CORPORATION OF THE CITY OF
CLARENCE-ROCKLAND
REGULAR MEETING

June 3, 2019, 6:00 pm
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

Pages

1. Opening of the meeting

   The meeting is scheduled to begin at 6:00 pm in order to allow for a closed session.

   The portion of the meeting that is open to the public begins at 7:15 pm.

2. Prayer 1

3. Adoption of the agenda

4. Disclosure of pecuniary interests 3

5. Closed Meeting

   5.1 Adoption of the Closed Meeting Minutes of May 22, 2019

   5.2 Flood Management Payment

   5.3 Human Resources matter

   5.4 Hiring - Manager of operations (report to follow)

6. Closed Meeting report

7. Announcements

8. Comment/Question Period

Note: Members of the public may come forward to the podium and after seeking permission from the Presiding Officer, shall state their name and direct their question/comment on any matter which is related to any item included in this agenda to the Presiding Officer.

The maximum time allowed in all circumstances for a question/comment shall be three (3) minutes per person per meeting. There shall be a maximum of 30 minutes dedicated to the question/comment period. Any unasked questions/comments due to the time restriction may be submitted in writing to the Clerk.

At no time shall this question period be taken by members of the audience to make speeches or accusations.

9. Council Members' Items

9.1 Member's resolution presented by Councillor Mario Zanth and seconded by Councillor Don Bouchard asking the Provincial and Federal governments to establish a committee regarding floods

9.2 Member's resolution presented by Councillor André J. Lalonde and seconded by Councillor Don Bouchard in regard to waiving landfill site fees for residents affected by the floods

9.3 Member's resolution presented by Deputy Mayor Carl Grimard and seconded by Councillor Christian Simard in regard to waiving fees related to applications for demolition permits

10. Consent Items

Note: All items listed in this section of the agenda will be subject to approval under one non-debatable, non-amendable motion. Should any member of Council wish to hold a discussion or engage in debate on one of these items, he or she is required to ask for the item to be considered separately before a vote is taken.

10.1 Adoption of the minutes of the following meetings:

a. Regular meeting - May 22, 2019 5

b. Committee of the Whole - May 22, 2019 23

10.2 Receipt of the minutes of the following meetings:

a. Heritage Advisory Committee - August 21, 2018 39

b. Heritage Advisory Committee - March 28, 2019 47

c. Committee of Adjustment - March 27, 2019 55

d. Committee of Adjustment - April 24, 2019 63

10.3 The following recommendations from Committee of the Whole of May 22, 2019

a. Resolution to authorize the Rockland Optimist Club to install a unilingual francophone permanent ground sign on municipal property 79

b. Resolution to raise a pride flag during the third week of July 89

c. Resolution to amend a condition of Draft Approval of Brigil and Stage 5 Morris Village 91

d. Resolution to transfer of $21,141 from the Federal gas tax funds to the Clarence Creek Baseball field construction project 355

e. Resolution to remove the “Clarence Creek Server Room Fire Extinguishing System” project from the 2019 Capital Projects list to add a project for improvements to the security system 363

10.4 Resolution to declare the Ottawa River Festival as an event of municipal significance

11. Committee/Staff Reports

11.1 National Disaster Resilience Profile Project Proposal 367

11.2 Grant application to the Ministry for Seniors and Accessibility’s Seniors Community Grant Program 473

11.3 Addition of a training fire hydrant to the fire training grounds in Bourget 475

12. By-laws

Note: All items listed in this section of the agenda will be subject to approval under one non-debatable, non-amendable motion. Should any member of Council wish to hold a discussion or engage in debate on one of these By-laws, he or she is required to ask for the item to be considered separately before a vote is taken.

12.1 2019-50 - Condominium conversion – 535-545 Russell Road, Cheney 483

12.2 2019-60 - Remuneration of Council members 489

12.3 2019-61 - Amendment to Signs By-law 2015-160 491

13. Confirmatory By-law 493

14. Adjournment

CORPORATION DE LA CITÉ DE
CLARENCE-ROCKLAND
RÉUNION RÉGULIÈRE

le 3 juin 2019, 18 h 00
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

Pages

1. **Ouverture de la réunion**
   La réunion débute à 18h afin de permettre une session à huis clos.

   La section de la réunion ouverte au public débute à 19h15.

2. **Prière** 1

3. **Adoption de l'ordre du jour**

4. **Déclarations d'intérêts pécuniaires** 3

5. **Réunion à huis clos**

   5.1 **Adoption du procès-verbal de la réunion à huis clos du 22 mai 2019**

   5.2 **Paiement de gestionnaires suite aux inondations**

   5.3 **Dossier des ressources humaines**

   5.4 **Embauche - Gestionnaire des opérations (rapport à venir)**

6. **Rapport de la réunion à huis clos**

7. **Annonces**

8. Période de Questions/Commentaires

Note: Les membres du public sont invités à se rendre au podium et après avoir reçu la permission du président de l'assemblée, doivent se nommer et adresser leur question et/ou commentaire sur tout sujet qui est relié à n'importe quel item qui figure à l'ordre du jour au président de réunion.
Le temps maximal accordé pour une question/commentaire dans toutes circonstances est de trois (3) minutes par personne par réunion. Il y aura un maximum de 30 minutes consacrés à la période de questions/ commentaires. Toutes questions et/ou commentaires qui n'ont pas été adressés par faute de temps peuvent être soumis par écrit à la greffière.
En aucun cas, cette période de questions/ commentaires ne peut être utilisée par les membres du public pour faire des discours ou porter des accusations.

9. Items des membres du Conseil

9.1 Résolution de membre présentée par le conseiller Mario Zanth et appuyée par le conseiller Don Bouchard demandant aux gouvernement provincial et fédéral de créer un comité relativement aux inondations

9.2 Résolution de membre présentée par le conseiller André J. Lalonde et appuyée par le conseiller Don Bouchard visant à pourvoir une exemption aux frais au dépotoir pour les residents affectés par les inondations

9.3 Résolution de membre présentée par le maire suppléant Carl Grimard et appuyée par le conseiller Christian Simard visant à pourvoir une exemption aux frais de demande de permis de démolition

10. Items par consentement

Note : Les items énumérés dans cette section de l'ordre du jour seront sujet à être considéré pour approbation sous une résolution qui n'est pas sujette au débat et non-modifiable. Si un membre du conseil désire engager une discussion ou un débat par rapport à un de ces items, il/elle doit demander que l'item soit considéré séparément avant que le vote ait lieu.

10.1 Adoption des procès-verbaux des réunions suivantes:

a. Réunion régulière - 22 mai 2019 5

b. Comité plénier - 22 mai 2019 23

10.2 Réception des procès-verbaux des réunions suivantes:

a. Comité consultatif du patrimoine - 21 août 2018 39

b. Comité consultatif du patrimoine - 28 mars 2019 47

c. Comité de dérogation - 27 mars 2019 55

d. Comité de dérogation - 24 avril 2019 63

10.3 Les recommandations suivantes du comité plénier du 22 mai 2019

a. Résolution pour autoriser le Club Optimiste de Rockland d'installer une enseigne permanente sur le sol, unilingue francophone, sur un terrain municipal 79

b. Résolution pour lever le drapeau de la fierté durant la troisième semaine de juillet 89

c. Résolution pour modifier une condition de l'ébauche d'approbation de Brigil et de l'étape 5 du Village Morris 91

d. Résolution pour transférer 21 141$ des fonds de la taxe sur l'essence vers le budget de construction du terrain de balle de Clarence Creek 355

e. Résolution pour retirer le projet de "Système d'extinction des feux pour la salle de serveur de l'hôtel de ville de Clarence Creek" de la liste des projets capitaux 2019 et ajouter le projet de mise au point des systèmes de sécurité 363

10.4 Résolution pour déclarer le Festival de la rivière des Outaouais un évenement d'envergure municipale

11. Rapports des Comités/Services

11.1 Proposition pour le projet de profil national de résilience 367

11.2 Demande au programme de subvention aux projets communautaires pour l'inclusion des aînés 473

11.3 Ajout d'une borne fontaine de formation pour le nouveau terrain d'entraînement à Bourget 475

12. Règlements municipaux

Les règlements énumérés dans cette section de l'ordre du jour seront sujet à être considéré pour approbation sous une résolution qui n'est pas sujette au débat et non-modifiable. Si un membre du conseil désire engager une discussion ou un débat par rapport à un de ces règlements, il/elle doit demander que l'item soit considéré séparément avant que le vote ait lieu.

12.1 2019-50 - Conversion de condominiums – 535-545 chemin Russell, Cheney 483

12.2 2019-60 - Rémunération des membres du conseil 489

12.3 2019-61 - Amendement au règlement sur les enseignes 2015-160 491

13. Règlement de confirmation 493

14. Ajournement

PRIÈRE D'OUVERTURE / OPENING PRAYOR CITÉ DE / CITY OF CLARENCE-ROCKLAND

Notre Père

Les personnes présentes dans cette salle ont des opinions divergentes, des modes d'expressions variés, des façons différentes de vivre leurs émotions et des cheminements divers dans la prise de leurs décisions.

May we combine clarity of mind with kindness of heart. May we be impartial without bending to strong personalities. May we sacrifice self-interest for the good of the whole.

Veuillez éclairer nos discussions et nos décisions. Aidez-nous à accomplir notre travail avec amour et une vision juste de l'avenir pour le plus grand bien de ceux que nous représentons.

May your name be glorified through our efforts.
Amen

Declaration of pecuniary interest
Déclaration d'intérêt pécuniaire

Date of meeting Date de la réunion:	
Item Number Numéro de l'item:	
Subject of the item: Sujet de l'item :	
Name of Council Member Nom du membre du conseil	

I, _____, hereby declare a pecuniary interest in the matter identified above for the following reason :

Je, _____, déclare un intérêt pécuniaire en ce qui concerne l'article ci-haut mentionné, pour la raison suivante :

Name (print)	Signature	Date

This declaration is filed in accordance with the *Municipal Conflict of Interest Act* and will be recorded in the meeting minutes and will be made available in a public registry. / Cette déclaration est soumise sous la *Loi sur les conflits d'intérêt municipaux* et sera enregistrée dans le procès-verbal de la réunion et sera disponible dans un registre public.

Excerpt from the Municipal Conflict of Interest Act, R.S.O. 1990, c. M.50

DUTY OF MEMBER

When present at meeting at which matter considered

5 (1) Where a member, either on his or her own behalf or while acting for, by, with or through another, has any pecuniary interest, direct or indirect, in any matter and is present at a meeting of the council or local board at which the matter is the subject of consideration, the member,

(a) shall, prior to any consideration of the matter at the meeting, disclose the interest and the general nature thereof;

(b) shall not take part in the discussion of, or vote on any question in respect of the matter; and

(c) shall not attempt in any way whether before, during or after the meeting to influence the voting on any such question. R.S.O. 1990, c. M.50, s. 5 (1).

Where member to leave closed meeting

(2) Where the meeting referred to in subsection (1) is not open to the public, in addition to complying with the requirements of that subsection, the member shall forthwith leave the meeting or the part of the meeting during which the matter is under consideration. R.S.O. 1990, c. M.50, s. 5 (2).

Extrait de la Loi sur les conflits d'intérêts municipaux, L.R.O. 1990, chap. M.50

OBLIGATIONS DU MEMBRE

Participation à une réunion où l'affaire est discutée

5 (1) Le membre qui, soit pour son propre compte soit pour le compte d'autrui ou par personne interposée, seul ou avec d'autres, a un intérêt pécuniaire direct ou indirect dans une affaire et participe à une réunion du conseil ou du conseil local où l'affaire est discutée, est tenu aux obligations suivantes :

a) avant toute discussion de l'affaire, déclarer son intérêt et en préciser la nature en termes généraux;

b) ne pas prendre part à la discussion ni voter sur une question relative à l'affaire;

c) ne pas tenter, avant, pendant ni après la réunion, d'influencer de quelque façon le vote sur une question relative à l'affaire. L.R.O. 1990, chap. M.50, par. 5 (1).

Exclusion de la réunion à huis clos

(2) Si la réunion visée au paragraphe (1) se tient à huis clos, outre les obligations que lui impose ce paragraphe, le membre est tenu de quitter immédiatement la réunion ou la partie de la réunion où l'affaire est discutée. L.R.O. 1990, chap. M.50, par. 5 (2).

CORPORATION OF THE

CITY OF CLARENCE-ROCKLAND

REGULAR MEETING MINUTES

May 22, 2019
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

PRESENT:	Guy Desjardins, Mayor
	Samuel Cardarelli, Councillor Ward 1
	Mario Zanth, Councillor Ward 2
	Don Bouchard, Councillor Ward 4
	André J. Lalonde, Councillor Ward 5
	Christian Simard, Councillor Ward 6
	Michel Levert, Councillor Ward 7
	Diane Choinière, Councillor Ward 8
	Helen Collier, Chief Administrative Officer
	Monique Ouellet, Clerk
	Maryse St-Pierre, Deputy Clerk
ABSENT:	Carl Grimard, Councillor Ward 3

1. Opening of the meeting

Mayor Desjardins calls the meeting to order at 6:30 pm.

2. Prayer

Councillor Mario Zanth recites the prayer.

3. Adoption of the agenda

RESOLUTION 2019-101
Moved by Mario Zanth
Seconded by André J. Lalonde

BE IT RESOLVED THAT the agenda be adopted as presented.

CARRIED

4. Disclosure of pecuniary interests (None)

5. Closed Meeting

RESOLUTION 2019-102
Moved by Diane Choinière
Seconded by Mario Zanth

BE IT RESOLVED THAT the regular meeting be adjourned in order to discuss the following items, as stipulated in Section 239 of the *Municipal Act, 2001*, as amended:

5.1. Adoption of the Closed meeting minutes of April 15, 2019

5.2. CIH Proposal update

5.3. Human Resources matter - Letter from employee

CARRIED

Members of Council move to the conference room adjacent to the Council Chambers at 6:32 pm and return to the Council Chambers at 6:55 pm.

RESOLUTION 2019-103
Moved by Mario Zanth
Seconded by Diane Choinière

BE IT RESOLVED THAT the closed session be adjourned to resume the regular meeting.

CARRIED

6. Closed Meeting report

Mayor Desjardins informs the members of the public that Council discussed some matters in closed session and that directives were given to staff.

7. Announcements

Mayor Desjardins announces that on May 27th, an information session will be held for those affected by the floods.

Mayor Desjardins announces that the Lieutenant Governor of Ontario will visit the City of Clarence-Rockland on May 30th.

Mayor Desjardins announces that representatives from the Government of Canada will present at the Alphonse Carrière Park in Hammond, to officially announce its support for the construction of this accessible park.

Mayor Desjardins announces that the sod breaking ceremony for the Alain Potvin Park, located at the intersection of St-Jean Street and Docteur Corbeil Boulevard will take place next week.

8. Comment/Question Period

Rolland Labonté, representing his daughter living at 1573 Rollin Road, asks if the contractor in charge for the works on his daughter's property had a permit. Julian Lenhart replies that the City hires general contractors to do the works, however it could be possible for them to hire subcontractors. He adds that the tender process has been respected.

9. Council Members' Items

9.1 Member's resolution presented by Councillor Mario Zanth, seconded by Councillor Don Bouchard in regards to chicken coops in the urban area

RESOLUTION 2019-104
Moved by Mario Zanth
Seconded by Don Bouchard

WHEREAS Council has been approached by property owners within the urban area who want to have chicken coops in their back yards;

BE IT RESOLVED THAT the administration be hereby mandated to prepare a report to outline the process that needs to be initiated to allow the installation of chicken coops in urban residential zones within the boundaries of Clarence-Rockland.

CARRIED

10. Consent Items

RESOLUTION 2019-105
Moved by Michel Levert
Seconded by Christian Simard

BE IT RESOLVED THAT the following items, as identified under the consent items category on the regular meeting agenda of May 22, 2019 be adopted:

10.1. Adoption of the minutes of the following meetings:

a. Regular meeting - April 15, 2019
b. Committee of the Whole meeting - April 15, 2019
c. Special meeting - April 24, 2019
d. Special meeting - May 10, 2019

10.2. Receipt of the minutes of the following meetings:

a. Accessibility Advisory Committee of February 5, 2019
b. Library Board meeting of April 16, 2019

10.3. The following recommendations from Committee of the Whole of April 15, 2019:

a. Resolution to Protect the Ottawa River

b. Resolution to support the Municipality of Grey Highlands regarding the potential reduction and/or loss of the Ontario Municipal Partnership Fund (OMPF) allotment

c. Resolution to adopt the proposed amendment to Policy LOI2014-01 – Non-profit organizations (NPO)

10.4. Resolution to appoint a member to the Accessibility Advisory Committee

10.5. Resolution to adopt the salaries paid from March 24, 2019 to May 4, 2019, in the gross amount of $834,478.99 and net amount of $576,189.58

CARRIED

Text of the resolutions as adopted by consent under Resolution 2019-105:

10.3a. WHEREAS *Canadian Nuclear Laboratories (CNL) is a consortium of private businesses managing and developing nuclear sites, installations and property belonging to Atomic Energy of Canada Limited (AECL); and*

WHEREAS *CNL has submitted to the Canadian Nuclear Safety Commission a plan for a near-surface disposal facility (NSDF) for radioactive waste at Chalk River Laboratories, Chalk River, Ontario; and*

WHEREAS *the site intended for the NSDF is located on a hillside, in a marsh and seismic area, less than one kilometre from the Ottawa River; and*

WHEREAS *CNL has proposed erecting an 'engineered' mound with a height of 5 storeys on an area of 16 hectares; and*

WHEREAS *from the present time until 2070, CNL estimates that the NSDF will contain 1 million cubic metres of radioactive waste including some radioactive materials with very long half-lives; and*

WHEREAS *the site for the proposed NSDF is near a vital source of drinking water for a large population; and*

WHEREAS *CNL has submitted to the Canadian Nuclear Safety Commission a project to decommission the Nuclear Power Demonstration (NPD) reactor at Rolphton, Ontario; and*

WHEREAS *CNL proposes to entomb the Rolphton NPD reactor and its radioactive components in grout and concrete; and*

WHEREAS *the Rolphton NPD reactor is located less than 200 metres from the Ottawa River; now therefore*

BE IT RESOLVED THAT *the City of Clarence-Rockland is opposed to the plan to create a near surface disposal facility for radioactive waste in a marsh and seismic area less then one kilometre from the Ottawa River, which is a major source of drinking water for a population of several million;*

BE IT RESOLVED THAT *the City of Clarence-Rockland is opposed to the plan to entomb the Rolphton NPD reactor in cement on site, less than 200 metres from the Ottawa River.*

10.3b. ***BE IT RESOLVED THAT*** *the City of Clarence-Rockland supports the resolution of the Municipality of Grey Highlands regarding the potential reduction and/or loss of the Ontario Municipal Partnership Fund (OMPF) allotment.*

10.3c. ***WHEREAS*** *Community Services receive several requests for recognition from non-profit organizations annually; and*

WHEREAS *Policy LOI2014-01 states that each application for recognition must be approved by Municipal Council;*

BE IT RESOLVED THAT *Municipal Council adopts the proposed amendments to policy LOI2014-01 Non-Profit Organizations (NPOs), in order to allow the Community Services Director to evaluate and approve the submitted requests, as recommended.*

10.4 ***WHEREAS*** *there are some vacant seats remaining on the Accessibility Advisory Committee;*

BE IT RESOLVED THAT *Council accepts to appoint Mrs. Diane Saumure as a member of the Accessibility Advisory Committee for the remainder of the term*

10.5 ***BE IT RESOLVED THAT*** *the salaries paid from March 24, 2019 to May 4, 2019, in the gross amount of $834,478.99 and net amount of $576,189.58 be adopted as recommended.*

11. Committee/Staff Reports

11.1 2018 Year end report

RESOLUTION 2019-106
Moved by Don Bouchard
Seconded by Samuel Cardarelli

THAT report no. FIN2019-019 be received as information.

CARRIED

11.2 2018 Financial Statements

a. Presentation

Annie Blanchard presents the financial statements.

b. Adoption of the Financial Statements

RESOLUTION 2019-107
Moved by Mario Zanth
Seconded by Michel Levert

BE IT RESOLVED THAT Municipal Council hereby adopts the Financial Statements of the City of Clarence-Rockland, as prepared by BDO Canada for the period ending December 31st 2018, as recommended.

CARRIED

11.3 Accounts paid

RESOLUTION 2019-108
Moved by Samuel Cardarelli
Seconded by Mario Zanth

BE IT RESOLVED THAT the accounts paid from April 8, 2019 to May 12, 2019, in the amount of $3,193,452.57 be adopted as recommended.

CARRIED

11.4 Proposed new Hall rental policy – Online reservation

RESOLUTION 2019-109
Moved by André J. Lalonde
Seconded by Don Bouchard

WHEREAS the current Community Hall Rental Policy needs to be updated and reflect the future online booking system;

BE IT RESOLVED THAT Council adopts Policy LOI2019-01, being the policy for establishing the guidelines for managing municipal community hall rentals, effective June 1st, 2019, repealing Policy LOI98-02; and

BE IT RESOLVED THAT Council adopts By-Law 2019-46 to replace Schedule J of the User Fee By-law 2019-16, showing the revised rental rates for community halls as attached to report LOI2019-04-05.

CARRIED

11.5 Morris Village Park - Contract Award for the project management

RESOLUTION 2019-110
Moved by Don Bouchard
Seconded by André J. Lalonde

WHEREAS Atrel Engineering has designed all the plans and specifications for the construction of the Morris Village Park and that this firm is therefore well versed to supervise the work;

BE IT RESOLVED THAT Municipal Council accepts to allow an exemption from the procurement policy section 17.3. in order to adopt By-law 2019-47 to authorize the Mayor and the City Clerk to sign a contract with Atrel Engineering for the administration and supervision of the construction work for the Morris Village Park for an amount of $36,000 excluding the T.V.H., as recommended in staff report no. LOI2019-04-03.

CARRIED

11.6 Award a inspection and administration contract to Atrel Engineering for the Gareau and Pouliotte streets watermain replacement projects

RESOLUTION 2019-111
Moved by Samuel Cardarelli
Seconded by Christian Simard

WHEREAS a contract for the design and preparation of the tender drawings and documents has been previously awarded to Atrel Engineering in June 2018 as per Report INF2018-007;

BE IT RESOLVED THAT Council approves that the Infrastructure and Planning department deviates from the current procurement policy to sole source the site inspection and contract administration (C.A.) to Atrel Engineering for the Gareau and Pouliotte streets watermain replacement projects for the amount of $96 000 excluding HST.

CARRIED

12. By-laws

RESOLUTION 2019-112
Moved by Christian Simard
Seconded by Michel Levert

BE IT RESOLVED THAT the following by-laws be adopted:

12.1. 2019-49 - Dedication of public highway, Clark Rd, Part 2 on Plan 50R-10739

12.2. 2019-55 - to authorize the use of funds from the maintenance and reconstruction of roads reserve fund to finance the conversion of hard surface back to gravel

12.3. 2019-56 - to appoint Councillor Samuel Cardarelli as a member to the Public Library Board

12.4. 2019-57 to authorize the signature of an agreement with MTO - ARIS

12.5. 2019-58 - Naming of the park located in Morris Village "Parc Alain Potvin Park"

CARRIED

13. Confirmatory By-law

RESOLUTION 2019-113
Moved by Mario Zanth
Seconded by Samuel Cardarelli

BE IT RESOLVED THAT By-law no. 2019-48, being a confirmatory by-law for the regular meeting of May 22, 2019, be adopted.

CARRIED

14. Adjournment

Mayor Desjardins adjourns the meeting at 7:45 pm.

_____ _____

Guy Desjardins, Mayor Maryse St-Pierre, Deputy Clerk

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

RÉUNION RÉGULIÈRE - PROCÈS-VERBAL

le 22 mai 2019
Salle du Conseil
415 rue Lemay Street, Clarence Creek, Ont.

PRÉSENT:	Guy Desjardins, maire
	Samuel Cardarelli, conseiller quartier 1
	Mario Zanth, conseiller du quartier 2
	Don Bouchard, conseiller quartier 4
	André J. Lalonde, conseiller du quartier 5
	Christian Simard, conseiller quartier 6
	Michel Levert, conseiller du quartier 7
	Diane Choinière, conseillère du quartier 8
	Helen Collier, directrice générale
	Monique Ouellet, greffière
	Maryse St-Pierre, greffière adjointe
ABSENT:	Carl Grimard, conseiller du quartier 3

1. Ouverture de la réunion

Le maire Desjardins ouvre la réunion à 18h30.

2. Prière

Le conseiller Mario Zanth fait la lecture de la prière.

3. Adoption de l'ordre du jour

RÉSOLUTION 2019-101
Proposée par Mario Zanth
Appuyée par André J. Lalonde

QU'IL SOIT RÉSOLU QUE l'ordre du jour soit adopté tel que présenté.

ADOPTÉE

4. Déclarations d'intérêts pécuniaires (Aucune)

5. Réunion à huis clos

RÉSOLUTION 2019-102
Proposée par Diane Choinière
Appuyée par Mario Zanth

QU'IL SOIT RÉSOLU QUE la réunion régulière du conseil municipal soit ajournée afin de tenir une session à huis clos pour discuter des sujets suivants, tel que stipulé à la section 239 de la *Loi sur les municipalités 2001*, tel que modifiée :

5.1. Adoption du procès-verbal de la réunion à huis clos du 15 avril 2019

5.2. Proposition du CIH - mise à jour

5.3. Dossier de ressources humaines - lettre d'un employé

ADOPTÉE

Les membres du conseil se retirent dans la salle de conférence adjacente à la salle du conseil à 18h32 et retournent dans la salle du conseil à 18h55.

RÉSOLUTION 2019-103
Proposée par Mario Zanth
Appuyée par Diane Choinière

QU'IL SOIT RÉSOLU QUE la réunion à huis clos soit ajournée afin de retourner en réunion régulière.

ADOPTÉE

6. Rapport de la réunion à huis clos

Le maire Desjardins informe les membres du public que le conseil a discuté de dossiers à huis clos et que des directives ont été données au personnel.

7. Annonces

Le maire Desjardins annonce que le 27 mai aura lieu une réunion d'information pour les personnes touchées par les inondations.

Le maire Desjardins annonce que la lieutenante gouverneur de l'Ontario viendra faire une visite à la Cité de Clarence-Rockland le 30 mai prochain.

Le maire Desjardins annonce que demain des représentants du gouvernement du Canada seront présents au parc Alphonse Carrière à Hammond afin d'annoncer officiellement leur appui pour la construction d'un parc accessible.

Le maire Desjardins annonce que la semaine prochaine aura lieu la cérémonie de pelletée de terre pour le parc Alain Potvin, situé au coin de la rue St-Jean et du boulevard Docteur Corbeil.

8. Période de Questions/Commentaires

Rolland Labonté, représentant sa fille demeurant au 1573 chemin Rollin, demande si l'entrepreneur qui est venu faire les travaux sur le terrain de sa fille avait un permis. Julian Lenhart explique que la Cité engage des entrepreneurs généraux pour faire les travaux, mais qu'il lui est possible d'engager des sous-traitants. Il ajoute que le processus d'appel d'offre a été respecté.

9. Items des membres du Conseil

9.1 Résolution de membre présentée par le conseiller Mario Zanth, appuyée du conseiller Don Bouchard au sujet des cages à poules dans le secteur urbain

RÉSOLUTION 2019-104
Proposée par Mario Zanth
Appuyée par Don Bouchard

ATTENDU QUE le conseil a été approché par des propriétaires de la zone urbaine qui veulent avoir des cages à poules dans leurs cours;

QU'IL SOIT RÉSOLU QUE l'administration soit mandaté à préparer un rapport pour expliquer le processus qui doit être entamé pour allouer l'installation de cages à poules dans les zones résidentielles urbaines de Clarence-Rockland.

ADOPTÉE

10. Items par consentement

RÉSOLUTION 2019-105
Proposée par Michel Levert
Appuyée par Christian Simard

QU'IL SOIT RÉSOLU QUE les items suivants, tels qu'identifiés sous la rubrique «items par consentement» à l'ordre du jour de la réunion régulière du 22 mai 2019 soient adoptés :

10.1. Adoption des procès-verbaux des réunions suivantes:

a. Réunion régulière - 15 avril 2019
b. Comité plénier - 15 avril 2019
c. Réunion spéciale - 24 avril 2019
d. Réunion spéciale - 10 mai 2019

10.2. Réception des procès-verbaux des réunions suivantes:

a. Comité consultatif sur l'accessibilité du 5 février 2019
b. Conseil d'administration de la bibliothèque publique du 16 avril 2019

10.3. Les recommandations suivantes du comité plénier du 15 avril 2019

a. Résolution pour protéger la rivière des Outaouais

b. Résolution pour appuyer la municipalité de Grey Highlands concernant la réduction et/ou la perte potentielle de l'allocation de Fonds de partenariat avec les municipalités de l'Ontario (FPMO)

c. Résolution pour adopter l'amendement proposé à la politique LOI2014-01 – Organismes sans but lucratif (OSBL)

10.4. Résolution pour nommer un membre au sein du Comité consultatif en accessibilité

10.5. Résolution pour adopter les salaires payés pour la période du 24 mars 2019 au 4 mai 2019, au montant brut de 834 478,99$ et montant net de 576 189,58$

ADOPTÉE

Texte des résolutions adoptées par consentement telles qu'identifiées dans la résolution 2019-105:

10.3a. ATTENDU QUE *Les Laboratoires Nucléaires Canadiens (LNC) est un consortium d'entreprises privées faisant la gestion et le développement des sites, installations et propriétés nucléaires appartenant à Énergie Atomique du Canada Limitée (EACL); et*

ATTENDU QUE *LNC a soumis à la Commission Canadienne de sécurité nucléaire un plan pour une installation de gestion des déchets près de la surface (IGDPS) pour les déchets radioactifs aux laboratoires de Chalk River en Ontario; et*

ATTENDU QUE *le site prévu pour le IGDPS est situé sur un flanc de colline, dans une zone marécageuse et sysmique, à moins d'un kilomètre de la rivière des Outaouais; et*

ATTENDU QUE *LNC a proproper d'ériger un monticule artificiel d'une hauteur de 5 étages sur une surface dans une zone de 16 hectares; et*

ATTENDU QUE *de l'instant présent jusqu'en 2070, LNC estime que le IGDPS contiendra 1 million de mètres cubes de déchets radioactifs, incluant des matériaux radioactifs avec des demi-vies très longues; et*

ATTENDU QUE *le site proposé pour de IGDPS est près d'une source vitale d'eau potable pour une large population; et*

ATTENDU QUE *LNC a soumis à la Commission Canadienne de sécurité nucléaire un projet de déclassement du réacteur de démonstration (NPD) à Rolphton, Ontario; et*

ATTENDU QUE *LNC propose d'enterrer le réacteur NPD de Rolphton et ses composantes radioactives dans du mortier et du béton; et*

ATTENDU QUE *le réacteur NPD de Rolphton est situé à moins de 200 mètres de la rivière des Outaouais; par conséquent*

QU'IL SOIT RÉSOLU QUE *la Cité de Clarence-Rockland s'oppose au plan de créer une installation de gestion des déchets près de la surface dans une zone marécageuse et systique, situé à moins d'un kilometre de la rivière des Outaouais, laquelle est une source majeure d'eau potable pour une population de plusieurs millions de gens; et*

QU'IL SOIT RÉSOLU QUE *la Cité de Clarence-Rockland s'oppose au plan d'enterrer le réacteur NPD de Rolphton dans du ciment sur le site se trouvant à moins de 200 mètres de la rivière des Outaouais.*

10.3b. QU'IL SOIT RÉSOLU QUE *la Cité de Clarence-Rockland appuie la résolution de la municipalité de Grey Highland concernant la potentielle réduction ou perte de l'allocation du Fonds de partenariat avec les municipalités de l'Ontario (FPMO).*

10.3c. ATTENDU QUE *les Services communautaires reçoivent plusieurs demandes de reconnaissance d'organismes sans but lucratif annuellement; et*

ATTENDU QUE *la politique LOI2014-01 indique que chaque demande de reconnaissance doit être approuvée par le conseil municipal;*

QU'IL SOIT RÉSOLU QUE *le conseil municipal adopte les amendements proposés à la politique LOI2014-01 Organismes sans but lucratif (OSBL), dans le but de permettre au directeur du service d'évaluer et d'approuver les demandes reçues, tel que recommandé.*

10.4 ***ATTENDU QU****'il reste des postes vacants au sein du Comité consultatif en accessibilité ;*

QU'IL SOIT RÉSOLU QUE *le Conseil accepte de nommer Mme Diane Saumure à titre de membre du comité consultatif sur l'accessibilité pour le reste du terme.*

10.5 ***QU'IL SOIT RÉSOLU QUE*** *les salaires payés pour la période du 24 mars 2019 au 4 mai 2019, au montant brut de 834 478,99 $ et montant net de 576 189,58 $, soient adoptés tel que recommandé.*

11. Rapports des Comités/Services

11.1 Rapport de fin d'année 2018

RÉSOLUTION 2019-106
Proposée par Don Bouchard
Appuyée par Samuel Cardarelli

QUE le Rapport no. FIN2019-019 soit reçue à titre d'information.

ADOPTÉE

11.2 États financiers 2018

a. Présentation

Annie Blanchard fait la présentation des états financiers.

b. Adoption des états financiers

RÉSOLUTION 2019-107
Proposée par Mario Zanth
Appuyée par Michel Levert

QU'IL SOIT RÉSOLU QUE le Conseil municipal adopte les états financiers de la Cité de Clarence-Rockland, tels que préparés par la firme BDO Canada pour l'exercice se terminant le 31 décembre 2018, tel que recommandé.

ADOPTÉE

11.3 Comptes payés

RÉSOLUTION 2019-108
Proposée par Samuel Cardarelli
Appuyée par Mario Zanth

QU'IL SOIT RÉSOLU QUE les comptes payés pour la période du 8 avril 2019 au 12 mai 2019, au montant de 3 193 452,57 $ soient adoptés tel que recommandé.

ADOPTÉE

11.4 Nouvelle Politique de location de salle proposée – Réservation en ligne

RÉSOLUTION 2019-109
Proposée par André J. Lalonde
Appuyée par Don Bouchard

ATTENDU QUE la politique actuelle pour la gestion des locations des salles communautaires a besoin d'être mise à jour et adaptée pour refléter le futur système de réservation en ligne;

QU'IL SOIT RÉSOLU QUE le conseil municipal adopte la politique LOI2019-01, étant la politique pour établir les lignes directrices afin de gérer les locations des salles communautaires municipales, effectif le 1er juin 2019, abrogeant la politique LOI98-02; et

QU'IL SOIT RÉSOLU QUE le conseil municipal adopte le règlement 2019-46 pour remplacer l'annexe J du règlement sur les frais d'usagers 2019-16, énonçant les nouveaux tarifs de location des salles communautaires inclus avec le rapport LOI2019-04-05.

ADOPTÉE

11.5 Parc Village Morris - Octroi du contrat pour la gestion du projet

RÉSOLUTION 2019-110
Proposée par Don Bouchard
Appuyée par André J. Lalonde

ATTENDU QUE la firme Atrel Engineering a conçu tous les plans et devis pour la construction du parc Du Village Morris et que cette firme est donc là mieux placée pour effectuer la supervision des travaux ;

QU'IL SOIT RÉSOLU QUE le conseil municipal accepte de déroger de l'article 17.3 de la politique d'approvisionnement afin d'adopter le règlement 2019-47 pour autoriser le Maire et la greffière à signer un contrat d'une valeur de 36 000$ excluant la T.V.H. à la firme Atrel Engineering pour l'administration et la supervision des travaux de construction du parc Du Village Morris, tel que recommandé au rapport LOI2019-04-03.

ADOPTÉE

11.6 Octroi d'un contrat d'inspection et d'administration à Atrel Engineering pour les projets de remplacement des conduites d'eau des chemins Gareau et Pouliotte

RÉSOLUTION 2019-111
Proposée par Samuel Cardarelli
Appuyée par Christian Simard

ATTENDU QU'UN contrat pour la conception et la préparation des plans et devis a déjà été octroyé préalablement à Atrel Engineering en juin 2018 par le biais du rapport INF2018-007;

QU'IL SOIT RÉSOLU QUE le Conseil approuve que le département d'Infrastructure et aménagement du territoire dévie de la politique d'approvisionnement pour octroyer un contrat à source unique à Atrel Engineering pour l'inspection et l'administration du contrat du projet de remplacement d'aqueduc sur les rues Gareau et Pouliotte pour la somme de 96,000$, excluant la TPS.

ADOPTÉE

12. Règlements municipaux

RÉSOLUTION 2019-112
Proposée par Christian Simard
Appuyée par Michel Levert

QU'IL SOIT RÉSOLU QUE les règlements municipaux suivants soient adoptés :

12.1. 2019-49 - Dédier un chemin public, chemin Clark, Partie 2 au Plan 50R-10739

12.2. 2019-55 - pour autoriser l'utilisation des fonds provenant du fonds de réserve pour l'entretien et la reconstruction du réseau routier afin de financer la reconversion de la surface dure en gravier

12.3. 2019-56 - pour nommer le conseiller Samuel Cardarelli à tire de membre du conseil d'administration de la bibliothèque publique

12.4. 2019-57 pour autoriser la signature d'un entente avec MTO - ARIS

12.5. 2019-58 pour nommer le parc situé dans le village Morris "Parc Alain Potvin Park".

ADOPTÉE

13. Règlement de confirmation

RÉSOLUTION 2019-113
Proposée par Mario Zanth
Appuyée par Samuel Cardarelli

QU'IL SOIT RÉSOLU QUE le règlement no. 2019-48, étant un règlement de confirmation pour la réunion régulière du 22 mai 2019, soit adopté.

ADOPTÉE

14. Ajournement

Le maire Desjardins lève l'assemblée à 19h45.

_____ _____

Guy Desjardins, Maire Maryse St-Pierre, Greffière adjointe

CORPORATION OF THE

CITY OF CLARENCE-ROCKLAND

COMMITTEE OF THE WHOLE MINUTES

May 22, 2019
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

PRESENT:	Guy Desjardins, Mayor
	Samuel Cardarelli, Councillor Ward 1
	Mario Zanth, Councillor Ward 2
	Don Bouchard, Councillor Ward 4
	André J. Lalonde, Councillor Ward 5
	Christian Simard, Councillor Ward 6
	Michel Levert, Councillor Ward 7
	Diane Choinière, Councillor Ward 8
	Helen Collier, Chief Administrative Officer
	Monique Ouellet, Clerk
	Maryse St-Pierre, Deputy Clerk
ABSENT:	Carl Grimard, Councillor Ward 3

1. Opening of the meeting

Mayor Desjardins calls the meeting to order at 8:01 pm.

2. Adoption of the agenda

RECOMMENDATION COW2019-64
Moved by Mario Zanth
Seconded by André J. Lalonde

THAT the agenda be adopted as presented.

CARRIED

3. Disclosure of pecuniary interests (none)

4. Delegations / Presentations

4.1 Presentation by the Rockland Optimist Club regarding a request for a variance to the Sign By-Law

Robert Laplante, representing the Rockland Optimist Club, explains the involvement of his organization to the youth. He explains that the request is to install a 4'X4' sign on Caron Street and on County Road 17. Pierre Boucher confirms that the location on County Road 17 belongs to the City.

Further to questions, Mr. Laplante explains that the sign will announce the Club activities in French only.

Further to questions, Monique Ouellet explains that the sign by-law requires the signs to be bilingual, except for churches and schools.

Denis Vaillancourt, representing the Rockland Optimist Club, explains that their events are posted in both languages.

Further to questions, Pierre Boucher explains that the sign located at the Jean-Marc Lalonde Arena is made to post community ads. He adds that the postings on villages entrance signs is time limited.

RECOMMENDATION COW2019-65
Moved by Don Bouchard
Seconded by Michel Levert

THAT the Committee of the Whole recommends that Municipal Council authorizes the installation of a unilingual francophone permanent ground sign on municipal property within the right-of-way of Caron Street in Rockland for the announcement of the Rockland Optimist Club events; and

THAT the Committee of the Whole recommends that Municipal Council approves the request for an exemption to the requirement to pay the application fees for the Rockland Optimist Club for their sign permit and sign variance applications, for a total amount of $333.00.

CARRIED

5. Petitions / Correspondence

5.1 Request for pride flag raising - Prescott-Russell LGTBQ+ Allies Group

Further to discussions, a resolution will be considered at the next Regular meeting.

6. Notice of Motion

6.1 Notice of motion presented by Councillor Mario Zanth and seconded by Councillor Don Bouchard asking the Provincial and Federal governments to establish a committee regarding floods.

The notice of motion is presented.

6.2 Notice of motion presented by Councillor André J. Lalonde and seconded by Councillor Don Bouchard in regard to waiving landfill site fees for residents affected by the floods.

The notice of motion is presented.

Ms. Monica Seguin, 2919 Old Highway 17, asks if the proposed July 31st date could be extended, since she will need more time to demolish her home and clean her property.

6.3 Notice of motion presented by Mayor Guy Desjardins and seconded by Councillor Christian Simard in regard to waiving fees related to applications for demolition permits.

The notice of motion is presented.

Ms. Monica Séguin, 2919 Old Highway 17, explains that she appreciates the City's devotion for the different needs of the families affected by the floods. She explains that it is not good to allow zoning for the construction of a house in a potential flooding zone. Mayor Desjardins explains that discussions are in progress with Marie-Ève Bélanger in this regard. Julian Lenhart explains that each situation is different and they should be dealt with on an individual basis.

7. Comment/Question Period

André Sarault, 103 Pigeon Street, thanks the City for the help received. He explains that Pigeon Street should be elevated by two or three feet in front of his property in order to give him access to his property in case of floods.

Nancy Kelly, representing the minor baseball association, would like to support the project for the Clarence Creek baseball field. She explains that this will allow the association to host tournaments, which will have an economic impact on the City.

8. Report from the United Counties of Prescott and Russell

Mayor Desjardins reports on the UCPR.

9. Committee/Staff Reports

9.1 Transportation Impact Study and modification to a condition of Draft Approval of Brigil and Stage 5 Morris Village

Julian Lenhart does the presentation.

Further to questions, Julian Lenhart explains that when the project touches more than one development, the cost is not necessarily assumed by the developers.

Further to questions, Julian Lenhart explains that the intention on a long-term basis is to extend the infrastructure to accommodate the traffic. He explains that Carmen Bergeron Road has been identified as a problem, but that the whole area should be identified in the planning process for development charges.

Further to questions, Julian Lenhart explains that the proposed design is to support the further developments. He confirms that this design is not final.

RECOMMENDATION COW2019-66
Moved by Don Bouchard
Seconded by Mario Zanth

WHEREAS the Transportation Impact Study for the east-west collector was completed in December 2018; and

WHEREAS a condition must be modified under the Brigil and Morris Village Stage 5 draft approval;

THAT Committee of the Whole recommends that Condition 26 of the Brigil file and Condition 29 of the Morris Village Stage 5 file be modified to read as follows:

- That Poupart Side Road, Bronze Avenue and St-Jean Street be designed and built to municipal standards with an urban cross-section approved by the City. The design should follow the recommendation of the detailed transportation impact study that was completed by Castleglenn Consultants (Dec 2018) with any subsequent revisions, if applicable. The design, the environmental studies, the EA, the construction work, the project management fees and any other studies or works required are to be paid by the Development Charges By-law and the municipal budget in place for the current year. The estimated cost of the design and works to be completed must be approved by the City before any undertaking.

CARRIED

9.2 Amendment to Draft Plan Conditions – Bourgon/Lavigne Subdivision

Mayor Desjardins asks that this item be deferred in order to renegotiate the agreement at the UCPR Public Works Committee.

RECOMMENDATION COW2019-67
Moved by Diane Choinière
Seconded by André J. Lalonde

WHEREAS Council, through a resolution, adopted a series of 76 conditions in regards to the subdivision project of Bourgon & Lavigne for Part of Lot 21, Concession 10, Russell Road – Cheney, on February 4, 2019; and

WHEREAS on March 27, 2019, County Council approved the minutes of the March 13, 2019 Public Works Committee meeting in regards to a Cheney pedestrian crossing; and

WHEREAS it was resolved to impose the installation of the pedestrian crossing as a condition to the subdivision agreement for the proposed subdivision, south of County Road 2 in Cheney; and

WHEREAS Section 51 (44) of the *Planning Act, L.R.O. 1990 chap. P.13*; municipal council can, at its discretion, modify the conditions of approval

THAT the Committee recommends that municipal Council approves the following additional condition to the Draft Plan of Subdivision, submitted by Lascelles Engineering & Associates Limited for Développement Bourgon and Lavigne Developments Inc., file number D-12-VVV-02:

"The Owner shall be responsible to design and install a pedestrian crossing treatment on County Road 2, in Cheney. This pedestrian crossing treatment will consist of a Pedestrian Crossover Level 2 Type "B" – Intersection (2-way) as per the Ontario Traffic Manual Book 15. The design shall be submitted to the Director of Infrastructure and Planning and the Public Works Department of the United Counties of Prescott and Russell (UCPR) for their review and approval as part of the subdivision approval. The design, purchase and installation of this device shall be at the developer's cost. As such, the UCPR will require 100% of the cost estimate via letter of credit – to be added to the subdivision agreement. The Owner will need to obtained a road cut permit from the UCPR prior to the installation of the pedestrian crossing treatment."

DEFERRED

9.3 Condominium conversion – 535-545 Russell Road, Cheney

RECOMMENDATION COW2019-68
Moved by Michel Levert
Seconded by Christian Simard

THAT the Committee of the Whole recommends to Council to adopt By-law 2019-50 to exempt from the plan of subdivision approval process, the condominiums' description of the subject property of 1847305 Ontario Inc., located at 535-545 Russell Road, and that the Mayor and the Clerk be authorized to sign the appropriate certificate.

CARRIED

9.4 Request for additional funding – Clarence Creek Baseball Field

RECOMMENDATION COW2019-69
Moved by André J. Lalonde
Seconded by Michel Levert

WHEREAS the 2019 capital budget for the construction of the Clarence Creek baseball field is $ 150,000; and

WHEREAS the bids for the construction of the Clarence Creek baseball field are much higher than anticipated;

THAT the Committee of the Whole recommends that Municipal Council authorizes the transfer of $ 21,141 from the Federal gas tax funds to the Clarence Creek Baseball field construction project as recommended.

CARRIED

9.5 Annual Repayment Limit

RECOMMENDATION COW2019-70
Moved by Diane Choinière
Seconded by Mario Zanth

THAT Report no. FIN2019-015 be received as information.

CARRIED

9.6 Improvements to the security system (doors, alarms and cameras)

RECOMMENDATION COW2019-71
Moved by Samuel Cardarelli
Seconded by Mario Zanth

THAT the Committee of the Whole recommends that Council approves the removal of the “Clarence Creek Server Room Fire Extinguishing System” project from the 2019 Capital Projects list; and

THAT the Committee of the Whole recommends that Council approves the addition of a project to make significant improvements to the security system with a budget of $25,000.

CARRIED

9.7 Smart City Initiative – signed MOU

RECOMMENDATION COW2019-72
Moved by Christian Simard
Seconded by Mario Zanth

THAT the Committee of the Whole recommends that report no. IMIT2019-004, be received as information.

CARRIED

9.8 Construction monthly statistics - April 2019

RECOMMENDATION COW2019-73
Moved by Christian Simard
Seconded by Mario Zanth

THAT the Construction Department monthly statistics be received as information.

CARRIED

10. Other items

Councillor Don Bouchard explains that the speed sensor located on the Outaouais Side Road does not work properly. Julian Lenhart explains that other traffic calming options are possible.

Councillor Mario Zanth thanks the By-Law Department for traffic calming on Edwards and asks if it could be installed again. Brian Wilson explains that the intention is to make a rotation between different locations.

Councillor André Lalonde if the properties auction was successful. Frédéric Desnoyers explains that alternatives should be found for properties that were not sold.

11. Adjournment

The Mayor adjourns the meeting at 9:47 pm.

_____ _____

Guy Desjardins, Mayor Maryse St-Pierre, Deputy Clerk

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

PROCÈS-VERBAL DU COMITÉ PLÉNIER

le 22 mai 2019
Salle du Conseil
415 rue Lemay Street, Clarence Creek, Ont.

PRÉSENT:	Guy Desjardins, maire
	Samuel Cardarelli, conseiller quartier 1
	Mario Zanth, conseiller du quartier 2
	Don Bouchard, conseiller quartier 4
	André J. Lalonde, conseiller du quartier 5
	Christian Simard, conseiller quartier 6
	Michel Levert, conseiller du quartier 7
	Diane Choinière, conseillère du quartier 8
	Helen Collier, directrice générale
	Monique Ouellet, greffière
	Maryse St-Pierre, greffière adjointe
ABSENT:	Carl Grimard, conseiller du quartier 3

1. Ouverture de la réunion

Le maire Desjardins ouvre la réunion à 20h01.

