# MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT – MASTER PLAN PROCESS

## Schedule B Environment Assessment Study – Project File Report

Ainslie Wood Traffic Management Study
Hamilton, Ontario
Project # TPB186044

Prepared for:

**The City of Hamilton**

703 Highway 8, Stoney Creek ON L8E 5J6

December 2019

# MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT – MASTER PLAN PROCESS

Ainslie Wood Traffic Management Plan
Hamilton, Ontario
Project # TPB186044

**Prepared for:**

The City of Hamilton
703 Highway 8, Stoney Creek ON L8E 5J6

**Prepared by:**

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Date August 2019

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# List of Acronyms

| | |
|---|---|
| AODA | Accessibility for Ontarians with Disabilities Act |
| AWS | All Way Stop Sign |
| Class EA | Municipal Class Environmental Assessment |
| CMP | Cycling Master Plan |
| *EA Act* | Ontario *Environmental Assessment Act* |
| Hamilton LRT EPR | Hamilton Light Rail Transit Environmental Study Report Addendum |
| HSR | Hamilton Street Railway |
| km | kilometres |
| LOS | Level of Service |
| LRT | Light Rail Transit |
| M | Million |
| MECP | Ministry of the Environment, Conservation and Parks |
| MTO | Ministry of Transportation |
| PDO | Property-Damage-Only |
| PIC | Public Information Centre |
| PMP | Pedestrian Mobility Plan |
| ROW | Right-of-Way |
| SMV | Single Motor Vehicles |
| TAC | Technical Advisory Committee |
| TDM | Transportation Demand Management |
| The City | City of Hamilton |
| Wood | Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited |

# 1.0 Introduction and Background

The City of Hamilton (referred to as "City" hereinafter) has initiated a Municipal Class Environmental Assessment (Class EA) for the Ainslie Wood Neighbourhood Traffic Management Study. The study limits are shown in **Figure 1-1**. The objective of this Study was to identify and recommend potential transportation-related improvements in the Ainslie Wood neighbourhood which will benefit all road-users and reflect the Complete-Livable-Better (CLB) Streets concept of design outlined in the 2018 Hamilton Transportation Master Plan. Wood Environment & Infrastructure Solutions, a Division of Wood Canada Limited (Wood), was retained by the City to complete the Study.

The Ainslie Woods Community is located in the City and is generally bound by the King's Highway 403 to the south, Main Street West to the west, Cootes Drive to the north and both Main Street West and Highway 403 to the east. The neighbourhood is mainly low-density residential in nature, with medium to high density residential areas along Main Street West. The McMaster University campus extends to the north end of the Study Area. There are two (2) schools, one (1) elementary and one (1) secondary school.

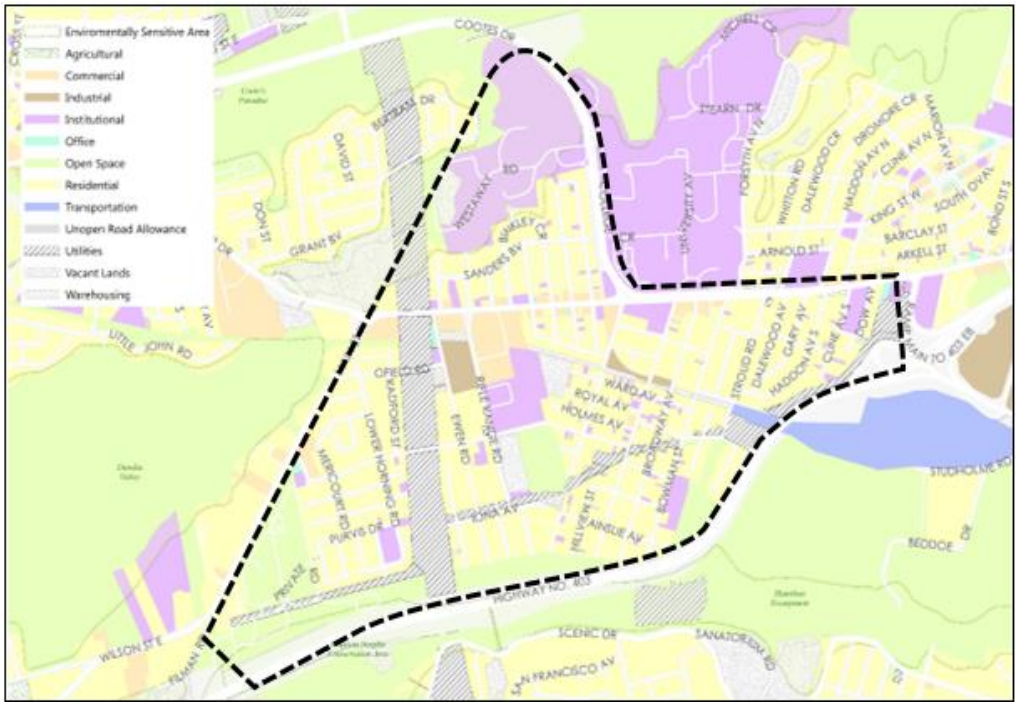


**Figure 1-1: Ainslie Wood Neighbourhood Study Area**

## 1.1 Environmental Assessment Act and Process

The Ontario *Environmental Assessment Act* (R.S.O. 1990, c. E.18; *EA Act*) was put into place to provide for the protection, conservation and wise management of the environment within the province. The *EA Act*

applies to all projects being undertaken by provincial, municipal or other public bodies within the province (unless explicitly exempted). It defines the environmental assessment works that must be completed prior to commencement of any undertaking, as well as the proponent's obligations to consult with all affected and / or interested parties.

### 1.1.1 Municipal Class Environmental Assessment Process

The Class EA process is a mechanism by which planning, and approval of municipal infrastructure is provided in an efficient, timely, economical and environmentally responsible manner. It represents a consistent, streamlined and easily understood process for planning and implementing municipal infrastructure projects. Under the *EA Act*, projects are classified as approved, subject to screening, subject to a Class Environmental Assessment, or subject to a full (Individual) Environmental Assessment. Master Plans are unique in which they do not require approval under the *EA Act;* however, it is recommended that they are reviewed every five years.

This Project, the Ainslie Wood Neighbourhood Traffic Management Study, is classified as being subject to the Master Plan process. It was conducted according to the requirements outlined in the Municipal Engineers Association document titled *Municipal Class Environmental Assessment (October 2000, as amended in 2007, 2011 & 2015).*

### 1.1.2 What is a Transportation Master Plan?

A Transportation Master Plan is a long-term Study that evaluates various infrastructure improvements required due to any changes to the existing and future land use. A Master Plan is not focused on one specific project, instead considers a group of related projects dealing with a similar project specific issue. The result of the Master Plan provides an outline for future work and development.

Although there are several approaches to conducting a Master Plan, this project is following Approach #2:

> *This approach involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the Municipal Class EA process where the level of investigation, consultation and documentation are sufficient to fulfil the requirements for Schedule B projects. Accordingly, the final public notice for the Master Plan could become the Notice of Completion for the Schedule B projects within it. Any Schedule C projects, however, would have to fulfil Phases 3 and 4 prior to filing an ESR(s) for public review. The Master Plan would provide the basis for future investigations for the specific Schedule C projects identified within it.*

The Study approach has been designed to meet the following objectives:

i. Protection of the environment, including natural, social and economic components of the environment.

ii. Participation of a broad range of stakeholders in the study process to allow for sharing of ideas, education, testing of creative solutions and developing alternatives.

iii. Documentation of the study process in compliance with all phases of the Master Plan process.

The Class EA process classifies projects according to their level of complexity and potential environmental impacts. These are termed "Schedules" and are summarized below:

> ***Schedule A and A+*** includes projects that involve minor modifications to existing facilities. Environmental effects of these projects are generally small; therefore, the projects are considered pre-approved.
>
> ***Schedule B*** includes project that involve improvements and minor expansion to existing facilities. There is a potential for some adverse environmental impacts and, therefore, the proponent is required to proceed through a screening process, including consultation with those affected. Schedule B projects are required to proceed through Phases 1, 2 and 5 of the Municipal Class EA process.
>
> ***Schedule C*** includes projects that involve construction of new facilities and major expansion of existing facilities. These projects proceed through the environmental assessment planning process outlined in the Municipal Class EA document. These projects are required to fulfill the requirements of all five phases of the Municipal Class EA process.

This Study is being completed under the requirements of a Schedule B Municipal Class EA. Any subsequent projects that results from the conclusions of this study will be subject to a Schedule A, A+, B or C.

The Master Plan process only requires proponents to follow the following phases:

- ***Phase 1*** – Identify the problem (deficiency) or opportunity.
- ***Phase 2*** – Identify and evaluate alternative solutions to address the problem or opportunity by taking into consideration the existing environment, and establish the preferred solution considering public and review agency input.

Any subsequent Schedule C projects that results from the conclusions of this study will be subject to the following phases:

- ***Phase 3*** – Identify Alternative Design Concepts for the preferred solution implementation by taking into consideration the existing environment and establish the preferred design concept by considering public and review agency input.
- ***Phase 4*** – Document the Environmental Assessment including the design and consultation process in an Environmental Study Report for public review.
- ***Phase 5*** – Complete contract drawings and documents and proceed to construction and operation. Monitor construction for adherence to environmental provisions and commitments. Where special conditions dictate, also monitor the operation of the completed facility.

Depending on the nature of the future projects, the proponent may need to revisit Phase 1 and 2 as well.

