Municipality of Mississippi Mills

COMMITTEE OF THE WHOLE AGENDA

Tuesday, March 3, 2020
Council Chambers, Municipal Office

A. CALL TO ORDER (immediately following Council)

B. DISCLOSURE OF PECUNIARY INTEREST AND GENERAL NATURE THEREOF

C. APPROVAL OF AGENDA

D. APPROVAL OF MINUTES

Committee of the Whole minutes dated February 18, 2020 Pages 4-12

E. CONSENT REPORTS

Committee/Board Minutes to Receive:

i. Library Board – Jan 24, 2020 Pages 13-15
ii. Committee of Adjustment – Feb 19, 2020 Pages 16-19
iii. Agriculture – Feb 24, 2020 Pages 20-22

Motion to Approve or Receive:

Agriculture

a. Wild Parsnip and Organic Farming Page 21

Recommendation:

That the Committee of the Whole receive the recommendations from the Agriculture Advisory Committee's February 24, 2020 meeting as information;

And that the Committee of the Whole direct staff to bring forward a report to the March 17, 2020 meeting outlining options for implementation including costing of the proposed Organic Farming Pilot Program as per the Agriculture Advisory Committee's recommendations.

Agriculture Advisory Committee Recommendation 1:

That the Agricultural Advisory Committee recommends to Council that with respect to organic farming, a pilot project be undertaken to mechanically remove Wild Parsnip from the frontages of up to 13 organic farms in the community, plus an 8m

buffer from each corner of the property lines, representing approximately 10.5 linear kilometres of road.

And that the Agricultural Advisory Committee recommends that mechanical removal of Wild Parsnip should include the most economical means of either hand pulling or traditional mechanical removal to be determined on a case by case basis by the Municipality in consultation with the impacted organic farmer, and that an additional levy to be borne by the property owner may apply.

And that the Agricultural Advisory Committee recommends that Council explore the costing of hand removal for a light infestation of Wild Parsnip as a pilot project for organic farms.

Agriculture Advisory Committee Recommendation 2:

That the Agricultural Advisory Committee recommends that Council consider verifying that all mapping, agricultural or otherwise, is accurate and true, particularly noting the areas of Clayton Lake Road and Concession 1 Ramsay.

F. STAFF REPORTS

Roads and Public Works

1. Ottawa Street Intersection Study Pages 23-120

Recommendation:

That Committee of the Whole recommend Council receive the technical memorandum prepared by Parsons dated February 18, 2020, entitled “Mississippi Mills Traffic and Safety Review” as information;

And that Committee of the Whole recommend Council direct staff to implement the recommended mitigation measures identified in Table 6 of the memorandum in 2020;

And that Committee of the Whole recommend Council direct staff with respect to any other potential mitigation measures identified in Table 7 that Council would like implemented in 2020**.**

Building and Planning

2. Official Plan and Zoning By-Law Amendment OPA 23 And Z-16-19 Block 70 in Riverfront Estates — Pages 121-148

   Recommendation:

   That Committee of the Whole recommends that Council approve the Official Plan Amendment to recognize a net density of up to 91 units per ha on the subject lands known as Block 70 PLAN 27M-88 (PIN 05297-0507) in Riverfront Estate Subdivision;

   And that Committee of the Whole recommends that Council approve the Zoning By-law Amendment to change the zoning on the lands known as Block 70 PLAN 27M-88 (PIN 05297-0507), Almonte Ward, Municipality of Mississippi Mills from "Residential Fourth Density" (R4) to "Residential Fourth Density – Special Exception" (R4-X) to recognize a maximum of one dwelling unit per 111m² of lot area; a minimum setback of 4.80m between habitable room windows and parking spaces; an a minimum 1.0m fence and no berm shall be required on the south property line of the site; a privacy yard shall have a minimum depth of 4.30m; and a maximum combined width of 13.4m for two driveways on Johanna Street.

Finance and Administration

3. Addition to the Municipality's Names Reserve List – Herb Pragnell — Pages 149-158

   Recommendation:

   That the Committee of the Whole recommend that Council approve the addition of "Herb Pragnell" to the Municipality's Names Reserve List for consideration for future naming of a street within the municipality.

G. NOTICE OF MOTION (None)

H. INFORMATION ITEMS

i.	Mayor's Report	None
ii.	County Councillors' Report	Page 159
iii.	Mississippi Valley Conservation Authority Report	Page 160
iv.	Information List (motion to receive)	Pages 161-165
v.	Meeting Calendars (March)	Page 166

I. OTHER/NEW BUSINESS

J. PENDING LIST — Page 167

K. ADJOURNMENT

The Corporation of the Municipality of Mississippi Mills

Committee of the Whole Meeting #06-20

MINUTES

A special meeting of Committee of the Whole was held on Tuesday, February 18, 2020 at 3:00 p.m. in Council Chambers.

A. CALL TO ORDER

Councillor Dalgity called the meeting to order at 3:01 p.m.

B. ATTENDANCE

Present:

Committee: Mayor Lowry
Deputy Mayor Minnille
Councillor Dalgity (Chair)
Councillor Holmes
Councillor Guerard
Councillor Ferguson

Ken Kelly, CAO
Staff: Jeanne Harfield, Acting Clerk

Absent: Councillor Maydan

C. APPROVAL OF AGENDA

Motion No. CW036-20
Moved by Mayor Lowry
Seconded by Councillor Holmes
THAT the agenda be approved as presented.

CARRIED

D. DISCLOSURE OF PECUNIARY INTEREST OR GENERAL NATURE THEREOF

None

E. OTHER NEW BUSINESS

1. Advisory Committee – Terms of Reference

   The CAO provided an overview of the goal for the discussions regarding the existing non-statutory advisory committees such as their roles, budgets, public consultations, staff involvement, committee structure (standing committees, ad-hoc, etc.), value of advisory committees, reporting structure, expectations, and deliverables. Members discussed potential changes and provided input to the CAO.

   The CAO will report back to Council with proposed changes to the advisory committee structure for future consideration.

F. ADJOURNMENT

Motion No. CW037-20
Moved by Mayor Lowry
Seconded by Councillor Holmes
THAT the meeting be adjourned at 4:52 p.m.

CARRIED

_____
Jeanne Harfield, Acting Clerk
Recording Secretary

The Corporation of the Municipality of Mississippi Mills

Committee of the Whole Meeting #07-20

MINUTES

A regular meeting of Committee of the Whole was held on Tuesday, February 18, 2020 immediately following Council in the Council Chambers.

ATTENDANCE

Present:

Committee:	Mayor Lowry Deputy Mayor Minnille Councillor Dalgity (Chair) Councillor Holmes Councillor Guerard Councillor Ferguson
Staff:	Ken Kelly, CAO Jeanne Harfield, Acting Clerk Guy Bourgon, Director of Roads and Public Works Abby Armstrong, Environmental Compliance Coordinator (left at 7:08 p.m.) Tiffany MacLaren, Community and Culture Coordinator (left at 6:25 p.m.)
Absent:	Councillor Maydan

A. CALL TO ORDER

Councillor Dalgity called the meeting to order at 6:13 p.m.

B. DISCLOSURE OF PECUNIARY INTEREST OR GENERAL NATURE THEREOF

None

C. APPROVAL OF AGENDA

Motion No. CW038-20
Moved by Councillor Ferguson
Seconded by Deputy Mayor Minnille
THAT the agenda be approved as presented.

CARRIED

D. APPROVAL OF MINUTES

Motion No. CW039-20
Moved by Councillor Holmes
Seconded by Mayor Lowry
THAT the minutes dated February 4, 2020 be approved.

CARRIED

E. CONSENT REPORTS

Motion to Receive

Motion No. CW040-20
Moved by Councillor Ferguson
Seconded by Mayor Lowry
THAT the Committee of the Whole recommends that Council receive the CAO Report – February 2020 as information.

CARRIED

Committee/Board Minutes to Receive

Motion No. CW041-20
Moved by Councillor Holmes
Seconded by Deputy Mayor Minnille
THAT the following advisory committee minutes be received:

- MRPC – Dec 19, 2019
- Parks and Rec – Jan 28, 2020
- Agriculture – Feb 11, 2020

CARRIED

ACTION: Staff to provide clarification regarding MVCA buffer 3-5 meters (Parks and Rec minutes). Staff to invite the Road Technologist to present to Council on the new mapping system (Agriculture Minutes)

Motion to approve/support

Parks and Recreations

a) Resignation of Member

Moved by Deputy Mayor Minnille
Seconded by Councillor Guerard
THAT Committee of the Whole accept with regret the resignation of Denny O'Connell from the Parks and Recreation Advisory Committee.

Motion to amend
Motion No. 042-20
Moved by Councillor Holmes
Seconded by Councillor Guerard
Insert: And that Committee of the Whole recommends that Council appoint two new members to the Parks and Recreations Advisory Committee.

CARRIED

Motion as amended
Motion No. 043-20
Moved by Deputy Mayor Minnille
Seconded by Councillor Guerard
THAT Committee of the Whole accept with regret the resignation of Denny O'Connell from the Parks and Recreation Advisory Committee;

AND THAT Committee of the Whole recommends that Council appoint two new members to the Parks and Recreations Advisory Committee.

CARRIED

Agriculture

b) Provincial Consultation
Re: Proposed Changes to the Drainage Act

Motion No. 044-20
Moved by Councillor Ferguson
Seconded by Deputy Mayor Minnille
THAT Council send correspondence to the Province supporting the proposed changes to the Drainage Act.

CARRIED

F. STAFF REPORTS

Recreation and Culture

1. Funding for Ramsay Recreational Halls 2020

Motion No. 045-20
Moved by Mayor Lowry
Seconded by Councillor Holmes
THAT Committee of the Whole recommends that Council approve 2020 funding for Union Hall and the Clayton Hall based on 35% of their respective 2019 operating;

AND FURTHERMORE THAT Committee of the Whole recommends Council require both organizations to develop a five-year business plan to be submitted by the end of July, 2020;

AND FURTHERMORE THAT a review of the funding model for 2021-2024 occur in October 2020 upon review of business plans from both facilities.

CARRIED

Roads and Public Works

2. Paterson Street Parking Restrictions

Motion No. 046-20
Moved by Councillor Holmes
Seconded by Councillor Ferguson
THAT Committee of the Whole recommend Council direct staff to amend By-law 02-27 Traffic and Parking to restrict parking on Paterson Street in proximity to the Orchardview Estates development as detailed in the report by the Director of Roads and Public Works dated February 18th, 2020.

AND THAT Committee of the Whole recommend Council direct staff with respect to public consultation in accordance with the options identified in this report.

CARRIED

3. 2020 Wild Parsnip Management Program

Motion No. 047-20
Moved by Councillor Holmes
Seconded by Councillor Ferguson
THAT Committee of the Whole recommend Council approve the 2020 Wild Parsnip Management Program as identified as Option 1 in the Environmental Compliance Coordinator's Report on the 2020 Wild Parsnip Management Program dated February 18, 2020 with the understanding that modifications may be made to the plan based on the forthcoming Agriculture Advisory Committee recommendations with regards to organic farming operations.

DEFERRED

Motion No. 048-20
Moved by Councillor Holmes
Seconded by Deputy Mayor Minnille
THAT the matter be deferred until March 3, 2020.

CARRIED
Deferred to March 3, 2020

Finance and Administration

4. Community Engagement Strategies

Motion No. 049-20
Moved by Councillor Holmes
Seconded by Mayor Lowry
THAT the Committee of the Whole recommends that Council direct staff to develop a community engagement strategy as part of the strategic plan;

AND THAT the Committee of the Whole recommends that Council direct staff to formalize plans for ward open houses/town halls;

AND THAT the Committee of the Whole recommends that Council direct staff to incorporate cost effective online community engagement tools into the website development;

AND THAT the Committee of the Whole recommends that Council direct staff to obtain quotes for online community engagement software as part of the community engagement strategy;

AND THAT the Committee of the Whole recommends that Council provide direction to staff regarding the option of facilitating council drop-ins or office hours and including more detailed information about Councillors on the new municipal website.

CARRIED

Motion to amend:
Motion No. 050-20
Moved by Councillor Guerard
Seconded by Councillor Holmes
Insert: And that the Committee of the Whole recommends that Council direct staff to bring forward Open Forum at Committee of the Whole meetings within certain parameters such as but not limited to registration with Clerk by the Friday before the meeting, subject matter must be on the agenda, and time limits.

DEFEATED

5. Support Development of Independent Model for Mill of Kintail

Moved by Councillor Holmes
Seconded by Councillor Ferguson
THAT the Committee of the Whole recommend Council direct the Mayor and staff to work with the Mississippi Valley Conservation Authority, the Mill of Kintail Special Advisory Committee, the Provincial Government and other private parties to develop an independent and sustainable model for the R. Tait McKenzie and Dr. James Naismith Collections.

AND THAT the Committee of the Whole recommend Council allocate $10,000 to support the professional legal advice for a governance structure.

Motion to amend
Motion No. 051-20
Moved by Councillor Holmes
Seconded by Councillor Ferguson
Insert: And That the Committee of the whole recommend that Council direct staff to keep Council informed.

CARRIED

Motion as amended
Motion No. 052-20
Moved by Councillor Holmes
Seconded by Councillor Ferguson
THAT the Committee of the Whole recommend Council direct the Mayor and staff to work with the Mississippi Valley Conservation Authority, the Mill of Kintail Special Advisory Committee, the Provincial Government and other private parties to develop an independent and sustainable model for the R. Tait McKenzie and Dr. James Naismith Collections.

AND THAT the Committee of the Whole recommend Council allocate $10,000 to support the professional legal advice for a governance structure;

AND THAT the Committee of the whole recommend that Council direct staff to keep Council informed.

CARRIED

G. NOTICE OF MOTION

1. Mayor Lowry Motion
   Re: Memorandum of Understanding Between the Municipality of Mississippi Mills and the Mississippi Valley Textile Museum

Motion No. 053-20
Moved by Mayor Lowry
Seconded by Councillor Holmes
THAT Whereas the Municipality will be undertaking Phase 2 of the Riverwalk which includes the Mill Workers' staircase;

AND WHEREAS the Municipality owns or has agreements in place for all lands related to Phase 2 of Riverwalk;

AND WHEREAS the mandate of the Mississippi Valley Textile Museum includes preserving and sharing the history of mill workers in the area;

AND WHEREAS the Mississippi Valley Textile Museum has secured grant funding for projects connected to the Riverwalk Expansion;

THEREFOR BE IT RESOLVED THAT the Committee of the Whole recommends that Council direct staff to draft and execute a Memorandum of Understanding between The Municipality of Mississippi Mills and The Mississippi Valley Textile Museum for projects pertaining to the Riverwalk and Millworkers' Staircase.

CARRIED

H. INFORMATION ITEMS

i. **Mayor's Report** – None

ii. **County Councillor's Report** – Highlights: Business Retention and Expansion Strategy; Allocation of 2020-2021 Community Homelessness Prevention Initiative; Community Housing Renewal Strategy; Allocation of Ontario Priorities Housing Initiative; Report from Lanark County Paramedic Service Chief; and Climate Action Plan: One Million Trees Project.

iii. **Mississippi Valley Conservation Authority Report** – None

iv. **Information List 04-20**

Motion No. CW054-20
Moved by Councillor Holmes
Seconded by Councillor Ferguson
THAT Information List #04-20 be received

AND THAT items #1 Carleton Place re: Donor Wall, #4 Almonte Civitan re: Volunteer Appreciation Week and # 5 Mississippi Mills Library Board re: Cost Sharing Agreement.

CARRIED

v. **Meeting Calendar (February/March)**
Amendments: AAC cancelled and March meeting moved to March 11th, Parks and Rec moved from Feb 25th to March 3rd.

I. OTHER/NEW BUSINESS

[None]

J. PENDING LIST

Members reviewed the pending list.

K. ADJOURNMENT

Motion No. CW055-20
Moved by Mayor Lowry
Seconded by Deputy Mayor Minnille
THAT the meeting be adjourned at 7:25 p.m.

CARRIED

_____
Jeanne Harfield, Clerk
Recording Secretary

MISSISSIPPI MILLS PUBLIC LIBRARY BOARD

MINUTES

Regular Meeting

A regular meeting of the Mississippi Mills Public Library Board was held on January 24, 2020 at 2:30 p.m. at the Almonte Branch.

1. CALL TO ORDER

   The meeting was called to order at 2:33 p.m.

2. ATTENDANCE:

PRESENT:	ABSENT:
Jeff Fraser	
Councillor Jan Maydan	
Cathy Peacock, Chair	
Marie Traversy	
Warren Thorngate	
Barbara Button	
Leanne Czerwinski, Acting Chair	
Micheline Boucher	
Christine Row, staff	

3. APPROVAL OF AGENDA

   Resolution No. 01-20
   Moved by J. Fraser
   Seconded by J. Maydan

   THAT the agenda be approved as presented.

   CARRIED

4. DISCLOSURE OF PECUNIARY INTEREST
   [None]

5. DELEGATIONS/PRESENTATIONS
   [None]

6. CONSENT ITEMS
   a) Approval of minutes from December 18, 2019
   b) Correspondence- FOPL HR Survey Summary and Recommendations
   c) Reports- January 2020 CEO Report
   d) Incidents
      [None]
   e) Financials
      [None]

Resolution No. 02-20
Moved by L. Czerwinski
Seconded by W. Thorngate

THAT the MMPLB accepts the consent items and approves the December 18, 2019 minutes as amended.

CARRIED

7. FOR DISCUSSION/DECISION
   a. Business arising from the minutes- AED Funding

      C. Row has contacted MP Scott Reid's office but has not received a response at this time.

   b. Almonte Space Needs Assessment

Resolution No. 03-20
Moved by L. Czerwinski
Seconded by M. Traversy

THAT MMPLB approves hiring Big Thinking on contract to complete the Space Needs Assessment project in accordance with the Single Source Procurement Section 4 (i) and (v) of The Corporation of the Municipality of Mississippi Mills Procurement Policy.

CARRIED

   c. Closed meeting

Resolution No. 04-20
Moved by M. Traversy
Seconded by J. Fraser

THAT MMPLB enter into an in camera session at 3:07 p.m. to address a topic pertaining to personal matters about an identifiable individual, including municipal or local board employees.

CARRIED

Resolution No. 05-20
Moved by M. Traversy
Seconded by J. Fraser

THAT the MMPLB meeting moves out of in-camera at 3:14 p.m.

CARRIED

Resolution No. 06-20
Moved by B. Button
Seconded by J. Maydan

THAT the MMPLB accepts the recommendation of the HR Committee to accept the previous professional experience of the current CEO (15 years with previous employer plus 2 years with Mississippi Mills Public Library as of August 20, 2020) to receive the respective vacation entitlement in accordance with By-law No. 01-21 Vacation with Pay (E).

CARRIED

8. OTHER/NEW BUSINESS

a) Friends of the Library

J. Fraser provided an update on the Friends including news that they plan to seek funding to support the March Break children's programming and will run the canteen at the Pakenham Branch during the Pakenham Maple Run Tour on April 4th and 5th.

b) Reciprocal borrowing with Arnprior Public Library

C. Row explained that the Arnprior Public Library Board decided not to sign reciprocal borrowing agreement this year.

c) 2020 Cost Sharing budget

The Board agreed to write a letter to Council to address their concerns.

9. NEXT MEETING
February 21, 2020 at 2:30 at the Pakenham Branch.

10. ADJOURNMENT

Resolution No. 07-20
Moved by L. Czerwinski
Seconded by B. Button

THAT the meeting be adjourned at 3:50 p.m.

CARRIED

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS

COMMITTEE OF ADJUSTMENT

MINUTES

Wednesday, February 19, 2020, at 5:30 P.M.

Council Chambers, Municipal Office, 3131 Old Perth Rd., Almonte

PRESENT:	Stacey Blair (Acting Chair)	
	Connie Bielby	
REGRETS:	Patricia McCann-MacMillan (Chair)	
APPLICANTS/PUBLIC:	A-02-20:	Rod Price (Applicant)
		Barry Sweetman (Owner)
	A-03-20:	David Frisch (Owner/Applicant)
		Kim Narraway (Owner/Applicant)
		John Riordan
	A-04-20:	Rod Ayotte (Applicant)
	A-05-20:	
STAFF:	Maggie Yet, Planner 1, Recording Secretary	

Acting Chair of the Committee called the meeting to order at 5:31 p.m.

A. APPROVAL OF AGENDA
Moved by Connie Bielby
Seconded by Stacey Blair

CARRIED

B. DISCLOSURE OF PECUNIARY INTEREST
None.

C. APPROVAL OF MINUTES

1. January 15th, 2020 PUBLIC MEETING
Moved by Stacey Blair
Seconded by Connie Bielby

CARRIED

D. NEW BUSINESS
None.

E. HEARINGS

1. Minor Variance Application A-02-20

Owner(s):	Barry Sweetman & Nyssa Schmidt
Applicant:	Rortar Land Development Consultants (Rod Price)
Legal Description:	Lot 9, Henderson Section, Plan 6262
Address:	136 Brougham Street
Zoning:	Residential Second Density (R2)

The applicant is requesting relief from the minimum lot frontage requirement of 10m to 6.75m and minimum lot area requirement from 320m^2 to 222.2m^2 in the Residential Second Density (R2) Zone for an existing semi-detached dwelling. The requested relief would constitute a condition of approval for a Consent application to

the County of Lanark for a proposed severance of the semi-detached dwelling into two legally conveyable land holdings.

The Acting Chair opened the floor to comments by the Applicant. The Applicant provided comments regarding the requested relief. No other comments were received.

The Committee took to a vote and passed the following motion:

THAT the Municipality of Mississippi Mills Committee of Adjustment approve the Minor Variance for the lands described legally as Lot 9, Henderson Section, Plan 6262, Almonte Ward, Municipality of Mississippi Mills, municipally known as 136 Brougham Street, to reduce the minimum lot frontage for a semi-detached dwelling from 10m (32.81ft) to 6.75m (22.1ft) and minimum lot area from 320m^2 (3,444.5ft^2) to 222.2m^2 (2,391.7ft^2) in the Residential Second Density (R2) Zone, subject to the following conditions:

1. **That the Minor Variances are approved based on the plans submitted;**
2. **That the variance is conditional upon Consent approval from the County of Lanark;**
3. **That separate water and sanitary connections are installed in each unit with standposts and water meters;**
4. **That an agreement is registered on the title of the two properties specifying sharing arrangements for the shared driveway, wooden ramp, portico and patio;**
5. **That the Owners install fire separation to meet existing standards for semi-detached dwellings held in separate ownership; and**
6. **That the Owners obtain all required building permits.**

CARRIED

2. Minor Variance Application A-03-20

Owner(s)/Applicant: David Frisch & Kim Narraway
Legal Description: Lots 71 & 72, Plan 6262
Address: 39 Cameron Street
Zoning: Residential Second Density (R2)

The owners/applicants are requesting relief from minimum rear yard setback from 7.5m to 4.5m within the Residential Second Density (R2) Zone to expand a legal non-complying addition at the rear of the dwelling. The proposal would result in the partial demolition of the existing addition and expanded in the rear yard by an additional 1.2m (3.9ft).

The Acting Chair opened the floor to comments. C Bielby questioned if the hobby shed would be removed to which the Owner responded affirmatively. No other comments were received.

The Committee took to a vote and passed the following motion:

THAT the Municipality of Mississippi Mills Committee of Adjustment approve the Minor Variance for the lands described legally as Plan 6262, Lots 71 & 72, Almonte Ward, Municipality of Mississippi Mills, municipally known as 39 Cameron Street, to reduce the minimum rear yard setback from 7.5m (24.6ft) to 4.5m (14.8ft) to permit the expansion of a legal non-complying addition at the rear of the dwelling, subject to the following conditions:

1. **That the Minor Variance is approved based on the plans submitted; and**
2. **That the Owners obtain all required building permits.**

CARRIED

3. Minor Variance Application A-04-20

Owner(s):	Adel Girgis & Nashaat Mekhaeil
Applicant:	Rod Ayotte
Legal Description:	Part Lot 2, McClellan Section, Plan 6262, being Part 1 on Reference Plan 27R5684
Address:	55 Spring Street
Zoning:	Residential Second Density Exception 6 (R2-6)

The applicant is requesting relief from the minimum exterior side yard setback from 6m to 4.1m and the minimum rear yard setback from 7.5m to 6.9m in the Residential Second Density Exception 6 (R2-6) Zone to permit the construction of an addition for a proposed pharmacy at the rear of an existing dwelling. The pharmacy would front onto State Street.

The Acting Chair opened the floor to comments. Staff summarized comments received from the residents of 51 Spring Street and the Almonte General Hospital following the finalization of the meeting agenda and provided a response to the comments. The comments were as follows:

Regarding property and resale values: Staff responded that potential impacts on property values are not considered as part of the analysis for minor variance applications as they do not constitute land use planning rationale.

Regarding landscaping: Staff responded that the proposal is subject to Site Plan Control whereby a landscaping plan indicating landscape, vegetation and buffering and screening is required and examined by Staff in further detail.

Regarding the physical characteristics of the proposal: Staff responded that the physical characteristics will be further examined at time of Site Plan Control.

Regarding Traffic and Parking: The Almonte General Hospital provided comments with concerns regarding the existing parking and traffic conditions on Spring Street and State Street. Staff responded that the hospital's comments were provided to the Director of Roads and Public Works. The Director of Roads and Public Works had no record of concerns from the hospital regarding parking and traffic conditions in the area.

The Committee took to a vote and passed the following motion:

THAT the Municipality of Mississippi Mills Committee of Adjustment approve the Minor Variance for the lands described legally as Part Lot 2, McClellan Section, Plan 6262, Almonte Ward, Municipality of Mississippi Mills, municipally known as 55 Spring Street, to permit the construction of an addition for a proposed pharmacy, subject to the following conditions:

1. **That the Minor Variance is approved based on the plans submitted;**
2. **That the Owners apply for and obtain Site Plan Control for the proposed addition; and**

3. **That the Owners obtain all required building permits.**

CARRIED

4. Minor Variance Application A-05-20

Owner(s): Helen Noreen Levi
Applicant: Stephan Chagnon
Legal Description: Lot 3, Plan 6262
Address: 144 Queen Street
Zoning: Downtown Commercial (C2)

The applicant is requesting relief to legally permit a non-conforming secondary dwelling unit in the Downtown Commercial (C2) Zone and relief from the Secondary Dwelling Unit provisions to permit a dwelling unit greater than 40 percent of the gross floor area of the principal dwelling unit. The secondary dwelling unit is located within a one-storey addition to an existing detached dwelling formerly used for commercial purposes.

The Acting Chair opened the floor to comments. No comments were received.

The Committee took to a vote and passed the following motion:

THAT the Municipality of Mississippi Mills Committee of Adjustment approve the Minor Variance for the lands described legally as Lot 3, Plan 6262, Almonte Ward, Municipality of Mississippi Mills, municipally known as 144 Queen Street, to permit a secondary dwelling unit in a detached dwelling in the C2 Zone, and to permit said secondary dwelling unit to occupy up to 49.6% or 74.8m^2 (805ft^2) of the gross floor area of the principal dwelling unit, subject to the following conditions:

1. **That the Minor Variance is approved based on the plans submitted; and**
2. **That the Owner/Applicant obtain all required building permits and approvals for the secondary dwelling unit.**

CARRIED

F. OTHER BUSINESS

None.

G. ANNOUNCEMENTS

Ms. Yet stated that the Municipality received an appeal on the Minor Variance decision for application A-01-20.

H. ADJOURNMENT

Moved by Stacey Blair
Seconded by Connie Bielby
THAT the meeting be adjourned at 5:58 p.m. as there is no further business before the Committee.

Maggie Yet, Recording Secretary

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS
AGRICULTURE COMMITTEE
MINUTES

Monday, February 24, 2020 @ 12:30 P.M.

Municipal Office, 3131 Old Perth Road, Almonte

PRESENT: Brenda Cochran
Lorne Heslop
Merlin Knapton
Scott Sigurdson
Councillor Bev Holmes

STAFF: Niki Dwyer, Director of Planning
Jeanne Harfield, Clerk

REGRETS: Paul Crozier

The Chair called the meeting to order at 12:30 p.m.

A. APPROVAL OF AGENDA
Moved by Lorne Heslop
Seconded by Scott Sigurdson
THAT the Agenda dated February 11, 2020 be approved as presented.

CARRIED

B. DISCLOSURE OF PECUNIARY INTEREST OR GENERAL NATURE THEREOF

None were declared.

C. APPROVAL OF MINUTES
Moved by Merlin Knapton
Seconded by Scott Sigurdson
THAT the Minutes dated February 11, 2020 be approved as amended.

CARRIED

D. DELEGATIONS/PRESENTATIONS

None.

E. NEW BUSINESS
1. Wild Parsnip Management

The Committee discussed a variety of mechanical removal options for the treatment of Wild Parsnip in front of organic farms, which were previously identified by the Committee.

It was noted that there is a required 8m buffer of no-spray zone around organic farms and that this may need to be factored into a linear setback measured from the property line of the organic farms.

Moved by Scott Sigurdson
Seconded by Merlin Knapton
THAT the Agricultural Advisory Committee recommends to Council that with respect to organic farming, a pilot project be undertaken to mechanically remove Wild Parsnip from the frontages of up to 13 organic farms in the community, plus an 8m buffer from each corner of the property lines, representing approximately 10.5 linear kilometres of road.

AND THAT the Agricultural Advisory Committee recommends that mechanical removal of Wild Parsnip should include the most economical means of either hand pulling or traditional mechanical removal to be determined on a case by case basis by the Municipality in consultation with the impacted organic farmer, and that an additional levy to be borne by the property owner may apply.

AND THAT the Agricultural Advisory Committee recommends that Council explore the costing of hand removal for a light infestation of Wild Parsnip as a pilot project for organic farms.

CARRIED

Moved by Merlin Knapton
Seconded by Scott Sigurdson
THAT the Agricultural Advisory Committee recommends that Council consider verifying that all mapping, agricultural or otherwise, is accurate and true, particularly noting the areas of Clayton Lake Road and Concession 1 Ramsay.

CARRIED

F. INFO/CORRESPONDENCE

None

G. ROUNDTABLE:

The Committee also discussed the identification and classification of farming in the Community of Mississippi Mills and how the Committee can promote and support the Agricultural Community through a self-identification program for farms who do not qualify for certification by OFA.

Lorne suggested the following:

- The Committee should be teaching itself about Land Evaluation Area Reviews;
- The Leeds Grenville and Lanark Food Core is interested in Municipalities adopting Food Charters in order to highlight the importance of food and food production;
- Soil Crop Improvement Association has launched a tool called ALICE which gives the farmer the ability to move property in and out of productive form without financial loss;
- MVCA is working on a Watershed Plan which may have impacts on agricultural operations.

Scott suggested that the Municipality adopt an “Open Farm Day” as a collaborative effort to raise interest and awareness about where and how food is produced.

H. ANNOUNCEMENT

To be determined.

I. ADJOURNMENT

Moved by Merlin Knapton
Seconded by Scott Sigurdson
THAT the meeting be adjourned at 1:58 p.m.

CARRIED

Niki Dwyer, Recording Secretary

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS

STAFF REPORT

DATE: March 3, 2020

TO: Committee of the Whole

FROM: Guy Bourgon, P.Eng., Director of Roads and Public Works

SUBJECT: Ottawa Street Intersection Study

RECOMMENDATION:

THAT Committee of the Whole recommend Council receive the technical memorandum prepared by Parsons dated February 18, 2020, entitled "Mississippi Mills Traffic and Safety Review" as information;

AND THAT Committee of the Whole recommend Council direct staff to implement the recommended mitigation measures identified in Table 6 of the memorandum in 2020;

AND THAT Committee of the Whole recommend Council direct staff with respect to any other potential mitigation measures identified in Table 7 that Council would like implemented in 2020.

BACKGROUND:

At the November 5th, 2019, Council meeting, Council directed staff to engage Parsons to undertake a study of the intersections of Ottawa Street and Martin Street, Ottawa Street and Paterson/Menzie Streets, and Ottawa Street and Industrial/Sadler Streets to identify safety issues and propose cost-effective solutions in keeping with measures undertaken in other comparably-sized municipalities.

At the February 18th, 2020, Council meeting, Parsons presented their findings to Council. The staff report on the Ottawa Street Intersection Study was subsequently deferred to address issues put forward by Council, including Leading Pedestrian Intervals and Right-turn on Red restrictions.

DISCUSSION:

A copy of the revised technical memorandum prepared by Parsons is attached.

Traffic data was collected over a 10 hour period on November 7th, 2019, at all three intersections. Based on the data collected, collision history and field observations,

Parsons completed an analysis of the intersection performance and prepared a mitigation strategy.

The memorandum does not identify major safety concerns at any of the intersections that were studied and proposes minor low-cost improvements which can be implemented by the Municipality at these intersections. Should Council be supportive of the mitigation measures recommended for implementation in the report, staff would be able to implement these measures in the spring of 2020.

OPTIONS:

In addition to the recommended mitigation measures identified in Table 6, Parsons has also provided a list of potential mitigation measures for future consideration in Table 7, which was revised on the basis of feedback from Council at the February 18th meeting. Although not forming part of Parsons recommended measures, these optional measures could be implemented at the discretion of Council.

FINANCIAL IMPLICATIONS:

Estimates of the various recommended measures have been included in the memorandum.

SUMMARY:

As directed by Council, Parsons has prepared a technical memorandum addressing safety concerns at three Ottawa Street Intersections. Staff are recommending that the memorandum be received and the measures identified in Table 6 of the memorandum be implemented in 2020, along with any other potential mitigation measures from Table 7 that Council desires.

Respectfully submitted,

Guy Bourgon, P.Eng.
Director of Roads and Public Works

Reviewed by,

Ken Kelly
CAO

Attachment: Technical Memorandum – Mississippi Mills Traffic and Safety Review

Technical Memorandum

To:	Guy Bourgon, P.Eng.	Date:	18 February 2020
From:	Austin Shih, M.A.Sc., P.Eng./Rani Nahas, EIT	Project:	477345-01000

Re: Mississippi Mills – Traffic and Safety Review

1. INTRODUCTION

The following Technical Memorandum outlines a traffic and safety review of three intersection on Ottawa Street in the Municipality of Mississippi Mills (Municipality). This assignment is the result of a Standing Offer call-up under RFP# 17-05. In discussions with Municipality staff and an initial review of the site context, we understand the following:

- There have been several complaints received by local Councillors regarding perceived safety concerns at the following intersections in Almonte, mostly to do with school children.
    - Ottawa Street with Martin Street;
    - Ottawa Street with Paterson/Menzie Streets; and
    - Ottawa Street with Industrial/Sadler Streets.
- Council would like a study to review these intersections with a specific focus on pedestrian safety.
- Council would like cost-effective options developed (complete with costing) to improve pedestrian safety.
- Options should be in keeping with measures that have been implemented in similar sized communities.

The site context is shown in **Figure 1**. This memo will document the methodology, analysis, results, and recommendations for the noted assignment. Additionally, concept plans for potential mitigation options will be provided.

Figure 1: Site Context

2. STUDY AREA

2.1. AREA ROAD NETWORK

Ottawa Street extends from Main Street E in the southwest to Appleton Side Road in the northeast. Street has a two-lane cross-section (one travel lane in each direction) within the study area with auxiliary turn lanes at Martin Street N to Paterson

Street. East of Paterson Street, Ottawa Street street transitions to a four-lane cross-section with auxiliary turn lanes at Industrial. The posted speed limit is 50 km/h.

Queen Street extends from Bridge Street in the southwest to Martin Street in the north. Queen Street operates with one travel lane in each direction and auxiliary turn lanes at major intersections. The posted speed limit is 50 km/h.

Martin Street N extends from Ottawa Street to Blakeney Road in the north. Within the study area, Martin Street N operates with one travel lane in each direction. The posted speed limit is 50 km/h.

Paterson Street extends from Ottawa Street in the northwest to Robert Hill Street in the southeast. It operates with one travel lane in each direction. The posted speed limit is 40 km/h.

Menzie Street extends from Ottawa Street to Maude Street in the north. Within the study area, Menzie Street operates with one travel lane in each direction. The posted speed limit is 50 km/h.

Industrial Drive extends from Ottawa Street to Appleton Side Road. Within the study area, Industrial Drive operates with one travel lane in each direction. The posted speed limit is 50 km/h.

Sadler Drive extends from Ottawa Street to Horton Street in the north. Within the study area, Sadler Drive operates with one travel lane in each direction. The posted speed limit is 50 km/h.

2.2. STUDY AREA INTERSECTIONS

Martin/Ottawa

The Martin/Ottawa intersection is a signalized four-legged intersection. The east and westbound approaches consist of an auxiliary left-turn lane and a shared through-right turn lane. The northbound approach consists of a shared through-left turn lane and a right-turn lane. The southbound approach consists of a single all-movement lane. All movements are permitted at this location.

Paterson/Ottawa

The Paterson/Ottawa intersection is a signalized four-legged intersection. The eastbound approach consists of a single all-movement lane. The westbound approach consists of a left-turn lane, through lane, and right-turn lane. The north and southbound approaches consist of a single all movement lane. All movements are permitted at this location.

Industrial/Ottawa

The Industrial/Ottawa intersection is a signalized four-legged intersection. The eastbound approach consists of a left-turn lane, through lane, and right-turn lane. The westbound approach consists of a left-turn lane, through lane, and shared through-right turn lane. The northbound approach consists of a shared through-left turn lane and a channelized right-turn lane. The southbound approach consists of a left-turn lane and a shared through-right turn lane. All movements are permitted at this location.

2.3. PEDESTRIAN/CYCLING NETWORK

Sidewalks are located on all sides of each of the subject intersections with the exception of the east sides of Menzie Street and Industrial Drive. Sidewalk widths vary from approximately 1.2m at Martin Street to 2.4m at Paterson Street. At the intersection of Paterson/Ottawa the ladder crosswalks on the east and west side crossings (crossing Ottawa Street) are offset from the sidewalks along the east and west sides of Paterson Street by approximately 7.5 m (east side) and 12 m (west side). Given the long radii on all quadrants their current location provides the shortest crossing distance across Ottawa Street and aligns with the location of the pedestrian push buttons. Listed below are existing pedestrian treatments at study area intersections.

Martin/Ottawa:

- LED countdown timers and displays
- accessible push buttons (includes audibles and LED lights)
- depressed curbs
- standard transverse crosswalk markings
- audibles

Paterson/Ottawa:

- LED countdown timers and displays
- accessible push buttons (includes audibles and LED lights)
- depressed curbs
- ladder crosswalk markings
- audibles
- TWSIs (northern quadrants only)

Industrial/Ottawa -:

- LED pedestrian displays
- “bull-dog” push buttons (standard button)
- depressed curbs
- standard transverse crosswalk markings
- audibles

Cycling facilities are provided in the form of east and westbound curbside bike lanes along Ottawa Street between Paterson Street and just east of Martin Street N. Additionally, sharrows are provided on the east leg of the Martin/Ottawa intersection travelling east and westbound. There are no other cycling facilities provided at the study area intersections. **Figure 2**, **Figure 3** and **Figure 4** illustrate existing intersection layouts within the study area.

Figure 2: Industrial/Ottawa (Source: Google Maps Streetview)

Figure 3: Paterson/Ottawa (Source: Google Maps Streetview)

Figure 4: Martin/Ottawa (Source: Google Maps Streetview)

3. EXISTING CONDITIONS ANALYSIS

3.1. DATA COLLECTION PROGRAM

A data collection program was prepared and implemented for this assignment. The purpose of the data collection was to help develop a better understanding of existing traffic conditions experienced by all users, i.e. pedestrians, cyclists and motorists, at the three study area intersections. The recorded results will help identify any existing deficiencies, conflicts or safety concerns that will guide the mitigation plan.

Parsons completed a site visit to record field observations within the study area, as well as turning movement counts on Thursday November 7, 2019 at all three study area intersections. The data collection scope has been summarized below.

Time Period:

- Weekday 7:00am to 5:00pm (10 hours).

Coverage:

- Intersection counts captured pedestrians, cyclists, and vehicles (including trucks/buses);
- Observations of multi-modal interactions throughout the day; and,
- Focus on pedestrians/students.

The Municipality also provided the following information to support the assignment:

- Signal timing plans for three study area intersections;
- Ottawa Street speed survey summaries;
- Collision history at the three study area intersections within the last 5 years; and,
- A summary of modifications at the three study area intersections within the last 7 years.
- Any other development or construction plans within the study area.

It is important to note the Municipality did not have speed survey data on Ottawa Street, nor did they request speed surveys be completed as part of this assignment. As a result, there will be limited commentary on vehicular speeds and their potential impact on safety.

3.2. DATA REVIEW AND ANALYSIS

The following sections review and discuss patterns/trends from data collected from the aforementioned program. Key findings/observations have also been provided.

3.2.1. INFRASTRUCTURE AND DEVELOPMENT INFORMATION

The following list outlines the intersection and roadway modifications that have occurred in the last 7 years within the study area:

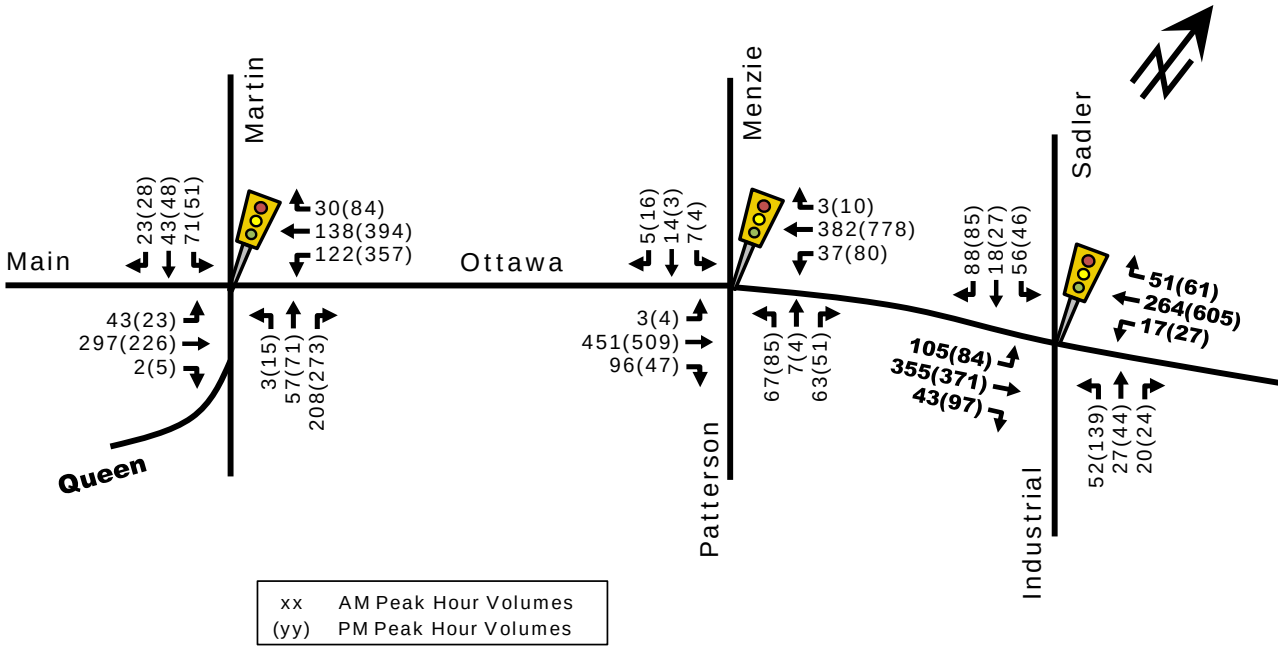
- Implementation of curb-side bike lanes and removal of parking on both sides of Ottawa Street from Martin Street N to Paterson Street (2017);
- The construction of Menzie Street from Ottawa Street to Maude Street (2018); and,
- Implementation of an auxiliary southbound left-turn lane on Martin Street southbound at Ottawa Street (June 2019).

The only future adjacent development of note is Phase 5 of the Riverfront Subdivision, which is fairly removed from the study area and is not expected to affect the results of the forthcoming analysis.

3.2.2. VEHICULAR VOLUMES

Figure 5 summarizes the weekday morning and afternoon peak hour traffic volumes, based on vehicular traffic volumes. All relevant traffic data collection sheets (i.e. vehicle, pedestrian and cyclist counts) have been provided in **Appendix A**.

Figure 5: Existing Peak Hour Traffic Volumes



A summary of the vehicular traffic counts are as follows:

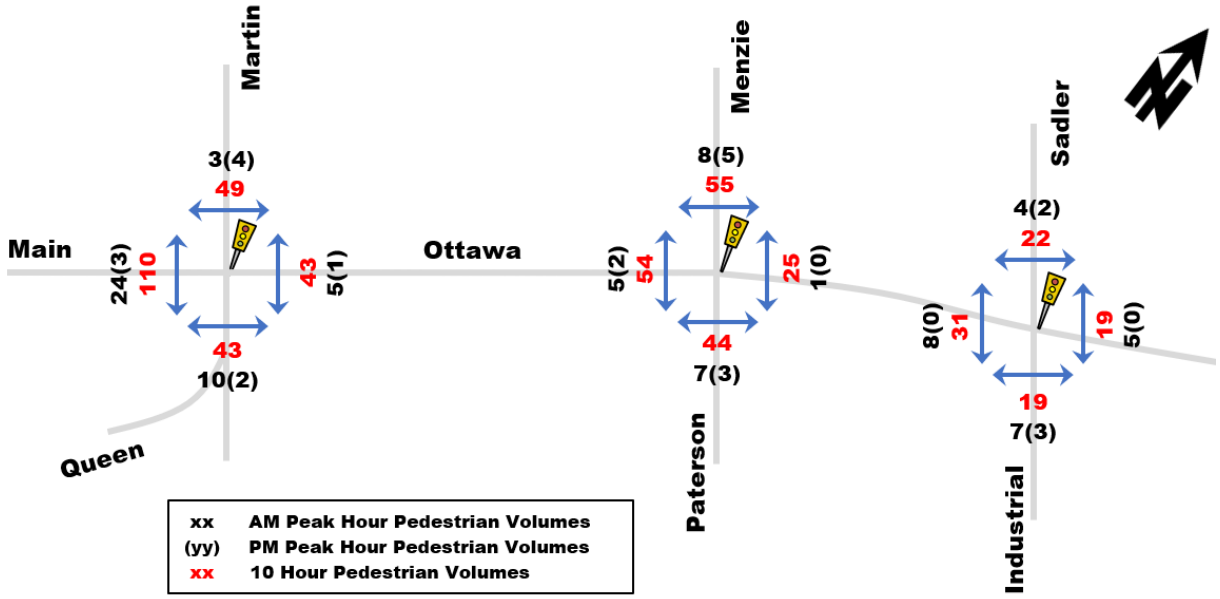
- All three intersections had comparable traffic activity over the 10-hour data collection period, with at least 11k approaching vehicles. The intersection with the most vehicular activity was Industrial/Ottawa with approximately 11.6k approaching vehicles.
- The AM and PM peak hours with the highest observed vehicular traffic volumes at each intersection have been noted below:
    - Martin/Ottawa - 7:45am to 8:45am; 4:00pm to 5:00pm
    - Paterson/Ottawa – 9:00am to 10:00am; 4:00pm to 5:00pm
    - Industrial/Ottawa - 9:00am to 10:00am; 4:00pm to 5:00pm

  The earlier peak hour at Martin/Ottawa is likely attributed to the Almonte & District High School schedule, which begins class at 8:00am.
- Peak hour traffic volumes on Ottawa Street ranged between 500 to 900 vehicles in the peak direction, and as low as 300 vehicles in the reverse direction. The critical peak hour was in the PM, with higher traffic volumes on nearly all approaches compared to the AM peak hour.
- The Paterson/Ottawa intersection experienced the highest AM and PM peak hour traffic volumes within the study area. The eastbound approach volume in the AM peak hour was approximately 550 vehicles, and the westbound approach volume in the PM peak hour was approximately 870 vehicles.