2. Adoption de l'ordre du jour

RECOMMANDATION COW2019-64
Proposée par Mario Zanth
Appuyée par André J. Lalonde

QUE l'ordre du jour soit adopté tel que présenté.

ADOPTÉE

3. Déclarations d'intérêts pécuniaires (aucune)

4. Délégations / Présentations

4.1 Présentation du Club Optimiste de Rockland relativement à une demande de dérogation au règlement sur l'affichage

Robert Laplante, représentant du Club Optimiste de Rockland, explique l'implication de son organisme auprès des jeunes. Il explique que la demande a pour but d'installer un panneau de 4'X4' sur la rue Caron et sur le chemin de Comté 17. Pierre Boucher confirme que l'endroit choisi pour le chemin de comté 17 appartient à la Cité.

Suite aux questions, M. Laplante explique que l'affiche annonce les activités du Club en français seulement.

Suite aux questions, Monique Ouellet explique que le règlement sur l'affichage exige que les affiches soient bilingues, excepté pour les églises et les écoles.

Denis Vaillancourt, représentant du Club Optimiste, explique que les évènements sont affichés dans les deux langues.

Suite aux questions, Pierre Boucher explique qu'à l'aréna Jean-Marc Lalonde, les gens peuvent faire des annonces communautaires. Il ajoute que les annonces sur les affiches d'entrée dans les villages ont un temps limite d'affichage.

RECOMMANDATION COW2019-65
Proposée par Don Bouchard
Appuyée par Michel Levert

QUE le comité plénier recommande au conseil municipal d'autoriser l'installation d'une enseigne permanente sur le sol, unilingue francophone, sur un terrain municipal dans l'emprise de chemin de la rue Caron à Rockland afin d'annoncer les activités du Club Optimiste de Rockland; et

QUE le comité plénier recommande au conseil municipal d'approuver la demande d'exemption à l'exigence de payer les frais de demande pour le club Optimiste de Rockland pour leur demande de permis d'enseigne et leur demande de dérogation d'enseigne, pour un montant total de 333,00$.

ADOPTÉE

5. Pétitions / Correspondance

5.1 Demande de lever le drapeau de la fierté - Groupe LGBTQ+ Alliés de Prescott-Russell

Suite aux discussions, une résolution devra être considérée à la prochaine réunion régulière.

6. Avis de motion

6.1 Avis de motion présenté par le conseiller Mario Zanth et appuyé par le conseiller Don Bouchard demandant aux gouvernement provincial et fédéral de créer un comité relativement aux inondations

L'avis de motion est présenté.

6.2 Avis de motion présenté par le conseiller André J. Lalonde et appuyé par le conseiller Don Bouchard visant à pourvoir une exemption aux frais au dépotoir pour les résidents affectés par les inondations

L'avis de motion est présenté.

Mme Monica Séguin, 2919 vieux chemin de comté 17, demande si la date proposée du 31 juillet peut être prolongée puisqu'elle a besoin de plus de temps pour démolir sa maison et nettoyer sa propriété.

6.3 Avis de motion présenté par le maire Guy Desjardins et appuyé par le conseiller Christian Simard visant à pourvoir une exemption aux frais de demande de permis de démolition

L'avis de motion est présenté.

Mme Monica Séguin, 2919 vieux chemin de comté 17, explique qu'elle apprécie le dévouement de la Cité envers les besoins des différentes familles touchées par les inondations. Elle explique que ce n'est pas bien de permettre le zonage pour la construction d'une maison dans une zone potentiellement inondable. Le maire Desjardins explique que les discussions sont en cours avec Marie-Ève Bélanger à ce sujet. Julian Lenhart explique que chacune des situations est différente et qu'elles doivent être traitées sur une base individuelle.

7. Période de Questions/Commentaires

André Sarault, 103 rue Pigeon, remercie la Cité pour l'aide reçue. Il explique que la rue Pigeon pourrait être relevée de deux à trois pieds vis-à-vis sa propriété afin de lui permettre l'accès à sa propriété en cas d'inondation.

Nancy Kelly, représentante de l'association de baseball mineur, vient appuyer le projet de terrain de balle à Clarence Creek. Elle explique que cela permettrait à l'association d'être hôte de tournois, lesquels apportent un impact économique à la Cité.

8. Rapport des Comtés unis de Prescott et Russell

Le maire Desjardins fait son rapport sur les CUPR.

9. Rapports des Comités/Services

9.1 Étude de transport pour le collecteur et modification d'une condition de l'ébauche d'approbation de Brigil et de l'étape 5 du Village Morris

Julian Lenhart fait la présentation.

Suite aux questions, Julian Lenhart explique que lorsque le projet touche plus qu'un développement, le coût n'est pas nécessairement assumé par les développeurs.

Suite aux questions, Julian Lenhart explique que l'intention à long terme est d'étendre nos infrastructures pour accommoder la circulation. Il explique que le chemin Carmen Bergeron a été identifié comme un problème, mais que l'ensemble du secteur doit être identifié dans le processus de planification des frais de développement.

Suite aux questions, Julian Lenhart explique que la configuration proposée est pour supporter les développements futurs. Il confirme que cette configuration n'est pas définitive.

RECOMMANDATION COW2019-66
Proposée par Don Bouchard
Appuyée par Mario Zanth

ATTENDU QUE l'étude de transport pour le collecteur est-ouest a été complétée en décembre 2018, et

ATTENDU QU'UNE condition doit être modifiée dans la liste de conditions approuvées pour le lotissement du Village Morris Stage 5 et de Brigil.

QUE le comité plénier recommande que la condition 26 du lotissement de Brigil et la condition 29 du lotissement du village Morris stage 5 soit modifié afin de lire comme suit :

- "That Poupart Side Road, Bronze Avenue and St-Jean Street be designed and built to municipal standards with an urban cross-section approved by the City. The design should follow the recommendation of the detailed transportation impact study that was completed by Castleglenn Consultants (Dec 2018) with any subsequent revisions, if applicable. The design, the environmental studies, the EA, the construction work, the project management fees and any other studies or works required are to be paid by the Development Charges By-law and the municipal budget in place for the current year. The estimated cost of the design and works to be completed must be approved by the City before any undertaking."

ADOPTÉE

9.2 Amendement aux conditions de l'ébauche du plan – Subdivision Bourgon/Lavigne

Le maire Desjardins demande que l'item soit différé afin que l'entente soit renégociée au comité des Travaux publics des CUPR.

RECOMMANDATION COW2019-67
Proposée par Diane Choinière
Appuyée par André J. Lalonde

ATTENDU QUE le conseil municipal, sous forme de résolution, a adopté une série de 76 conditions relatives au projet de lotissement du développement Bourgon & Lavigne pour une Partie du lot 21, Concession 10, Russell Road - Cheney, le 4 février 2019; et

ATTENDU QUE le 27 mars 2019 le Conseil des Comtés a approuvé le procès-verbal du Comité des Travaux publics du 13 mars 2019 au sujet d'un passage piétonnier à Cheney; et

ATTENDU QU'IL a été résolu d'imposer l'installation du passage piétonnier comme condition préalable à l'entente de subdivision pour la subdivision proposée, au sud du chemin de comté 2 à Cheney; et

ATTENDU QUE selon l'article 51 (44) de la *Loi sur l'aménagement du territoire, L.R.O. 1990 chap. P.13*, le conseil municipal peut, à sa discrétion, modifier les conditions de son approbation;

QUE le comité plénier recommande au conseil municipal d'approuver l'ajout de la condition suivante pour l'ébauche du plan de lotissement, soumise par Lascelles Engineering & Associates Limited pour Développement Bourgon and Lavigne Development Inc, dossier numéro D-12-VVV-02 :

"The Owner shall be responsible to design and install a pedestrian crossing treatment on County Road 2, in Cheney. This pedestrian crossing treatment will consist of a Pedestrian Crossover Level 2 Type "B" – Intersection (2-way) as per the Ontario Traffic Manual Book 15. The design shall be submitted to the Director of Infrastructure and Planning and the Public Works Department of the United Counties of Prescott and Russell (UCPR) for their review and approval as part of the subdivision approval. The design, purchase and installation of this device shall be at the developer's cost. As such, the UCPR will require 100% of the cost estimate via letter of credit – to be added to the subdivision agreement. The

Owner will need to obtained a road cut permit from the UCPR prior to the installation of the pedestrian crossing treatment."

DIFFÉRÉE

9.3 Conversion de condominiums – 535-545 chemin Russell, Cheney

RECOMMANDATION COW2019-68
Proposée par Michel Levert
Appuyée par Christian Simard

QUE le comité plénier recommande au conseil l'adoption du règlement 2019-50 en vue de soustraire de la procédure d'approbation de plan de lotissement, la description de condominiums du projet au 535-545 Russell Road à Cheney, appartenant à 1847305 Ontario Inc. et que le maire et la greffière soient désignés pour signer le certificat à cet effet.

ADOPTÉE

9.4 Demande de fonds supplémentaires – Terrain de balle de Clarence Creek

RECOMMANDATION COW2019-69
Proposée par André J. Lalonde
Appuyée par Michel Levert

ATTENDU QUE le budget capital 2019 pour la construction d'un terrain de balle à Clarence Creek est de 150 000$; et

ATTENDU QUE les prix des soumissions obtenues pour la construction du terrain de balle sont plus élevés qu'anticipés;

QUE le comité plénier recommande au conseil municipal d'autoriser le transfert de 21 141$ des fonds de la taxe sur l'essence vers le budget de construction du terrain de balle de Clarence Creek, tel que recommandé

ADOPTÉE

9.5 Limite de remboursement annuelle de la dette

RECOMMANDATION COW2019-70
Proposée par Diane Choinière
Appuyée par Mario Zanth

QUE le Rapport no. FIN2019-015, soit reçu à titre d'information.

ADOPTÉE

9.6 Mise au point des systèmes de sécurité (portes, alarmes et caméras)

RECOMMANDATION COW2019-71
Proposée par Samuel Cardarelli
Appuyée par Mario Zanth

QUE le Comité plénier recommande au Conseil d'approuver que le projet de "Système d'extinction des feux pour la salle de serveur de l'hôtel de ville de Clarence Creek" soit retiré de la liste des projets capitaux; et

QUE le Comité plénier recommande au Conseil d'approuver l'ajout d'un projet qui consiste à faire une importante mise à point du système de sécurité avec un budget de 25 000 $.

ADOPTÉE

9.7 Initiative Smart City – protocole d'entente signé

RECOMMANDATION COW2019-72
Proposée par Christian Simard
Appuyée par Mario Zanth

QUE le comité plénier recommande que le rapport no. IMIT2019-004 soit reçu à titre d'information.

ADOPTÉE

9.8 Statistiques mensuelles de la construction - avril 2019

RECOMMANDATION COW2019-73
Proposée par Christian Simard
Appuyée par Mario Zanth

QUE les statistiques mensuelles du département de la construction soient reçues à titre d'information.

ADOPTÉE

10. Autres items

Le conseiller Don Bouchard explique que le capteur de vitesse situé sur la Montée des Outaouais ne capte pas bien. Julian Lenhart explique que d'autres stratégies de ralentissement de la circulation sont possibles.

Le conseiller Mario Zanth remercie le département de la règlementation pour le ralentissement de la vitesse sur la rue Edwards et demande si on peut réinstaller le dispositif. Brian Wilson explique que l'intention est de faire une rotation à travers les divers emplacements.

Le conseiller André J. Lalonde demande si la vente aux enchères des propriétés a été un succès. Frédéric Desnoyers explique que des alternatives doivent être trouvées pour les propriétés qui n'ont pas été vendues.

11. Ajournement

Le maire lève l'assemblée à 21h47.

_____ _____

Guy Desjardins, Maire Maryse St-Pierre, Greffière adjointe

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

PROCÈS-VERBAL RÉUNION COMITÉ CONSULTATIF DU PATRIMOINE

le 21 août 2018
Salle du Conseil
415 rue Lemay Street, Clarence Creek, Ont.

PRÉSENT:	Marie-Eve Belanger
	Michel Jubinville
	Gilles Chartrand
	Louis Aubry
	Ghyslain Hotte
ABSENT:	Lise Guindon
	Jean-Marc Lalonde

1. Ouverture de la réunion

Le président ouvre la réunion à 10h04.

2. Adoption de l'ordre du jour

Proposé par Michel Jubinville
Appuyé par Ghyslain Hotte

QUE l'ordre du jour soit adopté tel que présenté avec l'ajout de l'item 4.3 b.

ADOPTÉE, telle que modifiée

3. Adoption des procès-verbaux

Proposé par Louis Aubry
Appuyé par Michel Jubinville

Que le procès-verbal de la réunion du 29 mai 2018 soit approuvé.

ADOPTÉE

4. Plan de travail

4.1 Désignation patrimoniale du Parc du Moulin et réinstallation des plaques

M. Chartrand indique que M. Jean-Marc Lalonde a ramassé la plaque du musée.

4.2 Toponymie

4.2.a rue Hupé

Proposé par Michel Jubinville
Appuyé par Louis Aubry

Que le nom Hupé soit approuvé pour une rue future dans Clarence Creek.

ADOPTÉE

4.2.b parc du Village Morris

Proposé par Michel Jubinville
Appuyé par Ghyslain Hotte

Que le comité propose que le nom du parc sur Docteur Corbeil se nomme Parc du Village Morris.

ADOPTÉE

4.2.c rue St-Jean

Proposé par Ghyslain Hotte
Appuyé par Louis Aubry

Que le comité recommande qu'une portion de la rue St-Jean soit nommée Filion, puisque c'est une suite de la rue existante.

ADOPTÉE

4.2.d plaque Moise-Gendron

Mme Bélanger mentionne que le conseil a approuvé que le comité soit responsable d'approuver les demandes des plaques historiques.

4.3 Circuit patrimonial

4.3.a Ferme Gendron et Hurtubise

M. Aubry propose que Mme Bélanger insère les textes suggérés pour la ferme Gendron. Le comité n'a pas appuyé la proposition. La discussion sera alors faite à la prochaine réunion.

4.3.b Tour de TVC22

Certains membres du comité aident présentement TVC22 pour leur tour.

4.4 Parc du Patrimoine

M. Chartrand a envoyé un courriel à la chambre de commerce de Clarence-Rockland, sans réponse.

Mme Bélanger indique qu'elle parlera au consultant du parc qui s'occupe de la revitalisation de la rue Laurier

4.5 Registre municipal des propriétés du patrimoine culturel

M. Jubinville n'a pas d'autres nouvelles à ce sujet.

5. Affaire nouvelles

La prochaine rencontre sera le 30 octobre 2018.

6. Ajournement

La réunion est ajournée à 11h36.

Gilles Chartrand
Président

Marie Eve Bélanger
W Secrétaire

Clarence-Rockland

CORPORATION OF THE
CITY OF CLARENCE-ROCKLAND
HERITAGE ADVISORY COMMITTEE MEETING MINUTES

August 21, 2018
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

PRESENT:	Marie-Eve Belanger
	Michel Jubinville
	Gilles Chartrand
	Louis Aubry
	Ghyslain Hotte
ABSENT:	Lise Guindon
	Jean-Marc Lalonde

1. Opening of the meeting

The Chair opens the meeting at 10:04 am.

2. Adoption of the agenda

Moved by Michel Jubinville
Seconded By Ghyslain Hotte

THAT the agenda be adopted as presented with the addition of item 4.3 b.

CARRIED, as modified

3. Adoption of the minutes

Moved by Louis Aubry
Seconded By Michel Jubinville

That the minutes of May 29th, 2018 be approved.

CARRIED

4. Work Schedule

4.1 Heritage Designation of du Moulin Park and the reinstallation of plaques

Mr. Chartrand indicated that Mr. Jean-Marc Lalonde picked up the plaque from the museum.

4.2 Toponomy

4.2.a Hupé Street

Moved by Michel Jubinville
Seconded By Louis Aubry

That the name Hupé be approved as a future road name for Clarence Creek.

CARRIED

4.2.b Morris Village Park

Moved by Michel Jubinville
Seconded By Ghyslain Hotte

That the Committee recommends that the park on Docteur Corbeil be named Morris Village Park.

CARRIED

4.2.c St-Jean Street

Moved by Ghyslain Hotte
Seconded By Louis Aubry

The Committee recommends that a portion of St-Jean Street be named Filion, as it continues with the existing road.

CARRIED

4.2.d Moise-Gendron-plaque

Mrs. Bélanger mentioned that Council approved that the Committee be responsible to approve the request made for historical plaques.

4.3 Heritage Tour

4.3.a Gendron and Hurtubise farm

Mr. Aubry proposed that Mrs. Bélanger inserts the suggested text for Gendron Farm. The Committee did not second the proposition. The discussion will be held at a next meeting.

4.3.b TVC22 Tour

Some members of the Committee are helping TV22 for their tour.

4.4 Heritage Park

Mr. Chartrand indicated that he sent an email to the Clarence Rockland Chamber of Commerce with no response.

Mrs. Bélanger suggested that she asks the consultant that is doing the Laurier Street Revitalization to look at the park.

4.5 Municipal Registry of Heritage Properties

Mr. Jubinville does not have any news on this subject.

5. New items

The next meeting is October 30, 2018.

6. Adjournment

The meeting is adjourned at 11:36 am.

Gilles Chartrand

President

Marie Eve Bélanger

W Recording Secretary

CORPORATION OF THE

CITY OF CLARENCE-ROCKLAND

HERITAGE ADVISORY COMMITTEE MEETING MINUTES

March 28, 2019
Salle de conférence principale / Principal Boardroom
1560, rue Laurier Street, Rockland ON K4K 1P7

PRESENT: Marie-Eve Belanger
Lise Guindon
Michel Jubinville
Gilles Chartrand
Louis Aubry
Ghyslain Hotte
Don Bouchard

1. Opening of the meeting

Mr. Chartrand opens the meeting at 1:33 pm.

2. Election of a President

Moved by Gilles Chartrand
Seconded By Lise Guindon

That Michel Jubinville be named President of the Heritage Advisory Commitee for 2019.

CARRIED

3. Adoption of the agenda

Moved by Lise Guindon
Seconded By Louis Aubry

THAT the agenda be adopted with the addition of Item 10 before Adjournment.

CARRIED

4. Adoption of the minutes

Moved by Gilles Chartrand
Seconded By Ghyslain Hotte

That the minutes of the Heritage Advisory Committee of August 21st, 2018 be approved.

CARRIED

5. Mandate of the Committee

Moved by Gilles Chartrand
Seconded By Don Bouchard

THAT the mandate of the Heritage Tour Committee is completed, being that:

- the identification of sites according to criteria following tourist attraction, architectural value, historical value and a role that the property has had in the community;

-a leaflet named Un brin d'histoire Clarence-Rockland A Touch of History with maps, identifying civic adresses and pictures;

-a description of the property with photo on Baladodécouverte accessible from a cell or tablet;

-a plaque installed in front of 40 sites.

BE IT RESOLVED that Council mandate the Heritage Advisory Committee to assume the responsibility of the Heritage Tour.

CARRIED, as modified

Moved by Lise Guindon
Seconded By Don Bouchard

THAT the Committee recommends that Item 1,1 i) under the Terms of References be modified to read as follows:

-Make recommandations to Council on street names, park and trail names, etc, that will be submitted to the Committee by the Infrastructure and Planning Department.

CARRIED

Moved by Ghyslain Hotte
Seconded By Gilles Chartrand

THAT the Committee recommends that Item 1,1 b) of the Terms of Reference be modified to read as follows:

- In collaboration with the Clerk, keep a Heritage Municipal registry.

CARRIED

6. Annual Report 2018

It is suggested that on the last paragraph, the names of the Committee members and subject for TV22 be added. Mr. Chartrand will make the changes.

Moved by Gilles Chartrand
Seconded By Lise Guindon

CARRIED

7. Priorities

7.1 Heritage Park

7.2 du Moulin Park

7.3 Municipal registry

Moved by Gilles Chartrand
Seconded By Louis Aubry

THAT the registry of the designated property be presented to Council for their approval.

CARRIED

7.4 Heritage Tour

The Committee will not make any changed to the Heritage Tour before Council approves the revised Term of References.

7.5 Heritage Month

8. Elaboration of a 4 year plan

The Committee reviews the 4 year plan that Mr. Jubinville provided.

9. Meeting schedule 2019

10. Paper use

It was discussed that the agenda not be printed. Members of the Committee can bring their own copies or a laptop.

11. Adjournment

The Committee thanks Mr. Chartrand for presiding the Heritage Advisory Committee for the last 20 years.

The meeting is adjourned at 3:15 pm.

President

W Recording Secretary

Clarence-Rockland

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

PROCÈS-VERBAL RÉUNION COMITÉ CONSULTATIF DU PATRIMOINE

le 28 mars 2019

PRÉSENT: Marie-Eve Bélanger
Lise Guindon
Michel Jubinville
Gilles Chartrand
Louis Aubry
Ghyslain Hotte
Don Bouchard

1. Ouverture de la réunion

M. Chartrand ouvre la réunion à 13h33.

2. Élection d'un président

Proposé par Gilles Chartrand
Appuyé par Lise Guindon

Que Michel Jubinville soit nommé président du comité consultatif du patrimoine pour 2019.

ADOPTÉE

3. Adoption de l'ordre du jour

Proposé par Lise Guindon
Appuyé par Louis Aubry

QUE l'ordre du jour soit adopté avec l'ajout de l'item 10 avant l'item Ajournement.

ADOPTÉE

4. Adoption des procès-verbaux

Proposé par Gilles Chartrand
Appuyé par Ghyslain Hotte

Que le procès-verbal de la réunion du comité consultatif du patrimoine du 21 aout 2018 soit approuvé.

ADOPTÉE

5. Mandat du comité

Proposé par Gilles Chartrand
Appuyé par Don Bouchard

ATTENDU QUE le mandat du Comité du circuit patrimonial est à toute fin complétée c'est-à-dire :

- le recensement des sites selon les critères suivants un attrait touristique, une valeur architecturale, une valeur historique et un rôle que le bien a eu dans la communauté ;
- un dépliant nommé Un brin d'histoire Clarence-Rockland A Touch of History avec cartes géographiques, identification avec addresses civiques des sites et photos
- une description du bien avec photo sur Baladodécouverte accessible à partir d'un cellulaire ou une tablette ;
- une plaque installée devant 40 sites;

QU'IL SOIT RÉSOLU que le Conseil municipal de la Cité de Clarence-Rockland mandate le comité consultatif du patrimoine de Clarence-Rockland d'assumer la responsabilité du circuit patrimonial.

ADOPTÉE, telle que modifiée

Proposé par Lise Guindon
Appuyé par Don Bouchard

QUE le comité recommande que l'item 1,1 i) dans les termes de référence soit modifié afin de lire comme suit:

-Faire des recommandations au conseil municipal sur les noms de rues, parc, sentiers, etc, qui seront soumis par le Département d'infrastructure et aménagement du territoire.

ADOPTÉE

Proposé par Ghyslain Hotte
Appuyé par Gilles Chartrand

QUE le comité recommande que l'item 1.1 b) des Termes de Référence soit modifié comme suit:

- En collaboration avec la greffière, tenir le registre municipal du patrimoine.

ADOPTÉE

6. Rapport annuel 2018

Il est suggéré que dans le dernier paragraphe, il y soit ajouté les noms des membres et sujet discuté pour TVC22. M. Chartrand fera les modifications.

Proposé par Gilles Chartrand
Appuyé par Lise Guindon

Que le rapport annuel 2018 soit présenté au conseil suite au corrections apportés.

ADOPTÉE

7. Priorités

7.1 Parc du patrimoine

7.2 Parc du Moulin

7.3 Régistre municipal

Proposé par Gilles Chartrand
Appuyé par Louis Aubry

QUE le registre municipal des biens désignés soit présenté au conseil pour approbation.

ADOPTÉE

7.4 Circuit patrimonial

Le comité n'apportera aucune modification au circuit patrimonial sans que le conseil ai approuvé les termes de référence révisé.

7.5 Mois du patrimoine

8. Élaboration d'un plan de 4 ans

Le comité révise le plan de 4 ans que M. Jubinville a fait circulé.

9. Horaire des rencontres 2019

10. Utilisation du papier

Il est discuté que l'ordre du jour ne sera pas imprimé. Les membres du comité apporteront leur copies ou leur portable.

11. Ajournement

Le comité remercie M. Gilles Chartrand pour avoir assumé la présidence pendant 20 ans.

La réunion est ajournée à 15h15.

Président

W Secrétaire

Clarence-Rockland

CORPORATION OF THE
CITY OF CLARENCE-ROCKLAND
COMMITTEE OF ADJUSTMENT MEETING MINUTES

March 27, 2019
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

PRESENT:	Serge Dicaire
	Marie-Ève Bélanger
	Guy Desjardins
	Michel Levert
	Samuel Cardarelli
	Mario Zanth
	Nicolas Denis
ABSENT:	Michel Bergeron
	Jean-Yves Lalonde

1. Opening of the meeting

The Chair opens the meeting at 7:03 pm.

2. Reading and Adoption of the agenda

Moved by Mario Zanth
Seconded By Samuel Cardarelli

THAT the agenda be adopted as presented.

CARRIED

3. Pecuniary declarations

none

4. Adoption of the minutes

Moved by Michel Levert
Seconded By Samuel Cardarelli

That the minutes of the meeting of February 27th, 2019 of the Adjustment Committee be approved.

CARRIED

5. Consent Applications

5.1 B-CR-033-2010

Moved by Michel Levert
Seconded By Mario Zanth

QUE le Comité de dérogation approuve la demande d'autorisation soumise par Suzanne et Jean-Marie Godin, dossier B-CR-033-2010, concernant la propriété décrite comme étant le 1884 chemin Henrie, partie du lot 8, concession 5;

Sujette aux conditions suivantes :

1. Que le(s) requérant(s) fournisse(nt) à la Cité de Clarence-Rockland une copie originale en papier et une copie numérique en format PDF du plan de référence (plan d'arpentage) dûment enregistrées qui se conforment essentiellement à la demande B-CR-033-2010 telle qu'accordée.
2. Que le(s) requérant(s) fournisse(nt) aux Comtés Unis de Prescott et Russell une copie en format PDF et une copie en format DWG du plan de référence (plan d'arpentage) dûment enregistrées qui se conforment essentiellement à la demande B-CR-033-2010 telle qu'accordée.
3. Que le(s) requérant(s) remette à la Cité de Clarence-Rockland un montant représentant 5% de la valeur de la parcelle à être détachée pour fins de parc. La valeur de la parcelle sera déterminé par:
   a. Une évaluation de marché ou lettre d'opinion, obtenu par le propriétaire et au dépenses du propriétaire, d'un évaluateur certifié, révisé et accepté par le Département d'infrastructures et aménagement; ou
   b. L'enregistrement de la vente du terrain le plus récent, pas plus que 24 mois avant la date de la décision, révisé et accepté par le Département d'infrastructures et aménagement; pourvu que la vente était au valeur du marché et qu'il n'y a pas eu des modifications qui pourraient affecter la valeur du terrain, incluant

mais pas limité à des changements de zonage, de désignation du Plan officiel, ou de morcellement.

4. Que le(s) requérant(s) fournisse(nt) à l'autorité approbatrice de la Cité de Clarence-Rockland un rapport d'analyse d'eau selon le Plan officiel des Comtés unis, article 7.4.2, politique 14.1, afin de démontrer que l'aquifère peut fournir une réserve d'eau viable à long terme et de qualité et quantité acceptables. L'étude sera préparée par un professionnel qualifié aux frais du(des) requérant(s) et sera révisée et approuvée par la Conservation de la Nation Sud.
5. Que le(s) requérant(s) fournisse(nt) à l'Autorité approbatrice de la Cité de Clarence-Rockland un Transfert/Acte de cession transférant le terrain divisé dans le but d'émettre un certificat d'autorisation.
6. Que chaque condition soit remplie et que l'Autorité approbatrice de la Cité de Clarence-Rockland en soit avisée par écrit pas plus tard qu'un (1) an après la date de l'avis de la décision par les départements ou les agences qui ont imposé la/les condition(s) respective(s).

CARRIED

5.2 B-CR-003-2019

Moved by Samuel Cardarelli
Seconded By Michel Levert

THAT the Committee of Adjustment approve the consent application submitted by Robin Cloutier and Natalie Lalonde, file number B-CR-003-2019, concerning the property described as 3733 and 3737 Marcil Road, Part 8 on Plan 50R-2554, subject to the following conditions:

1. That a monetary compensation for revision fees amounting to $350.00 be paid to the United Counties of Prescott and Russell.
2. That the applicant(s) provide to the City of Clarence-Rockland one original paper copy and a digital copy (PDF format) of a registered Reference Plan (plan of survey) that identifies the severance B-CR-003-2019 as approved by the committee.
3. That the applicant(s) provide to the United Counties of Prescott and Russell one copy to be submitted electronically in PDF and DWG formats of a registered Reference Plan (plan of survey) that identifies the severance B-CR-003-2019 as approved by the committee.
4. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.

5. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

CARRIED

6. Minor Variance Applications

6.1 A/03/19

Mr. Zanth asks if the distance between the side lot line will be respected. Claire indicated that the 1 metre setback from the lot line will be respected.

Moved by Michel Levert
Seconded By Mario Zanth

THAT the Committee of Adjustment accepts the application for Minor Variance submitted by Eric Portelance, for the property identified as 46 Granite Street, to:

- Increase the maximum width of the driveway to 9.15 metres.

CARRIED

Serge Dicaire President

W Marie-Eve Bélanger Secretary Treasurer

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

PROCÈS-VERBAL RÉUNION COMITÉ DE DÉROGATION

le 27 mars 2019
Salle du Conseil
415 rue Lemay Street,
Clarence Creek, Ont.

PRÉSENT:	Serge Dicaire
	Marie-Ève Bélanger
	Guy Desjardins
	Michel Levert
	Samuel Cardarelli
	Mario Zanth
	Nicolas Denis
ABSENT:	Michel Bergeron
	Jean-Yves Lalonde

1. Ouverture de la réunion

Le président ouvre la réunion à 19h03.

2. Lecture et Adoption de l'ordre du jour

Proposé par Mario Zanth
Appuyé par Samuel Cardarelli

QUE l'ordre du jour soit adopté tel que présenté.

ADOPTÉE

3. Déclarations pécuniaires

aucune

4. Adoption des procès-verbaux

Proposé par Michel Levert
Appuyé par Samuel Cardarelli

Que le procès-verbal de la réunion du comité de dérogation du 27 février 2019 soit approuvé.

ADOPTÉE

5. Demandes de morcellement

5.1 B-CR-033-2010

Proposé par Michel Levert
Appuyé par Mario Zanth

QUE le Comité de dérogation approuve la demande d'autorisation soumise par Suzanne et Jean-Marie Godin, dossier B-CR-033-2010, concernant la propriété décrite comme étant le 1884 chemin Henrie, partie du lot 8, concession 5;

Sujette aux conditions suivantes :

1. Que le(s) requérant(s) fournisse(nt) à la Cité de Clarence-Rockland une copie originale en papier et une copie numérique en format PDF du plan de référence (plan d'arpentage) dûment enregistrées qui se conforment essentiellement à la demande B-CR-033-2010 telle qu'accordée.
2. Que le(s) requérant(s) fournisse(nt) aux Comtés Unis de Prescott et Russell une copie en format PDF et une copie en format DWG du plan de référence (plan d'arpentage) dûment enregistrées qui se conforment essentiellement à la demande B-CR-033-2010 telle qu'accordée.
3. Que le(s) requérant(s) remette à la Cité de Clarence-Rockland un montant représentant 5% de la valeur de la parcelle à être détachée pour fins de parc. La valeur de la parcelle sera déterminé par:
   a. Une évaluation de marché ou lettre d'opinion, obtenu par le propriétaire et au dépenses du propriétaire, d'un évaluateur certifié, révisé et accepté par le Département d'infrastructures et aménagement; ou
   b. L'enregistrement de la vente du terrain le plus récent, pas plus que 24 mois avant la date de la décision, révisé et accepté par le Département d'infrastructures et aménagement; pourvu que la vente était au valeur du marché et qu'il n'y a pas eu des modifications qui pourraient affecter la valeur du terrain, incluant mais pas limité à des changements de zonage, de désignation du Plan officiel, ou de morcellement.

4. Que le(s) requérant(s) fournisse(nt) à l'autorité approbatrice de la Cité de Clarence-Rockland un rapport d'analyse d'eau selon le Plan officiel des Comtés unis, article 7.4.2, politique 14.1, afin de démontrer que l'aquifère peut fournir une réserve d'eau viable à long terme et de qualité et quantité acceptables. L'étude sera préparée par un professionnel qualifié aux frais du(des) requérant(s) et sera révisée et approuvée par la Conservation de la Nation Sud.
5. Que le(s) requérant(s) fournisse(nt) à l'Autorité approbatrice de la Cité de Clarence-Rockland un Transfert/Acte de cession transférant le terrain divisé dans le but d'émettre un certificat d'autorisation.
6. Que chaque condition soit remplie et que l'Autorité approbatrice de la Cité de Clarence-Rockland en soit avisée par écrit pas plus tard qu'un (1) an après la date de l'avis de la décision par les départements ou les agences qui ont imposé la/les condition(s) respective(s).

ADOPTÉE

5.2 B-CR-003-2019

Proposé par Samuel Cardarelli
Appuyé par Michel Levert

THAT the Committee of Adjustment approve the consent application submitted by Robin Cloutier and Natalie Lalonde, file number B-CR-003-2019, concerning the property described as 3733 and 3737 Marcil Road, Part 8 on Plan 50R-2554, subject to the following conditions:

1. That a monetary compensation for revision fees amounting to $350.00 be paid to the United Counties of Prescott and Russell.
2. That the applicant(s) provide to the City of Clarence-Rockland one original paper copy and a digital copy (PDF format) of a registered Reference Plan (plan of survey) that identifies the severance B-CR-003-2019 as approved by the committee.
3. That the applicant(s) provide to the United Counties of Prescott and Russell one copy to be submitted electronically in PDF and DWG formats of a registered Reference Plan (plan of survey) that identifies the severance B-CR-003-2019 as approved by the committee.
4. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.
5. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within

one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

ADOPTÉE

6. Demandes de dérogation mineure

6.1 A/03/19

M. Zanth demande si la distance de la ligne intérieure sera respectée. Claire mentionne que la distance de 1 mètre de la ligne sera respectée.

Proposé par Michel Levert
Appuyé par Mario Zanth

THAT the Committee of Adjustment accepts the application for Minor Variance submitted by Eric Portelance, for the property identified as 46 Granite Street, to:

- Increase the maximum width of the driveway to 9.15 metres.

ADOPTÉE

Serge Dicaire Président

W Marie-Eve Bélanger Secrétaire-Trésorière

CORPORATION OF THE
CITY OF CLARENCE-ROCKLAND
COMMITTEE OF ADJUSTMENT MEETING MINUTES

April 24, 2019
Council Chambers
415 rue Lemay Street, Clarence Creek, Ont.

PRESENT:	Marie-Ève Bélanger
	Guy Desjardins
	Michel Levert
	Michel Bergeron
	Samuel Cardarelli
	Mario Zanth
	Nicolas Denis
ABSENT:	Serge Dicaire
	Jean-Yves Lalonde

1. Opening of the meeting

The Chair opens the meeting at 7h02.

2. Reading and Adoption of the agenda

Moved by Guy Desjardins
Seconded By Michel Bergeron

THAT the agenda be adopted as presented.

CARRIED

4. Adoption of the minutes

Moved by Michel Levert
Seconded By Mario Zanth

That the minutes of the March 27th, 2019 meeting of the Adjustment Committee be approved.

CARRIED

5. Consent Applications

5.1 B-CR-006-2019

Mrs. Bélanger proceeds to present both severances at the same time. She explains Condition no. 2, in which the department deems that the lots should be smaller.

Jonah Bonn for Holzman planners explains the reasoning behind the bigger lots. They did a survey of surrounding properties and indicated that the proposed lots are a little bit bigger than surrounding properties. A realtor also suggested that lots be of 5 acres, which would give residents more privacy. He does not anticipate that the lots will be clearcut.

He continues on noting that an aggregate extraction at that location would have cumulative adverse impact for residences nearby (dust, noise, heavy truck traffic, etc.).

Mr. Zanth asks how many houses are proposed per lot. Mr. Bonn indicated that it will not be for a subdivision; only one house per lot.

Mr. Desjardins does not see why we should stop someone from severing 5 acres.

Mr. Bonn says that it is a new opportunity for this area.

Mr. Cardarelli asked the Committee if they are willing to affect the resource by creating bigger lots.

Mr. Desjardins indicated that it gives a choice for people to have bigger lots.

Mr. Levert suggest to remove condition 2.

Moved by Michel Levert
Seconded By Mario Zanth

THAT the Committee of Adjustment approve the consent application submitted by Holzman Consultants for Donald Hall, file number B-CR-006-2019, concerning the property described as Part of Lot 16, Concession 7, Bouvier Road, subject to the following conditions:

1. That a monetary compensation for revision fees amounting to $350.00 be paid to the United Counties of Prescott and Russell.

2. That copy of all reference plans associated with this application be provided to the Secretary-Treasurer of the Committee of Adjustment for approval prior to registration.

3. That the applicant(s) provide to the City of Clarence-Rockland one original paper copy and one electronic copy (PDF format) of a registered Reference Plan (plan of survey) that identifies the severance B-CR-006-2019 as approved by the committee.

4. That the applicant(s) provide to the United Counties of Prescott and Russell one copy to be submitted electronically in PDF and DWG formats of a registered Reference Plan (plan of survey) that identifies the severance B-CR-006-2019 as approved by the committee.

5. That the applicant(s) pay the City of Clarence-Rockland an amount equivalent to 5% of the value of the parcel to be severed as cash in lieu of parkland payment. The value of the land shall be determined by:

    a. A market appraisal or a letter of opinion, obtained by and at the owner's expense, from a certified appraiser reviewed and accepted by the Infrastructure and Planning Department; or

    b. The most recent land sale record of the subject property, no more than 24 months prior to the date of the decision, reviewed and accepted by the Infrastructure and Planning Department; provided the sale was at market value and there has been no change that may impact the land value, including but not limited to changes in the zoning, Official Plan designation, or severance.

6. That the applicant(s) provide to the Approval Authority of the City of Clarence-Rockland a written engagement stating that they will ensure that any purchase and sale agreement for the severed parcel mentions that the lot must be connected to the municipal water service along Bouvier Road.

7. That the applicant provides SNC with a revised Environmental Impact Assessment (EIA) that addresses South Nation Conservation's comments on the original EIA.

8. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.

9. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within

one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

CARRIED, as modified

5.2 B-CR-007-2019

This file was presented at the same time as file B-CR-006-2019.

Moved by Michel Levert
Seconded By Mario Zanth

THAT the Committee of Adjustment approve the consent application submitted by Holzman Consultants for Donald Hall, file number B-CR-007-2019, concerning the property described as Part of Lot 16, Concession 7, Bouvier Road, subject to the following conditions:

1. That a monetary compensation for revision fees amounting to $350.00 be paid to the United Counties of Prescott and Russell.
2. That copy of all reference plans associated with this application be provided to the Secretary-Treasurer of the Committee of Adjustment for approval prior to registration.
3. That the applicant(s) provide to the City of Clarence-Rockland one original paper copy and one electronic copy (PDF format) of a registered Reference Plan (plan of survey) that identifies the severance B-CR-007-2019 as approved by the committee.
4. That the applicant(s) provide to the United Counties of Prescott and Russell one copy to be submitted electronically in PDF and DWG formats of a registered Reference Plan (plan of survey) that identifies the severance B-CR-007-2019 as approved by the committee.
5. That the applicant(s) pay the City of Clarence-Rockland an amount equivalent to 5% of the value of the parcel to be severed as cash in lieu of parkland payment. The value of the land shall be determined by:
    a. A market appraisal or a letter of opinion, obtained by and at the owner's expense, from a certified appraiser reviewed and accepted by the Infrastructure and Planning Department; or
    b. The most recent land sale record of the subject property, no more than 24 months prior to the date of the decision, reviewed and accepted by the Infrastructure and Planning Department; provided

the sale was at market value and there has been no change that may impact the land value, including but not limited to changes in the zoning, Official Plan designation, or severance.

6. That the applicant(s) provide to the Approval Authority of the City of Clarence-Rockland a written engagement stating that they will ensure that any purchase and sale agreement for the severed parcel mentions that the lot must be connected to the municipal water service along Bouvier Road.

7. That the applicant provides SNC with a revised Environmental Impact Assessment (EIA) that addresses South Nation Conservation's comments on the original EIA.

8. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.

9. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

CARRIED, as modified

6. Minor Variance Applications

6.1 A/04/19

Mr. Robert Lévesque requested if a construction permit is necessary. Mrs. Bélanger indicated that it is.

Moved by Mario Zanth
Seconded By Michel Levert

QUE le Comité de dérogation accepte la demande de dérogation mineure soumise par Robert Levesque, dossier A/04/19, concernant la propriété décrite comme étant le 1429 chemin Vinette, dans le but d':

- Augmenter la taille des structures accessoires de 188 m^2 à 325,2 m^2.

CARRIED

6.2 A/05/19

Mr. Zanth requested if the second access will be paved. Mr. Picard indicated that they will pave it if it's necessary.

Mr. Lévesque wants to store his boat in the summer and his car in the winter. He also wants to respect the location of the entrance as per the entrance permit. He does not want to cut trees along Charlebois and will be more than 30 metres from Landry. He also indicated that he obtained consent from the two neighbors on Charlebois.

Moved by Michel Levert
Seconded By Michel Bergeron

THAT the Committee of Adjustment accepts the application for Minor Variance submitted by Steve Picard, for the property identified as 3 Adolphus Court, to:

- Allow a second driveway on Charlebois Street.

CARRIED

8. Other Items

8.1 B-CR-006-2018, B-CR-007-2018

Mrs. Bélanger indicated that she met with SNC's hydrogeologist, Mr. Rozon and Lascelles Engineering on Monday. SNC is not satisfied that the new lots will have enough water for the long term. It was agreed by all parties that more water pumping would be completed during a dry summer day as per the ministry's guideline. SNC then forwarded two new conditions to be added to the list. It is understood that one more year would be added to complete the conditions.

Moved by Mario Zanth
Seconded By Michel Levert

That the following conditions be added to the list of conditions for B-CR-006-2018 and B-CR-007-2018:

1A: The applicant provides to South Nation Conservation a pump test showing recovery that meets the D-5-5 Ministry of the Environment, Conservation, and Parks guidelines, conducted during a time of seasonal low groundwater level (e.g. July-September); and

1B: The applicant demonstrates to South Nation Conservation that the proposed septic systems will be located and/or designed appropriately to protect drinking water wells.

CARRIED

9. Adjournment

The meeting is adjourned at 7:53.

Samuel Cardarelli, Acting President

W Marie-Eve Bélanger Secretary Treasurer

CORPORATION DE LA

CITÉ DE CLARENCE-ROCKLAND

PROCÈS-VERBAL RÉUNION COMITÉ DE DÉROGATION

le 24 avril 2019
Salle du Conseil
415 rue Lemay Street,
Clarence Creek, Ont.

PRÉSENT:	Marie-Ève Bélanger
	Guy Desjardins
	Michel Levert
	Michel Bergeron
	Samuel Cardarelli
	Mario Zanth
	Nicolas Denis
ABSENT:	Serge Dicaire
	Jean-Yves Lalonde

1. Ouverture de la réunion

Le président ouvre la réunion à 19h02.

2. Lecture et Adoption de l'ordre du jour

Proposé par Guy Desjardins
Appuyé par Michel Bergeron

QUE l'ordre du jour soit adopté tel que présenté.

ADOPTÉE

4. Adoption des procès-verbaux

Proposé par Michel Levert
Appuyé par Mario Zanth

Que le procès-verbal de la rencontre du comité de dérogation du 27 mars 2019 soit approuvé.

ADOPTÉE

5. Demandes de morcellement

5.1 B-CR-006-2019

Mme Bélanger présente les deux dossiers de morcellement en même temps. Elle explique la condition no. 2, dans lequel le département estime que les lots devraient être plus petits.

Jonah Bonn, pour Holzman, explique le raisonnement des lots plus grands. Ils ont fait une enquête sur les propriétés environnantes et ont indiqué que les lots proposés sont un peu plus grands que les propriétés environnantes. Un agent immobilier a également suggéré que les terrains soient d'une superficie de 5 acres, ce qui donnerait aux résidents plus d'intimité. Il ne prévoit pas que les lots seront coupés à blanc.

Il continue en notant qu'une extraction de granulats sur le site aurait un impact négatif cumulatif sur les résidences à proximité (poussière, bruit, circulation dense de camions, etc.).

M. Zanth demande combien de maisons sont proposées par lot. M. Bonn a indiqué que ce ne serait pas pour une subdivision; une seule maison par lot.

M. Desjardins ne voit pas pourquoi on devrait empêcher quelqu'un de couper 5 acres.

M. Bonn dit que c'est une nouvelle opportunité pour cette région.

M. Cardarelli a demandé au Comité s'il était prêt à créer un impact sur la ressource en créant de plus grands lots.

M. Desjardins a indiqué que cela donnait le choix aux personnes d'avoir de plus grands terrains.

M. Levert suggère de supprimer la condition 2.

Proposé par Michel Levert
Appuyé par Mario Zanth

THAT the Committee of Adjustment approve the consent application submitted by Holzman Consultants for Donald Hall, file number B-CR-006-2019, concerning the property described as Part of Lot 16, Concession 7, Bouvier Road, subject to the following conditions:

1. That a monetary compensation for revision fees amounting to $350.00 be paid to the United Counties of Prescott and Russell.
2. That copy of all reference plans associated with this application be provided to the Secretary-Treasurer of the Committee of Adjustment for approval prior to registration.
3. That the applicant(s) provide to the City of Clarence-Rockland one original paper copy and one electronic copy (PDF format) of a registered Reference Plan (plan of survey) that identifies the severance B-CR-006-2019 as approved by the committee.
4. That the applicant(s) provide to the United Counties of Prescott and Russell one copy to be submitted electronically in PDF and DWG formats of a registered Reference Plan (plan of survey) that identifies the severance B-CR-006-2019 as approved by the committee.
5. That the applicant(s) pay the City of Clarence-Rockland an amount equivalent to 5% of the value of the parcel to be severed as cash in lieu of parkland payment. The value of the land shall be determined by:
    a. A market appraisal or a letter of opinion, obtained by and at the owner's expense, from a certified appraiser reviewed and accepted by the Infrastructure and Planning Department; or
    b. The most recent land sale record of the subject property, no more than 24 months prior to the date of the decision, reviewed and accepted by the Infrastructure and Planning Department; provided the sale was at market value and there has been no change that may impact the land value, including but not limited to changes in the zoning, Official Plan designation, or severance.
6. That the applicant(s) provide to the Approval Authority of the City of Clarence-Rockland a written engagement stating that they will ensure that any purchase and sale agreement for the severed parcel mentions that the lot must be connected to the municipal water service along Bouvier Road.
7. That the applicant provides SNC with a revised Environmental Impact Assessment (EIA) that addresses South Nation Conservation's comments on the original EIA.
8. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.

9. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

ADOPTÉE, telle que modifiée

5.2 B-CR-007-2019

Ce dossier a été présenté en même temps que le dossier B-CR-006-2019.

Proposé par Michel Levert
Appuyé par Mario Zanth

THAT the Committee of Adjustment approve the consent application submitted by Holzman Consultants for Donald Hall, file number B-CR-007-2019, concerning the property described as Part of Lot 16, Concession 7, Bouvier Road, subject to the following conditions:

1. That a monetary compensation for revision fees amounting to $350.00 be paid to the United Counties of Prescott and Russell.
2. That copy of all reference plans associated with this application be provided to the Secretary-Treasurer of the Committee of Adjustment for approval prior to registration.
3. That the applicant(s) provide to the City of Clarence-Rockland one original paper copy and one electronic copy (PDF format) of a registered Reference Plan (plan of survey) that identifies the severance B-CR-007-2019 as approved by the committee.
4. That the applicant(s) provide to the United Counties of Prescott and Russell one copy to be submitted electronically in PDF and DWG formats of a registered Reference Plan (plan of survey) that identifies the severance B-CR-007-2019 as approved by the committee.
5. That the applicant(s) pay the City of Clarence-Rockland an amount equivalent to 5% of the value of the parcel to be severed as cash in lieu of parkland payment. The value of the land shall be determined by:
    a. A market appraisal or a letter of opinion, obtained by and at the owner's expense, from a certified appraiser reviewed and accepted by the Infrastructure and Planning Department; or

b. The most recent land sale record of the subject property, no more than 24 months prior to the date of the decision, reviewed and accepted by the Infrastructure and Planning Department; provided the sale was at market value and there has been no change that may impact the land value, including but not limited to changes in the zoning, Official Plan designation, or severance.