The Phases of the Municipal Class EA Master Plan process for this project are illustrated in **Figure 1-2**

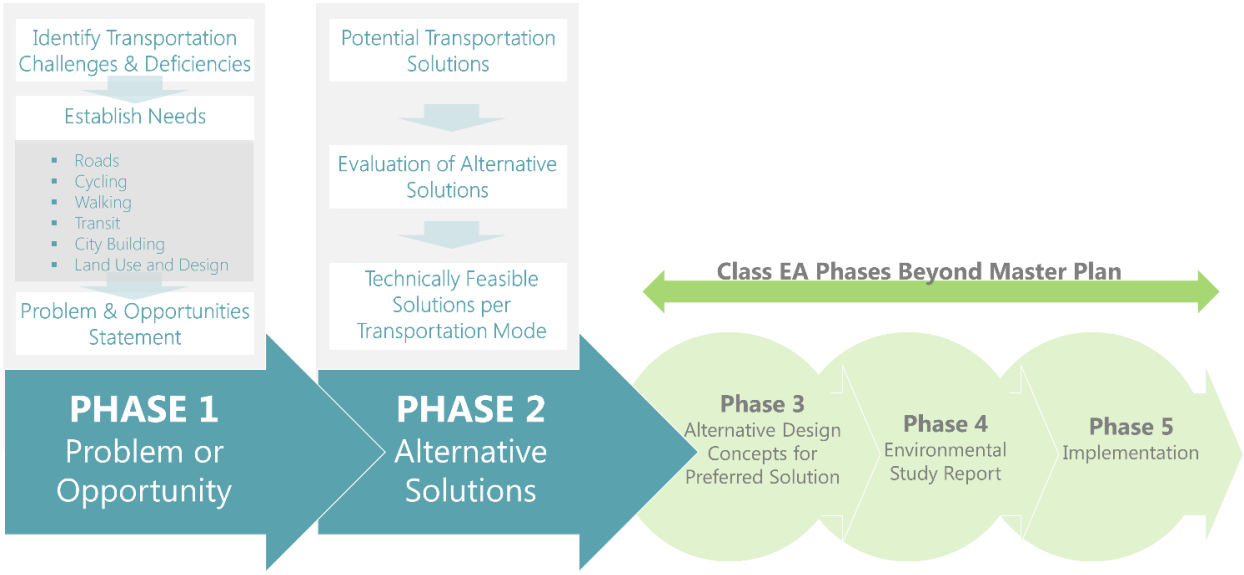


**Figure 1-2: Master Class Environmental Assessment Process**

#### 1.1.2.1 Pre-Approved Recommendations

Master Plans are typically created for larger study areas, such as a Municipal boundary. This Master Plan is unique as it is focusing on a relatively smaller neighbourhood, where the recommendations are minor in nature. Minor in this case is defined as improvements that will not take great efforts to construct and may be relatively inexpensive. For this Study, all recommendations will be subject to a Schedule A or A+ of the Class EA, or in other words, it will be considered pre-approved. Pre-approved projects are smaller, comparatively inexpensive, with ease of implementation, and is not mandated to have a consultation component or an extensive existing conditions inventory and impact assessment.

### 1.1.3 The Traffic Management Study

#### 1.1.3.1 Filing of the Traffic Management Study

A Notice of Study Completion will be placed in the local newspaper, the Hamilton Spectator, in accordance with the requirements of the Municipal Class EA process and the Study website.

Copies of the Traffic Management Study will be made available at the following locations:

| | |
|---|---|
| **Office of the City Clerk**<br>71 Main Street West<br>City Hall, 2nd Floor<br>Hamilton, Ontario<br>L8P 4Y5<br>(905) 546-CITY<br><br>Hours:<br>Monday – Friday: 8:30 am to 4:30 pm | **Hamilton Public Library – Westdale Branch**<br>955 King Street West<br>L8S 1K9 Hamilton, ON<br>905-546-3456<br><br>Hours:<br>Monday and Friday: 10:00 am to 6:00 pm<br>Tuesday - Thursday: 10:00 am to 9:00 pm<br>Saturday: 10:00 am to 5:00 pm |

A review period of not less than thirty (30) days will be provided, during which comments will be received from stakeholders and agencies.

## 1.2 Study Organization

The Project Team consisted of staff from the following organizations:

| | |
|---|---|
| **Proponent:** | **City of Hamilton**<br>Bryan Purins, Project Manager |
| **Prime Consultant:** | **Wood Environment & Infrastructure Solutions**<br>Ravi Bhim, Project Manager<br>Joseph Gowrie, Traffic Engineer<br>Loren Polonsky, Environmental Planner<br>Tavia Chow, Transportation Planner |

## 1.3 Purpose and Study Background

The intent of this Study is to identify actions and strategies to improve the safety and mobility needs of all local residents for all transportation modes in the Ainslie Wood Neighbourhood. Due to the close proximity of McMaster University, a large percentage of the neighbourhood is occupied with students, who reside alongside local residents. The Study aims to address some of the common behaviours of the occupants of the neighbourhood, including concerns of speeding and safety. Ward 1, which encompasses the Ainslie Wood neighbourhood, employs a Participatory Budget process which provides constituents with an opportunity to advise the councillor on how to spend $1.5 million (M) on local infrastructure projects.

In summary, the Study will achieve the following objectives:

- Identify transportation-related challenges in the neighbourhood with the consideration of all types of road users (including users of Hamilton Street Railway (HSR) transit and potential Light Rail Transit (LRT) services);
- Develop feasible and context-sensitive alternative solutions to address localized concerns;
- Facilitate public consultation and stakeholder engagement to ensure a transparent and well-informed Study process;
- Evaluate transportation options in a transparent manner by developing an "evaluation matrix" (i.e. a menu of tools to address traffic issues) that will clearly and transparently demonstrate the most technically preferred option; and
- Prepare a Phasing and Implementation Plan to prioritize preferred alternative solutions into short, medium and long-term solutions to accommodate City's budgetary constraints.

### 1.3.1 Previous Studies / Projects and Adjacent Studies / Projects

The Study Team reviewed the following planning documents, guidelines and other reports relevant to the Study Area. The list below presents some of the key documents being referenced by the Study; however, this is not an inclusive list.

- Ainslie Wood / Westdale Neighbourhoods Transportation Master Plan 2003;
- Ainslie Wood / Westdale Walkability Assessment Report 2008;
- Pedestrian Mobility Plan 2014;
- Draft Hamilton Transportation Master Plan 2018 (*City in Motion*);
- Shifting Gears - Cycling Master Plan 2009;
- Ministry of Transportation's (MTO) Niagara to GTA Corridor Study;
- MTO's Greater Golden Horseshoe Transportation Study;
- Metrolinx Big Move; and
- Province of Ontario, Places to Grow.

This Study considers the concepts and policies as stated in the City-Wide Transportation Master Plan (approved August 2018). Additionally, a multi-modal approach has been adopted such that the proposed alternative solutions will consider the principles of Complete-Livable-Better Streets to ensure designs are context-sensitive and balance the needs of all mode user types.

# 2.0 Stakeholder and Agency Consultation

## 2.1 Phase 1 and 2 Consultation

A Notice of Study Commencement and Public Information Centre (PIC) #1, detailing the Study Area, summarizing the Study's objectives, providing PIC #1 details and requesting comments, was submitted to relevant stakeholders, property owners and agencies by mail, in June 2018. In addition, the Notice was published in the *Hamilton Spectator* on June 8 and 15, 2018 and the City of Hamilton website (https://www.hamilton.ca/city-planning/master-plans-class-eas/ainslie-wood-neighbourhood-traffic-management-review).

Similarly, Notice of PIC #2 was also advertised in the *Hamilton Spectator* on May 3 and 18. The notice was tweeted by the City of Hamilton and sent to the Councillor to distribute to their constituents.

Responses to this notice were received from several stakeholders and agencies. Copies of the newspaper advertisement, letters from and to stakeholders and agencies are contained in **Appendix A**.

**Table 2-1** presents an overview of the agency and public stakeholder consultation activities.

**Table 2-1: Consultation Schedule**

| Consultation Event | Date |
|---|---|
| Notice of Commencement and PIC #1, published in newspaper and mailed to Project Mailing List | Newspaper Advertisement: June 8 and 15, 2018<br>Mail-out: June 4, 2018 |
| Technical Advisory Committee Meeting #1 | April 24, 2018 |
| Public Information Center #1 | June 19, 2018 |
| Community Meeting | February 14, 2019 |
| Technical Advisory Committee Meeting #2 | April 3, 2019 |
| Notice of Public Information Centre No. 2 published in newspaper and mailed Project Mailing List | Newspaper Advertisement: May 3 and May 18, 2019 |
| Public Information Center #2 | May 21, 2019 |
| Notice of Completion | December 6, 2019 |

Details regarding the consultation with agencies and public stakeholders are further detailed in the following sections. Meeting minutes and agenda with agencies and Study Team can be found in **Appendix A.**

### 2.1.1 Study Mailing List

A Study Mailing List was created by adding contacts by request, including through completion of Comment Forms at the public meetings.

## 2.2 Internal Agency Consultation

As part of the Class EA process, two Technical Advisory Committee (TAC) meetings were arranged in order to review materials to be presented at the PIC and to obtain feedback from the internal technical agency committee on the proposed project. Evaluation of the planning alternatives and preferred design was discussed with input from the agencies during these two meetings. Other components of evaluation included the technical aspects, cost, and compatibility with the City-Wide Transportation Master Plan Update.