3.2.3. PEDESTRIAN/CYCLING VOLUMES

Figure 6 summarizes the weekday morning and afternoon peak hour pedestrian volumes and 10-hour pedestrian volumes observed during the site visit.

Figure 6: Peak Hour and 10-h Pedestrian Volumes



Pedestrian activity was highest at the Martin/Ottawa intersection, followed by the Paterson/Ottawa intersection. The surrounding residential communities and two local schools, the Almonte District High School located approximately 350m to the north or Martin/Ottawa, and the Holy Name of Mary Catholic School located approximately 350m south of Paterson/Ottawa, contributed to pedestrian activity at these locations. Pedestrian activity was lowest at Industrial/Ottawa, which was expected based on the area transition from residential to commercial/industrial uses.

A summary of pedestrian counts has been provided in Table 1.

Table 1: Pedestrian Count Summary

Location	Number of Pedestrian Crossings		
	10-Hr	AM Pk-Hr	PM Pk-Hr
Martin/Ottawa	200	45	10
Paterson/Ottawa	180	20	10
Industrial/Ottawa	90	25	5

Cycling activity was shown to be quite low within the study area. Fewer than five (5) cyclists crossed the Paterson/Ottawa and Industrial/Ottawa intersections over a 10-hour period. At the Martin/Ottawa intersection, eight (8) cyclists were observed crossing over a 10-hour period with 3 of those cyclists crossing during the morning peak hour. It is important to note that cycling volumes are not expected to represent peak season activity based on the time of year. However, it was considered reasonable to assume cycling activity along Ottawa Street on a 'typical' weekday will not be as prominent compared to vehicular and pedestrian activity.

3.2.4. COLLISION HISTORY

Historical collision records were obtained from the Municipality at all three study area intersections. The data was recorded over five years, between January 1, 2015 to October 29, 2019 inclusive. The original collision report has been provided in Appendix B.

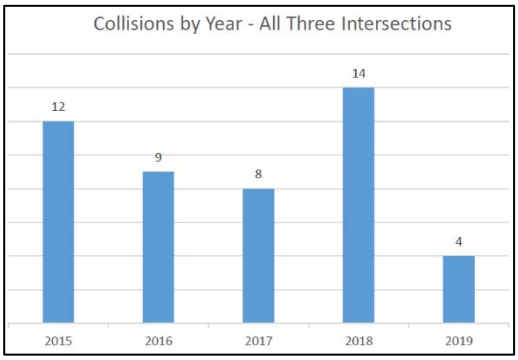
It is important to note the following limitations in the collision data:

- Data was aggregated, individual collision reports were not provided. This level of detail is important for a comprehensive assessment since it provides context for each collision, which provides an understanding of potential triggers, e.g. weather conditions, single vs. multiple vehicle collision, vehicle maneuver (turning left or right or straight ahead) etc. Therefore, insights on collision patterns will be limited.
- It is uncertain how many non-fatal injuries were bystanders versus drivers, which is an important distinction to assess safety concerns.

The key findings from the collision data is provided below:

- In total, there were 47 reportable motor vehicle collisions at the three Ottawa Street intersections:
  - 9 at Martin;
  - 11 at Paterson; and,
  - 27 at Industrial.
- Over half the total reported collisions occurred in non-winter months and the majority occurred in daylight hours; and,
- The primary cause of collisions was generally related to driver error, such as failing to yield, improper turn, disobeyed traffic control, or inattentiveness;
- Overall, between 2015 and 2017, reported collisions were trending down, as shown in **Figure 7**. A spike occurred in 2018, but was followed by a significant drop in 2019, representing the lowest level in the last 5 years.

Figure 7: Annual Total Reported Collisions



To help quantify the relative safety risk at intersections within the study area, an industry standard unit of measure for assessing collisions at an intersection was used based on the number collisions per million entering vehicles (MEV). An MEV value greater than 1.00 indicates a relatively high frequency of collisions; however, it does not provide an indication of injury risks at the intersection. A secondary analysis is done to determine the injury risks by representing the number of personal injuries as a percentage of the total number of collisions at a given intersection (%PIR).

Generally, a high propensity location (MEV > 1.00 or %PIR > 30%) would signal a potential intersection design deficiency or other contributing factor, such as poor intersection geometry, blind spots, poor lighting, excessive speeds, high amount of entry/exit driveways etc. In these cases, mitigation is often recommended. A summary of the safety risk assessment is as follows:

- 0.38/MEV and %PIR = 56% at the Martin/Ottawa (9 collisions & 5 personal injuries in 5 years);
- 0.45/MEV and %PIR = 36% at the Paterson/Ottawa (11 collisions & 4 personal injuries in 5 years); and,
- 1.08/MEV and %PIR = 15% at the Industrial/Ottawa (27 collisions and 4 personal injuries in 5 years).

The safety risk assessment suggests Martin/Ottawa and Paterson/Ottawa intersections have a lower frequency of collisions, but a higher propensity for injuries. In contrast, Industrial/Ottawa has a higher frequency of collisions, but a lower risk of injury.

The key findings based on the above analysis has been summarized below:

- All reported collisions occurred between the hours of 7:00am and 9:00pm, while the majority occurred in non-winter months. This result suggests temporal factors, such as congestion and multi-modal traffic interactions have greater influence on the risk of collisions than the fixed factors, such as roadway geometry and seasonality. Driver error was shown to be a consistent contributing factor in reported collisions, which supports the approach of improving driver awareness, such as enhancing existing pavement markings and signage or implementing traffic calming measures to reduce speeds while forcing drivers to pay attention to the road.

- The Martin/Ottawa and Paterson/Ottawa intersections were shown to have a low frequency of collisions, but have a higher propensity for injuries. Without knowing if the reported injuries are specific to drivers or bystanders, a targeted response cannot be done. However, in these cases, mitigation options should focus on reducing risks of injuries in the event of a collision, such as reducing vehicular speeds, increasing awareness of non-motorists, enhancing pedestrian/cycling facilities, etc.
- The Industrial/Ottawa intersection was shown to have a higher frequency of collisions, but a low propensity for injuries. The intersection is skewed (Ottawa Street bends slightly southeast), it has a large footprint with four travel lanes, auxiliary lanes and a significant crosswalk offset. There are no medians on Ottawa Street approaches to help guide traffic into the appropriate lane. The north leg that leads to the Tim Horton's, was noted to be quite narrow for incoming eastbound left-turn vehicles, as shown in **Figure 8**.

Figure 8: Ottawa/Industrial SB View (Source: Google Maps Streetview)

In this context, it is critical for drivers to be aware of the space around them since the intersection limits extend beyond their field of view or are in their peripheral vision. This situation can create 'blind spots,' and combined with inattentiveness or distractions, further reduces reaction time that can increase the risk of an incident. In these cases, mitigation options should focus on preventing collisions, such as enhancing existing pavement markings, signage, lighting, audible/visual measures etc.

- Overall, the number of collisions within the study area have generally been decreasing. The 2018 spike appears to be an outlier, and may be attributed to recent roadworks on Ottawa Street. In 2017, on-street parking was removed, and designated bike lanes were introduced. In 2018, Menzie Street was constructed and the existing intersection at Ottawa Street was restriped. There may have been an adoption period for drivers to adjust to changes in road facilities. Over the course of 2019, the number of collisions has dropped significantly, even after pro-rating the final 2 months. Therefore, whole-scale and costly modifications would not be appropriate or necessary in this context.

3.2.5. FIELD OBSERVATIONS

Field observations were recorded at all study area intersections during 10-hour traffic counts. The purpose of these observations was to note any unusual activity, incidents or 'near-misses' between pedestrians and motorists. These notes provide 'real-life' context to supplement the historical collision analysis.

Overall, with the exception of a single adult pedestrian crossing at Menzie Street, no pedestrian crossing issues were observed. 'Walking School Buses' crossed on the east, west and north crossings at Paterson where groups of children were assisted by adults wearing safety vests and carrying stop sign paddles. Virtually all children and youths, and the majority of the adults properly used the pedestrian push buttons resulting in no observed vehicle/pedestrian conflicts. Although the majority of the pedestrian crossings take place on a green signal/walk signal, some pedestrians were observed crossing

on the red/don't walk signal. Only one conflict was observed, and it involved an adult who crossed Menzie Street against a red signal forcing a driver to brake to avoid a collision.

The pedestrian push buttons installed on all quadrants are clear and easy to use and when pressed, pedestrians are provided with immediate feedback via an electronic voice stating 'WAIT' when the button is pushed. The 'Walk' signal is promptly displayed and a tone is provided when it is displayed. Provided the public uses the push buttons properly and employs common sense when crossing by ensuring traffic is stopped, there are no obvious deficiencies or safety concerns.

Other general observations of note have been summarized below:

- Pavement markings and TWSI applications within the study area are inconsistent.
- The 'School Crossing' sign (Wc-2A) facing northbound traffic on Paterson Street at Ottawa Street, as depicted in **Figure 9**, must be accompanied by school crossing guards, which were not observed. This criterion is set forth in the Ontario Traffic Manual Book 6. A review of the school crossing guard requirements is provided in **Section 3.2.6**. However, "walking school buses" were observed at the intersection.
- Street name signs at all three intersections are small and can be very difficult to see; in some cases, obstructions further reduce their visibility.

Figure 9: School Crossing Sign (NB on Paterson/Ottawa)

During the data collection, Parsons gathered additional field observations outside the established study area. This information was not incorporated into the analysis, but have been summarized in **Appendix C** for the Municipality. The additional data focused on side street traffic and safety concerns from local schools in the area.

3.2.6. SCHOOL CROSSING GUARD

At this time, it is our understanding that both R Tait McKenzie and Holy Name of Mary School are participants in a "Walking the Rural Way" project, which is supported by Ontario Active School Travel, a program of Green Communities Canada with funding from the Government of Ontario. This project provides community tailored 'Walking School Bus' models, using paid and volunteer supervisors to walk with elementary school children, on established routes to and from school. Similar to a yellow school bus, a Walking School Bus has designated "bus stops" and "pick up times." Paterson/Ottawa would be a key intersection along the designated route to these schools.

This is a unique program that adapts the traditional school crossing guard stationed at a single intersection, to a supervisor who directs the 'bus'/platoon of children on a fixed route. This model appears to be more appropriate for the local community compared to the conventional approach often used in larger municipalities. However, there is limited student capacity (there are waiting lists) and parents must volunteer their children for the program. As a result, any student not registered with the program will not have designated assistance at any crossings to and from school.

The Municipality may consider a traditional crossing guard at Paterson/Ottawa to accommodate all school children. A literature review was completed to assess whether a traditional school crossing guard would be supported based on current practices in Ontario. A summary of the review has been provided in **Appendix D**.

It was determined a conventional school crossing guard would not be necessary at the Paterson/Ottawa intersection based on existing conditions. Therefore, the aforementioned school crossing sign at Paterson/Ottawa should be removed. The Municipality may continue to monitor existing traffic conditions, to reassess the need in the future. If the Municipality chooses to proceed with this measure, it is highly recommended the procedures 2017 OTC School Crossing Guard Guide be followed as discussed in **Appendix D**.

The Municipality has since confirmed that a school crossing guard has been hired and deployed at Paterson/Ottawa starting January 2020.

3.3. INTERSECTION OPERATION PERFORMANCE

In the following section, the operational capacity of study area intersections will be assessed using Synchro v10 analysis software. The purpose of this analysis is to identify whether there is vehicular congestion that may contribute to safety concerns. The peak hour traffic volumes from **Figure 5** were entered and modelled in Synchro. The criteria for the analysis have been summarized below.

3.3.1. INTERSECTION ANALYSIS CRITERIA

For signalized intersections, the Level of Service (LOS) defines operational conditions within a traffic stream and their perception by motorists. LOS 'A' represents the best operating conditions and LOS 'E' represents the level which the intersection or an approach to the intersection is carrying the maximum traffic volume that can theoretically be accommodated. LOS 'F' indicates that the intersection is operating beyond its theoretical capacity.

For the purposes of this analysis, the City of Ottawa criteria for LOS has been referenced. These criteria were developed as part of the Transportation Impact Assessment Guidelines, which relate a LOS designation to be defined range. These criteria are as follows:

Table 2: LOS Criteria for Signalized Intersections

LOS	Volume to Capacity Ratio (v/c)
A	0 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90
E	0.91 to 1.00
F	>1.00

A LOS 'D' or better is considered acceptable operations based on City of Ottawa Standards. Based on these criteria, the operational capacity at the study area intersections were assessed in the following section.

3.3.2. INTERSECTION ANALYSIS RESULTS

Table 3 provides a summary of the existing traffic operations at the study area intersections. The signalized intersections were assessed in terms of the volume-to-capacity (v/c) ratio and the corresponding Level of Service (LOS) for the critical movement(s) and for the entire intersection, the latter was assessed based on weighted v/c ratio. The Synchro model output of existing conditions is provided within **Appendix E**.

Table 3: Existing Intersection Performance

Intersection	Weekday AM(PM) Peak Hour Operational Results					
	Critical Movement			Intersection		
	max. v/c	LOS	Movement	Delay (s)	LOS	v/c
Martin/Ottawa	0.49(0.58)	A(A)	EBT(WBL)	12.4(12.5)	A(A)	0.39(0.55)
Paterson/Ottawa	0.62(0.64)	B(B)	NBT(WBT)	13.1(14.7)	A(A)	0.50(0.60)
Industrial/Ottawa	0.26(0.63)	A(B)	WBT(WBT)	10.4(16.8)	A(A)	0.23(0.56)
Note: Analysis of signalized intersections assumes a PHF of 0.95 and a saturation flow rate of 1800 veh/h/lane.						

As shown in **Table 3**, the study area intersections currently operate at an excellent LOS 'A' during the morning and afternoon peak hours. With regard to 'critical movements' at study area intersections, they are operating at an acceptable LOS 'B' or better during peak hours. Therefore, vehicle related congestion is not expected to be a contributing factor to the noted safety concerns.

Additionally, signal timing plans at study area intersections were assessed for pedestrian crossings. Generally, there is an abundance of intersection capacity to support vehicular demand. Therefore, there may be opportunities to redistribute some of the signal timing priority to pedestrians.

Firstly, the Flashing Don't Walk signal duration should be designed to last at least as long as it takes for a pedestrian to navigate the crosswalk, assuming a pedestrian starts crossing at the same time as the flashing signal. The industry standard design speed for a pedestrian is 1 m/s. Two locations did not provide sufficient Flashing Don't Walk signal time, the east-west crossings at Martin/Ottawa, and the east-west crossings at Industrial/Ottawa. These timings should be adjusted to ensure the average pedestrian has sufficient time to cross before the red signal, to reduce the risk of vehicular conflicts.

Other options include an advance walk phase or prohibiting right-turns on red. The former triggers the pedestrian Walk signal before the traffic green bulb for the corresponding vehicular movements, which gives pedestrians on the crosswalks a 'head-start' on crossing before vehicles. The latter prohibits right-turning vehicles from entering the intersection during a red phase. Both options reduce the risks of conflicts between vehicles and pedestrians in the crosswalk.

It is expected the existing hardware at the study area intersections will permit all the noted options, but they should be confirmed by the signal timing contractors for the Municipality prior to implementation.

3.4. MULTI-MODAL LEVEL OF SERVICE

The Multi-Modal Level of Service (MMLOS) Guidelines is a tool used by the City of Ottawa to quantify the level of service experienced for typically underrecognized travel modes, i.e. pedestrians, cyclists, transit, and trucks. For this assignment, the focus of the MMLOS was on pedestrians and cyclists. The objective of these Guidelines is to provide a methodology to evaluate existing facilities and thereby, identify appropriate measures that can be implemented to help create a complete street environment.

3.4.1. MMLOS ANALYSIS CRITERIA

The MMLOS Guidelines provide target levels of service for signalized intersections based on the City of Ottawa's Official Plan (OP) policy/designation and road class. For this assignment, these road classifications were compared with the characteristics of roadways within the study area, to determine appropriate MMLOS targets for this assessment. It is important to note the MLOS targets are **not** standards, and it is common they cannot be met depending on the site context. For this study, these targets are meant to guide the safety review and provide insight to active mode operations, but they are not intended to be enforced as policy.

The following characteristics have been assumed for each roadway within the study area:

Ottawa Street:

- Arterial Roadway
- Spine Cycling Route between Paterson Street and Menzie Street
- Truck Route

Menzie Street-Paterson Street:

- Collector Roadway
- No cycling designation
- Not a Truck Route

Martin Street-Queens Street:

- Collector Roadway
- Local Cycling Route north of Ottawa Street due to presence of sharrows
- Not a Truck Route

Industrial Drive-Sadler Drive:

- Collector Roadway
- No cycling designation
- Truck Route

Upon reviewing the local context, two OP designations/policy areas that could be applied to study area intersections are the "Within 300m of a School" and "General Urban Area" classifications. The target levels of service for both of these classifications are provided in **Table 4**.

Table 4: MMLOS Targets

Road Classification	Target LOS			
	Pedestrian (PLOS)	Bicycle (BLOS)		
		Spine Route	Local Route	Elsewhere
Within 300m of a School	A	B or C	B	D
General Urban Area	C	B or C	B	D
Note: On a Spine Route, a collector roadway has a target BLoS 'B' and an arterial roadway has a target 'C'				

To determine the appropriate MMLOS target at each intersection, the targets for both the main street and side street were compared using the assumptions in **Table 4**, and the higher target was chosen for each mode. As all three study area intersections were located outside the 300m radius around a school, they were considered to be within a "General Urban Area."

The MMLOS analysis for the study area intersections have been summarized in **Table 5**. The existing detailed MMLOS analysis is provided as **Appendix F**. As shown in **Table 5**, none of the study area intersections met MMLOS targets, based on existing infrastructure.

Table 5: MMLoS – Study Area Intersections, Existing Conditions

Intersection	Level of Service			
	Pedestrian (PLOS)		Bicycle (BLOS)	
	PLoS	Target	BLoS	Target
Martin/Ottawa	C	C	D	C
Paterson/Ottawa	E	C	D	C
Industrial/Ottawa	F	C	E	C

3.4.2. PEDESTRIAN LEVEL OF SERVICE (PLOS) RESULTS

The PLOS is comprised of two components: a traffic signal delay and PETSI (Pedestrian Exposure to Traffic at Signalized Intersections). The traffic signal delay measures the average delay pedestrians experience at an intersection. The PETSI component is based on the width of the intersections and pedestrian features provided at the intersections (i.e. raised crosswalks, advanced pedestrian signals, etc.). Each leg of the intersection is scored with the poorest performing component governing the assigned level of service for pedestrians for the intersection as a whole. **Figure 10** illustrates the scoring thresholds for both components.

Figure 10: PLoS Scoring Thresholds for PETSI and Delay Components

Pedestrian Exposure to Traffic LOS	
Points threshold	LOS
≥90	A
≥75	B
≥60	C
≥45	D
≥30	E
<30	F

Average Pedestrian Crossing Delay Component	
$\text{Delay} = 0.5 \times \frac{(\text{Cycle Length} - \text{Pedestrian Effective Walk Time})^2}{\text{Cycle Length}}$	
< 10 s per intersection leg	LOS A
≥10 to 20 sec	LOS B
>20 to 30 sec	LOS C
>30 to 40 sec	LOS D
>40 to 60 sec	LOS E
> 60 sec	LOS F

The Martin/Ottawa intersection meets the target PLoS as pedestrians cross only three lanes and the signal delay is less than 30s. At the Paterson/Ottawa intersection, a PLoS 'E' is realized because pedestrians on the east leg of the intersection cross five lanes resulting is a PLoS 'E'. Comparatively, the other three legs of the intersection have a PLoS 'B' due to the shorter crossing distances (only 2 lanes). The delay scores on the south, east, and west legs score a 'D' compared to the

north leg which scores a 'C'. The north leg has a higher PLoS due to the westbound left-turn phase giving pedestrians on the north leg a longer effective walk time.

At the Industrial/Ottawa intersection, a PLoS 'F' is realized as pedestrians are crossing up to 6 lanes of traffic across Ottawa Street resulting in low PETSI scores. The north and south legs of the intersection however achieve PLoS 'C' and 'B', respectively, as they are shorter crossing distances. The delay scores range from 'C' to 'F' as there are protected left-turn phases causing additional delay for pedestrians.

3.4.3. BICYCLE LEVEL OF SERVICE (BLOS) RESULTS

The bicycle level of service evaluates the level of traffic stress (LTS) experienced by cyclists completing right or left turns at an intersection. To complete this, the Guidelines evaluate the quality of bicycle facilities provided to cyclists at intersection. Examples of facilities include curbside or pocket bike lanes, cross-rides, or two-stage left-turn bike-boxes. In the case where no facilities are provided the number of lanes crossed and speed adjacent vehicle traffic is taken into consideration.

At both the Martin/Ottawa and Paterson/Ottawa intersections, all but one Ottawa Street approach does not have a right-turn cycling facility, which results in the BLoS 'D' as cyclists are forced to travel in mixed traffic. The Industrial/Ottawa intersection does not have dedicated cycling facilities, meaning cyclist are forced mix with general traffic, which results in a lower level of service.

4. EXISTING CONDITIONS SUMMARY

The preceding sections outlined the scope of the assignment, the methodology for data collection, onsite field observations and analysis results of the study area intersections based on available data. Based on this body of work, there was little evidence to support the severe safety concerns expressed by the local community at the identified locations. The number of reported collisions within the study area was shown to be trending down in the last five years. A spike occurred in 2018 that appeared to be an outlier, and since that time the number of reported collisions in 2019 has dropped significantly, even after pro-rating the final two months of 2019.

During 10-hr field observations, with the exception of a single adult pedestrian crossing at Menzie Street, no pedestrian crossing issues were observed. 'Walking School Buses' crossed on the east, west and north crossings at Paterson where groups of children were assisted by adults wearing safety vests and carrying stop sign paddles. Virtually all children and youths, and the majority of the adults properly used the pedestrian push buttons resulting in no observed vehicle/pedestrian conflicts.

Provided the public uses the pedestrian push buttons properly and employs common sense when crossing by ensuring traffic is stopped, there are no obvious deficiencies or safety concerns at study area intersections. Furthermore, operational analysis of the study area intersections confirmed very good vehicular levels of service within the study area, which suggests vehicular congestion may not a play a significant factor in the noted safety concerns.

General notes and minor safety concerns within the study area have been summarized below.

Collision History:

- The majority of reported collisions were caused by driver infractions in daylight hours and in non-winter months. This result supports the approach of improving driver awareness, which may include enhancing existing pavement markings and signage or implementing traffic calming measures to reduce speeds while forcing drivers to pay attention to the road.
- The Martin/Ottawa and Paterson/Ottawa intersections were shown to have a low frequency of collisions, but have a higher propensity for injuries. Mitigation should focus on reducing risks of injuries in the event of a collision, such as reducing vehicular speeds, increasing awareness of non-motorists, enhancing pedestrian/cycling facilities, etc.

- The Industrial/Ottawa intersection was shown to have a higher frequency of collisions, but a low propensity for injuries. Mitigation should focus on preventing collisions, such as enhancing existing pavement markings, signage, lighting, audible/visual measures etc.
- The Industrial/Ottawa intersection has a large footprint, due to the 4-lane cross section, auxiliary turn lanes, and ample crosswalk setbacks. There are no medians on Ottawa Street approaches to help guide traffic into the appropriate lane. The intersection extents may not be entirely in the driver's field of view, which may affect vehicle maneuvers, e.g. drivers may inadvertently turn into an opposing lane or try to 'squeeze' in a turn while a pedestrian is crossing.

Field Observations:

- Although the majority of the pedestrian crossings take place on a green signal/walk signal, some pedestrians were observed crossing on the red/don't walk signal, which resulted in one conflict. An adult who crossed Menzie Street against a red signal forcing a driver to brake to avoid a collision.
- Pavement markings and TWSI use within the study area are inconsistent. It appears the Municipality is gradually implementing updated facilities as construction works progress within the study area.
- Street name signs are small and may not be clearly visible at the larger intersections.
- The 'School Crossing' sign (Wc-2A) facing northbound traffic on Paterson Street at Ottawa Street must be accompanied by school crossing guards, which were not observed. This criterion is set forth in the Ontario Traffic Manual Book 6. "Walking school buses" were observed at the intersection.
- It was determined a conventional school crossing guard would not be necessary at the Paterson/Ottawa intersection based on a literature review of current practices in Ontario municipalities. Therefore, the aforementioned school crossing sign at Paterson/Ottawa should be removed.
- Speeding may be a factor for safety, based on the straight alignment and ample lane width provided on Ottawa Street. This could not be confirmed without speed survey data; however, field observations did not suggest speeding to be a significant concern.

Intersection Capacity/MMLOS Analysis:

- All three study area intersections were shown to operate very well based on City of Ottawa standards, suggesting traffic congestion may not factor heavily in reported collisions.
- There is ample intersection capacity within the study area to consider redistributing signal timing priority from vehicles to pedestrians, which reduces vehicular operations efficiency to improve pedestrian safety. Examples include adding an advance walk phase or prohibiting right-turns on red.
- Two locations did not provide sufficient Flashing Don't Walk signal time, the east-west crossings at Martin/Ottawa, and the east-west crossings at Industrial/Ottawa. These timings should be adjusted to ensure the average pedestrian has sufficient time to cross before the red signal, to reduce the risk of vehicular conflicts.
- The City of Ottawa MMLOS standard for pedestrians was only met at Martin/Ottawa. Industrial/Ottawa and Paterson/Ottawa did not meet pedestrian LOS targets because pedestrians must cross 5 or more travel lanes. However, field observations do not suggest a high-risk environment for pedestrians and there is no expectation that the Municipality will consider reducing the number of travel lanes to accommodate pedestrians based on the level-of-effort and cost requirements. Thus, recommendations were focused on improving driver awareness and increasing the pedestrian profile to reduce conflict risks.
- The MMLOS standard for cyclists were not met at study area intersections due to the lack of exclusive cycling facilities at the study area intersections. The Municipality only recently introduced cycling facilities on Ottawa Street, and expanding them to intersections could be considered in the future. Related to this assignment, there would be no direct benefit to pedestrian safety, but may be considered in the future.

Overall, these results depict a relatively low risk environment for pedestrians. Driver or pedestrian error appear to be the driving factors for incidents. However, drivers appear to be adapting to the environment, based on historical data, meaning passive measures to support existing facilities would be the most appropriate approach to address perceived safety concerns. Aggressive and more costly modifications may not be necessary in this context.

5. MITIGATION TOOLBOX WITH COSTS

The perceived safety concerns by the local community appear to be isolated incidents, and do not indicate a chronic condition. Overall, the prior analysis did not reveal any specific patterns or deficiencies that would result in serious risks to pedestrian safety within the study area, based on available data. Only minor issues or concerns were observed, to which a toolbox of viable mitigation measures has been prepared for the Municipality to use at their discretion. Some of these measures were recommended for implementation, others have been provided for consideration. There are also measures that were considered, but ultimately not recommended. With this approach, the Municipality has flexibility to tailor their response to future issues on a case-by-case basis.

The toolbox includes various traffic calming and safety-oriented measures cited from the City of Ottawa Traffic Calming Design Guidelines (2019) and OTM Book 15 Pedestrian Crossing Treatments (2016). These measures have been categorized based on general type. The recommendations comprise generally low-cost measures that have a proven track record and can be implemented quickly and easily.

Caution should be taken when choosing how many measures to implement beyond those specifically recommended, to avoid over-use and throw-away costs. It is recommended that any implemented measures be monitored during deployment, to evaluate their efficacy. Public surveys and education are also important factors to consider prior to and during implementation to raise awareness and increase overall effectiveness. Estimated unit costs for each mitigation measure have also been provided, where applicable. It is important to note these constitute *high-level* cost estimates, some provided in a range to represent various potential applications. These estimates do not include design costs, which would have to be confirmed during site-specific implementation.

Table 6 summarizes the recommended mitigation measures to help address the concerns outlined by the Municipality. Following the table are conceptual plans (**Figure 11**, **Figure 12** and **Figure 13**) of the study area intersections before and after implementation. The proposed deployment of mitigation measures is meant as a guide, which can be amended in future discussions with the Municipality prior to implementation.

Table 7 completes the toolbox of additional mitigations measures for consideration by the Municipality that may augment the recommendations to address future needs. **Table 8** provides a list of mitigation measures that were considered over the course of this assignment, but ultimately rejected due to the disbenefits outweighing the benefits.

6. CLOSING

The Municipality of Mississippi Mills requested an assessment of Ottawa Street at the intersections with Martin Street, Paterson Street and Industrial Drive in regard to safety concerns received by the local community. Parsons completed an evaluation of expected traffic conditions within an established study area, and developed a series of mitigation options, with estimated costs, to help reduce the onset and severity of incidents that may impact traffic operations and vulnerable road users, e.g. pedestrians and cyclists. Suggested deployment of recommended mitigation measures has been provided as a guide and are flexible; they can be amended in future discussions with the Municipality prior to implementation. It is critical that any implemented measures be monitored upon deployment, to evaluate their efficacy and ensure proper adoption by the public. In this regard, public surveys and education are also important factors to consider prior to and during implementation to raise awareness and increase overall effectiveness of the mitigation options.

Table 6 Summary of Recommended Mitigation Measures

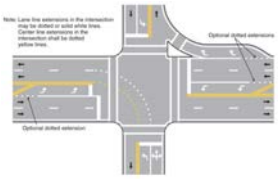
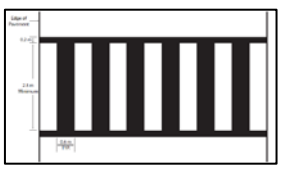
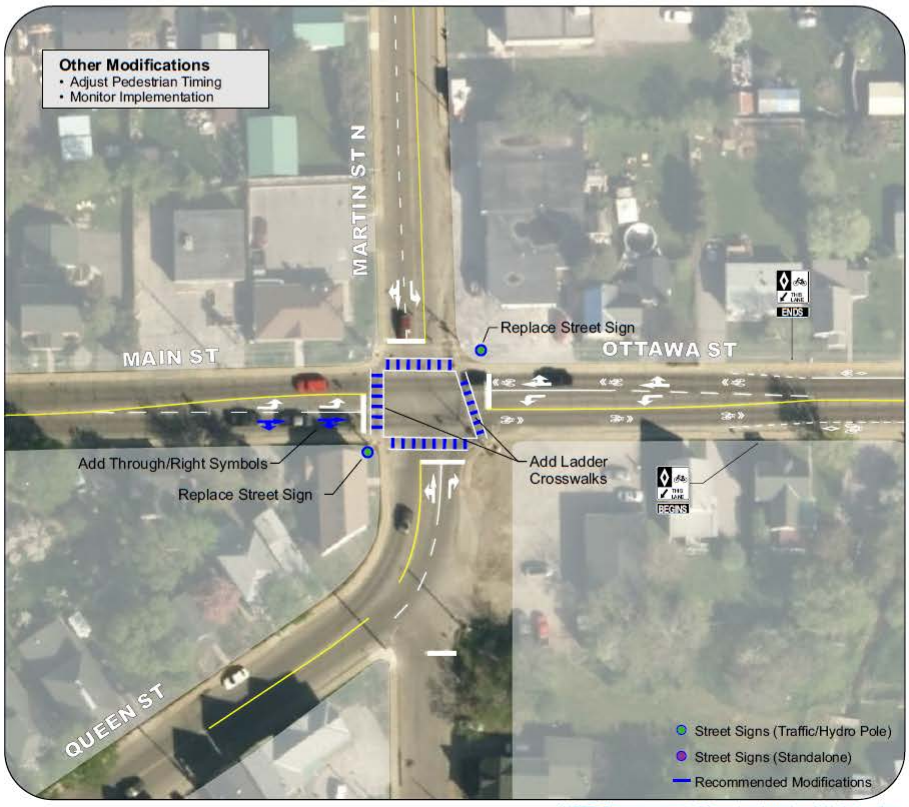
Mitigation Option	Summary of Benefits/Disbenefits	Potential Location(s)	Cost Estimate
Intersection Monitoring	The Municipality should **monitor** intersections upon implementation of any mitigation measures to evaluate their efficacy and adjust if necessary.	Industrial/Ottawa Paterson/Ottawa Martin/Ottawa	N/A
Remove School Crossing Sign 	The **'School Crossing' sign** (Wc-2A) facing northbound traffic on Paterson Street at Ottawa Street must be accompanied by school crossing guards, which was not justified based on a literature review of current practices in Ontario municipalities. A school crossing guard summary has been provided among mitigation measures for future consideration.	Paterson/Ottawa	N/A
Signal Timing Adjustments 	Increase the **Flashing Don't Walk signal timing duration** to accommodate 1m/s pedestrian crossing speed. Investigate other options to leverage signal timings to improve pedestrian safety, which have been noted in Future Considerations.	Industrial/Ottawa Martin/Ottawa	N/A
Adjust/Add Street Name Signs 	Consideration should be given to improving the location and size of the **street name signs** as the existing signs are very difficult to see. Drivers unfamiliar with the area may concentrate more on confirming the street name than watching for vulnerable users. Industrial/Ottawa is the largest study area intersection and has only one street name sign. A second should be considered on the SW corner.	Industrial/Ottawa Paterson/Ottawa Martin/Ottawa	<$150 per sign
Pavement Markings 	A review of **pavement markings** was completed and found minor gaps in the study area to be addressed to improve traffic safety. At Martin/Ottawa, the eastbound through-right turn lane should be marked with a symbol similar to the westbound approach for symmetry and consistency. The Paterson/Ottawa westbound right-turn lane was still gored, with right-turn symbols painted overtop when the lane is open. The Municipality confirmed the gored area would not be reinstated and will eventually fade over time.	Martin/Ottawa	$250 per symbol
Lane Line Extensions  Source: MUTCD Section 3B.08	**Lane Line Extensions** are used in highway design or reduced visibility conditions to provide control or to guide vehicles through an intersection. In this context, they may help left-turning vehicles turn into the proper lane, and not turn into on-coming traffic lanes. Pavement markings extended into or continued through an intersection shall be the same color and at least the same width as the line markings they extend. To the extent possible, they should be designed in a manner that minimizes potential confusion for drivers in adjacent or opposing lanes.	Industrial/Ottawa: EB left-turn Optional – SB left-turn	<$250 per intersection
Ladder Crosswalks 	The application of **ladder crosswalks** should be considered at locations with high pedestrian traffic or locations with noted pedestrian safety concerns. Ladder crosswalks provide enhanced visibility of the crosswalk and thereby increases drivers' awareness of potential conflict. The use of ladder crosswalks was considered optional at Industrial/Ottawa due to the low pedestrian volumes.	Martin/Ottawa Optional - Industrial/Ottawa	$1,000 - $2,000 per intersection

Figure 11: Martin/Ottawa Intersection Concept Plans

Existing Condition

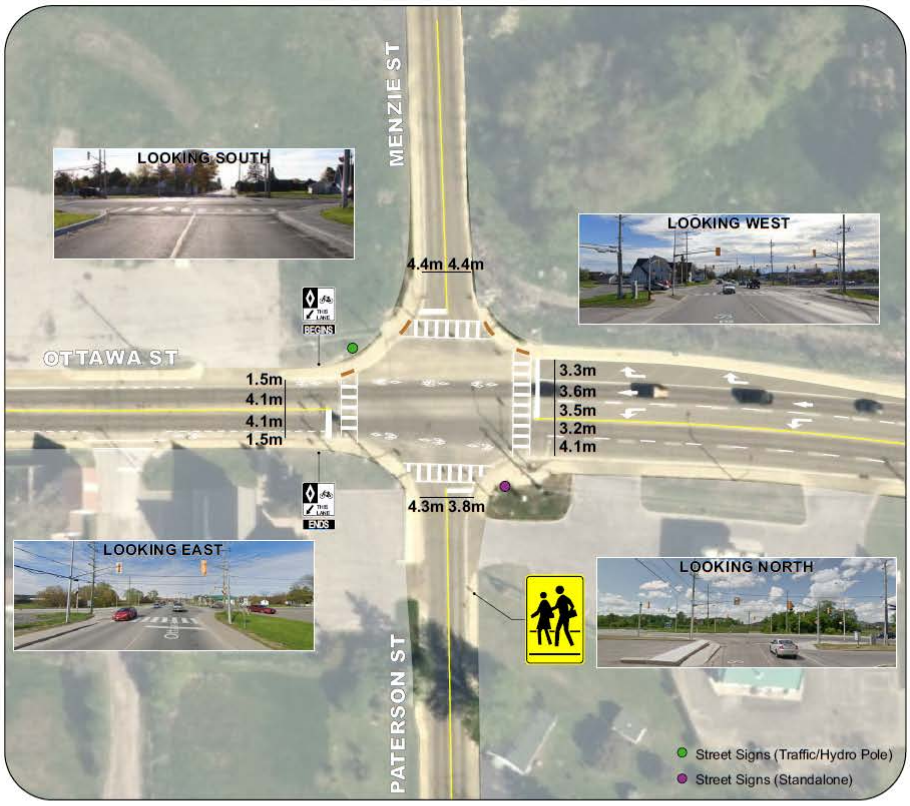
Recommended Modifications



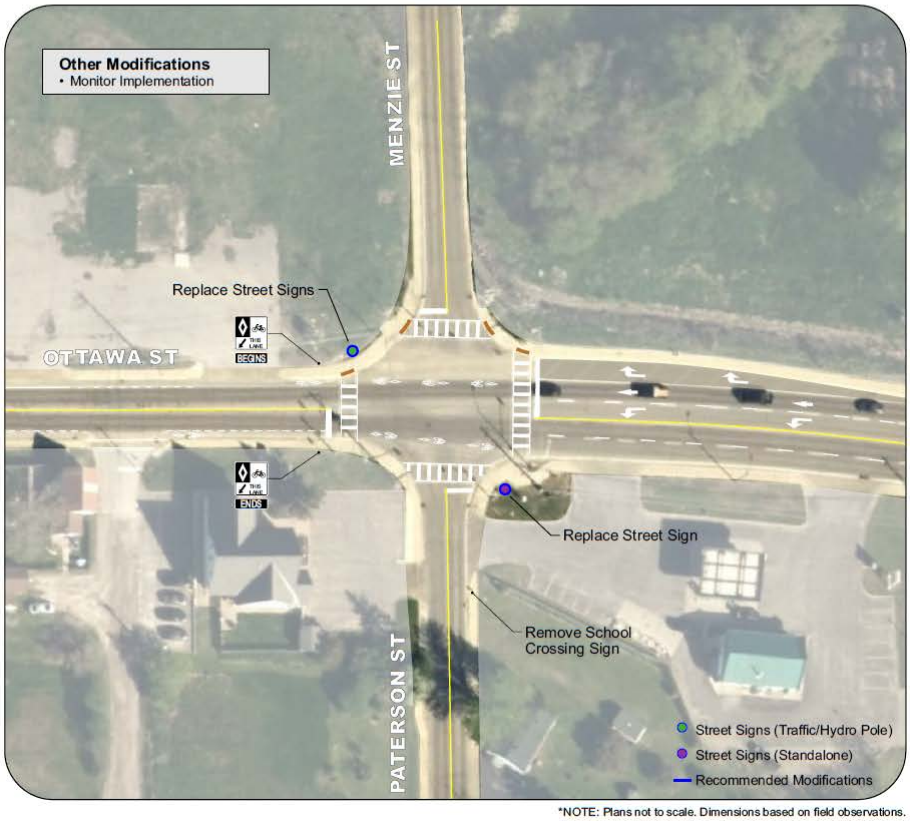
*NOTE: Plans not to scale. Dimensions based on field observations.

Figure 12: Paterson/Ottawa Intersection Concept Plans

Existing Condition



Recommended Modifications

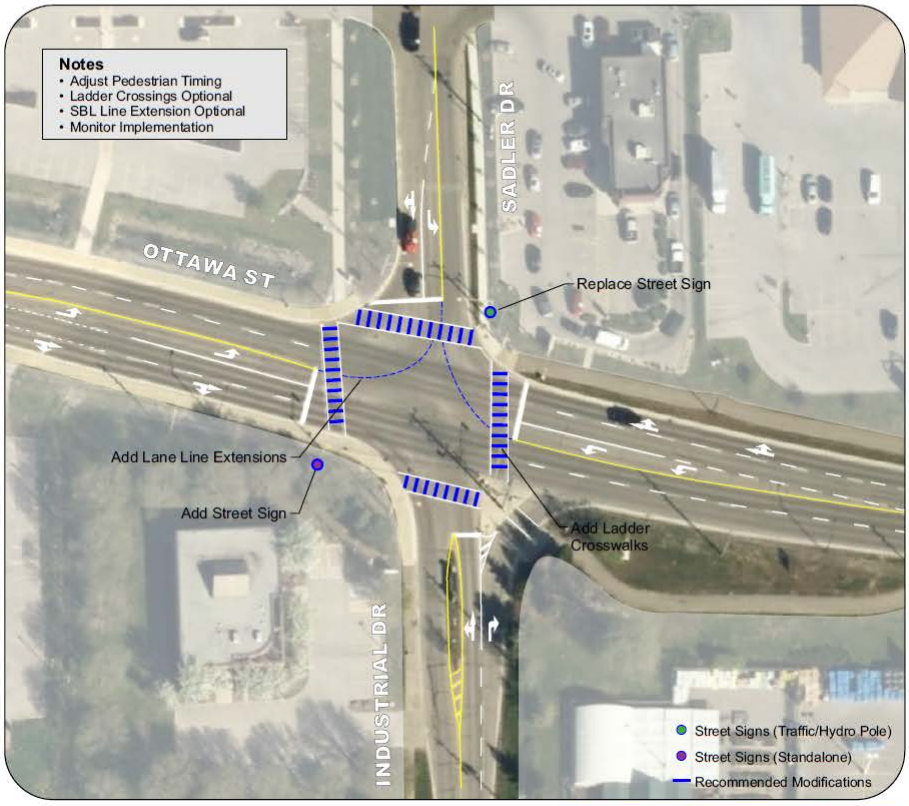


*NOTE: Plans not to scale. Dimensions based on field observations.

Figure 13: Industrial/Ottawa Intersection Concept Plans

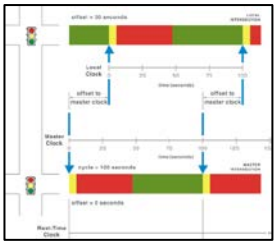
Existing Condition

Recommended Modifications



*NOTE: Plans not to scale. Dimensions based on field observations.

