ph7	Not In Use
Ph4	WB - Lacewood Dr	Ph8	EB - Lacewood Dr

UTILITIES - CONFIGURE PORTS * 2 - 8 - 3

Communications Setup For Port 2 & 3

Baud Rate..... : 9600

PHASE DATA - VEHICLE TIMINGS * 3 - 1

Basic Timings Phase:	1	2	3	4	5	6	7	8
Minimum Green..... :	0	15	7	7	7	15	0	7
Passage Time /10.... :	0	20	20	20	20	20	0	20
Maximum No 1..... :	0	35	10	40	20	35	0	40
Maximum No 2..... :	0	25	0	30	30	25	0	30
Yellow Change /10.... :	0	46	40	41	40	46	0	41
Red Clearance /10..... :	0	19	0	26	0	19	0	26

PHASE DATA - PEDESTRIAN TIMINGS & CONTROL * 3 - 3

Pedestrian Times Phase:	1	2	3	4	5	6	7	8
Walk..... :	0	7	0	7	0	7	0	7
Pedestrian Clearance. :	0	15	0	20	0	15	0	20
Act Rest In Walk..... :	0	1	0	0	0	1	0	0

Pedestrian Control Entry "1" = Yes & "0" = No

PHASE DATA - GENERAL CONTROL * 3 - 4

General Control Phase:	1	2	3	4	5	6	7	8
Initialization..... :	0	3	1	1	1	3	0	1
Non-Act Response..... :	0	2	0	1	0	2	0	1

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * 3 - 5

Phase:	1	2	3	4	5	6	7	8
Vehicle Recall..... :	0	2	0	0	0	2	0	0
Pedestrian Recall..... :	0	0	0	0	0	0	0	0
Recall Delay (SEC).... :	0	0	0	0	0	0	0	0

Codes..... :	0	1	2	3	4
Initialization..... :	NONE	INACTIVE	RED	YELLOW	GREEN
Non-Act Response..... :	NONE	TO NA I	TO NA II	TO BOTH	----
Vehicle Recall..... :	NONE	1 CALL	MINIMUM	MAXIMUM	SOFT
Pedestrian Recall..... :	NONE	1 CALL	PED	NA	NA+

PHASE DATA - VEHICLE CONTROLS * 3 - 6

Vehicle Control Phase:	1	2	3	4	5	6	7	8
Non-Lock Memory..... :	0	1	1	1	1	1	0	1
Dual Entry..... :	0	1	0	1	0	1	0	1

Vehicle Control Entry: "1"=Yes & "0"=No

Intersection Name		Intersection No.	Controller Serial No.
Dunbrack @ Lacewood		053	127150
Controller Make	**Model**	**Firmware Rev. No.**	
Eagle	M51	3.33SEd	

PHASE DATA - SEQUENCE CONTROL * 3 - 7

Phase:	1	2	3	4	5	6	7	8
Phase Omit..... :	0	0	4	0	6	0	0	0
Phase - Yellow..... :	0	0	0	0	0	0	0	0

PHASE DATA - VEHICLE DETECTOR CONTROL * 3 - 8

Det Channel :	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase:	6	0	3	4	5	0	4	8	5	2	6	6				
Switch:			8		2				2							
Ext (sec):									0	0	0	0				

UNIT DATA - START UP & MISC. * 4 - 1

Startup Time..... :	5	Time in Seconds
Startup State..... :	0	0-Flash 1-Red
Red Revert /10..... :	40	Time In Tenth Second
Auto Pedestrian Clear :	0	0-No 1-Yes
Stop Time Reset..... :	0	0-No 1-Yes
Alternate Sequence... :	0	00-15 Alt Sequence ##

UNIT DATA - OVERLAPS * 4 - 3

Overlaps	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Phase(s)											3		5			
Phase(s)																

COORD DATA - MODE * 5 - 1

Control		Codes:	0	1	2	3	4	5
Operation..... :	1		FRE	AUT	MAN	---	---	---
Mode..... :	0		PRM	YLD	PYL	POM	SOM	FAC
Maximum..... :	0		INH	MX1	MX2	---	---	---
Correction..... :	3		DW	MDW	SWY	SW+	---	---
Offset (?? Of Green).. :	0		BEGIN	END OF GREEN				
Force..... :	0		PLAN	CYCLE TIME				
Max Dwell Time..... :	0		Time In Seconds					
Yield Period..... :	0		Time In Seconds					
Manual Dial (dial/split/offset)	1/ 1/ 1							

COORD DATA - TIMING PLANS * 5 - 3

Control Timing Plan :		D1/S1	D2/S1	D3/S1	D4/S1	D4/S2
Cycle Length..... :		85	95	90		
Phase 01 Time/Mode/LPM		0/0	0/0	0/6		
Phase 02 Time/Mode/LPM	SB	40/7	55/7	43/7		
Phase 03 Time/Mode/LPM	EBLT	13/0	0/6	12/0		
Phase 04 Time/Mode/LPM	WB	32/1	40/1	35/1		
Phase 05 Time/Mode/LPM	SBLT	12/6	24/0	12/6		
Phase 06 Time/Mode/LPM	NB	29/7	31/7	31/7		
Phase 07 Time/Mode/LPM		0/0	0/0	0/0		
Phase 08 Time/Mode/LPM	EB	44/1	40/1	47/1		
Offset 1..... :		72	8	82		
Offset 1 Pattern Mode :						
Offset 2..... :						
Offset 2 Pattern Mode :						

Codes ..... :

Phase Mode..... : 0-Actuated 1-Coord Phase 2-Min Rec 3-Max Rec
4-Ped Rec 5-Max+Ped Recall 6-Phase Omitted 7-Dual Coord Phase

Pattern Mode..... : 0-Normal/ 1-Perm/ 2-Yield/ 3-Perm Yield/ 4-Perm Omit/ 5-Seq Omit /6-Full Act

Alternate Sequence Values To Be Set To Zero "0"

R# LAG N/A

TIME BASE DATA - MISCELLANEOUS * 6 - 2 * 6 - 6

DST:BEGIN: MONTH 3 WEEK 2

DST:END : MONTH 11 WEEK 1

DST: Daylight Savings TIME
Month = 01 to 12 (begin < End)
Week = 1 to 5 (5=Last Week)

COORD CYCLE ZERO 24:00

EQUATED DAY: (DEFINED DAY = DAY)

02 = 03 04 05 06
=
=
=
=

CYCLE ZERO: Time (HH:MM) Sets
Reference For Coord Sync
00:00 = Event Time / Other = That HH:MM

DAY EQUATES: Care Must be Used to insure
days are not equated to undefined days
or days that are equated to other days.
Results will be a day without events to run

Intersection Name		Intersection No.	Controller Serial No.
Dunbrack @ Lacewood		053	127150
Controller Make	**Model**	**Firmware Rev. No.**	
Eagle	M51	3.33SEd	

TIME BASE DATA - TRAFFIC EVENTS * 6 - 3

Refer to phase function mapping.

DAY PDAY	TIME HH:MM	PATTERN	PHASE FUNCTIONS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
01	00:01		0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0
01	11:00	1/1/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01	18:00		0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0
02	00:00		0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0
02	07:00	2/1/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02	09:15		0	1	0	1	0	1	0	1	0	0	1	0	0	0	0	0
02	11:00	1/1/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02	15:45	3/1/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02	18:00		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02	21:00		0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0
07	00:01		0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0
07	10:00	3/1/1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07	18:00		0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0

PDAY - 01-99 Program Day
HH:MM -24 Hour Clock
A.123 - Auxiliary Output
D.123 - Detector
1 - Det Diag Value
2 - Enables Report
3 - Rep Multiplier
DIM - Dimming Enable
S.1> - Special Function Output
ALL - 0 - OFF / 1-ON
PATTERN: (D/S/O)
Flash - 5/5/0
Free - 0/0/4
Phase Functions: Call Free
Set Pattern to 0/0/0

TIME BASE DATA - TIME OF YEAR EVENTS * 6 - 5

DATE MM/DD/YY	SPECIAL DAY	WEEK	DATE MM/DD/YY	SPECIAL DAY	WEEK
New Year's Day	01		01/01/	1	
Good Friday	01		07/01/	1	
Victoria Day	01		11/11/	1	
Canada Day	01		12/25/	1	
Civic Day	01		12/26/	1	
Labour Day	01				
Thanksgiving	01				
Christmas Day	01				
Boxing Day	01				

Reference Data:
Special Day -
Any Program Day 00-99
Special Week -
Week 0 = Program Day 01-07
Week 1 = Program Day 11-17
Week 2 = Program Day 21-27
Week 9 = Program Day 91-97

TIME BASE DATA - PHASE FUNCTION MAPPING * 6 - 9

Function Name — Refer To Traffic Events

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHS 01 MAX #2…….. :	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHS 02 MAX #2…….. :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHS 03 MAX #2…….. :	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
PHS 04 MAX #2…….. :	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
PHS 05 MAX #2…….. :	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
PHS 06 MAX #2…….. :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
PHS 07 MAX #2…….. :	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
PHS 08 MAX #2…….. :	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

CODES: 0 - OFF / 1 - ON

TIME BASE DATA - PHASE FUNCTION MAPPING * 6 - 9

Function Name — Refer To Traffic Events

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHS 01 PHS OMIT…. :	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
PHS 02 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
PHS 03 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
PHS 04 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
PHS 05 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
PHS 06 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
PHS 07 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
PHS 08 PHS OMIT…. :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CODES: 0 - OFF / 1 - ON

Intersection Name		Intersection No.	Controller Serial No.
Dunbrack @ Lacewood		053	127150
Controller Make	**Model**	**Firmware Rev. No.**	
Eagle	M51	3.33SEd	

PREEMPT DATA - ALL DATA

Ring Times	1	2	3	4	
MIN GRN/WLK	7	7	7	7	* 7 - 1

PREEMPT DATA - PREEMPT 3 — * 7 - 2

INTERVAL TIMES — * 7 - 2 - 2

NOTE: All settings programmed to "0" except the following

SEL PED CLR	16	TRK GREEN	1
DWELL GREEN	5	EXIT PH	2,6

VEHICLE STATUS — * 7 - 2 - 3

	1	2	3	4	5	6	7	8
TRK GRN	0	0	0	0	0	0	0	0
DWELL	0	1	0	0	1	0	0	0

CODES: 0 - OFF / 1 - ON

OVERLAP STATUS — * 7 - 2 - 5

	I	J	K	L	M	N	O	P
TRK GRN	0	0	0	0	0	0	0	0
DWELL	0	0	0	0	5	0	0	0

CODES: 0-RED; 1-GRN; 2-FLR; 3-FLY; 4-DARK; 5-FLG

PREEMPT DATA - PREEMPT 4 — * 7 - 3

INTERVAL TIMES — * 7 - 3 - 2

NOTE: All settings programmed to "0" except the following

SEL PED CLR	0
DWELL GREEN	0

VEHICLE STATUS — * 7 - 3 - 3

	1	2	3	4	5	6	7	8
TRK GRN	0	0	0	0	0	0	0	0
DWELL	0	0	0	0	0	0	0	0

CODES: 0 - OFF / 1 - ON

OVERLAP STATUS — * 7 - 3 - 5

	I	J	K	L	M	N	O	P
TRK GRN	0	0	0	0	0	0	0	0
DWELL	0	0	0	0	0	0	0	0

CODES: 0-RED; 1-GRN; 2-FLR; 3-FLY; 4-DARK; 5-FLG

SYSTEM DATA - GENERAL — * 8 - 1

Local Address	000	Three Digits (000-32)	* 8 - 1 - 1
Revert To Backup	015	Time In Minutes (000-255)	* 8 - 1 - 2

An address other than "000" Transfers local "D" connector I/O to it's system definition

SYSTEM DATA - VEH DETECTOR DIAGNOSTICS — * 8 - 3 - 1 -1

VALUE 0

Detector :	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Max Presence..... :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No Activity..... :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Erratic Counts..... :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SYSTEM DATA - PED DETECTOR DIAGNOSTICS — * 8 - 3 -1 - 9

VALUE 0

Ped Detector :	1	2	3	4	5	6	7	8
Max Presence..... :	0	0	0	0	0	0	0	0
No Activity..... :	0	0	0	0	0	0	0	0
Erratic Counts..... :	0	0	0	0	0	0	0	0

Notes:

To Flash Green Arrows

1. TBC Data - Spec Func tab, activate "Alt Sequence 8-15 Flash Green Phase in first column only
2. Unit Data - Overlap tab, turn on required overlaps (phase 1=I; phase 3=K; phase 5=M; phase 7=O)
3. Unit Data - Alt Sequence tab, type phase number for required phases in first column only (8=phase 1; 10=phase 3; 12=phase 5; 14=phase 7)
4. Unit Data - Channel Output tab, "Control" column only, select appropriate overlaps for appropriate phases

Comments: _____

Authorized Signature: _____ Date: _____

Signal Timing Report

Time Generated: 2017-09-11 14:02:53

Region: Halifax **Signal ID:** 090 **Location:** Lacewood Dr E at Bayview Rd

Phase	Units	1	2 - E/W	3	4 - N/S	5	6	7	8
Walk	Sec	0	10	0	8	0	0	0	0
Ped Clear	Sec	0	9	0	14	0	0	0	0
Min Green	Sec	0	10	0	10	0	0	0	0
Passage	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum 1	Sec	0	30	0	30	0	0	0	0
Maximum 2	Sec	0	0	0	0	0	0	0	0
Yellow Change	Sec	3.0	4.1	3.0	4.1	3.0	4.0	3.0	4.0
Red Clearance	Sec	1.0	1.5	1.0	1.8	1.0	2.0	1.0	2.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	yellowChange	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Non Lock Det Sim Gap Disable	Enabled Auto Flash Exit Non Lock Det Max Veh Recall Ped Recall Sim Gap Disable	Non Lock Det Sim Gap Disable	Enabled Auto Flash Entry Non Lock Det Max Veh Recall Ped Recall Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable
[P2] Ring	Ring	0	1	0	1	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

Phase	Units	9	10	11	12	13	14	15	16
Walk	Sec	0	7	0	7	0	7	0	7
Ped Clear	Sec	0	15	0	15	0	15	0	15
Min Green	Sec	4	15	4	15	4	15	4	15
Passage	Sec	2.0	5.0	2.0	5.0	2.0	5.0	2.0	5.0
Maximum 1	Sec	15	45	15	45	15	45	15	45
Maximum 2	Sec	15	45	15	45	15	45	15	45
Yellow Change	Sec	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Red Clearance	Sec	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Red Revert	Sec	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before	Sec	0	0	0	0	0	0	0	0
Cars Before	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn	phaseNotOn
[P2] Options	Bit	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable	Non Lock Det Sim Gap Disable
[P2] Ring	Ring	0	0	0	0	0	0	0	0
[P2] Concurrency	Phase (,)	()	()	()	()	()	()	()	()

HALIFAX

Signal Timing Report

Time Generated: 2017-09-11 14:03:00

Region: Halifax **Signal ID:** 090 **Location:** Lacewood Dr E at Bayview Rd

Coord Param	Units	Value
Operational Mode	Enum	Automatic
Correction Mode	Enum	shortway
Maximum Mode	Enum	maxInhibit
Force Mode	Enum	fixed

Coord Pattern	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	70	80	80	60	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	1	2	3	4	5	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1

Coord Pattern	Units	9	10	11	12	13	14	15	16
Cycle Time	Sec	0	0	0	0	0	0	0	0
Offset	Sec	0	0	0	0	0	0	0	0
Split	Split	1	1	1	1	1	1	1	1
Sequence	Sequence	1	1	1	1	1	1	1	1

HALIFAX

Signal Timing Report

Time Generated: 2017-09-11 14:03:03

Region: Halifax **Signal ID:** 090 **Location:** Lacewood Dr E at Bayview Rd

Coord Split	Units	1	2	3	4	5	6	7	8
Split 1 - Mode	Enum	none	8	none	pedRecall	none	none	none	none
Split 1 - Time	Sec	0	42	0	28	0	0	0	0
Split 1 - Coord	Enum	false	true	false	false	false	false	false	false
Split 2 - Mode	Enum	none	8	none	pedRecall	none	none	none	none
Split 2 - Time	Sec	0	50	0	30	0	0	0	0
Split 2 - Coord	Enum	false	true	false	false	false	false	false	false
Split 3 - Mode	Enum	none	8	none	pedRecall	none	none	none	none
Split 3 - Time	Sec	0	45	0	35	0	0	0	0
Split 3 - Coord	Enum	false	true	false	false	false	false	false	false
Split 4 - Mode	Enum	none	8	none	pedRecall	none	none	none	none
Split 4 - Time	Sec	0	33	0	27	0	0	0	0
Split 4 - Coord	Enum	false	true	false	false	false	false	false	false
Split 5 - Mode	Enum	none	pedRecall	none	pedRecall	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

HALIFAX

Signal Timing Report

Time Generated: 2017-09-11 14:03:08

Region: Halifax **Signal ID:** 090 **Location:** Lacewood Dr E at Bayview Rd

Coord Split	Units	9	10	11	12	13	14	15	16
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	0	0	0	0	0	0	0	0
Split 1 - Coord	Enum	false	false	false	false	false	false	false	false
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	0	0	0	0	0	0	0	0
Split 2 - Coord	Enum	false	false	false	false	false	false	false	false
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	0	0	0	0	0	0	0	0
Split 3 - Coord	Enum	false	false	false	false	false	false	false	false
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none
Split 4 - Time	Sec	0	0	0	0	0	0	0	0
Split 4 - Coord	Enum	false	false	false	false	false	false	false	false
Split 5 - Mode	Enum	none	none	none	none	none	none	none	none
Split 5 - Time	Sec	0	0	0	0	0	0	0	0
Split 5 - Coord	Enum	false	false	false	false	false	false	false	false
Split 6 - Mode	Enum	none	none	none	none	none	none	none	none
Split 6 - Time	Sec	0	0	0	0	0	0	0	0
Split 6 - Coord	Enum	false	false	false	false	false	false	false	false
Split 7 - Mode	Enum	none	none	none	none	none	none	none	none
Split 7 - Time	Sec	0	0	0	0	0	0	0	0
Split 7 - Coord	Enum	false	false	false	false	false	false	false	false
Split 8 - Mode	Enum	none	none	none	none	none	none	none	none
Split 8 - Time	Sec	0	0	0	0	0	0	0	0
Split 8 - Coord	Enum	false	false	false	false	false	false	false	false
Split 9 - Mode	Enum	none	none	none	none	none	none	none	none
Split 9 - Time	Sec	0	0	0	0	0	0	0	0
Split 9 - Coord	Enum	false	false	false	false	false	false	false	false
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	0	0	0	0	0	0	0	0
Split 10 - Coord	Enum	false	false	false	false	false	false	false	false
Split 11 - Mode	Enum	none	none	none	none	none	none	none	none
Split 11 - Time	Sec	0	0	0	0	0	0	0	0
Split 11 - Coord	Enum	false	false	false	false	false	false	false	false
Split 12 - Mode	Enum	none	none	none	none	none	none	none	none
Split 12 - Time	Sec	0	0	0	0	0	0	0	0
Split 12 - Coord	Enum	false	false	false	false	false	false	false	false
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	0	0	0	0	0	0	0	0
Split 13 - Coord	Enum	false	false	false	false	false	false	false	false
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	0	0	0	0	0	0	0	0
Split 14 - Coord	Enum	false	false	false	false	false	false	false	false
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	0	0	0	0	0	0	0	0
Split 15 - Coord	Enum	false	false	false	false	false	false	false	false
Split 16 - Time	Sec	0	0	0	0	0	0	0	0
Split 16 - Mode	Enum	none	none	none	none	none	none	none	none
Split 16 - Coord	Enum	false	false	false	false	false	false	false	false