6. That the applicant(s) provide to the Approval Authority of the City of Clarence-Rockland a written engagement stating that they will ensure that any purchase and sale agreement for the severed parcel mentions that the lot must be connected to the municipal water service along Bouvier Road.

7. That the applicant provides SNC with a revised Environmental Impact Assessment (EIA) that addresses South Nation Conservation's comments on the original EIA.

8. That the applicant provide to the Approval Authority of the City of Clarence-Rockland a Transfer/Deed of land conveying the severed land for use for the issuance of a Certificate of Consent.

9. That each condition be fulfilled and that the Consent Approval Authority of the City of Clarence-Rockland be notified in writing within one (1) year of the date of the Decision by the departments and/or agencies having imposed the said conditions.

ADOPTÉE, telle que modifiée

6. Demandes de dérogation mineure

6.1 A/04/19

Robert Levesque demande s'il a besoin d'un permis de construction. Mme Bélanger indique que oui.

Proposé par Mario Zanth
Appuyé par Michel Levert

QUE le Comité de dérogation accepte la demande de dérogation mineure soumise par Robert Levesque, dossier A/04/19, concernant la propriété décrite comme étant le 1429 chemin Vinette, dans le but d':

- Augmenter la taille des structures accessoires de 188 m^2 à 325,2 m^2.

ADOPTÉE

6.2 A/05/19

M. Zanth demande si la deuxième entrée sera pavée. M. Picard indique que ce serait fait si nécessaire.

M. Lévesque veut entreposer sont bateau l'été et auto l'hiver. Il veut également respecter la localisation d'après le permis d'entrée. Il ne veut pas couper des arbres le long de la rue Charlebois. Il sera également à plus de 30 mètres du chemin Landry. De plus, il a obtenu le consentement des 2 voisins sur Charlebois.

Proposé par Michel Levert
Appuyé par Michel Bergeron

THAT the Committee of Adjustment accepts the application for Minor Variance submitted by Steve Picard, for the property identified as 3 Adolphus Court, to:

- Allow a second driveway on Charlebois Street.

ADOPTÉE

8. Autres items

8.1 B-CR-006-2018, B-CR-007-2018

Mme Bélanger indique qu'elle a rencontré lundi l'hydrogéologue de la CNS avec M. Rozon et Lascelles Engineering. Elle indique que la CNS n'est pas satisfaite que les nouveaux terrains auront assez d'eau. Il a été entendu par toutes les parties que le puit serait à nouveau pomper pendant une journée sèche d'été, tel que convenu pas les guides du ministère. La CNS a donc soumise deux nouvelles conditions à être ajoutées à la liste de condition. Il est entendu que le délai pour compléter les conditions sera prolongée de 1 an.

Proposé par Mario Zanth
Appuyé par Michel Levert

Que les conditions suivantes soient ajoutées à la liste de condition pour les dossiers B-CR-006-2018 et B-CR-007-2018:

1A: The applicant provides to South Nation Conservation a pump test showing recovery that meets the D-5-5 Ministry of the Environment,

Conservation, and Parks guidelines, conducted during a time of seasonal low groundwater level (e.g. July-September); and

1B: The applicant demonstrates to South Nation Conservation that the proposed septic systems will be located and/or designed appropriately to protect drinking water wells.

ADOPTÉE

9. Ajournement

La réunion est ajournée à 19h53.

Samuel Cardarelli, Président par intérim

W Marie-Eve Bélanger Secrétaire-Trésorière

RAPPORT N° AMÉ-19-40-R

Date	03/04/2019
Soumis par	Claire Lemay
Objet	Dérogation au règlement sur l'affichage – Club Optimiste de Rockland
# du dossier	D-13-SIGN-70

1) **NATURE / OBJECTIF :**
Le but de ce rapport est de présenter une demande de dérogation au règlement 2015-160 afin de permettre une enseigne permanente pour le Club Optimiste de Rockland.

2) **DIRECTIVE/POLITIQUE ANTÉCÉDENTE :**
S/O

3) **RECOMMANDATION DU SERVICE:**
THAT the municipal Council authorizes the installation of a unilingual francophone permanent ground sign on municipal property within the right-of-way of Caron Street in Rockland for the announcement of the Rockland Optimist Club events.

AND THAT the municipal Council approves the request for an exemption to the requirement to pay the application fees for the Rockland Optimist Club for their sign permit and sign variance applications, for a total amount of 333.00$.

QUE le conseil municipal autorise l'installation d'une enseigne permanente sur le sol, unilingue francophone, sur un terrain municipal dans l'emprise de chemin de la rue Caron à Rockland afin d'annoncer les activités du Club Optimiste de Rockland.

ET QUE le conseil municipale approuve la demande d'exemption à l'exigence de payer les frais de demande pour le club Optimiste de Rockland pour leur demande de permis d'enseigne et leur demande de dérogation d'enseigne, pour un montant total de $ 333,00.

4) **HISTORIQUE :**
S/O

5) **DISCUSSION :**
Le règlement sur l'affichage (Règlement 2015-160 tel qu'amendée) n'a pas de catégorie d'enseigne ni de dispositions spécifique à des enseignes permanentes pour organismes à but non-lucratif. Le règlement permet des enseignes permanentes posés sur le sol pour

des commerces, pourvu qu'elles soient situées sur le même terrain que le commerce. Des enseignes temporaires ou mobiles sont permis pour des organismes à but non-lucratif sur des terrains publics ou privés, avec la permission du propriétaire.

Le Club Optimiste de Rockland souhaite installer une enseigne permanente dans l'emprise de la rue Caron, au sud de l'intersection avec le chemin de Comté 17. Cette enseigne proposée comprendra deux parties : en haut, le logo du club Optimiste (dimensions 4'x4') et en bas, un espace de 18''x4' qui permettra au club d'annoncer leurs activités (par exemple, souper de homards, vente de gâteaux, etc.). La structure est conçue par des professionnels et sera fabriqué en PVC et placé entre deux poteaux de 4''x4''x12', recouverts de PVC blanc. L'enseigne sera visible de deux côtés.

Les organismes à but non-lucratif installent d'habitude des enseignes temporaires pour annoncer leurs événements. Chaque nouvelle enseigne temporaire doit être approuvée par le Département d'infrastructure et aménagement du territoire et un permis d'enseigne doit être donné. Avec l'installation d'un enseigne permanente pour le Club Optimiste, l'organisme n'aura plus besoin de soumettre une nouvelle demande de permis d'enseigne pour annoncer chaque événement.

Le Club Optimiste demande une exemption aux exigences de l'article 8.8 du règlement sur l'affichage. L'article 8.8 exige que : « Le message et le contenu de toute nouvelle enseigne permanente ou temporaire doivent être rédigés dans les deux langues officielles du Canada. Le lettrage d'une enseigne permanente ou temporaire (dimensions et style) doit être identique en français et anglais; toutefois, le nom de l'entreprise peut être unilingue. » L'article 8.8.1 stipule que les églises et les écoles unilingues sont exemptés des exigences de l'article 8.8. C'est l'avis du département que le Club Optimiste, étant un organisme francophone avec un mandat de promouvoir l'utilisation de la langue française devrait bénéficier d'une exemption similaire. Avec une exemption aux exigences de l'article 8.8 du règlement sur l'affichage approuvé par le conseil, le club Optimiste pourra créer des annonces en français pour leurs activités et événements qui se dérouleront uniquement en français.

L'article 7.2 du règlement sur l'affichage stipule que les frais de demande de permis d'enseigne ou de dérogation « ne s'applique pas à un permis pour une enseigne temporaire lorsque le requérant est un organisme sans but lucratif et lorsque le but de l'enseigne est de publiciser une activité ou la période d'inscription d'un programme. » Par contre, la présente demande du club Optimiste est une demande pour une enseigne permanente, alors les frais de demande de permis ($125) et de dérogation ($208) s'appliquent. Le club Optimiste

demande que le conseil approuve une exemption à l'exigence de payer les frais de demande (montant total de $333).

6) **CONSULTATION :**
S/O

7) **RECOMMANDATION OU COMMENTAIRES DU COMITÉ :**
S/O

8) **IMPACT FINANCIER (monétaire/matériaux/etc.):**
Le département d'infrastructure et aménagement absorbera les coûts associés au traitement de la demande de permis d'enseigne et de dérogation d'enseigne pour le Club Optimiste, ce qui est le cas pour toutes les autres demandes de permis d'enseigne des organismes à but non-lucratif.

9) **IMPLICATIONS LÉGALES :**
S/O

10) **GESTION DU RISQUE (RISK MANAGEMENT) :**
S/O

11) **IMPLICATIONS STRATÉGIQUES :**
S/O

12) **DOCUMENTS D'APPUI:**
Attachement 1 : Lettre du trésorier du club Optimiste de Rockland
Attachement 2 : Carte index de l'emplacement proposé de l'enseigne
Attachement 3 : Croquis de l'enseigne

Le 25 mars 2019

Monsieur Pierre Boucher
Directeur des services communautaires
Cité de Clarence-Rockland
1560, rue Laurier
Rockland (Ontario) K4K 1P7

Monsieur,

Comme vous le savez, depuis plus de 40 ans le club Optimiste de Rockland fait partie intégrante de notre communauté et est toujours très actif. Pour nous aider à mettre davantage en valeur notre engagement communautaire, nous avons besoin de votre appui et de votre permission.

Afin d'assurer une meilleure visibilité de notre organisme à l'entrée de la cité de Clarence-Rockland, nous voulons poser une affiche faisant la promotion du club Optimiste de Rockland sur une partie du terrain de la cité de Clarence-Rockland (voir plan en annexe). L'affiche contiendra notre logo d'une grandeur de 4' × 4' et sous le logo il y aura une deuxième affiche de 18" × 4' qui nous permettra d'annoncer les activités du club (ex., souper de homards, vente de gâteaux, etc.). Le tout, conçu par des professionnels, sera fabriqué en PVC et placé entre deux poteaux de 4" × 4" × 12' recouverts de PVC blanc. Enfin, le logo et les annonces seront visibles des deux côtés : d'un côté, en français, de l'autre, en anglais. Bien sûr, le club Optimiste de Rockland assume tous les coûts de la fabrication, de l'installation et de l'entretien de cette affiche.

En nous permettant d'utiliser une parcelle de votre terrain pour ce projet, vous contribuez à votre tour au bien-être de la jeunesse et de notre communauté et vous nous encouragez à poursuivre notre mission. Nos contributions annuelles de près de 15 000 $ visent toujours à inspirer le meilleur chez les jeunes.

En souhaitant grandement que vous acceptiez notre demande, nous vous prions d'agréer, Monsieur, nos salutations distinguées.

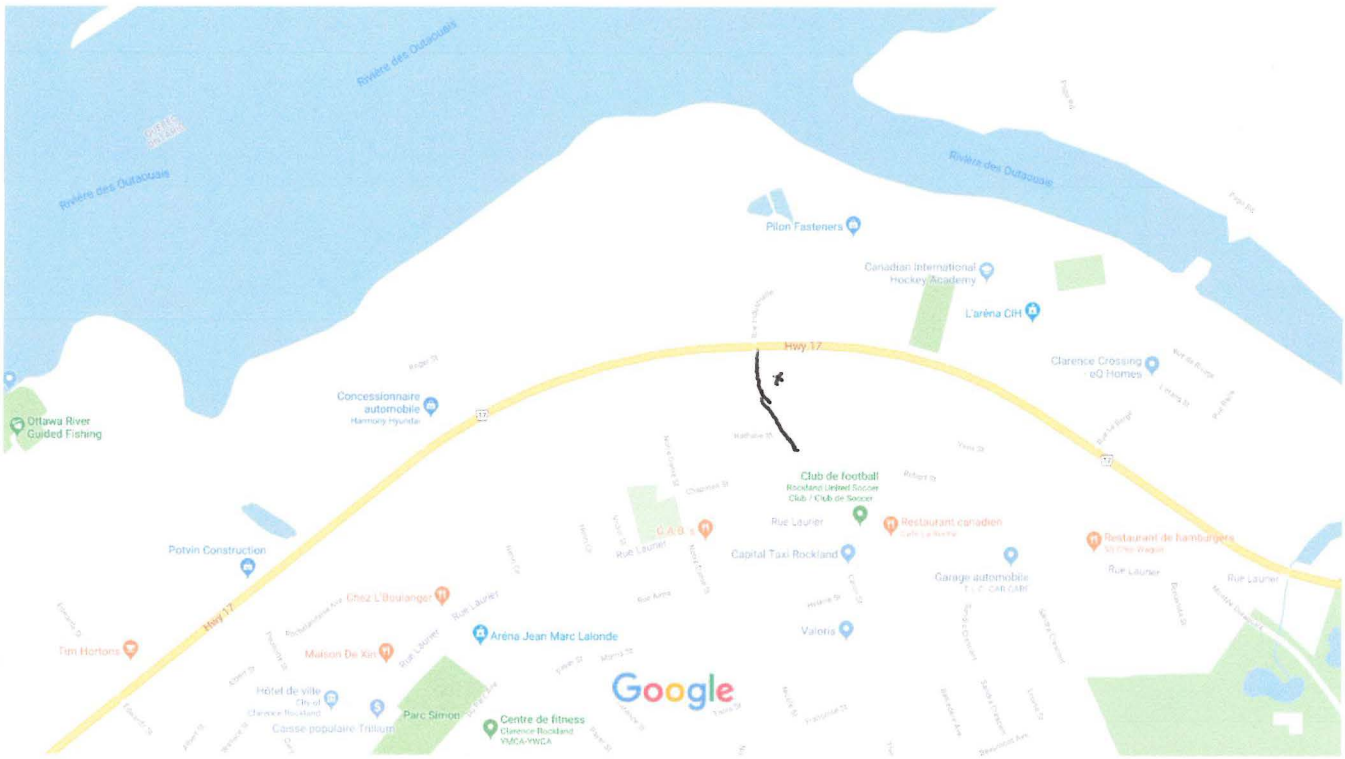
Robert Laplante, trésorier

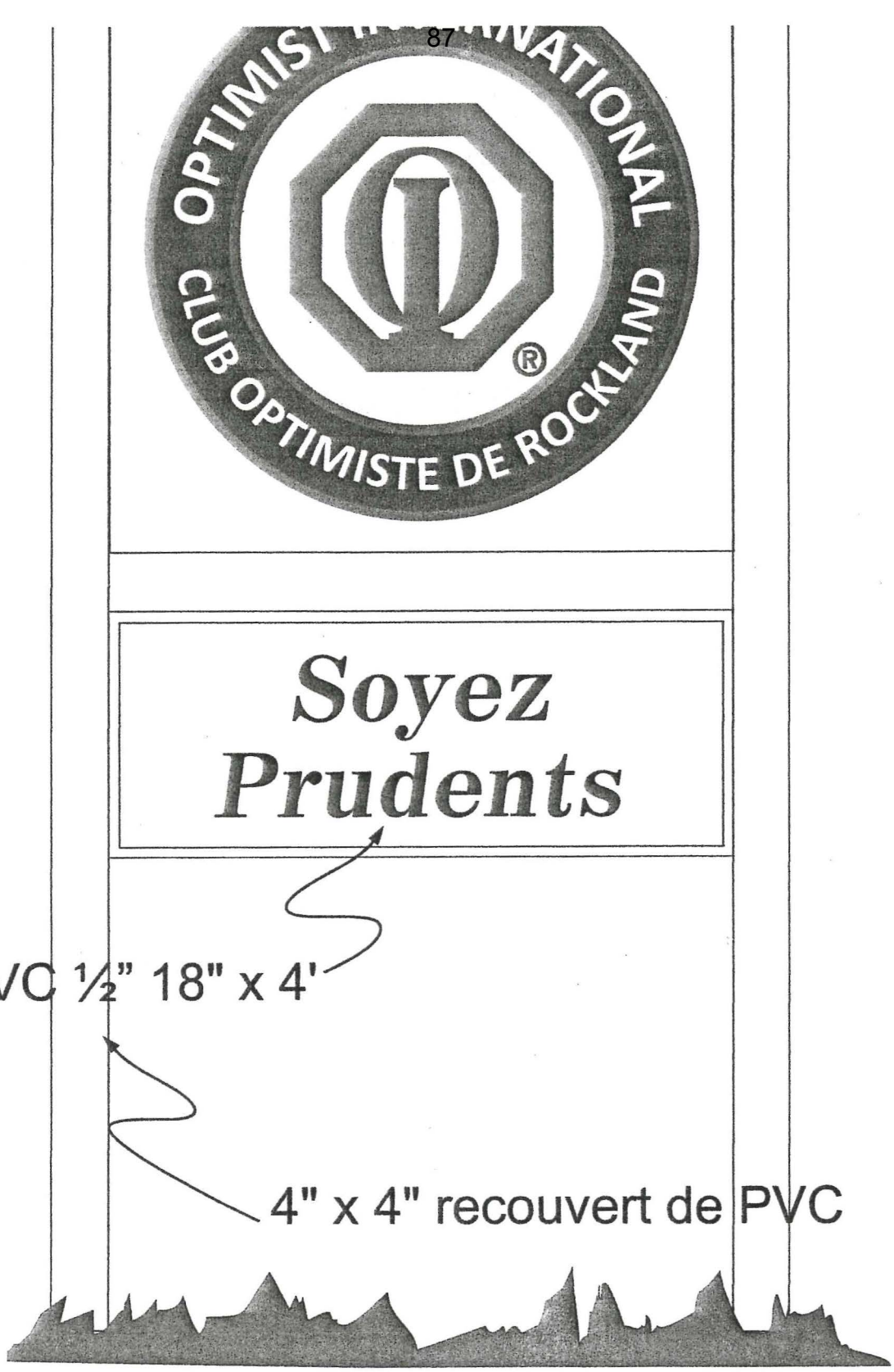
Pièces jointes: Croquis de l'affiche et plan du terrain

Par ma signature, je donne la permission au club Optimiste Rockland d'installer l'affiche décrite ci-haut.

_____

Google Maps


Rivière des Outaouais
Rivière des Outaouais
Rivière des Outaouais
Pilon Fasteners
Canadian International Hockey Academy
L'aréna CIH
Hwy 17
Clarence Crossing - eQ Homes
Concessionnaire automobile
Ottawa River Guided Fishing
Club de football
Rue Laurier
Restaurant canadien
Restaurant de hamburgers
Capital Taxi Rockland
Garage automobile
Potvin Construction
Hwy 17
Chez L'Boulanger
Aréna Jean Marc Lalonde
Tim Hortons
Maison De Kim
Valoris
Hôtel de ville
Caisse populaire Trillium
Parc Simon
Centre de fitness
Google
Données cartographiques ©2019 Google
100 m


OPTIMIST INTERNATIONAL
CLUB OPTIMISTE DE ROCKLAND
Soyez
Prudents
seigne PVC ½" 18" x 4'
4" x 4" recouvert de PVC

Julie Chartrand

From: Sophie <pr.lgbtq@gmail.com>
Sent: April-23-19 12:14 PM
To: info@alfred-plantagenet.com; info@casselman.ca; Julie Chartrand; llalonde@easthawkesbury.ca; Info@hawkesbury.ca; jbrizard@nationmun.ca; info@russell.ca; Alison Collard
Subject: Pride Flag Raising

Greetings,

My name is Sophie, and I am a member of the Groupe LGBTQ+Alliés de Prescott-Russell LGTBQ+Allies Group. Our bilingual group has been active for over two years in the region: we hold monthly meetings in Hawkesbury and Casselman; we have attended a dozen events with our promotional tables; and we continue to work closely with our partners in various school boards and health-related agencies to provide information about gender identity and sexual orientation to their employees. Our mission is to facilitate access to support, resources and education in our mainly rural community. We seek to foster change so that lesbian, gay, bisexual, and transgender people can participate free of negative stereotypes and as equal members of society.

Last year, we asked our municipalities to raise a Pride flag during the third week of July to mark our Pride celebration, and 5 out of 8 municipalities did so. Once again this year, in recognition of the diverse community residing in our villages and townships, we kindly request that all the municipalities in the United Counties of Prescott-Russell raise a Pride flag from July 15 to 21 to coincide with our annual Pride Picnic, being held on July 20.

Please join other municipalities and jurisdictions across Canada and outline your support for tolerance and equality.

Thank you,

Sophie Lalonde

--

If you do not wish to receive these emails, please email us with "unsubscribe" in the subject line.

Si vous ne voulez pas recevoir nos courriels, s.v.p. nous envoyer un courriel qui indique "désabonnement" dans le champ objet.

Date	19/03/2019
Submitted by	Marie-Eve Bélanger
Subject	TIS and modification to a condition of Draft Approval of Brigil and Stage 5 Morris Village
File N°	D-12-121, D-12-122

REPORT N°
AMÉ-19-30-R

1) **NATURE/GOAL :**
The nature of this report is the present the Transportation Impact Study for the east-west collector and to change a condition in the Draft Plan Approval of Brigil and Morris Village Stage 5.

2) **DIRECTIVE/PREVIOUS POLICY :**
n/a

3) **DEPARTMENT'S RECOMMENDATION :**
ATTENDU QUE l'étude de transport pour le collecteur est-ouest a été complétée en décembre 2018, et

ATTENDU QU'UNE condition doit être modifiée dans la liste de conditions approuvées pour le lotissement du Village Morris Stage 5 et de Brigil.

QUE la condition 26 du lotissement de Brigil et la condition 29 du lotissement du village Morris stage 5 soit modifié afin de lire comme suit :

- "That Poupart Side Road, Bronze Avenue and St-Jean Street be designed and built to municipal standards with an urban cross-section approved by the City. The design should follow the recommendation of the detailed transportation impact study that was completed by Castleglenn Consultants (Dec 2018) with any subsequent revisions, if applicable. The design, the environmental studies, the EA, the construction work, the project management fees and any other studies or works required are to be paid by the Development Charges By-law and the municipal budget in place for the current year. The estimated cost of the design and works to be completed must be approved by the City before any undertaking."

WHEREAS the Transportation Impact Study for the east-west collector was completed in December 2018.

AND WHEREAS a condition must be modified under the Brigil and Morris Village Stage 5 draft approval.

THAT Condition 26 of the Brigil file and Condition 29 of the Morris Village Stage 5 file be modified to read as follows:

- That Poupart Side Road, Bronze Avenue and St-Jean Street be designed and built to municipal standards with an urban cross-section approved by the City. The design should follow the recommendation of the detailed transportation impact study that was completed by Castleglenn Consultants (Dec 2018) with any subsequent revisions, if applicable. The design, the environmental studies, the EA, the construction work, the project management fees and any other studies or works required are to be paid by the Development Charges By-law and the municipal budget in place for the current year. The estimated cost of the design and works to be completed must be approved by the City before any undertaking.

4) **BACKGROUND :**

On April 17th, 2018, Council approved a list of conditions for the Brigil Subdivision. On June 18th, 2018, two conditions were added following the LPAT appeal.

On April 4th, 2018, Council approved a list of conditions for Morris Village Stage 5. On May 7th, 2018, one condition was amended to change the date of expiry as per the Counties request.

5) **DISCUSSION :**

On December 21st, 2018, the City obtained a copy of the Transportation Impact Study that was completed for the Brigil and Morris Village Stage 5 projects. The study includes recommendations on the construction of the future east-west collector, which includes parts of Poupart Side Road and St-Jean Street. The Study also shows modifications or improvements to be completed to different existing intersections.

Following a meeting with the Developer's Engineer, Atrel Engineering, it was determined that we should be undertaking the design of St-Jean Street first. As such, the budget of 2019 was approved with an amount for the design of St-Jean Street from Poupart Side Road to Docteur Corbeil Boulevard.

The study that was undertaken for the east-west collector was necessary for the City and was paid under the 2018 budget. The draft

plan conditions that were approved for both project indicated that both developers needed to work together to hire an Engineer to complete this study and that the development charges would cover the cost. As such, the study was undertaken by the developers.

With the 2019 budget approved and the study completed, we deem that the developer's Engineer should be responsible to complete the design of St-Jean Street from Poupart Side Road to Docteur Corbeil Boulevard. The developers' engineering firm completed a preliminary design at the same time as the traffic study and thus it would be beneficial that the same firm continues the work that was started.

Condition 26 of Brigil's Draft Plan Approval and Condition 29 of Morris Village Stage 5 Draft Plan Approval indicates that the Owner is responsible to complete the design of Poupart Road and Street No.1 (in Morris Village). However, St-Jean Street was omitted from the condition and should be added.

As such, we recommend that both conditions be modified to read as follows:

- That Poupart Side Road, Bronze Avenue and St-Jean Street be designed and built to municipal standards with an urban cross-section approved by the City. The design should follow the recommendation of the detailed transportation impact study that was completed by Castleglenn Consultants (Dec 2018) with any subsequent revisions, if applicable. The design, the environmental studies, the EA, the construction work, the project management fees and any other studies or works required are to be paid by the Development Charges By-law and the municipal budget in place for the current year. The estimated cost of the design and works to be completed must be approved by the City before any undertaking.

<u>Transportation Impact Study:</u>

The Transportation Impact Study is included as Schedule A of this report. Based on this study, the east-west collector must be designed to accommodate a divided 4-lane starting from the west. Once Poupart reaches St-Jean Street, it will become an undivided 4-lane to the east to the new roundabout at the bottom the hill. At this point, St-Jean Street will split into two streets, one being Bronze Street in Morris Village and the other will stay St-Jean Street towards Laurier Street. Both of those two streets will be 2-lane. The study also recommends multiples roundabouts throughout the east-west collector. An excerpt from the Study is included as Schedule B and shows the modifications

to be completed. See Appendix E of the Transportation Impact Study for the preliminary design and road configuration.

6) **CONSULTATION:**
The City has consulted with both Developers; all parties are in agreement with the outcomes of the study, the timing of works and plans.

7) **RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS :**
n/a

8) **FINANCIAL IMPACT (expenses/material/etc.):**
The budget was approved for $400,000.00 for the design of St-Jean Street from Poupart Side Road to Docteur Corbeil Boulevard. It is mostly funded by the Development Charges.

9) **LEGAL IMPLICATIONS :**
n/a

10) **RISK MANAGEMENT :**
n/a

11) **STRATEGIC IMPLICATIONS :**
It is important to design the east-west collector at this stage since we will be in a better position to design the surroundings areas. The right-of-way easements will be easier to obtain prior to any subdivisions being built.

12) **SUPPORTING DOCUMENTS:**
Transportation Impact Study
Excerpt of TIS

TRANSPORTATION IMPACT STUDY

(DRAFTPLAN OF SUBDIVISION)

Submitted To:

CITY OF CLARENCE-ROCKLAND
Department of Infrastructure and Planning
1560 Laurier Street Rockland, Ontario K4K 1P7

And

Spacebuilders Ottawa Ltd
345A Laurier Street, P.O. Box 849
Clarence-Rockland, Ontario, K4K 1L5

Brigil Construction
98 Lois Street
Gatineau, Quebec, J8Y 3R7

Prepared by:

Atrel Engineering Ltd.
1-2884 Chamberland Street
Rockland, ON K4K 1M6
Tel: (613) 446-7423

And

Castleglenn Consultants Inc.
2460 Lancaster Road, Suite 200
Ottawa, ON K1B 4S5
Tel: (613) 731-4052

December 21, 2018

ATREL Ref. No. 180801

Transportation Impact Study

TABLE OF CONTENT

1.0 INTRODUCTION 1

1.1 BACKGROUND 1
1.2 STUDY OBJECTIVES 1
1.3 KEY FINDINGS 2
1.3.1 General 2
1.3.2 Richelieu Street, Carmen Bergeron Street and Future East to West Poupart Road Bypass (Study Points O, N, M, K and J) 3
1.3.3 Poupart Road (from Laurier Street to 90 degree bend) (Study point L, K and J) 3
1.3.4 Poupart Road (from 90 degree bend to St-Jean Street) (Study Points J, I and H) 4
1.3.5 St-Jean Street (from Poupart Road to Morris Site Entrance - Street No. 1) (Study Points H and G) 4
1.3.6 Morris Village Street No. 1 (Study Points C and D) 4
1.3.7 St-Jean Street (from Morris Site Entrance – Street No. 1 to Patricia Street) (Study Points G and C) 5
1.3.8 Caron Street (Study Points D, E and F) 5
1.4 ST-JEAN STREET HILL REHABILITATION (FROM STUDY POINTS H TO G) 5
1.5 LAURIER/POUPART INTERSECTION (STUDY POINT L) 6
1.6 HYDRO STATION/UTILITIES 6

2.0 SUMMARY AND RECOMMENDATION 7

Transportation Impact Study

APPENDICES

Appendix "A" SK1 – Location Map

Appendix "B" Traffic Impact Study prepared by CastleGlenn Consultants

Appendix "C" Typical Cross-Sections
- 180801-CS1 – Proposed undivided 23.0m R.O.W. (Poupart)
- 180801-CS2 - Proposed 30.0m divided R.O.W. (Poupart)
- 180801-CS3 - Proposed 30.0m undivided R.O.W. (St-Jean)
- 180801-CS4 - Proposed 26.0m undivided R.O.W. (Morris Village)
- 180801-CS5 - Proposed 26.0m undivided R.O.W. (St-Jean)

Appendix "D" Reference Plan – 180801-RP1

Appendix "E" Roundabout Schematic Plans
- 180801-RA1 (Poupart)
- 180801-RA2 (Poupart/Brigil)
- 180801-RA3 (Poupart/Brigil/St-Jean)
- 180801-RA4 (St-Jean/Morris)
- 180801-RA5 (St-Jean/Dr. Corbeil)

Appendix "F" Land Acquisition Preliminary Plans
- 180801-LA1 (Poupart)
- 180801-LA2 (Poupart)
- 180801-LA3 (Poupart/St-Jean)
- 180801-LA4 (St-Jean)
- 180801-LA5 (St-Jean)
- 180801-LA6 (St-Jean)

Appendix "G" Road Schematic Plans
- 180801-RD1 (Poupart)
- 180801-RD2 (Poupart)
- 180801-RD3 (Poupart/St-Jean)
- 180801-RD4 (St-Jean)
- 180801-RD5 (St-Jean)
- 180801-RD6 (St-Jean)

Appendix "H" St-Jean Hill Plans
- 180801-HILL - St-Jean Preliminary Hill Plan and Profile
- 180801-DS1 - St-Jean Residential Preliminary Driveway Slopes
- 180801-DS2 - St-Jean Commercial Preliminary Driveway Slopes

Appendix "I" Hydro Station Sketches
- 180801-HS1 - Hydro Station Street View
- 180801-HS2 - Hydro Station Top View

1.0 INTRODUCTION

1.1 Background

The following Traffic Impact Study has been prepared by Atrel Engineering Ltd for the City of Clarence-Rockland in response to the Draft Plan conditions provided to Brigil and Spacebuilders. A location map illustrating the Traffic Study Area is presented in Apprendix "A" of this report (refer to SK1 "Location Map"). The recommendations are based on the results obtained from CastleGlenn Consultants, provided in Appendix "B", the legal plan prepared by Arpentage Dutrisac Surveying Inc. (ADSI) and the schematic design prepared by Atrel Engineering Ltd (AEL).

1.2 Study Objectives

As mentioned, this study is presented as a City request as part of the draft conditions for multiple development in the Rockland area. The requirements are detailed below:

The Owner shall submit a Transportation Impact Study certified by a qualified Professional Engineer with expertise in undertaking such studies which measures and analyzes traffic impacts, transit impacts and implications for traffic at the existing and proposed following intersections:

a. County Road 21 (St-Jean Street) and Laurier Street; **(Point A)**
b. County Road 21 (St-Jean Street) and Patricia Street; **(Point B)**
c. County Road 21 (St-Jean Street) and Docteur Corbeil Boulevard; **(Point C)**
d. Docteur Corbeil Boulevard and Caron Street **(Point D)**
e. David Street and Caron Street **(Point E)**
f. Street No.1 and Caron Street **(Point F)**
g. County Road 21 (St-Jean Street) and Street No. 1 of the proposed Stage 5 Subdivision; **(Point G)**
h. County Road 21 (St-Jean Street) and Poupart Road and Street No. 2 of the proposed Brigil/Poupart Subdivision; **(Point H)**
i. Poupart Road and Brigil/Poupart Subdivision West entrance **(Point I)**
j. Poupart Side Road with Poupart Side Road at the 90 degree turn **(Point J)**
k. Poupart Side Road and Richelieu Street **(Point K)**
l. Laurier Street bend **(Point L)**
m. Richelieu Street and the entrance to Walmart and commercial uses to the north **(Point M)**
n. Poupart Side Road and Carmen Bergeron **(Point N)**
o. County Road 17 and Carmen Bergeron Street **(Point O)**

The consultant shall provide traffic counts at all above mentioned locations. Furthermore, the consultant shall provide the prescribed rights-of-ways for Poupart Road and St-Jean Street as part of this study as well as provide turning lanes and through lanes information.

Further, the Transportation Impact Study will consider the road link capacity and configuration for all roadways from Laurier Street to County Road 17 as per the intersections listed above and shall consider the development potential located east of the Spacebuilders Stage 5 Subdivision. The Transportation Impact Study shall consider a roundabout at the intersection of St-Jean Street and

Street No. 1 of the proposed Stage 5 Subdivision as well as at the intersection of County Road 21 and Dr. Corbeil Boulevard. The study shall be reviewed and approved by the Director of Infrastructure and Planning of the City of Clarence-Rockland.

Additionally, the study will identify the following:

a. the schematic design of the critical intersections **(Points C, D, G, H, I and K)** along Poupart Road and St-Jean Street
b. the legal boundary extent from points **L to B** along Poupart Road and St-Jean Street
c. recommendations for hill rehabilitation and necessary land acquisition along the St-Jean Street slope (from points **H to G**)
d. whether the roads should be divided or not
e. whether a sidewalk, bikepath or multi-use path is required
f. the lane width, length, storage, turning, acceleration and deceleration lanes
g. the proposed posted speed limit and any traffic calming features
h. if the intersections are warranted
i. the maximum hill slope of St-Jean Street. A preliminary grading and profile will be provided from points **H to G**.
j. the traffic schemes from existing to build out conditions including a 5 to 10 year and a 10 to 20 year horizon.

1.3 Key Findings

As per the Traffic Impact Study, prepared by CastleGlenn Consultants, presented in Appendix "B" and the legal plan prepared by ADSI, the following observations/recommendations are made:

1.3.1 General

Road cross-sections were developed based on the forecast traffic volume, the posted speed limit, the traffic calming features and the non-auto mode requirements. Five (5) typical cross-sections (Appendix "C") were developed to identify the various right-of-way width, roadway lanes and non-auto mode.

A reference plan has been prepared to identify the various locations of the cross-sections, the land acquisition plans, the roundabout schematic plans, the road schematic plans, the St-Jean hill preliminary plans and the hydro station sketches.

Based on the forecasted traffic volumes and analysis, Castleglenn Consultants have elected to use roundabouts between Richelieu Street and Patricia Street to control the traffic. Roundabout schematics of the various intersection are shown as drawings 180801-RA1 to 180801-RA5 in Appendix "E".

Using the existing legal plan, the proposed road cross-section and the roundabout schematic, the land acquisition preliminary plans were prepared to identify various areas where the existing right-of-way width is insufficient to accommodate the proposed road infrastructures. Drawings 180801-LA1 to 180801-LA6 (Appendix "F") show the preliminary extent of the require land acquisition. Prior to acquiring the land, a detailed road, roundabout and utility design will be

required and then, an Ontario Land Surveyor (OLS) will need to clearly identify the proposed right-of-way.

Based on the proposed cross-sections, the widening of the Poupart Road and St-Jean Street will require some land acquisition. Dutrisac Surveying Inc. has been retained by AEL to obtain the existing legal surveying plans of the Poupart Road and St-Jean Street.

Drawings 180801-RD1 to 180801-RD6 in Appendix "G" show the proposed road schematic plans for Poupart Road and St-Jean Street from Laurier to Patricia Street which correspond to the cross-sections.

One of the main constraints in re-building St-Jean Street is the longitudinal slope of the existing road from the St-Jean/Poupart intersection to the proposed roundabout at Street No.1 (Morris Village entrance). After careful analysis of the surrounding areas, preliminary drawings were prepared to harmonize the hill to the surrounding residential and commercial entrances. Drawings 180801-HILL, 180801-DS1 and 180801-DS2 show the preliminary design of the hill and its proposed modifications.

Furthermore, the property requirement (road widening and roundabout construction) in proximity to the hydro station will have to be discussed with hydro at an early stage.

Additionally, drawings 180801-HS1 and 180801-HS2 show that some utility poles are currently located within the proposed road area and subsequently will need to be relocated as per the typical cross-sections mentioned above. Coordination with the utility companies will be required in order to complete this work.

1.3.2 Richelieu Street, Carmen Bergeron Street and Future East to West Poupart Road Bypass (Study Points O, N, M, K and J)

As detailed in Castleglenn's report, the majority of the future developments south of Rockland will travel along St-Jean Street and Poupart Road in the east and west direction to travel to and from the City of Ottawa. Castleglenn has analyzed Richelieu Street and Carmen Bergeron Street and found that at the 5 to 10 year timeframe, the segments' capacities are maximized and the system requires a travel alternative.

The alternative is provided in the form of the City of Clarence-Rockland's special study to extend the current Poupart Road to the west from the 90 degree bend in order to connect to County Road 17 further west (refer to Castleglenn's report for details).

This alternative, however, does not fix the issue of County Road 17 itself which is currently near maximum capacity. Another traffic study has been prepared and recommended to upgrade County Road 17 in the medium term (± year 2032).

1.3.3 Poupart Road (from Laurier Street to 90 degree bend) (Study point L, K and J)

- The road is currently a two lane undivided asphalt road from Richelieu Street to Sta. 1+310.
- The road is currently a two lane rural undivided gravel road with surface treatment from Sta. 1+310 to the 90 degree bend.
- The existing right-of-way width is approximately 23m from Laurier Street to Sta. 1+425.

- The existing right-of-way width ranges from approximately 12m to 23m from Sta. 1+425 to the 90 degree bend.
- Please refer to cross-section 180801-CS1 in Appendix "C" for this segment's proposed roadway and servicing details.
- The proposed right-of-way width is proposed to be 23m.
- As shown on the cross-section, the built out roadway will be a two lane (4.25m per lane) undivided asphalt road with concrete barrier curbs.
- A multi-use pathway and sidewalk are proposed in the boulevard.
- As shown on drawing 180801-RD1, there are existing utility poles along the road which will need to be relocated to the new location as shown on the cross-section.

1.3.4 Poupart Road (from 90 degree bend to St-Jean Street) (Study Points J, I and H)

- The road is currently a two lane rural undivided gravel road with surface treatment.
- The existing right-of-way width ranges from approximately 10m to 23m.
- Please refer to cross-section 18010-CS2 in Appendix "C" for this segment's proposed roadway and servicing details.
- The proposed right-of-way width is proposed to be 30m.
- As shown on the cross-section, the built out roadway will be a four lane (3.75m per lane) divided asphalt road (5.0m island) with concrete barrier curbs.
- A multi-use pathway and sidewalk are proposed in the boulevard.
- As shown on drawings 180801-RD2 and 180801-RD3, there are existing utility poles along the road which will need to be relocated to the new location as shown on the cross-section.

1.3.5 St-Jean Street (from Poupart Road to Morris Site Entrance - Street No. 1) (Study Points H and G)

- The road is currently a two lane rural undivided asphalt road.
- The existing right-of-way width ranges from approximately 24m to 38m.
- The current maximum slope along the road is approximately 14.6%.
- Please refer cross-section 180801-CS3 in Appendix "C" for this segment's proposed roadway and servicing details.
- The proposed right-of-way width will be widened to a minimum of 30m depending on the side slopes.
- As shown on the cross-section, the built out roadway will be a four lane (3.75m per lane) undivided asphalt road with concrete barrier curbs.
- The maximum proposed slope will be 8%.
- A multi-use pathway and sidewalk are proposed in the boulevard.
- As shown on drawings 180801-RD3 and 180801-RD4, there are existing utility poles along the road which will need to be relocated to the new location as shown the cross-section.

1.3.6 Morris Village Street No. 1 (Study Points C and D)

- Please refer to cross-section 180801-CS4 in Appendix "C" for this segment's proposed roadway and servicing details.
- The proposed right-of-way width will be 26m.
- As shown on the cross-section, the built out roadway will be a two lane (5.5m per lane) undivided asphalt road with concrete mountable curbs.
- A multi-use pathway and sidewalk are proposed in the boulevard

1.3.7 St-Jean Street (from Morris Site Entrance – Street No. 1 to Patricia Street) (Study Points G and C)

- The road is currently a two lane rural undivided asphalt road.
- The existing right-of-way width ranges from approximately 10m to 15m.
- Please refer to cross-section 180801-CS5 in Appendix "C" for this segment's proposed roadway and servicing details.
- The proposed right-of-way width will be a minimum of 26m depending on the side slopes.
- As shown on the cross-section, the built out roadway will be a two lane (4.25m per lane) undivided asphalt road with concrete barrier curbs.
- A multi-use pathway and sidewalk are proposed in the boulevard.
- As shown on drawings 180801-RD4 to 180801-RD6, there are utility poles along the road which will need to be relocated to the new locations as shown on the cross-sections.

1.3.8 Caron Street (Study Points D, E and F)

- The road is currently a two lane rural undivided asphalt road from Baseline Road to David Street.
- The road then becomes a three lane undivided with a shared turning lane from David Street to Laurier Street.
- Castleglenn has evaluated Caron Street for all development timeframes and has detailed their results within their report. A four (4) lane road with traffic lights are ultimately proposed for better traffic flow.

1.4 St-Jean Street Hill Rehabilitation (From Study Points H to G)

The existing St-Jean Street's road gradient was found to be approximately 15%. As per the Ontario Ministry of Transportation, the maximum slope for an undivided four lane collector is found to be 8.0%. In order to achieve such a requirement, the St-Jean Street hill was redesigned and realigned in order to match the existing properties.

There are currently four (4) lots which need to be accounted for in the hill design; three residential lots at the top of the hill (1253, 1259 and 1273 St-Jean Street) as well as the existing commercial lot owned by Centennial Construction Rockland Ltd (1211 St- Jean Street).

The St-Jean hill was designed in order to accommodate those lots. Based on the preliminary design, the existing residential properties' entrances will be matched and reinstated while the commercial entrances will be slightly modified to accommodate the hill's design slope of 8% which results in increasing the St-Jean Street elevations several metres near the bottom of the hill (Refer to drawing 180801-HILL for profile alignment and 180801-DS1 and 180801-DS2 for recommended driveway realignment).

In order to properly accommodate the commercial land entrances, it is proposed to realign the St-Jean Street centreline to the north. The right-of-way from Sta. 3+400 to Sta. 3+900 will be between 30m and 45m wide.

The existing culvert at the bottom of the St-Jean hill, which conveys runoff from the existing Lafontaine Creek, does not currently convey the creek's 100 year runoff. Instead the major storm event's runoff crosses St-Jean Street overland. As St-Jean Street will be raised several metres, the culvert will probably be replaced and sized to convey the creek's 100 year storm runoff. Various work permits from the conservation authority/Ministry of Natural

Resources/Ministry of Environment will be required in order to work within the floodplain limits.

1.5 Laurier/Poupart Intersection (Study Point L)

The existing intersection is currently curving toward the west to abruptly turn towards the east when driving to the north.

ADSI looked at the legal property to observe that there are no private properties to acquire in order to rebuild this road with a normal curve.

Essentially this road can be re-aligned whenever the City wishes to do so. Drawing 180801-LA1 shows the extent of the property lines.

Since the multi-use pathway (MUP) will be provided to the Poupart/Laurier intersection, it would be recommended to continue the MUP to Laporte Street if the right-of-way allows such installation. The legal boundary would need to be verified, especially at the Lafontaine Creek crossing to ensure it can be achieved.

1.6 Hydro Station/Utilities

The construction of a wider and urbanized road will trigger the movement of infrastructures. The above and underground utilities along the Poupart and St-Jean roads will have to be identified and a relocation plan will be worked out with all utility companies.

Drawings 180801-HS1 and 180801-HS2 show the existing hydro station at the corner of Poupart and St-Jean and its various pole lines. In order to acquire the appropriate land, discussions should take place with Hydro One and other utility companies at an early stage to ensure that land can be acquired in this area, otherwise a plan ‘B’ will be required.

2.0 SUMMARY AND RECOMMENDATION

Castleglenn has analyzed Rockland's transportation system for three timeframes; 5 to 10 year, 10 to 20 year and built out. Recommendations have been made for key intersections and roadway specifications for all three timeframes along the study area as mentioned in the City's draft conditions to the developers.

In addition, road and intersection configurations are shown on the attached drawings along with land acquisition drawings and St-Jean Street hill grading specifications. As mentioned, the St-Jean hill's proposed grading will require widening of the right-of-way as well as work within the Lafontaine Creek area. These works will require a geotechnical report, an environmental impact study as well as a hydraulic analysis of the creek itself in order to assess the impact of the proposed road profile on the new culvert.

In order to assess the required land acquisition, a detailed road and roundabout design should be undertaken including the input of the utility companies.

All of which is respectfully submitted:

Prepared by:

ATREL ENGINEERING LTD



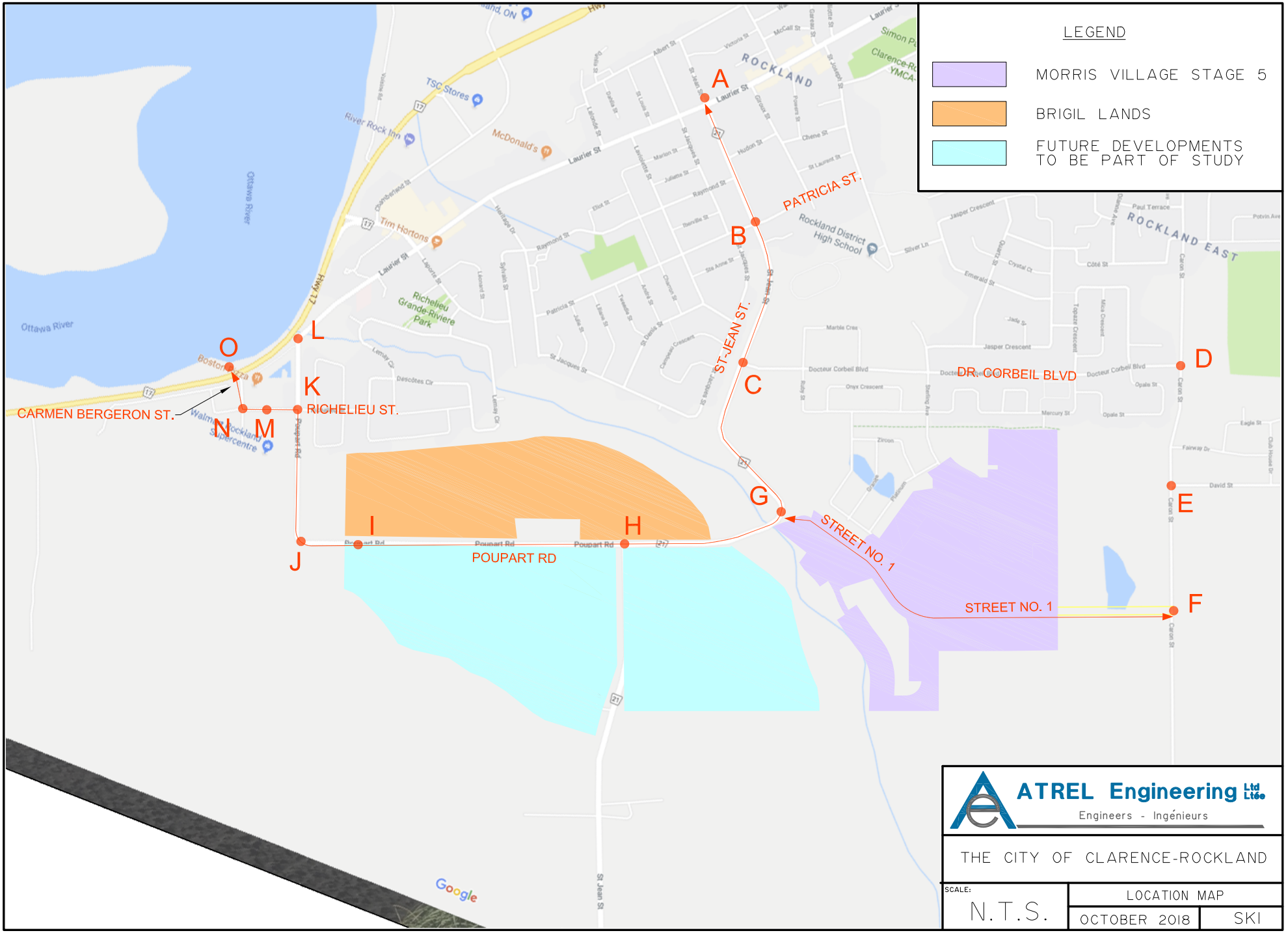


Jonathan Gendron, P.Eng.
Project Designer

Jean Décoeur, P.Eng.
Project Engineer

APPENDIX "A"

SK1 – Location Map



ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

THE CITY OF CLARENCE-ROCKLAND

SCALE:	LOCATION MAP	
N.T.S.	OCTOBER 2018	SKI

APPENDIX "B"

Traffic Impact Study prepared by CastleGlenn Consultants

TRANSPORTATION IMPACT STUDY

Draft Plan of Subdivision

Presented to: Atrel Engineering

Mr. Jean Décoeur
Project Manager
1-2884 Chamberland St.
Rockland, Ontario K4K 1M6

Prepared by: Castleglenn Consultants Inc.

