

Transportation Impact Study Addendum

PROPOSED RESIDENTIAL DEVELOPMENT

Coscorp Joshua Creek
OAKVILLE, ONTARIO

July 2023
Project No: NT-22-128

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NextEng Consulting Group Inc.

July 11, 2023

Attention: Tom Baskerville

Coscorp Inc.
6625 Kitimat Road, Unit 58
Mississauga, ON L5N 6J1

**Re: Transportation Impact Study Addendum
Proposed Residential Development – Draft Plan of Subdivision
Part of Lot 10 Concession 1, Town of Oakville
Our Project No. NT-22-128**

Nextrans Consulting Engineers (a Division of NextEng Consulting Group Inc.) is pleased to present the enclosed Transportation Impact Study for the above noted site in support of a proposed draft plan of subdivision for a proposed residential development.

The proposed residential development is located south of Burnhamthorpe Road E, north of Dundas Street East between Eighth Line and Ninth Line in the North Oakville East Secondary Plan, in the Town of Oakville. The subject site is currently vacant. The proposed residential development consists of a total 181 residential dwelling units, with 129 single-detached and 52 street townhouse units. The proposed development access is provided via internal public streets connecting to Mattamy Joshua Creek Phase 3, and eventually to Burnhamthorpe Road E via future proposed draft plan of subdivisions to the north. Under the interim conditions where the proposed draft plans of subdivision to the north are not completed, the anticipated traffic from the proposed development will be routing primarily to and from Dundas Street via John McKay Boulevard, Meadowridge Drive and William Cutmore Boulevard, as well as Eighth Line via Wheat Boom Drive. The proposed development will also protect for future Street C and Street A extensions to the west and north, respectively.

The transportation impact study is prepared in accordance with the Town of Oakville and the Region of Halton Transportation Impact Study guidelines, and consistent with background transportation studies conducted in the area. Nextrans acknowledged that some of the information from this Study has utilized and referenced from the GHD Traffic Impact Study dated April, 2022 prepared on behalf of Mattamy Joshua Creek Phase 3 proposed plan of subdivision with permission from GHD and Mattamy. This is to ensure consistency. The Study concludes that the proposed development can adequately be accommodated by the existing and future transportation network, future transit services for the area, as well as the recommended measures identified in this report.

We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

Nextrans Consulting Engineers

A Division of NextEng Consulting Group Inc.

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Report Submission Record

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TOWN OF OAKVILLE COMMENTS

The following comments were received from the Town of Oakville and appropriate responses are provided below:

Sustainable Transportation

1. Please indicate bicycling facilities, path as per Figure 6.1 of Design Brief. Please refer to OTM book 18 for details. Please indicate where the cycle parking will be located at the village square.

Response: Noted. However, this comment will be addressed through the updated Design Brief as this was not part of the Transportation Impact Study.

2. Please indicate on-street parking details of proposed roads associated with future cycle lanes.

Response: It should be noted that the proposed development only consists of local roads, therefore, no cycling lanes are provided. This is similar to the Mattamy – Joshua Creek Phase 3 proposed subdivision. The proposed speed limit will be posted at 40 km/h, which is suitable for shared on-street cycling.

Transportation

3. As per the Pre-consultation requirements, an approved Scope of Work from the Region of Halton/Town of Oakville was required. Please provide a copy of the approved scope of work from either the Region/Town in the Appendix.

Response: Noted. Nextrans has submitted a study term of reference for this Study Update. It should be noted that as the Town has provided comprehensive comments in the original TIS submitted, therefore, these are similar or more comprehensive than an approved scope of work as mentioned in the comment above. Nextrans has addressed all of the Town's comments in this Study Addendum.

4. All reports submitted for review should be finalized, signed and stamped by a Professional Engineer.

Response: Noted and Professional Engineer stamp has been provided in this Study Addendum.

5. Executive Summary

- a. Proposed Development: The proposed development should not rely strictly on connection to "Mattamy Joshua Creek Phase 3" development for access as the it is unclear when the road network will be completed. The development land boundaries onto Burnhamthorpe Road, please provide information for access onto Burnhamthorpe Road.

Response: It should be noted that the boundary of the proposed draft plan of subdivision is south of the Joshua Creek. The proposed development is not crossing the existing creek, therefore, no access can be provided to Burnhamthorpe Road E. In addition, there is an existing use for the lands abutting Burnhamthorpe Road E such as the Joshua Cree Heritage Art Centre, which is not part of the proposed development, therefore, an access to Burnhamthorpe Road E cannot be provided.

As all subdivisions in the North Oakville East Secondary Plan will be built in phases, this proposed draft plan of subdivision is no different from the other draft plan of subdivisions in the area, including the Mattamy – Joshua Creek Phase proposed development. This proposed development will be coordinated with the Mattamy – Joshua Creek Phase 3 development in order to move ahead as the proposed subdivision access will be developed in a coordinated manner.

- b. Auto- Mode Assessment: Please include support to the statement made.

Response: The analysis indicates that there are some critical movements at the intersections along Dundas Street E. These are due to many factors such as:

- The fine grid road network identified in the North Oakville East Secondary Plan is not completed yet. There are still some gaps and missing links that force vehicles to concentrate at certain movements such as the southbound left turns at all intersections along Dundas Street E;
- The majority of the existing developments are concentrated along north and south Dundas Street E corridor, therefore, no existing traffic from these developments is using William Halton Parkway or Burnhamthorpe Road E at this time;
- The proposed northern east-west collector road and north-south collector roads are not completed, it doesn't give existing traffic many other options at this time; and
- There is a significant amount of traffic is to and from the Hwy 403 interchange

Under the existing conditions, Dundas Street E is the main east-west and Trafalgar Road is the main north-south corridors that serve the developments along both the south side and north side of Dundas Street E, as well as the proposed developments in the North Oakville East Secondary Plan. In the future, with the implementation of the completion of other north-south collector roads identified in the North Oakville East Secondary Plan, some of the east-west and north-south traffic will be using these corridors instead of concentrating on the Dundas Street E and Trafalgar Road corridors. As new transportation capacity will be available in these new corridors in the future, it will provide relief for the intersections along Dundas Street E.

- c. Please include in this section, the study horizons for the proposed development.

Response: Noted. The proposed development is anticipated to be completed within the 5-year horizon (by 2028), which is one year after the anticipated completion of the Mattamy – Joshua Creek Phase 3 development. This has been included in this Study Addendum.

6. Introduction: Please identify phases for anticipated access to proposed development.

Response: As noted throughout this Study Addendum and some of the responses provided above, the proposed development access will be coordinated with the Mattamy – Joshua Creek Phase 3. As illustrated in the proposed draft plan of subdivision, access to the proposed development is not possible without coordination with the adjacent subdivisions.

Therefore, the analysis conducted in the previous Transportation Impact Study dated July 2022 and this Study Addendum assess only the access options to connect to Mattamy – Joshua Creek Phase 3 proposed subdivision.

7. Section 2.0 Existing Condition Assessment:

- i. Existing Road Network: Please review and confirm all the information provided for the existing road network description in Table 1 is accurate.

Response: Noted. Nexttrans has confirmed with all the information available to date and updated Table 1.

- ii. Please provide reference to the location of the figures provided, either in the body of the report or in the appendix. (E.g. Figure 3 is mentioned in the report but not illustrated in the report.)

Response: Noted. The figures have been provided right after the page it was referenced. In the previous TIS, figures were provided at the end of the report so that the figures do not interfere with the text.

- iii. Walking & Cycling Section: There are no existing walking/cycling facilities within the study area. The 2017 ATMP illustrates the future active routes within the study area.

Response: Noted. Nexttrans has clearly indicated that the map in Figure 4 of the Study illustrates the future active transportation routes. Nexttrans has reiterated this statement in the Study Addendum to be clear and move these future maps to the future total conditions assessment.

- iv. Figure 4 & Figure 5: Please illustrate the site location bordering Burnhamthorpe as illustrated in the site plan.

Response: It should be noted that the proposed draft plan of subdivision limit does not abut Burnhamthorpe Road E. The parcel of land that abuts Burnhamthorpe Road E is not part of the proposed development and it currently has existing uses (i.e. Joshua Creek Heritage Art Centre). This use will remain and will not be redeveloped at this time.

- v. Transit Section: Please update statement to reflect the actual number of routes servicing this subdivision.

Response: Based on Nexttrans' review of the existing transit services in the area, there are four transit routes that are currently servicing the area, which is one more than the previous study indicated. This Study Addendum has reflected the existing Route 5/5A Dundas.

- vi. Transit Section: Both Trafalgar Road and Dundas Road transit routes are more than 400m away from the proposed subdivision and do not currently service the study area as there are no existing developments. Please use the North Oakville Secondary Plan to identify future Transit Route in the "Future Conditions section".

Response: Noted. The texts in the Study Addendum have been revised to reference the potential future services.

- vii. Section 2.3: This section seems to be referring to future viii. Section 2.4: GHD undertook their counts in 2019 which is over three (3) years old, please undertake/obtain the most recent turning movement counts for the approved study area intersections.

Response: Noted. The latest turning movement counts have been undertaken by Spectrum and reflected in this Study Addendum. The counts were conducted in May, 2023 and early June, 2023.

- viii. Section 2.4: Similar to comment above, please remain consistent with the reference to figures provided in the report body/appendix.

Response: Noted. The figures have been provided right after the page it was referenced.

- ix. Section 2.6: Please clarify the highlighted statement with respect to re-distribution of trips from Highway 403 from Dundas Street E to Burnhamthorpe Road.

Response: Under the existing conditions, Dundas Street E is the main east-west and Trafalgar Road is the main north-south corridors that serve the developments along both the south side and north side of Dundas Street E, as well as the proposed developments in the North Oakville East Secondary Plan. In the future, with the implementation of other east-west and north-south collector roads identified in the North Oakville East Secondary Plan, some of the site traffic in the area that will be to/from the north, east and west will be using these corridors instead of concentrating on the Dundas Street E corridor. As new transportation capacity will be available in these new collector roads in the future, it will provide relief for the intersections along Dundas Street E. This was the intent of the Secondary Plan road network.

8. Section 4.0 Future Background Conditions

- i. Section 4.1: The proposed development is anticipated to be built by 2024, however Joshua Creek Phase 3 is anticipating a 2027 build-out year. Please clarify how the horizon of the developments are anticipated to align.

Response: It should be noted that Mattamy – Joshua Creek Phase 3 completion is not 2027, the 2027 is the planning 5-year horizon for transportation analysis (from the date of the Study 2022 to 2027). Therefore, the proposed development is expected to commence or completed within the same horizon year as the Mattamy – Joshua Creek Phase 3 subdivision.

As indicated in the previous responses, the proposed development access will be coordinated with the Mattamy – Joshua Creek Phase 3. As illustrated in the proposed draft plan of subdivision, access to the proposed development is not possible without coordination with the adjacent subdivisions.

- ii. Section 4.1: A five-year horizon should be completed post build-out.

Response: As the proposed development is tied to the access to be provided as part of the Mattamy – Joshua Creek Phase 3, we have assumed the same analysis horizon year as the GHD report. It should be noted that 2027 is the GHD planning horizon year, not completion or full build-out of Mattamy – Joshua Creek Phase 3. We are proposing 2028 analysis horizon year (5-year from the Study date of 2023 as per Halton’s TIS Guidelines). This is consistent with all background studies prepared for this area.

- iii. Section 4.5: Please clarify how all the subdivision intersections along Dundas Street E are “operating at acceptable level of service” when the intersections are operating over the critical capacity of 0.85.

Response: Based on the intersection capacity analysis conducted, the intersections are expected to operate acceptable from overall intersection operation perspective. Each signalized intersection along Dundas Street E corridor only has one or two critical movements (mostly left turn movements and some through movements) that are expected to be higher than v/c ratio of 0.85. The majority of the movements are under v/c ratio of 0.85. Given that this area is still developing and a fine grid transportation network is being implemented in various phases, the critical movements with v/c ratios greater than 0.85 are the results of missing road links. The missing links temporarily force the residents to concentrate on these critical movement in the interim conditions until the full transportation network in the North Oakville East Secondary Plan is constructed. This is typical for any area that is under major redevelopment. For these reasons, Nexttrans concluded that these intersections along Dundas Street E are expected to operate at acceptable levels of service given the context of the area.

However, we acknowledged in this Study Addendum that there are critical movements with v/c over 0.85 and these movements will need to be monitored in the future by the Region and the Town. At this time, we do not recommend any physical improvements as the traffic pattern will change once the fine grid transportation network is completed. Any improvements at this time would be throw away costs, which will have significant impact on traffic disruption, noise, congestions and housing affordability as this will add unnecessary costs to the development.

- iv. Figure 11: Please confirm that these volumes were obtained from the respective TIA reports identified and are the summation of all background development site traffic.

Response: Yes, it is confirmed that the traffic volumes illustrated in Figure 11 were obtained from the respective TIA reports identified and are the summation of all background development site traffic.

- v. Figure 12: Please confirm that these volumes were obtained from the GHD.

Response: Yes, it is confirmed that the traffic volumes illustrated in Figure 12 were obtained from the GHD TIS.

9. Section 5.0 Site Traffic

- i. Non-modal split: Please provide confirmation that Regional Staff supports 18% non-auto modal split for the area.

Response: This information was obtained from GHD TIS study terms of reference comments provided by Regional staff. However, for the purposes of this assessment, Nextrans has not utilized the 18% modal split, which is conservative.

- ii. Figure 14: Please clarify the distribution of the site trips, provide details as to why there were no trip distributed via William Cutmore Boulevard.

Response: Because William Cutmore Boulevard is located further to the east of the site and John McKay Blvd is more direct route to Dundas Street E. In addition, it is not certain if the site Street D will be connected to William Cutmore by 2028 horizon. Given that the proposed development is not expected to generate a significant number of trips during the peak hours, the redistribution of the trips will not materially impact William Cutmore Boulevard and its intersection at Dundas Street E.

However, to address this comment, Nextrans has assigned appropriate numbers of trips to this intersection and reflected in the analysis. The analysis indicates that due to the low site trip generation, the impact is minimal or negligible.

10. Section 6.0 Future Total Traffic

- i. Section 6.1: Please clarify most of the subdivision intersections along Dundas Street E are operating at acceptable level of service when the intersections are operating over the critical capacity of 0.85.

Response: This comment has been addressed above. Nextrans acknowledged in this Study Addendum that there are critical movements with v/c over 0.85 and these movements will need to be monitored in the future by the Region and the Town. At this time, we do not recommend any physical improvements as the traffic pattern will change once the fine grid transportation network is completed. Any improvements at this time would be throw away costs, which will have significant impact on traffic disruption, noise, congestions and housing affordability as this will add unnecessary costs to the development.

11. Section 7.0 Draft Plan of Subdivision Review

- i. Section 7.4: Please verify the width for on-street parking stall. It is typically not the width of a bicycle route.

Response: The dimensions for on-street parking stall will be 2.5m width and 6.5m length for interior, and 2.5 m width and 5.2 m length for single and end spaces. This is consistent with the North Oakville Parking Strategy.

- ii. Section 7.4: Since there is an approximate number of on-street parking identified on the site concept plan, please provide a summary of the total amount of anticipated on-street parking for the subdivision. Please note that 17m ROW do not allow for parking on both sides

Response: There are a total of 92 on-street parking spaces identified on the proposed subdivision. For 22m right-of-way street, on-street parking is provided on both sides, with 17m right-of-way street, on-street parking is provided on one side.

12. Staff requires a sensitivity analysis report for the redistribution of trips to Burnhamthorpe Road based on the North Oakville Secondary Plan. Traffic counts will be required at the intersections of Burnhamthorpe Road & Trafalgar Road and Burnhamthorpe Road & Ninth Line.

Response: Given that this is a small development with less than 200 units and small amount of site trips, with the additional connections to Burnhamthorpe Road via the Mattamy – Joshua Creek Phase 3 subdivision, the site traffic will be very minimal and will not have significant impact on the intersections of Burnhamthorpe Road & Trafalgar Road and Burnhamthorpe Road & Ninth Line. In addition, as these intersections are 3-5 km away from the site and there are several future intersections in between, the site trips will not significantly impact on

these two intersections. If these intersections are included, the scope of work would be similar to a secondary plan transportation analysis. It is Nextrans' understanding that the transportation study to support the secondary plan already been done previously.

However, to address this comment, sensitivity analysis has been completed as part of this Study Addendum. The assessment and results are included in Section 6.5 of this Study Addendum. Therefore, this comment has been addressed.

13. Appendix

- i. Please identify the intersection under review that is provided in the future capacity analysis.

Response: It is the internal intersection of Street D and John McKay Boulevard. The Synchro printout has been labeled and provided in **Appendix G**.

EXECUTIVE SUMMARY

Nextrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) was retained by Coscorp Inc. (the 'Client') to undertake a Transportation Impact Study Addendum in support of a proposed draft plan of subdivision for a proposed residential development. The proposed residential development is located south of Burnhamthorpe Road E, north of Dundas Street East between Eighth Line and Ninth Line in the North Oakville East Secondary Plan, in the Town of Oakville.

The transportation impact study is prepared in accordance with the Town of Oakville and the Region of Halton Transportation Impact Study guidelines, and consistent with background transportation studies conducted in the area. A Study terms of reference has been sent to the Town.

Nextrans acknowledged that some of the information from this Study has utilized and referenced from the GHD Traffic Impact Study dated April, 2022 prepared on behalf of Mattamy Joshua Creek Phase 3 proposed plan of subdivision with permission from GHD and Mattamy. This is to ensure consistency.

Proposed Development

The subject site is currently vacant. The proposed residential development consists of a total 181 residential dwelling units, with 129 single-detached and 52 street townhouse units.

Proposed Development Access

The proposed development access is provided via internal public streets connecting to Mattamy Joshua Creek Phase 3 proposed draft plan of subdivision, and eventually to Burnhamthorpe Road E via future proposed draft plan of subdivisions to the north. Therefore, this proposed development access will be coordinated with the Mattamy – Joshua Creek Phase 3 development in order to move ahead.

Under the interim conditions where the proposed draft plans of subdivision to the north are not completed, the anticipated traffic from the proposed development will be routing primarily to and from Dundas Street via John McKay Boulevard, Meadowridge Drive and William Cutmore Boulevard, as well as Eighth Line via Wheat Boom Drive.

The proposed development will also protect for future Street C and Street A extensions to the west and north, respectively.

Capacity Analysis

The proposed development is expected to generate 115 two-way auto trips (31 inbound and 84 outbound) and 153 two-way auto trips (94 inbound and 59 outbound) during the morning and afternoon peak hours, respectively;

Auto Mode Assessment

Based on the intersection capacity analysis, under the existing conditions, all intersections considered in the analysis are expected to operate at acceptable levels of service. However, Nextrans acknowledges that the eastbound through movement (morning peak hour) and westbound through movement (afternoon peak hour) at the Ninth Line/Dundas Street E intersection are critical movements with v/c greater than 0.85. This is due to the heavy through traffic volumes in this direction coming from Highway 403 and Mississauga. This type of movement is typical at any major arterial intersections in the Great Toronto Area and in the Region of Halton. It is expected that with the completion of the full road network identified in the North Oakville Secondary Plan, this fine grid road network will provide much needed east-west capacity for the entire area. Given that any physical improvements at this time would be throw away costs due to on-going transportation network improvements in the area, Nextrans does not recommend any improvements at this time.

Based on the intersection capacity analysis, under the future background and future total traffic conditions, the analysis the analysis indicates that the majority of the movements at the signalized intersections considered in the study area are expected to operate at acceptable levels of service. However, there is a number of critical movements. This can be explained with the following:

- The Secondary Plan Area fine grid road network is not completed at this time and under this horizon year
- Once the complete road network identified in the Secondary Plan Area is completed, it is expected that the traffic will not be concentrating at the critical movements
- Especially with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway
- It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, as well as the completion of William Halton Parkway, it will provide much needed east-west capacity for the area; and
- The intersection of Dundas Street E/Ninth Line is expected to operate near or at capacity. This is due to the heavy through traffic volumes in this direction coming from Highway 403 and Mississauga. However, this type of movement is typical at any major arterial intersections in the Great Toronto Area and in the Region of Halton. It is Nextrans' opinion that the east-west capacity will be addressed as part of the future improvements on Burnhamthorpe Road E and completion of William Halton Parkway

It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, as well as the completion of William Halton Parkway, it will provide much needed east-west capacity for the area. In addition, with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway.

Based on this assessment and provision, it is Nextrans' opinion that no improvements should be implemented under this horizon year for the intersections located along Dundas Street E. Nextrans recommends that the Region and the Town monitor these intersections in the future and make appropriate signal timing adjustments in the interim conditions. A monitoring program is also required in the future once all the road network is completed to ensure that signal timing and lane configurations are appropriate for the area.

It should be noted that the proposed development has negligible or no impacts on the existing and future intersections along Dundas Street E. The internal intersections are also expected to have minimum traffic volumes and delay or queue.

Auto Mode Assessment Sensitivity Analysis

The Town of Oakville has requested that a sensitivity analysis be undertaken for Burnhamthorpe Road E, which includes the intersections Trafalgar Road/Burnhamthorpe Road and Burnhamthorpe Road E/William Halton Parkway. To address this comment, Nextrans has obtained the turning movement counts for these two intersections on Wednesday June 7, 2023 from Spectrum.

The analysis indicates that under the existing conditions, both intersections are currently operating well with no critical movements or long delay. Under the 2028 future background conditions, the signalized intersection of Trafalgar Road/Burnhamthorpe Road E is expected to operate well with no critical movements or long delay. However, the northbound at the unsignalized of Burnhamthorpe Road E/William Halton Parkway is expected to operate slightly over capacity during the morning peak hour. This is due to higher northbound right turn movement from Burnhamthorpe Road E to William Halton Parkway. Under the 2028 future total conditions, the signalized intersection of Trafalgar Road/Burnhamthorpe Road E is expected to operate well with no critical movements or long delay. However, similar to the 2028 future background conditions, the northbound at the unsignalized of Burnhamthorpe Road E/William Halton Parkway is expected to operate over capacity during the morning peak hour. This is due to higher northbound right turn movement from Burnhamthorpe Road E to William Halton Parkway.

Active Transportation Mode Assessment

Walking

Under the existing conditions, there are no sidewalks in the subject site as it is not yet built. However, external to the site, sidewalks are available on the established sides of the street such as Dundas Street E, Eighth Line, Postridge Drive, Trafalgar Road, Prince Michael Drive, Meadowridge Drive and Ninth Line. This sidewalk network is complete and appropriate for the existing communities; however, the future communities will need similar complete sidewalk network.

It is Nextrans' understanding that sidewalks will be provided on both sides of all internal streets within the North Oakville Secondary Plan to facilitate pedestrians. Therefore, in the future, a complete sidewalk network will be provided and constructed by the proposed developments in the area. For an illustration of the big picture in the Joshua's Meadows Community, **Figure 21** of this Study illustrates the Town of Oakville Proposed Pedestrian Network Phasing (*excerpt from the Town of Oakville 2017 ATMP, Map 8*). On this basis, sidewalks will be provided on all of the proposed internal roads within the subject development, as per the Town of Oakville requirements and standards.

Cycling

External to the site, there are dedicated cycling routes along Ninth Line south of Dundas Street E. There are also multi-use trails along Dundas Street E in the vicinity of the study area. It is Nextrans' understanding that a complete active transportation network (sidewalk and cycling facilities) will be constructed as part of the North Oakville Secondary Plan communities in the future.

Similar to the walking network, it is Nextrans' understanding that cycling facilities will be constructed in phases, as per the Town's proposed cycling network phasing and priority projects. For an illustration of the big picture in the Joshua's Meadows Community, **Figure 22** of this Study illustrates the Town of Oakville Proposed Cycling Network Phasing and Priority Projects (*excerpt from the Town of Oakville 2017 ATMP, Map 9*), with **Figure 23** of this Study illustrating the North Oakville Trails Plan (Updated as of 2019). On this basis, the proposed development will support the Town's initiative with regards to the cycling facility, where appropriate. However, given that the proposed development only consists of local roads, therefore, no cycling lanes are provided. This is similar to the Mattamy – Joshua Creek Phase 3 proposed subdivision. The proposed speed limit will be posted at 40 km/h, which is suitable for shared on-street cycling.

Transit Mode Assessment

The area is current serviced by several Oakville Transit Bus Routes 1 Trafalgar, 24 South Common, 20 Northridge and 5/5A Dundas.

As indicated, the proposed development is expected to generate much lower numbers of total trips, including transit trips compared to other developments in the area, the proposed development transit ridership can be accommodated by the existing transit service, as well as the future proposed transit service in the area without additional improvements beyond what already been planned for the area.

Based on Nextrans' review of the future proposed future transit network to the Joshua's Meadows Community, there will be:

- Primary transit routes running along Burnhamthorpe Road E, Postridge Drive, Meadowridge Drive and Eighth Line
- Secondary transit routes running along Prince Michael Drive, Wheat Boom Drive, and new east-west collector road south of Burnhamthorpe Road E; and
- Inter-regional transit route along Highway 407

As the proposed development will be located close to the future primary route on Burnhamthorpe Road E, and secondary routes on the future east-west road and Prince Michael Drive, therefore, proposed development will have good transit service in the future.

Transportation Demand Management Measures and Incentives

The Report identifies and recommends appropriate Transportation Demand Management measures and incentives to support active transportation and transit, to meet the objectives and requirements of the Town and the Region. These potential measures are included in Section 8 of this Study.

Study Conclusions and Recommendations

Based on the findings of this Study, the following recommendations are provided:

- The Town approves the proposed draft plan of subdivision;
- The proposed development building sidewalks along both sides of the internal subdivision streets;
- The proposed development implements the TDM measures and incentives identified in this report to support active transportation and transit and to reduce the numbers of single-occupant-vehicle trips to and from the proposed development;
- Minimize pavement and lane width where possible to facilitate pedestrian/cyclist crossing; and
- No additional physical improvements for the area at this time to accommodate the proposed development, under the future background and future total conditions

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- Table 8 – Site Trip Assignment for the Proposed Development
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APPENDICES

Appendix A – Existing Traffic Data

Appendix B – Existing Traffic Level of Service Calculations

Appendix C – Background Developments

Appendix D – Future Background Traffic Level of Service Calculations

Appendix E – 2016 TTS Data Analysis

Appendix F – Future Total Traffic Level of Service Calculations

Appendix G – Sensitivity Analysis

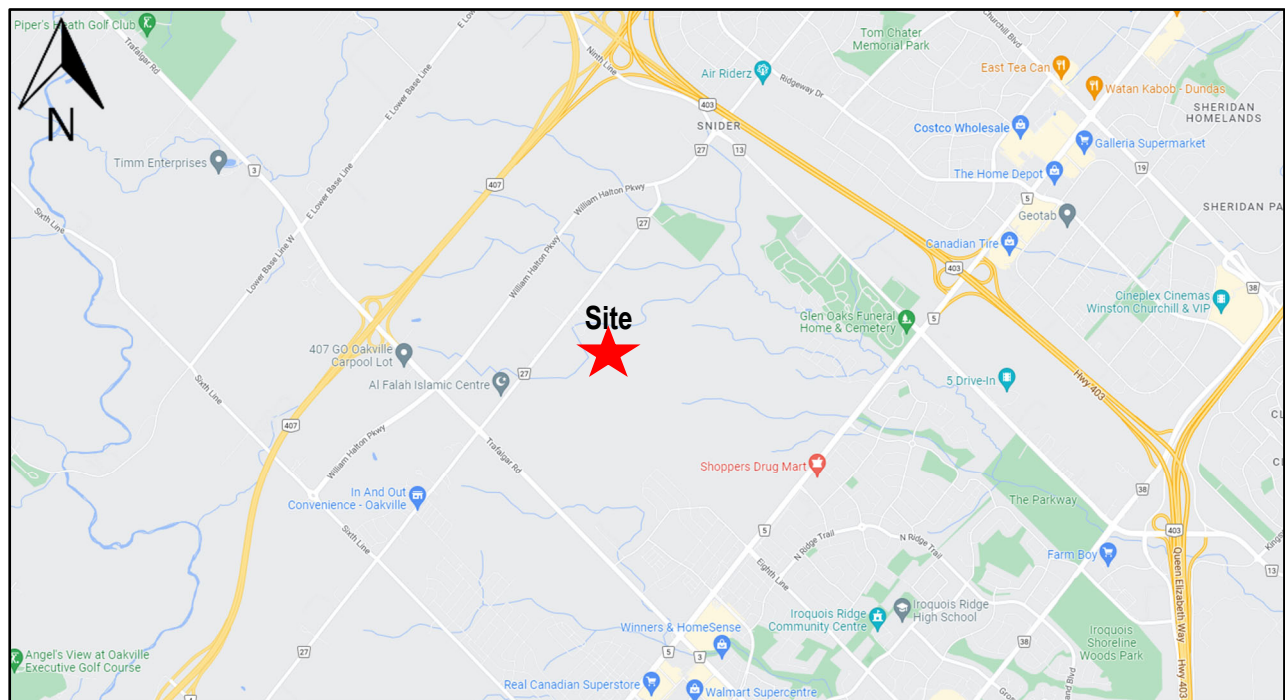
1.0 INTRODUCTION

Nextrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) was retained by Coscorp Inc. (the 'Client') to undertake a Transportation Impact Study Addendum in support of a proposed draft plan of subdivision for a proposed residential development. The proposed residential development is located south of Burnhamthorpe Road E, north of Dundas Street East between Eighth Line and Ninth Line in the North Oakville East Secondary Plan, in the Town of Oakville. The location of the proposed development is illustrated in **Figure 1**.

This transportation impact study and the previous Study dated July, 2022 are prepared in accordance with the Town of Oakville and the Region of Halton Transportation Impact Study guidelines, and consistent with background transportation studies conducted in the area. A Study terms of reference has been submitted to the Town.

Nextrans acknowledged that some of the information from this Study, especially the traffic turning movement counts, have utilized and referenced from the GHD Traffic Impact Study dated April, 2022 that was prepared on behalf of Mattamy Joshua Creek Phase 3 proposed draft plan of subdivision with permission from GHD and Mattamy. This is to ensure consistency.

Figure 1 – Proposed Development Location



Source: Google Map

The subject site is currently vacant. The proposed residential development consists of a total 181 residential dwelling units, with 129 single-detached and 52 street townhouse units.

The proposed development access is provided via internal public streets connecting to Mattamy Joshua Creek Phase 3 proposed draft plan of subdivision, and eventually to Burnhamthorpe Road E via future proposed draft plan of subdivisions to the north. The proposed development will protect for future Street C and Street A extensions to the west and north, respectively. Therefore, the proposed development will coordinate with Mattamy – Joshua Creek Phase 3 to provide appropriate and coordinated access for the proposed development.

Under the interim conditions where the proposed draft plans of subdivision to the north are not completed, the anticipated traffic from the proposed development will be routing primarily to and from Dundas Street via John McKay Boulevard,

Meadowridge Drive and William Cutmore Boulevard, as well as Eighth Line via Wheat Boom Drive. The proposed development will also protect for future Street C and Street A extensions to the west and north, respectively.

Figure 2 illustrates the proposed development site plan.

Figure 2 – Proposed Draft Plan of Subdivision



2.0 EXISTING CONDITION ASSESSMENT

2.1. Existing Road Network

As indicated, the proposed residential development is located south of Burnhamthorpe Road E, north of Dundas Street East between Eighth Line and Ninth Line in the North Oakville East Secondary Plan, in the Town of Oakville. The description of the existing road network in the study area is summarized in Table 1 below.

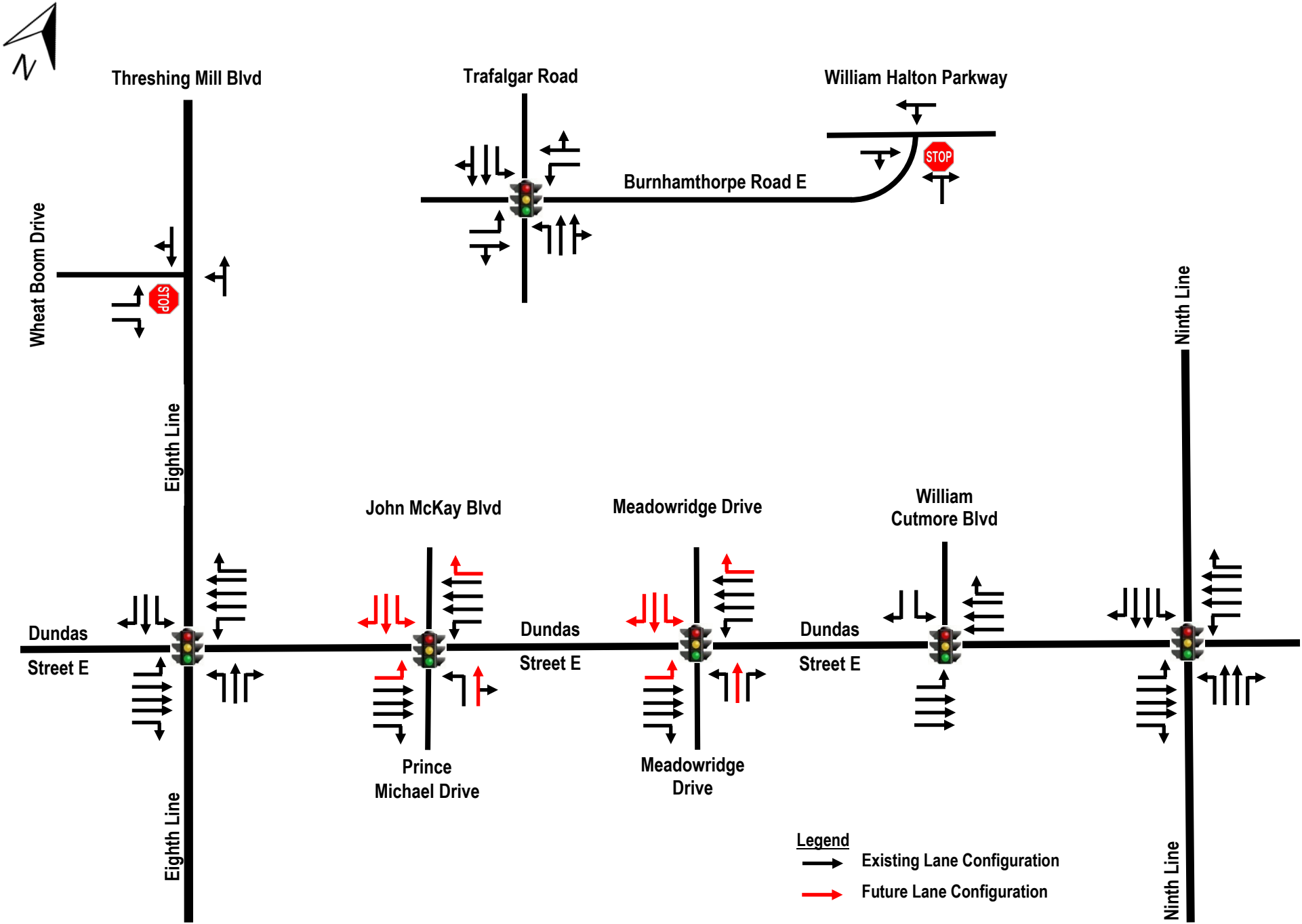
Table 1 – Summary of the Existing Road Network in the Study Area (as of July, 2023)

Road Name	Jurisdiction	Number of Lanes	Road Type	Sidewalk/Cycling
Dundas Street E	Halton Region	5	Major Arterial	Sidewalk on south side only
Eighth Line	Town of Oakville	4 south of Dundas St and 2 north of Dundas St	Collector Road	Sidewalk on both sides of the street south of Dundas/north side is under construction
Wheat Boom Drive	Town of Oakville	2	Collector Road	Sidewalk on both sides of the street/under construction
Meadowridge Drive	Town of Oakville	2	Minor Collector	Sidewalk on both sides of the street
William Cutmore Boulevard	Town of Oakville	2	Minor Collector	Under construction
Ninth Line	Halton Region	4	Major Arterial	No sidewalk north of Dundas Street, sidewalk on the east side south of Dundas Street and bicycle lanes
Prince Michael Drive	Town of Oakville	2	Major Collector	Under construction

Figure 3 illustrates the existing lane configurations and traffic control devices for the intersections considered in the analysis.

2.2. Existing and Previously Proposed Active Transportation Network and Assessment

As the proposed development draft plan of subdivision is not yet built, there are no active transportation facilities available at this time.



Not to Scale

Area Pedestrian Facilities

Under the existing conditions, sidewalks are available on the established sides of the street such as Dundas Street E, Eighth Line, Postridge Drive, Trafalgar Road, Prince Michael Drive, Meadowridge Drive and Ninth Line.

As other streets are currently under construction, sidewalks will be available once these streets are completed as part of the proposed developments in the North Oakville Secondary Plan.

Area Cycling Facilities

Currently, there are dedicated cycling routes along Ninth Line south of Dundas Street E. There are also multi-use trails along Dundas Street E in the vicinity of the study area. It is Nexttrans' understanding that a complete active transportation network (sidewalk and cycling facilities) will be constructed as part of the North Oakville Secondary Plan communities in the future.

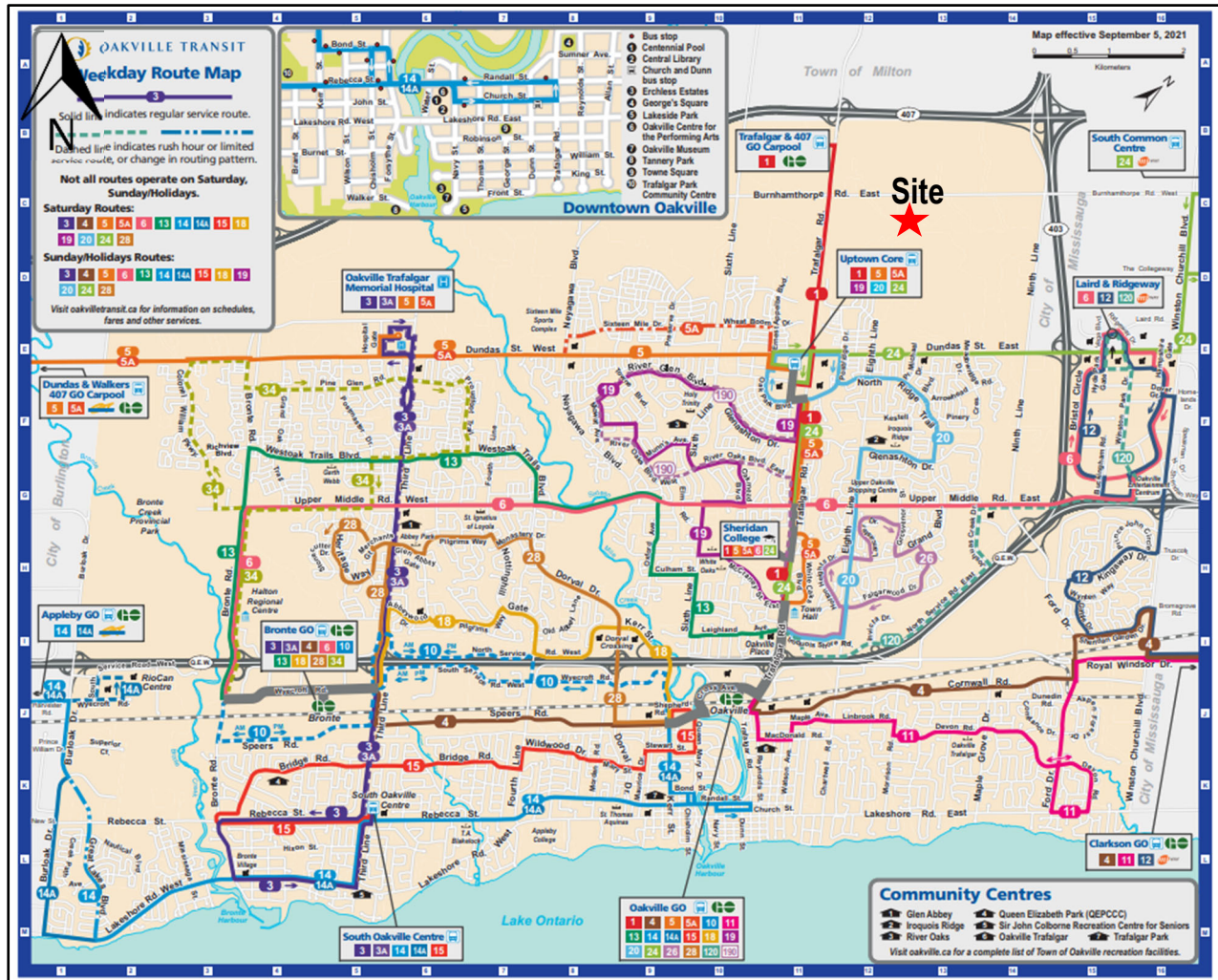
2.3. Existing Oakville Transit System

The area is current serviced by several existing Oakville Transit Bus Routes 1 Trafalgar, 24 South Common, 20 Northridge and Dundas Route 5/5A. **Figure 4** illustrates the existing Oakville Transit System.

Below are the bus route descriptions based on the information provided on the Oakville Transit Website (<https://www.oakvilletransit.ca/schedules-and-maps.html>):

- **Route 1 Trafalgar** – The Trafalgar Route travels generally in the north-south direction from Oakville GO Train Station to Highway 407 GO Oakville Carpool Lot. This service runs early in the morning until after midnight during the weekday. The service frequency is approximately 60-minute all day.
- **Route 20 Northridge** – The Northridge route travels north - south and east-west from Oakville GO Train Station to Walmart Supercentre located south-west of the Trafalgar Road/Dundas Street E intersection. This service runs 7 days a week from the early morning until 11 pm. The service frequency is approximately 30-minute during the weekday peak periods and approximately 60-minute during the weekend.
- **Route 24 South Common** – The South Common route travels north - south and east-west from Oakville GO Train Station to South Common Centre in the City of Mississauga located near Erin Mills Parkway and Burnhamthorpe Road W. This service runs 7 days a week from the early morning until midnight. The service frequency is approximately 15-minute during the weekday peak periods and approximately 30-minute during the weekend.
- **Route 5/5A Dundas** – The Dundas route travels north - south and east-west from Oakville GO Train Station to Dundas/407 GO Carpool. This service runs 7 days a week from the early morning until midnight. The service frequency is approximately 15-minute during the weekday peak periods and approximately 30-minute during the weekend.

Figure 4 – Existing Oakville Transit Network



Source: Oakville Transit website

2.3. Existing Area Context

Nextrans has conducted a comprehensive review of the area. The proposed development is located within the approved North Oakville East Secondary Plan, Joshua’s Meadows residential community bounded by Dundas Street E to the south, Burnhamthorpe Road E to the north, Trafalgar Road to the west and Ninth Line to the east, in the Town of Oakville.

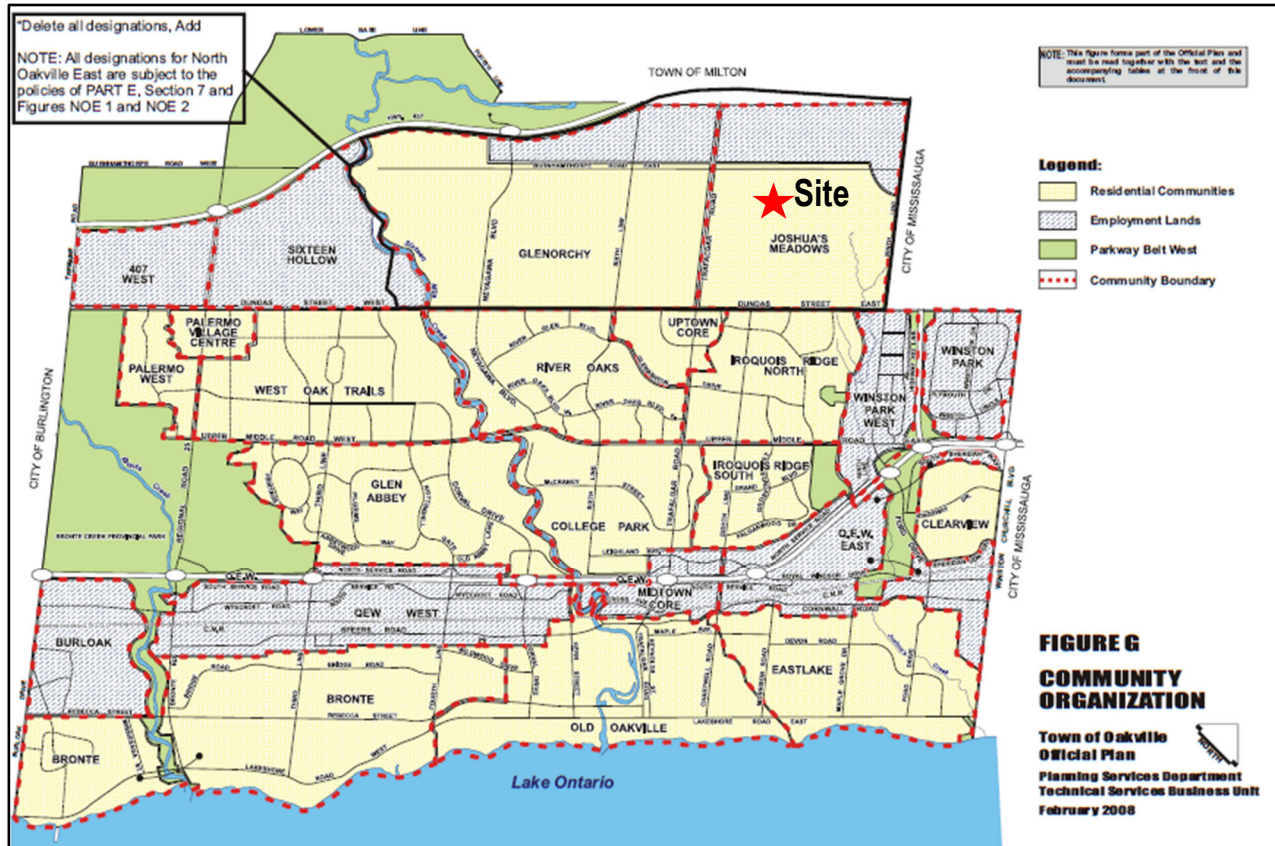
This area will be built into a vibrant community with complete network of sidewalk and cycling facilities, along with future Oakville Transit service extension to the area. **Figure 5** illustrates the North Oakville East Secondary Plan Community Organization (OPA No. 272, February 2008).

2.4. Existing Traffic Volumes

Nextrans has reviewed all of the background traffic impact studies prepared in the general area. Recently, GHD has prepared a Traffic Impact Study dated April, 2022 in support of Mattamy Joshua Creek Phase 3 proposed residential development located immediately to the east of the subject site. In review of this Study and discussion with GHD, Nextrans concurred that it is not appropriate to conduct new traffic counts at that time due to the on-going pandemic, especially with new variant and monkeypox disease.

However, based on the Town’s comments, Nextrans has obtained the latest turning movement counts conducted on Tuesday May 9, 2023 and Wednesday June 7, 2023 for the study area intersections. The Turning movement counts are summarized in **Appendix A**. The existing volumes are illustrated in **Figure 6**.

Figure 5 – North Oakville East Secondary Plan



Source: North Oakville East Secondary Plan Figure G

2.5. Existing Condition Assessment

The existing volumes in **Figure 6** were analyzed using Synchro Version 11 software. The methodology of the software follows the procedures described and outlined in the Highway Capacity Manual, HCM 2000, published by the Transportation Research Board. It should be noted that the printouts for unsignalized intersections are based on HCM outputs and the results for signalized intersections are based on Synchro so that queues and more detailed information can be provided. The results are provided in **Appendix B** and summarized in **Table 2**.

2.6. Finding Summary

Based on the intersection capacity analysis, under the existing traffic conditions, all intersections considered in the analysis are operating at acceptable levels of service. However, Nextrans acknowledges that the eastbound through movement (morning peak hour) and westbound through movement (afternoon peak hour) at the Ninth Line/Dundas Street E intersection are critical movements with v/c greater than 0.85. This is due to the heavy through traffic volumes in this direction coming from Highway 403 and Mississauga. However, this type of movement is typical at any major arterial intersections in the Great Toronto Area and in the Region of Halton. It is expected that with the completion of the full road network identified in the North Oakville Secondary Plan, this fine grid road network will provide much needed east-west capacity for the entire area.

Given that any physical improvements at this time would be throw away costs due to on-going transportation network improvements in the area, Nextrans does not recommend any improvements at this time.



Threshing Mill Blvd

Ninth Line

Wheat Boom Drive

Eighth Line

John McKay Blvd

Meadowridge Drive

William Cutmore Blvd

Dundas

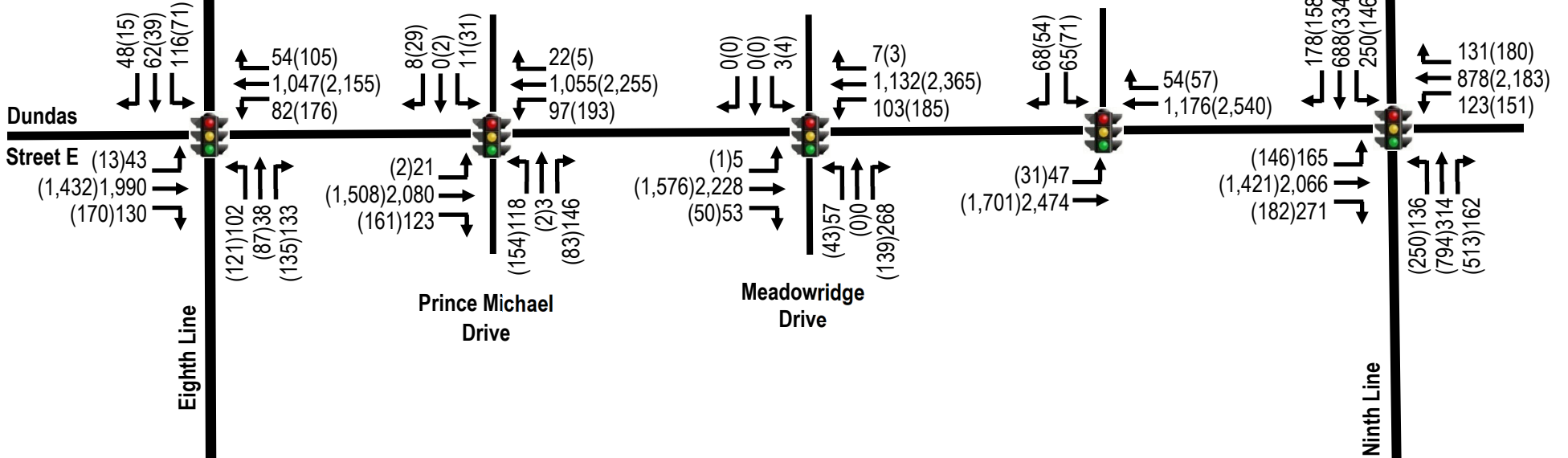
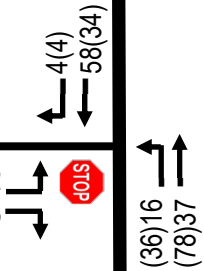
Street E

Eighth Line

Prince Michael Drive

Meadowridge Drive

Ninth Line



Not to Scale



Legend

XX AM Peak Hour (XX) PM Peak Hour



Existing Stop Sign



Existing Signalized Intersection

Figure 6 - Existing Traffic Volumes (2023 Actual Counts)

Table 2 – 2023 Existing Levels of Service

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Dundas Street E/ Eighth Line (signalized)	Overall	B (0.60)	15		B (0.59)	13		
	EB – L	A (0.15)	5	6	A (0.06)	4	3	~115
	EB – T	B (0.60)	13	143	B (0.44)	12	98	~300
	EB – R	A (0.13)	3	12	A (0.16)	2	10	~75
	WB – L	A (0.35)	8	12	C (0.49)	20	43	~155
	WB – T	A (0.32)	9	79	A (0.59)	8	86	~585
	WB – R	A (0.05)	3	10	A (0.09)	4	9	~85
	NB – L	E (0.54)	60	43	E (0.59)	62	50	~45
	NB – T	D (0.15)	47	19	D (0.30)	49	36	~255
	NB – R	B (0.40)	14	21	B (0.40)	13	21	~30
	SB – L	E (0.57)	61	48	D (0.39)	54	32	~45
	SB – T	D (0.23)	49	28	D (0.14)	46	19	~310
SB – R	A (0.24)	8	7	A (0.05)	0	0	~25	
Dundas Street E/ Prince Michael Drive/ John McKay Blvd (signalized)	Overall	A (0.62)	10		B (0.75)	20		
	EB – L	A (0.07)	5	3	A (0.01)	8	0	~120
	EB – T	A (0.62)	9	207	A (0.48)	8	36	~585
	EB – R	A (0.12)	1	10	A (0.17)	1	1	~75
	WB – L	C (0.43)	34	30	B (0.62)	20	39	~125
	WB – T	A (0.29)	3	17	C (0.63)	25	225	~570
	WB – R	A (0.02)	0	0	A (0.00)	0	0	~85
	NB – L	E (0.57)	61	49	E (0.75)	75	70	~65
	NB – TR	B (0.46)	12	20	B (0.31)	14	16	~225
	SB – L	D (0.07)	43	7	D (0.11)	41	16	~15
	SB – T	A (0.00)	0	0	D (0.01)	39	3	~195
	SB – R	A (0.03)	0	0	A (0.08)	0	0	~15
Dundas Street E/ Meadowridge Drive (signalized)	Overall	A (0.82)	8		B (0.58)	12		
	EB – L	A (0.03)	2	0	A (0.01)	4	0	~80
	EB – T	A (0.66)	4	13	B (0.43)	19	169	~570
	EB – R	A (0.05)	0	0	A (0.04)	7	10	~80
	WB – L	C (0.50)	24	18	B (0.55)	17	24	~140
	WB – T	A (0.31)	3	7	A (0.58)	5	232	~335
	WB – R	A (0.01)	0	0	A (0.00)	0	0	~70
	NB – L	D (0.30)	53	28	E (0.31)	60	23	~25
	NB – T	A (0.00)	0	0	A (0.00)	0	0	~215
	NB – R	D (0.82)	49	78	B (0.53)	20	25	~25
	SB – L	D (0.03)	48	4	D (0.04)	55	5	~15
	SB – T	A (0.00)	0	0	A (0.00)	0	0	~175
SB – R	A (0.00)	0	0	A (0.00)	0	0	~15	
Dundas Street E/ William Cutmore Blvd (signalized)	Overall	A (0.60)	9		A (0.62)	62		
	EB – L	A (0.15)	5	6	B (0.21)	12	11	~100
	EB – T	B (0.60)	11	243	A (0.40)	10	146	~335
	WB – T	A (0.30)	2	18	A (0.62)	4	28	~500
	WB – R	A (0.04)	0	0	A (0.05)	0	0	~85
	SB – L	E (0.44)	65	32	E (0.47)	66	34	~45
	SB – R	B (0.39)	19	15	B (0.30)	18	13	~30
Dundas Street E/ Ninth Line (signalized)	Overall	C (0.89)	27		D (1.00)	39		
	EB – L	A (0.41)	10	23	D (0.72)	54	59	~225
	EB – T	C (0.89)	25	240	B (0.66)	20	49	~500
	EB – R	A (0.34)	6	22	A (0.25)	5	7	~85
	WB – L	C (0.56)	32	39	C (0.68)	35	49	~230
	WB – T	C (0.41)	24	75	E (1.00)	55	266	~255
	WB – R	A (0.17)	4	13	A (0.25)	9	25	~85
	NB – L	D (0.64)	41	38	C (0.59)	32	65	~160
	NB – T	D (0.36)	40	48	D (0.74)	45	123	~485
	NB – R	A (0.32)	9	20	D (0.92)	53	167	~130
	SB – L	D (0.65)	38	67	D (0.64)	36	39	~130
	SB – T	D (0.77)	50	107	C (0.32)	35	49	~810
SB – R	A (0.34)	9	22	A (0.27)	8	19	~55	
Eighth Line/Threshing Mill Blvd/ Wheat Boom Dr (unsignalized)	EB – LTR	A (0.03)	9	1	A (0.03)	9	1	~30
	NB – TL	A (0.01)	2	0	A (0.02)	2	1	~300
	SB – TR	A (0.04)	0	0	A (0.02)	0	0	~300

2.7. Potential Mitigation Measures

Based on the finding summary noted above and given that the entire transportation network in the area is still evolving in the next 10 years, therefore, no improvements to the existing road network are recommended at this time given that any temporary improvements will be throw away costs. This will not be fair for such a small development and potentially become a barrier to provide housing supply to the Town and the Region.

3.0 TRANSPORTATION PLANNING CONTEXT IN THE AREA

3.1. Existing Land Use Context and Amenities

As indicated, the proposed development is located within the approved North Oakville East Secondary Plan, Joshua’s Meadows residential community bounded by Dundas Street E to the south, Burnhamthorpe Road E to the north, Trafalgar Road to the west and Ninth Line to the east, in the Town of Oakville. This area will be built into a vibrant community with complete network of sidewalk and cycling facilities, along with future Oakville Transit service extension to the area.

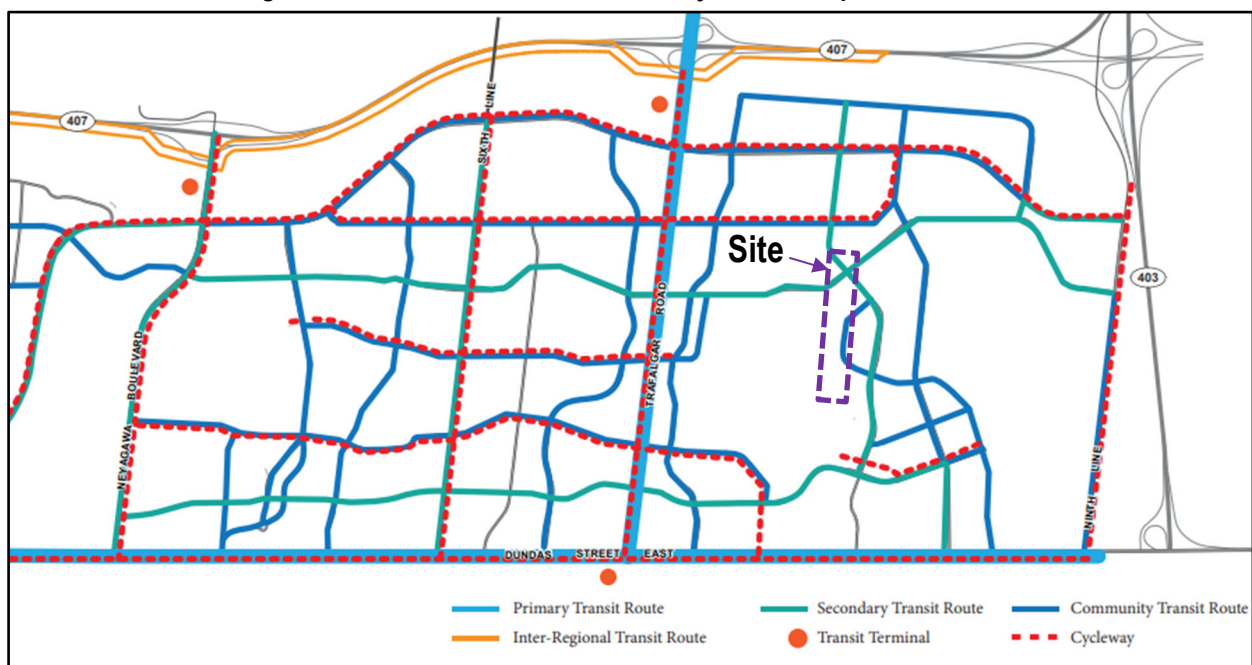
As the proposed residential development consists of a total 181 residential dwelling units, with 129 single-detached and 52 street townhouse units, the proposed development is compatible and consistent with other proposed background developments in the immediate area within the Joshua’s Meadows community.

3.2. Transportation Planning Context

As the community is building through different phases, the road network, active transportation network and transit network will also be built at different phases. This is a typical process through-out the Greater Toronto and Hamilton Area.

However, once completed, the area will have a complete fine grid transportation network consists of transit, active transportation and road network. **Figure 7** illustrates the proposed North Oakville East Secondary Plan Area transportation network.

Figure 7 – North Oakville East Secondary Plan Transportation Network



Source: *The New Communities of Oakville Brochure (Prepared by the Town of Oakville)*

4.0 FUTURE BACKGROUND CONDITIONS

4.1. Analysis Horizon

It is Nextrans' understanding that the proposed development can be built fairly quickly pending on necessary approvals and building permits. For the purpose of this assessment and to be consistent with other background transportation studies in the area, a five-year horizon (2023 to 2028) has been carried out for the study analysis. This provision is consistent with the Town of Oakville and Halton Region's Traffic Impact Study Guidelines. As indicated, this is also consistent with other background transportation studies conducted in the area.

4.2. Future Background Corridor Growth

Based on the Town of Oakville and Halton Region's requirements, a 2% per annum compounded growth rate will be applied to the 2019 traffic volumes to estimate the 2023 and 2028 projected traffic volumes. This is equivalent to more than 10% total growth from 2023 to 2028 due to compounded growth rate.

Figure 8 Illustrates the 2028 background through corridor growth.

4.3. Background Development Applications

Based on Nextrans' review of the proposed active development applications in the area, using the Town's development application website for Ward 7 (<https://www.oakville.ca/business/planning-applications-ward-7.html>), as well as other background traffic impact studies such as GHD TIS dated April 2022 for the Mattamy Joshua Creek Phase 3, the following background developments have been identified and will be included in the analysis:

- Mattamy Joshua Creek Phase 3 proposed residential development with 306 townhouse units and 709 single-detached homes – GHD TIS dated April, 2022
- ARGO Land Development in the Joshua Creek Residential Subdivision in North Oakville proposed residential development with 103 single-detached homes, 90 townhouse units and 12 mid-rise units - CGH Transportation Inc. TIS dated December, 2019 and Addendum dated November, 2021
- Dunoak and Bressa Draft Plans Proposed Residential Developments - GHD TIS dated July, 2020
- Proposed Redoak/Capoak Residential Development – GHD TIS dated November, 2021
- 1005 Dundas Street East and 3033 Eighth Line - Paradigm Transportation Solutions Limited.

Figure 9 illustrates the active background developments in the study area.



Threshing Mill Blvd

Ninth Line

Wheat Boom Drive

Eighth Line

John McKay Blvd

Meadowridge Drive

William Cutmore Blvd

Dundas

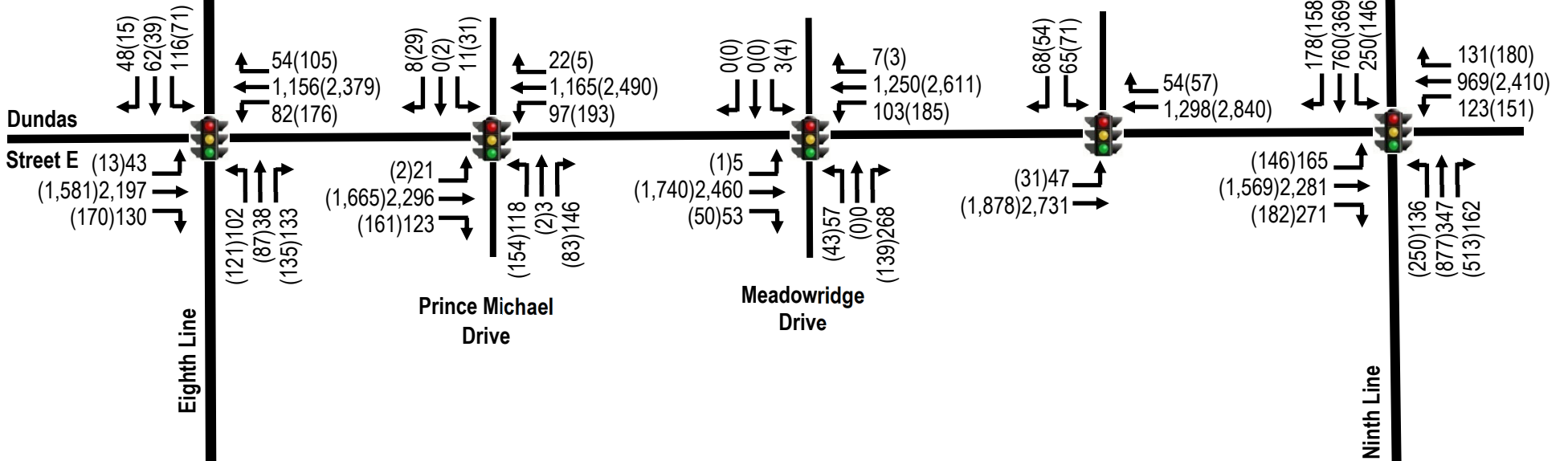
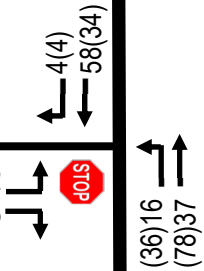
Street E

Eighth Line

Prince Michael Drive

Meadowridge Drive

Ninth Line



Not to Scale

Legend

XX AM Peak Hour (XX) PM Peak Hour



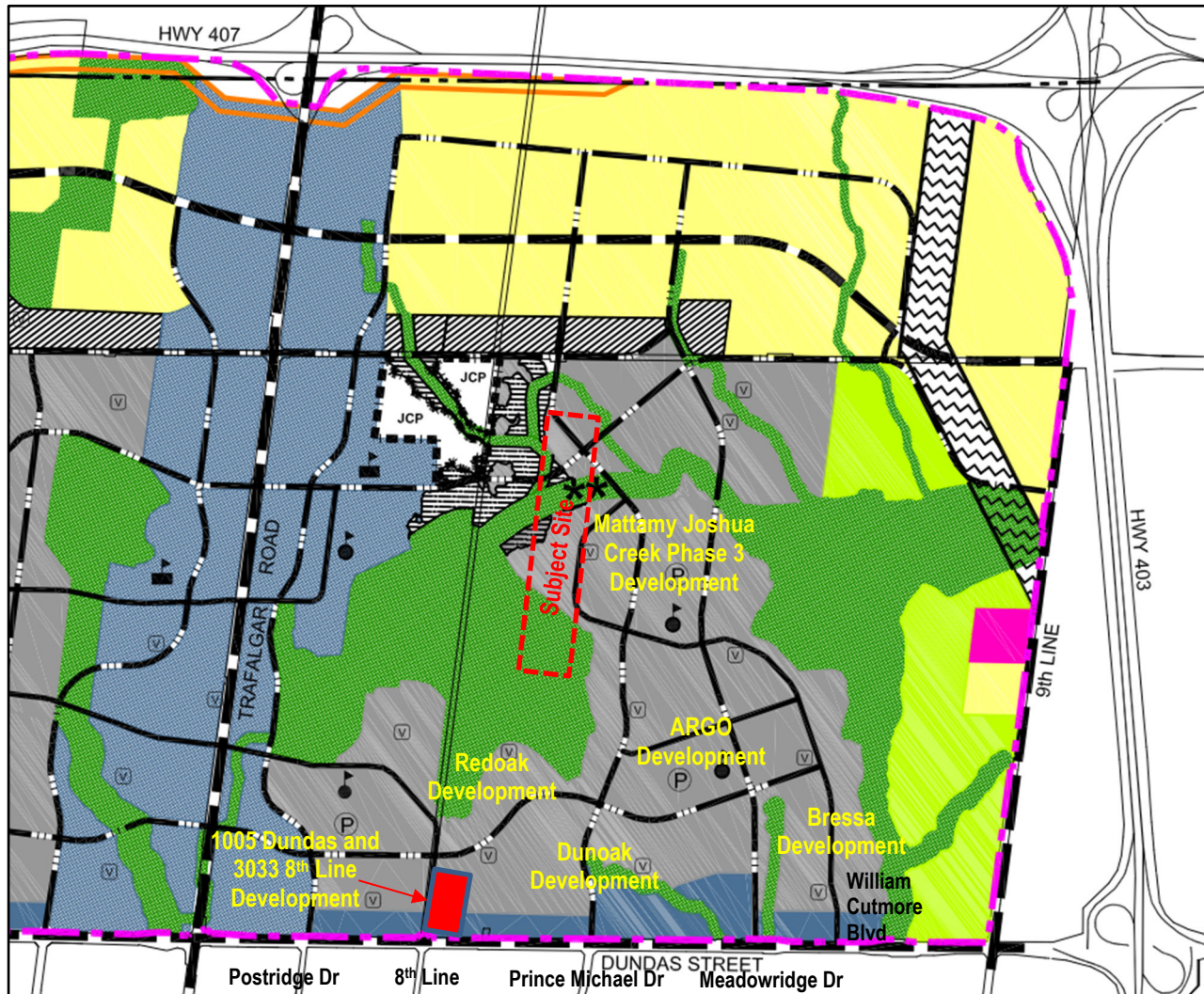
Existing Stop Sign



Existing Signalized Intersection

Figure 8 – Background Through Corridor Growth (2028 Horizon Year)

Figure 9 – Active Background Development General Locations



Source: Figure Now 2 & NOE 2 Land Use Plan – North Oakville Secondary Plan

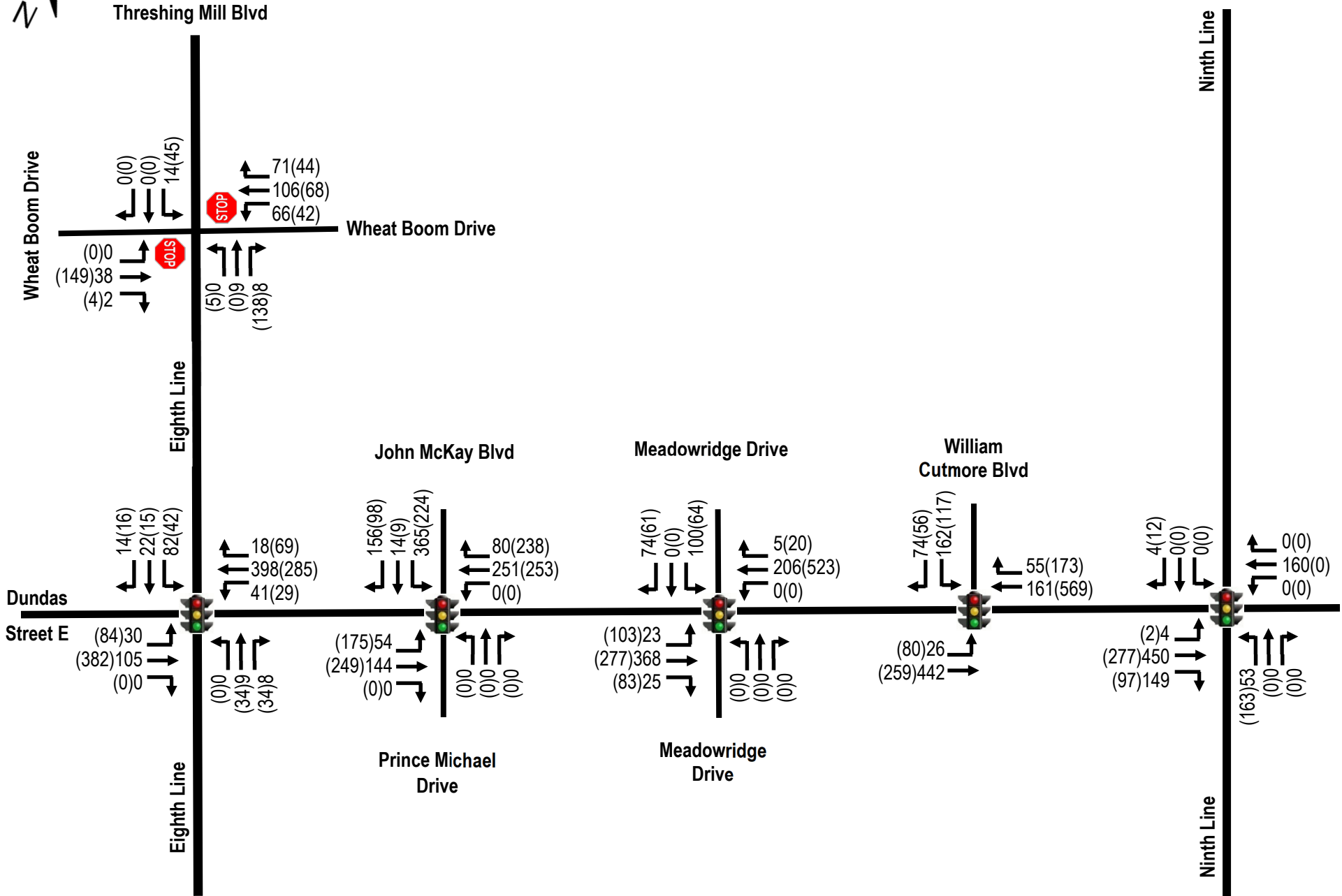
Table 3 summarizes the proposed background development trip generation estimates based on these background development traffic impact studies, with Figures 10 and 11 illustrating background development traffic volumes obtained from GHD Study. The detailed TIS traffic volume information is included in Appendix C.

Table 3 – Active Background Development Site Traffic Generation

Proposed Active Background Developments in the Study Area	Morning Peak Hour			Afternoon Peak Hour		
	In	Out	Total	In	Out	Total
Mattamy Joshua Creek Phase 3 – Residential Subdivision	143	389	532	429	265	694
ARGO Land Development – Joshua Creek Residential Subdivision	140	453	593	494	290	784
Dunoak Residential Developments	137	431	568	418	264	682
Redoak/Capoak Residential Development	114	355	469	362	220	582
1005 Dundas Street East and 1033 Eighth Line	19	58	77	60	40	100

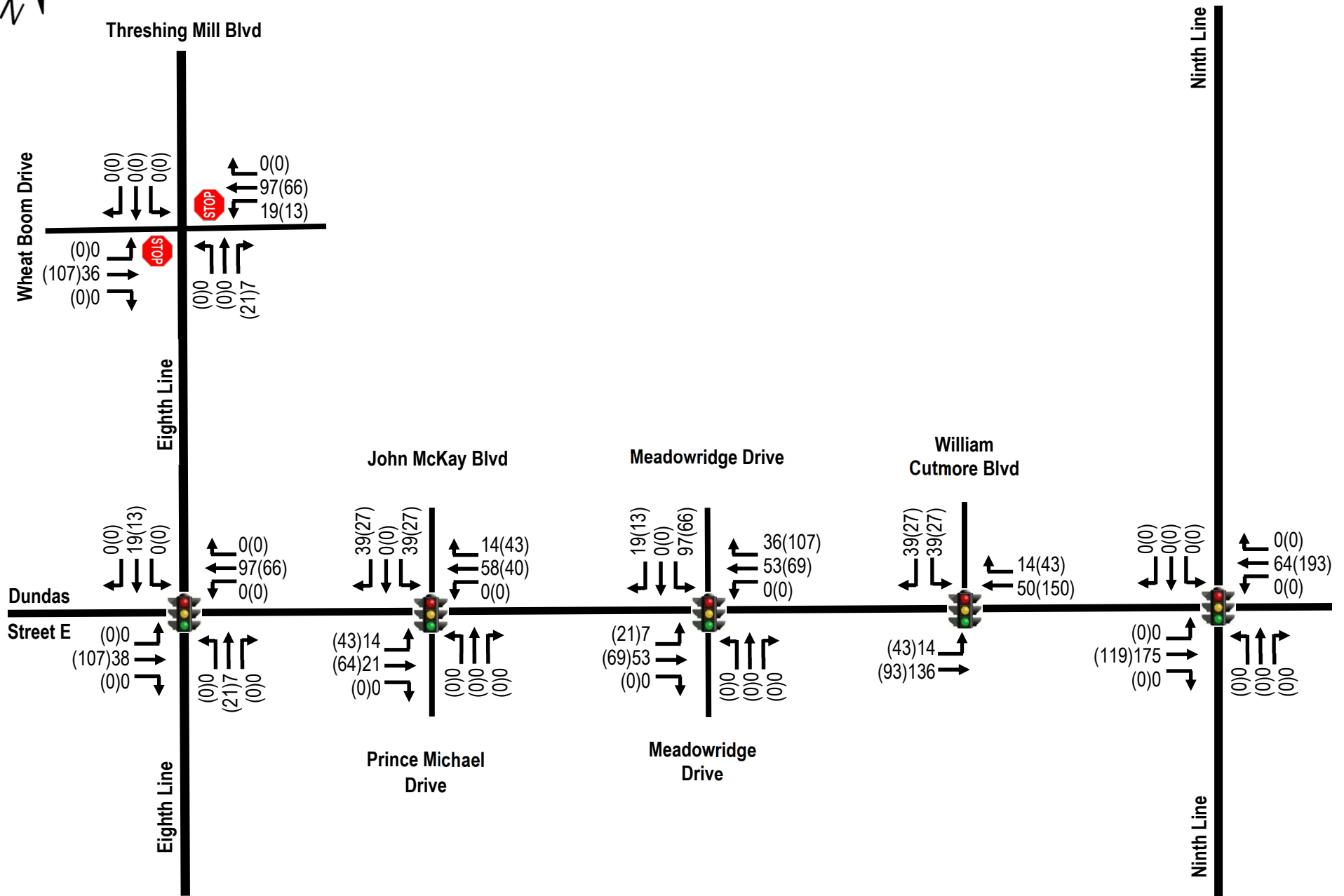
4.4. Future Background Condition Assessment

The estimated 2028 future background traffic volumes are illustrated in Figure 12 (future background traffic growth traffic volumes + background development traffic volumes) and were analyzed using Synchro Version 11 software. The detailed calculations are provided in Appendix D and summarized in Table 4.