TB Param	Units	Value
Daylight Saving	Enum	enableDaylightSavingNode
Standard Time Zone	Sec	-14400
Pattern Sync	Sec	0

TB Schedule	Units	1	2	3	4	5	6	7	8
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	0	0	J----------	------J-----	----------N-	----------D
Day of Week	Bit	S-----S	-MTWTF-	0	0	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
Day of Month	Bit	12345678901234567890123456789012345678901	12345678901234567890123456789012345678901	0	0	1--------------------------------	1----------	----------1----------	----------5------
Day Plan	Number	1	2	0	0	1	1	1	1

Signal Timing Report

Time Generated: 2017-09-11 14:03:11

Region: Halifax **Signal ID:** 090 **Location:** Lacewood Dr E at Bayview Rd

TB Schedule	Units	9	10	11	12	13	14	15	16
Month	Bit	----------D	0	0	0	0	0	0	0
Day of Week	Bit	SMTWTFS	0	0	0	0	0	0	0
Day of Month	Bit	---------- -6-----	0	0	0	0	0	0	0
Day Plan	Number	1	0	0	0	0	0	0	0

TB Dayplan	Units	1	2	3	4	5	6	7	8
Plan 1 Hour	Hour	0	6	9	21	23	0	0	0
Plan 1 Minute	Min	1	0	0	0	0	0	0	0
Plan 1 Action	Number	5	4	1	4	5	0	0	0
Plan 2 Hour	Hour	0	6	7	9	15	18	21	23
Plan 2 Minute	Min	1	0	0	15	45	0	0	0
Plan 2 Action	Number	5	4	2	1	3	1	4	5
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

TB Dayplan	Units	9	10	11	12	13	14	15	16
Plan 1 Hour	Hour	0	0	0	0	0	0	0	0
Plan 1 Minute	Min	0	0	0	0	0	0	0	0
Plan 1 Action	Number	0	0	0	0	0	0	0	0
Plan 2 Hour	Hour	0	0	0	0	0	0	0	0
Plan 2 Minute	Min	0	0	0	0	0	0	0	0
Plan 2 Action	Number	0	0	0	0	0	0	0	0
Plan 3 Hour	Hour	0	0	0	0	0	0	0	0
Plan 3 Minute	Min	0	0	0	0	0	0	0	0
Plan 3 Action	Number	0	0	0	0	0	0	0	0
Plan 4 Hour	Hour	0	0	0	0	0	0	0	0
Plan 4 Minute	Min	0	0	0	0	0	0	0	0
Plan 4 Action	Number	0	0	0	0	0	0	0	0
Plan 5 Hour	Hour	0	0	0	0	0	0	0	0
Plan 5 Minute	Min	0	0	0	0	0	0	0	0
Plan 5 Action	Number	0	0	0	0	0	0	0	0
Plan 6 Hour	Hour	0	0	0	0	0	0	0	0
Plan 6 Minute	Min	0	0	0	0	0	0	0	0
Plan 6 Action	Number	0	0	0	0	0	0	0	0
Plan 7 Hour	Hour	0	0	0	0	0	0	0	0
Plan 7 Minute	Min	0	0	0	0	0	0	0	0
Plan 7 Action	Number	0	0	0	0	0	0	0	0
Plan 8 Hour	Hour	0	0	0	0	0	0	0	0
Plan 8 Minute	Min	0	0	0	0	0	0	0	0
Plan 8 Action	Number	0	0	0	0	0	0	0	0

EKISTICS PLANNING & DESIGN

APPENDIX D

Trip Generation

Trip Generation Summary

Alternative: Seton Ridge Development
Phase:
Project: Seton Ridge

Open Date: 2018-11-05
Analysis Date: 2018-11-05

ITE	Land Use		Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
210	Single Family			897	897	1794		34	101	135		112	65	177
	179	Dwelling Units												
222	Apartments (High-Rise)			3595	3595	7190		129	385	514		365	234	599
	1712	Dwelling Units												
223	Apartments (Mid-Rise)							56	125	181		136	99	235
	603	Dwelling Units												
230	Low Rise Condo			28	28	56		1	4	5		4	2	6
	6	Dwelling Units												
253	Shannex Caritas			505	505	1010		18	12	30		47	38	85
	500	Dwelling Units												
495	Rec Centre			110	110	220		9	4	13		9	9	18
	6.5	Gross Floor Area 1000 SF												
710	Office			254	253	507		63	9	72		12	57	69
	46	Gross Floor Area 1000 SF												
820	Retail Area			1909	1908	3817		53	33	86		159	173	332
	89.4	Gross Leasable Area 1000 SF												
Unadjusted Volume				7298	7296	14594		363	673	1036		844	677	1521
Internal Capture Trips				0	0	0		19	19	38		83	83	166
Pass-By Trips				0	0	0		0	0	0		44	44	88
Volume Added to Adjacent Streets				7298	7296	14594		344	654	998		717	550	1267

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 4 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 11 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012

TRIP GENERATION 2014, TRAFFICWARE, LLC

AM Peak Hour	Trip Generation		10% AT Reduction		15% Transit Reduction*		Adjusted Volumes	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Single Family	34	101	-3.4	-10.1		-15.2	31	76
Apartments (HR)	129	385	-12.9	-38.5		-57.8	116	289
Apartments (MR)	56	125	-5.6	-12.5		-18.8	50	94
Low Rise Condos	1	4	-0.1	-0.4		-0.6	1	3
Shannex	18	12	-1.8	-1.2	-2.7		14	11
Rec Centre	9	4	-0.9	-0.4	-1.4	-0.6	7	3
Office	63	9	-6.3	-0.9	-9.5		47	8
Retail	53	33	-5.3	-3.3	-8.0	-5.0	40	25
	363	**673**	**-36.3**	**-67.3**	**-21.5**	**-97.8**	**305**	**508**
Internal Capture	19	19	-1.9	-1.9	-2.85	-2.85	14	14
Pass-by Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Volume Added	**344**	**654**	**-34.4**	**-65.4**	**-18.6**	**-94.95**	**291**	**494**

** Reductions Applied in Peak Direction Only*

			Bedford Hwy 60%		Lacewood 40%	
			Enter	Exit	Enter	Exit
Peak Direction ***Entering***	107	47	64	28	43	19
To/From the West			42	10	26	7
To/From the East			23	18	17	11
Peak Direction ***Exiting***	184	447	110	268	74	179
To/From the West			72	94	44	72
To/From the East			39	174	29	107

		Bedford Hwy		Lacewood	
		Enter	Exit	Enter	Exit
TOTALS	**To/From the West**	113	104	70	79
	To/From the East	61	193	47	118

PM Peak Hour	Trip Generation		10% AT Reduction		15% Transit Reduction*		Adjusted Volumes	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Single Family	112	65	-11.2	-6.5	-16.8		84	59
Apartments (HR)	365	234	-36.5	-23.4	-54.8		274	211
Apartments (MR)	136	99	-13.6	-9.9	-20.4		102	89
Low Rise Condos	4	2	-0.4	-0.2	-0.6		3	2
Shannex	47	38	-4.7	-3.8		-5.7	42	29
Rec Centre	9	9	-0.9	-0.9	-1.4	-1.4	7	7
Office	12	57	-1.2	-5.7		-8.6	11	43
Retail	159	173	-15.9	-17.3	-23.9	-26.0	119	130
	844	**677**	**-84.4**	**-67.7**	**-117.8**	**-41.6**	**642**	**568**
Internal Capture	83	83	-8.3	-8.3	-12.45	-12.45	62	62
*Pass-by Trips***	*44*	*44*	*-4.4*	*-4.4*	*-6.6*	*-6.6*	*33*	*33*
Volume Added	**717**	**550**	**-71.7**	**-55**	**-98.7**	**-22.5**	**547**	**473**

** Reductions Applied in Peak Direction Only*

*** New site trips not reduced for pass-by trips.*
Pass trips applied during network assignment.

			Bedford Hwy 60%		Lacewood 40%	
			Enter	Exit	Enter	Exit
Peak Direction ***Exiting***	163	191	98	115	65	77
To/From the West			34	75	26	46
To/From the East			63	40	39	31
Peak Direction ***Entering***	384	281	230	169	154	113
To/From the West			81	110	61	68
To/From the East			150	59	92	45

		Bedford Hwy		Lacewood	
		Enter	Exit	Enter	Exit
TOTALS	**To/From the West**	115	184	87	113
	To/From the East	213	99	131	76

Internal Capture Report - Seton Ridge Development

AM & PM Peak Hour

Project: Seton Ridge

Open Date: 2018-11-05

Analysis Date: 2018-11-05

AM	Entering Trips				Exiting Trips			
Category	**Internal**	**External**	**Total**	**Percent**	**Internal**	**External**	**Total**	**Percent**
Cinema	0	0	0	0%	0	0	0	0%
Hotel	0	0	0	0%	0	0	0	0%
Office	5	58	63	8%	3	6	9	33%
Residential	5	233	238	2%	8	619	627	1%
Restaurant	0	0	0	0%	0	0	0	0%
Retail	9	44	53	17%	8	25	33	24%
All Other Land Uses	0	9	9	0%	0	4	4	0%
Totals	19	344	363	5%	19	654	673	3%

PM	Entering Trips				Exiting Trips			
Category	**Internal**	**External**	**Total**	**Percent**	**Internal**	**External**	**Total**	**Percent**
Cinema	0	0	0	0%	0	0	0	0%
Hotel	0	0	0	0%	0	0	0	0%
Office	10	2	12	83%	12	45	57	21%
Residential	46	618	664	7%	23	415	438	5%
Restaurant	0	0	0	0%	0	0	0	0%
Retail	27	132	159	17%	48	125	173	28%
All Other Land Uses	0	9	9	0%	0	9	9	0%
Totals	83	761	844	10%	83	594	677	12%

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012

TRIP GENERATION 2014, TRAFFICWARE, LLC

Internal Trip Capture Rates

Source : NCHRP - AM Peak

Open Date: 09/10/2017

Project: Seton Ridge

Analysis Date: 09/10/2017

FROM **TO**

	Cinema	Hotel	Office	Residential	Restaurant	Retail
Cinema	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	0.00	0.00	0.75	0.00	0.09	0.14
Office	0.00	0.00	0.00	0.10	0.63	0.28
Residential	0.00	0.00	0.02	0.00	0.20	0.01
Restaurant	0.00	0.03	0.31	0.04	0.00	0.14
Retail	0.00	0.00	0.29	0.14	0.13	0.00

TO **FROM**

	Cinema	Hotel	Office	Residential	Restaurant	Retail
Cinema	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	0.00	0.00	0.00	0.00	0.04	0.00
Office	0.00	0.03	0.00	0.03	0.14	0.04
Residential	0.00	0.00	0.00	0.00	0.05	0.02
Restaurant	0.00	0.06	0.23	0.20	0.00	0.50
Retail	0.00	0.04	0.32	0.17	0.08	0.00

Internal Trip Capture Rates

Source : NCHRP - PM Peak

Open Date: 09/10/2017

Project: Seton Ridge

Analysis Date: 09/10/2017

FROM **TO**

	Cinema	Hotel	Office	Residential	Restaurant	Retail
Cinema	0.00	0.02	0.02	0.08	0.31	0.21
Hotel	0.00	0.00	0.00	0.02	0.68	0.16
Office	0.00	0.00	0.00	0.02	0.04	0.20
Residential	0.00	0.03	0.04	0.00	0.21	0.42
Restaurant	0.08	0.07	0.03	0.18	0.00	0.41
Retail	0.04	0.05	0.02	0.26	0.29	0.00

TO **FROM**

	Cinema	Hotel	Office	Residential	Restaurant	Retail
Cinema	0.00	0.00	0.01	0.00	0.32	0.26
Hotel	0.01	0.00	0.00	0.12	0.71	0.17
Office	0.06	0.00	0.00	0.57	0.30	0.31
Residential	0.04	0.00	0.04	0.00	0.16	0.46
Restaurant	0.03	0.05	0.02	0.14	0.00	0.29
Retail	0.04	0.02	0.08	0.10	0.50	0.00

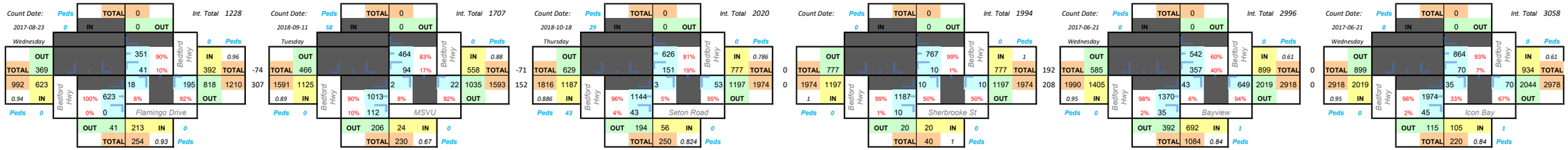
EKISTICS PLANNING & DESIGN

APPENDIX E

Trip Assignment

AM Peak-Bedford Highway

EXISTING COUNTS



EXISTING FACTORED COUNTS

Growth 1.005
Seasonal Adj. 1.020
Adj.Factor 1.025

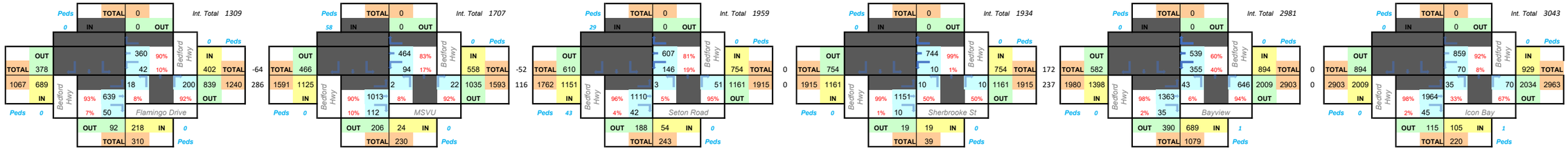
Growth 1.000
Seasonal Adj. 1.000
Adj.Factor 1.000

Growth 1.000
Seasonal Adj. 0.970
Adj.Factor 0.970

Growth 1.000
Seasonal Adj. 0.970
Adj.Factor 0.970

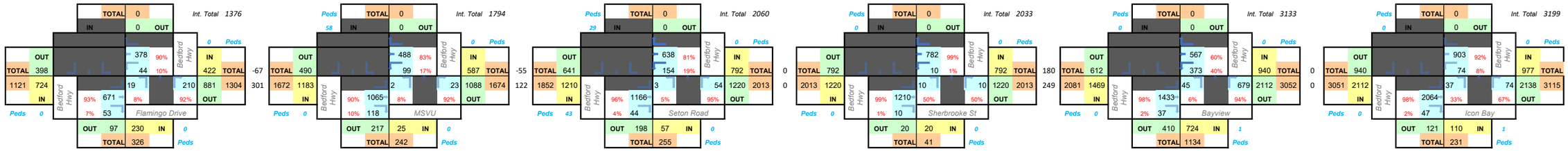
Growth 1.005
Seasonal Adj. 0.990
Adj.Factor 0.995