The Active Transportation Department provided additional comments, outside of the TAC meeting on the alternative assessment technical memorandum. The comments are summarized below:

- We ask that the Study address the traffic control at the 6 trail crossings (Ewen through to Stroud). We are supportive of the plan to introduce stop control for street traffic – and give ROW to trail traffic – where suitable. This needs to be designed in consideration of sightlines and the proximity of other stop control, etc.
- There are general comments about pedestrian markings – we need to confirm that the idea of markings are married with suitable control
- Ref # 3 – add a note to flag the need for a suitable cycling crossing – from planned Emerson bicycle lanes to where an assessment determines bicycle should "land" on campus
- Ref # 4 – what does ped barriers mean? More? less? Different?
- Ref # 6-9 – see first note above and we need to ensure these crossing are not just for peds
- Ref # 10 – we need to review the idea of bollards with Road Ops
- Ref # 14 – planned bicycle lanes should be mentioned
- Ref # 17 – planned cycle route signage should be flagged
- Ref # 19 – planned bicycle lanes should be mentioned

All comments are included in **Appendix A**.

### 2.2.1 Technical Agency Committee Meeting #1

As part of Phase 1 consultation activities, a TAC meeting was held on April 24, 2018 at the City of Hamilton office (330 Wentworth Street North), from 9:00 am to 10:00 pm. The purpose of this meeting was to provide a project overview, identify neighbourhood issues, discuss the consultation and communication strategy, review the schedule / major milestones and determine the next steps.

The following City Department's participated:

- Asset Management;
- Community Planning;
- EMS;
- Engineering Design;
- Fire;
- HSR Transit;
- LRT;

- Public Health;
- Road Operations;
- Traffic;
- Transportation Planning; and
- Waste Collection.

Meeting agenda and minutes can be found in **Appendix A**.

### 2.2.2 Technical Agency Committee Meeting #2

As part of Phase 2 consultation activities, a TAC meeting was held on April 3, 2019 at the City of Hamilton office (330 Wentworth Street North), from 2:00 pm to 3:00 pm. The purpose of this meeting was to review materials for the upcoming PIC, review current Study status, discuss problems, opportunities and recommendations and determine next steps.

The following City Department's participated:

- Asset Management;
- Community Planning;
- EMS;
- Engineering Design;
- Fire;
- HSR Transit;
- LRT;
- Public Health;
- Road Operations;
- Traffic;
- Transportation Planning; and
- Waste Collection.

Meeting agenda and minutes can be found in **Appendix A**.

## 2.3 Community Meetings

On February 14, 2019, Wood presented its progress to the Ainslie Wood Community Association. A summary of the Study to date as well as the suggested problems and opportunities throughout the neighbourhood and the proposed solutions were discussed. In addition to valuable discussions throughout the meeting, numerous individuals submitted comments to the City using the comment forms provided by Wood. **Table 2-2** summarizes the comments received at the meeting. The comment forms and meeting minutes can be found in **Appendix A**.

**Table 2-2: Summary of Comments Received at Ainslie Wood Community Meeting**

| Street / Area | Issue | Suggested Solution |
|---|---|---|
| Emerson Street | Very busy street and not enough room to drive with parked cars, snow, busses etc. | • No parking on either side of the street from rail trail (Whitney Avenue) to Main Street West.<br>• Install bike lanes along same stretch |
| Neighborhood - Wide | Parking – too many free one-hour spots for students and not enough parking for hospital visitors | • Charge for parking on side streets |
| Main Street West & Cootes Drive | Long queues for eastbound left turn | • Advanced green for eastbound left-turn |
| West Park Avenue / Ewen Road & Main Street West | No crosswalk / light to cross at in order to connect to rail trail | • Add nearby crossing for pedestrians / cyclists going between Sanders Boulevard bike route and the Rail Trail |
| Sanders Boulevard | Speeding | • Stop signs at Binkley Crescent / Cottrill Street and or Binkley Crescent / Hollywood Street |
| Trail Crossings | Apply same trail crossings recommended on Leland Street to all trail crossings | • Upgrade crossings at Rifle Range Road and Even Road |

## 2.4 Public Consultation

Effective public consultation is an important part of the Master Plan process. Feedback from the public is significant as it helps identify gaps and allows the Study Team to understand the design preference. PICs provide a transparency to the EA process and gives individuals an opportunity to share their views. Two PICs were held in order to provide information about the Study and present the alternatives.

Details of the PICs are presented in **Appendix B and C**.

### 2.4.1 Public Information Centre #1

The City held a PIC on Tuesday June 19, 2018 from 6:00 p.m. to 8:00 p.m. at the West End Fortinos, 1579 Main St W, Hamilton, ON L8S 1E6. The City posted PIC Information on its Study website prior to the event (https://www.hamilton.ca/city-planning/master-plans-class-eas/ainslie-wood-neighbourhood-traffic-management-review).

PIC #1 included 20 poster boards displayed around the room to share information on the progress of the Study, initial findings of the traffic and transportation studies, alternatives being considered, and next steps in the Study. The event was arranged as an open house drop-in format, where Study Team members were on hand to guide attendees through the information, discuss the Study and answer questions. Several interactive display boards enabled attendees to identify transportation issues and opportunities within the community. The Study Team made a 20-minute presentation to attendees, providing additional

information about the Study while making time for several questions. Attendees were encouraged to sign-in and complete a Comment Form.

**Table 2-3** provides a summary of the comments heard at PIC#1.

**Table 2-3: Summary of Comments Received at PIC#1**

| Theme | Frequent Comment |
|---|---|
| **Cycling Lanes** | Many cyclists ride on the sidewalk as opposed to roads. |
| | Many students riding bikes on the sidewalk don't stop at traffic signals. |
| **Local Transit** | Bus shelters in the neighbourhood have large advertising signs that block drivers view from someone who may be waiting in the shelter. |
| **Parking** | Reduce street parking throughout the Study Area. |
| | Concerned about the proposed student housing buildings' impact on parking in the neighbourhood. |
| | The current "no parking" signs are not being adhered to and there is no parking enforcement. People disobeying the signs are not receiving any penalty (i.e., parking tickets). |
| | Several McMaster students and staff park their cars in the Ainslie Wood neighbourhood and take a bus to the campus. |
| | The Thorndale Crescent intersection is often blocked by cars (parking on the edge of the intersection). |
| **Pedestrian Safety** | Concerned about students crossing Binkley Road and walking on the road. |
| | The footpath located at the end of Iona Avenue to Emerson Street was reconstructed ten years ago and a sewer line was installed. The path now floods every summer and is difficult to walk through. This path used to be heavily used; however, residents are now avoiding this path. |
| | There is a lack of visibility of the rail trail from Emerson Street. |
| | Concerned over the lack of initiatives and slow progress to implement Vision Zero. |
| | Why do pedestrians need to push a button for a walk sign but cars don't have to? |
| **Speeding** | Speeding is a significant problem throughout the Study Area. |
| | Speeding along Sanders Boulevard occurs at all times of the day, especially during weekend nights. |
| | The right-of-way (ROW) on Sanders Boulevard is very wide, which results in speeding. |
| | Speeding occurs along Emerson Street and Whitney Avenue. |
| | Concerned about the method (i.e., radar gun) in which travel speed information is gathered and the time of day/day of the week in which the information is collected. Speeding is especially a concern between midnight and 2:00 am. |
| | Speeding is a concern on Forsyth Avenue. Consider constructing a sidewalk extension or installation of a permanent boulevard to improve safety. Residents have been asking for these measures for the past ten years and have not received any response. |
| | The road condition on Emerson Street is poor and in need of repair. |

| Theme | Frequent Comment |
|---|---|
| **General Traffic** | Rifle Range Road acting as a through street is resulting in increased traffic in the morning. |
| | Many residents are unaware of what a flashing yellow sign means. Many people are not stopping or slowing down when the sign is flashing. |
| | Consider flashing all traffic lights in the neighbourhood at midnight. |
| | Consider implementing rumble strips on Ofield Road and Ewen Road, and a protected left-turn lane on Cootes Drive and Main Street West. |
| **The Study Information** | There appears to be incorrect census data presented on a few of the boards. |
| | One of the display boards indicated 50km/h as the posted limit on Sanders Boulevard; however, the actual signs are 40km/h. This may be skew the data, as it currently portrays a lower percentage of speeding issues on Sanders Boulevard. |

Details of PIC #1 are presented in **Appendix B**.

### 2.4.2 Public Information Centre #2

The City held a PIC on Tuesday May 21, 2019 from 7:00 p.m. to 9:00 p.m. at the West End Fortinos, 1579 Main St W, Hamilton, ON L8S 1E6. The City of Hamilton posted PIC Information on its Study website prior to the event (https://www.hamilton.ca/city-planning/master-plans-class-eas/ainslie-wood-neighbourhood-traffic-management-review).

PIC #2 included 11 poster boards displayed around the room to share information on the progress of the Study, summary of comments received, problem and opportunities within the Study Area, evaluation criteria, proposed solutions and next steps in the Study. The event was arranged as an open house drop-in format, where Study Team members were on hand to guide attendees through the information, discuss the Study and answer questions. The Study Team made a 20-minute presentation to attendees, providing additional information about the Study while making time for several questions. Attendees were encouraged to sign-in and complete a Comment Form.