Not to Scale

Figure 10 – Background Development Traffic Volumes
(Argo, Redoak, Dunoak, Bressa and 1005 Dundas/3033 8th Line)



Not to Scale

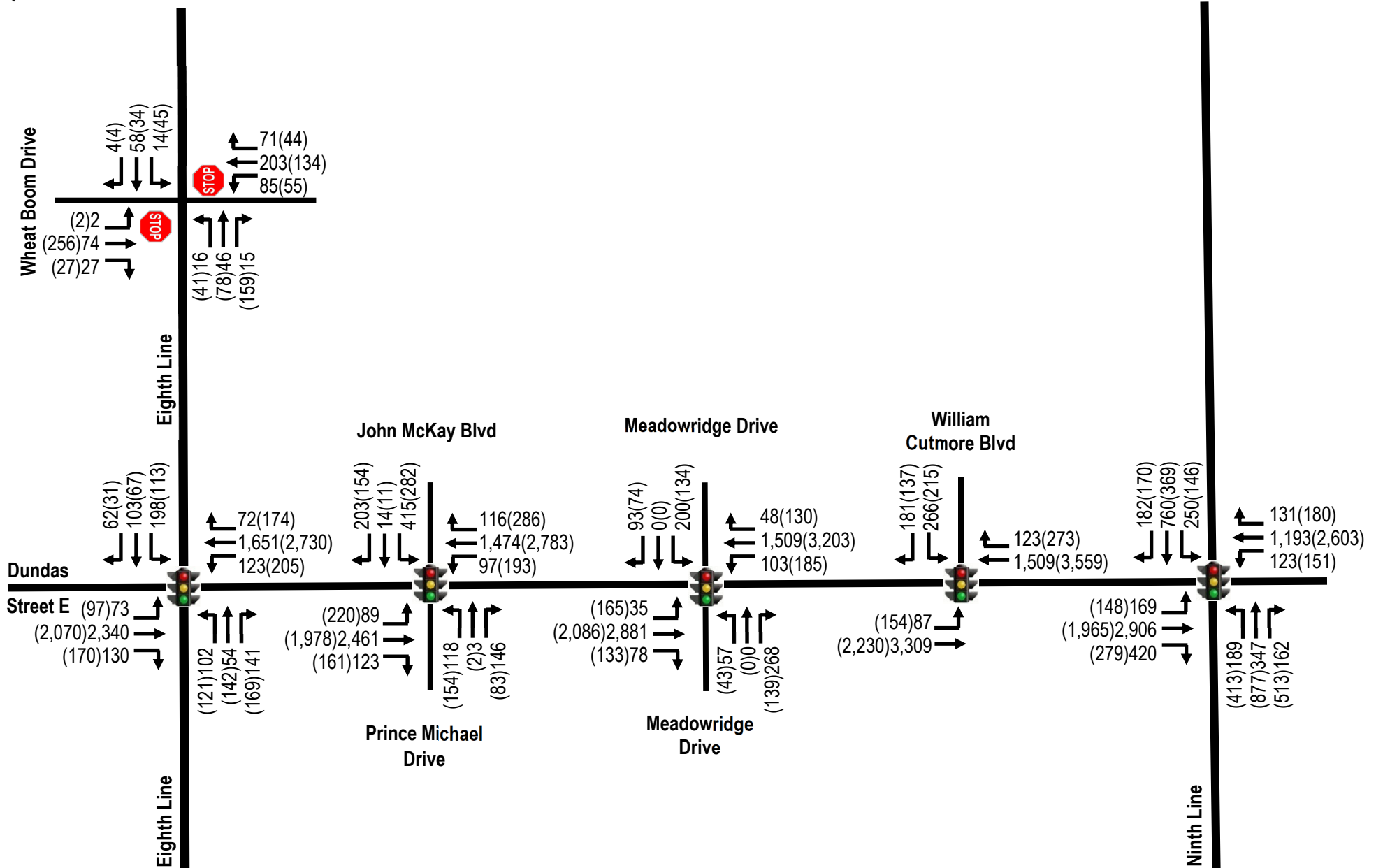
Legend

Figure 11 – Background Development Traffic Volumes (Mattamy Joshua Creek Phase 3 – Adjacent to Subject Site)



Threshing Mill Blvd

Ninth Line



Not to Scale

Legend

XX AM Peak Hour (XX) PM Peak Hour



Existing Stop Sign



Existing Signalized Intersection

Figure 12 – 2028 Future Background Traffic Volumes

Table 4 – 2028 Future Background Levels of Service

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Dundas Street E/ Eighth Line (signalized)	Overall	C (0.79)	23		C (0.83)	22		
	EB – L	B (0.42)	15	16	C (0.45)	26	27	~115
	EB – T	C (0.79)	24	253	C (0.72)	23	188	~300
	EB – R	A (0.14)	6	17	A (0.19)	5	17	~75
	WB – L	B (0.52)	20	35	D (0.57)	37	49	~155
	WB – T	B (0.57)	19	148	B (0.83)	17	133	~585
	WB – R	A (0.08)	7	14	A (0.17)	7	11	~85
	NB – L	D (0.43)	48	39	E (0.57)	59	49	~45
	NB – T	D (0.15)	39	22	D (0.46)	52	53	~255
	NB – R	B (0.34)	12	21	C (0.49)	23	36	~30
	SB – L	E (0.70)	59	72	E (0.75)	78	49	~45
	SB – T	D (0.27)	42	37	D (0.22)	46	28	~310
SB – R	A (0.25)	10	11	A (0.11)	1	1	~25	
Dundas Street E/ Prince Michael Drive/ John McKay Blvd (signalized)	Overall	C (1.16)	30		C (0.98)	24		
	EB – L	C (0.67)	33	22	E (0.95)	74	91	~120
	EB – T	C (0.93)	25	282	A (0.69)	10	54	~585
	EB – R	A (0.15)	2	1	A (0.18)	1	4	~75
	WB – L	D (0.51)	42	33	D (0.77)	42	38	~125
	WB – T	A (0.51)	8	54	C (0.98)	23	325	~570
	WB – R	A (0.13)	0	0	A (0.31)	2	10	~85
	NB – L	E (0.62)	65	51	E (0.76)	76	70	~65
	NB – TR	C (0.55)	28	35	B (0.31)	14	16	~225
	SB – L	F (1.16)	135	167	F (0.93)	85	130	~15
	SB – T	C (0.02)	30	8	D (0.03)	39	8	~195
	SB – R	C (0.45)	30	56	B (0.34)	10	21	~15
Dundas Street E/ Meadowridge Drive (signalized)	Overall	C (1.63)	22		C (1.02)	31		
	EB – L	A (0.32)	8	2	F (1.02)	102	72	~80
	EB – T	A (0.88)	7	60	C (0.60)	21	205	~570
	EB – R	A (0.08)	0	0	A (0.12)	4	6	~80
	WB – L	C (0.51)	33	23	D (0.84)	36	25	~140
	WB – T	A (0.43)	4	9	C (0.92)	33	311	~335
	WB – R	A (0.06)	0	0	A (0.16)	5	7	~70
	NB – L	D (0.26)	51	28	D (0.21)	51	23	~25
	NB – T	A (0.00)	0	0	A (0.00)	0	0	~215
	NB – R	D (0.76)	45	81	C (0.45)	23	32	~25
	SB – L	F (1.63)	253	130	F (0.90)	107	76	~15
	SB – T	A (0.00)	0	0	A (0.00)	0	0	~175
SB – R	C (0.32)	20	22	B (0.27)	12	14	~15	
Dundas Street E/ William Cutmore Blvd (signalized)	Overall	C (1.05)	22		C (1.02)	28		
	EB – L	B (0.47)	15	14	F (0.98)	83	70	~100
	EB – T	C (0.86)	22	306	B (0.57)	18	192	~335
	WB – T	A (0.41)	3	24	C (1.02)	31	65	~500
	WB – R	A (0.11)	0	0	A (0.25)	0	0	~85
	SB – L	F (1.05)	121	136	F (0.91)	94	106	~45
SB – R	D (0.69)	44	57	C (0.50)	34	37	~30	
Dundas Street E/ Ninth Line (signalized)	Overall	F (1.28)	86		E (1.20)	67		
	EB – L	C (0.57)	21	28	D (0.74)	55	56	~225
	EB – T	F (1.28)	160	413	C (0.92)	24	174	~500
	EB – R	B (0.53)	16	52	A (0.37)	4	6	~85
	WB – L	C (0.59)	34	44	D (0.77)	51	62	~230
	WB – T	C (0.57)	28	108	F (1.20)	129	353	~255
	WB – R	A (0.18)	4	13	B (0.26)	11	29	~85
	NB – L	E (0.92)	74	69	E (1.00)	77	154	~160
	NB – T	D (0.37)	38	51	D (0.81)	47	139	~485
	NB – R	A (0.30)	9	20	D (0.92)	53	171	~130
	SB – L	D (0.64)	36	65	D (0.71)	41	46	~130
	SB – T	D (0.79)	49	118	C (0.34)	35	54	~810
SB – R	B (0.34)	10	25	B (0.30)	12	27	~55	

Eighth Line/ Threshing Mill Blvd/ Wheat Boom Drive (unsignalized)	EB – L	B (0.00)	14	0	C (0.01)	17	0	~30
	EB – TR	B (0.14)	11	4	C (0.58)	22	29	~30
	WB – LTR	C (0.51)	15	24	C (0.55)	23	26	~100
	NB – LTR	A (0.01)	2	0	A (0.03)	1	1	~300
	SB – LTR	A (0.01)	1	0	A (0.03)	4	1	~300

4.5. Finding Summary

Based on the intersection capacity analysis, under the future background traffic conditions, the analysis the analysis indicates that the intersections considered are expected to operate at acceptable levels of service. However, Nextrans acknowledges that there is a number of critical movements with v/c ratios are greater than 0.85. This can be explained with the following:

- The Secondary Plan Area fine grid road network is not completed at this time and under this horizon year
- Once the complete road network identified in the Secondary Plan Area is completed, it is expected that the traffic will not be concentrating at the critical movements
- Especially with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway
- It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, as well as the completion of William Halton Parkway, it will provide much needed east-west capacity for the area
- The intersection of Dundas Street E/Ninth Line is expected to operate near or at capacity. This is due to the heavy through traffic volumes in this direction coming from Highway 403 and Mississauga. However, this type of movement is typical at any major arterial intersections in the Great Toronto Area and in the Region of Halton. It is Nextrans’ opinion that the east-west capacity will be addressed as part of the future improvements on Burnhamthorpe Road E and completion of William Halton Parkway

4.6. Potential Mitigation Measures

As indicated above, the reasons for the critical movements outlined in the analysis are due to the uncompleted fine grid network identified in the Secondary Plan. In addition, currently Dundas Street E carries the majority of the east-west traffic. It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, it will provide much needed east-west capacity for the area.

In addition, with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway.

Based on this assessment and provision, Nextrans does not recommend any physical improvements to be implemented under this horizon year for the intersections located along Dundas Street E.

Nextrans recommends that the Region and the Town monitor these intersections in the future and make appropriate signal timing adjustments in the interim conditions. A monitoring program is also required in the future once all the road network is completed to ensure that signal timing and lane configurations are appropriate for the area.

For demonstration purposes, Nextrans has provided potential signal timing optimization for the signalized intersections along Dundas Street E with critical movements of v/c ratios that are greater than 0.85. It should be noted that signal timing optimization is the most effective way to increase intersection capacity. It is cost effective, fast and has less interruption to the existing road network. There are many new technologies such as camera detection, loop detection and Bluetooth that can detect slow down accident and provide better signal coordination/progression. The signal optimization results are provided in **Table 5** below.

Table 5 – 2028 Future Background Levels of Service with Signal Timing Optimization

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Dundas Street E/ Prince Michael Drive/ John McKay Blvd (signalized) With signal timing optimization	Overall	C (0.99)	32		C (0.98)	23		
	EB – L	C (0.52)	25	8	E (0.95)	74	91	~120
	EB – T	D (0.99)	37	303	A (0.69)	10	54	~585
	EB – R	A (0.16)	2	1	A (0.18)	1	4	~75
	WB – L	D (0.52)	49	36	D (0.77)	42	38	~125
	WB – T	B (0.63)	16	67	C (0.98)	23	325	~570
	WB – R	A (0.15)	3	8	A (0.31)	2	10	~85
	NB – L	E (0.62)	65	51	E (0.76)	76	70	~65
	NB – TR	C (0.55)	27	35	B (0.31)	14	16	~225
	SB – L	E (0.98)	75	147	F (0.93)	85	130	~15
	SB – T	C (0.02)	27	7	D (0.03)	39	8	~195
	SB – R	C (0.38)	16	39	B (0.34)	10	21	~15
Dundas Street E/ Meadowridge Drive (signalized) With signal timing optimization	Overall	C (0.99)	27		C (0.96)	32		
	EB – L	B (0.39)	14	3	D (0.80)	53	52	~80
	EB – T	B (0.99)	17	85	C (0.61)	21	205	~570
	EB – R	A (0.08)	0	0	A (0.12)	4	6	~80
	WB – L	D (0.64)	36	37	D (0.81)	38	27	~140
	WB – T	C (0.49)	23	135	D (0.96)	37	324	~335
	WB – R	A (0.07)	8	9	A (0.16)	7	10	~70
	NB – L	D (0.29)	53	28	D (0.21)	51	22	~25
	NB – T	A (0.00)	0	0	A (0.00)	0	0	~215
	NB – R	F (0.87)	88	94	B (0.43)	19	28	~25
	SB – L	F (0.95)	130	103	F (0.89)	103	75	~15
	SB – T	A (0.00)	0	0	A (0.00)	0	0	~175
SB – R	B (0.22)	16	21	A (0.25)	8	10	~15	
Dundas Street E/ William Cutmore Blvd (signalized) With signal timing optimization	Overall	C (0.90)	26		C (0.99)	26		
	EB – L	C (0.49)	22	20	F (0.97)	81	69	~100
	EB – T	C (0.90)	30	328	B (0.56)	17	187	~335
	WB – T	A (0.43)	7	61	C (0.99)	26	61	~500
	WB – R	A (0.11)	1	5	A (0.24)	0	0	~85
	SB – L	E (0.87)	78	114	F (0.91)	96	105	~45
	SB – R	D (0.62)	41	56	C (0.50)	34	36	~30
Dundas Street E/ Ninth Line (signalized) With signal timing optimization	Overall	E (1.11)	63		E (1.17)	62		
	EB – L	C (0.59)	23	36	D (0.71)	53	54	~225
	EB – T	F (1.11)	94	433	C (0.90)	22	146	~500
	EB – R	B (0.48)	16	81	A (0.36)	3	6	~85
	WB – L	E (0.77)	63	65	D (0.74)	49	60	~230
	WB – T	C (0.49)	26	107	F (1.17)	118	342	~255
	WB – R	A (0.16)	3	11	B (0.25)	11	28	~85
	NB – L	F (0.94)	89	94	E (0.98)	72	146	~160
	NB – T	D (0.36)	47	63	D (0.80)	47	136	~485
	NB – R	C (0.32)	22	40	D (0.90)	51	164	~130
	SB – L	D (0.70)	52	85	D (0.68)	40	41	~130
	SB – T	E (0.87)	68	153	C (0.34)	35	53	~810
	SB – R	C (0.38)	21	42	B (0.30)	11	26	~55

5.0 SITE TRAFFIC

5.1. Proposed Development

The subject site is currently vacant. The proposed residential development consists of a total 181 residential dwelling units, with 129 single-detached and 52 street townhouse units.

For the purposes of this assessment and consistent with other background traffic impact studies prepared for other developments in the area, the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) and 2016 TTS information will be utilized in this Study.

5.2. Non-auto Modal Split

As the majority of the area north of Dundas Street E is still under construction, the 2016 Transportation Tomorrow Survey data for existing traffic zones north of Dundas Street will not be representative. For these reasons, the traffic zones located south of Dundas Street E will be selected for analysis as these are stable communities. **Table 5** summarizes the travel mode split information based on the review of the 2016 Transportation Tomorrow Survey data for Traffic Zones 4033 and 4035. The 2016 TTS data extraction is included in **Appendix E**.

Table 6 – Modal Split based on 2016 TTS Data for Traffic Zones

Time	Trips Made by Traffic Zones				
	Auto Driver	Auto Passenger	Transit	Cycle	Walk
AM Peak Period (6:00AM – 9:00AM)	68%	17%	7%	0%	8%
PM Peak Period (4:00PM – 7:00PM)	74%	17%	8%	0%	1%

Based on the information above, the non-auto mode of transportation (transit + walking + carpooling) accounts for near 32% during the morning peak period and 26% during the afternoon peak period. Although this is a great trend, however, the auto driver mode is still very high, which is not sustainable and does not meet the sustainable objective of the Town Official Plan policies and directions. In addition, there is none or very little bicycle trips, despite there are existing cycling facilities.

Nextrans’ review of the background traffic impact studies, especially the GHD report, and understands that the Regional staff would support 18% non-auto modal split for the area, including 10% transit, 5% active transportation and 3% transportation demand management. This was stated in the terms of reference prepared by GHD for the Joshua Creek Phase 3. However, to be conservative, **Nextrans will NOT use this modal split in the trip generation analysis**. Therefore, both of these provisions will address the Town’s comment to verify that the Regional staff support 18% modal split for the area.

5.3. Sit Trip Generation

The ITE Trip Generation Manual 11th Edition Land Use Codes (LUC) 201 “Single-Family Detached Housing General Urban/Suburban” and LUC 215 “Single-Family Attached Housing General Urban/Suburban” fitted curve equations have been utilized for the proposed development. The site trip generation is summarized in **Table 6**.

Table 7 – Site Traffic Trip Generation Based on ITE Trip Rates (11th Edition)

ITE Land Use	Magnitude (units)	Parameters	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Single-Family Detached Housing LUC 210 General Urban/Suburban	129	Trip Rates AM - $\ln(T) = 0.91 \cdot \ln(X) + 0.12$ PM - $\ln(T) = 0.94 \cdot \ln(X) + 0.27$	0.19	0.54	0.73	0.62	0.36	0.98
		Sub-Total Trips	24	70	94	79	47	126
Single-Family Attached Housing LUC 215 General Urban/Suburban	52	Trip Rates AM - $T = 0.52 \cdot (X) - 5.70$ PM - $T = 0.60 \cdot (X) - 3.93$	0.12	0.28	0.40	0.3	0.22	0.52
		Sub-Total Trips	7	14	21	15	12	27
Total Trips			31	84	115	94	59	153

Based on the analysis noted above, the proposed development is expected to generate a total of 115 two-way auto trips (31 inbound and 84 outbound) and 153 two-way auto trips (94 inbound and 59 outbound) during the morning and afternoon peak hours, respectively.

The analysis indicates that the proposed development is expected to generate very little auto trips, significantly less than all of the active background developments in the area.

5.4. Site Trip Distribution Based on Existing Site

The 2016 Transportation Tomorrow Survey (TTS) data was reviewed for Traffic Zones 4033 and 4035 in order to estimate the general trip distribution for the proposed development. **Table 7** summarizes the planning district/traffic zones distribution based on the 2016 TTS data, with **Table 8** summarizing the site trip assignment based on the 2016 TTS data and the existing traffic turning movement counts in the area.

Table 8 – General Trip Distribution for the Proposed Development

Oakville	Mississauga	Burlington	Milton/ Halton Hills	Toronto	Brampton	York Region	Hamilton	Niagara Region	Total
57%	18%	3%	5%	6%	2%	3%	5%	1%	100%

Table 9 – Site Trip Assignment for the Proposed Development

General Direction (To/From)	AM Peak Hour – Trip Percentage	PM Peak Hour – Trip Percentage
East	20%	20%
West	30%	30%
North	25%	25%
South	25%	25%
Total	100%	100%

As indicated, the proposed development access is provided via internal public streets connecting to Mattamy Joshua Creek Phase 3 proposed draft plan of subdivision, and eventually to Burnhamthorpe Road E via future proposed draft plan of subdivisions to the north. Under the interim conditions where the proposed draft plans of subdivision to the north are not completed, the anticipated traffic from the proposed development will be routing primarily to and from Dundas Street via John McKay Boulevard, Meadowridge Drive and William Cutmore Boulevard, as well as Eighth Line via Wheat Boom Drive. The proposed development will also protect for future Street C and Street A extensions to the west and north, respectively.

Figure 13 illustrates the proposed development generated traffic volumes for the residential component. It should be noted that the auto site trip distribution and assignment have been taken into consideration the 2016 TTS information above, existing turning restrictions and available road network in the study area.

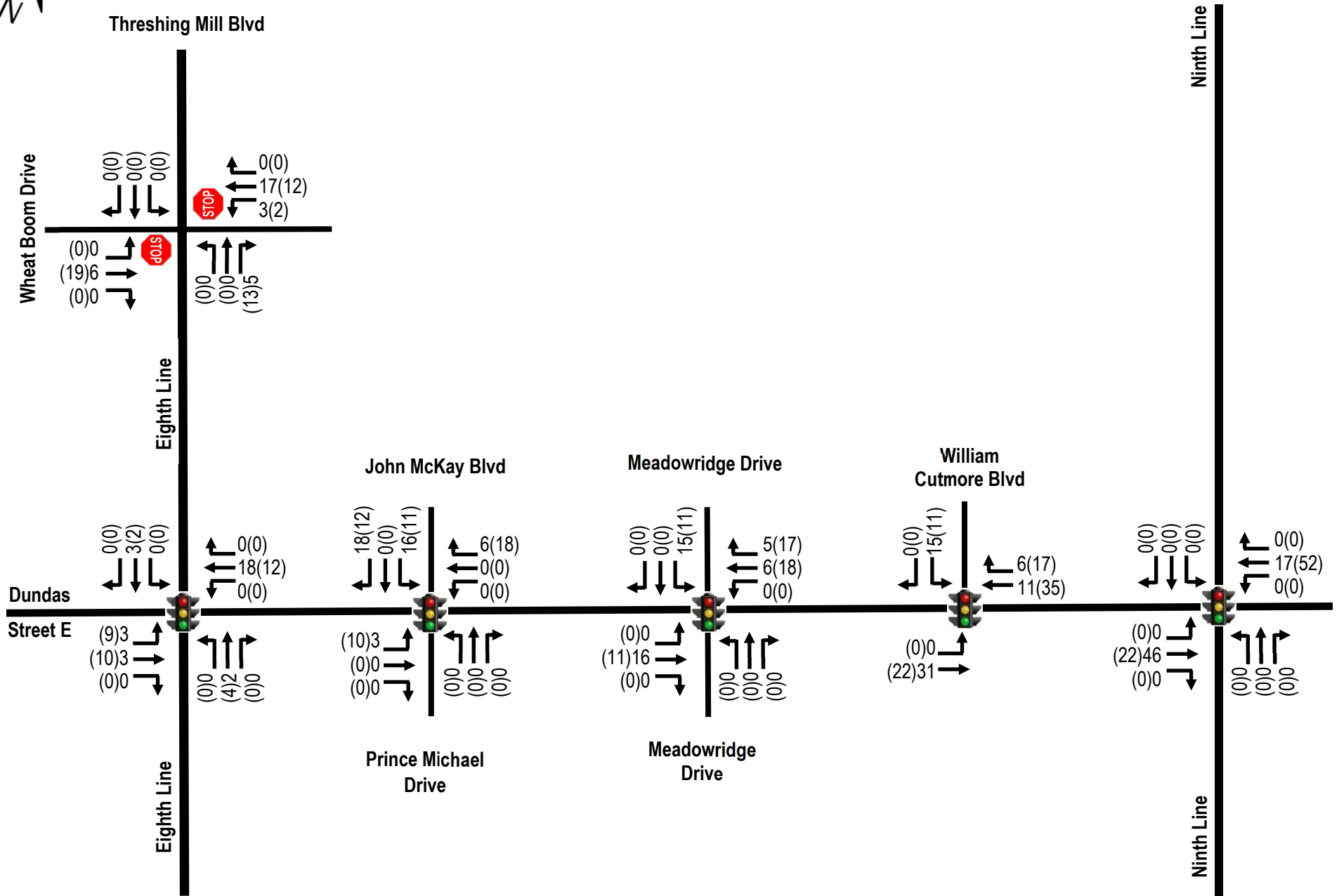
6.0 FUTURE TOTAL TRAFFIC CONDITIONS

6.1. Future Total Traffic Assessment for Auto Mode

The estimated future total traffic volumes (future background traffic volumes + site generated traffic volumes) are illustrated in **Figure 14**, and were analyzed using Synchro Version 11 software. The detailed calculations are provided in **Appendix F** and summarized in **Table 10**.

Table 10 – 2028 Future Total Levels of Service

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Dundas Street E/ Eighth Line (signalized)	Overall	C (0.79)	23		C (0.84)	23		
	EB – L	B (0.44)	17	18	C (0.47)	28	30	~115
	EB – T	C (0.79)	24	254	C (0.73)	23	190	~300
	EB – R	A (0.14)	6	17	A (0.19)	5	17	~75
	WB – L	B (0.52)	20	35	D (0.57)	37	48	~155
	WB – T	B (0.58)	19	150	B (0.84)	18	135	~585
	WB – R	A (0.08)	7	14	A (0.17)	7	11	~85



Not to Scale

Legend

XX AM Peak Hour (XX) PM Peak Hour



Stop Sign



Signalized Intersection

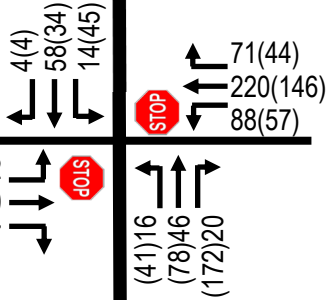
Figure 13 – Site Traffic Volumes



Threshing Mill Blvd

Ninth Line

Wheat Boom Drive



Eighth Line

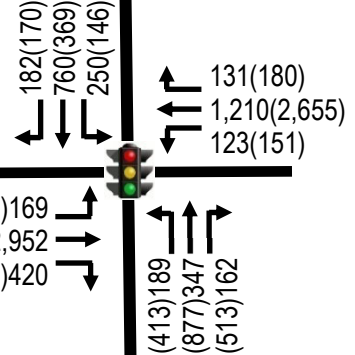
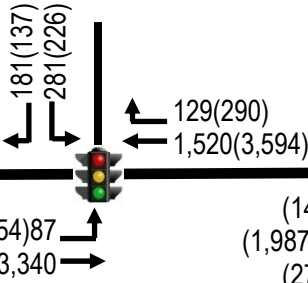
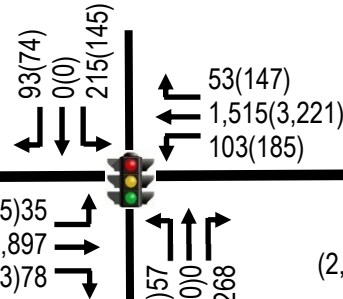
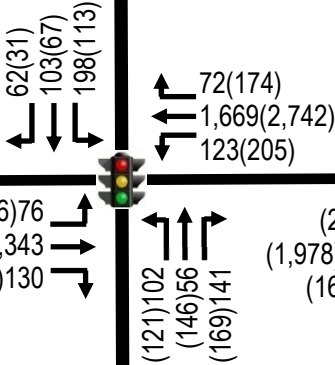
John McKay Blvd

Meadowridge Drive

William Cutmore Blvd

Dundas

Street E



Prince Michael Drive

Meadowridge Drive

Not to Scale

Legend

XX AM Peak Hour (XX) PM Peak Hour



Existing Stop Sign



Existing Signalized Intersection

Figure 14 – 2028 Future Total Traffic Volumes

	NB – L	D (0.43)	48	39	E (0.57)	59	49	~45
	NB – T	D (0.15)	40	23	D (0.47)	52	55	~255
	NB – R	B (0.34)	12	21	C (0.49)	23	35	~30
	SB – L	E (0.70)	59	72	F (0.76)	80	49	~45
	SB – T	D (0.27)	42	37	D (0.22)	46	28	~310
	SB – R	A (0.25)	10	11	A (0.11)	1	1	~25
	Overall	C (1.21)	31		C (1.00)	25		
Dundas Street E/ Prince Michael Drive/ John McKay Blvd (signalized)	EB – L	C (0.70)	35	26	F (1.00)	84	98	~120
	EB – T	C (0.93)	25	282	A (0.69)	10	55	~585
	EB – R	A (0.15)	2	1	A (0.18)	1	4	~75
	WB – L	D (0.51)	42	33	D (0.77)	41	38	~125
	WB – T	A (0.51)	8	53	C (0.99)	24	325	~570
	WB – R	A (0.13)	0	0	A (0.32)	2	10	~85
	NB – L	E (0.62)	65	51	E (0.76)	76	70	~65
	NB – TR	C (0.56)	29	36	B (0.31)	14	16	~225
	SB – L	F (1.21)	152	177	F (0.94)	89	137	~15
	SB – T	C (0.02)	30	8	D (0.03)	39	8	~195
	SB – R	C (0.49)	32	62	B (0.36)	12	25	~15
	Overall	C (1.75)	25		C (1.08)	31		
Dundas Street E/ Meadowridge Drive (signalized)	EB – L	A (0.32)	8	2	F (1.08)	116	70	~80
	EB – T	A (0.88)	7	62	C (0.60)	21	205	~570
	EB – R	A (0.08)	0	0	A (0.12)	3	6	~80
	WB – L	C (0.51)	33	23	C (0.86)	32	24	~140
	WB – T	A (0.43)	4	8	C (0.92)	33	309	~335
	WB – R	A (0.07)	0	0	A (0.18)	5	8	~70
	NB – L	D (0.26)	51	28	D (0.20)	51	23	~25
	NB – T	A (0.00)	0	0	A (0.00)	0	0	~215
	NB – R	D (0.76)	46	81	C (0.44)	23	32	~25
	SB – L	F (1.75)	403	140	F (0.94)	114	84	~15
	SB – T	A (0.00)	0	0	A (0.00)	0	0	~175
	SB – R	C (0.32)	20	23	B (0.26)	12	14	~15
	Overall	C (1.11)	23		C (1.03)	31		
Dundas Street E/ William Cutmore Blvd (signalized)	EB – L	B (0.47)	15	15	F (1.02)	93	70	~100
	EB – T	C (0.87)	22	307	B (0.58)	19	193	~335
	WB – T	A (0.41)	3	24	C (1.03)	35	63	~500
	WB – R	A (0.11)	0	0	A (0.26)	0	0	~85
	SB – L	F (1.11)	138	146	F (0.94)	99	114	~45
	SB – R	D (0.70)	45	59	C (0.49)	33	37	~30
	Overall	F (1.31)	91		E (1.23)	71		
Dundas Street E/ Ninth Line (signalized)	EB – L	C (0.58)	21	28	D (0.74)	54	55	~225
	EB – T	F (1.31)	169	420	C (0.93)	25	193	~500
	EB – R	B (0.53)	16	51	A (0.37)	4	7	~85
	WB – L	C (0.59)	35	44	D (0.77)	51	62	~230
	WB – T	C (0.58)	28	110	F (1.23)	140	363	~255
	WB – R	A (0.18)	4	13	B (0.26)	12	30	~85
	NB – L	E (0.92)	74	69	E (1.00)	77	154	~160
	NB – T	D (0.37)	38	51	D (0.81)	47	139	~485
	NB – R	A (0.30)	9	20	D (0.92)	53	171	~130
	SB – L	D (0.64)	36	65	D (0.71)	41	46	~130
	SB – T	D (0.79)	49	118	C (0.34)	35	54	~810
	SB – R	B (0.34)	11	26	B (0.30)	12	27	~55
	EB – L	B (0.01)	14	0	C (0.01)	18	0	~30
Eighth Line/ Threshing Mill Blvd/ Wheat Boom Drive (unsignalized)	EB – TR	B (0.15)	11	4	C (0.64)	25	35	~30
	WB – LTR	C (0.55)	16	27	D (0.61)	27	31	~100
	NB – LTR	A (0.01)	2	0	A (0.03)	1	1	~300
	SB – LTR	A (0.01)	1	0	A (0.03)	4	1	~300

6.2. Finding Summary

Based on the intersection capacity analysis, under the future total traffic conditions, the analysis indicates that the intersections considered are expected to operate at acceptable levels of service from overall intersection operation perspective. However, Nexttrans acknowledges that there are a number of critical movements with v/c ratios that are great than 0.85. This can be explained with the following:

- The Secondary Plan Area fine grid road network is not completed at this time and under this horizon year
- Once the complete road network identified in the Secondary Plan Area is completed, it is expected that the traffic will not be concentrating at the critical movements
- Especially with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway
- It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, as well as the completion of William Halton Parkway, it will provide much needed east-west capacity for the area
- The intersection of Dundas Street E/Ninth Line is expected to operate near or at capacity. This is due to the heavy through traffic volumes in this direction coming from Highway 403 and Mississauga. However, this type of movement is typical at any major arterial intersections in the Great Toronto Area and in the Region of Halton. It is Nextrans' opinion that the east-west capacity will be addressed as part of the future improvements on Burnhamthorpe Road E and completion of William Halton Parkway
- It should be noted that the proposed development has negligible or no impacts on the existing and future intersections along Dundas Street E. The internal intersections are also expected to have minimum traffic volumes and delay or queue.

6.3. Potential Mitigation Measures

As indicated above, the reasons for the critical movements outlined in the analysis are due to the uncompleted fine grid network identified in the Secondary Plan. In addition, currently Dundas Street E carries the majority of the east-west traffic. It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, it will provide much needed east-west capacity for the area.

In addition, with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway.

Based on this assessment and provision, Nextrans does not recommend any physical improvements to be implemented under this horizon year for the intersections located along Dundas Street E.

Nextrans recommends that the Region and the Town monitor these intersections in the future and make appropriate signal timing adjustments in the interim conditions. A monitoring program is also required in the future once all the road network is completed to ensure that signal timing and lane configurations are appropriate for the area.

It should be noted that the proposed development has negligible or no impacts on the existing and future intersections along Dundas Street E. The internal intersections are also expected to have minimum traffic volumes and delay or queue.

Nextrans recommends that the Region and the Town monitor these intersections in the future and make appropriate signal timing adjustments in the interim conditions. A monitoring program is also required in the future once all the road network is completed to ensure that signal timing and lane configurations are appropriate for the area.

For demonstration purposes, Nextrans has provided potential signal timing optimization for the signalized intersections along Dundas Street E with critical movements of v/c ratios that are greater than 0.85. It should be noted that signal timing optimization is the most effective way to increase intersection capacity. It is cost effective, fast and has less interruption to the existing road network. There are many new technologies such as camera detection, loop detection and Bluetooth that can detect slow down accident and provide better signal coordination/progression. The signal optimization results are provided in **Table 11** below.

Table 11 – 2028 Future Total Levels of Service

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Dundas Street E/ Prince Michael Drive/ John McKay Blvd (signalized) With signal timing optimization	Overall	D (0.99)	40		C (0.98)	29		
	EB – L	E (0.79)	74	61	F (0.98)	103	106	~120
	EB – T	D (0.99)	49	309	C (0.69)	21	155	~585
	EB – R	A (0.16)	9	20	A (0.18)	3	12	~75
	WB – L	C (0.57)	35	33	D (0.80)	45	38	~125
	WB – T	B (0.55)	19	113	C (0.98)	25	332	~570
	WB – R	A (0.14)	3	9	A (0.32)	2	12	~85
	NB – L	E (0.65)	73	55	E (0.76)	78	72	~65
	NB – TR	C (0.58)	32	39	B (0.31)	14	16	~225
	SB – L	E (0.98)	77	167	F (0.96)	94	145	~15
	SB – T	C (0.02)	29	8	D (0.03)	41	8	~195
SB – R	C (0.44)	30	63	B (0.36)	11	24	~15	
Dundas Street E/ Meadowridge Drive (signalized) With signal timing optimization	Overall	D (0.98)	36		C (0.95)	31		
	EB – L	C (0.39)	32	18	D (0.86)	55	60	~80
	EB – T	D (0.98)	40	354	C (0.60)	24	212	~570
	EB – R	A (0.08)	2	6	A (0.12)	5	15	~80
	WB – L	D (0.70)	52	45	E (0.88)	64	73	~140
	WB – T	B (0.49)	13	93	C (0.95)	31	313	~335
	WB – R	A (0.08)	2	5	A (0.18)	4	13	~70
	NB – L	E (0.32)	64	32	D (0.21)	53	23	~25
	NB – T	A (0.00)	0	0	A (0.00)	0	0	~215
	NB – R	E (0.93)	76	110	C (0.45)	24	33	~25
	SB – L	F (0.97)	104	123	F (0.95)	119	86	~15
SB – T	A (0.00)	0	0	A (0.00)	0	0	~175	
SB – R	C (0.22)	21	26	B (0.26)	12	14	~15	
Dundas Street E/ William Cutmore Blvd (signalized) With signal timing optimization	Overall	C (0.91)	21		C (0.99)	26		
	EB – L	C (0.51)	21	31	F (0.99)	107	78	~100
	EB – T	C (0.91)	22	311	A (0.56)	6	80	~335
	WB – T	A (0.43)	7	69	C (0.99)	31	382	~500
	WB – R	A (0.12)	1	6	A (0.25)	2	13	~85
	SB – L	F (0.87)	80	122	F (0.99)	116	122	~45
	SB – R	D (0.61)	42	59	C (0.50)	31	38	~30
Dundas Street E/ Ninth Line (signalized) With signal timing optimization	Overall	E (1.13)	66		E (1.03)	54		
	EB – L	C (0.60)	23	36	F (0.88)	80	84	~225
	EB – T	F (1.13)	101	444	D (0.78)	37	219	~500
	EB – R	B (0.48)	16	81	A (0.34)	9	36	~85
	WB – L	E (0.77)	63	65	F (0.92)	90	88	~230
	WB – T	C (0.50)	26	109	E (1.03)	67	372	~255
	WB – R	A (0.16)	3	11	B (0.23)	11	29	~85
	NB – L	F (0.94)	89	94	E (0.98)	78	180	~160
	NB – T	D (0.36)	47	63	D (0.74)	53	161	~485
	NB – R	C (0.32)	22	40	E (0.94)	69	215	~130
	SB – L	D (0.70)	52	85	E (0.82)	66	57	~130
SB – T	E (0.87)	68	153	D (0.39)	50	69	~810	
SB – R	C (0.38)	21	42	C (0.35)	21	40	~55	

6.4. Sensitivity Analysis

The Town of Oakville has requested that a sensitivity analysis be undertaken for Burnhamthorpe Road E, which includes the intersections Trafalgar Road/Burnhamthorpe Road and Burnhamthorpe Road E/William Halton Parkway. To address this comment, Nexttrans has obtained the turning movement counts for these two intersections on Wednesday June 7, 2023 from Spectrum. **Figure 15** illustrates the existing traffic volumes.

Figure 15 – Existing Traffic Volumes

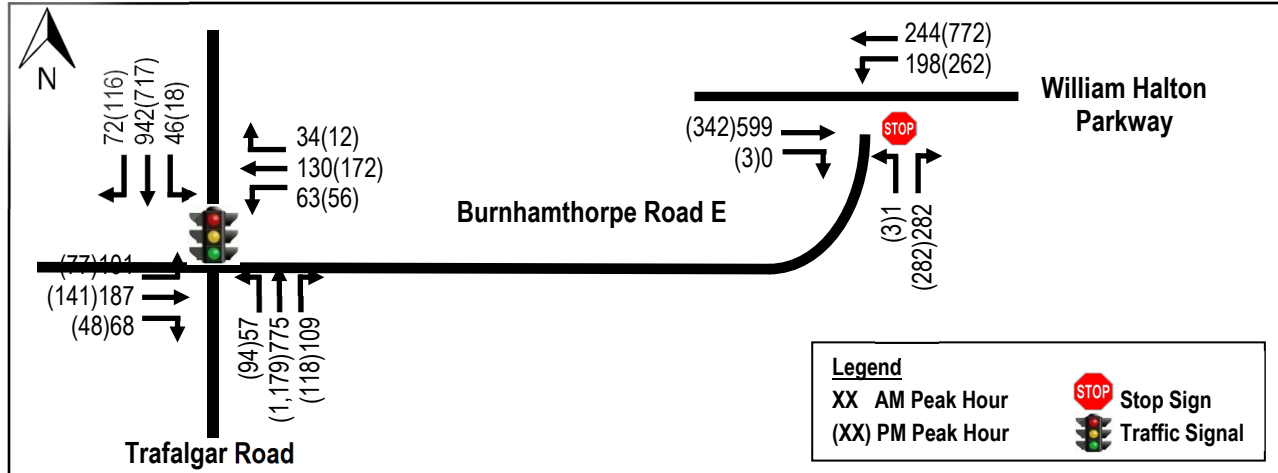


Figure 15 illustrating the 2028 background through corridor traffic grow (2% compounded).

The background development and site traffic volumes were estimated based on the following:

- 25% diversion for the Phase 3 Joshua Creek – Mattamy
- 10% diversion for the remainder of the background development
- The site traffic volumes were based on the 2016 TTS general trip distribution and assignment

Figure 16 illustrates the background development traffic volumes, with Figure 17 illustrating the 2028 future background traffic volumes. Figure 18 illustrates the site generated traffic volumes, with Figure 19 illustrating the 2028 future total traffic volumes.

Figure 16 – 2028 Background Through Corridor Growth

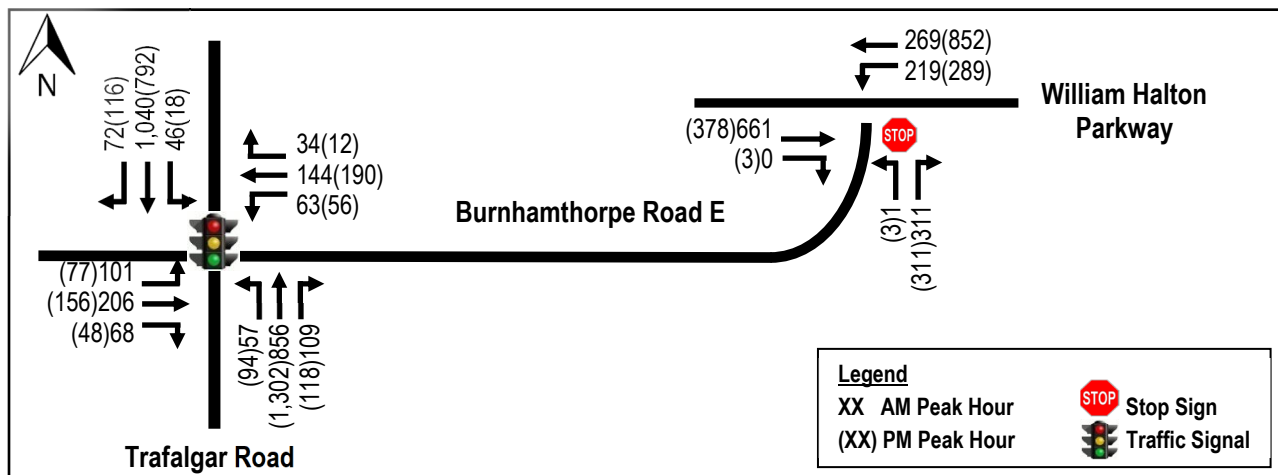


Figure 17 – 2028 Background Developments

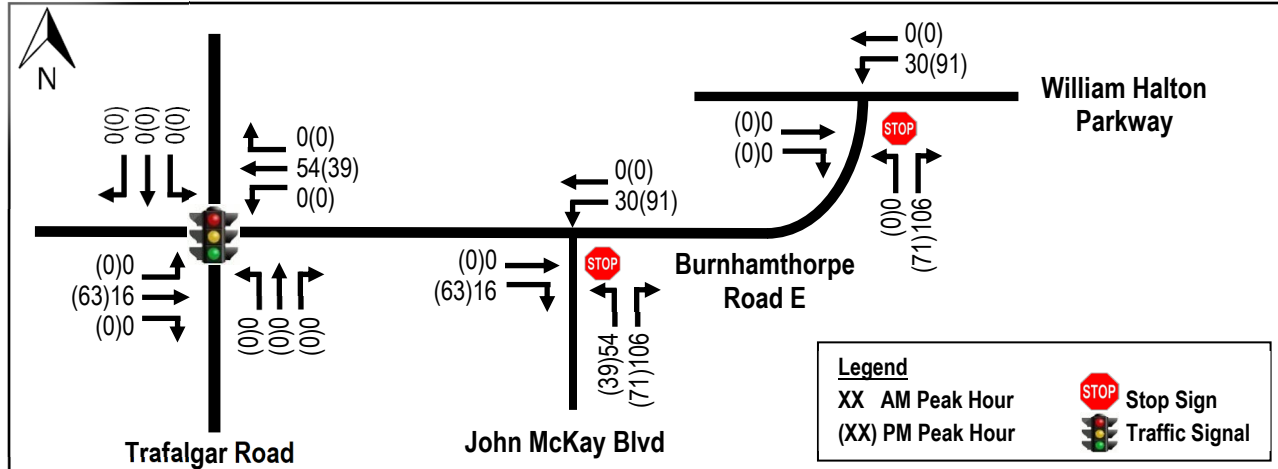


Figure 18 – 2028 Future Background Traffic Volumes

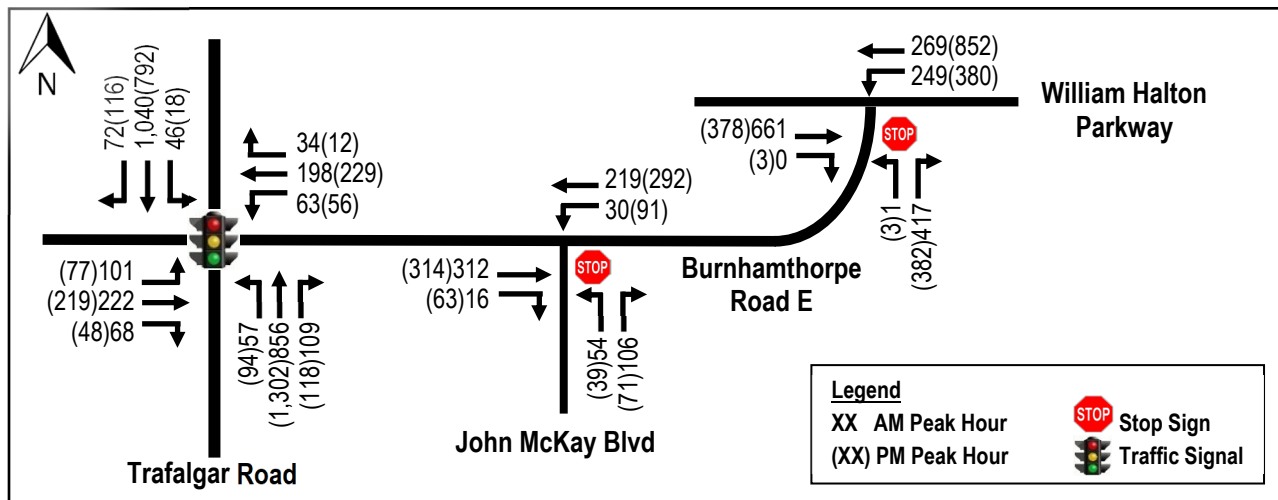


Figure 19 – Site Traffic Volumes

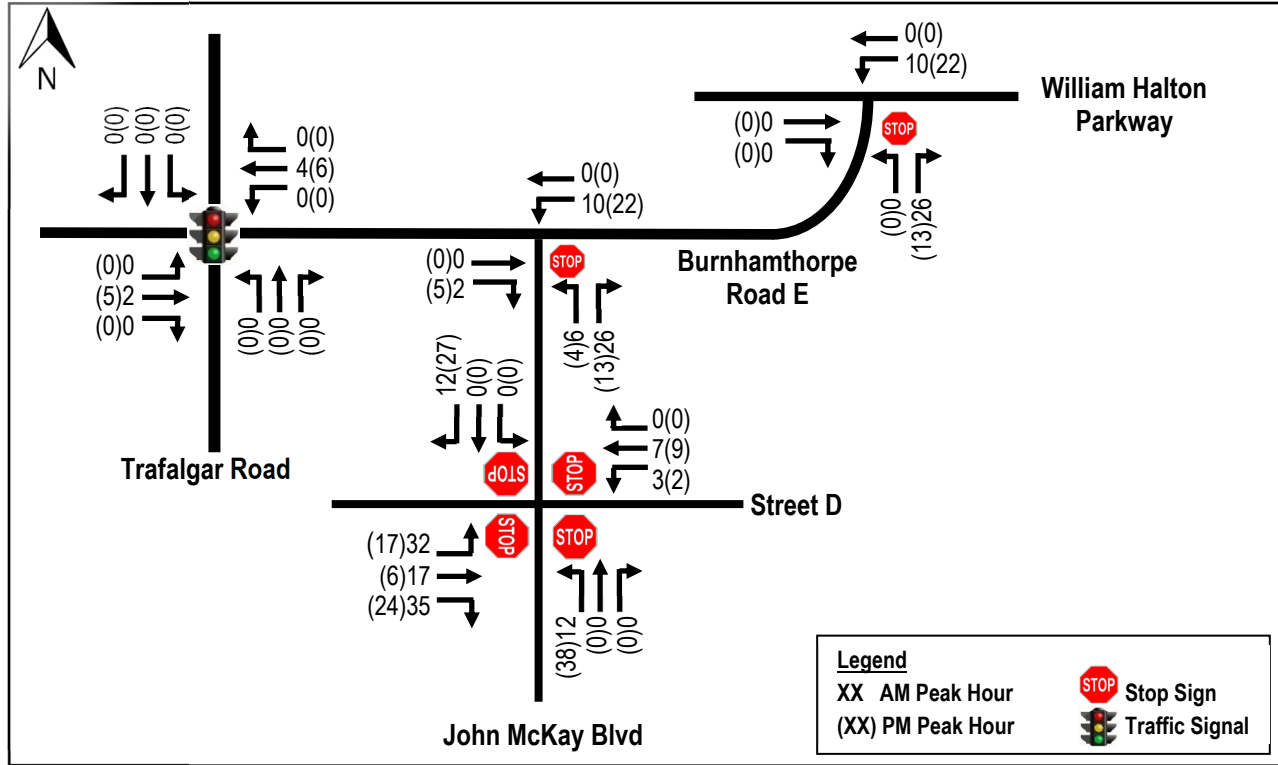
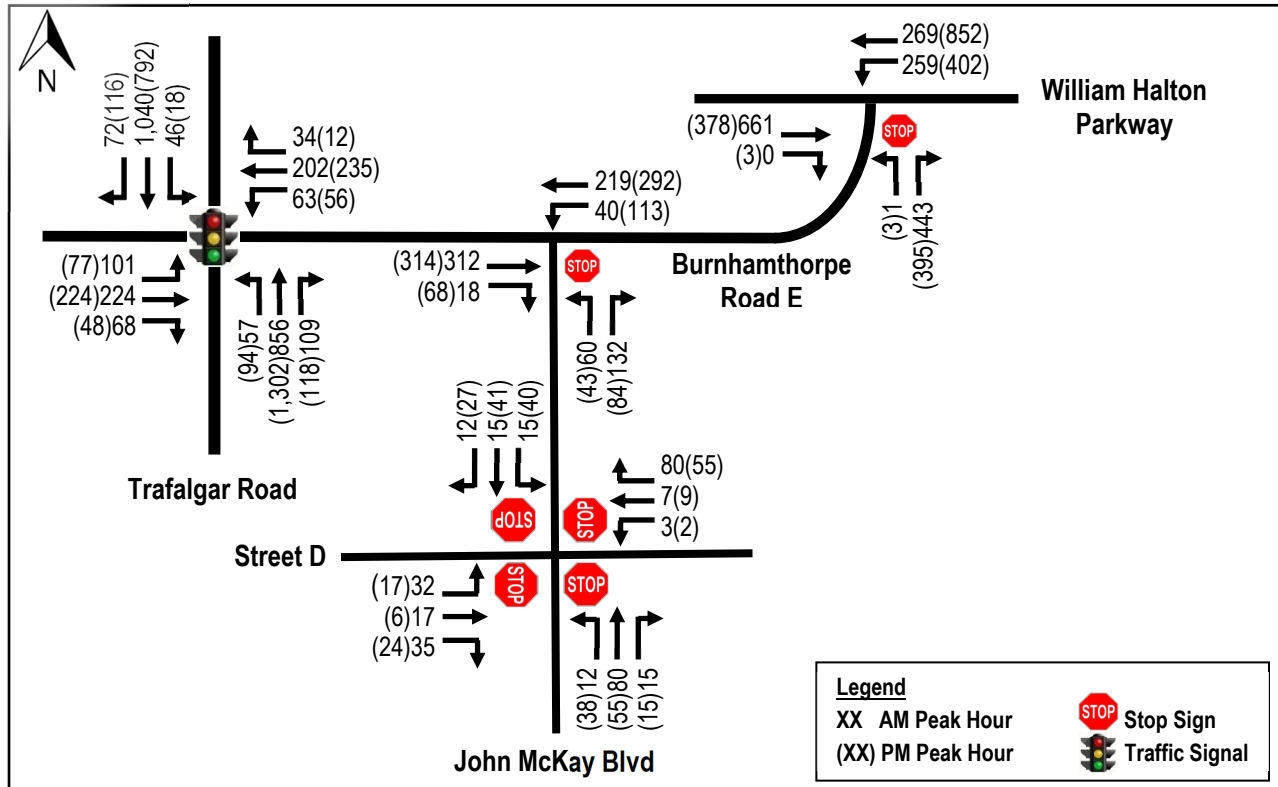


Figure 20 – 2028 Future Total Traffic Volumes



The existing, 2028 future background and future total traffic volumes were analyzed using Synchro Version 11 software. The detailed calculations are provided in **Appendix H** and summarized in **Tables 12, 13 and 14** below.

Table 12 – Existing Levels of Service Sensitivity Analysis

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Trafalgar Road/ Burnhamthorpe Rd E (signalized)	Overall	C (0.70)	21		B (0.63)	18		
	EB – L	D (0.41)	41	35	D (0.39)	44	29	~30
	EB – TR	D (0.70)	47	75	D (0.63)	48	58	~300
	WB – L	C (0.21)	24	17	C (0.18)	26	17	~20
	WB – TR	C (0.31)	26	39	C (0.39)	33	48	~300
	NB – L	C (0.24)	21	20	B (0.26)	16	27	~140
	NB – TR	B (0.50)	19	107	B (0.61)	16	160	~500
	SB – L	B (0.12)	10	10	A (0.06)	8	5	~120
SB – TR	B (0.51)	13	103	A (0.37)	9	67	~500	
William Halton Pkwy/ Burnhamthorpe Rd E (unsignalized)	EB – TR	A (0.41)	0	0	A (0.22)	0	0	~300
	WB – TL	A (0.25)	6	8	A (0.23)	5	7	~300
	NB – LR	D (0.74)	33	48	C (0.48)	16	21	~300

Table 13 – 2028 Future Background Levels of Service Sensitivity Analysis

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Trafalgar Road/ Burnhamthorpe Rd E (signalized)	Overall	C (0.73)	23		C (0.72)	22		
	EB – L	D (0.40)	39	34	D (0.33)	38	27	~30
	EB – TR	D (0.73)	48	85	D (0.71)	48	78	~300
	WB – L	C (0.21)	23	17	C (0.19)	23	16	~20
	WB – TR	C (0.41)	29	54	C (0.44)	31	58	~300
	NB – L	C (0.29)	25	23	C (0.32)	21	32	~140
	NB – TR	C (0.56)	21	124	C (0.72)	22	222	~500
	SB – L	B (0.13)	11	11	B (0.08)	10	5	~120
SB – TR	B (0.57)	16	122	B (0.43)	12	85	~500	
Burnhamthorpe Rd E/ John McKay Blvd (unsignalized)	EB – TR	A (0.45)	0	0	D (0.24)	0	0	~300
	WB – TL	A (0.34)	8	12	A (0.35)	8	13	~300
	NB – LR	F (1.19)	139	153	D (0.71)	25	46	~300
William Halton Pkwy/ Burnhamthorpe Rd E (unsignalized)	EB – TR	A (0.21)	0	0	A (0.24)	0	0	~300
	WB – TL	A (0.03)	1	1	A (0.09)	3	2	~300
	NB – LR	B (0.31)	14	10	C (0.26)	16	8	~300

Table 14 – 2028 Future Total Levels of Service Sensitivity Analysis

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour			Available Storage Length (m)
		LOS (v/c)	Delay (s)	95 th Queue (m)	LOS (v/c)	Delay (s)	95 th Queue (m)	
Trafalgar Road/ Burnhamthorpe Rd E (signalized)	Overall	C (0.73)	23		C (0.72)	23		
	EB – L	D (0.40)	39	34	D (0.32)	37	27	~30
	EB – TR	D (0.73)	48	85	D (0.71)	48	79	~300
	WB – L	C (0.21)	23	17	C (0.19)	23	16	~20
	WB – TR	C (0.42)	29	55	C (0.44)	31	59	~300
	NB – L	C (0.29)	25	23	C (0.32)	21	33	~140
	NB – TR	C (0.56)	21	124	C (0.72)	22	223	~500
	SB – L	B (0.13)	11	11	B (0.08)	11	5	~120
SB – TR	B (0.57)	16	122	B (0.43)	13	86	~500	
Burnhamthorpe Rd E/ John McKay Blvd (unsignalized)	EB – TR	A (0.45)	0	0	D (0.24)	0	0	~300
	WB – TL	A (0.35)	8	13	A (0.37)	9	14	~300
	NB – LR	F (1.27)	168	177	D (0.74)	27	51	~300
William Halton Pkwy/ Burnhamthorpe Rd E (unsignalized)	EB – TR	A (0.21)	0	0	A (0.24)	0	0	~300
	WB – TL	A (0.04)	2	1	A (0.11)	3	3	~300
	NB – LR	B (0.37)	15	13	C (0.32)	17	11	~300
John McKay Blvd/ Street D (unsignalized)	EB – LTR	A (0.11)	8	0	A (0.06)	8	0	~100
	WB – LTR	A (0.10)	7	0	A (0.08)	7	0	~100
	NB – LTR	A (0.14)	8	0	A (0.14)	8	0	~100
	SB – LTR	A (0.05)	8	0	A (0.14)	8	0	~100

The analysis indicates that under the existing conditions, both intersections are currently operating well with no critical movements or long delay. Under the 2028 future background conditions, the signalized intersection of Trafalgar Road/Burnhamthorpe Road E is expected to operate well with no critical movements or long delay. However, the northbound at the unsignalized of Burnhamthorpe Road E/William Halton Parkway is expected to operate slightly over capacity during the morning peak hour. This is due to higher northbound right turn movement from Burnhamthorpe Road E to William Halton Parkway. Under the 2028 future total conditions, the signalized intersection of Trafalgar Road/Burnhamthorpe Road E is expected to operate well with no critical movements or long delay. However, similar to the 2028 future background conditions, the northbound at the unsignalized of Burnhamthorpe Road E/William Halton Parkway is expected to operate over capacity during the morning peak hour. This is due to higher northbound right turn movement from Burnhamthorpe Road E to William Halton Parkway.

In order to mitigate this operational issue at the Burnhamthorpe Road E/William Halton Parkway intersection during the morning peak hour, it is suggested that:

Interim Conditions

- A temporary traffic signal be installed at this intersection for the interim conditions; and
- No turn lanes are required

Ultimate Conditions

- A full traffic signal be installed at this intersection for the ultimate conditions;
- Full improvements at this are required for the build-out of the Secondary Plan with exclusive left turn and right turn lanes. The full extent of the improvements will be determined through the future developments abutting Burnhamthorpe Road E;
- Based on the findings of this Study, only an exclusive westbound left turn lane is required on William Halton Parkway, with one eastbound and one westbound through lane on William Halton Parkway. Only one northbound and one southbound lane similar to today condition are sufficient for Burnhamthorpe Road E

6.5. Active Transportation Mode Assessment

Walking

Under the existing conditions, external to the subject site, sidewalks are available on the established sides of the street such as Dundas Street E, Eighth Line, Postridge Drive, Trafalgar Road, Prince Michael Drive, Meadowridge Drive and Ninth Line. This sidewalk network is complete and appropriate for the existing communities; however, the future communities will need similar complete sidewalk network. It is Nextrans' understanding that sidewalks will be provided on both sides of all internal streets within the North Oakville Secondary Plan to facilitate pedestrians. Therefore, in the future, a complete sidewalk network will be provided and constructed by the proposed developments in the area. For an illustration of the big picture in the Joshua's Meadows Community, **Figure 21** illustrates the Town of Oakville Proposed Pedestrian Network Phasing (*excerpt from the Town of Oakville 2017 ATMP, Map 8*). On this basis, sidewalks will be provided on all of the proposed internal roads within the subject development, as per the Town of Oakville requirements and standards.

Cycling

Under the existing conditions, external to the subject site, there are dedicated cycling routes along Ninth Line south of Dundas Street E. There are also multi-use trails along Dundas Street E in the vicinity of the study area. It is Nextrans' understanding that a complete active transportation network (sidewalk and cycling facilities) will be constructed as part of the North Oakville Secondary Plan communities in the future. Similar to the walking network, it is Nextrans' understanding that cycling facilities will be constructed in phases, as per the Town's proposed cycling network phasing and priority projects. For an illustration of the big picture in the Joshua's Meadows Community, **Figure 22** illustrates the Town of Oakville Proposed Cycling Network Phasing and Priority Projects (*excerpt from the Town of Oakville 2017 ATMP, Map 9*), with **Figure 23** illustrating the North Oakville Trails Plan (Updated as of 2019). On this basis, the proposed development will support the Town's initiative with regards to the cycling facility, where appropriate.

Figure 21 – Town of Oakville Proposed Pedestrian Network Phasing

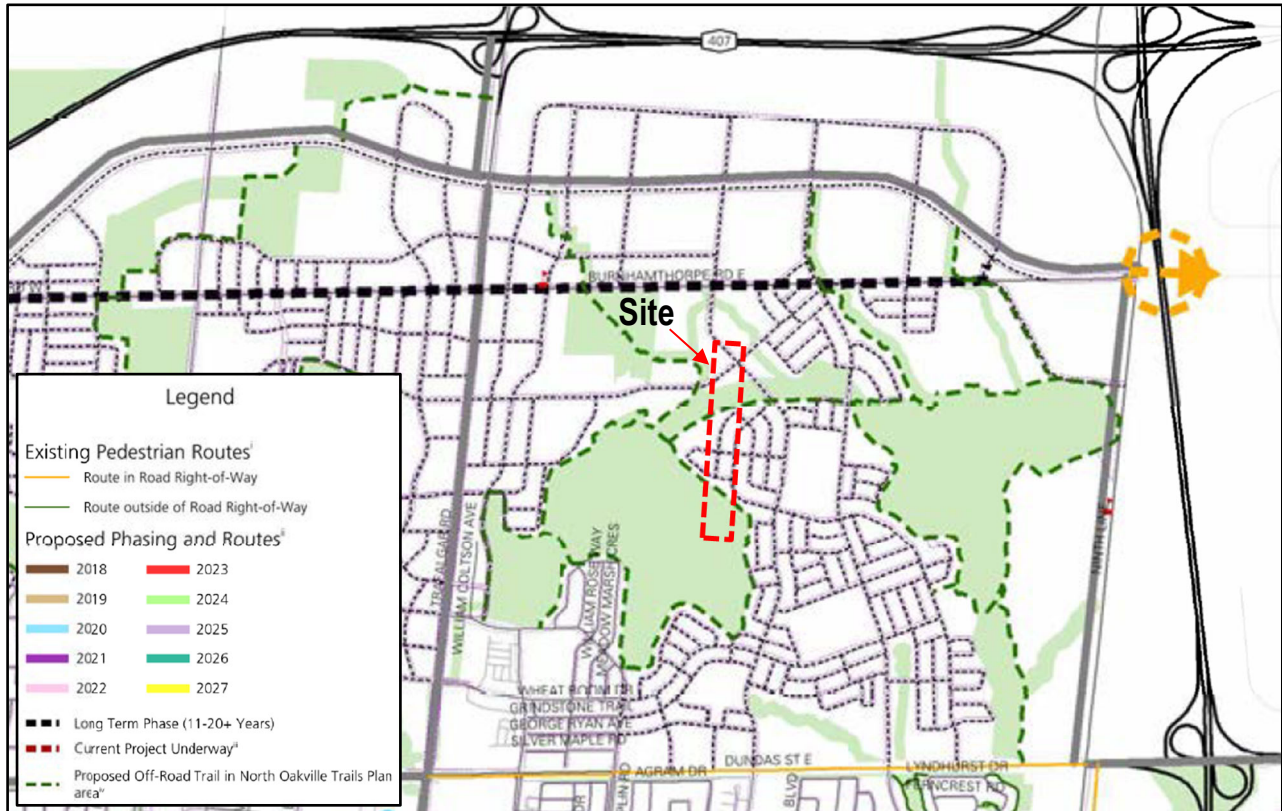


Figure 22 – Town of Oakville Proposed Cycling Network Phasing and Priority Projects

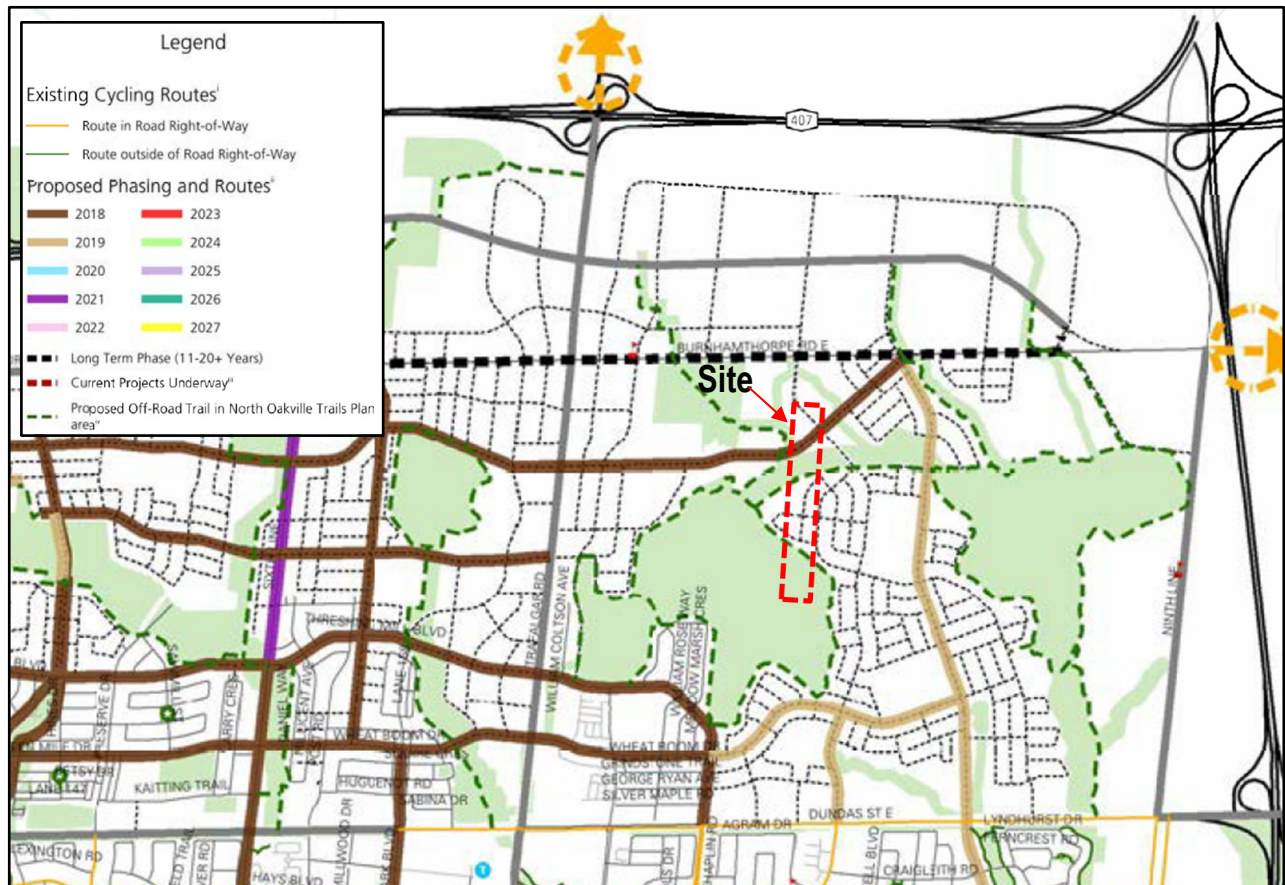
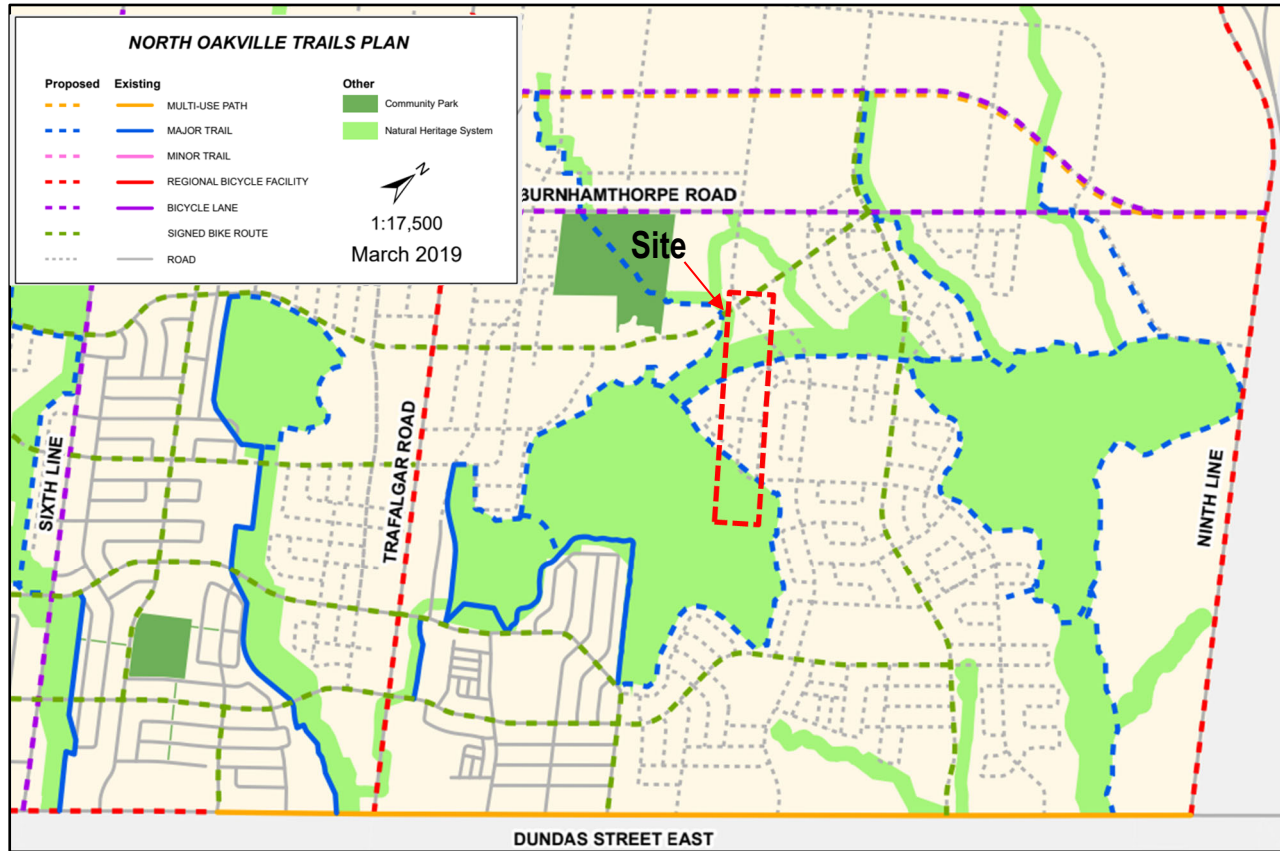


Figure 23 – North Oakville Trails Plan



Source: North Oakville Trail Plan - 2019

6.6. Transit Mode Assessment

The area is current serviced by two existing Oakville Transit Bus Routes 1 Trafalgar, 24 South Common and 20 Northridge.

As indicated, the proposed development is expected to generate 21 total two-way non-auto trips (6 inbound and 15 outbound) and 28 total two-way non-auto trips (17 inbound and 11 outbound) during the morning and afternoon peak hours, respectively. It is Nextrans' opinion that the proposed development transit ridership can be easily accommodated by the existing transit service, as well as the future proposed transit service in the area without additional improvements beyond what already been planned for the area.