Turn Volume Extracted
From 50 Bedford Highway
Traffic Study



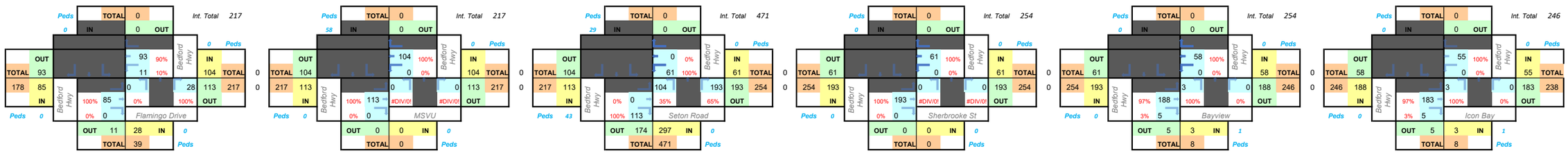
2028- Background Traffic Only

10 year of growth @ 0.5%
Adj.Factor 1.051

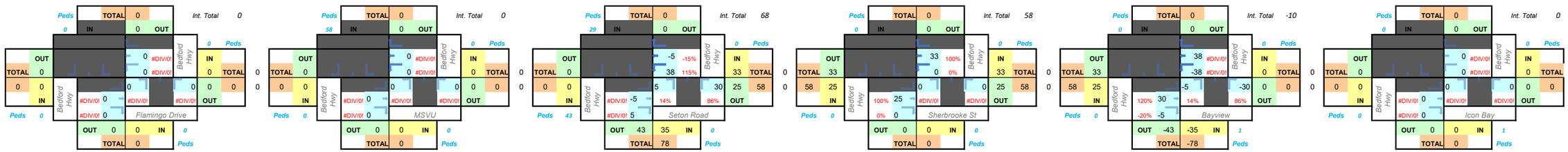


AM Peak-Bedford Highway

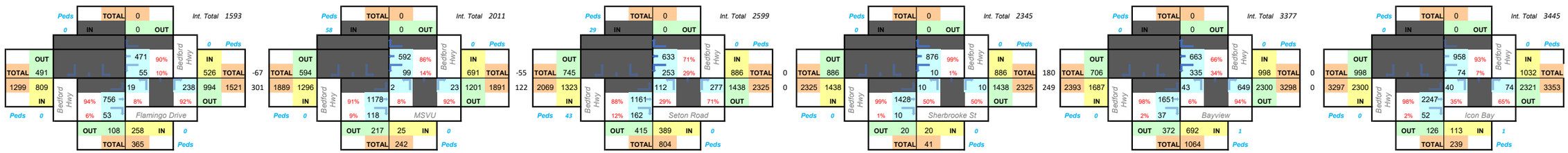
Development Traffic



DIVERSION

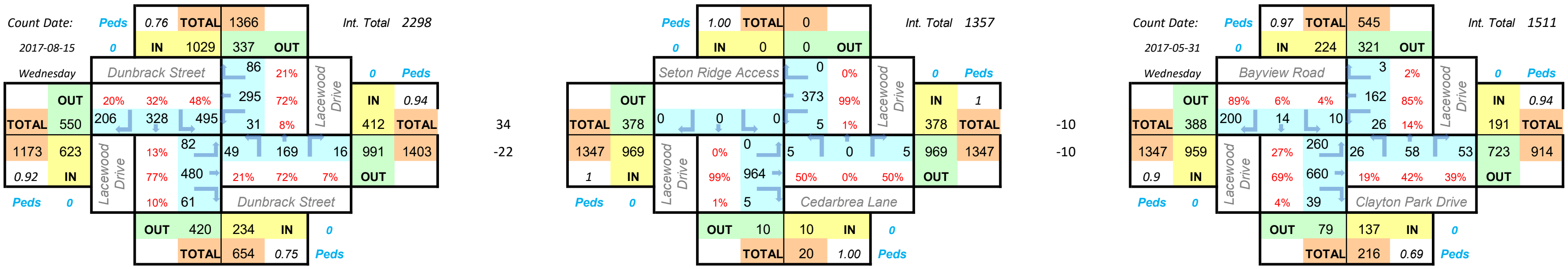


028 With Development + Diversion



AM Peak-Lacewood

EXISTING COUNTS



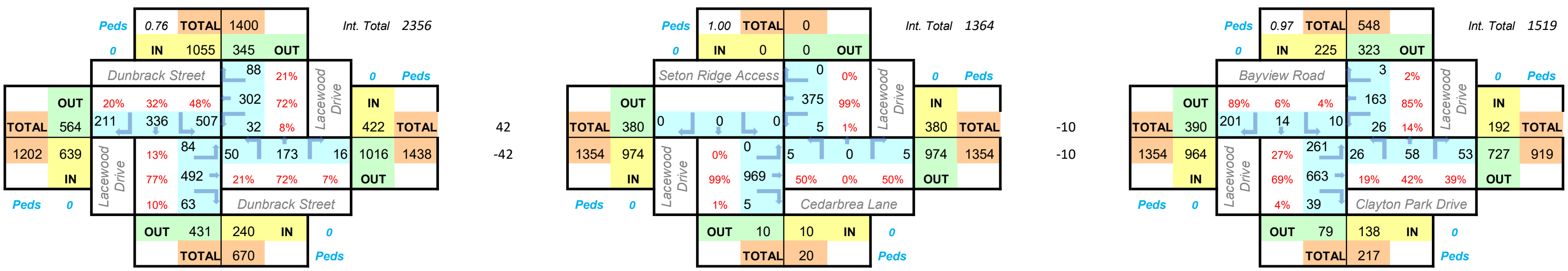
34
-22

-10
-10

Growth 1.005
Seasonal Adj. 1.020
Adj.Factor 1.025

Growth 1.005
Seasonal Adj. 1.000
Adj.Factor 1.005

EXISTING FACTORED COUNTS

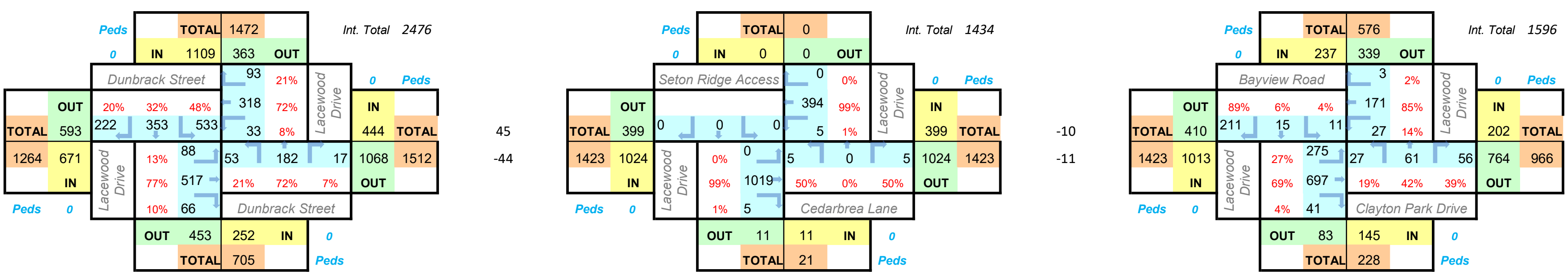


42
-42

-10
-10

10 year of growth @ 0.5%
Adj.Factor 1.051

2028 - Background Traffic Added

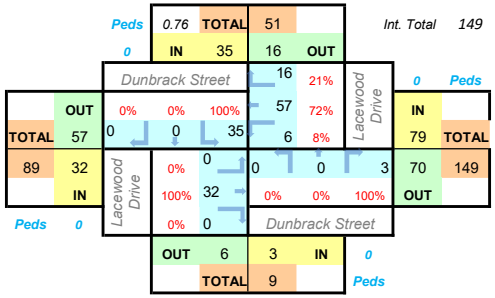


45
-44

-10
-11

AM Peak-Lacewood

Development Traffic



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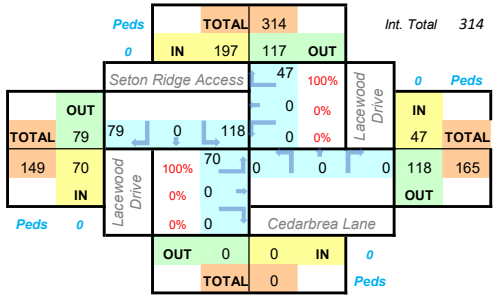

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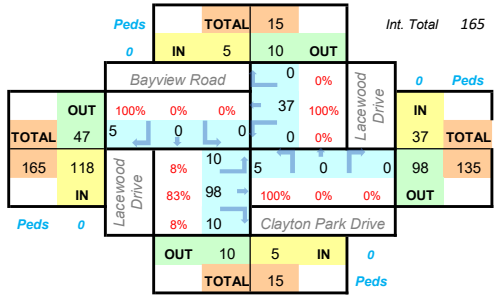

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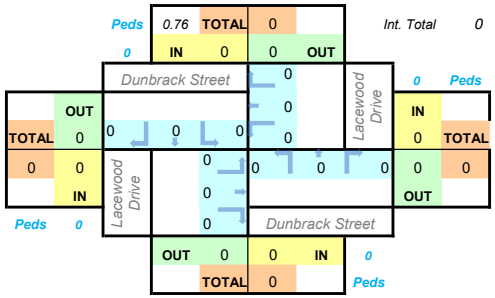

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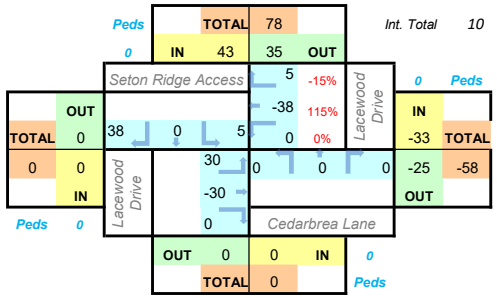

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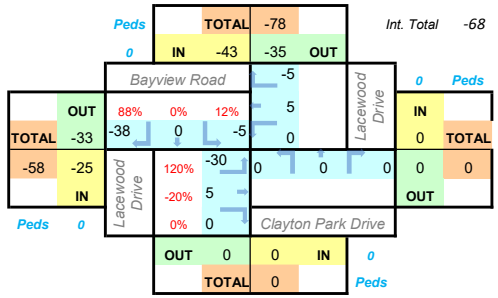
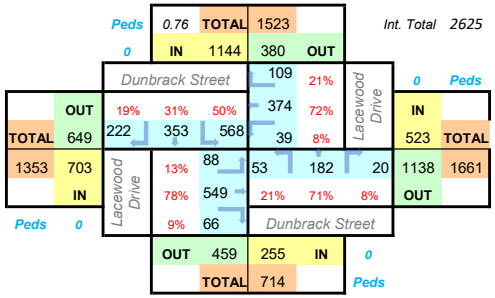
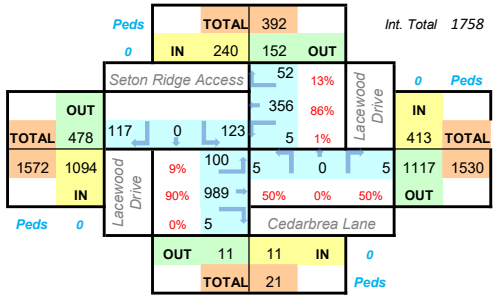


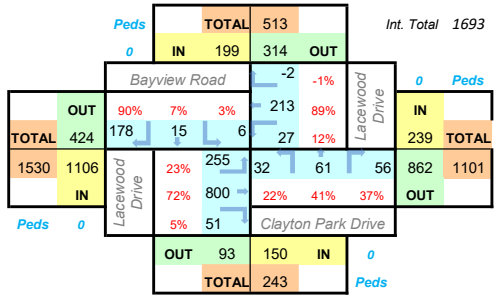
2028 With Development + Divsersion



45
-44

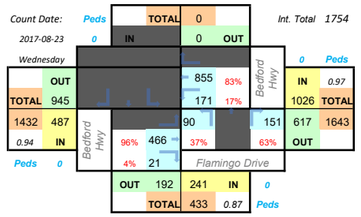


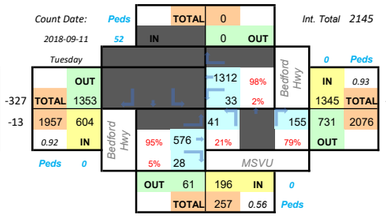
-10
-11

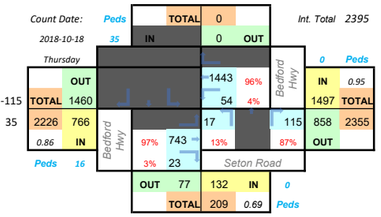


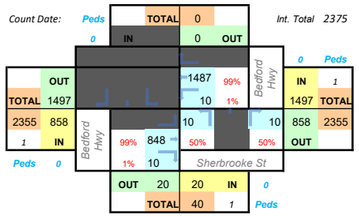
PM Peak-Bedford Highway

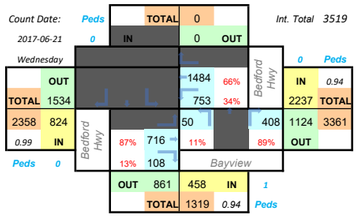
EXISTING COUNTS

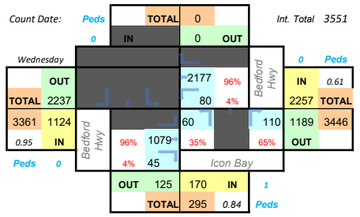












Growth 1.005
Seasonal Adj. 1.020
Adj.Factor 1.025

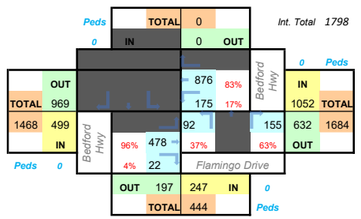
Growth 1.000
Seasonal Adj. 1.000
Adj.Factor 1.000

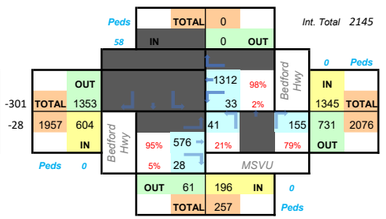
Growth 1.000
Seasonal Adj. 0.970
Adj.Factor 0.970

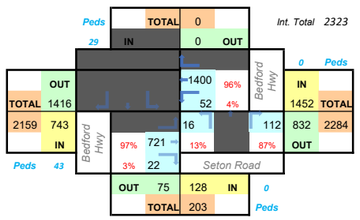
Growth 1.005
Seasonal Adj. 0.990
Adj.Factor 0.995

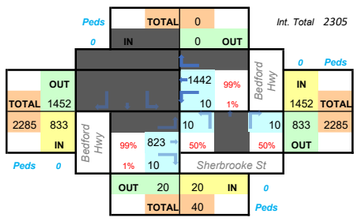
Turn Volume Extracted
From 50 Bedford Highway
Traffic Study

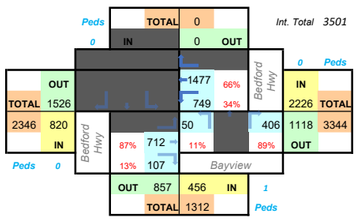
EXISTING FACTORED COUNTS

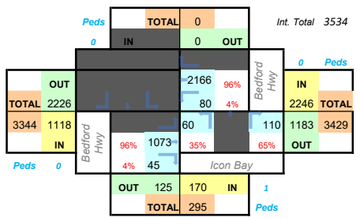






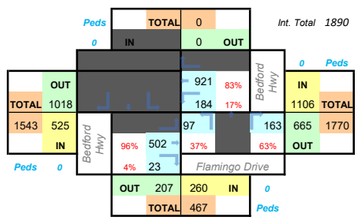


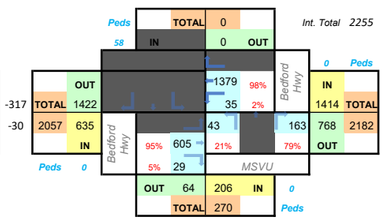


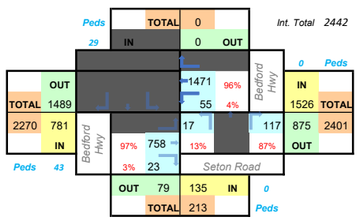


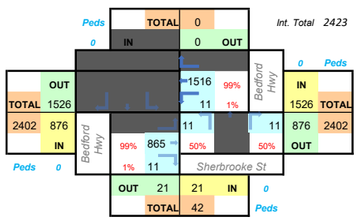
10 year of growth @ 0.5%
Adj.Factor 1.051

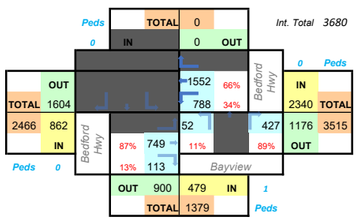
2028 - Background Traffic Added

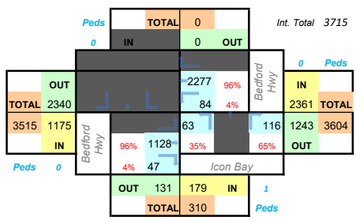






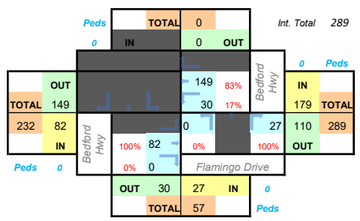


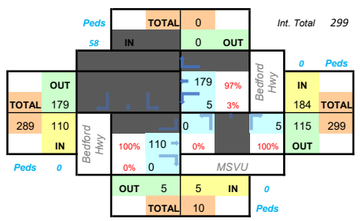


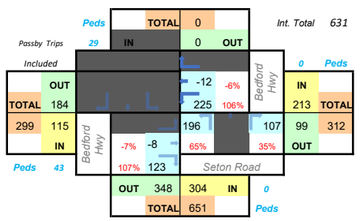


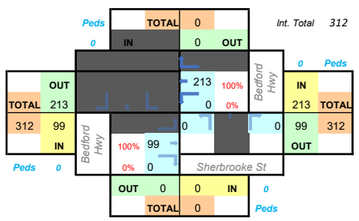
PM Peak-Bedford Highway

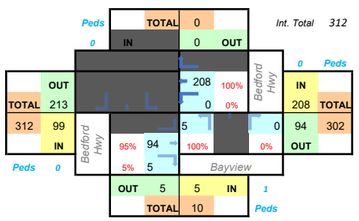
Development Traffic

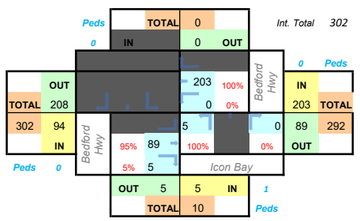












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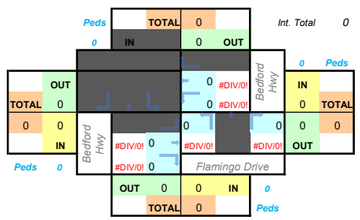
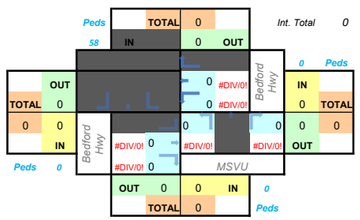
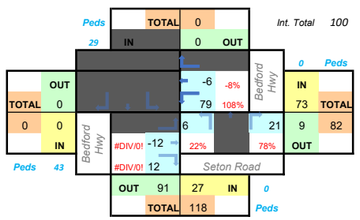
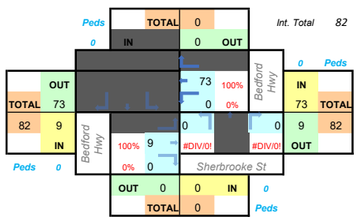
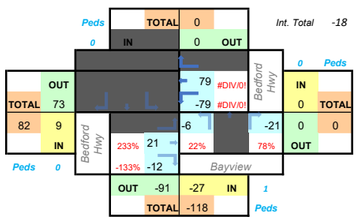
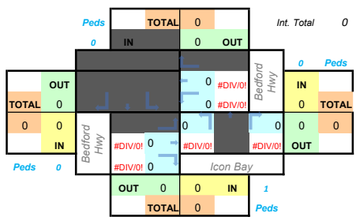