Table 7 Summary of Potential Mitigation Measures for Future Consideration

Mitigation Option	Summary of Benefits/Disbenefits	Potential Location(s)	Cost Estimate
Develop New Signal Timing Plans 	**Signal timing plans** can be redesigned within the study area to improve pedestrian safety by redistributing signal time away from vehicles (which have very high levels-of-service) and given to pedestrians. Examples include: Leading Pedestrian Intervals (LPI) gives pedestrians an advance walk signal before motorists get a green signal, giving the pedestrian several seconds to start walking in the crosswalk before a concurrent signal is provided to vehicles. This makes pedestrians more visible to motorists and motorists more likely to yield to them. Typical LPI settings provide 3 to 6 seconds of advance walk time. No Right-Turns on Red prohibit vehicles from turning right during a red phase, which is legally permitted in Ontario, to reduce conflicts with pedestrian crossings. The hardware compatibility and programming of these adjustments will need to be confirmed by the signal timing contractors for the Municipality prior to implementation.	Industrial/Ottawa Paterson/Ottawa Martin/Ottawa	Variable - to be confirmed.
Adjust Lane Configurations 	Additional **lane adjustments** may be considered within the study area to improve traffic operations and safety if necessary. At Martin/Ottawa, the northbound and southbound approaches may be adjusted to reflect one left-turn lane and one shared through/right-turn lane. The current design reflects through-lefts and right-turn lanes. The key concern is the short auxiliary lane for through traffic, which is unconventional. People may confuse the right-turn lanes as a through lanes, and block the movement. At this time, northbound right-turn volumes are high and left-turn/through volumes are low, which suggest the existing configuration is justified. However, if the northbound left-turn or through volumes increase in the future, it may be wise to consider this change. The lane widths would also be adjusted to ensure the left-turn lanes overlap slightly so vehicle paths do not cross.	Martin/Ottawa	$250 per symbol
Vertical Centreline Treatments 	**Vertical centreline treatments** such as flexible stake bollards give drivers a lane-narrowing effect/perception by creating vertical “friction” elements in the centre of the road. The flexible/collapsible design is preferable since it is more impact resistant. It is important to note this is a temporary/seasonal measure that may require frequent replacement due to impacts.	Ottawa Street between Martin and Paterson	<$500 per sign
Information Signage 	**Information signage** can draw attention to the presence of traffic calming or encourage lower vehicle speeds. Signage can be implemented to educate the public, highlight conditions ahead, and reinforce the presence of regulatory signage.	EB approach to Martin Street WB approach to Paterson Street	<$500 per sign

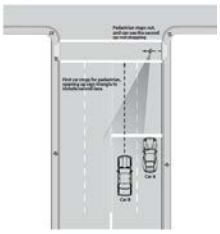
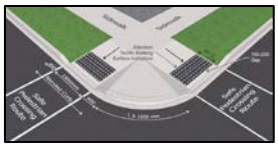
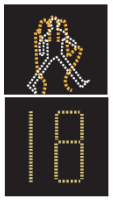
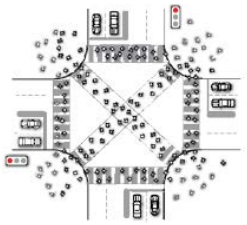
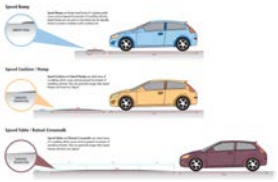
Advanced Stop Bar 	At some signalized intersections, the vehicle stop line can be moved further back from the crosswalk to improve visibility or to accommodate the path of turning vehicles. With multilane approaches an **advanced stop bar** allows pedestrians to see vehicles in the median lane without visibility being blocked by vehicles stopped in the curb lane. It also provides additional space for oncoming left-turn vehicles to enter the receiving lane. Initially, an advanced stop bar was recommended for the southbound left-turn at Industrial/Ottawa, to reduce the risk of conflict with eastbound left-turn traffic that may inadvertently enter the wrong lane. However, the southbound left-turn is actuated with loop detectors in the road. It is uncertain of the type and configuration, which may increase the construction cost. If there is room to adjust the stop bar without moving the loop detectors, the cost would low, making it an effective option. If loop detectors must be adjusted, it would cost $5k as a conservative estimate for a single loop contract; $2.5k/loop in the context of a construction contract with multiple loops. The Municipality should review the design of the southbound left turn to determine the feasibility of this option in the future.	Industrial/Ottawa – (SBL stop bar)	Variable: $250 to $5k
School Crossing Guard 	School crossings are supervised by **school crossing guards** during specified hours and during regular school period. The role of the crossing guards is to direct and supervise the movement of persons across a highway by creating necessary gaps in vehicular traffic to provide safe passage at designated school crossing locations. However, the literature review in **Section 3.2.6.** suggests this measure may not be necessary at this time, but as traffic patterns evolve and the community grows, the necessity may be reviewed in the future. It is our understanding the Municipality has implemented a crossing guard at Paterson/Ottawa. Traffic conditions should be monitored and recorded for future reference.	Paterson/Ottawa	Refer to Treasurer's Report
Tactile Walking Strip Indicators (TWSIs) 	**TWSI** is a standardized surface, detectable underfoot or by a long white cane, to assist people with low vision or blindness by alerting or guiding them. Typically, they are implemented at curb ramps or depressed curbs. It is recommended their implementation adhere to City of Ottawa Accessibility Design Standards. The Municipality has confirmed as sidewalks are renewed, TWSIs will be installed.	Paterson/Ottawa - (south side only) Martin/Ottawa	$1,000 - $2,000 per unit
Pedestrian Countdown Signals  Separate Countdown Housing	**Pedestrian countdown signals** (PCS) may supplement the regular Walk and Flashing Don't Walk indicators with a numeric countdown of the number of seconds remaining in the Flashing Don't Walk indications. Pedestrian countdown signals are often effective devices at locations that have a high percentage of seniors, children, and other mobility-challenged pedestrians, at locations with a history of high pedestrian-motor vehicle conflicts, and those locations that generate high pedestrian and/or motor vehicle traffic.	Industrial/Ottawa Paterson/Ottawa	$10,000 per unit

Table 8 Summary of Mitigation Measures Considered but Rejected

Mitigation Option	Summary of Benefits/Disbenefits	Potential Location(s)	Cost Estimate
Exclusive Pedestrian Phase ("Scrambles") 	**Exclusive pedestrian phases** at intersections increase pedestrian levels of service. Section 6.2.3.6 of Book 15 in the Ontario Traffic Manual (OTM) states: "EPPs are normally required only where the volumes of crossing pedestrians are extremely high (such as downtown locations or central business districts)." Furthermore, this unique approach can trigger other issues, as noted in the OTM: o Increased potential of pedestrian violations during the "don't walk" interval; o Increased potential for driver confusion and motor vehicle-pedestrian conflicts; and, o Increased challenges for pedestrians with a disability, especially for the visually impaired.	N/A	N/A
Bulb-outs 	**Bulb-outs** are horizontal intrusions of curbs into roadways resulting in narrower sections of road surface area. Among their benefits: they shorten crossing distances, improve pedestrian visibility, create separation between pedestrians and traffic, and prevent parking close to intersections. However, large vehicles may need to cross into adjacent travel lanes in order to negotiate turns. Ottawa Street is a truck route, and therefore, may not be a suitable corridor for this option. The costs and potential drainage/parking implications were also considered too prohibitive for the Municipality.	N/A	>$10,000 per location
Reduce Curb Radii (Corner Tightening) 	**Curb radius reductions** involve modification of intersection corners to implement tighter corners (smaller radii). They reduce speeds of right-turning vehicles and shorten crossing distances. They are typically not suitable at locations with large volumes of turning trucks and buses, or if vehicles cannot physically complete the turn without encroaching on curbside space for pedestrians. In the local context, the potential costs to redesign and construct new curb radii may be too prohibitive for the Municipality. Ottawa Street is a truck route, and may not be a suitable corridor for this option.	N/A	>$10,000 per location
Speed Display Devices 	**Speed display devices** (SDD) measure the speed of approaching vehicles, typically with radar, and display the measured speed. They can be temporary or permanent installations, used at speed-sensitive locations to reduce vehicle speed. SDD are not intended to directly enforce speed limits, but rather to inform motorists and modify their driving behaviour, either when approaching a danger zone or to generally comply with the speed limit. Generally, speed data analysis is recommended to identify appropriate locations for SDDs. However, their effectiveness is limited without police enforcement and supporting measures. They should be implemented with caution to avoid non-compliance. The costs were also considered too prohibitive in this context.	N/A	$7,500 - $10,000 per unit

Vertical Deflection Measures 	**Vertical deflection measures** include raised crossings, raised intersections, speed humps, speed tables and speed cushions. They are generally implemented to reduce speed and, in the case of raised crosswalks and intersections, increase pedestrian awareness and comfort. However, vertical deflection measures are known to adversely impact emergency, transit, and snow clearing services. They may also result in a false sense of security if placed in isolation without supporting passive measures, which increases their total cost. In the local context, this measure may not be suitable for Ottawa Street, an arterial roadway with high traffic volumes, including truck traffic. There are also homes with direct frontage, and these measures may not be viewed positively due to their potential to increase localized noise and vibration levels.	N/A	$2,000 - $5,000 per location
Adjust Intersection Design	At Paterson/Ottawa, the WB left-turn lane does not have an opposing EB left-turn lane, which is atypical. Symmetric designs are preferred to reduce confusion and risk of incidents. A driver in the WB left-turn lane must rely on the turn signal indicator from the oncoming vehicle to be certain they are safe to turn. Offset turning lanes also provide less separation between opposing vehicles as they complete a turn. However, there does not appear to be sufficient pavement width to simply mark an EB left-turn lane. A full redesign of the intersection would be required. As the north leg of this intersection was only recently constructed, this modification would be of significant cost.	Paterson/Ottawa	>50,000

APPENDIX A – Traffic Counts

ACCURATE TRUSTED TRAFFIC DATA

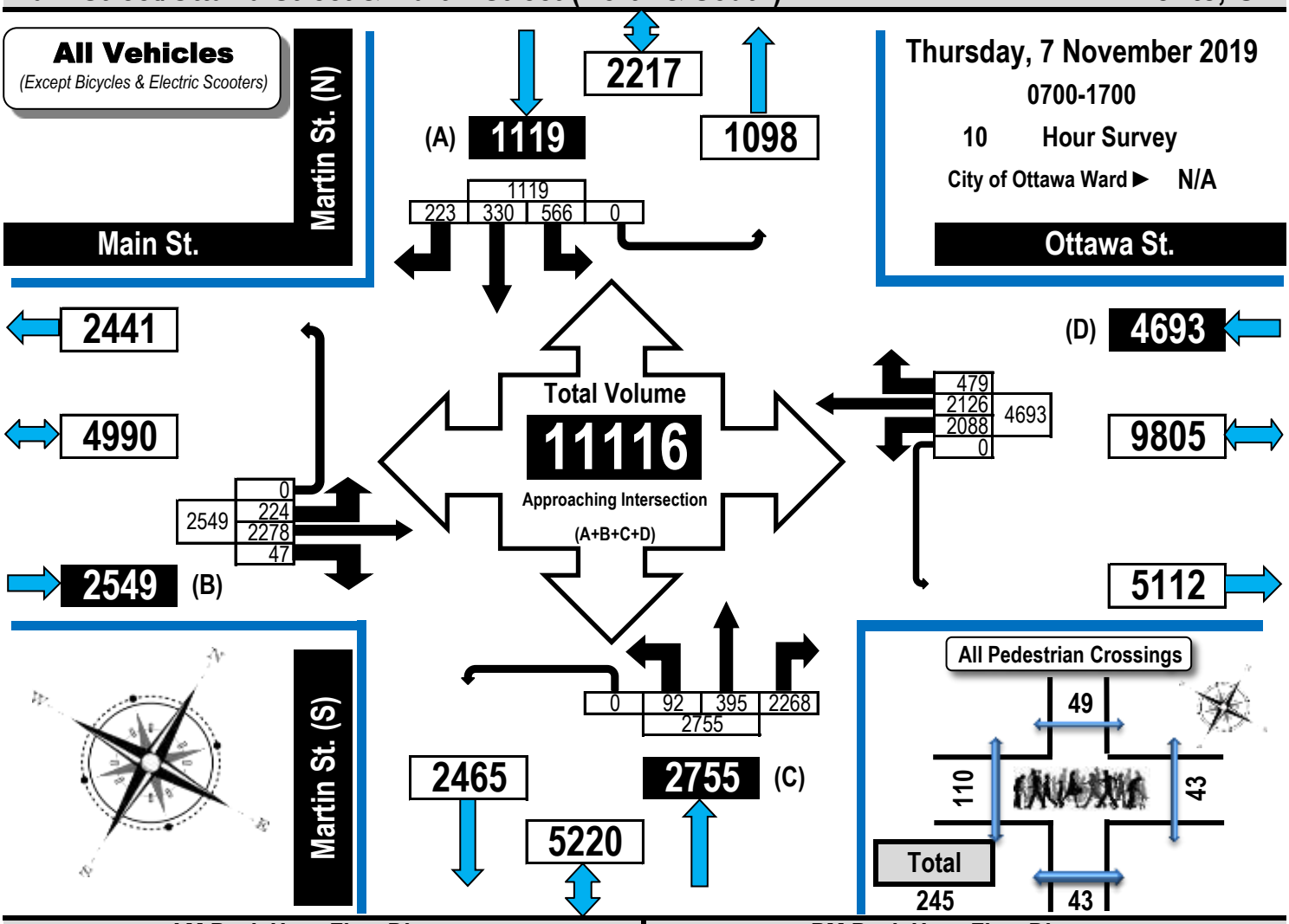
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

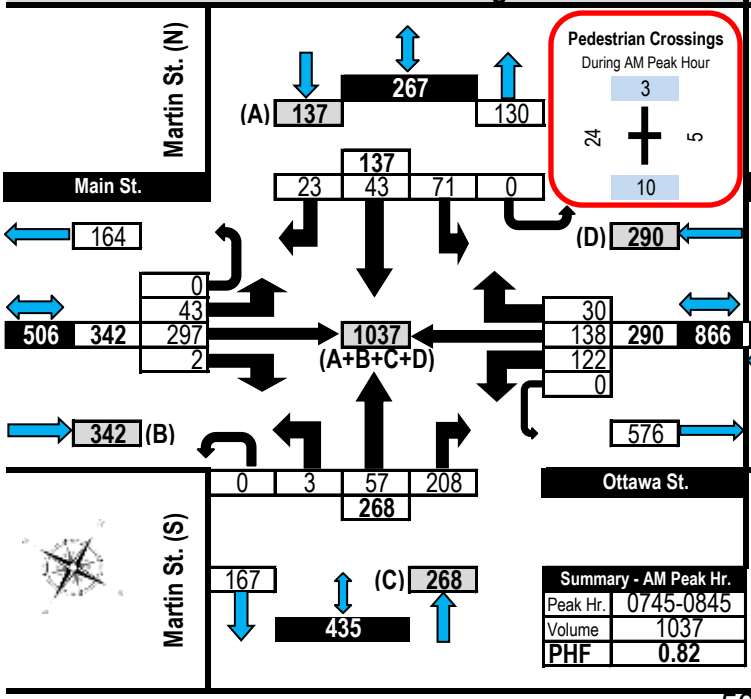
Main Street/Ottawa Street & Martin Street (North & South) — Almonte, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, 7 November 2019
0700-1700
10 Hour Survey
City of Ottawa Ward ► N/A

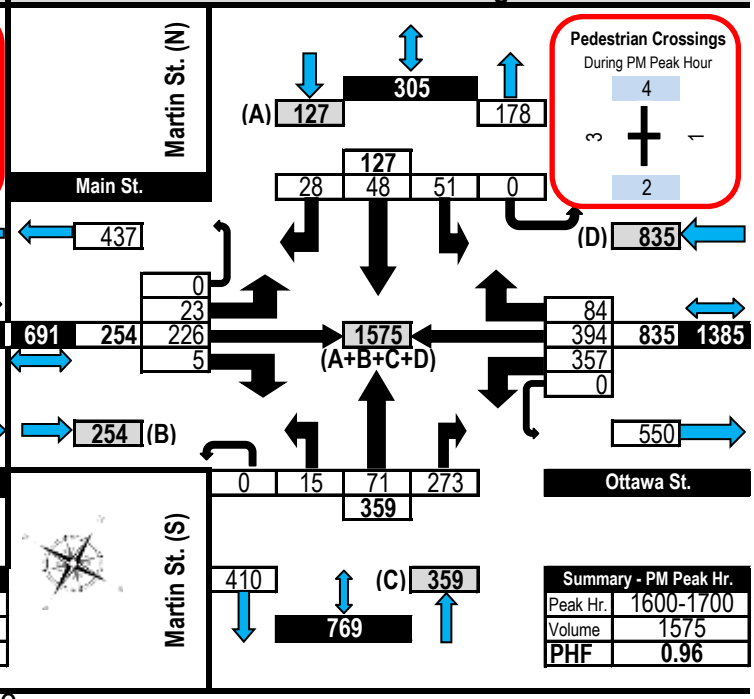


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0745-0845
Volume	1037
PHF	0.82

PM Peak Hour Flow Diagram



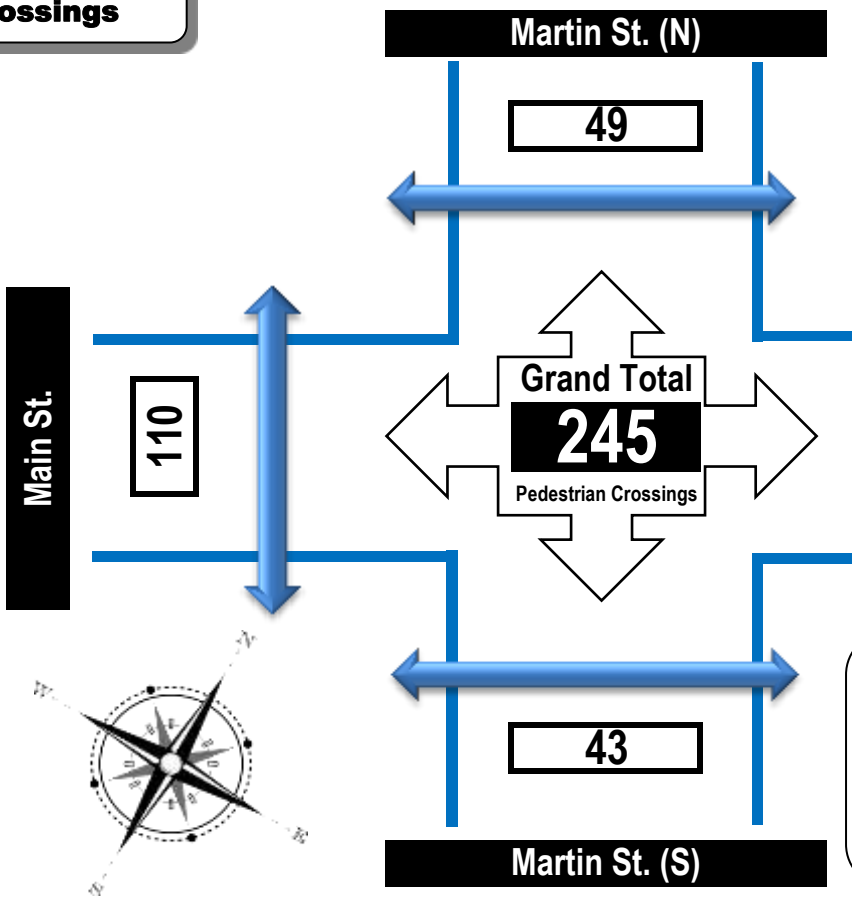
Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	1575
PHF	0.96

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Main Street/Ottawa Street & Martin Street (North & South) — **Almonte, ON**

Pedestrian Crossings

Thursday, 7 November 2019
0700-1700
10 Hour Survey
City of Ottawa Ward ► N/A



Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Main St.	East Side Crossing Ottawa St.	Street Total	South Side Crossing Martin St. (S)	North Side Crossing Martin St. (N)	Street Total	Grand Total
0700-0800	27	3	30	16	3	19	49
0800-0900	9	2	11	3	0	3	14
0900-1000	4	1	5	2	2	4	9
1000-1100	4	3	7	1	7	8	15
1100-1200	15	6	21	6	9	15	36
1200-1300	2	3	5	2	1	3	8
1300-1400	7	2	9	7	3	10	19
1400-1500	32	17	49	3	12	15	64
1500-1600	7	5	12	1	8	9	21
1600-1700	3	1	4	2	4	6	10
Totals	110	43	153	43	49	92	245

Comments:

There were no issues involving pedestrian crossings. Northbound traffic sometimes backs up south of Ottawa Street on Queen Street. Bus traffic comprised 30.2% of the heavy vehicles (primarily school buses and a few other bus types).

ACCURATE TRUSTED TRAFFIC DATA

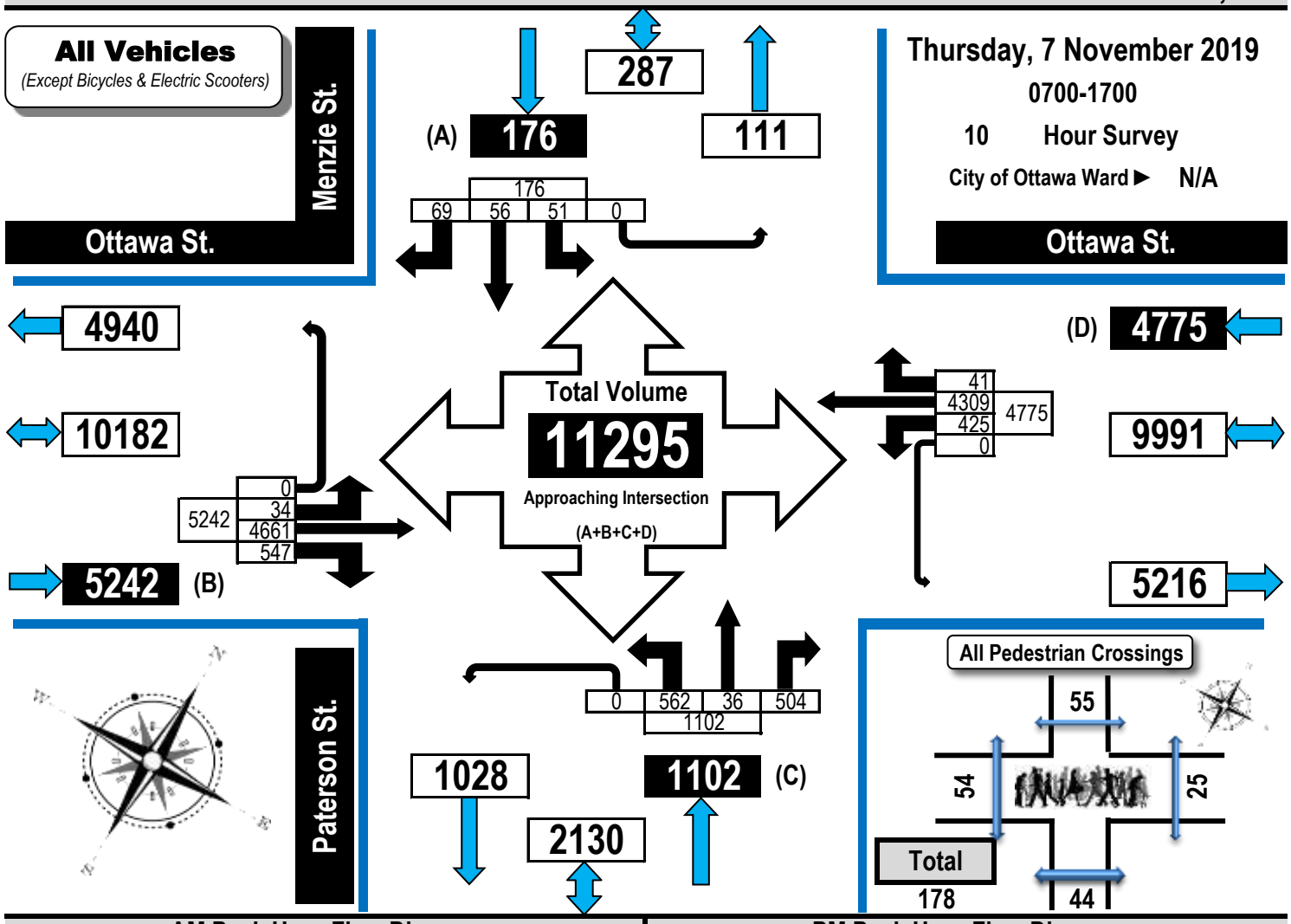
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

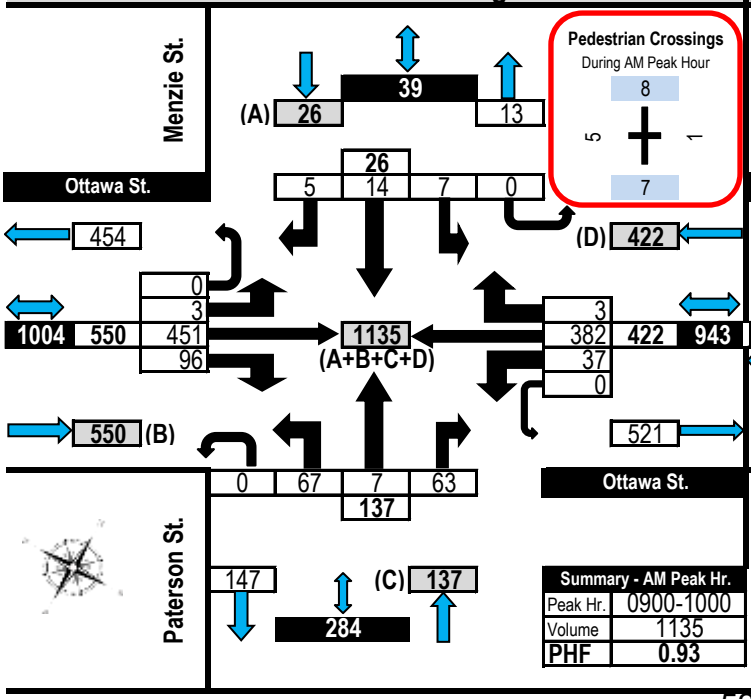
Menzie Street/Paterson Street & Ottawa Street — Almonte, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, 7 November 2019
0700-1700
10 Hour Survey
City of Ottawa Ward ► N/A

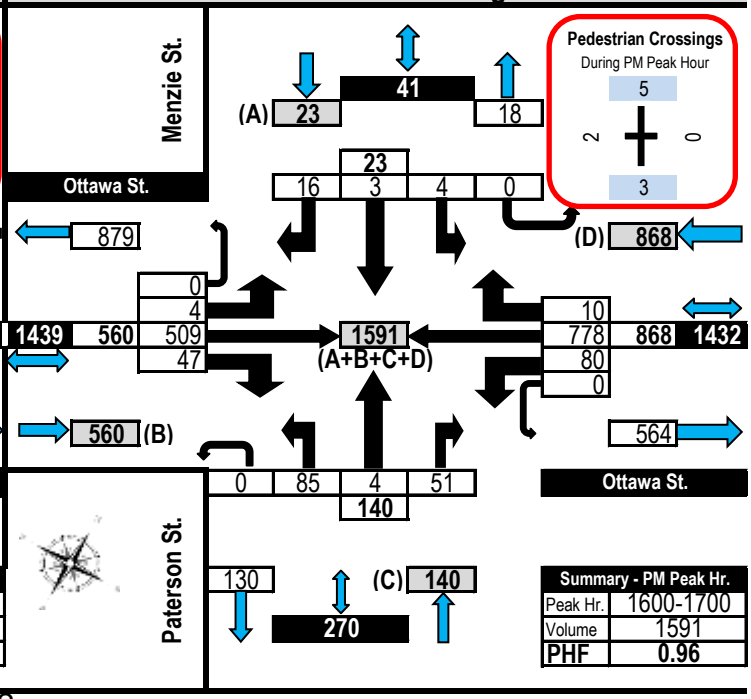


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0900-1000
Volume	1135
PHF	0.93

PM Peak Hour Flow Diagram



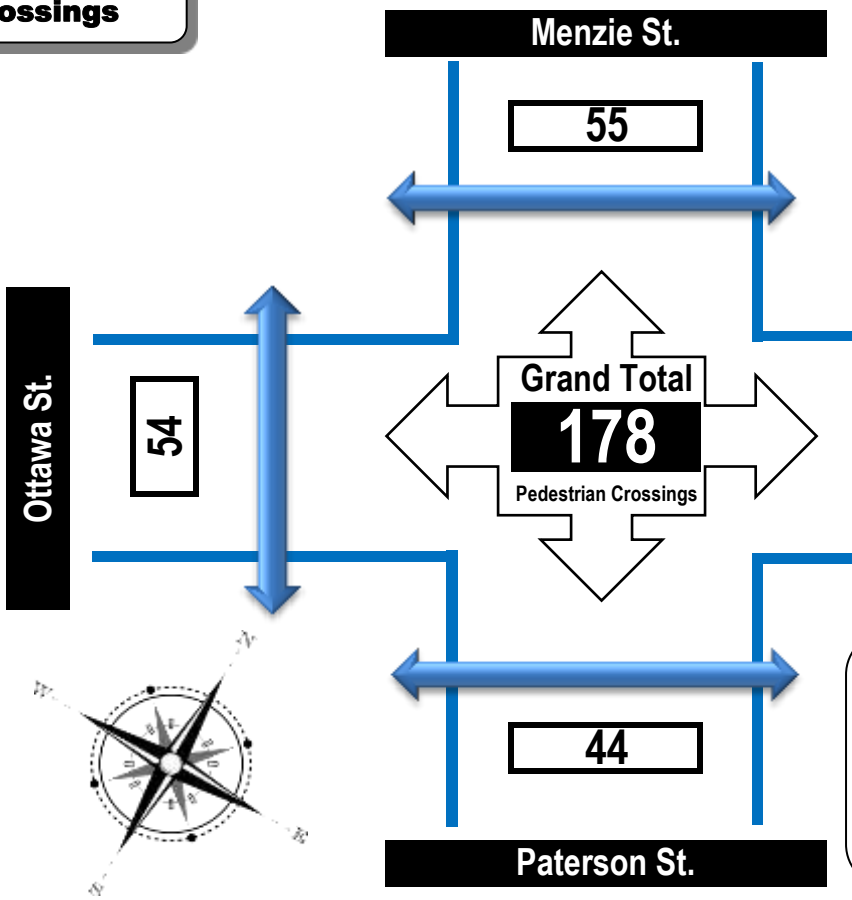
Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	1591
PHF	0.96

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Menzie Street/Paterson Street & Ottawa Street — Almonte, ON

Pedestrian Crossings

Thursday, 7 November 2019
0700-1700
10 Hour Survey
City of Ottawa Ward ► N/A



Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Ottawa St.	East Side Crossing Ottawa St.	Street Total	South Side Crossing Paterson St.	North Side Crossing Menzie St.	Street Total	Grand Total
0700-0800	1	1	2	2	2	4	6
0800-0900	15	9	24	5	11	16	40
0900-1000	5	1	6	7	8	15	21
1000-1100	0	1	1	3	7	10	11
1100-1200	0	1	1	1	8	9	10
1200-1300	2	1	3	1	2	3	6
1300-1400	2	0	2	6	0	6	8
1400-1500	4	3	7	5	4	9	16
1500-1600	23	8	31	11	8	19	50
1600-1700	2	0	2	3	5	8	10
Totals	54	25	79	44	55	99	178

Comments:

There were no issues involving children crossings at this location. There was one conflict involving an adult pedestrian who crossed on red in the north crossing. A driver had to brake to avoid hitting the pedestrian. During the morning time period only, walking school buses were observed using the north, east and west crossings. Parents in safety vests and carrying stop sign paddles assisted children in crossing this intersection.

ACCURATE TRUSTED TRAFFIC DATA

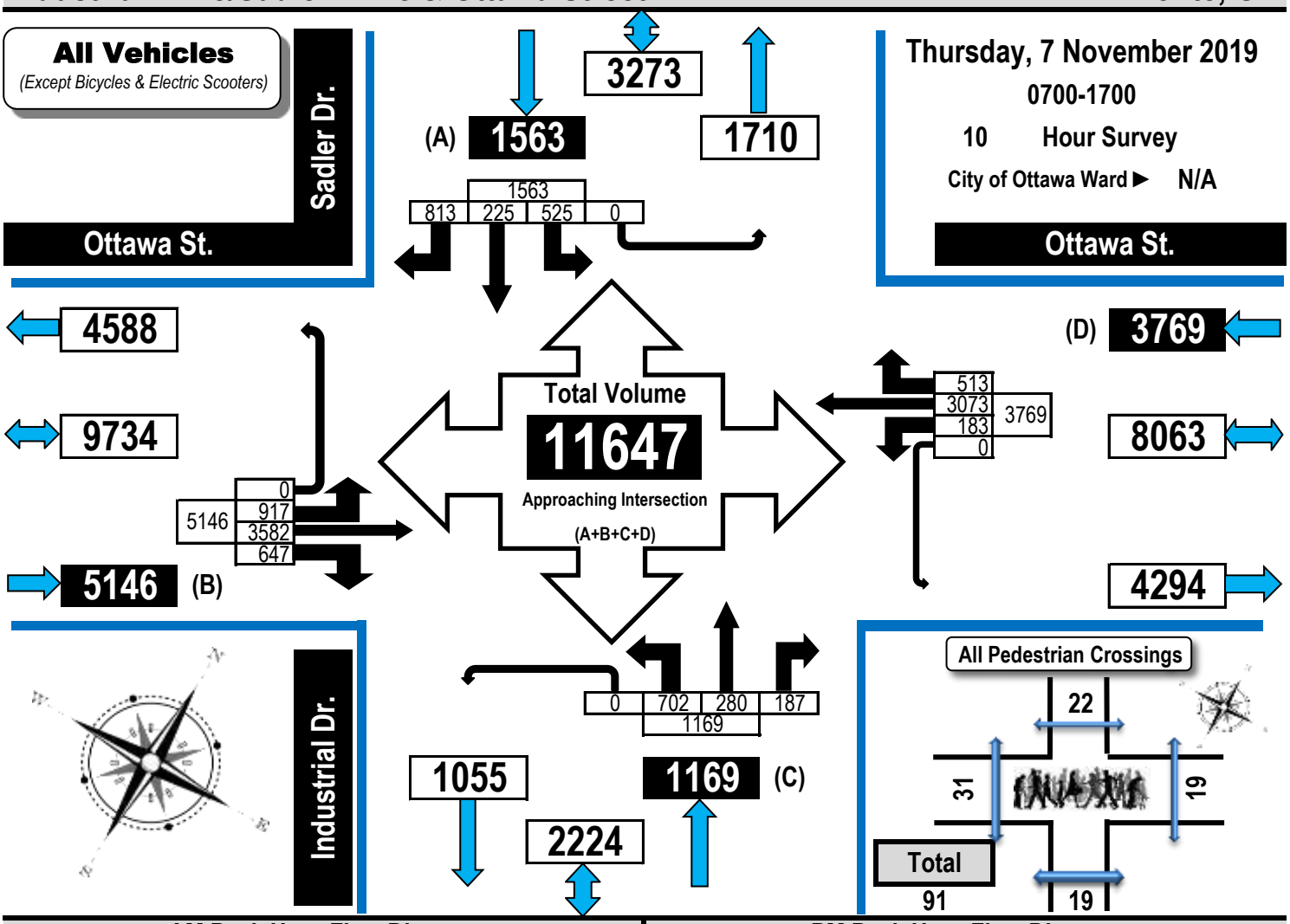
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

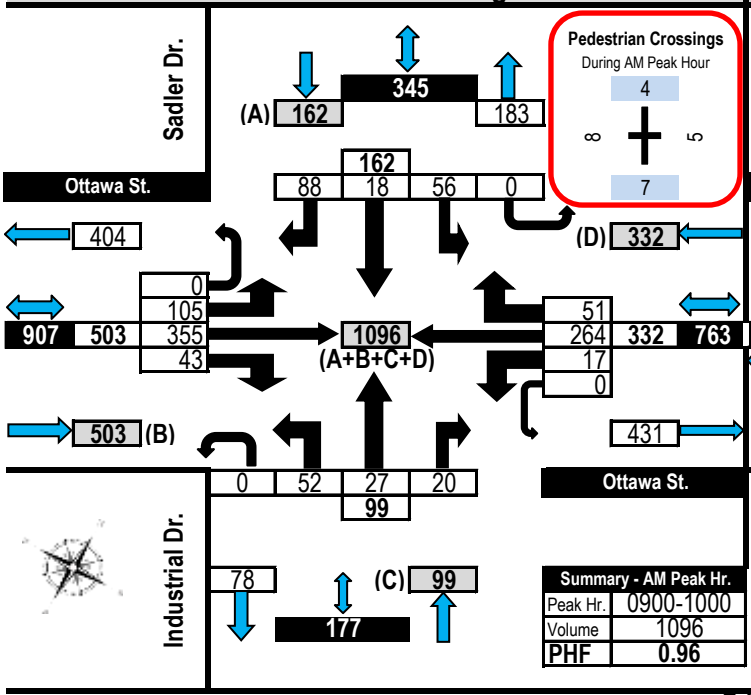
Industrial Drive/Sadler Drive & Ottawa Street — Almonte, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, 7 November 2019
0700-1700
10 Hour Survey
City of Ottawa Ward ► N/A

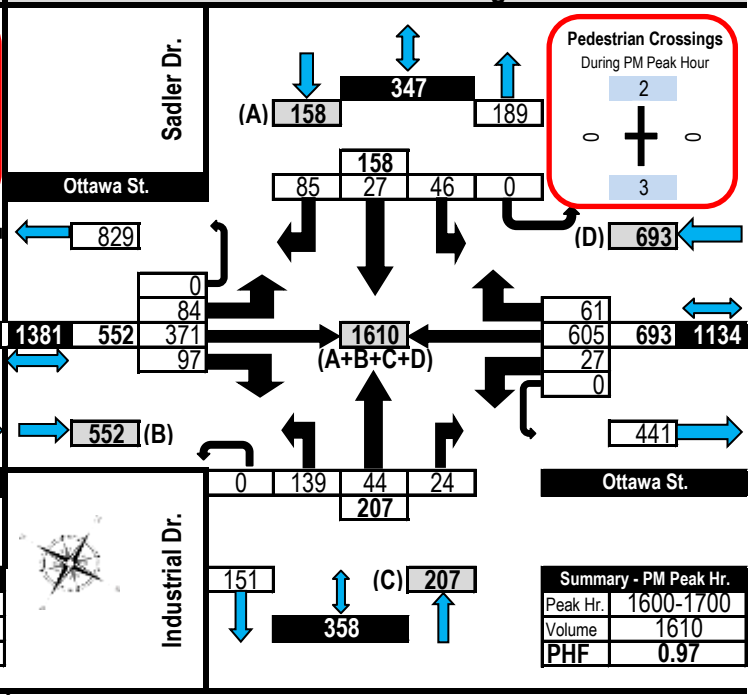


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0900-1000
Volume	1096
PHF	0.96

PM Peak Hour Flow Diagram



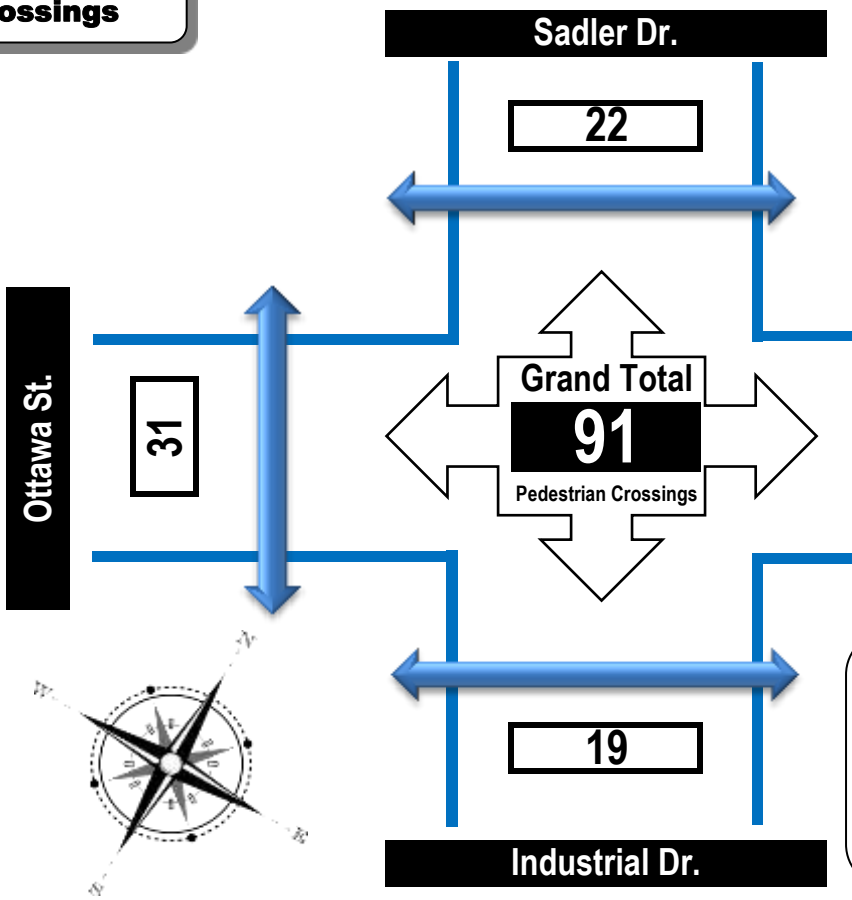
Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	1610
PHF	0.97

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Industrial Drive/Sadler Drive & Ottawa Street — Almonte, ON

Pedestrian Crossings

Thursday, 7 November 2019
0700-1700
10 Hour Survey
City of Ottawa Ward ► N/A



Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Ottawa St.	East Side Crossing Ottawa St.	Street Total	South Side Crossing Industrial Dr.	North Side Crossing Sadler Dr.	Street Total	Grand Total
0700-0800	0	1	1	0	0	0	1
0800-0900	2	0	2	2	3	5	7
0900-1000	8	5	13	7	4	11	24
1000-1100	4	2	6	0	2	2	8
1100-1200	0	1	1	1	5	6	7
1200-1300	1	1	2	0	2	2	4
1300-1400	3	3	6	3	0	3	9
1400-1500	2	0	2	0	2	2	4
1500-1600	11	6	17	3	2	5	22
1600-1700	0	0	0	3	2	5	5
Totals	31	19	50	19	22	41	91

Comments:
There were no issues involving pedestrian crossings.

APPENDIX B – Historical Collision Records

Ontario Provincial Police
Lanark Detachment

15 Coleman Street, Carleton Place, ON
Tel: 613-257-5610

Ottawa Street Intersections – Mississippi Mills

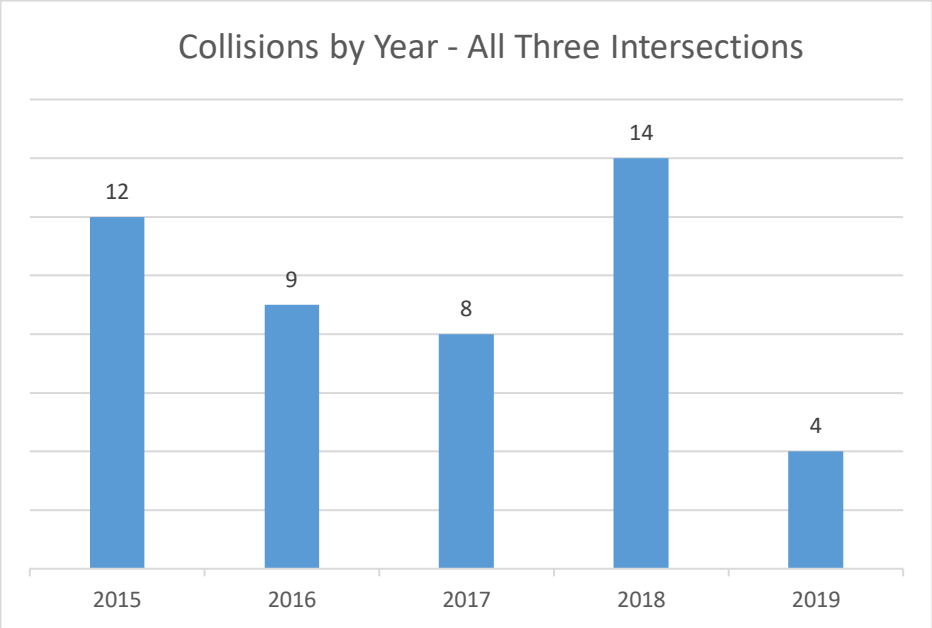
Report Date	**Submitting Author**
30 OCT 2019	*Sean Trahan #9477* 15 Coleman street , Carleton Place, ON **Tel: 613-257-5610 Fax: 613-257-8847** *sean.trahan@opp.ca*
Submitting Agency Report Number	

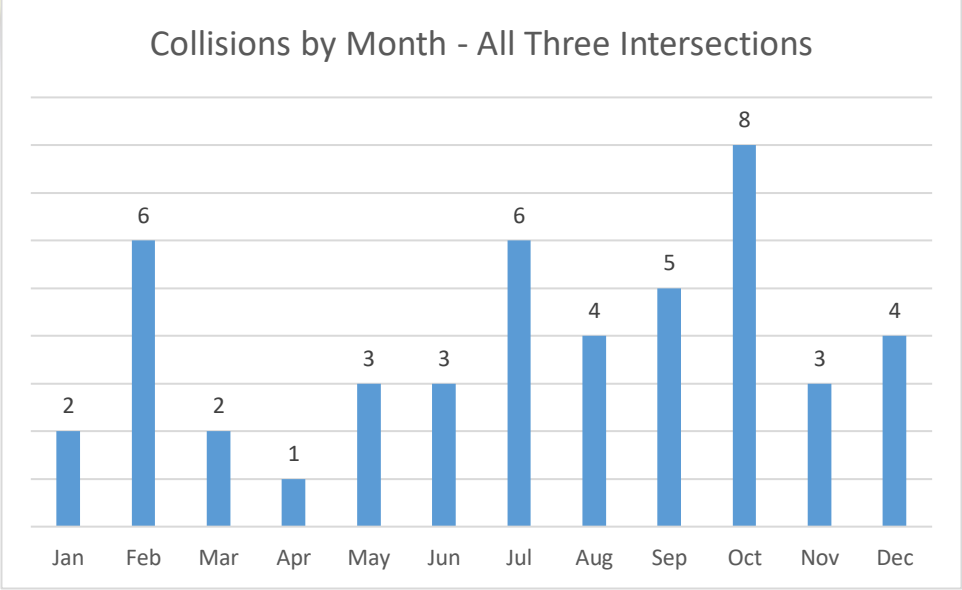
At the request of Staff Sergeant McConnell a review for the past 5 years was conducted of Motor Vehicle Collisions on Ottawa Street in Mississippi Mills at the intersections of Martin Street, Paterson Street / Menzie Street and Industrial Drive / Sadler Drive.