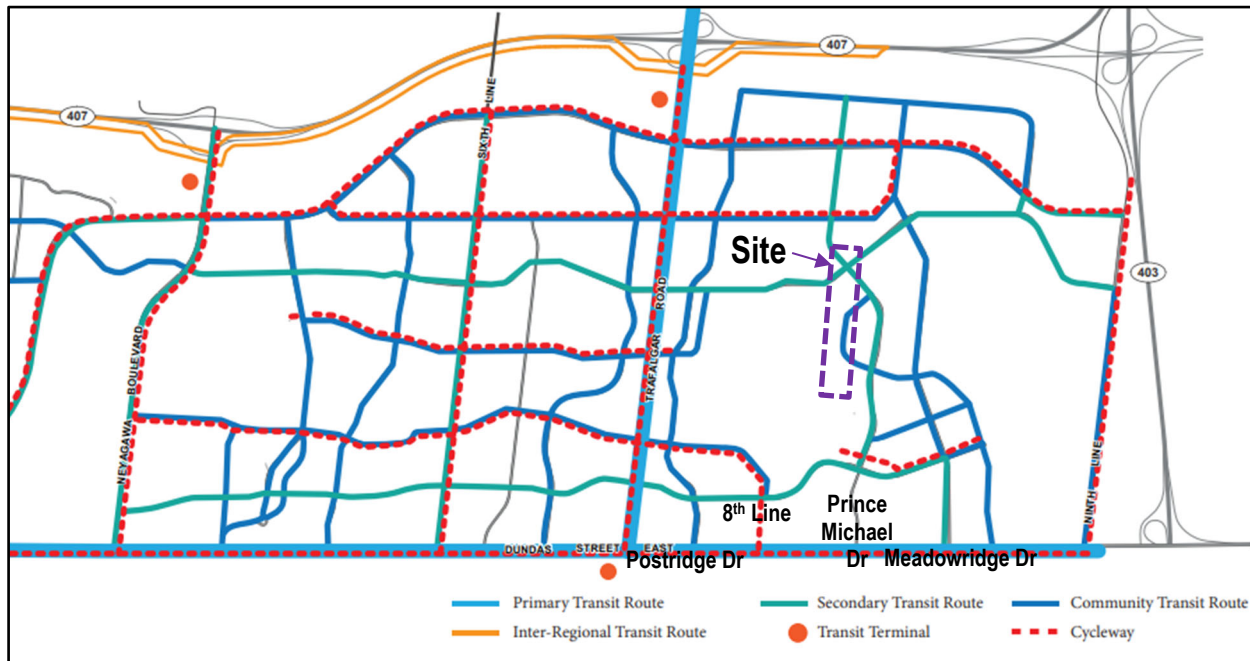
Based on Nextrans' review of the future proposed transit network to the Joshua's Meadows Community, there will be:

- Primary transit routes running along Burnhamthorpe Road E, Postridge Drive, Meadowridge Drive and Eighth Line
- Secondary transit routes running along Prince Michael Drive, Wheat Boom Drive, and new east-west collector road south of Burnhamthorpe Road E; and
- Inter-regional transit route along Highway 407

As the proposed development will be located close to the future primary route on Burnhamthorpe Road E, and secondary routes on the future east-west road and Prince Michael Drive, it is Nextrans' opinion that the proposed development will have good transit service in the future.

Figure 24 illustrates the contemplated North Oakville East Secondary Plan future transit network.

Figure 24 – North Oakville East Secondary Plan Future Transit Network



Source: *The New Communities of Oakville Brochure (Prepared by the Town of Oakville)*

7.0 DRAFT PLAN OF SUBDIVISION REVIEW

7.1. Solid Waste Management

Given the context of the proposed development, solid waste including organic, recycling and garbage will be picked up on the curbside, similar to the existing developments located to the south.

As the proposed development will provide all public roads within the proposed draft plan of subdivision, these public roads will be designed and constructed to the Town of Oakville standards and requirements. On this basis, vehicle turning movement templates are not required at this stage. However, if necessary, Nextrans can provide this information at the Town’s discretion.

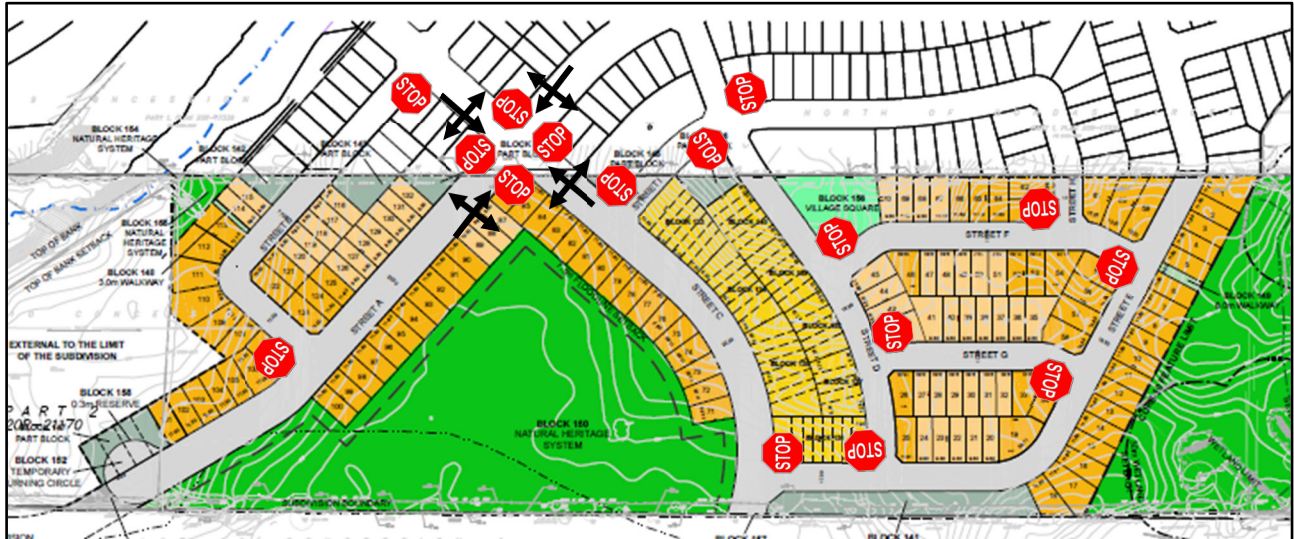
7.2. Internal Intersection Traffic Control and Lane Configurations

As indicated above, all streets located within the proposed draft plan of subdivision will be public roads and will be constructed to the Town’s standards. Given the internal traffic volumes are estimated to be low, only basic lane configurations are required at the intersection. For example, all internal intersections will have shared left/through/right with no dedicated turning lanes.

With the exception of the Street A/Street C intersection, all intersections will have stop signs on the minor approach. Nextrans suggested that the Street A/Street C intersection be equipped with all-way stop given the nature of the two main streets. All-way stops will help facilitate pedestrian crossing this intersection.

Figure 25 illustrates the proposed traffic control and lane configurations for the internal intersections.

Figure 25 – Internal Intersection Traffic Control and Lane Configurations



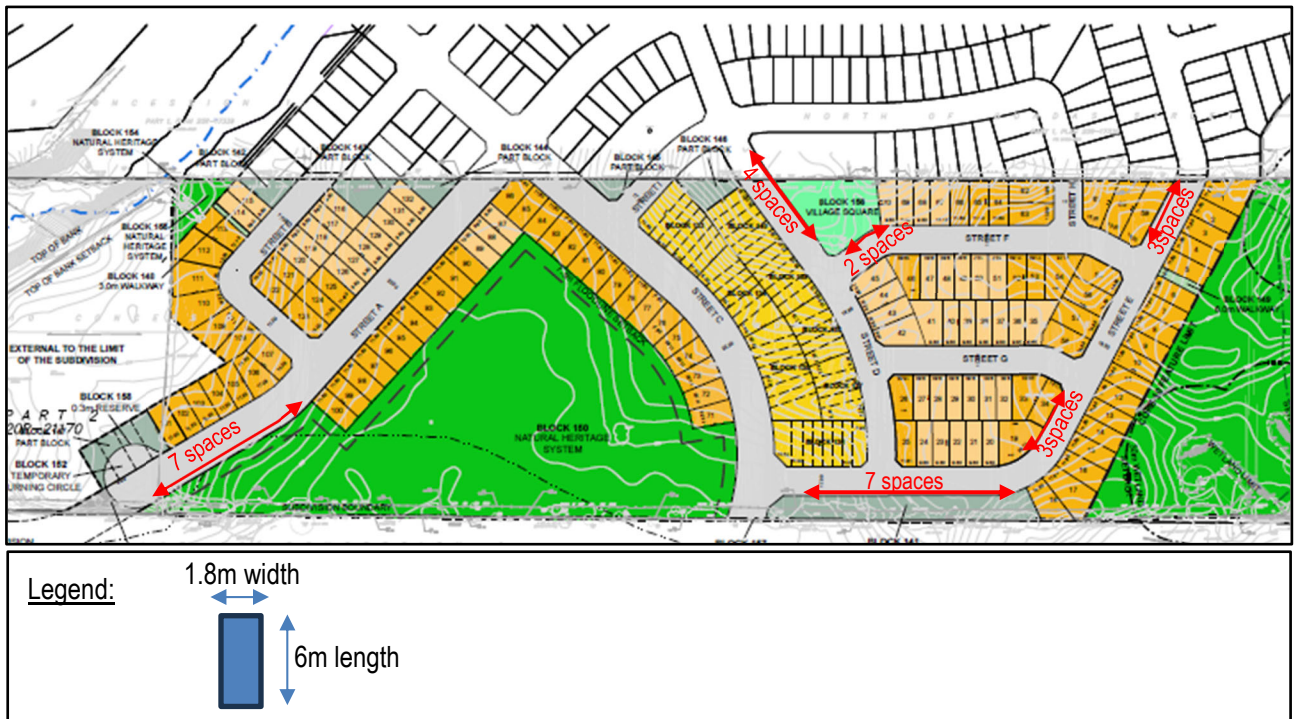
7.3. Traffic Calming

Nextrans recommends that the Town of Oakville consider a narrower lane width and pavement width to discourage speeding and minimize pedestrian/cycling crossing distance at intersections and midblock.

7.4. On-Street Parking Assessment

On-street parking is typically required for visitor parking. A typical on-street parking space (parallel parking) is approximately 1.8 m in width and 6 m in length. **Figure 26** illustrates the potential on-street vehicle parking spaces for the proposed draft plan of subdivision. A total of 26 on-street parking spaces are available.

Figure 26 – On-Street Parking for the Internal Streets



8.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is a co-ordinated series of actions aimed at maximizing the people moving capability of the transportation system. Intended to reduce single-occupant auto use, potential TDM measures include: TDM supportive land use, bicycle and pedestrian programs and facilities, public transit improvements, preferential treatments for buses and ridesharing, where appropriate.

Given that the proposed development and the surrounding developments in the area are mostly low-rise, there are limited opportunities to implement aggressive TDM measures. However, some general TDM measures can still be implemented to support sustainable transportation and encourage residents to use other modes of transportation.

As the gas price is record high, along with increasing inflation, it is Nextrans' opinion that residents will automatically working from home, carpool or taking transit to curb the costs of living. It is the responsibility of the Region and the Town to provide options for residents, such as providing public transit and active transportation facilities.

The following TDM incentives are recommended for the proposed residential development, based on Nextrans' review of the development area context:

- Support the Region and the Town on their active and public transit initiatives;
- Provide sidewalks on both sides of the internal roadways;
- Reduce pavement width and lane width where possible to support lower speed and minimize pedestrian and cyclist crossing distance at intersections and midblock;
- Provide information package for new residents in a form of a letter. The information package letter will include links to Oakville Transit schedules, GO Transit schedules, community amenity maps and cycling maps. The Information Package can be distributed at the sale office in form of a letter.

9.0 CONCLUSIONS / FINDINGS

9.1. Study Conclusions

The findings and conclusions of the analysis are as follows:

- The proposed development is expected to generate 115 two-way auto trips (31 inbound and 84 outbound) and 153 two-way auto trips (94 inbound and 59 outbound) during the morning and afternoon peak hours, respectively;
- Based on the intersection capacity analysis, under the existing conditions, all intersections considered in the analysis are expected to operate at acceptable levels of service from overall intersection operation perspective. However, Nextrans acknowledges that the eastbound through movement (during the morning peak hour) and the westbound through movement (during the afternoon peak hour) at the Dundas Street E/Ninth Line intersection have v/c ratios greater than 0.85. This is due to the heavy through movement, however, it is a typical condition at the major arterial in the Region and in the Town of Oakville. This critical movement will be addressed through the completion of fine grid transportation road network as part of the Secondary Plan.
- Based on the intersection capacity analysis, under the future background and future total traffic conditions, the analysis the analysis indicates that the intersections considered are expected to operate at acceptable levels of service from overall intersection operation perspective. However, Nextrans acknowledges that there are a number of critical movements with v/c ratios greater than 0.85. This can be explained with the following:
 - The Secondary Plan Area fine grid road network is not completed at this time and under this horizon year

- Once the complete road network identified in the Secondary Plan Area is completed, it is expected that the traffic will not be concentrating at the critical movements
- Especially with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway
- It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, as well as the completion of William Halton Parkway, it will provide much needed east-west capacity for the area
- The intersection of Dundas Street E/Ninth Line is expected to operate near or at capacity. This is due to the heavy through traffic volumes in this direction coming from Highway 403 and Mississauga. However, this type of movement is typical at any major arterial intersections in the Great Toronto Area and in the Region of Halton

It is expected that with the future improvements on Burnhamthorpe Road E, the North Oakville Secondary Plan subdivision east-west road south of Burnhamthorpe Road E, it will provide much needed east-west capacity for the area. In addition, with the completion of the north-south collector roads such as Meadowridge Drive and John McKay Blvd, the traffic from the proposed draft plans of subdivision can use Burnhamthorpe Road E and William Halton Parkway.

Based on this assessment and provision, Nextrans does not recommend any physical improvements to be implemented under this horizon year for the intersections located along Dundas Street E. Nextrans recommends that the Region and the Town monitor these intersections in the future and make appropriate signal timing adjustments in the interim conditions. A monitoring program is also required in the future once all the road network is completed to ensure that signal timing and lane configurations are appropriate for the area.

It should be noted that the proposed development has negligible or no impacts on the existing and future intersections along Dundas Street E. The internal intersections are also expected to have minimum traffic volumes and delay or queue.

- It should be noted that the proposed development has negligible or no impacts on the existing and future intersections along Dundas Street E. The internal intersections are also expected to have minimum traffic volumes and delay or queue.
- The area is current serviced by several existing Oakville Transit Bus Routes 1 Trafalgar, 24 South Common, 20 Northridge and Dundas Route 5/5A. The proposed development is expected to generate very little total site traffic volumes compared to other developments in the area. Therefore, the proposed development transit ridership can be easily accommodated by the existing transit service, as well as the future proposed transit service in the area without additional improvements beyond what already been planned for the area.
- The area will also have a complete network of active transportation facility in the future as identified in the North Oakville Secondary Plan. It is Nextrans' opinion that no improvements are required beyond the identified plans. It is recommended that all the proposed developments in the Secondary Plan work with the Town and the Region to support and implement these initiatives.

9.2. Study Recommendations

Based on the findings of this Study, the following recommendations are provided:

- The Town approves the proposed draft plan of subdivision;
- The proposed development building sidewalks along both sides of the internal subdivision streets;

- The proposed development implements the TDM measures and incentives identified in this report to support active transportation and transit and to reduce the numbers of single-occupant-vehicle trips to and from the proposed development;
- Minimize pavement and lane width where possible to facilitate pedestrian/cyclist crossing; and
- No additional physical improvements for the area at this time to accommodate the proposed development, under the future background and future total conditions.

Appendix A

Existing Traffic Data and Signal Timing Plans



Turning Movement Count (2 . BURNHAMTHORPE ROAD EAST & WILLIAM HALTON PARKWAY)

Start Time	E Approach WILLIAM HALTON PKWY					S Approach BURNHAMTHORPE RD E					W Approach WILLIAM HALTON PKWY					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:00:00	38	28	0	0	66	21	0	0	0	21	1	80	0	0	81	168	
07:15:00	59	25	0	0	84	28	0	0	0	28	1	100	0	0	101	213	
07:30:00	52	26	0	0	78	41	0	0	0	41	0	145	0	0	145	264	
07:45:00	30	28	0	0	58	54	0	0	0	54	0	151	0	0	151	263	908
08:00:00	49	41	0	0	90	69	0	0	0	69	0	172	0	0	172	331	1071
08:15:00	64	50	0	0	114	67	0	0	0	67	0	139	0	0	139	320	1178
08:30:00	73	56	0	0	129	81	0	0	0	81	0	159	0	0	159	369	1283
08:45:00	58	51	0	0	109	65	1	0	0	66	0	129	0	0	129	304	1324
09:00:00	54	26	0	0	80	48	0	0	0	48	0	92	0	0	92	220	1213
09:15:00	54	31	0	0	85	48	0	0	0	48	0	101	0	0	101	234	1127
09:30:00	59	24	0	0	83	35	2	0	0	37	0	95	0	0	95	215	973
09:45:00	60	24	0	0	84	27	0	0	0	27	0	64	0	0	64	175	844
BREAK																	
16:00:00	176	47	0	0	223	79	0	0	0	79	0	68	0	0	68	370	
16:15:00	212	63	0	0	275	74	2	0	0	76	0	71	0	0	71	422	
16:30:00	181	72	0	0	253	75	1	0	0	76	1	96	0	0	97	426	
16:45:00	204	59	0	0	263	62	0	0	0	62	2	79	0	0	81	406	1624
17:00:00	175	68	0	0	243	71	0	0	0	71	0	96	0	0	96	410	1664
17:15:00	184	54	1	0	239	79	0	0	0	79	0	102	0	0	102	420	1662
17:30:00	196	51	0	0	247	70	0	0	0	70	0	92	0	0	92	409	1645
17:45:00	146	51	0	0	197	75	1	0	0	76	0	88	0	0	88	361	1600
18:00:00	157	48	0	0	205	45	0	0	0	45	0	76	0	1	76	326	1516
18:15:00	136	43	0	0	179	52	0	0	0	52	0	90	0	0	90	321	1417
18:30:00	118	59	0	0	177	51	0	0	0	51	0	88	0	0	88	316	1324
18:45:00	85	44	0	0	129	57	0	0	0	57	0	69	0	0	69	255	1218
Grand Total	2620	1069	1	0	3690	1374	7	0	0	1381	5	2442	0	1	2447	7518	-
Approach%	71%	29%	0%	-	-	99.5%	0.5%	0%	-	-	0.2%	99.8%	0%	-	-	-	-
Totals %	34.8%	14.2%	0%	-	49.1%	18.3%	0.1%	0%	-	18.4%	0.1%	32.5%	0%	-	32.5%	-	-
Heavy	74	12	0	-	-	16	0	0	-	-	1	79	0	-	-	-	-
Heavy %	2.8%	1.1%	0%	-	-	1.2%	0%	0%	-	-	20%	3.2%	0%	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 08:00 AM - 09:00 AM Weather: Clear Sky (12.18 °C)

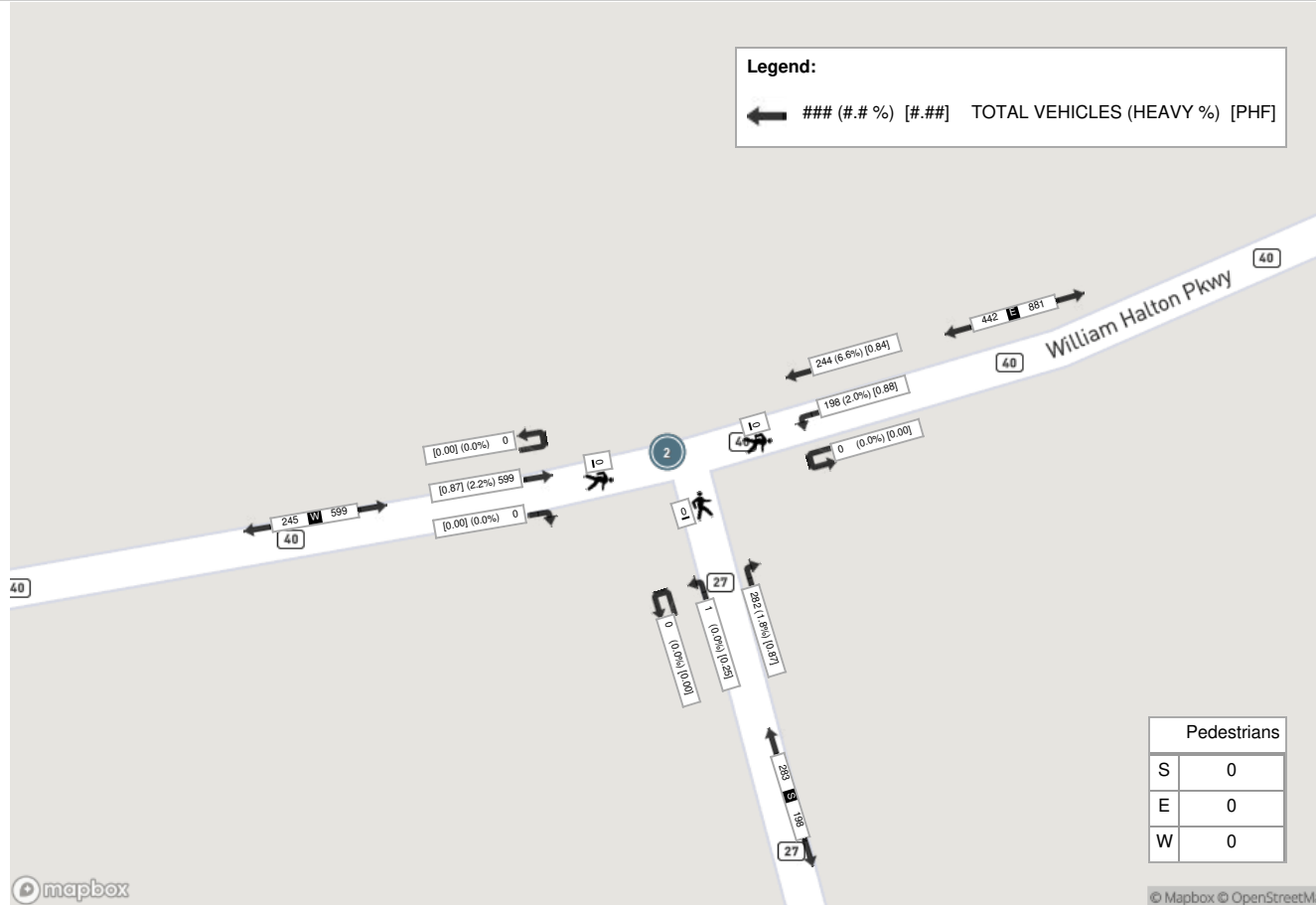
Start Time	E Approach WILLIAM HALTON PKWY					S Approach BURNHAMTHORPE RD E					W Approach WILLIAM HALTON PKWY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:00:00	49	41	0	0	90	69	0	0	0	69	0	172	0	0	172	331
08:15:00	64	50	0	0	114	67	0	0	0	67	0	139	0	0	139	320
08:30:00	73	56	0	0	129	81	0	0	0	81	0	159	0	0	159	369
08:45:00	58	51	0	0	109	65	1	0	0	66	0	129	0	0	129	304
Grand Total	244	198	0	0	442	282	1	0	0	283	0	599	0	0	599	1324
Approach%	55.2%	44.8%	0%	-	-	99.6%	0.4%	0%	-	-	0%	100%	0%	-	-	-
Totals %	18.4%	15%	0%	33.4%	21.3%	0.1%	0%	21.4%	0%	45.2%	0%	45.2%	-	-	-	-
PHF	0.84	0.88	0	0.86	0.87	0.25	0	0.87	0	0.87	0	0.87	0	0.87	-	-
Heavy	16	4	0	20	5	0	0	5	0	13	0	13	-	-	-	-
Heavy %	6.6%	2%	0%	4.5%	1.8%	0%	0%	1.8%	0%	2.2%	0%	2.2%	-	-	-	-
Lights	227	194	0	421	277	1	0	278	0	586	0	586	-	-	-	-
Lights %	93%	98%	0%	95.2%	98.2%	100%	0%	98.2%	0%	97.8%	0%	97.8%	-	-	-	-
Single-Unit Trucks	8	1	0	9	1	0	0	1	0	4	0	4	-	-	-	-
Single-Unit Trucks %	3.3%	0.5%	0%	2%	0.4%	0%	0%	0.4%	0%	0.7%	0%	0.7%	-	-	-	-
Buses	1	3	0	4	4	0	0	4	0	0	0	0	-	-	-	-
Buses %	0.4%	1.5%	0%	0.9%	1.4%	0%	0%	1.4%	0%	0%	0%	0%	-	-	-	-
Articulated Trucks	7	0	0	7	0	0	0	0	0	9	0	9	-	-	-	-
Articulated Trucks %	2.9%	0%	0%	1.6%	0%	0%	0%	0%	0%	1.5%	0%	1.5%	-	-	-	-
Bicycles on Road	1	0	0	1	0	0	0	0	0	0	0	0	-	-	-	-
Bicycles on Road %	0.4%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	-
Pedestrians%	-	-	-	0%	-	-	-	0%	-	-	-	0%	-	-	-	-



Peak Hour: 04:15 PM - 05:15 PM Weather: Clear Sky (21.12 °C)

Start Time	E Approach WILLIAM HALTON PKWY					S Approach BURNHAMTHORPE RD E					W Approach WILLIAM HALTON PKWY				Int. Total (15 min)	
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds		Approach Total
16:15:00	212	63	0	0	275	74	2	0	0	76	0	71	0	0	71	422
16:30:00	181	72	0	0	253	75	1	0	0	76	1	96	0	0	97	426
16:45:00	204	59	0	0	263	62	0	0	0	62	2	79	0	0	81	406
17:00:00	175	68	0	0	243	71	0	0	0	71	0	96	0	0	96	410
Grand Total	772	262	0	0	1034	282	3	0	0	285	3	342	0	0	345	1664
Approach%	74.7%	25.3%	0%		-	98.9%	1.1%	0%		-	0.9%	99.1%	0%		-	-
Totals %	46.4%	15.7%	0%		62.1%	16.9%	0.2%	0%		17.1%	0.2%	20.6%	0%		20.7%	-
PHF	0.91	0.91	0		0.94	0.94	0.38	0		0.94	0.38	0.89	0		0.89	-
Heavy	9	4	0		13	7	0	0		7	0	13	0		13	-
Heavy %	1.2%	1.5%	0%		1.3%	2.5%	0%	0%		2.5%	0%	3.8%	0%		3.8%	-
Lights	763	258	0		1021	275	3	0		278	3	328	0		331	-
Lights %	98.8%	98.5%	0%		98.7%	97.5%	100%	0%		97.5%	100%	95.9%	0%		95.9%	-
Single-Unit Trucks	7	1	0		8	4	0	0		4	0	5	0		5	-
Single-Unit Trucks %	0.9%	0.4%	0%		0.8%	1.4%	0%	0%		1.4%	0%	1.5%	0%		1.4%	-
Buses	1	3	0		4	3	0	0		3	0	0	0		0	-
Buses %	0.1%	1.1%	0%		0.4%	1.1%	0%	0%		1.1%	0%	0%	0%		0%	-
Articulated Trucks	1	0	0		1	0	0	0		0	0	8	0		8	-
Articulated Trucks %	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0%	2.3%	0%		2.3%	-
Bicycles on Road	0	0	0		0	0	0	0		0	0	1	0		1	-
Bicycles on Road %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0.3%	0%		0.3%	-
Pedestrians	-	-	-	0	-	-	-	0		-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%	-	-	-	0%		-	-	-	-	0%	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Clear Sky (12.18 °C)



Peak Hour: 04:15 PM - 05:15 PM Weather: Clear Sky (21.12 °C)



mapbox

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Turning Movement Count (2 . DUNDAS STREET EAST & EIGHTH LINE)

Start Time	N Approach EIGHTH LINE						E Approach DUNDAS ST E						S Approach EIGHTH LINE						W Approach DUNDAS ST E						Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
07:00:00	10	4	9	0	0	23	14	159	3	1	0	177	20	4	14	0	2	38	13	446	3	0	2	462	700		
07:15:00	8	1	23	0	0	32	14	208	5	0	0	227	24	4	16	0	3	44	15	417	0	0	2	432	735		
07:30:00	7	3	17	0	1	27	11	198	7	0	0	216	34	6	15	0	1	55	16	481	3	2	1	502	800		
07:45:00	9	9	30	0	2	48	7	212	16	0	0	235	43	3	22	0	1	68	21	501	7	0	0	529	880	3115	
08:00:00	8	16	28	0	0	52	9	218	24	0	1	251	30	6	17	0	0	53	35	492	11	0	1	538	894	3309	
08:15:00	16	18	35	0	0	69	8	260	15	0	3	283	36	10	26	0	1	72	36	524	12	0	0	572	996	3570	
08:30:00	14	12	29	0	1	55	14	261	18	0	1	293	36	11	36	0	5	83	32	467	14	0	1	513	944	3714	
08:45:00	10	16	24	0	0	50	23	308	25	0	0	356	31	11	23	0	1	65	27	507	6	0	1	540	1011	3845	
09:00:00	7	9	17	0	2	33	15	251	19	0	1	285	35	5	14	0	3	54	21	361	9	0	2	391	763	3714	
09:15:00	11	7	20	0	0	38	5	231	23	0	0	259	15	6	15	0	1	36	35	429	12	0	0	476	809	3527	
09:30:00	4	5	9	0	0	18	7	223	13	0	2	243	26	4	21	0	3	51	37	354	10	1	2	402	714	3297	
09:45:00	4	2	16	0	0	22	9	288	23	0	0	320	18	5	16	0	2	39	19	318	12	0	0	349	730	3016	
BREAK																											
16:00:00	5	10	22	0	1	37	19	477	45	1	2	542	17	10	39	0	1	66	26	336	5	0	2	367	1012		
16:15:00	1	6	21	0	4	28	31	495	35	0	3	561	33	12	22	0	2	67	43	362	2	0	2	407	1063		
16:30:00	5	14	17	0	0	36	24	483	28	1	1	536	30	14	27	0	2	71	37	368	5	1	0	411	1054		
16:45:00	5	7	20	0	4	32	24	550	51	0	5	625	28	21	29	0	3	78	46	353	2	0	1	401	1136	4265	
17:00:00	2	5	12	0	1	19	30	521	44	0	0	595	36	21	32	0	0	89	45	378	2	0	0	425	1128	4381	
17:15:00	2	15	21	0	2	38	21	565	43	0	2	629	28	24	31	0	1	83	41	371	3	1	2	416	1166	4484	
17:30:00	6	12	18	0	3	36	30	519	38	0	2	587	43	21	29	0	6	93	38	330	5	0	3	373	1089	4519	
17:45:00	8	8	14	0	2	30	39	507	40	0	6	586	27	19	29	0	1	75	44	351	4	0	1	399	1090	4473	
18:00:00	4	7	19	0	0	30	30	461	34	0	1	525	28	18	31	0	4	77	42	323	2	1	1	368	1000	4345	
18:15:00	3	9	17	1	3	30	28	477	33	1	6	539	30	11	25	0	4	66	45	364	4	0	5	413	1048	4227	
18:30:00	3	8	18	0	1	29	28	403	30	0	3	461	20	13	35	0	8	68	44	293	2	0	3	339	897	4035	
18:45:00	2	6	14	1	3	23	25	389	33	1	4	448	24	9	22	0	0	55	45	336	6	0	0	387	913	3858	
Grand Total	154	209	470	2	30	835	465	8664	645	5	43	9779	692	268	586	0	55	1546	803	9462	141	6	32	10412	22572	-	
Approach%	18.4%	25%	56.3%	0.2%	-	-	4.8%	88.6%	6.6%	0.1%	-	-	44.8%	17.3%	37.9%	0%	-	7.7%	90.9%	1.4%	0.1%	-	-	-	-	-	
Totals %	0.7%	0.9%	2.1%	0%	3.7%	3.7%	2.1%	38.4%	2.9%	0%	43.3%	43.3%	3.1%	1.2%	2.6%	0%	6.8%	3.6%	41.9%	0.6%	0%	46.1%	-	-	-	-	
Heavy	82	7	9	0	-	-	30	320	3	0	-	-	12	7	16	0	-	13	260	60	0	-	-	-	-	-	
Heavy %	53.2%	3.3%	1.9%	0%	-	-	6.5%	3.7%	0.5%	0%	-	-	1.7%	2.6%	2.7%	0%	-	1.6%	2.7%	42.6%	0%	-	-	-	-	-	
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)

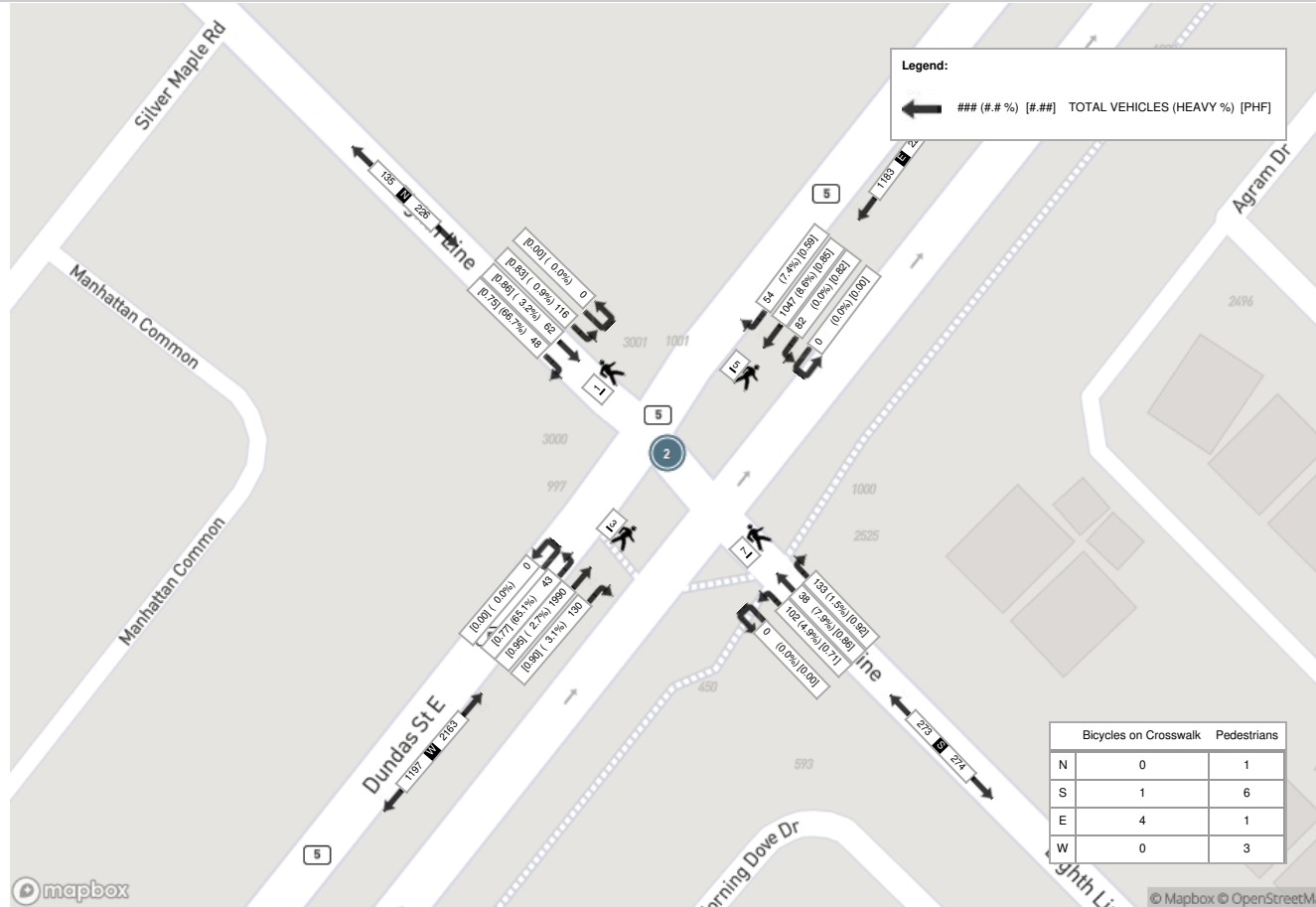
Start Time	N Approach EIGHTH LINE						E Approach DUNDAS ST E						S Approach EIGHTH LINE						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	8	16	28	0	0	52	9	218	24	0	1	251	30	6	17	0	0	53	35	492	11	0	1	538	894
08:15:00	16	18	35	0	0	69	8	260	15	0	3	283	36	10	26	0	1	72	36	524	12	0	0	572	996
08:30:00	14	12	29	0	1	55	14	261	18	0	1	293	36	11	36	0	5	83	32	467	14	0	1	513	944
08:45:00	10	16	24	0	0	50	23	308	25	0	0	356	31	11	23	0	1	65	27	507	6	0	1	540	1011
Grand Total	48	62	116	0	1	226	54	1047	82	0	5	1183	133	38	102	0	7	273	130	1990	43	0	3	2163	3845
Approach%	21.2%	27.4%	51.3%	0%	-	-	4.6%	88.5%	6.9%	0%	-	-	48.7%	13.9%	37.4%	0%	-	-	6%	92%	2%	0%	-	-	
Totals %	1.2%	1.6%	3%	0%	5.9%	1.4%	27.2%	2.1%	0%	30.8%	3.5%	1%	2.7%	0%	7.1%	3.4%	51.8%	1.1%	0%	56.3%	-	-	-	-	
PHF	0.75	0.86	0.83	0	0.82	0.59	0.85	0.82	0	0.83	0.92	0.86	0.71	0	0.82	0.9	0.95	0.77	0	0.95	-	-	-	-	
Heavy	32	2	1	0	35	4	90	0	0	94	2	3	5	0	10	4	54	28	0	86	-	-	-	-	
Heavy %	66.7%	3.2%	0.9%	0%	15.5%	7.4%	8.6%	0%	0%	7.9%	1.5%	7.9%	4.9%	0%	3.7%	3.1%	2.7%	65.1%	0%	4%	-	-	-	-	
Lights	16	60	115	0	191	50	957	82	0	1089	131	35	97	0	263	126	1936	15	0	2077	-	-	-	-	
Lights %	33.3%	96.8%	99.1%	0%	84.5%	92.6%	91.4%	100%	0%	92.1%	98.5%	92.1%	95.1%	0%	96.3%	96.9%	97.3%	34.9%	0%	96%	-	-	-	-	
Single-Unit Trucks	31	0	0	0	31	3	43	0	0	46	0	0	1	0	1	0	23	28	0	51	-	-	-	-	
Single-Unit Trucks %	64.6%	0%	0%	0%	13.7%	5.6%	4.1%	0%	0%	3.9%	0%	0%	1%	0%	0.4%	3.9%	1.2%	65.1%	0%	2.4%	-	-	-	-	
Buses	1	2	1	0	4	1	11	0	0	12	2	3	3	0	8	3	15	0	0	18	-	-	-	-	
Buses %	2.1%	3.2%	0.9%	0%	1.8%	1.9%	1.1%	0%	0%	1%	1.5%	7.9%	2.9%	0%	2.9%	2.3%	0.8%	0%	0%	0.8%	-	-	-	-	
Articulated Trucks	0	0	0	0	0	0	36	0	0	36	0	0	1	0	1	1	16	0	0	17	-	-	-	-	
Articulated Trucks %	0%	0%	0%	0%	0%	0%	3.4%	0%	0%	3%	0%	0%	1%	0%	0.4%	0.8%	0.8%	0%	0%	0.8%	-	-	-	-	
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
Pedestrians	-	-	-	-	1	-	-	-	-	1	-	-	-	-	6	-	-	-	-	3	-	-	-	-	
Pedestrians %	-	-	-	-	6.3%	-	-	-	-	6.3%	-	-	-	-	37.5%	-	-	-	-	18.8%	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	4	-	-	-	-	1	-	-	-	-	0	-	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	25%	-	-	-	-	6.3%	-	-	-	-	0%	-	-	-	-	



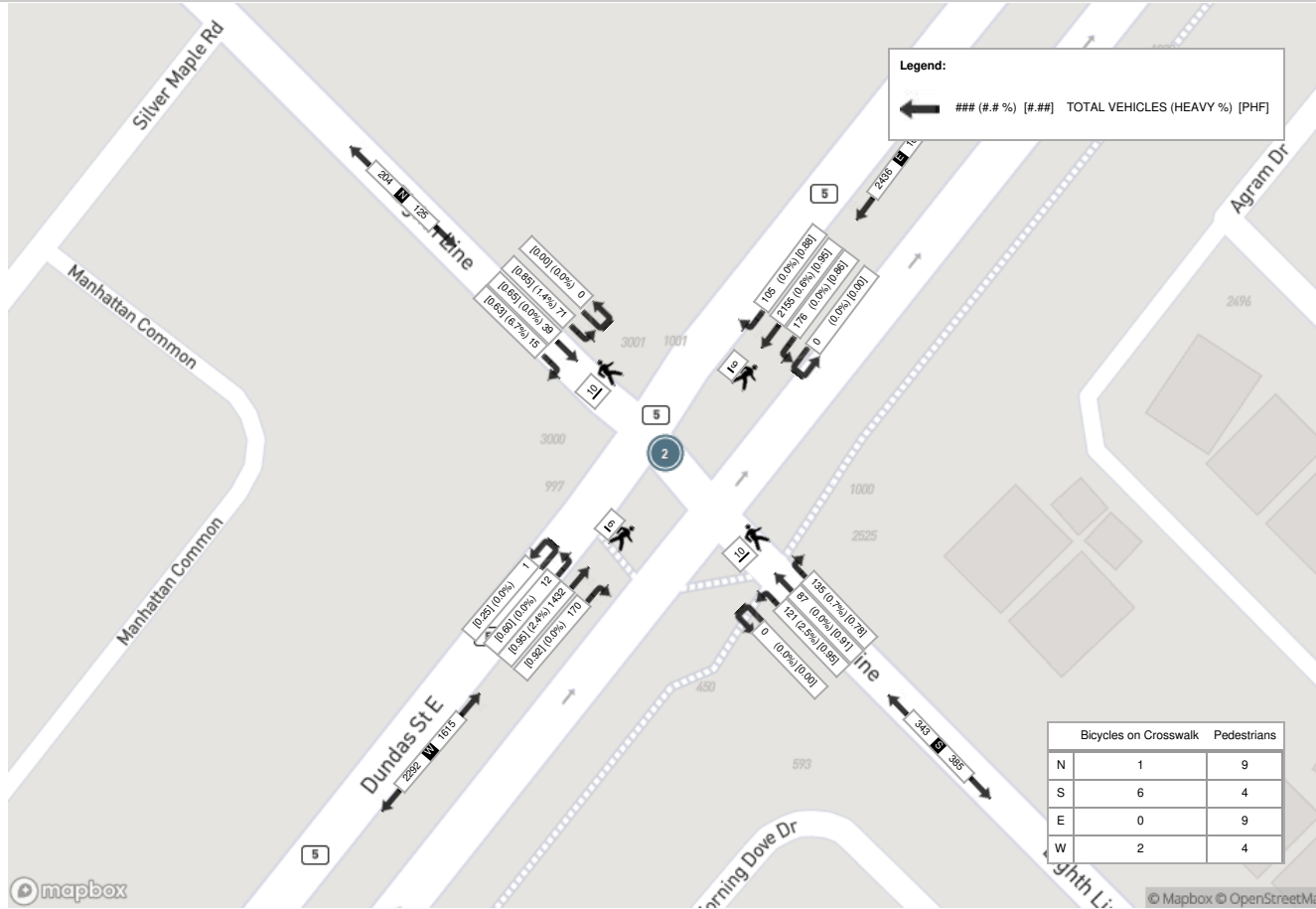
Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)

Start Time	N Approach EIGHTH LINE						E Approach DUNDAS ST E						S Approach EIGHTH LINE						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	5	7	20	0	4	32	24	550	51	0	5	625	28	21	29	0	3	78	46	353	2	0	1	401	1136
17:00:00	2	5	12	0	1	19	30	521	44	0	0	595	36	21	32	0	0	89	45	378	2	0	0	425	1128
17:15:00	2	15	21	0	2	38	21	565	43	0	2	629	28	24	31	0	1	83	41	371	3	1	2	416	1166
17:30:00	6	12	18	0	3	36	30	519	38	0	2	587	43	21	29	0	6	93	38	330	5	0	3	373	1089
Grand Total	15	39	71	0	10	125	105	2155	176	0	9	2436	135	87	121	0	10	343	170	1432	12	1	6	1615	4519
Approach%	12%	31.2%	56.8%	0%	-	-	4.3%	88.5%	7.2%	0%	-	-	39.4%	25.4%	35.3%	0%	-	-	10.5%	88.7%	0.7%	0.1%	-	-	
Totals %	0.3%	0.9%	1.6%	0%	2.8%	2.8%	2.3%	47.7%	3.9%	0%	53.9%	3%	1.9%	2.7%	0%	7.6%	3.8%	31.7%	0.3%	0%	35.7%	-	-		
PHF	0.63	0.65	0.85	0	0.82	0.82	0.88	0.95	0.86	0	0.97	0.78	0.91	0.95	0	0.92	0.92	0.95	0.6	0.25	0.95	-	-		
Heavy	1	0	1	0	2	2	0	13	0	0	13	1	0	3	0	4	0	34	0	0	34	-	-		
Heavy %	6.7%	0%	1.4%	0%	1.6%	1.6%	0%	0.6%	0%	0%	0.5%	0.7%	0%	2.5%	0%	1.2%	0%	2.4%	0%	0%	2.1%	-	-		
Lights	14	39	70	0	123	123	105	2142	176	0	2423	134	87	118	0	339	170	1398	12	1	1581	-	-		
Lights %	93.3%	100%	98.6%	0%	98.4%	98.4%	100%	99.4%	100%	0%	99.5%	99.3%	100%	97.5%	0%	98.8%	100%	97.6%	100%	100%	97.9%	-	-		
Single-Unit Trucks	1	0	1	0	2	2	0	2	0	0	2	1	0	0	0	1	0	17	0	0	17	-	-		
Single-Unit Trucks %	6.7%	0%	1.4%	0%	1.6%	1.6%	0%	0.1%	0%	0%	0.1%	0.7%	0%	0%	0%	0.3%	0%	1.2%	0%	0%	1.1%	-	-		
Buses	0	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	4	0	0	4	-	-		
Buses %	0%	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0.2%	0%	0%	0.8%	0%	0.3%	0%	0.3%	0%	0%	0.2%	-	-		
Articulated Trucks	0	0	0	0	0	0	0	7	0	0	7	0	0	2	0	2	0	13	0	0	13	-	-		
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0.3%	0%	0%	0.3%	0%	0%	1.7%	0%	0.6%	0%	0.9%	0%	0%	0.8%	-	-		
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-		
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-		
Pedestrians	-	-	-	-	9	-	-	-	-	-	9	-	-	-	-	4	-	-	-	-	4	-	-		
Pedestrians %	-	-	-	-	25.7%	-	-	-	-	-	25.7%	-	-	-	-	11.4%	-	-	-	-	11.4%	-	-		
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	6	-	-	-	-	2	-	-		
Bicycles on Crosswalk %	-	-	-	-	2.9%	-	-	-	-	-	0%	-	-	-	-	17.1%	-	-	-	-	5.7%	-	-		

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)





Turning Movement Count (3 . DUNDAS STREET EAST & JOHN MCKAY BOULEVARD / PRINCE MICHAEL DRIVE)

Start Time	E Approach DUNDAS ST E						S Approach PRINCE MICHAEL DR					W Approach DUNDAS ST E					N Approach JOHN MCKAY BLVD					Int. Total (15 min)	Int. Total (1 hr)			
	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total	Right N:W	Thru N:S	Left N:E			UTurn N:N	Peds N:	Approach Total
07:00:00	13	173	6	0	1	192	18	0	10	0	4	28	14	449	3	0	1	466	1	0	1	0	0	2	688	
07:15:00	10	189	11	0	0	210	27	0	14	0	1	41	10	431	16	0	1	457	2	0	1	0	2	3	711	
07:30:00	9	192	12	0	0	213	34	0	20	0	0	54	15	495	5	0	0	515	2	1	4	0	2	7	789	
07:45:00	7	206	19	0	0	232	31	1	26	0	0	58	28	552	2	0	0	582	1	0	2	0	0	3	875	3063
08:00:00	5	229	23	0	0	257	39	2	25	0	0	66	27	495	8	0	1	530	2	0	4	0	0	6	859	3234
08:15:00	4	256	28	0	1	288	44	0	27	0	0	71	25	555	4	0	0	584	3	0	4	0	1	7	950	3473
08:30:00	7	260	25	1	0	293	37	1	28	0	1	66	33	512	6	0	0	551	1	0	2	0	0	3	913	3597
08:45:00	6	310	20	0	0	336	26	0	38	0	1	64	38	518	2	1	2	559	2	0	1	0	0	3	962	3684
09:00:00	6	252	29	0	0	287	24	0	35	0	2	59	24	392	4	0	0	420	4	0	4	0	0	8	774	3599
09:15:00	4	225	22	1	0	252	26	0	23	0	6	49	24	429	2	0	0	455	1	1	6	0	0	8	764	3413
09:30:00	5	223	17	0	0	245	27	0	19	0	0	46	23	356	4	0	0	383	3	0	5	0	0	8	682	3182
09:45:00	3	299	22	1	0	325	21	0	17	0	0	38	23	323	4	0	0	350	2	0	5	0	0	7	720	2940
BREAK																										
16:00:00	1	489	47	1	0	538	16	0	35	0	2	51	36	341	1	0	0	378	6	0	5	0	2	11	978	
16:15:00	2	510	49	2	2	563	18	0	32	0	4	50	30	382	1	0	0	413	5	0	3	0	2	8	1034	
16:30:00	1	478	46	2	0	527	21	0	49	0	7	70	40	362	2	1	0	405	3	1	0	0	0	4	1006	
16:45:00	1	591	63	0	2	655	16	0	47	0	9	63	38	347	0	1	0	386	2	0	11	0	2	13	1117	4135
17:00:00	2	522	43	1	0	568	21	1	30	0	1	52	40	419	0	0	0	459	21	1	6	0	0	28	1107	4264
17:15:00	2	595	35	0	1	632	19	0	40	0	4	59	38	365	0	0	0	403	4	1	9	0	1	14	1108	4338
17:30:00	0	547	48	3	0	598	27	1	37	0	2	65	45	377	1	0	0	423	2	0	5	0	0	7	1093	4425
17:45:00	0	536	46	1	0	583	24	0	39	0	6	63	39	331	0	0	0	370	1	0	5	0	0	6	1022	4330
18:00:00	2	485	49	4	0	540	24	0	37	0	1	61	38	353	1	0	0	392	4	0	3	0	0	7	1000	4223
18:15:00	6	487	44	5	0	542	29	1	46	0	6	76	36	358	2	0	0	396	2	1	6	0	0	9	1023	4138
18:30:00	0	428	41	2	2	471	18	0	37	0	13	55	26	323	1	0	2	350	1	0	1	0	1	2	878	3923
18:45:00	2	425	42	4	0	473	24	0	35	0	4	59	31	329	3	0	3	363	1	0	2	0	0	3	898	3799
Grand Total	98	8907	787	28	9	9820	611	7	746	0	74	1364	721	9794	72	3	10	10590	76	6	95	0	13	177	21951	-
Approach%	1%	90.7%	8%	0.3%	-	-	44.8%	0.5%	54.7%	0%	-	-	6.8%	92.5%	0.7%	0%	-	42.9%	3.4%	53.7%	0%	-	-	-	-	
Totals %	0.4%	40.6%	3.6%	0.1%	44.7%	2.8%	0%	3.4%	0%	6.2%	3.3%	44.6%	0.3%	0%	48.2%	0.3%	0%	0.4%	0%	0.8%	-	-	-	-	-	
Heavy	4	321	7	0	-	11	0	14	0	-	17	260	2	0	-	4	0	4	0	-	-	-	-	-	-	
Heavy %	4.1%	3.6%	0.9%	0%	-	1.8%	0%	1.9%	0%	-	2.4%	2.7%	2.8%	0%	-	5.3%	0%	4.2%	0%	-	-	-	-	-	-	
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)

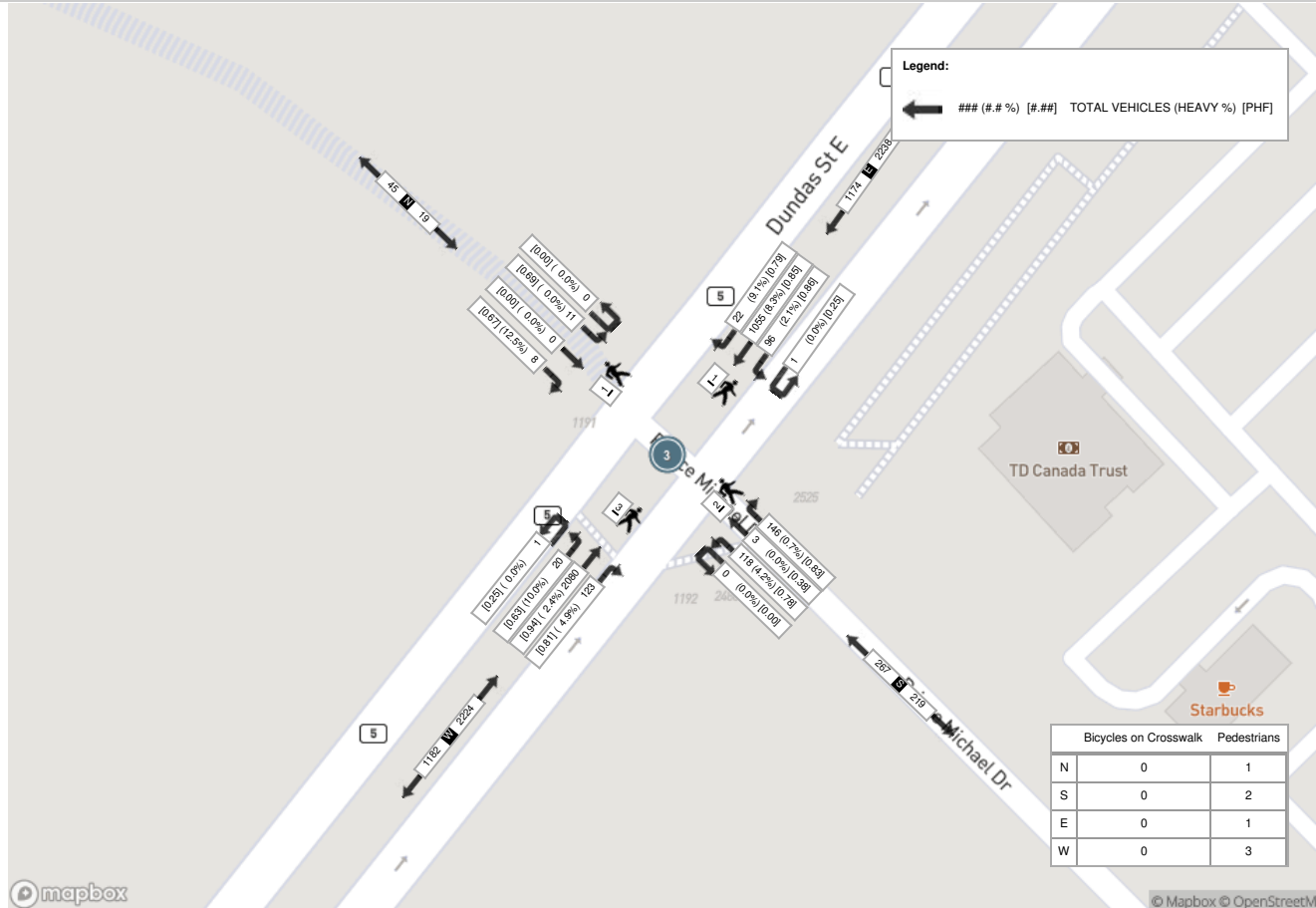
Start Time	E Approach DUNDAS ST E						S Approach PRINCE MICHAEL DR						W Approach DUNDAS ST E						N Approach JOHN MCKAY BLVD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	5	229	23	0	0	257	39	2	25	0	0	66	27	495	8	0	1	530	2	0	4	0	0	6	859
08:15:00	4	256	28	0	1	288	44	0	27	0	0	71	25	555	4	0	0	584	3	0	4	0	1	7	950
08:30:00	7	260	25	1	0	293	37	1	28	0	1	66	33	512	6	0	0	551	1	0	2	0	0	3	913
08:45:00	6	310	20	0	0	336	26	0	38	0	1	64	38	518	2	1	2	559	2	0	1	0	0	3	962
Grand Total	22	1055	96	1	1	1174	146	3	118	0	2	267	123	2080	20	1	3	2224	8	0	11	0	1	19	3684
Approach%	1.9%	89.9%	8.2%	0.1%	-	-	54.7%	1.1%	44.2%	0%	-	-	5.5%	93.5%	0.9%	0%	-	-	42.1%	0%	57.9%	0%	-	-	-
Totals %	0.6%	28.6%	2.6%	0%	-	31.9%	4%	0.1%	3.2%	0%	-	7.2%	3.3%	56.5%	0.5%	0%	-	60.4%	0.2%	0%	0.3%	0%	-	0.5%	-
PHF	0.79	0.85	0.86	0.25	-	0.87	0.83	0.38	0.78	0	-	0.94	0.81	0.94	0.63	0.25	-	0.95	0.67	0	0.69	0	-	0.68	-
Heavy	2	88	2	0	-	92	1	0	5	0	-	6	6	50	2	0	-	58	1	0	0	0	-	1	-
Heavy %	9.1%	8.3%	2.1%	0%	-	7.8%	0.7%	0%	4.2%	0%	-	2.2%	4.9%	2.4%	10%	0%	-	2.6%	12.5%	0%	0%	0%	-	5.3%	-
Lights	20	967	94	1	-	1082	145	3	113	0	-	261	117	2030	18	1	-	2166	7	0	11	0	-	18	-
Lights %	90.9%	91.7%	97.9%	100%	-	92.2%	99.3%	100%	95.8%	0%	-	97.8%	95.1%	97.6%	90%	100%	-	97.4%	87.5%	0%	100%	0%	-	94.7%	-
Single-Unit Trucks	2	44	1	0	-	47	0	0	1	0	-	1	2	20	1	0	-	23	1	0	0	0	-	1	-
Single-Unit Trucks %	9.1%	4.2%	1%	0%	-	4%	0%	0%	0.8%	0%	-	0.4%	1.6%	1%	5%	0%	-	1%	12.5%	0%	0%	0%	-	5.3%	-
Buses	0	8	0	0	-	8	1	0	4	0	-	5	3	15	0	0	-	18	0	0	0	0	-	0	-
Buses %	0%	0.8%	0%	0%	-	0.7%	0.7%	0%	3.4%	0%	-	1.9%	2.4%	0.7%	0%	0%	-	0.8%	0%	0%	0%	0%	-	0%	-
Articulated Trucks	0	36	1	0	-	37	0	0	0	0	-	0	1	15	1	0	-	17	0	0	0	0	-	0	-
Articulated Trucks %	0%	3.4%	1%	0%	-	3.2%	0%	0%	0%	0%	-	0%	0.8%	0.7%	5%	0%	-	0.8%	0%	0%	0%	0%	-	0%	-
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	-
Bicycles on Road %	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-
Pedestrians	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
Pedestrians %	-	-	-	-	14.3%	-	-	-	-	28.6%	-	-	-	-	-	42.9%	-	-	-	-	-	14.3%	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-



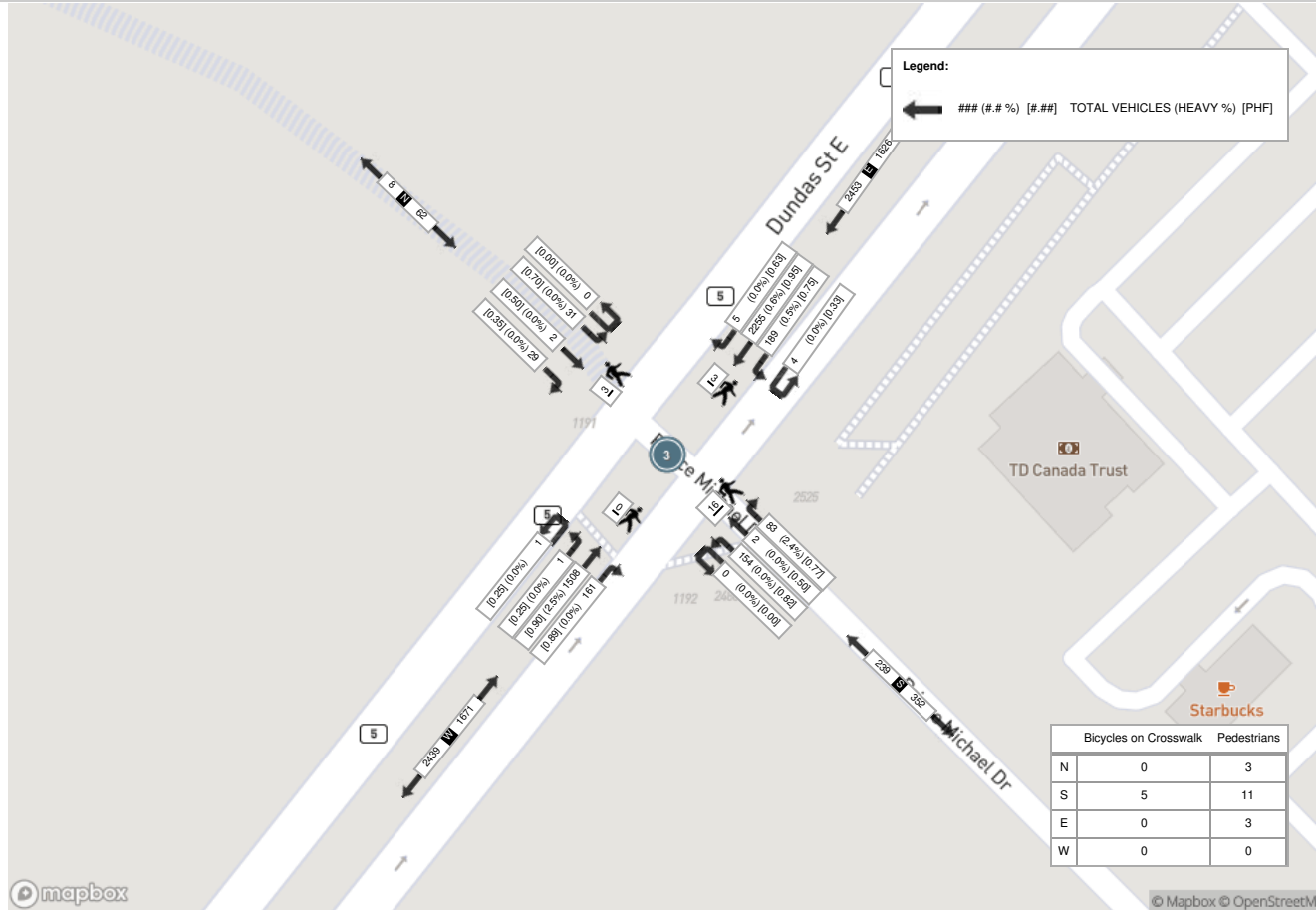
Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)

Start Time	E Approach DUNDAS ST E						S Approach PRINCE MICHAEL DR						W Approach DUNDAS ST E						N Approach JOHN MCKAY BLVD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	1	591	63	0	2	655	16	0	47	0	9	63	38	347	0	1	0	386	2	0	11	0	2	13	1117
17:00:00	2	522	43	1	0	568	21	1	30	0	1	52	40	419	0	0	0	459	21	1	6	0	0	28	1107
17:15:00	2	595	35	0	1	632	19	0	40	0	4	59	38	365	0	0	0	403	4	1	9	0	1	14	1108
17:30:00	0	547	48	3	0	598	27	1	37	0	2	65	45	377	1	0	0	423	2	0	5	0	0	7	1093
Grand Total	5	2255	189	4	3	2453	83	2	154	0	16	239	161	1508	1	1	0	1671	29	2	31	0	3	62	4425
Approach%	0.2%	91.9%	7.7%	0.2%	-	-	34.7%	0.8%	64.4%	0%	-	-	9.6%	90.2%	0.1%	0.1%	-	46.8%	3.2%	50%	0%	-	-	-	
Totals %	0.1%	51%	4.3%	0.1%	55.4%	-	1.9%	0%	3.5%	0%	5.4%	-	3.6%	34.1%	0%	0%	37.8%	0.7%	0%	0.7%	0%	1.4%	-	-	
PHF	0.63	0.95	0.75	0.33	0.94	-	0.77	0.5	0.82	0	0.92	-	0.89	0.9	0.25	0.25	0.91	0.35	0.5	0.7	0	0.55	-	-	
Heavy	0	14	1	0	15	-	2	0	0	0	2	-	0	37	0	0	37	0	0	0	0	0	-	-	
Heavy %	0%	0.6%	0.5%	0%	0.6%	-	2.4%	0%	0%	0%	0.8%	-	0%	2.5%	0%	0%	2.2%	0%	0%	0%	0%	0%	-	-	
Lights	5	2241	188	4	2438	-	81	2	154	0	237	-	160	1471	1	1	1633	29	2	31	0	62	-	-	
Lights %	100%	99.4%	99.5%	100%	99.4%	-	97.6%	100%	100%	0%	99.2%	-	99.4%	97.5%	100%	100%	97.7%	100%	100%	100%	0%	100%	-	-	
Single-Unit Trucks	0	3	1	0	4	-	2	0	0	0	2	-	0	19	0	0	19	0	0	0	0	0	-	-	
Single-Unit Trucks %	0%	0.1%	0.5%	0%	0.2%	-	2.4%	0%	0%	0%	0.8%	-	0%	1.3%	0%	0%	1.1%	0%	0%	0%	0%	0%	-	-	
Buses	0	4	0	0	4	-	0	0	0	0	0	-	0	4	0	0	4	0	0	0	0	0	-	-	
Buses %	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0.3%	0%	0%	0.2%	0%	0%	0%	0%	0%	-	-	
Articulated Trucks	0	7	0	0	7	-	0	0	0	0	0	-	0	14	0	0	14	0	0	0	0	0	-	-	
Articulated Trucks %	0%	0.3%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	-	0%	0.9%	0%	0%	0.8%	0%	0%	0%	0%	0%	-	-	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	1	0	0	0	1	0	0	0	0	0	-	-	
Bicycles on Road %	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0.6%	0%	0%	0%	0.1%	0%	0%	0%	0%	0%	-	-	
Pedestrians	-	-	-	-	3	-	-	-	-	-	11	-	-	-	-	-	0	-	-	-	-	-	3	-	-
Pedestrians %	-	-	-	-	13.6%	-	-	-	-	-	50%	-	-	-	-	-	0%	-	-	-	-	-	13.6%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	22.7%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)





Turning Movement Count (4 . DUNDAS STREET EAST & MEADOWRIDGE DRIVE)

Start Time	N Approach MEADOWRIDGE DR						E Approach DUNDAS ST E						S Approach MEADOWRIDGE DR						W Approach DUNDAS ST E						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	0	0	0	0	0	6	178	9	0	0	193	31	0	5	0	1	36	0	462	0	2	0	464	693	
07:15:00	1	0	2	0	1	3	4	205	13	0	0	222	35	0	2	0	0	37	2	487	0	0	0	489	751	
07:30:00	0	0	3	0	2	3	1	218	13	0	0	232	43	0	3	0	1	46	8	531	0	0	1	539	820	
07:45:00	0	0	2	0	0	2	1	229	16	0	0	246	47	0	5	0	0	52	7	592	0	0	0	599	899	3163
08:00:00	0	0	1	0	4	1	5	268	15	2	0	290	56	0	9	0	0	65	9	552	1	0	0	562	918	3388
08:15:00	0	0	1	0	3	1	0	273	29	0	0	302	71	0	9	0	0	80	15	598	0	0	0	613	996	3633
08:30:00	0	0	1	0	4	1	0	298	31	0	0	329	64	0	13	0	1	77	15	546	0	1	0	562	969	3782
08:45:00	0	0	0	0	0	0	2	293	25	1	0	321	77	0	26	0	0	103	14	532	2	1	0	549	973	3856
09:00:00	1	0	1	0	0	2	0	294	17	0	0	311	46	0	11	1	1	58	9	432	0	0	0	441	812	3750
09:15:00	0	0	0	0	0	0	2	243	17	0	0	262	38	0	1	0	0	39	5	467	0	0	0	472	773	3527
09:30:00	2	0	1	0	0	3	0	262	22	0	0	284	30	0	7	0	0	37	5	397	0	0	0	402	726	3284
09:45:00	0	0	1	0	0	1	0	325	26	0	0	351	37	0	4	0	0	41	3	326	1	0	0	330	723	3034
BREAK																										
16:00:00	1	0	2	0	0	3	1	532	39	0	0	572	28	0	12	0	0	40	16	373	0	1	0	390	1005	
16:15:00	0	0	1	0	2	1	1	544	37	1	2	583	38	0	9	0	1	47	7	405	0	0	1	412	1043	
16:30:00	1	0	1	0	0	2	0	551	38	0	0	589	36	0	7	0	2	43	14	394	0	0	0	408	1042	
16:45:00	0	0	1	0	1	1	0	596	42	1	1	639	23	0	13	0	1	36	12	366	0	0	0	378	1054	4144
17:00:00	0	0	0	0	0	0	0	572	42	1	0	615	33	0	4	0	0	37	14	435	0	0	0	449	1101	4240
17:15:00	0	0	2	0	0	2	3	615	49	0	0	667	38	0	10	0	3	48	7	364	0	0	0	371	1088	4285
17:30:00	0	0	1	0	0	1	0	582	48	2	0	632	45	0	16	0	1	61	17	411	0	1	0	429	1123	4366
17:45:00	0	0	2	0	0	2	2	572	44	0	0	618	40	0	12	0	0	52	19	339	0	1	0	359	1031	4343
18:00:00	0	0	6	0	0	6	0	554	39	0	0	593	34	0	5	0	1	39	13	397	0	0	0	410	1048	4290
18:15:00	0	0	5	0	0	5	0	491	49	0	0	540	42	0	9	0	3	51	19	368	0	0	0	387	983	4185
18:30:00	0	0	0	0	0	0	0	458	47	1	0	506	43	0	8	0	1	51	7	351	0	0	0	358	915	3977
18:45:00	0	0	1	0	0	1	0	465	52	1	0	518	30	0	3	0	1	33	6	351	0	1	2	358	910	3856
Grand Total	6	0	35	0	17	41	28	9618	759	10	3	10415	1005	0	203	1	18	1209	243	10476	4	8	4	10731	22396	-
Approach%	14.6%	0%	85.4%	0%	-	-	0.3%	92.3%	7.3%	0.1%	-	-	83.1%	0%	16.8%	0.1%	-	-	2.3%	97.6%	0%	0.1%	-	-	-	
Totals %	0%	0%	0.2%	0%	0.2%	0.2%	0.1%	42.9%	3.4%	0%	46.5%	4.5%	0%	0.9%	0%	5.4%	1.1%	46.8%	0%	0%	47.9%	-	-	-	-	
Heavy	3	0	11	0	-	-	12	334	16	0	-	-	3	0	5	0	-	-	4	270	2	0	-	-	-	
Heavy %	50%	0%	31.4%	0%	-	-	42.9%	3.5%	2.1%	0%	-	-	0.3%	0%	2.5%	0%	-	-	1.6%	2.6%	50%	0%	-	-	-	
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)

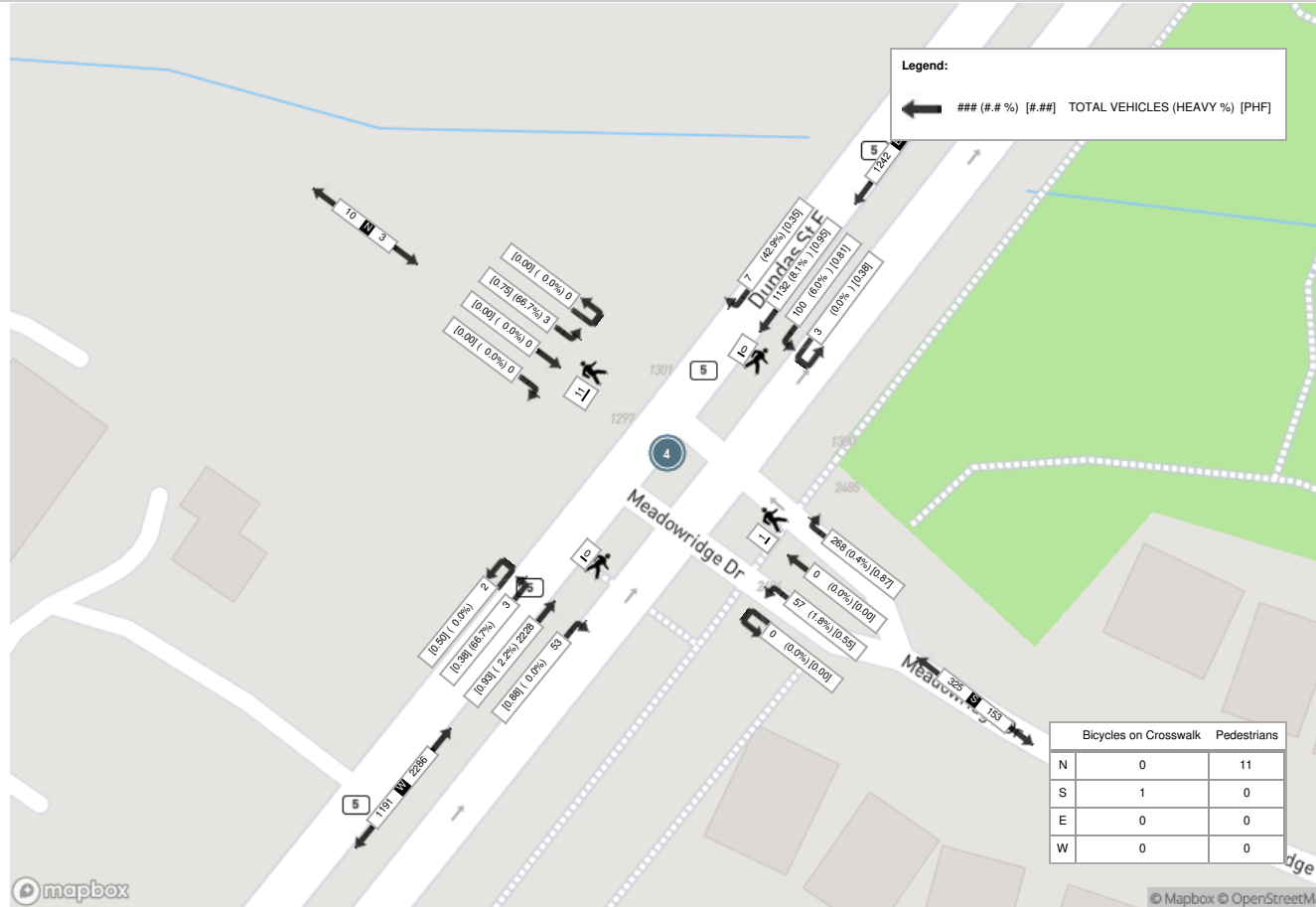
Start Time	N Approach MEADOWRIDGE DR						E Approach DUNDAS ST E						S Approach MEADOWRIDGE DR						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	0	0	1	0	4	1	5	268	15	2	0	290	56	0	9	0	0	65	9	552	1	0	0	562	918
08:15:00	0	0	1	0	3	1	0	273	29	0	0	302	71	0	9	0	0	80	15	598	0	0	0	613	996
08:30:00	0	0	1	0	4	1	0	298	31	0	0	329	64	0	13	0	1	77	15	546	0	1	0	562	969
08:45:00	0	0	0	0	0	0	2	293	25	1	0	321	77	0	26	0	0	103	14	532	2	1	0	549	973
Grand Total	0	0	3	0	11	3	7	1132	100	3	0	1242	268	0	57	0	1	325	53	2228	3	2	0	2286	3856
Approach%	0%	0%	100%	0%	-	-	0.6%	91.1%	8.1%	0.2%	-	-	82.5%	0%	17.5%	0%	-	-	2.3%	97.5%	0.1%	0.1%	-	-	
Totals %	0%	0%	0.1%	0%	0.1%	0.1%	0.2%	29.4%	2.6%	0.1%	32.2%	32.2%	7%	0%	1.5%	0%	8.4%	8.4%	1.4%	57.8%	0.1%	0.1%	59.3%	-	
PHF	0	0	0.75	0	0.75	0.75	0.35	0.95	0.81	0.38	0.94	0.94	0.87	0	0.55	0	0.79	0.79	0.88	0.93	0.38	0.5	0.93	-	
Heavy	0	0	2	0	2	2	3	92	6	0	101	101	1	0	1	0	2	2	0	48	2	0	50	-	
Heavy %	0%	0%	66.7%	0%	66.7%	66.7%	42.9%	8.1%	6%	0%	8.1%	8.1%	0.4%	0%	1.8%	0%	0.6%	0.6%	0%	2.2%	66.7%	0%	2.2%	-	
Lights	0	0	1	0	1	1	4	1040	94	3	1141	1141	267	0	56	0	323	323	53	2180	1	2	2236	-	
Lights %	0%	0%	33.3%	0%	33.3%	33.3%	57.1%	91.9%	94%	100%	91.9%	91.9%	99.6%	0%	98.2%	0%	99.4%	99.4%	100%	97.8%	33.3%	100%	97.8%	-	
Single-Unit Trucks	0	0	0	0	0	0	2	47	2	0	51	51	0	0	0	0	0	0	0	18	0	0	18	-	
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	28.6%	4.2%	2%	0%	4.1%	4.1%	0%	0%	0%	0%	0%	0%	0%	0.8%	0%	0%	0.8%	-	
Buses	0	0	0	0	0	0	0	7	3	0	10	10	1	0	1	0	2	2	0	15	0	0	15	-	
Buses %	0%	0%	0%	0%	0%	0%	0%	0.6%	3%	0%	0.8%	0.8%	0.4%	0%	1.8%	0%	0.6%	0.6%	0%	0.7%	0%	0%	0.7%	-	
Articulated Trucks	0	0	2	0	2	2	1	38	1	0	40	40	0	0	0	0	0	0	0	15	2	0	17	-	
Articulated Trucks %	0%	0%	66.7%	0%	66.7%	66.7%	14.3%	3.4%	1%	0%	3.2%	3.2%	0%	0%	0%	0%	0%	0%	0%	0.7%	66.7%	0%	0.7%	-	
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	
Pedestrians	-	-	-	-	11	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	
Pedestrians %	-	-	-	-	91.7%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	8.3%	-	-	-	-	-	0%	-	