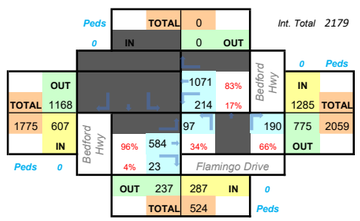


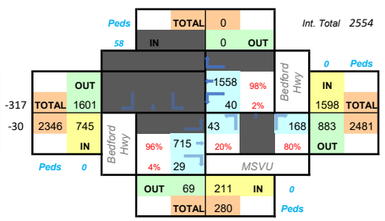


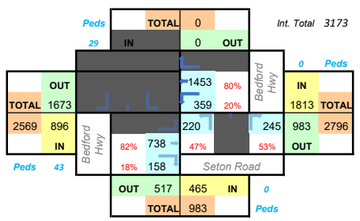


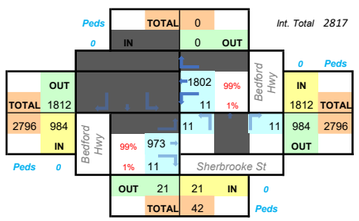


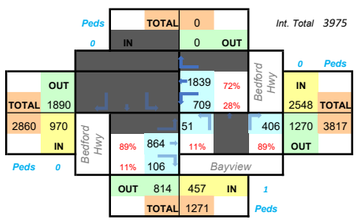
2028 With Development + Diversion

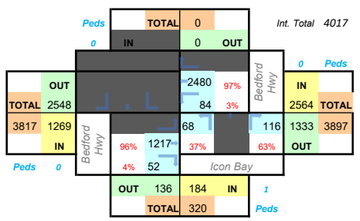






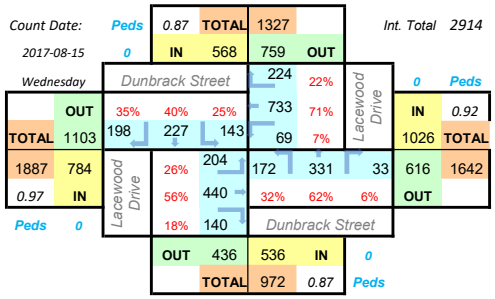






PM Peak-Lacewood

EXISTING COUNTS



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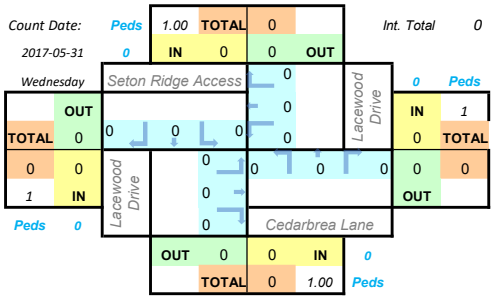

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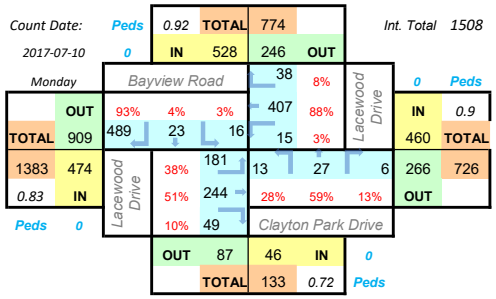
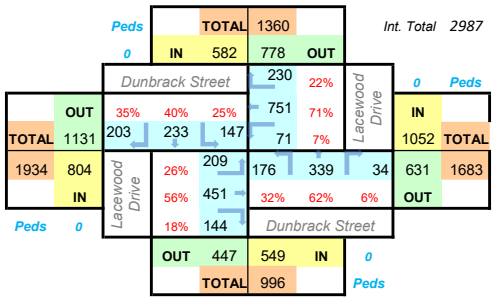


Growth 1.005
Seasonal Adj. 1.020
Adj.Factor 1.025

Growth 1.005
Seasonal Adj. 1.070
Adj.Factor 1.075

EXISTING FACTORED COUNTS



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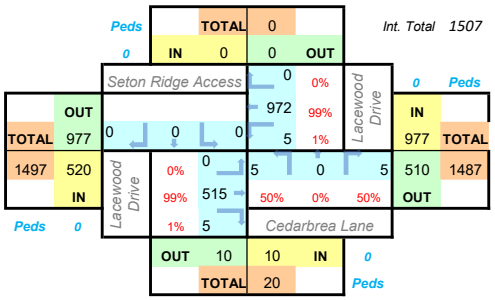

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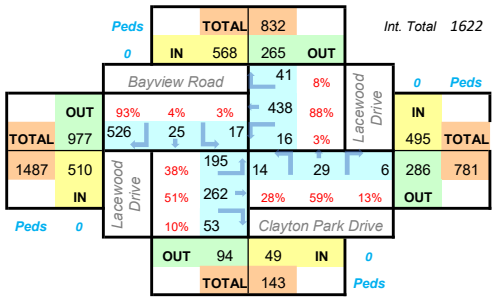
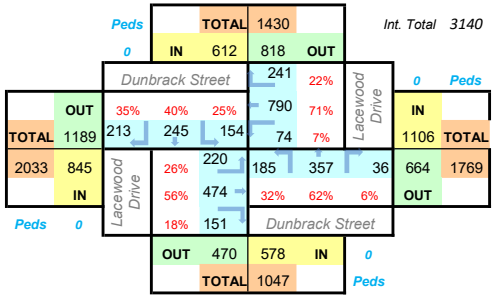


10 year of growth @ 0.5%
Adj.Factor 1.051

2028 - Background Traffic Added



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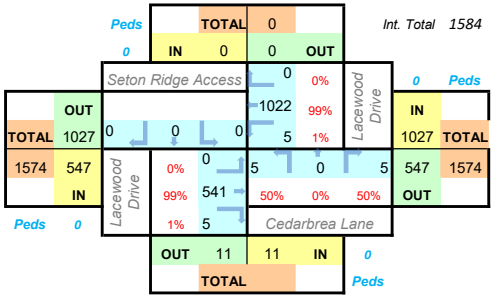

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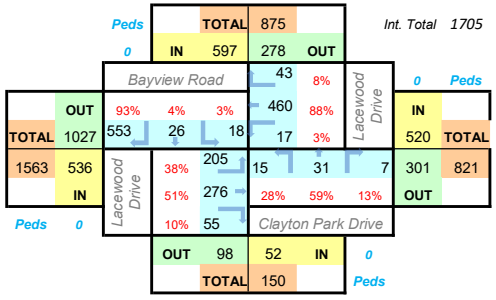
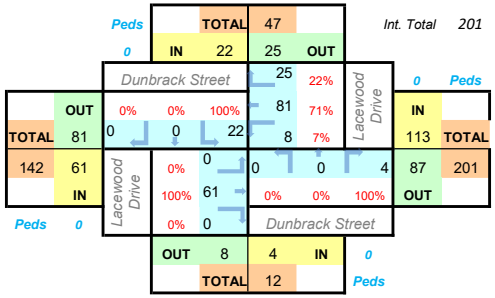


PM Peak-Lacewood

Development Traffic



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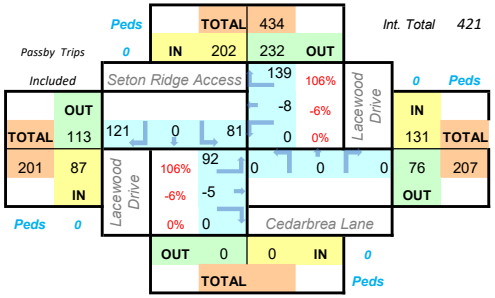

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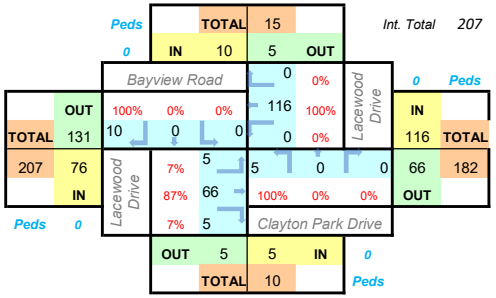

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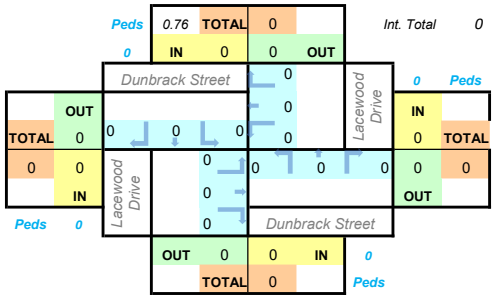

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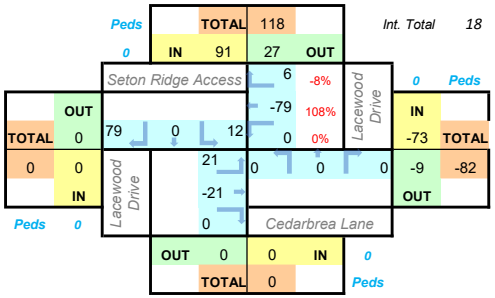

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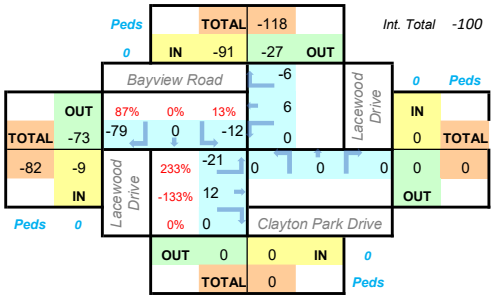
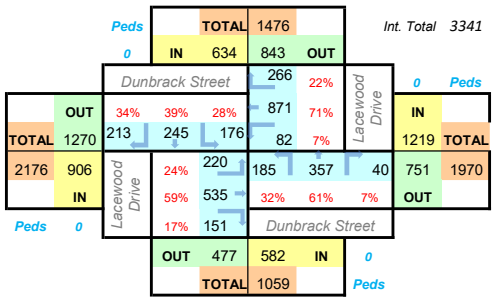


2028 With Development + Divsersion



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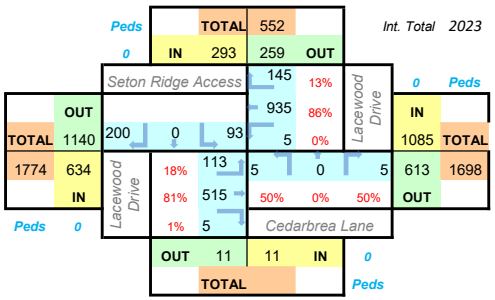

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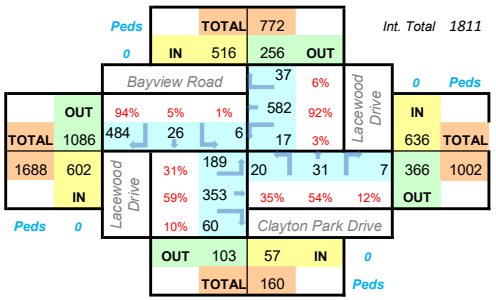


EKISTICS PLANNING & DESIGN

APPENDIX F

Synchro Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	639	50	42	360	18	200
Future Volume (vph)	639	50	42	360	18	200
Satd. Flow (prot)	1857	0	1825	1883	1825	1633
Flt Permitted			0.356		0.950	
Satd. Flow (perm)	1857	0	675	1883	1696	1487
Satd. Flow (RTOR)	9					217
Lane Group Flow (vph)	726	0	44	379	20	217
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	4	
Permitted Phases			6			4
Total Split (s)	94.0		94.0	94.0	26.0	26.0
Total Lost Time (s)	4.5		4.0	4.0	4.0	4.0
Act Effct Green (s)	100.4		100.9	100.9	11.1	11.1
Actuated g/C Ratio	0.84		0.84	0.84	0.09	0.09
v/c Ratio	0.47		0.08	0.24	0.12	0.65
Control Delay	4.0		2.4	2.5	49.8	16.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.0		2.4	2.5	49.8	16.0
LOS	A		A	A	D	B
Approach Delay	4.0			2.5	18.9	
Approach LOS	A			A	B	
Queue Length 50th (m)	29.9		1.2	11.6	4.7	0.0
Queue Length 95th (m)	70.3		4.6	28.8	12.0	23.2
Internal Link Dist (m)	212.2			218.2	156.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1555		567	1584	334	449
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.47		0.08	0.24	0.06	0.48

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 6.1 — Intersection LOS: A
Intersection Capacity Utilization 58.2% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Flamingo & Bedford Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1013	112	94	464	2	22
Future Volume (Veh/h)	1013	112	94	464	2	22
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1066	118	99	488	2	24
Pedestrians	58				30	
Lane Width (m)	3.7				3.7	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			1214		1655	1155
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1214		1655	1155
tC, single (s)			4.1		*5.5	*5.5
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			83		98	92
cM capacity (veh/h)			567		126	295

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	1184	262	325	2	24
Volume Left	0	99	0	2	0
Volume Right	118	0	0	0	24
cSH	1700	567	1700	126	295
Volume to Capacity	0.70	0.17	0.19	0.02	0.08
Queue Length 95th (m)	0.0	5.0	0.0	0.4	2.1
Control Delay (s)	0.0	6.3	0.0	34.0	18.3
Lane LOS		A		D	C
Approach Delay (s)	0.0	2.8		19.5	
Approach LOS				C	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		

* User Entered Value

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1110	42	146	607	3	51
Future Volume (Veh/h)	1110	42	146	607	3	51
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1168	44	154	639	3	55
Pedestrians	29			20	43	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	4	
Right turn flare (veh)						4
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			1255		1890	1253
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1255		1890	1253
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			72		93	65
cM capacity (veh/h)			540		43	157

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	1212	367	426	58
Volume Left	0	154	0	3
Volume Right	44	0	0	55
cSH	1700	540	1700	166
Volume to Capacity	0.71	0.28	0.25	0.35
Queue Length 95th (m)	0.0	9.3	0.0	11.6
Control Delay (s)	0.0	8.7	0.0	42.6
Lane LOS		A		E
Approach Delay (s)	0.0	4.0		42.6
Approach LOS				E

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1156	5	5	748	5	10
Future Volume (Veh/h)	1156	5	5	748	5	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1217	5	5	787	5	11
Pedestrians	20			20	20	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			1242		1663	1260
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1242		1663	1260
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		94	93
cM capacity (veh/h)			558		86	159

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	1222	267	525	16
Volume Left	0	5	0	5
Volume Right	5	0	0	11
cSH	1700	558	1700	126
Volume to Capacity	0.72	0.01	0.31	0.13
Queue Length 95th (m)	0.0	0.2	0.0	3.4
Control Delay (s)	0.0	0.3	0.0	37.8
Lane LOS		A		E
Approach Delay (s)	0.0	0.1		37.8
Approach LOS				E

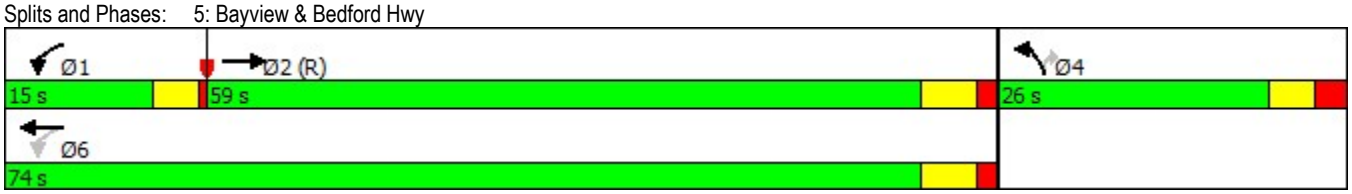
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1363	35	355	539	43	646
Future Volume (vph)	1363	35	355	539	43	646
Satd. Flow (prot)	3566	0	1921	1883	2107	2241
Flt Permitted			0.085		0.950	
Satd. Flow (perm)	3566	0	172	1883	2107	2241
Satd. Flow (RTOR)	4					210
Lane Group Flow (vph)	1472	0	355	567	47	646
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	59.0		15.0	74.0	26.0	26.0
Total Lost Time (s)	5.8		0.5	5.8	6.0	3.0
Act Effct Green (s)	53.2		73.5	68.2	20.0	23.0
Actuated g/C Ratio	0.53		0.74	0.68	0.20	0.23
v/c Ratio	0.78		0.93	0.44	0.11	0.95
Control Delay	22.2		57.7	4.5	33.7	51.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	22.2		57.7	4.5	33.7	51.7
LOS	C		E	A	C	D
Approach Delay	22.2			25.0	50.4	
Approach LOS	C			C	D	
Queue Length 50th (m)	119.5		32.9	15.6	7.9	92.8
Queue Length 95th (m)	148.9		#96.6	19.8	18.0	#165.2
Internal Link Dist (m)	307.4			271.2	169.9	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1898		380	1284	421	677
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.78		0.93	0.44	0.11	0.95

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 13 (13%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 29.4 — Intersection LOS: C
Intersection Capacity Utilization 85.0% — 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: 5: Bayview & Bedford Hwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1964	45	70	859	35	70
Future Volume (vph)	1964	45	70	859	35	70
Satd. Flow (prot)	3569	0	1807	3579	1807	1617
Flt Permitted			0.062		0.950	
Satd. Flow (perm)	3569	0	118	3579	1807	1617
Satd. Flow (RTOR)	4					76
Lane Group Flow (vph)	2114	0	74	904	38	76
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	63.0		13.0	76.0	24.0	24.0
Total Lost Time (s)	5.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	61.1		72.0	70.2	18.0	18.0
Actuated g/C Ratio	0.61		0.72	0.70	0.18	0.18
v/c Ratio	0.97		0.36	0.36	0.12	0.22
Control Delay	26.9		11.2	6.4	35.5	10.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	26.9		11.2	6.4	35.5	10.0
LOS	C		B	A	D	B
Approach Delay	26.9			6.8	18.5	
Approach LOS	C			A	B	
Queue Length 50th (m)	~134.7		3.8	33.6	6.6	0.0
Queue Length 95th (m)	m#277.0		11.4	43.0	15.8	12.4
Internal Link Dist (m)	271.2			230.3	79.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	2182		236	2512	325	353
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.97		0.31	0.36	0.12	0.22

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 20.4 — Intersection LOS: C
Intersection Capacity Utilization 73.8% — ICU Level of Service D
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.

m Volume for 95th percentile queue is metered by upstream signal.