**Table 2-4** provides a summary of the comments heard at PIC#2.

**Table 2-4: Summary of Comments Received at PIC#2**

| Theme | Frequent Comment |
|---|---|
| **Cycling Lanes** | What is the purpose of the green box stating put your bike here? Does this activate lights? |
| | We don't want speed bumps on Sanders Boulevard because there are many cyclists on this road. |
| | Cyclists should be licensed to use the bike lanes. Cyclists do not obey rules and do not deserve separate bike lanes. |
| | No one uses the SoBi bikes. |

| Theme | Frequent Comment |
|---|---|
| **Parking** | Reduce street parking throughout the Study Area. |
| | Concerned about the proposed development on Binkley Road's impact on parking in the neighbourhood. |
| | The current "no parking" signs are not being adhered to and there is no parking enforcement. People disobeying the signs are not receiving any penalty (i.e., parking tickets). |
| | Parking issues on Norfolk Street S. due to increased traffic from Doughbox Pizza. |
| | Illegal parking on Norfolk Street S. (parking is one side, alternating sides halfway through the month). However, often cars will park on both sides of the street. |
| | Parking issues at intersection of Westwood Avenue and Bowman Street (cars will park right up to the stop sign on the north side of Westwood Avenue due to improper signage. This may be a sightline issue. |
| | Illegal parking on Ofield Road. |
| | Ainslie Wood North has a 1-hour parking limit, however without any enforcement, this is meaningless. |
| | We do not want a petition to change parking rules because this pushes parking to side streets and will result in angry neighbours. |
| | It is difficult to back out of driveways due to all the parked vehicles. |
| | Parking issues on Lower Horning Road due to the apartment building. |
| | A suggestion made to have parking on alternative weeks on different streets. |
| | A comprehensive parking plan is needed west of the Hydro corridor. |
| **Pedestrian Safety** | A flagman is required on Ewen Road due to the trucks coming in and out of the chocolate factory. |
| | Program Eastbound Lane advance green at Leland Street / Cootes Drive and Main Street W. Difficult to make left turn due to high volumes of opposing traffic (westbound lane traffic) and high volumes of pedestrians on E-W crosswalk. *(note* that recommendations can't be made for Main Street W. until LRT plans are finalized)* |
| **Speeding** | Speeding is a significant problem throughout the Study Area. |
| | Speeding and road racing is a problem along Sanders Boulevard. |
| **General Traffic** | Why didn't the Study Team take into consideration the proposed new development on Binkley Crescent and did the Study Team review the developers traffic impact Study? |
| | Long delay for pedestrians using the N-S crossings at Rifle Range Road / Westbourne Road (pedestrian calls are not served quickly)<br>Coordinate Rifle Range Road / Westbourne Road signal with Fortinos signal (to avoid queue build-ups between the signals). |
| **Road Diet** | A road diet with dedicated delineated parking lane / bike lanes would help decrease speed. Dragon teeth road markers or a flashing 40 zone for the school that is properly delineated. |

| Theme | Frequent Comment |
|---|---|
| **Sightline Issues** | Sightline issues should be addressed throughout the Study Area (specific attention at Norfolk Street S. and Main Street W.). Student input isn't addressed enough, and they are a huge part of the neighbourhood. Hosting summer PICs doesn't help because most student are home. |
| | The left turn from Main Street W. into Norfolk Street S. is dangerous due to cars jumping to turn left onto Cootes Drive. |
| **All Ways Stop (AWS) Request** | AWS request on Sanders Boulevard at either Kingsmount Street S. or Hollywood Street S. |
| | AWS request at intersection of Ewen Road and Iona Avenue is not warranted, then perhaps consider making it 2-way (i.e. only N-S traffic is required to stop). |
| **Chicanes** | Chicanes do not increase safety and encourage stunt driving and inhibits road racing. |
| **Speed Cushions** | For Whitney Avenue, the speed cushions would be effective enough for addressing the issue. |
| | Speed cushions are required on Stroud Road. |
| | Westwood Avenue should also be slowed down. |
| **Flashing Lights** | Likes the flashing lights for pedestrians. |
| **Accessibility Concerns** | Restaurants use the metered parking spots and take over the accessibility spots (5m parking spots). |
| | Recommend using Rick Hansen Accessibility resources. |
| | For curb-cuts, will the City be meeting Accessibility for Ontarians with Disabilities Act (AODA) requirements? |
| | Bump outs are a nuisance as it is difficult to park close to the curb when the snow has not been ploughed properly. People with wheelchairs have difficult taking out chairs from their vehicle. |
| **The Study Information** | How did you get to the conclusion / the alternative solutions? |
| | Are we looking at arterial conversation? |

Details of PIC #2 are presented in **Appendix C**.

# 3.0 Existing Conditions

## 3.1 Study Area

The study area defined for this project is shown in **Figure 3-3**. According to the Urban Hamilton Official Plan Schedule C, Main Street West and Cootes Drive are major arterials within the Study Area. King Street, Whitney Avenue, Leland Street, and Emmerson Street are classified as collectors. The remainder of the streets are considered local roadways.

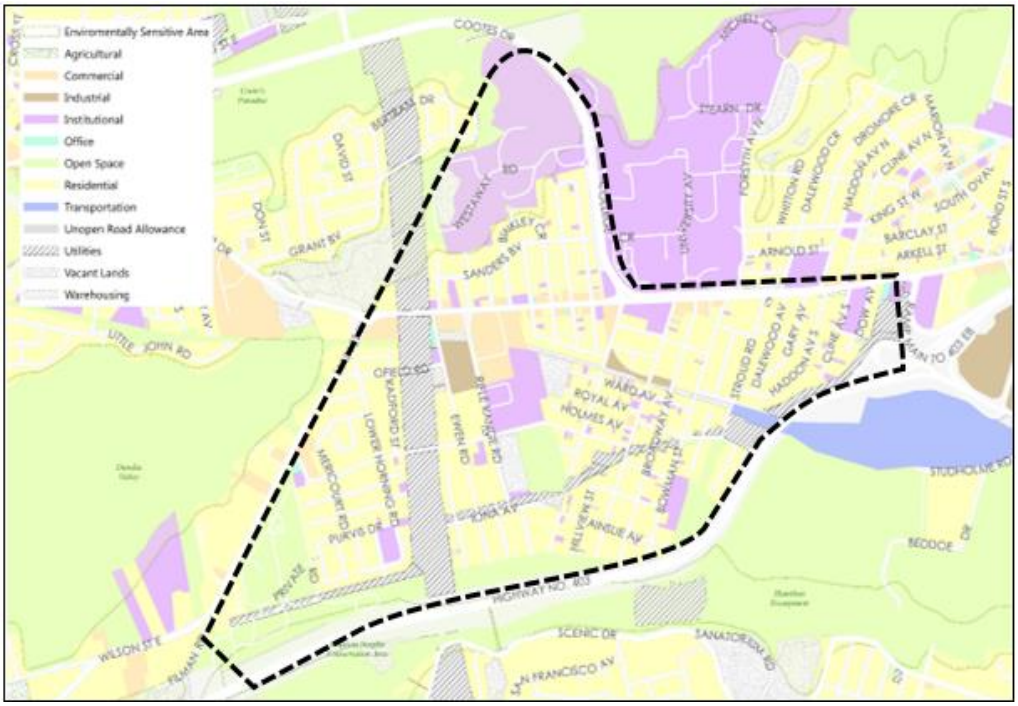


**Figure 3-3: Ainslie Wood Neighbourhood Study Area**

## 3.2 Land Use and Development Plans

The following are a few relevant policies and initiatives reviewed as part of this Study:

- **Ainslie Wood / Westdale Neighbourhoods Transportation Master Plan 2003** – provided a 20-year framework for land use decisions, transportation needs and servicing components.
- **Pedestrian Mobility Plan 2014** purpose is to improve and encourage pedestrian mobility throughout the City.
- **Draft Hamilton Transportation Master Plan 2018 (*City in Motion*)** is a strategic planning framework that provides direction for future transportation-related studies, projects, initiatives and decisions.

- **Shifting Gears - Cycling Master Plan** has been reviewed and updated, as part of the City-Wide Hamilton Transportation Master Plan 2018. Shifting Gears supports the City's Transportation vision and goals by identifying a well-connected, convenient and safe cycling network in the City.
- **Complete-Livable-Better Streets** is a concept that involves designing streets in a manner that is safe for all users, regardless of age and physical ability.
- **Vision Zero** supports the goal of zero fatalities or serious injuries on the roadway. Vision Zero's target for safer streets can be achieved by addressing traffic safety holistically through education, enforcement, engineering, evaluation and engagement.

The Planning Context Report in **Appendix D** summarizes the various planning reports and its applicability to this Study.

## 3.3 Existing Traffic Conditions

Traffic volumes were highest on Main Street West (i.e. major arterial within the Study Area) as it provides direct connection to Highway 403 as well as the downtown Hamilton core. Traffic movement was consistent with commuter patterns with the highest volumes occurring during the AM and PM peak hours.

### 3.3.1 Travel Patterns and Behaviours

The general planning direction is to encourage a greater shift towards more sustainable transportation modes, including transit, walking and cycling.

Current mode splits for the neighbourhood are 66% autos, 21% transit, and 13% walking or cycling. The longest trips are made by GO transit while most trip lengths are within 15 kilometres (km) in the Study Area.

### 3.3.2 Traffic Operations

Analysis showed that the road network is currently operating with an overall acceptable level of service (LOS). LOS is defined in **Table 3-5** and is represented by a letter between 'A' and 'F', with 'F' being the longest delay.

**Table 3-5: Correlation of Anticipated Vehicle Delay with Level of Service.**

| Level of Service (LOS) | Description of Operations |
|---|---|
| A | Little to no delay at intersections. |
| B | Minimal delay. |
| C | Some queuing and delay (<35 sec/vehicle). |
| D | Frequent queuing and delay (< 55 sec/vehicle). |
| E | Significant delay and queuing, occasionally vehicles may need to wait for a second green. |

| | |
|---|---|
| F | Intolerable delays and queues. |

Critical individual movements are noted at the following intersections and have movements with LOS 'F' during both AM and PM peak hours:

- Cootes Drive at Main Street West (Northbound Left);
- Emerson Street at Main Street West (southbound left-turn and southbound through); and
- Dalewood Avenue at Main Street West (southbound left-turn and southbound through).