2460 Lancaster Road
Ottawa, ON K1J 8K5

Table of Contents

1 INTRODUCTION 1
2 EXISTING CONDITIONS 1
2.1 EXISTING ROADWAYS 1
2.2 EXISTING PEDESTRIAN FACILITIES 3
2.3 EXISTING CYCLING FACILITIES 3
2.4 EXISTING TRANSIT PROVISIONS 4
2.5 EXISTING TRAFFIC VOLUMES 4
3 TRAFFIC ANALYSIS 4
3.1 FUTURE DEVELOPMENT 4
3.2 TRIP GENERATION 6
3.3 TRIP DISTRIBUTION AND ASSIGNMENT 8
3.4 FORECAST TRAFFIC VOLUMES 8
3.5 INTERSECTION CAPACITY ANALYSIS 8
3.5.1 ***Existing Traffic Analysis 9***
3.5.2 ***Forecast Short-term (5-to-10 years) Traffic Analysis 9***
3.5.3 ***Forecast Medium-term (10-to-20 years) Traffic Analysis 10***
3.5.4 ***Forecast Ultimate Build-Out Traffic Analysis 12***
4 INFRASTRUCTURE REQUIREMENTS 13
4.1 STUDY AREA CORRIDORS 13
4.2 STUDY AREA INTERSECTIONS 13
5 DESIGN INPUT 16
5.1 CROSS-SECTION CONFIGURATION (DIVIDED VS UNDIVIDED) 16
5.2 POSTED SPEED 16
5.3 TRAFFIC CALMING 16
5.4 NON-AUTO MODE REQUIREMENTS 17
5.5 RIGHT-OF-WAY REQUIREMENTS 17
5.6 ROUNDABOUT CONFIGURATIONS 18
5.7 ST-JEAN STREET HILL SLOPE 18
5.8 POUPART RD & LAURIER ST CURVE 19
6 ALTERNATE FUTURE ROUTES 19
6.1 EAST-WEST CORRIDOR 19
6.2 NORTH-SOUTH CORRIDOR 20
7 FINDINGS AND RECOMMENDATIONS 21

1 INTRODUCTION

Castleglenn Consultants Inc. was retained in August, 2018 to undertake a Transportation Impact Study (TIS) that would:

- provide an overview of the existing conditions within the study area;
- address the traffic and transportation issues associated with the plan of subdivision located in the south-west end of the City of Clarence-Rockland; and
- provide input to the design component within the study area, inclusive of intersection type and configuration, auxiliary lane requirements, cross-section configuration (divided vs undivided), posted speed, traffic calming measures, non-auto mode requirements, right-of-way requirements and the St-Jean Street hill slope.

The plan of subdivision would involve the construction of over 9,000 units over approximately 430 hectares of land. The residential units are anticipated to consist of approximately 4,000 single family detached homes, 2,700 townhomes and 2,400 apartment units. A 1.03 hectares commercial development is also proposed.

2 EXISTING CONDITIONS

The study area is defined by Carmen-Bergeron Street to the west, County Road (CR) 17 and Laurier St to the north, Caron Street to the east and Poupart Road to the south. A site visit was undertaken on September 18th, 2018 to verify current roadway geometrics (roadway lane configuration, land uses, etc.) and undertake observations of the existing conditions within the vicinity of the proposed site.

The majority of the study area is undeveloped rural and treed areas, with some existing country residential dwellings located along Poupart Road. Within the north-east section of the study area, residential development has been built around Dr. Corbeil Boulevard. West of the proposed development plans is an existing commercial area with big box stores.

2.1 EXISTING ROADWAYS

The roadways within the study area are described as follows:

- ***Carmen Bergeron Street:*** This north-south corridor represents the first main access into the City from the west. The corridor connects CR 17 with a commercial development, by way of a 4-lane undivided cross-section. On-street parking is not permitted and one sidewalk is located on the east side. The speed limit is 50 km/hr.
- ***Caron Street:*** This north-south corridor was recently (within the last 10 years) reconstructed and intersects with CR 17. The corridor has a 3-lane cross-section, with a single lane in each direction and a middle lane with back-to-back left turns (between

CR 17 and David Street). On-street parking is not permitted and one sidewalk is located on the west side and a multi-use pathway on the east side. The posted speed limit is 50 km/hr.

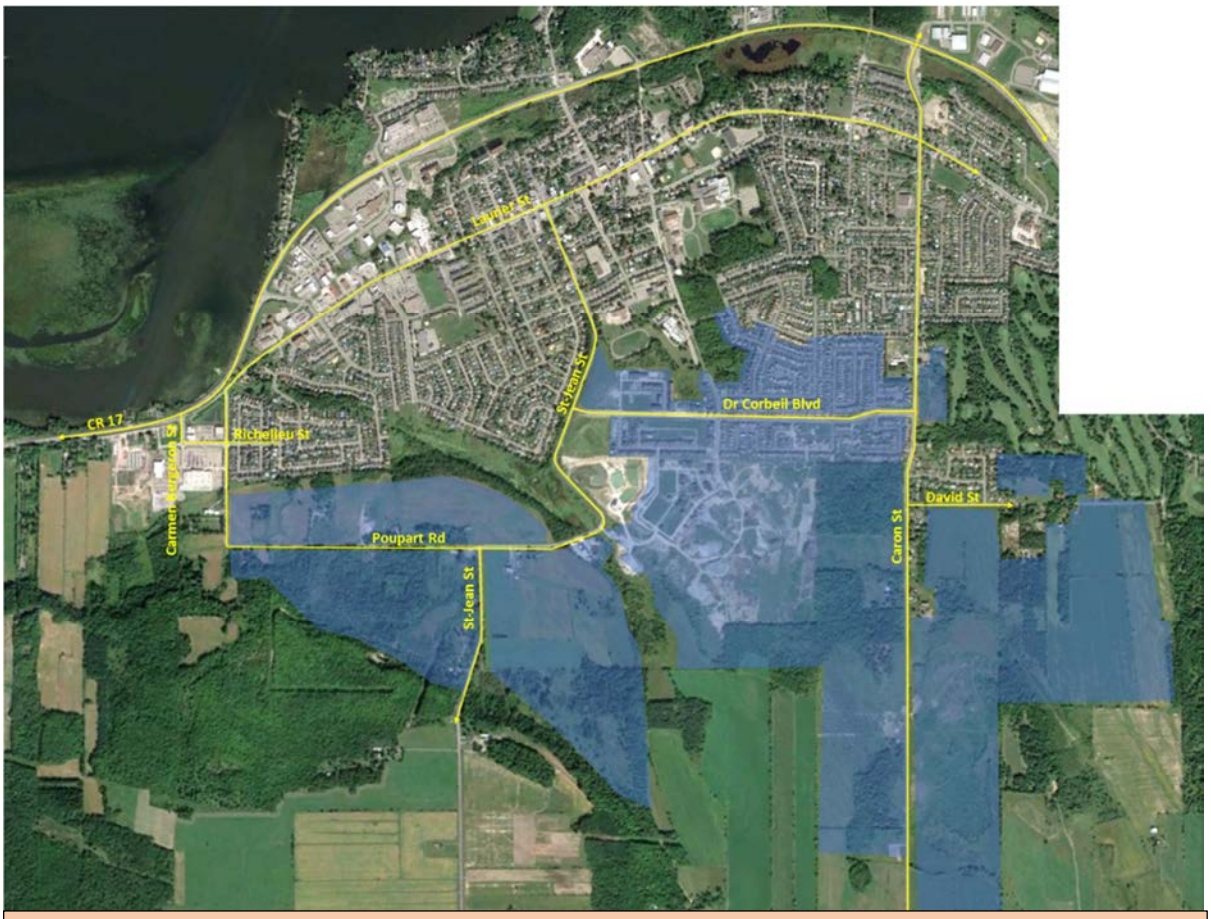


***Exhibit 2-1: Study Area** (Development area shown in blue)*

- ***County Road 17** (CR 17):* This east-west corridor connects the City of Clarence-Rockland to Ottawa on the west and Hawkesbury on the east. Within the City, the corridor cross-section is 2-lanes (one-lane in each direction) along the majority of its length. On-street parking is not permitted and no sidewalks are provided. The posted speed limit is 70 km/hr.
- ***David Street:*** This east-west corridor is a local, rural, 2-lane roadway. There are no sidewalks. The speed limit is 50 km/hr.
- ***Dr. Corbeil Boulevard:*** This east-west corridor connects St-Jean Street to Caron Street and was constructed within the last 10-years as a local 2-lane roadway. The roadway has on-street parking permitted on the north side and sidewalks on either the south side or along both sides along its length. The corridor accommodates bike lanes and has a speed limit of 50 km/hr.
- ***Laurier Street:*** This east-west corridor represents the City's "main street". The roadway has a 2-lane cross-section along the majority of its length and on-street

parking is permitted along many segments of the roadway. Sidewalks are provided on the north side or on both sides throughout its length. The posted speed limit is 50 km/hr.

- ***Patricia Street:*** This east-west corridor is a local, 2-lane roadway. Parking is permitted on both sides and a sidewalk is provided on the south side. The speed limit is 50 km/hr.
- ***Poupart Road:*** This east-west corridor connects the commercial development to the west, to the residential area around St-Jean Street. The corridor has a 2-lane cross-section and a paved surface treatment chip seal. There are no sidewalks along the majority of the length, with the exception of a sidewalk along the west side of the north-south section of roadway (between Laurier and the Walmart access). The speed limit is 50 km/hr.
- ***Richelieu Street:*** This east-west corridor has a 3-lane cross-section within the study area (between Carmen Bergeron St and Poupart Rd), where the center lane provides back-to-back left-turn auxiliary lanes. The section is intersected by Smart Centres commercial area and Walmart accesses. On-street parking is not permitted. Sidewalks are provided along both sides of the roadway. The speed limit is 50 km/hr.
- ***St-Jean Street:*** This north-south corridor connects Laurier Street to Poupart Rd (and continues further south as County Road 21). The corridor has a 2-lane cross-section. The roadway has designated on-street parking permitted on the west side (from Laurier Street to Raymond St) and a sidewalk located along the east side (from Laurier Street to Dr. Corbeil Blvd). The speed limit is 50 km/hr.

2.2 EXISTING PEDESTRIAN FACILITIES

Sidewalks currently exist along:

- St-Jean St, from Laurier Street to Dr. Corbeil Boulevard;
- Poupart Road in the vicinity of Richelieu Street and the commercial plaza;
- Dr. Corbeil Boulevard; and
- Caron Street, from CR 17 to David Street on the west side of the road.

Multi-use pathway (MUP) currently exist in the east-west direction south of Dr. Corbeil Boulevard from Caron Street to St-Jean Street.

2.3 EXISTING CYCLING FACILITIES

In general, there are no dedicated cycling lanes within the study area, with the exception that on-street cycling lanes are provided along Dr. Corbeil Boulevard. Very few cyclists were observed during the traffic count periods.

2.4 EXISTING TRANSIT PROVISIONS

Clarence-Rockland Transit (CR Transit) operates a commuter route in the morning and afternoon peak hours, providing service to Ottawa in the morning and return in the afternoon. Service is not provided on statutory holidays. There are two main routes:

- ***#530A – Morris Village:*** This route, going westbound in the morning, travels from CR 17, along Laurier Street, down Caron Street, along Dr. Corbeil Boulevard, down St-Jean Street and back onto Laurier Street and connects with CR 17. Ten (10) stops are provided along the route. The reverse route takes place in the afternoon; and
- ***#530 – Laurier***: This route, going westbound in the morning, travels from CR 17, goes along the entire length of Laurier Street, and connects back to CR 17. Eight (8) stops are provided along the route. The reverse route takes place in the afternoon.

A total of 8 westbound trips are provided in the morning and 7 eastbound in the afternoon (a single westbound trip also takes place in the early afternoon as the first bus travels to Ottawa).

2.5 EXISTING TRAFFIC VOLUMES

Traffic counts were undertaken at the existing study area intersections during the week of September 10th, 2018, which accounted for school traffic. The traffic counts were undertaken during the morning (6:30am-to-9:00am) and afternoon (3:00pm-to-6:00pm) peak hours.

A review of Exhibit 2.1 indicates that the demand in the morning is greater in the westbound direction (vehicles traveling towards Ottawa) and the reverse trend is observed in the afternoon (where commuters return home).

3 TRAFFIC ANALYSIS

This TIS evaluated three (3) design horizon years: short-term (5-to-10 years), medium-term (10-to-20 years) and ultimate build-out. The forecast traffic volumes are based on existing (2018) traffic data and future developments within the study area. The following sections provide details on the forecast traffic volumes and analysis.

3.1 FUTURE DEVELOPMENT

Exhibit 3.1 illustrates the future developments that were accounted for in the forecasted traffic volumes. The future developments were segmented into three phases that included short-term, medium-term and ultimate build-out.

- In the short-term, over 2,000 units are anticipated to be constructed;
- In the medium-term, an additional 3,100 are anticipated to come on board; and
- At full build-out, an additional 3,900 units are anticipated, resulting in over 9,100 total units.

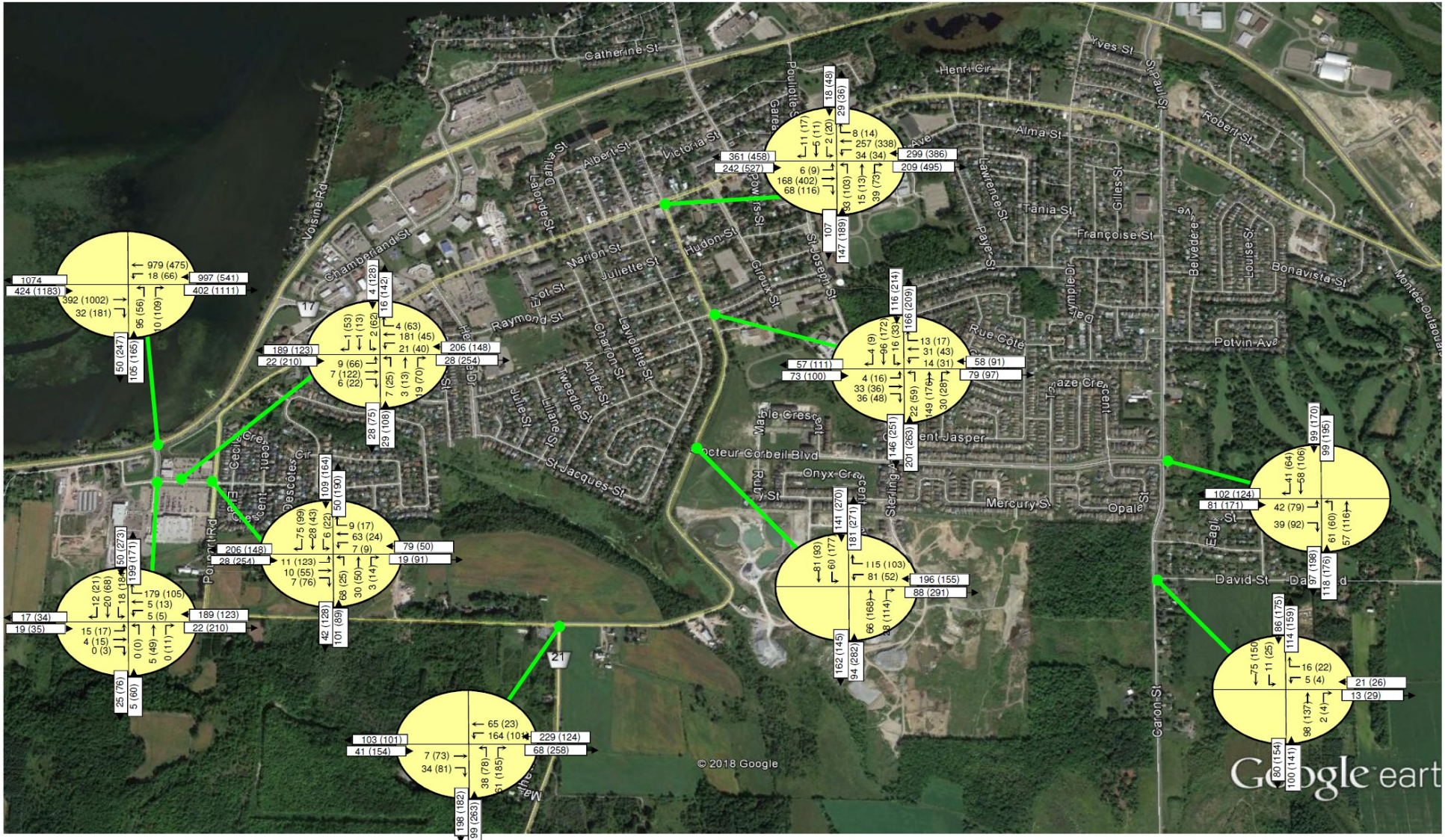


Exhibit 2.1: Existing (2018) Traffic Volumes ***Format: Morning peak hour (afternoon peak hour)***

3.2 TRIP GENERATION

The trip generation associated with the study area developments were estimated using the ITE Trip Generation Manual. The morning and afternoon peak hour rates were used to estimate the site traffic volumes. It has become a common and accepted practice to determine the volume of "person" trips to be generated by a given development. The purpose of this is to quantify the expected demands for the primary modes of transportation. In order to convert ITE rates to person trips, the rates obtained from the ITE Trip Generation Manual were adjusted by a factor of 1.3 passengers-per-vehicle to account for an inherent transit modal share and auto occupancy.

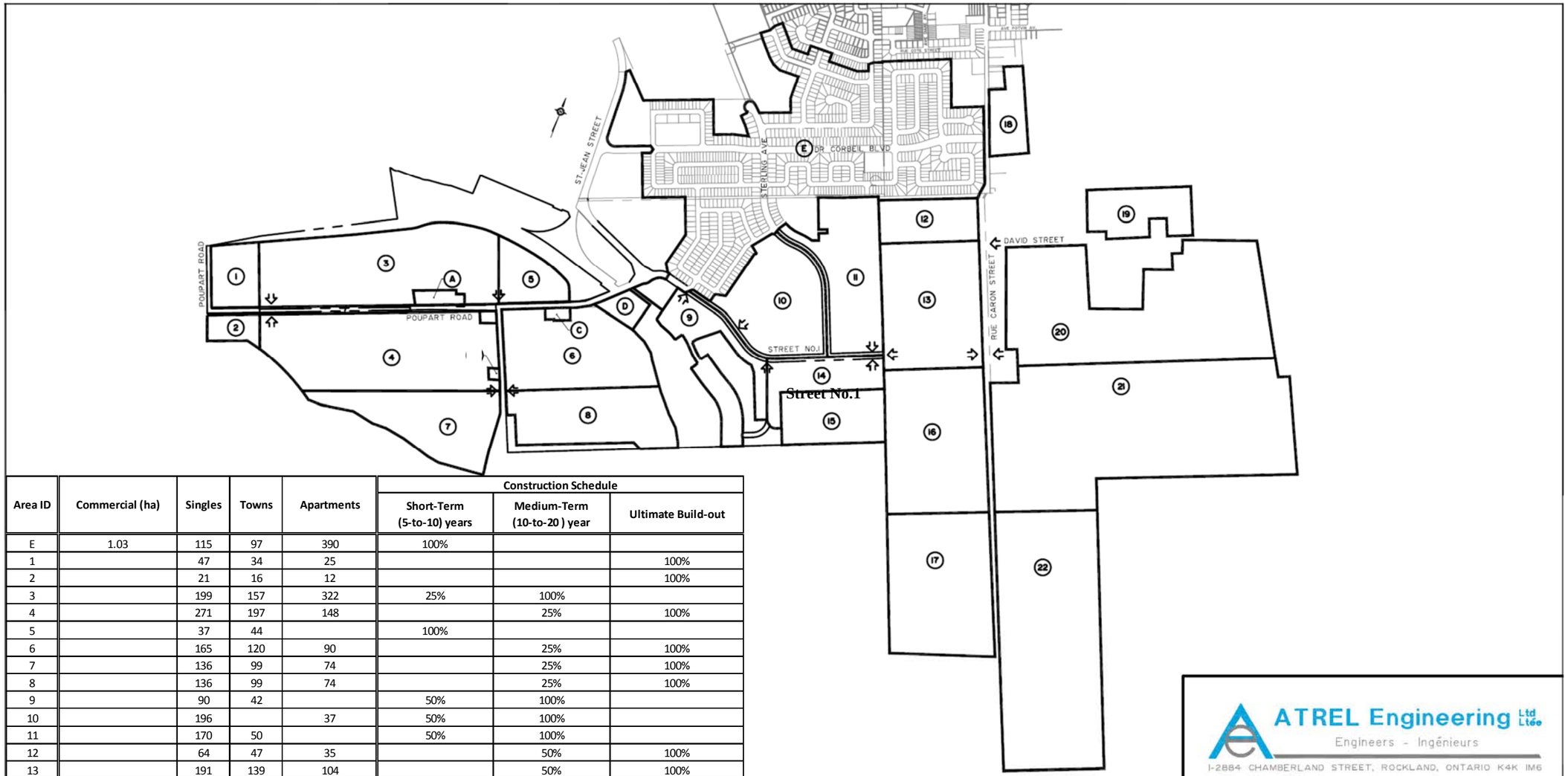
Table 3.1: ITE Trip Rates

ITE Trip Rates					**Modified Person Trips Rate**	**x 1.3**			
Rate per unit	Pk Period	Rate	Split		Rate per unit	Pk Period	Rate	Split	
			IN	OUT				IN	OUT
Single Family Homes - 210	AM	0.75	25%	75%	Single Family Homes - 210	AM	0.98	25%	75%
	PM	1.01	63%	37%		PM	1.31	63%	37%
Rate per unit	Pk Period	Rate	Split		Rate per unit	Pk Period	Rate	Split	
			IN	OUT				IN	OUT
Townhomes - 230	AM	0.44	17%	83%	Townhomes - 230	AM	0.57	17%	83%
	PM	0.52	67%	33%		PM	0.68	67%	33%
Rate per unit	Pk Period	Rate	Split		Rate per unit	Pk Period	Rate	Split	
			IN	OUT				IN	OUT
Apartment - 220	AM	0.51	20%	80%	Apartment - 220	AM	0.66	20%	80%
	PM	0.62	65%	35%		PM	0.81	65%	35%

The person trips were then assigned to the primary modal shares (i.e. auto, passenger, transit and non-auto). Based on limited existing transit service and active mode facilities in the immediate study area, it was assumed that the auto driver modal share will be 85% and the remaining 15% will encompass passenger, transit, and non-auto modes.

Table 3.1: Build-Out Total Development – Person Trips by Modal Share

Travel Mode	***Mode Share***	***AM***			***PM***		
		In	***Out***	***Total***	***In***	***Out***	***Total***
Auto Driver	85%	1,481	4,473	5,954	4,936	3,019	7,955
Passenger	5%	78	257	335	242	187	428
Transit (Non-Auto)	10%		509	509	581		581
Total Person Trips	100%	1,559	5,239	6,798	5,759	3,206	8,965
Total Development Auto Trips		**1,481**	**4,473**	**5,954**	**4,936**	**3,019**	**7,955**



Area ID	Commercial (ha)	Singles	Towns	Apartments	Construction Schedule		
					Short-Term (5-to-10) years	Medium-Term (10-to-20) year	Ultimate Build-out
E	1.03	115	97	390	100%		
1		47	34	25			100%
2		21	16	12			100%
3		199	157	322	25%	100%	
4		271	197	148		25%	100%
5		37	44		100%		
6		165	120	90		25%	100%
7		136	99	74		25%	100%
8		136	99	74		25%	100%
9		90	42		50%	100%	
10		196		37	50%	100%	
11		170	50		50%	100%	
12		64	47	35		50%	100%
13		191	139	104		50%	100%
14		90			50%	100%	
15		83	60	45		50%	100%
16		221	161	121		50%	100%
17		224	163	122		50%	100%
18			110			100%	
19		70	51	38	50%	100%	
20		424	309	232	25%	50%	100%
21		603	439	329	25%	50%	100%
22		426	310	232	25%	50%	100%
Total	**1.03**	**3,979**	**2,744**	**2,430**	**2,096**	**3,154**	**3,904**

* Note that areas A, B, C and D are existing/developed parcels. The table above presents proposed new developments only.

Exhibit 3.1: Future Development Area and Statistics

The total site traffic volumes generated by the proposed development have been estimated to be approximately 6,000 vehicle trips during the morning peak hour and 8,000 vehicle trips during the afternoon peak hour.

A small commercial development is also proposed within the study area located at the south-west corner of St-Jean Street / Street No.1 (area between "D" and "9" on Exhibit 3.1). The commercial development site trips are anticipated to be internal and pass-by trips from the community. Therefore, the traffic impacts of the commercial development are not anticipated to be significant.

3.3 TRIP DISTRIBUTION AND ASSIGNMENT

The traffic distribution assumptions were derived from the "***Place of work and commuting to work***" information obtained from Statistics Canada in the 2016 Census. The statistics indicate that the majority (~65%) of working residents commute to a different census subdivision. However, given the nature of the development (residential) and the lack of employment development in Rockland, the following traffic distribution assumptions were applied:

- 65% destined to/from west of the City of Rockland;
- 15% destined to/from south of the City of Rockland;
- 13% destined to/from east of the City of Rockland; and
- 7% remain within the City of Rockland.

3.4 FORECAST TRAFFIC VOLUMES

The forecast short-term, medium-term and ultimate traffic volumes were produced for the study area. Appendix "B" illustrates the site and forecast traffic volumes for the study area intersections.

3.5 INTERSECTION CAPACITY ANALYSIS

Intersection capacity analysis was undertaken for the existing and forecast traffic volumes for the study area intersections. Synchro 10™ was used to analyze stop control and traffic-controlled intersections. Roundabouts were analyzed using Sidra intersection analysis. For analysis purposes, it was assumed that a volume-to-capacity (v/c) ratio of greater than 0.92 was considered unsatisfactory.

3.5.1 Existing Traffic Analysis

Table 3.1 depicts a summary of the intersection capacity analysis results for the study area intersections (See Appendix A for detailed traffic analysis sheets). Existing signal timing was used for the intersection of CR 17 and Carmen Bergeron Street.

Table 3.1: Existing (2018) Intersection Capacity Analysis Results

Intersection	*Control Type*	*Morning Peak Hour*		*Afternoon Peak Hour*	
		Overall LOS	*Critical Movement (LOS, V/C)*	*Overall LOS*	*Critical Movement (LOS, V/C)*
CR 17 / Carmen Bergeron[1]	Traffic Signal	C	WB-TH (C, **0.92**)	**E**	**EB-TH (F, 1.22)**
CR 17 / Carmen Bergeron[2]	Traffic Signal	C	WB-TH (C, 0.62)	C	EB-TH (D, **0.96)**
Carmen Bergeron / Richelieu	All-Way Stop Control	A	WB-T/RT (A, 0.22)	A	WB-T/RT (A, 0.16)
Richelieu / Commercial Access	2-Way Stop Control	B	NB (A, 0.04)	B	SB (B, 0.26)
Poupart / Richelieu	All-Way Stop Control	A	NB (A, 0.14)	A	SB (A, 0.22)
Poupart / St-Jean	All-Way Stop Control	A	WB (A, 0.30)	A	NB (A, 0.34)
St-Jean / Dr. Corbeil	Minor-leg Stop Control	B	WB (B, 0.26)	B	WB (B, 0.27)
St-Jean / Patricia	All-Way Stop Control	A	NB (A, 0.04)	A	NB (B, 0.38)
St-Jean / Laurier	Traffic Signal	B	WB (B, 0.37)	B	EB-TH (B, 0.65)
Caron / Dr. Corbeil	Minor-leg Stop Control	B	EB (B, 0.11)	B	EB (B, 0.26)
Caron / David	All-Way Stop Control	A	NB (A, 0.13)	A	NB (A, 0.18)

1- Existing signal timing from County of Prescott-Russell
2- Optimized signal timing

The results indicate that all the intersections operate at satisfactory level of service except the intersection of CR 17 / Carmen Bergeron Street. The intersection operates at an overall level of service (LOS) "E" during the afternoon peak hour of travel demand. The critical movement was determined to be the eastbound (EB) movement with LOS "F" and v/c ratio of 1.22. With optimized signal timing (i.e. providing more time to the dominant movement), the EB-TH movement can be improved to LOS "D" with v/c ratio of 0.96 during the afternoon peak hour of travel demand.

3.5.2 Forecast Short-term (5-to-10 years) Traffic Analysis

By the short-term horizon year, it was assumed that:

- Roundabouts would be constructed at St-Jean Street / Dr. Corbeil Boulevard and St-Jean Street / Street No.1 Access into Morris Village development;
- Stop-Control configuration along Poupart west of the St-Jean Street slope hill;

- Stop-Control configuration along Caron Street; and
- 2-lane cross-sections along St-Jean Street, Poupart Road and Caron Street.

Table 3.2 below provides a summary of the short-term analysis results (See Appendix "D" for detailed analysis sheets).

Table 3.2: Short-Term Traffic Analysis

Intersection	*Control Type*	*Morning Peak Hour*		*Afternoon Peak Hour*	
		Overall LOS	*Critical Movement (LOS, V/C)*	*Overall LOS*	*Critical Movement (LOS, V/C)*
CR 17 / Carmen Bergeron	Traffic Signal	**F**	**WB-TH (F, 1.20) NB-LT (F, 1.00)**	**F**	**EB-TH (F, 1.38)**
Carmen Bergeron / Richelieu	All-Way Stop Control	B	WB-T/R (A, 0.48)	B	SB-T/L (B, 0.49)
Richelieu / Commercial Access	2-Way Stop Control	B	NB (A, 0.05)	C	SB (C, 0.44)
Poupart / Richelieu	All-Way Stop Control	B	NB (A, 0.46)	B	EB-T/R (B, 0.57)
Poupart / St-Jean	All-Way Stop Control	B	WB (A, 0.57)	B	NB (B, 0.54)
St-Jean / Dr. Corbeil	Roundabout	A	EB (A, 0.39)	A	SB (A, 0.48)
St-Jean / Patricia	All-Way Stop Control	B	NB (A, 0.52)	B	SB (B, 0.61)
St-Jean / Laurier	Traffic Signal	B	WB-TH (B, 0.39) NB-LT (C, 0.56)	B	EB-TH (B, 0.68)
Caron / Dr. Corbeil	Minor-leg Stop Control	C	EB (B, 0.33)	E	EB (E, 0.74)
Caron / David	All-Way Stop Control	B	NB (A, 0.55)	C	SB (C, 0.70)
St-Jean/Street No. 1 Access	Roundabout	A	SB (A, 0.28)	A	NB (A, 0.43)
Street No.1 / Sterling	Minor-leg Stop Control	A	SB (A, 0.005)	A	SB (A, 0.02)
Caron / Street No.1	All-Way Stop Control	B	NB (B, 0.52)	C	SB (D, 0.79)
Poupart / Site Access	Minor-leg Stop Control	B	SB (B, 0.06)	B	SB (B, 0.04)

All of the study area intersections operate at satisfactory level of service during the peak hours of travel demand, except for CR 17 / Carmen Bergeron Street. The intersection warrants more capacity in the east-west direction (over 1,500 vph in the peak direction). The CR 17 is at capacity today and warrants to be widened given the level of development that is anticipated to occur.

3.5.3 Forecast Medium-term (10-to-20 years) Traffic Analysis

By the medium-term horizon year, it was assumed that:

- Single roundabouts would be constructed along Poupart Road;

- Poupart Road would require to be extended further west to connect with CR 17[1]; and
- Traffic signals would be required along Caron Street;
- 2-lane cross-sections along St-Jean Street, Poupart Road and Caron Street[2]; and 4-lanes along CR 17.

Table 3.3 below provides a summary of the medium-term analysis results.

Table 3.3: Medium-Term Traffic Analysis

Intersection	*Control Type*	*Morning Peak Hour*		*Afternoon Peak Hour*	
		Overall LOS	*Critical Movement (LOS, V/C)*	*Overall LOS*	*Critical Movement (LOS, V/C)*
CR 17 / Carmen Bergeron	Traffic Signal	B	WB-TH (C, 0.91)	C	EB-TH (D, **1.00**)
Carmen Bergeron / Richelieu	All-Way Stop Control	A	WB-T/R (A, 0.27)	A	SB-L/T (A, 0.18)
Richelieu / Commercial Access	2-Way Stop Control	B	SB (B, 0.03)	C	SB (C, 0.40)
Poupart / Richelieu	All-Way Stop Control	A	NB (A, 0.30)	B	EB-LT (B, 0.34)
Poupart / St-Jean	Roundabout	C	WB (C, **0.94**)	E	**EB (F, 1.14)** **NB (F, 1.14)**
St-Jean / Dr. Corbeil	Roundabout	A	WB (A, 0.44)	A	SB (A, 0.61)
St-Jean / Patricia	All-Way Stop Control	B	NB (C, 0.66)	C	SB (D, 0.80)
St-Jean / Laurier	Traffic Signal	B	NB-LT (C, 0.69)	B	WB (C, 0.76)
Caron / Dr. Corbeil	Traffic Signal	B	EB (C, 0.58) NB (B, 0.68)	C	EB (E, 0.85) SB (C, **0.95**)
Caron / David	Traffic Signal	A	WB (B, 0.44) NB (A, 0.69)	A	SB (A, 0.80)
St-Jean/Street No. 1 Access	Roundabout	A	NB (A, 0.29)	A	SB (A, 0.86)
Street No.1 / Sterling	Minor-leg Stop Control	B	WB (B, 0.13)	C	SB (C, 0.23)
Caron / Street No.1	Traffic Signal	B	SB (E, 0.59)	B	SB (C, 0.78)
Poupart Rd Extension	Roundabout	A	WB (A, 0.91)	C	**EB (F, 1.03)**
Poupart / Site Access	Roundabout	A	WB (A, 0.83)	C	**EB (F, 1.04)**

All of the study area intersections operate at satisfactory level of service during the peak hours of travel demand, except for:

- ***CR 17 / Carmen Bergeron Street***: The intersection still experiences slight congestion in the peak direction despite assuming a 4-lane CR 17. The EB movement results in a v/c ratio greater than 0.90 during the afternoon peak hour of travel demand.
- ***Poupart Road west of St-Jean Street***: The proposed single roundabouts from St-Jean Street to Poupart Road extension to CR 17 are anticipated to reach capacity (EB direction results in v/c ratio greater than 1.00) during the afternoon peak hour. The corridor should be monitored as development progresses to confirm if/when a 4-lane facility is required during the medium-term horizon year.
  Since the forecast assumes that a 2-lane Poupart and single roundabouts fail within

[1] Official Plan City of Clarence-Rockland - Schedule "B" – Road Network and Community Linkages
[2] Caron Street has an existing third lane along its length.

the medium-term horizon, consideration should be given to construct this corridor as a 4-lane cross-section with double roundabouts from the onset. Staging Poupart Road and the roundabouts from single-to-double within a short time period (potentially under 10-years) would result in throw-away infrastructure and is not recommended.

3.5.4 Forecast Ultimate Build-Out Traffic Analysis

By the full build-out year, it was assumed that:

- Poupart Road west of the Morris Village roundabout (as St-Jean/Poupart transition from north-south to east-west) would require a 4-lane cross-section to accommodate development growth; and
- Caron Street would require a 4-lane cross-section to accommodate development along Caron Street.

Table 3.4 below provides a summary of the build-out analysis.

Table 3.4: Build-Out Traffic Analysis

Intersection	*Control Type*	*Morning Peak Hour*		*Afternoon Peak Hour*	
		Overall LOS	*Critical Movement (LOS, V/C)*	*Overall LOS*	*Critical Movement (LOS, V/C)*
CR 17 / Carmen Bergeron	Traffic Signal	D	WB-TH (C, **1.04**)	**F**	**EB-TH (F, 1.25)**
Carmen Bergeron / Richelieu	All-Way Stop Control	A	WB-T/R (A, 0.29)	A	SB-L/T (A, 0.19)
Richelieu / Commercial Access	2-Way Stop Control	B	SB (B, 0.04)	D	SB (C, 0.54)
Poupart / Richelieu	All-Way Stop Control	A	NB (A, 0.41)	B	EB-LT (B, 0.54)
Poupart / St-Jean	Roundabout	B	WB (C, 0.82) SB (E, **0.98**)	C	EB (C, .96) **NB-RT (F, 1.01)**
St-Jean / Dr. Corbeil	Roundabout	A	WB (B, 0.51)	A	SB (A, 0.75)
St-Jean / Patricia	All-Way Stop Control	C	NB (D, 0.84)	E	**SB (F, 1.03)**
St-Jean / Laurier	Traffic Signal	B	NB-LT (C, 0.79)	C	WB (C, 0.86)
Caron / Dr. Corbeil	Traffic Signal	B	EB (C, 0.59) NB (B, 0.68)	C	EB (D, 0.80) SB (C, **0.91**)
Caron / David	Traffic Signal	A	WB (C, 0.47) NB (B, 0.68)	A	SB (A, 0.80)
St-Jean/Street No. 1 Access	Roundabout	B	EB-LT (B, 0.76)	A	SB (A, 0.77)
Street No.1 / Sterling	Minor-leg Stop Control	C	SB (C, 0.35)	C	**SB (F, 0.91)**
Caron / Street No.1	Traffic Signal	C	WB (E, 0.75)	C	SB (C, 0.83)
Poupart Rd Extension	Roundabout	A	WB (A, 0.77)	B	EB (C, **0.94)**
Poupart / Site Access	Roundabout	B	WB (A, 0.77) SB (C, 0.83)	A	EB (A, 0.88) NB (C, 0.77)

All of the study area intersections operate at satisfactory level of service during the peak hours of travel demand, except for:

- ***CR 17 / Carmen Bergeron Street***: The intersection would continue to experience congestion in the peak direction despite assuming a 4-lane CR 17. The EB movement results in a v/c ratio greater than 0.90 during the afternoon peak hour of travel demand.

- ***St-Jean Street / Patricia Street***: The intersection would experience failure level of service in the southbound direction during the afternoon peak hour. The intersection should be monitored as development progresses within the area to determine if traffic signals are warranted at this intersection.
- ***Poupart Road west of St-Jean Street***: The proposed roundabouts from St-Jean Street to Poupart Road extension to CR 17 are anticipated to improve in terms of level of service with the additional capacity along Poupart Road. Albeit a few roundabouts would still experience slightly high v/c ratio at the build-out stage during the afternoon peak hour of travel demand.

4 INFRASTRUCTURE REQUIREMENTS

This section provides the infrastructure requirements for the study area for each phase of the development. The section is segmented into two part: study area corridors and intersections.

4.1 STUDY AREA CORRIDORS

Exhibit 4.1 illustrates the infrastructure envisioned to be required for each phase of the development. The exhibit provides link volumes at each location along the study area corridors. In summary:

- ***Poupart Road*** (west of Street No.1/St-Jean roundabout) is envisioned to be a 4-lane facility. The corridor reaches capacity by the medium-term horizon year. Should development progress as envisioned in this study, widening should be considered by or beyond the medium-term horizon year.
- ***St-Jean Street*** north of the Street No.1 roundabout is envisioned to remain a 2-lane corridor.
- ***Caron Street*** is envisioned to remain a 2-lane facility and would (at the time of the full build-out) require to be widened to 4-lanes to accommodate the growth on either side of the corridor. It is appreciated that some sections of Caron Street might not have sufficient right-of-way (ROW) to be able to be widened. This should be evaluated in details to determine if sufficient ROW exists to widen ultimately to 4-lanes.

4.2 STUDY AREA INTERSECTIONS

As development progresses within the study area, roundabouts are envisioned along Poupart Road and traffic signals along Caron Street for the study area intersections.

Traffic signals were selected along Caron Street as a preferred intersection control given the dominant direction alternates between the northbound (during the morning) and southbound (during the afternoon) direction. Traffic signals would provide the ability to control and provide more green time to the dominant movement during the peak direction.

Table 4.1 provides a summary of the intersection type and configuration for each phase of the development.

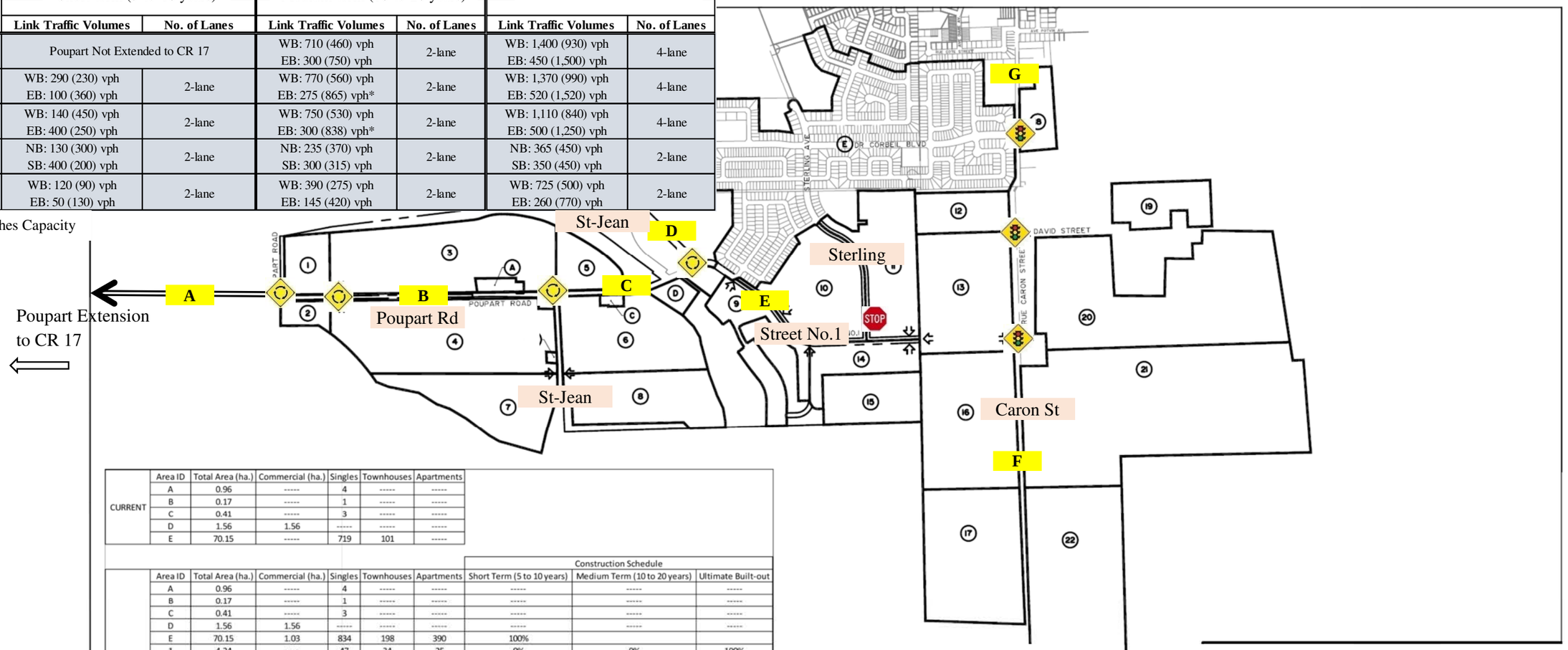
Table 4.1: Proposed Improvements

Intersections	***Short-Term Improvements***	***Medium-Term Improvements***	***Ultimate Build-Out Improvements***
Caron / Dr. Corbeil	All-Way Stop Control	Traffic Signals[1] • NB-LT = 40 m	Traffic Signals NB-LT = 40 m Storage
Caron / David St	2-Way Stop Control	Traffic Signals[1] • NB-LT = 30 m	Traffic Signals SB-LT = 30 m Storage
Caron / Street No.1	All-Way Stop Control	Traffic Signals[1] • NB-LT = 120 m • SB-LT = 120m • SB-RT = 120m • EB-LT = 35 • EB-RT = 125m • WB-LT = 30m • WB-RT = 120m	Traffic Signals • NB-LT = 120 m • SB-LT = 120m • SB-RT = 120m • EB-LT = 35 • EB-RT = 125m • WB-LT = 30m • WB-RT = 120m
St-Jean / Dr. Corbeil	Single lane roundabout	Single lane roundabout	Single lane roundabout
St-Jean / Street No.1	Single lane roundabout with auxiliary lanes	Single lane roundabout with auxiliary lanes[2]	Single lane roundabout with auxiliary lanes
St-Jean / Poupart	All-Way Stop Control	Single (or Double[3]) lane roundabout	2-lane roundabout with auxiliary lanes[2]
Poupart / Site Access	2-Way Stop Control	Single (or Double[3]) lane roundabout[3]	2-lane roundabout
Poupart / Poupart Rd Extension	N/A	Single (or Double[3]) lane roundabout[3]	2-lane roundabout

1- The storage lengths were calculated assuming a cycle length of 120 sec, vehicle length of 7m and a safety factor of 1.5.
2- See Appendix "C" for conceptual level lay-out along with auxiliary lane.
3- The roundabouts can be constructed as 4-lanes during the medium term. The intersections should be monitored closely at this time to confirm a 4-lane Poupart facility is required. Consideration should be given to construct double roundabouts and a 4-lane Poupart Rd from the outset.

Links	Short-term (5-to-10 years)		Medium-term (10-to-20 years)		Ultimate Build-out	
	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes
A	Poupart Not Extended to CR 17		WB: 710 (460) vph EB: 300 (750) vph	2-lane	WB: 1,400 (930) vph EB: 450 (1,500) vph	4-lane
B	WB: 290 (230) vph EB: 100 (360) vph	2-lane	WB: 770 (560) vph EB: 275 (865) vph*	2-lane	WB: 1,370 (990) vph EB: 520 (1,520) vph	4-lane
C	WB: 140 (450) vph EB: 400 (250) vph	2-lane	WB: 750 (530) vph EB: 300 (838) vph*	2-lane	WB: 1,110 (840) vph EB: 500 (1,250) vph	4-lane
D	NB: 130 (300) vph SB: 400 (200) vph	2-lane	NB: 235 (370) vph SB: 300 (315) vph	2-lane	NB: 365 (450) vph SB: 350 (450) vph	2-lane
E	WB: 120 (90) vph EB: 50 (130) vph	2-lane	WB: 390 (275) vph EB: 145 (420) vph	2-lane	WB: 725 (500) vph EB: 260 (770) vph	2-lane

*Reaches Capacity



	Area ID	Total Area (ha.)	Commercial (ha.)	Singles	Townhouses	Apartments
CURRENT	A	0.96	-----	4	-----	-----
	B	0.17	-----	1	-----	-----
	C	0.41	-----	3	-----	-----
	D	1.56	1.56	-----	-----	-----
	E	70.15	-----	719	101	-----

							Construction Schedule		
	Area ID	Total Area (ha.)	Commercial (ha.)	Singles	Townhouses	Apartments	Short Term (5 to 10 years)	Medium Term (10 to 20 years)	Ultimate Built-out
FUTURE	A	0.96	-----	4	-----	-----	-----	-----	-----
	B	0.17	-----	1	-----	-----	-----	-----	-----
	C	0.41	-----	3	-----	-----	-----	-----	-----
	D	1.56	1.56	-----	-----	-----	-----	-----	-----
	E	70.15	1.03	834	198	390	100%		
	1	4.24	-----	47	34	25	0%	0%	100%
	2	1.94	-----	21	16	12	0%	0%	100
	3	25.26	-----	199	157	322	25%	100%	
	4	24.63	-----	271	197	148	0%	25%	100
	5	5.44	-----	37	44	-----	100%		
	6	14.96	-----	165	120	90	0%	25%	100
	7	12.33	-----	136	99	74	0%	25%	100
	8	12.34	-----	136	99	74	0%	25%	100
	9	7.97	-----	90	42	-----	50%	100%	
	10	13.92	-----	196	-----	37	50%	100%	
	11	13.61	-----	170	50	-----	50%	100%	
	12	5.85	-----	64	47	35	0%	50%	100
	13	17.40	-----	191	139	104	0%	50%	100%
	14	6.22	-----	90	-----	-----	50%	100%	
	15	7.53	-----	83	60	45	0%	50%	100%
	16	20.10	-----	221	161	121	0%	50%	100%
	17	20.38	-----	224	163	122	0%	50%	100%
	18	3.56	-----	-----	110	-----	100%		
	19	6.40	-----	70	51	38	50%	100%	
	20	38.59	-----	424	309	232	25%	50%	100%
	21	54.84	-----	603	439	329	25%	50%	100%
	22	38.72	-----	426	310	232	25%	50%	100%

Links	Short-term (5-to-10 years)		Medium-term (10-to-20 years)		Ultimate Build-out	
	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes
F	NB: 340 (360) vph SB: 225 (430) vph	2-lane	NB: 800 (700) vph SB: 415 (930) vph	2-lane	NB: 1,480 (1,190) vph SB: 670 (1,660) vph	4-lane
G	NB: 435 (420) vph SB: 210 (530) vph	2-lane	NB: 940 (750) vph SB: 375 (1,060) vph	2-lane	NB: 1,640 (1,210) vph SB: 600 (1,800) vph	4-lane

TRANSPORTATION IMPACT STUDY

PROJECT No. 18080I

DATE AUGUST 2018

PLAN FUTURE DEVELOPMENT AREA AND STATISTICS

DRAWING No. 18080I-FDASI

Exhibit 4.1: Infrastructure Requirements

5 DESIGN INPUT

This section provides input to the design component of the traffic study such as cross-section requirements, posted speeds, traffic calming measures, etc.