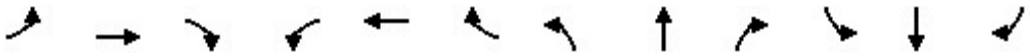
Splits and Phases: 6: 50 Bedford Hwy & Bedford Hwy

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	507	336	211	50	173	16	84	492	63	32	302	88
Future Volume (vph)	507	336	211	50	173	16	84	492	63	32	302	88
Satd. Flow (prot)	1767	3500	1759	1807	3579	1617	1807	3522	0	1668	3198	0
Flt Permitted	0.569			0.534			0.383			0.234		
Satd. Flow (perm)	1059	3500	1759	1016	3579	1617	729	3522	0	411	3198	0
Satd. Flow (RTOR)			229			88		17			46	
Lane Group Flow (vph)	551	365	229	54	188	17	91	603	0	35	424	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	24.0	55.0	55.0	31.0	31.0	31.0	40.0	40.0		40.0	40.0	
Total Lost Time (s)	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
Act Effct Green (s)	62.4	62.3	62.3	37.7	37.7	37.7	24.5	24.5		24.5	24.5	
Actuated g/C Ratio	0.66	0.66	0.66	0.40	0.40	0.40	0.26	0.26		0.26	0.26	
v/c Ratio	0.65	0.16	0.19	0.13	0.13	0.02	0.49	0.66		0.33	0.49	
Control Delay	13.1	7.1	1.5	24.1	21.3	0.1	38.0	33.7		36.2	27.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.1	7.1	1.5	24.1	21.3	0.1	38.0	33.7		36.2	27.9	
LOS	B	A	A	C	C	A	D	C		D	C	
Approach Delay		8.9			20.5			34.2			28.6	
Approach LOS		A			C			C			C	
Queue Length 50th (m)	47.7	12.8	0.0	6.6	12.0	0.0	14.9	53.1		5.5	32.4	
Queue Length 95th (m)	86.4	22.4	9.0	17.9	23.2	0.0	28.6	65.4		14.1	43.1	
Internal Link Dist (m)		244.5			347.6			162.5			194.1	
Turn Bay Length (m)	60.0		70.0	65.0		65.0	70.0			20.0		
Base Capacity (vph)	863	2295	1232	403	1421	695	275	1341		155	1237	
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	0.64	0.16	0.19	0.13	0.13	0.02	0.33	0.45		0.23	0.34	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 95
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 20.5 — Intersection LOS: C
Intersection Capacity Utilization 75.6% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 7: Lacewood & Dunbrack



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	5	0	5	0	969	5	5	375	0
Future Volume (Veh/h)	0	0	0	5	0	5	0	969	5	5	375	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	5	0	5	0	1053	5	5	408	0
Pedestrians		20			20			20			20	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			2	
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (m)											220	
pX, platoon unblocked												
vC, conflicting volume	990	1516	244	1310	1514	569	428			1078		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	990	1516	244	1310	1514	569	428			1078		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	96	100	99	100			99		
cM capacity (veh/h)	189	116	737	111	116	454	1123			643		

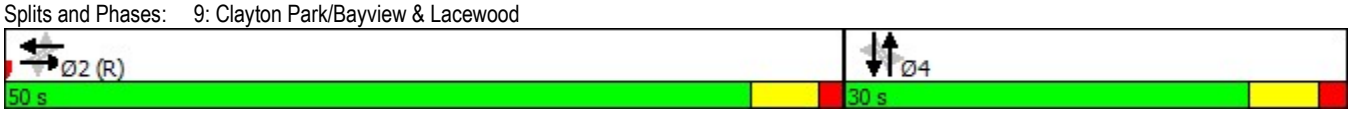
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	10	526	532	209	204
Volume Left	0	5	0	0	5	0
Volume Right	0	5	0	5	0	0
cSH	1700	179	1123	1700	643	1700
Volume to Capacity	0.00	0.06	0.00	0.31	0.01	0.12
Queue Length 95th (m)	0.0	1.4	0.0	0.0	0.2	0.0
Control Delay (s)	0.0	26.3	0.0	0.0	0.3	0.0
Lane LOS	A	D			A	
Approach Delay (s)	0.0	26.3	0.0		0.2	
Approach LOS	A	D				

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	36.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	663	39	26	163	3	26	58	53	10	14	201
Future Volume (vph)	261	663	39	26	163	3	26	58	53	10	14	201
Satd. Flow (prot)	0	3527	0	0	3555	0	0	1787	0	0	1651	0
Flt Permitted		0.789			0.810			0.916			0.987	
Satd. Flow (perm)	0	2807	0	0	2898	0	0	1650	0	0	1632	0
Satd. Flow (RTOR)		9			3			43			218	
Lane Group Flow (vph)	0	1047	0	0	208	0	0	149	0	0	244	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		3.6			3.6			3.9			3.9	
Act Effct Green (s)		46.4			46.4			26.1			26.1	
Actuated g/C Ratio		0.58			0.58			0.33			0.33	
v/c Ratio		0.64			0.12			0.26			0.36	
Control Delay		13.4			7.7			15.4			5.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.4			7.7			15.4			5.8	
LOS		B			A			B			A	
Approach Delay		13.4			7.7			15.4			5.8	
Approach LOS		B			A			B			A	
Queue Length 50th (m)		53.4			7.1			12.1			2.8	
Queue Length 95th (m)		73.7			11.9			26.2			18.4	
Internal Link Dist (m)		196.2			187.5			143.1			137.1	
Turn Bay Length (m)												
Base Capacity (vph)		1631			1682			567			679	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.64			0.12			0.26			0.36	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 71.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Clayton Park/Bayview & Lacewood



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	671	53	44	378	19	210
Future Volume (vph)	671	53	44	378	19	210
Satd. Flow (prot)	1857	0	1825	1883	1825	1633
Flt Permitted			0.339		0.950	
Satd. Flow (perm)	1857	0	644	1883	1696	1487
Satd. Flow (RTOR)	9					228
Lane Group Flow (vph)	762	0	46	398	21	228
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	4	
Permitted Phases			6			4
Total Split (s)	94.0		94.0	94.0	26.0	26.0
Total Lost Time (s)	4.5		4.0	4.0	4.0	4.0
Act Effct Green (s)	100.3		100.8	100.8	11.2	11.2
Actuated g/C Ratio	0.84		0.84	0.84	0.09	0.09
v/c Ratio	0.49		0.09	0.25	0.12	0.66
Control Delay	4.2		2.5	2.6	49.7	16.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.2		2.5	2.6	49.7	16.0
LOS	A		A	A	D	B
Approach Delay	4.2			2.6	18.8	
Approach LOS	A			A	B	
Queue Length 50th (m)	32.6		1.2	12.3	5.0	0.0
Queue Length 95th (m)	77.6		4.9	30.9	12.4	23.7
Internal Link Dist (m)	212.2			218.2	156.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1554		541	1582	334	458
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.49		0.09	0.25	0.06	0.50

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Flamingo & Bedford Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1065	118	99	488	3	23
Future Volume (Veh/h)	1065	118	99	488	3	23
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1121	124	104	514	3	25
Pedestrians	58				30	
Lane Width (m)	3.7				3.7	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			1275		1736	1213
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1275		1736	1213
tC, single (s)			4.1		*5.5	*5.5
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			81		97	91
cM capacity (veh/h)			537		112	276

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	1245	275	343	3	25
Volume Left	0	104	0	3	0
Volume Right	124	0	0	0	25
cSH	1700	537	1700	112	276
Volume to Capacity	0.73	0.19	0.20	0.03	0.09
Queue Length 95th (m)	0.0	5.7	0.0	0.7	2.4
Control Delay (s)	0.0	6.8	0.0	38.0	19.3
Lane LOS		A		E	C
Approach Delay (s)	0.0	3.0		21.3	
Approach LOS				C	

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

* User Entered Value

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1169	44	154	638	4	54
Future Volume (Veh/h)	1169	44	154	638	4	54
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1231	46	162	672	4	59
Pedestrians	29			20	43	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	4	
Right turn flare (veh)						4
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			1320		1986	1317
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1320		1986	1317
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			68		89	59
cM capacity (veh/h)			511		35	142

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	1277	386	448	63
Volume Left	0	162	0	4
Volume Right	46	0	0	59
cSH	1700	511	1700	152
Volume to Capacity	0.75	0.32	0.26	0.41
Queue Length 95th (m)	0.0	10.8	0.0	14.6
Control Delay (s)	0.0	9.7	0.0	51.7
Lane LOS		A		F
Approach Delay (s)	0.0	4.5		51.7
Approach LOS				F

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1218	5	5	787	5	10
Future Volume (Veh/h)	1218	5	5	787	5	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1282	5	5	828	5	11
Pedestrians	20			20	20	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			1307		1748	1324
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1307		1748	1324
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	92
cM capacity (veh/h)			527		75	144

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	1287	281	552	16
Volume Left	0	5	0	5
Volume Right	5	0	0	11
cSH	1700	527	1700	112
Volume to Capacity	0.76	0.01	0.32	0.14
Queue Length 95th (m)	0.0	0.2	0.0	3.8
Control Delay (s)	0.0	0.3	0.0	42.5
Lane LOS		A		E
Approach Delay (s)	0.0	0.1		42.5
Approach LOS				E

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1433	37	373	567	45	679
Future Volume (vph)	1433	37	373	567	45	679
Satd. Flow (prot)	3566	0	1921	1883	2107	2241
Flt Permitted			0.070		0.950	
Satd. Flow (perm)	3566	0	142	1883	2107	2241
Satd. Flow (RTOR)	4					206
Lane Group Flow (vph)	1547	0	373	597	49	679
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	59.0		15.0	74.0	26.0	26.0
Total Lost Time (s)	5.8		0.5	5.8	6.0	3.0
Act Effct Green (s)	53.2		73.5	68.2	20.0	23.0
Actuated g/C Ratio	0.53		0.74	0.68	0.20	0.23
v/c Ratio	0.82		1.03	0.46	0.12	1.01
Control Delay	23.7		85.0	4.6	33.7	64.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	23.7		85.0	4.6	33.7	64.4
LOS	C		F	A	C	E
Approach Delay	23.7			35.5	62.4	
Approach LOS	C			D	E	
Queue Length 50th (m)	130.1		~43.3	16.4	8.3	~104.9
Queue Length 95th (m)	162.0		#114.0	20.7	18.4	#181.8
Internal Link Dist (m)	307.4			271.2	169.9	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1898		362	1284	421	674
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.82		1.03	0.46	0.12	1.01

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 13 (13%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 35.9	Intersection LOS: D
Intersection Capacity Utilization 88.9%	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: 5: Bayview & Bedford Hwy

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2065	47	74	903	37	74
Future Volume (vph)	2065	47	74	903	37	74
Satd. Flow (prot)	3569	0	1807	3579	1807	1617
Flt Permitted			0.062		0.950	
Satd. Flow (perm)	3569	0	118	3579	1807	1617
Satd. Flow (RTOR)	4					80
Lane Group Flow (vph)	2223	0	78	951	40	80
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	63.0		13.0	76.0	24.0	24.0
Total Lost Time (s)	5.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	61.0		72.0	70.2	18.0	18.0
Actuated g/C Ratio	0.61		0.72	0.70	0.18	0.18
v/c Ratio	1.02		0.37	0.38	0.12	0.22
Control Delay	38.9		12.0	6.6	35.6	9.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	38.9		12.0	6.6	35.6	9.9
LOS	D		B	A	D	A
Approach Delay	38.9			7.0	18.5	
Approach LOS	D			A	B	
Queue Length 50th (m)	~255.5		4.0	36.1	6.9	0.0
Queue Length 95th (m)	m#295.2		12.7	46.0	16.4	12.6
Internal Link Dist (m)	271.2			230.3	79.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	2178		236	2512	325	356
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.02		0.33	0.38	0.12	0.22

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 28.4 — Intersection LOS: C
Intersection Capacity Utilization 77.2% — ICU Level of Service D
Analysis Period (min) 15

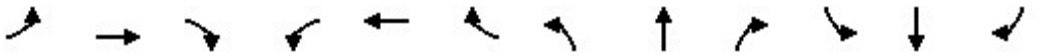
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: 50 Bedford Hwy & Bedford Hwy

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	533	353	222	53	182	17	88	517	66	33	318	93
Future Volume (vph)	533	353	222	53	182	17	88	517	66	33	318	93
Satd. Flow (prot)	1767	3500	1759	1807	3579	1617	1807	3522	0	1668	3198	0
Flt Permitted	0.559			0.524			0.372			0.224		
Satd. Flow (perm)	1040	3500	1759	997	3579	1617	708	3522	0	393	3198	0
Satd. Flow (RTOR)			241			88		17			46	
Lane Group Flow (vph)	579	384	241	58	198	18	96	634	0	36	447	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	24.0	55.0	55.0	31.0	31.0	31.0	40.0	40.0		40.0	40.0	
Total Lost Time (s)	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
Act Effct Green (s)	61.2	61.1	61.1	35.4	35.4	35.4	25.7	25.7		25.7	25.7	
Actuated g/C Ratio	0.64	0.64	0.64	0.37	0.37	0.37	0.27	0.27		0.27	0.27	
v/c Ratio	0.69	0.17	0.20	0.16	0.15	0.03	0.50	0.66		0.34	0.50	
Control Delay	15.0	7.6	1.6	25.6	22.7	0.1	37.9	32.9		35.8	27.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.0	7.6	1.6	25.6	22.7	0.1	37.9	32.9		35.8	27.4	
LOS	B	A	A	C	C	A	D	C		D	C	
Approach Delay		10.0			21.8			33.6			28.0	
Approach LOS		A			C			C			C	
Queue Length 50th (m)	53.1	14.0	0.0	7.5	13.5	0.0	15.7	55.6		5.6	34.2	
Queue Length 95th (m)	95.4	24.3	9.4	19.2	24.2	0.0	30.0	67.9		14.3	44.8	
Internal Link Dist (m)		244.5			347.6			162.5			194.1	
Turn Bay Length (m)	60.0		70.0	65.0		65.0	70.0			20.0		
Base Capacity (vph)	846	2252	1217	371	1332	657	267	1341		148	1237	
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	0.68	0.17	0.20	0.16	0.15	0.03	0.36	0.47		0.24	0.36	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Lacewood & Dunbrack



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	5	0	5	0	1019	5	5	394	0
Future Volume (Veh/h)	0	0	0	5	0	5	0	1019	5	5	394	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	5	0	5	0	1108	5	5	428	0
Pedestrians		20			20			20			20	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			2	
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (m)											220	
pX, platoon unblocked												
vC, conflicting volume	1037	1591	254	1374	1588	596	448			1133		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1037	1591	254	1374	1588	596	448			1133		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	100	99	100			99		
cM capacity (veh/h)	174	104	726	100	104	436	1104			613		

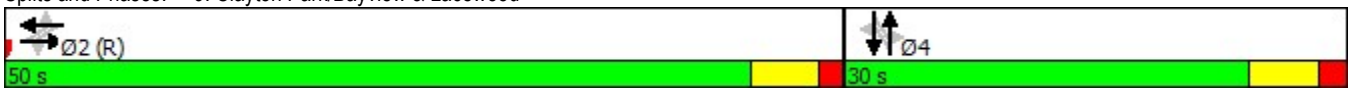
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	10	554	559	219	214
Volume Left	0	5	0	0	5	0
Volume Right	0	5	0	5	0	0
cSH	1700	162	1104	1700	613	1700
Volume to Capacity	0.00	0.06	0.00	0.33	0.01	0.13
Queue Length 95th (m)	0.0	1.6	0.0	0.0	0.2	0.0
Control Delay (s)	0.0	28.7	0.0	0.0	0.3	0.0
Lane LOS	A	D			A	
Approach Delay (s)	0.0	28.7	0.0		0.2	
Approach LOS	A	D				

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	38.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	697	41	27	171	3	27	61	56	11	15	211
Future Volume (vph)	275	697	41	27	171	3	27	61	56	11	15	211
Satd. Flow (prot)	0	3527	0	0	3555	0	0	1787	0	0	1653	0
Flt Permitted		0.786			0.802			0.913			0.985	
Satd. Flow (perm)	0	2797	0	0	2870	0	0	1644	0	0	1631	0
Satd. Flow (RTOR)		9			3			43			229	
Lane Group Flow (vph)	0	1102	0	0	218	0	0	156	0	0	257	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		3.6			3.6			3.9			3.9	
Act Effct Green (s)		46.4			46.4			26.1			26.1	
Actuated g/C Ratio		0.58			0.58			0.33			0.33	
v/c Ratio		0.68			0.13			0.28			0.37	
Control Delay		14.2			7.8			15.8			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.2			7.8			15.8			5.9	
LOS		B			A			B			A	
Approach Delay		14.2			7.8			15.8			5.9	
Approach LOS		B			A			B			A	
Queue Length 50th (m)		58.1			7.5			12.9			3.0	
Queue Length 95th (m)		80.2			12.4			27.5			19.2	
Internal Link Dist (m)		196.2			187.5			143.1			137.1	
Turn Bay Length (m)												
Base Capacity (vph)		1626			1665			565			686	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.68			0.13			0.28			0.37	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Clayton Park/Bayview & Lacewood



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	756	53	55	471	19	238
Future Volume (vph)	756	53	55	471	19	238
Satd. Flow (prot)	1860	0	1825	1883	1825	1633
Flt Permitted			0.299		0.950	
Satd. Flow (perm)	1860	0	574	1883	1696	1487
Satd. Flow (RTOR)	8					253
Lane Group Flow (vph)	852	0	58	496	21	259
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	4	
Permitted Phases			6			4
Total Split (s)	94.0		94.0	94.0	26.0	26.0
Total Lost Time (s)	4.5		4.0	4.0	4.0	4.0
Act Effct Green (s)	99.9		100.4	100.4	11.6	11.6
Actuated g/C Ratio	0.83		0.84	0.84	0.10	0.10
v/c Ratio	0.55		0.12	0.32	0.12	0.70
Control Delay	5.1		2.9	3.1	48.8	16.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.1		2.9	3.1	48.8	16.9
LOS	A		A	A	D	B
Approach Delay	5.1			3.1	19.3	
Approach LOS	A			A	B	
Queue Length 50th (m)	39.8		1.6	16.5	5.0	1.4
Queue Length 95th (m)	102.3		6.6	43.4	12.2	26.7
Internal Link Dist (m)	212.2			218.2	156.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1548		479	1574	334	479
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.55		0.12	0.32	0.06	0.54

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 6.8 — Intersection LOS: A
Intersection Capacity Utilization 66.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Flamingo & Bedford Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1178	118	99	592	3	23
Future Volume (Veh/h)	1178	118	99	592	3	23
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1240	124	104	623	3	25
Pedestrians	58				30	
Lane Width (m)	3.7				3.7	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				259		
pX, platoon unblocked						
vC, conflicting volume			1394		1910	1332
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1394		1910	1332
tC, single (s)			4.1		*5.5	*5.5
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		97	90
cM capacity (veh/h)			484		89	241