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)

Start Time	N Approach MEADOWRIDGE DR						E Approach DUNDAS ST E						S Approach MEADOWRIDGE DR						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	0	0	1	0	1	1	0	596	42	1	1	639	23	0	13	0	1	36	12	366	0	0	0	378	1054
17:00:00	0	0	0	0	0	0	0	572	42	1	0	615	33	0	4	0	0	37	14	435	0	0	0	449	1101
17:15:00	0	0	2	0	0	2	3	615	49	0	0	667	38	0	10	0	3	48	7	364	0	0	0	371	1088
17:30:00	0	0	1	0	0	1	0	582	48	2	0	632	45	0	16	0	1	61	17	411	0	1	0	429	1123
Grand Total	0	0	4	0	1	4	3	2365	181	4	1	2553	139	0	43	0	5	182	50	1576	0	1	0	1627	4366
Approach%	0%	0%	100%	0%	-	-	0.1%	92.6%	7.1%	0.2%	-	-	76.4%	0%	23.6%	0%	-	-	3.1%	96.9%	0%	0.1%	-	-	-
Totals %	0%	0%	0.1%	0%	0.1%	0.1%	0.1%	54.2%	4.1%	0.1%	58.5%	3.2%	0%	1%	0%	4.2%	1.1%	36.1%	0%	0%	37.3%	-	-	-	-
PHF	0	0	0.5	0	0.5	0.5	0.25	0.96	0.92	0.5	0.96	0.77	0	0.67	0	0.75	0.74	0.91	0	0.25	0.91	-	-	-	-
Heavy	0	0	1	0	1	1	1	15	0	0	16	0	0	0	0	0	0	38	0	0	38	-	-	-	-
Heavy %	0%	0%	25%	0%	25%	33.3%	0.6%	0%	0%	0.6%	0%	0%	0%	0%	0%	0%	0%	2.4%	0%	0%	2.3%	-	-	-	-
Lights	0	0	3	0	3	2	2349	181	4	2536	139	0	43	0	182	50	1538	0	1	1589	-	-	-	-	-
Lights %	0%	0%	75%	0%	75%	66.7%	99.3%	100%	100%	99.3%	100%	0%	100%	0%	100%	100%	97.6%	0%	100%	97.7%	-	-	-	-	-
Single-Unit Trucks	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	20	0	0	20	-	-	-	-
Single-Unit Trucks %	0%	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	1.3%	0%	0%	1.2%	-	-	-	-
Buses	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	-	-	-	-
Buses %	0%	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	0.3%	0%	0%	0.2%	-	-	-	-
Articulated Trucks	0	0	1	0	1	1	1	7	0	0	8	0	0	0	0	0	0	14	0	0	14	-	-	-	-
Articulated Trucks %	0%	0%	25%	0%	25%	33.3%	0.3%	0%	0%	0.3%	0%	0%	0%	0%	0%	0%	0%	0.9%	0%	0%	0.9%	-	-	-	-
Bicycles on Road	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	0	-	-	-	-
Pedestrians%	-	-	-	-	14.3%	-	-	-	-	14.3%	-	-	-	-	71.4%	-	-	-	-	0%	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)





Turning Movement Count (6 . DUNDAS STREET EAST & NINTH LINE)

Start Time	N Approach NINTH LINE						E Approach DUNDAS ST E					S Approach NINTH LINE					W Approach DUNDAS ST E					Int. Total (15 min)	Int. Total (1 hr)			
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N			UTurn W:W	Peds W:	Approach Total
07:00:00	16	58	51	0	0	125	24	184	11	0	0	219	18	31	27	0	0	76	48	377	23	0	1	448	868	
07:15:00	20	85	56	0	0	161	34	179	15	1	0	229	13	56	25	0	0	94	49	478	36	0	2	563	1047	
07:30:00	25	154	58	0	0	237	33	182	16	0	0	231	24	71	25	0	0	120	41	458	32	0	0	531	1119	
07:45:00	30	137	61	0	0	228	41	185	27	2	0	255	25	79	40	0	1	144	62	565	57	1	0	685	1312	4346
08:00:00	55	165	62	0	0	282	50	170	38	0	0	258	34	101	27	0	0	162	60	471	51	0	0	582	1284	4762
08:15:00	51	180	70	0	0	301	27	227	23	1	0	278	30	68	28	0	0	126	88	543	29	0	0	660	1365	5080
08:30:00	36	156	53	0	0	245	29	240	25	0	0	294	51	78	44	0	1	173	51	523	37	0	0	611	1323	5284
08:45:00	36	187	65	0	0	288	25	241	36	0	0	302	47	67	37	0	2	151	72	529	48	0	0	649	1390	5362
09:00:00	23	116	40	0	0	179	27	245	29	0	0	301	24	68	43	0	0	135	50	392	27	0	0	469	1084	5162
09:15:00	29	107	51	0	0	187	12	207	27	0	0	246	30	55	23	0	0	108	58	420	30	1	0	509	1050	4847
09:30:00	24	105	30	0	0	159	23	216	29	2	0	270	27	53	28	0	0	108	44	378	30	0	0	452	989	4513
09:45:00	28	87	35	0	0	150	32	296	24	0	0	352	35	34	31	0	0	100	33	323	23	0	0	379	981	4104
BREAK																										
16:00:00	33	82	41	0	0	156	45	500	24	1	0	570	86	185	54	0	1	305	51	310	38	1	1	400	1431	
16:15:00	43	90	35	1	0	169	47	479	31	1	0	558	100	196	57	0	1	353	50	360	42	0	0	452	1532	
16:30:00	38	82	48	0	1	168	47	494	32	0	0	573	118	178	64	0	0	360	45	329	34	0	0	408	1509	
16:45:00	38	81	27	0	0	146	53	548	39	1	0	641	122	180	52	0	0	354	53	352	36	0	0	441	1582	6054
17:00:00	52	89	40	0	1	181	39	499	39	0	0	577	141	228	64	0	0	433	52	335	44	0	1	431	1622	6245
17:15:00	25	70	36	0	0	131	49	604	34	0	0	687	122	189	58	0	1	369	42	374	32	0	0	448	1635	6348
17:30:00	43	94	43	0	0	180	39	532	36	2	0	609	128	197	76	0	0	401	35	360	34	0	0	429	1619	6458
17:45:00	33	54	29	0	0	116	46	502	33	2	0	583	94	159	66	0	0	319	40	341	40	0	0	421	1439	6315
18:00:00	41	79	38	0	1	158	39	473	31	0	0	543	86	142	51	3	0	282	49	362	31	0	1	442	1425	6118
18:15:00	31	81	48	0	1	160	65	470	28	0	0	563	79	131	68	0	0	278	39	331	34	0	0	404	1405	5888
18:30:00	35	73	39	0	0	147	54	450	31	0	0	535	47	93	53	0	1	193	37	334	35	0	0	406	1281	5550
18:45:00	18	79	46	0	0	143	68	409	22	1	0	500	46	84	44	0	1	174	38	308	46	0	0	392	1209	5320
Grand Total	803	2491	1102	1	4	4397	948	8532	680	14	0	10174	1527	2703	1085	3	9	5318	1187	9553	869	3	6	11612	31501	-
Approach%	18.3%	56.7%	25.1%	0%	-	-	9.3%	83.9%	6.7%	0.1%	-	-	28.7%	50.8%	20.4%	0.1%	-	10.2%	82.3%	7.5%	0%	-	-	-	-	
Totals %	2.5%	7.9%	3.5%	0%	14%	-	3%	27.1%	2.2%	0%	32.3%	-	4.8%	8.6%	3.4%	0%	16.9%	3.8%	30.3%	2.8%	0%	36.9%	-	-	-	
Heavy	18	80	29	0	-	-	27	299	20	1	-	-	65	105	48	0	-	50	229	9	0	-	-	-	-	
Heavy %	2.2%	3.2%	2.6%	0%	-	-	2.8%	3.5%	2.9%	7.1%	-	-	4.3%	3.9%	4.4%	0%	-	4.2%	2.4%	1%	0%	-	-	-	-	
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)

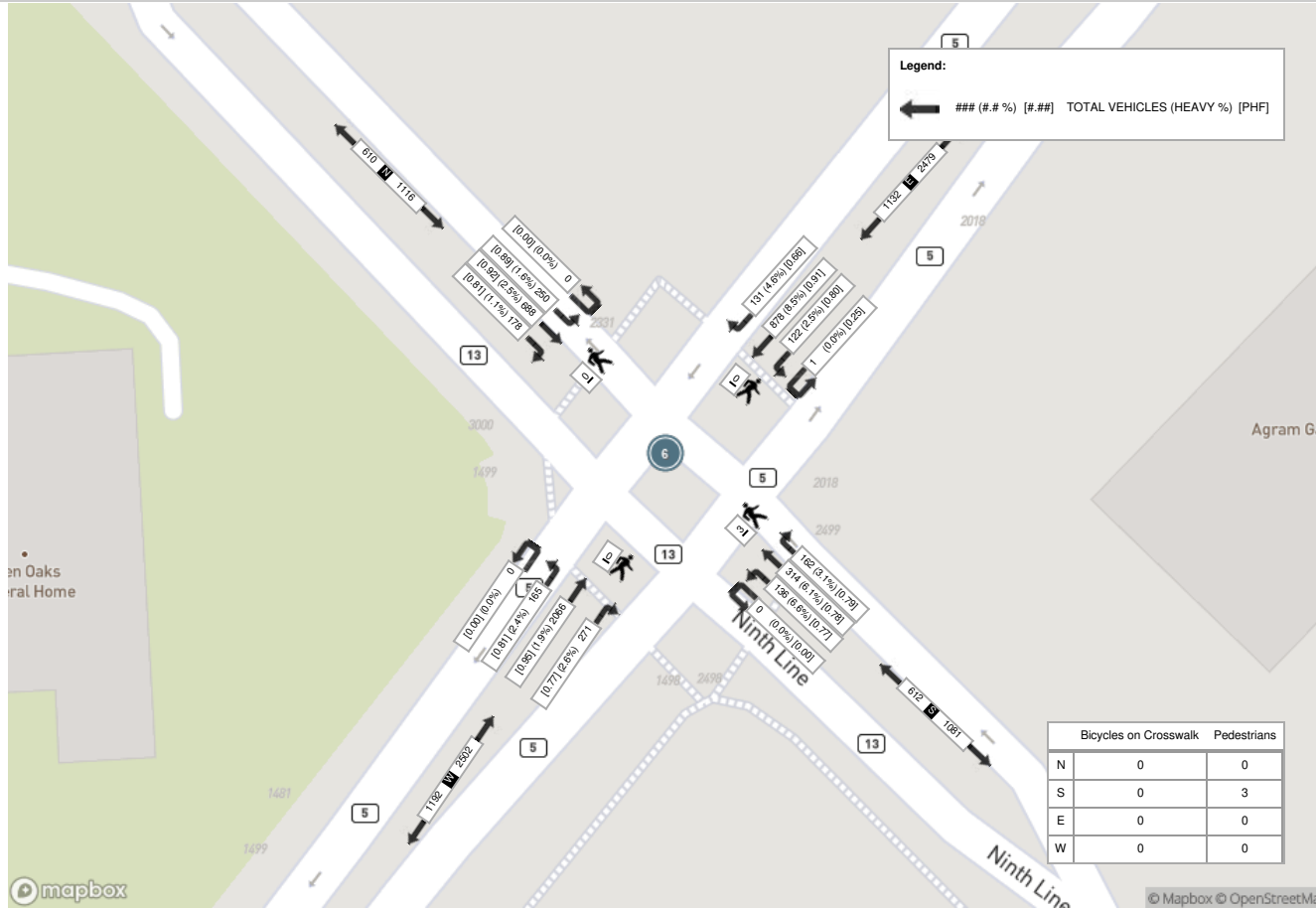
Start Time	N Approach NINTH LINE						E Approach DUNDAS ST E						S Approach NINTH LINE						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	55	165	62	0	0	282	50	170	38	0	0	258	34	101	27	0	0	162	60	471	51	0	0	582	1284
08:15:00	51	180	70	0	0	301	27	227	23	1	0	278	30	68	28	0	0	126	88	543	29	0	0	660	1365
08:30:00	36	156	53	0	0	245	29	240	25	0	0	294	51	78	44	0	1	173	51	523	37	0	0	611	1323
08:45:00	36	187	65	0	0	288	25	241	36	0	0	302	47	67	37	0	2	151	72	529	48	0	0	649	1390
Grand Total	178	688	250	0	0	1116	131	878	122	1	0	1132	162	314	136	0	3	612	271	2066	165	0	0	2502	5362
Approach%	15.9%	61.6%	22.4%	0%		-	11.6%	77.6%	10.8%	0.1%		-	26.5%	51.3%	22.2%	0%		-	10.8%	82.6%	6.6%	0%		-	-
Totals %	3.3%	12.8%	4.7%	0%		20.8%	2.4%	16.4%	2.3%	0%		21.1%	3%	5.9%	2.5%	0%		11.4%	5.1%	38.5%	3.1%	0%		46.7%	-
PHF	0.81	0.92	0.89	0		0.93	0.66	0.91	0.8	0.25		0.94	0.79	0.78	0.77	0		0.88	0.77	0.95	0.81	0		0.95	-
Heavy	2	17	4	0		23	6	75	3	0		84	5	19	9	0		33	7	39	4	0		50	-
Heavy %	1.1%	2.5%	1.6%	0%		2.1%	4.6%	8.5%	2.5%	0%		7.4%	3.1%	6.1%	6.6%	0%		5.4%	2.6%	1.9%	2.4%	0%		2%	-
Lights	176	671	246	0		1093	125	803	119	1		1048	157	295	127	0		579	264	2027	161	0		2452	-
Lights %	98.9%	97.5%	98.4%	0%		97.9%	95.4%	91.5%	97.5%	100%		92.6%	96.9%	93.9%	93.4%	0%		94.6%	97.4%	98.1%	97.6%	0%		98%	-
Single-Unit Trucks	2	8	2	0		12	5	34	2	0		41	5	14	4	0		23	3	14	1	0		18	-
Single-Unit Trucks %	1.1%	1.2%	0.8%	0%		1.1%	3.8%	3.9%	1.6%	0%		3.6%	3.1%	4.5%	2.9%	0%		3.8%	1.1%	0.7%	0.6%	0%		0.7%	-
Buses	0	3	1	0		4	0	4	1	0		5	0	3	4	0		7	1	11	3	0		15	-
Buses %	0%	0.4%	0.4%	0%		0.4%	0%	0.5%	0.8%	0%		0.4%	0%	1%	2.9%	0%		1.1%	0.4%	0.5%	1.8%	0%		0.6%	-
Articulated Trucks	0	6	1	0		7	1	37	0	0		38	0	2	1	0		3	3	14	0	0		17	-
Articulated Trucks %	0%	0.9%	0.4%	0%		0.6%	0.8%	4.2%	0%	0%		3.4%	0%	0.6%	0.7%	0%		0.5%	1.1%	0.7%	0%	0%		0.7%	-
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-
Pedestrians%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	100%	-	-	-	-	-	-	0%	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-



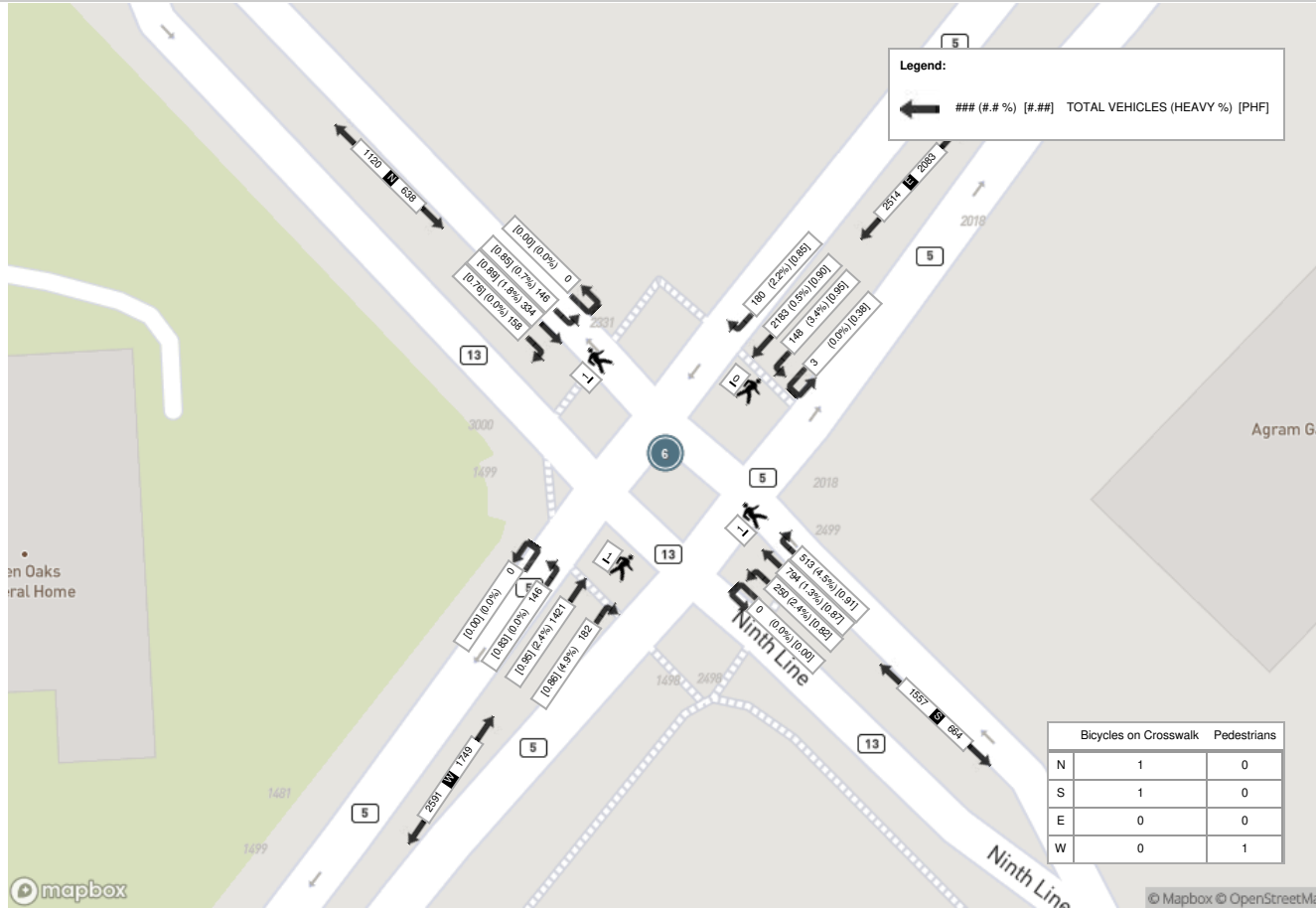
Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)

Start Time	N Approach NINTH LINE						E Approach DUNDAS ST E						S Approach NINTH LINE						W Approach DUNDAS ST E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	38	81	27	0	0	146	53	548	39	1	0	641	122	180	52	0	0	354	53	352	36	0	0	441	1582
17:00:00	52	89	40	0	1	181	39	499	39	0	0	577	141	228	64	0	0	433	52	335	44	0	1	431	1622
17:15:00	25	70	36	0	0	131	49	604	34	0	0	687	122	189	58	0	1	369	42	374	32	0	0	448	1635
17:30:00	43	94	43	0	0	180	39	532	36	2	0	609	128	197	76	0	0	401	35	360	34	0	0	429	1619
Grand Total	158	334	146	0	1	638	180	2183	148	3	0	2514	513	794	250	0	1	1557	182	1421	146	0	1	1749	6458
Approach%	24.8%	52.4%	22.9%	0%	-	-	7.2%	86.8%	5.9%	0.1%	-	-	32.9%	51%	16.1%	0%	-	-	10.4%	81.2%	8.3%	0%	-	-	-
Totals %	2.4%	5.2%	2.3%	0%	9.9%	9.9%	2.8%	33.8%	2.3%	0%	38.9%	38.9%	7.9%	12.3%	3.9%	0%	24.1%	24.1%	2.8%	22%	2.3%	0%	27.1%	27.1%	-
PHF	0.76	0.89	0.85	0	0.88	0.88	0.85	0.9	0.95	0.38	0.91	0.91	0.87	0.82	0	0	0.9	0.9	0.86	0.95	0.83	0	0.98	0.98	-
Heavy	0	6	1	0	7	7	4	11	5	0	20	23	10	6	0	0	39	39	9	34	0	0	43	43	-
Heavy %	0%	1.8%	0.7%	0%	1.1%	1.1%	2.2%	0.5%	3.4%	0%	0.8%	0.9%	1.3%	2.4%	0%	0%	2.5%	2.5%	4.9%	2.4%	0%	0%	2.5%	2.5%	-
Lights	158	328	145	0	631	631	176	2172	143	3	2494	2494	490	784	244	0	1518	1518	173	1387	146	0	1706	1706	-
Lights %	100%	98.2%	99.3%	0%	98.9%	98.9%	97.8%	99.5%	96.6%	100%	99.2%	99.2%	95.5%	98.7%	97.6%	0%	97.5%	97.5%	95.1%	97.6%	100%	0%	97.5%	97.5%	-
Single-Unit Trucks	0	4	1	0	5	5	3	2	2	0	7	9	7	1	0	0	17	17	6	15	0	0	21	21	-
Single-Unit Trucks %	0%	1.2%	0.7%	0%	0.8%	0.8%	1.7%	0.1%	1.4%	0%	0.3%	1.8%	0.9%	0.4%	0%	0%	1.1%	1.1%	3.3%	1.1%	0%	0%	1.2%	1.2%	-
Buses	0	1	0	0	1	1	0	4	1	0	5	1	0	0	0	0	1	1	0	5	0	0	5	5	-
Buses %	0%	0.3%	0%	0%	0.2%	0.2%	0%	0.2%	0.7%	0%	0.2%	0.2%	0%	0%	0%	0%	0.1%	0.1%	0%	0.4%	0%	0%	0.3%	0.3%	-
Articulated Trucks	0	1	0	0	1	1	1	5	2	0	8	13	3	5	0	0	21	21	3	14	0	0	17	17	-
Articulated Trucks %	0%	0.3%	0%	0%	0.2%	0.2%	0.6%	0.2%	1.4%	0%	0.3%	2.5%	0.4%	2%	0%	0%	1.3%	1.3%	1.6%	1%	0%	0%	1%	1%	-
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-
Pedestrians %	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-
Bicycles on Crosswalk	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-
Bicycles on Crosswalk %	-	-	-	33.3%	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-	-	-	0%	-	-	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)





Turning Movement Count (5 . DUNDAS STREET EAST & WILLIAM CUTMORE BOULEVARD)

Start Time	N Approach WILLIAM CUTMORE BLVD					E Approach DUNDAS ST E					W Approach DUNDAS ST E					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	4	5	0	0	9	18	179	0	0	197	466	14	0	0	480	686	
07:15:00	9	18	0	2	27	27	232	0	0	259	535	6	0	0	541	827	
07:30:00	11	15	0	0	26	22	211	0	1	233	566	13	0	0	579	838	
07:45:00	14	27	0	0	41	18	222	0	0	240	633	8	0	0	641	922	3273
08:00:00	26	15	0	0	41	10	271	0	0	281	606	13	0	0	619	941	3528
08:15:00	12	16	0	0	28	20	286	0	0	306	661	9	0	0	670	1004	3705
08:30:00	12	15	0	0	27	7	332	0	1	339	599	15	0	0	614	980	3847
08:45:00	18	19	0	0	37	17	287	0	0	304	608	10	0	0	618	959	3884
09:00:00	7	15	0	0	22	16	310	0	1	326	456	8	1	1	465	813	3756
09:15:00	13	18	0	0	31	16	252	0	0	268	507	10	0	0	517	816	3568
09:30:00	4	10	0	0	14	17	279	0	0	296	434	5	0	0	439	749	3337
09:45:00	7	18	0	0	25	11	335	0	0	346	344	3	0	0	347	718	3096
BREAK																	
16:00:00	7	13	0	0	20	14	563	0	0	577	400	16	1	0	417	1014	
16:15:00	11	16	0	0	27	22	598	0	2	620	435	6	3	0	444	1091	
16:30:00	14	21	0	1	35	11	574	0	1	585	429	9	0	2	438	1058	
16:45:00	15	22	0	0	37	6	624	0	0	630	390	2	1	1	393	1060	4223
17:00:00	20	15	0	1	35	17	615	0	0	632	450	8	0	2	458	1125	4334
17:15:00	13	16	0	1	29	17	625	0	0	642	402	11	0	1	413	1084	4327
17:30:00	6	18	0	0	24	17	676	0	0	693	459	9	0	1	468	1185	4454
17:45:00	5	15	0	0	20	15	554	1	1	570	378	3	0	0	381	971	4365
18:00:00	9	11	0	1	20	12	598	0	0	610	427	3	0	1	430	1060	4300
18:15:00	4	11	0	2	15	14	532	0	3	546	414	5	0	2	419	980	4196
18:30:00	6	15	0	1	21	11	520	0	0	531	388	4	0	1	392	944	3955
18:45:00	3	7	0	0	10	17	489	0	0	506	385	6	0	0	391	907	3891
Grand Total	250	371	0	9	621	372	10164	1	10	10537	11372	196	6	12	11574	22732	-
Approach%	40.3%	59.7%	0%	-	-	3.5%	96.5%	0%	-	-	98.3%	1.7%	0.1%	-	-	-	-
Totals %	1.1%	1.6%	0%	2.7%	-	1.6%	44.7%	0%	46.4%	-	50%	0.9%	0%	50.9%	-	-	-
Heavy	29	26	0	-	-	36	325	0	-	-	262	20	1	-	-	-	-
Heavy %	11.6%	7%	0%	-	-	9.7%	3.2%	0%	-	-	2.3%	10.2%	16.7%	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)

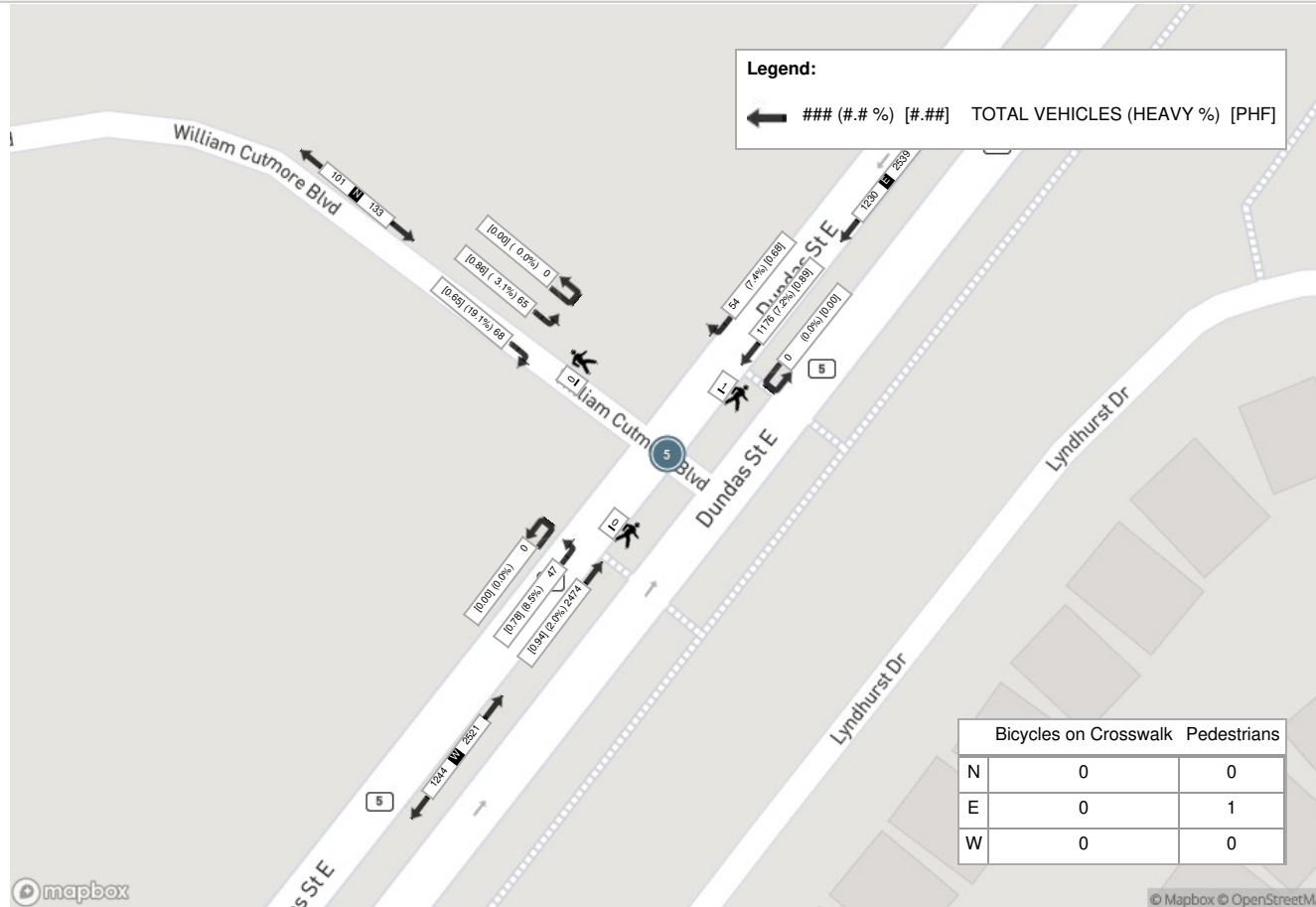
Start Time	N Approach WILLIAM CUTMORE BLVD					E Approach DUNDAS ST E					W Approach DUNDAS ST E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	26	15	0	0	41	10	271	0	0	281	606	13	0	0	619	941
08:15:00	12	16	0	0	28	20	286	0	0	306	661	9	0	0	670	1004
08:30:00	12	15	0	0	27	7	332	0	1	339	599	15	0	0	614	980
08:45:00	18	19	0	0	37	17	287	0	0	304	608	10	0	0	618	959
Grand Total	68	65	0	0	133	54	1176	0	1	1230	2474	47	0	0	2521	3884
Approach%	51.1%	48.9%	0%	-	-	4.4%	95.6%	0%	-	-	98.1%	1.9%	0%	-	-	-
Totals %	1.8%	1.7%	0%	3.4%	1.4%	30.3%	0%	31.7%	63.7%	1.2%	0%	64.9%	-	-	-	-
PHF	0.65	0.86	0	0.81	0.68	0.89	0	0.91	0.94	0.78	0	0.94	-	-	-	-
Heavy	13	2	0	15	4	85	0	89	49	4	0	53	-	-	-	-
Heavy %	19.1%	3.1%	0%	11.3%	7.4%	7.2%	0%	7.2%	2%	8.5%	0%	2.1%	-	-	-	-
Lights	55	63	0	118	50	1091	0	1141	2425	43	0	2468	-	-	-	-
Lights %	80.9%	96.9%	0%	88.7%	92.6%	92.8%	0%	92.8%	98%	91.5%	0%	97.9%	-	-	-	-
Single-Unit Trucks	7	0	0	7	2	44	0	46	19	1	0	20	-	-	-	-
Single-Unit Trucks %	10.3%	0%	0%	5.3%	3.7%	3.7%	0%	3.7%	0.8%	2.1%	0%	0.8%	-	-	-	-
Buses	4	0	0	4	2	6	0	8	15	2	0	17	-	-	-	-
Buses %	5.9%	0%	0%	3%	3.7%	0.5%	0%	0.7%	0.6%	4.3%	0%	0.7%	-	-	-	-
Articulated Trucks	2	2	0	4	0	35	0	35	15	1	0	16	-	-	-	-
Articulated Trucks %	2.9%	3.1%	0%	3%	0%	3%	0%	2.8%	0.6%	2.1%	0%	0.6%	-	-	-	-
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	1	-	-	-	0	-	-	-	-
Pedestrians%	-	-	-	0%	-	-	-	100%	-	-	-	0%	-	-	-	-
Bicycles on Crosswalk	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	-
Bicycles on Crosswalk%	-	-	-	0%	-	-	-	0%	-	-	-	0%	-	-	-	-



Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)

Start Time	N Approach WILLIAM CUTMORE BLVD					E Approach DUNDAS ST E					W Approach DUNDAS ST E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	15	22	0	0	37	6	624	0	0	630	390	2	1	1	393	1060
17:00:00	20	15	0	1	35	17	615	0	0	632	450	8	0	2	458	1125
17:15:00	13	16	0	1	29	17	625	0	0	642	402	11	0	1	413	1084
17:30:00	6	18	0	0	24	17	676	0	0	693	459	9	0	1	468	1185
Grand Total	54	71	0	2	125	57	2540	0	0	2597	1701	30	1	5	1732	4454
Approach%	43.2%	56.8%	0%	-	-	2.2%	97.8%	0%	-	-	98.2%	1.7%	0.1%	-	-	-
Totals %	1.2%	1.6%	0%	2.8%	1.3%	57%	0%	58.3%	38.2%	0.7%	0%	38.9%	-	-	-	-
PHF	0.68	0.81	0	0.84	0.84	0.94	0	0.94	0.93	0.68	0.25	0.93	-	-	-	-
Heavy	2	2	0	4	1	14	0	15	39	0	0	39	-	-	-	-
Heavy %	3.7%	2.8%	0%	3.2%	1.8%	0.6%	0%	0.6%	2.3%	0%	0%	2.3%	-	-	-	-
Lights	52	69	0	121	56	2526	0	2582	1662	30	1	1693	-	-	-	-
Lights %	96.3%	97.2%	0%	96.8%	98.2%	99.4%	0%	99.4%	97.7%	100%	100%	97.7%	-	-	-	-
Single-Unit Trucks	1	0	0	1	0	3	0	3	20	0	0	20	-	-	-	-
Single-Unit Trucks %	1.9%	0%	0%	0.8%	0%	0.1%	0%	0.1%	1.2%	0%	0%	1.2%	-	-	-	-
Buses	0	0	0	0	0	4	0	4	4	0	0	4	-	-	-	-
Buses %	0%	0%	0%	0%	0%	0.2%	0%	0.2%	0.2%	0%	0%	0.2%	-	-	-	-
Articulated Trucks	1	2	0	3	1	7	0	8	15	0	0	15	-	-	-	-
Articulated Trucks %	1.9%	2.8%	0%	2.4%	1.8%	0.3%	0%	0.3%	0.9%	0%	0%	0.9%	-	-	-	-
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	1	-	-	-	0	-	-	-	-	5	-	-	-
Pedestrians%	-	-	-	14.3%	-	-	-	0%	-	-	-	-	71.4%	-	-	-
Bicycles on Crosswalk	-	-	-	1	-	-	-	0	-	-	-	-	0	-	-	-
Bicycles on Crosswalk%	-	-	-	14.3%	-	-	-	0%	-	-	-	-	0%	-	-	-

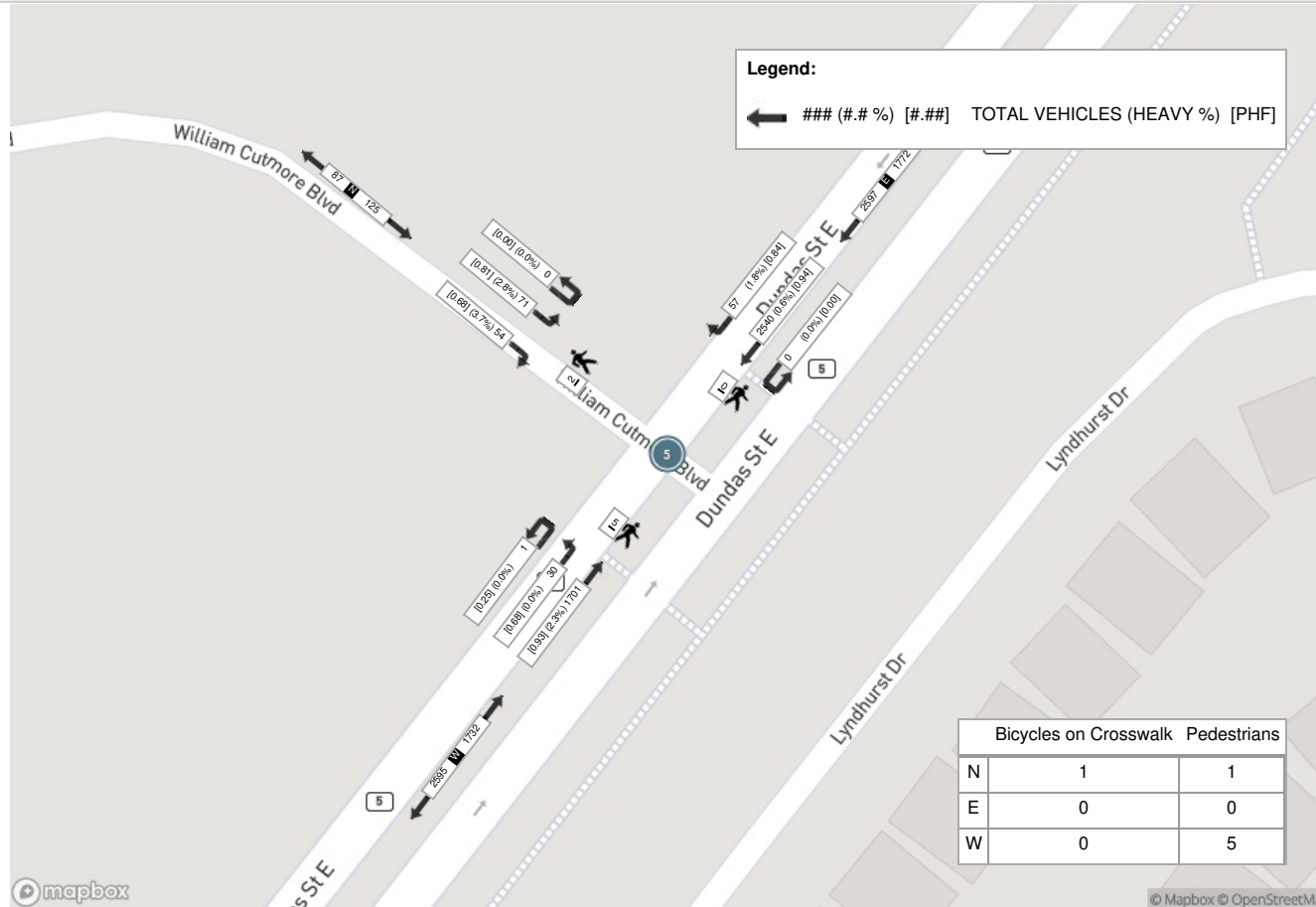
Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (7.89 °C)



mapbox

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Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (15.91 °C)





Turning Movement Count (1 . TRAFALGAR ROAD & BURNHAMTHORPE ROAD EAST)

Start Time	N Approach TRAFALGAR RD						E Approach BURNHAMTHORPE RD E						S Approach TRAFALGAR RD						W Approach BURNHAMTHORPE RD E						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	17	127	0	0	0	144	1	13	6	0	1	20	5	104	6	0	1	115	11	8	8	0	0	27	306	
07:15:00	21	140	3	0	0	164	3	16	5	0	0	24	7	150	3	0	0	160	15	19	14	0	0	48	396	
07:30:00	12	197	1	0	0	210	2	19	9	0	0	30	12	177	7	0	0	196	16	26	18	0	0	60	496	
07:45:00	7	210	5	0	0	222	0	14	7	0	0	21	18	161	8	0	0	187	15	29	24	0	0	68	498	1696
08:00:00	16	207	4	0	0	227	4	21	10	0	0	35	21	197	10	0	0	228	20	50	23	0	0	93	583	1973
08:15:00	18	233	14	0	0	265	5	30	23	0	0	58	32	189	27	0	0	248	16	46	30	0	0	92	663	2240
08:30:00	15	253	15	0	0	283	12	35	15	0	0	62	28	231	15	0	0	274	17	47	26	0	2	90	709	2453
08:45:00	23	249	13	0	0	285	13	44	15	0	0	72	28	158	5	0	0	191	15	44	22	0	0	81	629	2584
09:00:00	23	221	6	0	0	250	4	13	11	0	0	28	17	141	10	0	0	168	11	25	18	0	0	54	500	2501
09:15:00	18	151	6	0	0	175	0	18	4	0	0	22	19	100	12	0	0	131	14	32	15	0	0	61	389	2227
09:30:00	6	176	6	0	0	188	2	9	11	0	0	22	15	127	12	0	0	154	16	22	15	0	0	53	417	1935
09:45:00	9	144	2	0	0	155	2	13	8	0	0	23	13	114	13	0	0	140	9	10	10	0	0	29	347	1653
BREAK																										
16:00:00	32	148	5	0	0	185	6	34	17	0	0	57	21	257	17	0	0	295	9	40	20	0	0	69	606	
16:15:00	21	156	4	0	0	181	10	39	11	0	0	60	40	276	21	0	0	337	9	42	18	0	0	69	647	
16:30:00	26	153	7	0	0	186	3	47	18	0	0	68	29	268	18	0	0	315	13	39	17	0	0	69	638	
16:45:00	22	181	4	0	0	207	5	48	9	0	0	62	22	287	22	0	0	331	11	32	14	0	0	57	657	2548
17:00:00	28	166	3	0	0	197	3	43	16	0	0	62	34	327	20	0	0	381	10	30	26	0	0	66	706	2648
17:15:00	26	186	4	0	0	216	2	46	14	0	0	62	35	304	19	0	0	358	10	46	18	0	0	74	710	2711
17:30:00	40	184	7	0	0	231	2	35	17	0	0	54	27	261	33	0	0	321	17	33	19	0	0	69	675	2748
17:45:00	23	174	5	0	0	202	2	39	7	0	0	48	18	213	21	0	0	252	18	50	15	0	0	83	585	2676
18:00:00	18	142	4	0	0	164	2	35	18	0	0	55	30	217	24	1	0	272	16	21	15	0	0	52	543	2513
18:15:00	11	141	4	0	0	156	1	26	12	0	0	39	29	206	18	0	0	253	20	35	16	0	0	71	519	2322
18:30:00	21	138	7	0	0	166	0	37	31	0	0	68	29	128	17	0	0	174	14	30	10	0	0	54	462	2109
18:45:00	10	132	5	0	0	147	1	28	21	0	0	50	14	129	15	0	0	158	5	33	12	0	0	50	405	1929
Grand Total	463	4209	134	0	0	4806	85	702	315	0	1	1102	543	4722	373	1	1	5639	327	789	423	0	2	1539	13086	-
Approach%	9.6%	87.6%	2.8%	0%		-	7.7%	63.7%	28.6%	0%		-	9.6%	83.7%	6.6%	0%	-	21.2%	51.3%	27.5%	0%		-	-	-	
Totals %	3.5%	32.2%	1%	0%		36.7%	0.6%	5.4%	2.4%	0%		8.4%	4.1%	36.1%	2.9%	0%	43.1%	2.5%	6%	3.2%	0%		11.8%	-	-	
Heavy	18	236	4	0		-	4	9	4	0		-	4	252	10	0	-	6	15	15	0		-	-	-	
Heavy %	3.9%	5.6%	3%	0%		-	4.7%	1.3%	1.3%	0%		-	0.7%	5.3%	2.7%	0%	-	1.8%	1.9%	3.5%	0%		-	-	-	
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-	-	-	
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-	-	-	



Peak Hour: 08:00 AM - 09:00 AM Weather: Clear Sky (12.18 °C)

Start Time	N Approach TRAFALGAR RD						E Approach BURNHAMTHORPE RD E						S Approach TRAFALGAR RD						W Approach BURNHAMTHORPE RD E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	16	207	4	0	0	227	4	21	10	0	0	35	21	197	10	0	0	228	20	50	23	0	0	93	583
08:15:00	18	233	14	0	0	265	5	30	23	0	0	58	32	189	27	0	0	248	16	46	30	0	0	92	663
08:30:00	15	253	15	0	0	283	12	35	15	0	0	62	28	231	15	0	0	274	17	47	26	0	2	90	709
08:45:00	23	249	13	0	0	285	13	44	15	0	0	72	28	158	5	0	0	191	15	44	22	0	0	81	629
Grand Total	72	942	46	0	0	1060	34	130	63	0	0	227	109	775	57	0	0	941	68	187	101	0	2	356	2584
Approach%	6.8%	88.9%	4.3%	0%	-	-	15%	57.3%	27.8%	0%	-	-	11.6%	82.4%	6.1%	0%	-	-	19.1%	52.5%	28.4%	0%	-	-	-
Totals %	2.8%	36.5%	1.8%	0%	41%	1.3%	5%	2.4%	0%	8.8%	4.2%	30%	2.2%	0%	36.4%	2.6%	7.2%	3.9%	0%	13.8%	-	-	-	-	
PHF	0.78	0.93	0.77	0	0.93	0.65	0.74	0.68	0	0.79	0.85	0.84	0.53	0	0.86	0.85	0.94	0.84	0	0.96	-	-	-	-	
Heavy	2	72	0	0	74	0	3	0	0	3	2	45	1	0	48	0	3	3	0	6	-	-	-	-	
Heavy %	2.8%	7.6%	0%	0%	7%	0%	2.3%	0%	0%	1.3%	1.8%	5.8%	1.8%	0%	5.1%	0%	1.6%	3%	0%	1.7%	-	-	-	-	
Lights	70	870	46	0	986	34	127	63	0	224	107	730	56	0	893	68	184	98	0	350	-	-	-	-	
Lights %	97.2%	92.4%	100%	0%	93%	100%	97.7%	100%	0%	98.7%	98.2%	94.2%	98.2%	0%	94.9%	100%	98.4%	97%	0%	98.3%	-	-	-	-	
Single-Unit Trucks	2	42	0	0	44	0	1	0	0	1	1	28	0	0	29	0	1	3	0	4	-	-	-	-	
Single-Unit Trucks %	2.8%	4.5%	0%	0%	4.2%	0%	0.8%	0%	0%	0.4%	0.9%	3.6%	0%	0%	3.1%	0%	0.5%	3%	0%	1.1%	-	-	-	-	
Buses	0	8	0	0	8	0	2	0	0	2	1	7	1	0	9	0	1	0	0	1	-	-	-	-	
Buses %	0%	0.8%	0%	0%	0.8%	0%	1.5%	0%	0%	0.9%	0.9%	0.9%	1.8%	0%	1%	0%	0.5%	0%	0%	0.3%	-	-	-	-	
Articulated Trucks	0	22	0	0	22	0	0	0	0	0	0	10	0	0	10	0	1	0	0	1	-	-	-	-	
Articulated Trucks %	0%	2.3%	0%	0%	2.1%	0%	0%	0%	0%	0%	0%	1.3%	0%	0%	1.1%	0%	0.5%	0%	0%	0.3%	-	-	-	-	
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
Bicycles on Road %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-	-	-	
Pedestrians %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	100%	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	



Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (21.12 °C)

Start Time	N Approach TRAFALGAR RD						E Approach BURNHAMTHORPE RD E						S Approach TRAFALGAR RD						W Approach BURNHAMTHORPE RD E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	22	181	4	0	0	207	5	48	9	0	0	62	22	287	22	0	0	331	11	32	14	0	0	57	657
17:00:00	28	166	3	0	0	197	3	43	16	0	0	62	34	327	20	0	0	381	10	30	26	0	0	66	706
17:15:00	26	186	4	0	0	216	2	46	14	0	0	62	35	304	19	0	0	358	10	46	18	0	0	74	710
17:30:00	40	184	7	0	0	231	2	35	17	0	0	54	27	261	33	0	0	321	17	33	19	0	0	69	675
Grand Total	116	717	18	0	0	851	12	172	56	0	0	240	118	1179	94	0	0	1391	48	141	77	0	0	266	2748
Approach%	13.6%	84.3%	2.1%	0%	-	-	5%	71.7%	23.3%	0%	-	-	8.5%	84.8%	6.8%	0%	-	-	18%	53%	28.9%	0%	-	-	-
Totals %	4.2%	26.1%	0.7%	0%	31%	0.4%	6.3%	2%	0%	8.7%	4.3%	42.9%	3.4%	0%	50.6%	1.7%	5.1%	2.8%	0%	9.7%	-	-	-	-	
PHF	0.73	0.96	0.64	0	0.92	0.6	0.9	0.82	0	0.97	0.84	0.9	0.71	0	0.91	0.71	0.77	0.74	0	0.9	-	-	-	-	
Heavy	0	20	0	0	20	1	0	0	0	1	1	25	1	0	27	0	5	4	0	9	-	-	-	-	
Heavy %	0%	2.8%	0%	0%	2.4%	8.3%	0%	0%	0%	0.4%	0.8%	2.1%	1.1%	0%	1.9%	0%	3.5%	5.2%	0%	3.4%	-	-	-	-	
Lights	116	696	18	0	830	11	172	56	0	239	117	1154	93	0	1364	48	136	73	0	257	-	-	-	-	
Lights %	100%	97.1%	100%	0%	97.5%	91.7%	100%	100%	0%	99.6%	99.2%	97.9%	98.9%	0%	98.1%	100%	96.5%	94.8%	0%	96.6%	-	-	-	-	
Single-Unit Trucks	0	6	0	0	6	0	0	0	0	0	0	14	1	0	15	0	1	3	0	4	-	-	-	-	
Single-Unit Trucks %	0%	0.8%	0%	0%	0.7%	0%	0%	0%	0%	0%	0%	1.2%	1.1%	0%	1.1%	0%	0.7%	3.9%	0%	1.5%	-	-	-	-	
Buses	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	4	0	0	4	-	-	-	-	
Buses %	0%	0.8%	0%	0%	0.7%	0%	0%	0%	0%	0%	0%	0.3%	0%	0%	0.2%	0%	2.8%	0%	0%	1.5%	-	-	-	-	
Articulated Trucks	0	8	0	0	8	1	0	0	0	1	1	8	0	0	9	0	0	1	0	1	-	-	-	-	
Articulated Trucks %	0%	1.1%	0%	0%	0.9%	8.3%	0%	0%	0%	0.4%	0.8%	0.7%	0%	0%	0.6%	0%	1.3%	0%	0.4%	-	-	-	-		
Bicycles on Road	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
Bicycles on Road %	0%	0.1%	0%	0%	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
Pedestrians %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
Bicycles on Crosswalk %	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	

Peak Hour: 08:00 AM - 09:00 AM Weather: Clear Sky (12.18 °C)



Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (21.12 °C)





Turning Movement Count (1 . WHEAT BOOM DR & THRESHING MILLS BLVD)

Start Time	N Approach THRESHING MILLS BLVD					S Approach THRESHING MILLS BLVD					W Approach WHEAT BOOM DR					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	U-Turn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Left W:N	U-Turn W:W	Peds W:	Approach Total		
07:00:00	0	3	0	0	3	4	1	0	0	5	4	0	0	2	4	12	
07:15:00	0	4	0	0	4	2	0	0	0	2	2	0	0	3	2	8	
07:30:00	0	3	0	0	3	3	0	0	0	3	6	2	0	3	8	14	
07:45:00	0	11	0	0	11	7	4	0	0	11	4	1	0	1	5	27	61
08:00:00	1	12	0	0	13	6	2	0	0	8	6	0	0	4	6	27	76
08:15:00	2	15	0	0	17	8	7	0	0	15	4	1	0	2	5	37	105
08:30:00	0	17	0	0	17	9	3	0	0	12	7	0	0	3	7	36	127
08:45:00	1	14	0	0	15	14	4	0	0	18	8	1	0	4	9	42	142
09:00:00	0	8	0	0	8	6	6	0	0	12	4	1	0	1	5	25	140
09:15:00	0	9	0	0	9	6	5	0	0	11	4	0	0	2	4	24	127
09:30:00	0	7	0	0	7	10	2	0	0	12	6	0	0	4	6	25	116
09:45:00	0	10	0	0	10	6	3	0	0	9	7	0	0	0	7	26	100
BREAK																	
16:00:00	0	10	0	0	10	14	6	0	0	20	6	0	0	0	6	36	
16:15:00	0	10	0	2	10	16	5	0	0	21	8	1	0	0	9	40	
16:30:00	0	11	0	2	11	23	3	0	0	26	5	1	0	2	6	43	
16:45:00	1	5	0	0	6	16	8	1	0	25	8	0	0	4	8	39	158
17:00:00	2	12	0	0	14	19	11	0	0	30	3	0	0	2	3	47	169
17:15:00	1	10	0	0	11	16	10	0	0	26	5	1	0	0	6	43	172
17:30:00	0	9	0	0	9	27	6	0	0	33	5	1	0	0	6	48	177
17:45:00	1	3	0	0	4	16	9	0	0	25	10	0	0	0	10	39	177
18:00:00	0	14	0	0	14	13	7	0	0	20	6	0	0	0	6	40	170
18:15:00	1	6	0	0	7	17	11	0	0	28	4	0	0	1	4	39	166
18:30:00	0	11	0	0	11	16	8	0	0	24	6	0	0	4	6	41	159
18:45:00	2	8	0	0	10	11	5	0	0	16	7	0	0	3	7	33	153
Grand Total	12	222	0	4	234	285	126	1	0	412	135	10	0	45	145	791	-
Approach%	5.1%	94.9%	0%	-	-	69.2%	30.6%	0.2%	-	-	93.1%	6.9%	0%	-	-	-	-
Totals %	1.5%	28.1%	0%	-	29.6%	36%	15.9%	0.1%	-	52.1%	17.1%	1.3%	0%	-	18.3%	-	-
Heavy	0	4	0	-	-	9	3	0	-	-	8	1	0	-	-	-	-
Heavy %	0%	1.8%	0%	-	-	3.2%	2.4%	0%	-	-	5.9%	10%	0%	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 08:00 AM - 09:00 AM Weather: Clear Sky (11.59 °C)

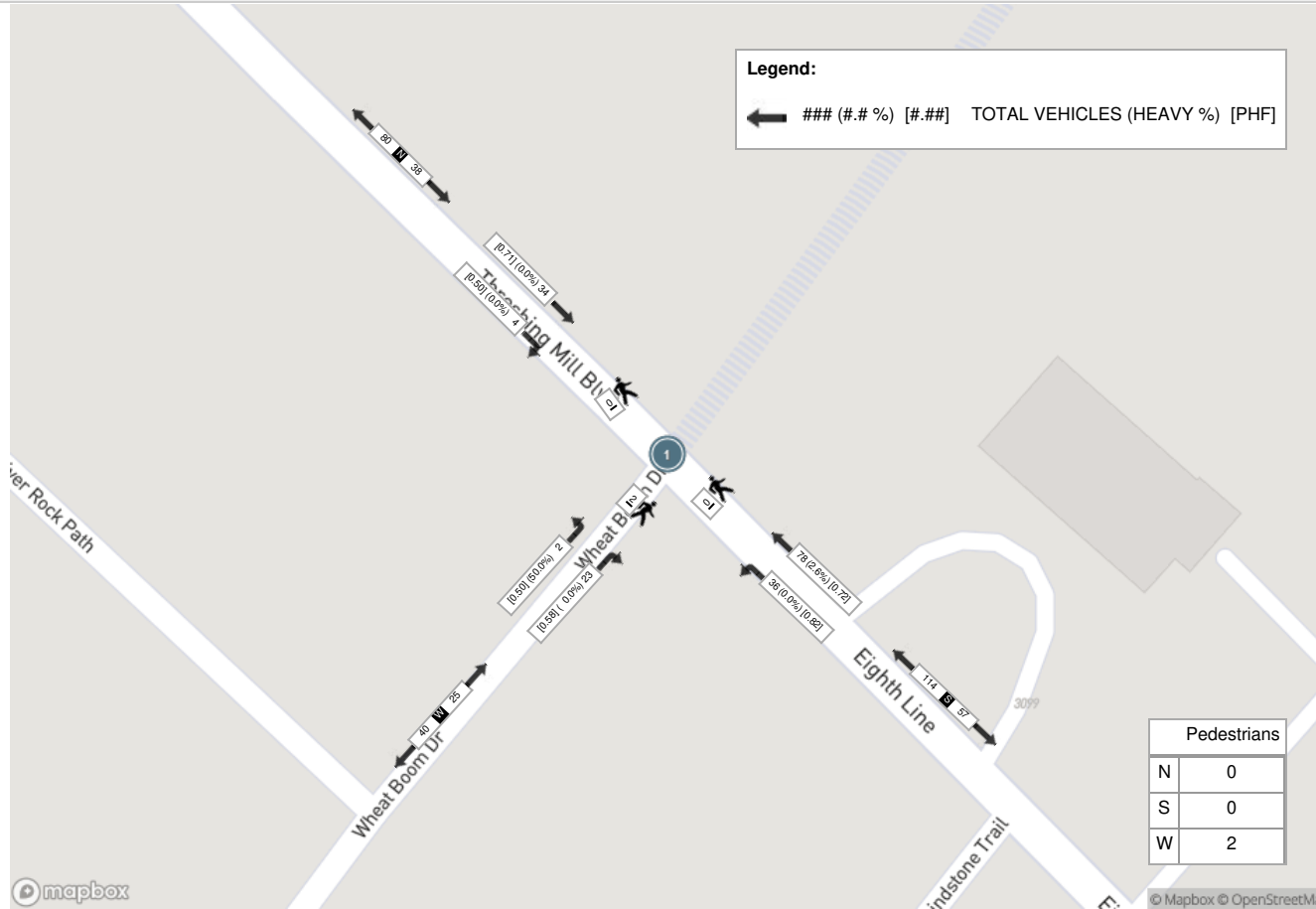
Start Time	N Approach THRESHING MILLS BLVD					S Approach THRESHING MILLS BLVD					W Approach WHEAT BOOM DR					Int. Total (15 min)
	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	
08:00:00	1	12	0	0	13	6	2	0	0	8	6	0	0	4	6	27
08:15:00	2	15	0	0	17	8	7	0	0	15	4	1	0	2	5	37
08:30:00	0	17	0	0	17	9	3	0	0	12	7	0	0	3	7	36
08:45:00	1	14	0	0	15	14	4	0	0	18	8	1	0	4	9	42
Grand Total	4	58	0	0	62	37	16	0	0	53	25	2	0	13	27	142
Approach%	6.5%	93.5%	0%		-	69.8%	30.2%	0%		-	92.6%	7.4%	0%		-	-
Totals %	2.8%	40.8%	0%		43.7%	26.1%	11.3%	0%		37.3%	17.6%	1.4%	0%		19%	-
PHF	0.5	0.85	0		0.91	0.66	0.57	0		0.74	0.78	0.5	0		0.75	-
Heavy	0	1	0		1	4	1	0		5	1	0	0		1	-
Heavy %	0%	1.7%	0%		1.6%	10.8%	6.3%	0%		9.4%	4%	0%	0%		3.7%	-
Lights	4	57	0		61	33	15	0		48	24	2	0		26	-
Lights %	100%	98.3%	0%		98.4%	89.2%	93.8%	0%		90.6%	96%	100%	0%		96.3%	-
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Buses	0	1	0		1	4	1	0		5	1	0	0		1	-
Buses %	0%	1.7%	0%		1.6%	10.8%	6.3%	0%		9.4%	4%	0%	0%		3.7%	-
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	-
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Bicycles on Road	0	0	0		0	0	0	0		0	0	0	0		0	-
Bicycles on Road %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	13	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	100%	-	-



Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (23.83 °C)

Start Time	N Approach THRESHING MILLS BLVD					S Approach THRESHING MILLS BLVD					W Approach WHEAT BOOM DR					Int. Total (15 min)
	Right	Thru	U-Turn	Peds	Approach Total	Thru	Left	U-Turn	Peds	Approach Total	Right	Left	U-Turn	Peds	Approach Total	
17:00:00	2	12	0	0	14	19	11	0	0	30	3	0	0	2	3	47
17:15:00	1	10	0	0	11	16	10	0	0	26	5	1	0	0	6	43
17:30:00	0	9	0	0	9	27	6	0	0	33	5	1	0	0	6	48
17:45:00	1	3	0	0	4	16	9	0	0	25	10	0	0	0	10	39
Grand Total	4	34	0	0	38	78	36	0	0	114	23	2	0	2	25	177
Approach%	10.5%	89.5%	0%	-	-	68.4%	31.6%	0%	-	-	92%	8%	0%	-	-	-
Totals %	2.3%	19.2%	0%	21.5%	44.1%	20.3%	0%	64.4%	13%	1.1%	0%	14.1%	-	-	-	-
PHF	0.5	0.71	0	0.68	0.72	0.82	0	0.86	0.58	0.5	0	0.63	-	-	-	-
Heavy	0	0	0	0	2	0	0	2	0	1	0	1	-	-	-	-
Heavy %	0%	0%	0%	0%	2.6%	0%	0%	1.8%	0%	50%	0%	4%	-	-	-	-
Lights	4	34	0	38	74	36	0	110	23	1	0	24	-	-	-	-
Lights %	100%	100%	0%	100%	94.9%	100%	0%	96.5%	100%	50%	0%	96%	-	-	-	-
Single-Unit Trucks	0	0	0	0	1	0	0	1	0	1	0	1	-	-	-	-
Single-Unit Trucks %	0%	0%	0%	0%	1.3%	0%	0%	0.9%	0%	50%	0%	4%	-	-	-	-
Buses	0	0	0	0	1	0	0	1	0	0	0	0	-	-	-	-
Buses %	0%	0%	0%	0%	1.3%	0%	0%	0.9%	0%	0%	0%	0%	-	-	-	-
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Articulated Trucks %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-
Bicycles on Road	0	0	0	0	2	0	0	2	0	0	0	0	-	-	-	-
Bicycles on Road %	0%	0%	0%	0%	2.6%	0%	0%	1.8%	0%	0%	0%	0%	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	0	-	-	-	2	-	-	-	-
Pedestrians%	-	-	-	0%	-	-	-	0%	-	-	-	100%	-	-	-	-

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (23.83 °C)



Ontario Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 7:45:00

To: 8:45:00

Municipality: Oakville
Site #: 1902900001
Intersection: Dundas St E & Ninth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

North Leg Total: 1452
 North Entering: 800
 North Peds: 0
 Peds Cross: \times

Heavys	0	0	0	0
Trucks	0	2	0	2
Cars	98	518	182	798
Totals	98	520	182	



Heavys	0
Trucks	5
Cars	647
Totals	652

East Leg Total: 3571
 East Entering: 1102
 East Peds: 0
 Peds Cross: \times

Heavys	Trucks	Cars	Totals
0	95	1036	1131

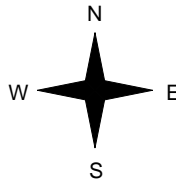


Ninth Line

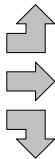
Cars	Trucks	Heavys	Totals
122	0	0	122
786	74	0	860
118	2	0	120
1026	76	0	



Dundas St E



Heavys	Trucks	Cars	Totals
0	0	217	217
0	25	2109	2134
0	1	312	313
0	26	2638	



Dundas St E



Peds Cross: \times
 West Peds: 0
 West Entering: 2664
 West Leg Total: 3795

Cars	948	Cars	152	308	148	608
Trucks	5	Trucks	21	5	5	31
Heavys	0	Heavys	0	0	0	0
Totals	953	Totals	173	313	153	



Ninth Line



Peds Cross: \times
 South Peds: 0
 South Entering: 639
 South Leg Total: 1592

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:45:00
To: 17:45:00

Municipality: Oakville
Site #: 1902900001
Intersection: Dundas St E & Ninth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

North Leg Total: 1558
North Entering: 598
North Peds: 0
Peds Cross: \times

Heavys	0	0	0	0
Trucks	0	2	2	4
Cars	195	297	102	594
Totals	195	299	104	



Heavys	0
Trucks	6
Cars	954
Totals	960

East Leg Total: 4476
East Entering: 2687
East Peds: 0
Peds Cross: \times

Heavys	0	Trucks	25	Cars	2896	Totals	2921
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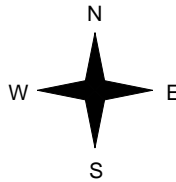


Ninth Line

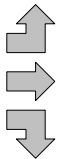
Cars	133	Trucks	0	Heavys	0	Totals	133
Cars	2393	Trucks	20	Heavys	0	Totals	2413
Cars	138	Trucks	3	Heavys	0	Totals	141
Cars	2664	Trucks	23	Heavys	0	Totals	



Dundas St E



Heavys	0	Trucks	0	Cars	129	Totals	129
Heavys	0	Trucks	35	Cars	1120	Totals	1155
Heavys	0	Trucks	4	Cars	159	Totals	163
Heavys	0	Trucks	39	Cars	1408	Totals	



Dundas St E



Peds Cross: \times
West Peds: 0
West Entering: 1447
West Leg Total: 4368

Cars	594	Cars	308	692	504	1504
Trucks	9	Trucks	5	6	26	37
Heavys	0	Heavys	0	0	0	0
Totals	603	Totals	313	698	530	



Ninth Line



Peds Cross: \times
South Peds: 0
South Entering: 1541
South Leg Total: 2144

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Oakville
Site #: 1902900001
Intersection: Dundas St E & Ninth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

North Leg Total: 5571
 North Entering: 2631
 North Peds: 1
 Peds Cross: ⚡

Heavys	0	0	0	0
Trucks	1	9	5	15
Cars	548	1505	563	2616
Totals	549	1514	568	



Heavys	0
Trucks	24
Cars	2916
Totals	2940

East Leg Total: 15364
 East Entering: 7140
 East Peds: 0
 Peds Cross: ⚡

Heavys	Trucks	Cars	Totals
0	262	7476	7738

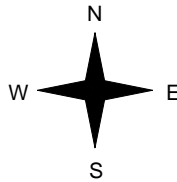


Ninth Line

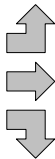
Cars	Trucks	Heavys	Totals
440	2	0	442
6020	205	0	6225
463	10	0	473
6923	217	0	



Dundas St E



Heavys	Trucks	Cars	Totals
0	1	610	611
0	145	6276	6421
0	20	830	850
0	166	7716	



Ninth Line



Dundas St E



Cars	Trucks	Heavys	Totals
8016	208	0	8224

Peds Cross: ⚡
 West Peds: 0
 West Entering: 7882
 West Leg Total: 15620

Cars	2798
Trucks	39
Heavys	0
Totals	2837



Cars	908	1866	1177	3951
Trucks	56	21	58	135
Heavys	0	0	0	0
Totals	964	1887	1235	

Peds Cross: ⚡
 South Peds: 1
 South Entering: 4086
 South Leg Total: 6923

Comments

Ontario Traffic Inc. Traffic Count Summary

Intersection: Dundas St E & Ninth Line

Count Date: 19-Feb-19

Municipality: Oakville

North Approach Totals						South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	194	414	43	651	1	1193	8:00:00	136	268	138	542	0
9:00:00	177	510	107	794	0	1413	9:00:00	188	289	142	619	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	82	283	207	572	0	1982	17:00:00	305	654	451	1410	1
18:00:00	115	307	192	614	0	2129	18:00:00	335	676	504	1515	0
Totals:	568	1514	549	2631	1	6717		964	1887	1235	4086	1
East Approach Totals						West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	94	718	86	898	0	3452	8:00:00	181	2131	242	2554	0
9:00:00	103	817	106	1026	0	3527	9:00:00	204	2007	290	2501	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	134	2350	111	2595	0	3998	17:00:00	99	1147	157	1403	0
18:00:00	142	2340	139	2621	0	4045	18:00:00	127	1136	161	1424	0
Totals:	473	6225	442	7140	0	15022		611	6421	850	7882	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00		17:00	18:00	18:00	18:00			
Crossing Values:	0	744	875	0		1041	2609	1126	2609			

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 7:45:00

To: 8:45:00

Municipality: Oakville
Site #: 1902900002
Intersection: Dundas St E & Meadowridge Dr
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

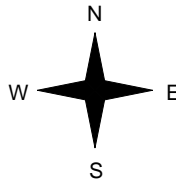
East Leg Total: 3762
 East Entering: 1118
 East Peds: 0
 Peds Cross: X

Heavys	Trucks	Cars	Totals
0	97	982	1079



Dundas St E

Heavys	Trucks	Cars	Totals
0	28	2351	2379
0	1	48	49
0	29	2399	



Meadowridge Dr

Cars	Trucks	Heavys	Totals
933	96	0	1029
88	1	0	89
1021	97	0	



Dundas St E

Cars	Trucks	Heavys	Totals
2616	28	0	2644

Peds Cross: X
 South Peds: 0
 South Entering: 315
 South Leg Total: 453

Peds Cross: X
 West Peds: 0
 West Entering: 2428
 West Leg Total: 3507

Cars	136		
Trucks	2		
Heavys	0		
Totals	138		



Cars	49	265	314
Trucks	1	0	1
Heavys	0	0	0
Totals	50	265	

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 17:00:00
To: 18:00:00

Municipality: Oakville
Site #: 1902900002
Intersection: Dundas St E & Meadowridge Dr
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 4325
East Entering: 2891
East Peds: 0
Peds Cross: ∞

Heavys	Trucks	Cars	Totals
0	22	2689	2711

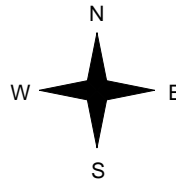


Dundas St E

Heavys	Trucks	Cars	Totals
0	37	1258	1295
0	0	71	71
0	37	1329	



Meadowridge Dr



Cars	Trucks	Heavys	Totals
2649	22	0	2671
220	0	0	220
2869	22	0	



Dundas St E

Cars	Trucks	Heavys	Totals
1397	37	0	1434

Peds Cross: ∞
South Peds: 0
South Entering: 179
South Leg Total: 470

Peds Cross: ∞
West Peds: 0
West Entering: 1366
West Leg Total: 4077

Cars	291	Cars	40	139	179
Trucks	0	Trucks	0	0	0
Heavys	0	Heavys	0	0	0
Totals	291	Totals	40	139	

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Oakville
Site #: 1902900002
Intersection: Dundas St E & Meadowridge Dr
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

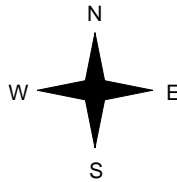
East Leg Total: 15666
 East Entering: 7748
 East Peds: 1
 Peds Cross: X

Heavys	Trucks	Cars	Totals
0	240	7114	7354



Dundas St E

Heavys	Trucks	Cars	Totals
0	163	6967	7130
0	1	207	208
0	164	7174	



Meadowridge Dr

Cars	Trucks	Heavys	Totals
6962	239	0	7201
536	11	0	547
7498	250	0	



Dundas St E

Cars	Trucks	Heavys	Totals
7746	172	0	7918



Peds Cross: X
 West Peds: 1
 West Entering: 7338
 West Leg Total: 14692

Cars	743	Cars	152	779	931
Trucks	12	Trucks	1	9	10
Heavys	0	Heavys	0	0	0
Totals	755	Totals	153	788	



Peds Cross: X
 South Peds: 2
 South Entering: 941
 South Leg Total: 1696

Comments

Ontario Traffic Inc. Traffic Count Summary

Intersection: Dundas St E & Meadowridge Dr													Count Date: 19-Feb-19		Municipality: Oakville	
North Approach Totals						South Approach Totals										
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds				
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total					
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0				
8:00:00	0	0	0	0	0	245	8:00:00	18	0	227	245	0				
9:00:00	0	0	0	0	0	345	9:00:00	58	0	287	345	0				
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0				
17:00:00	0	0	0	0	0	172	17:00:00	37	0	135	172	2				
18:00:00	0	0	0	0	0	179	18:00:00	40	0	139	179	0				
Totals:	0	0	0	0	0	941		153	0	788	941	2				
East Approach Totals						West Approach Totals										
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds				
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total					
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0				
8:00:00	43	841	0	884	1	3207	8:00:00	0	2304	19	2323	1				
9:00:00	91	1059	0	1150	0	3463	9:00:00	0	2261	52	2313	0				
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0				
17:00:00	193	2630	0	2823	0	4159	17:00:00	0	1270	66	1336	0				
18:00:00	220	2671	0	2891	0	4257	18:00:00	0	1295	71	1366	0				
Totals:	547	7201	0	7748	1	15086		0	7130	208	7338	1				
Calculated Values for Traffic Crossing Major Street																
Hours Ending:	7:00	8:00	9:00	16:00		17:00	17:00	18:00	18:00							
Crossing Values:	0	20	58	0		37	37	40	40							

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 7:30:00

To: 8:30:00

Municipality: Oakville
Site #: 1902900003
Intersection: Dundas St E & Prince Michael Dr
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 3435
 East Entering: 1020
 East Peds: 2
 Peds Cross: ∞

Heavys	Trucks	Cars	Totals
0	108	960	1068

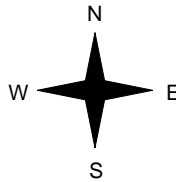


Dundas St E

Heavys	Trucks	Cars	Totals
0	28	2216	2244
0	4	103	107
0	32	2319	



Prince Michael Dr



Cars	Trucks	Heavys	Totals
854	107	0	961
59	0	0	59
913	107	0	



Dundas St E

Cars	Trucks	Heavys	Totals
2386	29	0	2415

Peds Cross: ∞
 South Peds: 1
 South Entering: 278
 South Leg Total: 444

Peds Cross: ∞
 West Peds: 2
 West Entering: 2351
 West Leg Total: 3419

Cars	162		
Trucks	4		
Heavys	0		
Totals	166		



Cars	106	170	276
Trucks	1	1	2
Heavys	0	0	0
Totals	107	171	

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 16:00:00

To: 18:00:00

One Hour Peak

From: 16:45:00

To: 17:45:00

Municipality: Oakville
Site #: 1902900003
Intersection: Dundas St E & Prince Michael Dr
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 4051
 East Entering: 2719
 East Peds: 0
 Peds Cross: ∞

Heavys	Trucks	Cars	Totals
0	21	2623	2644

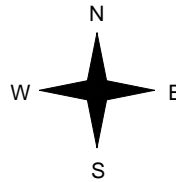


Dundas St E

Heavys	Trucks	Cars	Totals
0	40	1207	1247
0	3	147	150
0	43	1354	



Prince Michael Dr



Cars	Trucks	Heavys	Totals
2471	21	0	2492
226	1	0	227
2697	22	0	



Dundas St E

Cars	Trucks	Heavys	Totals
1292	40	0	1332

Peds Cross: ∞
 South Peds: 5
 South Entering: 237
 South Leg Total: 614

Peds Cross: ∞
 West Peds: 0
 West Entering: 1397
 West Leg Total: 4041

Cars	373	Cars	152	85	237
Trucks	4	Trucks	0	0	0
Heavys	0	Heavys	0	0	0
Totals	377	Totals	152	85	

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Oakville
Site #: 1902900003
Intersection: Dundas St E & Prince Michael Dr
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

East Leg Total: 14447
 East Entering: 7337
 East Peds: 3
 Peds Cross: 8

Heavys	Trucks	Cars	Totals
0	239	7018	7257

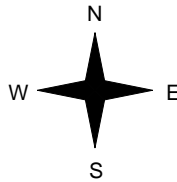


Dundas St E

Heavys	Trucks	Cars	Totals
0	157	6516	6673
0	12	489	501
0	169	7005	



Prince Michael Dr



Cars	Trucks	Heavys	Totals
6542	234	0	6776
559	2	0	561
7101	236	0	



Dundas St E

Cars	Trucks	Heavys	Totals
6952	158	0	7110



Peds Cross: 8
 West Peds: 8
 West Entering: 7174
 West Leg Total: 14431

Cars 1048	Cars 476	436	912
Trucks 14	Trucks 5	1	6
Heavys 0	Heavys 0	0	0
Totals 1062	Totals 481	437	



Peds Cross: 3
 South Peds: 14
 South Entering: 918
 South Leg Total: 1980

Comments

Ontario Traffic Inc. Traffic Count Summary

Intersection: Dundas St E & Prince Michael Dr Count Date: 19-Feb-19 Municipality: Oakville

North Approach Totals						South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	215	8:00:00	69	0	146	215	3
9:00:00	0	0	0	0	0	249	9:00:00	108	0	141	249	1
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0	229	17:00:00	156	0	73	229	8
18:00:00	0	0	0	0	0	225	18:00:00	148	0	77	225	2
Totals:	0	0	0	0	0	918		481	0	437	918	14
East Approach Totals						West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	46	820	0	866	0	3106	8:00:00	0	2168	72	2240	1
9:00:00	67	1041	0	1108	2	3328	9:00:00	0	2074	146	2220	2
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	211	2444	0	2655	1	3989	17:00:00	0	1200	134	1334	3
18:00:00	237	2471	0	2708	0	4088	18:00:00	0	1231	149	1380	2
Totals:	561	6776	0	7337	3	14511		0	6673	501	7174	8
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	0:00	0:00	7:00	8:00			9:00	16:00	17:00	18:00		
Crossing Values:	0	0	0	70			112	0	160	150		

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:00:00
To: 9:00:00

One Hour Peak

From: 7:45:00
To: 8:45:00

Municipality: Oakville
Site #: 1902900004
Intersection: Dundas St E & Eighth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

North Leg Total: 225
North Entering: 175
North Peds: 0
Peds Cross: \times

Heavys	0	0	0	0
Trucks	0	1	0	1
Cars	25	57	92	174
Totals	25	58	92	



Heavys	0
Trucks	2
Cars	48
Totals	50

East Leg Total: 3429
East Entering: 1097
East Peds: 1
Peds Cross: \times

Heavys	0
Trucks	95
Cars	1099
Totals	1194

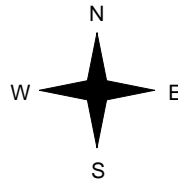


Eighth Line

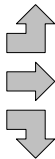
Cars	20	0	0	20
Trucks	922	95	0	1017
Heavys	60	0	0	60
Totals	1002	95	0	



Dundas St E



Heavys	0
Trucks	1
Cars	10
Totals	11
Heavys	0
Trucks	29
Cars	2060
Totals	2089
Heavys	0
Trucks	3
Cars	110
Totals	113
Heavys	0
Trucks	33
Cars	2180
Totals	2180



Dundas St E



Cars	2300	32	0	2332
Trucks				
Heavys				
Totals				

Eighth Line



Peds Cross: \times
West Peds: 0
West Entering: 2213
West Leg Total: 3407

Cars	227
Trucks	4
Heavys	0
Totals	231



Cars	152	18	148	318
Trucks	0	1	3	4
Heavys	0	0	0	0
Totals	152	19	151	

Peds Cross: \times
South Peds: 1
South Entering: 322
South Leg Total: 553

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 16:00:00
To: 18:00:00

One Hour Peak

From: 16:45:00
To: 17:45:00

Municipality: Oakville
Site #: 1902900004
Intersection: Dundas St E & Eighth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E

North Leg Total: 163
North Entering: 56
North Peds: 0
Peds Cross: \times

Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	10	13	33	56
Totals	10	13	33	



Heavys	0
Trucks	1
Cars	106
Totals	107

East Leg Total: 4027
East Entering: 2642
East Peds: 2
Peds Cross: \times

Heavys	0	Trucks	20	Cars	2547	Totals	2567
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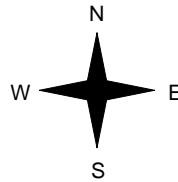


Eighth Line

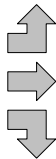
Cars	69	Trucks	0	Heavys	0	Totals	69
Cars	2374	Trucks	19	Heavys	0	Totals	2393
Cars	180	Trucks	0	Heavys	0	Totals	180
Cars	2623	Trucks	19	Heavys	0	Totals	



Dundas St E



Heavys	0	Trucks	0	Cars	9	Totals	9
Heavys	0	Trucks	42	Cars	1198	Totals	1240
Heavys	0	Trucks	3	Cars	178	Totals	181
Heavys	0	Trucks	45	Cars	1385	Totals	



Dundas St E



Cars	1343	Trucks	42	Heavys	0	Totals	1385
------	------	--------	----	--------	---	--------	------



Eighth Line

Peds Cross: \times
West Peds: 1
West Entering: 1430
West Leg Total: 3997

Cars	371	Cars	163	28	112	Totals	303
Trucks	3	Trucks	1	1	0	Totals	2
Heavys	0	Heavys	0	0	0	Totals	0
Totals	374	Totals	164	29	112	Totals	



Peds Cross: \times
South Peds: 0
South Entering: 305
South Leg Total: 679

Comments

Ontario Traffic Inc.