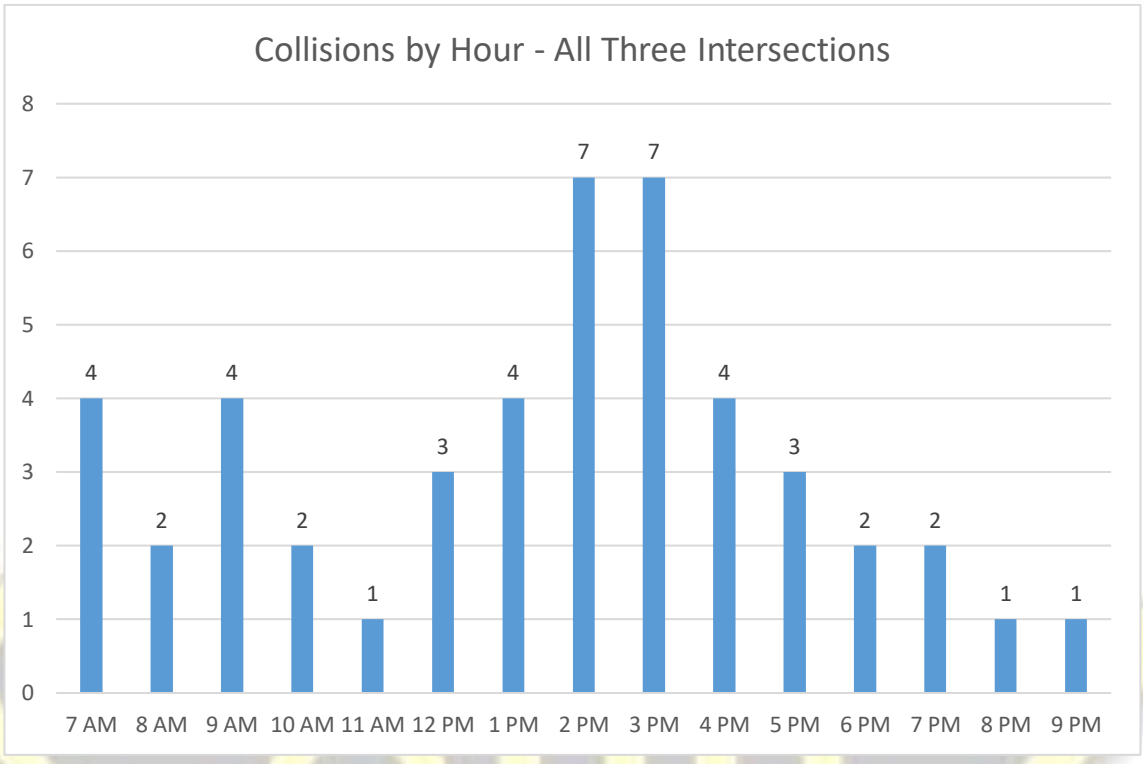
Data was utilized from the Ministry of Transportation Electronic Collision Reporting System (ECRS) as provided by the OPP Business Management Unit. It should be noted that the ECRS only contains data for “reportable” collisions as defined by the Ontario Highway Traffic Act. There were a total of **47** reportable motor vehicle collisions at these three intersections since January 1, 2015 to October 29, 2019. There were **9** at the Martin Street intersection, **11** at the Paterson Street / Menzie Street intersection and **27** at the Industrial Drive / Sadler Drive intersection.

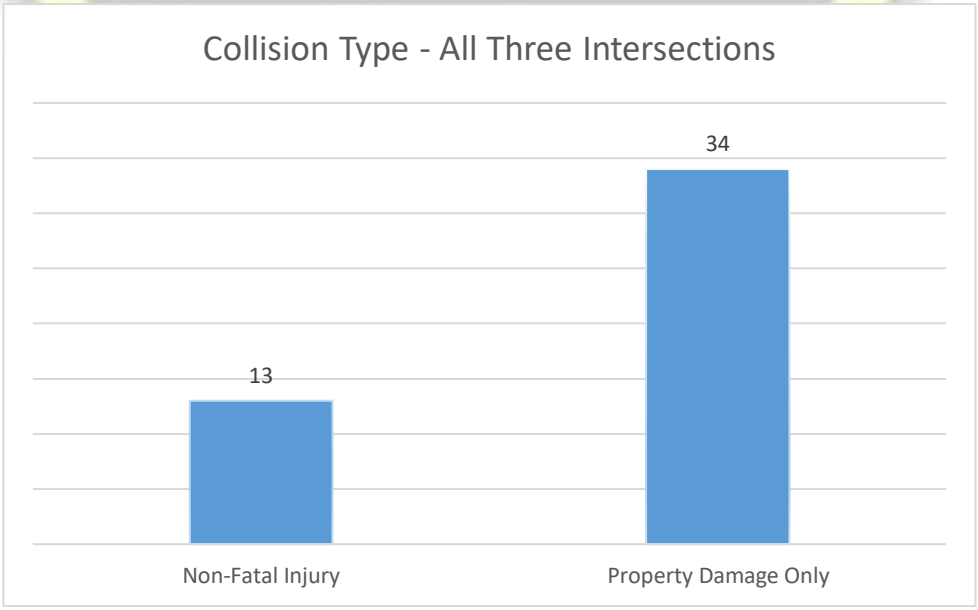
The total collisions at all intersections and each intersection is broken down in the charts below by number of collisions by year, month, hour, type, and primary cause.

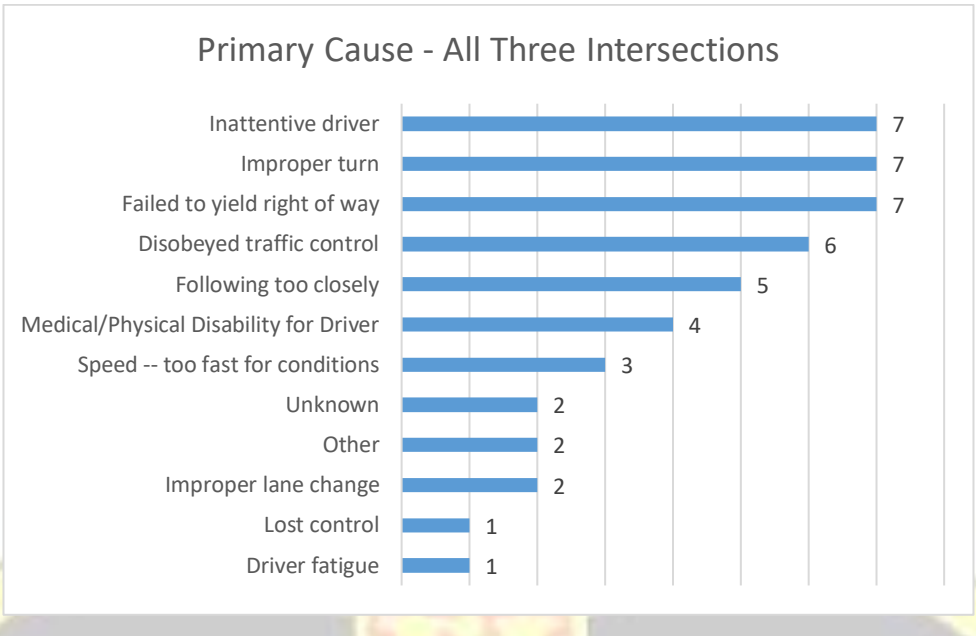
Ottawa Street – All Three Intersections (47 Collisions)



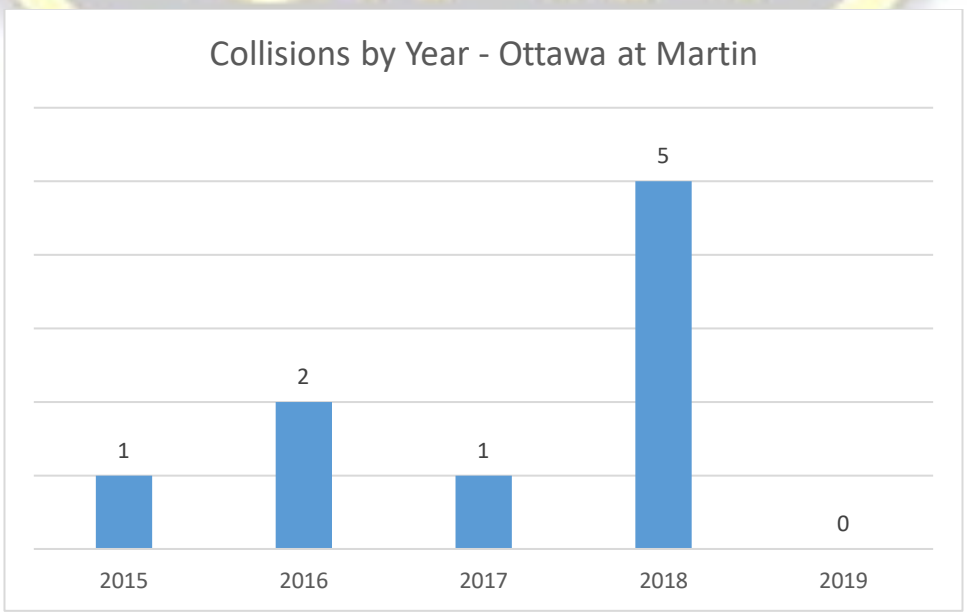


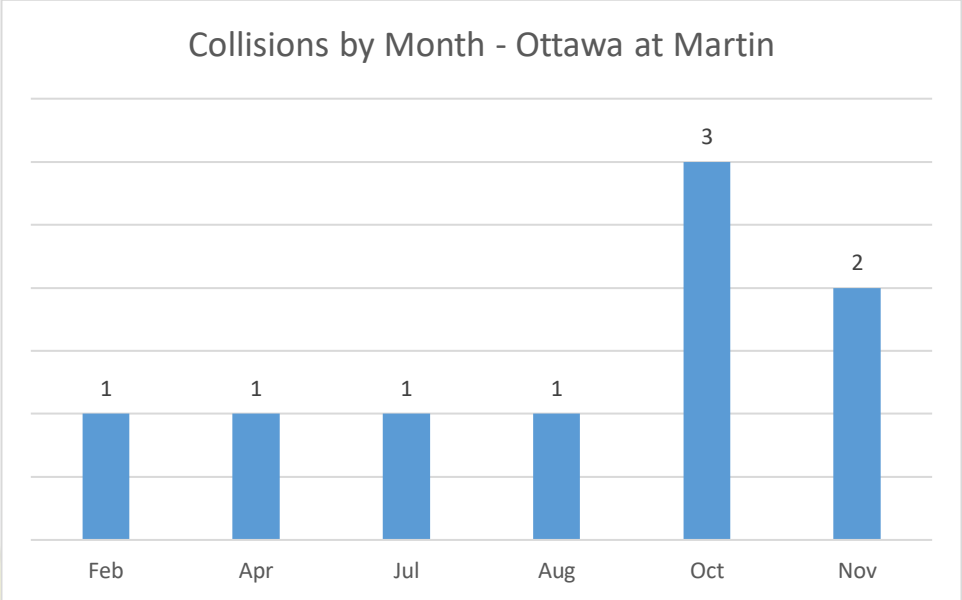

Collisions by Hour - All Three Intersections
8
7
6
5
4
3
2
1
0
4
2
4
2
1
3
4
7
7
4
3
2
2
1
1
7 AM
8 AM
9 AM
10 AM
11 AM
12 PM
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM
7 PM
8 PM
9 PM

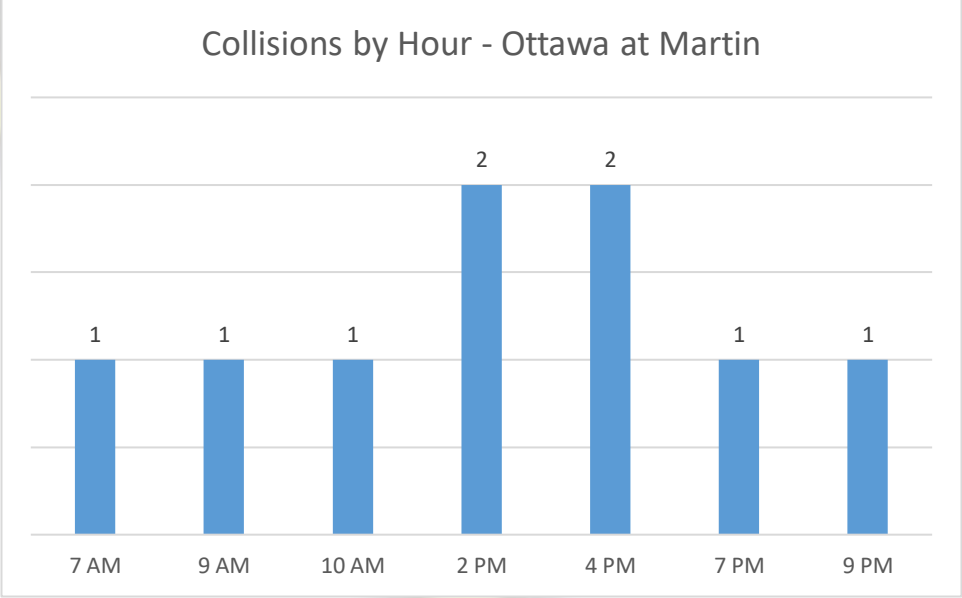

Collision Type - All Three Intersections
34
13
Non-Fatal Injury
Property Damage Only

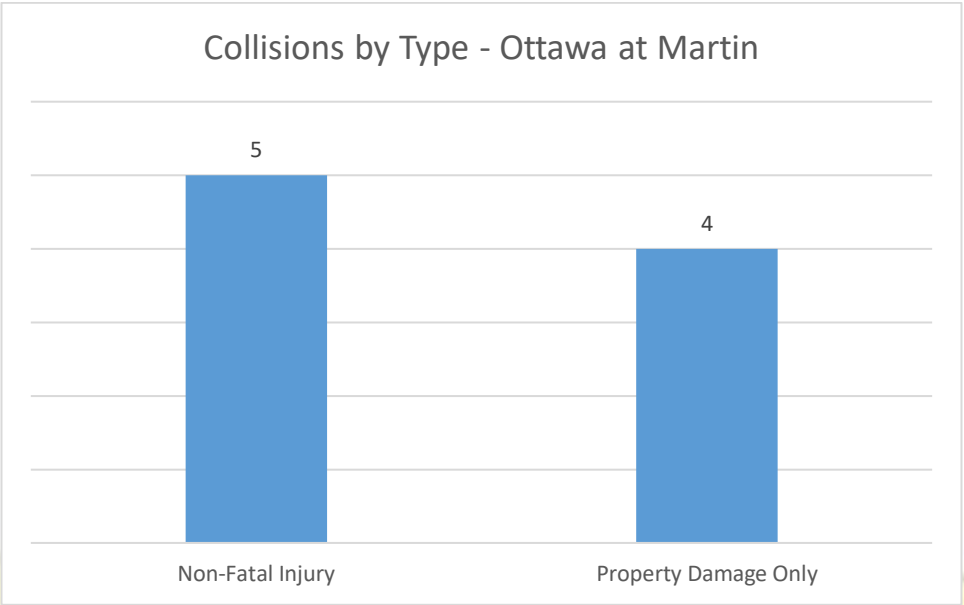


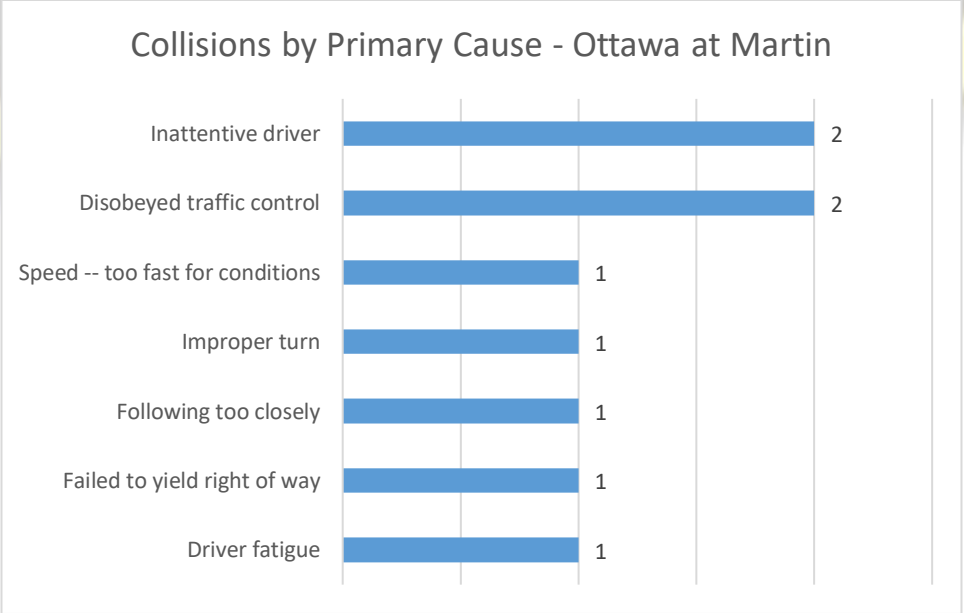
Ottawa Street at Martin Street (9 Collisions)



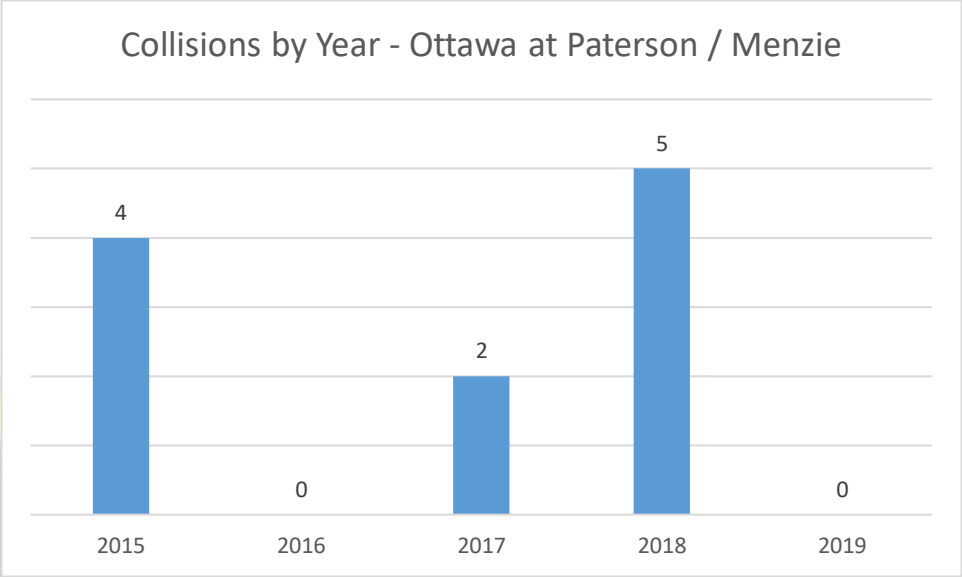

Collisions by Month - Ottawa at Martin
1
1
1
1
3
2
Feb
Apr
Jul
Aug
Oct
Nov

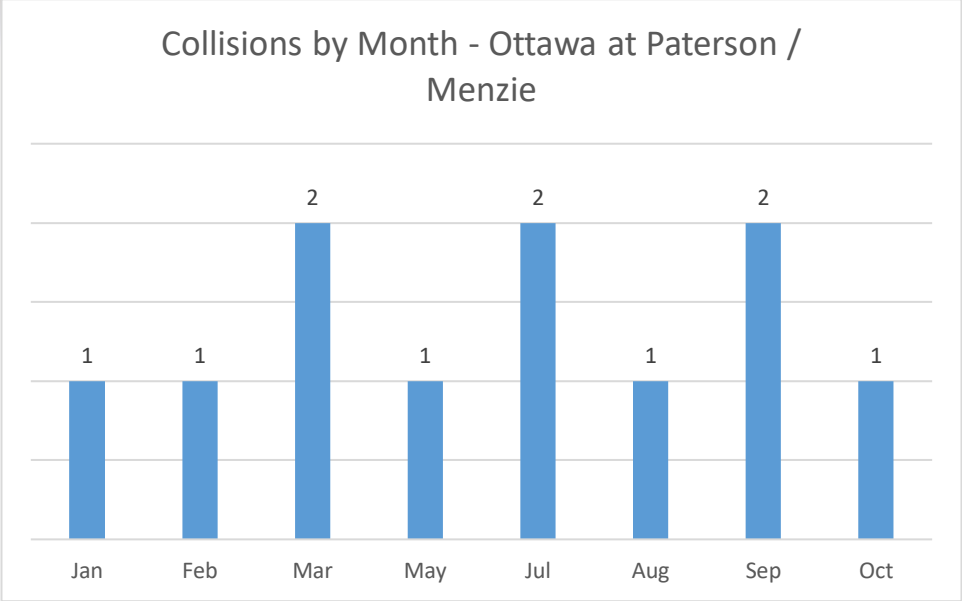

Collisions by Hour - Ottawa at Martin
1
1
1
2
2
1
1
7 AM
9 AM
10 AM
2 PM
4 PM
7 PM
9 PM

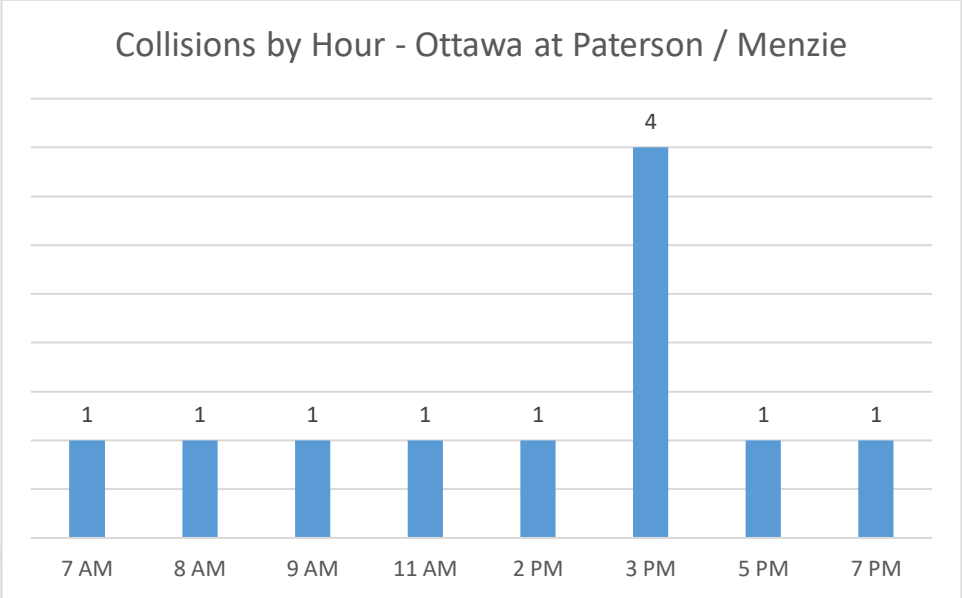

Collisions by Type - Ottawa at Martin
5
4
Non-Fatal Injury
Property Damage Only

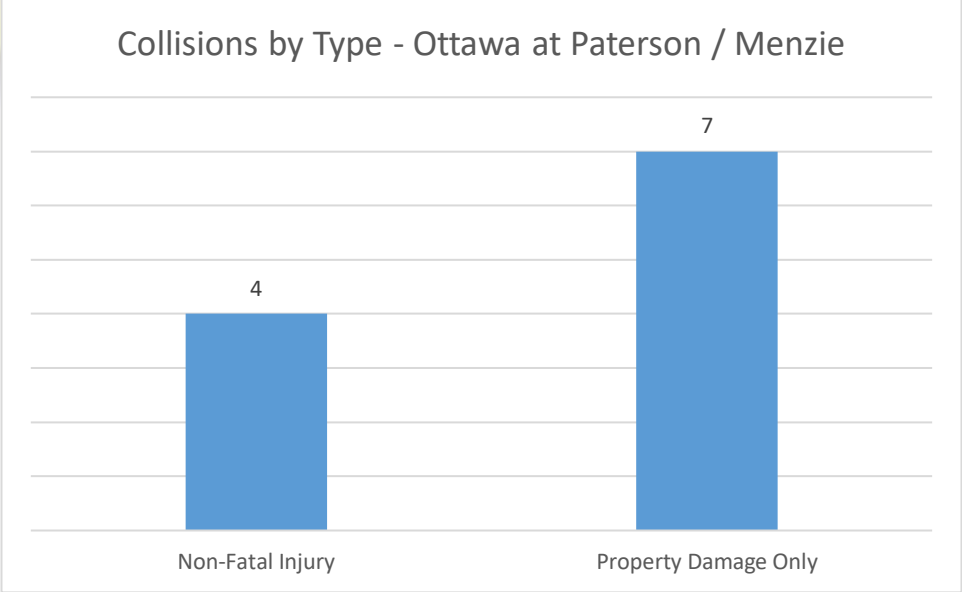

Collisions by Primary Cause - Ottawa at Martin
Inattentive driver
2
Disobeyed traffic control
2
Speed -- too fast for conditions
1
Improper turn
1
Following too closely
1
Failed to yield right of way
1
Driver fatigue
1

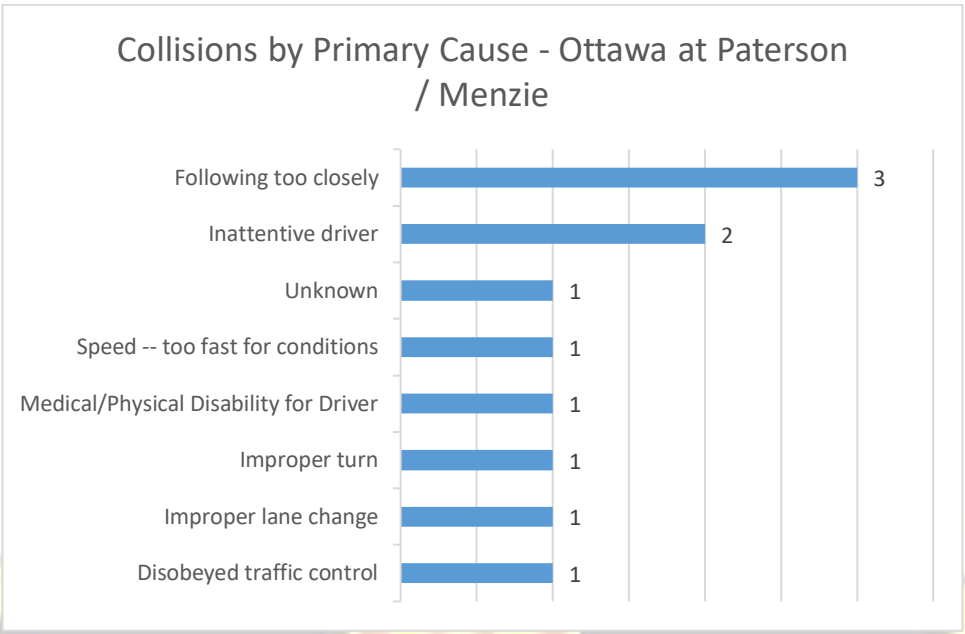
Ottawa Street at Paterson / Menzie (11 Collisions)



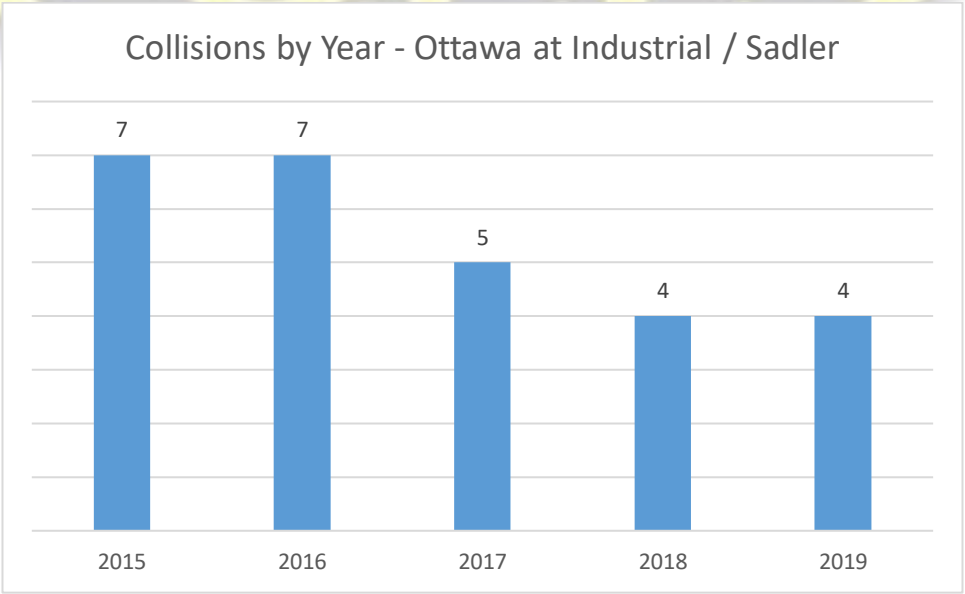


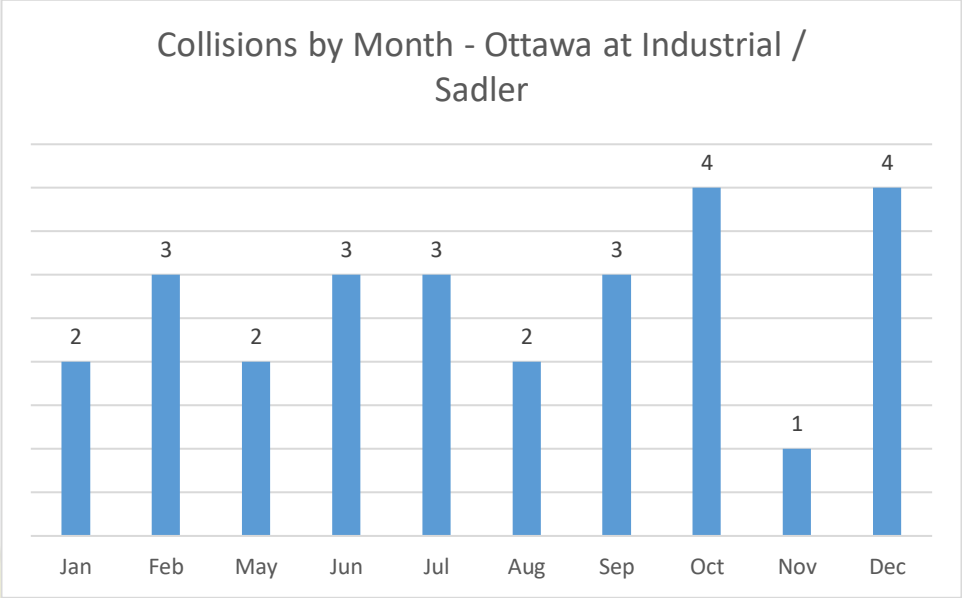

Collisions by Hour - Ottawa at Paterson / Menzie
4
1
1
1
1
1
1
1
7 AM
8 AM
9 AM
11 AM
2 PM
3 PM
5 PM
7 PM

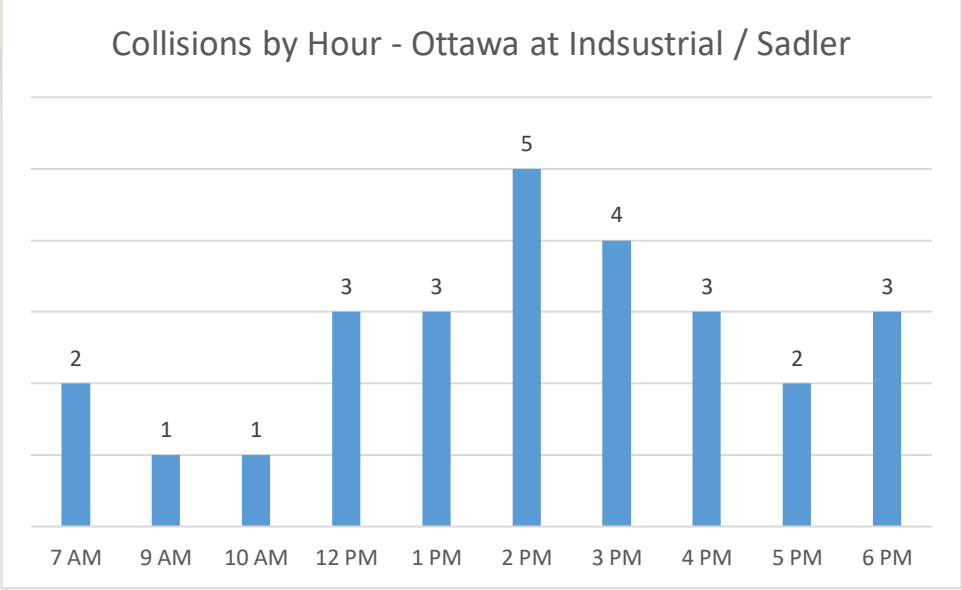

Collisions by Type - Ottawa at Paterson / Menzie
7
4
Non-Fatal Injury
Property Damage Only

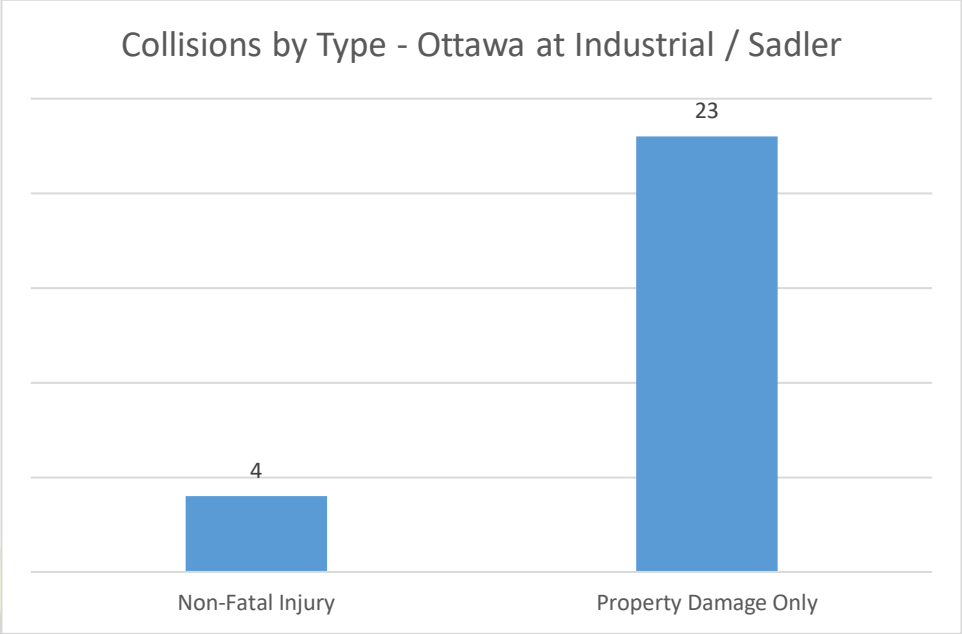


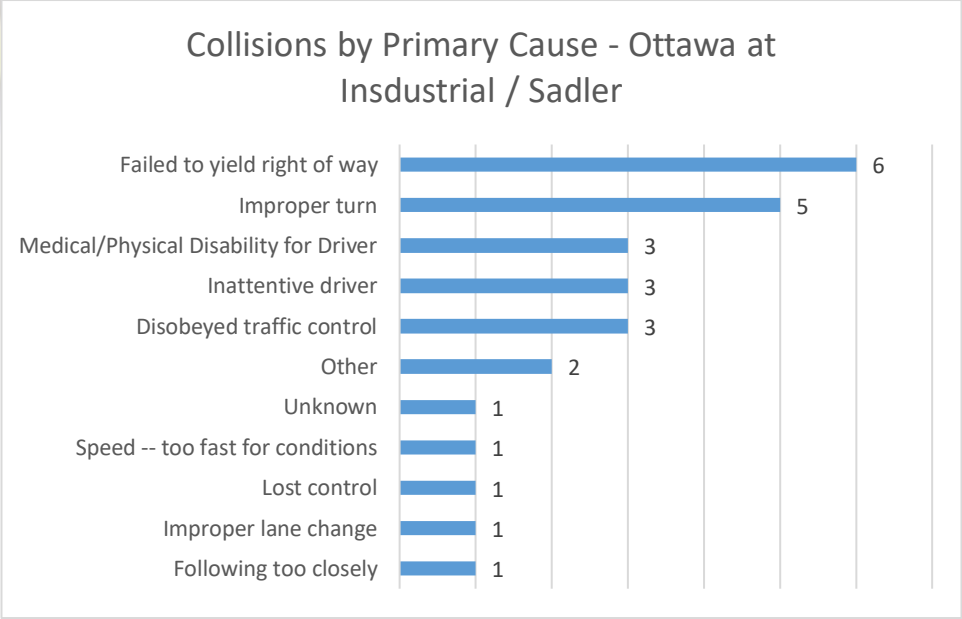
Ottawa Street at Industrial / Sadler (27 Collisions)




Collisions by Month - Ottawa at Industrial / Sadler
2
3
2
3
3
2
3
4
1
4
Jan
Feb
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Collisions by Hour - Ottawa at Indsustrial / Sadler
2
1
1
3
3
5
4
3
2
3
7 AM
9 AM
10 AM
12 PM
1 PM
2 PM
3 PM
4 PM
5 PM
6 PM





Author: P/C Sean Trahan #9477

P:\600 - Operations\Analytics\Traffic\Ottawa Street

APPENDIX C – Additional Field Observations

Additional Field Observations:

In addition to the field observations completed on Ottawa Street, Parsons received information on traffic and pedestrian behaviour outside the study area, specifically on side streets near adjacent schools. There are three schools associated with the three subject intersections including:

1. Martin Street – Almonte and District High School;
2. Paterson Street – Holy Name of Mary Catholic School; and,
3. Paterson Street – R. Tait McKenzie Public School.

In speaking with the Principals of Almonte and District High School, Holy Name of Mary Catholic School and R. Tait McKenzie Public School, issues other than pedestrian crossings at Ottawa Street were noted.

Speed concerns were mentioned on Martin Street near the high school. On Paterson Street, the location of the pedestrian crossover was mentioned as it was felt that it should be moved north of the Catholic School to ensure children from R. Tait McKenzie Public School crossed north of Holy Name of Mary Catholic School. This action would eliminate the need for children to cross the three school accesses at the Catholic School thereby removing three conflict points.

At Holy Name of Mary Catholic School, the Almonte Daycare is moving into the south end of the school on December 1, 2019. Additional school traffic will commence at 6:30am. Concerns were raised with the operation of the pedestrian crossover in that some children push the button, then immediately walk out into traffic.

The warning and regulatory signing, although not within the scope of this report, along Martin Street north of Ottawa Street and on Paterson Street south of Ottawa Street should be reviewed in conjunction with the Ontario Traffic Manual, Books 5 and 6. School area signs are missing and school speed zones are in effect 24 hours/day, seven days a week.

Application of the school zone/school speed zone warrants outlined in both the City of Ottawa Speed Zone Policy for Urban and Rural Roads (2009) and Province of Alberta guidelines confirm changes could be implemented to ensure high driver compliance when children are present. Warrant analysis are shown below. Reduced hours for the 40km/h speed limit during the morning arrival time and afternoon departure time should be considered together with appropriate school area signing.

School Area and School Speed Zone

Warrant Analysis

Almonte and District High School — Almonte, ON

126 Martin Street North, Almonte, ON K0A 1A0

Speed Limit: **40** km/h **Date:** 25-Oct-2019

Installation Criterion	Maximum Point Value (MPV)	Description		Weighting Factor (WF)	Weighting Factor for this School	Score (MPV*WF)
School Type	40	Elementary		1.0	0.2	8
		Middle/Junior High School		0.4		
		High School		0.2		
		Post Secondary/ College/ University		0.0		
Road Classification	20	**Urban Land Use**	**Rural Land Use**			
		Local	N/A	1.0	0.25	5
		Minor Collector	Local	0.75		
		Collector	Collector	0.5		
		Major Collector/Minor Arterial	Arterial	0.25		
		Major Arterial/Expressway	Expressway	0.0		
Fencing	20	Fully Traversable		1.0	1	20
		Partially Traversable		0.5		
		Non-Traversable		0.1		
Property Line Separation	10	Abuts Roadway		1.0	1	10
		Within 50 Metres		0.5		
		Further than 50 Metres		0.0		
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	1	5
		Secondary Entrance		0.6		
		None		0.0		
Sidewalks	5	None or Non-School Side		1.0	0	0
		School Side		0.6		
		Both Sides		0.0		
TOTAL SCORE (Sum of T, C, F, L, E, and S) =						48

School Zone Results Matrix	
Total Score	**Area or Zone ?**
0 - 40	Nothing
41 - 64	School Area
65 - 80	School Area or School Speed Zone *
81 - 100	School Speed Zone

** Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.*

School Area Warranted?	YES
School Speed Zone Optional?	NO
School Speed Zone Warranted?	NO

To ensure maximum driver compliance with the warranted school zone speed limit, it is imperative the hours of operation reflect the times when the maximum number of students are either arriving at or leaving the school property. When a school is located in a rural area or is the sole school in a neighbourhood, the school zone speed limit time-periods should be set to a minimum of 30 minutes prior to the school start time and 10 minutes after and at dismissal time to 10 minutes prior to and 30 minutes after the school dismissal bell.

School Area and School Speed Zone

Warrant Analysis

Holy Name of Mary Catholic School — Almonte, ON

Box 789, 110 Paterson Street, Almonte, ON K0A 1A0

Speed Limit: **40** km/h **Date:** 25-Oct-2019

Installation Criterion	Maximum Point Value (MPV)	Description		Weighting Factor (WF)	Weighting Factor for this School	Score (MPV*WF)
School Type	40	Elementary		1.0	1	40
		Middle/Junior High School		0.4		
		High School		0.2		
		Post Secondary/ College/ University		0.0		
Road Classification	20	**Urban Land Use**	**Rural Land Use**		0.5	10
		Local	N/A	1.0		
		Minor Collector	Local	0.75		
		Collector	Collector	0.5		
		Major Collector/Minor Arterial	Arterial	0.25		
		Major Arterial/Expressway	Expressway	0.0		
Fencing	20	Fully Traversable		1.0	1	20
		Partially Traversable		0.5		
		Non-Traversable		0.1		
Property Line Separation	10	Abuts Roadway		1.0	0.5	5
		Within 50 Metres		0.5		
		Further than 50 Metres		0.0		
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	1	5
		Secondary Entrance		0.6		
		None		0.0		
Sidewalks	5	None or Non-School Side		1.0	0	0
		School Side		0.6		
		Both Sides		0.0		
TOTAL SCORE (Sum of T, C, F, L, E, and S) =						80

School Zone Results Matrix	
Total Score	**Area or Zone ?**
0 - 40	Nothing
41 - 64	School Area
65 - 80	School Area or School Speed Zone *
81 - 100	School Speed Zone

** Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.*

School Area Warranted?	YES
School Speed Zone Optional?	YES
School Speed Zone Warranted?	NO

To ensure maximum driver compliance with the warranted school zone speed limit, it is imperative the hours of operation reflect the times when the maximum number of students are either arriving at or leaving the school property. When a school is located in a rural area or is the sole school in a neighbourhood, the school zone speed limit time periods should be set to a minimum of 30 minutes prior to the school start time and 10 minutes after and at dismissal time to 10 minutes prior to and 30 minutes after the school dismissal bell.

School Area and School Speed Zone

Warrant Analysis

R. Tait McKenzie Public School — Almonte, ON

175 Paterson Street, Almonte, ON K0A 1A0

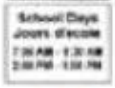
Speed Limit: **40** km/h **Date:** 25-Oct-2019

Installation Criterion	Maximum Point Value (MPV)	Description		Weighting Factor (WF)	Weighting Factor for this School	Score (MPV*WF)
School Type	40	Elementary		1.0	1	40
		Middle/Junior High School		0.4		
		High School		0.2		
		Post Secondary/ College/ University		0.0		
Road Classification	20	**Urban Land Use**	**Rural Land Use**			
		Local	N/A	1.0	0.5	10
		Minor Collector	Local	0.75		
		Collector	Collector	0.5		
		Major Collector/Minor Arterial	Arterial	0.25		
		Major Arterial/Expressway	Expressway	0.0		
Fencing	20	Fully Traversable		1.0	1	20
		Partially Traversable		0.5		
		Non-Traversable		0.1		
Property Line Separation	10	Abuts Roadway		1.0	0.5	5
		Within 50 Metres		0.5		
		Further than 50 Metres		0.0		
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	1	5
		Secondary Entrance		0.6		
		None		0.0		
Sidewalks	5	None or Non-School Side		1.0	0	0
		School Side		0.6		
		Both Sides		0.0		
TOTAL SCORE (Sum of T, C, F, L, E, and S) =						80

School Zone Results Matrix

Total Score	Area or Zone ?
0 - 40	Nothing
41 - 64	School Area
65 - 80	School Area or School Speed Zone *
81 - 100	School Speed Zone

** Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.*



School Area Warranted?	YES
School Speed Zone Optional?	YES
School Speed Zone Warranted?	NO

To ensure maximum driver compliance with the warranted school zone speed limit, it is imperative the hours of operation reflect the times when the maximum number of students are either arriving at or leaving the school property. When a school is located in a rural area or is the sole school in a neighbourhood, the school zone speed limit time periods should be set to a minimum of 30 minutes prior to the school start time and 10 minutes after and at dismissal time to 10 minutes prior to and 30 minutes after the school dismissal bell.

APPENDIX C – Additional Field Observations

Additional Field Observations:

In addition to the field observations completed on Ottawa Street, Parsons received information on traffic and pedestrian behaviour outside the study area, specifically on side streets near adjacent schools. There are three schools associated with the three subject intersections including:

1. Martin Street – Almonte and District High School;
2. Paterson Street – Holy Name of Mary Catholic School; and,
3. Paterson Street – R. Tait McKenzie Public School.

In speaking with the Principals of Almonte and District High School, Holy Name of Mary Catholic School and R. Tait McKenzie Public School, issues other than pedestrian crossings at Ottawa Street were noted.

Speed concerns were mentioned on Martin Street near the high school. On Paterson Street, the location of the pedestrian crossover was mentioned as it was felt that it should be moved north of the Catholic School to ensure children from R. Tait McKenzie Public School crossed north of Holy Name of Mary Catholic School. This action would eliminate the need for children to cross the three school accesses at the Catholic School thereby removing three conflict points.

At Holy Name of Mary Catholic School, the Almonte Daycare is moving into the south end of the school on December 1, 2019. Additional school traffic will commence at 6:30am. Concerns were raised with the operation of the pedestrian crossover in that some children push the button, then immediately walk out into traffic.

The warning and regulatory signing, although not within the scope of this report, along Martin Street north of Ottawa Street and on Paterson Street south of Ottawa Street should be reviewed in conjunction with the Ontario Traffic Manual, Books 5 and 6. School area signs are missing and school speed zones are in effect 24 hours/day, seven days a week.

Application of the school zone/school speed zone warrants outlined in both the City of Ottawa Speed Zone Policy for Urban and Rural Roads (2009) and Province of Alberta guidelines confirm changes could be implemented to ensure high driver compliance when children are present. Warrant analysis are shown below. Reduced hours for the 40km/h speed limit during the morning arrival time and afternoon departure time should be considered together with appropriate school area signing.