5.1 CROSS-SECTION CONFIGURATION (DIVIDED VS UNDIVIDED)

Poupart Road, from the proposed St-Jean Street (CR 21) roundabout to the proposed extension to CR 17 is anticipated to be a 4-lane facility. Whether the cross-section configuration be divided or undivided depends on many factors, which include access management, speed, traffic volumes, but the main factor is safety.

Raised medians are used to restrict turning movements and access points, and consequently decrease collision rates. Table 4.5.3 within the "***Geometric Design Guide for Canadian Roads***" (Transportation Association of Canada, June 2017) indicates that divided roads reduce the potential of collisions (i.e. head-on and side sweep collisions) by up to ~60% (based upon traffic volumes). As such, a divided cross-section along Poupart Road is recommended from the proposed St-Jean Street roundabout (west of the hill) to the proposed extension to CR 17.

It should be noted that although east of the St-Jean Street roundabout to the Street No. 1 roundabout is recommended to be a divided cross-section, a divided configuration cannot be accommodated due to the hill slope requirements along this segment of St-Jean Street (see Section 5.7 of this report).

5.2 POSTED SPEED

A posted speed limit of 50 km/hr is recommended along all roads within the study area (with the exception of CR 17 which has an existing posted speed of 70 km/hr).

Due to mainly residential land uses surrounding the corridors and the use of roundabouts along Poupart Road and St-Jean Street, it is recommended that a posted speed of 50 km/hr be maintained along this corridor. (A higher posted speed would result in vehicles speeding up/slowing down between each roundabout, which is considered undesirable and defeats the purpose of using roundabouts as traffic calming tools, see Section 5.3.)

5.3 TRAFFIC CALMING

Traffic calming measures are often implemented as a reactionary tool where high speed traffic, cut-through traffic or other local issues are identified in established areas.

As a precautionary traffic calming tool, roundabouts have been proposed along many intersections within the study area. Roundabouts naturally slow vehicular traffic and encourage drivers to be more aware by increasing cognitive load approaching intersections. Roundabouts are posted at 30 km/hr and, by their design, all vehicles approaching intersections slow down (as opposed to traffic signals where vehicles are often seen speeding up to ensure they cross on the green).

Other traffic calming features that can be considered at the design stage, specifically for local roads, include narrow lanes, horizontal deflections and accommodating on-street parking.

5.4 NON-AUTO MODE REQUIREMENTS

Along St-Jean Street, Poupart Road and Street No. 1, the design is to include a multi-use pathway and/or sidewalk to provide for a safe area for pedestrians and cyclists. The multi-use pathway (MUP) is proposed to be 2.5m wide and would accommodate cyclists and other forms of active transportation (skateboards, rollerblades, etc.); the pathway will connect to the existing path along the hydro corridor within the residential development. The sidewalk is proposed to be 2m wide. Both the multi-use pathway and sidewalk are recommended to be hard-surfaces (pavement for MUP and concrete for sidewalks) and cleared of snow in winter months.

5.5 RIGHT-OF-WAY REQUIREMENTS

Right-of-way widths were identified as 26m for two-lane roadways (with the exception of Poupart Road in the vicinity of the Walmart access which is currently 23m) and 30m for four-lane cross-sections (See proposed cross-sections presented by Atrel). Additional property would be needed at intersections to accommodate auxiliary lanes (particularly where roundabouts are provided, see Section 4.2).

- **Caron Street**: This corridor was recently constructed to a 3-lane cross-section. It is recommended that in the ultimate stage, this roadway be widened to 4-lanes. Traffic signals are proposed along the intersections at Dr Corbeil Boulevard, David Street and Street No. 1, however it would be prudent to protect right-of-way to accommodate roundabouts along this corridor, should they be preferred in the future.
- **Poupart Road**: A 4-lane divided cross-section is proposed within the 30 m right-of-way with 15m pavement width (3.75m per lane) and 5m median. Additional right-of-way is required at the roundabout locations. Poupart Road at Walmart narrows to ROW of 23m with pavement width of 8.5m.
- **St-Jean Street**: A 4-lane undivided cross-section is proposed within the 30 m right-of-way to Street No.1 (3.75m lane width). A 2-lane cross-section is envisioned north of Street No.1 roundabout with ROW of 26m and pavement width of 8.5m.

- **Street No.1**: This road is envisioned to accommodate 2 travel lanes with ROW of 26m. The pavement width is proposed to be 11m to accommodate on-street parking.

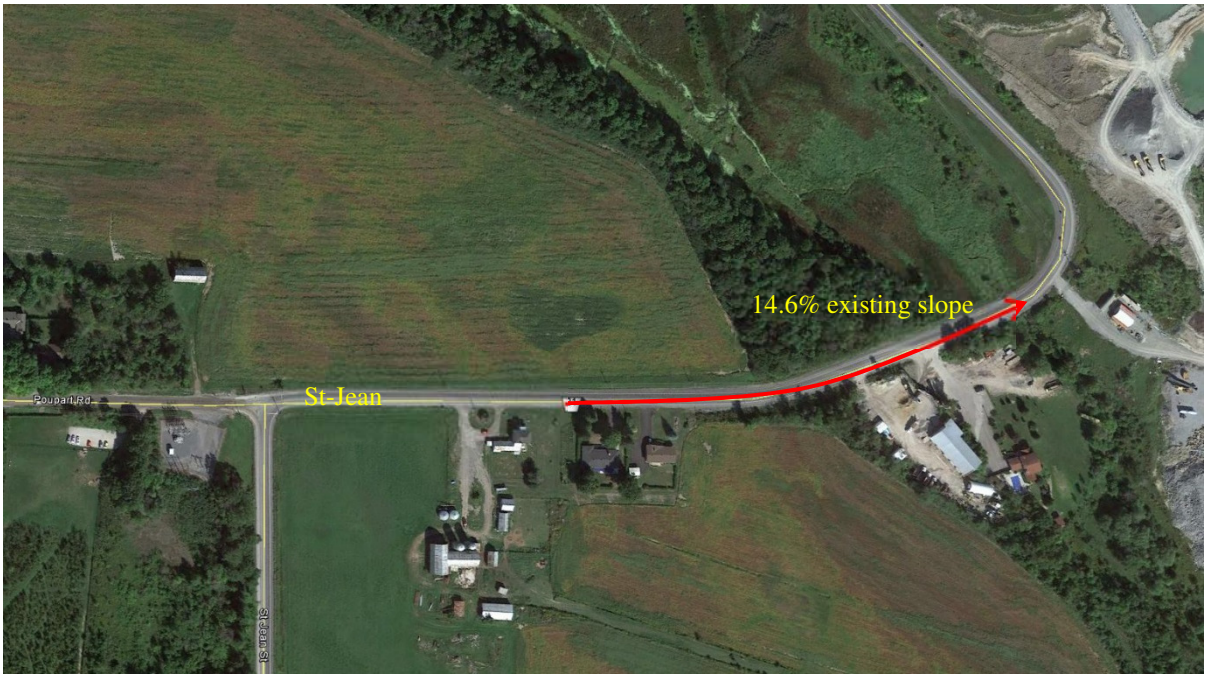
5.6 ROUNDABOUT CONFIGURATIONS

The following provides details regarding roundabout configuration and sizing:

- For all roundabouts, the roundabout circle diameter depends on the design vehicle that would traverse the roundabout. Typically for a single lane roundabout that would accommodate a WB-15 truck has an inscribed circle that ranges from 32-to-46m[3]. In the case of the St-Jean Street and Dr. Corbeil roundabout, a 32-to-36m inscribed circle for a single lane would suffice. This translates to a 6m circular lane width and 20m inner circle that includes a 3-to-4m apron for trucks.
- A 2-lane roundabout, that would typically accommodate a WB-15 or WB-20 truck, has an inscribed circle that ranges from 46-to-67m. A 46-to-50m inscribed circle for a 2-lane roundabout within this study area should suffice. This translates to 9.5-to-10m circular lane width and a 30m inner circle that includes a 3-to-4m apron for trucks. Please note that the dimensions of the roundabout should be tested to accommodate the design vehicle that is envisioned to use the roundabout.

5.7 ST-JEAN STREET HILL SLOPE

St-Jean Street hill is located after the bend along St-Jean Street shown in the exhibit below with an existing slope of 14.6%. St-Jean Street is generally posted at 50km/hr. speed with an advisory speed of 30 km/hr in the vicinity of the hill because of the back-to-back curves on either side along St-Jean Street.



[3] National Cooperative Highway Research Program (NCHRP) Report 672, Exhibit 6-9

It was assumed that the St-Jean Street hill will be classified (as development progresses) as an Urban Collector Undivided (UCU) roadway. Based on this classification and referencing Table 3.3.1 of the "***Geometric Design Guide for Canadian Roads***" (Transportation Association of Canada, June 2017), the maximum acceptable gradient for UCU (50km/hr) is 8% for rolling topography. This would flatten the slope by almost half of the existing slope.

5.8 POUPART RD & LAURIER ST CURVE

Poupart Rd and Laurier St are currently connected by back-to-back curves, where the main curve appears to have a radius of approximately 18m (which does not meet current design standards[4]). Two-way traffic volumes along this segment of roadway are currently 159 vehicles-per-hour in the morning and 354 vph in the afternoon. Traffic volume growth from the proposed developments are anticipated to be low (growth along this section of Poupart Rd/Laurier St is going to be more representative of background growth within the City itself), by the ultimate stage, forecast traffic volumes along this segment are anticipated to be 225 vph in the morning and 435 vph in the afternoon.

The existing curve should be reviewed and considerations should be given to increase the radius in this location if/when safety concerns arise.

6 ALTERNATE FUTURE ROUTES

The following section explores, at a high-level, potential alternative road options for the City of Clarence-Rockland.

6.1 EAST-WEST CORRIDOR

Given the growth that is anticipated to occur within the City of Clarence-Rockland in the next 20 years (and beyond), it is recommended that other road options be explored to provide an alternative entry/exit point to the City. The majority of traffic today use CR 17 to head to/from the City of Ottawa, which funnels all the traffic in and out of the City. Despite widening the CR 17 corridor, it reaches capacity in the next 20-to-30 years as development progresses. A potential alternative option is evaluating a second east-west corridor south of the study area (i.e. connecting Baseline Road to Innes Road – Exhibit 6.1). This would provide additional capacity and alleviate traffic along CR 17, Poupart Road and divert traffic south of the study area. A detailed network-wide assessment is recommended to be undertaken to determine the level of impact on traffic diversion.

[4] "***Geometric Design Guide for Canadian Roads***", (Transportation Association of Canada, June 2017). Table 3.2.8 states that, at a minimum, a 30m radius curve should be provided for a roadway with a design speed of 30km/hr.



Exhibit 6.1: Alternative East-West Corridor

6.2 NORTH-SOUTH CORRIDOR

It is anticipated that Caron Street would ultimately require to be 4-lanes to accommodate growth on either side of the corridor. The challenge with 4-lanning Caron Street is the potential ROW constraint along some segments of the road, especially north of David Street. Another option is to evaluate an alternative north-south corridor connecting the City of Clarence-Rockland to Baseline Road. Consideration should be given to having this roadway be somewhere between St-Jean St (CR 21) and Caron Street, or between Caron Street and Landry Street. This could alleviate the pressure from Caron Street and eliminate the need to 4-lane the corridor. Again, this option should be evaluated in more details as part of a network-wide study to quantify the benefits, a north-south corridor on its own, without an extended east-west connection (i.e. Baseline to Innes, as described above), would not likely provide much benefit.

7 FINDINGS AND RECOMMENDATIONS

The traffic study yields the following findings:

1. The total site traffic volumes generated by the proposed development has been estimated be approximately 6,000 vehicle trips during the morning peak hour and 8,000 vehicle trips during the afternoon peak hour.
2. By the short-term horizon year, it was assumed that:
    a. Roundabouts are recommneded to be constructed at St-Jean Street / Dr. Corbeil Boulevard and St-Jean Street / Street No.1 access into the Morris Village development (as development is anticpated to progress from the east to west);
    b. Stop-Control configuration along Poupart west of the St-Jean Street slope hill;
    c. Stop-Control configuration along Caron Street; and
    d. A 2-lane St-Jean Street, Poupart Road and Caron Street.
3. By the medium-term horizon year, it was assumed that:
    a. Single roundabouts and a 2-lane Poupart Road would be constructed. It should be acknowledged that a 2-lane Poupart Road does reach capacity by this horizon year if development progresses at the rate assumed within this report. The intersections should be monitored to confirm if a 4-lane Poupart facility and double roundabouts are preferred. Consideration should be given to construct double roundabouts and a 4-lane Poupart Rd from the outset to avoid staging costs and throw-away infrastructure;
    b. Poupart Road would require to be extended further west to connect with CR 17;
    c. Traffic signals would be required along Caron Street; and
    d. 2-lane cross-sections along St-Jean Street and Caron Street and 4-lanes along CR 17.
4. By the full build-out year, it was assumed that:
    a. Poupart Road west of the Morris Village roundabout would require a 4-lane cross-section to accommodate development growth; and
    b. Caron Street would require a 4-lane cross-section to accommodate development along Caron Street. A detailed evaluation is recommended to ensure Caron Street has sufficient ROW to accommodate a 4-lane roadway.
5. A divided cross-section along Poupart Road is recommended from the proposed St-Jean Street roundabout (west of the hill) to the proposed extension to CR 17.
6. A posted speed limit of 50 km/hr is recommended along St-Jean Street, Poupart Road and Street No.1.
7. The maximum acceptable proposed gradient for St-Jean Street hill [UCU (50km/hr.)] is recommended to be 8% for rolling topography. This would flatten the slope by almost half of the existing slope.

8. The Poupart Road and Laurier Street curve should be monitered; considerations should be given to increase the radius in this location if/when safety concerns arise.
9. Roundabouts have been proposed along many intersections within the study area. Roundabouts naturally slow vehicular traffic and encourage drivers to be more aware. Roundabouts are posted at 30 km/hr and by their design act as a traffic calming measures. Other traffic calming features that can be considered at the design stage, specifically for local roads, include narrow lanes, horizontal deflections and accommodating on-street parking.
10. The design is to include a paved multi-use pathway and/or concrete sidewalk located within the boulevard to provide for a safe area for pedestrians and cyclists along St-Jean Street, Poupart Road and Street No. 1.

It is recommended that the City of Clarence-Rockland proceed to process the application of subdivision from a transportation perspective. Given the size of the development and long-term planning horizon years, the City of Clarence-Rockland is encouraged to undertake subsequent transportation impact studies as the development progresses to substantiate the medium and long-term assumptions (beyond five years) in this traffic study.

Yours Truly,

Arman Matti

Arman Matti, P. Eng.
Sr. Transportation Engineer
December 2018



Appendix A

Existing Traffic Analysis

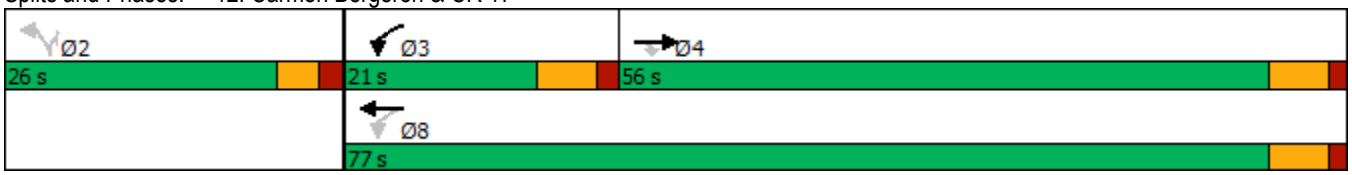


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	392	32	18	979	95	10
Future Volume (vph)	392	32	18	979	95	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1810	1524	1703	1881	1770	1346
Flt Permitted			0.394		0.950	
Satd. Flow (perm)	1810	1524	706	1881	1770	1346
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		35				11
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	6%	6%	1%	2%	20%
Adj. Flow (vph)	426	35	20	1064	103	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	426	35	20	1064	103	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	56.0	56.0	21.0	77.0	26.0	26.0
Total Split (%)	54.4%	54.4%	20.4%	74.8%	25.2%	25.2%
Maximum Green (s)	49.8	49.8	14.8	70.8	20.8	20.8
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	48.4	48.4	52.6	52.6	21.4	21.4
Actuated g/C Ratio	0.56	0.56	0.61	0.61	0.25	0.25
v/c Ratio	0.42	0.04	0.04	0.92	0.23	0.03
Control Delay	12.6	3.6	5.6	27.8	32.1	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	3.6	5.6	27.8	32.1	17.1
LOS	B	A	A	C	C	B
Approach Delay	11.9			27.3	30.7	
Approach LOS	B			C	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 103			
Actuated Cycle Length: 85.7			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 23.3		Intersection LOS: C	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lanes, Volumes, Timings
17: St-Jean & Laurier

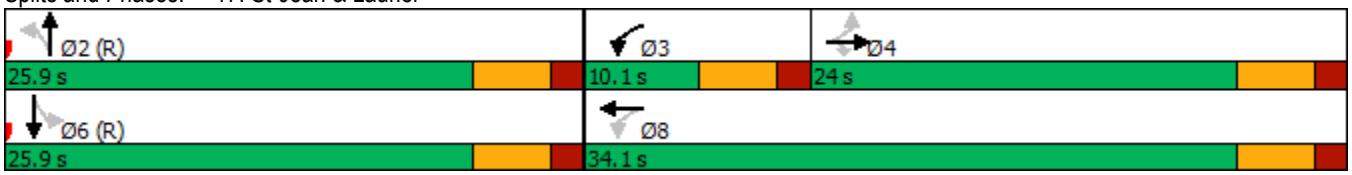
Existing Analysis AM
10/21/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	168	68	34	257	8	93	15	39	2	5	11
Future Volume (vph)	6	168	68	34	257	8	93	15	39	2	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.891			0.894	
Flt Protected		0.998			0.994		0.950			0.950		
Satd. Flow (prot)	0	1843	1568	0	1875	0	1719	1479	0	1805	1604	0
Flt Permitted		0.985			0.959		0.746			0.719		
Satd. Flow (perm)	0	1819	1568	0	1809	0	1350	1479	0	1366	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127		3			42			12	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	3%	3%	0%	0%	5%	13%	15%	0%	20%	0%
Adj. Flow (vph)	7	183	74	37	279	9	101	16	42	2	5	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	74	0	325	0	101	58	0	2	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.1	23.1	23.1	10.1	23.1		23.1	23.1		23.1	23.1	
Total Split (s)	24.0	24.0	24.0	10.1	34.1		25.9	25.9		25.9	25.9	
Total Split (%)	40.0%	40.0%	40.0%	16.8%	56.8%		43.2%	43.2%		43.2%	43.2%	
Maximum Green (s)	19.0	19.0	19.0	5.1	29.1		20.9	20.9		20.9	20.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		19.0	19.0		29.1		20.9	20.9		20.9	20.9	
Actuated g/C Ratio		0.32	0.32		0.48		0.35	0.35		0.35	0.35	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.33	0.13		0.37		0.21	0.11		0.00	0.03	
Control Delay		17.7	1.6		11.1		15.4	7.1		13.0	8.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		17.7	1.6		11.1		15.4	7.1		13.0	8.8	
LOS		B	A		B		B	A		B	A	
Approach Delay		13.2			11.1			12.4			9.3	
Approach LOS		B			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 12.0		Intersection LOS: B	
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier



Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	33	36	14	31	13	22	149	30	16	96	4
Future Vol, veh/h	4	33	36	14	31	13	22	149	30	16	96	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	6	0	14	6	0	5	3	10	0	1	25
Mvmt Flow	4	36	39	15	34	14	24	162	33	17	104	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.4	9	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	5%	24%	14%
Vol Thru, %	74%	45%	53%	83%
Vol Right, %	15%	49%	22%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	201	73	58	116
LT Vol	22	4	14	16
Through Vol	149	33	31	96
RT Vol	30	36	13	4
Lane Flow Rate	218	79	63	126
Geometry Grp	1	1	1	1
Degree of Util (X)	0.267	0.099	0.086	0.157
Departure Headway (Hd)	4.396	4.477	4.93	4.484
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	817	800	727	801
Service Time	2.419	2.506	2.96	2.51
HCM Lane V/C Ratio	0.267	0.099	0.087	0.157
HCM Control Delay	9	8	8.4	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.3	0.3	0.6

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	16	98	2	11	75
Future Vol, veh/h	5	16	98	2	11	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	40	13	9	0	18	13
Mvmt Flow	5	17	107	2	12	82
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	7.8	7.9	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	24%	100%	0%
Vol Thru, %	98%	0%	0%	100%
Vol Right, %	2%	76%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	21	11	75
LT Vol	0	5	11	0
Through Vol	98	0	0	75
RT Vol	2	16	0	0
Lane Flow Rate	109	23	12	82
Geometry Grp	5	2	7	7
Degree of Util (X)	0.128	0.029	0.018	0.109
Departure Headway (Hd)	4.249	4.649	5.4	4.815
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	775	662	743
Service Time	2.303	2.649	3.136	2.55
HCM Lane V/C Ratio	0.13	0.03	0.018	0.11
HCM Control Delay	7.9	7.8	8.2	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.1	0.4

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	81	115	66	28	60	81
Future Vol, veh/h	81	115	66	28	60	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	2	7	2	2
Mvmt Flow	88	125	72	30	65	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	305	87	0	0	102	0
Stage 1	87	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Critical Hdwy	6.4	6.24	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	-	-	2.218	-
Pot Cap-1 Maneuver	691	966	-	-	1490	-
Stage 1	941	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	659	966	-	-	1490	-
Mov Cap-2 Maneuver	659	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	3.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	810	1490	-
HCM Lane V/C Ratio	-	-	0.263	0.044	-
HCM Control Delay (s)	-	-	11	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.1	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	34	164	65	38	61
Future Vol, veh/h	7	34	164	65	38	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	43	0	1	0	0	5
Mvmt Flow	8	37	178	71	41	66
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	9.2	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	38%	0%	72%
Vol Thru, %	0%	17%	28%
Vol Right, %	62%	83%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	99	41	229
LT Vol	38	0	164
Through Vol	0	7	65
RT Vol	61	34	0
Lane Flow Rate	108	45	249
Geometry Grp	1	1	1
Degree of Util (X)	0.128	0.057	0.296
Departure Headway (Hd)	4.282	4.639	4.285
Convergence, Y/N	Yes	Yes	Yes
Cap	843	775	829
Service Time	2.283	2.65	2.364
HCM Lane V/C Ratio	0.128	0.058	0.3
HCM Control Delay	7.9	7.9	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.2	1.2

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	10	7	7	63	9	68	30	3	6	28	75
Future Vol, veh/h	11	10	7	7	63	9	68	30	3	6	28	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	22	0	0	0	0	0	2	0	33	0	4	0
Mvmt Flow	12	11	8	8	68	10	74	33	3	7	30	82
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.1	8	8.2	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	67%	100%	0%	9%	6%
Vol Thru, %	30%	0%	59%	80%	26%
Vol Right, %	3%	0%	41%	11%	69%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	11	17	79	109
LT Vol	68	11	0	7	6
Through Vol	30	0	10	63	28
RT Vol	3	0	7	9	75
Lane Flow Rate	110	12	18	86	118
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.136	0.02	0.025	0.107	0.128
Departure Headway (Hd)	4.444	5.948	4.779	4.484	3.897
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	809	604	751	801	923
Service Time	2.457	3.666	2.497	2.501	1.91
HCM Lane V/C Ratio	0.136	0.02	0.024	0.107	0.128
HCM Control Delay	8.2	8.8	7.6	8	7.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.1	0.4	0.4

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	4	0	5	5	179	0	5	0	18	20	12
Future Vol, veh/h	15	4	0	5	5	179	0	5	0	18	20	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	6	0	13
Mvmt Flow	16	4	0	5	5	195	0	5	0	20	22	13
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8	7.8	6.9	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	47%	0%
Vol Thru, %	100%	100%	0%	100%	0%	3%	53%	0%
Vol Right, %	0%	0%	0%	0%	0%	97%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	15	4	5	184	38	12
LT Vol	0	0	15	0	5	0	18	0
Through Vol	3	3	0	4	0	5	20	0
RT Vol	0	0	0	0	0	179	0	12
Lane Flow Rate	3	3	16	4	5	200	41	13
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.004	0.003	0.024	0.006	0.008	0.218	0.061	0.016
Departure Headway (Hd)	5.041	3.335	5.206	4.705	5.112	3.93	5.331	4.289
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	1079	680	751	695	904	676	839
Service Time	2.743	1.036	2.995	2.494	2.879	1.696	3.032	1.99
HCM Lane V/C Ratio	0.004	0.003	0.024	0.005	0.007	0.221	0.061	0.015
HCM Control Delay	7.8	6	8.1	7.5	7.9	7.8	8.4	7.1
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0.8	0.2	0

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	39	61	57	58	41
Future Vol, veh/h	42	39	61	57	58	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	13	13	9	0	10
Mvmt Flow	46	42	66	62	63	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	280	86	108	0	-	0
Stage 1	86	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.42	6.33	4.23	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.417	2.317	-	-	-
Pot Cap-1 Maneuver	710	943	1417	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	677	943	1417	-	-	-
Mov Cap-2 Maneuver	677	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1417	-	783	-	-
HCM Lane V/C Ratio	0.047	-	0.112	-	-
HCM Control Delay (s)	7.7	-	10.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	7	6	21	181	4	7	3	19	2	1	1
Future Vol, veh/h	9	7	6	21	181	4	7	3	19	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	22	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	10	8	7	23	197	4	8	3	21	2	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	0	15	0	0	278	279	12	289	280	199
Stage 1	-	-	-	-	-	-	32	32	-	245	245	-
Stage 2	-	-	-	-	-	-	246	247	-	44	35	-
Critical Hdwy	4.32	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.398	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1260	-	-	1616	-	-	678	632	1074	667	632	847
Stage 1	-	-	-	-	-	-	990	872	-	763	707	-
Stage 2	-	-	-	-	-	-	762	706	-	975	870	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1260	-	-	1616	-	-	665	618	1074	640	618	847
Mov Cap-2 Maneuver	-	-	-	-	-	-	665	618	-	640	618	-
Stage 1	-	-	-	-	-	-	982	865	-	757	697	-
Stage 2	-	-	-	-	-	-	749	696	-	945	863	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.7	9.3	10.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	877	1260	-	-	1616	-	-	675
HCM Lane V/C Ratio	0.036	0.008	-	-	0.014	-	-	0.006
HCM Control Delay (s)	9.3	7.9	-	-	7.3	-	-	10.4
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

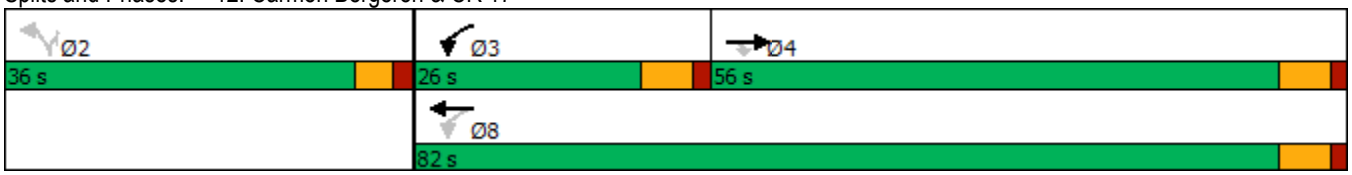


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1002	181	66	475	56	109
Future Volume (vph)	1002	181	66	475	56	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1845	1599	1752	1863	1805	1615
Flt Permitted			0.071		0.950	
Satd. Flow (perm)	1845	1599	131	1863	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		111				118
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	3%	2%	0%	0%
Adj. Flow (vph)	1089	197	72	516	61	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1089	197	72	516	61	118
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	26.2	26.2
Total Split (s)	56.0	56.0	26.0	82.0	36.0	36.0
Total Split (%)	47.5%	47.5%	22.0%	69.5%	30.5%	30.5%
Maximum Green (s)	49.8	49.8	19.8	75.8	30.8	30.8
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	50.0	50.0	60.8	60.8	30.9	30.9
Actuated g/C Ratio	0.48	0.48	0.59	0.59	0.30	0.30
v/c Ratio	1.22	0.24	0.38	0.47	0.11	0.21
Control Delay	135.9	8.3	14.9	13.6	28.6	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	135.9	8.3	14.9	13.6	28.6	6.4
LOS	F	A	B	B	C	A
Approach Delay	116.4			13.7	13.9	
Approach LOS	F			B	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 118			
Actuated Cycle Length: 103.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay: 78.0		Intersection LOS: E	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1002	181	66	475	56	109
Future Volume (vph)	1002	181	66	475	56	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1845	1599	1752	1863	1805	1615
Flt Permitted			0.054		0.950	
Satd. Flow (perm)	1845	1599	100	1863	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		171				118
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	3%	2%	0%	0%
Adj. Flow (vph)	1089	197	72	516	61	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1089	197	72	516	61	118
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	26.2	26.2
Total Split (s)	80.0	80.0	11.2	91.2	26.8	26.8
Total Split (%)	67.8%	67.8%	9.5%	77.3%	22.7%	22.7%
Maximum Green (s)	73.8	73.8	5.0	85.0	21.6	21.6
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	67.8	67.8	76.2	76.2	22.1	22.1
Actuated g/C Ratio	0.62	0.62	0.69	0.69	0.20	0.20
v/c Ratio	0.96	0.19	0.49	0.40	0.17	0.28
Control Delay	39.3	2.4	21.1	7.8	42.2	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	2.4	21.1	7.8	42.2	9.4
LOS	D	A	C	A	D	A
Approach Delay	33.7			9.4	20.6	
Approach LOS	C			A	C	

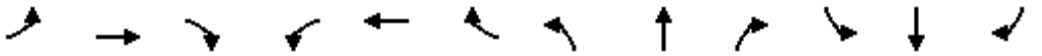
Intersection Summary			
Area Type:	Other		
Cycle Length: 118			
Actuated Cycle Length: 110			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 25.6		Intersection LOS: C	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lanes, Volumes, Timings
17: St-Jean & Laurier

Existing Analysis - PM
10/21/2018

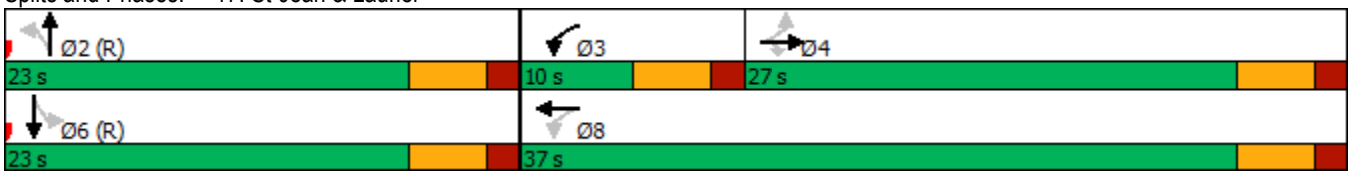


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	402	116	34	338	14	103	13	73	20	11	17
Future Volume (vph)	9	402	116	34	338	14	103	13	73	20	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.995			0.873			0.910	
Flt Protected		0.999			0.996		0.950			0.950		
Satd. Flow (prot)	0	1898	1568	0	1878	0	1752	1659	0	1805	1729	0
Flt Permitted		0.988			0.928		0.738			0.697		
Satd. Flow (perm)	0	1877	1568	0	1750	0	1361	1659	0	1324	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127		5			79			18	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	7%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	437	126	37	367	15	112	14	79	22	12	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	447	126	0	419	0	112	93	0	22	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	27.0	27.0	27.0	10.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	45.0%	45.0%	45.0%	16.7%	61.7%		38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	22.0	22.0	22.0	5.0	32.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		22.0	22.0		32.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio		0.37	0.37		0.53		0.30	0.30		0.30	0.30	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.65	0.19		0.44		0.27	0.17		0.06	0.06	
Control Delay		21.2	3.8		10.2		18.3	6.5		15.6	9.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		21.2	3.8		10.2		18.3	6.5		15.6	9.9	
LOS		C	A		B		B	A		B	A	
Approach Delay		17.3			10.2			13.0			12.3	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 14.0		Intersection LOS: B	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier



Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	36	48	31	43	17	59	176	28	33	172	9
Future Vol, veh/h	16	36	48	31	43	17	59	176	28	33	172	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	3	2	0	0	0	2	1	0	0	1	0
Mvmt Flow	17	39	52	34	47	18	64	191	30	36	187	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	9.2	10.6	10
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	16%	34%	15%
Vol Thru, %	67%	36%	47%	80%
Vol Right, %	11%	48%	19%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	100	91	214
LT Vol	59	16	31	33
Through Vol	176	36	43	172
RT Vol	28	48	17	9
Lane Flow Rate	286	109	99	233
Geometry Grp	1	1	1	1
Degree of Util (X)	0.375	0.154	0.143	0.309
Departure Headway (Hd)	4.724	5.098	5.221	4.775
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	758	697	680	747
Service Time	2.786	3.182	3.307	2.841
HCM Lane V/C Ratio	0.377	0.156	0.146	0.312
HCM Control Delay	10.6	9.1	9.2	10
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	0.5	0.5	1.3

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	22	137	4	25	150
Future Vol, veh/h	4	22	137	4	25	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	1	0	8	1
Mvmt Flow	4	24	149	4	27	163
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	7.3	8.2	8.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	15%	100%	0%
Vol Thru, %	97%	0%	0%	100%
Vol Right, %	3%	85%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	26	25	150
LT Vol	0	4	25	0
Through Vol	137	0	0	150
RT Vol	4	22	0	0
Lane Flow Rate	153	28	27	163
Geometry Grp	5	2	7	7
Degree of Util (X)	0.178	0.033	0.04	0.21
Departure Headway (Hd)	4.187	4.203	5.262	4.642
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	846	857	679	771
Service Time	2.267	2.203	3.003	2.383
HCM Lane V/C Ratio	0.181	0.033	0.04	0.211
HCM Control Delay	8.2	7.3	8.2	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.1	0.1	0.8

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	103	166	114	117	93
Future Vol, veh/h	52	103	166	114	117	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	1	1
Mvmt Flow	57	112	180	124	127	101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	597	242	0	0	304	0
Stage 1	242	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	469	802	-	-	1263	-
Stage 1	803	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	419	802	-	-	1263	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	714	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	4.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	614	1263	-
HCM Lane V/C Ratio	-	-	0.274	0.101	-
HCM Control Delay (s)	-	-	13.1	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0.3	-

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	81	101	23	78	185
Future Vol, veh/h	73	81	101	23	78	185
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	1	2	2	4	3	2
Mvmt Flow	79	88	110	25	85	201
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.1	9.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	30%	0%	81%
Vol Thru, %	0%	47%	19%
Vol Right, %	70%	53%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	263	154	124
LT Vol	78	0	101
Through Vol	0	73	23
RT Vol	185	81	0
Lane Flow Rate	286	167	135
Geometry Grp	1	1	1
Degree of Util (X)	0.341	0.205	0.185
Departure Headway (Hd)	4.291	4.414	4.932
Convergence, Y/N	Yes	Yes	Yes
Cap	838	812	726
Service Time	2.322	2.452	2.972
HCM Lane V/C Ratio	0.341	0.206	0.186
HCM Control Delay	9.5	8.6	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.5	0.8	0.7

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	55	76	9	24	17	25	50	14	22	43	99
Future Vol, veh/h	123	55	76	9	24	17	25	50	14	22	43	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	11	0	0	0	0	0	0	2	0
Mvmt Flow	134	60	83	10	26	18	27	54	15	24	47	108
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.3	8.5	8.7	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	28%	100%	0%	18%	13%
Vol Thru, %	56%	0%	42%	48%	26%
Vol Right, %	16%	0%	58%	34%	60%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	123	131	50	164
LT Vol	25	123	0	9	22
Through Vol	50	0	55	24	43
RT Vol	14	0	76	17	99
Lane Flow Rate	97	134	142	54	178
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.131	0.211	0.189	0.075	0.222
Departure Headway (Hd)	4.877	5.69	4.778	4.999	4.488
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	733	630	748	713	799
Service Time	2.921	3.439	2.527	3.059	2.525
HCM Lane V/C Ratio	0.132	0.213	0.19	0.076	0.223
HCM Control Delay	8.7	10	8.6	8.5	8.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.8	0.7	0.2	0.8

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	15	3	5	13	105	0	49	11	18	68	21
Future Vol, veh/h	17	15	3	5	13	105	0	49	11	18	68	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	33	0	0	0	0	2	0	0	1	19
Mvmt Flow	18	16	3	5	14	114	0	53	12	20	74	23
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.1	7.9	7.8	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	21%	0%
Vol Thru, %	100%	60%	0%	83%	0%	11%	79%	0%
Vol Right, %	0%	40%	0%	17%	0%	89%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	27	17	18	5	118	86	21
LT Vol	0	0	17	0	5	0	18	0
Through Vol	33	16	0	15	0	13	68	0
RT Vol	0	11	0	3	0	105	0	21
Lane Flow Rate	36	30	18	20	5	128	93	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.05	0.039	0.029	0.027	0.008	0.155	0.132	0.027
Departure Headway (Hd)	5.042	4.725	5.562	4.943	5.488	4.362	5.065	4.275
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	712	760	645	726	654	825	709	839
Service Time	2.759	2.442	3.281	2.662	3.204	2.078	2.781	1.991
HCM Lane V/C Ratio	0.051	0.039	0.028	0.028	0.008	0.155	0.131	0.027
HCM Control Delay	8	7.6	8.4	7.8	8.2	7.9	8.6	7.1
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1	0.1	0	0.5	0.5	0.1

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	92	60	116	106	64
Future Vol, veh/h	79	92	60	116	106	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	100	65	126	115	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	406	150	185	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	605	902	1402	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	577	902	1402	-	-	-
Mov Cap-2 Maneuver	577	-	-	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	2.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1402	-	716	-	-
HCM Lane V/C Ratio	0.047	-	0.26	-	-
HCM Control Delay (s)	7.7	-	11.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	122	22	40	45	63	25	13	70	62	13	53
Future Vol, veh/h	66	122	22	40	45	63	25	13	70	62	13	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	72	133	24	43	49	68	27	14	76	67	14	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	117	0	0	157	0	0	494	492	145	503	470	83
Stage 1	-	-	-	-	-	-	289	289	-	169	169	-
Stage 2	-	-	-	-	-	-	205	203	-	334	301	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1484	-	-	1435	-	-	489	481	908	482	495	982
Stage 1	-	-	-	-	-	-	723	677	-	838	763	-
Stage 2	-	-	-	-	-	-	802	737	-	684	669	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1484	-	-	1435	-	-	423	443	908	406	456	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	423	443	-	406	456	-
Stage 1	-	-	-	-	-	-	688	644	-	797	740	-
Stage 2	-	-	-	-	-	-	718	715	-	583	636	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	2.1	11.7	13.9
HCM LOS			B	B

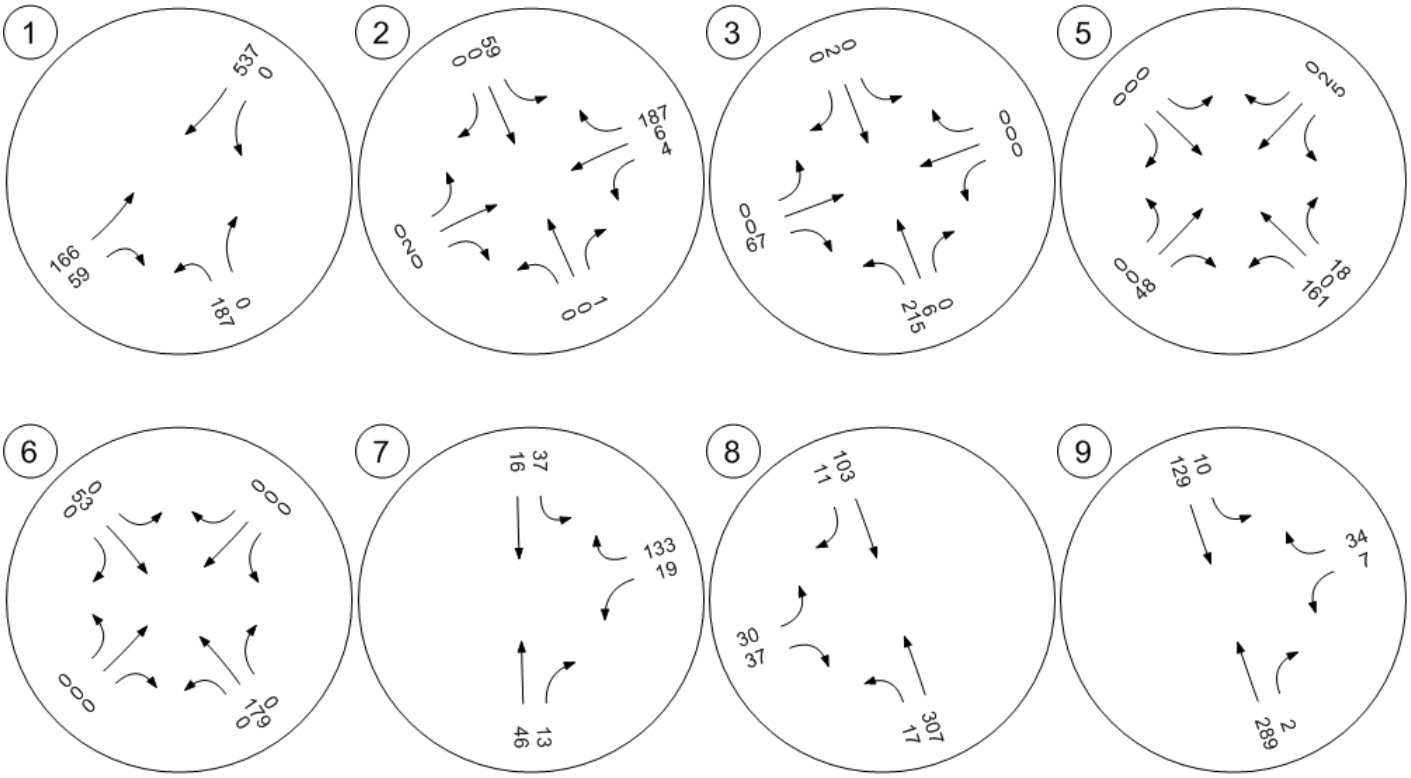
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	652	1484	-	-	1435	-	-	544
HCM Lane V/C Ratio	0.18	0.048	-	-	0.03	-	-	0.256
HCM Control Delay (s)	11.7	7.5	-	-	7.6	-	-	13.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0.1	-	-	1