During the AM peak hour, the dominant direction of traffic is eastbound along Main Street West. Eastbound traffic generally experiences heaviest queuing at Cootes Drive, Emerson Street, and Longwood Road. During the PM peak hour, traffic distribution is fairly evenly split in the eastbound and westbound directions on Main Street West. The dominant direction of traffic movement during the PM peak hour is also generally eastbound along Main Street West.

### 3.3.3 Travel Speeds

The percentage of compliant vehicles on Sanders Boulevard, Leland Street, Glenmount Avenue, and Whitney Avenue are relatively low; with compliances of 46%, 37% (in school zone), 42%, and 51% respectively.

### 3.3.4 Pedestrians

There are sidewalks that are located on both sides of the streets in the current network, providing sufficient connectivity for pedestrians. More complex pedestrian crossing facilities at major intersections along Main Street West (e.g. Emerson Street / University, Dalewood and Haddon Avenues). Pedestrian crossover treatments can be implemented and improved at minor stop-controlled street within the neighbourhood where high pedestrian activities are incurred. Generally, shorter crossing distances, clearer delineation, slower vehicular speeds and multitude of street-facing businesses and residences can elevate pedestrian experience.

### 3.3.5 Cyclists

Notable cyclist activities can be observed throughout the neighborhood with frequent SOBI Hamilton service users. SOBI, which stands for Social Bicycle, is the City's bike sharing service. SOBI hubs are located throughout the study area alongside the curb, adjacent to the bicycle lanes and sidewalks.

Designated bicycle lanes are present on Sanders Boulevard and are situated between an active lane of traffic and curb-side parking. Signed on-street bike lanes (with no pavement markings) are present along Ewen Road, Rifle Range Road, Dalewood Avenue and Haddon Avenue, providing connections to Westdale and the Hamilton-Brantford Rail trail, which serves as a major cycling commuter facility through the neighbourhood.

### 3.3.6 Transit

Multiple bus routes are present within the Study Area, providing frequent opportunities to use transit. Route 1 King, Route 5 Delaware, Route 10 B-Line Express, and Route 51 University all offer service within the neighbourhood. Headways generally range from 10 minutes to 30 minutes for these routes. Within the Study Area, transit routes are generally located on Main Street West, Whitney Avenue, and Emerson Street. In addition to HSR Transit, GO Transit (Routes 15 and 47) also services the McMaster GO Station, which is located on campus.

### 3.3.7 Safety

The collision analysis showed that accidents are relatively distributed in the Study Area with the exception of Main Street West which experienced the highest number of collisions.

During the five-year analysis period (2013-2017), there are 268 collisions recorded during the analysis period that resulted in 129 (or 48%) Property-Damage-Only (PDO), 138 (or 51%) injuries and 1 fatality.

The collision-prone locations are the following:

- **Main Street West & Cootes Drive** (27 collisions)
    - 27 collisions: 12 PDO and 15 Non-fatal injury
    - Predominant impact type: rear-ends and left-turns
- **Main Street West & Emerson Street** (26 collisions)
    - 26 collisions: 11 PDO and 15 Non-fatal injury
    - Predominant impact type: rear-ends and pedestrian-related
- **Main Street West & Newton Avenue** (19 collisions)
    - 26 collisions: 10 PDO and 9 Non-fatal injury
    - Predominant impact type: rear-ends and left-turns
- **Local Neighbourhood**
    - High proportion of collisions in the local neighbourhood occurred along Whitney Avenue
    - Predominant impact type: Single Motor Vehicles (SMVs)
    - SMV collisions were mainly attributed to insufficient visibility (illumination issue) and / or unfavourable road conditions
- Traffic volumes were highest on Main Street West (i.e. major arterial within the Study Area) as it provides direct connection to Highway 403 as well as the downtown Hamilton core.

There are opportunities for reducing high rear-end collisions within the neighbourhood, particularly along Main Street West. The probable contributing factors for rear-end collisions were due to close traffic gaps,

improper lane change or speeding too fast for conditions. With respect to vulnerable road users, approximately 65% of the pedestrian-related collisions occurred under dark light (night time) conditions indicating potential illumination issue. As part of the City's Vision Zero policy, minimizing vulnerable user-related collisions will be a key consideration for this Study.

# 4.0 Future Conditions

A traffic operational assessment was completed considering two scenarios for the 2031 horizon year; "Do-Nothing" and "With LRT". The "Do-Nothing" option will evaluate future traffic conditions assuming that the LRT is not constructed. Conversely, the "With LRT" scenario will assess future traffic operations by considering the projected impact of the LRT on the road network.

The future conditions were modelled in Synchro for weekday AM and PM peak hours and utilized to develop performance metrics such as LOS, volume-to-capacity ratios, and delays. Intersections are projected to operate with an overall acceptable LOS in both the AM and PM peak hours for both scenarios.

Additionally, all Study intersections are operating with an overall LOS of "D" or better. It should be noted that some intersections are anticipated to reach near capacity by the 2031 horizon year.

Based on the review of existing traffic volumes and those forecasted in the *Hamilton LRT EPR Addendum*, the growth rates for the two scenarios are provided in **Table 4-6**. Traffic volumes outside of Main Street West will assume a growth rate of 2% per annum.

**Table 4-6: Summary of Growth Rates**

| Corridor | With LRT | | | | Without LRT | | | |
|---|---|---|---|---|---|---|---|---|
| | AM Peak | | PM Peak | | AM Peak | | PM Peak | |
| | EB | WB | EB | WB | EB | WB | EB | WB |
| Main Street West | -0.21% | -2.49% | -0.78% | -1.14% | 0.56% | -1.94% | -0.06% | 0.60% |
| All Other Areas | 2.00% | 2.00% | 2.00% | 2.00% | 2.00% | 2.00% | 2.00% | 2.00% |

Notes
EB – Eastbound
WB – Westbound

## 4.1 Do Nothing Scenario - 2031

During the AM peak period, Main Street West is expected to grow an average of 0.56% per annum in the eastbound direction and decrease by 1.94% per annum in the westbound direction.

During the PM peak period, Main Street West is expected to decrease by an average of 0.06% per annum in the eastbound direction and grow by 0.60% per annum in the westbound direction.

## 4.2 Light Rail Transit Scenario – 2031

Based on the forecasted traffic volumes, during the morning peak period the traffic along Main Street West is expected to decrease by 0.21% per annum in the eastbound direction and 2.49% in the westbound direction.

During the PM peak period, the traffic along Main Street West is expected to decrease by 0.78% in the eastbound direction and 1.14% in the westbound direction.

## 4.3 Analysis

All Study intersections are operating with an overall LOS of "D" or better in both the AM and PM peak hours and under both the without and with LRT scenario. It should be noted that some intersections are anticipated to reach near capacity by the 2031 horizon year.

For further detail, the Future Conditions Report can be found in **Appendix G**.

# 5.0 Development and Evaluation of Alternative Planning Solutions

## 5.1 Problem and Opportunity Statement

As a result of existing and future growth within the Ainslie Wood Neighbourhood, there is a need to improve the safety, mobility and accessibility for all residents, students and employees, whether travelling by automobile, transit, cycling or walking.

## 5.2 Evaluation Criteria

As part of the initial phases of this Study the following preliminary evaluation criteria were developed to reflect the concerns of various stakeholders, as communicated through Phase one and two consultation. **Table 5-7** provides a description of the evaluation criteria used in subsequent phases of the Study:

**Table 5-7: Evaluation Criteria for Alternative Assessment**

| Category | Criteria | Measures / Indicators | Symbol | Symbol Definition |
|---|---|---|---|---|
| Technical | Change in Traffic Level of Service | • Improvements to LOS and capacity (i.e. delay and volume / capacity ratios) |  | Significant Positive Impact to Traffic Operations (e.g. Delay, Capacity, LOS) |
| | | |  | Moderate Positive Impact to Traffic Operations (e.g. Delay, Capacity, LOS) |
| | | |  | No Impact to Traffic Operations (e.g. Delay, Capacity, LOS) |
| | | |  | Moderate Negative Impact to Traffic Operations (e.g. Delay, Capacity, LOS) |
| | | |  | Significant Negative Impact to Traffic Operations (e.g. Delay, Capacity, LOS) |
| | Supportiveness of Other Transportation Modes | • Supportive of other transportation modes (i.e. walking, cycling, carpooling, transit etc.)<br>• Consistent with Pedestrian Mobility Plan (PMP), Cycling Master Plan (CMP), HSR Operations Plans, and Health-by-Design (Public Health) |  | Significantly Improves the Ability to Use Sustainable Modes of Transportation |
| | | |  | Improves the Ability to Use Sustainable Modes of Transportation |
| | | |  | No Change |
| | | |  | More Difficult to Use Sustainable Modes of Transportation |
| | | |  | Significantly More Difficult to Use Sustainable Modes of Transportation |
| | Efficiency of Use of Existing Infrastructure | • Accommodating all modes of transportation within the confines of the existing |  | Enhance the Use of Facility with No Modification to Existing Infrastructure |
| | | |  | Enhance the Use of Facility with Minor Modification to Existing Infrastructure |
| | | |  | No Change to Existing Infrastructure |