School Area and School Speed Zone

Warrant Analysis

Almonte and District High School — Almonte, ON

126 Martin Street North, Almonte, ON K0A 1A0

Speed Limit: **40** km/h **Date:** 25-Oct-2019

Installation Criterion	Maximum Point Value (MPV)	Description		Weighting Factor (WF)	Weighting Factor for this School	Score (MPV*WF)
School Type	40	Elementary		1.0	0.2	8
		Middle/Junior High School		0.4		
		High School		0.2		
		Post Secondary/ College/ University		0.0		
Road Classification	20	**Urban Land Use**	**Rural Land Use**			
		Local	N/A	1.0	0.25	5
		Minor Collector	Local	0.75		
		Collector	Collector	0.5		
		Major Collector/Minor Arterial	Arterial	0.25		
		Major Arterial/Expressway	Expressway	0.0		
Fencing	20	Fully Traversable		1.0	1	20
		Partially Traversable		0.5		
		Non-Traversable		0.1		
Property Line Separation	10	Abuts Roadway		1.0	1	10
		Within 50 Metres		0.5		
		Further than 50 Metres		0.0		
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	1	5
		Secondary Entrance		0.6		
		None		0.0		
Sidewalks	5	None or Non-School Side		1.0	0	0
		School Side		0.6		
		Both Sides		0.0		
TOTAL SCORE (Sum of T, C, F, L, E, and S) =						48

School Zone Results Matrix	
Total Score	**Area or Zone ?**
0 - 40	Nothing
41 - 64	School Area
65 - 80	School Area or School Speed Zone *
81 - 100	School Speed Zone

** Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.*

School Area Warranted?	YES
School Speed Zone Optional?	NO
School Speed Zone Warranted?	NO

To ensure maximum driver compliance with the warranted school zone speed limit, it is imperative the hours of operation reflect the times when the maximum number of students are either arriving at or leaving the school property. When a school is located in a rural area or is the sole school in a neighbourhood, the school zone speed limit time-periods should be set to a minimum of 30 minutes prior to the school start time and 10 minutes after and at dismissal time to 10 minutes prior to and 30 minutes after the school dismissal bell.

School Area and School Speed Zone

Warrant Analysis

Holy Name of Mary Catholic School — Almonte, ON

Box 789, 110 Paterson Street, Almonte, ON K0A 1A0

Speed Limit: **40** km/h **Date:** 25-Oct-2019

Installation Criterion	Maximum Point Value (MPV)	Description		Weighting Factor (WF)	Weighting Factor for this School	Score (MPV*WF)
School Type	40	Elementary		1.0	1	40
		Middle/Junior High School		0.4		
		High School		0.2		
		Post Secondary/ College/ University		0.0		
Road Classification	20	**Urban Land Use**	**Rural Land Use**		0.5	10
		Local	N/A	1.0		
		Minor Collector	Local	0.75		
		Collector	Collector	0.5		
		Major Collector/Minor Arterial	Arterial	0.25		
		Major Arterial/Expressway	Expressway	0.0		
Fencing	20	Fully Traversable		1.0	1	20
		Partially Traversable		0.5		
		Non-Traversable		0.1		
Property Line Separation	10	Abuts Roadway		1.0	0.5	5
		Within 50 Metres		0.5		
		Further than 50 Metres		0.0		
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	1	5
		Secondary Entrance		0.6		
		None		0.0		
Sidewalks	5	None or Non-School Side		1.0	0	0
		School Side		0.6		
		Both Sides		0.0		
TOTAL SCORE (Sum of T, C, F, L, E, and S) =						80

School Zone Results Matrix	
Total Score	**Area or Zone ?**
0 - 40	Nothing
41 - 64	School Area
65 - 80	School Area or School Speed Zone *
81 - 100	School Speed Zone

** Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.*

School Area Warranted?	YES
School Speed Zone Optional?	YES
School Speed Zone Warranted?	NO

To ensure maximum driver compliance with the warranted school zone speed limit, it is imperative the hours of operation reflect the times when the maximum number of students are either arriving at or leaving the school property. When a school is located in a rural area or is the sole school in a neighbourhood, the school zone speed limit time periods should be set to a minimum of 30 minutes prior to the school start time and 10 minutes after and at dismissal time to 10 minutes prior to and 30 minutes after the school dismissal bell.

School Area and School Speed Zone

Warrant Analysis

R. Tait McKenzie Public School — Almonte, ON

175 Paterson Street, Almonte, ON K0A 1A0

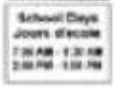
Speed Limit: **40** km/h **Date:** 25-Oct-2019

Installation Criterion	Maximum Point Value (MPV)	Description		Weighting Factor (WF)	Weighting Factor for this School	Score (MPV*WF)
School Type	40	Elementary		1.0	1	40
		Middle/Junior High School		0.4		
		High School		0.2		
		Post Secondary/ College/ University		0.0		
Road Classification	20	**Urban Land Use**	**Rural Land Use**			
		Local	N/A	1.0	0.5	10
		Minor Collector	Local	0.75		
		Collector	Collector	0.5		
		Major Collector/Minor Arterial	Arterial	0.25		
		Major Arterial/Expressway	Expressway	0.0		
Fencing	20	Fully Traversable		1.0	1	20
		Partially Traversable		0.5		
		Non-Traversable		0.1		
Property Line Separation	10	Abuts Roadway		1.0	0.5	5
		Within 50 Metres		0.5		
		Further than 50 Metres		0.0		
School Entrance	5	Main Entrance / Multiple Secondary Entrances		1.0	1	5
		Secondary Entrance		0.6		
		None		0.0		
Sidewalks	5	None or Non-School Side		1.0	0	0
		School Side		0.6		
		Both Sides		0.0		
TOTAL SCORE (Sum of T, C, F, L, E, and S) =						80

School Zone Results Matrix

Total Score	Area or Zone ?
0 - 40	Nothing
41 - 64	School Area
65 - 80	School Area or School Speed Zone *
81 - 100	School Speed Zone

** Local conditions must be considered in detail in order to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.*



School Area Warranted?	YES
School Speed Zone Optional?	YES
School Speed Zone Warranted?	NO

To ensure maximum driver compliance with the warranted school zone speed limit, it is imperative the hours of operation reflect the times when the maximum number of students are either arriving at or leaving the school property. When a school is located in a rural area or is the sole school in a neighbourhood, the school zone speed limit time periods should be set to a minimum of 30 minutes prior to the school start time and 10 minutes after and at dismissal time to 10 minutes prior to and 30 minutes after the school dismissal bell.

APPENDIX D – School Crossing Guard Literature Review

In 2017, the Ontario Traffic Council (OTC) updated the 2004 School Crossing Guard Guide, which recommends best practices and warrants for municipalities across Ontario to use when determining locations for school crossing guards. The warrant is based on engineering principles, observations and judgment as a basis for data collection. The guide recommends an Exposure Index for traffic signal control locations, based on existing crossing guard locations within the municipality.

In our review of other Ontario municipalities' approach to school crossing guards at signalized intersections, it was found that very few municipalities are using the Exposure Index at signalized intersections and many municipalities do not place crossing guards at signalized intersections. The municipalities that do use the Exposure Index all have different thresholds based on existing locations, but are limited by low sample sizes. Mississippi Mills, similarly, does not have a large enough sample size of signalized school crossing locations to create an Exposure Index.

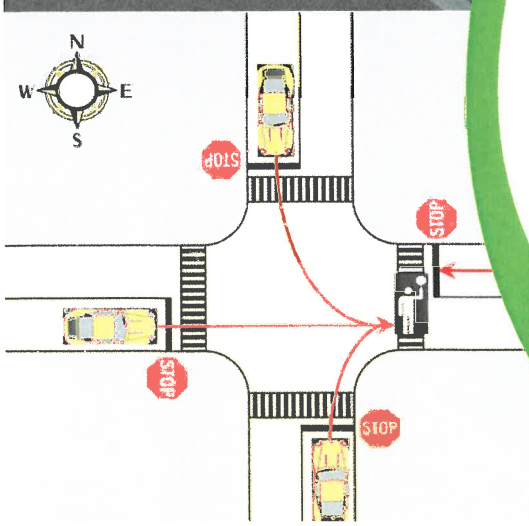
However, the body of evidence would suggest that school crossing guards at signalized intersections are a response to highly constrained and critical locations. In the majority of situations, traffic control signals provide for the orderly flow of traffic and pedestrians that school crossing guards should not be necessary. One must also keep in mind that the use of a school crossing guard at a signalized intersection could adversely affect traffic flow, causing undue delay for motorists. Thus, the implementation of a school crossing guard is often considered a '**last resort**.'

In general, the following criteria should be met before considering a crossing guard at signalized intersections:

- Posted speed limit or 85th percentile operating speeds must be less than 60 km/h;
- There is a large number of conflicting turn movements (left and right turns on green, and right turns on red);
- There are at least 40 students, particularly young students, crossing during the peak school periods;
- The students appear timid in crossing the road or do not seem to be properly trained on how to cross the road safely, e.g. forgetting to push the pedestrian button or entering the roadway after the red flashing hand is showing.
- The intersection is located on an arterial or major collector with significant volume of trucks or other large vehicles, which may affect visibility for both pedestrians and drivers.
- Poor driver behaviour: not yielding to pedestrians, not coming to a complete stop prior to turning on a red signal, drivers inching forward or intimidating pedestrians in or about to cross the roadway and/or drivers weaving through pedestrians as they cross the roadway; and,

In this case, Ottawa Street is an arterial road and a designated truck route, which makes it a less desirable candidate location. Furthermore, field observations confirmed very low turning volumes during the school peak periods and the vast majority of children and youths properly navigated the Paterson/Ottawa intersection without incident, resulting in no observable vehicle-pedestrian conflicts. Therefore, a school crossing guard is not expected to be required at this location.

Excerpts from the 2017 OTC School Crossing Guard Guide for signalized intersections has been provided below.



Ontario Traffic Council
www.otc.org

School Crossing Guard Guide

May 2017

Table of Contents

1.0 FOREWORD

The Ontario Traffic Council (OTC) prepared a School Crossing Guard Guide (SCGG) in 2006 for use by municipalities across the province. Since that time, new guidelines and manuals have been produced, the Highway Traffic Act has been amended and new best practices have emerged. Members of the OTC decided it was time to undertake a comprehensive update of the SCGG to reflect the changes in policy and best practice. Members also expressed a strong desire to ensure that the SCGG is easy to understand, justified in its guidance and straightforward to implement. The names of the OTC Committee members and the WSP | MMM Group consulting team that contributed to the development of the 2017 School Crossing Guard Guide are provided in **Table 1**.

Table 1: School Crossing Guard Guide Committee Members

Committee Member	Jurisdiction
Violet Skirten	Brampton
Christine Hopwood	Burlington
Karen Accursi	Cambridge
Shannon Noonan	Cambridge
Slav Potrykus	Clarington
Allister McIlveen	Guelph
Christine Vettor	Guelph
Dean McMillan	Kitchener
Alexei Chkouro	London
Shane Maguire	London
Valerie Lister	Milton
Heide Schlegl	Milton
Daniel Prelipcean	Ministry of Transportation Ontario
Sheelagh Duffin	Mississauga
Kim Hutton	Oakville
Marco D'Angelo	Ontario Traffic Council
Kerry-Lynn Mohr	Ottawa
Rob Cowie	Richmond Hill
Sheldon Koo	Toronto
Brett Moore	Toronto Police Service
Derrick Martin	Toronto Police Service
Margie Chung	Vaughan
Wai Lam Tang	Vaughan
Dhaval Pandya	Whitby

Consultant Team	
David Richardson	WSP|MMM Group
Brett Sears	WSP|MMM Group
Peter Yu	WSP|MMM Group
Safiyyah Saleh	WSP|MMM Group

OTC would like to thank the members of the SCGG Committee for their efforts and dedication in creating this fully updated and revised School Crossing Guard Guide.

The Ministry of Transportation Ontario (MTO) was one of the stakeholders that participated in the development of the School Crossing Guard Guide. While MTO does not administer school crossing guard programs on provincial highways, their Traffic Office has reviewed this Guide and views it as a valuable document to promote school crossing safety and uniformity in the province.

2.0 INTRODUCTION

2.1 Background

Over the years, various programs have been developed across the Province of Ontario with respect to the implementation and standardization of school crossings. In 1992, representatives from both the Ontario Traffic Council (OTC) and the Ontario Ministry of Transportation (MTO) collaborated to prepare a report entitled School Crossing Review 1992. That document was then used as the springboard from which the OTC produced the *2006 School Crossing Guard Guide (SCGG)*.

Since that time, new technology has evolved for crossing locations, such as a wider range of pedestrian crossovers. In addition, roundabouts have become more prevalent as a form of intersection control. New Ontario Traffic Manuals have been produced and others have been updated. The Highway Traffic Act has also been amended.

With these changes in mind, members of the OTC decided to update both the technical content and the organization of the chapters of the SCGG in order to provide clear direction, and to make the Guide easier to use by practitioners.

2.2 Intent of the Guide

The goal of this Guide is to provide a step-by-step technical approach to determine whether or not a school crossing guard should be provided at a specific location. The Guide is organized as a reference document so that practitioners can turn to the specific area of interest and find an easy to understand, straightforward process to develop a technical recommendation. If the decision is made to provide a school crossing guard, information is included on training and equipment, as well as public education for those who will come into contact with the guard.

While this Guide covers a broad range of best practices, no document such as this one can cover all contingencies or all situations involving a school crossing guard. Therefore, field experience and knowledge of application are essential in deciding what to do in the absence of specific direction from the Guide itself, and in overriding any recommendations in this Guide.

The practitioner's fundamental responsibility is to exercise good engineering judgment and experience on technical matters in the best interests of the public and students. Guidelines are provided in this Guide to assist in making those judgments, but they should not be used as a substitute for good judgment.

Application, operational guidelines and procedures should be used with judicious care and proper consideration of the prevailing circumstances. Reasons for departing from the recommended guidelines should be documented.

2.3 Contents of the Guide

The 2017 SCGG begins with the Background Information in **Chapter 3**, which provides details on the legislative authority and the role of a school crossing guard. This information includes the definition of terms used throughout the Guide, and addresses issues pertaining to urban versus rural school sites, new versus existing sites and crossing solutions other than school crossing guards.

The Site Inspection chapter describes how to examine school sites to gather data that will be used to determine if a location needs a crossing guard. General information is provided on the warrant analysis of a crossing location, with the methodology explained for two ways to determine if a crossing guard is warranted.

Eight chapters are dedicated to providing warrants for different crossing facilities. Practitioners can quickly refer to the chapter that applies to their type of facility. The types of crossing facilities included in this Guide are:

- Signalized intersections;
- All way stop-controlled intersections;
- Minor street stop-controlled intersections;
- Intersection and mid-block pedestrian signals;
- Pedestrians crossovers;
- Mid-block locations; and
- Roundabouts.

Once it is determined that a school crossing guard is warranted, chapters are provided on human resources needed to staff the location, standard equipment, training and how to respond to incidents.

The process to follow when considering whether or not to remove a school crossing guard is provided in **Chapter 13**. The removal warrant methodology has been made clear so that decision makers can be confident with the recommendation resulting from the analysis.

Finally, a chapter is provided on public education to give general guidance on how to inform school staff, students, parents, guardians and the general public about the role of a school crossing guard and how to obey the directions of a guard.

Appendices are included at the end of the Guide to provide additional detail and examples of some of the topics addressed in the Guide.

3.0 BACKGROUND INFORMATION

This chapter provides the context for this Guide by outlining the Legislative Authority for school crossings provided by the *Highway Traffic Act*. It also defines the role of the school crossing guard and provides other definitions for commonly used terms in the Guide. Finally, it addresses the differences between urban and rural school settings, new and existing school sites and alternative solutions to school crossing guards that should be considered.

3.1 Legislative Authority

The *Highway Traffic Act* (HTA) sets out the rules of the road in Ontario, including the operation of school crossings and the role of school crossing guards. There are several sections that refer to pedestrians and road crossing regulations. Specific legislation related to school crossings and the operation of school crossing guards is found in section 176 of the HTA and is provided in **Appendix A** for reference. Of particular importance is the fact that school crossing guards can only be assigned if the speed limit is less than 60 km/h. The references in this Guide are current as of January 23, 2017. Users of this Guide should refer to the original statutes for updates.

3.2 Role of the School Crossing Guard

The role of the school crossing guard is to direct and supervise the movement of persons (as defined in the HTA) across a highway (the HTA term for any public road) by creating necessary gaps in vehicular traffic to provide safe passage at a designated school crossing location.

3.3 Definition of a School Crossing

A school crossing is a location supervised by a school crossing guard that has been recommended through a combination of a site inspection and a warrant evaluation process. These designated school crossings are identified by pavement markings and signage as described in the *Ontario Traffic Manual Books 6 and 11*.

3.4 Definition of Terms

There are a number of technical terms used throughout this Guide, and the key ones are defined in this section. Some of these terms are common to other Ontario Traffic Manuals and Guides. In these cases, the definitions previously used in existing manuals and guides have been used again in this School Crossing Guard Guide to maintain consistency.

AADT: Abbreviation for Annual Average Daily Traffic, which is the estimated total traffic volume for a typical day on a particular road segment. AADT data are commonly used to calculate traffic growth on a roadway.

All-way stop: An intersection where STOP signs are installed on all approaches. As per *OTM Book 15*, vehicles approaching a STOP sign in advance of a crosswalk are required to stop at the stop bar, thereby yielding to vehicular traffic and pedestrians whose arrival preceded theirs before they in turn proceed.

Approval Authority: The Approval Authority in the context of this guide is the agency or regulatory body responsible for carrying out an evaluation process to make an executive decision or recommendation. The approval authority can be those appointed to complete the school crossing guard warrants, and be responsible for the hiring and training of crossing guard personnel.

Conflicting vehicular movement: In the context of this guide, a conflicting vehicular movement is one that interferes with or compromises the safety of the crossing of student volumes. The conflicting

vehicular movements vary depending on the type of intersection, crossing or control where students are crossing. The conflicting vehicular movements for each type of intersection and location are outlined in the respective sections of **Chapters 6 to 12**.

Controlled crossing: A controlled crossing location is one with stop or yield signs, a pedestrian crossover (PXO), intersection pedestrian signals (IPS), mid-block pedestrian signals (MPS) or full traffic control signals (TCS). At controlled crossings, vehicles must obey the respective HTA regulations for each type of control. A school crossing in the absence of stop signs, IPS, PXO, MPS or TCS is considered a controlled crossing only when the crossing is being supervised by a school crossing guard *(OTM Book 15)*. Table 1 from *OTM Book 15* summarizes the types of controlled crossings relative to the uncontrolled crossings, as shown below.

Table 1: Controlled and Uncontrolled Crossings *(OTM Book 15)*

Controlled Crossings	Uncontrolled Crossings
• Traffic Control Signals (TCS) • Intersection Pedestrian Signals (IPS) • Mid-block Pedestrian Signals (MPS) • Pedestrian Crossover (PXO) • Stop sign • Yield Sign • School Crossing when a school crossing guard is supervising	• Mid-block Crossings (in the absence of MPS or PXO) • Designated School Crossing (in the absence of a school crossing guard and without other forms of control such as TCS, IPS, MPS, PXO, Stop signs or Yield signs) • Marked Crossing (at an intersection in the absence of Stop or Yield signs) • Roundabouts

Exposure Index method: The Exposure Index method is used in the transportation industry as a screening tool to determine the need for safety-related initiatives. For example, many municipalities use an Exposure Index as the primary screening tool to evaluate the need for grade separations at railroad crossings by relating the rail and vehicular volumes. In the context of this guide, the Exposure Index method examines the level of interaction and conflict between vehicular and student pedestrian volumes. The Exposure Index method generates a graph based on historical trends at existing crossing guard locations. The graph is then used as the threshold for future crossing locations where a school crossing guard may be required.

Gap: In the context of this guide, it is measured as the elapsed time between the rear of a lead vehicle passing a location and the front of the following vehicle passing the same location, as shown in **Figure 3-2**. Gaps are measured as part of the Gap Study warrant methodology described in **Chapter 5**.

Figure 3-2: Gap

Gap acceptance level: The minimum gap required for road users, inclusive of pedestrians and drivers, to safely complete a specific manoeuvre such as crossing an intersection or roadway.

Gap Study method: An objective process using site observations to establish the safe gap threshold for pedestrians to cross a roadway, and measuring the available gaps along the roadway to determine if there is a sufficient number of safe gaps. The Gap Study method is one of the school crossing guard warrants that is available to the Approval Authority.

Heavy vehicle percentage: Refers to the proportion of vehicular traffic passing through a given intersection or other reference point composed of trucks, buses and other heavy vehicles weighing over 3,856 kg as per regulatory information provided by Environment and Climate Change Canada, or the weight threshold established by each municipality.

Intersection: The area enclosed by the extension of lateral cub lines or, if none, of the rights-of-way of two or more highways that intersect one another at an angle, whether or not one highway crosses the other *(OTM Book 11)*.

Intersection pedestrian signal (IPS): Traffic control signals installed at intersections that are dedicated to providing controlled crossing opportunities for pedestrians. This is illustrated below in **Figures 3-3** and **3-4.** There are no traffic signals facing vehicles on the minor street. These vehicles are controlled by stop signs, and have the option to proceed into the intersection when it is clear and safe to do so, similar to the operation of a minor street stop-controlled intersection.

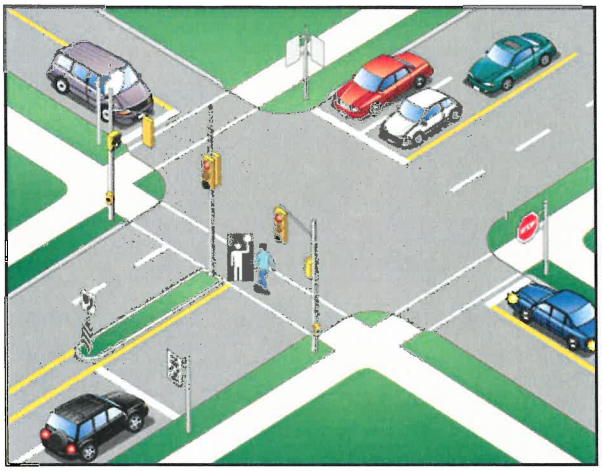


Figure 3-3: Intersection Pedestrian Signal (MTO – Driver's Handbook)

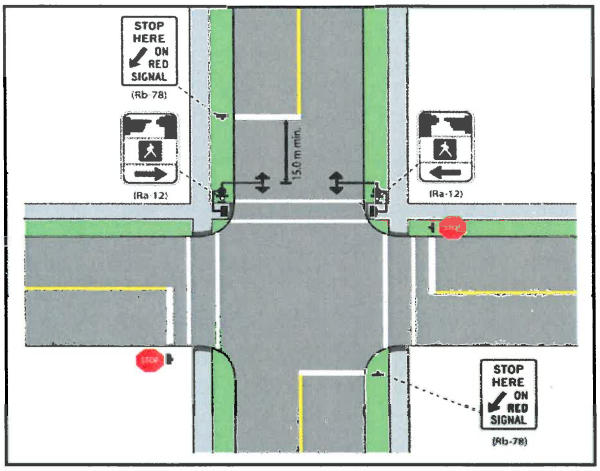


Figure 3-4: Components of an Intersection Pedestrian Signal (OTM Book 15)

Junior kindergarten (JK): In Ontario, junior kindergarten refers to students who are entering the kindergarten program at age 4.

Legs of an intersection: The part of any one of the roadways radiating from an intersection which is outside the immediate area of the intersection proper. This is illustrated in **Figure 3-5.**

Mid-block: the segment of a roadway between two intersections as illustrated in **Figure 3-6.**

Mid-block pedestrian signal (MPS): Traffic control signals that are installed between two intersections and dedicated to providing a controlled crossing for pedestrians. This is shown in **Figures 3-7** and **3-8**.

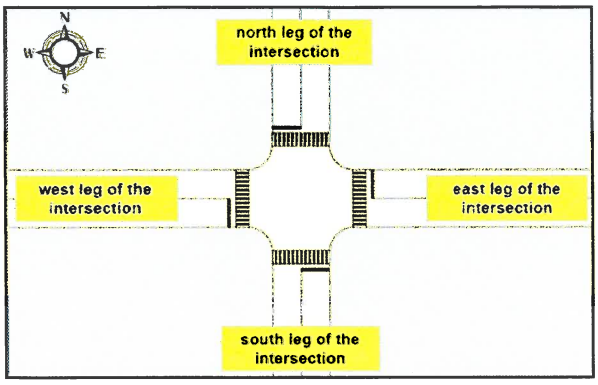


Figure 3-5: Legs of an Intersection

Figure 3-6: Mid-block Locations (Guelph)

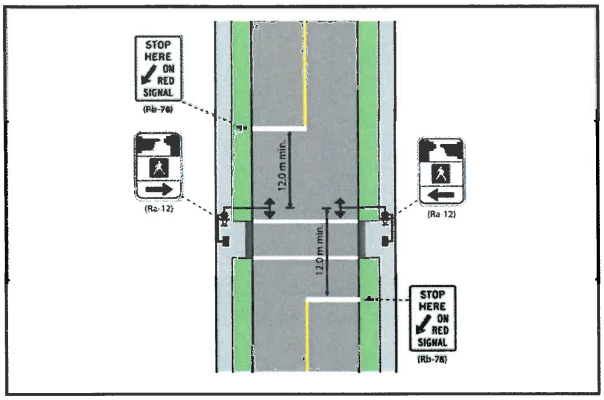


Figure 3-7: Components of a Mid-block Pedestrian Signal (OTM Book 15)

Figure 3-8: Mid-block Pedestrian Signal (Guelph)

OTM: Abbreviation for Ontario Traffic Manual, which provides information and guidance for transportation practitioners, and promotes uniformity of treatment in the design, application and operation of traffic control devices and systems across the province. The objective is safe driving behaviour, achieved by a predictable roadway environment through the consistent and appropriate application of traffic control devices. The information based on the OTM books are current as of the time of publishing this Guide. Future updates to the OTM books should be followed.

Pedestrian crossover (PXO): Any portion of a roadway, designated by municipal By-law, at an intersection or mid-block, exclusively for pedestrian crossings and designated by signs and pavement markings as prescribed by the regulations in the HTA. There are four types of pedestrian crossovers that can be applied in Ontario. These are further discussed in **Chapter 10** of this Guide.

Pedestrian crosswalk: A crosswalk means:

a. That part of a highway at an intersection that is included within the connections of the lateral lines of the sidewalk on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the roadway; or

b. Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by signs or lines or other markings on the surface.

An example is shown in **Figure 3-9.**

Figure 3-9: Pedestrian Crosswalks

Permissive phase: During a permissive phase, vehicles can manoeuvre in conjunction with other movements that may conflict. For example, permissive left-turns enable drivers to proceed, but only when there is a sufficient gap in the opposing flow. Similarly, right turns on red allow drivers to turn when there is a sufficient gap in the crossing traffic and the pedestrian flow. Additional information on traffic signals are provided in *OTM Book 12*.

Phase of a traffic signal: The portion of a traffic signal cycle where one or more movements receive a simultaneous green or walk indication. The time required for a single phase is the total of the green display plus the amber and all-red interval times. Similarly, it can be the time required for the walk plus the flashing and solid don't walk indications. For more information, see *OTM Book 12*.

Protected phase: During a protected phase, vehicles can manoeuvre without any conflict. For example, protected left-turns require the opposing flow and any conflicting pedestrian movements to be stopped on a red or don't walk indication. Protected phases can also be applied to through or right turns where separate movements are necessary. For more information, see *OTM Book 12*

Refuge island: Medians placed in the centre of the roadway at mid-block locations or unsignalized intersections. As per *OTM Book 15*, refuge islands are intended to assist pedestrians in crossing wide streets by providing a safe storage area in the centre of the road, allowing pedestrians to cross one direction

of traffic at a time. The presence of a refuge island reduces the time a pedestrian must wait for an adequate gap in the traffic stream and reduces the crossing distance that they must face at one time.

Regulatory sign: A traffic sign advising drivers of an action they must or must not do under a given set of circumstances. Disregarding a regulatory sign constitutes an offence under the HTA.

Right-of-way: In the context of this guide, right-of-way is the allocation of time or priority to a road user, in preference over other road users. Road users include motorists, pedestrians and cyclists.

Roundabout: A raised circular island located in the centre of an intersection, which requires vehicles to travel through the intersection in a counter-clockwise direction around the island. Roundabouts are distinguished by YIELD signs and raised splitter islands on all approaches, and in some cases, gradual widening of the entry approach to two or more lanes. For more information, see *OTM Book 15*. A roundabout is shown in **Figure 3-10.**

Rural area: An area outside of the limits of any incorporated or unincorporated city, town, village or other designated residential or commercial area. Further discussion of rural relative to urban areas in the context of this guide is provided in **Chapter 3.5**.

Stopping sight distance: As per the OTM, stopping sight distance is the distance required by a driver of a vehicle, travelling at a given speed, to bring their vehicle to a stop after an object on the roadway becomes visible. It includes the distance travelled during the decision time plus the vehicle braking distance.

School crossing guard: A person 16 years or older who is directing the movement of persons (as defined in the HTA) across a highway (HTA term for any road) by creating necessary gaps in vehicular traffic to provide safe passage at a designated school crossing location.

Figure 3-10: Roundabout (Ottawa)

School crossing guard warrants: The process of verifying whether one or multiple crossing guards are required for an intersection or location. The warrant process is intended to be an unbiased and consistent evaluation method that is done without outside influence. There may be multiple ways to complete a school crossing guard warrant depending on the type of intersection and location being assessed.

School peak periods: The timeframes in the morning, midday and afternoon during which the majority of students arrive at and depart from school.

School zone: A roadway section with a lower speed limit in the vicinity of a school. The periods during which the lower speed limits are in effect are at the discretion of each municipality.

Sight line: An unobstructed view of a roadway or intersection available to a pedestrian or other road user, which allows the user to anticipate and react to the movements of others, as well as to choose gaps for crossing the roadway. Methods of evaluating sight line distance are provided in the *Transportation Association of Canada (TAC) – Geometric Design Guide for Canadian Roads – Part 1: Chapter 1.2.5 Sight Distance.*

Speed bumps and humps: Raised pavement area that extends transversely across the travel way with the primary purpose of acting as a vertical traffic calming measure. Speed bumps usually have more abrupt raised areas and are not typically used on public roadways. Speed humps are more gradual and are utilized extensively in residential areas to reduce both vehicular operating speeds and "through" traffic volumes.

Splitter island: As per *OTM Book 15*, a splitter island is a raised or painted area on an approach to a roundabout that is used to separate entering and exiting traffic. It also deflects and slows entering traffic, and provides storage space for pedestrians crossing the road in two stages and thus functioning as a refuge island.

Student volume: The total number of students crossing at a given intersection or reference point over a defined period of time. Students are considered those in Junior Kindergarten (JK) to Grade 5. At the discretion of each municipality, more senior grades may be included in the student volume. For the purpose of crossing guard warrants, student volumes may include students walking with their parents. It should be noted that parents walking with their children are not counted. Bused students are not typically recorded in the student count. Crossing Guards would not be assigned for bused students since school buses are equipped with flashing lights and a stop sign and can change their pick up/drop off location if considered unsafe.

Tab: A sign smaller than the primary sign with which it is associated, and mounted below it. There are two types of tab signs:

1. Supplementary tab signs contain additional, related information; and

2. Educational tab signs convey the meaning of symbols during their introductory period.

Traffic calming: The utilization of primarily physical measures to reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users.

Traffic control devices: Any sign, signal, marking or device placed upon, over or adjacent to a roadway by a public authority or official having jurisdiction, for the purpose of regulating, warning, guiding or informing road users. For more information, see *OTM Book 15*.

Traffic control signal (TCS): Any power-operated Traffic Control Device, whether manually, electrically or mechanically operated, by which traffic is alternately directed to stop and permitted to proceed. A Traffic Signal:

1. When used in general discussion, is a complete installation including signal heads, wiring, controller, poles and other appurtenances;

2. When used specifically, the term refers to the signal head which conveys a message to the observer; and

3. That part of a traffic control signal system that consists of one set of no less than three coloured lenses, red, amber and green, mounted on a frame and commonly referred to as a signal head.

Turn lane: A lane reserved for turning vehicles and so indicated by pavement markings and sometimes supplemented by lane designation signs.

Uncontrolled crossing: In the context of this guide, uncontrolled crossings are locations where pedestrians do not have the right-of-way, and must wait for a safe gap in traffic prior to attempting to enter the roadway.

Urban area: An area of land used primarily for residential, commercial, recreational and/or

industrial purposes, usually associated with a given city, town, village or incorporated area. Further discussion of rural relative to urban areas in the context of this guide is provided in **Chapter 3.5**.

Vehicular volume: The number of vehicles that pass a given point on a lane or a roadway, or make a particular movement during a specific time period.

3.5 Urban versus Rural School Crossing Locations

Locations for school crossings in urban and rural locations may exhibit different characteristics including student and vehicular volumes, posted speed limits, topography, driving patterns and mix of vehicle types.

Some municipalities include slight variations in the number of student pedestrians or the volume of vehicular traffic required to warrant a school crossing guard. In general, lower traffic volumes and fewer students are required in rural settings to warrant a school crossing guard compared to urban locations.

As a guide for all of Ontario, this School Crossing Guard Guide has been designed to be tailored to the individual needs of each municipality. The Exposure Index worksheet provided in **Appendix C** and discussed in **Chapter 5** allows municipalities to determine their own threshold given their locally observed volumes of students and vehicles.

Recognizing that tools such as the Exposure Index method or the Gap Study Method are only one step in the overall evaluation of a location for a school crossing guard, observations made during site inspections must be considered. The site-specific characteristics are often the best indicators of the need for school crossing guards, and so it may be irrelevant as to whether a crossing is located within an urban or rural location.

This Guide recommends a thorough site inspection of the local context and the application of the appropriate warrant process in order to evaluate the need for a school crossing guard. Using the steps outlined in this Guide, the Approval Authority will be able to make an informed decision for rural, suburban and urban locations.

3.6 New versus Existing School Site

The need for a school crossing guard at new versus existing school sites can also be assessed using the methodology set forth in this Guide. The site inspection and warrant application processes are designed to mitigate any differences between new and existing school sites so that a well informed decision can be made.

For new school sites, the forecast of student and vehicular traffic volumes likely will need to be analyzed as part of the overall assessment process. The vehicular volumes should be able to be obtained through a Traffic Impact Study that would have been prepared during the process to develop the site plan for the school or through a proxy site survey at a comparable school location. The student volumes can be estimated based on the maximum school enrolment as well as the catchment area of each school. A guard may be proactively assigned at school opening. Once the school opens, the combination of site inspection and warrants may be completed to evaluate if warrants are met and whether the positioning of a guard is appropriate.

3.7 Alternative Solutions other than Crossing Guards

A school crossing guard should not be considered the only or first tool to improve the safety of students as they cross roadways to and from school. Furthermore, school crossing guards should not be assigned as a means of addressing illegal parking. The assignment of a school crossing guard does not impact illegal parking or stopping in the vicinity

of guard supervision. Instead, parking or stopping concerns should be dealt with through By-law compliance and enforcement.

During the site inspection process (**Chapter 4**), the surveyor must observe if the following options are feasible depending on the type of intersection or crossing:

Signalized intersections

- Educating students and parents on how to properly cross at signalized intersections. For instance, the use of pedestrian pushbuttons or how to interpret the signal phases;
- If safer routes that lead to and from the school exist, students should be directed to use those routes instead of the signalized intersection;
- If there is a high volume of conflicting traffic on one leg of an intersection, student volumes should be directed to cross an alternate leg of the intersection;
- Review the walk and flashing don't walk times to ensure that they are sufficient for student pedestrians to walk safely across the intersection. Signal timings may need to be adjusted;
- The installation of traffic calming devices such as curb extensions, medians or refuge islands;
- Traffic enforcement such as the implementation of speed or red light cameras; and
- Modification of parking regulations based on parking patterns.

All-way stop-controlled intersections

- Educating students and parents on how to properly cross at all-way stop-controlled intersections;
- If safer routes that lead to and from the school exist, students should be directed to use those routes instead of at the all-way stop-controlled intersection;
- If there is a high volume of conflicting traffic on one leg of an intersection, student volumes should be directed to cross an alternate leg of the intersection;
- The installation of traffic calming devices such as curb extensions, medians or refuge islands;
- Conducting signal warrants *(OTM Book 12)* and all-way stop control warrants *(OTM Book 5)* to evaluate whether traffic signals or an all-way stop-controlled arrangement is the most suitable type of control;
- Traffic enforcement such as the implementation speed cameras; and
- Modification of parking regulations based on parking patterns.

Minor street stop-controlled intersections

- Educating students and parents on how to properly cross at minor street stop-controlled intersections;
- If safer routes that lead to and from the school exist, student pedestrians should be directed to use those routes instead of at the side street stop-controlled intersection;
- If there is a high volume of conflicting traffic on one leg of an intersection, student volumes should be directed to cross an alternate leg of the intersection;
- The use of signage, traffic devices or markings that make drivers aware of the presence of a school crossing;
- The installation of traffic calming devices such as curb extensions, speed humps, medians or refuge islands;

- Conducting signal warrants *(OTM Book 12)* and all-way stop control warrants *(OTM Book 5)* to evaluate whether traffic signals or an all-way stop-controlled arrangement are adequate types of control;
- Traffic enforcement such as the implementation of speed cameras; and
- Modification of parking regulations based on parking patterns.

Mid-block uncontrolled intersections

- Educating students and parents on how to properly cross at mid-block locations;
- If safer routes that lead to and from the school exist, student pedestrians should be directed to use those routes instead of the mid-block uncontrolled intersection;
- The installation of traffic calming devices such as curb extensions, speed humps, medians or refuge islands;
- Conducting signal warrants and pedestrian crossover *(OTM Book 15)* warrants to evaluate whether traffic signals or pedestrian crossovers are adequate types of control;
- Traffic enforcement such as the implementation of speed cameras; and
- Modification of parking regulations based on parking patterns.

4.0 SITE INSPECTION

Site inspections are an important component of assessing the need for school crossing guards. In addition to the control-specific data collection detailed in the warrant chapters, this chapter outlines the "who, why, what, where, when and how" of the site inspection process.

4.1 Who

The process recommends appointing a Site Inspection Authority, comprised of either a single person or group, who will be responsible for conducting the site inspections as part of the school crossing guard evaluation. Designating a stable person or group as the Site Inspection Authority helps to improve the consistency of site inspections.

4.2 Why

Site inspections are usually the first step taken in the school crossing guard evaluation process. It may be followed by or completed in conjunction with the control-specific warrant surveys such as gap studies or traffic counts. The purpose of the site inspection is to identify and assess apparent hazards at a potential school crossing location. Implementation of a school crossing should be considered only after all of the other options discussed in **Chapter 3.7** have been exhausted.

4.3 What

The site inspection report contains information about site conditions. It is used to determine whether the proposed school crossing location is safe for students, or if there are alternative solutions to any identified safety issues that would make the crossing safer. The site inspection should capture, at a minimum, the following operational and geometric characteristics of the potential school crossing location:

- Time period of observations;
- School hours;
- Peak morning, midday and afternoon school periods when the highest number of students are walking to or from school;
- School enrolment data and demographics such as age distribution;
- Weather and road conditions during the site inspection;
- Proximity of the potential school crossing to the school;
- Any "near misses" observed;
- Distance of the potential crossing location to the nearest upstream and downstream crossings or intersections;
- Presence of sidewalks in the vicinity of the potential school crossing location;
- Posted speed limit;
- Observations of aggressive driving patterns and non-compliance with the Highway Traffic Act;
- Intersection or crossing geometry such as the number of lanes in each direction;
- Width of the potential school crossing location;
- Quantity and pattern of school buses or public transit;
- Availability of alternative routes that would be safer for students to utilize;
- Route surveys that may explain certain route preferences. For example, major origin and destination locations, shortcuts, attractions, transit patterns or high traffic volume areas. It should be noted that crossing guards would not

be provided if a certain location is outside the school's boundary;

- Number of students crossing at the potential crossing location;
- Approximate proportion of students being walked by parents;
- Existing control type, if any, at the potential crossing location;
- Is the existing control, if any, utilized properly? For example, do students know how to use the pedestrian pushbuttons, or are they familiar with how to cross at a PXO?
- Are there queue spill-overs, illegal parking or lay-bys encumbering the safety of students crossing at the potential crossing location?
- Are there any temporary or permanent sightline obstructions such as hedges, fences, trees or billboards?
- Are there any steep vertical or horizontal grades?
- Are there any school staff, patrollers or volunteers assisting with student crossings?
- Are there any signs or pavement markings in the vicinity of the potential school crossing, and are they clearly legible and do they conform to the OTM requirements?

4.4 Where

Site inspections are generally conducted at potential school crossing guard locations that may include:

- Signalized intersections;
- Mid-block locations without any form of traffic control;
- All way stop-controlled intersections;
- Minor street stop-controlled intersections;
- Intersections controlled by an Intersection Pedestrian Signal (IPS);
- Locations controlled by a Mid-block Pedestrian Signal (MPS);
- Pedestrian Crossovers (PXO); and
- Roundabouts.

4.5 When

Site inspections should be done during typical school days. The following atypical days should be avoided:

- First and last week of school;
- Christmas break;
- Spring break;
- Statutory, public and "elective" holidays such as Remembrance Day;
- Days that precede or follow a holiday break;
- Professional Activity (PA) days;
- Days that precede or follow a PA day;
- Days with special events at the school such as a concert or track and field; and
- Days with inclement weather.

Site inspections should be completed during the morning, midday and afternoon school peak periods, which are usually 30 minutes before the school start time, during the lunch period, and 30 minutes after the school dismissal time, respectively. The duration of site inspections may vary depending on the arrival and dismissal pattern of students. The midday peak period may be inspected depending on the school's policy during the lunch break. The exact timing of the school start and dismissal may also vary among different schools and municipalities. In addition to the initial site inspection conducted at the start of

the school crossing guard evaluation, regular site inspections may be scheduled to monitor future conditions with or without school crossing guards.

4.6 How

Standard report forms should be developed by each municipality to be used for all site inspections. **Appendix B** provides sample generic site inspection forms as well as ones from various municipalities in Ontario. This form should cover the list of items noted in the "what" section above. After the inspection form is completed, the information can then be input to the school crossing guard evaluation processes outlined in **Chapters 6 to 12**.

Logistically speaking, a consistent routing and handling of site inspection requests should be established. For example, a process should be in place for School Boards to advise the Site Inspection Authority of new school openings, school closings, changes to school boundaries, changes in school start and dismissal times or busing changes that could impact student crossing safety. Contact information of the Site Inspection Authority should be readily accessible to schools, the local police service or any member of the public who may have a question or concern about student safety related to school crossings.

5.0 SCHOOL CROSSING GUARD WARRANT METHODOLOGIES

5.1 Context

Once it is determined that other alternatives, as discussed in **Chapter 3.7**, are not sufficient to provide a safe student crossing environment, a school crossing guard warrant needs to be completed. Based on a best practice review of several municipalities within Ontario, there are two methods to conduct the warrant:

1. Exposure Index method: a warrant methodology suitable for controlled crossing facilities that have conflicting movements between vehicular and student volumes; or

2. Gap Study Method: warrant methodology suitable for uncontrolled crossing facilities. The Gap Study method may also be used to evaluate some controlled crossing facilities.

In addition to methods 1 and 2, other site-specific factors need to be considered in the school crossing guard warrant process.

An overview of the above methods is provided in the following sections.

5.2 Exposure Index Method

In the transportation industry, the Exposure Index method is used as a screening tool to determine the need for improvement initiatives. For example, many municipalities use the Exposure Index method as the primary screening tool to objectively evaluate the need for grade separations at railway crossings. In this context, the Exposure Index method relates the average number of trains that cross a specific location along a road and the average daily traffic that crosses the railway at the same location. The Exposure Index is also used by rail authorities such as Metrolinx to evaluate and prioritize the need for grade separations at their at-grade rail crossings because it allows for an "apples to apples" comparison among multiple locations.

In 2002, HDR (formerly iTrans) collaborated with the Town of Oakville to develop Exposure Indices to evaluate the need for school crossing guards at signalized, all-way stop-controlled and minor street stop-controlled crossing facilities. The need for the Exposure Index method was due to the lack of warrant information at controlled crossing locations in the previous OTC School Crossing Guard Guide, and difficulties encountered when applying the Gap Study method at controlled locations. The Gap Study method, featured prominently in the previous OTC School Crossing Guard Guide, does not fully account for the conflicting movements between vehicular and student volumes at controlled crossing facilities.

The 2002 Exposure Indices were developed based on the peak hour vehicular and student volumes at existing school crossing guard locations in the Town of Oakville. The Exposure Index establishes the 85th percentile threshold of the existing locations. This threshold is then used to evaluate the level of conflicting vehicular and student volumes at potential school crossing guard locations. The Exposure Index method can also be used as a

prioritization tool because it allows for an easy comparison of the level of conflicting movements between different school crossing guard locations.

Exposure Indices were also developed for the Town of Ajax as part of the Traffic Operations at Schools Study, dated March 2006. Because the 2002 and 2006 Exposure Indices were developed based on data collected in the Town of Oakville and the Town of Ajax, respectively, it is recommended that each municipality develop their own Exposure Indices. This approach ensures that the input data accounts for the municipality-specific characteristics.

For municipalities that are not able to develop their own Exposure Indices for reasons such as the lack of existing school crossing guard locations, it is recommended that the Approval Authority consult other municipalities that have similar characteristics such as population, density, school structure, or school arrival and dismissal periods. The Exposure Indices from a suitable municipality can be used as an interim school crossing guard warrant. Eventually, when more crossing guards have been designated, the Approval Authorities have the option of developing their own Exposure Indices.

The Exposure Index method requires the Approval Authority to exercise good engineering judgment on whether an existing school crossing guard location should be included as part of the model input data. For example, if an existing school crossing guard location has seen a drastic decrease in student crossing demand since the school crossing guard inception, then data from this crossing location should not be used to develop the Exposure Index. Other outliers that should not be included are locations where school crossing guards have been provided due to external influences that would have otherwise not resulted in a guard being warranted. The inclusion of such school crossing guard locations will skew the Exposure Indices. The need for school crossing guards due to unique circumstances are separately evaluated in the consideration of the other site-specific factors, as discussed in **Chapter 5.4**.