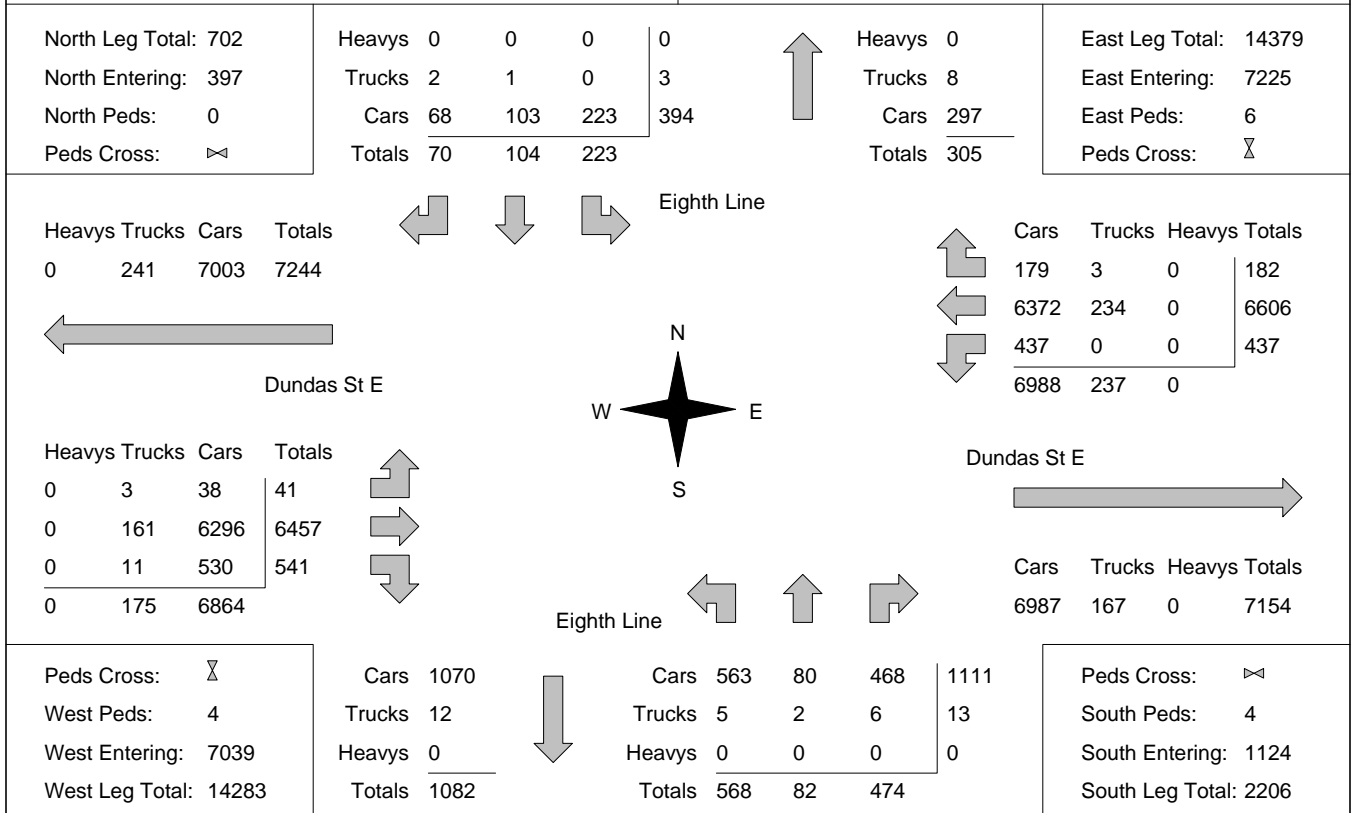
Total Count Diagram

Municipality: Oakville
Site #: 1902900004
Intersection: Dundas St E & Eighth Line
TFR File #: 1
Count date: 19-Feb-19

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dundas St E runs W/E



Comments

Ontario Traffic Inc. Traffic Count Summary

Intersection: Dundas St E & Eighth Line

Count Date: 19-Feb-19

Municipality: Oakville

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	71	27	28	126	0	345	8:00:00	83	6	130	219	1
9:00:00	86	47	17	150	0	472	9:00:00	164	20	138	322	1
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	24	19	11	54	0	326	17:00:00	153	24	95	272	2
18:00:00	42	11	14	67	0	378	18:00:00	168	32	111	311	0
Totals:	223	104	70	397	0	1521		568	82	474	1124	4
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	30	840	16	886	1	2991	8:00:00	4	2013	88	2105	1
9:00:00	66	1029	26	1121	1	3251	9:00:00	15	2003	112	2130	0
16:00:00	0	0	0	0	0	0	16:00:00	0	0	0	0	0
17:00:00	172	2388	70	2630	1	4022	17:00:00	12	1220	160	1392	1
18:00:00	169	2349	70	2588	3	4000	18:00:00	10	1221	181	1412	2
Totals:	437	6606	182	7225	6	14264		41	6457	541	7039	4
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	7:00	8:00	9:00	16:00		17:00	17:00	18:00	18:00			
Crossing Values:	0	183	298	0		203	203	247	247			

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Configuration Controller Sequence

Phase Ring Sequence and Assignment (MM) 1-1-1

Hardware Alternate Sequence Enable: No

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Sequence 1																
Ring 1	| 1	2 | 3	4 | 9	10 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 7	8 | 11	12 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 2																
Ring 1	| 2	1 | 3	4 | 10	9 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 7	8 | 11	12 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 3																
Ring 1	| 1	2 | 4	3 | 9	10 | 14	13 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 7	8 | 11	12 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 4																
Ring 1	| 2	1 | 4	3 | 10	9 | 14	13 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 7	8 | 11	12 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 5																
Ring 1	| 1	2 | 3	4 | 9	10 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 6	5 | 7	8 | 12	11 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 6																
Ring 1	| 2	1 | 3	4 | 10	9 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 6	5 | 7	8 | 12	11 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 7																
Ring 1	| 1	2 | 4	3 | 9	10 | 14	13 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 6	5 | 7	8 | 12	11 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 8																
Ring 1	| 2	1 | 4	3 | 10	9 | 14	13 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 6	5 | 7	8 | 12	11 | 15	16 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 9																
Ring 1	| 1	2 | 3	4 | 9	10 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 8	7 | 11	12 | 16	15 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 10																
Ring 1	| 2	1 | 3	4 | 10	9 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 8	7 | 11	12 | 16	15 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 11																
Ring 1	| 1	2 | 4	3 | 9	10 | 14	13 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 8	7 | 11	12 | 16	15 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 12																
Ring 1	| 2	1 | 4	3 | 10	9 | 14	13 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 5	6 | 8	7 | 11	12 | 16	15 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 13																
Ring 1	| 1	2 | 3	4 | 9	10 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Ring 2	| 6	5 | 8	7 | 12	11 | 16	15 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .
Sequence 14																
Ring 1	| 2	1 | 3	4 | 10	9 | 13	14 | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .	. | .

Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.	.
Sequence 15																	
Ring 1	| 1	2	| 4	3	| 9	10	| 14	13	| .	.	.	.	.	.	.	.	.
Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.	.
Sequence 16																	
Ring 1	| 2	1	| 4	3	| 10	9	| 14	13	| .	.	.	.	.	.	.	.	.
Ring 2	| 6	5	| 8	7	| 12	11	| 16	15	| .	.	.	.	.	.	.	.	.

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X	X	X		X		X								
Exclusive Ped																

Phase Compatibility (MM)

1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Description																

Administration (MM) 1-7-1

Enable Controller/Cabinet Interlock CRC	No
CRC (16 bit)	F0D6
Enable Automatic Backup to Datakey	No

Backup Prevent (MM) 1-1-3

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Timing	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phases	2	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	6	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	8	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Simultaneous Gap (MM) 1-1-4

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase Must Gap With Phase	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Disable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignments (MM) 1-3

	Phase / Overlap	Type	Dimming				Power Up	Auto		Flash Together
			Red	Yellow	Green	Dark		Red	Yellow	
1	1	V				-	Auto	X		
2	2	V				-	Auto	X		X
3	3	V				-	Auto	X		
4	4	V				-	Auto	X		X
5	5	.				+	Auto	X		
6	6	V				+	Auto	X		X
7	7	.				+	Auto	X		
8	8	V				+	Auto	X		X
9	2	.				-	Auto			
10	4	.				-	Auto			
11	6	.				+	Auto			
12	8	.				+	Auto			
13	1	O				-	Auto	X		

14	2	O				+	Auto	X		X
15	3	O				-	Auto	X		
16	4	O				+	Auto	X		X

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Configuration Port 1 (SDLC)**Port 1 SDLC (MM) 1-4-1**

BIU	1	2	3	4	5	6	7	8
Term & Facility	X	X						
Detector Rack	X							

Enable TS2/MMU Type Cabinet: No
 Enable MMU Extended Status: Yes
 Enable SDLC Stop Time: No
 Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	Channel 2
1	5
1	6
1	11
2	5
2	6
2	9
2	11
3	7
3	8
3	12
4	7
4	8
4	10
4	12
5	9
6	9
6	11
7	10
8	10
8	12
9	11
10	12

Color Check Enable (MM) 1-4-3

Enable Color Check: No

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green			X		X		X		X	X	X	X	X	X	X	X
Yellow			X		X		X		X	X	X	X	X	X	X	X
Red			X		X		X		X	X	X	X	X	X	X	X

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Configuration Logging / Display**Event Logging (MM) 1-6-1**

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	No	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Backlight Enable:	Yes
LED Mode:	Auto
Display Mode:	Basic
Screen Format:	Advanced
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World

Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 02.49.00

OS (Boot) Version: 01.12.05



Town of Oakville

MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control
---------	-------------------

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	SBLT	NB	WBLT	EB		SB		WB								
Min Green	7	20	7	10	0	20	0	10	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	7	0	7	0	7	0	7	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	5.0	3.0	3.0	0.0	5.0	0.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	45	0	30	0	60	0	30	35	35	35	35	35	35	35	35
Max2	15	45	15	35	0	60	0	50	40	40	40	40	40	40	40	40
Max3	15	45	0	55	0	60	0	55	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.6	3.0	3.7	3.0	4.6	3.0	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.4	1.0	2.3	1.0	1.4	1.0	2.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Controller Overlaps**Vehicle Overlaps (MM) 2-2**

Overlap	Type	Lag Green	Yellow	Red	Adv. Green
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Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green
---------	-------	----------	---------	-------------	-------------	----------	--------------	--------------	-------------

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable
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Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Controller Start / Flash Data (MM) 2-5**Start Up**

Phase	Phase Setting
1	.
2	.
3	.
4	Y
5	.
6	.
7	.
8	Y
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap

Flash Thru Mon: Yes
Flash Time: 0
All Red: 0
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon: Yes
Exit Flash: W
Minimum Flash: 8

Mimimum Recall: No
Cycle Through Phase: No

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I	X					X										
Non-Act II				X				X								
Dual Entry	X	X	X	X	X											
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall			X					X								
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

**Coordination Options
Options (MM) 3-1**

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Percent	Offsets In	Percent
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Lead	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Percent
Cycle	120	Std (COS)	9	Offsets In	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Splits (Split Pat 1)	17	41	0	42	0	58	0	42	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data			
Veh Perm 1	0	Veh Perm 2	0
Veh Perm 2 Disp	0	Split Demand Pat 1	0
Split Demand Pat 2	0	Split Demand Pat 2	0
Crossing Arterial Pat	0		

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Percent
Cycle	110	Std (COS)	17	Offsets In	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Splits (Split Pat 2)	10	60	0	30	0	70	0	30	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data			
Veh Perm 1	0	Veh Perm 2	0
		Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0
		Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Percent
Cycle	120	Std (COS)	25	Offsets In	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Splits (Split Pat 3)	13	55	0	32	0	68	0	32	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data			
Veh Perm 1	0	Veh Perm 2	0
		Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0
		Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Percent
Cycle	110	Std (COS)	33	Offsets In	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Splits (Split Pat 4)	13	42	13	32	0	55	0	45	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Coordination Split Pattern
Split Pattern Data (MM) 3-3
Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Split (percent)	17	41	0	42	0	58	0	42	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Split (percent)	10	60	0	30	0	70	0	30	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								
Split (percent)	13	55	0	32	0	68	0	32	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	SBLT	NB	WBLT	EB		SB		WB								

Split (percent)	13	42	13	32	0	55	0	45	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X				X										
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	Yes	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	0	3	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active Out On		Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

**Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1**

Manual Action Plan: 0
SYNC Reference Time: 03:15
SYNC Reference: Reference Time
Day Light Savings: USDLS
Time Reset Input Set Time: 3:30:00
Standard Time From GMT: -5

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

**Time Base Action Plan
Action Plan (MM) 5-2**

Action Plan - 1

Pattern	1	Override Sys	Yes
Timing Plan	0	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit			X													
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	
LP 16-30	
LP 31-45	
LP 46-60	
LP 61-75	
LP 76-90	
LP 91-100	

Action Plan - 2

Pattern	2	Override Sys	Yes
Timing Plan	0	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit			X													
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15
LP 16-30
LP 31-45
LP 46-60
LP 61-75
LP 76-90
LP 91-100

Action Plan - 3

Pattern	3	Override Sys	Yes
Timing Plan	0	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit			X													
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 16-30
LP 31-45
LP 46-60
LP 61-75
LP 76-90
LP 91-100

Action Plan - 4

Pattern	4	Override Sys	Yes
Timing Plan	0	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	
LP 16-30	
LP 31-45	
LP 46-60	
LP 61-75	
LP 76-90	
LP 91-100	

Action Plan - 5

Pattern	Free	Override Sys	Yes
Timing Plan	0	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit			X													
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 16-30
LP 31-45
LP 46-60
LP 61-75
LP 76-90
LP 91-100

Town of Oakville



 MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Time Base Day Plan/Schedule
Day Plan (MM) 5-3
Day Plan #1

Event	Action Plan	Start Time
1	1	06:00
2	2	10:00
3	3	15:00
5	5	22:00

Day Plan #2

Event	Action Plan	Start Time
1	1	06:00
2	2	10:00
3	4	13:00
4	3	15:45
5	5	22:00

Day Plan #3

Event	Action Plan	Start Time
1	3	06:00
2	5	22:00

Schedule (MM) 5-4**Schedule Number - 1**

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X		

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
						X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 3

Day Plan No.: 3

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22

	X	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

Town of Oakville



MOVING TRAFFIC FORWARD

REG5101 - Trafalgar Rd @ Burnhamthorpe Rd - Econolite Type - ASC/3

Detectors**Detectors - Pg 1****Veh Det Phase Assignment (MM) 6-1****Vehicle Detector Plan Number - 1**

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3	8	S
4	4	8	S
5	2		S
6	6		S
7	4	8	S
8	8	4	S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S
15	15		S
16	16		S

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		S
5	5		S
6	6		S
7	7		S
8	8		S
9	9		S
10	10		S
11	11		S
12	12		S
13	13		S
14	14		S
15	15		S
16	16		S

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	

4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	C-CALLING	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	

60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	
63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	6	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No

**Ped Detector Phase Assignment
(MM) 6-3**

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

18. APPENDIX D: PROGRAM REFERENCE CARD

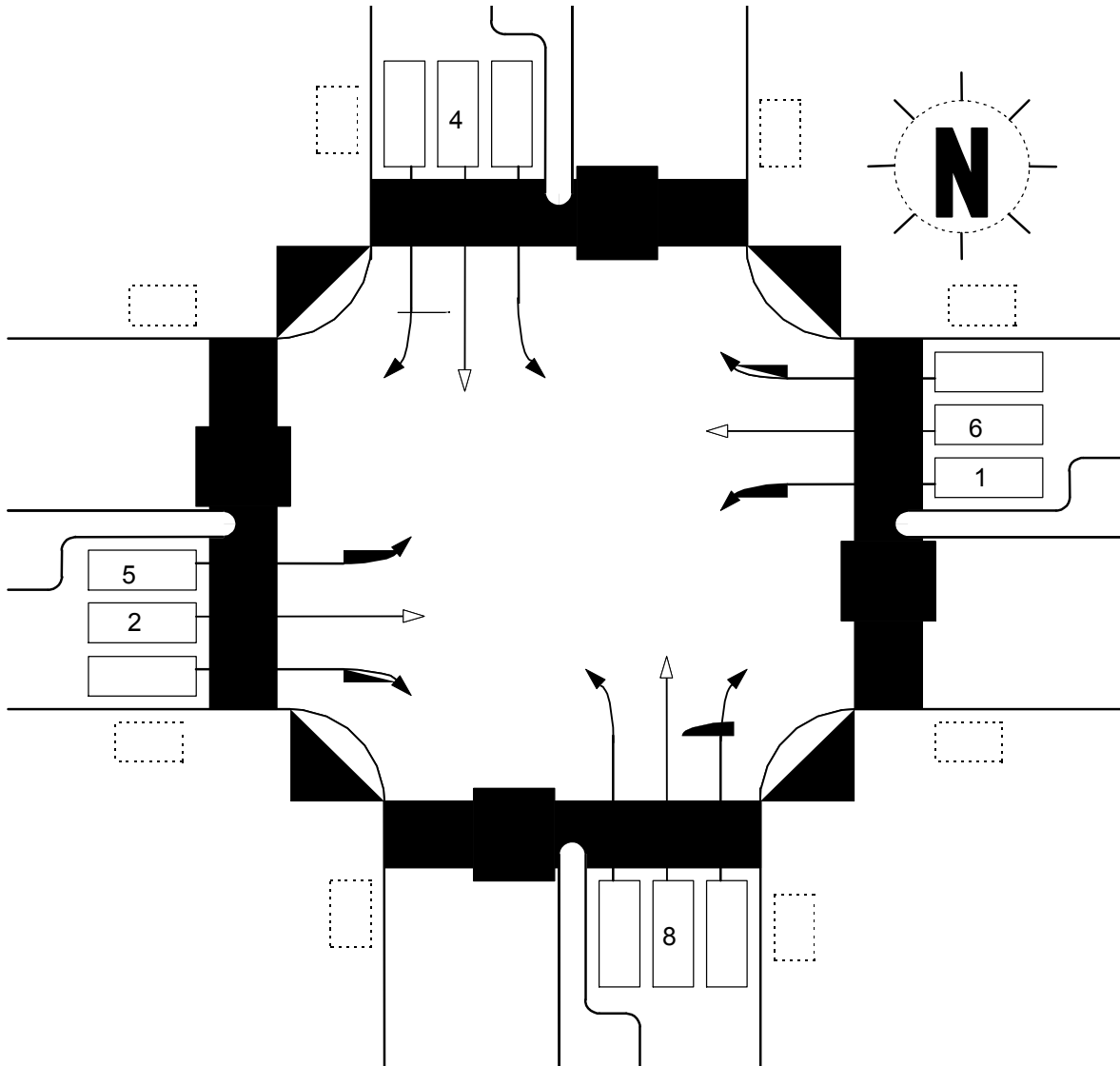
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION Dundas Street & Eighth Line

CONTROLLER NUMBER _____ ENTERED BY: _____ DATE 03 / 27 / 17

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE _____



CONFIGURATION SUBMENU

1-1-1. PHASE RING ASSIGNMENT

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RING																

1-1-2. PHASE COMPATIBILITY

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-5 SIMULTANEOUS GAP

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 2																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 3																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 4																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 5																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 6																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 7																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 8																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1		SEQUENCE 9																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 10																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 11																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 12																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 13																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 14																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 15																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 16																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGETHER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-2. MMU PROGRAM

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-1. SDLC OPTIONS

TERM & FACIL	BIU NUMBER							
	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
MMU ENABLE								
MMU STOP TIME								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
CONTROLLER PEER TO PEER ENABLE								
DISABLE 3 CRITICAL RFEs LOCKUP								

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS																
MMU CHANNEL	1	2	3	4	5	6	7	8								
GREEN / WALK																
YELLOW / PC																
RED / DW																
MMU CHANNEL	9	10	11	12	13	14	15	16								
GREEN / WALK																
YELLOW / PC																
RED / DW																

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				

IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		24		32		24		32								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	15	46		25	15	46		25								
MAX2	20	60		30	20	60		30								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	4.2		3.3	3.0	4.2		3.3								
RED CLRANCE	1.0	2.5		3.7	1.0	2.5		3.7								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							
REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT																
UNIT RED REVERT																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
GUARANTEE D PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION																
FREE INPUT DISABLED PRE-TIMED																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
PRE-TIMED																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4		
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN	
OFFSET VALUE	44		
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
		1	2
RING SPLIT EXTENSION (SECONDS)		3	4
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	4	5	
		8	9
		10	11
			13
			15
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN	5		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
		1	2
RING SPLIT EXTENSION (SECONDS)		3	4
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	4	5	
		8	9
		10	11
			13
			15
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
		1	2
RING SPLIT EXTENSION (SECONDS)		3	4
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	4	5	
		8	9
		10	11
			13
			15
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
		1	2
RING SPLIT EXTENSION (SECONDS)		3	4
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	4	5	
		8	9
		10	11
			13
			15
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)																								
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES											0	1			3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)																								
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES											0	1			3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)																								
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES											0	1			3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)																								
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES											0	1			3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																
OFFSET VALUE		SEQUENCE																
SPLITS IN		OFFSETS IN																
CROSSING ARTERY PATTERN																		
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																
ACTUATED COORDINATION		TIMING PLAN																
ACTUATED REST IN WALK		PHASE RESERVICE																
RING SPLIT EXTENSION (SECONDS)		1	2	3	4													
SPLIT DEMAND PATTERN																		
RING DISPLACEMENT																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PREFERENCE 1 PHASES																		
PREFERENCE 2 PHASES																		

COORDINATOR PATTERN																		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																
OFFSET VALUE		SEQUENCE																
SPLITS IN		OFFSETS IN																
CROSSING ARTERY PATTERN																		
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																
ACTUATED COORDINATION		TIMING PLAN																
ACTUATED REST IN WALK		PHASE RESERVICE																
RING SPLIT EXTENSION (SECONDS)		1	2	3	4													
SPLIT DEMAND PATTERN																		
RING DISPLACEMENT																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PREFERENCE 1 PHASES																		
PREFERENCE 2 PHASES																		

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER		1																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		9	54	0	37	9	54	0	37											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		2																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		10	50	0	40	10	50	0	40											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		3																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		12	51	0	37	9	54	0	37											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		4																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		11	42	0	47	11	42	0	47											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

PHASE	1	2	3	4	5	6	7	8								
MINIMUM GREEN																
PHASE	9	10	11	12	13	14	15	16								
MINIMUM GREEN																

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
DEMAND 1																	
DEMAND 2																	
DEMAND		1	2														
DETECTOR																	
CALL TIME (SECONDS)																	
CYCLE COUNT																	

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

PREEMPTOR NUMBER	2																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		3															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		4															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		5															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		6															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		7															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		8															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		9																
ACTIVE	NON-LOCK INPUT																	
PREEMPTION OVERRIDE	INTERLOCK ENABLE																	
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																	
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																	
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																	
PED DARK	RESERVICE TIME																	
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																	
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																	
RING	1	2	3	4														
FREE DURING PREEMPTION																		
	WALK	PED CLEAR	GREEN	YELLOW	RED													
ENTERING MINIMUM TIME																		
TRACK CLEARANCE TIME																		
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																		
DWELL FLASH		FLASH EXIT COLOR																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																		
DWELL PHASE																		
DWELL PEDESTRIAN																		
CYCLING PHASE																		
CYCLING PEDESTRIAN																		
EXIT PHASE																		
EXIT CALLS																		
SPECIAL FUNCTION																		
PREEMPTION TO COORDINATION		EXIT TIMING PLAN																
LINKED PREEMPTOR																		
PREEMPTOR ACTIVE OUTPUTS																		
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL																
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR OVERLAP																		
DWELL OVERLAP																		
CYCLING OVERLAP																		

PREEMPTOR NUMBER		10																
ACTIVE	NON-LOCK INPUT																	
PREEMPTION OVERRIDE	INTERLOCK ENABLE																	
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																	
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																	
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																	
PED DARK	RESERVICE TIME																	
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																	
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																	
RING	1	2	3	4														
FREE DURING PREEMPTION																		
	WALK	PED CLEAR	GREEN	YELLOW	RED													
ENTERING MINIMUM TIME																		
TRACK CLEARANCE TIME																		
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																		
DWELL FLASH		FLASH EXIT COLOR																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																		
DWELL PHASE																		
DWELL PEDESTRIAN																		
CYCLING PHASE																		
CYCLING PEDESTRIAN																		
EXIT PHASE																		
EXIT CALLS																		
SPECIAL FUNCTION																		
PREEMPTION TO COORDINATION		EXIT TIMING PLAN																
LINKED PREEMPTOR																		
PREEMPTOR ACTIVE OUTPUTS																		
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL																
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR OVERLAP																		
DWELL OVERLAP																		
CYCLING OVERLAP																		

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
		X	X	X	X	X				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
	X						X			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

PATTERN		1		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		3		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		2		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		4		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN																				
PATTERN	5	SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

5-5 EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

DETECTORS

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
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51		
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58		
59		
60		
61		
62		
63		
64		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER										1						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										2						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										3						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										4						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

PHASE PEDESTRIAN DETECTOR								
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								
LOCAL SYSTEM DETECTOR								
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER					1
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

VEHICLE DIAGNOSTIC PLAN NUMBER					2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

**6-6 VEHICLE DETECTOR DIAGNOSTICS
(CONTINUED)**

VEHICLE DIAGNOSTIC PLAN NUMBER					3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

VEHICLE DIAGNOSTIC PLAN NUMBER					4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER 1					PED DIAGNOSTIC PLAN NUMBER 2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

PED DIAGNOSTIC PLAN NUMBER 3					PED DIAGNOSTIC PLAN NUMBER 4				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

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18. APPENDIX D: PROGRAM REFERENCE CARD

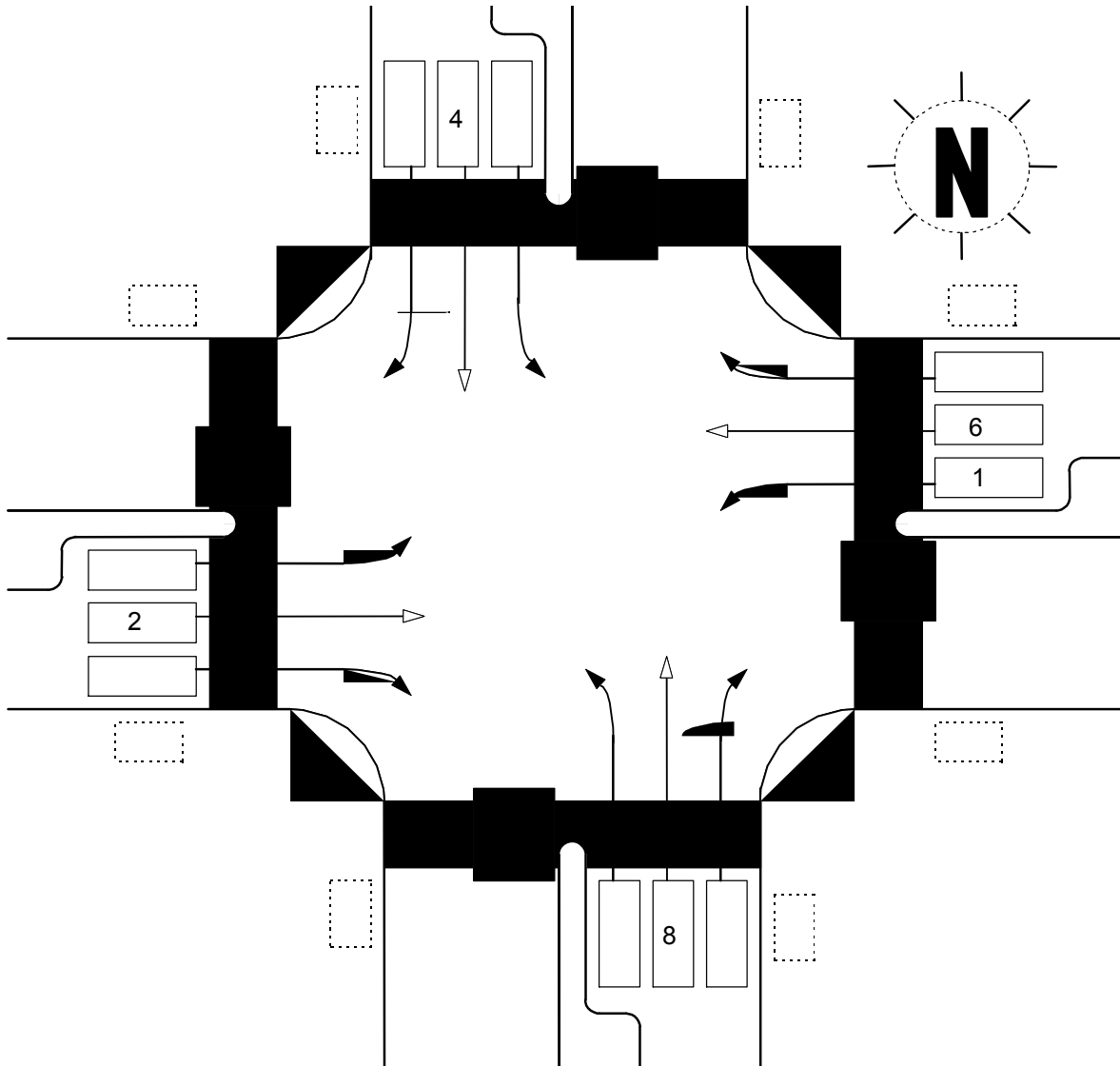
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION Dundas Street & Meadowridge Drive

CONTROLLER NUMBER _____ ENTERED BY: _____ DATE 03/27/17

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE _____



CONFIGURATION SUBMENU

1-1-1. PHASE RING ASSIGNMENT

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RING																

1-1-2. PHASE COMPATIBILITY

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-5 SIMULTANEOUS GAP

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 2																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 3																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 4																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 5																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 6																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 7																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 8																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1		SEQUENCE 9																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 10																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 11																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 12																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 13																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 14																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 15																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 16																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGETHER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-2. MMU PROGRAM

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-1. SDLC OPTIONS

TERM & FACIL	BIU NUMBER							
	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
MMU ENABLE								
MMU STOP TIME								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
CONTROLLER PEER TO PEER ENABLE								
DISABLE 3 CRITICAL RFEs LOCKUP								

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS																
MMU CHANNEL	1	2	3	4	5	6	7	8								
GREEN / WALK																
YELLOW / PC																
RED / DW																
MMU CHANNEL	9	10	11	12	13	14	15	16								
GREEN / WALK																
YELLOW / PC																
RED / DW																

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				

IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		23		30		23		30								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	20	55		30		55		30								
MAX2	20	60		30		60		30								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	4.2		3.3		4.2		3.3								
RED CLRANCE	1.0	2.5		3.6		2.5		3.6								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP I PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
INCLUDED																		
PROTECTED																		
MODIFIER																		
PEDESTRIAN PROTECT NOT OVERLAP																		
TRAILING GREEN				TRAILING YELLOW						TRAILING RED								
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRAILING LEADING																		
ADVANCE GREEN																		
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
FLASH GREEN																		

OVERLAP K PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
INCLUDED																		
PROTECTED																		
MODIFIER																		
PEDESTRIAN PROTECT NOT OVERLAP																		
TRAILING GREEN				TRAILING YELLOW						TRAILING RED								
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRAILING LEADING																		
ADVANCE GREEN																		
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
FLASH GREEN																		

OVERLAP J PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
INCLUDED																		
PROTECTED																		
MODIFIER																		
PEDESTRIAN PROTECT NOT OVERLAP																		
TRAILING GREEN				TRAILING YELLOW						TRAILING RED								
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRAILING LEADING																		
ADVANCE GREEN																		
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
FLASH GREEN																		

OVERLAP L PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
INCLUDED																		
PROTECTED																		
MODIFIER																		
PEDESTRIAN PROTECT NOT OVERLAP																		
TRAILING GREEN				TRAILING YELLOW						TRAILING RED								
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRAILING LEADING																		
ADVANCE GREEN																		
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
FLASH GREEN																		

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							
REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT																
UNIT RED REVERT																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
GUARANTEE D PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION																
FREE INPUT DISABLED PRE-TIMED																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
PRE-TIMED																

COORDINATOR SUBMENU

3-1 COORDINATOR OPTIONS

MANUAL PATTERN	Auto		
INTERCONNECT SOURCE	TBC	INTERCONNECT FORMAT	
TRANSITION	Smooth	ECPI COORDINATION	Yes
OFFSET REFERENCE	Lead	DWELL / ADD TIME	
DELAY COORD WALK TO LOCAL ZERO	No	FORCE OFF	Float
FORCE OFF ADDED INITIAL GREEN	No	USE PED TIME FOR SMOOTH TRANSITION	No
PEDESTRIAN RECALL	No	PEDESTRIAN RESERVICE	Yes
ENABLE MANUAL SYNC INPUT		LOCAL ZERO OVERRIDE	No
RE-SYNC COUNT	No	MAX SELECT	MaxInh
MULTISYNC	No		

3-2 COORDINATOR PATTERN

COORDINATOR PATTERN	1	SPLIT PATTERN																																																																					
CYCLE LENGTH (SECONDS)	130	SEQUENCE																																																																					
OFFSET VALUE	70	OFFSETS IN . . .	Per																																																																				
SPLITS IN	Per																																																																						
CROSSING ARTERY PATTERN																																																																							
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																																																																					
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	1																																																																				
ACTUATED COORDINATION	Yes	TIMING PLAN																																																																					
ACTUATED REST IN WALK		PHASE RESERVICE																																																																					
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	1	2	3	4																																																																			
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SPLIT DEMAND PATTERN																																																																							
RING DISPLACEMENT																																																																							
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PREFERENCE 1 PHASES								0	1	3	5																																																												
PREFERENCE 2 PHASES																																																																							
SPECIAL FUNCTION	1	2	3	4	5	8																																																																	

COORDINATOR PATTERN	2	SPLIT PATTERN																																																									
CYCLE LENGTH (SECONDS)	120	SEQUENCE																																																									
OFFSET VALUE	7	OFFSETS IN	Per																																																								
SPLITS IN	Per																																																										
CROSSING ARTERY PATTERN																																																											
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																																																									
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	2																																																								
ACTUATED COORDINATION	Yes	TIMING PLAN																																																									
ACTUATED REST IN WALK		PHASE RESERVICE																																																									
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	1	2	3	4																																																							
RING SPLIT EXTENSION (SECONDS)																																																											
SPLIT DEMAND PATTERN																																																											
RING DISPLACEMENT																																																											
	1	2	3	4	5	8	9	1	1	1	1																																																
PREFERENCE 1 PHASES								0	1	3	5																																																
PREFERENCE 2 PHASES																																																											

COORDINATOR PATTERN	3	SPLIT PATTERN																																																									
CYCLE LENGTH (SECONDS)	130	SEQUENCE																																																									
OFFSET VALUE	75	OFFSETS IN	Per																																																								
SPLITS IN	Per																																																										
CROSSING ARTERY PATTERN																																																											
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																																																									
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	3																																																								
ACTUATED COORDINATION	Yes	TIMING PLAN																																																									
ACTUATED REST IN WALK		PHASE RESERVICE																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>RING SPLIT EXTENSION (SECONDS)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SPLIT DEMAND PATTERN</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">RING DISPLACEMENT</td> </tr> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>8</td> <td>9</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>PREFERENCE 1 PHASES</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td>1</td> <td>3</td> <td>5</td> </tr> <tr> <td>PREFERENCE 2 PHASES</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					1	2	3	4	RING SPLIT EXTENSION (SECONDS)					SPLIT DEMAND PATTERN					RING DISPLACEMENT						1	2	3	4	5	8	9	1	1	1	1	PREFERENCE 1 PHASES								0	1	3	5	PREFERENCE 2 PHASES											
	1	2	3	4																																																							
RING SPLIT EXTENSION (SECONDS)																																																											
SPLIT DEMAND PATTERN																																																											
RING DISPLACEMENT																																																											
	1	2	3	4	5	8	9	1	1	1	1																																																
PREFERENCE 1 PHASES								0	1	3	5																																																
PREFERENCE 2 PHASES																																																											

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4		
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN	
OFFSET VALUE	8		
SPLITS IN	Per	OFFSETS IN	Per
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4
ACTUATED COORDINATION	Yes	TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	1	2	3
PREFER ENCE 1 PHASES			
PREFER ENCE 2 PHASES			

COORDINATOR PATTERN	5		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	1	2	3
PREFER ENCE 1 PHASES			
PREFER ENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	1	2	3
PREFER ENCE 1 PHASES			
PREFER ENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)			
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1	2	3
	1	2	3
PREFER ENCE 1 PHASES			
PREFER ENCE 2 PHASES			

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																
OFFSET VALUE		SEQUENCE																
SPLITS IN		OFFSETS IN																
CROSSING ARTERY PATTERN																		
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																
ACTUATED COORDINATION		TIMING PLAN																
ACTUATED REST IN WALK		PHASE RESERVICE																
RING SPLIT EXTENSION (SECONDS)		1	2	3	4													
SPLIT DEMAND PATTERN																		
RING DISPLACEMENT																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PREFERENCE 1 PHASES																		
PREFERENCE 2 PHASES																		

COORDINATOR PATTERN																		
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																
OFFSET VALUE		SEQUENCE																
SPLITS IN		OFFSETS IN																
CROSSING ARTERY PATTERN																		
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																
ACTUATED COORDINATION		TIMING PLAN																
ACTUATED REST IN WALK		PHASE RESERVICE																
RING SPLIT EXTENSION (SECONDS)		1	2	3	4													
SPLIT DEMAND PATTERN																		
RING DISPLACEMENT																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PREFERENCE 1 PHASES																		
PREFERENCE 2 PHASES																		

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER		1																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		11	54	0	35	0	65	0	35											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		2																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		10	52	0	38	0	62	0	38											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		3																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		16	49	0	35	0	65	0	35											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		4																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		11	44	0	45	0	55	0	45											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

PHASE	1	2	3	4	5	6	7	8
MINIMUM GREEN								
PHASE	9	10	11	12	13	14	15	16
MINIMUM GREEN								

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
DEMAND 1																	
DEMAND 2																	
DEMAND	1		2														
DETECTOR																	
CALL TIME (SECONDS)																	
CYCLE COUNT																	

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

PREEMPTOR NUMBER	2																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		3															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		4															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		5															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		6															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		7															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		8															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		9																
ACTIVE	NON-LOCK INPUT																	
PREEMPTION OVERRIDE	INTERLOCK ENABLE																	
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																	
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																	
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																	
PED DARK	RESERVICE TIME																	
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																	
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																	
RING	1	2	3	4														
FREE DURING PREEMPTION																		
	WALK	PED CLEAR	GREEN	YELLOW	RED													
ENTERING MINIMUM TIME																		
TRACK CLEARANCE TIME																		
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																		
DWELL FLASH		FLASH EXIT COLOR																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																		
DWELL PHASE																		
DWELL PEDESTRIAN																		
CYCLING PHASE																		
CYCLING PEDESTRIAN																		
EXIT PHASE																		
EXIT CALLS																		
SPECIAL FUNCTION																		
PREEMPTION TO COORDINATION		EXIT TIMING PLAN																
LINKED PREEMPTOR																		
PREEMPTOR ACTIVE OUTPUTS																		
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL																
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR OVERLAP																		
DWELL OVERLAP																		
CYCLING OVERLAP																		

PREEMPTOR NUMBER		10																
ACTIVE	NON-LOCK INPUT																	
PREEMPTION OVERRIDE	INTERLOCK ENABLE																	
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																	
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																	
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																	
PED DARK	RESERVICE TIME																	
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																	
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																	
RING	1	2	3	4														
FREE DURING PREEMPTION																		
	WALK	PED CLEAR	GREEN	YELLOW	RED													
ENTERING MINIMUM TIME																		
TRACK CLEARANCE TIME																		
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																		
DWELL FLASH		FLASH EXIT COLOR																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																		
DWELL PHASE																		
DWELL PEDESTRIAN																		
CYCLING PHASE																		
CYCLING PEDESTRIAN																		
EXIT PHASE																		
EXIT CALLS																		
SPECIAL FUNCTION																		
PREEMPTION TO COORDINATION		EXIT TIMING PLAN																
LINKED PREEMPTOR																		
PREEMPTOR ACTIVE OUTPUTS																		
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL																
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR OVERLAP																		
DWELL OVERLAP																		
CYCLING OVERLAP																		

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
		x	x	x	x	x				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
	x						x			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER													
DAY PLAN NUMBER													
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE							
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER							
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10			
	11	12	13	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27	28	29	30			
	31												

SCHEDULE NUMBER													
DAY PLAN NUMBER													
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE							
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER							
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10			
	11	12	13	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27	28	29	30			
	31												

SCHEDULE NUMBER													
DAY PLAN NUMBER													
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE							
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER							
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10			
	11	12	13	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27	28	29	30			
	31												

SCHEDULE NUMBER													
DAY PLAN NUMBER													
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE							
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER							
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10			
	11	12	13	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27	28	29	30			
	31												

SCHEDULE NUMBER													
DAY PLAN NUMBER													
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE							
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER							
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10			
	11	12	13	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27	28	29	30			
	31												

SCHEDULE NUMBER													
DAY PLAN NUMBER													
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE							
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER							
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT						
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10			
	11	12	13	14	15	16	17	18	19	20			
	21	22	23	24	25	26	27	28	29	30			
	31												

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

PATTERN		1		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		3		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		2		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		4		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN																				
PATTERN	5	SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

5-5 EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

DETECTORS

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
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53		
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59		
60		
61		
62		
63		
64		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER										1						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										2						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										3						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										4						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

PHASE PEDESTRIAN DETECTOR								
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								
LOCAL SYSTEM DETECTOR								
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER					1
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

VEHICLE DIAGNOSTIC PLAN NUMBER					2
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

**6-6 VEHICLE DETECTOR DIAGNOSTICS
(CONTINUED)**

VEHICLE DIAGNOSTIC PLAN NUMBER					3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

VEHICLE DIAGNOSTIC PLAN NUMBER					4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER 1					PED DIAGNOSTIC PLAN NUMBER 2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

PED DIAGNOSTIC PLAN NUMBER 3					PED DIAGNOSTIC PLAN NUMBER 4				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

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18. APPENDIX D: PROGRAM REFERENCE CARD

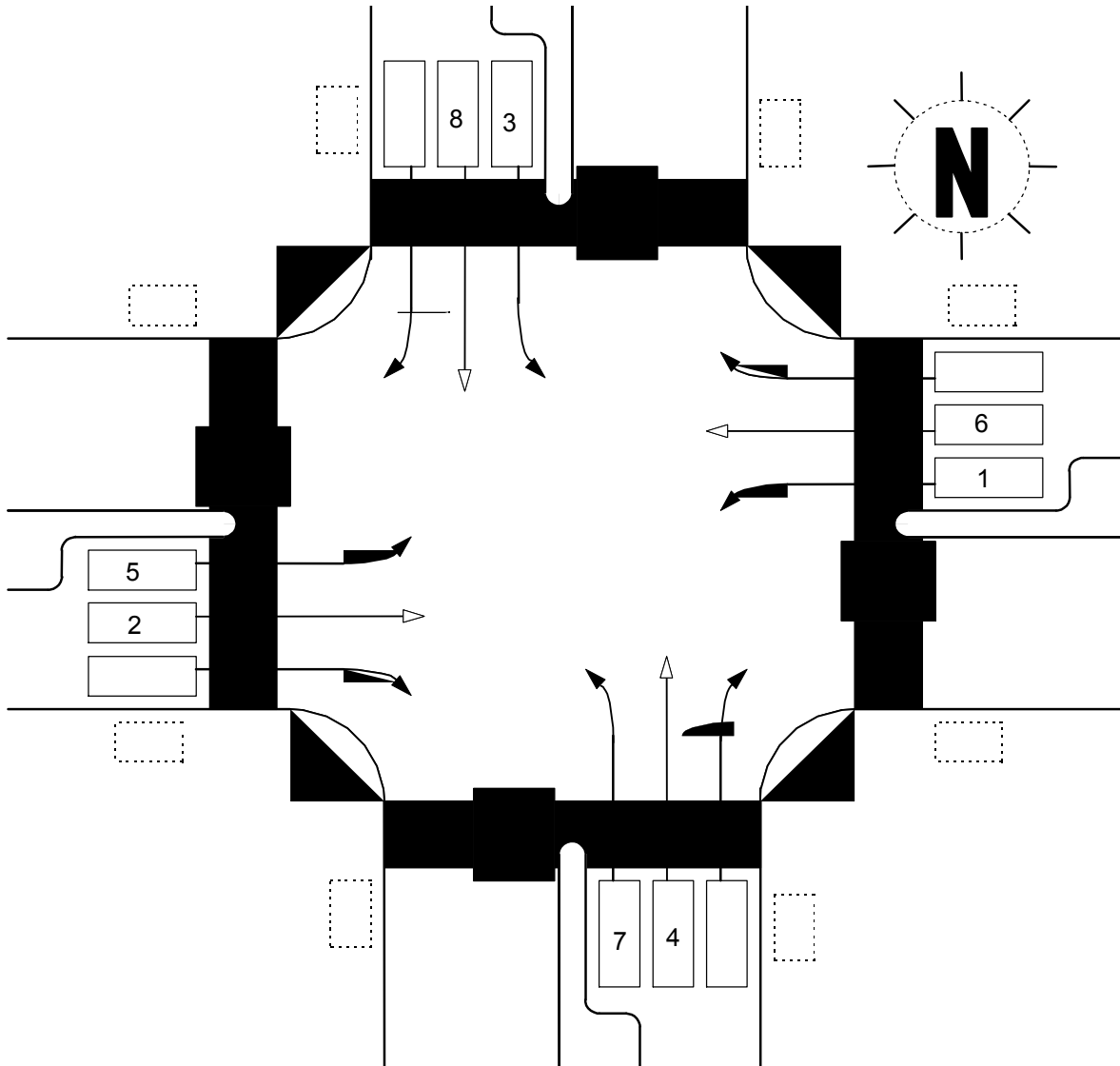
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION Dundas Street & Ninth Line

CONTROLLER NUMBER _____ ENTERED BY: _____ DATE 03 / 13 / 17

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE _____



CONFIGURATION SUBMENU

1-1-1. PHASE RING ASSIGNMENT

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RING																

1-1-2. PHASE COMPATIBILITY

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-5 SIMULTANEOUS GAP

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 2																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 3																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 4																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 5																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 6																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 7																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 8																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1		SEQUENCE 9																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 10																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 11																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 12																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 13																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 14																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 15																
RING 1																		
RING 2																		
RING 3																		
RING 4																		
CONTROLLER 1		SEQUENCE 16																
RING 1																		
RING 2																		
RING 3																		
RING 4																		

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGETHER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-2. MMU PROGRAM

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-1. SDLC OPTIONS

TERM & FACIL	BIU NUMBER							
	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
MMU ENABLE								
MMU STOP TIME								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
CONTROLLER PEER TO PEER ENABLE								
DISABLE 3 CRITICAL RFEs LOCKUP								

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS																
MMU CHANNEL	1	2	3	4	5	6	7	8								
GREEN / WALK																
YELLOW / PC																
RED / DW																
MMU CHANNEL	9	10	11	12	13	14	15	16								
GREEN / WALK																
YELLOW / PC																
RED / DW																

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				

IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		32		34		32		34								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	20	55	20	35	20	55	20	35								
MAX2	20	60	20	40	20	60	20	40								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	3.7	3.0	3.7	3.0	3.7	3.0	3.7								
RED CLRANCE	1.0	2.6	1.0	2.8	2.0	2.6	1.0	2.8								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							
REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT																
UNIT RED REVERT																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
GUARANTEE D PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION																
FREE INPUT DISABLED PRE-TIMED																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
PRE - TIMED																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4			
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN		
OFFSET VALUE	59			
SPLITS IN	Per	OFFSETS IN	Per	
CROSSING ARTERY PATTERN				
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH		
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	4	
ACTUATED COORDINATION	Yes	TIMING PLAN		
ACTUATED REST IN WALK		PHASE RESERVICE		
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				
	1	2	3	4
PREFER ENCE 1 PHASES				
PREFER ENCE 2 PHASES				

COORDINATOR PATTERN	5			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN		
OFFSET VALUE		SEQUENCE		
SPLITS IN		OFFSETS IN		
CROSSING ARTERY PATTERN				
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH		
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	5	
ACTUATED COORDINATION		TIMING PLAN		
ACTUATED REST IN WALK		PHASE RESERVICE		
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				
	1	2	3	4
PREFER ENCE 1 PHASES				
PREFER ENCE 2 PHASES				

COORDINATOR PATTERN				
CYCLE LENGTH (SECONDS)		SPLIT PATTERN		
OFFSET VALUE		SEQUENCE		
SPLITS IN		OFFSETS IN		
CROSSING ARTERY PATTERN				
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH		
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN		
ACTUATED COORDINATION		TIMING PLAN		
ACTUATED REST IN WALK		PHASE RESERVICE		
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				
	1	2	3	4
PREFER ENCE 1 PHASES				
PREFER ENCE 2 PHASES				

COORDINATOR PATTERN				
CYCLE LENGTH (SECONDS)		SPLIT PATTERN		
OFFSET VALUE		SEQUENCE		
SPLITS IN		OFFSETS IN		
CROSSING ARTERY PATTERN				
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH		
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN		
ACTUATED COORDINATION		TIMING PLAN		
ACTUATED REST IN WALK		PHASE RESERVICE		
RING SPLIT EXTENSION (SECONDS)				
SPLIT DEMAND PATTERN				
RING DISPLACEMENT				
	1	2	3	4
PREFER ENCE 1 PHASES				
PREFER ENCE 2 PHASES				

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

COORDINATOR PATTERN																								
CYCLE LENGTH (SECONDS)		SPLIT PATTERN																						
OFFSET VALUE		SEQUENCE																						
SPLITS IN		OFFSETS IN																						
CROSSING ARTERY PATTERN																								
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH																						
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN																						
ACTUATED COORDINATION		TIMING PLAN																						
ACTUATED REST IN WALK		PHASE RESERVICE																						
RING SPLIT EXTENSION (SECONDS)		1				2				3				4										
SPLIT DEMAND PATTERN																								
RING DISPLACEMENT																								
		1	2	3	4	5			8	9	1	1			1	1			1	1			1	1
PREFERENCE 1 PHASES										0	1				3								5	
PREFERENCE 2 PHASES																								

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9	1 1 1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9	1 1 1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9	1 1 1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN			
CYCLE LENGTH (SECONDS)		SPLIT PATTERN	
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9	1 1 1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN															
CYCLE LENGTH (SECONDS)		SPLIT PATTERN													
OFFSET VALUE		SEQUENCE													
SPLITS IN		OFFSETS IN													
CROSSING ARTERY PATTERN															
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH													
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN													
ACTUATED COORDINATION		TIMING PLAN													
ACTUATED REST IN WALK		PHASE RESERVICE													
RING SPLIT EXTENSION (SECONDS)		1	2	3	4										
SPLIT DEMAND PATTERN															
RING DISPLACEMENT															
		1	2	3	4	5		8	9	1	1	1	1	1	1
										0	1		3		5
PREFERENCE 1 PHASES															
PREFERENCE 2 PHASES															

COORDINATOR PATTERN																	
CYCLE LENGTH (SECONDS)		SPLIT PATTERN															
OFFSET VALUE		SEQUENCE															
SPLITS IN		OFFSETS IN															
CROSSING ARTERY PATTERN																	
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH															
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN															
ACTUATED COORDINATION		TIMING PLAN															
ACTUATED REST IN WALK		PHASE RESERVICE															
RING SPLIT EXTENSION (SECONDS)		1	2	3	4												
SPLIT DEMAND PATTERN																	
RING DISPLACEMENT																	
		1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	
											0	1	2	3	4	5	6
PREFERENCE 1 PHASES																	
PREFERENCE 2 PHASES																	

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER		1																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		9	53	11	27	15	47	11	27											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		2																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		12	51	12	25	12	51	12	25											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		3																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		10	53	17	20	10	53	10	27											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		4																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		12	48	12	28	12	48	12	28											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
COORDINATED PHASE(S)																
PHASE	1	2	3	4	5	6	7	8								
SPLIT VALUE																
MODE																
PHASE	9	10	11	12	13	14	15	16								
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
COORDINATED PHASE(S)																
PHASE	1	2	3	4	5	6	7	8								
SPLIT VALUE																
MODE																
PHASE	9	10	11	12	13	14	15	16								
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
COORDINATED PHASE(S)																
PHASE	1	2	3	4	5	6	7	8								
SPLIT VALUE																
MODE																
PHASE	9	10	11	12	13	14	15	16								
SPLIT VALUE																
MODE																

SPLIT PATTERN NUMBER																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
COORDINATED PHASE(S)																
PHASE	1	2	3	4	5	6	7	8								
SPLIT VALUE																
MODE																
PHASE	9	10	11	12	13	14	15	16								
SPLIT VALUE																
MODE																

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

PHASE	1	2	3	4	5	6	7	8								
MINIMUM GREEN																
PHASE	9	10	11	12	13	14	15	16								
MINIMUM GREEN																

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
DEMAND 1																
DEMAND 2																
DEMAND	1		2													
DETECTOR																
CALL TIME (SECONDS)																
CYCLE COUNT																

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1		
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

PREEMPTOR NUMBER	2																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1			
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		3															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		4															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		5															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		6															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		7															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		8															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		9															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		10															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

SCHEDULE NUMBER											
DAY PLAN NUMBER											
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE					
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER					
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	28	29	30	
	31										

PATTERN		1		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		3		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		2		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN		4		SYSTEM OVERRIDE												
VEHICLE DETECTOR PLAN				DETECTOR LOG												
FLASH				VEHICLE DET DIAGNOSTIC PLAN												
RED REST				PED DET DIAGNOSTIC PLAN												
CONTROLLER SEQUENCE				DIMMING ENABLE												
TIMING PLAN																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1
PED RECALL																
WALK 2																
VEH EXT 2																
VEH RECALL																
MAX RECALL																
MAX 2																
MAX 3																
CS INHIBIT																
PHASE OMIT																
SPEC FUNCTION																(1-8)
AUX FUNCTION				(1-3)												
	1	2	3	4	5	6	7	8	9	10						
LP 1-10																
LP 11-20																
LP 21-30																
LP 31-40																
LP 41-50																
LP 51-60																
LP 61-70																
LP 71-80																
LP 81-90																
LP 91-100																

ACTION PLAN																				
PATTERN	5	SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN		SYSTEM OVERRIDE																		
VEHICLE DETECTOR PLAN		DETECTOR LOG																		
FLASH		VEHICLE DET DIAGNOSTIC PLAN																		
RED REST		PED DET DIAGNOSTIC PLAN																		
CONTROLLER SEQUENCE		DIMMING ENABLE																		
TIMING PLAN																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION					(1-3)															
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

5-5 EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					

DETECTORS

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
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58		
59		
60		
61		
62		
63		
64		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

VEHICLE PLAN NUMBER																		
DETECTOR NUMBER																		
ASSIGNED PHASE		ADDED INITIAL OPTION																
SWITCH PHASE		CALL DETECTOR OPTION																
EXTEND TIME		PASSAGE DETECTOR OPTION																
DELAY TIME		QUEUE DETECTOR OPTION																
QUEUE LIMIT		NTCIP OCCUPANCY LOG																
FAIL TIME		NTCIP VOLUME LOG																
FAIL CALL DELAY		ECPI LOG																
YELLOW LOCK		RED LOCK																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																		

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER										1						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										2						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										3						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										4						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

PHASE PEDESTRIAN DETECTOR								
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								
LOCAL SYSTEM DETECTOR								
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER					1				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					33				
2					34				
3					35				
4					36				
5					37				
6					38				
7					39				
8					40				
9					41				
10					42				
11					43				
12					44				
13					45				
14					46				
15					47				
16					48				
17					49				
18					50				
19					51				
20					52				
21					53				
22					54				
23					55				
24					56				
25					57				
26					58				
27					59				
28					60				
29					61				
30					62				
31					63				
32					64				

VEHICLE DIAGNOSTIC PLAN NUMBER					2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					33				
2					34				
3					35				
4					36				
5					37				
6					38				
7					39				
8					40				
9					41				
10					42				
11					43				
12					44				
13					45				
14					46				
15					47				
16					48				
17					49				
18					50				
19					51				
20					52				
21					53				
22					54				
23					55				
24					56				
25					57				
26					58				
27					59				
28					60				
29					61				
30					62				
31					63				
32					64				

**6-6 VEHICLE DETECTOR DIAGNOSTICS
(CONTINUED)**

VEHICLE DIAGNOSTIC PLAN NUMBER					3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

VEHICLE DIAGNOSTIC PLAN NUMBER					4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER 1					PED DIAGNOSTIC PLAN NUMBER 2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

PED DIAGNOSTIC PLAN NUMBER 3					PED DIAGNOSTIC PLAN NUMBER 4				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

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18. APPENDIX D: PROGRAM REFERENCE CARD

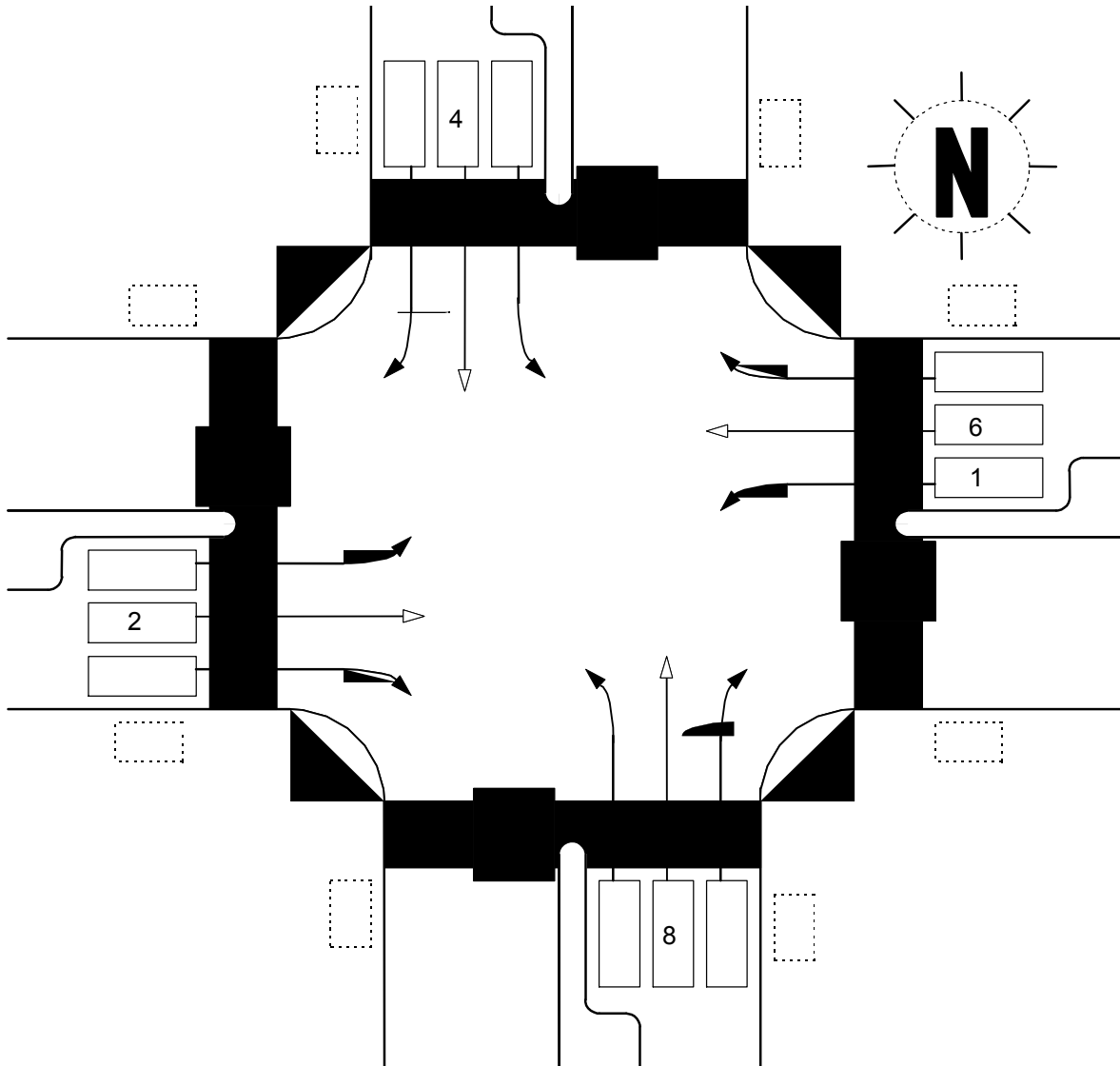
ASC/3

PROGRAM REFERENCE CARD

INTERSECTION Dundas Street & Prince Michael Drive

CONTROLLER NUMBER _____ ENTERED BY: _____ DATE 03 / 13 / 17

BOOT: _____ MAIN: _____ HELP: _____ DATA BASE _____



CONFIGURATION SUBMENU

1-1-1. PHASE RING ASSIGNMENT

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RING																

1-1-2. PHASE COMPATIBILITY

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-2. PHASES IN USE / EXCLUSIVE PED

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASES IN USE																
EXCLUSIVE PED																

1-1-4. BACKUP PREVENT PHASES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-5 SIMULTANEOUS GAP

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

1-1-3. PHASE RING SEQUENCE

CONTROLLER 1			SEQUENCE 1																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 2																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 3																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 4																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 5																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 6																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 7																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1			SEQUENCE 8																	
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-1-3. PHASE RING SEQUENCE (CONT)

CONTROLLER 1		SEQUENCE 9																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 10																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 11																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 12																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 13																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 14																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 15																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				
CONTROLLER 1		SEQUENCE 16																		
RING 1																				
RING 2																				
RING 3																				
RING 4																				

1-3. PHASE TO LOAD SWITCH (MMU) ASSIGNMENT

LOAD SWITCH	PHASE / OVERLAP	TYPE	DIMMING				AUTO FLASH	
			RED	YELLOW	GREEN	PHASE	COLOR	TOGETHER
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

1-4-2. MMU PROGRAM

PHASE	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

1-4-1. SDLC OPTIONS

TERM & FACIL	BIU NUMBER							
	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
DETECTOR RACK	1	2	3	4	5	6	7	8
ENABLE								
PEER-PEER EN								
MMU ENABLE								
MMU STOP TIME								
DIAGNOSTIC ENABLE (TEST FIXTURE)								
CONTROLLER PEER TO PEER ENABLE								
DISABLE 3 CRITICAL RFEs LOCKUP								

1-4-3. COLOR CHECK DISABLE

DISABLE ALL COLOR CHECKS																
MMU CHANNEL	1	2	3	4	5	6	7	8								
GREEN / WALK																
YELLOW / PC																
RED / DW																
MMU CHANNEL	9	10	11	12	13	14	15	16								
GREEN / WALK																
YELLOW / PC																
RED / DW																

1-5-1 GLOBAL PORT PARAMETERS

NTCIP BACKUP TIME (SECONDS)	
PORT 2 PRIORITY	
PORT 3A PRIORITY	
PORT 3B PRIORITY	
ETHERNET PRIORITY	

1-5-1 PORT 2 (TERMINAL)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-3 PORT 3A (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
ELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-7-1 ADMINISTRATION

SUPERVISOR ACCESS CODE	
ENABLE CRC CHECK OF DATA BASE	
CRC OF PROGRAM DATA BASE	
REQUEST DOWNLOAD OF PROGRAMMED DATA	

1-7-2 DISPLAY OPTIONS

KEY CLICK ENABLE	
BACKLIGHT ENABLE	

1-5-4. PORT 3B (TELEMETRY)

PROTOCOL	
ENABLE	
DATA RATE (BPS)	
DATA, PARITY, STOP	
MODEM SETUP STRING	
USER STRING	
COMM. PORT ADDRESS	
SYSTEM DETECTOR 9 - 16 ADDRESS	
TELEMETRY RESPONSE DELAY	
DUPLEX HALF - FULL	
AB3418 / NTCIP GROUP ADDRESS	
AB3418 / NTCIP SINGLE FLAG ENABLE	
NTCIP PROTOCOL	
RTS TO CTS DELAY	
RTS TURN OFF DELAY	
DROP OUT TIME (in seconds)	
EARLY RTS	

1-5-5 ETHERNET PORT CONFIGURATION

IP ADDRESS					
ADDRESS MASK					
FTP SERVER ADDRESS					
DEFAULT GATEWAY ADDRESS					

1-6-1 ENABLE EVENT LOGS

CRITICAL RFE'S (MMU/TE)	
3 CRITICAL RFE ERRORS IN 24 HOURS	
NON-CRITICAL RFE'S (DET/TEST)	
DETECTOR ERRORS	
COORDINATION ERRORS	
MMU FLASH FAULTS	
LOCAL FLASH FAULTS	
PREEMPT	
POWER ON/OFF	
LOW BATTERY	
ACCESS	
DATA CHANGE	
CONTROLLER DOWNLOAD	
ALARM 1	
ALARM 2	
ALARM 3	
ALARM 4	
ALARM 5	
ALARM 6	
ALARM 7	
ALARM 8	
ALARM 9	
ALARM 10	
ALARM 11	
ALARM 12	
ALARM 13	
ALARM 14	
ALARM 15	
ALARM 16	

IF				
THEN				
ELSE				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

1-8-2 LOGIC PROCESSOR (CONTINUED)

LOGIC GATE NUMBER				
IF				

LOGIC GATE NUMBER				
IF				

THEN				
ELSE				

LOGIC GATE NUMBER				
IF				
THEN				
ELSE				

CONTROLLER SUBMENU

2-1. CONTROLLER TIMING DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN	7	20	7	10	7	20	7	10								
BICYCLE MINIMUM GREEN																
CONDITIONAL SERVICE MINIMUM GREEN																
DELAYED GREEN																
WALK		7		7		7		7								
WALK 2																
WALK MAX																
PEDESTRIAN CLEARANCE		25		30		25		30								
PEDESTRIAN CLEARANCE 2																
PEDESTRIAN CLEARANCE MAX																
PEDESTRIAN CARRY OVER																
VEHICLE EXTENSION	3.5	5.5	3.5	3.5	3.5	5.5	3.5	3.5								
VEHICLE EXTENSION 2																
MAX1	20	55		35		55		35								
MAX2	20	60		40		60		40								
MAX3																
DYNAMIC MAX																
DYNAMIC MAX STEP																
YELLOW CHANGE	3.0	4.2		3.3		4.2		3.3								
RED CLRANCE	1.0	2.6		3.4		2.6		3.4								
RED MAX																
RED REVERT																
ACTUATIONS BEFORE GAP REDUCTION																
SECONDS PER ACTIONS ADDED TO INITIAL																
MAXIMUM ADDED INITIAL GREEN																
TIME BEFORE GAP REDUCTION																
CARS WAITING BEFORE GAP REDUCTION																
STEP TO REDUCE																
TIME TO REDUCE TO MINIMUM																
MINIMUM GAP																

2-2 VEHICLE OVERLAP

OVERLAP A PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP C PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP B PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP D PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT																	
NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP E PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP G PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP F PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP H PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP I PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP K PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP J PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP L PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-2 VEHICLE OVERLAP (CONTINUED)

OVERLAP M PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP O PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP N PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

OVERLAP P PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
INCLUDED																	
PROTECTED																	
MODIFIER																	
PEDESTRIAN PROTECT NOT OVERLAP																	
TRAILING GREEN																	
TRAILING YELLOW																	
TRAILING RED																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRAILING LEADING																	
ADVANCE GREEN																	
PHASES	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
FLASH GREEN																	

2-3 PEDESTRIAN OVERLAP

PEDESTRIAN OVERLAP CONSISTS OF PHASES																
PEDESTRIAN OVERLAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