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	1364	312	415	3	25
Volume Left	0	104	0	3	0
Volume Right	124	0	0	0	25
cSH	1700	484	1700	89	241
Volume to Capacity	0.80	0.21	0.24	0.03	0.10
Queue Length 95th (m)	0.0	6.5	0.0	0.8	2.7
Control Delay (s)	0.0	7.2	0.0	46.9	21.7
Lane LOS		A		E	C
Approach Delay (s)	0.0	3.1		24.4	
Approach LOS				C	

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		

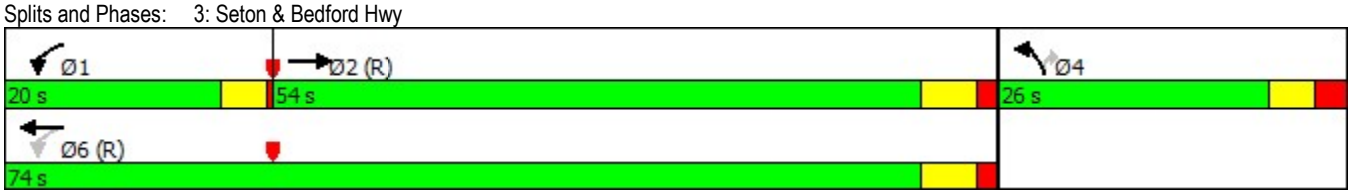
* User Entered Value

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1161	162	253	633	112	277
Future Volume (vph)	1161	162	253	633	112	277
Satd. Flow (prot)	3468	0	1825	1883	1825	1633
Flt Permitted			0.079		0.950	
Satd. Flow (perm)	3468	0	152	1883	1746	1633
Satd. Flow (RTOR)	21					293
Lane Group Flow (vph)	1393	0	266	666	122	301
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	54.0		20.0	74.0	26.0	26.0
Total Lost Time (s)	5.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	50.6		70.0	68.2	20.0	20.0
Actuated g/C Ratio	0.51		0.70	0.68	0.20	0.20
v/c Ratio	0.79		0.80	0.52	0.33	0.54
Control Delay	24.6		46.7	4.7	37.3	8.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	24.6		46.7	4.7	37.3	8.6
LOS	C		D	A	D	A
Approach Delay	24.6			16.7	16.9	
Approach LOS	C			B	B	
Queue Length 50th (m)	120.5		29.7	20.8	21.5	1.3
Queue Length 95th (m)	154.1		#65.5	26.4	38.6	24.1
Internal Link Dist (m)	235.5			71.5	133.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1766		374	1284	365	561
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.79		0.71	0.52	0.33	0.54

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 48 (48%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 20.7 — Intersection LOS: C
Intersection Capacity Utilization 71.1% — ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Seton & Bedford Hwy



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1428	10	10	876	10	10
Future Volume (Veh/h)	1428	10	10	876	10	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1503	11	11	922	11	11
Pedestrians	20			20	20	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	95					
pX, platoon unblocked			0.67		0.67	0.67
vC, conflicting volume			1534		2032	797
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			822		1561	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		84	98
cM capacity (veh/h)			540		67	709

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1002	512	318	615	22
Volume Left	0	0	11	0	11
Volume Right	0	11	0	0	11
cSH	1700	1700	540	1700	122
Volume to Capacity	0.59	0.30	0.02	0.36	0.18
Queue Length 95th (m)	0.0	0.0	0.5	0.0	5.0
Control Delay (s)	0.0	0.0	0.7	0.0	40.9
Lane LOS			A		E
Approach Delay (s)	0.0		0.2		40.9
Approach LOS					E

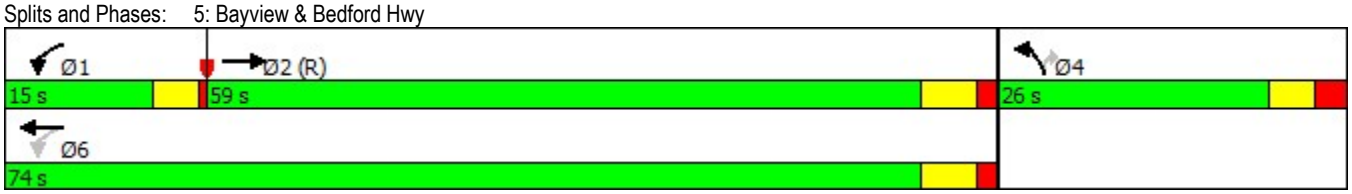
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1651	37	335	663	43	649
Future Volume (vph)	1651	37	335	663	43	649
Satd. Flow (prot)	3569	0	1921	1883	2107	2241
Flt Permitted			0.070		0.950	
Satd. Flow (perm)	3569	0	142	1883	2107	2241
Satd. Flow (RTOR)	3					199
Lane Group Flow (vph)	1723	0	335	698	47	649
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	59.0		15.0	74.0	26.0	26.0
Total Lost Time (s)	5.8		0.5	5.8	6.0	3.0
Act Effct Green (s)	53.2		73.5	68.2	20.0	23.0
Actuated g/C Ratio	0.53		0.74	0.68	0.20	0.23
v/c Ratio	0.91		0.93	0.54	0.11	0.97
Control Delay	37.3		63.4	6.6	33.7	56.1
Queue Delay	4.2		0.0	0.0	0.0	1.9
Total Delay	41.5		63.4	6.6	33.7	58.0
LOS	D		E	A	C	E
Approach Delay	41.5			25.0	56.3	
Approach LOS	D			C	E	
Queue Length 50th (m)	193.5		41.2	28.2	7.9	96.3
Queue Length 95th (m)	#224.7		#96.0	35.0	18.0	#170.3
Internal Link Dist (m)	307.4			271.2	169.9	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1900		362	1284	421	668
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	127		0	0	0	7
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.97		0.93	0.54	0.11	0.98

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 13 (13%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 39.6 — Intersection LOS: D
Intersection Capacity Utilization 93.2% — 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: 5: Bayview & Bedford Hwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2247	52	74	958	40	74
Future Volume (vph)	2247	52	74	958	40	74
Satd. Flow (prot)	3569	0	1807	3579	1807	1617
Flt Permitted			0.058		0.950	
Satd. Flow (perm)	3569	0	110	3579	1807	1617
Satd. Flow (RTOR)	5					80
Lane Group Flow (vph)	2346	0	78	1008	43	80
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	69.0		11.0	80.0	20.0	20.0
Total Lost Time (s)	3.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	67.4		76.0	74.2	14.0	14.0
Actuated g/C Ratio	0.67		0.76	0.74	0.14	0.14
v/c Ratio	0.98		0.39	0.38	0.17	0.27
Control Delay	21.2		12.5	5.1	39.9	11.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	21.2		12.5	5.1	39.9	11.6
LOS	C		B	A	D	B
Approach Delay	21.2			5.6	21.5	
Approach LOS	C			A	C	
Queue Length 50th (m)	~131.2		3.3	32.5	7.8	0.0
Queue Length 95th (m)	m#292.8		13.0	41.2	18.2	13.2
Internal Link Dist (m)	271.2			230.3	79.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	2406		202	2655	252	295
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.98		0.39	0.38	0.17	0.27

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 77.9% ICU Level of Service D
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.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: 50 Bedford Hwy & Bedford Hwy

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	568	353	222	53	182	20	88	549	66	39	374	109
Future Volume (vph)	568	353	222	53	182	20	88	549	66	39	374	109
Satd. Flow (prot)	1767	3500	1759	1807	3579	1617	1807	3525	0	1668	3198	0
Flt Permitted	0.554			0.524			0.315			0.211		
Satd. Flow (perm)	1031	3500	1759	997	3579	1617	599	3525	0	370	3198	0
Satd. Flow (RTOR)			241			88		16			45	
Lane Group Flow (vph)	617	384	241	58	198	22	96	669	0	42	525	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	24.0	55.0	55.0	31.0	31.0	31.0	40.0	40.0		40.0	40.0	
Total Lost Time (s)	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
Act Effct Green (s)	60.2	60.1	60.1	32.7	32.7	32.7	26.7	26.7		26.7	26.7	
Actuated g/C Ratio	0.63	0.63	0.63	0.34	0.34	0.34	0.28	0.28		0.28	0.28	
v/c Ratio	0.74	0.17	0.20	0.17	0.16	0.04	0.57	0.67		0.41	0.56	
Control Delay	17.9	8.1	1.7	26.9	24.1	0.1	42.2	32.4		38.7	28.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	17.9	8.1	1.7	26.9	24.1	0.1	42.2	32.4		38.7	28.4	
LOS	B	A	A	C	C	A	D	C		D	C	
Approach Delay		11.7			22.8			33.7			29.1	
Approach LOS		B			C			C			C	
Queue Length 50th (m)	60.3	14.4	0.0	8.3	14.9	0.0	15.9	58.7		6.6	41.6	
Queue Length 95th (m)	#116.8	25.4	9.8	19.2	24.2	0.0	31.0	70.4		16.3	52.4	
Internal Link Dist (m)		244.5			347.6			162.5			194.1	
Turn Bay Length (m)	60.0		70.0	65.0		65.0	70.0			20.0		
Base Capacity (vph)	838	2213	1201	342	1231	613	226	1342		139	1236	
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	0.74	0.17	0.20	0.17	0.16	0.04	0.42	0.50		0.30	0.42	

Intersection Summary

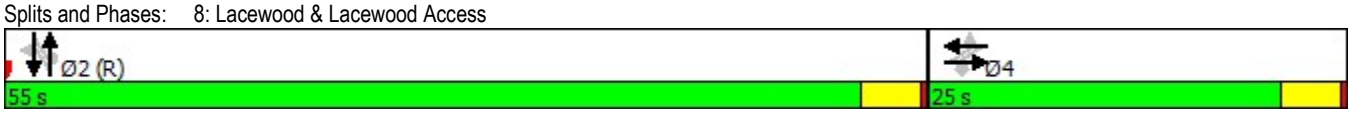
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 22.2 — Intersection LOS: C
Intersection Capacity Utilization 80.7% — ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Lacewood & Dunbrack

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	0	117	5	0	5	100	989	5	5	356	52
Future Volume (vph)	123	0	117	5	0	5	100	989	5	5	356	52
Satd. Flow (prot)	0	1825	1633	0	1748	0	0	3564	0	0	3517	0
Flt Permitted		0.751			0.913			0.851			0.945	
Satd. Flow (perm)	0	1443	1633	0	1635	0	0	3048	0	0	3326	0
Satd. Flow (RTOR)			127		14			1			40	
Lane Group Flow (vph)	0	134	127	0	10	0	0	1189	0	0	449	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Total Split (s)	25.0	25.0	25.0	25.0	25.0		55.0	55.0		55.0	55.0	
Total Lost Time (s)		4.0	4.0		4.0			4.0			4.0	
Act Effct Green (s)		21.0	21.0		21.0			51.0			51.0	
Actuated g/C Ratio		0.26	0.26		0.26			0.64			0.64	
v/c Ratio		0.35	0.24		0.02			0.61			0.21	
Control Delay		27.3	6.1		9.8			10.3			5.2	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		27.3	6.1		9.8			10.3			5.2	
LOS		C	A		A			B			A	
Approach Delay		16.9			9.8			10.3			5.2	
Approach LOS		B			A			B			A	
Queue Length 50th (m)		17.4	0.0		0.0			52.4			10.6	
Queue Length 95th (m)		33.2	12.4		3.2			70.9			19.7	
Internal Link Dist (m)		111.7			74.7			169.9			196.2	
Turn Bay Length (m)			50.0									
Base Capacity (vph)		378	522		439			1943			2134	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.35	0.24		0.02			0.61			0.21	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 10.0	Intersection LOS: B
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

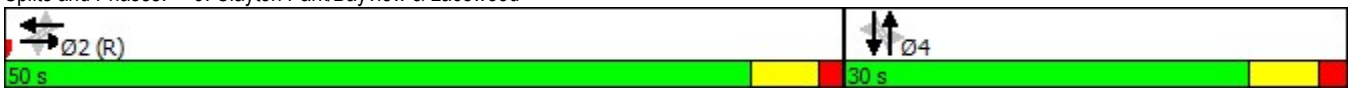
Splits and Phases: 8: Lacewood & Lacewood Access



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	800	51	27	213	3	32	61	56	6	15	178
Future Volume (vph)	255	800	51	27	213	3	32	61	56	6	15	178
Satd. Flow (prot)	0	3527	0	0	3560	0	0	1788	0	0	1651	0
Flt Permitted		0.789			0.806			0.904			0.991	
Satd. Flow (perm)	0	2804	0	0	2883	0	0	1632	0	0	1639	0
Satd. Flow (RTOR)		10			2			40			193	
Lane Group Flow (vph)	0	1202	0	0	264	0	0	162	0	0	216	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		3.6			3.6			3.9			3.9	
Act Effct Green (s)		46.4			46.4			26.1			26.1	
Actuated g/C Ratio		0.58			0.58			0.33			0.33	
v/c Ratio		0.74			0.16			0.29			0.33	
Control Delay		10.2			8.0			16.6			5.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.2			8.0			16.6			5.8	
LOS		B			A			B			A	
Approach Delay		10.2			8.0			16.6			5.8	
Approach LOS		B			A			B			A	
Queue Length 50th (m)		36.7			9.3			14.0			2.5	
Queue Length 95th (m)		44.2			14.8			29.0			17.2	
Internal Link Dist (m)		196.2			187.5			143.1			137.1	
Turn Bay Length (m)												
Base Capacity (vph)		1630			1672			559			664	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.74			0.16			0.29			0.33	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 80.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Clayton Park/Bayview & Lacewood



EKISTICS PLANNING & DESIGN

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	487	22	175	876	92	155
Future Volume (vph)	487	22	175	876	92	155
Satd. Flow (prot)	1868	0	1825	1883	1825	1633
Flt Permitted			0.441		0.950	
Satd. Flow (perm)	1868	0	829	1883	1696	1487
Satd. Flow (RTOR)	5					168
Lane Group Flow (vph)	536	0	184	922	100	168
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	4	
Permitted Phases			6			4
Total Split (s)	94.0		94.0	94.0	26.0	26.0
Total Lost Time (s)	4.5		4.0	4.0	4.0	4.0
Act Effct Green (s)	97.6		98.1	98.1	13.9	13.9
Actuated g/C Ratio	0.81		0.82	0.82	0.12	0.12
v/c Ratio	0.35		0.27	0.60	0.47	0.53
Control Delay	3.9		4.1	6.3	56.3	13.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	3.9		4.1	6.3	56.3	13.1
LOS	A		A	A	E	B
Approach Delay	3.9			5.9	29.2	
Approach LOS	A			A	C	
Queue Length 50th (m)	27.1		8.4	64.0	23.6	0.0
Queue Length 95th (m)	48.2		18.7	113.7	40.1	20.2
Internal Link Dist (m)	212.2			218.2	156.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1520		677	1539	334	409
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.35		0.27	0.60	0.30	0.41

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Flamingo & Bedford Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	576	28	33	1312	41	155
Future Volume (Veh/h)	576	28	33	1312	41	155
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	606	29	35	1381	45	168
Pedestrians	58				30	
Lane Width (m)	3.7				3.7	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			665		1469	650
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			665		1469	650
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		58	59
cM capacity (veh/h)			910		107	406

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	635	495	921	45	168
Volume Left	0	35	0	45	0
Volume Right	29	0	0	0	168
cSH	1700	910	1700	107	406
Volume to Capacity	0.37	0.04	0.54	0.42	0.41
Queue Length 95th (m)	0.0	1.0	0.0	14.1	15.9
Control Delay (s)	0.0	1.1	0.0	60.9	20.0
Lane LOS		A		F	C
Approach Delay (s)	0.0	0.4		28.6	
Approach LOS				D	

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	721	22	52	1400	16	112
Future Volume (Veh/h)	721	22	52	1400	16	112
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	759	23	55	1474	17	122
Pedestrians	29			20	43	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	4	
Right turn flare (veh)						4
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			825		1690	834
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			825		1690	834
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		77	59
cM capacity (veh/h)			784		75	299

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	782	546	983	139
Volume Left	0	55	0	17
Volume Right	23	0	0	122
cSH	1700	784	1700	341
Volume to Capacity	0.46	0.07	0.58	0.41
Queue Length 95th (m)	0.0	1.8	0.0	15.4
Control Delay (s)	0.0	1.9	0.0	30.1
Lane LOS		A		D
Approach Delay (s)	0.0	0.7		30.1
Approach LOS				D

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	823	10	10	1442	10	10
Future Volume (Veh/h)	823	10	10	1442	10	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	866	11	11	1518	11	11
Pedestrians	20			20	20	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			897		1692	912
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			897		1692	912
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		87	96
cM capacity (veh/h)			752		82	271

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	877	517	1012	22
Volume Left	0	11	0	11
Volume Right	11	0	0	11
cSH	1700	752	1700	125
Volume to Capacity	0.52	0.01	0.60	0.18
Queue Length 95th (m)	0.0	0.4	0.0	4.9
Control Delay (s)	0.0	0.4	0.0	39.7
Lane LOS		A		E
Approach Delay (s)	0.0	0.1		39.7
Approach LOS				E

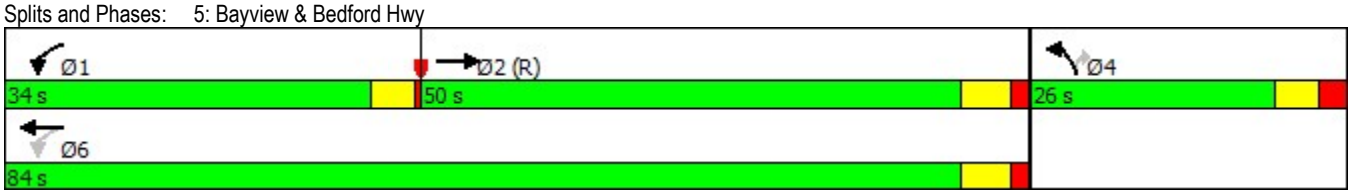
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	712	107	749	1477	50	406
Future Volume (vph)	712	107	749	1477	50	406
Satd. Flow (prot)	3516	0	1921	1983	2107	2241
Flt Permitted			0.225		0.950	
Satd. Flow (perm)	3516	0	455	1983	2107	2241
Satd. Flow (RTOR)	18					406
Lane Group Flow (vph)	862	0	749	1477	54	406
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	50.0		34.0	84.0	26.0	26.0
Total Lost Time (s)	5.8		-0.5	1.3	6.0	3.0
Act Effct Green (s)	45.2		84.5	82.7	20.0	23.0
Actuated g/C Ratio	0.41		0.77	0.75	0.18	0.21
v/c Ratio	0.59		0.94	0.99	0.14	0.51
Control Delay	27.0		41.0	25.0	39.0	6.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	27.0		41.0	25.0	39.0	6.2
LOS	C		D	C	D	A
Approach Delay	27.0			30.4	10.0	
Approach LOS	C			C	B	
Queue Length 50th (m)	78.1		97.6	87.9	10.3	0.0
Queue Length 95th (m)	99.1		m#176.5	#425.8	21.9	24.9
Internal Link Dist (m)	307.4			271.2	169.9	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1455		809	1490	383	789
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.59		0.93	0.99	0.14	0.51