Appendix B

Site and Forecast Traffic Volumes

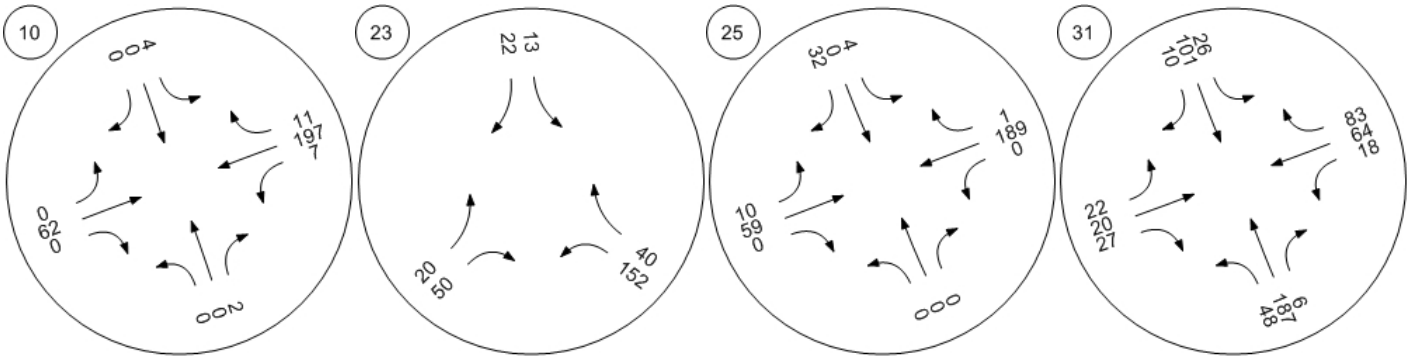
Traffic Volume - Net New Site Trips

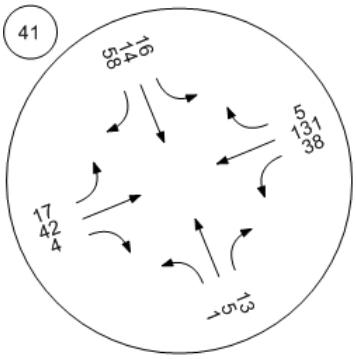




Traffic Volume - Net New Site Trips

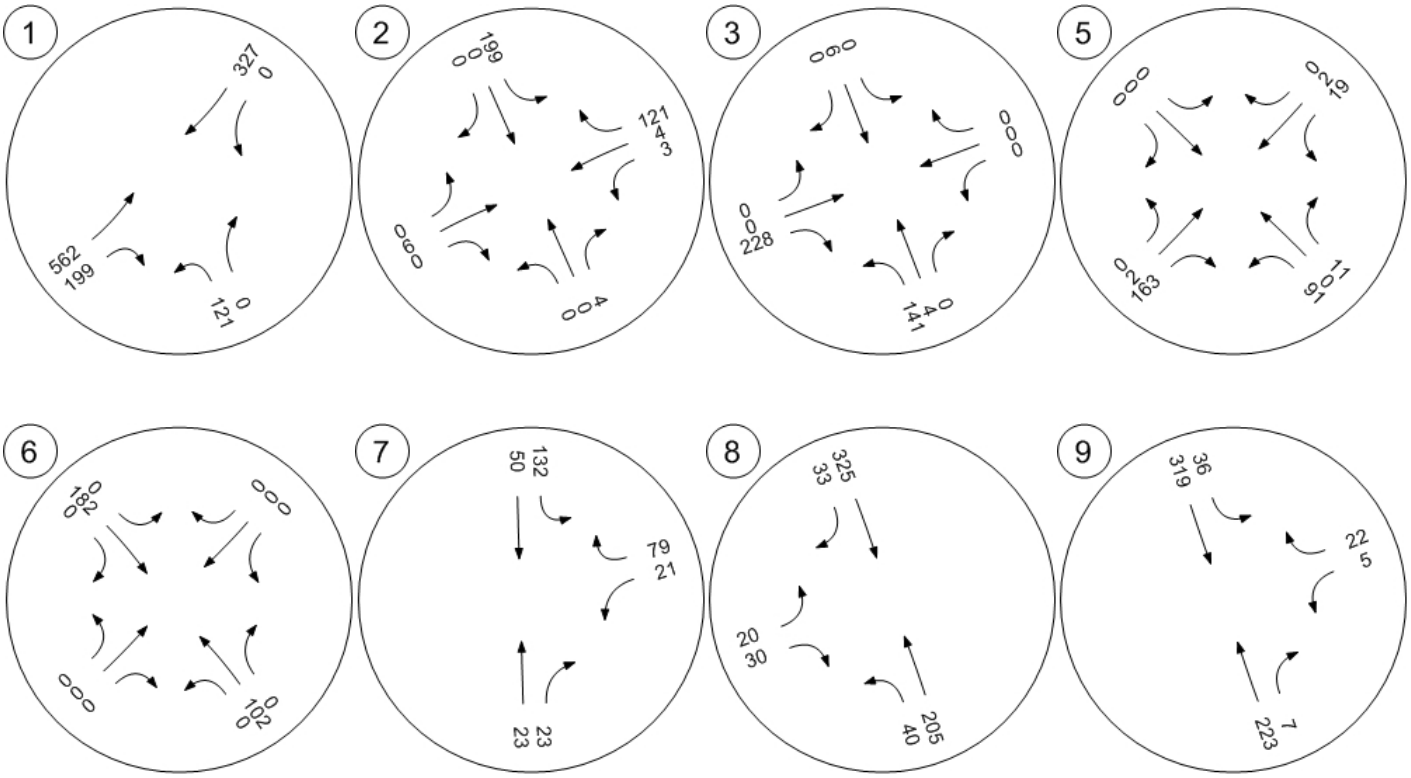






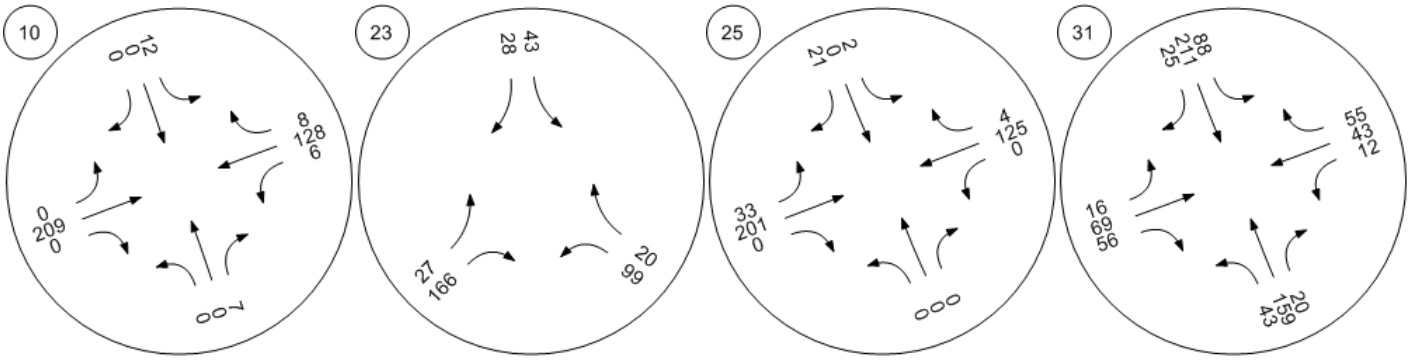
Traffic Volume - Net New Site Trips





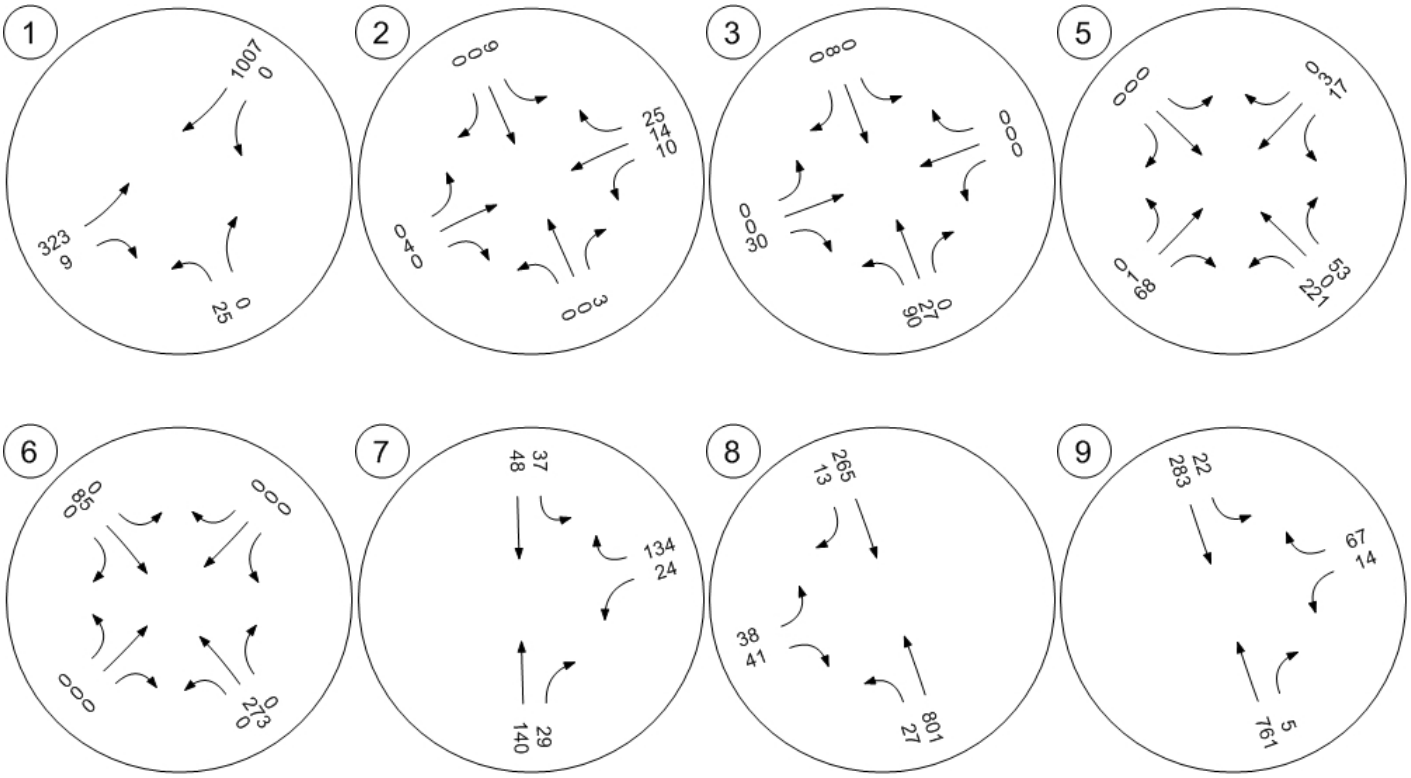
Traffic Volume - Net New Site Trips





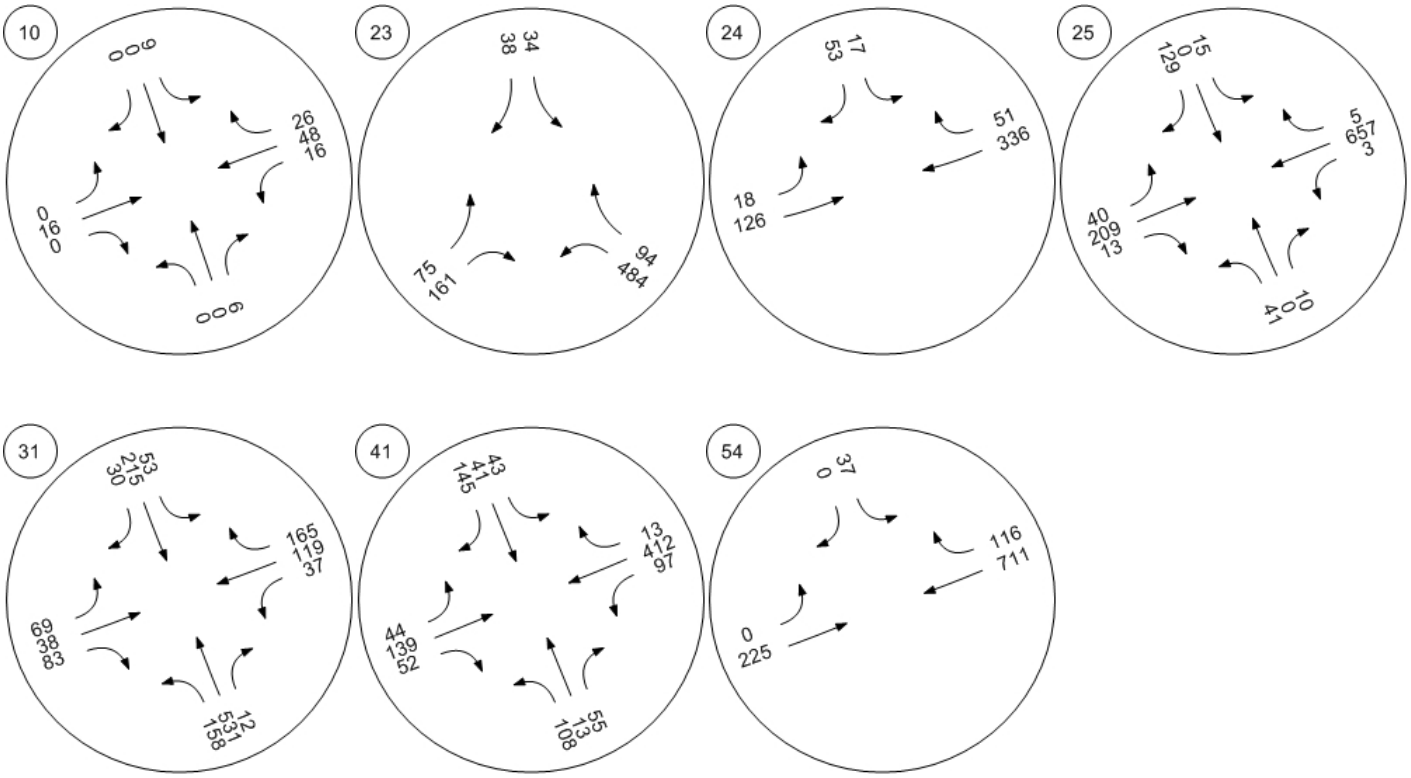
Traffic Volume - Net New Site Trips





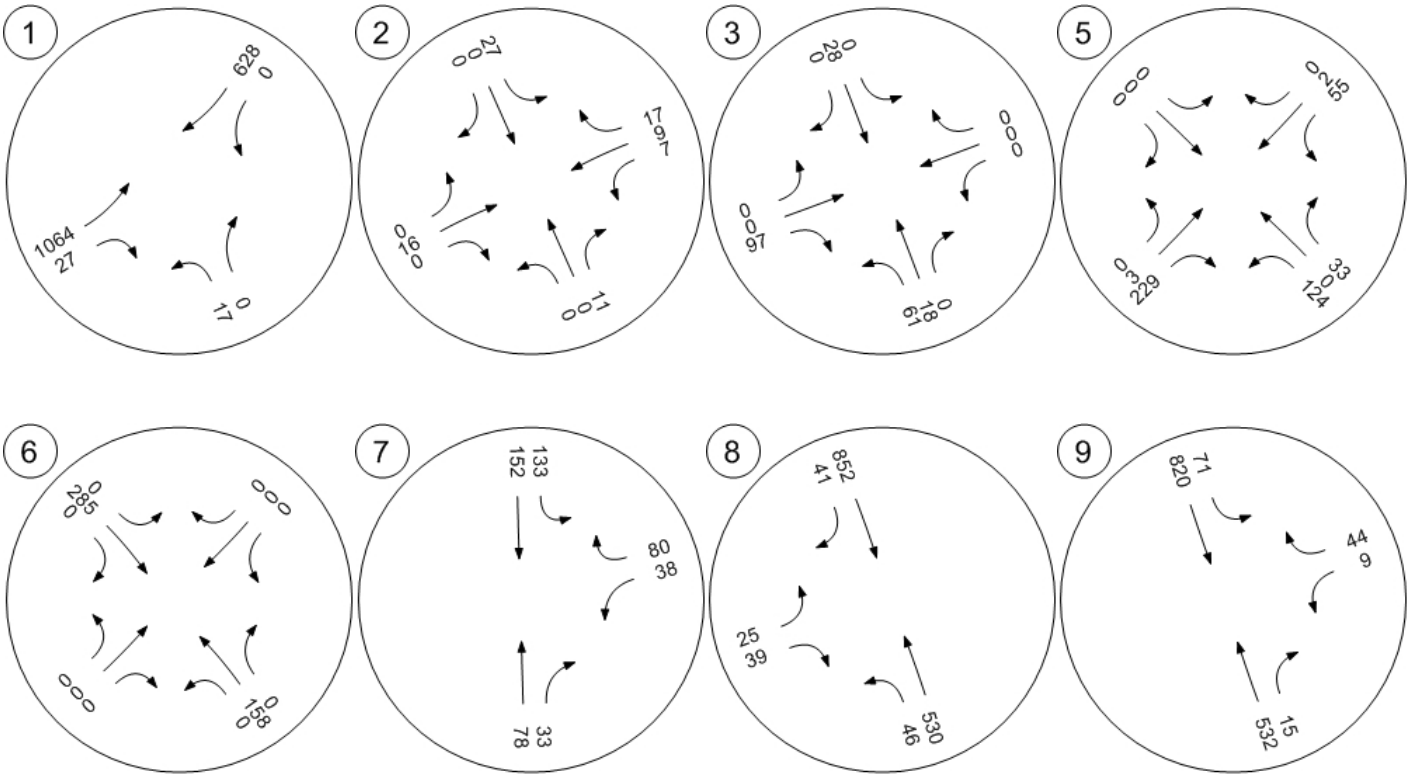
Traffic Volume - Net New Site Trips





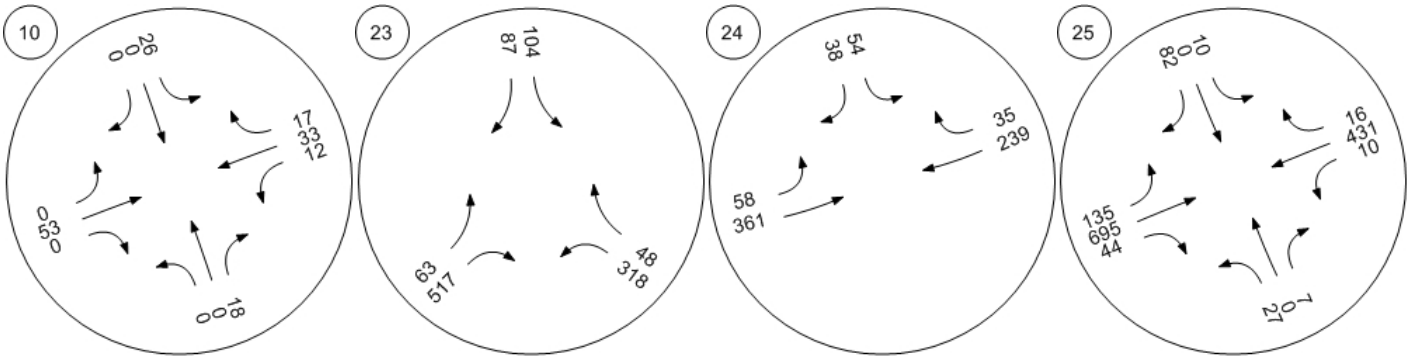
Traffic Volume - Net New Site Trips

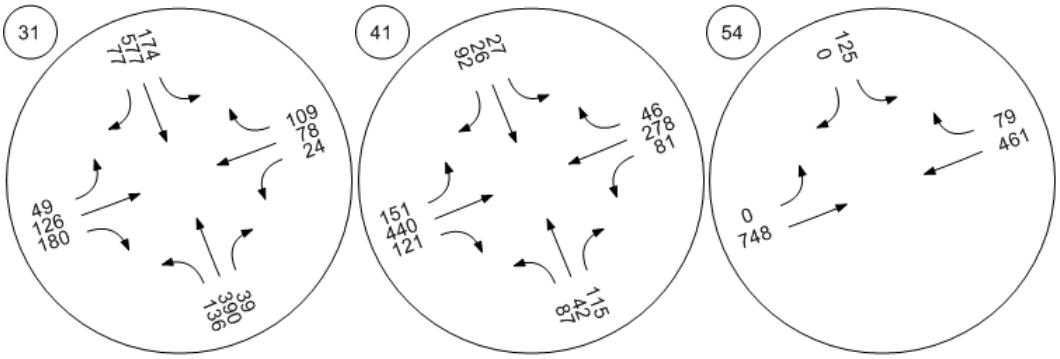




Traffic Volume - Net New Site Trips

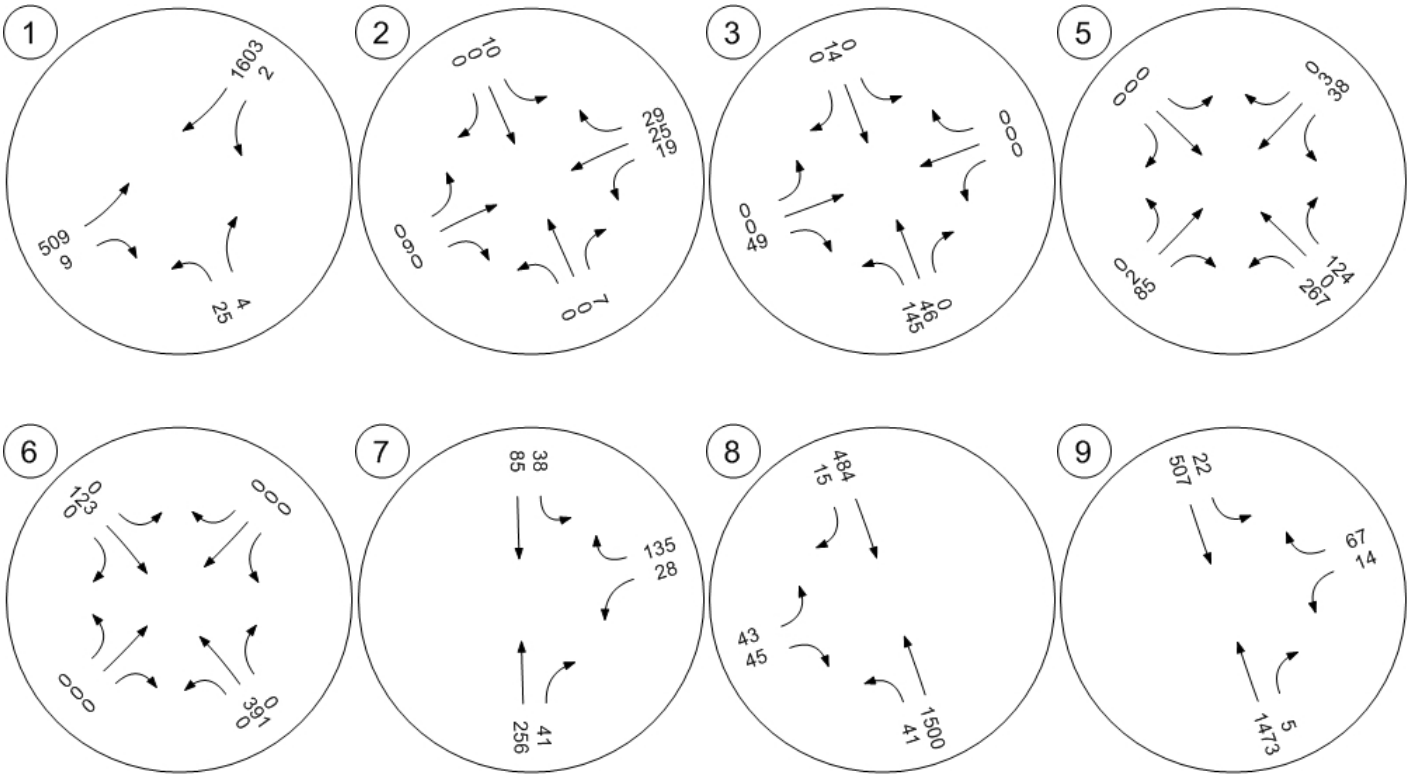






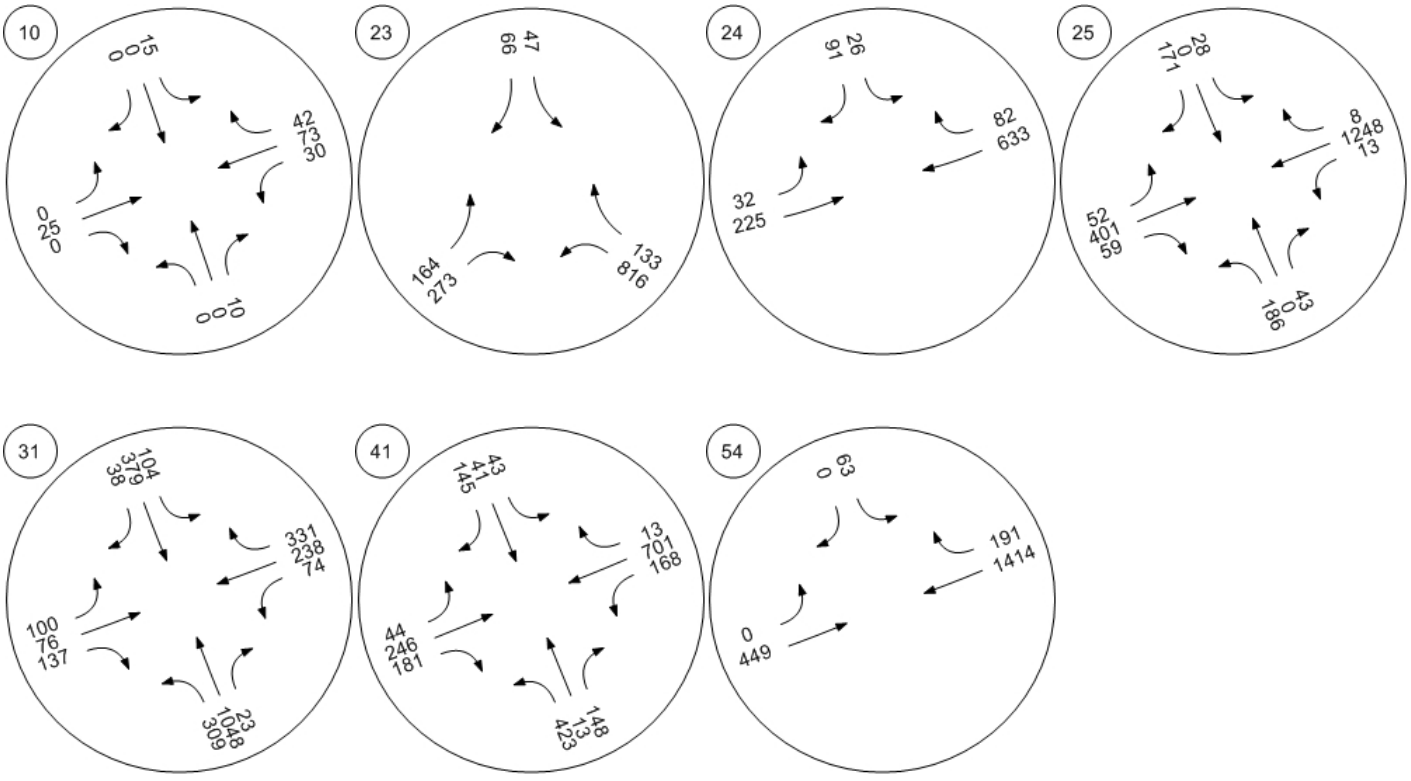
Traffic Volume - Net New Site Trips





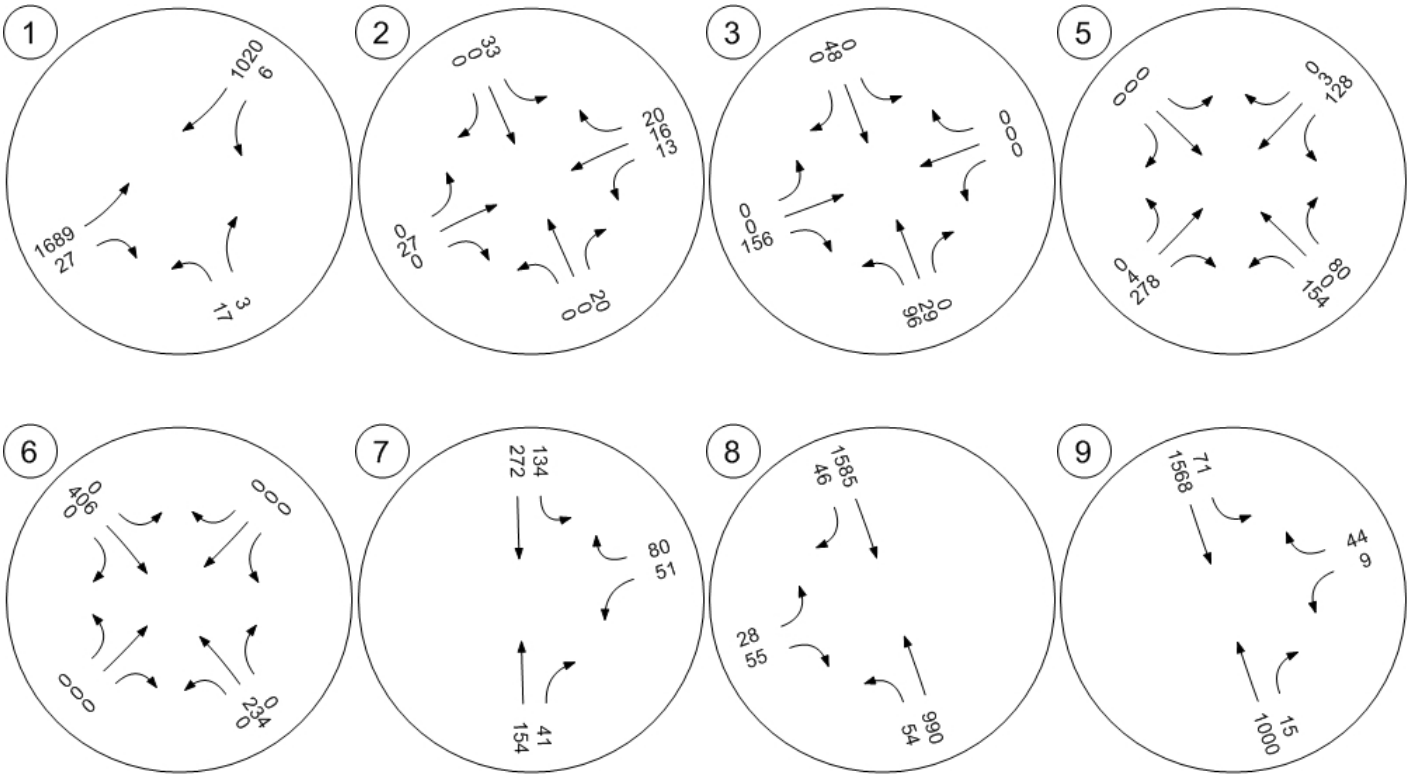
Traffic Volume - Net New Site Trips





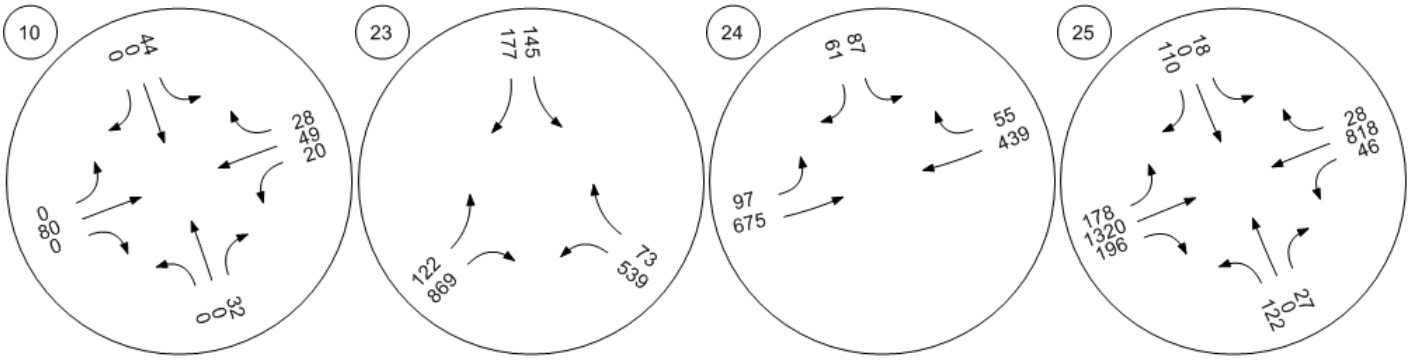
Traffic Volume - Net New Site Trips

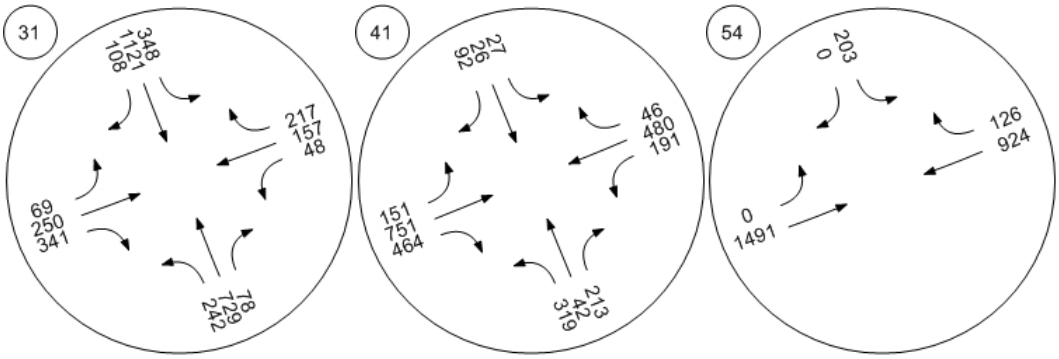




Traffic Volume - Net New Site Trips

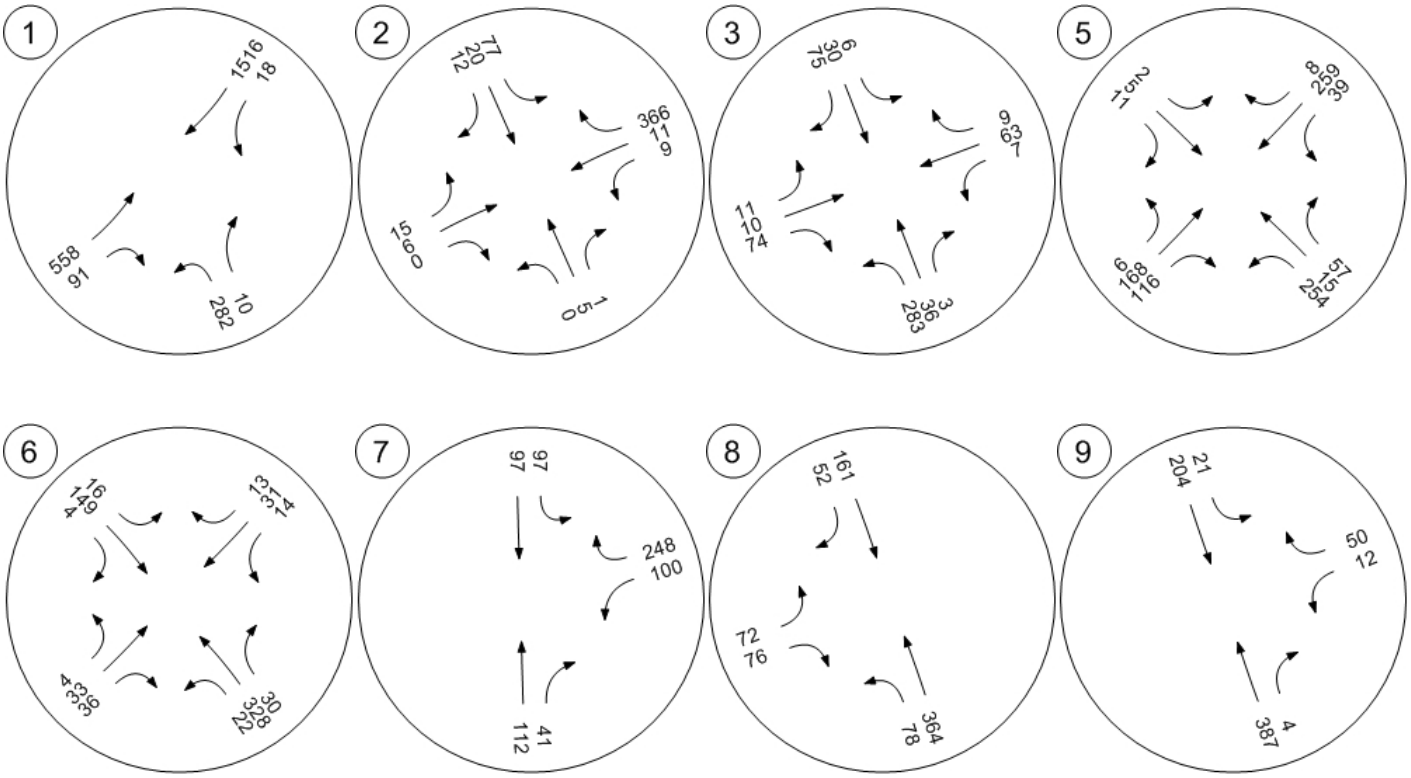






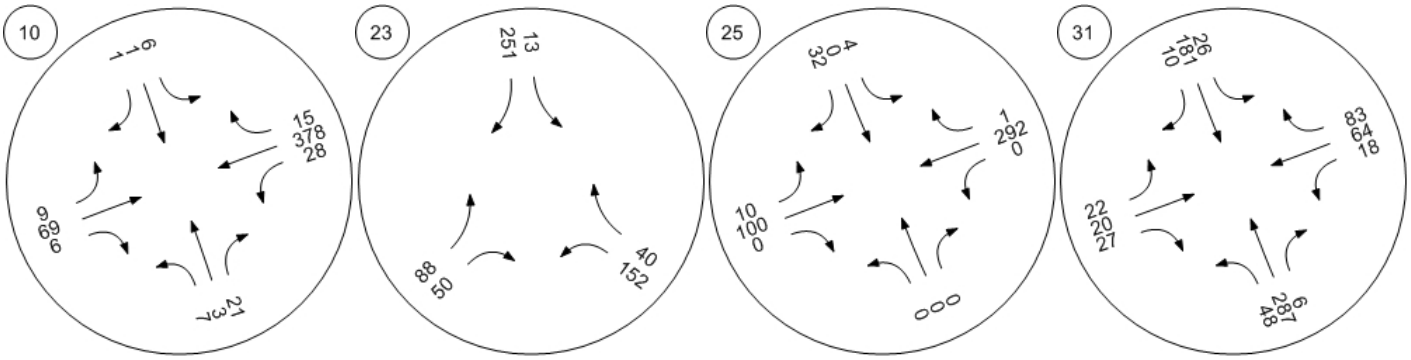
Traffic Volume - Future Total Volume

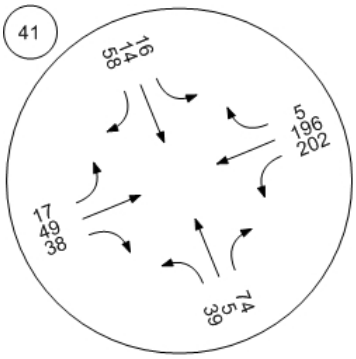




Traffic Volume - Future Total Volume

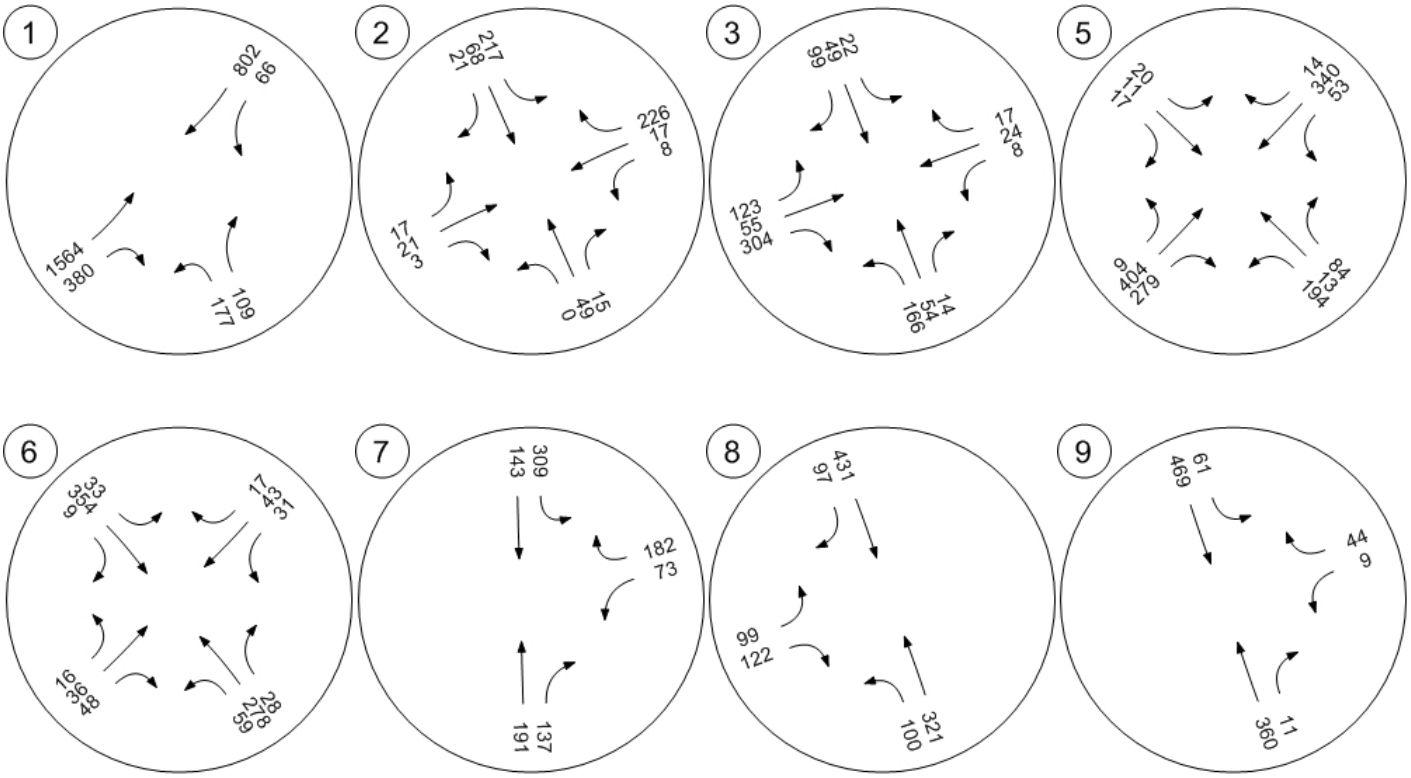






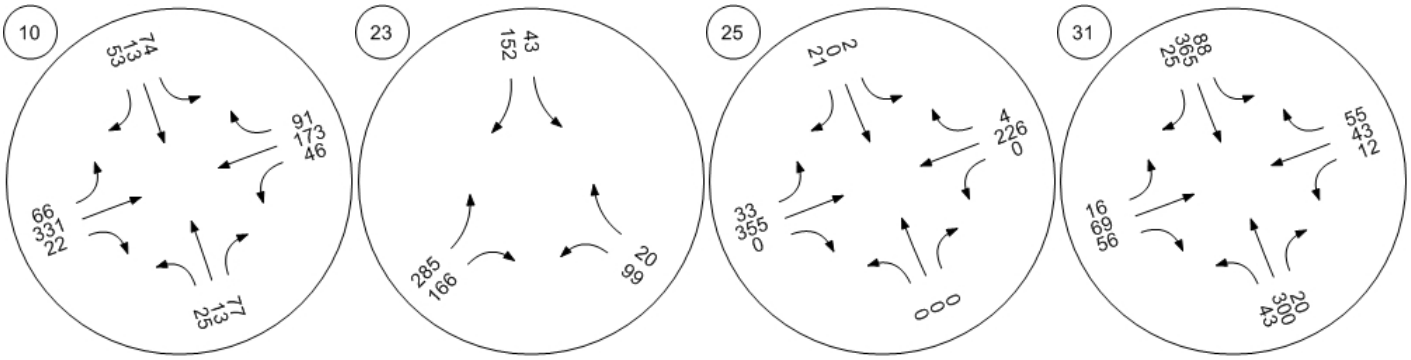
Traffic Volume - Future Total Volume

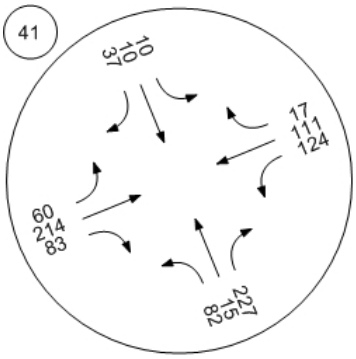




Traffic Volume - Future Total Volume







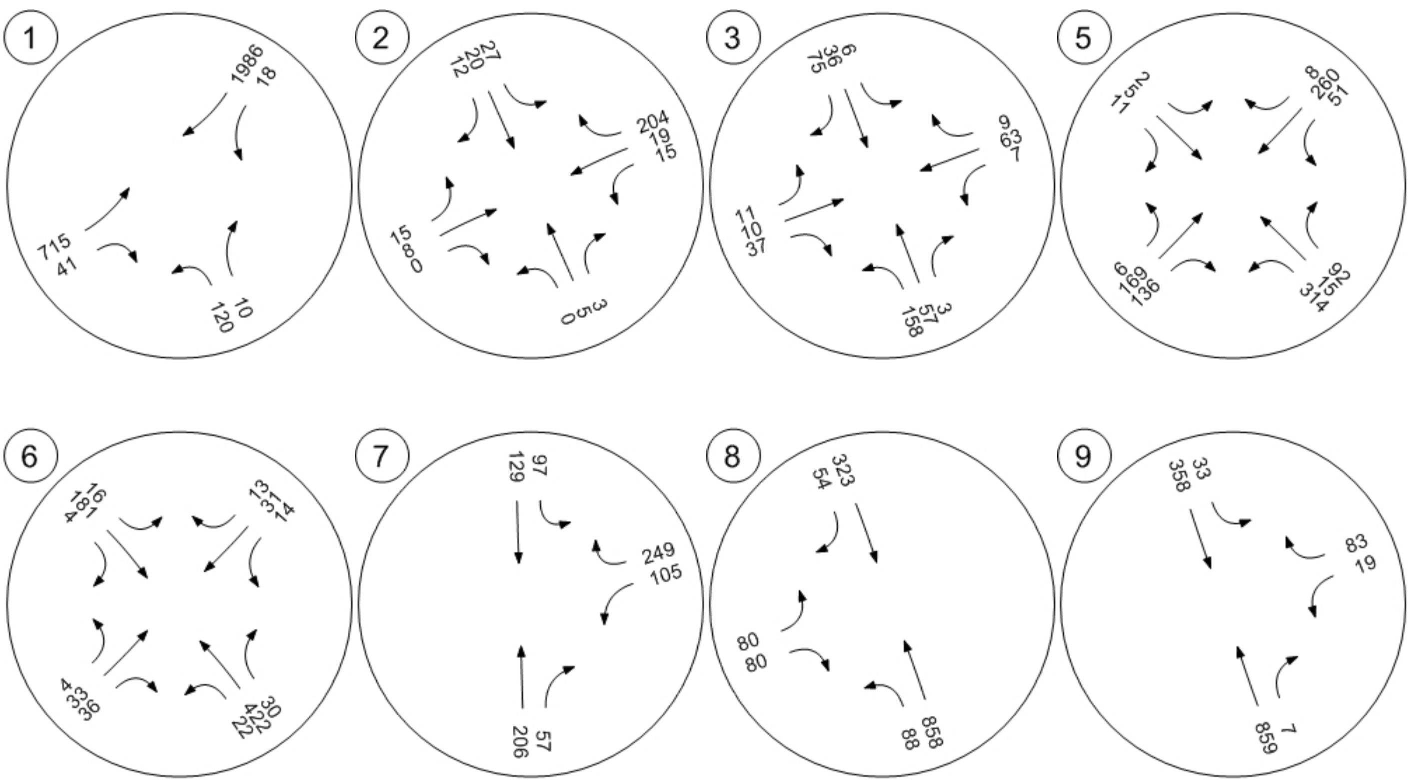
Generated with PTV VISTRO

Version 6.00-02

10-year Development AM

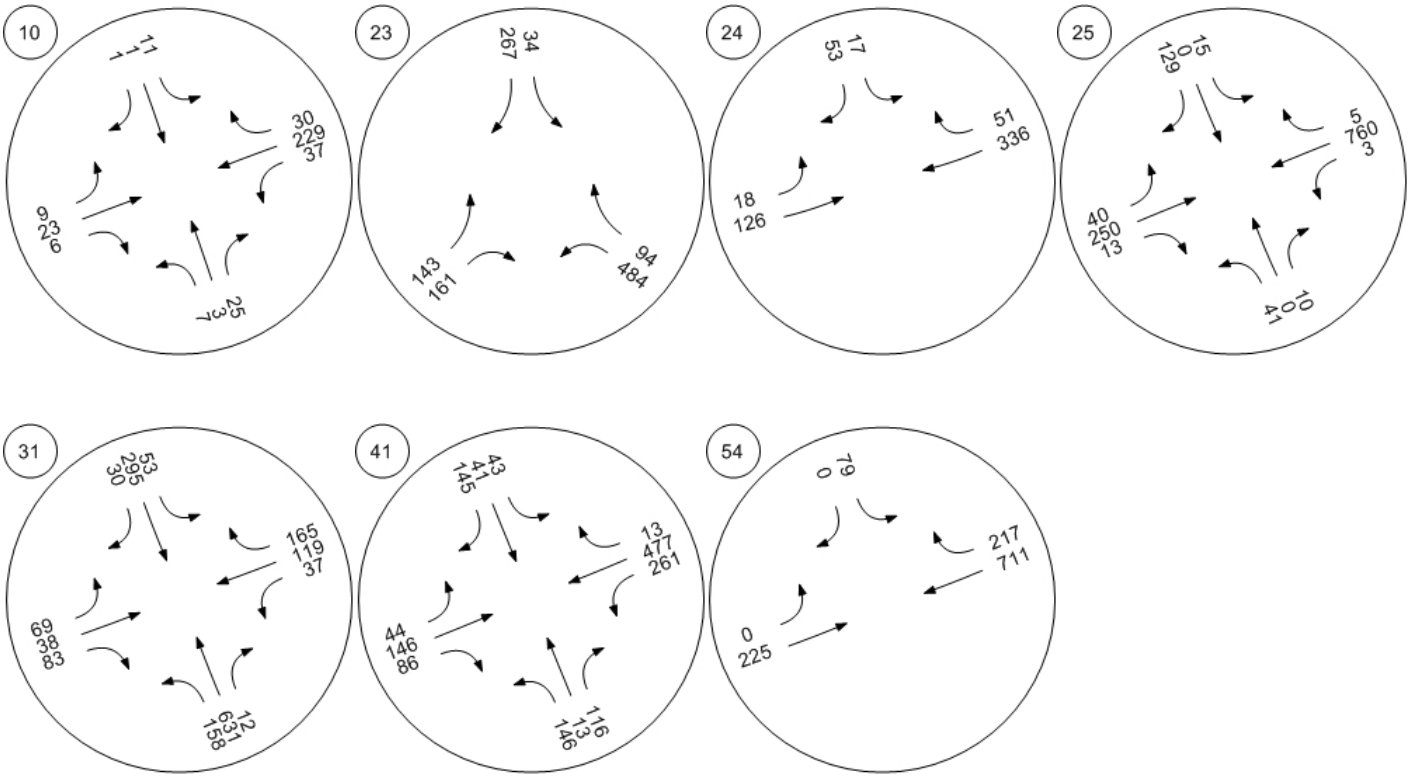
Traffic Volume - Future Total Volume





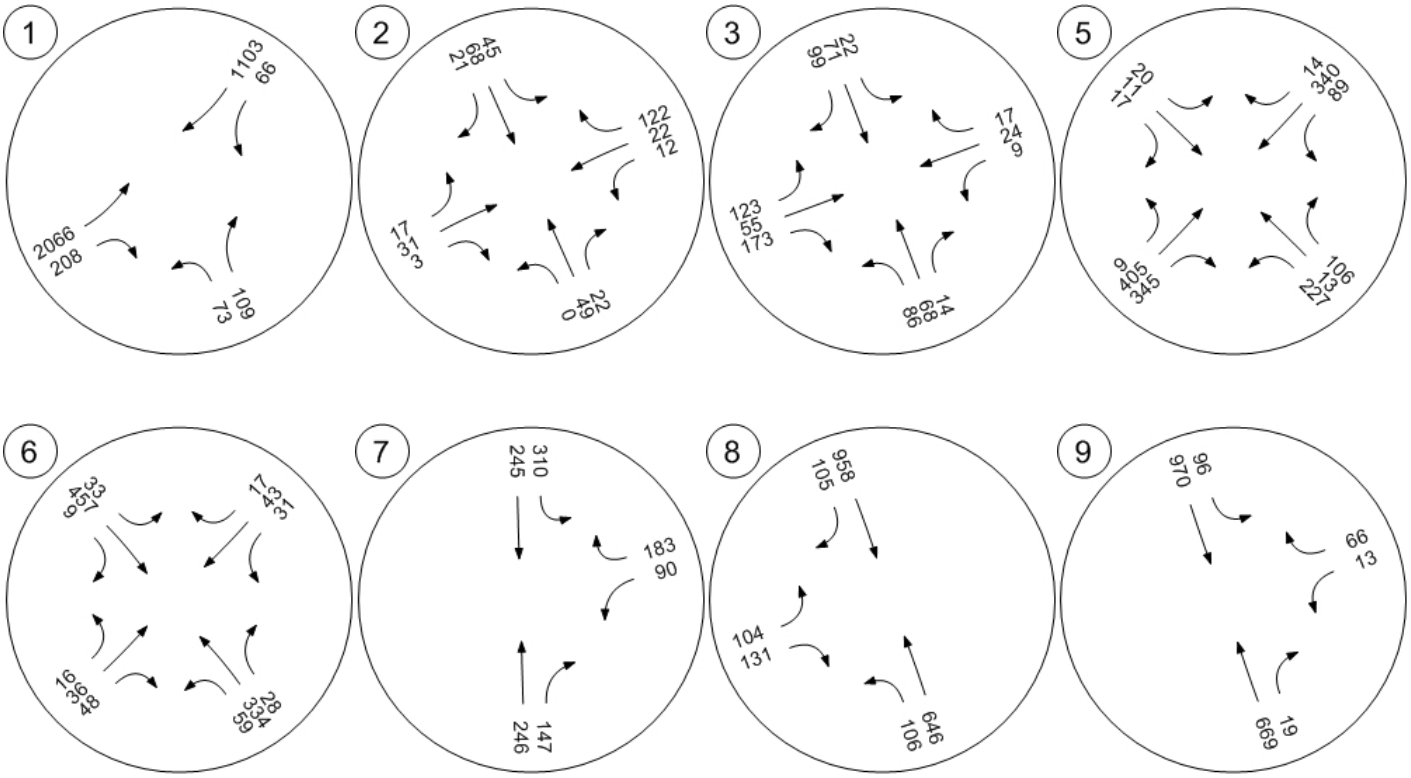
Traffic Volume - Future Total Volume





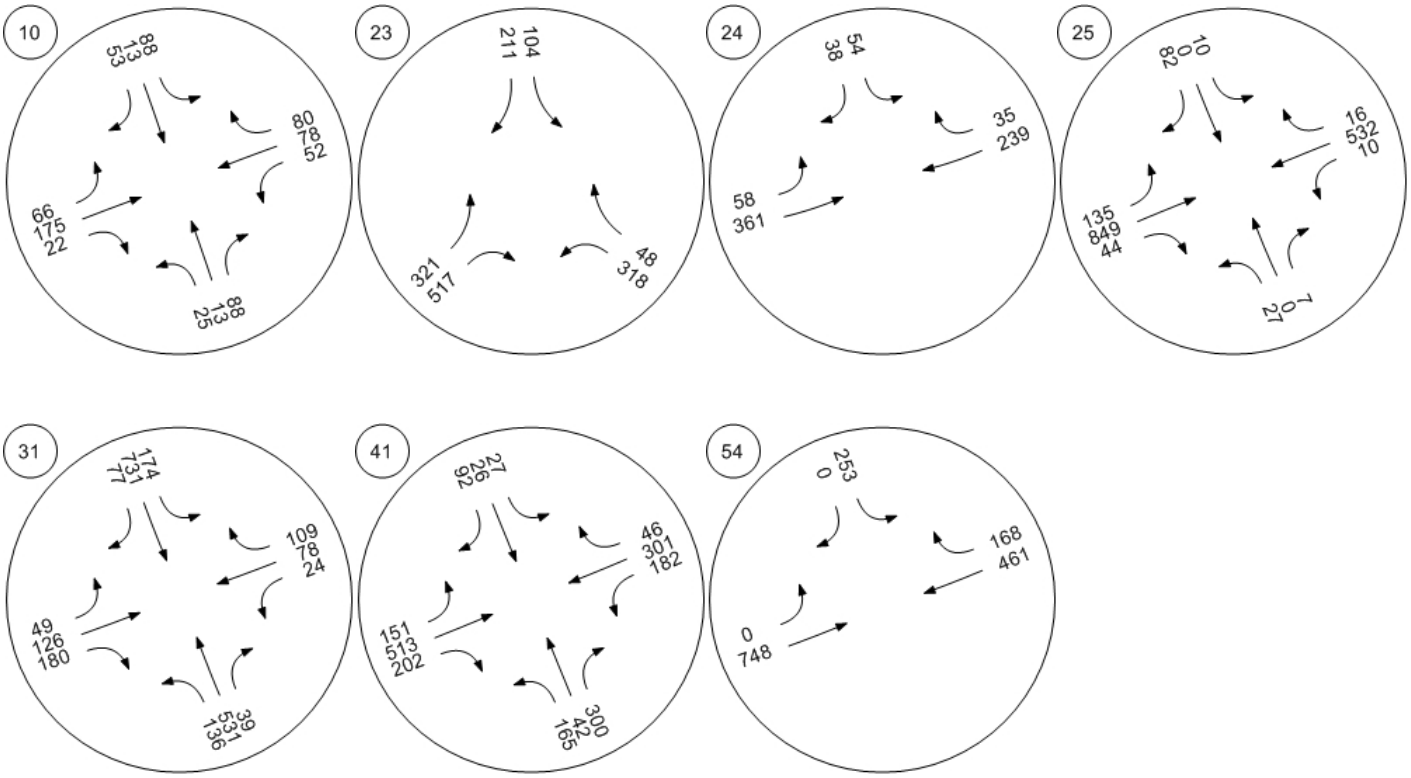
Traffic Volume - Future Total Volume





Traffic Volume - Future Total Volume



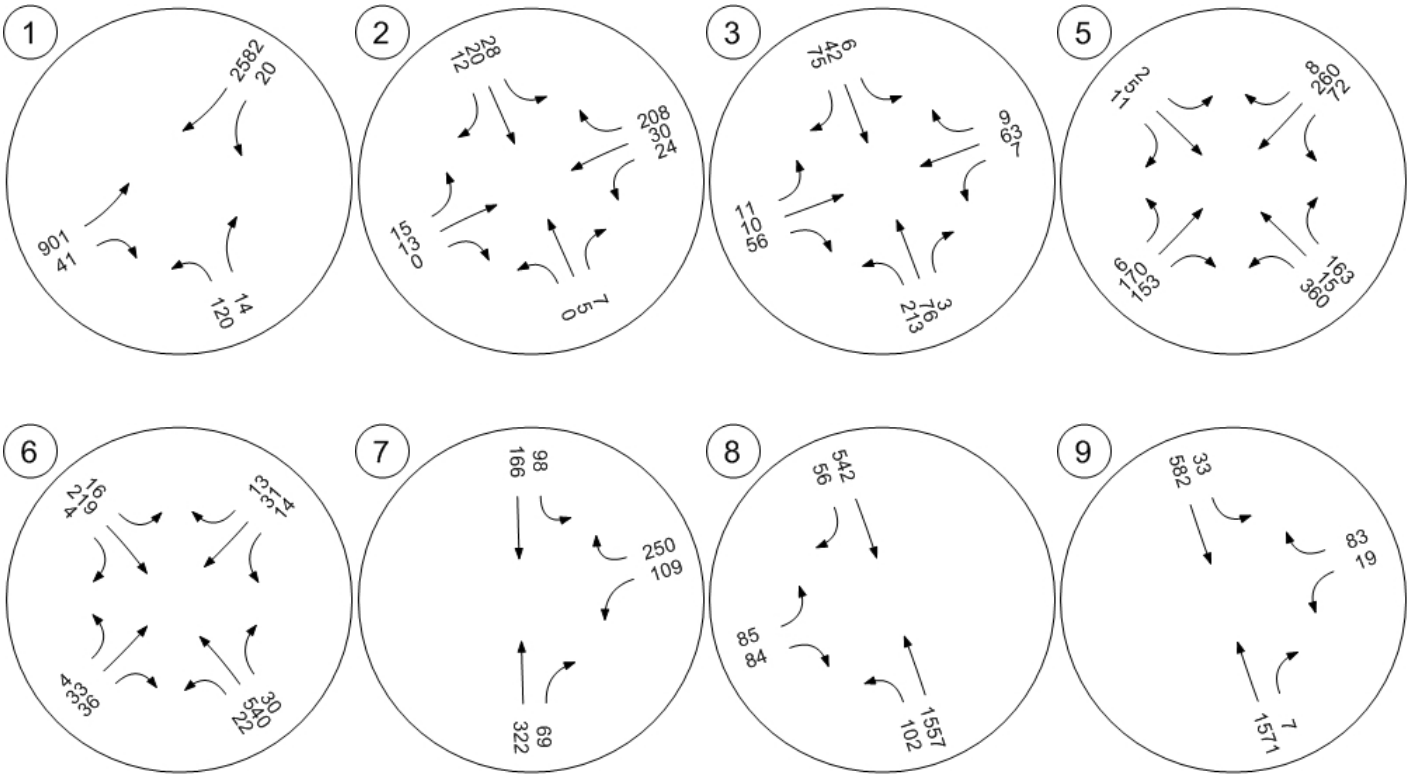


Generated with PTV VISTRO Ultimate Build-out AM

Version 6.00-02

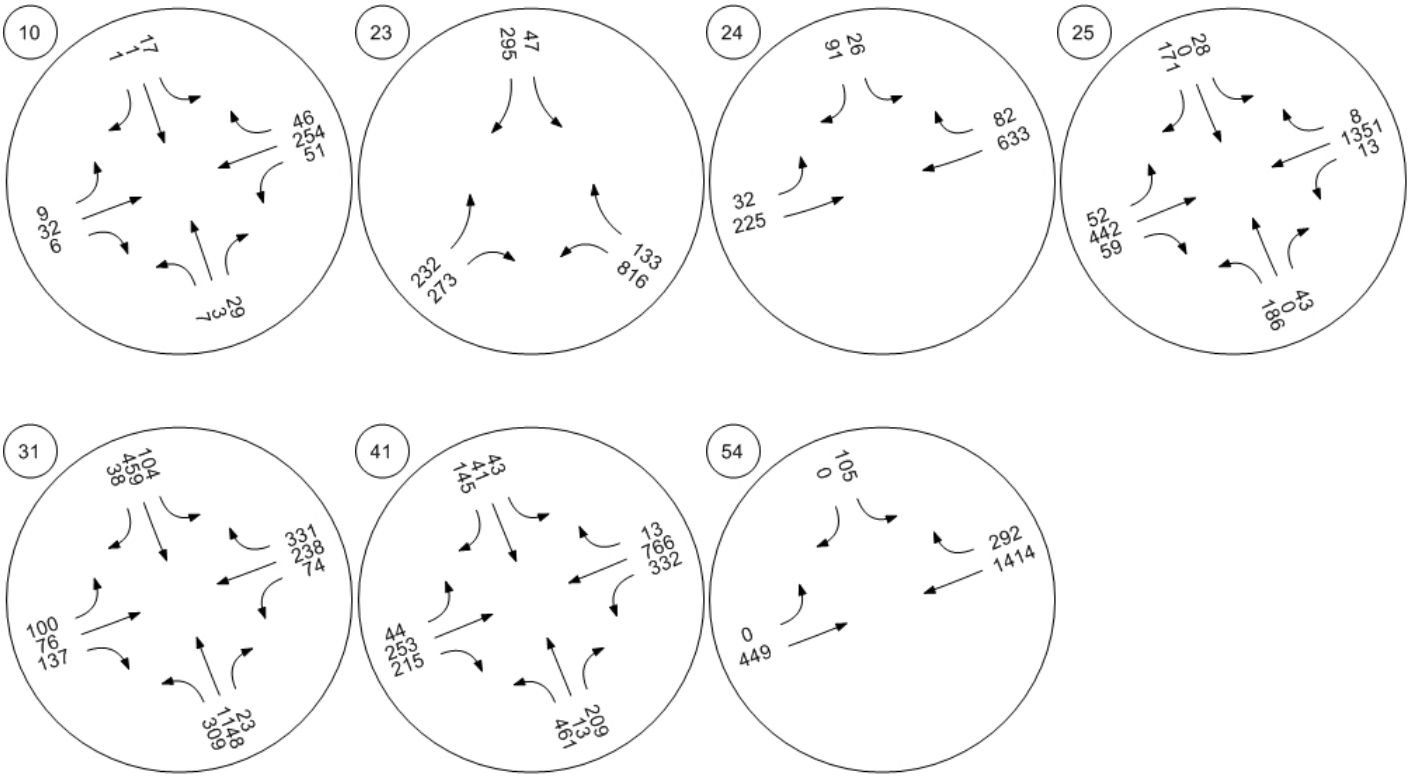
Traffic Volume - Future Total Volume





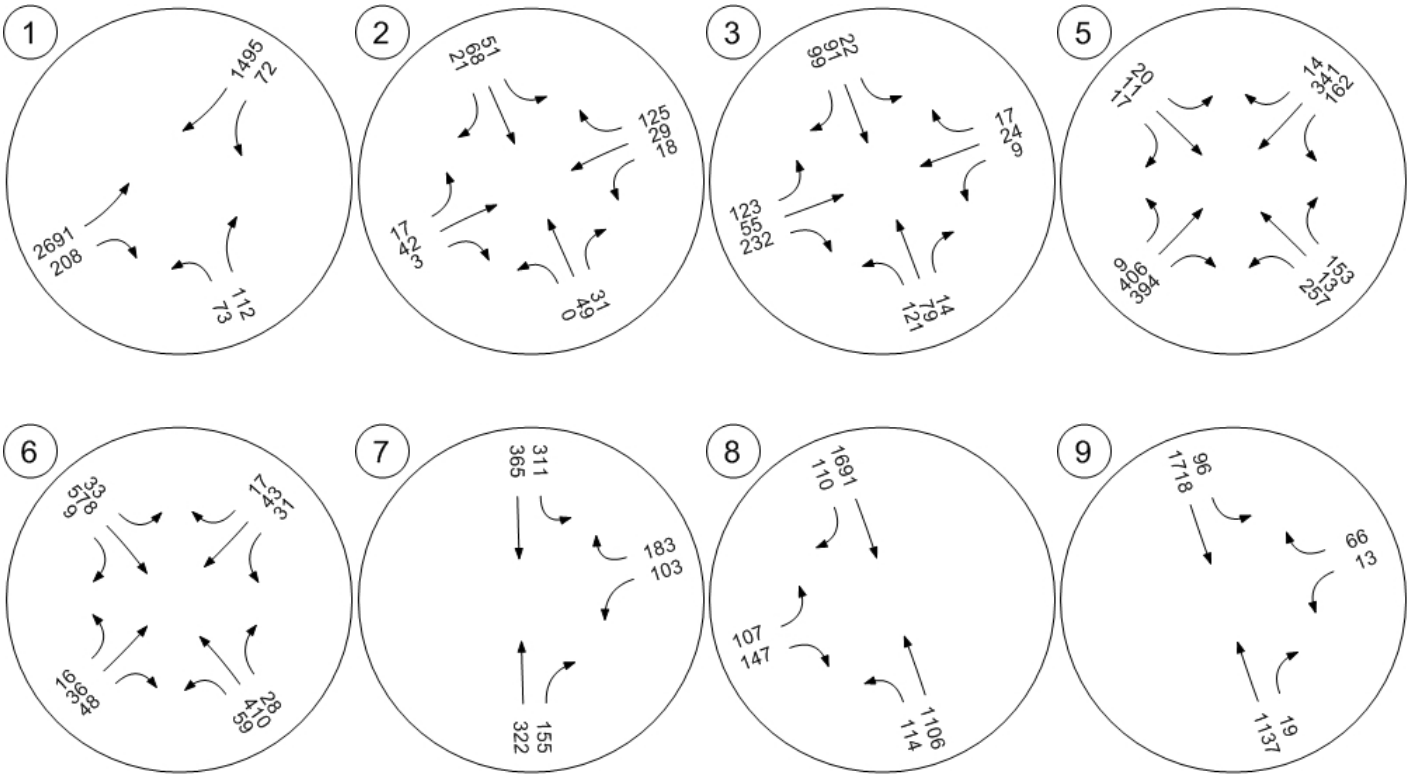
Traffic Volume - Future Total Volume





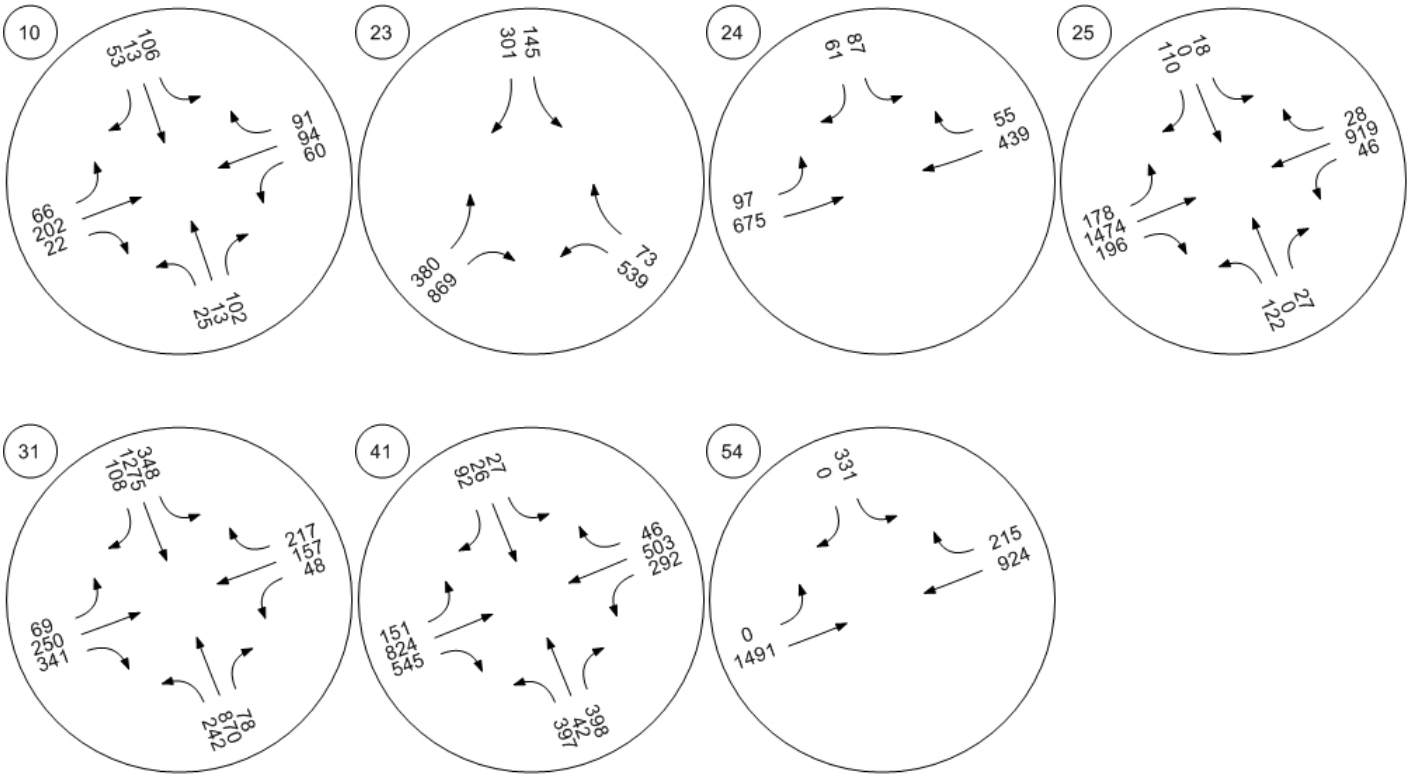
Traffic Volume - Future Total Volume





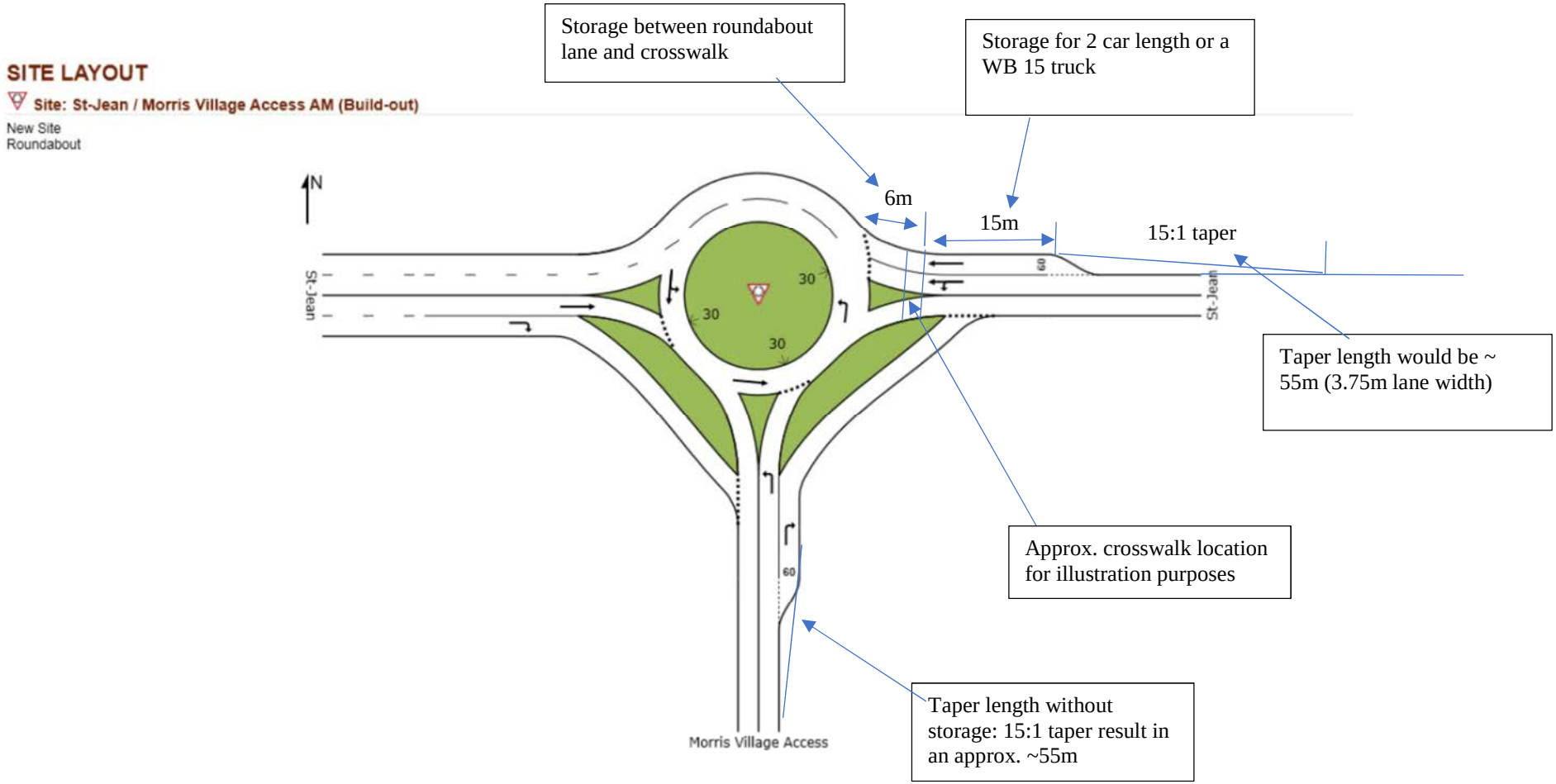
Traffic Volume - Future Total Volume





Appendix C

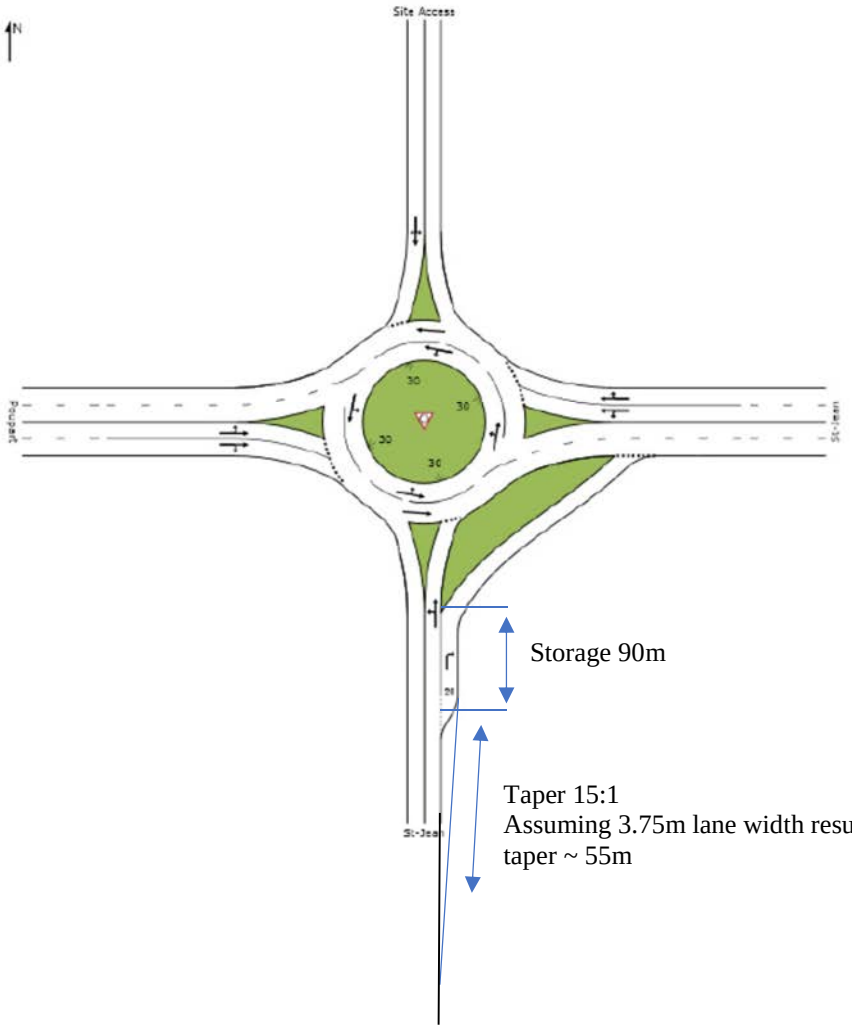
Roundabout Configuration
(St-Jean/Street No.1 & St-Jean/Poupart)


SITE LAYOUT
Site: St-Jean / Morris Village Access AM (Build-out)
New Site
Roundabout
N
St-Jean
30
30
30
60
St-Jean
60
Morris Village Access
6m
15m
15:1 taper
Storage between roundabout lane and crosswalk
Storage for 2 car length or a WB 15 truck
Taper length would be ~ 55m (3.75m lane width)
Approx. crosswalk location for illustration purposes
Taper length without storage: 15:1 taper result in an approx. ~55m

SITE LAYOUT

Site: St-Jean / Poupart AM (Build-out)

New Site
Roundabout



Appendix D

Forecast Traffic Analysis

Appendix D-1

Forecast Short-Term Traffic Analysis



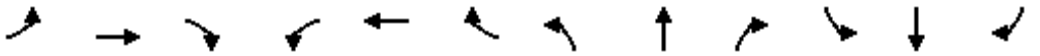
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	558	91	18	1516	282	10
Future Volume (vph)	558	91	18	1516	282	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1810	1524	1703	1881	1770	1346
Flt Permitted			0.335		0.950	
Satd. Flow (perm)	1810	1524	600	1881	1770	1346
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		99				11
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	6%	6%	1%	2%	20%
Adj. Flow (vph)	607	99	20	1648	307	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	607	99	20	1648	307	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	82.8	82.8	11.2	94.0	26.0	26.0
Total Split (%)	69.0%	69.0%	9.3%	78.3%	21.7%	21.7%
Maximum Green (s)	76.6	76.6	5.0	87.8	20.8	20.8
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	83.3	83.3	87.8	87.8	20.8	20.8
Actuated g/C Ratio	0.69	0.69	0.73	0.73	0.17	0.17
v/c Ratio	0.48	0.09	0.04	1.20	1.00	0.05
Control Delay	10.9	1.8	4.6	115.8	102.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	1.8	4.6	115.8	102.1	20.8
LOS	B	A	A	F	F	C
Approach Delay	9.6			114.4	99.3	
Approach LOS	A			F	F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.20			
Intersection Signal Delay: 85.2		Intersection LOS: F	
Intersection Capacity Utilization 104.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



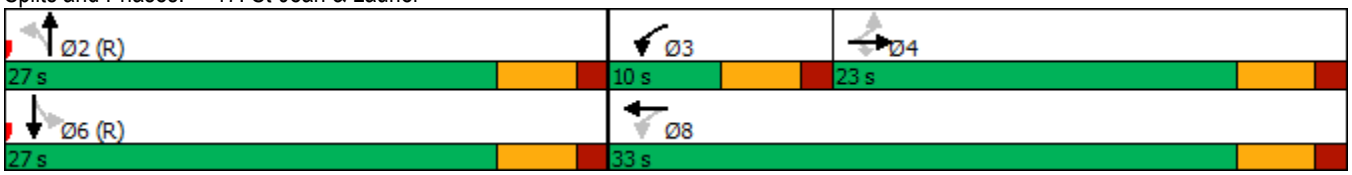


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	168	116	39	259	8	254	15	57	2	5	11
Future Volume (vph)	6	168	116	39	259	8	254	15	57	2	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.881			0.894	
Flt Protected		0.998			0.994		0.950			0.950		
Satd. Flow (prot)	0	1843	1568	0	1874	0	1719	1461	0	1805	1604	0
Flt Permitted		0.984			0.952		0.746			0.706		
Satd. Flow (perm)	0	1817	1568	0	1795	0	1350	1461	0	1341	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127		3			62			12	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	3%	3%	0%	0%	5%	13%	15%	0%	20%	0%
Adj. Flow (vph)	7	183	126	42	282	9	276	16	62	2	5	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	126	0	333	0	276	78	0	2	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0	23.0	10.0	33.0		27.0	27.0		27.0	27.0	
Total Split (%)	38.3%	38.3%	38.3%	16.7%	55.0%		45.0%	45.0%		45.0%	45.0%	
Maximum Green (s)	18.0	18.0	18.0	5.0	28.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		18.0	18.0		28.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.30	0.30		0.47		0.37	0.37		0.37	0.37	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.35	0.23		0.39		0.56	0.14		0.00	0.03	
Control Delay		18.7	4.8		12.0		20.4	6.0		12.0	8.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		18.7	4.8		12.0		20.4	6.0		12.0	8.3	
LOS		B	A		B		C	A		B	A	
Approach Delay		13.1			12.0			17.2			8.7	
Approach LOS		B			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier



Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	33	36	14	31	13	22	328	30	16	149	4
Future Vol, veh/h	4	33	36	14	31	13	22	328	30	16	149	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	6	0	14	6	0	5	3	10	0	1	25
Mvmt Flow	4	36	39	15	34	14	24	357	33	17	162	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	9.2	12.4	9.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	5%	24%	9%
Vol Thru, %	86%	45%	53%	88%
Vol Right, %	8%	49%	22%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	380	73	58	169
LT Vol	22	4	14	16
Through Vol	328	33	31	149
RT Vol	30	36	13	4
Lane Flow Rate	413	79	63	184
Geometry Grp	1	1	1	1
Degree of Util (X)	0.52	0.112	0.097	0.242
Departure Headway (Hd)	4.532	5.069	5.528	4.738
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	793	701	643	753
Service Time	2.578	3.142	3.605	2.793
HCM Lane V/C Ratio	0.521	0.113	0.098	0.244
HCM Control Delay	12.4	8.8	9.2	9.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	3.1	0.4	0.3	0.9

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	50	387	4	21	204
Future Vol, veh/h	19	50	387	4	21	204
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	40	13	9	0	18	13
Mvmt Flow	21	54	421	4	23	222
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	9.6	13.3	10.3
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	28%	100%	0%
Vol Thru, %	99%	0%	0%	100%
Vol Right, %	1%	72%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	391	69	21	204
LT Vol	0	19	21	0
Through Vol	387	0	0	204
RT Vol	4	50	0	0
Lane Flow Rate	425	75	23	222
Geometry Grp	5	2	7	7
Degree of Util (X)	0.55	0.12	0.037	0.324
Departure Headway (Hd)	4.66	5.759	5.856	5.266
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	620	611	683
Service Time	2.691	3.816	3.594	3.005
HCM Lane V/C Ratio	0.55	0.121	0.038	0.325
HCM Control Delay	13.3	9.6	8.8	10.5
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	3.4	0.4	0.1	1.4

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	49	38	202	196	5	39	5	74	16	14	58
Future Vol, veh/h	17	49	38	202	196	5	39	5	74	16	14	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	43	0	1	0	2	0	2	5	2	2	2
Mvmt Flow	18	53	41	220	213	5	42	5	80	17	15	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	13.9	9.2	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	16%	50%	18%
Vol Thru, %	4%	47%	49%	16%
Vol Right, %	63%	37%	1%	66%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	104	403	88
LT Vol	39	17	202	16
Through Vol	5	49	196	14
RT Vol	74	38	5	58
Lane Flow Rate	128	113	438	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.179	0.152	0.572	0.134
Departure Headway (Hd)	5.027	4.828	4.697	5.062
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	707	735	762	700
Service Time	3.11	2.91	2.758	3.15
HCM Lane V/C Ratio	0.181	0.154	0.575	0.137
HCM Control Delay	9.2	8.8	13.9	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.5	3.7	0.5

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	10	74	7	63	9	283	36	3	6	30	75
Future Vol, veh/h	11	10	74	7	63	9	283	36	3	6	30	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	22	0	0	0	0	0	2	0	33	0	4	0
Mvmt Flow	12	11	80	8	68	10	308	39	3	7	33	82
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.7	9	11.7	8.2
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	88%	100%	0%	9%	5%
Vol Thru, %	11%	0%	12%	80%	27%
Vol Right, %	1%	0%	88%	11%	68%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	322	11	84	79	111
LT Vol	283	11	0	7	6
Through Vol	36	0	10	63	30
RT Vol	3	0	74	9	75
Lane Flow Rate	350	12	91	86	121
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.459	0.022	0.129	0.124	0.148
Departure Headway (Hd)	4.72	6.594	5.086	5.206	4.408
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	759	541	700	684	808
Service Time	2.764	4.357	2.849	3.272	2.464
HCM Lane V/C Ratio	0.461	0.022	0.13	0.126	0.15
HCM Control Delay	11.7	9.5	8.6	9	8.2
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	2.4	0.1	0.4	0.4	0.5

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	6	0	9	11	366	0	5	1	77	20	12
Future Vol, veh/h	15	6	0	9	11	366	0	5	1	77	20	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	6	0	13
Mvmt Flow	16	7	0	10	12	398	0	5	1	84	22	13
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.4	10.7	8.3	9.7
HCM LOS	A	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	79%	0%
Vol Thru, %	100%	62%	0%	100%	0%	3%	21%	0%
Vol Right, %	0%	38%	0%	0%	0%	97%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	15	6	9	377	97	12
LT Vol	0	0	15	0	9	0	77	0
Through Vol	3	2	0	6	0	11	20	0
RT Vol	0	1	0	0	0	366	0	12
Lane Flow Rate	4	3	16	7	10	410	105	13
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.006	0.004	0.026	0.009	0.015	0.479	0.175	0.017
Departure Headway (Hd)	5.631	5.366	5.693	5.19	5.394	4.211	5.973	4.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	634	665	629	690	666	856	600	749
Service Time	3.377	3.112	3.424	2.92	3.11	1.927	3.712	2.505
HCM Lane V/C Ratio	0.006	0.005	0.025	0.01	0.015	0.479	0.175	0.017
HCM Control Delay	8.4	8.1	8.6	8	8.2	10.8	10	7.6
HCM Lane LOS	A	A	A	A	A	B	A	A
HCM 95th-tile Q	0	0	0.1	0	0	2.6	0.6	0.1

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	76	78	364	161	52
Future Vol, veh/h	72	76	78	364	161	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	13	13	9	0	10
Mvmt Flow	78	83	85	396	175	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	770	204	232	0	-	0
Stage 1	204	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Critical Hdwy	6.42	6.33	4.23	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.417	2.317	-	-	-
Pot Cap-1 Maneuver	369	810	1274	-	-	-
Stage 1	830	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	344	810	1274	-	-	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	568	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1274	-	488	-	-
HCM Lane V/C Ratio	0.067	-	0.33	-	-
HCM Control Delay (s)	8	-	16	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	69	6	28	378	15	7	3	21	6	1	1