| Category | Criteria | Measures / Indicators | Symbol | Symbol Definition |
|---|---|---|---|---|
| | | transportation system (i.e. creation of complete streets within the limits of existing road ROW) |  | Requires Minor Modification to Existing Infrastructure with No Direct Enhancement of Facility. |
| | | |  | Requires Significant Modification to Existing Infrastructure with No Direct Enhancement of Facility. |
| | Safety | • Reflective of Hamilton Road Safety Program (i.e. safety, behaviors, enforcement levels, etc.)<br>• Consistent with Vision Zero |  | Improves Safety for All Road Users |
| | | |  | Improves Safety for Some Road Users |
| | | |  | No Change |
| | | |  | Increases the Safety Risks for Some Road Users |
| | | |  | Increases the Safety Risks for All Road Users |
| **Conformity with City's Direction / Policies** | Compatibility with City Plans | • Consistency with City policy objectives included in the Transportation Master Plan (TMP)<br>• Consistent with Complete, Liveable, Better (CLB) Streets concepts and elements |  | Compatible |
| | | |  | -- |
| | | |  | -- |
| | | |  | -- |
| | | |  | Not Compatible |
| | Implementation Feasibility | • General assessment of feasibility of implementation by the City<br>• Constructability of features<br>• Impact of features on other operations (e.g. winter control, emergency service response)<br>• Compatibility with proposed LRT |  | Very Easy to Implement (Requires Minimal Resources / Very Short Duration) |
| | | |  | Easy to Implement (Requires Some Technical Resources / Short Duration) |
| | | |  | -- |
| | | |  | Difficult to Implement (Requires Some Technical Resources / Long Duration) |
| | | |  | Very Difficult to Implement (Requires Significant Technical Resources / Long Duration) |
| **Estimated Costs** | Estimated Costs | • Estimated capital costs (discriminating implementation and maintenance costs) |  | No Cost |
| | | |  | Low Cost |

| Category | Criteria | Measures / Indicators | Symbol | Symbol Definition |
|---|---|---|---|---|
| | | • Consideration of timing with other City projects / priorities to ensure efficiency in expenditures<br>• Compatibility with budget planning process |  | Medium Cost |
| | | |  | High Cost |
| | | |  | Prohibitive Cost |

## 5.3 Methodology

Transportation related challenges and opportunities were identified and documented. Localized concerns were identified and reviewed based on technical analysis, field investigation and comments provided by local residents at the PIC. The project team synthesized all information for developing feasible potential alternatives for the Ainslie Wood neighbourhood.

The development of potential alternatives incorporates a multi-modal approach to ensure designs are context-sensitive and balance the needs of all mode user types. As a result, the following City guidelines and transportation demand management strategies / policies were considered in developing potential improvements:

- Traffic Calming / Management Policy;
- Complete Streets Design Guidelines;
- Pedestrian Mobility Plan;
- Strategic Road Safety Program with emphasis on intersections and vulnerable road users;
- Neighbourhood Action Plans;
- Vision Zero concept;
- City Wide Transportation Master Plan; and
- Cycling Master Plan.

## 5.4 Identification of Alternative

During PIC#1, residents and key stakeholders identified their transportation challenges and opportunities for the Ainslie Woods neighbourhood. Several residents identified potential alternative solutions to address the community's transportation challenges.

As part of the City-wide traffic calming and management policy, the development of alternative solutions will reflect the principles and concepts of the *Complete Liveable Streets* design approach. Both the carried forward and screened-out alternatives were documented with clear justification and explanation as to the recommendation.

Transportation alternatives were proposed along Main Street West based on existing conditions analysis findings and comments received from the local residents. Considering the future implementation of the

Hamilton LRT, any medium to long-term recommendations along Main Street West will likely be reviewed and revisited by the City when further studies on the LRT are being conducted.

For ease of review and the nature of traffic calming improvements, the like-type improvements are grouped and evaluated together in the table. This method allows a pragmatic implementation approach as it is more time-efficient and cost-effective to implement like-type improvements within the community simultaneously (i.e. road rehabilitation, signage installation, etc.). In addition, a single location may have been identified with multiple issues / opportunities and, as such, may appear in more than one location.

It is also noted that if a solution is recommended that requires a significant geometric change to the area or the implementation of something new (signage, pavement markings), the City should consider adding an education piece to the implementation which would serve to ensure the public understands how to interact with the changes properly.

It is also noted that if a solution is recommended that requires a significant geometric change to the area or the implementation of something new (signage, pavement markings), the City should consider adding an education piece to the implementation which would serve to ensure the public understands how to interact with the changes properly.

For further detail, the Evaluation of Alternatives Memo for Ainslie Wood can be found in **Appendix E**.

**Figure 5-4** displays a location plan showing all the locations within the Ainslie Wood neighbourhood where either a problem or opportunity was identified through the Study. These locations are referenced in the same manner in **Table 5-8** that documents the proposed alternative solutions by location.

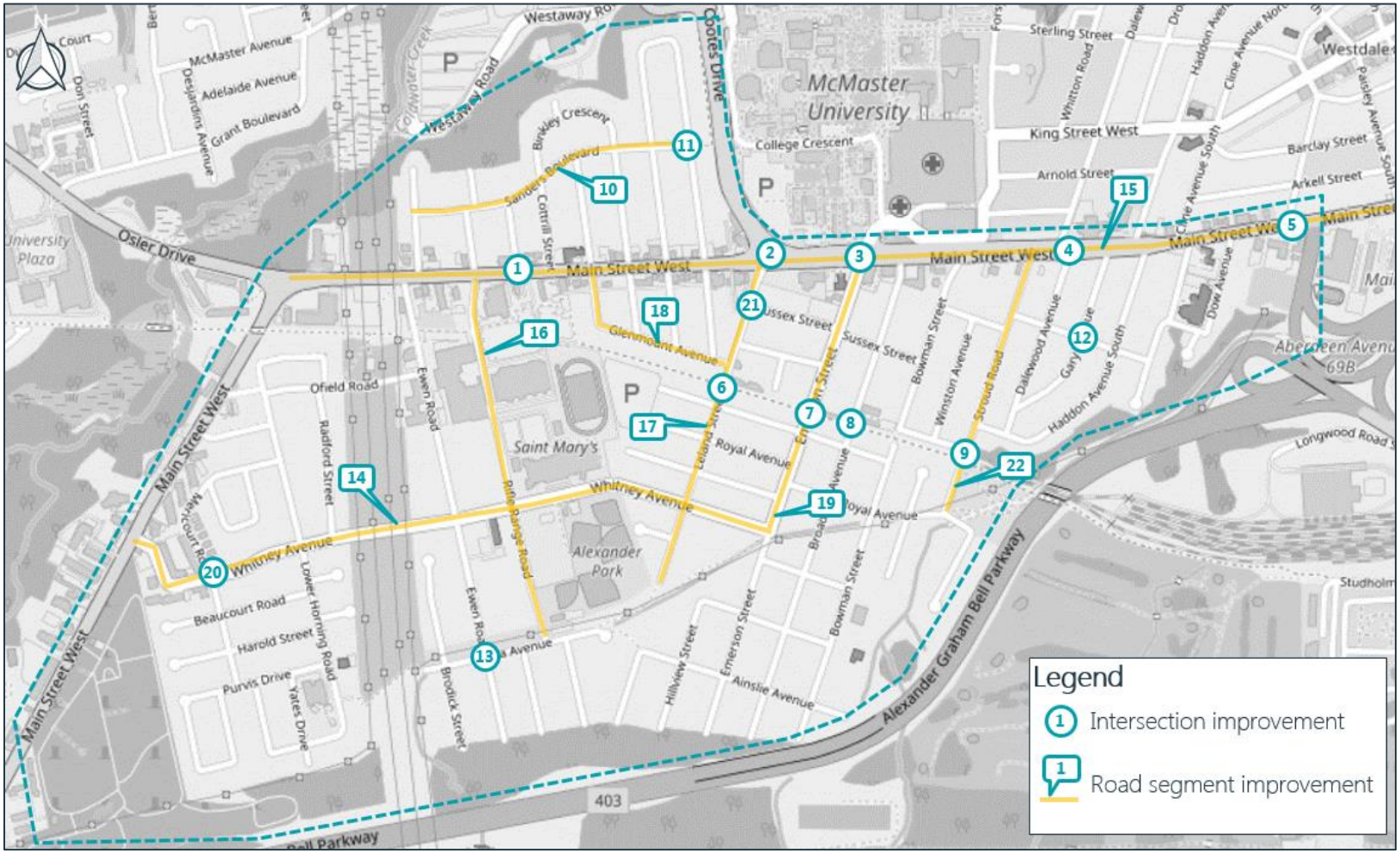


**Figure 5-4: Locations of Identified Problems or Opportunities in Ainslie Wood**

**Table 5-8: Potential Alternative Solutions for Ainslie Wood**

| Reference No. | Location | Resident Issue | Potential Alternative Solutions |
|---|---|---|---|
| General | Ainslie Wood | • Consider flashing all traffic lights in the neighbourhood at midnight. Many residents are unaware of what a flashing amber means.<br>• Many people are not stopping or slowing down when the sign is flashing.<br>• Consider implementing rumble strips on Ofield Road and Ewen Road.<br>• Many cyclists that ride on the sidewalk do not stop at traffic signals.<br>• Bus shelters in the neighbourhood have large advertising signs that block drivers view from someone waiting in the shelter. | -- |
| 1 | Main Street West & Binkley Road | • Fifty percent of collisions (or 4 out of 8) involved pedestrians; however, 2 out of 4 (50%) pedestrian-related collisions are associated with pedestrian crossing without ROW (note that this is a jogged intersection with no pedestrian crossing treatment on the west approach. | • Monitoring of pedestrian crossing behaviour is required to determine if any mitigation measures are needed (i.e. increase in pedestrian related collisions). |
| 2 | Main Street West & Cootes Drive | • Predominate impact types are rear-end (11 out of 27) and left-turns (8 out of 27).<br>• WB right turn is channelized with a large radius resulting in high speed vehicles. Two uncontrolled pedestrian crossings exist (pedestrians must "wait for gap").<br>• PM Peak NBL operates at LOS F. Signal timing plan does not have a protected phase. Consider implementing one. | • Alter lane designation (convert EB Through-Left lane to just EB Left).<br>• Higher order pedestrian crossing treatment. |
| 3 | Main Street West & | • Predominate impact types are rear-end (14 out of 26) followed by pedestrian (5 out of 26). | • Implement pedestrian signage.<br>• Add crosswalk markings. |