2-4 GUARANTEED MINIMUM TIMES

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINIMUM GREEN																
WALK																
PEDESTRIAN CLEARANCE																
YELLOW CHANGE																
RED CLEARANCE																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MINIMUM GREEN																

2-5 START / FLASH DATA

POWER START																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
OVERLAP																
POWER START RED									FLASH TIME							
REMOTE (AUTOMATIC) FLASH																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ENTRY																
EXIT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
EXIT																
EXIT REMOTE FLASH									MINIMUM AUTOMATIC FLASH							
MINIMUM RECALL									CYCLE THROUGH PHASES							

2-6-1 CONTROLLER OPTIONS

PEDESTRIAN CLEARANCE PROTECT																
UNIT RED REVERT																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
GUARANTEE D PASSAGE																
NON-ACT I																
NON ACT II																
DUAL ENTRY																
PED RESERVICE																
REST IN WALK																
FLASHING WALK																
PED CLEAR > YELLOW																
PED CLEAR > ALL RED																
INIT GREEN + VEHICLE EXIT																

2-7 ACTUATED / PRE-TIMED MODE PHASES

ENABLE PRE-TIMED OPERATION																
FREE INPUT DISABLED PRE-TIMED																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE																
PRE-TIMED																

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN	4															
CYCLE LENGTH (SECONDS)	100	SPLIT PATTERN														
OFFSET VALUE	79															
SPLITS IN	Per	OFFSETS IN														
CROSSING ARTERY PATTERN																
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH														
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN														
ACTUATED COORDINATION	Yes	TIMING PLAN														
ACTUATED REST IN WALK		PHASE RESERVICE														
													1	2	3	4
RING SPLIT EXTENSION (SECONDS)																
SPLIT DEMAND PATTERN																
RING DISPLACEMENT																
	1	2	3	4	5			8	9	1	1	1	1	1	1	5
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN	5															
CYCLE LENGTH (SECONDS)		SPLIT PATTERN														
OFFSET VALUE		SEQUENCE														
SPLITS IN		OFFSETS IN														
CROSSING ARTERY PATTERN																
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH														
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN														
ACTUATED COORDINATION		TIMING PLAN														
ACTUATED REST IN WALK		PHASE RESERVICE														
													1	2	3	4
RING SPLIT EXTENSION (SECONDS)																
SPLIT DEMAND PATTERN																
RING DISPLACEMENT																
	1	2	3	4	5			8	9	1	1	1	1	1	1	5
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN																
CYCLE LENGTH (SECONDS)		SPLIT PATTERN														
OFFSET VALUE		SEQUENCE														
SPLITS IN		OFFSETS IN														
CROSSING ARTERY PATTERN																
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH														
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN														
ACTUATED COORDINATION		TIMING PLAN														
ACTUATED REST IN WALK		PHASE RESERVICE														
													1	2	3	4
RING SPLIT EXTENSION (SECONDS)																
SPLIT DEMAND PATTERN																
RING DISPLACEMENT																
	1	2	3	4	5			8	9	1	1	1	1	1	1	5
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN																
CYCLE LENGTH (SECONDS)		SPLIT PATTERN														
OFFSET VALUE		SEQUENCE														
SPLITS IN		OFFSETS IN														
CROSSING ARTERY PATTERN																
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH														
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN														
ACTUATED COORDINATION		TIMING PLAN														
ACTUATED REST IN WALK		PHASE RESERVICE														
													1	2	3	4
RING SPLIT EXTENSION (SECONDS)																
SPLIT DEMAND PATTERN																
RING DISPLACEMENT																
	1	2	3	4	5			8	9	1	1	1	1	1	1	5
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

Per
Per

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

COORDINATOR PATTERN				SPLIT PATTERN			
CYCLE LENGTH (SECONDS)				SEQUENCE			
OFFSET VALUE				OFFSETS IN			
SPLITS IN				VEHICLE PERMISSIVE 2 LENGTH			
CROSSING ARTERY PATTERN				ACTION PLAN			
VEHICLE PERMISSIVE 1 LENGTH				TIMING PLAN			
VEHICLE PERMISSIVE 2 DISPLACEMENT				PHASE RESERVICE			
ACTUATED COORDINATION							
ACTUATED REST IN WALK							
RING SPLIT EXTENSION (SECONDS)				1		2	
SPLIT DEMAND PATTERN				3		4	
RING DISPLACEMENT							
PREFERENCE 1 PHASES							
PREFERENCE 2 PHASES							

3-2 COORDINATOR PATTERN (CONTINUED)

COORDINATOR PATTERN		SPLIT PATTERN	
CYCLE LENGTH (SECONDS)			
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9 1 1	1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN		SPLIT PATTERN	
CYCLE LENGTH (SECONDS)			
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9 1 1	1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN		SPLIT PATTERN	
CYCLE LENGTH (SECONDS)			
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9 1 1	1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN		SPLIT PATTERN	
CYCLE LENGTH (SECONDS)			
OFFSET VALUE		SEQUENCE	
SPLITS IN		OFFSETS IN	
CROSSING ARTERY PATTERN			
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH	
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN	
ACTUATED COORDINATION		TIMING PLAN	
ACTUATED REST IN WALK		PHASE RESERVICE	
RING SPLIT EXTENSION (SECONDS)		1	2
SPLIT DEMAND PATTERN			
RING DISPLACEMENT			
	1 2 3 4 5	8 9 1 1	1 1
		0 1	3 5
PREFERENCE 1 PHASES			
PREFERENCE 2 PHASES			

COORDINATOR PATTERN																
CYCLE LENGTH (SECONDS)		SPLIT PATTERN														
OFFSET VALUE		SEQUENCE														
SPLITS IN		OFFSETS IN														
CROSSING ARTERY PATTERN																
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH														
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN														
ACTUATED COORDINATION		TIMING PLAN														
ACTUATED REST IN WALK		PHASE RESERVICE														
RING SPLIT EXTENSION (SECONDS)		1	2	3	4											
SPLIT DEMAND PATTERN																
RING DISPLACEMENT																
		1	2	3	4	5		8	9	1	1	1	1	1	1	1
										0	1		3		5	
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

COORDINATOR PATTERN																
CYCLE LENGTH (SECONDS)		SPLIT PATTERN														
OFFSET VALUE		SEQUENCE														
SPLITS IN		OFFSETS IN														
CROSSING ARTERY PATTERN																
VEHICLE PERMISSIVE 1 LENGTH		VEHICLE PERMISSIVE 2 LENGTH														
VEHICLE PERMISSIVE 2 DISPLACEMENT		ACTION PLAN														
ACTUATED COORDINATION		TIMING PLAN														
ACTUATED REST IN WALK		PHASE RESERVICE														
RING SPLIT EXTENSION (SECONDS)		1	2	3	4											
SPLIT DEMAND PATTERN																
RING DISPLACEMENT																
		1	2	3	4	5	6	7	8	9	1	1	1	1	1	1
											0	1	2	3	4	5
PREFERENCE 1 PHASES																
PREFERENCE 2 PHASES																

3-3 SPLIT PATTERN

SPLIT PATTERN NUMBER		1																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		9	56	0	35	0	65	0	35											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		2																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		10	52	0	38	0	62	0	38											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		3																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		12	53	0	35	0	65	0	35											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER		4																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)			X				X													
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE		11	44	0	45	0	44	0	45											
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

SPLIT PATTERN NUMBER																				
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
COORDINATED PHASE(S)																				
PHASE		1	2	3	4	5	6	7	8											
SPLIT VALUE																				
MODE																				
PHASE		9	10	11	12	13	14	15	16											
SPLIT VALUE																				
MODE																				

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-3 SPLIT PATTERN (CONTINUED)

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

SPLIT PATTERN NUMBER																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
COORDINATED PHASE(S)																	
PHASE	1	2	3	4	5	6	7	8									
SPLIT VALUE																	
MODE																	
PHASE	9	10	11	12	13	14	15	16									
SPLIT VALUE																	
MODE																	

3-4 AUTO PERMISSIVE MINIMUM GREEN TIME

PHASE	1	2	3	4	5	6	7	8								
MINIMUM GREEN																
PHASE	9	10	11	12	13	14	15	16								
MINIMUM GREEN																

3-5 SPLIT DEMAND

PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
DEMAND 1																	
DEMAND 2																	
DEMAND		1	2														
DETECTOR																	
CALL TIME (SECONDS)																	
CYCLE COUNT																	

PREEMPTOR SUBMENU

4-1 PREEMPTOR

PREEMPTOR NUMBER	1																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/ EXIT YELLOW /RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

PREEMPTOR NUMBER	2																			
ACTIVE	NON-LOCK INPUT																			
PREEMPTION OVERRIDE	INTERLOCK ENABLE																			
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																			
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																			
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																			
PED DARK	RESERVICE TIME																			
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																			
TERMINATE OVERLAPS ASAP	PED CLEAR THROUGH YELLOW																			
RING	1				2				3				4							
FREE DURING PREEMPTION																				
	WALK				PED CLEAR				GREEN				YELLOW				RED			
ENTERING MINIMUM TIME																				
TRACK CLEARANCE TIME																				
MIN DWELL – CYCLE GREEN/EXIT YELLOW/RED																				
DWELL FLASH	FLASH EXIT COLOR																			
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																				
DWELL PHASE																				
DWELL PEDESTRIAN																				
CYCLING PHASE																				
CYCLING PEDESTRIAN																				
EXIT PHASE																				
EXIT CALLS																				
SPECIAL FUNCTION																				
PREEMPTION TO COORDINATION									EXIT TIMING PLAN											
LINKED PREEMPTOR																				
PREEMPTOR ACTIVE OUTPUTS																				
PREEMPTOR ACTIVE OUT									PREEMPTOR ACTIVE OUT IN DWELL											
OTHER PRIORITY PREEMPTOR OUT									NON-PRIORITY PREEMPTOR OUT											
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
TRACK CLEAR OVERLAP																				
DWELL OVERLAP																				
CYCLING OVERLAP																				

4-2 LOW PRIORITY PREEMPTOR SELECTION

FILTERED INPUT	SOLID	PULSING
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		3																
ACTIVE	NON-LOCK INPUT																	
PREEMPTION OVERRIDE	INTERLOCK ENABLE																	
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																	
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																	
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																	
PED DARK	RESERVICE TIME																	
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																	
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																	
RING	1	2	3	4														
FREE DURING PREEMPTION																		
	WALK	PED CLEAR	GREEN	YELLOW	RED													
ENTERING MINIMUM TIME																		
TRACK CLEARANCE TIME																		
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																		
DWELL FLASH		FLASH EXIT COLOR																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																		
DWELL PHASE																		
DWELL PEDESTRIAN																		
CYCLING PHASE																		
CYCLING PEDESTRIAN																		
EXIT PHASE																		
EXIT CALLS																		
SPECIAL FUNCTION																		
PREEMPTION TO COORDINATION		EXIT TIMING PLAN																
LINKED PREEMPTOR																		
PREEMPTOR ACTIVE OUTPUTS																		
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL																
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR OVERLAP																		
DWELL OVERLAP																		
CYCLING OVERLAP																		

PREEMPTOR NUMBER		4																
ACTIVE	NON-LOCK INPUT																	
PREEMPTION OVERRIDE	INTERLOCK ENABLE																	
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																	
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																	
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																	
PED DARK	RESERVICE TIME																	
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																	
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																	
RING	1	2	3	4														
FREE DURING PREEMPTION																		
	WALK	PED CLEAR	GREEN	YELLOW	RED													
ENTERING MINIMUM TIME																		
TRACK CLEARANCE TIME																		
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																		
DWELL FLASH		FLASH EXIT COLOR																
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	
TRACK CLEAR PHASE																		
DWELL PHASE																		
DWELL PEDESTRIAN																		
CYCLING PHASE																		
CYCLING PEDESTRIAN																		
EXIT PHASE																		
EXIT CALLS																		
SPECIAL FUNCTION																		
PREEMPTION TO COORDINATION		EXIT TIMING PLAN																
LINKED PREEMPTOR																		
PREEMPTOR ACTIVE OUTPUTS																		
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL																
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT																
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
TRACK CLEAR OVERLAP																		
DWELL OVERLAP																		
CYCLING OVERLAP																		

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		5															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		6															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH																	
FLASH EXIT COLOR																	
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION					EXIT TIMING PLAN												
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT					PREEMPTOR ACTIVE OUT IN DWELL												
OTHER PRIORITY PREEMPTOR OUT					NON-PRIORITY PREEMPTOR OUT												
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		7															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		8															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

4-1 PREEMPTOR (CONTINUED)

PREEMPTOR NUMBER		9															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

PREEMPTOR NUMBER		10															
ACTIVE	NON-LOCK INPUT																
PREEMPTION OVERRIDE	INTERLOCK ENABLE																
DELAY TIME (SECONDS)	INHIBIT TIME (SECONDS)																
EXTEND INPUT (SECONDS)	MAX PRESENCE TIME (SECONDS)																
DURATION TIME (SECONDS)	TRACK CLEARANCE RESERVICE																
PED DARK	RESERVICE TIME																
AUTOMATIC FLASH HAS PRIORITY	RED CLEAR GOES GREEN																
TERMINATE OVERLAPS ASAP	PC THROUGH YELLOW																
RING	1	2	3	4													
FREE DURING PREEMPTION																	
	WALK	PED CLEAR	GREEN	YELLOW	RED												
ENTERING MINIMUM TIME																	
TRACK CLEARANCE TIME																	
MIN DWELL - CYCLE GREEN/ EXIT YELLOW /RED																	
DWELL FLASH		FLASH EXIT COLOR															
PHASE	1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
TRACK CLEAR PHASE																	
DWELL PHASE																	
DWELL PEDESTRIAN																	
CYCLING PHASE																	
CYCLING PEDESTRIAN																	
EXIT PHASE																	
EXIT CALLS																	
SPECIAL FUNCTION																	
PREEMPTION TO COORDINATION		EXIT TIMING PLAN															
LINKED PREEMPTOR																	
PREEMPTOR ACTIVE OUTPUTS																	
PREEMPTOR ACTIVE OUT		PREEMPTOR ACTIVE OUT IN DWELL															
OTHER PRIORITY PREEMPTOR OUT		NON-PRIORITY PREEMPTOR OUT															
OVERLAP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
TRACK CLEAR OVERLAP																	
DWELL OVERLAP																	
CYCLING OVERLAP																	

TIME BASE SUBMENU

5-1 CLOCK/CALENDAR DATA

DATE SET:	
TIME SET:	
MANUAL ACTION PLAN	
SYNC REFERENCE TIME	
SYNC REFERENCE	
DAYLIGHT SAVINGS	
TIME RESET INPUT TIME SET	
STANDARD TIME FROM GMT	

5-2 SCHEDULE

SCHEDULE NUMBER	1
DAY PLAN NUMBER	1

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
		x	x	x	x	x				
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	1
DAY PLAN NUMBER	2

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
	x						x			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER	
DAY PLAN NUMBER	

MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE				
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT			
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31									

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

SCHEDULE NUMBER												
DAY PLAN NUMBER												
MONTH	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
DAY OF WEEK (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
DAY OF MONTH (DOM)	1	2	3	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17	18	19	20		
	21	22	23	24	25	26	27	28	29	30		
	31											

PATTERN		1		SYSTEM OVERRIDE														
VEHICLE DETECTOR PLAN				DETECTOR LOG														
FLASH				VEHICLE DET DIAGNOSTIC PLAN														
RED REST				PED DET DIAGNOSTIC PLAN														
CONTROLLER SEQUENCE				DIMMING ENABLE														
TIMING PLAN																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
PED RECALL																		
WALK 2																		
VEH EXT 2																		
VEH RECALL																		
MAX RECALL																		
MAX 2																		
MAX 3																		
CS INHIBIT																		
PHASE OMIT																		
SPEC FUNCTION																		(1-8)
AUX FUNCTION																		(1-3)
		1	2	3	4	5	6	7	8	9	10							
LP 1-10																		
LP 11-20																		
LP 21-30																		
LP 31-40																		
LP 41-50																		
LP 51-60																		
LP 61-70																		
LP 71-80																		
LP 81-90																		
LP 91-100																		

ACTION PLAN		3		SYSTEM OVERRIDE														
VEHICLE DETECTOR PLAN				DETECTOR LOG														
FLASH				VEHICLE DET DIAGNOSTIC PLAN														
RED REST				PED DET DIAGNOSTIC PLAN														
CONTROLLER SEQUENCE				DIMMING ENABLE														
TIMING PLAN																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
PED RECALL																		
WALK 2																		
VEH EXT 2																		
VEH RECALL																		
MAX RECALL																		
MAX 2																		
MAX 3																		
CS INHIBIT																		
PHASE OMIT																		
SPEC FUNCTION																		(1-8)
AUX FUNCTION																		(1-3)
		1	2	3	4	5	6	7	8	9	10							
LP 1-10																		
LP 11-20																		
LP 21-30																		
LP 31-40																		
LP 41-50																		
LP 51-60																		
LP 61-70																		
LP 71-80																		
LP 81-90																		
LP 91-100																		

ACTION PLAN		2		SYSTEM OVERRIDE														
VEHICLE DETECTOR PLAN				DETECTOR LOG														
FLASH				VEHICLE DET DIAGNOSTIC PLAN														
RED REST				PED DET DIAGNOSTIC PLAN														
CONTROLLER SEQUENCE				DIMMING ENABLE														
TIMING PLAN																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
PED RECALL																		
WALK 2																		
VEH EXT 2																		
VEH RECALL																		
MAX RECALL																		
MAX 2																		
MAX 3																		
CS INHIBIT																		
PHASE OMIT																		
SPEC FUNCTION																		(1-8)
AUX FUNCTION																		(1-3)
		1	2	3	4	5	6	7	8	9	10							
LP 1-10																		
LP 11-20																		
LP 21-30																		
LP 31-40																		
LP 41-50																		
LP 51-60																		
LP 61-70																		
LP 71-80																		
LP 81-90																		
LP 91-100																		

ACTION PLAN		4		SYSTEM OVERRIDE														
VEHICLE DETECTOR PLAN				DETECTOR LOG														
FLASH				VEHICLE DET DIAGNOSTIC PLAN														
RED REST				PED DET DIAGNOSTIC PLAN														
CONTROLLER SEQUENCE				DIMMING ENABLE														
TIMING PLAN																		
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1
PED RECALL																		
WALK 2																		
VEH EXT 2																		
VEH RECALL																		
MAX RECALL																		
MAX 2																		
MAX 3																		
CS INHIBIT																		
PHASE OMIT																		
SPEC FUNCTION																		(1-8)
AUX FUNCTION																		(1-3)
		1	2	3	4	5	6	7	8	9	10							
LP 1-10																		
LP 11-20																		
LP 21-30																		
LP 31-40																		
LP 41-50																		
LP 51-60																		
LP 61-70																		
LP 71-80																		
LP 81-90																		
LP 91-100																		

ACTION PLAN		5																		
PATTERN		5										SYSTEM OVERRIDE								
VEHICLE DETECTOR PLAN												DETECTOR LOG								
FLASH																				
RED REST												VEHICLE DET DIAGNOSTIC PLAN								
CONTROLLER SEQUENCE												PED DET DIAGNOSTIC PLAN								
TIMING PLAN												DIMMING ENABLE								
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION																				(1-3)
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN												SYSTEM OVERRIDE								
VEHICLE DETECTOR PLAN												DETECTOR LOG								
FLASH																				
RED REST												VEHICLE DET DIAGNOSTIC PLAN								
CONTROLLER SEQUENCE												PED DET DIAGNOSTIC PLAN								
TIMING PLAN												DIMMING ENABLE								
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION																				(1-3)
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN												SYSTEM OVERRIDE								
VEHICLE DETECTOR PLAN												DETECTOR LOG								
FLASH																				
RED REST												VEHICLE DET DIAGNOSTIC PLAN								
CONTROLLER SEQUENCE												PED DET DIAGNOSTIC PLAN								
TIMING PLAN												DIMMING ENABLE								
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION																				(1-3)
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

ACTION PLAN																				
PATTERN												SYSTEM OVERRIDE								
VEHICLE DETECTOR PLAN												DETECTOR LOG								
FLASH																				
RED REST												VEHICLE DET DIAGNOSTIC PLAN								
CONTROLLER SEQUENCE												PED DET DIAGNOSTIC PLAN								
TIMING PLAN												DIMMING ENABLE								
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1	1
PED RECALL																				
WALK 2																				
VEH EXT 2																				
VEH RECALL																				
MAX RECALL																				
MAX 2																				
MAX 3																				
CS INHIBIT																				
PHASE OMIT																				
SPEC FUNCTION																				(1-8)
AUX FUNCTION																				(1-3)
		1	2	3	4	5	6	7	8	9	10									
LP 1-10																				
LP 11-20																				
LP 21-30																				
LP 31-40																				
LP 41-50																				
LP 51-60																				
LP 61-70																				
LP 71-80																				
LP 81-90																				
LP 91-100																				

5-5 EXCEPTION DAY PROGRAM

EXCEPTION DAY	FLOAT / FIXED	MON / MON	DOW / DOM	WOM / YEAR	DAY PLAN
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
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29					
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31					
32					
33					
34					
35					
36					

DETECTORS

6-1. DETECTOR TYPE AND TS SELECT

DET	TYPE	TS1 DETECTOR
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
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19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

DET	TYPE	TS1 DETECTOR
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
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61		
62		
63		
64		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

6-2 VEHICLE DETECTOR SETUP

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER		
DETECTOR NUMBER		
ASSIGNED PHASE		ADDED INITIAL OPTION
SWITCH PHASE		CALL DETECTOR OPTION
EXTEND TIME		PASSAGE DETECTOR OPTION
DELAY TIME		QUEUE DETECTOR OPTION
QUEUE LIMIT		NTCIP OCCUPANCY LOG
FAIL TIME		NTCIP VOLUME LOG
FAIL CALL DELAY		ECPI LOG
YELLOW LOCK		RED LOCK
PHASE	1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1	
CALLED		

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

VEHICLE PLAN NUMBER																			
DETECTOR NUMBER																			
ASSIGNED PHASE		ADDED INITIAL OPTION																	
SWITCH PHASE		CALL DETECTOR OPTION																	
EXTEND TIME		PASSAGE DETECTOR OPTION																	
DELAY TIME		QUEUE DETECTOR OPTION																	
QUEUE LIMIT		NTCIP OCCUPANCY LOG																	
FAIL TIME		NTCIP VOLUME LOG																	
FAIL CALL DELAY		ECPI LOG																	
YELLOW LOCK		RED LOCK																	
PHASE		1	2	3	4	5	6	7	8	9	0	1	1	1	1	1	1	1	1
CALLED																			

6-3 PHASE DETECTOR OPTIONS

PHASE DETECTOR OPTION PLAN NUMBER										1						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										2						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										3						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

PHASE DETECTOR OPTION PLAN NUMBER										4						
PHASE	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1
DETECTOR LOCK																
VEH RECALL																
PED RECALL																
MAX RECALL																
SOFT RECALL																
NO REST																
ADD INIT CALC																

6-4 PEDESTRIAN AND SYSTEM DETECTOR OPTIONS

PHASE PEDESTRIAN DETECTOR								
	1	2	3	4	5	6	7	8
PED DET INPUT								
	9	10	11	12	13	14	15	16
PED DET INPUT								
LOCAL SYSTEM DETECTOR								
	1	2	3	4	5	6	7	8
VEH DET INPUT								
	9	10	11	12	13	14	15	16
VEH DET INPUT								

6-5 LOG – SPEED DETECTOR SET UP

NTCIP LOG PERIOD								
ECPI LOG PERIOD								
LENGTH UNIT								
SPEED DETECTOR	1	2	3	4	5	6	7	8
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								
SPEED DETECTOR	9	10	11	12	13	14	15	16
LOCAL DETECTOR								
ONE / TWO DET								
VEH LENGTH								
TRAP LENGTH								
ENABLE LOG								

6-6 VEHICLE DETECTOR DIAGNOSTICS

VEHICLE DIAGNOSTIC PLAN NUMBER					1				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					33				
2					34				
3					35				
4					36				
5					37				
6					38				
7					39				
8					40				
9					41				
10					42				
11					43				
12					44				
13					45				
14					46				
15					47				
16					48				
17					49				
18					50				
19					51				
20					52				
21					53				
22					54				
23					55				
24					56				
25					57				
26					58				
27					59				
28					60				
29					61				
30					62				
31					63				
32					64				

VEHICLE DIAGNOSTIC PLAN NUMBER					2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					33				
2					34				
3					35				
4					36				
5					37				
6					38				
7					39				
8					40				
9					41				
10					42				
11					43				
12					44				
13					45				
14					46				
15					47				
16					48				
17					49				
18					50				
19					51				
20					52				
21					53				
22					54				
23					55				
24					56				
25					57				
26					58				
27					59				
28					60				
29					61				
30					62				
31					63				
32					64				

**6-6 VEHICLE DETECTOR DIAGNOSTICS
(CONTINUED)**

VEHICLE DIAGNOSTIC PLAN NUMBER					3
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

VEHICLE DIAGNOSTIC PLAN NUMBER					4
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	
1					33
2					34
3					35
4					36
5					37
6					38
7					39
8					40
9					41
10					42
11					43
12					44
13					45
14					46
15					47
16					48
17					49
18					50
19					51
20					52
21					53
22					54
23					55
24					56
25					57
26					58
27					59
28					60
29					61
30					62
31					63
32					64

6-7 PEDESTRIAN DETECTOR DIAGNOSTICS

PED DIAGNOSTIC PLAN NUMBER 1					PED DIAGNOSTIC PLAN NUMBER 2				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

























PED DIAGNOSTIC PLAN NUMBER 3					PED DIAGNOSTIC PLAN NUMBER 4				
DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER	DET	COUNTS	ACTUATIONS	PRESENCE	MULTIPLIER
1					1				
2					2				
3					3				
4					4				
5					5				
6					6				
7					7				
8					8				
9					9				
10					10				
11					11				
12					12				
13					13				
14					14				
15					15				
16					16				

Appendix B

Existing Traffic Level of Service Calculations

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1990	130	82	1047	54	102	38	133	116	62	48
Future Volume (vph)	43	1990	130	82	1047	54	102	38	133	116	62	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1082	4980	1526	1785	4706	1469	1700	1740	1566	1767	1824	956
Flt Permitted	0.246			0.066			0.716			0.732		
Satd. Flow (perm)	280	4980	1473	124	4706	1436	1278	1740	1539	1355	1824	942
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			103			67			122			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		310.7			586.1			253.5			312.8	
Travel Time (s)		16.0			30.1			18.3			22.5	
Confl. Peds. (#/hr)	1		7	7		1	3		5	5		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	65%	3%	3%	0%	9%	7%	5%	8%	2%	1%	3%	67%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	2031	133	84	1068	55	104	39	136	118	63	49
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	38.0	38.0	11.5	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	103.2	89.0	89.0	104.8	92.1	92.1	19.8	19.8	19.8	19.8	19.8	19.8
Actuated g/C Ratio	0.79	0.68	0.68	0.81	0.71	0.71	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.15	0.60	0.13	0.35	0.32	0.05	0.54	0.15	0.40	0.57	0.23	0.24
Control Delay	4.5	12.7	3.0	8.2	8.9	3.0	60.0	46.7	13.6	61.3	48.5	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	12.7	3.0	8.2	8.9	3.0	60.0	46.7	13.6	61.3	48.5	8.1
LOS	A	B	A	A	A	A	E	D	B	E	D	A
Approach Delay		12.0			8.5			35.5				46.4
Approach LOS		B			A			D				D
Queue Length 50th (m)	1.9	94.4	2.3	0.6	63.5	2.1	26.2	9.3	3.3	30.0	15.1	0.0
Queue Length 95th (m)	5.7	142.7	11.6	11.8	79.0	9.7	43.2	19.1	21.0	48.0	27.5	7.2
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	290	3407	1040	249	3335	1037	433	590	602	459	618	363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.60	0.13	0.34	0.32	0.05	0.24	0.07	0.23	0.26	0.10	0.13

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	23 (18%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	14.6
Intersection LOS:	B
Intersection Capacity Utilization:	70.5%
ICU Level of Service:	C
Analysis Period (min):	15




























Splits and Phases: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	21	2080	123	97	1055	22	118	3	146	11	0	8
Future Volume (vph)	21	2080	123	97	1055	22	118	3	146	11	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1623	5029	1497	1750	4724	1465	1716	1565	0	1785	1879	1413
Flt Permitted	0.253			0.055			0.757			0.337		
Satd. Flow (perm)	432	5029	1456	101	4724	1431	1359	1565	0	632	1879	1387
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			44			149			101
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		586.1			572.2			226.5			194.2	
Travel Time (s)		30.1			29.4			16.3			14.0	
Confl. Peds. (#/hr)	1		2	2		1	3		1	1		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	2%	5%	2%	8%	9%	4%	0%	1%	0%	0%	13%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	2122	126	99	1077	22	120	152	0	11	0	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt		Perm
Protected Phases		2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		7.0	10.0	10.0
Minimum Split (s)	25.2	25.2	25.2	11.0	25.2	25.2	22.5	22.5		11.0	24.3	24.3
Total Split (s)	72.0	72.0	72.0	11.0	83.0	83.0	23.0	23.0		24.0	47.0	47.0
Total Split (%)	55.4%	55.4%	55.4%	8.5%	63.8%	63.8%	17.7%	17.7%		18.5%	36.2%	36.2%
Maximum Green (s)	66.8	66.8	66.8	7.0	77.8	77.8	18.7	18.7		20.0	42.7	42.7
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.0	3.3	3.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.2	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.0	4.3	4.3

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

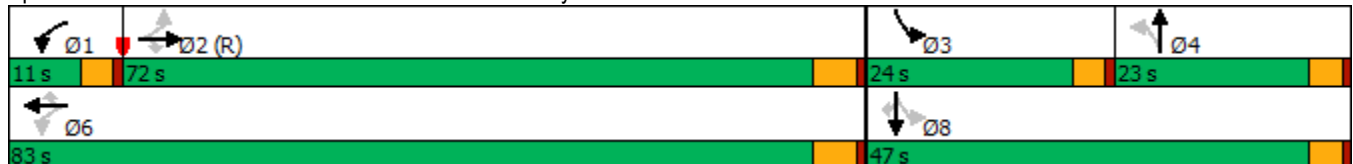


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	0
Act Effct Green (s)	88.7	88.9	88.9	105.7	101.7	101.5	20.0	16.7		19.3		19.0
Actuated g/C Ratio	0.68	0.68	0.68	0.81	0.78	0.78	0.15	0.13		0.15		0.15
v/c Ratio	0.07	0.62	0.12	0.43	0.29	0.02	0.57	0.46		0.07		0.03
Control Delay	4.9	9.4	1.2	34.4	2.9	0.0	61.1	12.3		42.6		0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	4.9	9.4	1.2	34.4	2.9	0.0	61.1	12.3		42.6		0.1
LOS	A	A	A	C	A	A	E	B		D		A
Approach Delay		8.9			5.5			33.8				24.7
Approach LOS		A			A			C				C
Queue Length 50th (m)	0.4	121.6	0.4	13.3	14.5	0.0	30.4	0.7		2.6		0.0
Queue Length 95th (m)	m3.2	207.4	10.1	30.1	17.1	0.1	48.9	19.8		7.3		0.0
Internal Link Dist (m)		562.1			548.2			202.5				170.2
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	294	3437	1025	232	3697	1127	241	364		289		523
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	0.07	0.62	0.12	0.43	0.29	0.02	0.50	0.42		0.04		0.02

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 60 (46%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 9.7 Intersection LOS: A
 Intersection Capacity Utilization 70.4% ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	2228	53	103	1132	7	57	0	268	3	0	0
Future Volume (vph)	5	2228	53	103	1132	7	57	0	268	3	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1069	5029	1572	1684	4724	1117	1750	1879	1597	1069	1879	1879
Flt Permitted	0.233			0.047			0.757			0.757		
Satd. Flow (perm)	260	5029	1535	83	4724	1051	1394	1879	1597	852	1879	1879
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			66			33			125			
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		572.2			334.1			216.4			176.9	
Travel Time (s)		29.4			17.2			15.6			12.7	
Confl. Peds. (#/hr)	11		1	1		11						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	67%	2%	0%	6%	8%	43%	2%	0%	0%	67%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	2273	54	105	1155	7	58	0	273	3	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			4			8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	2	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.7	26.7	26.7	11.5	28.4	28.4	24.9	24.9	24.9	24.9	24.9	24.9
Total Split (s)	90.0	90.0	90.0	14.0	104.0	104.0	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	69.2%	69.2%	69.2%	10.8%	80.0%	80.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Maximum Green (s)	83.3	83.3	83.3	10.0	97.3	97.3	19.1	19.1	19.1	19.1	19.1	19.1
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	3.6	3.6	3.6
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	6.9	6.9	6.9

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

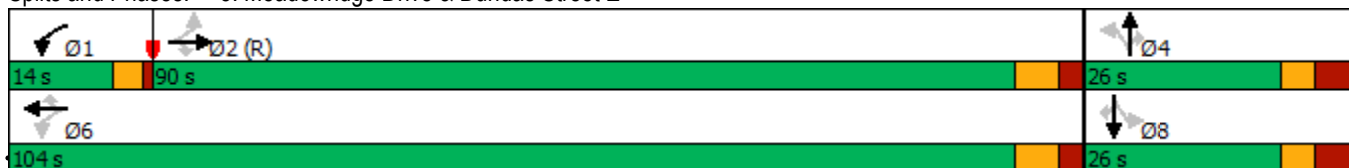


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	87.5	89.2	89.2	105.8	101.8	100.1	18.2		18.2	16.3		
Actuated g/C Ratio	0.67	0.69	0.69	0.81	0.78	0.77	0.14		0.14	0.13		
v/c Ratio	0.03	0.66	0.05	0.50	0.31	0.01	0.30		0.82	0.03		
Control Delay	2.4	4.1	0.1	24.3	3.1	0.0	53.0		49.2	48.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Total Delay	2.4	4.1	0.1	24.3	3.1	0.0	53.0		49.2	48.3		
LOS	A	A	A	C	A	A	D		D	D		
Approach Delay		4.0			4.8			49.9			48.3	
Approach LOS		A			A			D			D	
Queue Length 50th (m)	0.0	149.4	0.0	1.5	48.8	0.0	13.9		39.0	0.7		
Queue Length 95th (m)	m0.1	13.4	m0.0	17.6	6.5	m0.1	27.9		#77.7	3.8		
Internal Link Dist (m)		548.2			310.1			192.4			152.9	
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		
Base Capacity (vph)	175	3452	1074	227	3697	816	225		362	125		
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0		
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0		
Storage Cap Reductn	0	0	0	0	0	0	0		0	0		
Reduced v/c Ratio	0.03	0.66	0.05	0.46	0.31	0.01	0.26		0.75	0.02		

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 70 (54%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 8.2 Intersection LOS: A
 Intersection Capacity Utilization 82.1% 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: 8: Meadowridge Drive & Dundas Street E



Existing AM Peak 9:43 pm 07-11-2023 Baseline

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (vph)	47	2474	1176	54	65	68
Future Volume (vph)	47	2474	1176	54	65	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1638	5002	4794	1469	1733	1342
Flt Permitted	0.218				0.950	
Satd. Flow (perm)	376	5002	4794	1469	1733	1342
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				55		69
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	2%	7%	7%	3%	19%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	2524	1200	55	66	69
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	24.5	24.5	24.5	24.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	24.0	24.0
Total Split (%)	81.5%	81.5%	81.5%	81.5%	18.5%	18.5%
Maximum Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	Max	Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	109.7	109.7	109.7	109.7	11.3	11.3
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.09	0.09
v/c Ratio	0.15	0.60	0.30	0.04	0.44	0.39
Control Delay	5.4	11.0	1.6	0.4	65.2	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	11.0	1.6	0.4	65.2	18.5
LOS	A	B	A	A	E	B
Approach Delay		10.9	1.5		41.4	
Approach LOS		B	A		D	
Queue Length 50th (m)	3.8	151.0	10.4	0.2	17.4	0.0
Queue Length 95th (m)	m6.4	243.4	18.0	m0.3	32.0	14.8
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	317	4219	4044	1248	259	259
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.60	0.30	0.04	0.25	0.27

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 9.0 Intersection LOS: A
 Intersection Capacity Utilization 63.6% ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	2066	271	123	878	131	136	314	162	250	688	178
Future Volume (vph)	165	2066	271	123	878	131	136	314	162	250	688	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1750	5029	1526	1733	4706	1497	1668	3368	1551	1750	3466	1581
Flt Permitted	0.253			0.064			0.171			0.481		
Satd. Flow (perm)	466	5029	1526	117	4706	1497	300	3368	1551	886	3466	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			134			145			161
Link Speed (k/h)		70			70			60				60
Link Distance (m)		505.1			255.3			487.3				810.8
Travel Time (s)		26.0			13.1			29.2				48.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	9%	5%	7%	6%	3%	2%	3%	1%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	2108	277	126	896	134	139	320	165	255	702	182
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

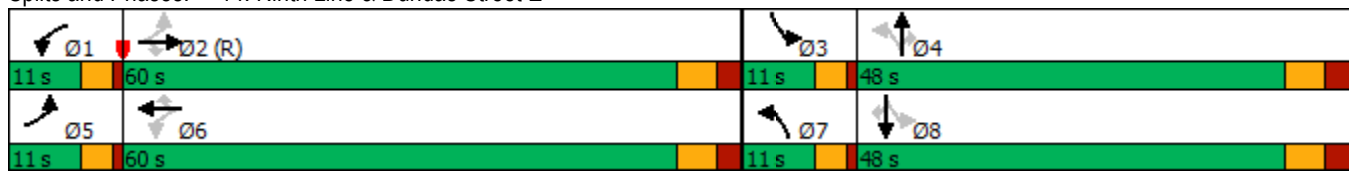


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	78.3	61.4	61.4	77.5	61.0	61.0	48.1	34.1	34.1	48.1	34.1	34.1
Actuated g/C Ratio	0.60	0.47	0.47	0.60	0.47	0.47	0.37	0.26	0.26	0.37	0.26	0.26
v/c Ratio	0.41	0.89	0.34	0.56	0.41	0.17	0.64	0.36	0.32	0.65	0.77	0.34
Control Delay	9.8	24.6	5.8	31.7	24.2	4.2	40.6	39.5	9.1	38.1	50.2	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	24.6	5.8	31.7	24.2	4.2	40.6	39.5	9.1	38.1	50.2	8.8
LOS	A	C	A	C	C	A	D	D	A	D	D	A
Approach Delay		21.6			22.7			31.7			40.9	
Approach LOS		C			C			C			D	
Queue Length 50th (m)	8.6	122.4	9.7	15.4	57.6	0.0	25.3	37.2	4.0	49.7	92.5	4.3
Queue Length 95th (m)	23.2	#239.8	22.0	39.2	74.9	12.5	37.7	47.5	20.4	67.1	107.2	21.5
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	408	2374	826	225	2207	773	216	1114	610	394	1146	630
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.89	0.34	0.56	0.41	0.17	0.64	0.29	0.27	0.65	0.61	0.29

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 27.0 Intersection LOS: C
 Intersection Capacity Utilization 92.2% 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: 14: Ninth Line & Dundas Street E



HCM Unsignalized Intersection Capacity Analysis
 12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive





























07-11-2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	25	16	37	58	4
Future Volume (Veh/h)	2	25	16	37	58	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2	26	16	38	59	4
Pedestrians	13					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)	313					
pX, platoon unblocked						
vC, conflicting volume	144	74	76			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	144	74	76			
tC, single (s)	6.4	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	100	97	99			
cM capacity (veh/h)	835	983	1482			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	28	54	63			
Volume Left	2	16	0			
Volume Right	26	0	4			
cSH	971	1482	1700			
Volume to Capacity	0.03	0.01	0.04			
Queue Length 95th (m)	0.7	0.3	0.0			
Control Delay (s)	8.8	2.3	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.8	2.3	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			19.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	13	1432	170	176	2155	105	121	87	135	71	39	15
Future Volume (vph)	13	1432	170	176	2155	105	121	87	135	71	39	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5079	1572	1733	1879	1581	1767	1879	1493
Flt Permitted	0.062			0.141			0.731			0.641		
Satd. Flow (perm)	116	5029	1508	264	5079	1508	1326	1879	1548	1183	1879	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173			89			125			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		310.7			586.1			253.5			312.8	
Travel Time (s)		16.0			30.1			18.3			22.5	
Confl. Peds. (#/hr)	10		10	10		10	6		9	9		6
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	3%	0%	1%	1%	0%	7%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	1461	173	180	2199	107	123	89	138	72	40	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.0	73.0	73.0	11.0	73.0	73.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	8.5%	56.2%	56.2%	8.5%	56.2%	56.2%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.0	66.0	66.0	7.0	66.0	66.0	39.0	39.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.3	5.3	1.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	100.1	85.8	85.8	104.5	95.8	95.8	20.5	20.5	20.5	20.5	20.5	20.5
Actuated g/C Ratio	0.77	0.66	0.66	0.80	0.74	0.74	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.06	0.44	0.16	0.49	0.59	0.09	0.59	0.30	0.40	0.39	0.14	0.05
Control Delay	4.4	12.1	2.1	20.0	7.5	3.6	61.5	49.4	12.9	53.6	45.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.4	12.1	2.1	20.0	7.5	3.6	61.5	49.4	12.9	53.6	45.6	0.3
LOS	A	B	A	C	A	A	E	D	B	D	D	A
Approach Delay		11.0			8.3			39.2				44.8
Approach LOS		B			A			D				D
Queue Length 50th (m)	0.6	62.7	0.0	17.7	47.7	0.1	31.2	21.5	3.0	17.6	9.4	0.0
Queue Length 95th (m)	2.5	98.2	10.2	m42.6	86.3	m8.9	49.5	35.9	20.7	31.5	19.2	0.0
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	217	3319	1054	369	3743	1134	428	607	584	382	607	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.44	0.16	0.49	0.59	0.09	0.29	0.15	0.24	0.19	0.07	0.03

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 3 (2%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 12.6 Intersection LOS: B
 Intersection Capacity Utilization 76.9% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1508	161	193	2255	5	154	2	83	31	2	29
Future Volume (vph)	2	1508	161	193	2255	5	154	2	83	31	2	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	4980	1572	1767	5051	1597	1785	1544	0	1785	1879	1597
Flt Permitted	0.053			0.119			0.757			0.661		
Satd. Flow (perm)	100	4980	1451	221	5051	1548	1422	1544	0	1235	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			107			85			123
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				193.9
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	3		16	16		3			3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1539	164	197	2301	5	157	87	0	32	2	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		6.5	10.0	10.0
Minimum Split (s)	11.0	26.8	26.8	11.0	26.8	26.8	23.5	23.5		11.0	22.5	22.5
Total Split (s)	17.0	79.5	79.5	16.0	78.5	78.5	23.5	23.5		11.0	34.5	34.5
Total Split (%)	13.1%	61.2%	61.2%	12.3%	60.4%	60.4%	18.1%	18.1%		8.5%	26.5%	26.5%
Maximum Green (s)	13.0	72.7	72.7	12.0	71.7	71.7	19.0	19.0		7.0	30.0	30.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5		3.0	3.5	3.5
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.8	-1.8	-3.0	-1.8	0.0	-1.9	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.8	2.6	4.5		4.0	4.5	4.5

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	84.0	83.0	83.0	97.6	93.6	91.8	19.1	17.2		26.6	23.5	23.5
Actuated g/C Ratio	0.65	0.64	0.64	0.75	0.72	0.71	0.15	0.13		0.20	0.18	0.18
v/c Ratio	0.01	0.48	0.17	0.62	0.63	0.00	0.75	0.31		0.11	0.01	0.08
Control Delay	8.0	7.5	0.6	19.8	25.3	0.0	75.3	13.7		41.1	39.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	8.0	7.5	0.6	19.8	25.3	0.0	75.3	13.7		41.1	39.0	0.4
LOS	A	A	A	B	C	A	E	B		D	D	A
Approach Delay		6.9			24.8			53.3			22.0	
Approach LOS		A			C			D			C	
Queue Length 50th (m)	0.1	30.1	0.2	34.5	211.5	0.0	40.5	0.5		6.8	0.4	0.0
Queue Length 95th (m)	m0.2	36.1	1.3	39.0	225.3	m0.0	#69.9	16.1		15.9	2.8	0.0
Internal Link Dist (m)		562.1			548.2			202.5			169.9	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	233	3180	985	346	3637	1124	228	298		286	433	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.01	0.48	0.17	0.57	0.63	0.00	0.69	0.29		0.11	0.00	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 11.8 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 19.6 Intersection LOS: B
 Intersection Capacity Utilization 75.9% 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.
 m Volume for 95th percentile queue is metered by upstream signal.





























Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Existing PM Peak 10:21 pm 07-11-2023 Baseline

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	1	1576	50	185	2365	3	43	0	139	4	0	0
Future Volume (vph)	1	1576	50	185	2365	3	43	0	139	4	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5051	1201	1785	1879	1597	1428	1879	1879
Flt Permitted	0.052			0.127			0.757			0.757		
Satd. Flow (perm)	98	5029	1512	238	5051	1173	1422	1879	1574	1135	1879	1879
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			51			46			125			
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		572.2			334.1			216.4			176.0	
Travel Time (s)		29.4			17.2			15.6			12.7	
Confl. Peds. (#/hr)	1		5	5		1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	33%	0%	0%	0%	25%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1608	51	189	2413	3	44	0	142	4	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	26.7	26.7	11.0	28.4	28.4	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.0	96.5	96.5	11.0	96.5	96.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	8.5%	74.2%	74.2%	8.5%	74.2%	74.2%	17.3%	17.3%	17.3%	17.3%	17.3%	17.3%
Maximum Green (s)	7.0	89.8	89.8	7.0	89.8	89.8	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.7	2.6	4.5	2.6	4.5	4.5	4.5

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	105.2	97.2	97.2	113.5	107.3	105.6	12.9		12.9	11.0		
Actuated g/C Ratio	0.81	0.75	0.75	0.87	0.83	0.81	0.10		0.10	0.08		
v/c Ratio	0.01	0.43	0.04	0.55	0.58	0.00	0.31		0.53	0.04		
Control Delay	4.0	19.0	6.7	16.6	5.0	0.0	60.1		19.8	54.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Total Delay	4.0	19.0	6.7	16.6	5.0	0.0	60.1		19.8	54.5		
LOS	A	B	A	B	A	A	E		B	D		
Approach Delay		18.6			5.8			29.3			54.5	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.1	137.9	4.8	12.5	3.4	0.0	11.3		4.3	1.0		
Queue Length 95th (m)	m0.1	169.4	9.8	23.7	232.0	m0.0	23.4		24.9	4.7		
Internal Link Dist (m)		548.2			310.1			192.4			152.0	
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		
Base Capacity (vph)	169	3760	1143	342	4169	961	217		346	157		
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0		
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0		
Storage Cap Reductn	0	0	0	0	0	0	0		0	0		
Reduced v/c Ratio	0.01	0.43	0.04	0.55	0.58	0.00	0.20		0.41	0.03		

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 75 (58%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 11.6 Intersection LOS: B
 Intersection Capacity Utilization 72.0% ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

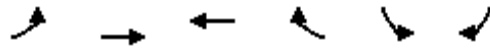
07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (vph)	31	1701	2540	57	71	54
Future Volume (vph)	31	1701	2540	57	71	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1785	5002	5079	1541	1733	1536
Flt Permitted	0.037				0.950	
Satd. Flow (perm)	70	5002	5079	1499	1714	1536
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				58		55
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)	2			2	5	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	2%	3%	4%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	1736	2592	58	72	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	11.0	24.5	24.5	24.5	22.5	22.5
Total Split (s)	11.0	107.0	96.0	96.0	23.0	23.0
Total Split (%)	8.5%	82.3%	73.8%	73.8%	17.7%	17.7%
Maximum Green (s)	7.0	102.5	91.5	91.5	18.5	18.5
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	Max	Max	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	112.8	113.2	106.6	106.6	11.6	11.6
Actuated g/C Ratio	0.87	0.87	0.82	0.82	0.09	0.09
v/c Ratio	0.21	0.40	0.62	0.05	0.47	0.30
Control Delay	11.8	10.0	3.7	0.0	65.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	10.0	3.7	0.0	65.9	17.5
LOS	B	A	A	A	E	B
Approach Delay		10.0	3.6		44.9	
Approach LOS		B	A		D	
Queue Length 50th (m)	3.9	95.7	20.2	0.0	18.9	0.0
Queue Length 95th (m)	10.9	146.1	m27.6	m0.0	34.4	13.1
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	153	4355	4164	1239	246	265
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.40	0.62	0.05	0.29	0.21

Intersection Summary































Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 7.2
 Intersection LOS: A
 Intersection Capacity Utilization 64.9%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	146	1421	182	151	2183	180	250	794	513	146	334	158
Future Volume (vph)	146	1421	182	151	2183	180	250	794	513	146	334	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1497	1733	5079	1541	1750	3535	1521	1767	3500	1597
Flt Permitted	0.068			0.097			0.482			0.156		
Satd. Flow (perm)	128	5029	1477	177	5079	1521	887	3535	1521	290	3500	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			186			126			148			145
Link Speed (k/h)		70			70			60				60
Link Distance (m)		505.1			255.3			487.3				810.8
Travel Time (s)		26.0			13.1			29.2				48.6
Confl. Peds. (#/hr)	1		1	1		1	1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	3%	1%	2%	2%	1%	5%	1%	2%	0%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	149	1450	186	154	2228	184	255	810	523	149	341	161
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

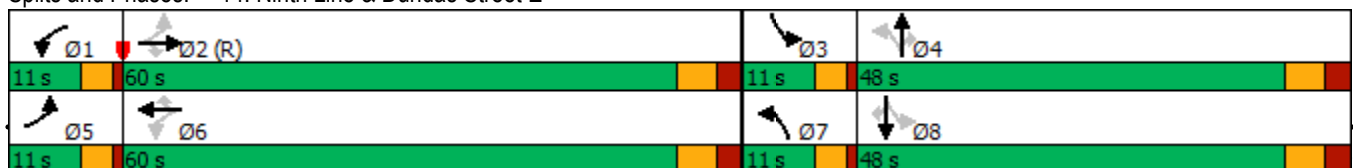


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	71.9	57.1	57.1	71.9	57.1	57.1	54.1	40.1	40.1	54.1	40.1	40.1
Actuated g/C Ratio	0.55	0.44	0.44	0.55	0.44	0.44	0.42	0.31	0.31	0.42	0.31	0.31
v/c Ratio	0.72	0.66	0.25	0.68	1.00	0.25	0.59	0.74	0.92	0.64	0.32	0.27
Control Delay	54.4	20.0	4.6	34.6	55.4	9.1	31.6	44.7	52.5	35.8	34.7	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	20.0	4.6	34.6	55.4	9.1	31.6	44.7	52.5	35.8	34.7	7.6
LOS	D	B	A	C	E	A	C	D	D	D	C	A
Approach Delay		21.2			50.8			45.2			28.3	
Approach LOS		C			D			D			C	
Queue Length 50th (m)	26.3	149.4	11.4	20.3	~236.7	9.3	43.8	99.5	99.9	23.9	35.7	2.9
Queue Length 95th (m)	#58.5	48.5	6.6	#48.8	#266.4	25.0	65.1	123.0	#166.7	38.8	49.0	19.0
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	208	2209	753	227	2232	739	435	1169	602	234	1157	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.66	0.25	0.68	1.00	0.25	0.59	0.69	0.87	0.64	0.29	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 39.2
 Intersection LOS: D
 Intersection Capacity Utilization 96.4%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 14: Ninth Line & Dundas Street E



HCM Unsignalized Intersection Capacity Analysis
 12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	23	36	78	34	4
Future Volume (Veh/h)	2	23	36	78	34	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2	23	37	80	35	4
Pedestrians	2					
Lane Width (m)	3.5					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)				313		
pX, platoon unblocked						
vC, conflicting volume	193	39	41			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	193	39	41			
tC, single (s)	6.9	6.2	4.1			
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.2			
p0 queue free %	100	98	98			
cM capacity (veh/h)	681	1037	1579			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	25	117	39			
Volume Left	2	37	0			
Volume Right	23	0	4			
cSH	995	1579	1700			
Volume to Capacity	0.03	0.02	0.02			
Queue Length 95th (m)	0.6	0.6	0.0			
Control Delay (s)	8.7	2.4	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	2.4	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization		22.8%		ICU Level of Service		A
Analysis Period (min)			15			

Appendix C

Background Developments



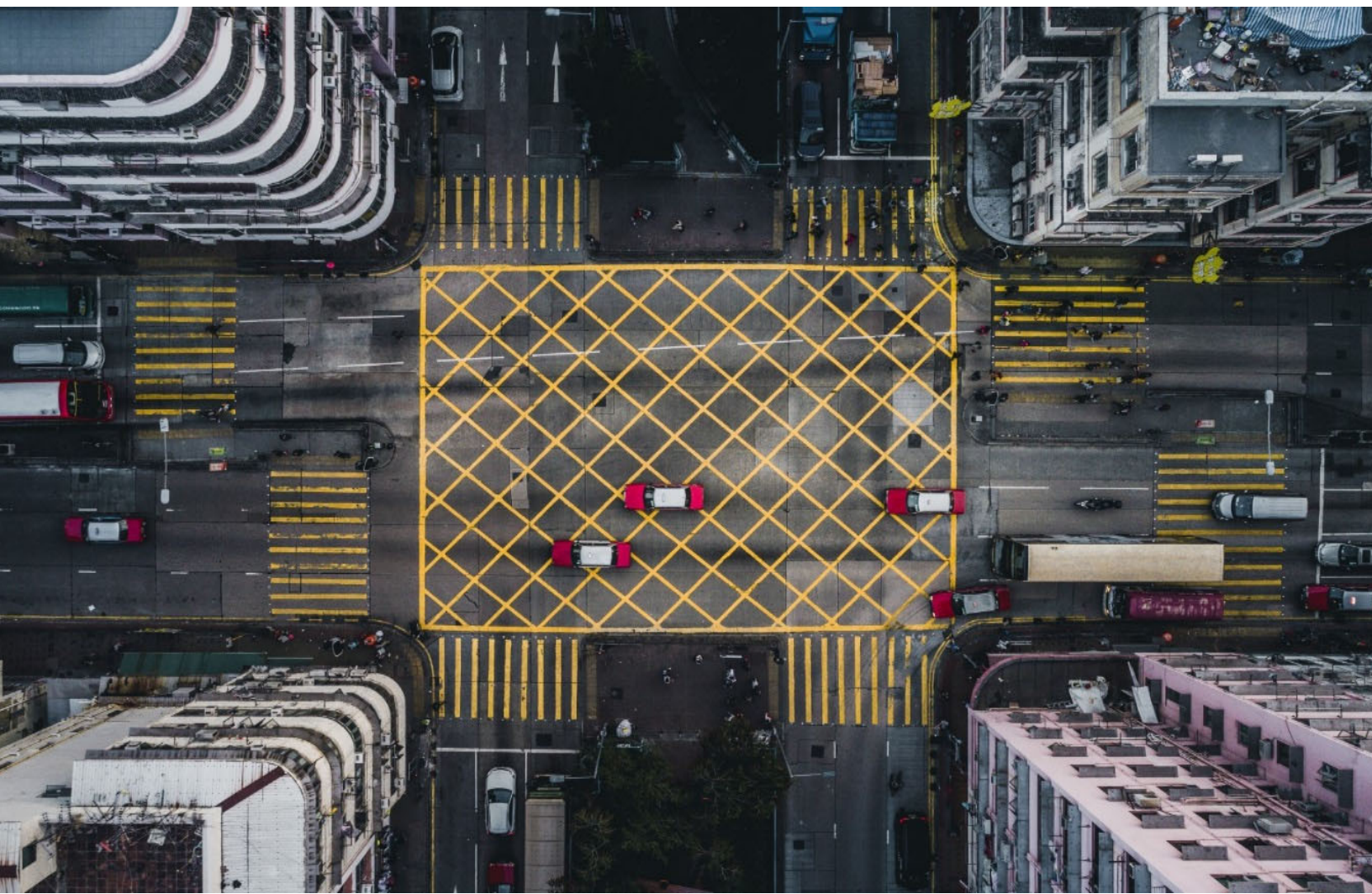
Traffic Impact Study

Joshua Creek Phase 3

Mattamy (Joshua Creek) Limited

18 April 2022

→ The Power of Commitment



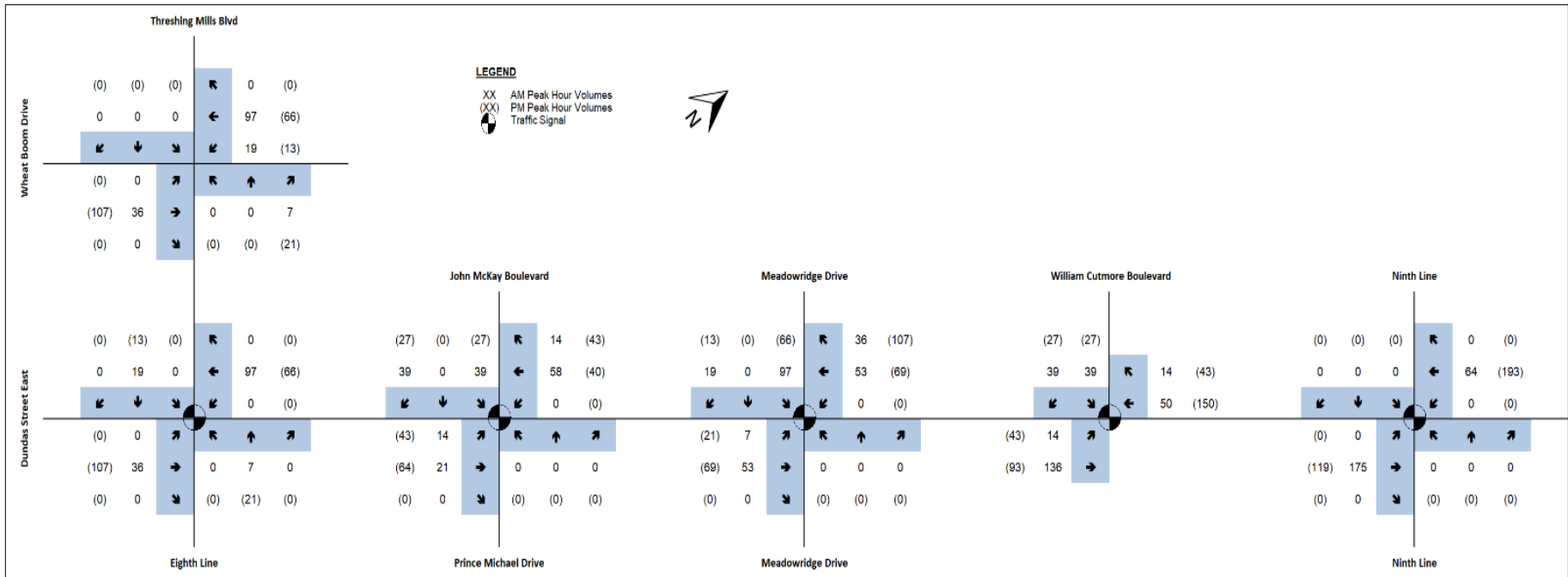
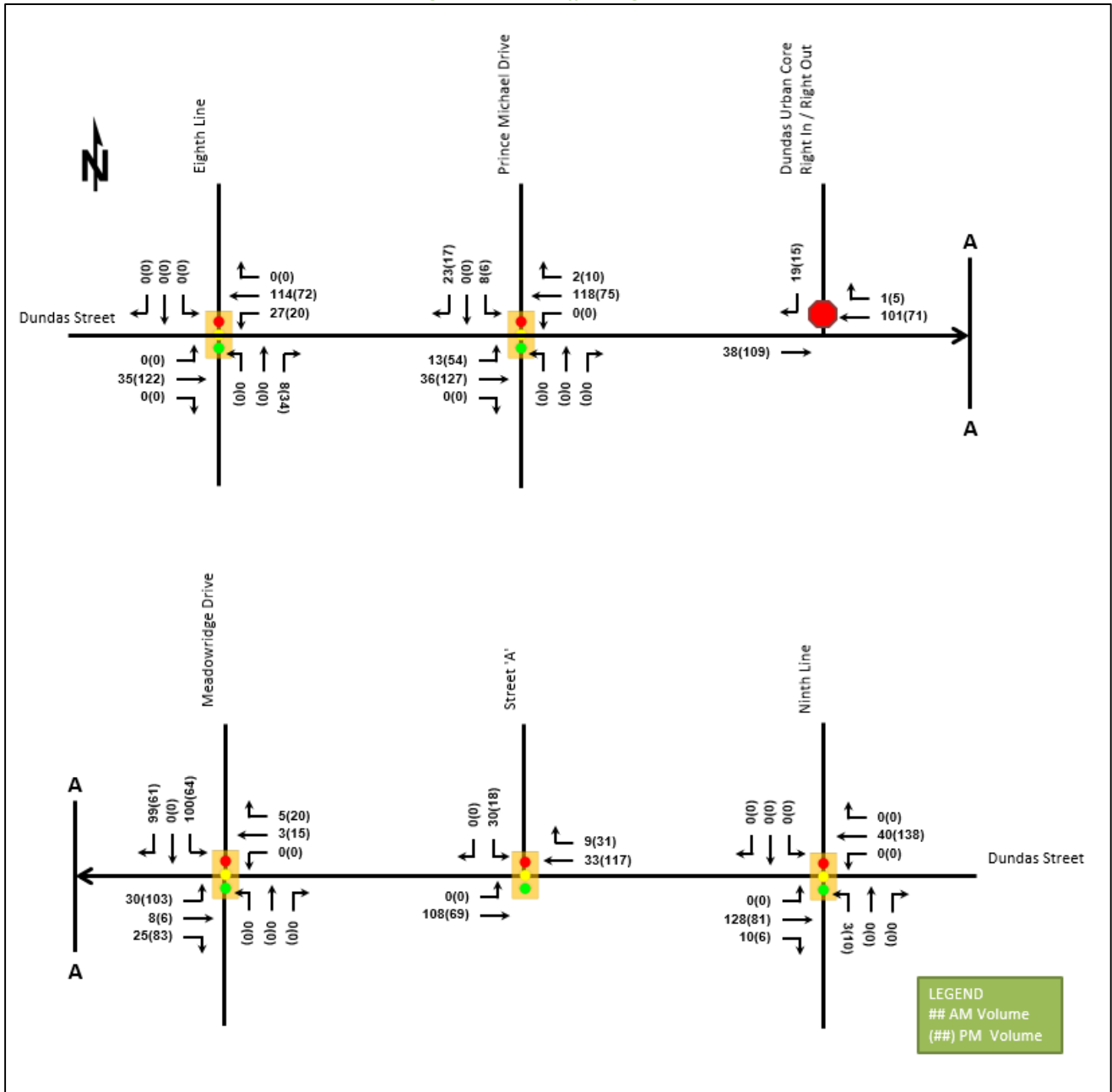


Figure 8 Site Trip Assignment

Figure 17: 2024 Traffic Assignment





Capoak Inc. and Redoak G & A Inc. Proposed Residential Development

Traffic Impact Study



Table 2 Site Trip Distribution

Trip Orientation	Trip Distribution
North	25%
South	10%
East	45%
West	20%
Total	100%

5.3 Site Trips Volumes

The estimated site trips generated by the proposed development for the 2% transit modal split scenario and the 10% transit modal split scenario, as assigned to the nearby road network for the weekday peak hours, is shown in **Figure 5** and **Figure 6**, respectively.

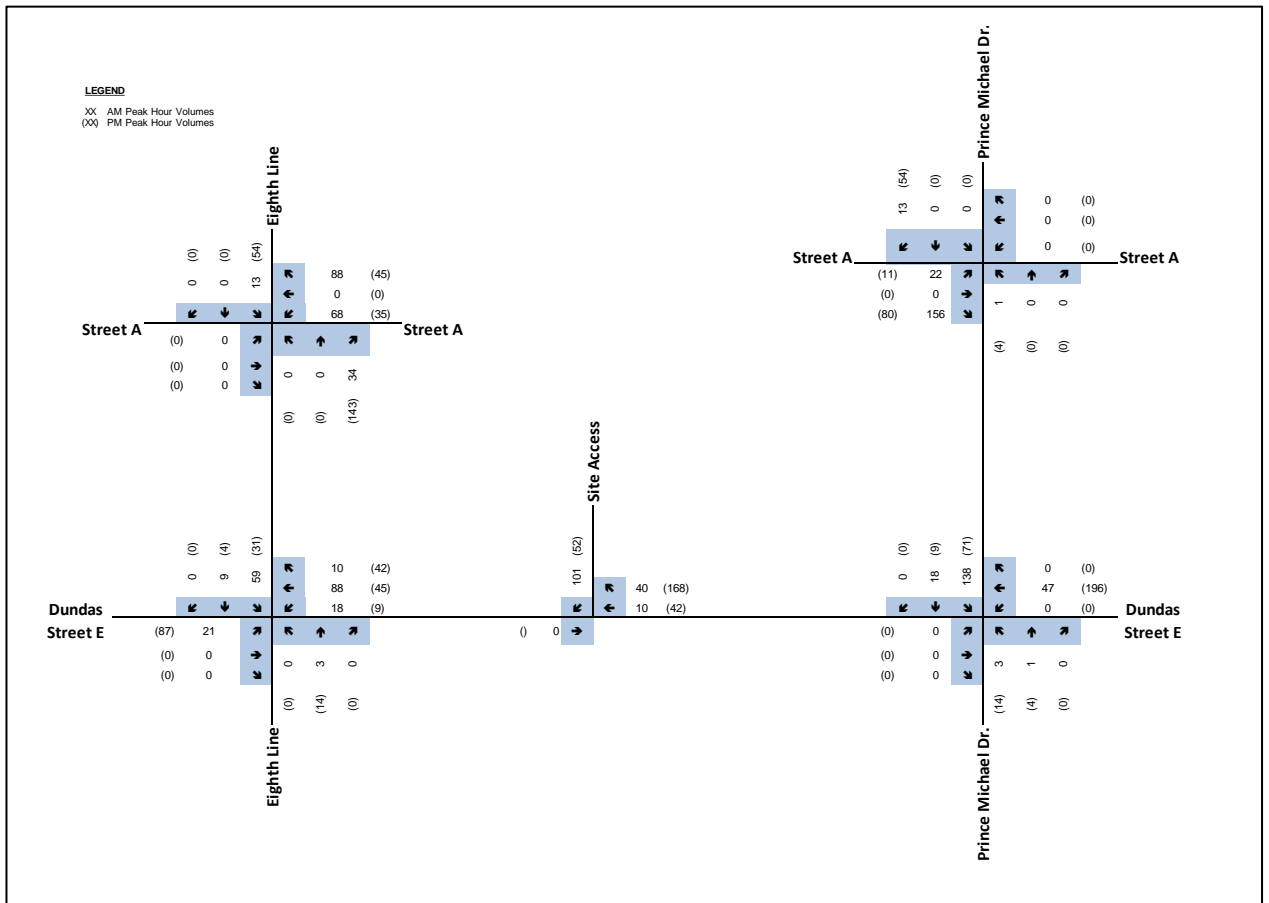


Figure 5 Site Trips with 2% Transit Modal Split



Dunoak and Bressa Draft Plans Proposed Residential Developments

Traffic Impact Study

GHD | 6705 Millcreek Drive Mississauga Ontario L5N 5M4 Canada
11194035 | 800 | Report No 2 | July 2020



Table 3 Site Trip Distribution

To/From	Road	Distribution	Inbound Route	Outbound Route
South	Ninth Line	20%	Northbound left-turn from Ninth Line onto Dundas Street E	Eastbound right-turn from Dundas Street E onto Ninth Line
East	Dundas Street East	37%	Westbound right-turn into given street from Dundas Street E	Southbound left-turn from given street onto Dundas Street E
West	Dundas Street East	43%	Eastbound left-turn into given street from Dundas Street E	Southbound right-turn from given street onto Dundas Street E
Total		100%		

The estimated site trips generated by the proposed development assigned to the adjacent road network for the weekday a.m. and p.m. peak hours are shown below in **Figure 8**.