It should be noted that an Exposure Index should be developed for each type of crossing facility. The Exposure Index template is a Microsoft Excel document and instructions on how to access and use it are provided in **Appendix C**. Because it is important to include only the conflicting vehicular movements in the Exposure Index method, the conflicting movements at each type of crossing facility are provided in each of the respective chapters below, along with step-by-step instructions on how to apply the Exposure Index method:

- Signalized intersection
  Chapter 6
- All-way stop controlled
  Chapter 7
- Minor street stop controlled
  Chapter 8
- Intersection pedestrian signal
  Chapter 9
- Pedestrian crossover at an intersection
  Chapter 10

5.3 Gap Study Method

The Gap Study method is an objective means of evaluating whether there are enough safe gaps in traffic along a road for students to cross. The safe gap time is calculated based on the site specific characteristics for each location. The calculated safe gap time is then used as a benchmark for the gaps measured at the crossing facility. If there are insufficient gaps, then a school crossing guard may be considered. Further descriptions of the methodology and gap survey forms are provided in **Appendix D**.

Based on the best practice review, the Gap Study method is most effective for evaluating school crossing guard needs at the following types of crossing facilities:

- Minor street stop controlled
  Chapter 8
- Mid-block uncontrolled locations
  Chapter 11

The Gap Study method is typically not suitable for fully controlled intersections because the gaps provided at these locations are a natural by-product of the control. The exception for this is at more urban locations where conflicting movements are high even when the pedestrian has the right-of-way. Under these circumstances, the gaps available for pedestrians to cross safely should be evaluated.

The step-by-step method of the Gap Study methodology at minor street stop-controlled intersections and at mid-block locations are outlined in **Chapters 8 and 11**, respectively.

5.4 Other Factors

It is important to note that in addition to the Exposure Index and Gap Study methods, there are several other factors to consider when evaluating the need for a school crossing guard. There may be instances where either controlled or uncontrolled locations fail to meet the Exposure Index or the Gap Study warrant requirements. This does not automatically mean that a school crossing guard should not be considered further. Likewise, locations that satisfy the Exposure Index and Gap Study warrants do not always need a crossing guard. It is the responsibility of the authority to review the following list of factors before completing the warrant evaluation:

- Minimum student crossing volume;
- Collision hazard reporting frequency;
- Motorist behaviour;
- Posted speed limit and speed adherence;
- Number of lanes on each approach;
- Sightline distance for drivers;
- Sightline distance for students;
- Proximity to a school;
- Walking route preference of students;
- Presence of pedestrian facilities; and
- Proportion of students that would require longer reaction times.

Because some of the above factors vary depending on the type of crossing facilities being evaluated, the details of these factors are discussed in the individual warrant sections in **Chapters 6 to 12**.

6.0 SCHOOL CROSSING GUARD WARRANT AT SIGNALIZED INTERSECTIONS

This chapter describes the process to determine whether or not to assign a school crossing guard at a signalized intersection. The chapter begins with a description of the data that needs to be collected, followed by the steps required to develop an Exposure Index, along with how to apply the warrant to candidate signalized intersections. Other factors to consider in the warrant process are also provided.

6.1 Context

As per *OTM Book 15 – Pedestrian Crossing Treatments*, crossing guards are assigned to signalized intersections in order to assist students who encounter conflicting turning movements. Prior to conducting a warrant analysis at a signalized intersection, it is important to understand the fundamental characteristics of this type of crossing facility from the perspective of a school crossing guard. With the exception of protected phases, vehicles are permitted to turn across the parallel pedestrian crosswalks on a "walk" indication. As a result, there may be simultaneous vehicle and pedestrian movements during the pedestrian "walk" and vehicle "green" indications. In addition, vehicles making a "right turn on red" may also conflict with pedestrians on the crosswalk. School crossing guards may be needed at signalized intersections if the degree of vehicle-to-student conflict exceeds the threshold established by the warrant.

As noted in **Chapter 3**, school crossing guards can only be assigned if the speed limit is less than 60 km/h.

6.2 Data Collection

In addition to the site inspection process outlined in **Chapter 4**, additional data and observations are needed to complete the school crossing guard warrant at a signalized intersection. These items include:

Quantitative:

- Count the conflicting vehicular volume as specified in Step 4 of **Chapter 6.3.2** during the morning, midday and afternoon school peak periods;
- Count the number of students that cross each leg of the intersection during the morning, midday and afternoon school peak periods. Students are considered those in JK to Grade 5. At the discretion of each municipality, more senior grades may be included in the student volume. For the purpose of crossing guard warrants, student volumes include students walking with their parents. These counts should be done concurrently with the conflicting vehicular volume count;
- Monitor the vehicular speeds in the vicinity if speed compliance is of concern; and
- Note the conflicting vehicular volumes that are heavy vehicles. Higher proportions of heavy vehicles at an intersection may impede the sight lines of motorists or students proceeding through the intersection.

Qualitative:

- Aggressiveness or indecision of drivers during the amber and all red indications;
- Poor driver behaviour such as not yielding the right-of-way to pedestrians, not coming to a complete stop at the intersection prior to turning on a red display, drivers inching forward thus intimidating pedestrians in the crosswalk, or drivers manoeuvring through pedestrians as they cross the roadway; and
- The students appear timid in crossing the roadway or do not seem to be properly trained on how to cross the road safely. This may include forgetting to push the pedestrian pushbutton if one is present, or entering the roadway after the "flashing don't walk" indication commences.

6.3 Warrant Method

6.3.1 Exposure Index

As discussed in **Chapter 5.1**, the school crossing guard warrant at a signalized intersection is best evaluated with the Exposure Index method, along with the consideration of other factors. The application of the Exposure Index method is done in two phases. The initial phase is to develop an Exposure Index for signalized intersections. The second phase is to use the Exposure Index method to evaluate candidate signalized intersections as to the need for school crossing guards.

6.3.2 Developing an Exposure Index

The step-by-step procedure for developing an Exposure Index at signalized intersections is provided as follows, with the template provided in **Appendix C**.

Step 1:
Review all of the signalized intersections that currently have school crossing guards in place. Obvious outlier locations where school crossing guards may not normally be needed should not be included since they would skew the threshold established to evaluate candidate school crossing guard locations. For very large municipalities which have a significant number of crossing guard locations, it may be difficult or impractical to review "all" of the crossings in their jurisdictions. Accordingly, these municipalities could gather a representative sample size that is statistically valid as a basis for analysis.

Step 2:
Review the duration of current school crossing guard supervision at all of the signalized intersections during the morning, midday and afternoon school peak periods. Then determine a common duration that best satisfies all of the signalized intersections. For example, if school crossing guards are currently implemented at a minimum of 30 minutes at all of the signalized intersections during various school peak periods, then the common duration would be 30 minutes. The purpose of this is to establish a common observation duration so that all subsequent evaluations can be completed on the same basis.

Step 3:
For the leg of the intersection that is being crossed with the assistance of a guard, identify the conflicting vehicular movements. In the context of this Guide, the conflicting movements for different legs of a signalized intersection are shown in **Figures 6-1** to **6-4**. These conflicting vehicular movements have the most direct correlation with the safety of student crossings. As noted in Chapter 3.4, a permissive phase is when vehicles can manoeuvre in conjunction with other movements that may conflict. For example, right turns on red allow drivers to turn when there is a sufficient gap in the crossing traffic and the pedestrian flow.

On the **north leg** of the intersection during the east-west green indication, the conflicting vehicular movements are:

- Southbound right turns on red;
- Eastbound left turns during the permissive phase; and
- Westbound right turns during the permissive phase.

These conflicting movements are illustrated in **Figure 6-1**.

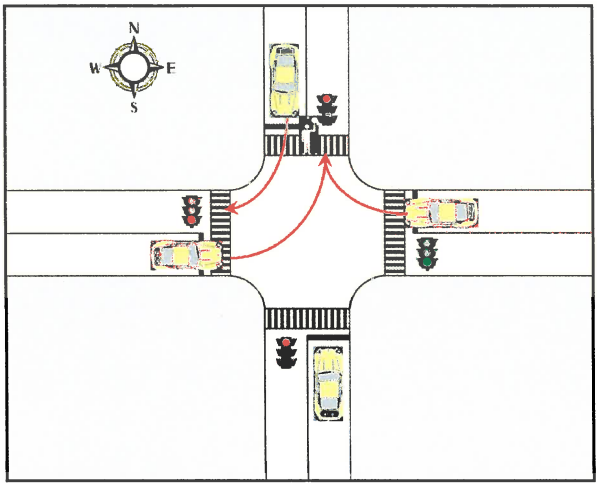


Figure 6-1 Conflicting Movements for Pedestrians on the North Leg

On the **south leg** of the intersection during the east-west green indication, the conflicting vehicular movements are:

- Northbound right turns on red;
- Westbound left turns during the permissive phase; and
- Eastbound right turns during the permissive phase.

These conflicting movements are illustrated in **Figure 6-2.**

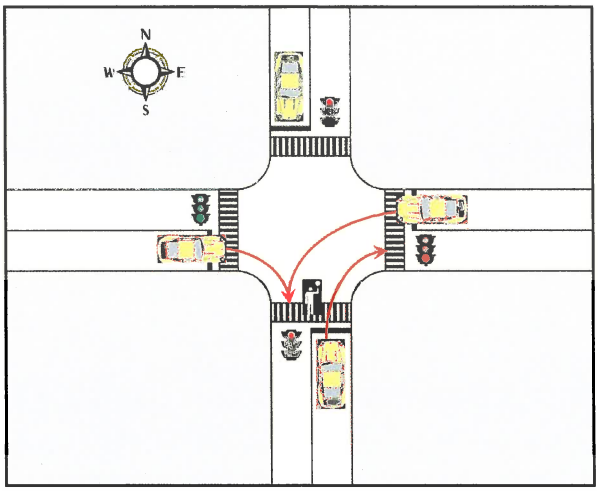


Figure 6-2 Conflicting Movements for Pedestrians on the South Leg

On the **east leg** of the intersection during the north-south green indication, the conflicting vehicular movements are:

- Westbound right turns on red;
- Southbound left turns during the permissive phase; and
- Northbound right turns during the permissive phase.

These conflicting movements are illustrated in **Figure 6-3.**

On the **west leg** of the intersection during the north-south green indication, the conflicting vehicular movements are:

- Eastbound right turns on red;
- Northbound left turns during the permissive phase; and
- Southbound right turns during the permissive phase.

These conflicting movements are illustrated in **Figure 6-4.**

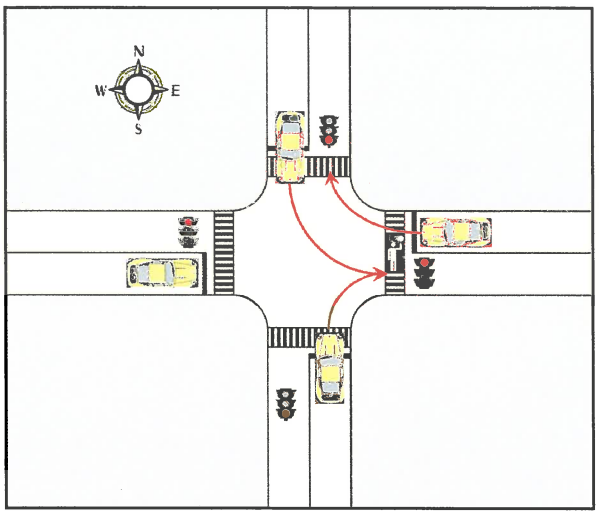


Figure 6-3 Conflicting Movements for Pedestrians on the East Leg

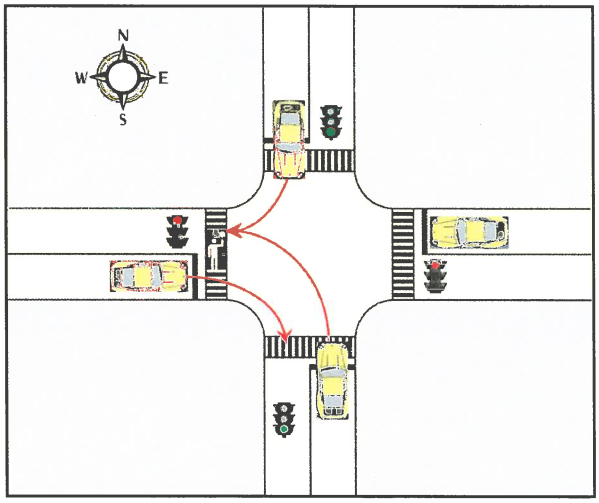


Figure 6-4 Conflicting Movements for Pedestrians on the West Leg

Step 4:
Count the conflicting vehicular volume during the school peak periods. The duration of the counts would be based on the uniform duration established in Step 2, and the movements counted are established in Step 3. The counts should be completed on typical school days, as discussed further in **Chapter 4.5**.

Step 5:
Count the student crossing volumes at the leg of the intersection that is being crossed with the assistance of the guard. The count needs to be completed concurrently and for the same duration as the vehicular count in Step 2. Students are at a minimum to be those in JK to Grade 5, and beyond at the discretion of each municipality. Students crossing with their parents should also be included in the count. Bused students are not typically recorded in the student count. Crossing Guards would not be assigned for bused students since school busses are equipped with flashing lights and a stop sign and can change their pick up/drop off location if considered unsafe.

Step 6:
Multiply the student crossing volume by the conflicting vehicular volume for each intersection and for each school period evaluated.

Step 7:
Select the school period for each signalized intersection that has the highest product of student crossing volume and conflicting vehicular volume. For example, the morning and afternoon school peak periods were counted at a signalized intersection and the products of student and conflicting vehicular volume were 1,000 and 1,700, respectively. In this case, the conflicting vehicular volume and student crossing volume during the school afternoon peak would be the critical dataset that is used for this intersection.

Step 8:
Input the critical dataset of conflicting vehicular volume and the student crossing volume for each signalized intersection into the Exposure Index template that is presented **Appendix C**.

Step 9:
Once Step 8 is complete, the Microsoft Excel worksheet will automatically generate the 85th percentile curve of the input data. This curve represents the threshold used to evaluate the need for school crossing guards at signalized intersections.

6.3.3 Using the Exposure Index for Warrants

Once an Exposure Index has been developed for signalized intersections, the following steps can be taken to evaluate potential school crossing guard locations that are signalized:

Step 1:
Establish the leg of the intersection that would be most suitable for a school crossing guard. This is typically based on the observed tendency of how students cross at an intersection, or based on the preference of the school to establish a safer route. Care should be taken to respect natural "desire lines", rather than trying to force students to take a more indirect or circuitous route.

Step 2:
Identify the conflicting vehicular movements for the leg of the intersection that was established in Step 1. The conflicting movements for each leg of a signalized intersection are shown in **Figures 6-1** to **6-4**.

Step 3:
Count the conflicting vehicular volumes and student crossing volumes during the school peak periods. The duration of the counts would be based on the uniform duration that is used in the Exposure Index method, as established in Step 2 in **Chapter 6.3.2**. The count should be completed on typical school days, as discussed further in **Chapter 4.5**.

Step 4:
Input the conflicting vehicular volume and student crossing volume to the appropriate table of the Exposure Index template. If the resulting point on the graph that corresponds to the location being evaluated is located above the 85th percentile line, then the Exposure Index warrant is met. If the resulting point is plotted below the 85th percentile line, then the signalized intersection being evaluated does not meet the Exposure Index threshold for requiring school crossing guards. In either case, the other factors discussed in **Chapter 6.3.4** need to be considered.

As noted in **Chapter 5.2**, for municipalities that are not able to develop their own Exposure Indices for reasons such as the lack of existing school crossing guard locations, it is recommended that the Approval Authority consult other municipalities that have similar characteristics such as population, density, school structure, or school arrival and dismissal periods. The Exposure Indices from a

suitable municipality can be used as an interim school crossing guard warrant. Eventually, when more crossing guards have been designated, the Approval Authority has the option of developing their own Exposure Indices.

6.3.4 Other Factors

As noted in **Chapter 5.3**, the Exposure Index method should be supplemented with a review of other factors to ensure a comprehensive assessment of the need for school crossing guards is completed. These factors include:

Minimum Student Crossing Volume: To establish a consistent method of evaluation, the minimum number of students crossing during the school peak periods should be set at a threshold of **40 students**. A lower value may be used at the discretion of each municipality. For instance, a municipality can establish a minimum threshold of 30 students crossing at a signalized intersection. Regardless of the threshold, the use of a uniform value throughout the municipality provides a quantitative tool for prioritizing the implementation of school crossing guards. The benefits are to ensure consistency of application, and to allow municipalities to focus their resources at school crossings where student utilization is higher. If the student crossing volumes do not meet the minimum threshold, alternate solutions outlined in **Chapter 3.7** should be considered to improve the safety of student crossings.

Collision Hazard Reporting Frequency: Over the previous three years, there has been an average of more than two reported collisions per year during school operations that are susceptible to correction by a school crossing guard.

Inadequate Visibility: During the site visit, pedestrian and motorist visibility should be evaluated based on the presence of:

- Vertical or horizontal road geometries;
- Permanent or temporary physical barriers such as trees, shrubs, billboards, bus shelters or buildings; or
- High frequency of heavy vehicles.

Methods of evaluating sight distance are provided in the *Transportation Association of Canada (TAC) – Geometric Design Guide for Canadian Roads – Part 1: Chapter 1.2.5 Sight Distance*.

Number of Gaps Available at Urban Locations: In highly urban locations where mixed uses surround a school site and where the number of conflicting vehicular movements is consistently high, the actual number of gaps during the pedestrian phase should be monitored. Under these circumstances, the Gap Study method can be used to complete the school crossing guard warrant. Details of the Gap Study method are provided in **Chapter 5.3**.

Proximity to a School: In general, school crossing guards should be assigned at intersections or crossings where the subject school to be served is visible or in proximity. In addition, the site inspection process should also verify which route students prefer to take. The combination of these two aspects will help determine the appropriate location for a school crossing guard. A signalized intersection may meet the Exposure Index requirements, but it may not lead to the preferable route for students.

6.4 Signage and Pavement Markings

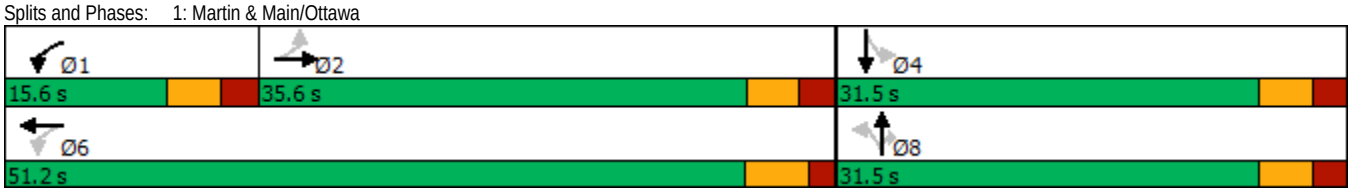
As per *OTM Book 6 - Warning Signs Section 7*, signed school crossings must not be located at pedestrian crossovers or at any signalized intersections. Thus, no school-related signs or pavement markings should be placed at a signalized intersection. Any deviation from the OTM requirements should be supported by a well-documented rationale.

APPENDIX E – Synchro Analysis Output

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	43	297	122	138	3	57	208	71	43
Future Volume (vph)	43	297	122	138	3	57	208	71	43
Lane Group Flow (vph)	45	315	128	177	0	63	219	0	144
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases		2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	2	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.6	23.6	10.6	23.7	23.5	23.5	23.5	23.5	23.5
Total Split (s)	35.6	35.6	15.6	51.2	31.5	31.5	31.5	31.5	31.5
Total Split (%)	43.0%	43.0%	18.9%	61.9%	38.1%	38.1%	38.1%	38.1%	38.1%
Yellow Time (s)	3.3	3.3	3.3	4.0	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.3	2.3	2.3	1.7	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	-1.6	-1.6	-1.6	-1.7		-1.5	-1.5		-1.5
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0		4.0
Lead/Lag	Lag	Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.4	18.4	27.8	27.8		15.5	15.5		15.5
Actuated g/C Ratio	0.40	0.40	0.61	0.61		0.34	0.34		0.34
v/c Ratio	0.10	0.44	0.19	0.17		0.11	0.33		0.30
Control Delay	13.3	16.1	5.7	4.9		16.8	4.9		17.9
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	13.3	16.1	5.7	4.9		16.8	4.9		17.9
LOS	B	B	A	A		B	A		B
Approach Delay		15.7		5.2		7.6			17.9
Approach LOS		B		A		A			B
Queue Length 50th (m)	2.6	21.3	3.9	4.9		4.2	0.0		9.2
Queue Length 95th (m)	9.3	48.0	11.6	14.1		13.7	13.6		26.6
Internal Link Dist (m)		47.2		54.7		96.4			33.7
Turn Bay Length (m)									
Base Capacity (vph)	794	1229	750	1598		1096	1031		880
Starvation Cap Reductn	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0		0	0		0
Reduced v/c Ratio	0.06	0.26	0.17	0.11		0.06	0.21		0.16

Intersection Summary	
Cycle Length: 82.7	
Actuated Cycle Length: 45.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

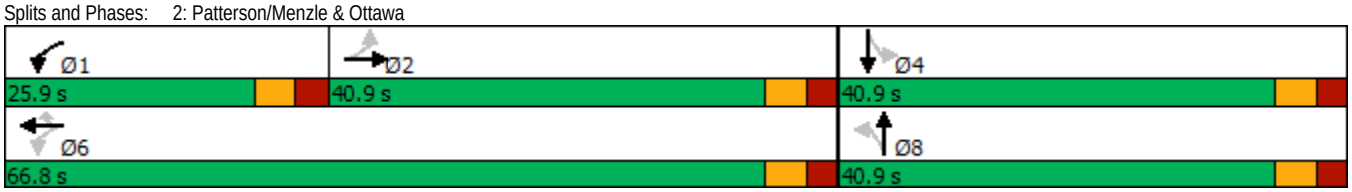
Splits and Phases: 1: Martin & Main/Ottawa



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	3	451	37	382	3	67	7	7	14
Future Volume (vph)	3	451	37	382	3	67	7	7	14
Lane Group Flow (vph)	0	579	39	402	3	0	144	0	27
Turn Type	Perm	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2	1	6			8		4
Permitted Phases	2		6		6	8		4	
Detector Phase	2	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.9	26.9	10.9	26.9	26.9	32.9	32.9	32.9	32.9
Total Split (s)	40.9	40.9	25.9	66.8	66.8	40.9	40.9	40.9	40.9
Total Split (%)	38.0%	38.0%	24.0%	62.0%	62.0%	38.0%	38.0%	38.0%	38.0%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)		-1.9	-1.9	-1.9	-1.9		-1.9		-1.9
Total Lost Time (s)		4.0	4.0	4.0	4.0		4.0		4.0
Lead/Lag	Lag	Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes						
Recall Mode	Max	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)		58.4	65.9	65.9	65.9		14.4		14.4
Actuated g/C Ratio		0.66	0.75	0.75	0.75		0.16		0.16
v/c Ratio		0.50	0.06	0.30	0.00		0.55		0.10
Control Delay		11.2	3.8	4.8	0.0		30.9		26.3
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0
Total Delay		11.2	3.8	4.8	0.0		30.9		26.3
LOS		B	A	A	A		C		C
Approach Delay		11.2		4.6			30.9		26.3
Approach LOS		B		A			C		C
Queue Length 50th (m)		48.7	1.3	16.8	0.0		14.9		3.1
Queue Length 95th (m)		92.5	4.5	35.8	0.0		32.3		9.7
Internal Link Dist (m)		115.7		196.9			61.7		66.7
Turn Bay Length (m)					35.0				
Base Capacity (vph)		1153	765	1330	1138		606		684
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		0.50	0.05	0.30	0.00		0.24		0.04

Intersection Summary	
Cycle Length: 107.7	
Actuated Cycle Length: 88.4	
Natural Cycle: 75	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

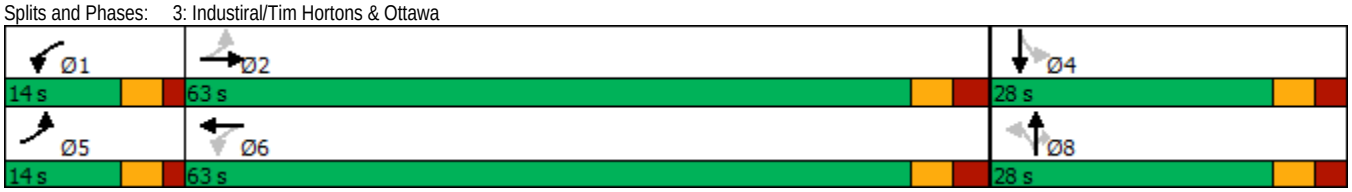
Splits and Phases: 2: Patterson/Menzle & Ottawa



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	105	355	17	264	52	27	20	56	18
Future Volume (vph)	105	355	17	264	52	27	20	56	18
Lane Group Flow (vph)	111	419	18	332	0	83	21	59	112
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	10.0	30.2	10.0	30.2	28.0	28.0	28.0	28.0	28.0
Total Split (s)	14.0	63.0	14.0	63.0	28.0	28.0	28.0	28.0	28.0
Total Split (%)	13.3%	60.0%	13.3%	60.0%	26.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	2.9	1.7	2.9	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	-1.0	-2.2	-1.0	-2.2		-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	24.0	24.3	19.8	17.0		14.4	14.4	14.4	14.4
Actuated g/C Ratio	0.60	0.60	0.49	0.42		0.36	0.36	0.36	0.36
v/c Ratio	0.16	0.21	0.03	0.23		0.18	0.04	0.13	0.18
Control Delay	5.4	7.0	5.1	12.0		15.2	0.1	14.7	6.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	5.4	7.0	5.1	12.0		15.2	0.1	14.7	6.2
LOS	A	A	A	B		B	A	B	A
Approach Delay		6.7		11.6		12.1			9.1
Approach LOS		A		B		B			A
Queue Length 50th (m)	3.5	7.0	0.6	9.7		5.1	0.0	3.5	1.1
Queue Length 95th (m)	8.5	21.8	2.3	18.5		14.3	0.0	11.0	10.1
Internal Link Dist (m)		196.9		93.1		51.6			72.0
Turn Bay Length (m)	45.0		30.0				25.0	15.0	
Base Capacity (vph)	738	3336	729	3309		805	967	772	997
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	0.15	0.13	0.02	0.10		0.10	0.02	0.08	0.11

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 40.2	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 38.5%	ICU Level of Service A
Analysis Period (min) 15	

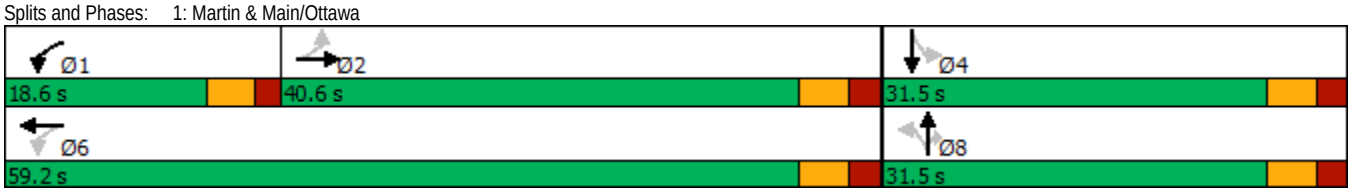
Splits and Phases: 3: Industiral/Tim Hortons & Ottawa



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	226	357	394	15	71	273	51	48
Future Volume (vph)	23	226	357	394	15	71	273	51	48
Lane Group Flow (vph)	24	243	376	503	0	91	287	0	134
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases		2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	2	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.6	23.6	10.6	24.3	23.5	23.5	23.5	23.5	23.5
Total Split (s)	40.6	40.6	18.6	59.2	31.5	31.5	31.5	31.5	31.5
Total Split (%)	44.8%	44.8%	20.5%	65.3%	34.7%	34.7%	34.7%	34.7%	34.7%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.3	2.3	1.7	2.3	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.6	5.6	5.0	5.6		5.5	5.5		5.5
Lead/Lag	Lag	Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.0	13.0	30.1	29.5		11.1	11.1		11.1
Actuated g/C Ratio	0.25	0.25	0.58	0.57		0.21	0.21		0.21
v/c Ratio	0.11	0.55	0.58	0.51		0.26	0.52		0.42
Control Delay	17.3	22.6	9.9	8.6		20.6	7.0		21.9
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	17.3	22.6	9.9	8.6		20.6	7.0		21.9
LOS	B	C	A	A		C	A		C
Approach Delay		22.1		9.2		10.3			21.9
Approach LOS		C		A		B			C
Queue Length 50th (m)	1.7	18.8	14.8	21.3		7.0	0.0		9.3
Queue Length 95th (m)	6.8	40.6	33.0	47.0		18.9	16.1		25.2
Internal Link Dist (m)		47.2		54.7		96.4			33.7
Turn Bay Length (m)									
Base Capacity (vph)	585	1218	689	1677		841	912		737
Starvation Cap Reductn	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0		0	0		0
Reduced v/c Ratio	0.04	0.20	0.55	0.30		0.11	0.31		0.18

Intersection Summary	
Cycle Length: 90.7	
Actuated Cycle Length: 51.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 12.5	Intersection LOS: B
Intersection Capacity Utilization 63.6%	ICU Level of Service B
Analysis Period (min) 15	

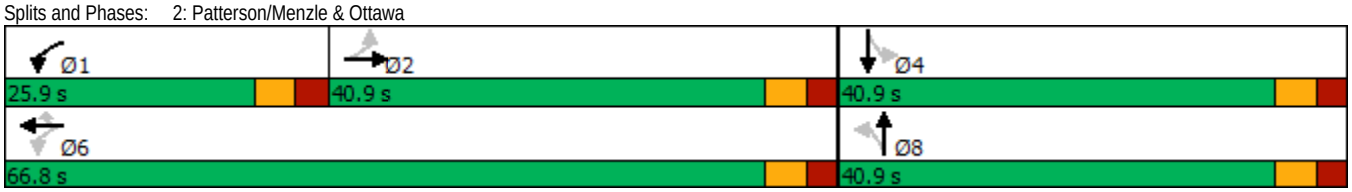
Splits and Phases: 1: Martin & Main/Ottawa



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	4	509	80	778	10	85	4	4	3
Future Volume (vph)	4	509	80	778	10	85	4	4	3
Lane Group Flow (vph)	0	589	84	819	11	0	147	0	24
Turn Type	Perm	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases		2	1	6			8		4
Permitted Phases	2		6		6	8		4	
Detector Phase	2	2	1	6	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	26.9	26.9	10.9	26.9	26.9	32.9	32.9	32.9	32.9
Total Split (s)	40.9	40.9	25.9	66.8	66.8	40.9	40.9	40.9	40.9
Total Split (%)	38.0%	38.0%	24.0%	62.0%	62.0%	38.0%	38.0%	38.0%	38.0%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		5.9	5.9	5.9	5.9		5.9		5.9
Lead/Lag	Lag	Lag	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes						
Recall Mode	Max	Max	None	Max	Max	None	None	None	None
Act Effct Green (s)		53.1	63.8	63.8	63.8		13.5		13.5
Actuated g/C Ratio		0.60	0.72	0.72	0.72		0.15		0.15
v/c Ratio		0.56	0.15	0.64	0.01		0.64		0.10
Control Delay		15.4	5.2	10.4	0.7		40.4		17.8
Queue Delay		0.0	0.0	0.3	0.0		0.0		0.0
Total Delay		15.4	5.2	10.7	0.7		40.4		17.8
LOS		B	A	B	A		D		B
Approach Delay		15.4		10.0			40.4		17.8
Approach LOS		B		B			D		B
Queue Length 50th (m)		57.7	3.5	59.2	0.0		18.2		1.0
Queue Length 95th (m)		109.7	9.4	121.3	0.7		36.7		7.3
Internal Link Dist (m)		115.7		196.9			70.8		66.7
Turn Bay Length (m)					35.0				
Base Capacity (vph)		1048	700	1276	1093		552		611
Starvation Cap Reductn		0	0	107	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		0.56	0.12	0.70	0.01		0.27		0.04

Intersection Summary	
Cycle Length: 107.7	
Actuated Cycle Length: 89.2	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

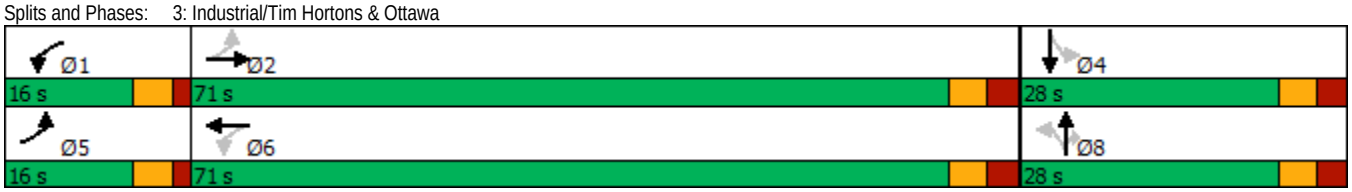
Splits and Phases: 2: Patterson/Menzle & Ottawa



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	84	371	27	605	139	44	24	46	27
Future Volume (vph)	84	371	27	605	139	44	24	46	27
Lane Group Flow (vph)	88	493	28	701	0	192	25	48	117
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	10.0	30.2	10.0	30.2	28.0	28.0	28.0	28.0	28.0
Total Split (s)	16.0	71.0	16.0	71.0	28.0	28.0	28.0	28.0	28.0
Total Split (%)	13.9%	61.7%	13.9%	61.7%	24.3%	24.3%	24.3%	24.3%	24.3%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	1.7	2.9	1.7	2.9	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.2	5.0	6.2		6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	29.9	25.5	25.3	19.5		16.3	16.3	16.3	16.3
Actuated g/C Ratio	0.51	0.43	0.43	0.33		0.28	0.28	0.28	0.28
v/c Ratio	0.21	0.34	0.06	0.63		0.55	0.05	0.15	0.23
Control Delay	8.4	11.9	7.7	20.3		27.8	0.2	20.2	8.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	8.4	11.9	7.7	20.3		27.8	0.2	20.2	8.8
LOS	A	B	A	C		C	A	C	A
Approach Delay		11.4		19.8		24.6			12.1
Approach LOS		B		B		C			B
Queue Length 50th (m)	4.2	13.0	1.3	34.6		19.0	0.0	4.2	2.4
Queue Length 95th (m)	11.2	34.4	4.7	57.9		42.0	0.0	12.7	13.9
Internal Link Dist (m)		196.9		93.1		93.1			84.4
Turn Bay Length (m)	45.0		30.0				25.0	15.0	
Base Capacity (vph)	491	3172	586	3227		506	659	459	691
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	0.18	0.16	0.05	0.22		0.38	0.04	0.10	0.17

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 58.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Industrial/Tim Hortons & Ottawa



APPENDIX F – MMLOS Analysis Output

Multi-Modal Level of Service - Intersections Form

Consultant	**PARSONS**	**Project**	**Mississippi Mills**
Scenario	**Existing Conditions**	**Date**	**Nov-19**
Comments			

Unlocked Rows for Replicating

INTERSECTIONS		Ottawa-Main/Martin				Ottawa/Patternson-Menzie				Ottawa/Industrial-Tim Hortons			
	Crossing Side	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Pedestrian	Lanes	3	3	3	3	0 - 2	0 - 2	5	0 - 2	3	3	6	5
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
	Conflicting Left Turns	Permissive	Protected/ Permissive	Permissive	Permissive	Permissive	Protected/ Permissive	Permissive	Permissive	Protected/ Permissive	Protected/ Permissive	Permissive	Permissive
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
	Right Turns on Red (RToR) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
	Ped Signal Leading Interval?	No	No	No	No	No	No	No	No	No	No	No	No
	Right Turn Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	Smart Channel	Smart Channel	No Channel
	Corner Radius	3-5m	5-10m	5-10m	3-5m	10-15m	5-10m	10-15m	10-15m	15-25m	10-15m	10-15m	15-25m
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score	**72**	**71**	**71**	**72**	**88**	**89**	**40**	**88**	**68**	**76**	**26**	**35**
	Ped. Exposure to Traffic LoS	**C**	**C**	**C**	**C**	**B**	**B**	**E**	**B**	**C**	**B**	**F**	**E**
	Cycle Length	91	91	91	91	108	108	108	108	115	115	115	115
	Effective Walk Time	43	24	18	18	43	24	23	23	48	48	10	10
	Average Pedestrian Delay	**13**	**25**	**29**	**29**	**20**	**33**	**33**	**33**	**20**	**20**	**48**	**48**
	Pedestrian Delay LoS	**B**	**C**	**C**	**C**	**C**	**D**	**D**	**D**	**C**	**C**	**E**	**E**
	Level of Service	**C**	**C**	**C**	**C**	**C**	**D**	**E**	**D**	**C**	**C**	**F**	**E**
		C				**E**				**F**			
	Direction of Travel	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND	NORTHBOUND	SOUTHBOUND	EASTBOUND	WESTBOUND
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Right Turn Lane Configuration	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m	≤ 50 m
	Right Turning Speed	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h
	Cyclist relative to RT motorists	**D**	**D**	**D**	**D**	**D**	**D**	**Not Applicable**	**D**	**D**	**D**	**D**	**D**
	Separated or Mixed Traffic	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Separated**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**
	Left Turn Approach	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	One lane crossed	One lane crossed
	Operating Speed	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h
	Left Turning Cyclist	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**E**	**E**
	Level of Service	**D**	**D**	**D**	**D**	**D**	**D**	**B**	**D**	**D**	**D**	**E**	**E**
		D				**D**				**E**			
Transit	Average Signal Delay												
	Level of Service	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
		-				**-**				**-**			
Truck	Effective Corner Radius	< 10 m	< 10 m	< 10 m	< 10 m	10 - 15 m	10 - 15 m	10 - 15 m	10 - 15 m	10 - 15 m	10 - 15 m	10 - 15 m	10 - 15 m
	Number of Receiving Lanes on Departure from Intersection	1	1	1	1	1	1	1	1	≥ 2	≥ 2	1	1
	Level of Service	**F**	**F**	**F**	**F**	**E**	**E**	**E**	**E**	**B**	**B**	**E**	**E**
		F				**E**				**E**			
Auto	Volume to Capacity Ratio												
	Level of Service	**-**				**-**				**-**			

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS

STAFF REPORT

DATE: March 3, 2020

TO: Committee of the Whole

FROM: Niki Dwyer, Director of Planning

SUBJECT: OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT OPA 23 and Z-16-19
Block 70 Plan 27M-88, Part of Lot 14 Con 10
Almonte Ward, Municipality of Mississippi Mills
KNOWN AS: Block 70 in Riverfront Estates (PIN 05297-0507)
OWNER: Houchaimi Holdings Inc. (Agent: McIntosh Perry)

RECOMMENDATION:

THAT Council approve the Official Plan Amendment to recognize a net density of up to 91 units per ha on the subject lands known as Block 70 PLAN 27M-88 (PIN 05297-0507) in Riverfront Estate Subdivision;

AND THAT Council approve the Zoning By-law Amendment to change the zoning on the lands known as Block 70 PLAN 27M-88 (PIN 05297-0507), Almonte Ward, Municipality of Mississippi Mills from "Residential Fourth Density" (R4) to "Residential Fourth Density – Special Exception" (R4-X) to recognize a maximum of one dwelling unit per 111m² of lot area; a minimum setback of 4.80m between habitable room windows and parking spaces; an a minimum 1.0m fence and no berm shall be required on the south property line of the site; a privacy yard shall have a minimum depth of 4.30m; and a maximum combined width of 13.4m for two driveways on Johanna Street.

BACKGROUND:

The applicant has applied to the Municipality to seek relief from the density provisions of the Community Official Plan as well as various provisions of the Zoning Bylaw to permit the construction of a three-story apartment dwelling building containing 42 dwelling units.

The original application filed by the owner sought relief from the 10m setback to the adjacent Agricultural (A) Zone lands to the south of the site. Following the receipt of public and staff feedback the applicant has since revised the configuration of the building on the site in order to preserve the 10m setback, however additional relief from other provisions of the Zoning Bylaw are now required.

The modification to the proposal also results in the net loss of 2 proposed dwelling units, for a total of 42 apartment units whereas 44 units were originally proposed.

As the intent of the development application is to permit the construction of a three-storey apartment dwelling this has not changed, staff have not deemed re-circulation necessary nor is it believed that there would be benefit from an additional public meeting.

PURPOSE AND EFFECT

The purpose of the Community Official Plan Amendment is a site-specific amendment to recognize an increased net density on the proposed site to permit the development of a three-storey, **42-unit apartment dwelling** unit on the subject lands. The Community Official Plan recognizes a general maximum net density of "medium density development[s]" of 35 units per ha (Policy 3.6.5). The proposed Amendment seeks a net site density of **91 units per ha** (previously 94 units per ha).

The purpose of the Zoning By-law Amendment application is to change the zoning of the proposed subject lots from "Residential Fourth Density" (R4) Zone to "Residential Fourth Density – Special Exception" (R4-x) Zone to recognize:

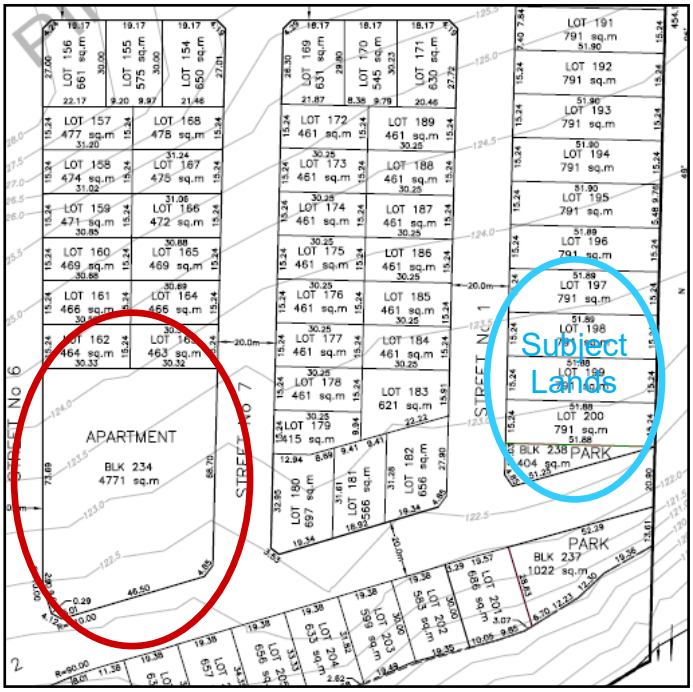
- An increase in the maximum density of the property from one dwelling unit per 137m² to **one dwelling unit per 111m²** (previously 106m²) in accordance with Section 16.2A(a);
- To **reduce the height of the privacy fence from 1.5m to 1m and to exempt the requirement for a 1.5m berm** to the agricultural lands in accordance with Section 6.20(8);
- To reduce the **setback between habitable room windows and parking spaces from 6m to 4.80m** in accordance with Section 9.3.7(d)(i);
- To reduce the **depth of a privacy yard from 6 to 4.3m** in accordance with Section 16.2A(d);
- To increase the **maximum width of driveways on a frontage of a property to 13.4m, where 9m is permitted** in accordance with Section 9.3.9(a).

Relief is no longer required from Section 6.20(8) to reduce the setback from the adjacent Agricultural lands from 10m to 6m.

Figure 1 – Context Map

The subject lands were originally intended to be reserved for townhomes as part of the initial approval of the Riverfront Estates Subdivision in 2010, with a large apartment block located north of the subject site on Spring Street.

Figure 2 – Previous Approved Apartment Dwelling Block Location



In the fall of 2017, the developer filed a redline amendment application to the County of Lanark to amend the lot configuration of Phase V and relocated the apartment dwelling block to the present location. At that time the developer did not commit to a proposed number of units for the described "Condominium Apartment".

Figure 3 – Phase V Density Calculations at 2017 Red Line Revision[1]

Housing Form	Previous Phase 5 Unit Count	Proposed Phase 5 Unit Count
Single-Detached	66.5	12
Semi-Detached		56
Townhouse	60	79
Condominium Apartment	TBD	TBD
Total	126.5	147

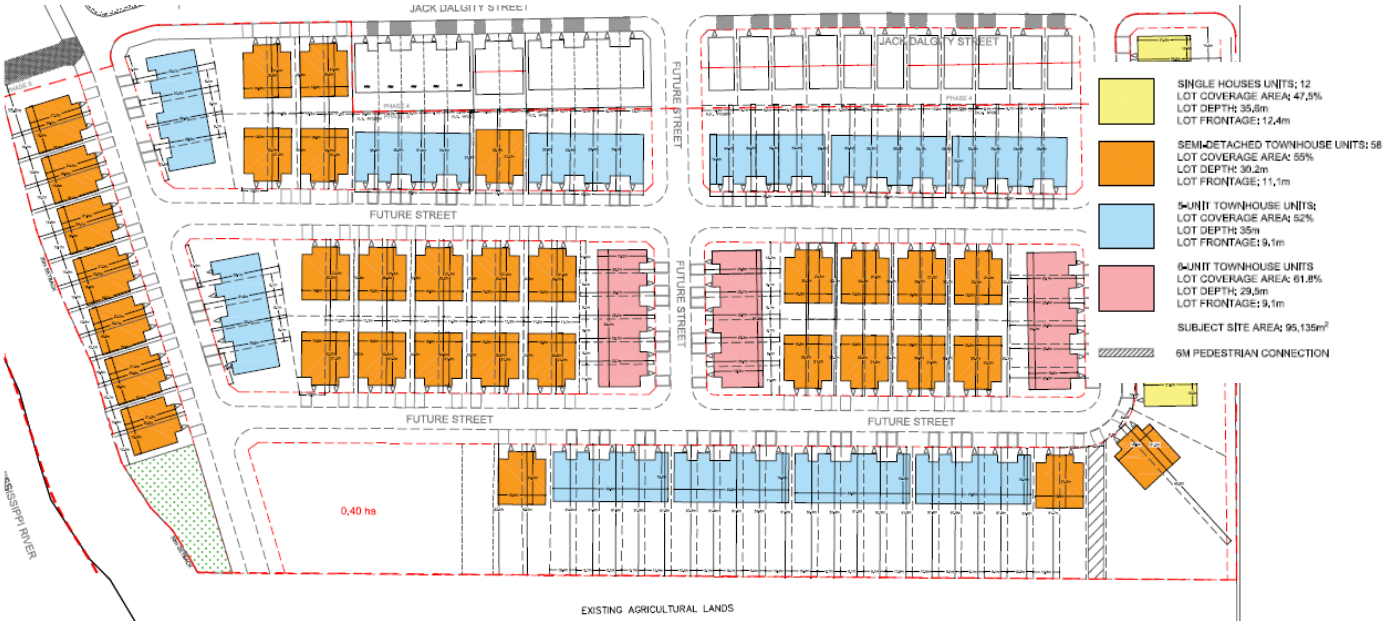
Previous Phase 5 Density	Proposed Phase 5 Density
126.5 units/9.5 ha = 13 units/ha	147 units/9.5 ha = 15.47 units/ha

[1] As provided in correspondence from S Morris (FoTenn) to J Stewart (Lanark County) on September 11, 2017

The subject land represents an area of approximately 0.46 ha, with frontage on both Johanna and Spring Street, of 89m and 51.2m respectively. The lands are at the end of the open Spring Street allowance. The majority of land adjacent to the subject property is located within the Riverfront Estates Subdivision, with the exception of the holding to the south of the site which is an active agricultural operation. These agricultural lands are owned by Houchaimi Holdings and rented for agricultural purposes.