| Reference No. | Location | Resident Issue | Potential Alternative Solutions |
|---|---|---|---|
| | Emerson Street | • Potential illumination issues at Main Street West and Emerson Street since all the pedestrian / vehicle collisions were recorded under dark conditions.<br>• Unclear whether pedestrians or vehicles have ROW for channelized westbound right movement on Main Street West. | • Improve street lighting. |
| 4 | Main Street West & Dalewood Avenue | • Pedestrians walk down wide center median on Main Street West to adjacent signal to the west.<br>• Pedestrian crossing is unstriped at the north/west corner of the intersection.<br>• Pavement marking and signage do not match.<br>• During PM Peak, SB Left and SB Through movements operate with LOS F. | • Correct signage at location.<br>• Add pavement markings.<br>• Pedestrian barriers. |
| 5 | Main Street West & Newton Avenue | • Predominant impact type is rear-ending (8 of 19) followed by left-turn collisions (6 of 19).<br>• Left turn collisions were caused by drivers making improper turns or lane changes along Main Street West. Improper lane change could be attributed to vehicles using the centre-left-turn-lane for turning onto Newton Avenue. | • Implement turning restriction. |
| 6 | Leland Street at Rail Trail | • Crosswalk marking requested along the rail trail to ensure cyclists and pedestrian safety at intersections. | • Implement pedestrian signage.<br>• Add crosswalk markings. |
| 7 | Emerson Street at Rail Trail | • Crosswalk marking requested along the rail trail to ensure cyclists and pedestrian safety at intersections. | • Implement pedestrian signage.<br>• Add crosswalk markings. |

| Reference No. | Location | Resident Issue | Potential Alternative Solutions |
|---|---|---|---|
| 8 | Broadway Avenue at Rail Trail | • Crosswalk marking requested along the rail trail to ensure cyclists and pedestrian safety at intersections. | • Implement pedestrian signage.<br>• Add crosswalk markings. |
| 9 | Stroud Road at Rail Trail | • Crosswalk marking requested along the rail trail to ensure cyclists and pedestrian safety at intersections. | • Implement pedestrian signage.<br>• Add crosswalk markings. |
| 10 | Sanders Boulevard | • Speeding concern. | • Implement flexible bollards along centerline.<br>• Implement flexible bollards between travel lane and bicycle lane.<br>• Install speed monitoring system with real-time speed reporting.<br>• Add East-West crosswalk markings. |
| 11 | Sanders Boulevard & Norfolk Street | • AWS request noted in Terms of Reference for project under "currently identified issues". | • Conduct AWS warrant. |
| 12 | Westwood Avenue & Gary | • AWS request noted in Terms of Reference for project under "currently identified issues". | • Conduct AWS warrant. |
| 13 | Iona Avenue & Ewen Road | • AWS request noted in Terms of Reference for project under "currently identified issues". | • Conduct AWS warrant. |
| 14 | Whitney Avenue | • Speeding concern. | • Implement flexible bollards along centerline.<br>• Install speed monitoring system.<br>• Implement geometric chicanes.<br>• Implement speed humps.<br>• Improve roadside lighting. |

| Reference No. | Location | Resident Issue | Potential Alternative Solutions |
|---|---|---|---|
| 15 | Main Street West | • Speeding concern. | • Reduce speed limit. |
| 16 | Rifle Range Road | • Speeding concern.<br>• Exhibits high N/S traffic demand due to connection with Main Street West and high trip generators. An increase in traffic volumes in the morning has been noted by residents. Is an important connection between Main Street West and Whitney Avenue resulting in increased traffic in the morning? | • Implement flexible bollards along centerline.<br>• Introduce speed monitoring system: Consider camera enforcement.<br>• Implement speed humps. |
| 17 | Leland Street | • Speeding concern. | • Implement flexible bollards along centerline.<br>• Speed monitoring system.<br>• Implement speed humps (installed 2018). |
| 18 | Glenmount Avenue | • Speeding concern. | • Implement flexible bollards along centerline.<br>• Implement speed humps. |
| 19 | Emerson Street | • 63% of vehicles travelling faster than the speed limit in the school zone. Traffic calming measures may need to be considered.<br>• Lack of visibility of rail trail from Emerson Street.<br>• Trail from Emerson Street to Iona Avenue now floods every spring. It was previously heavily used and is now avoided.<br>• Poor road condition, in need of repair. | • Introduce speed monitoring system: Install dynamic speed signs to raise awareness about motor vehicle speeds and consider camera enforcement. |
| 20 | Whitney Avenue & Mericourt Road | • AWS request noted in Terms of Reference for project under "currently identified issues". Also noted "to be installed in 2018". | • Conduct AWS warrant. |

| Reference No. | Location | Resident Issue | Potential Alternative Solutions |
|---|---|---|---|
| 21 | Sussex Street & Leland Street | • AWS request noted in Terms of Reference for project under "currently identified issues". | • Installed in 2018. |
| 22 | Stroud Street | • Speeding concern. Identified in the Terms of Reference for project under "currently identified issues". | • Implement flexible bollards along centerline.<br>• Implement speed humps. |

## 5.5 Preferred Alternative

Table 5-9 provides an overview of the preferred alternative. A more detailed analysis of the preferred alternative can be found in **Appendix E**.

**Table 5-9: Preferred Alternative**

| Type of Improvement | Location | Location ID | Details | Change in Traffic Level of Service | Supportiveness of other Transportation Modes | Efficiency of Use of Existing Infrastructure | Safety | Compatibility with City Plans | Implementation Feasibility | Estimated Costs | Recommendations | Implementation / Phasing Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Implement Signage | Leland Street at Rail Trail Crossing | 6 | Add Signage Indicating Trail Crossing | | | | | | | | | Short Term (1-3 Years) |
| | Emerson Street at Rail Trail Crossing | 7 | | | | | | | | | | |
| | Broadway Avenue at Rail Trail Crossing | 8 | | | | | | | | | | |
| | Stroud Road at Rail Trail Crossing | 9 | | | | | | | | | | |
| Add Crosswalk Markings | Leland Street at Rail Trail Crossing | 6 | Add Crosswalk Markings at Rail Trail Crossing to Improve Visibility | | | | | | | | | - |
| | Emerson Street at Rail Trail Crossing | 7 | | | | | | | | | | - |
| | Broadway Avenue at Rail Trail Crossing | 8 | | | | | | | | | | - |
| | Stroud Road at Rail Trail Crossing | 9 | | | | | | | | | | - |
| | Sanders Boulevard | 10 | Add EB / WB Crosswalk Markings | | | | | | | | | Short Term (1-3 Years) Funding Can Be Allocated From "Minor Rehab" In City's Budget For 2019-2027 |

| Type of Improvement | Location | Location ID | Details | Change in Traffic Level of Service | Supportiveness of other Transportation Modes | Efficiency of Use of Existing Infrastructure | Safety | Compatibility with City Plans | Implementation Feasibility | Estimated Costs | Recommendations | Implementation / Phasing Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| All-Way Stop Control | Sanders Boulevard and Norfolk Street | 11 | AWSC Request in Terms of Reference – Not Warranted According to Hamilton Policy | | | | | | | | | - |
| | Sanders Boulevard and Cottrill Street / Binkley Crescent | 10 | AWSC Request from Councillor / Stakeholder Groups | | | | | | | | | Short Term. Will require further review from the City. |
| | Sanders Boulevard and Hollywood Street / Binkley Crescent | 10 | AWSC Request from Councillor / Stakeholder Groups | | | | | | | | | Short Term. Will require further review from the City. |
| | Westwood Avenue and Gary Avenue | 12 | AWSC Request in Terms of Reference – Not Warranted According to Hamilton Policy | | | | | | | | | - |
| | Ewen Road and Iona Avenue | 13 | | | | | | | | | | - |
| | Whitney Avenue and Mericourt Road | 20 | AWSC Request in Terms of Reference – Planned to be Implemented in 2018 | | | | | | | | | Short Term (1-3 Years) |
| Introduce Speed Monitoring System | Emerson Street | 19 | Speed Indication Display (and Consider Camera Enforcement) | | | | | | | | | |
| | Rifle Range Road | 16 | Consider Camera Enforcement | | | | | | | | | Medium Term (3-5 Years) |
| Roadside Lighting | Main Street West and Emerson Street | 3 | Add on Median in Vicinity of Intersection to Improve illumination | | | | | | | | | |