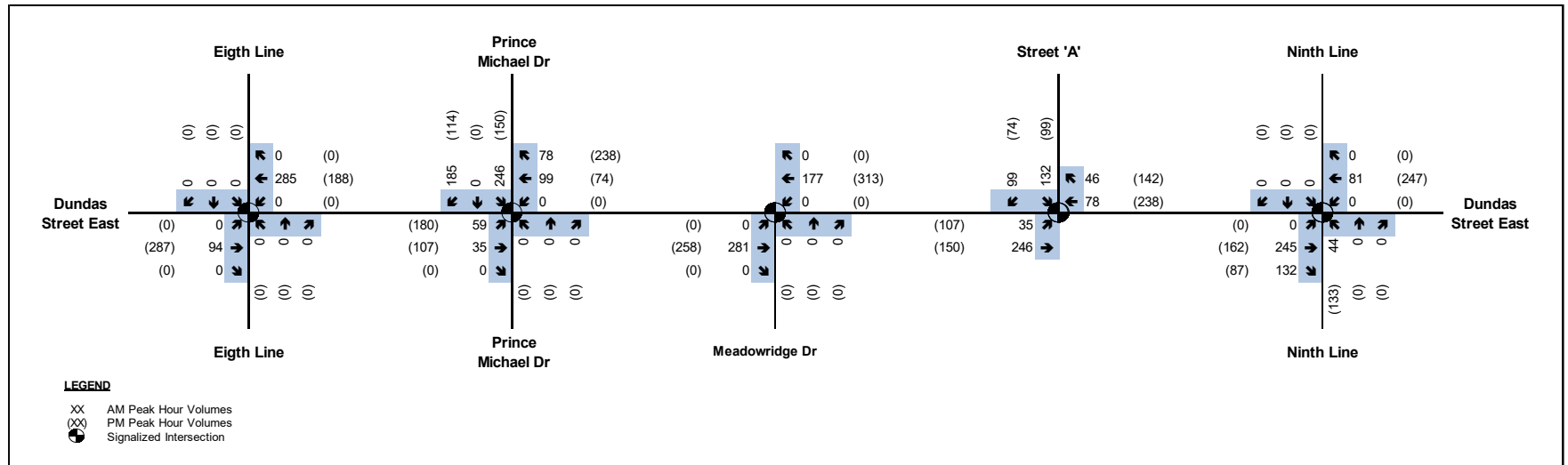
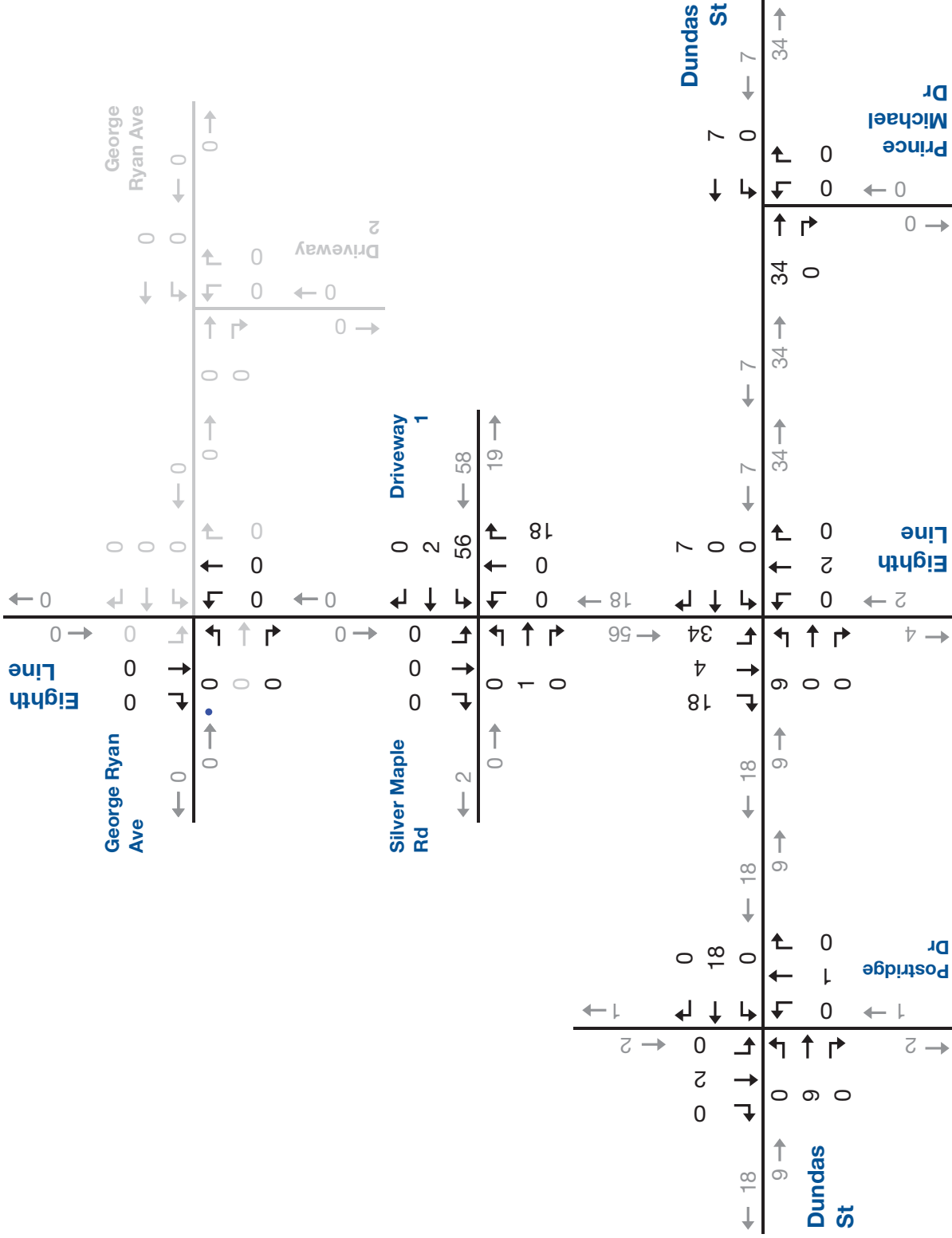
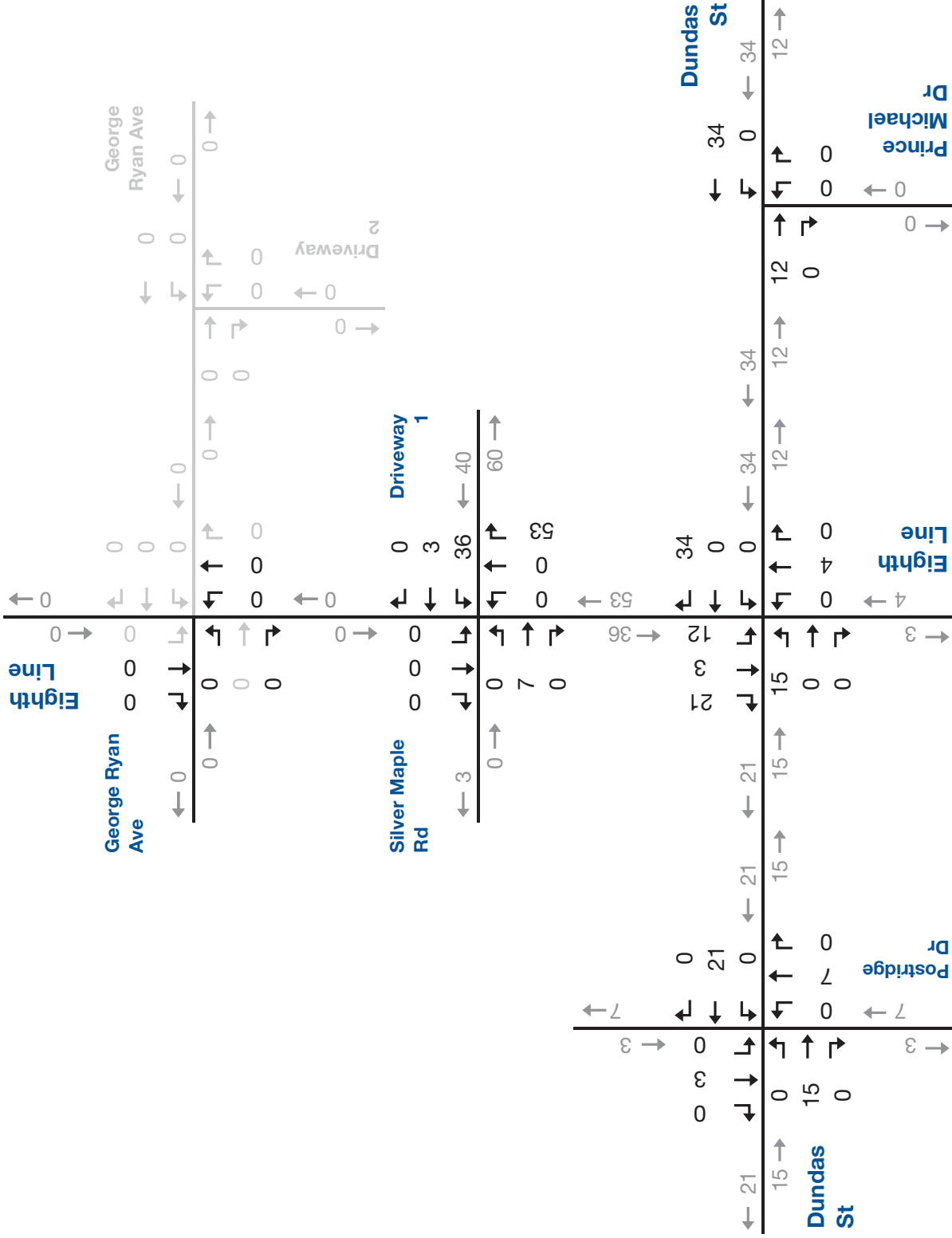


Figure 8 Site Traffic



Scenario 2 AM Peak Hour Site Generated Trip Assignment

Figure 3.3a



Scenario 2 PM Peak Hour Site Generated Trip Assignment

Figure 3.3b



























Appendix D

Future Background Level of Service Calculations

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	2340	130	123	1651	72	102	54	141	198	103	62
Future Volume (vph)	73	2340	130	123	1651	72	102	54	141	198	103	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1082	4980	1526	1785	4706	1469	1700	1740	1566	1767	1824	956
Flt Permitted	0.102			0.050			0.632			0.721		
Satd. Flow (perm)	116	4980	1473	94	4706	1436	1128	1740	1539	1335	1824	942
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			73			120			67
Link Speed (k/h)		70			70			50				50
Link Distance (m)		310.7			586.1			253.5				312.8
Travel Time (s)		16.0			30.1			18.3				22.5
Confl. Peds. (#/hr)	1		7	7		1	3		5	5		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	65%	3%	3%	0%	9%	7%	5%	8%	2%	1%	3%	67%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	2388	133	126	1685	73	104	55	144	202	105	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	38.0	38.0	11.5	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	95.0	78.6	78.6	96.6	81.7	81.7	28.1	28.1	28.1	28.1	28.1	28.1
Actuated g/C Ratio	0.73	0.60	0.60	0.74	0.63	0.63	0.22	0.22	0.22	0.22	0.22	0.22
v/c Ratio	0.42	0.79	0.14	0.52	0.57	0.08	0.43	0.15	0.34	0.70	0.27	0.25
Control Delay	15.3	23.8	6.0	19.8	19.3	6.6	47.8	39.4	11.7	59.3	42.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	23.8	6.0	19.8	19.3	6.6	47.8	39.4	11.7	59.3	42.2	10.0
LOS	B	C	A	B	B	A	D	D	B	E	D	A
Approach Delay		22.6			18.9			29.1				46.0
Approach LOS		C			B			C				D
Queue Length 50th (m)	4.8	168.8	4.7	12.6	110.1	3.6	24.4	12.1	5.2	50.7	23.7	0.0
Queue Length 95th (m)	15.6	#252.8	17.4	35.0	148.1	14.4	39.3	22.0	21.3	72.2	37.3	10.6
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	179	3010	925	244	2956	929	382	590	601	452	618	363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.79	0.14	0.52	0.57	0.08	0.27	0.09	0.24	0.45	0.17	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 23 (18%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 23.3 Intersection LOS: C
 Intersection Capacity Utilization 81.9% 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: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	2461	123	97	1474	116	118	3	146	415	14	203
Future Volume (vph)	89	2461	123	97	1474	116	118	3	146	415	14	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1623	5029	1497	1750	4724	1465	1716	1565	0	1785	1879	1413
Flt Permitted	0.149			0.054			0.748			0.315		
Satd. Flow (perm)	254	5029	1456	99	4724	1431	1343	1565	0	591	1879	1387
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81			118			99			52
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				194.2
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	1		2	2		1	3		1	1		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	2%	5%	2%	8%	9%	4%	0%	1%	0%	0%	13%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	2511	126	99	1504	118	120	152	0	423	14	207
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases		2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		7.0	10.0	10.0
Minimum Split (s)	25.2	25.2	25.2	11.0	25.2	25.2	22.5	22.5		11.0	24.3	24.3
Total Split (s)	72.0	72.0	72.0	11.0	83.0	83.0	23.0	23.0		24.0	47.0	47.0
Total Split (%)	55.4%	55.4%	55.4%	8.5%	63.8%	63.8%	17.7%	17.7%		18.5%	36.2%	36.2%
Maximum Green (s)	66.8	66.8	66.8	7.0	77.8	77.8	18.7	18.7		20.0	42.7	42.7
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.0	3.3	3.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.2	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.0	4.3	4.3

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

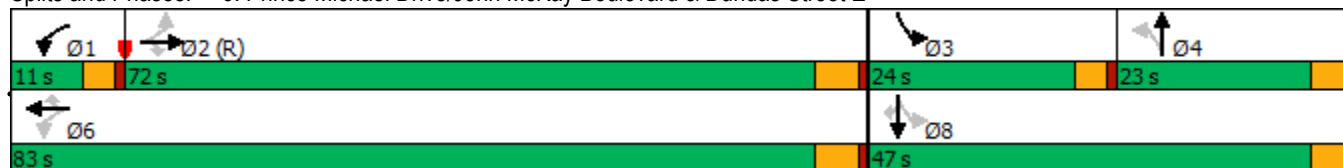


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	0
Act Effct Green (s)	69.6	69.8	69.8	85.1	81.1	80.9	18.9	15.6		39.9	39.6	39.6
Actuated g/C Ratio	0.54	0.54	0.54	0.65	0.62	0.62	0.15	0.12		0.31	0.30	0.30
v/c Ratio	0.67	0.93	0.15	0.51	0.51	0.13	0.62	0.55		1.16	0.02	0.45
Control Delay	32.8	25.3	1.6	41.6	7.8	0.3	65.4	27.9		135.0	30.2	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	32.8	25.3	1.6	41.6	7.8	0.3	65.4	27.9		135.0	30.2	29.7
LOS	C	C	A	D	A	A	E	C		F	C	C
Approach Delay		24.5			9.3			44.4			98.9	
Approach LOS		C			A			D			F	
Queue Length 50th (m)	20.4	253.7	5.3	13.6	47.7	0.2	30.4	13.1		~105.7	2.6	32.9
Queue Length 95th (m)	m21.9	#281.6	m0.5	32.8	53.6	0.3	51.4	35.3		#166.5	7.6	56.1
Internal Link Dist (m)		562.1			548.2			202.5			170.2	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	135	2698	818	195	2945	934	227	309		365	617	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.67	0.93	0.15	0.51	0.51	0.13	0.53	0.49		1.16	0.02	0.42

Intersection Summary





























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 60 (46%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 29.5 Intersection LOS: C
 Intersection Capacity Utilization 100.3% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	35	2881	78	103	1509	48	57	0	268	200	0	93
Future Volume (vph)	35	2881	78	103	1509	48	57	0	268	200	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1069	5029	1572	1684	4724	1117	1750	1879	1597	1069	1879	1597
Flt Permitted	0.155			0.045			0.757			0.757		
Satd. Flow (perm)	174	5029	1535	80	4724	1051	1394	1879	1597	852	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			66			49			119			71
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.9
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	11		1	1		11						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	67%	2%	0%	6%	8%	43%	2%	0%	0%	67%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	2940	80	105	1540	49	58	0	273	204	0	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	2	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.7	26.7	26.7	11.5	28.4	28.4	24.9	24.9	24.9	24.9	24.9	24.9
Total Split (s)	90.0	90.0	90.0	14.0	104.0	104.0	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	69.2%	69.2%	69.2%	10.8%	80.0%	80.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Maximum Green (s)	83.3	83.3	83.3	10.0	97.3	97.3	19.1	19.1	19.1	19.1	19.1	19.1
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	3.6	3.6	3.6
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	6.9	6.9	6.9

Lanes, Volumes, Timings
 8: Meadowridge Drive & Dundas Street E

07-11-2023

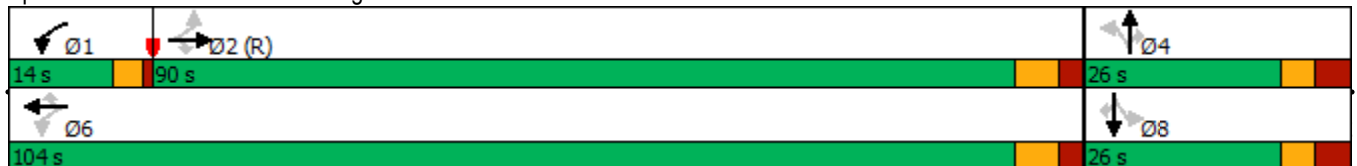


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	84.8	86.5	86.5	103.0	99.0	97.3	21.0		21.0	19.1		19.1
Actuated g/C Ratio	0.65	0.67	0.67	0.79	0.76	0.75	0.16		0.16	0.15		0.15
v/c Ratio	0.32	0.88	0.08	0.51	0.43	0.06	0.26		0.76	1.63		0.32
Control Delay	8.3	7.3	0.4	32.8	3.6	0.2	51.2		44.0	352.7		20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.3	0.3		0.0
Total Delay	8.3	7.3	0.4	32.8	3.6	0.2	51.2		45.2	353.0		20.1
LOS	A	A	A	C	A	A	D		D	F		C
Approach Delay		7.2			5.4			46.3				247.2
Approach LOS		A			A			D				F
Queue Length 50th (m)	1.8	53.2	0.0	5.9	7.3	0.0	13.9		40.6	~79.2		5.7
Queue Length 95th (m)	m2.4	m60.2	m0.2	m22.7	8.5	m0.0	27.9		#80.6	#130.2		22.3
Internal Link Dist (m)		548.2			310.1			192.4				152.9
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	113	3344	1043	223	3597	798	225		357	125		295
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0	0	0	0		16	2		0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.32	0.88	0.08	0.47	0.43	0.06	0.26		0.80	1.66		0.32

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 70 (54%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.63
 Intersection Signal Delay: 22.3 Intersection LOS: C
 Intersection Capacity Utilization 97.4% 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: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	87	3309	1509	123	266	181
Future Volume (vph)	87	3309	1509	123	266	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1638	5002	4794	1469	1733	1342
Flt Permitted	0.142				0.950	
Satd. Flow (perm)	245	5002	4794	1469	1733	1342
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				126		79
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	2%	7%	7%	3%	19%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	3377	1540	126	271	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	24.5	24.5	24.5	24.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	24.0	24.0
Total Split (%)	81.5%	81.5%	81.5%	81.5%	18.5%	18.5%
Maximum Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	Max	Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
v/c Ratio	0.47	0.86	0.41	0.11	1.05	0.69
Control Delay	14.7	21.9	2.7	0.3	121.4	44.0
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	14.7	22.3	2.7	0.3	121.4	44.0
LOS	B	C	A	A	F	D
Approach Delay		22.1	2.5		90.0	
Approach LOS		C	A		F	
Queue Length 50th (m)	11.3	300.6	19.0	0.2	~79.0	27.4
Queue Length 95th (m)	m14.9	m305.7	m23.5	m0.4	#136.2	#56.9
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	191	3905	3743	1174	259	268
Starvation Cap Reductn	0	161	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.90	0.41	0.11	1.05	0.69

Intersection Summary

























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 21.8
 Intersection LOS: C
 Intersection Capacity Utilization 86.2%
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	2906	420	123	1193	131	189	347	162	250	760	182
Future Volume (vph)	169	2906	420	123	1193	131	189	347	162	250	760	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1750	5029	1526	1733	4706	1497	1668	3368	1551	1750	3466	1581
Flt Permitted	0.151			0.066			0.148			0.458		
Satd. Flow (perm)	278	5029	1526	120	4706	1497	260	3368	1551	844	3466	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202			134			143			147
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		505.1			255.3			487.3			810.8	
Travel Time (s)		26.0			13.1			29.2			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	9%	5%	7%	6%	3%	2%	3%	1%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	2965	429	126	1217	134	193	354	165	255	776	186
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings

14: Ninth Line & Dundas Street E

07-11-2023

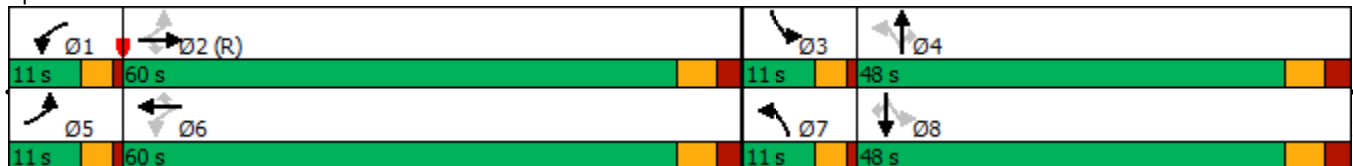


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	75.8	59.7	59.7	74.6	59.0	59.0	50.7	36.7	36.7	50.7	36.7	36.7
Actuated g/C Ratio	0.58	0.46	0.46	0.57	0.45	0.45	0.39	0.28	0.28	0.39	0.28	0.28
v/c Ratio	0.57	1.28	0.53	0.59	0.57	0.18	0.92	0.37	0.30	0.64	0.79	0.34
Control Delay	20.7	160.1	16.2	34.4	28.2	4.2	73.9	37.8	8.8	35.8	49.3	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	160.1	16.2	34.4	28.2	4.2	73.9	37.8	8.8	35.8	49.3	10.3
LOS	C	F	B	C	C	A	E	D	A	D	D	B
Approach Delay		136.0			26.5			40.9			40.5	
Approach LOS		F			C			D			D	
Queue Length 50th (m)	22.4	~380.9	35.1	16.1	90.8	0.0	34.7	40.0	4.3	47.5	101.1	7.7
Queue Length 95th (m)	m28.4	m#413.2	m51.6	#44.4	108.3	12.5	#69.1	51.1	20.3	65.1	117.8	25.3
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	300	2308	809	212	2136	752	209	1114	608	399	1146	621
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	1.28	0.53	0.59	0.57	0.18	0.92	0.32	0.27	0.64	0.68	0.30

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.28
 Intersection Signal Delay: 86.4 Intersection LOS: F
 Intersection Capacity Utilization 109.4% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Ninth Line & Dundas Street E



HCM Unsignalized Intersection Capacity Analysis

12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive





























07-11-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	74	27	85	203	71	16	46	15	14	58	4
Future Volume (Veh/h)	2	74	27	85	203	71	16	46	15	14	58	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2	76	28	87	207	72	16	47	15	14	59	4
Pedestrians		13										
Lane Width (m)		3.5										
Walking Speed (m/s)		1.2										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								313				
pX, platoon unblocked												
vC, conflicting volume	364	196	74	242	190	54	76			62		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	364	196	74	242	190	54	76			62		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	89	97	86	70	93	99			99		
cM capacity (veh/h)	410	675	983	622	683	1018	1482			1541		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	2	104	366	78	77							
Volume Left	2	0	87	16	14							
Volume Right	0	28	72	15	4							
cSH	410	737	713	1482	1541							
Volume to Capacity	0.00	0.14	0.51	0.01	0.01							
Queue Length 95th (m)	0.1	3.9	23.7	0.3	0.2							
Control Delay (s)	13.8	10.7	15.3	1.6	1.4							
Lane LOS	B	B	C	A	A							
Approach Delay (s)	10.7		15.3	1.6	1.4							
Approach LOS	B		C									
Intersection Summary												
Average Delay			11.1									
Intersection Capacity Utilization			41.2%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	97	2070	170	205	2730	174	121	142	169	113	67	31
Future Volume (vph)	97	2070	170	205	2730	174	121	142	169	113	67	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5079	1572	1733	1879	1581	1767	1879	1493
Flt Permitted	0.052			0.051			0.705			0.498		
Satd. Flow (perm)	98	5029	1508	96	5079	1508	1279	1879	1548	920	1879	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134			117			108			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		310.7			586.1			253.5			312.8	
Travel Time (s)		16.0			30.1			18.3			22.5	
Confl. Peds. (#/hr)	10		10	10		10	6		9	9		6
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	3%	0%	1%	1%	0%	7%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	2112	173	209	2786	178	123	145	172	115	68	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.0	73.0	73.0	11.0	73.0	73.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	8.5%	56.2%	56.2%	8.5%	56.2%	56.2%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.0	66.0	66.0	7.0	66.0	66.0	39.0	39.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.3	5.3	1.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	91.5	75.4	75.4	103.2	86.1	86.1	21.8	21.8	21.8	21.8	21.8	21.8
Actuated g/C Ratio	0.70	0.58	0.58	0.79	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.45	0.72	0.19	0.57	0.83	0.17	0.57	0.46	0.49	0.75	0.22	0.11
Control Delay	25.8	22.5	4.7	37.2	17.3	6.9	59.3	52.2	22.8	78.3	46.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	22.5	4.7	37.2	17.3	6.9	59.3	52.2	22.8	78.3	46.1	1.4
LOS	C	C	A	D	B	A	E	D	C	E	D	A
Approach Delay		21.4			18.1			42.7				56.7
Approach LOS		C			B			D				E
Queue Length 50th (m)	8.1	144.5	4.3	45.6	125.2	9.8	30.9	35.7	15.2	29.9	16.0	0.0
Queue Length 95th (m)	27.0	188.0	16.9	m48.9	m133.0	m11.1	48.5	53.0	35.5	48.9	27.9	1.3
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	222	2916	930	368	3363	1038	413	607	573	297	607	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.72	0.19	0.57	0.83	0.17	0.30	0.24	0.30	0.39	0.11	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 3 (2%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 22.4
 Intersection LOS: C
 Intersection Capacity Utilization 95.9%
 ICU Level of Service F
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

























Splits and Phases: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	1978	161	193	2783	286	154	2	83	282	11	154
Future Volume (vph)	220	1978	161	193	2783	286	154	2	83	282	11	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	4980	1572	1767	5051	1597	1785	1544	0	1785	1879	1597
Flt Permitted	0.062			0.065			0.750			0.661		
Satd. Flow (perm)	116	4980	1451	121	5051	1548	1409	1544	0	1235	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149			202			85			144
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		586.1			572.2			226.5			193.9	
Travel Time (s)		30.1			29.4			16.3			14.0	
Confl. Peds. (#/hr)	3		16	16		3			3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	224	2018	164	197	2840	292	157	87	0	288	11	157
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		6.5	10.0	10.0
Minimum Split (s)	11.0	26.8	26.8	11.0	26.8	26.8	23.5	23.5		11.0	22.5	22.5
Total Split (s)	17.0	79.5	79.5	16.0	78.5	78.5	23.5	23.5		11.0	34.5	34.5
Total Split (%)	13.1%	61.2%	61.2%	12.3%	60.4%	60.4%	18.1%	18.1%		8.5%	26.5%	26.5%
Maximum Green (s)	13.0	72.7	72.7	12.0	71.7	71.7	19.0	19.0		7.0	30.0	30.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5		3.0	3.5	3.5
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.8	-1.8	-3.0	-1.8	0.0	-1.9	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.8	2.6	4.5		4.0	4.5	4.5

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	77.2	76.2	76.2	78.6	74.6	72.8	19.1	17.2		29.4	28.9	28.9
Actuated g/C Ratio	0.59	0.59	0.59	0.60	0.57	0.56	0.15	0.13		0.23	0.22	0.22
v/c Ratio	0.95	0.69	0.18	0.77	0.98	0.31	0.76	0.31		0.93	0.03	0.34
Control Delay	74.0	9.6	1.0	41.8	23.4	2.1	76.0	13.7		85.4	39.1	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	74.0	9.6	1.0	41.8	23.4	2.1	76.0	13.7		85.4	39.1	10.2
LOS	E	A	A	D	C	A	E	B		F	D	B
Approach Delay		15.0			22.6			53.8			58.4	
Approach LOS		B			C			D			E	
Queue Length 50th (m)	45.2	41.5	0.2	31.4	274.2	9.8	40.5	0.5		71.4	2.3	2.8
Queue Length 95th (m)	m#90.8	54.3	m3.5	m38.4	#325.0	m9.8	#70.4	16.1		#130.2	7.7	21.1
Internal Link Dist (m)		562.1			548.2			202.5			169.9	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	235	2919	912	263	2898	955	226	298		311	433	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.95	0.69	0.18	0.75	0.98	0.31	0.69	0.29		0.93	0.03	0.33

Intersection Summary





























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 11.8 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 23.5 Intersection LOS: C
 Intersection Capacity Utilization 99.5% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	165	2086	133	185	3203	130	43	0	139	134	0	74
Future Volume (vph)	165	2086	133	185	3203	130	43	0	139	134	0	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5051	1201	1785	1879	1597	1428	1879	1597
Flt Permitted	0.044			0.061			0.757			0.757		
Satd. Flow (perm)	83	5029	1512	115	5051	1173	1422	1879	1574	1135	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			97			95			80
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.0
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	1		5	5		1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	33%	0%	0%	0%	25%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	2129	136	189	3268	133	44	0	142	137	0	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	26.7	26.7	11.0	28.4	28.4	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.0	96.5	96.5	11.0	96.5	96.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	8.5%	74.2%	74.2%	8.5%	74.2%	74.2%	17.3%	17.3%	17.3%	17.3%	17.3%	17.3%
Maximum Green (s)	7.0	89.8	89.8	7.0	89.8	89.8	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.7	2.6	4.5	2.6	4.5	4.5	4.5

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

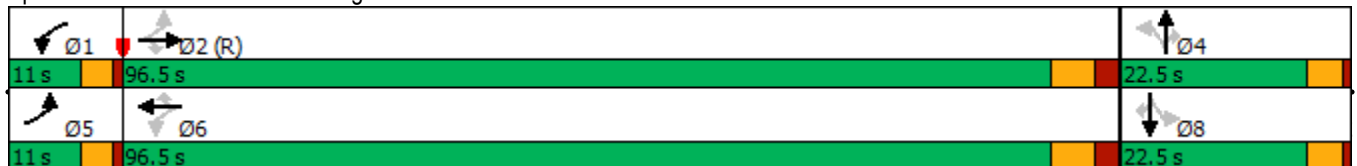


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	100.5	91.9	91.9	105.8	91.5	89.8	19.3		19.3	17.4		17.4
Actuated g/C Ratio	0.77	0.71	0.71	0.81	0.70	0.69	0.15		0.15	0.13		0.13
v/c Ratio	1.02	0.60	0.12	0.84	0.92	0.16	0.21		0.45	0.90		0.27
Control Delay	102.3	20.7	3.5	36.3	32.2	5.0	51.1		23.4	106.6		12.1
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.0	0.0		0.0	0.0		0.0
Total Delay	102.3	20.7	3.5	36.3	33.1	5.0	51.1		23.4	106.6		12.1
LOS	F	C	A	D	C	A	D		C	F		B
Approach Delay		25.4			32.2			30.0				72.9
Approach LOS		C			C			C				E
Queue Length 50th (m)	~32.7	194.1	6.0	24.6	314.5	7.2	10.5		11.2	36.7		0.0
Queue Length 95th (m)	m#71.8	205.2	m6.4	m24.5	m310.7	m7.2	22.5		32.4	#75.9		13.7
Internal Link Dist (m)		548.2			310.1			192.4				152.0
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	164	3553	1108	225	3555	840	217		321	157		290
Starvation Cap Reductn	0	0	0	0	110	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	1.02	0.60	0.12	0.84	0.95	0.16	0.20		0.44	0.87		0.26

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 75 (58%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 30.9 Intersection LOS: C
 Intersection Capacity Utilization 96.4% 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: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	154	2230	3559	273	215	137
Future Volume (vph)	154	2230	3559	273	215	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1785	5002	5079	1541	1733	1536
Flt Permitted	0.042				0.950	
Satd. Flow (perm)	79	5002	5079	1499	1714	1536
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				228		78
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)	2			2	5	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	2%	3%	4%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	2276	3632	279	219	140
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	11.0	24.5	24.5	24.5	22.5	22.5
Total Split (s)	11.0	107.0	96.0	96.0	23.0	23.0
Total Split (%)	8.5%	82.3%	73.8%	73.8%	17.7%	17.7%
Maximum Green (s)	7.0	102.5	91.5	91.5	18.5	18.5
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	Max	Max	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	103.4	102.9	91.5	91.5	18.1	18.1
Actuated g/C Ratio	0.80	0.79	0.70	0.70	0.14	0.14
v/c Ratio	0.98	0.57	1.02	0.25	0.91	0.50
Control Delay	83.1	18.1	28.2	0.2	94.1	30.4
Queue Delay	0.0	0.0	2.3	0.0	0.0	3.3
Total Delay	83.1	18.1	30.5	0.2	94.1	33.6
LOS	F	B	C	A	F	C
Approach Delay		22.3	28.4		70.5	
Approach LOS		C	C		E	
Queue Length 50th (m)	~27.5	175.7	~121.7	0.0	58.8	15.2
Queue Length 95th (m)	m#70.4	191.5	m64.9	m0.0	#105.7	37.0
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	160	3959	3574	1122	246	285
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	24	0	0	76
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.57	1.02	0.25	0.89	0.67

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 28.4 Intersection LOS: C
 Intersection Capacity Utilization 100.0% ICU Level of Service G
 Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

























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

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1965	279	151	2603	180	413	877	513	146	369	170
Future Volume (vph)	148	1965	279	151	2603	180	413	877	513	146	369	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1497	1733	5079	1541	1750	3535	1521	1767	3500	1597
Flt Permitted	0.069			0.069			0.453			0.119		
Satd. Flow (perm)	130	5029	1477	126	5079	1521	834	3535	1521	221	3500	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			217			106			137			125
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		505.1			255.3			487.3			810.8	
Travel Time (s)		26.0			13.1			29.2			48.6	
Confl. Peds. (#/hr)	1		1	1		1	1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	3%	1%	2%	2%	1%	5%	1%	2%	0%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	2005	285	154	2656	184	421	895	523	149	377	173
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings

14: Ninth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	71.0	56.5	56.5	71.2	56.6	56.6	54.9	40.9	40.9	54.9	40.9	40.9
Actuated g/C Ratio	0.55	0.43	0.43	0.55	0.44	0.44	0.42	0.31	0.31	0.42	0.31	0.31
v/c Ratio	0.74	0.92	0.37	0.77	1.20	0.26	1.00	0.81	0.92	0.71	0.34	0.30
Control Delay	55.0	24.1	3.6	51.2	129.4	11.3	76.8	47.1	53.2	41.4	34.8	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	24.1	3.6	51.2	129.4	11.3	76.8	47.1	53.2	41.4	34.8	11.5
LOS	D	C	A	D	F	B	E	D	D	D	C	B
Approach Delay		23.6			118.1			55.7			30.5	
Approach LOS		C			F			E			C	
Queue Length 50th (m)	26.8	78.0	4.2	24.7	~324.5	12.6	81.4	113.5	103.2	23.9	40.0	8.9
Queue Length 95th (m)	m#55.6	#174.3	m5.9	#62.2	#352.4	29.1	#153.7	139.4	#171.0	#45.5	54.0	26.7
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	205	2184	764	201	2209	721	422	1169	594	211	1157	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.92	0.37	0.77	1.20	0.26	1.00	0.77	0.88	0.71	0.33	0.29

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.20

Intersection Signal Delay: 67.1

Intersection LOS: E

Intersection Capacity Utilization 113.6%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

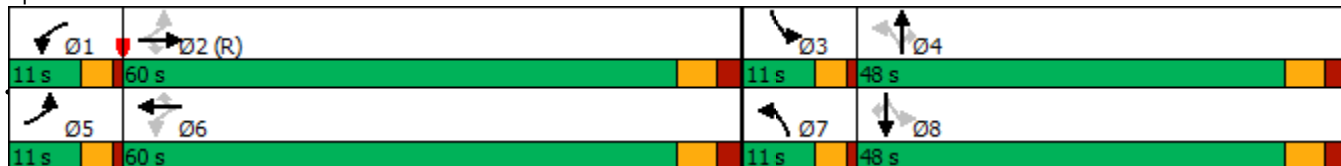
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.


















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

Splits and Phases: 14: Ninth Line & Dundas Street E



























HCM Unsignalized Intersection Capacity Analysis
 12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	256	27	55	134	44	41	78	159	45	34	4
Future Volume (Veh/h)	2	256	27	55	134	44	41	78	159	45	34	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2	261	28	56	137	45	42	80	162	46	35	4
Pedestrians		2										
Lane Width (m)		3.5										
Walking Speed (m/s)		1.2										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								313				
pX, platoon unblocked												
vC, conflicting volume	490	457	39	532	378	161	41			242		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	490	457	39	532	378	161	41			242		
tC, single (s)	7.6	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	4.0	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	44	97	77	74	95	97			97		
cM capacity (veh/h)	302	469	1037	240	520	889	1579			1336		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	2	289	238	284	85							
Volume Left	2	0	56	42	46							
Volume Right	0	28	45	162	4							
cSH	302	495	435	1579	1336							
Volume to Capacity	0.01	0.58	0.55	0.03	0.03							
Queue Length 95th (m)	0.2	29.4	25.7	0.7	0.9							
Control Delay (s)	17.0	21.9	22.8	1.3	4.3							
Lane LOS	C	C	C	A	A							
Approach Delay (s)	21.9		22.8	1.3	4.3							
Approach LOS	C		C									
Intersection Summary												
Average Delay			14.0									
Intersection Capacity Utilization			54.1%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	2340	130	123	1651	72	102	54	141	198	103	62
Future Volume (vph)	73	2340	130	123	1651	72	102	54	141	198	103	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1082	4980	1526	1785	4706	1469	1700	1740	1566	1767	1824	956
Flt Permitted	0.102			0.050			0.632			0.721		
Satd. Flow (perm)	116	4980	1473	94	4706	1436	1128	1740	1539	1335	1824	942
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			73			120			67
Link Speed (k/h)		70			70			50				50
Link Distance (m)		310.7			586.1			253.5				312.8
Travel Time (s)		16.0			30.1			18.3				22.5
Confl. Peds. (#/hr)	1		7	7		1	3		5	5		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	65%	3%	3%	0%	9%	7%	5%	8%	2%	1%	3%	67%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	2388	133	126	1685	73	104	55	144	202	105	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	38.0	38.0	11.5	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	95.0	78.6	78.6	96.6	81.7	81.7	28.1	28.1	28.1	28.1	28.1	28.1
Actuated g/C Ratio	0.73	0.60	0.60	0.74	0.63	0.63	0.22	0.22	0.22	0.22	0.22	0.22
v/c Ratio	0.42	0.79	0.14	0.52	0.57	0.08	0.43	0.15	0.34	0.70	0.27	0.25
Control Delay	15.3	23.8	6.0	20.1	30.7	11.0	47.8	39.4	11.7	59.3	42.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	23.8	6.0	20.1	30.7	11.0	47.8	39.4	11.7	59.3	42.2	10.0
LOS	B	C	A	C	C	B	D	D	B	E	D	A
Approach Delay		22.6			29.2			29.1			46.0	
Approach LOS		C			C			C			D	
Queue Length 50th (m)	4.8	168.8	4.7	9.9	159.3	2.9	24.4	12.1	5.2	50.7	23.7	0.0
Queue Length 95th (m)	15.6	#252.8	17.4	m33.6	183.9	m18.2	39.3	22.0	21.3	72.2	37.3	10.6
Internal Link Dist (m)		286.7			562.1			229.5			288.8	
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	179	3010	925	244	2956	929	382	590	601	452	618	363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.79	0.14	0.52	0.57	0.08	0.27	0.09	0.24	0.45	0.17	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 23 (18%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 27.1
 Intersection LOS: C
 Intersection Capacity Utilization 81.9%
 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.
 m Volume for 95th percentile queue is metered by upstream signal.





























Splits and Phases: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (vph)	89	2461	123	97	1474	116	118	3	146	415	14	203
Future Volume (vph)	89	2461	123	97	1474	116	118	3	146	415	14	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1623	5029	1497	1750	4724	1465	1716	1565	0	1785	1879	1413
Flt Permitted	0.103			0.059			0.748			0.315		
Satd. Flow (perm)	176	5029	1456	109	4724	1431	1343	1565	0	591	1879	1387
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78			118			101			109
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				194.2
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	1		2	2		1	3		1	1		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	2%	5%	2%	8%	9%	4%	0%	1%	0%	0%	13%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	2511	126	99	1504	118	120	152	0	423	14	207
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0		5.0	10.0	10.0
Minimum Split (s)	9.0	25.2	25.2	9.0	25.2	25.2	22.5	22.5		9.0	24.3	24.3
Total Split (s)	10.0	68.0	68.0	10.0	68.0	68.0	23.0	23.0		29.0	52.0	52.0
Total Split (%)	7.7%	52.3%	52.3%	7.7%	52.3%	52.3%	17.7%	17.7%		22.3%	40.0%	40.0%
Maximum Green (s)	6.0	62.8	62.8	6.0	62.8	62.8	18.7	18.7		25.0	47.7	47.7
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.0	3.3	3.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.0	4.3	4.3

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

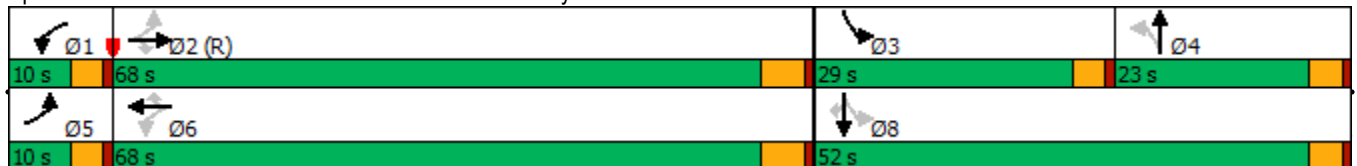


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	73.1	65.3	65.3	79.0	65.3	65.1	18.9	15.6		44.9	44.6	44.6
Actuated g/C Ratio	0.56	0.50	0.50	0.61	0.50	0.50	0.15	0.12		0.35	0.34	0.34
v/c Ratio	0.52	0.99	0.16	0.52	0.63	0.15	0.62	0.55		0.98	0.02	0.38
Control Delay	24.7	36.7	1.9	48.7	16.2	3.0	65.4	27.1		75.1	26.9	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	24.7	36.7	1.9	48.7	16.2	3.0	65.4	27.1		75.1	26.9	16.2
LOS	C	D	A	D	B	A	E	C		E	C	B
Approach Delay		34.7			17.2			44.0			55.1	
Approach LOS		C			B			D			E	
Queue Length 50th (m)	3.8	~273.4	5.7	17.9	40.0	0.0	30.4	12.6		96.0	2.5	18.3
Queue Length 95th (m)	m8.2	#303.3	m0.5	36.3	66.7	7.7	51.4	34.8		#147.4	7.1	39.2
Internal Link Dist (m)		562.1			548.2			202.5			170.2	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	174	2527	770	189	2372	775	227	311		433	689	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.52	0.99	0.16	0.52	0.63	0.15	0.53	0.49		0.98	0.02	0.36

Intersection Summary





























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 60 (46%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 32.0 Intersection LOS: C
 Intersection Capacity Utilization 99.8% 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: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	35	2881	78	103	1509	48	57	0	268	200	0	93
Future Volume (vph)	35	2881	78	103	1509	48	57	0	268	200	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1069	5029	1572	1684	4724	1117	1750	1879	1597	1069	1879	1597
Flt Permitted	0.144			0.051			0.757			0.612		
Satd. Flow (perm)	161	5029	1535	90	4724	1051	1394	1879	1597	689	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100			66			98			65
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.9
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	11		1	1		11						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	67%	2%	0%	6%	8%	43%	2%	0%	0%	67%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	2940	80	105	1540	49	58	0	273	204	0	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm		Perm	pm+pt		Perm
Protected Phases		2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	2	2	2	1	6	6	4	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	4.0	20.0	20.0	10.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	26.7	26.7	26.7	8.0	28.4	28.4	24.9	24.9	24.9	9.0	24.9	24.9
Total Split (s)	81.0	81.0	81.0	9.0	90.0	90.0	25.0	25.0	25.0	15.0	40.0	40.0
Total Split (%)	62.3%	62.3%	62.3%	6.9%	69.2%	69.2%	19.2%	19.2%	19.2%	11.5%	30.8%	30.8%
Maximum Green (s)	74.3	74.3	74.3	5.0	83.3	83.3	18.1	18.1	18.1	11.0	33.1	33.1
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	1.0	3.6	3.6
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	4.0	6.9	6.9

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

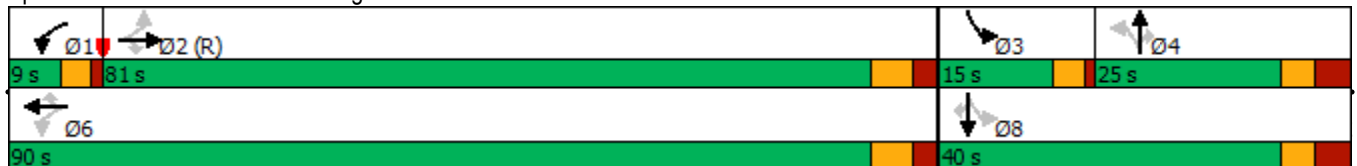


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0	0		0	0
Act Effct Green (s)	75.2	76.9	76.9	90.3	86.3	84.6	18.7		18.7	34.7		31.8
Actuated g/C Ratio	0.58	0.59	0.59	0.69	0.66	0.65	0.14		0.14	0.27		0.24
v/c Ratio	0.39	0.99	0.08	0.64	0.49	0.07	0.29		0.87	0.95		0.22
Control Delay	14.4	17.4	0.3	36.0	22.9	7.7	53.2		61.5	94.3		16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		26.4	36.0		0.0
Total Delay	14.4	17.4	0.3	36.0	22.9	7.7	53.2		87.9	130.3		16.0
LOS	B	B	A	D	C	A	D		F	F		B
Approach Delay		16.9			23.3			81.8				94.0
Approach LOS		B			C			F				F
Queue Length 50th (m)	2.8	~79.2	0.0	15.8	118.9	1.8	14.0		47.2	49.3		6.2
Queue Length 95th (m)	m3.1	m#84.9	m0.1	#37.1	134.5	m8.7	28.2		#93.9	#102.8		20.6
Internal Link Dist (m)		548.2			310.1			192.4				152.9
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	93	2975	948	165	3135	707	214		328	215		455
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0	0	0	0		59	26		0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.39	0.99	0.08	0.64	0.49	0.07	0.27		1.01	1.08		0.21

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 70 (54%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 27.2 Intersection LOS: C
 Intersection Capacity Utilization 95.0% 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: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	87	3309	1509	123	266	181
Future Volume (vph)	87	3309	1509	123	266	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1638	5002	4794	1469	1733	1342
Flt Permitted	0.139				0.950	
Satd. Flow (perm)	240	5002	4794	1469	1733	1342
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				126		66
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	2%	7%	7%	3%	19%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	3377	1540	126	271	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	24.5	24.5	24.5	24.5	22.5	22.5
Total Split (s)	100.0	100.0	100.0	100.0	30.0	30.0
Total Split (%)	76.9%	76.9%	76.9%	76.9%	23.1%	23.1%
Maximum Green (s)	95.5	95.5	95.5	95.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	Max	Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	97.5	97.5	97.5	97.5	23.5	23.5
Actuated g/C Ratio	0.75	0.75	0.75	0.75	0.18	0.18
v/c Ratio	0.49	0.90	0.43	0.11	0.87	0.62
Control Delay	21.9	29.1	6.6	1.0	77.7	40.7
Queue Delay	0.0	1.3	0.0	0.0	0.0	0.0
Total Delay	21.9	30.4	6.6	1.0	77.7	40.7
LOS	C	C	A	A	E	D
Approach Delay		30.2	6.2		62.7	
Approach LOS		C	A		E	
Queue Length 50th (m)	18.9	321.9	52.7	0.0	70.3	29.2
Queue Length 95th (m)	m19.9	m327.9	60.6	5.0	#113.8	55.8
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	180	3751	3595	1133	339	316
Starvation Cap Reductn	0	194	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.95	0.43	0.11	0.80	0.59

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 25.7 Intersection LOS: C
 Intersection Capacity Utilization 86.2% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings

12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023

































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	74	27	85	203	71	16	46	15	14	58	4
Future Volume (vph)	2	74	27	85	203	71	16	46	15	14	58	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	10.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	1753	0	0	1786	0	0	1680	0	0	1815	0
Flt Permitted	0.950				0.988			0.990			0.991	
Satd. Flow (perm)	1785	1753	0	0	1786	0	0	1680	0	0	1815	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		211.2			173.3			312.8			111.9	
Travel Time (s)		15.2			12.5			22.5			8.1	
Confl. Peds. (#/hr)							13					13
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	6%	11%	0%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	104	0	0	366	0	0	78	0	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	169	2906	420	123	1193	131	189	347	162	250	760	182
Future Volume (vph)	169	2906	420	123	1193	131	189	347	162	250	760	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1750	5029	1526	1733	4706	1497	1668	3368	1551	1750	3466	1581
Flt Permitted	0.172			0.047			0.109			0.506		
Satd. Flow (perm)	317	5029	1526	86	4706	1497	191	3368	1551	932	3466	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175			131			86			110
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		505.1			255.3			487.3			810.8	
Travel Time (s)		26.0			13.1			29.2			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	9%	5%	7%	6%	3%	2%	3%	1%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	2906	420	123	1193	131	189	347	162	250	760	182
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	9.0	45.3	45.3	9.0	45.3	45.3	9.0	47.5	47.5	9.0	47.5	47.5
Total Split (s)	10.0	87.0	87.0	10.0	87.0	87.0	15.0	53.0	53.0	10.0	48.0	48.0
Total Split (%)	6.3%	54.4%	54.4%	6.3%	54.4%	54.4%	9.4%	33.1%	33.1%	6.3%	30.0%	30.0%
Maximum Green (s)	6.0	80.7	80.7	6.0	80.7	80.7	11.0	46.5	46.5	6.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	97.4	83.0	83.0	97.6	83.1	83.1	59.5	45.5	45.5	53.5	40.5	40.5
Actuated g/C Ratio	0.61	0.52	0.52	0.61	0.52	0.52	0.37	0.28	0.28	0.33	0.25	0.25
v/c Ratio	0.59	1.11	0.48	0.77	0.49	0.16	0.94	0.36	0.32	0.70	0.87	0.38
Control Delay	22.8	93.7	15.7	63.2	25.8	3.4	89.3	46.5	21.9	52.2	68.4	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	93.7	15.7	63.2	25.8	3.4	89.3	46.5	21.9	52.2	68.4	21.3
LOS	C	F	B	E	C	A	F	D	C	D	E	C
Approach Delay		80.9			26.9			52.4			57.8	
Approach LOS		F			C			D			E	
Queue Length 50th (m)	23.8	~410.8	50.8	24.7	93.6	0.0	44.0	48.3	19.0	60.2	127.2	18.8
Queue Length 95th (m)	36.4	#433.2	80.9	#65.2	107.2	11.2	#94.2	63.2	40.0	85.0	152.6	41.9
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	286	2608	875	160	2443	840	200	1010	525	357	931	505
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	1.11	0.48	0.77	0.49	0.16	0.94	0.34	0.31	0.70	0.82	0.36

Intersection Summary






























Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 12 (8%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 62.5 Intersection LOS: E
 Intersection Capacity Utilization 109.4% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 14: Ninth Line & Dundas Street E



Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (vph)	97	2070	170	205	2730	174	121	142	169	113	67	31
Future Volume (vph)	97	2070	170	205	2730	174	121	142	169	113	67	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5079	1572	1733	1879	1581	1767	1879	1493
Flt Permitted	0.052			0.051			0.705			0.498		
Satd. Flow (perm)	98	5029	1508	96	5079	1508	1279	1879	1548	920	1879	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134			117			108			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		310.7			586.1			253.5			312.8	
Travel Time (s)		16.0			30.1			18.3			22.5	
Confl. Peds. (#/hr)	10		10	10		10	6		9	9		6
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	3%	0%	1%	1%	0%	7%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	2112	173	209	2786	178	123	145	172	115	68	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.0	73.0	73.0	11.0	73.0	73.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	8.5%	56.2%	56.2%	8.5%	56.2%	56.2%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.0	66.0	66.0	7.0	66.0	66.0	39.0	39.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.3	5.3	1.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	91.5	75.4	75.4	103.2	86.1	86.1	21.8	21.8	21.8	21.8	21.8	21.8
Actuated g/C Ratio	0.70	0.58	0.58	0.79	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.45	0.72	0.19	0.57	0.83	0.17	0.57	0.46	0.49	0.75	0.22	0.11
Control Delay	25.8	22.5	4.7	37.2	17.4	6.9	59.3	52.2	22.8	78.3	46.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	22.5	4.7	37.2	17.4	6.9	59.3	52.2	22.8	78.3	46.1	1.4
LOS	C	C	A	D	B	A	E	D	C	E	D	A
Approach Delay		21.4			18.1			42.7				56.7
Approach LOS		C			B			D				E
Queue Length 50th (m)	8.1	144.5	4.3	45.6	125.2	9.8	30.9	35.7	15.2	29.9	16.0	0.0
Queue Length 95th (m)	27.0	188.0	16.9	m48.8	m133.2	m11.1	48.5	53.0	35.5	48.9	27.9	1.3
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	222	2916	930	368	3363	1038	413	607	573	297	607	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.72	0.19	0.57	0.83	0.17	0.30	0.24	0.30	0.39	0.11	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 3 (2%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 22.4
 Intersection LOS: C
 Intersection Capacity Utilization 95.9%
 ICU Level of Service F
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	1978	161	193	2783	286	154	2	83	282	11	154
Future Volume (vph)	220	1978	161	193	2783	286	154	2	83	282	11	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	4980	1572	1767	5051	1597	1785	1544	0	1785	1879	1597
Flt Permitted	0.062			0.065			0.750			0.661		
Satd. Flow (perm)	116	4980	1451	121	5051	1548	1409	1544	0	1235	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149			202			85			144
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				193.9
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	3		16	16		3			3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	224	2018	164	197	2840	292	157	87	0	288	11	157
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		6.5	10.0	10.0
Minimum Split (s)	11.0	26.8	26.8	11.0	26.8	26.8	23.5	23.5		11.0	22.5	22.5
Total Split (s)	17.0	79.5	79.5	16.0	78.5	78.5	23.5	23.5		11.0	34.5	34.5
Total Split (%)	13.1%	61.2%	61.2%	12.3%	60.4%	60.4%	18.1%	18.1%		8.5%	26.5%	26.5%
Maximum Green (s)	13.0	72.7	72.7	12.0	71.7	71.7	19.0	19.0		7.0	30.0	30.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5		3.0	3.5	3.5
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.8	-1.8	-3.0	-1.8	0.0	-1.9	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.8	2.6	4.5		4.0	4.5	4.5

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	77.2	76.2	76.2	78.6	74.6	72.8	19.1	17.2		29.4	28.9	28.9
Actuated g/C Ratio	0.59	0.59	0.59	0.60	0.57	0.56	0.15	0.13		0.23	0.22	0.22
v/c Ratio	0.95	0.69	0.18	0.77	0.98	0.31	0.76	0.31		0.93	0.03	0.34
Control Delay	74.0	9.6	1.0	42.4	21.4	1.6	76.0	13.7		85.4	39.1	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	74.0	9.6	1.0	42.4	21.4	1.6	76.0	13.7		85.4	39.1	10.2
LOS	E	A	A	D	C	A	E	B		F	D	B
Approach Delay		15.0			20.9			53.8			58.4	
Approach LOS		B			C			D			E	
Queue Length 50th (m)	45.2	41.5	0.2	31.5	280.3	7.3	40.5	0.5		71.4	2.3	2.8
Queue Length 95th (m)	m#90.8	54.3	m3.5	m35.4	m#326.6	m7.7	#70.4	16.1		#130.2	7.7	21.1
Internal Link Dist (m)		562.1			548.2			202.5			169.9	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	235	2919	912	263	2898	955	226	298		311	433	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.95	0.69	0.18	0.75	0.98	0.31	0.69	0.29		0.93	0.03	0.33

Intersection Summary





























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 11.8 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 22.6 Intersection LOS: C
 Intersection Capacity Utilization 99.5% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	165	2086	133	185	3203	130	43	0	139	134	0	74
Future Volume (vph)	165	2086	133	185	3203	130	43	0	139	134	0	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5051	1201	1785	1879	1597	1428	1879	1597
Flt Permitted	0.045			0.062			0.757			0.757		
Satd. Flow (perm)	85	5029	1512	116	5051	1173	1422	1879	1574	1135	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			85			109			95
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.0
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	1		5	5		1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	33%	0%	0%	0%	25%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	2129	136	189	3268	133	44	0	142	137	0	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	26.7	26.7	9.0	28.4	28.4	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	95.0	95.0	12.0	91.0	91.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	12.3%	73.1%	73.1%	9.2%	70.0%	70.0%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%
Maximum Green (s)	12.0	88.3	88.3	8.0	84.3	84.3	18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.7	2.6	4.5	2.6	4.5	4.5	4.5

Lanes, Volumes, Timings
 8: Meadowridge Drive & Dundas Street E

07-11-2023

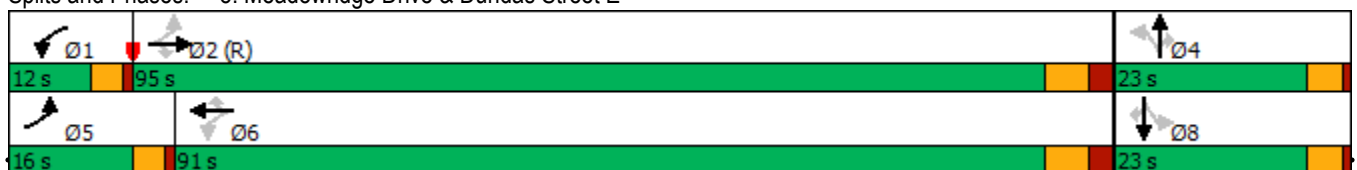


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	102.7	90.9	90.9	102.9	88.0	86.3	19.6		19.6	17.7		17.7
Actuated g/C Ratio	0.79	0.70	0.70	0.79	0.68	0.66	0.15		0.15	0.14		0.14
v/c Ratio	0.80	0.61	0.12	0.81	0.96	0.16	0.21		0.43	0.89		0.25
Control Delay	53.1	20.8	3.5	37.7	37.1	7.0	50.6		18.7	103.4		7.9
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0		0.0	0.0		0.0
Total Delay	53.1	20.8	3.5	37.7	37.4	7.0	50.6		18.7	103.4		7.9
LOS	D	C	A	D	D	A	D		B	F		A
Approach Delay		22.0			36.3			26.3				69.3
Approach LOS		C			D			C				E
Queue Length 50th (m)	23.2	194.2	6.0	25.3	320.3	8.9	10.4		7.8	36.6		0.0
Queue Length 95th (m)	m#51.7	205.3	m6.4	m26.9	m324.2	m10.0	22.4		28.3	#74.6		9.9
Internal Link Dist (m)		548.2			310.1			192.4				152.0
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	224	3514	1097	233	3417	807	223		338	161		308
Starvation Cap Reductn	0	0	0	0	18	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	0.75	0.61	0.12	0.81	0.96	0.16	0.20		0.42	0.85		0.25

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 75 (58%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 31.7
 Intersection LOS: C
 Intersection Capacity Utilization 96.4%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Meadowridge Drive & Dundas Street E



2028 Future Background PM Peak 10:21 pm 07-11-2023 Baseline

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	154	2230	3559	273	215	137
Future Volume (vph)	154	2230	3559	273	215	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1785	5002	5079	1541	1733	1536
Flt Permitted	0.042				0.950	
Satd. Flow (perm)	79	5002	5079	1499	1714	1536
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				231		78
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)	2			2	5	
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	2%	3%	4%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	2230	3559	273	215	137
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	9.0	24.5	24.5	24.5	22.5	22.5
Total Split (s)	11.0	107.5	96.5	96.5	22.5	22.5
Total Split (%)	8.5%	82.7%	74.2%	74.2%	17.3%	17.3%
Maximum Green (s)	7.0	103.0	92.0	92.0	18.0	18.0
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings

12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023


































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	256	27	55	134	44	41	78	159	45	34	4
Future Volume (vph)	2	256	27	55	134	44	41	78	159	45	34	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	10.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1190	1818	0	0	1787	0	0	1708	0	0	1804	0
Flt Permitted	0.950				0.988			0.993			0.974	
Satd. Flow (perm)	1190	1818	0	0	1787	0	0	1708	0	0	1804	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		211.2			137.9			312.8			111.9	
Travel Time (s)		15.2			9.9			22.5			8.1	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	50%	2%	0%	0%	2%	0%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	289	0	0	238	0	0	284	0	0	85	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.1%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 		 	 	
Traffic Volume (vph)	148	1965	279	151	2603	180	413	877	513	146	369	170
Future Volume (vph)	148	1965	279	151	2603	180	413	877	513	146	369	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1497	1733	5079	1541	1750	3535	1521	1767	3500	1597
Flt Permitted	0.068			0.068			0.458			0.124		
Satd. Flow (perm)	128	5029	1477	124	5079	1521	843	3535	1521	231	3500	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216			105			138			126
Link Speed (k/h)		70			70			60				60
Link Distance (m)		505.1			255.3			487.3				810.8
Travel Time (s)		26.0			13.1			29.2				48.6
Confl. Peds. (#/hr)	1		1	1		1	1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	3%	1%	2%	2%	1%	5%	1%	2%	0%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	1965	279	151	2603	180	413	877	513	146	369	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

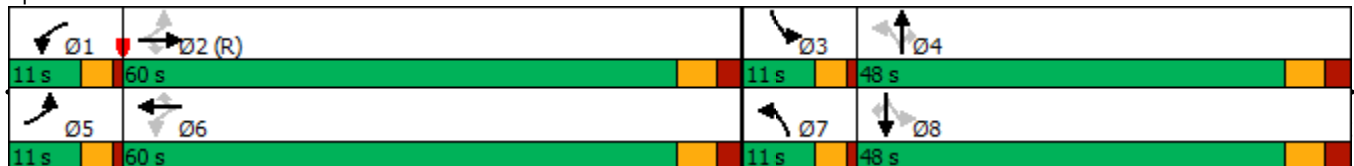


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	71.4	56.6	56.6	71.7	56.8	56.8	54.4	40.4	40.4	54.4	40.4	40.4
Actuated g/C Ratio	0.55	0.44	0.44	0.55	0.44	0.44	0.42	0.31	0.31	0.42	0.31	0.31
v/c Ratio	0.71	0.90	0.36	0.74	1.17	0.25	0.98	0.80	0.90	0.68	0.34	0.30
Control Delay	53.2	21.7	3.4	48.5	117.6	11.1	72.2	47.0	51.4	39.5	35.0	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	21.7	3.4	48.5	117.6	11.1	72.2	47.0	51.4	39.5	35.0	11.0
LOS	D	C	A	D	F	B	E	D	D	D	C	B
Approach Delay		21.5			107.5			54.0			30.0	
Approach LOS		C			F			D			C	
Queue Length 50th (m)	26.2	73.9	4.5	24.1	~313.6	12.1	79.3	110.5	99.1	23.3	39.1	8.2
Queue Length 95th (m)	m#54.4	145.7	m6.3	#60.4	#342.0	28.2	#146.0	135.8	#164.3	#41.0	52.9	25.7
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	208	2190	765	203	2217	723	422	1169	595	214	1157	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.90	0.36	0.74	1.17	0.25	0.98	0.75	0.86	0.68	0.32	0.28

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.17
 Intersection Signal Delay: 62.0 Intersection LOS: E
 Intersection Capacity Utilization 113.6% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Ninth Line & Dundas Street E



Appendix E

2016 TTS Data Analysis

Mode of Transportation - AM Peak Period

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Primary travel mode of trip - mode_prime

Column: 2006 GTA zone of household - gta06_hhld

Filters:

Primary travel mode of trip - mode_prime In B
and

2006 GTA zone of household - gta06_hhld In 4033
and

Start time of trip - start_time In 600-900

Trip 2016

Table:

Mode of Transportation/Traffic Zones	4033	4035	Total	Percentage
Transit excluding GO rail	45	37	82	1%
Auto driver	3712	1277	4989	68%
GO rail only	314	67	381	5%
Joint GO rail and local transit	33	15	48	1%
Auto passenger	1025	190	1215	17%
Walk	448	129	577	8%
Total	5577	1715	7292	100%

Mode of Transportation - PM Peak Period

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Primary travel mode of trip - mode_prime

Column: 2006 GTA zone of household - gta06_hhld

Filters:

Primary travel mode of trip - mode_prime In B
and

2006 GTA zone of household - gta06_hhld In 4033

and

Start time of trip - start_time In 1600-1900

Trip 2016

Table:






























Mode of Transportation/Traffic Zones	4033	4035	Total	Percentage
Transit excluding GO rail	54	17	71	1%
Cycle	0	17	17	0%
Auto driver	3374	1255	4629	74%
GO rail only	307	67	374	6%
Joint GO rail and local transit	21	25	46	1%
Auto passenger	912	129	1041	17%
Taxi passenger	19	0	19	0%
Walk	43	10	53	1%
Total	4730	1520	6250	100%

Appendix F

Future Total Level of Service Calculations

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (vph)	76	2343	130	123	1669	72	102	56	141	198	103	62
Future Volume (vph)	76	2343	130	123	1669	72	102	56	141	198	103	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1082	4980	1526	1785	4706	1469	1700	1740	1566	1767	1824	956
Flt Permitted	0.099			0.050			0.632			0.720		
Satd. Flow (perm)	113	4980	1473	94	4706	1436	1128	1740	1539	1333	1824	942
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			73			120			67
Link Speed (k/h)		70			70			50				50
Link Distance (m)		310.7			586.1			253.5				312.8
Travel Time (s)		16.0			30.1			18.3				22.5
Confl. Peds. (#/hr)	1		7	7		1	3		5	5		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	65%	3%	3%	0%	9%	7%	5%	8%	2%	1%	3%	67%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	2391	133	126	1703	73	104	57	144	202	105	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	38.0	38.0	11.5	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	95.3	78.6	78.6	96.5	81.4	81.4	28.1	28.1	28.1	28.1	28.1	28.1
Actuated g/C Ratio	0.73	0.60	0.60	0.74	0.63	0.63	0.22	0.22	0.22	0.22	0.22	0.22
v/c Ratio	0.44	0.79	0.14	0.52	0.58	0.08	0.43	0.15	0.34	0.70	0.27	0.25
Control Delay	16.8	23.8	6.0	19.8	19.4	6.5	47.8	39.5	11.7	59.3	42.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	23.8	6.0	19.8	19.4	6.5	47.8	39.5	11.7	59.3	42.2	10.0
LOS	B	C	A	B	B	A	D	D	B	E	D	A
Approach Delay		22.7			18.9			29.2				46.0
Approach LOS		C			B			C				D
Queue Length 50th (m)	5.1	169.2	4.7	12.2	110.1	3.5	24.4	12.5	5.2	50.7	23.7	0.0
Queue Length 95th (m)	17.9	#254.1	17.4	34.6	149.8	14.3	39.3	22.6	21.3	72.2	37.3	10.6
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	179	3010	925	244	2945	926	382	590	601	452	618	363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.79	0.14	0.52	0.58	0.08	0.27	0.10	0.24	0.45	0.17	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 23 (18%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 23.4
 Intersection LOS: C
 Intersection Capacity Utilization 82.0%
 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: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	2461	123	97	1474	122	118	3	146	431	14	221
Future Volume (vph)	92	2461	123	97	1474	122	118	3	146	431	14	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1623	5029	1497	1750	4724	1465	1716	1565	0	1785	1879	1413
Flt Permitted	0.149			0.054			0.748			0.315		
Satd. Flow (perm)	254	5029	1456	99	4724	1431	1343	1565	0	591	1879	1387
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81			124			97			52
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				194.2
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	1		2	2		1	3		1	1		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	2%	5%	2%	8%	9%	4%	0%	1%	0%	0%	13%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	94	2511	126	99	1504	124	120	152	0	440	14	226
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases		2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		7.0	10.0	10.0
Minimum Split (s)	25.2	25.2	25.2	11.0	25.2	25.2	22.5	22.5		11.0	24.3	24.3
Total Split (s)	72.0	72.0	72.0	11.0	83.0	83.0	23.0	23.0		24.0	47.0	47.0
Total Split (%)	55.4%	55.4%	55.4%	8.5%	63.8%	63.8%	17.7%	17.7%		18.5%	36.2%	36.2%
Maximum Green (s)	66.8	66.8	66.8	7.0	77.8	77.8	18.7	18.7		20.0	42.7	42.7
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.0	3.3	3.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.2	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.0	4.3	4.3

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	0
Act Effct Green (s)	69.6	69.8	69.8	85.1	81.1	80.9	18.9	15.6		39.9	39.6	39.6
Actuated g/C Ratio	0.54	0.54	0.54	0.65	0.62	0.62	0.15	0.12		0.31	0.30	0.30
v/c Ratio	0.70	0.93	0.15	0.51	0.51	0.13	0.62	0.56		1.21	0.02	0.49
Control Delay	35.0	25.3	1.6	41.6	7.8	0.3	65.4	28.6		151.9	30.2	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	35.0	25.3	1.6	41.6	7.8	0.3	65.4	28.6		151.9	30.2	31.5
LOS	C	C	A	D	A	A	E	C		F	C	C
Approach Delay		24.5			9.2			44.8			109.4	
Approach LOS		C			A			D			F	
Queue Length 50th (m)	21.3	253.7	5.3	13.6	47.5	0.2	30.4	13.6		~115.2	2.6	37.6
Queue Length 95th (m)	m26.0	#281.5	m0.5	32.7	53.4	0.3	51.4	35.9		#177.0	7.6	62.1
Internal Link Dist (m)		562.1			548.2			202.5			170.2	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	135	2698	818	195	2945	937	227	308		365	617	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.70	0.93	0.15	0.51	0.51	0.13	0.53	0.49		1.21	0.02	0.46

Intersection Summary





























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 60 (46%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.21
 Intersection Signal Delay: 31.3 Intersection LOS: C
 Intersection Capacity Utilization 101.2% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	35	2897	78	103	1515	53	57	0	268	215	0	93
Future Volume (vph)	35	2897	78	103	1515	53	57	0	268	215	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1069	5029	1572	1684	4724	1117	1750	1879	1597	1069	1879	1597
Flt Permitted	0.154			0.045			0.757			0.757		
Satd. Flow (perm)	172	5029	1535	80	4724	1051	1394	1879	1597	852	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			66			54			119			70
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.9
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	11		1	1		11						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	67%	2%	0%	6%	8%	43%	2%	0%	0%	67%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	2956	80	105	1546	54	58	0	273	219	0	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases		2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	2	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.7	26.7	26.7	11.5	28.4	28.4	24.9	24.9	24.9	24.9	24.9	24.9
Total Split (s)	90.0	90.0	90.0	14.0	104.0	104.0	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	69.2%	69.2%	69.2%	10.8%	80.0%	80.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Maximum Green (s)	83.3	83.3	83.3	10.0	97.3	97.3	19.1	19.1	19.1	19.1	19.1	19.1
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	3.6	3.6	3.6
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	6.9	6.9	6.9

Lanes, Volumes, Timings

8: Meadowridge Drive & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	84.8	86.5	86.5	103.0	99.0	97.3	21.0		21.0	19.1		19.1
Actuated g/C Ratio	0.65	0.67	0.67	0.79	0.76	0.75	0.16		0.16	0.15		0.15
v/c Ratio	0.32	0.88	0.08	0.51	0.43	0.07	0.26		0.76	1.75		0.32
Control Delay	8.4	7.4	0.4	33.2	3.6	0.2	51.2		44.0	401.9		20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.8	0.9		0.0
Total Delay	8.4	7.4	0.4	33.2	3.6	0.2	51.2		45.7	402.8		20.4
LOS	A	A	A	C	A	A	D		D	F		C
Approach Delay		7.3			5.3			46.7				287.1
Approach LOS		A			A			D				F
Queue Length 50th (m)	1.8	55.2	0.0	6.1	7.2	0.0	13.9		40.6	~87.6		5.9
Queue Length 95th (m)	m2.4	m61.7	m0.2	m22.8	8.4	m0.0	27.9		#80.6	#139.7		22.6
Internal Link Dist (m)		548.2			310.1			192.4				152.9
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	112	3344	1043	223	3597	800	225		357	125		294
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0	0	0	0		21	5		0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.32	0.88	0.08	0.47	0.43	0.07	0.26		0.81	1.82		0.32

Intersection Summary

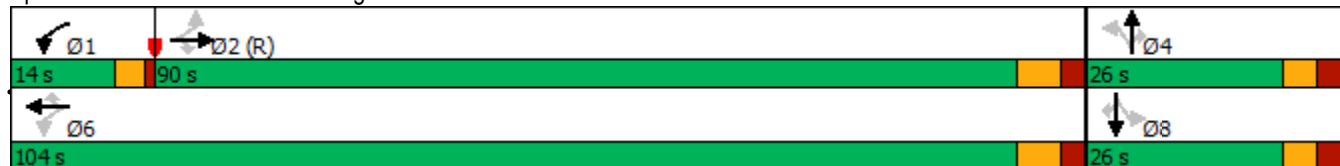
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 70 (54%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.75
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 98.6%
 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: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (vph)	87	3340	1520	129	281	181
Future Volume (vph)	87	3340	1520	129	281	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1638	5002	4794	1469	1733	1342
Flt Permitted	0.140				0.950	
Satd. Flow (perm)	241	5002	4794	1469	1733	1342
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				132		77
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	2%	7%	7%	3%	19%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	3408	1551	132	287	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	24.5	24.5	24.5	24.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	24.0	24.0
Total Split (%)	81.5%	81.5%	81.5%	81.5%	18.5%	18.5%
Maximum Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	Max	Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	101.5	101.5	101.5	101.5	19.5	19.5
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.15	0.15
v/c Ratio	0.47	0.87	0.41	0.11	1.11	0.70
Control Delay	14.8	22.0	2.7	0.3	138.1	45.0
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	14.8	22.4	2.7	0.3	138.1	45.0
LOS	B	C	A	A	F	D
Approach Delay		22.3	2.5		101.6	
Approach LOS		C	A		F	
Queue Length 50th (m)	11.3	302.3	19.1	0.2	~88.0	28.0
Queue Length 95th (m)	m14.5	m307.2	m23.5	m0.4	#146.2	#59.4
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	188	3905	3743	1175	259	266
Starvation Cap Reductn	0	161	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.91	0.41	0.11	1.11	0.70

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 23.0
 Intersection LOS: C
 Intersection Capacity Utilization 87.6%
 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	2952	420	123	1210	131	189	347	162	250	760	182
Future Volume (vph)	169	2952	420	123	1210	131	189	347	162	250	760	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1750	5029	1526	1733	4706	1497	1668	3368	1551	1750	3466	1581
Flt Permitted	0.146			0.066			0.148			0.458		
Satd. Flow (perm)	269	5029	1526	120	4706	1497	260	3368	1551	844	3466	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202			134			143			146
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		505.1			255.3			487.3			810.8	
Travel Time (s)		26.0			13.1			29.2			48.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	9%	5%	7%	6%	3%	2%	3%	1%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	3012	429	126	1235	134	193	354	165	255	776	186
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

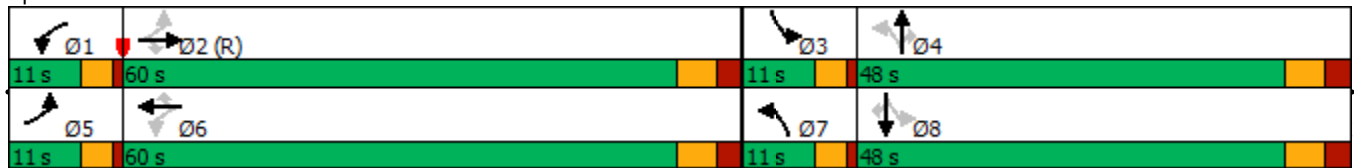


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	75.9	59.7	59.7	74.5	59.0	59.0	50.7	36.7	36.7	50.7	36.7	36.7
Actuated g/C Ratio	0.58	0.46	0.46	0.57	0.45	0.45	0.39	0.28	0.28	0.39	0.28	0.28
v/c Ratio	0.58	1.31	0.53	0.59	0.58	0.18	0.92	0.37	0.30	0.64	0.79	0.34
Control Delay	20.9	168.9	16.2	34.5	28.4	4.2	73.9	37.8	8.8	35.8	49.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	168.9	16.2	34.5	28.4	4.2	73.9	37.8	8.8	35.8	49.3	10.5
LOS	C	F	B	C	C	A	E	D	A	D	D	B
Approach Delay		143.8			26.7			40.9			40.5	
Approach LOS		F			C			D			D	
Queue Length 50th (m)	22.3	~390.8	35.0	16.2	92.8	0.0	34.7	40.0	4.3	47.5	101.1	7.9
Queue Length 95th (m)	m28.3	m#420.4	m50.6	#44.4	110.2	12.5	#69.1	51.1	20.3	65.1	117.8	25.6
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	296	2308	809	212	2134	752	209	1114	608	399	1146	620
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	1.31	0.53	0.59	0.58	0.18	0.92	0.32	0.27	0.64	0.68	0.30

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.31
 Intersection Signal Delay: 90.6 Intersection LOS: F
 Intersection Capacity Utilization 110.3% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: Ninth Line & Dundas Street E



HCM Unsignalized Intersection Capacity Analysis
 12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive





























07-11-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	80	27	88	220	71	16	46	20	14	58	4
Future Volume (Veh/h)	2	80	27	88	220	71	16	46	20	14	58	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2	82	28	90	224	72	16	47	20	14	59	4
Pedestrians		13										
Lane Width (m)		3.5										
Walking Speed (m/s)		1.2										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								313				
pX, platoon unblocked												
vC, conflicting volume	375	201	74	247	193	57	76			67		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	375	201	74	247	193	57	76			67		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	99	88	97	85	67	93	99			99		
cM capacity (veh/h)	393	671	983	612	681	1015	1482			1535		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	2	110	386	83	77							
Volume Left	2	0	90	16	14							
Volume Right	0	28	72	20	4							
cSH	393	730	706	1482	1535							
Volume to Capacity	0.01	0.15	0.55	0.01	0.01							
Queue Length 95th (m)	0.1	4.2	26.7	0.3	0.2							
Control Delay (s)	14.2	10.8	16.1	1.5	1.4							
Lane LOS	B	B	C	A	A							
Approach Delay (s)	10.9		16.1	1.5	1.4							
Approach LOS	B		C									
Intersection Summary												
Average Delay			11.6									
Intersection Capacity Utilization			42.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	106	2080	170	205	2742	174	121	146	169	113	67	31
Future Volume (vph)	106	2080	170	205	2742	174	121	146	169	113	67	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5079	1572	1733	1879	1581	1767	1879	1493
Flt Permitted	0.052			0.052			0.705			0.488		
Satd. Flow (perm)	98	5029	1508	98	5079	1508	1279	1879	1548	902	1879	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			117			108			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		310.7			586.1			253.5			312.8	
Travel Time (s)		16.0			30.1			18.3			22.5	
Confl. Peds. (#/hr)	10		10	10		10	6		9	9		6
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	3%	0%	1%	1%	0%	7%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	2122	173	209	2798	178	123	149	172	115	68	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.0	73.0	73.0	11.0	73.0	73.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	8.5%	56.2%	56.2%	8.5%	56.2%	56.2%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.0	66.0	66.0	7.0	66.0	66.0	39.0	39.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.3	5.3	1.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	91.9	75.3	75.3	103.1	85.5	85.5	21.9	21.9	21.9	21.9	21.9	21.9
Actuated g/C Ratio	0.71	0.58	0.58	0.79	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.47	0.73	0.19	0.57	0.84	0.17	0.57	0.47	0.49	0.76	0.22	0.11
Control Delay	27.8	22.7	4.7	36.8	18.0	7.0	59.0	52.4	22.7	80.1	45.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	22.7	4.7	36.8	18.0	7.0	59.0	52.4	22.7	80.1	45.9	1.4
LOS	C	C	A	D	B	A	E	D	C	F	D	A
Approach Delay		21.7			18.6			42.7				57.6
Approach LOS		C			B			D				E
Queue Length 50th (m)	10.4	146.0	4.5	45.1	126.4	9.7	30.9	36.7	15.2	29.9	16.0	0.0
Queue Length 95th (m)	29.8	189.5	17.1	m#48.1	m#135.2	m#11.0	48.5	54.5	35.4	49.1	27.9	1.3
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	228	2912	929	369	3340	1031	413	607	573	291	607	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.73	0.19	0.57	0.84	0.17	0.30	0.25	0.30	0.40	0.11	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 3 (2%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 22.8 Intersection LOS: C
 Intersection Capacity Utilization 96.2% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Eighth Line & Dundas Street E



2028 Future Total PM Peak 10:21 pm 07-11-2023 Baseline

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1978	161	193	2783	304	154	2	83	293	11	166
Future Volume (vph)	230	1978	161	193	2783	304	154	2	83	293	11	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	4980	1572	1767	5051	1597	1785	1544	0	1785	1879	1597
Flt Permitted	0.063			0.066			0.750			0.661		
Satd. Flow (perm)	118	4980	1451	123	5051	1548	1409	1544	0	1235	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149			214			85			144
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				193.9
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	3		16	16		3			3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	2018	164	197	2840	310	157	87	0	299	11	169
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0		6.5	10.0	10.0
Minimum Split (s)	11.0	26.8	26.8	11.0	26.8	26.8	23.5	23.5		11.0	22.5	22.5
Total Split (s)	17.0	79.5	79.5	16.0	78.5	78.5	23.5	23.5		11.0	34.5	34.5
Total Split (%)	13.1%	61.2%	61.2%	12.3%	60.4%	60.4%	18.1%	18.1%		8.5%	26.5%	26.5%
Maximum Green (s)	13.0	72.7	72.7	12.0	71.7	71.7	19.0	19.0		7.0	30.0	30.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5		3.0	3.5	3.5
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.8	-1.8	-3.0	-1.8	0.0	-1.9	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.8	2.6	4.5		4.0	4.5	4.5

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	76.8	75.8	75.8	78.2	74.2	72.4	19.1	17.2		29.8	29.3	29.3
Actuated g/C Ratio	0.59	0.58	0.58	0.60	0.57	0.56	0.15	0.13		0.23	0.23	0.23
v/c Ratio	1.00	0.69	0.18	0.77	0.99	0.32	0.76	0.31		0.94	0.03	0.36
Control Delay	84.2	9.7	1.1	41.2	24.2	2.1	76.0	13.7		88.7	39.1	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	84.2	9.7	1.1	41.2	24.2	2.1	76.0	13.7		88.7	39.1	11.8
LOS	F	A	A	D	C	A	E	B		F	D	B
Approach Delay		16.4			23.2			53.8			60.4	
Approach LOS		B			C			D			E	
Queue Length 50th (m)	~48.6	41.5	0.2	31.1	274.2	10.4	40.5	0.5		74.7	2.3	5.3
Queue Length 95th (m)	m#97.7	55.0	m3.7	m37.8	#324.7	m10.3	#70.4	16.1		#136.9	7.7	25.0
Internal Link Dist (m)		562.1			548.2			202.5			169.9	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	236	2904	908	264	2883	956	226	298		317	433	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	1.00	0.69	0.18	0.75	0.99	0.32	0.69	0.29		0.94	0.03	0.35

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 11.8 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 24.5 Intersection LOS: C
 Intersection Capacity Utilization 100.7% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	2097	133	185	3221	147	43	0	139	145	0	74
Future Volume (vph)	165	2097	133	185	3221	147	43	0	139	145	0	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5051	1201	1785	1879	1597	1428	1879	1597
Flt Permitted	0.045			0.060			0.757			0.757		
Satd. Flow (perm)	85	5029	1512	113	5051	1173	1422	1879	1574	1135	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			109			95			80
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.0
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	1		5	5		1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	33%	0%	0%	0%	25%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	2140	136	189	3287	150	44	0	142	148	0	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	26.7	26.7	11.0	28.4	28.4	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.0	96.5	96.5	11.0	96.5	96.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	8.5%	74.2%	74.2%	8.5%	74.2%	74.2%	17.3%	17.3%	17.3%	17.3%	17.3%	17.3%
Maximum Green (s)	7.0	89.8	89.8	7.0	89.8	89.8	18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.7	2.6	4.5	2.6	4.5	4.5	4.5

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

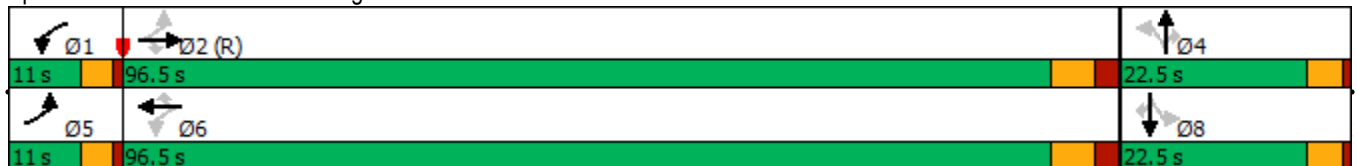


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	99.5	91.5	91.5	105.5	91.5	89.8	19.9		19.9	18.0		18.0
Actuated g/C Ratio	0.77	0.70	0.70	0.81	0.70	0.69	0.15		0.15	0.14		0.14
v/c Ratio	1.08	0.60	0.12	0.86	0.92	0.18	0.20		0.44	0.94		0.26
Control Delay	116.3	21.2	3.4	32.1	31.6	5.0	51.0		23.2	113.6		12.0
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0		0.0	0.0		0.0
Total Delay	116.3	21.2	3.4	32.1	32.7	5.0	51.0		23.2	113.6		12.0
LOS	F	C	A	C	C	A	D		C	F		B
Approach Delay		26.8			31.5			29.7				79.1
Approach LOS		C			C			C				E
Queue Length 50th (m)	~32.0	194.2	5.8	25.0	316.3	7.4	10.5		11.2	40.1		0.0
Queue Length 95th (m)	m#70.0	m205.3	m6.4	m24.3	m309.4	m8.1	22.5		32.4	#83.7		13.7
Internal Link Dist (m)		548.2			310.1			192.4				152.0
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	156	3539	1104	220	3555	843	217		321	157		290
Starvation Cap Reductn	0	0	0	0	111	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	1.08	0.60	0.12	0.86	0.95	0.18	0.20		0.44	0.94		0.26

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 75 (58%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 31.3 Intersection LOS: C
 Intersection Capacity Utilization 97.3% 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: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	154	2252	3594	290	226	137
Future Volume (vph)	154	2252	3594	290	226	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1785	5002	5079	1541	1733	1536
Flt Permitted	0.042				0.950	
Satd. Flow (perm)	79	5002	5079	1499	1714	1536
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				240		78
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)	2			2	5	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	2%	3%	4%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	2298	3667	296	231	140
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	11.0	24.5	24.5	24.5	22.5	22.5
Total Split (s)	11.0	107.0	96.0	96.0	23.0	23.0
Total Split (%)	8.5%	82.3%	73.8%	73.8%	17.7%	17.7%
Maximum Green (s)	7.0	102.5	91.5	91.5	18.5	18.5
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	Max	Max	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	103.0	102.5	91.5	91.5	18.5	18.5
Actuated g/C Ratio	0.79	0.79	0.70	0.70	0.14	0.14
v/c Ratio	1.02	0.58	1.03	0.26	0.94	0.49
Control Delay	93.0	18.7	31.4	0.2	98.8	30.1
Queue Delay	0.0	0.0	3.4	0.0	0.0	3.3
Total Delay	93.0	18.7	34.8	0.2	98.8	33.3
LOS	F	B	C	A	F	C
Approach Delay		23.4	32.2		74.1	
Approach LOS		C	C		E	
Queue Length 50th (m)	~27.4	176.8	~129.1	0.0	62.5	15.2
Queue Length 95th (m)	m#70.1	192.6	m63.2	m0.0	#114.1	37.0
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	154	3943	3574	1126	246	285
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	31	0	0	76
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.58	1.03	0.26	0.94	0.67

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 31.3 Intersection LOS: C
 Intersection Capacity Utilization 101.3% ICU Level of Service G
 Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.