Future Vol, veh/h	9	69	6	28	378	15	7	3	21	6	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	22	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	10	75	7	30	411	16	8	3	23	7	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	427	0	0	82	0	0	579	586	79	591	581	419
Stage 1	-	-	-	-	-	-	99	99	-	479	479	-
Stage 2	-	-	-	-	-	-	480	487	-	112	102	-
Critical Hdwy	4.32	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.398	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1033	-	-	1528	-	-	429	425	987	422	428	638
Stage 1	-	-	-	-	-	-	912	817	-	571	558	-
Stage 2	-	-	-	-	-	-	571	554	-	898	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1033	-	-	1528	-	-	418	412	987	400	415	638
Mov Cap-2 Maneuver	-	-	-	-	-	-	418	412	-	400	415	-
Stage 1	-	-	-	-	-	-	903	809	-	565	547	-
Stage 2	-	-	-	-	-	-	558	543	-	865	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.5	10.5	13.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	684	1033	-	-	1528	-	-	422
HCM Lane V/C Ratio	0.049	0.009	-	-	0.02	-	-	0.021
HCM Control Delay (s)	10.5	8.5	-	-	7.4	-	-	13.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	100	0	0	292	1	0	0	0	4	0	32
Future Vol, veh/h	10	100	0	0	292	1	0	0	0	4	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	109	0	0	317	1	0	0	0	4	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	318	0	0	109	0	0	466	449	109	449	449	318
Stage 1	-	-	-	-	-	-	131	131	-	318	318	-
Stage 2	-	-	-	-	-	-	335	318	-	131	131	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1242	-	-	1481	-	-	507	505	945	520	505	723
Stage 1	-	-	-	-	-	-	873	788	-	693	654	-
Stage 2	-	-	-	-	-	-	679	654	-	873	788	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1242	-	-	1481	-	-	479	500	945	516	500	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	500	-	516	500	-
Stage 1	-	-	-	-	-	-	865	781	-	687	654	-
Stage 2	-	-	-	-	-	-	646	654	-	865	781	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	0	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1242	-	-	1481	-	-	692
HCM Lane V/C Ratio	-	0.009	-	-	-	-	-	0.057
HCM Control Delay (s)	0	7.9	0	-	0	-	-	10.5
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	20	27	16	64	83	48	287	6	26	181	10
Future Vol, veh/h	22	20	27	16	64	83	48	287	6	26	181	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	22	29	17	70	90	52	312	7	28	197	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	10.3	13.3	10.8
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	32%	10%	12%
Vol Thru, %	84%	29%	39%	83%
Vol Right, %	2%	39%	51%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	341	69	163	217
LT Vol	48	22	16	26
Through Vol	287	20	64	181
RT Vol	6	27	83	10
Lane Flow Rate	371	75	177	236
Geometry Grp	1	1	1	1
Degree of Util (X)	0.517	0.117	0.262	0.338
Departure Headway (Hd)	5.021	5.631	5.322	5.152
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	723	635	675	698
Service Time	3.021	3.676	3.36	3.184
HCM Lane V/C Ratio	0.513	0.118	0.262	0.338
HCM Control Delay	13.3	9.4	10.3	10.8
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	3	0.4	1	1.5

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	45	117	10	4	0
Future Vol, veh/h	0	45	117	10	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	49	127	11	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	138	0	-	0	182	133
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1446	-	-	-	807	916
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1446	-	-	-	807	916
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	973	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1446	-	-	-	807
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

LANE SUMMARY

Site: St-Jean / Morris Village Access AM (short-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Morris Village Access													
Lane 1[d]	165	3.0	1327	0.124	100	10.6	LOS B	0.6	4.9	Full	500	0.0	0.0
Lane 2	43	3.0	1327	0.033	100	4.0	LOS A	0.2	1.2	Short	60	0.0	NA
Approach	209	3.0		0.124		9.2	LOS A	0.6	4.9				
East: St-Jean													
Lane 1[d]	287	3.0	1021	0.281	100	5.0	LOS A	1.7	12.9	Full	500	0.0	0.0
Approach	287	3.0		0.281		5.0	LOS A	1.7	12.9				
West: St-Jean													
Lane 1[d]	150	3.0	1197	0.125	100	3.6	LOS A	0.7	5.4	Full	500	0.0	0.0
Approach	150	3.0		0.125		3.6	LOS A	0.7	5.4				
Intersection	646	3.0		0.281		6.0	LOS A	1.7	12.9				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: St-Jean / Dr Corbeil AM (short-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	166	3.0	996	0.167	100	5.1	LOS A	0.9	7.1	Full	500	0.0	0.0
Approach	166	3.0		0.167		5.1	LOS A	0.9	7.1				
East: Dr. Corbeil													
Lane 1[d]	378	3.0	978	0.387	100	7.0	LOS A	2.6	20.3	Full	500	0.0	0.0
Approach	378	3.0		0.387		7.0	LOS A	2.6	20.3				
North: St-Jean													
Lane 1[d]	211	3.0	989	0.213	100	7.8	LOS A	1.2	9.6	Full	500	0.0	0.0
Approach	211	3.0		0.213		7.8	LOS A	1.2	9.6				
Intersection	755	3.0		0.387		6.8	LOS A	2.6	20.3				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

Lanes, Volumes, Timings
12: Carmen Bergeron & CR 17

Short-Term Analysis PM
10/22/2018

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1564	380	66	802	177	109
Future Volume (vph)	1564	380	66	802	177	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1845	1599	1752	1863	1805	1615
Flt Permitted			0.047		0.950	
Satd. Flow (perm)	1845	1599	87	1863	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		247				96
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	3%	2%	0%	0%
Adj. Flow (vph)	1700	413	72	872	192	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1700	413	72	872	192	118
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	85.0	85.0	11.2	96.2	23.8	23.8
Total Split (%)	70.8%	70.8%	9.3%	80.2%	19.8%	19.8%
Maximum Green (s)	78.8	78.8	5.0	90.0	18.6	18.6
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	78.9	78.9	87.7	87.7	18.6	18.6
Actuated g/C Ratio	0.67	0.67	0.74	0.74	0.16	0.16
v/c Ratio	1.38	0.36	0.53	0.63	0.67	0.35
Control Delay	196.2	4.3	26.4	9.6	60.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	196.2	4.3	26.4	9.6	60.2	16.2
LOS	F	A	C	A	E	B
Approach Delay	158.7			10.9	43.5	
Approach LOS	F			B	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 117.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.38			
Intersection Signal Delay: 106.6		Intersection LOS: F	
Intersection Capacity Utilization 101.6%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lanes, Volumes, Timings
17: St-Jean & Laurier

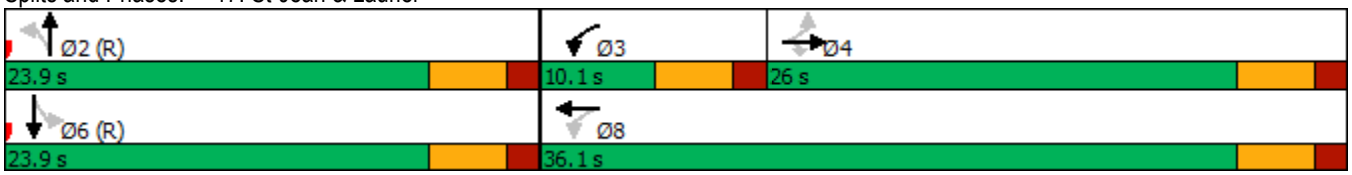
Short-Term Analysis PM
10/22/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	404	279	53	340	14	194	13	84	20	11	17
Future Volume (vph)	9	404	279	53	340	14	194	13	84	20	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.995			0.870			0.910	
Flt Protected		0.999			0.993		0.950			0.950		
Satd. Flow (prot)	0	1898	1568	0	1873	0	1752	1653	0	1805	1729	0
Flt Permitted		0.988			0.757		0.738			0.689		
Satd. Flow (perm)	0	1877	1568	0	1428	0	1361	1653	0	1309	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140		4			91			18	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	7%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	439	303	58	370	15	211	14	91	22	12	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	449	303	0	443	0	211	105	0	22	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.1	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	26.0	26.0	26.0	10.1	36.1		23.9	23.9		23.9	23.9	
Total Split (%)	43.3%	43.3%	43.3%	16.8%	60.2%		39.8%	39.8%		39.8%	39.8%	
Maximum Green (s)	21.0	21.0	21.0	5.1	31.1		18.9	18.9		18.9	18.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		21.0	21.0		31.1		18.9	18.9		18.9	18.9	
Actuated g/C Ratio		0.35	0.35		0.52		0.32	0.32		0.32	0.32	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.68	0.47		0.57		0.49	0.18		0.05	0.05	
Control Delay		23.1	10.9		12.8		21.5	6.0		14.9	9.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		23.1	10.9		12.8		21.5	6.0		14.9	9.5	
LOS		C	B		B		C	A		B	A	
Approach Delay		18.2			12.8			16.3			11.8	
Approach LOS		B			B			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 73.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier



Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	36	48	31	43	17	59	278	28	33	354	9
Future Vol, veh/h	16	36	48	31	43	17	59	278	28	33	354	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	3	2	0	0	0	2	1	0	0	1	0
Mvmt Flow	17	39	52	34	47	18	64	302	30	36	385	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	10.5	14.9	15.9
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	16%	34%	8%
Vol Thru, %	76%	36%	47%	89%
Vol Right, %	8%	48%	19%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	365	100	91	396
LT Vol	59	16	31	33
Through Vol	278	36	43	354
RT Vol	28	48	17	9
Lane Flow Rate	397	109	99	430
Geometry Grp	1	1	1	1
Degree of Util (X)	0.57	0.182	0.17	0.611
Departure Headway (Hd)	5.17	6.041	6.175	5.112
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	698	591	579	706
Service Time	3.21	4.103	4.236	3.151
HCM Lane V/C Ratio	0.569	0.184	0.171	0.609
HCM Control Delay	14.9	10.5	10.5	15.9
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	3.6	0.7	0.6	4.2

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	44	360	11	61	469
Future Vol, veh/h	9	44	360	11	61	469
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	1	0	8	1
Mvmt Flow	10	48	391	12	66	510
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	9.2	13.2	17.6
HCM LOS	A	B	C

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	17%	100%	0%
Vol Thru, %	97%	0%	0%	100%
Vol Right, %	3%	83%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	371	53	61	469
LT Vol	0	9	61	0
Through Vol	360	0	0	469
RT Vol	11	44	0	0
Lane Flow Rate	403	58	66	510
Geometry Grp	5	2	7	7
Degree of Util (X)	0.534	0.089	0.103	0.704
Departure Headway (Hd)	4.767	5.552	5.597	4.975
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	641	639	724
Service Time	2.807	3.626	3.339	2.716
HCM Lane V/C Ratio	0.534	0.09	0.103	0.704
HCM Control Delay	13.2	9.2	9	18.7
HCM Lane LOS	B	A	A	C
HCM 95th-tile Q	3.2	0.3	0.3	5.8

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	214	83	124	111	17	82	15	227	10	10	37
Future Vol, veh/h	60	214	83	124	111	17	82	15	227	10	10	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	1	2	2	4	2	3	2	2	2	2	2
Mvmt Flow	65	233	90	135	121	18	89	16	247	11	11	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.4	13.6	15	10
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	17%	49%	18%
Vol Thru, %	5%	60%	44%	18%
Vol Right, %	70%	23%	7%	65%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	324	357	252	57
LT Vol	82	60	124	10
Through Vol	15	214	111	10
RT Vol	227	83	17	37
Lane Flow Rate	352	388	274	62
Geometry Grp	1	1	1	1
Degree of Util (X)	0.54	0.593	0.444	0.108
Departure Headway (Hd)	5.517	5.503	5.837	6.253
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	648	652	614	577
Service Time	3.592	3.577	3.918	4.253
HCM Lane V/C Ratio	0.543	0.595	0.446	0.107
HCM Control Delay	15	16.4	13.6	10
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	3.2	3.9	2.3	0.4

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	55	304	8	24	17	166	54	14	22	49	99
Future Vol, veh/h	123	55	304	8	24	17	166	54	14	22	49	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	11	0	0	0	0	0	0	2	0
Mvmt Flow	134	60	330	9	26	18	180	59	15	24	53	108
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	13.7	9.7	12.7	10.6
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	71%	100%	0%	16%	13%
Vol Thru, %	23%	0%	15%	49%	29%
Vol Right, %	6%	0%	85%	35%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	234	123	359	49	170
LT Vol	166	123	0	8	22
Through Vol	54	0	55	24	49
RT Vol	14	0	304	17	99
Lane Flow Rate	254	134	390	53	185
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.406	0.235	0.567	0.09	0.28
Departure Headway (Hd)	5.742	6.339	5.233	6.06	5.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	626	567	691	590	658
Service Time	3.783	4.075	2.968	4.116	3.503
HCM Lane V/C Ratio	0.406	0.236	0.564	0.09	0.281
HCM Control Delay	12.7	11	14.6	9.7	10.6
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	2	0.9	3.6	0.3	1.1