| Type of Improvement | Location | Location ID | Details | Change in Traffic Level of Service | Supportiveness of other Transportation Modes | Efficiency of Use of Existing Infrastructure | Safety | Compatibility with City Plans | Implementation Feasibility | Estimated Costs | Recommendations | Implementation / Phasing Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Whitney Avenue | 14 | Improve Roadway Lighting | | | | | | | | | |
| Curb Bump-outs | Sanders Boulevard and Cottrill Street / Binkley Crescent | 10 | North West and South East Quadrant Traffic Calming Measure | | | | | | | | | |
| | Sanders Boulevard and Binkley Road | 10 | | | | | | | | | | |
| | Sanders Boulevard and Hollywood Street North / Binkley Crescent | 10 | | | | | | | | | | |
| Chicanes | Whitney Avenue | 14 | Traffic Calming Measure | | | | | | | | | Short Term (1-3 Years) |
| Speed Humps | Whitney Avenue | 14 | | | | | | | | | | |
| | Rifle Range Road | 16 | | | | | | | | | | |
| | Leland Street | 17 | Speed Hump Installed in 2018 | Speed Hump Already Installed. | | | | | | | | - |
| | Glenmount Avenue | 18 | Traffic Calming Measure | | | | | | | | | |
| Flexible Bollards | Sanders Boulevard | 10 | Implement Along Centreline and between Travel Lane and Bicycle Lane (Traffic Calming Measure) | | | | | | | | | Short Term (1-3 Years) |
| | Whitney Avenue | 14 | | | | | | | | | | |

| Type of Improvement | Location | Location ID | Details | Change in Traffic Level of Service | Supportiveness of other Transportation Modes | Efficiency of Use of Existing Infrastructure | Safety | Compatibility with City Plans | Implementation Feasibility | Estimated Costs | Recommendations | Implementation / Phasing Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rifle Range Road | 16 | Along Centreline (Traffic Calming Measure) | | | | | | | | | |
| | Leland Street | 17 | | | | | | | | | | |
| | Glenmount Avenue | 18 | | | | | | | | | | |
| Signal Timing Modification | Main Street West and Cootes Drive[1] | 2 | Modify Signal Timings to Improve Traffic | Signals are Already Optimized Along Main St. Not Feasible to Improve Timing if LRT Will Change all Timings in the Near Future. | | | | | | | | - |
| | Main Street West and Emerson Drive | 3 | | Signals are Already Optimized Along Main St. Not Feasible to Improve Timing if LRT Will Change all Timings in the Near Future. | | | | | | | | - |
| | Main Street West and Dalewood Drive | 4 | | Signals are Already Optimized Along Main St. Not Feasible to Improve Timing if LRT Will Change all Timings in the Near Future. | | | | | | | | - |
| Implement Signage | Main Street West and Emerson Drive | 3 | Add Signage for Pedestrians to Wait for a Gap to Cross the Channelized Westbound Right Turn Lane | | | | | | | | | Subject to LRT |
| | Main Street West and Dalewood Avenue | 4 | Match Signage with Pavement Markings (Lane Movements do not Match) | | | | | | | | | |
| Add Pavement Markings | Main Street West and Dalewood Avenue | 4 | Match Pavement Markings with Signage for which Lanes are for which Movements | | | | | | | | | |
| Add Crosswalk Markings | Main Street West and Emerson Drive | 3 | Increase Visibility of Crossing (i.e. Zebra Striping) | | | | | | | | | |

| Type of Improvement | Location | Location ID | Details | Change in Traffic Level of Service | Supportiveness of other Transportation Modes | Efficiency of Use of Existing Infrastructure | Safety | Compatibility with City Plans | Implementation Feasibility | Estimated Costs | Recommendations | Implementation / Phasing Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reduce Speed Limit | Main Street West | 15 | Decrease Posted Speed Limit from 60 km/h to 50 km/h | | | | | | | | | |
| Install Higher Order Pedestrian Treatment | Main Street West and Cootes Drive[2] | 2 | WBR Crossing Combine Two Pedestrian Crossing Areas and Implement PXO Type C. | | | | | | | | | |
| Implement Signalized Pedestrian Crossing | Main Street West and Cootes Drive | 2 | | | | | | | | | | |
| Pedestrian Barriers | Main Street West and Dalewood Avenue | 5 | To Dissuade Pedestrians from Walking on the Centre Median | | | | | | | | | |
| Roadside Lighting | Main Street West and Emerson Street | 3 | Add on Median in Vicinity of Intersection to Improve Illumination | | | | | | | | | |
| Monitoring | Main Street West and Binkley Road | 1 | Monitoring of Pedestrian Crossing Behaviour | | | | | | | | | |
| Turn Prohibition | Main Street West and Newton Avenue | 5 | Prohibit Vehicles from Making Left Turns | | | | | | | | | |

**Recommendations:** Carried Forward: Screened Out:

Notes:

1 – During study lifecycle, EBL protected phase was added at Main Street West & Cootes Drive intersection.

2 – Type D currently exists but will be replaced with Type C.

# 6.0 Preliminary Cost Estimate / Phasing and Implementation Plan

As there are many combinations of requested and / or potential improvements to address the deficiencies, an implementation plan was developed to identify the timing and phasing of implementing these improvement (short, medium and long-term solutions). The timeframe for implementation was established based on a number of factors including; capital budget, complexity of solutions, coordination efforts and neighbourhood consultation.

**Table 6-10: Summary of Phasing and Costing for Each Improvement**

| Improvement | Costing | Phasing |
|---|---|---|
| AWS Control | <$25,000 | 1 - 3 years |
| Bump Outs | $25,000 - $50,000 | 3 - 5 years |
| Chicanes | $25,000 - $100,000 | 3 - 5 years |
| Crosswalk Markings | <$25,000 | 1 - 3 years |
| Flexible Bollards | <$25,000 | 1 - 3 years |
| Higher Order Pedestrian Treatment | $25,000-$100,000 | 3 - 5 years |
| Parking Prohibitions | <$25,000 | 1 - 3 years |
| Remove Existing Signed Cycling Route | $25,000 - $100,000 | 3 - 5 years |
| Roadside Lighting | >$100,000 | >5 years |
| Speed Cushions | <$25,000 | 1 - 3 years |
| Speed Monitoring System | <$25,000 | 1 - 3 years |
| Upgrade Trail Crossing | $25,000 - $100,000 | 3 - 5 years |

# 7.0 Conclusion

## 7.1 Transportation Master Plan Recommendations

The Hamilton Transportation Master Plan review and update was endorsed by the City Council in August 2018, which occurred during the life cycle of this study. As such, several updates and recommendations were put forth in the 2018 TMP that may not have been covered in this study, but that should be considered. These include (but are not limited to):

- Planned bike lanes on Whitney Avenue and Emerson Street
- Planned signed bike route on Leland Street from Main Street to the Rail Trail

## 7.2 Next Steps

The Ainslie Wood Neighbourhood Traffic Management Review Study follows Approach #2 of the Municipal Class EA process which fulfills the requirements of Schedule A+, A and B projects. Projects that fall within the A+ and A classifications are pre-approved through this document, while Schedule B projects require contract documents and the monitoring of the construction project. There are no Schedule B projects from this Study.

Following the 30-day public review period, all comments will be addressed, and the Study will be formally filed with the Ministry of Environment, Conservation and Parks.

After Approval of the NTMR, budget will need to be allocated by Council (or Staff) for each of the recommendations of the Report. Given that the recommendations are primarily Schedule A+ and A type improvements, there is also the potential to include these recommendations into already approved and scheduled neighbourhood projects as no additional approvals or studies are required for implementation.

Should any of these recommendations be considered for implementation, they will be subject to further traffic engineering review and design prior to construction / implementation by the City.

# Appendix A

# Public and Agency Consultation

# Appendix B

# Public Information Summary #1 Report

# Appendix C

# Public Information Summary #2 Report

# Appendix D

# Planning Context Report

# Appendix E

# Evaluation of Alternatives Memo

# Appendix F

# Existing Conditions Report

# Appendix G

# Future Conditions Report

# Limitations

## Limitations

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:
    a. The Standard Terms and Conditions which form a part of our Professional Services Contract;
    b. The Scope of Services;
    c. Time and Budgetary limitations as described in our Contract; and
    d. The Limitations stated herein.
2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.
3. The conclusions presented in this report were based, in part, on visual observations of the Site and attendant structures. Our conclusions cannot and are not extended to include those portions of the Site or structures, which are not reasonably available, in Wood's opinion, for direct observation.
4. The environmental conditions at the Site were assessed, within the limitations set out above, having due regard for applicable environmental regulations as of the date of the inspection. A review of compliance by past owners or occupants of the Site with any applicable local, provincial or federal bylaws, orders-in-council, legislative enactments and regulations was not performed.
5. The Site history research included obtaining information from third parties and employees or agents of the owner. No attempt has been made to verify the accuracy of any information provided, unless specifically noted in our report.
6. Where testing was performed, it was carried out in accordance with the terms of our contract providing for testing. Other substances, or different quantities of substances testing for, may be present on-site and may be revealed by different or other testing not provided for in our contract.
7. Because of the limitations referred to above, different environmental conditions from those stated in our report may exist. Should such different conditions be encountered, Wood must be notified in order that it may determine if modifications to the conclusions in the report are necessary.
8. The utilization of Wood's services during the implementation of any remedial measures will allow Wood to observe compliance with the conclusions and recommendations contained in the report. Wood's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.
9. This report is for the sole use of the party to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or the part, or any reliance thereon or decisions made based on any information or conclusions in the report is the sole responsibility of such third party. Wood accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.
10. This report is not to be given over to any third party for any purpose whatsoever without the written permission of Wood.
11. Provided that the report is still reliable, and less than 12 months old, Wood will issue a third-party reliance letter to parties that the client identifies in writing, upon payment of the then current fee for such letters. All third parties relying on Wood's report, by such reliance agree to be bound by our proposal and Wood's standard reliance letter. Wood's standard reliance letter indicates that in no event shall Wood be liable for any damages, howsoever arising, relating to third-party reliance on Wood's report. No reliance by any party is permitted without such agreement.