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

Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	148	1987	279	151	2655	180	413	877	513	146	369	170
Future Volume (vph)	148	1987	279	151	2655	180	413	877	513	146	369	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1497	1733	5079	1541	1750	3535	1521	1767	3500	1597
Flt Permitted	0.069			0.069			0.453			0.119		
Satd. Flow (perm)	130	5029	1477	126	5079	1521	834	3535	1521	221	3500	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			214			104			137			125
Link Speed (k/h)		70			70			60				60
Link Distance (m)		505.1			255.3			487.3				810.8
Travel Time (s)		26.0			13.1			29.2				48.6
Confl. Peds. (#/hr)	1		1	1		1	1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	3%	1%	2%	2%	1%	5%	1%	2%	0%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	2028	285	154	2709	184	421	895	523	149	377	173
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	11.0	45.3	45.3	11.0	45.3	45.3	11.0	47.5	47.5	11.0	47.5	47.5
Total Split (s)	11.0	60.0	60.0	11.0	60.0	60.0	11.0	48.0	48.0	11.0	48.0	48.0
Total Split (%)	8.5%	46.2%	46.2%	8.5%	46.2%	46.2%	8.5%	36.9%	36.9%	8.5%	36.9%	36.9%
Maximum Green (s)	7.0	53.7	53.7	7.0	53.7	53.7	7.0	41.5	41.5	7.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings

14: Ninth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	71.0	56.5	56.5	71.2	56.6	56.6	54.9	40.9	40.9	54.9	40.9	40.9
Actuated g/C Ratio	0.55	0.43	0.43	0.55	0.44	0.44	0.42	0.31	0.31	0.42	0.31	0.31
v/c Ratio	0.74	0.93	0.37	0.77	1.23	0.26	1.00	0.81	0.92	0.71	0.34	0.30
Control Delay	54.3	24.7	3.7	51.2	139.5	11.5	76.8	47.1	53.2	41.4	34.8	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.3	24.7	3.7	51.2	139.5	11.5	76.8	47.1	53.2	41.4	34.8	11.5
LOS	D	C	A	D	F	B	E	D	D	D	C	B
Approach Delay		24.1			127.3			55.7			30.5	
Approach LOS		C			F			E			C	
Queue Length 50th (m)	26.7	80.6	4.2	24.7	~335.4	13.0	81.4	113.5	103.2	23.9	40.0	8.9
Queue Length 95th (m)	m#55.0	m#192.7	m6.5	#62.2	#363.1	29.5	#153.7	139.4	#171.0	#45.5	54.0	26.7
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	205	2184	762	201	2209	720	422	1169	594	211	1157	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.93	0.37	0.77	1.23	0.26	1.00	0.77	0.88	0.71	0.33	0.29

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 12 (9%), Referenced to phase 2:EBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.23

Intersection Signal Delay: 70.9

Intersection LOS: E

Intersection Capacity Utilization 114.6%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

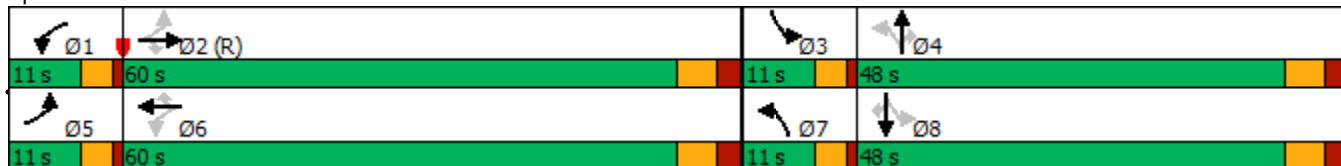
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.


















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

Splits and Phases: 14: Ninth Line & Dundas Street E
































HCM Unsignalized Intersection Capacity Analysis
 12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	275	27	57	146	44	41	78	172	45	34	4
Future Volume (Veh/h)	2	275	27	57	146	44	41	78	172	45	34	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2	281	28	58	149	45	42	80	176	46	35	4
Pedestrians		2										
Lane Width (m)		3.5										
Walking Speed (m/s)		1.2										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								313				
pX, platoon unblocked												
vC, conflicting volume	502	471	39	550	385	168	41			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	502	471	39	550	385	168	41			256		
tC, single (s)	7.6	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	4.0	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	39	97	73	71	95	97			97		
cM capacity (veh/h)	288	460	1037	215	515	881	1579			1321		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	2	309	252	298	85							
Volume Left	2	0	58	42	46							
Volume Right	0	28	45	176	4							
cSH	288	485	413	1579	1321							
Volume to Capacity	0.01	0.64	0.61	0.03	0.03							
Queue Length 95th (m)	0.2	35.1	31.4	0.7	0.9							
Control Delay (s)	17.6	24.6	26.5	1.2	4.4							
Lane LOS	C	C	D	A	A							
Approach Delay (s)	24.5		26.5	1.2	4.4							
Approach LOS	C		D									
Intersection Summary												
Average Delay			15.9									
Intersection Capacity Utilization			56.7%		ICU Level of Service				B			
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (vph)	76	2343	130	123	1669	72	102	56	141	198	103	62
Future Volume (vph)	76	2343	130	123	1669	72	102	56	141	198	103	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1082	4980	1526	1785	4706	1469	1700	1740	1566	1767	1824	956
Flt Permitted	0.099			0.050			0.632			0.720		
Satd. Flow (perm)	113	4980	1473	94	4706	1436	1128	1740	1539	1333	1824	942
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			73			120			67
Link Speed (k/h)		70			70			50				50
Link Distance (m)		310.7			586.1			253.5				312.8
Travel Time (s)		16.0			30.1			18.3				22.5
Confl. Peds. (#/hr)	1		7	7		1	3		5	5		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	65%	3%	3%	0%	9%	7%	5%	8%	2%	1%	3%	67%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	2391	133	126	1703	73	104	57	144	202	105	63
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	38.0	38.0	11.5	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.7	70.2	70.2	11.7	70.2	70.2	48.1	48.1	48.1	48.1	48.1	48.1
Total Split (%)	9.0%	54.0%	54.0%	9.0%	54.0%	54.0%	37.0%	37.0%	37.0%	37.0%	37.0%	37.0%
Maximum Green (s)	7.7	63.2	63.2	7.7	63.2	63.2	41.1	41.1	41.1	41.1	41.1	41.1
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-2.0	-2.0	-3.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	95.3	78.6	78.6	96.5	81.4	81.4	28.1	28.1	28.1	28.1	28.1	28.1
Actuated g/C Ratio	0.73	0.60	0.60	0.74	0.63	0.63	0.22	0.22	0.22	0.22	0.22	0.22
v/c Ratio	0.44	0.79	0.14	0.52	0.58	0.08	0.43	0.15	0.34	0.70	0.27	0.25
Control Delay	16.8	23.8	6.0	29.0	17.4	3.7	47.8	39.5	11.7	59.3	42.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	23.8	6.0	29.0	17.4	3.7	47.8	39.5	11.7	59.3	42.2	10.0
LOS	B	C	A	C	B	A	D	D	B	E	D	A
Approach Delay		22.7			17.7			29.2				46.0
Approach LOS		C			B			C				D
Queue Length 50th (m)	5.1	169.2	4.7	14.6	94.4	0.0	24.4	12.5	5.2	50.7	23.7	0.0
Queue Length 95th (m)	17.9	#254.1	17.4	37.3	146.4	8.1	39.3	22.6	21.3	72.2	37.3	10.6
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	179	3010	925	244	2945	926	382	590	601	452	618	363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.79	0.14	0.52	0.58	0.08	0.27	0.10	0.24	0.45	0.17	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 23 (18%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 22.9 Intersection LOS: C
 Intersection Capacity Utilization 82.0% 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: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	2461	123	97	1474	122	118	3	146	431	14	221
Future Volume (vph)	92	2461	123	97	1474	122	118	3	146	431	14	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1623	5029	1497	1750	4724	1465	1716	1565	0	1785	1879	1413
Flt Permitted	0.138			0.053			0.748			0.295		
Satd. Flow (perm)	236	5029	1455	98	4724	1430	1342	1565	0	554	1879	1387
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			72			124		95				48
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				194.2
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	1		2	2		1	3		1	1		3
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	2%	5%	2%	8%	9%	4%	0%	1%	0%	0%	13%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	94	2511	126	99	1504	124	120	152	0	440	14	226
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases		2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	4.0	20.0	20.0	10.0	10.0		4.0	10.0	10.0
Minimum Split (s)	25.2	25.2	25.2	8.0	25.2	25.2	22.5	22.5		8.0	24.3	24.3
Total Split (s)	74.0	74.0	74.0	10.0	84.0	84.0	23.0	23.0		33.0	56.0	56.0
Total Split (%)	52.9%	52.9%	52.9%	7.1%	60.0%	60.0%	16.4%	16.4%		23.6%	40.0%	40.0%
Maximum Green (s)	68.8	68.8	68.8	6.0	78.8	78.8	18.7	18.7		29.0	51.7	51.7
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3		3.0	3.3	3.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-0.2	-0.2	-3.0	-0.2	0.0	-3.3	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.2	5.0	5.0	1.0	5.0	5.2	1.0	4.3		4.0	4.3	4.3

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0			0	0
Act Effct Green (s)	70.8	71.0	71.0	85.6	81.6	81.4	19.4	16.1		49.4	49.1	49.1
Actuated g/C Ratio	0.51	0.51	0.51	0.61	0.58	0.58	0.14	0.12		0.35	0.35	0.35
v/c Ratio	0.79	0.99	0.16	0.57	0.55	0.14	0.65	0.58		0.98	0.02	0.44
Control Delay	74.3	48.8	9.3	35.0	19.1	2.6	73.1	31.9		76.9	28.6	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	74.3	48.8	9.3	35.0	19.1	2.6	73.1	31.9		76.9	28.6	29.5
LOS	E	D	A	C	B	A	E	C		E	C	C
Approach Delay		47.8			18.9			50.1			60.2	
Approach LOS		D			B			D			E	
Queue Length 50th (m)	22.7	~272.3	8.1	11.9	97.0	0.0	33.1	15.3		107.8	2.6	38.6
Queue Length 95th (m)	#60.5	#309.3	20.0	32.5	112.9	9.2	55.1	39.1		#167.2	7.7	62.7
Internal Link Dist (m)		562.1			548.2			202.5			170.2	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	119	2549	773	173	2754	883	210	291		450	693	542
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.79	0.99	0.16	0.57	0.55	0.14	0.57	0.52		0.98	0.02	0.42

Intersection Summary

























Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 60 (43%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 40.3 Intersection LOS: D
 Intersection Capacity Utilization 100.7% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	2897	78	103	1515	53	57	0	268	215	0	93
Future Volume (vph)	35	2897	78	103	1515	53	57	0	268	215	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1069	5029	1572	1684	4724	1117	1750	1879	1597	1069	1879	1597
Flt Permitted	0.141			0.043			0.757			0.616		
Satd. Flow (perm)	158	5029	1534	76	4724	1044	1394	1879	1597	693	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			87			57			102			56
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.9
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	11		1	1		11						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	67%	2%	0%	6%	8%	43%	2%	0%	0%	67%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	2956	80	105	1546	54	58	0	273	219	0	95
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm		Perm	pm+pt		Perm
Protected Phases		2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	2	2	2	1	6	6	4	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	20.0	20.0	20.0	4.0	20.0	20.0	10.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	26.7	26.7	26.7	8.0	28.4	28.4	24.9	24.9	24.9	8.0	24.9	24.9
Total Split (s)	95.0	95.0	95.0	10.0	105.0	105.0	25.0	25.0	25.0	20.0	45.0	45.0
Total Split (%)	63.3%	63.3%	63.3%	6.7%	70.0%	70.0%	16.7%	16.7%	16.7%	13.3%	30.0%	30.0%
Maximum Green (s)	88.3	88.3	88.3	6.0	98.3	98.3	18.1	18.1	18.1	16.0	38.1	38.1
Yellow Time (s)	4.2	4.2	4.2	3.0	4.2	4.2	3.3	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	2.5	3.6	3.6	3.6	1.0	3.6	3.6
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	6.7	5.0	5.0	1.0	5.0	6.7	5.0	6.9	5.0	4.0	6.9	6.9

Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

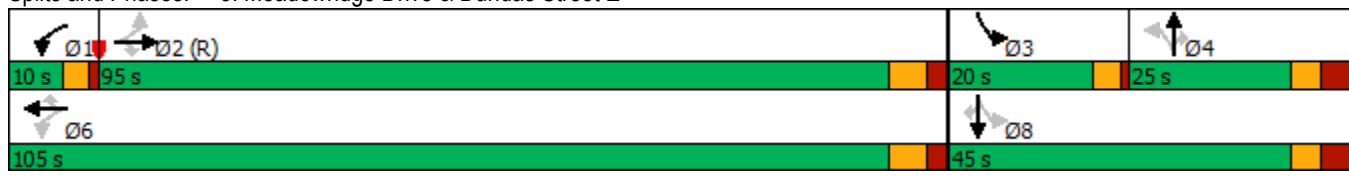


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0	0		0	0
Act Effct Green (s)	88.7	90.4	90.4	104.6	100.6	98.9	19.4		19.4	40.4		37.5
Actuated g/C Ratio	0.59	0.60	0.60	0.70	0.67	0.66	0.13		0.13	0.27		0.25
v/c Ratio	0.39	0.98	0.08	0.70	0.49	0.08	0.32		0.93	0.97		0.22
Control Delay	31.5	40.4	2.2	51.7	12.8	2.2	64.4		75.9	103.5		21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	31.5	40.4	2.2	51.7	12.8	2.2	64.4		75.9	103.5		21.1
LOS	C	D	A	D	B	A	E		E	F		C
Approach Delay		39.3			14.9			73.9				78.6
Approach LOS		D			B			E				E
Queue Length 50th (m)	5.8	315.3	0.0	16.5	82.3	0.0	16.7		55.2	63.1		9.4
Queue Length 95th (m)	18.1	#353.5	6.2	#45.4	93.1	4.8	31.9		#110.2	#122.8		25.6
Internal Link Dist (m)		548.2			310.1			192.4				152.9
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	93	3030	959	151	3167	707	185		301	226		447
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	0.98	0.08	0.70	0.49	0.08	0.31		0.91	0.97		0.21

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 70 (47%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 36.0 Intersection LOS: D
 Intersection Capacity Utilization 96.1% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: Meadowridge Drive & Dundas Street E



Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (vph)	87	3340	1520	129	281	181
Future Volume (vph)	87	3340	1520	129	281	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1638	5002	4794	1469	1733	1342
Flt Permitted	0.136				0.950	
Satd. Flow (perm)	234	5002	4794	1469	1733	1342
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				132		62
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	2%	7%	7%	3%	19%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	3408	1551	132	287	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	24.5	24.5	24.5	24.5	22.5	22.5
Total Split (s)	106.0	106.0	106.0	106.0	34.0	34.0
Total Split (%)	75.7%	75.7%	75.7%	75.7%	24.3%	24.3%
Maximum Green (s)	101.5	101.5	101.5	101.5	29.5	29.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings

12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	80	27	88	220	71	16	46	20	14	58	4
Future Volume (vph)	2	80	27	88	220	71	16	46	20	14	58	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	10.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	1755	0	0	1789	0	0	1675	0	0	1815	0
Flt Permitted	0.950				0.988			0.990			0.991	
Satd. Flow (perm)	1785	1755	0	0	1789	0	0	1675	0	0	1815	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		211.2			173.3			312.8			111.9	
Travel Time (s)		15.2			12.5			22.5			8.1	
Confl. Peds. (#/hr)							13					13
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	0%	0%	2%	0%	6%	11%	0%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	110	0	0	386	0	0	83	0	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	2952	420	123	1210	131	189	347	162	250	760	182
Future Volume (vph)	169	2952	420	123	1210	131	189	347	162	250	760	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1750	5029	1526	1733	4706	1497	1668	3368	1551	1750	3466	1581
Flt Permitted	0.168			0.047			0.109			0.506		
Satd. Flow (perm)	309	5029	1526	86	4706	1497	191	3368	1551	932	3466	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175			131			86			110
Link Speed (k/h)		70			70			60				60
Link Distance (m)		505.1			255.3			487.3				810.8
Travel Time (s)		26.0			13.1			29.2				48.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	3%	3%	9%	5%	7%	6%	3%	2%	3%	1%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	2952	420	123	1210	131	189	347	162	250	760	182
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0	4.0	20.0	20.0
Minimum Split (s)	8.0	45.3	45.3	8.0	45.3	45.3	8.0	47.5	47.5	8.0	47.5	47.5
Total Split (s)	10.0	87.0	87.0	10.0	87.0	87.0	15.0	53.0	53.0	10.0	48.0	48.0
Total Split (%)	6.3%	54.4%	54.4%	6.3%	54.4%	54.4%	9.4%	33.1%	33.1%	6.3%	30.0%	30.0%
Maximum Green (s)	6.0	80.7	80.7	6.0	80.7	80.7	11.0	46.5	46.5	6.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings
 14: Ninth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	97.4	83.0	83.0	97.6	83.1	83.1	59.5	45.5	45.5	53.5	40.5	40.5
Actuated g/C Ratio	0.61	0.52	0.52	0.61	0.52	0.52	0.37	0.28	0.28	0.33	0.25	0.25
v/c Ratio	0.60	1.13	0.48	0.77	0.50	0.16	0.94	0.36	0.32	0.70	0.87	0.38
Control Delay	23.3	100.8	15.7	63.2	25.9	3.4	89.3	46.5	21.9	52.2	68.4	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	100.8	15.7	63.2	25.9	3.4	89.3	46.5	21.9	52.2	68.4	21.3
LOS	C	F	B	E	C	A	F	D	C	D	E	C
Approach Delay		87.0			27.0			52.4			57.8	
Approach LOS		F			C			D			E	
Queue Length 50th (m)	23.8	~422.5	50.8	24.7	95.4	0.0	44.0	48.3	19.0	60.2	127.2	18.8
Queue Length 95th (m)	36.4	#444.4	80.9	#65.2	109.1	11.2	#94.2	63.2	40.0	85.0	152.6	41.9
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	281	2608	875	160	2443	840	200	1010	525	357	931	505
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.13	0.48	0.77	0.50	0.16	0.94	0.34	0.31	0.70	0.82	0.36

Intersection Summary





























Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 12 (8%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 65.7 Intersection LOS: E
 Intersection Capacity Utilization 110.3% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 14: Ninth Line & Dundas Street E



Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (vph)	106	2080	170	205	2742	174	121	146	169	113	67	31
Future Volume (vph)	106	2080	170	205	2742	174	121	146	169	113	67	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	115.0		75.0	155.0		85.0	45.0		0.0	45.0		0.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5079	1572	1733	1879	1581	1767	1879	1493
Flt Permitted	0.052			0.052			0.705			0.488		
Satd. Flow (perm)	98	5029	1508	98	5079	1508	1279	1879	1548	902	1879	1466
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			117			108			67
Link Speed (k/h)		70			70			50			50	
Link Distance (m)		310.7			586.1			253.5			312.8	
Travel Time (s)		16.0			30.1			18.3			22.5	
Confl. Peds. (#/hr)	10		10	10		10	6		9	9		6
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	3%	0%	1%	1%	0%	7%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	2122	173	209	2798	178	123	149	172	115	68	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.01	1.04	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.0	38.0	38.0	11.0	38.0	38.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (s)	11.0	73.0	73.0	11.0	73.0	73.0	46.0	46.0	46.0	46.0	46.0	46.0
Total Split (%)	8.5%	56.2%	56.2%	8.5%	56.2%	56.2%	35.4%	35.4%	35.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.0	66.0	66.0	7.0	66.0	66.0	39.0	39.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.0	3.3	3.3	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.0	3.7	3.7	1.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Lost Time Adjust (s)	-3.0	-1.7	-1.7	-3.0	-1.7	-1.7	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	1.0	5.3	5.3	1.0	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0

Lanes, Volumes, Timings
3: Eighth Line & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		24.0	24.0		24.0	24.0	32.0	32.0	32.0	32.0	32.0	32.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	91.9	75.3	75.3	103.1	85.5	85.5	21.9	21.9	21.9	21.9	21.9	21.9
Actuated g/C Ratio	0.71	0.58	0.58	0.79	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.47	0.73	0.19	0.57	0.84	0.17	0.57	0.47	0.49	0.76	0.22	0.11
Control Delay	27.8	22.7	4.7	34.5	21.5	4.6	59.0	52.4	22.7	80.1	45.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	22.7	4.7	34.5	21.5	4.6	59.0	52.4	22.7	80.1	45.9	1.4
LOS	C	C	A	C	C	A	E	D	C	F	D	A
Approach Delay		21.7			21.4			42.7				57.6
Approach LOS		C			C			D				E
Queue Length 50th (m)	10.4	146.0	4.5	33.5	190.0	5.3	30.9	36.7	15.2	29.9	16.0	0.0
Queue Length 95th (m)	29.8	189.5	17.1	63.3	#309.8	18.6	48.5	54.5	35.4	49.1	27.9	1.3
Internal Link Dist (m)		286.7			562.1			229.5				288.8
Turn Bay Length (m)	115.0		75.0	155.0		85.0	45.0			45.0		
Base Capacity (vph)	228	2912	929	369	3340	1031	413	607	573	291	607	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.73	0.19	0.57	0.84	0.17	0.30	0.25	0.30	0.40	0.11	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 3 (2%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 24.3
 Intersection LOS: C
 Intersection Capacity Utilization 96.2%
 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: 3: Eighth Line & Dundas Street E



Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1978	161	193	2783	304	154	2	83	293	11	166
Future Volume (vph)	230	1978	161	193	2783	304	154	2	83	293	11	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	120.0		75.0	125.0		85.0	65.0		0.0	15.0		15.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	4980	1572	1767	5051	1597	1785	1543	0	1785	1879	1597
Flt Permitted	0.060			0.063			0.750			0.639		
Satd. Flow (perm)	113	4980	1448	117	5051	1548	1409	1543	0	1194	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148			209			85			149
Link Speed (k/h)		70			70			50				50
Link Distance (m)		586.1			572.2			226.5				193.9
Travel Time (s)		30.1			29.4			16.3				14.0
Confl. Peds. (#/hr)	3		16	16		3			3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	2018	164	197	2840	310	157	87	0	299	11	169
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6			4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	4	4		3	8	8
Switch Phase												
Minimum Initial (s)	4.0	20.0	20.0	4.0	20.0	20.0	5.0	5.0		4.0	10.0	10.0
Minimum Split (s)	8.0	26.8	26.8	8.0	26.8	26.8	22.5	22.5		9.0	22.5	22.5
Total Split (s)	18.0	84.0	84.0	16.0	82.0	82.0	24.0	24.0		11.0	35.0	35.0
Total Split (%)	13.3%	62.2%	62.2%	11.9%	60.7%	60.7%	17.8%	17.8%		8.1%	25.9%	25.9%
Maximum Green (s)	14.0	77.2	77.2	12.0	75.2	75.2	20.0	20.0		7.0	30.5	30.5
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.0		3.0	3.5	3.5
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.8	-1.8	-3.0	-1.8	0.0	-1.9	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.8	2.1	4.0		4.0	4.5	4.5

Lanes, Volumes, Timings

6: Prince Michael Drive/John McKay Boulevard & Dundas Street E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	0
Act Effct Green (s)	80.6	79.6	79.6	81.1	77.1	75.3	19.9	18.0		30.9	30.4	30.4
Actuated g/C Ratio	0.60	0.59	0.59	0.60	0.57	0.56	0.15	0.13		0.23	0.23	0.23
v/c Ratio	0.98	0.69	0.18	0.80	0.98	0.32	0.76	0.31		0.96	0.03	0.36
Control Delay	102.9	20.8	3.0	44.5	24.5	2.4	77.7	13.7		94.4	41.1	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	102.9	20.8	3.0	44.5	24.5	2.4	77.7	13.7		94.4	41.1	11.3
LOS	F	C	A	D	C	A	E	B		F	D	B
Approach Delay		27.5			23.6			54.9			63.8	
Approach LOS		C			C			D			E	
Queue Length 50th (m)	50.1	138.0	1.8	33.6	307.6	11.3	42.1	0.5		78.3	2.4	4.4
Queue Length 95th (m)	#105.9	155.3	11.7	m38.3	#332.4	m11.5	#71.5	16.2		#144.8	7.8	24.2
Internal Link Dist (m)		562.1			548.2			202.5			169.9	
Turn Bay Length (m)	120.0		75.0	125.0		85.0	65.0			15.0		15.0
Base Capacity (vph)	240	2936	914	253	2884	955	228	301		312	424	476
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.98	0.69	0.18	0.78	0.98	0.32	0.69	0.29		0.96	0.03	0.36

Intersection Summary

Area Type: Other
 Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 11.8 (9%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 29.2 Intersection LOS: C
 Intersection Capacity Utilization 100.7% ICU Level of Service G
 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: 6: Prince Michael Drive/John McKay Boulevard & Dundas Street E



Lanes, Volumes, Timings
8: Meadowridge Drive & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	2097	133	185	3221	147	43	0	139	145	0	74
Future Volume (vph)	165	2097	133	185	3221	147	43	0	139	145	0	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5029	1572	1785	5051	1201	1785	1879	1597	1428	1879	1597
Flt Permitted	0.042			0.063			0.757			0.757		
Satd. Flow (perm)	79	5029	1511	118	5051	1172	1422	1879	1574	1135	1879	1597
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			98			95			80
Link Speed (k/h)		70			70			50				50
Link Distance (m)		572.2			334.1			216.4				176.0
Travel Time (s)		29.4			17.2			15.6				12.7
Confl. Peds. (#/hr)	1		5	5		1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	1%	33%	0%	0%	0%	25%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	4	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	168	2140	136	189	3287	150	44	0	142	148	0	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.04	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm		Perm	Perm		Perm
Protected Phases	5	2		1	6			4				8
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	26.7	26.7	9.0	28.4	28.4	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	15.0	101.0	101.0	11.0	97.0	97.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	11.1%	74.8%	74.8%	8.1%	71.9%	71.9%	17.0%	17.0%	17.0%	17.0%	17.0%	17.0%
Maximum Green (s)	11.0	94.3	94.3	7.0	90.3	90.3	18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	-1.7	-1.7	-3.0	-1.7	0.0	-1.9	0.0	-1.9	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	1.0	5.0	6.7	2.6	4.5	2.6	4.5	4.5	4.5

Lanes, Volumes, Timings
 8: Meadowridge Drive & Dundas Street E

07-11-2023

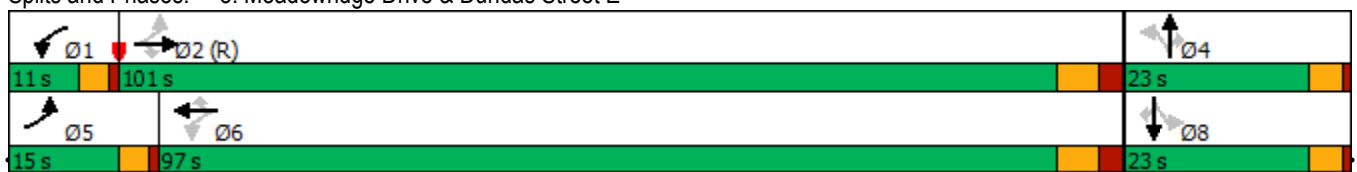


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0	0	0	0	0	0
Act Effct Green (s)	107.5	96.0	96.0	106.5	92.5	90.8	20.4		20.4	18.5		18.5
Actuated g/C Ratio	0.80	0.71	0.71	0.79	0.69	0.67	0.15		0.15	0.14		0.14
v/c Ratio	0.86	0.60	0.12	0.88	0.95	0.18	0.21		0.45	0.95		0.26
Control Delay	54.9	24.0	5.2	63.8	27.2	3.6	53.1		24.0	118.8		12.3
Queue Delay	0.0	0.0	0.0	0.0	3.4	0.0	0.0		0.0	0.0		0.0
Total Delay	54.9	24.0	5.2	63.8	30.6	3.6	53.1		24.0	118.8		12.3
LOS	D	C	A	E	C	A	D		C	F		B
Approach Delay		25.1			31.2			30.9				82.7
Approach LOS		C			C			C				F
Queue Length 50th (m)	25.2	197.3	10.2	27.8	284.0	4.7	11.0		11.7	41.8		0.0
Queue Length 95th (m)	m#60.2	m212.1	m15.1	#72.6	312.8	12.7	23.2		33.3	#86.3		14.0
Internal Link Dist (m)		548.2			310.1			192.4				152.0
Turn Bay Length (m)	80.0		80.0	140.0		70.0	25.0		25.0	15.0		15.0
Base Capacity (vph)	202	3576	1113	216	3460	820	214		318	155		287
Starvation Cap Reductn	0	0	0	0	130	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	0.83	0.60	0.12	0.88	0.99	0.18	0.21		0.45	0.95		0.26

Intersection Summary

Area Type: Other
 Cycle Length: 135
 Actuated Cycle Length: 135
 Offset: 75 (56%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 30.7 Intersection LOS: C
 Intersection Capacity Utilization 97.3% 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.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Meadowridge Drive & Dundas Street E



2028 Future Total PM Peak 10:21 pm 07-11-2023 Baseline

Lanes, Volumes, Timings
10: Dundas Street E & William Cutmore Blvd

07-11-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (vph)	154	2252	3594	290	226	137
Future Volume (vph)	154	2252	3594	290	226	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	100.0			85.0	45.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	7.5				7.5	
Satd. Flow (prot)	1785	5002	5079	1541	1733	1536
Flt Permitted	0.038				0.950	
Satd. Flow (perm)	71	5002	5079	1498	1713	1536
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				233		81
Link Speed (k/h)		70	70		50	
Link Distance (m)		334.1	505.1		180.3	
Travel Time (s)		17.2	26.0		13.0	
Confl. Peds. (#/hr)	2			2	5	
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	2%	3%	4%
Bus Blockages (#/hr)	0	4	0	4	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	154	2252	3594	290	226	137
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.01	1.02	1.01	1.04	1.01	1.01
Turning Speed (k/h)	25			15	25	15
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	20.0	20.0	20.0	10.0	10.0
Minimum Split (s)	9.0	24.5	24.5	24.5	22.5	22.5
Total Split (s)	12.0	117.0	105.0	105.0	23.0	23.0
Total Split (%)	8.6%	83.6%	75.0%	75.0%	16.4%	16.4%
Maximum Green (s)	8.0	112.5	100.5	100.5	18.5	18.5
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5

Lanes, Volumes, Timings
 10: Dundas Street E & William Cutmore Blvd

07-11-2023

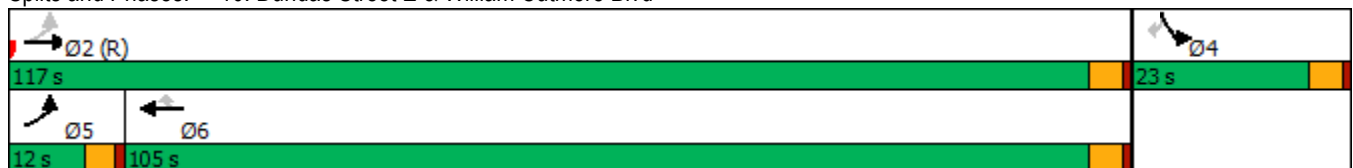


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	Max	Max	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	113.0	112.5	100.5	100.5	18.5	18.5
Actuated g/C Ratio	0.81	0.80	0.72	0.72	0.13	0.13
v/c Ratio	0.99	0.56	0.99	0.25	0.99	0.50
Control Delay	106.7	5.5	31.3	2.0	116.1	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.7	5.5	31.3	2.0	116.1	31.2
LOS	F	A	C	A	F	C
Approach Delay		12.0	29.1		84.1	
Approach LOS		B	C		F	
Queue Length 50th (m)	29.1	71.7	335.7	4.4	66.7	14.9
Queue Length 95th (m)	#77.5	79.8	#381.5	13.0	#121.8	37.8
Internal Link Dist (m)		310.1	481.1		156.3	
Turn Bay Length (m)	100.0			85.0	45.0	
Base Capacity (vph)	155	4019	3645	1141	229	273
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.56	0.99	0.25	0.99	0.50

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 25.9 Intersection LOS: C
 Intersection Capacity Utilization 101.3% ICU Level of Service G
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

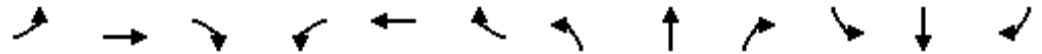
Splits and Phases: 10: Dundas Street E & William Cutmore Blvd



Lanes, Volumes, Timings

12: Eighth Line/Threshing Mill Blvd & Wheat Boom Drive

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	275	27	57	146	44	41	78	172	45	34	4
Future Volume (vph)	2	275	27	57	146	44	41	78	172	45	34	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	10.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1190	1819	0	0	1792	0	0	1703	0	0	1804	0
Flt Permitted	0.950				0.989			0.993			0.974	
Satd. Flow (perm)	1190	1819	0	0	1792	0	0	1703	0	0	1804	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		211.2			137.9			312.8			111.9	
Travel Time (s)		15.2			9.9			22.5			8.1	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	50%	2%	0%	0%	2%	0%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	309	0	0	252	0	0	298	0	0	85	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.7%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings
14: Ninth Line & Dundas Street E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1987	279	151	2655	180	413	877	513	146	369	170
Future Volume (vph)	148	1987	279	151	2655	180	413	877	513	146	369	170
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1785	5293	1497	1733	5346	1541	1750	3721	1521	1767	3684	1597
Flt Permitted	0.051			0.051			0.406			0.153		
Satd. Flow (perm)	96	5293	1477	93	5346	1520	747	3721	1521	285	3684	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			106			89			104
Link Speed (k/h)		70			70			60				60
Link Distance (m)		505.1			255.3			487.3				810.8
Travel Time (s)		26.0			13.1			29.2				48.6
Confl. Peds. (#/hr)	1		1	1		1	1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	3%	1%	2%	2%	1%	5%	1%	2%	0%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	1987	279	151	2655	180	413	877	513	146	369	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	0.95	1.04	1.01	0.95	1.04	1.01	0.95	1.01	1.01	0.95	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0	20.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	9.0	45.3	45.3	9.0	45.3	45.3	9.0	47.5	47.5	9.0	47.5	47.5
Total Split (s)	10.0	82.0	82.0	10.0	82.0	82.0	20.0	58.0	58.0	10.0	48.0	48.0
Total Split (%)	6.3%	51.3%	51.3%	6.3%	51.3%	51.3%	12.5%	36.3%	36.3%	6.3%	30.0%	30.0%
Maximum Green (s)	6.0	75.7	75.7	6.0	75.7	75.7	16.0	51.5	51.5	6.0	41.5	41.5
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.7	3.7
All-Red Time (s)	1.0	2.6	2.6	1.0	2.6	2.6	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	-3.0	-1.3	-1.3	-3.0	-1.3	-1.3	-3.0	-1.5	-1.5	-3.0	-1.5	-1.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0	5.0

Lanes, Volumes, Timings

14: Ninth Line & Dundas Street E

07-11-2023

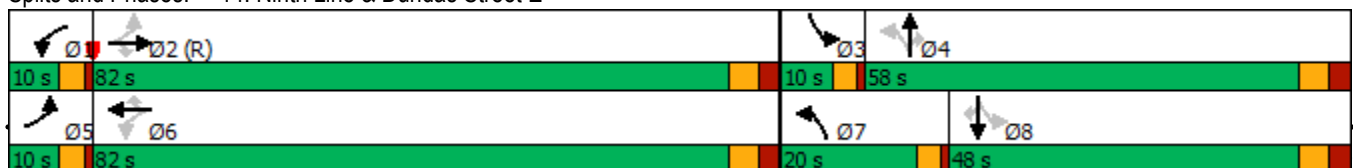


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		32.0	32.0		32.0	32.0		34.0	34.0		34.0	34.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	91.7	77.0	77.0	91.9	77.1	77.1	65.2	51.2	51.2	54.2	41.2	41.2
Actuated g/C Ratio	0.57	0.48	0.48	0.57	0.48	0.48	0.41	0.32	0.32	0.34	0.26	0.26
v/c Ratio	0.88	0.78	0.34	0.92	1.03	0.23	0.98	0.74	0.94	0.82	0.39	0.35
Control Delay	80.3	37.2	8.9	89.8	66.7	10.5	78.4	52.5	69.2	65.9	50.0	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	37.2	8.9	89.8	66.7	10.5	78.4	52.5	69.2	65.9	50.0	20.6
LOS	F	D	A	F	E	B	E	D	E	E	D	C
Approach Delay		36.6			64.5			63.2			46.1	
Approach LOS		D			E			E			D	
Queue Length 50th (m)	33.2	199.5	15.6	~37.9	~347.6	13.3	104.6	135.5	141.9	30.8	53.2	17.0
Queue Length 95th (m)	#83.6	218.5	36.4	#87.8	#372.0	29.4	#180.3	160.8	#214.7	#56.5	69.4	39.5
Internal Link Dist (m)		481.1			231.3			463.3			786.8	
Turn Bay Length (m)	225.0		85.0	230.0		85.0	160.0		130.0	130.0		55.0
Base Capacity (vph)	168	2547	810	164	2575	787	423	1232	563	179	990	499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.78	0.34	0.92	1.03	0.23	0.98	0.71	0.91	0.82	0.37	0.34

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 12 (8%), Referenced to phase 2:EBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 54.0 Intersection LOS: D
 Intersection Capacity Utilization 112.1% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.























Splits and Phases: 14: Ninth Line & Dundas Street E



Appendix G
Sensitivity Analysis

Lanes, Volumes, Timings
3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	187	68	63	130	34	57	775	109	46	942	72
Future Volume (vph)	101	187	68	63	130	34	57	775	109	46	942	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	30.0		0.0	20.0		0.0	140.0		0.0	120.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1733	1778	0	1785	1792	0	1750	3319	0	1785	3274	0
Flt Permitted	0.650			0.304			0.247			0.224		
Satd. Flow (perm)	1186	1778	0	571	1792	0	455	3319	0	421	3274	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			15			16			11	
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		521.1			1922.6			766.3			1041.9	
Travel Time (s)		31.3			115.4			34.5			46.9	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	2%	6%	2%	0%	8%	3%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	266	0	66	170	0	59	921	0	48	1056	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		10.0	10.0		7.0	10.0	
Minimum Split (s)	29.0	29.0		11.0	29.0		29.0	29.0		11.0	29.0	
Total Split (s)	35.0	35.0		15.0	50.0		45.0	45.0		15.0	60.0	
Total Split (%)	31.8%	31.8%		13.6%	45.5%		40.9%	40.9%		13.6%	54.5%	
Maximum Green (s)	29.0	29.0		11.0	44.0		39.0	39.0		11.0	54.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		4.6	4.6		3.0	4.6	
All-Red Time (s)	2.7	2.7		1.0	2.7		1.4	1.4		1.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-3.0	-2.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	3.0	4.0		1.0	4.0		3.0	3.0		1.0	3.0	

Lanes, Volumes, Timings
 3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

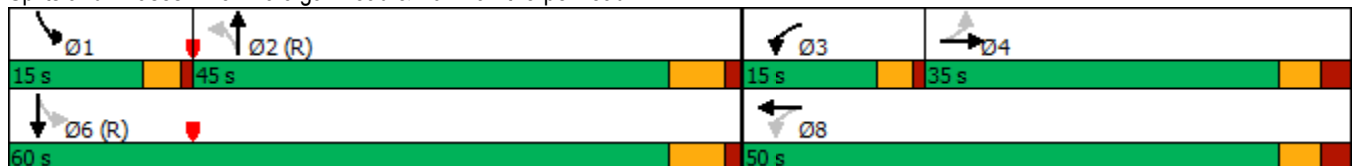


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	23.8	22.8		36.0	33.0		60.9	60.9		72.0	70.0	
Actuated g/C Ratio	0.22	0.21		0.33	0.30		0.55	0.55		0.65	0.64	
v/c Ratio	0.41	0.70		0.21	0.31		0.24	0.50		0.12	0.51	
Control Delay	40.7	47.1		23.9	26.2		21.2	18.9		10.1	13.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.7	47.1		23.9	26.2		21.2	18.9		10.1	13.3	
LOS	D	D		C	C		C	B		B	B	
Approach Delay		45.3			25.6			19.0			13.2	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	20.5	52.6		10.1	26.0		7.1	68.8		3.7	65.1	
Queue Length 95th (m)	34.7	74.9		17.4	38.6		20.4	106.9		10.4	102.9	
Internal Link Dist (m)		497.1			1898.6			742.3			1017.9	
Turn Bay Length (m)	30.0			20.0			140.0			120.0		
Base Capacity (vph)	345	513		341	758		251	1845		449	2088	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.52		0.19	0.22		0.24	0.50		0.11	0.51	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 20.8
 Intersection LOS: C
 Intersection Capacity Utilization 69.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 3: Trafalgar Road & Burnhamthorpe Road E



HCM Unsignalized Intersection Capacity Analysis

6: Burnhamthorpe Road E & William Halton Pkwy

07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↘
Traffic Volume (veh/h)	599	0	198	244	1	282
Future Volume (Veh/h)	599	0	198	244	1	282
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	689	0	228	280	1	324
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			689		1425	689
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			689		1425	689
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			75		99	27
cM capacity (veh/h)			905		113	446
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	689	508	325			
Volume Left	0	228	1			
Volume Right	0	0	324			
cSH	1700	905	442			
Volume to Capacity	0.41	0.25	0.74			
Queue Length 95th (m)	0.0	8.0	47.5			
Control Delay (s)	0.0	6.3	32.7			
Lane LOS		A	D			
Approach Delay (s)	0.0	6.3	32.7			
Approach LOS			D			
Intersection Summary						
Average Delay			9.1			
Intersection Capacity Utilization			82.8%	ICU Level of Service		E
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	141	48	56	172	12	94	1179	118	18	717	116
Future Volume (vph)	77	141	48	56	172	12	94	1179	118	18	717	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	30.0		0.0	20.0		0.0	140.0		0.0	120.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1700	1755	0	1785	1851	0	1767	3454	0	1785	3407	0
Flt Permitted	0.639			0.388			0.318			0.127		
Satd. Flow (perm)	1143	1755	0	729	1851	0	592	3454	0	239	3407	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			4			11				25
Link Speed (k/h)		60			60			80				80
Link Distance (m)		521.1			1922.6			766.3				1041.9
Travel Time (s)		31.3			115.4			34.5				46.9
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	4%	0%	0%	0%	8%	1%	2%	1%	0%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	194	0	58	189	0	97	1337	0	19	859	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5				3.5
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		10.0	10.0		7.0	10.0	
Minimum Split (s)	29.0	29.0		11.0	29.0		29.0	29.0		11.0	29.0	
Total Split (s)	35.0	35.0		15.0	50.0		45.0	45.0		15.0	60.0	
Total Split (%)	31.8%	31.8%		13.6%	45.5%		40.9%	40.9%		13.6%	54.5%	
Maximum Green (s)	29.0	29.0		11.0	44.0		39.0	39.0		11.0	54.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		4.6	4.6		3.0	4.6	
All-Red Time (s)	2.7	2.7		1.0	2.7		1.4	1.4		1.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-3.0	-2.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	3.0	4.0		1.0	4.0		3.0	3.0		1.0	3.0	

Lanes, Volumes, Timings
 3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

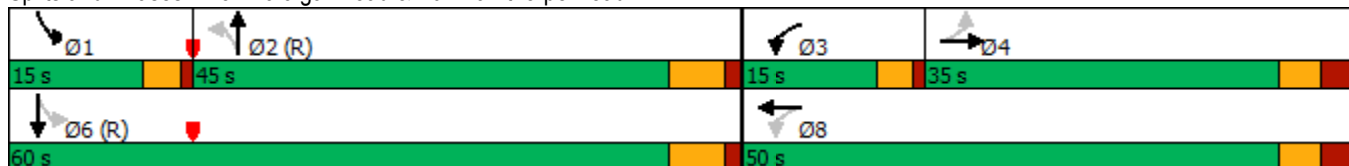


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	19.6	18.6		31.7	28.7		69.9	69.9		76.3	74.3	
Actuated g/C Ratio	0.18	0.17		0.29	0.26		0.64	0.64		0.69	0.68	
v/c Ratio	0.39	0.63		0.18	0.39		0.26	0.61		0.06	0.37	
Control Delay	44.1	47.5		26.4	33.0		15.5	16.4		8.1	9.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.1	47.5		26.4	33.0		15.5	16.4		8.1	9.3	
LOS	D	D		C	C		B	B		A	A	
Approach Delay		46.5			31.4			16.3			9.3	
Approach LOS		D			C			B			A	
Queue Length 50th (m)	15.9	38.0		9.4	33.5		8.2	80.1		1.3	41.1	
Queue Length 95th (m)	29.2	58.3		17.2	48.0		27.4	160.0		4.7	66.8	
Internal Link Dist (m)		497.1			1898.6			742.3			1017.9	
Turn Bay Length (m)	30.0			20.0			140.0			120.0		
Base Capacity (vph)	332	505		344	776		376	2198		362	2308	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.38		0.17	0.24		0.26	0.61		0.05	0.37	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	18.4
Intersection LOS:	B
Intersection Capacity Utilization:	73.6%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 3: Trafalgar Road & Burnhamthorpe Road E



HCM Unsignalized Intersection Capacity Analysis

6: Burnhamthorpe Road E & William Halton Pkwy

07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↘
Traffic Volume (veh/h)	342	3	262	772	3	282
Future Volume (Veh/h)	342	3	262	772	3	282
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	364	3	279	821	3	300
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			367		1744	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			367		1744	366
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			77		96	56
cM capacity (veh/h)			1192		74	677
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	367	1100	303			
Volume Left	0	279	3			
Volume Right	3	0	300			
cSH	1700	1192	627			
Volume to Capacity	0.22	0.23	0.48			
Queue Length 95th (m)	0.0	7.3	21.1			
Control Delay (s)	0.0	5.3	16.0			
Lane LOS		A	C			
Approach Delay (s)	0.0	5.3	16.0			
Approach LOS			C			
Intersection Summary						
Average Delay			6.0			
Intersection Capacity Utilization			100.9%	ICU Level of Service		G
Analysis Period (min)			15			

Lanes, Volumes, Timings

3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	222	68	63	198	34	57	856	109	46	1040	72
Future Volume (vph)	101	222	68	63	198	34	57	856	109	46	1040	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	30.0		0.0	20.0		0.0	140.0		0.0	120.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1733	1786	0	1785	1807	0	1750	3325	0	1785	3277	0
Flt Permitted	0.609			0.273			0.206			0.187		
Satd. Flow (perm)	1111	1786	0	513	1807	0	379	3325	0	351	3277	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			10			15			10	
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		521.1			1922.6			766.3			1041.9	
Travel Time (s)		31.3			115.4			34.5			46.9	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	2%	6%	2%	0%	8%	3%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	302	0	66	241	0	59	1006	0	48	1158	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		10.0	10.0		7.0	10.0	
Minimum Split (s)	29.0	29.0		11.0	29.0		29.0	29.0		11.0	29.0	
Total Split (s)	35.0	35.0		15.0	50.0		45.0	45.0		15.0	60.0	
Total Split (%)	31.8%	31.8%		13.6%	45.5%		40.9%	40.9%		13.6%	54.5%	
Maximum Green (s)	29.0	29.0		11.0	44.0		39.0	39.0		11.0	54.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		4.6	4.6		3.0	4.6	
All-Red Time (s)	2.7	2.7		1.0	2.7		1.4	1.4		1.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-3.0	-2.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	3.0	4.0		1.0	4.0		3.0	3.0		1.0	3.0	

Lanes, Volumes, Timings

3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

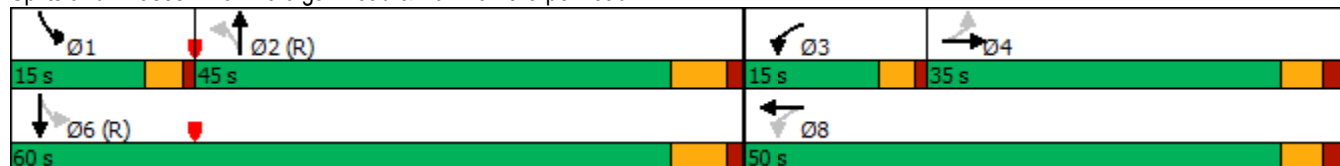


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0				7.0
Flash Dont Walk (s)	16.0	16.0			16.0		16.0	16.0				16.0
Pedestrian Calls (#/hr)	0	0			0		0	0				0
Act Effct Green (s)	25.9	24.9		38.0	35.0		58.9	58.9		70.0	68.0	
Actuated g/C Ratio	0.24	0.23		0.35	0.32		0.54	0.54		0.64	0.62	
v/c Ratio	0.40	0.73		0.21	0.41		0.29	0.56		0.13	0.57	
Control Delay	38.9	47.6		22.7	28.5		25.1	21.3		11.1	15.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	47.6		22.7	28.5		25.1	21.3		11.1	15.5	
LOS	D	D		C	C		C	C		B	B	
Approach Delay		45.3			27.3			21.5			15.3	
Approach LOS		D			C			C			B	
Queue Length 50th (m)	20.1	60.6		9.7	39.4		7.7	81.7		4.0	79.5	
Queue Length 95th (m)	34.2	84.6		16.9	53.8		22.6	124.4		10.8	122.2	
Internal Link Dist (m)		497.1			1898.6			742.3			1017.9	
Turn Bay Length (m)	30.0			20.0			140.0			120.0		
Base Capacity (vph)	325	516		339	761		202	1786		405	2029	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.32	0.59		0.19	0.32		0.29	0.56		0.12	0.57	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	22.9
Intersection LOS:	C
Intersection Capacity Utilization:	74.4%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 3: Trafalgar Road & Burnhamthorpe Road E



HCM Unsignalized Intersection Capacity Analysis

6: Burnhamthorpe Road E & William Halton Pkwy

07-11-2023

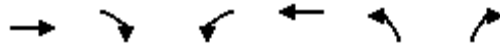


Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↙	↘
Traffic Volume (veh/h)	661	0	249	269	1	417
Future Volume (Veh/h)	661	0	249	269	1	417
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	760	0	286	309	1	479
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			760		1641	760
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			760		1641	760
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			66		99	0
cM capacity (veh/h)			852		74	406
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	760	595	480			
Volume Left	0	286	1			
Volume Right	0	0	479			
cSH	1700	852	402			
Volume to Capacity	0.45	0.34	1.19			
Queue Length 95th (m)	0.0	11.9	153.1			
Control Delay (s)	0.0	7.9	139.4			
Lane LOS		A	F			
Approach Delay (s)	0.0	7.9	139.4			
Approach LOS			F			
Intersection Summary						
Average Delay			39.0			
Intersection Capacity Utilization			98.6%	ICU Level of Service		F
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: John McKay Blvd & Burnhamthorpe Road E























07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Traffic Volume (veh/h)	312	16	30	219	54	106
Future Volume (Veh/h)	312	16	30	219	54	106
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	339	17	33	238	59	115
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			356		652	348
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			356		652	348
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		86	83
cM capacity (veh/h)			1214		421	696
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	356	271	174			
Volume Left	0	33	59			
Volume Right	17	0	115			
cSH	1700	1214	570			
Volume to Capacity	0.21	0.03	0.31			
Queue Length 95th (m)	0.0	0.7	10.3			
Control Delay (s)	0.0	1.2	14.1			
Lane LOS		A	B			
Approach Delay (s)	0.0	1.2	14.1			
Approach LOS			B			
Intersection Summary						
Average Delay			3.5			
Intersection Capacity Utilization			50.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	219	48	56	229	12	94	1302	118	18	792	116
Future Volume (vph)	77	219	48	56	229	12	94	1302	118	18	792	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	30.0		0.0	20.0		0.0	140.0		0.0	120.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1700	1770	0	1785	1859	0	1767	3457	0	1785	3413	0
Flt Permitted	0.605			0.302			0.277			0.082		
Satd. Flow (perm)	1083	1770	0	567	1859	0	515	3457	0	154	3413	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3			10			22	
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		521.1			1922.6			766.3			1041.9	
Travel Time (s)		31.3			115.4			34.5			46.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	4%	0%	0%	0%	8%	1%	2%	1%	0%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	275	0	58	248	0	97	1464	0	19	936	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		10.0	10.0		7.0	10.0	
Minimum Split (s)	29.0	29.0		11.0	29.0		29.0	29.0		11.0	29.0	
Total Split (s)	35.0	35.0		15.0	50.0		45.0	45.0		15.0	60.0	
Total Split (%)	31.8%	31.8%		13.6%	45.5%		40.9%	40.9%		13.6%	54.5%	
Maximum Green (s)	29.0	29.0		11.0	44.0		39.0	39.0		11.0	54.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		4.6	4.6		3.0	4.6	
All-Red Time (s)	2.7	2.7		1.0	2.7		1.4	1.4		1.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-3.0	-2.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	3.0	4.0		1.0	4.0		3.0	3.0		1.0	3.0	

Lanes, Volumes, Timings
 3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

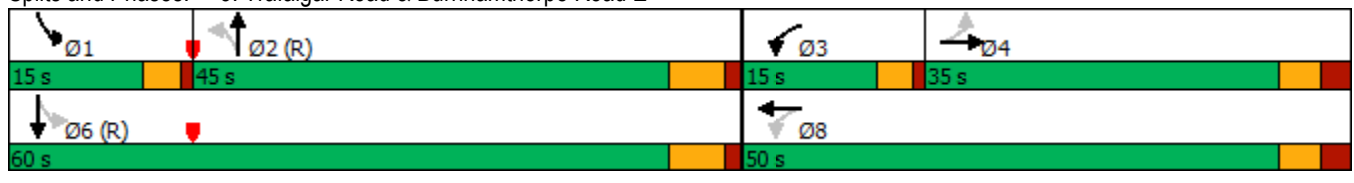


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	24.7	23.7		36.6	33.6		65.0	65.0		71.4	69.4	
Actuated g/C Ratio	0.22	0.22		0.33	0.31		0.59	0.59		0.65	0.63	
v/c Ratio	0.33	0.71		0.19	0.44		0.32	0.72		0.08	0.43	
Control Delay	37.7	48.0		23.0	30.9		20.5	22.0		10.4	12.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.7	48.0		23.0	30.9		20.5	22.0		10.4	12.3	
LOS	D	D		C	C		C	C		B	B	
Approach Delay		45.7			29.4			21.9			12.3	
Approach LOS		D			C			C			B	
Queue Length 50th (m)	15.0	55.8		8.7	42.9		9.8	108.3		1.5	53.8	
Queue Length 95th (m)	27.2	78.4		15.7	57.5		32.3	#222.2		5.4	85.1	
Internal Link Dist (m)		497.1			1898.6			742.3			1017.9	
Turn Bay Length (m)	30.0			20.0			140.0			120.0		
Base Capacity (vph)	315	506		343	779		304	2047		307	2161	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.25	0.54		0.17	0.32		0.32	0.72		0.06	0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 22.4 Intersection LOS: C
 Intersection Capacity Utilization 80.0% 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: 3: Trafalgar Road & Burnhamthorpe Road E



HCM Unsignalized Intersection Capacity Analysis

6: Burnhamthorpe Road E & William Halton Pkwy

07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↘
Traffic Volume (veh/h)	378	3	380	852	3	382
Future Volume (Veh/h)	378	3	380	852	3	382
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	402	3	404	906	3	406
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			405		2118	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			405		2118	404
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			65		92	37
cM capacity (veh/h)			1154		37	645
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	405	1310	409			
Volume Left	0	404	3			
Volume Right	3	0	406			
cSH	1700	1154	575			
Volume to Capacity	0.24	0.35	0.71			
Queue Length 95th (m)	0.0	12.7	46.3			
Control Delay (s)	0.0	8.1	25.2			
Lane LOS		A	D			
Approach Delay (s)	0.0	8.1	25.2			
Approach LOS			D			
Intersection Summary						
Average Delay			9.9			
Intersection Capacity Utilization			119.7%	ICU Level of Service		H
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: John McKay Blvd & Burnhamthorpe Road E























07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↶	↷
Traffic Volume (veh/h)	314	63	91	292	39	71
Future Volume (Veh/h)	314	63	91	292	39	71
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	341	68	99	317	42	77
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			409			890 375
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			409			890 375
tC, single (s)			4.1			6.4 6.2
tC, 2 stage (s)						
tF (s)			2.2			3.5 3.3
p0 queue free %			91			85 89
cM capacity (veh/h)			1161			287 671
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	409	416	119			
Volume Left	0	99	42			
Volume Right	68	0	77			
cSH	1700	1161	455			
Volume to Capacity	0.24	0.09	0.26			
Queue Length 95th (m)	0.0	2.2	8.3			
Control Delay (s)	0.0	2.7	15.7			
Lane LOS			A	C		
Approach Delay (s)	0.0	2.7	15.7			
Approach LOS			C			
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			57.3%	ICU Level of Service	B	
Analysis Period (min)			15			

Lanes, Volumes, Timings
3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	224	68	63	202	34	57	856	109	46	1040	72
Future Volume (vph)	101	224	68	63	202	34	57	856	109	46	1040	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	30.0		0.0	20.0		0.0	140.0		0.0	120.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1733	1786	0	1785	1808	0	1750	3325	0	1785	3277	0
Flt Permitted	0.607			0.271			0.206			0.187		
Satd. Flow (perm)	1107	1786	0	509	1808	0	379	3325	0	351	3277	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			15			10	
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		521.1			1922.6			766.3			1041.9	
Travel Time (s)		31.3			115.4			34.5			46.9	
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	2%	6%	2%	0%	8%	3%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	304	0	66	245	0	59	1006	0	48	1158	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		10.0	10.0		7.0	10.0	
Minimum Split (s)	29.0	29.0		11.0	29.0		29.0	29.0		11.0	29.0	
Total Split (s)	35.0	35.0		15.0	50.0		45.0	45.0		15.0	60.0	
Total Split (%)	31.8%	31.8%		13.6%	45.5%		40.9%	40.9%		13.6%	54.5%	
Maximum Green (s)	29.0	29.0		11.0	44.0		39.0	39.0		11.0	54.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		4.6	4.6		3.0	4.6	
All-Red Time (s)	2.7	2.7		1.0	2.7		1.4	1.4		1.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-3.0	-2.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	3.0	4.0		1.0	4.0		3.0	3.0		1.0	3.0	

Lanes, Volumes, Timings
 3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

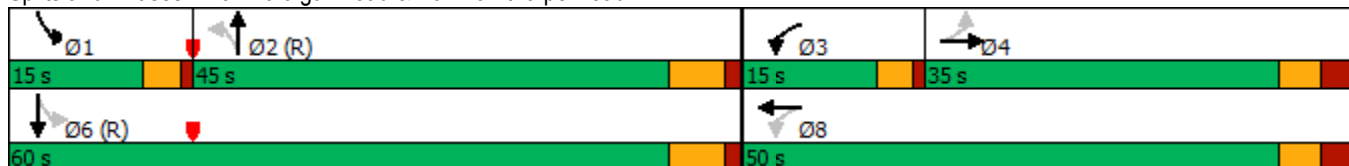


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	26.0	25.0		38.1	35.1		58.8	58.8		69.9	67.9	
Actuated g/C Ratio	0.24	0.23		0.35	0.32		0.53	0.53		0.64	0.62	
v/c Ratio	0.40	0.73		0.21	0.42		0.29	0.56		0.13	0.57	
Control Delay	38.9	47.7		22.6	28.8		25.2	21.4		11.2	15.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.9	47.7		22.6	28.8		25.2	21.4		11.2	15.5	
LOS	D	D		C	C		C	C		B	B	
Approach Delay		45.4			27.5			21.6			15.4	
Approach LOS		D			C			C			B	
Queue Length 50th (m)	20.1	61.0		9.7	40.3		7.7	81.8		4.0	79.7	
Queue Length 95th (m)	34.2	85.1		16.9	55.0		22.6	124.4		10.8	122.2	
Internal Link Dist (m)		497.1			1898.6			742.3			1017.9	
Turn Bay Length (m)	30.0			20.0			140.0			120.0		
Base Capacity (vph)	324	516		338	761		202	1783		405	2027	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.32	0.59		0.20	0.32		0.29	0.56		0.12	0.57	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	22.9
Intersection LOS:	C
Intersection Capacity Utilization:	74.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 3: Trafalgar Road & Burnhamthorpe Road E



HCM Unsignalized Intersection Capacity Analysis

6: Burnhamthorpe Road E & William Halton Pkwy

07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↗
Traffic Volume (veh/h)	661	0	259	269	1	443
Future Volume (Veh/h)	661	0	259	269	1	443
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	760	0	298	309	1	509
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			760		1665	760
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			760		1665	760
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			65		99	0
cM capacity (veh/h)			852		70	406
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	760	607	510			
Volume Left	0	298	1			
Volume Right	0	0	509			
cSH	1700	852	402			
Volume to Capacity	0.45	0.35	1.27			
Queue Length 95th (m)	0.0	12.6	177.0			
Control Delay (s)	0.0	8.1	167.9			
Lane LOS		A	F			
Approach Delay (s)	0.0	8.1	167.9			
Approach LOS			F			
Intersection Summary						
Average Delay			48.2			
Intersection Capacity Utilization			100.8%	ICU Level of Service		G
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: John McKay Blvd & Burnhamthorpe Road E

















07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↘	↙
Traffic Volume (veh/h)	312	18	40	219	60	132
Future Volume (Veh/h)	312	18	40	219	60	132
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	339	20	43	238	65	143
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			359		673	349
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			359		673	349
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		84	79
cM capacity (veh/h)			1211		406	694
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	359	281	208			
Volume Left	0	43	65			
Volume Right	20	0	143			
cSH	1700	1211	568			
Volume to Capacity	0.21	0.04	0.37			
Queue Length 95th (m)	0.0	0.9	13.4			
Control Delay (s)	0.0	1.5	15.0			
Lane LOS		A	B			
Approach Delay (s)	0.0	1.5	15.0			
Approach LOS			B			
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			52.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 12: John McKay Blvd & Street D

07-11-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	32	17	35	3	7	80	12	80	15	15	15	12
Future Volume (vph)	32	17	35	3	7	80	12	80	15	15	15	12
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)	35	18	38	3	8	87	13	87	16	16	16	13
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	91	98	116	45								
Volume Left (vph)	35	3	13	16								
Volume Right (vph)	38	87	16	13								
Hadj (s)	-0.17	-0.53	-0.06	-0.10								
Departure Headway (s)	4.2	3.8	4.3	4.3								
Degree Utilization, x	0.11	0.10	0.14	0.05								
Capacity (veh/h)	821	895	799	780								
Control Delay (s)	7.7	7.3	8.0	7.6								
Approach Delay (s)	7.7	7.3	8.0	7.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.7									
Level of Service			A									
Intersection Capacity Utilization			24.2%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	224	48	56	235	12	94	1302	118	18	792	116
Future Volume (vph)	77	224	48	56	235	12	94	1302	118	18	792	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	30.0		0.0	20.0		0.0	140.0		0.0	120.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1700	1772	0	1785	1859	0	1767	3457	0	1785	3413	0
Flt Permitted	0.602			0.297			0.276			0.081		
Satd. Flow (perm)	1077	1772	0	558	1859	0	513	3457	0	152	3413	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3			10			22	
Link Speed (k/h)		60			60			80			80	
Link Distance (m)		521.1			1922.6			766.3			1041.9	
Travel Time (s)		31.3			115.4			34.5			46.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	4%	0%	0%	0%	8%	1%	2%	1%	0%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	280	0	58	254	0	97	1464	0	19	936	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		7.0	10.0		10.0	10.0		7.0	10.0	
Minimum Split (s)	29.0	29.0		11.0	29.0		29.0	29.0		11.0	29.0	
Total Split (s)	35.0	35.0		15.0	50.0		45.0	45.0		15.0	60.0	
Total Split (%)	31.8%	31.8%		13.6%	45.5%		40.9%	40.9%		13.6%	54.5%	
Maximum Green (s)	29.0	29.0		11.0	44.0		39.0	39.0		11.0	54.0	
Yellow Time (s)	3.3	3.3		3.0	3.3		4.6	4.6		3.0	4.6	
All-Red Time (s)	2.7	2.7		1.0	2.7		1.4	1.4		1.0	1.4	
Lost Time Adjust (s)	-3.0	-2.0		-3.0	-2.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	3.0	4.0		1.0	4.0		3.0	3.0		1.0	3.0	

Lanes, Volumes, Timings
 3: Trafalgar Road & Burnhamthorpe Road E

07-11-2023

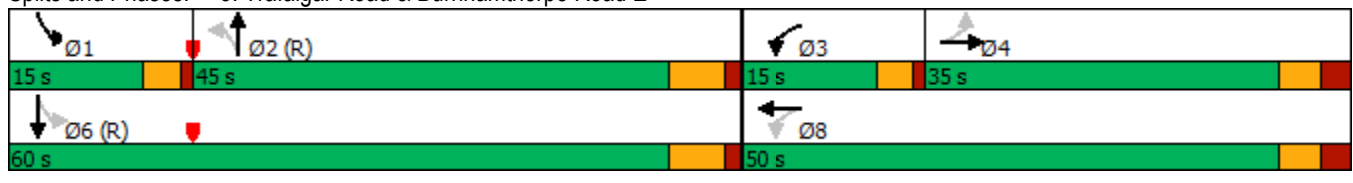


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	25.0	24.0		36.9	33.9		64.7	64.7		71.1	69.1	
Actuated g/C Ratio	0.23	0.22		0.34	0.31		0.59	0.59		0.65	0.63	
v/c Ratio	0.32	0.71		0.19	0.44		0.32	0.72		0.08	0.43	
Control Delay	37.4	47.9		22.8	30.8		20.8	22.2		10.6	12.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	47.9		22.8	30.8		20.8	22.2		10.6	12.5	
LOS	D	D		C	C		C	C		B	B	
Approach Delay		45.6			29.3			22.1			12.4	
Approach LOS		D			C			C			B	
Queue Length 50th (m)	15.0	56.8		8.7	43.9		9.8	109.1		1.5	54.3	
Queue Length 95th (m)	27.1	79.4		15.6	58.8		32.5	#223.4		5.4	85.7	
Internal Link Dist (m)		497.1			1898.6			742.3			1017.9	
Turn Bay Length (m)	30.0			20.0			140.0			120.0		
Base Capacity (vph)	314	507		343	779		302	2038		306	2153	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.25	0.55		0.17	0.33		0.32	0.72		0.06	0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 22.6 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: 3: Trafalgar Road & Burnhamthorpe Road E



HCM Unsignalized Intersection Capacity Analysis

6: Burnhamthorpe Road E & William Halton Pkwy

07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↔	↔
Traffic Volume (veh/h)	378	3	402	852	3	395
Future Volume (Veh/h)	378	3	402	852	3	395
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	402	3	428	906	3	420
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			405		2166	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			405		2166	404
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			63		91	35
cM capacity (veh/h)			1154		33	645
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	405	1334	423			
Volume Left	0	428	3			
Volume Right	3	0	420			
cSH	1700	1154	570			
Volume to Capacity	0.24	0.37	0.74			
Queue Length 95th (m)	0.0	13.9	51.2			
Control Delay (s)	0.0	8.6	27.3			
Lane LOS		A	D			
Approach Delay (s)	0.0	8.6	27.3			
Approach LOS			D			
Intersection Summary						
Average Delay			10.6			
Intersection Capacity Utilization			121.8%	ICU Level of Service		H
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: John McKay Blvd & Burnhamthorpe Road E

















07-11-2023



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	←
Traffic Volume (veh/h)	314	68	113	292	43	84
Future Volume (Veh/h)	314	68	113	292	43	84
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	341	74	123	317	47	91
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			415			378
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			415			378
tC, single (s)			4.1			6.2
tC, 2 stage (s)						
tF (s)			2.2			3.3
p0 queue free %			89			86
cM capacity (veh/h)			1155			669
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	415	440	138			
Volume Left	0	123	47			
Volume Right	74	0	91			
cSH	1700	1155	437			
Volume to Capacity	0.24	0.11	0.32			
Queue Length 95th (m)	0.0	2.9	10.7			
Control Delay (s)	0.0	3.2	17.0			
Lane LOS			A	C		
Approach Delay (s)	0.0	3.2	17.0			
Approach LOS			C			
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			59.8%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 12: John McKay Blvd & Street D

07-11-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	17	6	24	2	9	55	38	55	15	40	41	27
Future Volume (vph)	17	6	24	2	9	55	38	55	15	40	41	27
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)	18	7	26	2	10	60	41	60	16	43	45	29
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	51	72	117	117								
Volume Left (vph)	18	2	41	43								
Volume Right (vph)	26	60	16	29								
Hadj (s)	-0.23	-0.49	0.01	-0.06								
Departure Headway (s)	4.3	4.0	4.3	4.2								
Degree Utilization, x	0.06	0.08	0.14	0.14								
Capacity (veh/h)	793	838	804	812								
Control Delay (s)	7.5	7.3	8.0	7.9								
Approach Delay (s)	7.5	7.3	8.0	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.8									
Level of Service			A									
Intersection Capacity Utilization			24.1%	ICU Level of Service	A							
Analysis Period (min)			15									