The property is immediately to the north of the Settlement and Ward Boundary for Almonte Ward.

Figure 4 – Phase 5 Development Plan



SERVICING & INFRASTRUCTURE

The development is to be serviced by municipal water and sanitary services as part of the build out of Phase V. The municipal servicing and infrastructure demands are not anticipated to change as a result of the application and demand needs have been evaluated through a Servicing Options Report and Traffic Impact Study.

Vehicular access to the site is envisioned to be located on Johanna Street with additional secondary pedestrian access to the parkland space via Spring Street.

COMMENTS

FROM INTERNAL CIRCULATION
Comments received based on the circulation of this application have been summarized below:
CAO: No comments received.
Clerk: No comments received.
CBO: No comments received.
Fire Chief: No comments received.
Director of Roads and Public Works: No concerns or objections to the zoning amendment.
Recreation Coordinator: No concerns or objections.

FROM EXTERNAL AGENCY CIRCULATION
Comments were received from Enbridge Gas, Mississippi Valley Conservation Authority, Leeds Grenville and Lanark District Health Unit, indicating no objection to the application.

FROM THE PUBLIC

In reviewing Official Plan Amendment applications, Section 22(6.7) of the Planning Act requires that the notice of a decision of an amendment to the plan must include a brief explanation of the effect, if any, that the written and oral submissions provided in the public consultation process has had on the decision.

A table summarizing comments received and the impact they have had on the recommendation has been appended to this report (Appendix C).

EVALUATION

PROVINCIAL POLICY STATEMENT (PPS), 2014

The PPS provides policy direction on matters of provincial interest related to land use planning and development. As per Section 3(5)(a) of the *Planning Act, R.S.O. 1990*, all planning decisions must be consistent with the PPS.

The PPS encourages Municipalities to manage and direct land use activities in healthy, livable and safe communities by promoting efficient development patterns and accommodate an appropriate range and mix of land uses within the settlement area (Policy 1.1.3.2).

Healthy livable communities in Settlement Areas will be composed of a range of uses supportive to the long-term needs of the community and will be encouraged to take the form of intensified redevelopment where appropriate for the context of the community (Policy 1.1.1).

1.1.1 Healthy, liveable and safe communities are sustained by:

b) accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs;

e) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

COMMUNITY OFFICIAL PLAN (COP)

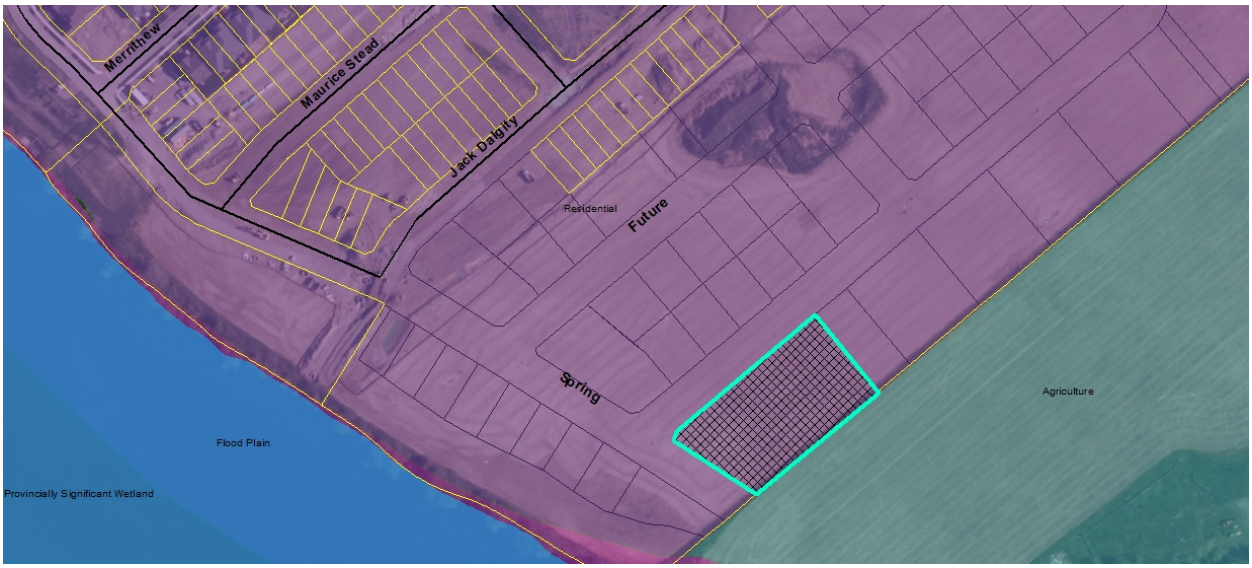
Schedule B of the Official Plan identifies the subject lands as "Residential".

3.3.1 Goal and Objectives

It is a goal of this Plan to:

Promote a balanced supply of housing to meet the present and future social and economic needs of all segments of the community.

Figure 5 – Community Official Plan Designation



Generally, "Residential" lands shall be used for low and medium density uses and accessory uses (Policy 3.6.2). The application seeks relief from the general maximum net density of "medium density development" of 35 units per ha (Policy 3.6.5). The proposed Amendment seeks a net site density of **91 units per ha**.

The Residential Land Use objectives instruct that the Municipality should "*Promote and support development which provides for affordable, rental and/or increased density of housing types"* and where intensification is planned within existing neighbourhoods that the new development is *"compatible with surrounding uses in terms of design*".

Affordable Housing provisions of the Community Official Plan describe that an "*adequate supply of affordable housing*" shall be encouraged and that "*[t]he [Municipality] shall attempt to have 25% of all new residential construction affordable*" based on a three-year average (Policy 3.6.3). The Plan also provides that the Municipality may leverage increased height and density provisions in order to achieve the affordable housing policies of this plan.

In accordance with the Provincial Policy Statements definition of "Affordable", staff have analyzed the current market conditions for both ownership and rental housing within the prescribed "regional market area" (Lanark County).

The PPS defines affordable owner-occupied housing as the lesser of the following:

- *Where the purchase price results in an annual accommodation cost of less than 30% of the gross annual household income for low and moderate income[2] households:*
    - The Ministry of Municipal Affairs and Housing reports this statistic in Lanark County as less than $323,700.00[3].
- *Where the purchase price is at least 10% below the average purchase price for a resale unit in the regional market are:*
    - The Ministry of Municipal Affairs and Housing reports this statistic to be $368,000.00 in Lanark County[4].

Consequently, affordable owner-occupied housing is determined to be housing purchased as less than $323,700.00.

Staff similarly reviewed the average sales value of dwellings in Mississippi Mills as reported in the Housing Study published by the County of Lanark in October 2018[5]. The County reported that the average sales value of all owned dwellings within the County was $324,400.00 while the median value of said homes was reported at $296,772.00. These numbers increased when the scope of analysis was restricted to Mississippi Mills specifically, where the sales value was reported at $380,403.00 and $349,130.00 respectively. These contextual findings suggest that a dwelling purchased at less than 10% of the average purchase price in Mississippi Mills would be $342,363.00.

[2] "in the case of ownership housing, households with incomes in the lowest 60 percent of the income distribution for the *regional market area*;" PPS Definition
[3] Based on 2016 Statistics Canada data.
[4] Based on 2016 Statistics Canada data.
[5] All reported values based on 2016 Statistics Canada data.

The PPS defines affordable rental housing as the lesser of the following:

- *Rent not exceeding 30% of the gross annual household income for low and moderate income[6] households:*
    - The Ministry of Municipal Affairs and Housing reports this statistic in Lanark County as less than $1,130 a month[7].
- *Rent which is at or below the average market rent of a unit in the regional market area:*
    - This is not a statistic which is accurately reported by the Ministry, however staff reviewed the average market rents reported by Lanark County in their recent Housing Study. The Study only reported rental values by Settlement Area (ie Almonte Ward) and is not consistent with the assessment of the "regional market area" in accordance with the PPS. The reported finds are included in the table below:

Figure 6 - Average Market Rent by Bedroom Size* (Housing Study, 2018, Lanark County)

Almonte	**Room**	**Bachelor**	**1 Bdrm**	**2 Bdrm**	**3 Bdrm**
AMR	$575	$624	$709	$951	$1,190
Annual Household Income to Afford Rent	$23,000	$24,960	$28,360	$38,040	$47,560

For the purposes of this report, affordable rental housing is determined to be a one bedroom dwellings rented for less than $710.00/month.

The Official Plan does not recognize a distinction between rental and owner-occupied housing in the targeted supply of affordable housing. The Policy only encourages the Municipality to attempt to have 25% of all new residential construction be affordable. Consequently, a review of the total number of new residential "units" has been summarized below:

[6] "in the case of rental housing, households with incomes in the lowest 60 percent of the income distribution for renter households for the *regional market area*." PPS Definition
[7] Based on 2016 Statistics Canada data.

Figure 7 – Number of Affordable Housing Units Constructed in Mississippi Mills (2017-19)

Construction Year	Number of Units Constructed	Number of Affordable Units[8]	Total Percentage Affordable
2017	165	92	56%
- **Owned**	165	92	56%
- **Rented (Apt)**	0	-	-
2018	232	66	28%
- **Owned**	171	54	32%
- **Rented (Apt)**	61	12	20%
2019	110	84	76%
- **Owned**	102	84	82%
- **Rented (Apt)**	8	0	0%
Three Year Average	**507**	**242**	**48%**
- **Owned**	438	230	53%
- **Rented (Apt)**	69	12	17%

As noted in the table above, the three-year average for new construction between 2017-2019 supports that 48% of all new units can be deemed affordable as defined by the Provincial Policy Statement. The majority of these units are owner-occupied townhomes in Riverfront Estates subdivision. The three-year average of newly constructed apartment dwellings indicates that the only new units that are rented for less than the regional market rent have been provided by Carebridge Community Support. There has been a notable increase in the number of apartment dwelling units in recent years and while the units are marketed at market rate, they provide housing options for residents who can afford market rent but may not be able to afford home ownership.

The applicant has indicated that the units in the proposed apartment dwelling in Riverfront Estates will be rented at market rates.

Affordable Housing can be generated through the establishment of a diverse housing base at mixed densities and housing types. Generally, dwelling units offered at a medium or high density can be offered at a more affordable price point as the cost to develop the land is less than lower density forms of development.

The Official Plan establishes a mixed density target of 70% low density (15 units per gross hectare) and 30% medium density (35 units per net hectare) (Policy 3.6.5). When evaluated by unit type, the entire subdivision represents a density ratio of 59:41, if the development proceeds with **42** apartment dwellings. If the apartment dwelling block was developed to meet the general density of 35 units/ha, the density ratio would be representative of a 60:40 distribution.

[8] Owned Affordable Units Determined by Reported Construction Value of Dwelling + Market Serviced Land Value ≤ $323,700.00; Rented Affordable Units Determined by advertised rental rate ≤ the average market rent of a unit in the regional market area as reported by Lanark County.

Figure 8 – Density Distribution of Riverfront Estates

Density	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**	**Total**
Singles/Semis	59	53	46	42	82	282
Towns/Apartments	21	12	22	41	100	196
Total Units	80	65	68	83	182	478
Density Ratio	**74:26**	**82:18**	**68:32**	**51:49**	**45:55**	**59:41**

The density ratio of 59:41 suggests that there is a higher potential to offer affordable dwellings than the targeted 70:30 distribution.

As previously described, the gross density of Phase V of the Subdivision was projected to be 36 units/ha. This calculation did not include the total number of units for the apartment/condominium development which would be considered a medium density development evaluated at net density. The current proposal for the development demonstrates a calculated net density of the site of 91 units/ha. The subject lands represent an area of approximately 0.46ha which could support 16 units in accordance with the Policy's general density targets.

Medium density development proposal must also demonstrate compliance with the following criteria (Policy 3.6.5):

> *(i) Proximity to shopping, parkland, health care, education and other community amenities;*
> The subject land is located on a local municipal road with direct pedestrian access to the passive greenspace along the Mississippi River and is within 300 m of the subdivision's neighbourhood park. The site is serviced by two local elementary schools within 1km and is serviced by municipal amenities such as the local hospital (1km), community centre (1.5 km -18 min walk), library (1.8 km – 21 min walk), and downtown core (1.4km – 17 min walk). The site is also within a 3-minute drive or 19-minute walk to the local drug store, grocery store and banks[9].

[9] Walking and driving times generated by GoogleMaps

Figure 9 – Proximity to Services

(ii) compatibility with existing land uses in the immediate area and the historical character of existing buildings;

The subject lands are located within the final phase of the Riverfront Estates Subdivision, which is currently under construction. The neighbourhood represents new constructed dwellings on small lots in a built form typical of most modern development. These is no historical character to the existing buildings in the neighbourhood.

(iii) designed with a maximum of three (3) stories and where possible, a building profile which conforms visually with the surrounding residential structures;

The proposed building complies with the maximum three storey height and has been designed to feature a step-back on the third floor in an effort to reduce the visual impact of the building on the adjacent bungalow dwellings. The site is also notably at the bottom of the sloped subdivision site which varies by as much as 5.5m from east to west along Johanna Street. As a result, the typography of the site suggests that the proposed three storey apartment dwelling (10.5m) would be 0.84m shorter than a bungalow (6.34m) at the top of the street.

(iv) availability of adequate off-street parking and appropriate access and circulation for vehicular traffic, including emergency vehicles;

The site will have direct vehicular access to Johanna Street, a local road which is intended to provide access out of the subdivision onto Paterson Street or Spring Street. The site will have sidewalks along the Johanna Street frontage and pedestrian access to the parkland on Spring Street.

The site is required to provide a minimum of **60** spaces for tenant and visitor parking. The design proposes **39** spaces to be located in an underground parking garage and an additional **21** spaces at grade uncovered.

(v) necessary buffering from abutting uses;

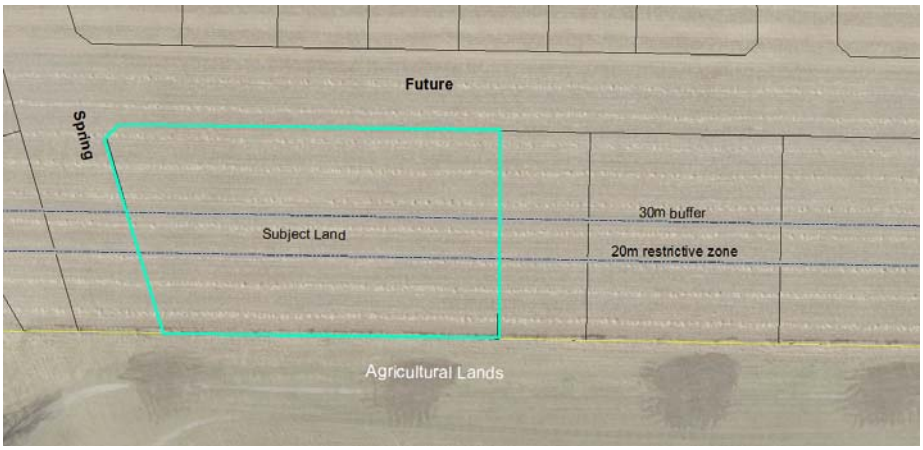
The building has the potential to have the most significant impact on the semi-detached dwellings located immediately to the east of the site. The building's location is proposed to have a 7.5m setback to the property line.

The Policy also recognizes a 30m setback from adjacent Agricultural lands to mitigate adverse impacts between non-complementary uses (Policy 3.6.16). The impact on residential uses in the subdivision on the agricultural lands were evaluated in the 2009 Agricultural Review. At the time the study recommended consideration be given to the following mitigative measures at the time of site design:

- Ensure that all residential buildings are setback at least 30m from the southern boundary/property line of the subdivision.
- Develop and register a restrictive covenant for placement on individual property titles for lots along the southern boundary of the subdivision. The covenant should state that the lot is adjacent to an agricultural area and may therefore be conducting normal farm practices. It should also contain provisions that prohibit the construction of accessory structures, including swimming pools and decks within 20m of the southern boundary.
- Construct a 2.45m high, sturdy, long lasting fence along the southern boundary of the subdivision. The fence should be climb resistant and there should not be any gates or openings in it to allow access to the adjacent farm property.
- Prepare and implement a landscape plan to establish a vegetative buffer and screening area along the southern boundary of the subdivision, just north of the fence. Trees and other vegetation should be selected to provide a dense visual and access buffer to the adjacent farm property.

The concept plan has been revised to ensure that the minimum 10m setback prescribed in the Zoning Bylaw is satisfied and has been designed to include a 1.6m terrace set 3m into the property topped by a 1m high fence and an evergreen buffering wall (proposed to be composed of cedars). The density and planting distribution of the buffer, as well as the details of the fencing will be evaluated at site plan control approval.

Figure 10 – Agricultural Lands Setback 2008 imagery (per 2007 Agricultural Assessment)



(vi) suitable landscaping, lot grading, drainage and on-site amenities; and,

The development proposes to work with the sloping topography by building into the hill and utilizing the low point of the site for the entrance to the below grade parking garage. Drainage is proposed to surface drain to the street and northwest to the drainage outlet into the Mississippi River. Preliminary landscaping of the site shows a garden separating the residential units from the parking area as well as tree plantings throughout the front yard to give presence and frame the pedestrian pathways.

(vii) the availability of full municipal services to accommodate the proposed density of development.

The site is proposed to be serviced by municipal water and sanitary services. A Servicing Options Report has been submitted and reviewed by the Director of Public Works. There are no concerns pertaining to the availability of services to accommodate the proposed increase density.

Range of housing provisions also encourage the adherence of a 70:30 housing tenure target. The proposed development assists in meeting the 30% rental housing stock as all **42** of the dwelling units are proposed to be rented. The developer has also indicated that approximately 50-60 of the existing units within the Riverfront Estates Subdivision are rented at this time.

With respect to the developments ability to improve access to special needs housing, the development does not expressly propose to build universally accessible units however the building will be serviced by elevators and level entry points to the building. As is the case with all new construction, the design will comply with current Ontario Building Code and Accessibility for Ontarians with Disabilities Act, which will establish a housing stock which is more compatible for residents with mobility challenges.

ZONING BY-LAW #11-83

The subject property is presently zoned “Residential Fourth Density” (R4) in the Municipality of Mississippi Mills Zoning Bylaw 11-83. The Fourth Density Zone permits a mix of medium density residential uses including townhomes and 3 storey apartments.

The following table represents the proposed developments adherence to the prescribed zone provisions:

Figure 11 – Zone Provisions of the Residential Fourth Density Zone

Provisions	**Dwelling, Apartment (low-rise)**	**Proposed Development**
Lot Area, Minimum (m2)	600	4,689
Lot Frontage, Minimum (m)	30	51.22
Front Yard, Minimum (m)	5	5
Rear Yard, Minimum (m)	7.5	7.5
Side Yard, Minimum (m)	6	6
Exterior Side Yard, Minimum (m)	6	2 7
Maximum Height (m)	11	10.7
Lot Coverage, Maximum (%)	45	29.7
Courts	(c)	Not applicable
Privacy Yards	**6m setback from ground floor units to parking areas or driveways**	**4.3m***
Equipped Children’s Play Area	(e)	Not applicable

* Relief required.

The Zone provisions prescribe a maximum density of one dwelling unit per 137m² of lot area, and the proposed development represents one dwelling unit per **111m²**. Request is being sought to relieve the maximum prescribed density.

Policy 6.20(8) of the Zoning Bylaw also requires that development adjacent to Agricultural lands be setback a minimum of 10m from the zone boundary and framed with a berm featuring a 1.5m tall fence. The proposed development has been amended to comply with the 10m setback, but is seeking **relief from the height of the privacy fence from 1.5m to 1m and to exempt the requirement for a 1.5m berm** to the agricultural lands should the proposed retaining wall not be required as a result of final grading plans.

Section 9.3.7(d)(i) also requires relief to reduce the **setback between habitable room windows and parking spaces from 6m to 4.80m** and relief from Section 9.3.9(a) which requires a **maximum width of all driveways or passageways on a lot to not exceed 9m and 13.4m is requested**.

Figure 12 – Zoning By-law #11-83

SUMMARY:

Having reviewed and assessed the proposed Zoning Amendment application, staff are satisfied that the proposal complies with the provisions of the Provincial Policy Statement 2014, conforms to the policies of the Community Official Plan and satisfies the applicable sections of the Municipal Zoning Bylaw #11-83.

As there are no outstanding or unaddressed comments and concerns raised by members of the public, staff are satisfied that the proposal will not result in negative impacts within the local community.

All of which is respectfully submitted,

Niki Dwyer, MCIP RPP MA BES
Director of Planning

Ken Kelly
Chief Administrative Officer

ATTACHMENTS:

Appendix A – Proposed Site Plan
Appendix B – Proposed Elevations
Appendix C – Comments Received

Appendix C – Comments Received

Commenting Party	*Comment Received*	*Impact on Recommendation*
Paul Schnittker	Noted general support for the diversity of housing options provided by the development	Noted for the record, no impact on recommendation.
Susan Cannon	Would like to see dense vegetation plantings in the 6m setback to the Agricultural lands	Applicant has revised the proposal to preserve the 10m setback to Agricultural lands and is proposing a 1m high fence as well as a cedar hedge row (the density of which will be examined at site plan).
	Concerned regarding the impact of blasting for underground parking	Blasting excavation requires the completion of pre-blast surveying by the Ministry of Environment. Post construction surveys are also completed to demonstrate no adverse impact. The development of Riverfront Estates was subject to a Geotechnical Report[10] to examine discrepancies in the soil/bedrock conditions. None were found on the site. The developer has acknowledge that further investigations will be completed at the site plan stage.
	Noted concern regarding the availability of less high-end apartments on the market	This concern is noted for the record as it does not pertain specifically to the proposed development but rather the market conditions of the community.

[10] A copy of the study is available from the Planning Department.

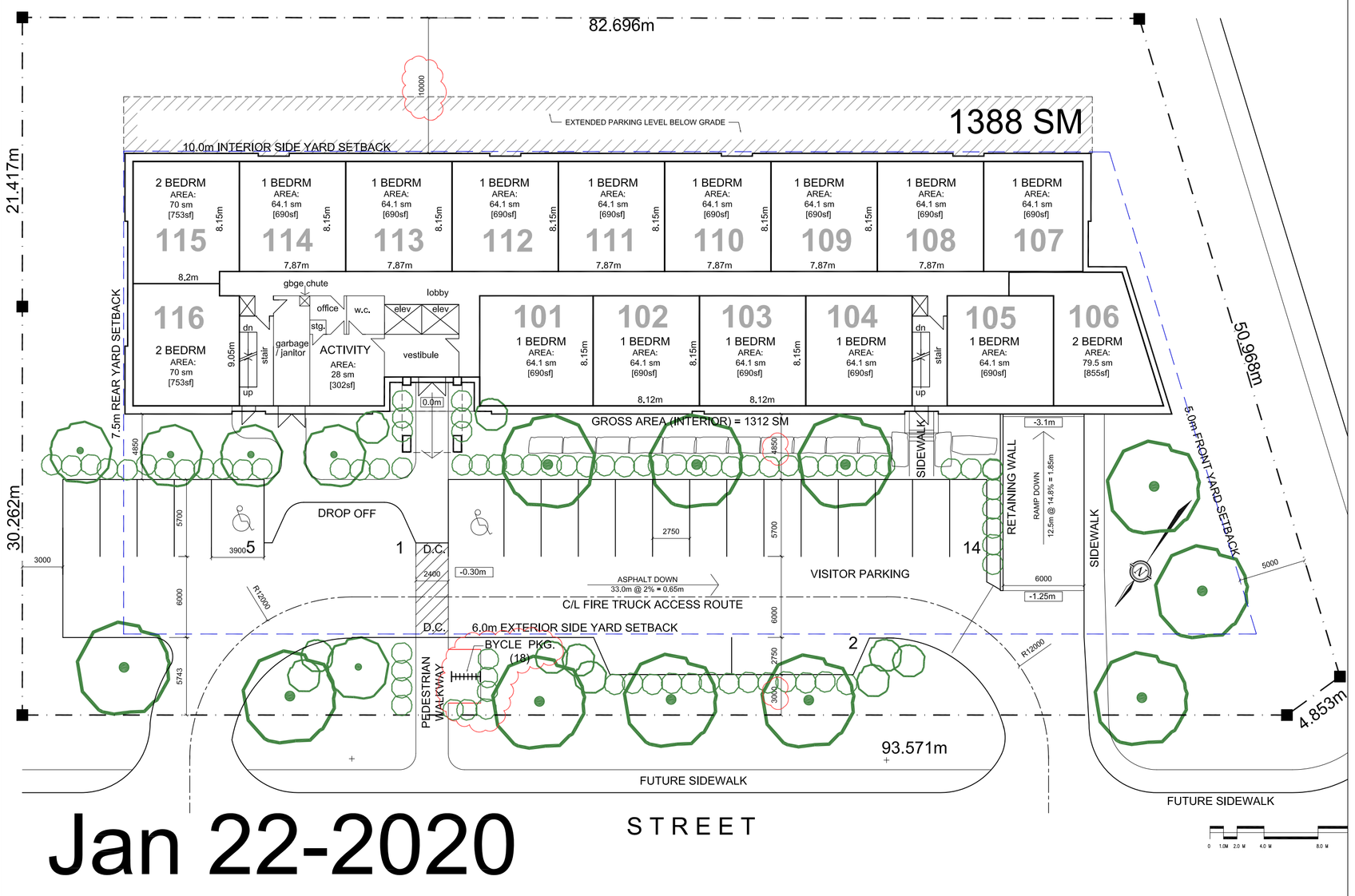
Ann LeBlanc	Concerns regarding water and runoff issues in the development; Limited parking spaces and traffic issues; Precedent for future development to the south of the site.	The applicant has submitted a Stormwater Management Plan for the development consistent with the approved plan for the entire Riverfront Estates Subdivision. The study has been reviewed and accepted by Public Works. The proposal includes the provision of 60 parking spaces on the site. This includes 1.2 spaces per unit plus an additional 0.2 spaces per unit for dedicated visitor parking. The proposal complies with the required parking provisions of the bylaw. See comments on Traffic below. Mayor Lowry clarified in the meeting that lands located to the south of the site are located outside of the Almonte Settlement Boundary and would not be subject to urban development.
Scott Newton	Concerns associated with the increase of density and the impact on traffic in the neighbourhood.	The original Subdivision approval include the submission of a Traffic Study to assess volumes and direction of traffic to and from the site. The Study was subject to an addendum[11] as part of this application to examine whether the proposed increase in density would lead to a net impact to the original findings of the study.

[11] A copy of the study and the addendum is available from the Planning Department.

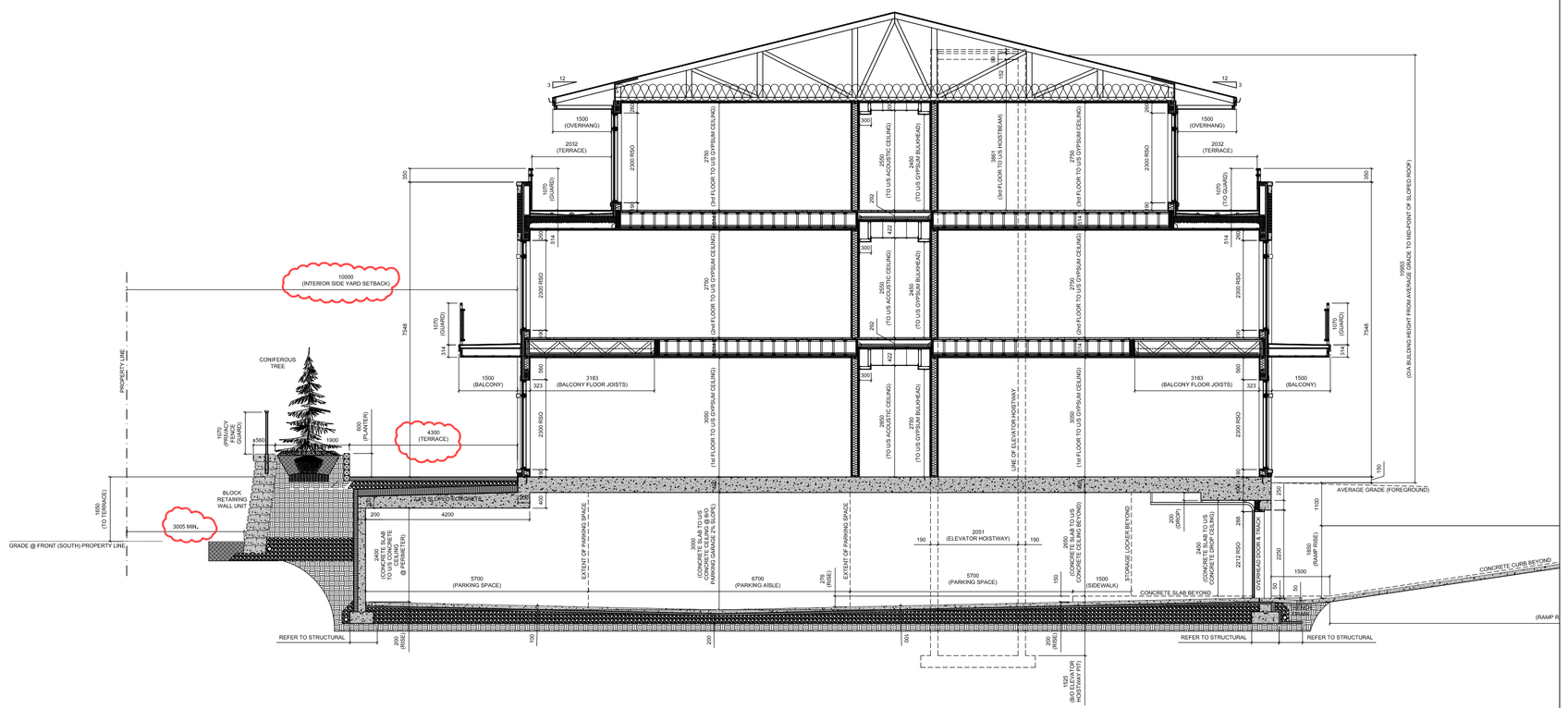
		The study concluded that the proposal would result in a 4% increase in vehicle trips in weekday peak AM/PM travel hour. This represents approximately 4 vehicles. The study found the impact to be minor and would not trigger a revision to the original study or additional traffic calming measures. General concerns associated with traffic congestion (particularly on Paterson Street as noted by the commenter) have been forwarded to Public Works for consideration.
Tracy Julian	Were the Owned units classified as Affordable [*sic in the previous staff report*] actually sold for less than 323,700? What data will we be using as we move into the next 3 year average timeline? Will we continue to use the figure of 323,700 as our benchmark for owner occupied housing?	The staff report provided the base unit pricing for the housing stock, not the actual sales value which would include any upgrades to the model. For the purpose of evaluating if the Municipality has made planning decisions to ensure that housing can be offered within affordable housing thresholds, base unit data is sufficient to determine if the policy framework meets the targets. Whether or not an individual purchaser elects to purchase more expensive finishing's is a matter of choice and not a factor of land use planning policy. The Ministry of Municipal Affairs and Housing publishes "Affordable Housing" Index data annually. The Index data is based on the most recent census data + annual inflation.

	Are we simply hoping that other future developments will help fulfill the COP and PPS requirements for the next 3 years?	The Municipality continues to monitor new housing starts annually. At this time the housing starts indicate that the stock planning meets the 25% affordable housing target in accordance with the Official Plan Policies.
	For this report the Affordable Rental Housing is determined to be a One Bedroom apartment renting for less than 710 a month. Does that also include the numbers given in the rest of the chart? Example a 3 bedroom house renting for less than 1,190 dollars? Will these numbers be used moving forward into the next 3 year average timeline?	The Affordable Rental Housing Index is also published annually by the Ministry of Municipal Affairs and Housing, however the relevant data for our regional market area is noticeably lacking. This has been identified by staff to the Ministry who have noted that they are working to develop more accurate market data. In the meantime, Municipal and County staff work collaboratively to develop a local data base of “market rent” figures for the community.
	Without an accurate report or statistics how can we provide a number that reflects the reality of what is Affordable rental accommodation in Mississippi Mills?	While the housing stock is evaluated based on the present legal policy framework (the PPS and COP) and is presently in conformity, the Municipality continues to examine the issues of “affordable” and “attainable” housing within our community and has commenced the undertaking of an Affordable Housing Secondary Plan.

	What is the actual rental cost of these units and are any of them a one bedroom renting at under 710 dollars.? Is relying on the advertised rental rates the only way to determine actual rental prices in our community? What is the plan to monitor the level of Affordable Housing being built in the next 3 year average timeline?	The agent for the developer has indicated that the units will be rented at “market value” but has indicated that no set rental rate has been determined at this point. As previously indicated, the Municipality has commenced annual monitoring of housing stock trends and is undertaking an Affordable Housing Secondary Plan per the direction of Council.



1 A1.0 SITE PLAN / MAIN FLOOR PLAN
1:250



2 A1.0 SCHEMATIC SECTION
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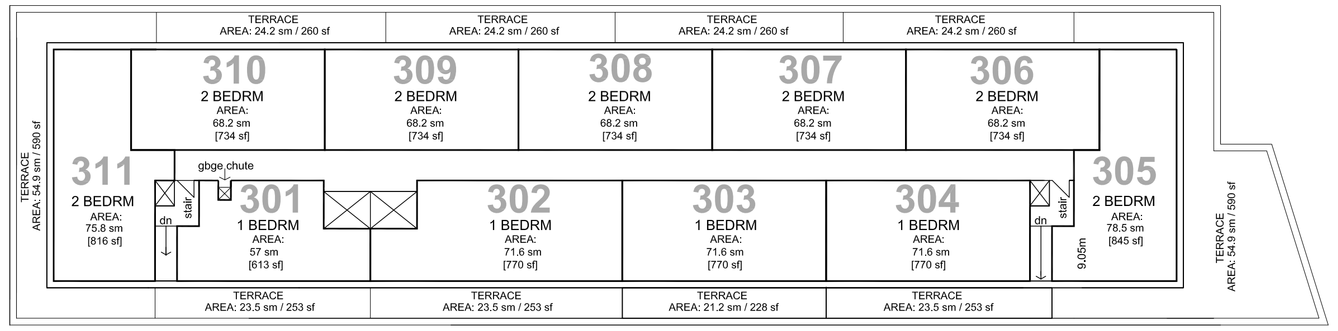
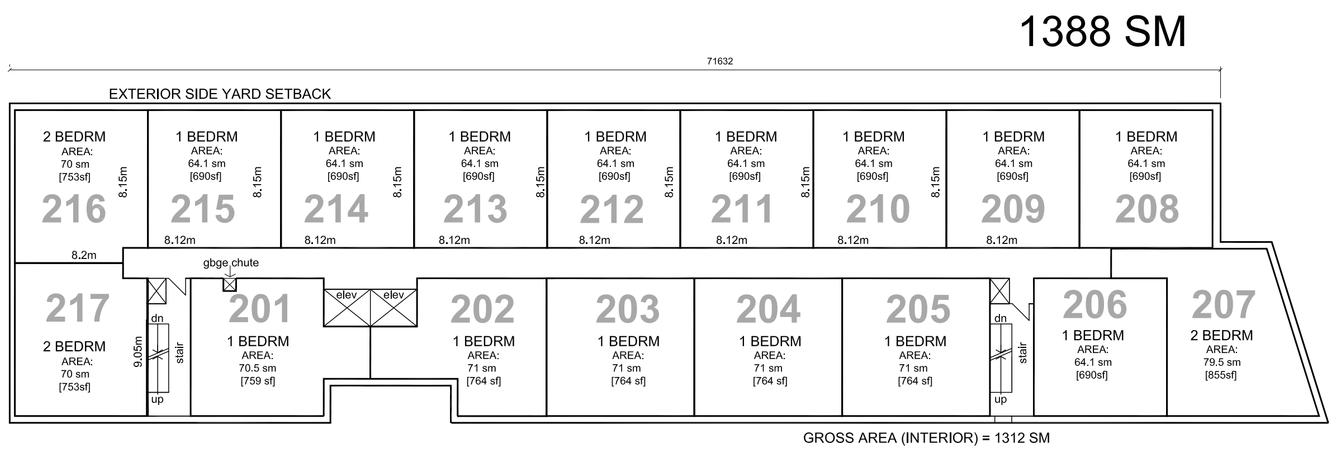


3 A1.0 THIRD LEVEL PLAN
1:250



4 A1.0 SECOND LEVEL PLAN
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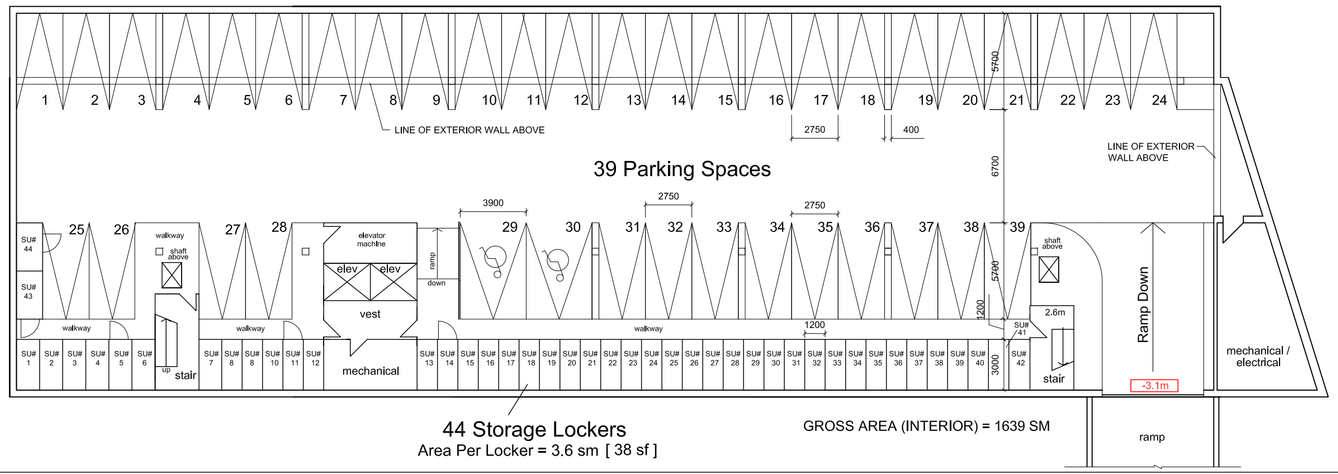


5 A1.0 LOWER LEVEL PLAN
1:250

ZONING & SITE STATISTICS

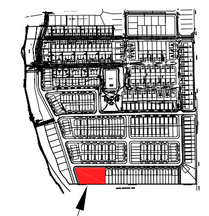
LEGAL DESCRIPTION:	BLOCK 70, PART OF LOT 14, CONCESSION 10, TOWN OF ALMONTE, MUNICIPALITY OF THE TOWN OF MISSISSIPPI MILLS
CIVIC ADDRESS:	TBD
CURRENT ZONING:	R4 - FOURTH DENSITY RESIDENTIAL
PROPOSED ZONING:	R4 - FOURTH DENSITY RESIDENTIAL SPECIAL EXCEPTION * (* INCREASED DENSITY)
OVERALL SITE AREA:	4,670m² (0,4670ha)
MAXIMUM DENSITY:	1 UNIT / 137m² OF LOT AREA
MAXIMUM NUMBER OF UNITS:	4,670m² / (137m² / UNIT) = 34 UNITS
PROPOSED DENSITY:	1 UNIT / 111.2 m² OF LOT AREA
PROPOSED NUMBER OF UNITS:	4,670m² / (111.2m² / UNIT) = 42 UNITS
LOT FRONTAGE:	50,968m
MINIMUM FRONT YARD SETBACK:	5.0m
MINIMUM EXTERIOR SIDE YARD SETBACK:	6.0m
MINIMUM INTERIOR SIDE YARD SETBACK:	10.0m
MINIMUM REAR YARD SETBACK:	7.5m
MAXIMUM BUILDING HEIGHT:	11.0m
PROPOSED BUILDING HEIGHT:	10.95m (TO MID-POINT OF SLOPED ROOF)
BUILDING AREA (ABOVE GRADE):	1,420m²
GROSS FLOOR AREA (GFA) (ABOVE GRADE): (EXCLUDING BELOW GRADE PARKING)	3,782m²
TOTAL GROSS FLOOR AREA (GFA): (INCLUDING BELOW GRADE PARKING)	5,503m²
TOTAL BUILDING COVERAGE: (MAXIMUM ALLOWABLE COVERAGE = 45%)	30.4% (1,420m² / 4,670m²)
TOTAL ASPHALT AREA:	21.0% (982m² / 4,670m²)
TOTAL LANDSCAPE AREA:	48.6% (2,268m² / 4,670m²)
TOTAL PARKING REQUIRED:	42 UNITS x 1.2 RESIDENT + 44 x 0.2 VISITOR = 60 SPACES
TOTAL PARKING PROVIDED:	60 SPACES
BELOW GRADE PARKING PROVIDED:	(37) REGULAR SPACES @ 2.75m x 5.75m + (2) ACCESSIBLE @ 3.9m x 5.75m
ABOVE GRADE PARKING PROVIDED:	(19) REGULAR SPACES 2.75m x 5.75m + (2) ACCESSIBLE @ 3.9m x 5.75m
BICYCLE PARKING PROVIDED:	18 SPACES

No.:	Issued For:	Date:
1	For Review	Oct 30-2019
2	For Review	Oct 31-2019
3	For Review	Dec13-2019
4	For Review	Jan 22-2020

Symbol Legend:

- DENOTES PROPOSED BUILDING
- DENOTES EXISTING BUILDING
- DENOTES LINE OF CONSTRUCTION ABOVE
- DENOTES LANDSCAPE AREA
- DENOTES UNIT PAVING
- DENOTES CONCRETE SURFACE
- DENOTES EXISTING BUILDING TO BE REMOVED
- DENOTES PROPERTY LINE
- DENOTES SITE SETBACK
- DENOTES C/L STREET AND/OR FIRE ACCESS ROUTE
- DENOTES BUILDING ENTRANCES
- DENOTES DEPRESSED CURB
- DENOTES ACCESSIBLE PARKING SPACE
- DENOTES 300mm [W] x 450mm [H] ALUMINUM SIGN
- DENOTES 610mm [D] TACTILE WALKING SURFACE INDICATOR (TWSI) SET 150mm BACK FROM EDGE OF DEPRESSED CURB
- DENOTES HIGH COLOUR CONTRAST DIAGONAL PAVEMENT MARKING (ACCESS AISLES & NO PARKING AREAS)
- DENOTES BICYCLE RING RACK
- DENOTES BOLLARD

Key Plan:



PROPOSED DEVELOPMENT SITE

Project North Arrow:

Actual North Arrow:

Architect:

Peter Mansfield, Architect
B. Tech., M. Arch., O.A.A.
122 Bridge Street, Almonte, ON
613-256-5213

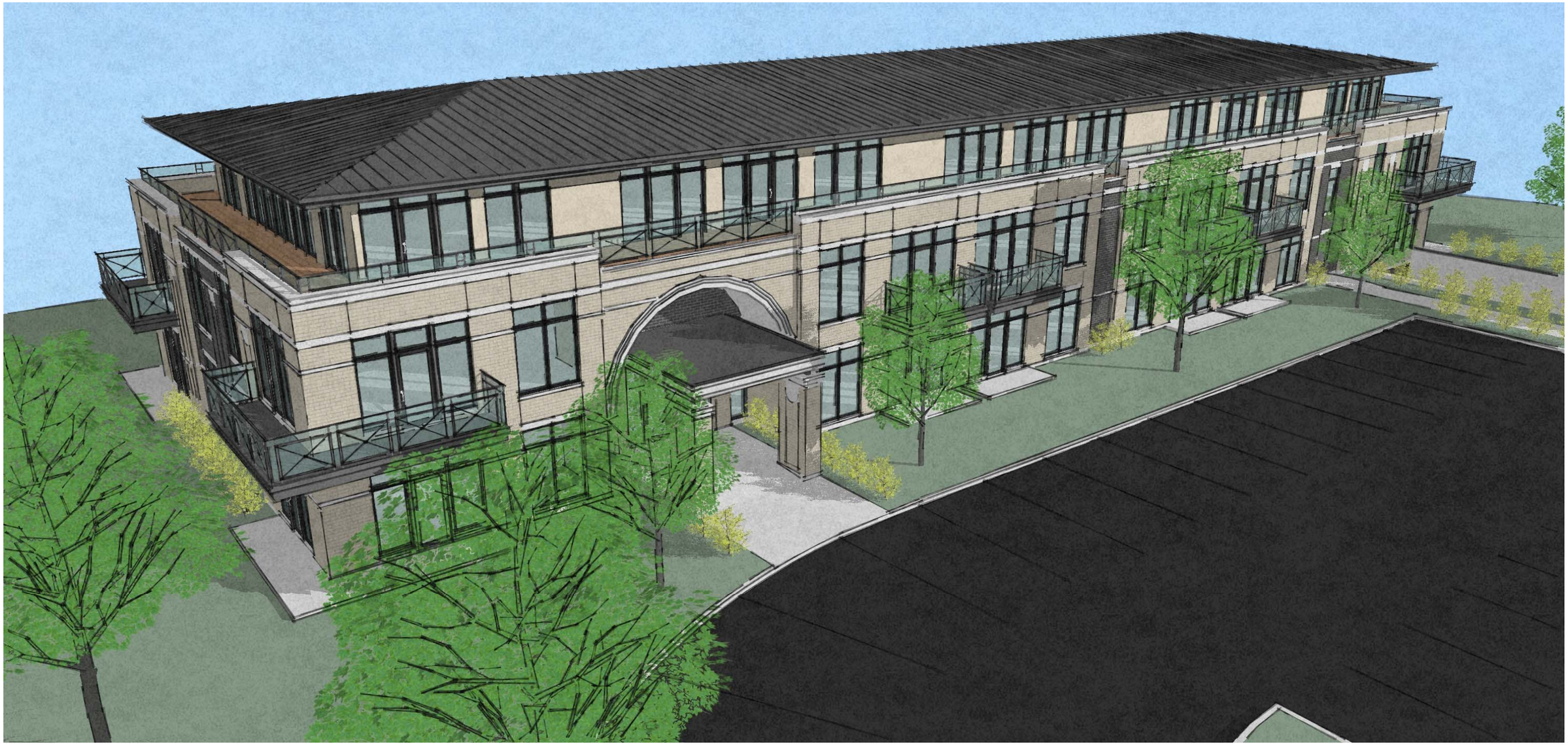
Project Title:

Proposed 44 Unit Apartment Building
Block 70, Part of Lot 14, Concession 10 Billy Houchaimi, Almonte, ON

Drawing List:

Site Plan

Job No.:	1803	Drawing No.:
Scale:	As Noted	A1.0
Date:	Sept 25-2019	
Drawn By: PM	Reviewed By: PM	

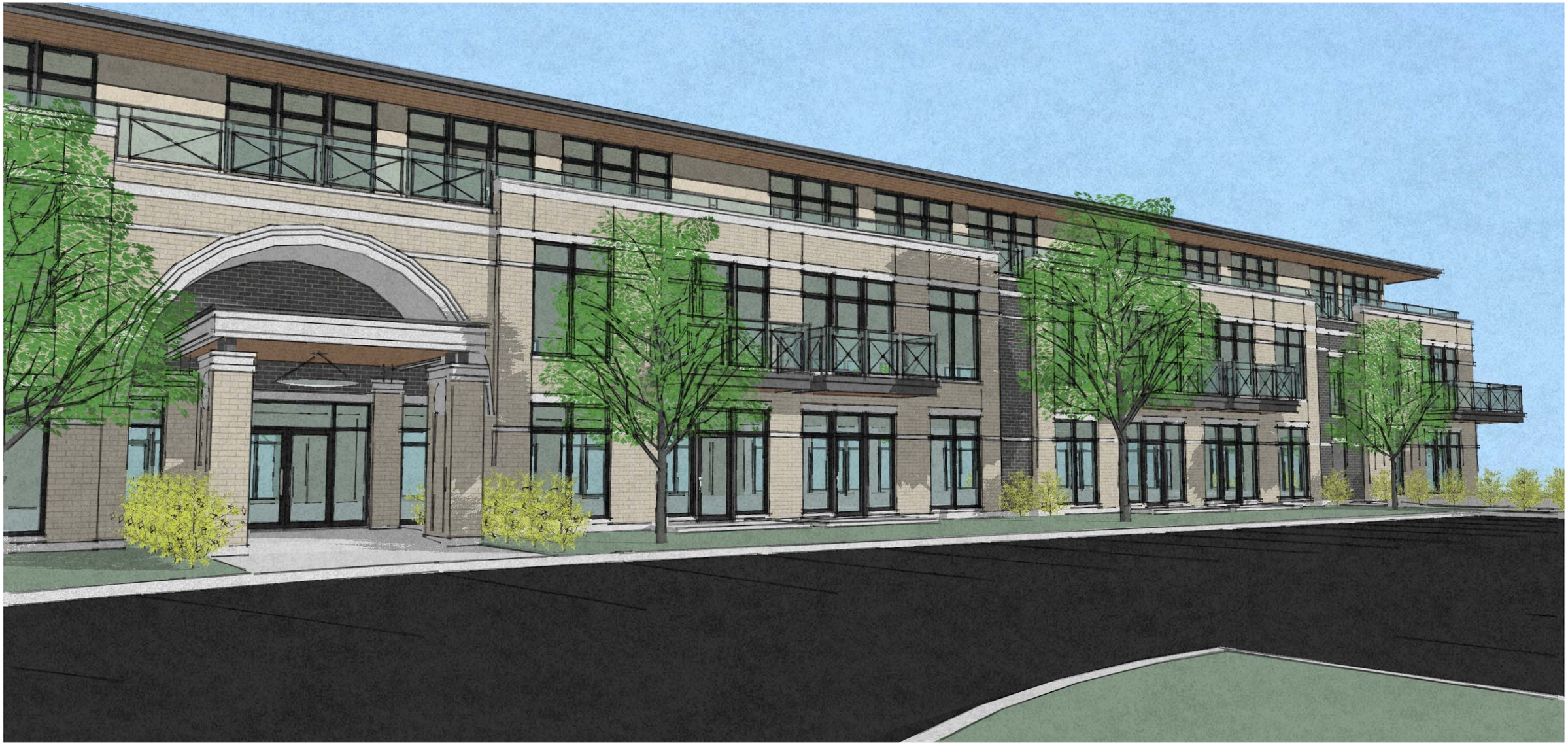


Proposed 44-Unit Apartment Building • Almonte, ON

October 31st, 2019

Perspective View

Peter Mansfield Architect
122 Bridge Street,
Almonte, Ontario, K0A 1A0
www.pmansfieldarchitect.ca



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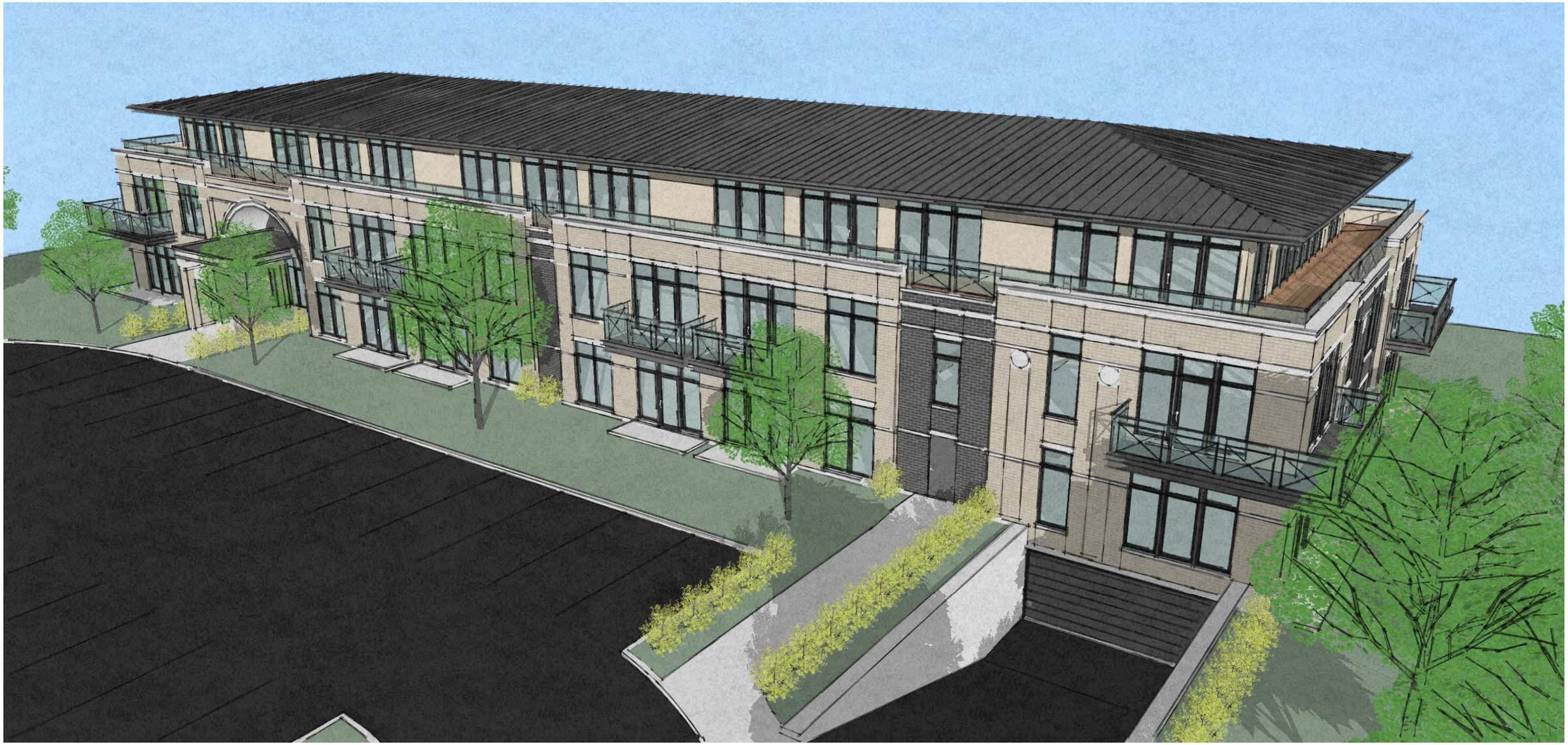

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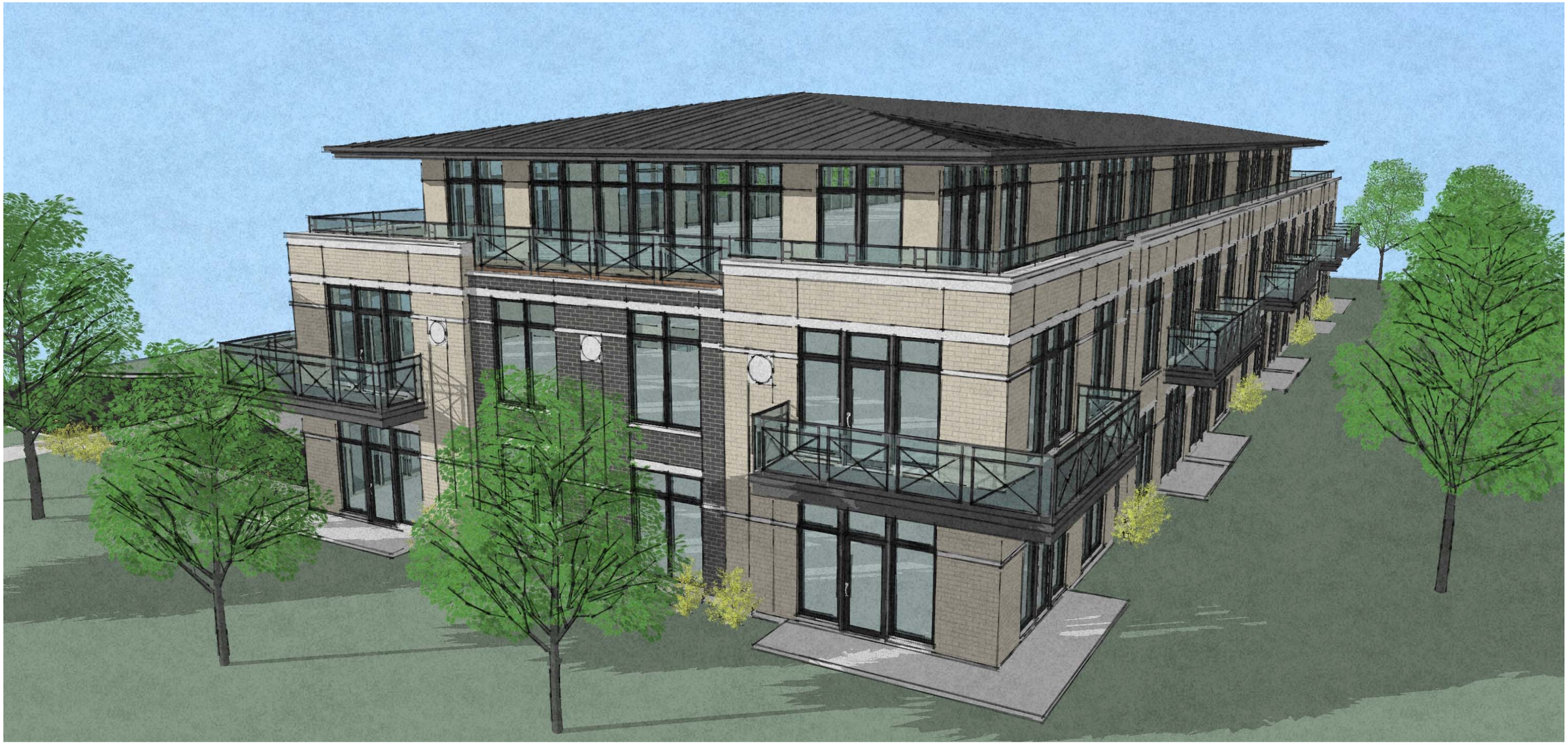

Proposed 44-Unit Apartment Building • Almonte, ON

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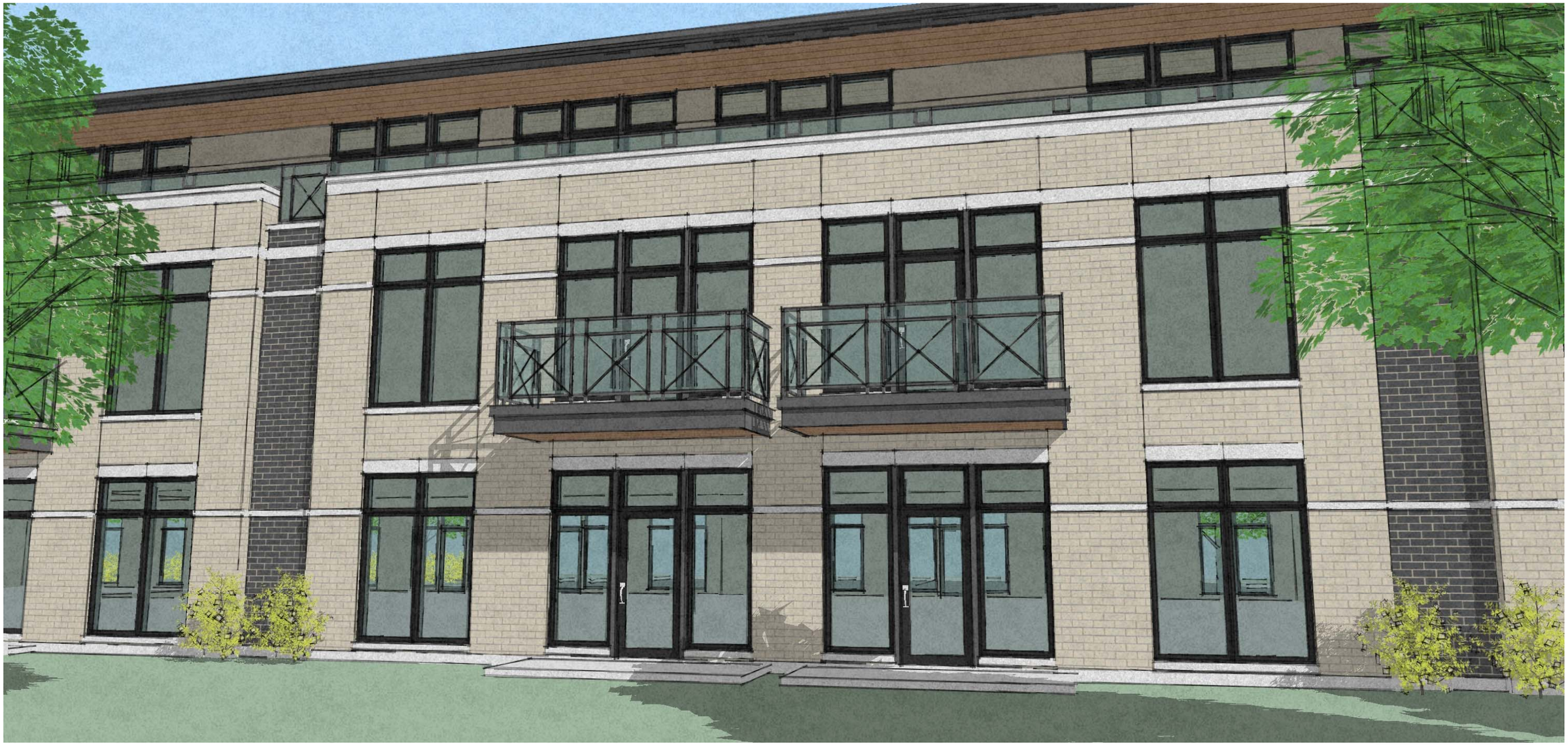
Almonte, Ontario, K0A 1A0
www.pmansfieldarchitect.ca

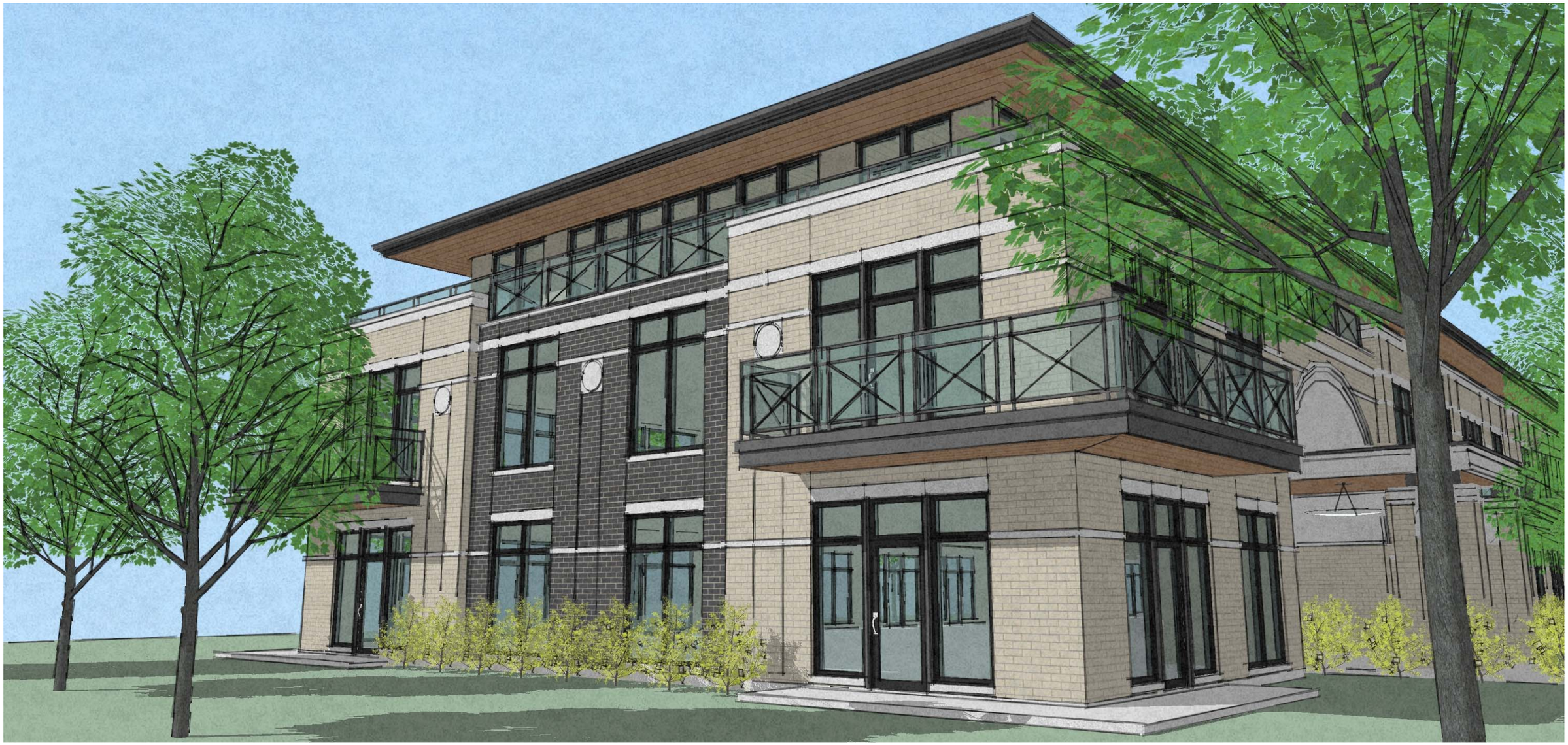


Proposed 44-Unit Apartment Building • Almonte, ON

October 31st, 2019

Perspective View

Peter Mansfield Architect
122 Bridge Street,
Almonte, Ontario, K0A 1A0
www.pmansfieldarchitect.ca



Proposed 44-Unit Apartment Building • Almonte, ON

October 31st, 2019

Perspective View

Peter Mansfield Architect
122 Bridge Street,
Almonte, Ontario, K0A 1A0
www.pmansfieldarchitect.ca

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS

STAFF REPORT

DATE: March 3, 2020

TO: Committee of the Whole

FROM: Jeanne Harfield, Clerk

SUBJECT: **Addition to the Municipality's Names Reserve List – Herb Pragnell**

RECOMMENDATION:

THAT the Committee of the Whole recommend that Council approve the addition of "Herb Pragnell" to the Municipality's Names Reserve List for consideration for future naming of a street within the municipality.

BACKGROUND:

An application to commemorate Herb Pragnell, veteran and former Councillor, was submitted by the Mississippi Valley Textile Museum. The proposal would place the family name on the Municipality's Names Reserve List to be used to name a future street in Mississippi Mills.

DISCUSSION:

In accordance with the Municipal Facility and Asset Naming Policy, correspondence was sent to Public Works, Planning, Fire, Police, Ambulance, and Lanark County on February 12, 2020 for comment on suitability and review of proposed external civic names for emergency management and response purposes. No concerns were raised as a result of agency and technical circulation.

The application meets the following criteria set out in the policy:

6.1.b A person / organization that demonstrates excellence, courage or exceptional dedication to service in ways that bring special credit to the Municipality of Mississippi Mills, the Province of Ontario and / or Canada.

6.1.c. A person / organization that volunteers and gives extraordinary help or care to individuals, families or groups, or supports community services or humanitarian causes. The quality of the contribution shall be considered along with the length of service by the individual/organization.

6.1.d. A person who risks his or her life to save or protect others above and beyond expectations.

6.1.e. A person who performs a deed or activity performed in an outstanding professional manner or of an uncommonly high standard that brings considerable benefit or honour to the Municipality.

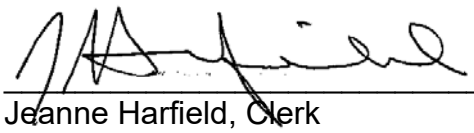
FINANCIAL IMPLICATIONS:

There are no financial implications associated with this report.

SUMMARY:

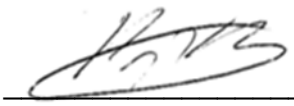
It is recommended that the naming proposal to add “Herb Pragnell” to the Municipality’s Names Reserve List be approved.

Respectfully submitted,



Jeanne Harfield, Clerk

Reviewed by,



Ken Kelly, CAO

ATTACHMENTS:

1. Herb Pragnell naming application and supporting documentation

Municipality of Mississippi Mills
3131 Old Perth Road
PO Box 400
Almonte ON K0A 1A0

Mississippi Mills

Municipal Facility & Asset Naming
APPLICATION FORM

A. NOMINATOR'S INFORMATION (*A COMMEMORATIVE NAME MAY BE USED ONLY ONCE IN THE MUNICIPALITY OF MISSISSIPPI MILLS–SUBSEQUENT REQUESTS MAY BE DENIED)

Name (Individual or Organization): Mississippi Valley Textile Museum

Mailing Address: PO Box 784, 3 Rosamond St E Almonte, ON

Telephone: [redacted] [redacted]
Home Work

E-mail: [redacted]

Affiliation to Nominee:

B. NOMINEE'S INFORMATION (NAME TO BE COMMEMORATED)

Name: Herb. Pragnell

Mailing Address: NA.

Date of Birth: January 28, 1922

Telephone: NA NA
Home Work

E-mail: NA

C. NOMINATOR'S INFORMATION (*A COMMEMORATIVE NAME MAY BE USED ONLY ONCE IN THE MUNICIPALITY OF MISSISSIPPI MILLS – SUBSEQUENT REQUESTS MAY BE DENIED)

Name (Individual or Organization): Mississippi Valley Textile Museum.

D. Nominee's Information (Name to be Commemorated)

Name: Herb Pragnell

E. Applicable Criteria (SELECT ONE)

- ☐ The nominee is an original inhabitant/family of the Mississippi Mills area having historical significance
- ☑ The nominated person/organization demonstrates excellence, courage or exceptional dedication to service in ways that bring special credit to the Municipality of Mississippi Mills, the Province of Ontario and / or Canada;
- ☑ The nominated person/organization volunteers and ~~gives~~ gave extraordinary help or care to individuals, families or groups, or supports community services or humanitarian causes. The quality of the contribution should be considered along with the length of service by the individual;
- ☑ The nominated individual risks his or her life to save or protect others above and beyond expectations;
- ☑ The nominated individual achieves a deed or activity performed in an outstanding professional manner or of an uncommonly high standard that brings considerable benefit or honour to the Municipality;
- ☐ The nominated person/organization has made a significant contribution towards a facility or asset owned by the Municipality;
- ☐ The nominated person/organization has a direct relationship with the facility or asset to be named;
- ☐ The nominated person is an employee, including an employee of a corporation which is owned by the Municipality in whole or part or a member of Council who is deceased, has retired or is no longer active in their field
- ☐ The nominated name reflects an historical event significant to Mississippi Mills

F. RATIONALE FOR NOMINATION AND ATTACHED BACKGROUND INFORMATION RELATED TO THE CRITERION CHOSEN, WHICH SUBSTANTIATES ALL CLAIMS MADE: INCLUDE ITEMS SUCH AS BUT NOT LIMITED TO COPIES OF NEWSPAPER ARTICLES, CERTIFICATES, AWARDS, LETTERS OF SUPPORT OR COMMENDATION, SERVICE RECORDS, PICTURES.

Please note all information provided below and/or attached to this Application Form will form part of the Naming Application Form and will therefore be released to the public in any public notices/advertisements produced, public Agenda and Minutes, Committee discussions/meetings and Reports which may go forward to Council.

G. DO YOU WISH THE NAME TO BE USED FOR A SPECIFIC:

- ☐ Park
- ☐ Facility
- ☑ Road
- ☐ Asset within a Facility
- ☐ Other
- ☐ Current Identification, Address or Location Information:

H. ADDITIONAL INFORMATION: (ADD INFORMATION AS NEEDED)

I. Consent to the Release of Information Provided in Sections C- J in Whole or in Part

Consent

I / We consent to the release of the information contained in this application in Sections C-H to members of the public for the purposes of allowing Council to receive public input into the proposed naming.

MFIPPA Statement
The information collected on this form will be used as part of the Municipal Facility and Asset Naming Process.

Personal information on the form, attached to the form or subsequently submitted to be included or attached to the Application Form, and all subsequent information collected as a result of the research and the staff investigation of the person's information, including but not limited to information found on websites, in local archived materials, in newspapers articles, or as a result of a public consultation process, will be used by staff and will be made available to the members of the public, and councillors—except the information collected in Sections A and B .

Nominator's Signature

Feb 4, 2020

Date

Nominee's Signature[1]

Date

[1] The nominee or a representative on their behalf (next of kin, solicitor, notary public, etc.) must provide consent to this nomination.

FEBRUARY 2020

TO: Town of Mississippi Mills

FROM: The Mississippi Valley Textile Museum

RE: Street naming application - Herbert Francis "Pragnell"

Strong communities are formed through the vision, and action, of people both past and present who are deserving of recognition. It is with this in mind, and on the benchmark celebration of our 35th year of incorporation, that the Mississippi Valley Textile Museum proposes that Mississippi Mills adopt the name Pragnell as a street name. We wish to honour Herbert Francis Pragnell as an individual whose actions impacted so many and also gave rise to the establishment of this museum.

A COMMUNITY MOVER AND SHAKER

Herbert Francis "Herb" Pragnell, a former municipal councillor and once named an Almonte Citizen of the year, was a dynamo for his community and country.

Having grown up in Portage la Prairie, Manitoba, Herb and his family moved to this area in 1959 and put down strong roots. Prior to that, Herb was a member of the Wartime RMC class of 1940-1942, served overseas with the Royal Canadian Engineers in England, and then with the Princess Patricia's Canadian Light Infantry (PPCLI) in Italy and during the liberation of Holland. Post-war, Herb completed his Civil Engineering degree at McGill University and spent most of his career with the Defense Research Board in Ottawa.

Over the years in Almonte, he would contribute his skills and play a number of diverse roles as he worked tirelessly for his community on council, in the Lion's Club, in the Almonte branch of the Royal Canadian Legion, as well as with many volunteer groups.

Here at the **Mississippi Valley Textile Museum**, we know that without his efforts as an amateur historian and while on the Almonte Town Council in our 1980 Centennial Year, the museum may not have come into existence. Herb spearheaded a committee to recognize Almonte's history as the woollen manufacturing centre of Canada with roots as far back as the 1850s. The committee members included Herb Pragnell along with Stan Morton, Jack Boyce, Jack Collie, John Dunn, and Gerry Wheatley. Together they would explore the creation of a museum which ultimately became the institution now housed in the Rosamond Woollen Mill. That exploration began with Commonwealth Historic Resource Management being appointed in 1982 to carry out a feasibility study under the direction of Dr. Harold Kalman. An intensive study and tour of other textile mills and museums in New England would include Herb along with, Gerry Wheatley, Jack Collie, Dr. Kalman and three reps from the National Capital Commission.

Herb's hands-on support of the museum would continue through the years as a museum volunteer from 1982 to 2014, while remaining a significant philanthropic supporter and advocate for the museum.

Formally recognized as a Canadian National Historic Site, the museum now marks 35 years of sharing our place in Canadian and local history with the public.

The engaged character of Herb Pragnell was also evident in other ways in the community and here are a few to consider in support of this street-naming proposal.

- As an active member of the Almonte Lions Club, Herb was on the committee that created the annual R. Tait McKenzie Scholarship Awards in 1967. To this day, awards are annually given to students of ADHS in recognition of their contributions to school life, academic excellence, volunteer service and being leaders in the community.
- His passion for preserving history was seen in his involvement with the North Lanark Historical Society when, as chair of a committee, he worked tirelessly to have a local monument established for the Almonte Train Wreck of 1942 when 37 lives were lost and which he had witnessed. The memorial was unveiled in 2001.
- A proud member of the Almonte Royal Canadian Legion, he advocated and worked for the tree-lined Veteran's Walk which opened in 2007 to honour local veterans.

Herb died in 2014 at the venerable age of 92. His influence is greatly appreciated here at the Mississippi Valley Textile Museum, and in the community.

We stand on the shoulders of those who went before us and we hope that Mississippi Mills agrees by accepting our proposal to name a street after Herbert Francis Pragnell.

ADDENDUM: PERSONAL SNAPSHOT - A VETERAN SUPPORTING HOME AND COUNTRY

Herb Pragnell had a distinguished service record. We are fortunate to have his "voice" through a military transcript where his pride in playing a hands-on role for Canada is evident.

I'm Herb Pragnell. I served in the army engineers and the infantry during the Second World War and for a year or two after. Well, I was fortunate when I finished high school in Portage la Prairie, Manitoba, they offered a posting with the RMC, the Royal Military College, who were running what they called a war course for two years. And I attended that from 1940 to June of 1942. And I studied engineering as well as other military work. And then after completion I was commissioned in the engineers and we shipped to Chilliwack, B.C. for training. And we all got assignments to work in the camp for a short while until we could join a draft. But the engineers had a rule that you had to be 21 if you're an officer before you could go overseas.

I was assigned to run the newly opened rifle range in Chilliwack where it rains all the time in the winter, and I felt sorry for the men because the ground where they had to lie down and fire on was just mud and nothing had been ready. It was just bulldozed up. So anyway, we were there all winter and really sorry for ourselves and when it came March, I was finally old enough and I was put on a draft overseas.

And I arrived in Britain and one of the first jobs I got was to go out and go to some old barracks in Aldershot and prepare them for an incoming draft because there wasn't any room in the engineering camp at the time.

Well, it wasn't much field work as such. This was a reinforcement centre; it wasn't really a training centre. So, the only training they gave us really was vehicle training, a certain amount of drill and motorcycles. The issued vehicle for engineering officers was a motorcycle. If you were in charge of your section, you had eight trucks, up to near 60 men and a motorcycle. At any rate, I thought they were still fighting the First World War because officers and the engineers at

this time, with all these vehicles and people, you had a lot of paperwork to do and you had to be in touch with people on the radio all the time and you couldn't do anything on a motorcycle, really. So, after they'd had a few experiences, they eventually issued us with a Jeep.

I'm still in the 2nd Div., but I moved up to run their waterproofing school as a punishment, I guess. But actually, it was quite interesting. This is where we, where the vehicle drivers we taught them how to waterproof their trucks for the landings in Europe. And they used to seal them all up with this muck-like paste and put pipe fence on and then we'd drive down to Brighton [England] and go into these water pools and submerge the vehicles up to a certain level. And if they got flooded, well, the guy failed and they hauled him back and he had to stay and do it over again. That ran until not long before D-Day, in which case we shipped those down. And I was back in the holding unit when D-Day arrived, unfortunately. So there I sat, along with about 70 or 80 other engineering officers, all of whom they expected very high casualties, but they didn't have any, the same number they expected of the engineering officers. High casualties of course were, as usual, in the infantry.

So not long after D-Day, maybe a month or two, we were all called in and invited to join the infantry, which I was happy to do. I had picked the PPCLI [Princess Patricia's Canadian Light Infantry], South Saskatchewan and another western regiment, because I'm a Westerner, and when the time came, these officers said, "Well, the average life of a subaltern with the South Saskatchewan Regiment right now is five days." Which was not very encouraging. That was they were wounded or killed, usually they were wounded anyway, most of them within five days.

Anyway, as we were getting ready to break up and move out, they came in with a stop order and they shipped me off to Italy. I finally got to the PPCLI in January [1945] and would you believe, after being assigned to a platoon, getting ready to move, I was once more hauled out, I must have been too well trained I guess, and pulled in and put in as a junior member on a court martial. And it was around the Gothic Line that I joined the 1st Div., the western brigade [2nd Canadian Infantry Brigade]. Anyway, in the spring, we were, as you know, Canadian Army moved up to Northern Europe, moved the entire Canadian Army, what was left of them. I just want you to know that the first platoon I took over in Italy, there were only seven men instead of 30 odd. So they sure needed reinforcements.

We went up and we arrived in the Ijssel River and we were getting ready to assemble in the bush there, the forest, getting ready to go out and cross this river in these [LVT-2 Water] Buffalo, which are like an open topped tank that floats. Great machine, they didn't have them in Italy, but they had them in northern Europe. So, we were there and in the middle of this, in the middle of the night, it seemed in the middle of the night at the time, a messenger arrived for me to report to headquarters. So, I said goodbye to my platoon and went up to headquarters, and I was hastily introduced to the pioneer platoon and given new orders. And I had a few minutes to assemble what they said was a crew that could clear mines in the far bank.

From then on, the regiment started pursuing the Germans. I was usually on a patrol and eventually in a Bren Gun Carrier [a light armoured track vehicle]. Usually at the front ostensibly checking for mines, which is pretty hard to do at the speeds they we were traveling, but you could only identify a disturbance. Fortunately, the Germans were disorganized at this time and things went fairly well for our regiment.

It was on May the 8th, and once again, I'm up front there, in my Bren Gun Carrier, checking for mines. We pull into the city and there is not a soul showing on the streets. We got orders, came

up with a DR [Disptach Rider] to stop, we stopped and waited. And all of a sudden, these people started appearing and eventually we were mobbed. And that's how it went all through Amsterdam, a delightful group of people. And the only thing they wanted, we thought it was food, we put guards on all the kitchens, and I'd issued barbed wire and, but all they wanted was cigarettes. And the poor sods had been deprived, I guess.

Well anyway, this liberation went beautifully well, really, and the people were very happy to see us. And we have been back several times and they're always happy to see us.

Thank-you Herb Pragnell.

County Council Report
March 3, 2020
Submitted by: Mayor Lowry

County Meeting - February 19
Council Decisions:

1) Community Homelessness Prevention Initiative funding allocation:
   $1,307, 907 (2020-2021)

2) Community Housing Renewal Strategy
   - Canada-Ontario Community Housing Initiative funding allocation:
     - $159,973(2020-21) and $239,897 (2021-2022)
   - Ontario Priorities Housing Initiative funding allocation:
     - $278,300 (2020-2021) and $433,300 (2021-2022)

3) Approved $10,000 provided to United Way East Ontario from 2019 surplus to support the Planet Youth Initiative

4) OVRT Promotions Committee Appointments:
   - Rick Minnille appointed for Mississippi Mills rep

Public Works Committee – February 19

APPROVED: Award for Tender & Proposals Including:

- Contract #PW-C-04-2020-20-E0, Road Rehabilitation of County Road #17 (Appleton Side Road), Thomas Cavanagh Construction Limited, $957,473.48;

- Contract #PW-C-06-2020-20-E0, Road Rehabilitation of County Road #9 (Tatlock Road), Arnott Brothers Construction Ltd. $815,177.00;

- Contract #PW-C-09-2020-20-E0, Maclan Bridge Rehabilitation, DW Building Restoration Services Inc., $188,002.46;

Economic Development Committee – February 19

- APPROVED: Red-Line Revision Request Mill Run Subdivision Phase 4b
  "THAT, Report #PD-04-2020, Red-line Revisions - Mill Run Draft Subdivision Plan - Phase 4B, File No. 09-T- 15002, be approved."

- DEFERRED: Ottawa Valley Recreational Trail Designated Wilderness and Accessible Sections
  “THAT, the Economic Development Committee recommends to County Council to accept the designated Accessible and Wilderness sections along the OVRT.

Mississippi Valley Conservation Authority

Jeanne Harfield
The Town of Mississippi Mills
3131 Old Perth Rd Box 400, Almonte, ON K0A 1A0

Dear Ms. Harfield, February 20, 2020

As a member of the Authority, please find below highlights from the recent Annual General Meeting of the Mississippi Valley Conservation Authority for distribution to Council. Complete minutes for the meeting will be circulated following their approval by the Board in March.

Elections

City of Ottawa member Janet Mason was acclaimed as Board Chair. This is her second term as Chair and fifth year sitting on the Board of Directors. City of Ottawa member Glen Gower was duly elected as Vice Chair. This will be his first term in this role and second year on the Board.

Budget

The Board of Directors approved the 2020 budget based on a municipal levy increase of 3.5% for a total of $5,041,047 including a capital program valued at over $1.26 million.

Annual Report

General Manager Sally McIntyre presented the 2019 annual report.

Highlights:

- Experienced record flooding across the watershed
- Issued double the annual average number of permits (292)
- Hosted nearly 40,000 visitors to our conservation areas
- Delivered curriculum-based outdoor education programs to nearly 7000 students
- Published three backgrounders for the Mississippi River Watershed Plan
- Planted 815 trees and shrubs across the watershed

Watershed Conditions & Outlook

Water Resources Technologist Jennifer North provided an update on conditions across the watershed: January rains elevated water levels in the upper watershed and put Crotch Lake at the top of its winter settings. With water overtopping the weir, draw down of Crotch Lake had to be delayed. The lake is now being aggressively lowered to achieve the pre-freshet target by mid-March. As excess water is released, flows downstream of Crotch Lake will remain high for the balance of the winter. Based on current forecasts, no flooding is expected although Dalhousie Lake may increase 10-20 cm.

INFORMATION LIST #05-20
March 3, 2020

The following is a list of information items received as of February 25, 2020.

Item #	Date	Originator	* Subject	Page #
1	Feb 13, 2020	Ministry of Natural Resources and Forestry	Proposed regulatory changes under the Aggregate Resources Act	162
2	Feb 25, 2020	Almonte General Hospital	Media Release re: Retirement of Ed McPherson, Chief of the Lanark County Paramedic Service	164

* Click on the subject name to go to the document

Info List #05-20
Item # 1

Jeanne Harfield

From: Aggregates (MNRF) <Aggregates@ontario.ca>
Sent: February 13, 2020 9:14 AM
To: [redacted]
Cc: [redacted]
Subject: Proposed regulatory changes under the Aggregate Resources Act
Attachments: ARA-RegER Posting -- Municipality Notification-12Feb2020_French.pdf

Dear Ontario Heads of Council and Clerks,

The Ministry of Natural Resources and Forestry recognizes the critical role Ontario's municipalities play in the lives of Ontarians. We value our strong collaborative partnership with municipalities and the associations that represent their interests.

We want to advise you that the Ministry of Natural Resources and Forestry is proposing changes to the way extraction of aggregate resources are regulated in Ontario, and we are inviting your input on the changes proposed.

The Ministry has gathered perspectives from, industry, municipalities, Indigenous communities, members of the public, and other stakeholders. These proposed changes promote economic growth within the aggregate industry while also maintaining strong protection of the environment and addressing community impacts.

The key areas being proposed for change are summarized below for your convenience. However, we would encourage you to read the details of the proposed regulatory changes which can be found on the Environmental Registry notice# **019-1303** *Proposed amendments to Ontario Regulation 244/97 and the Aggregate Resources of Ontario Provincial Standards under the ARA* located here.

The posting notice can also be viewed by searching for notice#**019-1303** at the following web link: **www.ero.ontario.ca**

We encourage you to provide feedback through the Environmental Registry process.

If you have any questions about the proposed changes, please call Rebecca Zeran at (705) 749-8422.

Kind Regards,

Jennifer Keyes
Director, Natural Resources Conservation Policy Branch
Ministry of Natural Resources and Forestry

Proposed regulatory changes include:
For new pits and quarries:

- enhancing the information required to be included in summary statements and technical reports at the time of application
- improving flexibility in how some standard site plan requirements can be implemented and modernizing how site plans are created

- creating better consistency of site plan requirements between private and Crown land and better alignment with other policy frameworks
- updating the list of qualified professionals who can prepare Class A site plans
- updating the required conditions that must be attached to a newly issued licence or permit
- adjusting notification and consultation timeframes for new pit and quarry applications
- changing and clarifying some aspects of the required notification process for new applications
- updating the objection process to clarify the process
- updating which agencies are to be circulated new pit and quarry applications for comment

For existing pits and quarries:

- making some requirements related to dust and blasting apply to all existing and new pits and quarries (requirements which were previously only applied to new applications)
- updating and enhancing some operating requirements that apply to all pits and quarries, including new requirements related to dust management and storage of recycled aggregate materials
- providing consistency on compliance reporting requirements, while reducing burdens for inactive sites
- enhancing reporting on rehabilitation by requiring more context and detail on where, when and how rehabilitation is or has been undertaken
- clarifying application requirements for site plan amendments
- outlining requirements for amendment applications to expand an existing site into an adjacent road allowance
- outlining requirements for amendment applications to expand an existing site below the water table
- setting out eligibility criteria and requirements to allow operators to self-file changes to existing site plans for some routine activities without requiring approval from the ministry (subject to conditions set out in regulation)

Allowing minor extraction for personal or farm use:

- outlining eligibility and operating requirements in order for some excavation activities to be exempted from needing a licence (i.e., if rules set in regulation are followed). This would only be for personal use (max. of 300 cubic meters) or farm use (max. 1,000 cubic meters)

MEDIA RELEASE

February 25, 2020

SALUTING A TRUE LEADER

Ed McPherson, Chief of the Lanark County Paramedic Service (LCPS), is retiring on February 29th. He leaves a legacy that includes a strong commitment to high quality care for patients in Lanark County, to progressive enhancement of clinical skills within the Service and to the welfare and well-being of our paramedics.

Originally a member of the ambulance service in Perth, Chief McPherson also held various training and education positions with the Ministry of Health Emergency Health Services Branch (Ambulance) over a 20-year period. He was promoted to Deputy Chief in May 2005 and became Chief in April 2013.

"Under Ed's leadership, LCPS has introduced Advanced Care Paramedicine and Community Paramedicine, implemented a patient satisfaction survey and developed a comprehensive program to support mental health amongst our paramedics," notes Mary Wilson Trider, President and CEO. "He should be very proud of the organization he has built. We wish him well on his retirement."

Lanark County Warden Brian Campbell agrees: "Lanark County Council congratulates Chief McPherson on his retirement and thanks him for his outstanding service to the people of Lanark County. Under his leadership he oversaw the implementation of a myriad of improvements that make LCPS second to none."

One of Ed's greatest achievements was being awarded the Major-General Richard Rhomer Commendation, where he was recognized for "having brought significant and meritorious credit to the profession of paramedicine in the Province of Ontario".

Lanark County Paramedic Service (LCPS) is operated by Almonte General Hospital under contract with the County of Lanark. LCPS is the sole provider of emergency medical response within the County of Lanark – a service district encompassing 3,074 square kilometres with a population of 57,000 people.

-30-

Media Contact:
Jane Adams
Communications Lead
Almonte General Hospital
613-729-4864
jane@brainstorm.nu

Cutline: Deputy Chief Travis Mellema with Chief Ed McPherson, Lanark County Paramedic Service

COUNCIL CALENDAR

March 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 6pm Council	4	5 10am Sp COW (Strat Plan)	6	7
8	9	10	11	12	13	14
15	16	17 6pm Council	18 5:30pm CoA	19 9am Fin & Pol	20	21
22	23	24 8am CEDC 10am Sp Council (training)	25 5pm Heritage 3pm Accessibility	26	27 2:30pm Library	28
29	30 2:30pm Public Works	31 3pm Parks & Rec				

Municipality of Mississippi Mills
PENDING LIST
March 3, 2020

Title	Department	Comments/Status	Report to Council (Date)
Community Official Plan (COP) Registry	Planning	Quarterly written updates	Every Quarter
Strategic Plan	CAO	Ongoing - Final Report to Council May 2020	Q2 2020
Update Debt Management Policy	Treasurer	Referred to staf at Dec. 17, 2019 Council meeting. Likely to be brought forward with Long Term Financial Plan	Q4 2020
Micro surfacing Gale St.	Public Works	Deferred from 2020 Budget, to be brought forward to 2021 Budget consideration	Q4 2020
Full Time Deputy Fire Chief	Fire Dept.	Deferred from 2020 Budget, to be brought forward to 2021 Budget consideration	Q4 2020