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 13 (12%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 26.9 — Intersection LOS: C
Intersection Capacity Utilization 88.0% — 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Bayview & Bedford Hwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1073	45	80	2166	60	110
Future Volume (vph)	1073	45	80	2166	60	110
Satd. Flow (prot)	3558	0	1807	3579	1807	1617
Flt Permitted			0.186		0.950	
Satd. Flow (perm)	3558	0	354	3579	1807	1617
Satd. Flow (RTOR)	7					120
Lane Group Flow (vph)	1176	0	84	2280	65	120
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	71.0		18.0	89.0	21.0	21.0
Total Lost Time (s)	5.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	74.2		85.0	83.2	15.0	15.0
Actuated g/C Ratio	0.67		0.77	0.76	0.14	0.14
v/c Ratio	0.49		0.23	0.84	0.26	0.37
Control Delay	5.8		4.5	12.9	45.8	11.3
Queue Delay	0.0		0.0	0.2	0.0	0.0
Total Delay	5.8		4.5	13.0	45.8	11.3
LOS	A		A	B	D	B
Approach Delay	5.8			12.7	23.4	
Approach LOS	A			B	C	
Queue Length 50th (m)	28.0		3.7	153.2	13.4	0.0
Queue Length 95th (m)	44.5		7.1	190.8	27.0	16.9
Internal Link Dist (m)	271.2			230.3	79.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	2403		458	2707	246	324
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	50	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.49		0.18	0.86	0.26	0.37

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

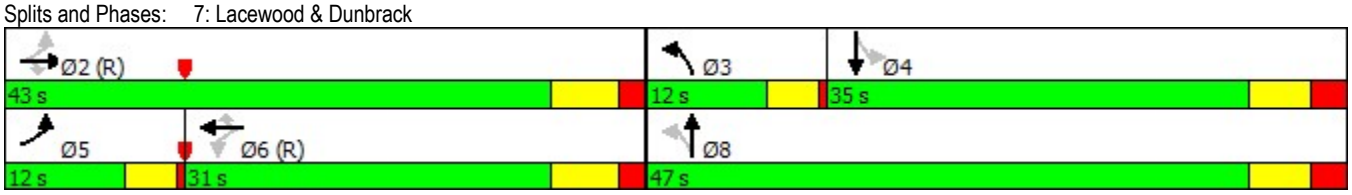
Splits and Phases: 6: 50 Bedford Hwy & Bedford Hwy

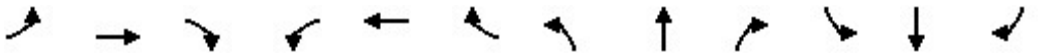
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	233	203	176	339	34	209	451	144	71	751	230
Future Volume (vph)	147	233	203	176	339	34	209	451	144	71	751	230
Satd. Flow (prot)	1767	3500	1759	1807	3579	1617	1807	3458	0	1668	3195	0
Flt Permitted	0.394			0.595			0.124			0.406		
Satd. Flow (perm)	733	3500	1759	1132	3579	1617	236	3458	0	713	3195	0
Satd. Flow (RTOR)			221			142		65			49	
Lane Group Flow (vph)	160	253	221	191	368	37	227	647	0	77	1066	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	12.0	43.0	43.0	31.0	31.0	31.0	12.0	47.0		35.0	35.0	
Total Lost Time (s)	4.0	4.1	4.1	4.1	4.1	4.1	1.4	4.1		4.1	4.1	
Act Effct Green (s)	39.0	38.9	38.9	27.1	27.1	27.1	45.6	42.9		30.9	30.9	
Actuated g/C Ratio	0.43	0.43	0.43	0.30	0.30	0.30	0.51	0.48		0.34	0.34	
v/c Ratio	0.39	0.17	0.25	0.56	0.34	0.06	0.75	0.38		0.32	0.94	
Control Delay	19.1	16.0	3.1	34.2	25.7	0.2	32.6	14.2		26.3	44.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.1	16.0	3.1	34.2	25.7	0.2	32.6	14.2		26.3	44.8	
LOS	B	B	A	C	C	A	C	B		C	D	
Approach Delay		12.3			26.8			19.0			43.6	
Approach LOS		B			C			B			D	
Queue Length 50th (m)	17.6	14.3	0.0	29.2	27.4	0.0	22.2	33.8		10.2	94.3	
Queue Length 95th (m)	31.0	22.2	12.6	52.2	39.8	0.0	#56.1	47.0		22.6	#138.2	
Internal Link Dist (m)		244.5			347.6			162.5			194.1	
Turn Bay Length (m)	60.0		70.0	65.0		65.0	70.0			20.0		
Base Capacity (vph)	409	1512	885	340	1075	585	304	1682		244	1129	
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	0.39	0.17	0.25	0.56	0.34	0.06	0.75	0.38		0.32	0.94	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 27.8 — Intersection LOS: C
Intersection Capacity Utilization 78.3% — 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: 7: Lacewood & Dunbrack





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	5	0	5	0	515	5	5	972	0
Future Volume (Veh/h)	0	0	0	5	0	5	0	515	5	5	972	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	5	0	5	0	560	5	5	1057	0
Pedestrians		20			20			20			20	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			2	
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (m)											220	
pX, platoon unblocked	0.96	0.96	0.96	0.96	0.96		0.96					
vC, conflicting volume	1392	1672	568	1141	1670	322	1077			585		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1322	1614	462	1060	1611	322	993			585		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	97	100	99	100			99		
cM capacity (veh/h)	104	97	511	163	97	656	663			983		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	10	280	285	534	528
Volume Left	0	5	0	0	5	0
Volume Right	0	5	0	5	0	0
cSH	1700	261	663	1700	983	1700
Volume to Capacity	0.00	0.04	0.00	0.17	0.01	0.31
Queue Length 95th (m)	0.0	1.0	0.0	0.0	0.1	0.0
Control Delay (s)	0.0	19.4	0.0	0.0	0.1	0.0
Lane LOS	A	C			A	
Approach Delay (s)	0.0	19.4	0.0		0.1	
Approach LOS	A	C				

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	40.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	262	53	16	438	41	14	29	6	17	25	526
Future Volume (vph)	195	262	53	16	438	41	14	29	6	17	25	526
Satd. Flow (prot)	0	3473	0	0	3521	0	0	1855	0	0	1644	0
Flt Permitted		0.622			0.932			0.861			0.993	
Satd. Flow (perm)	0	2194	0	0	3287	0	0	1618	0	0	1634	0
Satd. Flow (RTOR)		23			18			7			314	
Lane Group Flow (vph)	0	555	0	0	538	0	0	54	0	0	617	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	45.0	45.0		45.0	45.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		3.6			3.6			3.9			3.9	
Act Effct Green (s)		41.4			41.4			31.1			31.1	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
v/c Ratio		0.48			0.31			0.09			0.75	
Control Delay		13.6			11.3			14.4			16.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.6			11.3			14.4			16.5	
LOS		B			B			B			B	
Approach Delay		13.6			11.3			14.4			16.5	
Approach LOS		B			B			B			B	
Queue Length 50th (m)		26.9			23.5			4.6			39.7	
Queue Length 95th (m)		40.4			33.8			11.8			83.2	
Internal Link Dist (m)		196.2			187.5			143.1			137.1	
Turn Bay Length (m)												
Base Capacity (vph)		1146			1709			633			827	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.48			0.31			0.09			0.75	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 78.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Clayton Park/Bayview & Lacewood

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	502	23	184	921	97	163
Future Volume (vph)	502	23	184	921	97	163
Satd. Flow (prot)	1868	0	1825	1883	1825	1633
Flt Permitted			0.432		0.950	
Satd. Flow (perm)	1868	0	813	1883	1696	1487
Satd. Flow (RTOR)	5					177
Lane Group Flow (vph)	552	0	194	969	105	177
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	4	
Permitted Phases			6			4
Total Split (s)	94.0		94.0	94.0	26.0	26.0
Total Lost Time (s)	4.5		4.0	4.0	4.0	4.0
Act Effct Green (s)	97.3		97.8	97.8	14.2	14.2
Actuated g/C Ratio	0.81		0.82	0.82	0.12	0.12
v/c Ratio	0.36		0.29	0.63	0.49	0.53
Control Delay	4.1		4.4	6.9	56.4	12.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.1		4.4	6.9	56.4	12.9
LOS	A		A	A	E	B
Approach Delay	4.1			6.5	29.1	
Approach LOS	A			A	C	
Queue Length 50th (m)	28.8		9.2	72.0	24.7	0.0
Queue Length 95th (m)	51.1		20.5	129.0	41.5	20.3
Internal Link Dist (m)	212.2			218.2	156.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1515		662	1534	334	417
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.36		0.29	0.63	0.31	0.42

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Flamingo & Bedford Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	29	35	1379	43	163
Future Volume (Veh/h)	605	29	35	1379	43	163
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	637	31	37	1452	47	177
Pedestrians	58				30	
Lane Width (m)	3.7				3.7	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			698		1540	682
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			698		1540	682
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		51	54
cM capacity (veh/h)			884		96	387

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	668	521	968	47	177
Volume Left	0	37	0	47	0
Volume Right	31	0	0	0	177
cSH	1700	884	1700	96	387
Volume to Capacity	0.39	0.04	0.57	0.49	0.46
Queue Length 95th (m)	0.0	1.0	0.0	17.1	18.6
Control Delay (s)	0.0	1.2	0.0	74.2	21.9
Lane LOS		A		F	C
Approach Delay (s)	0.0	0.4		32.9	
Approach LOS				D	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	758	23	55	1471	17	117
Future Volume (Veh/h)	758	23	55	1471	17	117
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	798	24	58	1548	18	127
Pedestrians	29			20	43	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	4	
Right turn flare (veh)						4
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			865		1772	873
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			865		1772	873
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		73	55
cM capacity (veh/h)			758		66	282

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	822	574	1032	145
Volume Left	0	58	0	18
Volume Right	24	0	0	127
cSH	1700	758	1700	321
Volume to Capacity	0.48	0.08	0.61	0.45
Queue Length 95th (m)	0.0	2.0	0.0	17.9
Control Delay (s)	0.0	2.0	0.0	34.2
Lane LOS		A		D
Approach Delay (s)	0.0	0.7		34.2
Approach LOS				D

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	865	10	10	1516	10	10
Future Volume (Veh/h)	865	10	10	1516	10	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	911	11	11	1596	11	11
Pedestrians	20			20	20	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			942		1776	956
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			942		1776	956
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	96
cM capacity (veh/h)			724		72	253

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	922	543	1064	22
Volume Left	0	11	0	11
Volume Right	11	0	0	11
cSH	1700	724	1700	112
Volume to Capacity	0.54	0.02	0.63	0.20
Queue Length 95th (m)	0.0	0.4	0.0	5.5
Control Delay (s)	0.0	0.4	0.0	44.9
Lane LOS		A		E
Approach Delay (s)	0.0	0.1		44.9
Approach LOS				E

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	749	113	788	1552	52	427
Future Volume (vph)	749	113	788	1552	52	427
Satd. Flow (prot)	3516	0	1921	1983	2107	2241
Flt Permitted			0.201		0.950	
Satd. Flow (perm)	3516	0	406	1983	2107	2241
Satd. Flow (RTOR)	18					427
Lane Group Flow (vph)	907	0	788	1552	57	427
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	50.0		34.0	84.0	26.0	26.0
Total Lost Time (s)	5.8		-0.5	1.3	6.0	3.0
Act Effct Green (s)	44.2		84.5	82.7	20.0	23.0
Actuated g/C Ratio	0.40		0.77	0.75	0.18	0.21
v/c Ratio	0.64		1.00	1.04	0.15	0.53
Control Delay	28.4		53.2	39.1	39.1	6.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	28.4		53.2	39.1	39.1	6.2
LOS	C		D	D	D	A
Approach Delay	28.4			43.8	10.1	
Approach LOS	C			D	B	
Queue Length 50th (m)	83.6		~113.0	~381.4	10.9	0.0
Queue Length 95th (m)	105.7		m#188.2	#462.3	22.7	25.3
Internal Link Dist (m)	307.4			271.2	169.9	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1423		787	1490	383	806
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.64		1.00	1.04	0.15	0.53

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 13 (12%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 35.7 — Intersection LOS: D
Intersection Capacity Utilization 91.8% — 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.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Bayview & Bedford Hwy

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1128	47	84	2277	63	116
Future Volume (vph)	1128	47	84	2277	63	116
Satd. Flow (prot)	3558	0	1807	3579	1807	1617
Flt Permitted			0.171		0.950	
Satd. Flow (perm)	3558	0	325	3579	1807	1617
Satd. Flow (RTOR)	7					126
Lane Group Flow (vph)	1236	0	88	2397	68	126
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	71.0		18.0	89.0	21.0	21.0
Total Lost Time (s)	5.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	74.2		85.0	83.2	15.0	15.0
Actuated g/C Ratio	0.67		0.77	0.76	0.14	0.14
v/c Ratio	0.51		0.25	0.89	0.28	0.38
Control Delay	5.9		4.8	15.3	46.0	11.3
Queue Delay	0.0		0.0	0.4	0.0	0.0
Total Delay	5.9		4.8	15.7	46.0	11.3
LOS	A		A	B	D	B
Approach Delay	5.9			15.3	23.4	
Approach LOS	A			B	C	
Queue Length 50th (m)	29.6		3.9	176.7	14.0	0.0
Queue Length 95th (m)	46.5		7.3	223.0	27.9	17.3
Internal Link Dist (m)	271.2			230.3	79.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	2402		439	2707	246	329
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	68	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.51		0.20	0.91	0.28	0.38

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 78.6%	ICU Level of Service D
Analysis Period (min) 15	

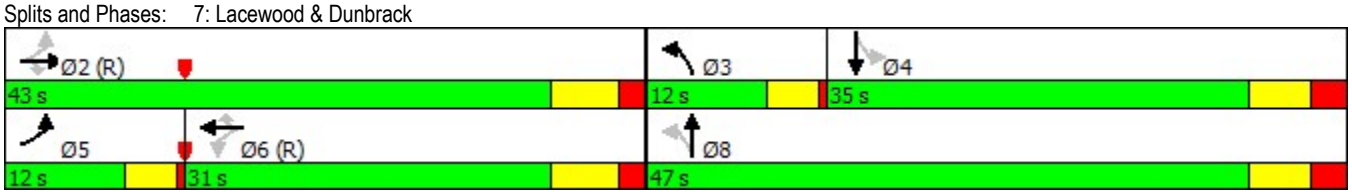
Splits and Phases: 6: 50 Bedford Hwy & Bedford Hwy

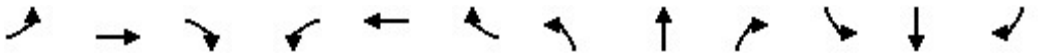
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	245	213	185	357	36	220	474	151	74	790	241
Future Volume (vph)	154	245	213	185	357	36	220	474	151	74	790	241
Satd. Flow (prot)	1767	3500	1759	1807	3579	1617	1807	3458	0	1668	3195	0
Flt Permitted	0.377			0.588			0.124			0.393		
Satd. Flow (perm)	701	3500	1759	1118	3579	1617	236	3458	0	690	3195	0
Satd. Flow (RTOR)			232			142		65			49	
Lane Group Flow (vph)	167	266	232	201	388	39	239	679	0	80	1121	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	12.0	43.0	43.0	31.0	31.0	31.0	12.0	47.0		35.0	35.0	
Total Lost Time (s)	4.0	4.1	4.1	4.1	4.1	4.1	1.4	4.1		4.1	4.1	
Act Effct Green (s)	39.0	38.9	38.9	27.0	27.0	27.0	45.6	42.9		30.9	30.9	
Actuated g/C Ratio	0.43	0.43	0.43	0.30	0.30	0.30	0.51	0.48		0.34	0.34	
v/c Ratio	0.42	0.18	0.26	0.60	0.36	0.07	0.79	0.40		0.34	0.99	
Control Delay	19.6	16.1	3.0	35.7	25.9	0.2	36.3	14.5		27.1	54.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.6	16.1	3.0	35.7	25.9	0.2	36.3	14.5		27.1	54.6	
LOS	B	B	A	D	C	A	D	B		C	D	
Approach Delay		12.4			27.5			20.2			52.7	
Approach LOS		B			C			C			D	
Queue Length 50th (m)	18.5	15.2	0.0	31.1	29.0	0.0	23.8	36.2		10.7	102.1	
Queue Length 95th (m)	32.1	23.3	12.8	55.4	41.9	0.0	#61.6	49.8		23.8	#149.9	
Internal Link Dist (m)		244.5			347.6			162.5			194.1	
Turn Bay Length (m)	60.0		70.0	65.0		65.0	70.0			20.0		
Base Capacity (vph)	398	1512	892	336	1075	584	304	1682		236	1129	
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	0.42	0.18	0.26	0.60	0.36	0.07	0.79	0.40		0.34	0.99	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 31.5 — Intersection LOS: C
Intersection Capacity Utilization 80.3% — 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: 7: Lacewood & Dunbrack





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	5	0	5	0	541	5	5	1022	0
Future Volume (Veh/h)	0	0	0	5	0	5	0	541	5	5	1022	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	5	0	5	0	588	5	5	1111	0
Pedestrians		20			20			20			20	
Lane Width (m)		3.7			3.7			3.7			3.7	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			2	
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (m)											220	
pX, platoon unblocked	0.95	0.95	0.95	0.95	0.95		0.95					
vC, conflicting volume	1460	1754	596	1196	1752	336	1131			613		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1380	1690	471	1103	1687	336	1034			613		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	97	100	99	100			99		
cM capacity (veh/h)	93	86	500	150	87	643	635			959		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	10	294	299	560	556
Volume Left	0	5	0	0	5	0
Volume Right	0	5	0	5	0	0
cSH	1700	244	635	1700	959	1700
Volume to Capacity	0.00	0.04	0.00	0.18	0.01	0.33
Queue Length 95th (m)	0.0	1.0	0.0	0.0	0.1	0.0
Control Delay (s)	0.0	20.4	0.0	0.0	0.1	0.0
Lane LOS	A	C			A	
Approach Delay (s)	0.0	20.4	0.0		0.1	
Approach LOS	A	C				

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	41.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	276	55	17	460	43	15	31	7	18	26	553
Future Volume (vph)	205	276	55	17	460	43	15	31	7	18	26	553
Satd. Flow (prot)	0	3477	0	0	3525	0	0	1852	0	0	1642	0
Flt Permitted		0.613			0.931			0.849			0.992	
Satd. Flow (perm)	0	2165	0	0	3287	0	0	1594	0	0	1632	0
Satd. Flow (RTOR)		23			18			8			295	
Lane Group Flow (vph)	0	583	0	0	565	0	0	58	0	0	649	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	45.0	45.0		45.0	45.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		3.6			3.6			3.9			3.9	
Act Effct Green (s)		41.4			41.4			31.1			31.1	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
v/c Ratio		0.52			0.33			0.09			0.80	
Control Delay		14.2			11.5			14.4			20.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.2			11.5			14.4			20.4	
LOS		B			B			B			C	
Approach Delay		14.2			11.5			14.4			20.4	
Approach LOS		B			B			B			C	
Queue Length 50th (m)		29.0			25.0			4.9			49.6	
Queue Length 95th (m)		43.5			35.6			12.4			#113.4	
Internal Link Dist (m)		196.2			187.5			143.1			137.1	
Turn Bay Length (m)												
Base Capacity (vph)		1131			1709			624			814	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.52			0.33			0.09			0.80	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 15.5 — Intersection LOS: B
Intersection Capacity Utilization 79.9% — 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: Clayton Park/Bayview & Lacewood

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	584	23	214	1071	97	190
Future Volume (vph)	584	23	214	1071	97	190
Satd. Flow (prot)	1870	0	1825	1883	1825	1633
Flt Permitted			0.388		0.950	
Satd. Flow (perm)	1870	0	733	1883	1696	1487
Satd. Flow (RTOR)	5					207
Lane Group Flow (vph)	639	0	225	1127	105	207
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	4	
Permitted Phases			6			4
Total Split (s)	94.0		94.0	94.0	26.0	26.0
Total Lost Time (s)	4.5		4.0	4.0	4.0	4.0
Act Effct Green (s)	97.3		97.8	97.8	14.2	14.2
Actuated g/C Ratio	0.81		0.82	0.82	0.12	0.12
v/c Ratio	0.42		0.38	0.73	0.49	0.58
Control Delay	4.5		5.4	9.4	56.4	13.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.5		5.4	9.4	56.4	13.0
LOS	A		A	A	E	B
Approach Delay	4.5			8.7	27.6	
Approach LOS	A			A	C	
Queue Length 50th (m)	35.6		11.7	101.3	24.7	0.0
Queue Length 95th (m)	62.9		26.9	188.2	41.5	22.1
Internal Link Dist (m)	212.2			218.2	156.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1517		597	1534	334	441
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.42		0.38	0.73	0.31	0.47

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 72.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Flamingo & Bedford Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	715	29	40	1558	43	168
Future Volume (Veh/h)	715	29	40	1558	43	168
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	753	31	42	1640	47	183
Pedestrians	58				30	
Lane Width (m)	3.7				3.7	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	5				3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				259		
pX, platoon unblocked					0.80	
vC, conflicting volume			814		1760	798
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			814		1457	798
tC, single (s)			4.1		*5.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		64	44
cM capacity (veh/h)			801		130	324

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	784	589	1093	47	183
Volume Left	0	42	0	47	0
Volume Right	31	0	0	0	183
cSH	1700	801	1700	130	324
Volume to Capacity	0.46	0.05	0.64	0.36	0.56
Queue Length 95th (m)	0.0	1.3	0.0	11.9	26.2
Control Delay (s)	0.0	1.4	0.0	47.8	29.5
Lane LOS		A		E	D
Approach Delay (s)	0.0	0.5		33.3	
Approach LOS				D	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

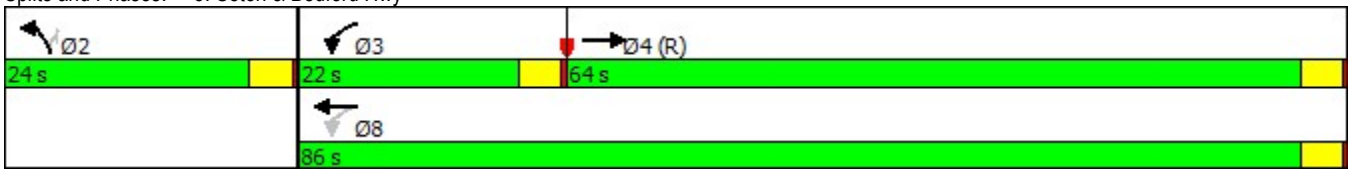
* User Entered Value

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	738	158	359	1453	220	245
Future Volume (vph)	738	158	359	1453	220	245
Satd. Flow (prot)	3526	0	0	3893	1825	1633
Flt Permitted				*0.610	0.950	
Satd. Flow (perm)	3526	0	0	2381	1722	1633
Satd. Flow (RTOR)	36					211
Lane Group Flow (vph)	943	0	0	1812	232	258
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases			8			2
Total Split (s)	64.0		22.0	86.0	24.0	24.0
Total Lost Time (s)	4.0			0.5	4.0	4.0
Act Effct Green (s)	82.0			85.5	20.0	20.0
Actuated g/C Ratio	0.75			0.78	0.18	0.18
v/c Ratio	0.36			0.98	0.70	0.55
Control Delay	5.1			10.8	54.7	14.2
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	5.1			10.8	54.7	14.2
LOS	A			B	D	B
Approach Delay	5.1			10.8	33.4	
Approach LOS	A			B	C	
Queue Length 50th (m)	31.5			177.0	49.6	9.0
Queue Length 95th (m)	40.0			m156.2	#79.2	34.2
Internal Link Dist (m)	235.4			71.6	132.6	
Turn Bay Length (m)						30.0
Base Capacity (vph)	2637			1850	331	469
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.36			0.98	0.70	0.55

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 43 (39%), Referenced to phase 4:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 95.7%	ICU Level of Service F
Analysis Period (min) 15	

* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Seton & Bedford Hwy



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	973	10	10	1802	10	10
Future Volume (Veh/h)	973	10	10	1802	10	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	1024	11	11	1897	11	11
Pedestrians	20			20	20	
Lane Width (m)	3.7			3.7	3.7	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	2			2	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	96					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			1055		2040	558
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			881		1954	339
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		78	98
cM capacity (veh/h)			700		50	588

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	683	352	643	1265	22
Volume Left	0	0	11	0	11
Volume Right	0	11	0	0	11
cSH	1700	1700	700	1700	92
Volume to Capacity	0.40	0.21	0.02	0.74	0.24
Queue Length 95th (m)	0.0	0.0	0.4	0.0	6.9
Control Delay (s)	0.0	0.0	0.4	0.0	55.9
Lane LOS			A		F
Approach Delay (s)	0.0		0.1		55.9
Approach LOS					F

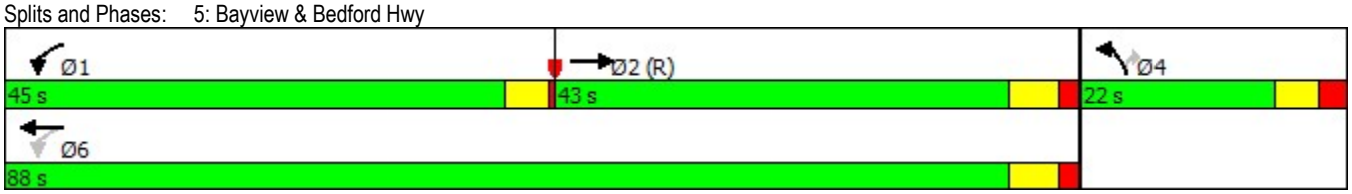
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	864	106	709	1839	51	406
Future Volume (vph)	864	106	709	1839	51	406
Satd. Flow (prot)	3560	0	0	3855	2107	2241
Flt Permitted				*0.600	0.950	
Satd. Flow (perm)	3560	0	0	2313	2107	2241
Satd. Flow (RTOR)	13					406
Lane Group Flow (vph)	1021	0	0	2548	55	406
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	43.0		45.0	88.0	22.0	22.0
Total Lost Time (s)	5.8			1.3	6.0	3.0
Act Effct Green (s)	37.2			86.7	16.0	19.0
Actuated g/C Ratio	0.34			0.79	0.15	0.17
v/c Ratio	0.84			1.05	0.18	0.56
Control Delay	36.3			37.2	43.0	7.3
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	36.3			37.2	43.0	7.3
LOS	D			D	D	A
Approach Delay	36.3			37.2	11.6	
Approach LOS	D			D	B	
Queue Length 50th (m)	85.0			~208.2	11.1	0.0
Queue Length 95th (m)	102.3			m#232.5	23.4	26.1
Internal Link Dist (m)	307.4			271.2	169.9	
Turn Bay Length (m)						30.0
Base Capacity (vph)	1212			2435	306	722
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.84			1.05	0.18	0.56

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 35 (32%), Referenced to phase 2:EBT, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 34.0	Intersection LOS: C
Intersection Capacity Utilization 114.1%	ICU Level of Service H
Analysis Period (min) 15	

* User Entered Value
~ 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Bayview & Bedford Hwy

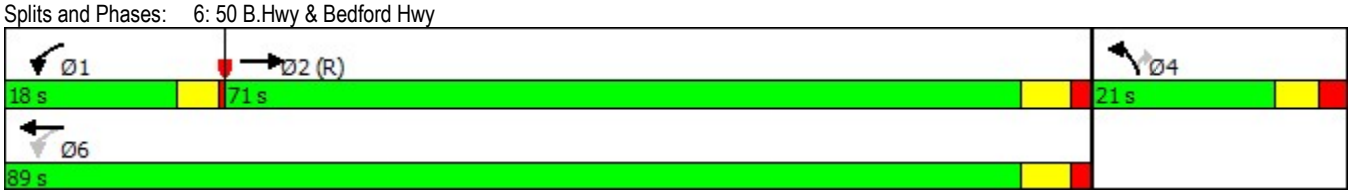


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1217	52	84	2480	68	116
Future Volume (vph)	1217	52	84	2480	68	116
Satd. Flow (prot)	3559	0	1807	3579	1807	1617
Flt Permitted			0.147		0.950	
Satd. Flow (perm)	3559	0	280	3579	1807	1617
Satd. Flow (RTOR)	7					126
Lane Group Flow (vph)	1336	0	88	2611	74	126
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	71.0		18.0	89.0	21.0	21.0
Total Lost Time (s)	5.8		4.0	5.8	6.0	6.0
Act Effct Green (s)	74.2		85.0	83.2	15.0	15.0
Actuated g/C Ratio	0.67		0.77	0.76	0.14	0.14
v/c Ratio	0.56		0.28	0.96	0.30	0.38
Control Delay	20.0		5.2	23.7	46.5	11.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	20.0		5.2	23.7	46.5	11.3
LOS	B		A	C	D	B
Approach Delay	20.0			23.1	24.3	
Approach LOS	B			C	C	
Queue Length 50th (m)	98.0		3.9	235.3	15.3	0.0
Queue Length 95th (m)	130.2		7.3	#354.6	30.0	17.3
Internal Link Dist (m)	271.2			230.3	79.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	2402		410	2707	246	329
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.56		0.21	0.96	0.30	0.38

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 22.2 — Intersection LOS: C
Intersection Capacity Utilization 84.2% — 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: 50 B.Hwy & Bedford Hwy

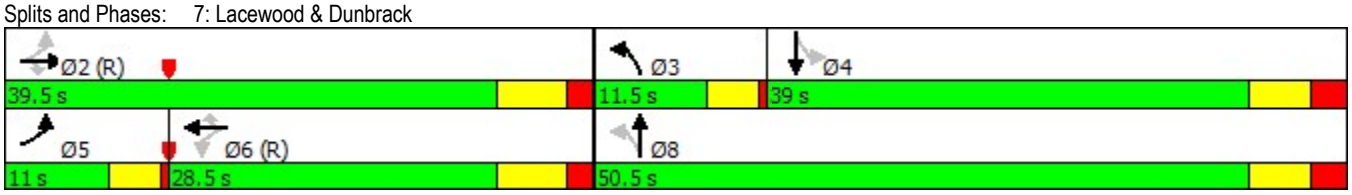


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	245	213	185	357	40	220	535	151	82	871	266
Future Volume (vph)	176	245	213	185	357	40	220	535	151	82	871	266
Satd. Flow (prot)	1767	3500	1759	1807	3579	1617	1807	3468	0	1668	3195	0
Flt Permitted	0.356			0.588			0.110			0.368		
Satd. Flow (perm)	662	3500	1759	1118	3579	1617	209	3468	0	646	3195	0
Satd. Flow (RTOR)			232			142		59			52	
Lane Group Flow (vph)	191	266	232	201	388	43	239	746	0	89	1236	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	11.0	39.5	39.5	28.5	28.5	28.5	11.5	50.5		39.0	39.0	
Total Lost Time (s)	4.0	4.1	4.1	4.1	4.1	4.1	1.4	4.1		4.1	4.1	
Act Effct Green (s)	35.5	35.4	35.4	24.4	24.4	24.4	49.1	46.4		34.9	34.9	
Actuated g/C Ratio	0.39	0.39	0.39	0.27	0.27	0.27	0.55	0.52		0.39	0.39	
v/c Ratio	0.55	0.19	0.28	0.66	0.40	0.08	0.82	0.41		0.36	0.97	
Control Delay	25.6	18.4	3.5	41.4	28.3	0.3	40.1	13.0		24.7	46.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	25.6	18.4	3.5	41.4	28.3	0.3	40.1	13.0		24.7	46.7	
LOS	C	B	A	D	C	A	D	B		C	D	
Approach Delay		15.4			30.6			19.6			45.2	
Approach LOS		B			C			B			D	
Queue Length 50th (m)	23.1	16.3	0.0	32.5	30.3	0.0	24.4	38.0		11.3	110.3	
Queue Length 95th (m)	39.3	25.1	13.8	#62.1	43.7	0.0	#64.1	51.4		24.8	#159.7	
Internal Link Dist (m)		244.5			347.6			162.5			194.1	
Turn Bay Length (m)	60.0		70.0	65.0		65.0	70.0			20.0		
Base Capacity (vph)	347	1376	832	303	970	541	293	1816		250	1270	
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	0.55	0.19	0.28	0.66	0.40	0.08	0.82	0.41		0.36	0.97	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 30.1 — Intersection LOS: C
Intersection Capacity Utilization 83.3% — 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: 7: Lacewood & Dunbrack

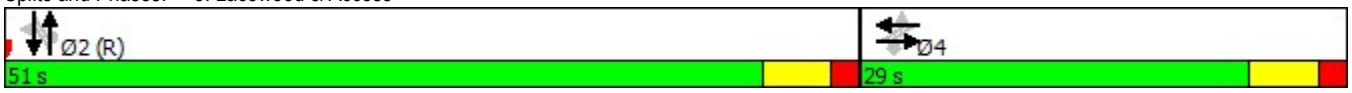


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	0	200	5	0	5	113	515	5	5	935	145
Future Volume (vph)	93	0	200	5	0	5	113	515	5	5	935	145
Satd. Flow (prot)	0	1825	1633	0	1748	0	0	3556	0	0	3517	0
Flt Permitted		0.751			0.856			0.603			0.953	
Satd. Flow (perm)	0	1443	1633	0	1533	0	0	2164	0	0	3351	0
Satd. Flow (RTOR)			100		40			1			35	
Lane Group Flow (vph)	0	101	217	0	10	0	0	688	0	0	1179	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Total Split (s)	29.0	29.0	29.0	29.0	29.0		51.0	51.0		51.0	51.0	
Total Lost Time (s)		5.9	5.9		5.9			5.9			5.9	
Act Effct Green (s)		12.0	12.0		12.0			56.2			56.2	
Actuated g/C Ratio		0.15	0.15		0.15			0.70			0.70	
v/c Ratio		0.47	0.66		0.04			0.45			0.50	
Control Delay		36.7	26.2		0.2			7.1			5.0	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		36.7	26.2		0.2			7.1			5.0	
LOS		D	C		A			A			A	
Approach Delay		29.6			0.2			7.1			5.0	
Approach LOS		C			A			A			A	
Queue Length 50th (m)		15.1	17.6		0.0			20.2			29.3	
Queue Length 95th (m)		27.1	35.9		0.1			42.3			47.8	
Internal Link Dist (m)		111.7			74.7			169.9			196.2	
Turn Bay Length (m)			50.0									
Base Capacity (vph)		416	542		471			1519			2362	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.24	0.40		0.02			0.45			0.50	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 9.2 — Intersection LOS: A
Intersection Capacity Utilization 72.1% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: Lacewood & Access



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	353	60	17	582	37	20	31	7	6	26	484
Future Volume (vph)	189	353	60	17	582	37	20	31	7	6	26	484
Satd. Flow (prot)	0	3486	0	0	3540	0	0	1851	0	0	1640	0
Flt Permitted		0.594			0.932			0.823			0.998	
Satd. Flow (perm)	0	2098	0	0	3302	0	0	1548	0	0	1638	0
Satd. Flow (RTOR)		22			12			8			209	
Lane Group Flow (vph)	0	654	0	0	691	0	0	64	0	0	561	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	45.0	45.0		45.0	45.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		3.6			3.6			3.9			3.9	
Act Effct Green (s)		41.4			41.4			31.1			31.1	
Actuated g/C Ratio		0.52			0.52			0.39			0.39	
v/c Ratio		0.60			0.40			0.11			0.73	
Control Delay		11.9			12.4			14.7			19.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.9			12.4			14.7			19.5	
LOS		B			B			B			B	
Approach Delay		11.9			12.4			14.7			19.5	
Approach LOS		B			B			B			B	
Queue Length 50th (m)		21.3			32.6			5.6			46.8	
Queue Length 95th (m)		27.5			45.1			13.4			87.4	
Internal Link Dist (m)		196.2			187.5			143.1			137.1	
Turn Bay Length (m)												
Base Capacity (vph)		1096			1714			606			764	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.60			0.40			0.11			0.73	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Clayton Park/Bayview & Lacewood

EKISTICS PLANNING & DESIGN