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	21	3	8	17	226	0	49	15	217	68	21
Future Vol, veh/h	17	21	3	8	17	226	0	49	15	217	68	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	33	0	0	0	0	2	0	0	1	19
Mvmt Flow	18	23	3	9	18	246	0	53	16	236	74	23
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	9.1	10.6	8.7	13.7
HCM LOS	A	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	76%	0%
Vol Thru, %	100%	52%	0%	88%	0%	7%	24%	0%
Vol Right, %	0%	48%	0%	12%	0%	93%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	31	17	24	8	243	285	21
LT Vol	0	0	17	0	8	0	217	0
Through Vol	33	16	0	21	0	17	68	0
RT Vol	0	15	0	3	0	226	0	21
Lane Flow Rate	36	34	18	26	9	264	310	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.058	0.052	0.034	0.043	0.015	0.368	0.494	0.03
Departure Headway (Hd)	5.847	5.473	6.549	5.953	6.172	5.012	5.746	4.676
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	616	658	550	605	577	713	623	755
Service Time	3.551	3.177	4.252	3.657	3.946	2.785	3.539	2.468
HCM Lane V/C Ratio	0.058	0.052	0.033	0.043	0.016	0.37	0.498	0.03
HCM Control Delay	8.9	8.5	9.5	8.9	9	10.7	14.1	7.6
HCM Lane LOS	A	A	A	A	A	B	B	A
HCM 95th-tile Q	0.2	0.2	0.1	0.1	0	1.7	2.7	0.1

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	99	122	100	321	431	97
Future Vol, veh/h	99	122	100	321	431	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	108	133	109	349	468	105

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1088	521	573	0	-	0
Stage 1	521	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	241	559	1010	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	215	559	1010	-	-	-
Mov Cap-2 Maneuver	215	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	572	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	41.5	2.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1010	-	326	-	-
HCM Lane V/C Ratio	0.108	-	0.737	-	-
HCM Control Delay (s)	9	-	41.5	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0.4	-	5.5	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	331	22	46	173	91	25	13	77	74	13	53
Future Vol, veh/h	16	331	22	46	173	91	25	13	77	74	13	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	17	360	24	50	188	99	27	14	84	80	14	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	287	0	0	384	0	0	780	793	372	793	756	238
Stage 1	-	-	-	-	-	-	406	406	-	338	338	-
Stage 2	-	-	-	-	-	-	374	387	-	455	418	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1287	-	-	1186	-	-	315	323	678	309	340	806
Stage 1	-	-	-	-	-	-	626	601	-	681	644	-
Stage 2	-	-	-	-	-	-	651	613	-	589	594	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1287	-	-	1186	-	-	271	306	678	250	322	806
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	306	-	250	322	-
Stage 1	-	-	-	-	-	-	618	593	-	672	617	-
Stage 2	-	-	-	-	-	-	566	587	-	497	586	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.2	15.6	23.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	463	1287	-	-	1186	-	-	348
HCM Lane V/C Ratio	0.27	0.014	-	-	0.042	-	-	0.437
HCM Control Delay (s)	15.6	7.8	-	-	8.2	-	-	23.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0.1	-	-	2.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	33	355	0	0	226	4	0	0	0	2	0	21
Future Vol, veh/h	33	355	0	0	226	4	0	0	0	2	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	386	0	0	246	4	0	0	0	2	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	250	0	0	386	0	0	718	708	386	706	706	248
Stage 1	-	-	-	-	-	-	458	458	-	248	248	-
Stage 2	-	-	-	-	-	-	260	250	-	458	458	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1316	-	-	1172	-	-	344	360	662	351	361	791
Stage 1	-	-	-	-	-	-	583	567	-	756	701	-
Stage 2	-	-	-	-	-	-	745	700	-	583	567	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1316	-	-	1172	-	-	325	347	662	342	348	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	347	-	342	348	-
Stage 1	-	-	-	-	-	-	563	547	-	730	701	-
Stage 2	-	-	-	-	-	-	724	700	-	563	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1316	-	-	1172	-	-	710
HCM Lane V/C Ratio	-	0.027	-	-	-	-	-	0.035
HCM Control Delay (s)	0	7.8	0	-	0	-	-	10.3
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	20.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	69	56	12	43	55	43	300	20	88	365	25
Future Vol, veh/h	16	69	56	12	43	55	43	300	20	88	365	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	75	61	13	47	60	47	326	22	96	397	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.1	11.5	17.9	26.1
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	11%	11%	18%
Vol Thru, %	83%	49%	39%	76%
Vol Right, %	6%	40%	50%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	363	141	110	478
LT Vol	43	16	12	88
Through Vol	300	69	43	365
RT Vol	20	56	55	25
Lane Flow Rate	395	153	120	520
Geometry Grp	1	1	1	1
Degree of Util (X)	0.628	0.279	0.219	0.788
Departure Headway (Hd)	5.733	6.543	6.591	5.57
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	635	550	545	655
Service Time	3.733	4.569	4.62	3.57
HCM Lane V/C Ratio	0.622	0.278	0.22	0.794
HCM Control Delay	17.9	12.1	11.5	26.1
HCM Lane LOS	C	B	B	D
HCM 95th-tile Q	4.4	1.1	0.8	7.7

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	125	85	7	12	0
Future Vol, veh/h	0	125	85	7	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	136	92	8	13	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	100	0	-	0	232	96
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1493	-	-	-	756	960
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1493	-	-	-	756	960
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1493	-	-	-	756
HCM Lane V/C Ratio	-	-	-	-	0.017
HCM Control Delay (s)	0	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

LANE SUMMARY

Site: St-Jean / Morris Village Access PM (short-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Morris Village Access													
Lane 1[d]	108	3.0	1114	0.097	100	11.6	LOS B	0.5	4.0	Full	500	0.0	0.0
Lane 2	22	3.0	1114	0.020	100	4.9	LOS A	0.1	0.8	Short	60	0.0	NA
Approach	129	3.0		0.097		10.5	LOS B	0.5	4.0				
East: St-Jean													
Lane 1[d]	212	3.0	1074	0.197	100	5.6	LOS A	1.1	8.9	Full	500	0.0	0.0
Approach	212	3.0		0.197		5.6	LOS A	1.1	8.9				
West: St-Jean													
Lane 1[d]	490	3.0	1153	0.425	100	3.9	LOS A	3.2	25.0	Full	500	0.0	0.0
Approach	490	3.0		0.425		3.9	LOS A	3.2	25.0				
Intersection	832	3.0		0.425		5.4	LOS A	3.2	25.0				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: St-Jean / Dr Corbeil PM (short-term)

New Site
Roundabout

Lane Use and Performance

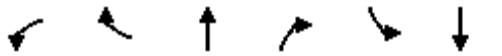
	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	357	3.0	779	0.458	100	7.7	LOS A	3.0	23.8	Full	500	0.0	0.0
Approach	357	3.0		0.458		7.7	LOS A	3.0	23.8				
East: Dr. Corbeil													
Lane 1[d]	277	3.0	874	0.317	100	7.6	LOS A	2.0	15.8	Full	500	0.0	0.0
Approach	277	3.0		0.317		7.6	LOS A	2.0	15.8				
North: St-Jean													
Lane 1[d]	491	3.0	1022	0.481	100	8.8	LOS A	3.9	30.7	Full	500	0.0	0.0
Approach	491	3.0		0.481		8.8	LOS A	3.9	30.7				
Intersection	1125	3.0		0.481		8.2	LOS A	3.9	30.7				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

Appendix D-1

Forecast Medium-Term Traffic Analysis



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	83	859	7	33	358
Future Volume (vph)	19	83	859	7	33	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	30.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.891		0.999			
Flt Protected	0.991				0.950	
Satd. Flow (prot)	1420	0	1743	0	1530	1681
Flt Permitted	0.991				0.232	
Satd. Flow (perm)	1420	0	1743	0	374	1681
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	90		1			
Link Speed (k/h)	50		50			50
Link Distance (m)	196.2		531.3			401.7
Travel Time (s)	14.1		38.3			28.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	40%	13%	9%	0%	18%	13%
Adj. Flow (vph)	21	90	934	8	36	389
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	0	942	0	36	389
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (m)	2.0		10.0		2.0	10.0
Trailing Detector (m)	0.0		0.0		0.0	0.0
Detector 1 Position(m)	0.0		0.0		0.0	0.0
Detector 1 Size(m)	2.0		0.6		2.0	0.6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	23.0		97.0		97.0	97.0
Total Split (%)	19.2%		80.8%		80.8%	80.8%
Maximum Green (s)	18.0		92.0		92.0	92.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		Min	Min
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	7.5		47.2		47.2	47.2
Actuated g/C Ratio	0.12		0.78		0.78	0.78
v/c Ratio	0.44		0.69		0.12	0.30
Control Delay	16.4		8.6		4.1	3.8
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	16.4		8.6		4.1	3.8
LOS	B		A		A	A
Approach Delay	16.4		8.6			3.8
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 60.6			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Caron & David

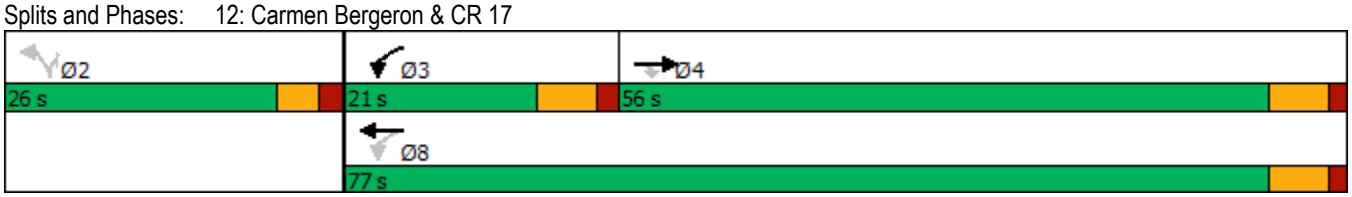


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	715	41	18	1986	120	10
Future Volume (vph)	715	41	18	1986	120	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3438	1524	1703	3574	1770	1346
Flt Permitted			0.292		0.950	
Satd. Flow (perm)	3438	1524	523	3574	1770	1346
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45				11
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	6%	6%	1%	2%	20%
Adj. Flow (vph)	777	45	20	2159	130	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	777	45	20	2159	130	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	56.0	56.0	21.0	77.0	26.0	26.0
Total Split (%)	54.4%	54.4%	20.4%	74.8%	25.2%	25.2%
Maximum Green (s)	49.8	49.8	14.8	70.8	20.8	20.8
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	59.2	59.2	63.9	63.9	21.0	21.0
Actuated g/C Ratio	0.61	0.61	0.66	0.66	0.22	0.22
v/c Ratio	0.37	0.05	0.05	0.91	0.34	0.04
Control Delay	10.5	3.2	5.4	20.7	37.0	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	3.2	5.4	20.7	37.0	17.4
LOS	B	A	A	C	D	B
Approach Delay	10.1			20.6	35.5	
Approach LOS	B			C	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 103			
Actuated Cycle Length: 96.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lanes, Volumes, Timings
17: St-Jean & Laurier

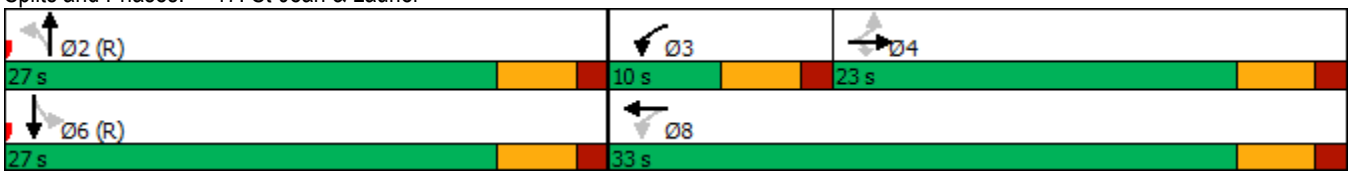
Medium-Term Analysis AM
10/22/2018

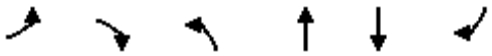
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	169	136	51	260	8	314	15	92	2	5	11
Future Volume (vph)	6	169	136	51	260	8	314	15	92	2	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.871			0.894	
Flt Protected		0.998			0.992		0.950			0.950		
Satd. Flow (prot)	0	1843	1568	0	1868	0	1719	1443	0	1805	1604	0
Flt Permitted		0.984			0.934		0.746			0.682		
Satd. Flow (perm)	0	1817	1568	0	1759	0	1350	1443	0	1296	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148		3			100			12	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	3%	3%	0%	0%	5%	13%	15%	0%	20%	0%
Adj. Flow (vph)	7	184	148	55	283	9	341	16	100	2	5	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	191	148	0	347	0	341	116	0	2	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0	23.0	10.0	33.0		27.0	27.0		27.0	27.0	
Total Split (%)	38.3%	38.3%	38.3%	16.7%	55.0%		45.0%	45.0%		45.0%	45.0%	
Maximum Green (s)	18.0	18.0	18.0	5.0	28.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		18.0	18.0		28.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.30	0.30		0.47		0.37	0.37		0.37	0.37	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.35	0.26		0.42		0.69	0.20		0.00	0.03	
Control Delay		18.7	4.7		12.4		25.2	5.2		12.0	8.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		18.7	4.7		12.4		25.2	5.2		12.0	8.3	
LOS		B	A		B		C	A		B	A	
Approach Delay		12.6			12.4			20.1			8.7	
Approach LOS		B			B			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	80	88	858	323	54
Future Volume (vph)	80	80	88	858	323	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.981	
Flt Protected	0.976		0.950			
Satd. Flow (prot)	1608	0	1597	1743	1837	0
Flt Permitted	0.976		0.506			
Satd. Flow (perm)	1608	0	851	1743	1837	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	36				21	
Link Speed (k/h)	50			50	50	
Link Distance (m)	1482.6			401.7	1080.0	
Travel Time (s)	106.7			28.9	77.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	13%	13%	9%	0%	10%
Adj. Flow (vph)	87	87	96	933	351	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	0	96	933	410	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (m)	2.0		2.0	10.0	10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	
Detector 1 Size(m)	2.0		2.0	0.6	0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	23.0		23.0	23.0	23.0	
Total Split (s)	24.0		96.0	96.0	96.0	
Total Split (%)	20.0%		80.0%	80.0%	80.0%	
Maximum Green (s)	19.0		91.0	91.0	91.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	11.8		48.0	48.0	48.0	
Actuated g/C Ratio	0.17		0.68	0.68	0.68	
v/c Ratio	0.58		0.17	0.78	0.33	
Control Delay	31.8		5.1	13.8	5.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	31.8		5.1	13.8	5.3	
LOS	C		A	B	A	
Approach Delay	31.8			13.0	5.3	
Approach LOS	C			B	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 70.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 21: Caron & Dr. Corbeil



Lanes, Volumes, Timings
33: Caron & Street No.1

Medium-Term Analysis AM
10/22/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	38	83	37	119	165	158	631	12	53	295	30
Future Volume (vph)	69	38	83	37	119	165	158	631	12	53	295	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		125.0	30.0		120.0	120.0		0.0	120.0		40.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1857	0	1770	1863	1583
Flt Permitted	0.385			0.730			0.504			0.293		
Satd. Flow (perm)	717	1863	1583	1360	1863	1583	939	1857	0	546	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90			179		1				109
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		289.2			367.4			197.4			531.3	
Travel Time (s)		20.8			26.5			14.2			38.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	41	90	40	129	179	172	686	13	58	321	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	41	90	40	129	179	172	699	0	58	321	33
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6

Lanes, Volumes, Timings
33: Caron & Street No.1

Medium-Term Analysis AM
10/22/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0		10.0	23.0	23.0
Total Split (s)	11.0	36.0	36.0	25.0	25.0	25.0	12.0	74.0		10.0	72.0	72.0
Total Split (%)	9.2%	30.0%	30.0%	20.8%	20.8%	20.8%	10.0%	61.7%		8.3%	60.0%	60.0%
Maximum Green (s)	6.0	31.0	31.0	20.0	20.0	20.0	7.0	69.0		5.0	67.0	67.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	0
Act Effct Green (s)	21.5	21.5	21.5	13.0	13.0	13.0	77.0	71.6		72.4	67.3	67.3
Actuated g/C Ratio	0.19	0.19	0.19	0.12	0.12	0.12	0.69	0.65		0.65	0.61	0.61
v/c Ratio	0.38	0.11	0.24	0.25	0.59	0.52	0.24	0.58		0.14	0.28	0.03
Control Delay	42.2	36.1	9.0	49.1	58.6	12.4	6.9	15.9		7.0	12.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	42.2	36.1	9.0	49.1	58.6	12.4	6.9	15.9		7.0	12.3	0.1
LOS	D	D	A	D	E	B	A	B		A	B	A
Approach Delay		26.5			33.8			14.1			10.6	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 110.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 33: Caron & Street No.1



Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	33	36	14	31	13	22	422	30	16	181	4
Future Vol, veh/h	4	33	36	14	31	13	22	422	30	16	181	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	6	0	14	6	0	5	3	10	0	1	25
Mvmt Flow	4	36	39	15	34	14	24	459	33	17	197	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	9.7	16.2	10
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	5%	24%	8%
Vol Thru, %	89%	45%	53%	90%
Vol Right, %	6%	49%	22%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	474	73	58	201
LT Vol	22	4	14	16
Through Vol	422	33	31	181
RT Vol	30	36	13	4
Lane Flow Rate	515	79	63	218
Geometry Grp	1	1	1	1
Degree of Util (X)	0.659	0.121	0.104	0.296
Departure Headway (Hd)	4.603	5.495	5.963	4.875
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	778	656	605	730
Service Time	2.668	3.497	3.965	2.958
HCM Lane V/C Ratio	0.662	0.12	0.104	0.299
HCM Control Delay	16.2	9.3	9.7	10
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	5	0.4	0.3	1.2

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	10	37	7	63	9	158	57	3	6	36	75
Future Vol, veh/h	11	10	37	7	63	9	158	57	3	6	36	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	22	0	0	0	0	0	2	0	33	0	4	0
Mvmt Flow	12	11	40	8	68	10	172	62	3	7	39	82
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.2	8.5	9.6	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	72%	100%	0%	9%	5%
Vol Thru, %	26%	0%	21%	80%	31%
Vol Right, %	1%	0%	79%	11%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	11	47	79	117
LT Vol	158	11	0	7	6
Through Vol	57	0	10	63	36
RT Vol	3	0	37	9	75
Lane Flow Rate	237	12	51	86	127
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.301	0.021	0.069	0.116	0.147
Departure Headway (Hd)	4.572	6.297	4.86	4.861	4.165
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	787	568	736	737	860
Service Time	2.598	4.035	2.598	2.897	2.194
HCM Lane V/C Ratio	0.301	0.021	0.069	0.117	0.148
HCM Control Delay	9.6	9.2	8	8.5	7.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	1.3	0.1	0.2	0.4	0.5

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	8	0	15	19	204	0	5	0	27	20	12
Future Vol, veh/h	15	8	0	15	19	204	0	5	0	27	20	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	6	0	13
Mvmt Flow	16	9	0	16	21	222	0	5	0	29	22	13
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8	8.3	7.1	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	57%	0%
Vol Thru, %	100%	100%	0%	100%	0%	9%	43%	0%
Vol Right, %	0%	0%	0%	0%	0%	91%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	15	8	15	223	47	12
LT Vol	0	0	15	0	15	0	27	0
Through Vol	3	3	0	8	0	19	20	0
RT Vol	0	0	0	0	0	204	0	12
Lane Flow Rate	3	3	16	9	16	242	51	13
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.004	0.003	0.024	0.012	0.023	0.269	0.078	0.016
Departure Headway (Hd)	5.187	3.479	5.366	4.864	5.13	3.988	5.513	4.419
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	694	1034	670	739	690	887	653	814
Service Time	2.891	1.183	3.072	2.571	2.915	1.773	3.214	2.121
HCM Lane V/C Ratio	0.004	0.003	0.024	0.012	0.023	0.273	0.078	0.016
HCM Control Delay	7.9	6.2	8.2	7.6	8	8.3	8.7	7.2
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0.1	1.1	0.3	0

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	23	6	37	229	30	7	3	25	11	1	1
Future Vol, veh/h	9	23	6	37	229	30	7	3	25	11	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	22	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	10	25	7	40	249	33	8	3	27	12	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	282	0	0	32	0	0	396	411	29	410	398	266
Stage 1	-	-	-	-	-	-	49	49	-	346	346	-
Stage 2	-	-	-	-	-	-	347	362	-	64	52	-
Critical Hdwy	4.32	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.398	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1174	-	-	1593	-	-	568	534	1052	556	543	778
Stage 1	-	-	-	-	-	-	969	858	-	674	639	-
Stage 2	-	-	-	-	-	-	673	629	-	952	856	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1174	-	-	1593	-	-	552	516	1052	525	525	778
Mov Cap-2 Maneuver	-	-	-	-	-	-	552	516	-	525	525	-
Stage 1	-	-	-	-	-	-	960	850	-	668	623	-
Stage 2	-	-	-	-	-	-	654	613	-	916	848	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.9	9.6	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	828	1174	-	-	1593	-	-	538
HCM Lane V/C Ratio	0.046	0.008	-	-	0.025	-	-	0.026
HCM Control Delay (s)	9.6	8.1	-	-	7.3	-	-	11.9
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	126	336	51	17	53
Future Vol, veh/h	18	126	336	51	17	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	137	365	55	18	58

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	420	0	-	0	570	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1139	-	-	-	483	656
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1139	-	-	-	474	656
Mov Cap-2 Maneuver	-	-	-	-	474	-
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1139	-	-	-	600
HCM Lane V/C Ratio	0.017	-	-	-	0.127
HCM Control Delay (s)	8.2	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

LANE SUMMARY

Site: Poupart / Site Access AM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	66	3.0	796	0.083	100	10.2	LOS B	0.4	3.2	Full	500	0.0	0.0
Approach	66	3.0		0.083		10.2	LOS B	0.4	3.2				
East: St-Jean													
Lane 1[d]	835	3.0	1005	0.831	100	7.1	LOS A	13.0	101.0	Full	500	0.0	0.0
Approach	835	3.0		0.831		7.1	LOS A	13.0	101.0				
North: Site Access													
Lane 1[d]	167	3.0	367	0.457	100	16.9	LOS B	3.3	26.0	Full	500	0.0	0.0
Approach	167	3.0		0.457		16.9	LOS B	3.3	26.0				
West: Poupart													
Lane 1[d]	329	3.0	1084	0.304	100	5.3	LOS A	2.2	17.3	Full	500	0.0	0.0
Approach	329	3.0		0.304		5.3	LOS A	2.2	17.3				
Intersection	1398	3.0		0.831		8.0	LOS A	13.0	101.0				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: Poupart Extension AM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Poupart													
Lane 1[d]	1009	3.0	1102	0.915	100	5.7	LOS A	33.5	260.9	Full	500	0.0	0.0
Approach	1009	3.0		0.915		5.7	LOS A	33.5	260.9				
North: Poupart													
Lane 1[d]	108	3.0	422	0.255	100	15.7	LOS B	1.6	12.4	Full	500	0.0	0.0
Approach	108	3.0		0.255		15.7	LOS B	1.6	12.4				
West: Poupart Extension													
Lane 1[d]	266	3.0	1004	0.265	100	5.5	LOS A	1.8	13.8	Full	500	0.0	0.0
Approach	266	3.0		0.265		5.5	LOS A	1.8	13.8				
Intersection	1383	3.0		0.915		6.4	LOS A	33.5	260.9				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: St-Jean / Dr Corbeil AM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	286	3.0	995	0.287	100	5.2	LOS A	1.8	13.8	Full	500	0.0	0.0
Approach	286	3.0		0.287		5.2	LOS A	1.8	13.8				
East: Dr. Corbeil													
Lane 1[d]	385	3.0	875	0.440	100	8.1	LOS A	3.0	23.2	Full	500	0.0	0.0
Approach	385	3.0		0.440		8.1	LOS A	3.0	23.2				
North: St-Jean													
Lane 1[d]	246	3.0	978	0.251	100	7.5	LOS A	1.5	12.0	Full	500	0.0	0.0
Approach	246	3.0		0.251		7.5	LOS A	1.5	12.0				
Intersection	916	3.0		0.440		7.1	LOS A	3.0	23.2				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Morris Village Access AM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Morris Village Access													
Lane 1[d]	526	3.0	1259	0.418	100	11.2	LOS B	2.9	22.7	Full	500	0.0	0.0
Lane 2	102	3.0	1259	0.081	100	4.3	LOS A	0.4	3.2	Short	60	0.0	NA
Approach	628	3.0		0.418		10.1	LOS B	2.9	22.7				
East: St-Jean													
Lane 1[d]	327	3.0	716	0.457	100	9.4	LOS A	3.2	25.3	Full	500	0.0	0.0
Approach	327	3.0		0.457		9.4	LOS A	3.2	25.3				
West: St-Jean													
Lane 1[d]	330	3.0	1159	0.285	100	3.8	LOS A	2.0	15.7	Full	500	0.0	0.0
Approach	330	3.0		0.285		3.8	LOS A	2.0	15.7				
Intersection	1286	3.0		0.457		8.3	LOS A	3.2	25.3				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Poupart AM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	299	3.0	837	0.357	100	9.4	LOS A	2.3	17.9	Full	500	0.0	0.0
Approach	299	3.0		0.357		9.4	LOS A	2.3	17.9				
East: St-Jean													
Lane 1[d]	816	3.0	874	0.935	100	23.3	LOS C	24.6	191.9	Full	500	0.0	0.0
Approach	816	3.0		0.935		23.3	LOS C	24.6	191.9				
North: Site Access													
Lane 1[d]	249	3.0	314	0.794	100	38.6	LOS D	8.6	67.3	Full	500	0.0	0.0
Approach	249	3.0		0.794		38.6	LOS D	8.6	67.3				
West: Poupart													
Lane 1[d]	300	3.0	722	0.415	100	8.7	LOS A	2.8	21.6	Full	500	0.0	0.0
Approach	300	3.0		0.415		8.7	LOS A	2.8	21.6				
Intersection	1664	3.0		0.935		20.4	LOS C	24.6	191.9				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	66	669	19	96	970
Future Volume (vph)	13	66	669	19	96	970
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	30.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887		0.996			
Flt Protected	0.992				0.950	
Satd. Flow (prot)	1672	0	1874	0	1671	1881
Flt Permitted	0.992				0.335	
Satd. Flow (perm)	1672	0	1874	0	589	1881
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	72		4			
Link Speed (k/h)	50		50			50
Link Distance (m)	196.2		558.9			401.7
Travel Time (s)	14.1		40.2			28.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	8%	1%
Adj. Flow (vph)	14	72	727	21	104	1054
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	748	0	104	1054
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (m)	2.0		10.0		2.0	10.0
Trailing Detector (m)	0.0		0.0		0.0	0.0
Detector 1 Position(m)	0.0		0.0		0.0	0.0
Detector 1 Size(m)	2.0		0.6		2.0	0.6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	23.0		97.0		97.0	97.0
Total Split (%)	19.2%		80.8%		80.8%	80.8%
Maximum Green (s)	18.0		92.0		92.0	92.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		Min	Min
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	7.3		49.4		49.4	49.4
Actuated g/C Ratio	0.12		0.80		0.80	0.80
v/c Ratio	0.33		0.50		0.22	0.70
Control Delay	15.4		4.7		4.1	7.9
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	15.4		4.7		4.1	7.9
LOS	B		A		A	A
Approach Delay	15.4		4.7			7.6
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 62			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 6.8		Intersection LOS: A	
Intersection Capacity Utilization 64.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Caron & David



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2066	208	66	1103	73	109
Future Volume (vph)	2066	208	66	1103	73	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3505	1599	1752	3539	1805	1615
Flt Permitted			0.053		0.950	
Satd. Flow (perm)	3505	1599	98	3539	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		194				81
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	3%	2%	0%	0%
Adj. Flow (vph)	2246	226	72	1199	79	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2246	226	72	1199	79	118
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	75.0	75.0	11.2	86.2	23.8	23.8
Total Split (%)	68.2%	68.2%	10.2%	78.4%	21.6%	21.6%
Maximum Green (s)	68.8	68.8	5.0	80.0	18.6	18.6
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	69.0	69.0	77.7	77.7	18.6	18.6
Actuated g/C Ratio	0.64	0.64	0.72	0.72	0.17	0.17
v/c Ratio	1.00	0.21	0.49	0.47	0.25	0.34
Control Delay	40.3	2.3	20.4	7.0	42.1	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	2.3	20.4	7.0	42.1	18.3
LOS	D	A	C	A	D	B
Approach Delay	36.8			7.8	27.9	
Approach LOS	D			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 107.8			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 73.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lanes, Volumes, Timings
17: St-Jean & Laurier

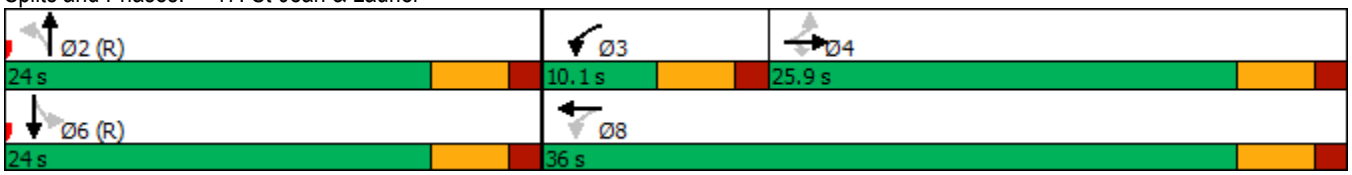
Medium-Term Analysis PM
10/22/2018

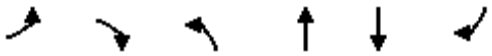
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	405	345	89	340	14	227	13	106	20	11	17
Future Volume (vph)	9	405	345	89	340	14	227	13	106	20	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.866			0.910	
Flt Protected		0.999			0.990		0.950			0.950		
Satd. Flow (prot)	0	1898	1568	0	1869	0	1752	1645	0	1805	1729	0
Flt Permitted		0.987			0.582		0.738			0.674		
Satd. Flow (perm)	0	1875	1568	0	1099	0	1361	1645	0	1281	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		4			115			18	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	7%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	440	375	97	370	15	247	14	115	22	12	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	450	375	0	482	0	247	129	0	22	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.1	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	25.9	25.9	25.9	10.1	36.0		24.0	24.0		24.0	24.0	
Total Split (%)	43.2%	43.2%	43.2%	16.8%	60.0%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	20.9	20.9	20.9	5.1	31.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		20.9	20.9		31.0		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.35	0.35		0.52		0.32	0.32		0.32	0.32	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.69	0.57		0.76		0.57	0.22		0.05	0.05	
Control Delay		23.4	12.3		20.5		23.5	5.5		14.8	9.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		23.4	12.3		20.5		23.5	5.5		14.8	9.5	
LOS		C	B		C		C	A		B	A	
Approach Delay		18.4			20.5			17.3			11.7	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 77.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	104	131	106	646	958	105
Future Volume (vph)	104	131	106	646	958	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925				0.987	
Flt Protected	0.978		0.950			
Satd. Flow (prot)	1719	0	1805	1900	1875	0
Flt Permitted	0.978		0.053			
Satd. Flow (perm)	1719	0	101	1900	1875	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	44				10	
Link Speed (k/h)	50			50	50	
Link Distance (m)	1482.6			401.7	1080.0	
Travel Time (s)	106.7			28.9	77.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	113	142	115	702	1041	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	255	0	115	702	1155	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (m)	2.0		2.0	10.0	10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	
Detector 1 Size(m)	2.0		2.0	0.6	0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm		pm+pt	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4		2			
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	23.0		10.0	23.0	23.0	
Total Split (s)	23.0		11.2	97.0	85.8	
Total Split (%)	19.2%		9.3%	80.8%	71.5%	
Maximum Green (s)	18.0		6.2	92.0	80.8	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	16.7		82.1	82.1	70.6	
Actuated g/C Ratio	0.15		0.75	0.75	0.65	
v/c Ratio	0.85		0.66	0.49	0.95	
Control Delay	64.4		35.7	6.6	34.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	64.4		35.7	6.6	34.1	
LOS	E		D	A	C	
Approach Delay	64.4			10.7	34.1	
Approach LOS	E			B	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 109.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.0		Intersection LOS: C	
Intersection Capacity Utilization 89.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 21: Caron & Dr. Corbeil



Lanes, Volumes, Timings
33: Caron & Street No.1

Medium-Term Analysis PM
10/22/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	126	180	24	78	109	136	531	39	174	731	77
Future Volume (vph)	49	126	180	24	78	109	136	531	39	174	731	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		125.0	30.0		120.0	120.0		0.0	120.0		40.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1844	0	1770	1863	1583
Flt Permitted	0.460			0.669			0.161			0.253		
Satd. Flow (perm)	857	1863	1583	1246	1863	1583	300	1844	0	471	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			196			145		5				145
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		179.3			276.0			177.7			558.9	
Travel Time (s)		12.9			19.9			12.8			40.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	137	196	26	85	118	148	577	42	189	795	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	137	196	26	85	118	148	619	0	189	795	84
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0		10.0	23.0	23.0
Total Split (s)	10.0	33.0	33.0	23.0	23.0	23.0	10.0	45.0		12.0	47.0	47.0
Total Split (%)	11.1%	36.7%	36.7%	25.6%	25.6%	25.6%	11.1%	50.0%		13.3%	52.2%	52.2%
Maximum Green (s)	5.0	28.0	28.0	18.0	18.0	18.0	5.0	40.0		7.0	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	0
Act Effct Green (s)	15.1	15.1	15.1	9.5	9.5	9.5	45.5	40.4		49.1	42.3	42.3
Actuated g/C Ratio	0.19	0.19	0.19	0.12	0.12	0.12	0.59	0.52		0.63	0.55	0.55
v/c Ratio	0.23	0.38	0.42	0.17	0.37	0.37	0.55	0.64		0.46	0.78	0.09
Control Delay	27.1	29.3	7.0	34.8	37.5	7.4	14.9	18.6		9.6	22.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	27.1	29.3	7.0	34.8	37.5	7.4	14.9	18.6		9.6	22.8	0.6
LOS	C	C	A	C	D	A	B	B		A	C	A
Approach Delay		17.7			21.7			17.9			18.7	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 73.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 33: Caron & Street No.1



Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	36	48	31	43	17	59	334	28	33	457	9
Future Vol, veh/h	16	36	48	31	43	17	59	334	28	33	457	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	3	2	0	0	0	2	1	0	0	1	0
Mvmt Flow	17	39	52	34	47	18	64	363	30	36	497	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.3	11.3	19.6	25.7
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	16%	34%	7%
Vol Thru, %	79%	36%	47%	92%
Vol Right, %	7%	48%	19%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	421	100	91	499
LT Vol	59	16	31	33
Through Vol	334	36	43	457
RT Vol	28	48	17	9
Lane Flow Rate	458	109	99	542
Geometry Grp	1	1	1	1
Degree of Util (X)	0.687	0.198	0.184	0.795
Departure Headway (Hd)	5.403	6.543	6.681	5.275
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	543	532	683
Service Time	3.468	4.638	4.779	3.337
HCM Lane V/C Ratio	0.69	0.201	0.186	0.794
HCM Control Delay	19.6	11.3	11.3	25.7
HCM Lane LOS	C	B	B	D
HCM 95th-tile Q	5.4	0.7	0.7	8

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	55	173	9	24	17	86	68	14	22	71	99
Future Vol, veh/h	123	55	173	9	24	17	86	68	14	22	71	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	11	0	0	0	0	0	0	2	0
Mvmt Flow	134	60	188	10	26	18	93	74	15	24	77	108
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	10.5	9.1	10.3	10
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	51%	100%	0%	18%	11%
Vol Thru, %	40%	0%	24%	48%	37%
Vol Right, %	8%	0%	76%	34%	52%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	168	123	228	50	192
LT Vol	86	123	0	9	22
Through Vol	68	0	55	24	71
RT Vol	14	0	173	17	99
Lane Flow Rate	183	134	248	54	209
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.267	0.224	0.343	0.085	0.284
Departure Headway (Hd)	5.264	6.023	4.982	5.614	4.905
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	674	590	714	642	724
Service Time	3.362	3.82	2.778	3.614	3
HCM Lane V/C Ratio	0.272	0.227	0.347	0.084	0.289
HCM Control Delay	10.3	10.6	10.4	9.1	10
HCM Lane LOS	B	B	B	A	A
HCM 95th-tile Q	1.1	0.9	1.5	0.3	1.2

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	31	3	12	22	122	0	49	22	45	68	21
Future Vol, veh/h	17	31	3	12	22	122	0	49	22	45	68	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	33	0	0	0	0	2	0	0	1	19
Mvmt Flow	18	34	3	13	24	133	0	53	24	49	74	23
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.3	8.4	8	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	40%	0%
Vol Thru, %	100%	43%	0%	91%	0%	15%	60%	0%
Vol Right, %	0%	57%	0%	9%	0%	85%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	38	17	34	12	144	113	21
LT Vol	0	0	17	0	12	0	45	0
Through Vol	33	16	0	31	0	22	68	0
RT Vol	0	22	0	3	0	122	0	21
Lane Flow Rate	36	42	18	37	13	157	123	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.051	0.055	0.029	0.053	0.02	0.197	0.181	0.028
Departure Headway (Hd)	5.218	4.78	5.724	5.159	5.626	4.528	5.309	4.423
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	686	749	626	694	637	794	676	809
Service Time	2.95	2.512	3.452	2.887	3.349	2.251	3.039	2.153
HCM Lane V/C Ratio	0.052	0.056	0.029	0.053	0.02	0.198	0.182	0.028
HCM Control Delay	8.2	7.8	8.6	8.2	8.5	8.4	9.2	7.3
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1	0.2	0.1	0.7	0.7	0.1

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	175	22	52	78	80	25	13	83	88	13	53
Future Vol, veh/h	66	175	22	52	78	80	25	13	83	88	13	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	72	190	24	57	85	87	27	14	90	96	14	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	172	0	0	214	0	0	625	632	202	641	601	129
Stage 1	-	-	-	-	-	-	346	346	-	243	243	-
Stage 2	-	-	-	-	-	-	279	286	-	398	358	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1417	-	-	1368	-	-	400	400	844	390	417	926
Stage 1	-	-	-	-	-	-	674	639	-	765	708	-
Stage 2	-	-	-	-	-	-	732	679	-	632	631	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1417	-	-	1368	-	-	339	364	844	315	379	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	339	364	-	315	379	-
Stage 1	-	-	-	-	-	-	640	606	-	726	678	-
Stage 2	-	-	-	-	-	-	644	650	-	523	599	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	1.9	13	19.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	582	1417	-	-	1368	-	-	415
HCM Lane V/C Ratio	0.226	0.051	-	-	0.041	-	-	0.403
HCM Control Delay (s)	13	7.7	-	-	7.7	-	-	19.4
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.9	0.2	-	-	0.1	-	-	1.9

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	58	361	239	35	54	38
Future Vol, veh/h	58	361	239	35	54	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	392	260	38	59	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	298	0	-	0	797	279
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1263	-	-	-	356	760
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1263	-	-	-	333	760
Mov Cap-2 Maneuver	-	-	-	-	333	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1263	-	-	-	434
HCM Lane V/C Ratio	0.05	-	-	-	0.23
HCM Control Delay (s)	8	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

LANE SUMMARY

Site: Poupart / Site Access PM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	48	3.0	246	0.195	100	20.4	LOS C	1.3	9.8	Full	500	0.0	0.0
Approach	48	3.0		0.195		20.4	LOS C	1.3	9.8				
East: St-Jean													
Lane 1[d]	607	3.0	896	0.677	100	7.8	LOS A	7.4	57.8	Full	500	0.0	0.0
Approach	607	3.0		0.677		7.8	LOS A	7.4	57.8				
North: Site Access													
Lane 1[d]	120	3.0	544	0.220	100	10.4	LOS B	1.3	10.1	Full	500	0.0	0.0
Approach	120	3.0		0.220		10.4	LOS B	1.3	10.1				
West: Poupart													
Lane 1[d]	1117	3.0	1072	1.043	100	34.1	LOS F	96.1	748.6	Full	500	0.0	18.6
Approach	1117	3.0		1.043		34.1	LOS C	96.1	748.6				
Intersection	1891	3.0		1.043		23.8	LOS C	96.1	748.6				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: Poupart Extension PM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Poupart													
Lane 1[d]	684	3.0	1097	0.623	100	4.6	LOS A	8.0	62.6	Full	500	0.0	0.0
Approach	684	3.0		0.623		4.6	LOS A	8.0	62.6				
North: Poupart													
Lane 1[d]	297	3.0	670	0.443	100	14.6	LOS B	2.9	22.9	Full	500	0.0	0.0
Approach	297	3.0		0.443		14.6	LOS B	2.9	22.9				
West: Poupart Extension													
Lane 1[d]	835	3.0	808	1.033	100	45.5	LOS F	39.3	306.1	Full	500	0.0	0.0
Approach	835	3.0		1.033		45.5	LOS D	39.3	306.1				
Intersection	1815	3.0		1.033		25.1	LOS C	39.3	306.1				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: St-Jean / Dr Corbeil PM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	427	3.0	769	0.556	100	9.0	LOS A	4.6	36.0	Full	500	0.0	0.0
Approach	427	3.0		0.556		9.0	LOS A	4.6	36.0				
East: Dr. Corbeil													
Lane 1[d]	297	3.0	814	0.364	100	8.4	LOS A	2.4	18.7	Full	500	0.0	0.0
Approach	297	3.0		0.364		8.4	LOS A	2.4	18.7				
North: St-Jean													
Lane 1[d]	603	3.0	996	0.605	100	8.7	LOS A	6.0	46.4	Full	500	0.0	0.0
Approach	603	3.0		0.605		8.7	LOS A	6.0	46.4				
Intersection	1327	3.0		0.605		8.7	LOS A	6.0	46.4				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Morris Village Access PM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Morris Village Access													
Lane 1[d]	346	3.0	1011	0.342	100	12.2	LOS B	2.5	19.4	Full	500	0.0	0.0
Lane 2	52	3.0	1011	0.052	100	5.1	LOS A	0.3	2.4	Short	60	0.0	NA
Approach	398	3.0		0.342		11.3	LOS B	2.5	19.4				
East: St-Jean													
Lane 1[d]	342	3.0	833	0.411	100	8.5	LOS A	2.8	21.8	Full	500	0.0	0.0
Approach	342	3.0		0.411		8.5	LOS A	2.8	21.8				
West: St-Jean													
Lane 1[d]	911	3.0	1060	0.859	100	7.3	LOS A	16.3	127.4	Full	500	0.0	0.0
Approach	911	3.0		0.859		7.3	LOS A	16.3	127.4				
Intersection	1651	3.0		0.859		8.5	LOS A	16.3	127.4				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Poupart PM (Medium-term)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	551	3.0	484	1.138	100	98.3	LOS F	39.0	303.5	Full	500	0.0	0.0
Approach	551	3.0		1.138		98.3	LOS F	39.0	303.5				
East: St-Jean													
Lane 1[d]	575	3.0	763	0.754	100	15.2	LOS B	9.7	75.7	Full	500	0.0	0.0
Approach	575	3.0		0.754		15.2	LOS B	9.7	75.7				
North: Site Access													
Lane 1[d]	158	3.0	505	0.312	100	11.6	LOS B	1.9	15.1	Full	500	0.0	0.0
Approach	158	3.0		0.312		11.6	LOS B	1.9	15.1				
West: Poupart													
Lane 1[d]	941	3.0	828	1.137	100	83.5	LOS F	63.3	492.9	Full	500	0.0	4.6
Approach	941	3.0		1.137		83.5	LOS F	63.3	492.9				
Intersection	2225	3.0		1.138		64.4	LOS E	63.3	492.9				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

Appendix D-3

Forecast Build-Out Traffic Analysis



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	83	1571	7	33	582
Future Volume (vph)	19	83	1571	7	33	582
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	30.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.891		0.999			
Flt Protected	0.991				0.950	
Satd. Flow (prot)	1420	0	3310	0	1530	3195
Flt Permitted	0.991				0.104	
Satd. Flow (perm)	1420	0	3310	0	167	3195
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	51		1			
Link Speed (k/h)	50		50			50
Link Distance (m)	196.2		531.3			401.7
Travel Time (s)	14.1		38.3			28.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	40%	13%	9%	0%	18%	13%
Adj. Flow (vph)	21	90	1708	8	36	633
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	0	1716	0	36	633
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (m)	2.0		10.0		2.0	10.0
Trailing Detector (m)	0.0		0.0		0.0	0.0
Detector 1 Position(m)	0.0		0.0		0.0	0.0
Detector 1 Size(m)	2.0		0.6		2.0	0.6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	25.0		95.0		95.0	95.0
Total Split (%)	20.8%		79.2%		79.2%	79.2%
Maximum Green (s)	20.0		90.0		90.0	90.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		Min	Min
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	9.0		51.1		51.1	51.1
Actuated g/C Ratio	0.14		0.78		0.78	0.78
v/c Ratio	0.47		0.67		0.28	0.26
Control Delay	25.0		7.0		10.5	3.6
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	25.0		7.0		10.5	3.6
LOS	C		A		B	A
Approach Delay	25.0		7.0			3.9
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 65.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Caron & David



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	901	41	20	2582	120	14
Future Volume (vph)	901	41	20	2582	120	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3438	1524	1703	3574	1770	1346
Flt Permitted			0.242		0.950	
Satd. Flow (perm)	3438	1524	434	3574	1770	1346
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45				15
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	6%	6%	1%	2%	20%
Adj. Flow (vph)	979	45	22	2807	130	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	979	45	22	2807	130	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	85.5	85.5	11.2	96.7	23.3	23.3
Total Split (%)	71.3%	71.3%	9.3%	80.6%	19.4%	19.4%
Maximum Green (s)	79.3	79.3	5.0	90.5	18.1	18.1
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	83.8	83.8	90.5	90.5	18.1	18.1
Actuated g/C Ratio	0.70	0.70	0.75	0.75	0.15	0.15
v/c Ratio	0.41	0.04	0.06	1.04	0.49	0.07
Control Delay	8.8	2.1	4.0	45.5	53.7	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	2.1	4.0	45.5	53.7	19.9
LOS	A	A	A	D	D	B
Approach Delay	8.5			45.2	50.2	
Approach LOS	A			D	D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 36.0		Intersection LOS: D	
Intersection Capacity Utilization 87.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17



Lanes, Volumes, Timings
17: St-Jean & Laurier

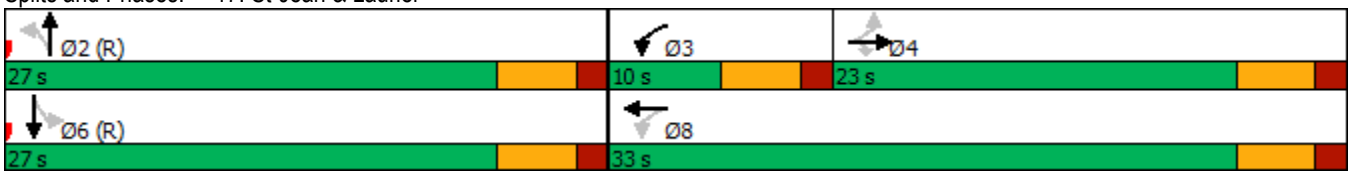
Ultimate Analysis AM
10/22/2018

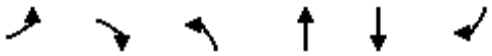
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	170	153	72	260	8	360	15	163	2	5	11
Future Volume (vph)	6	170	153	72	260	8	360	15	163	2	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997			0.862			0.894	
Flt Protected		0.998			0.990		0.950			0.950		
Satd. Flow (prot)	0	1843	1568	0	1864	0	1719	1426	0	1805	1604	0
Flt Permitted		0.983			0.902		0.746			0.636		
Satd. Flow (perm)	0	1815	1568	0	1698	0	1350	1426	0	1208	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166		3			177			12	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	3%	3%	0%	0%	5%	13%	15%	0%	20%	0%
Adj. Flow (vph)	7	185	166	78	283	9	391	16	177	2	5	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	192	166	0	370	0	391	193	0	2	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	23.0	23.0	23.0	10.0	33.0		27.0	27.0		27.0	27.0	
Total Split (%)	38.3%	38.3%	38.3%	16.7%	55.0%		45.0%	45.0%		45.0%	45.0%	
Maximum Green (s)	18.0	18.0	18.0	5.0	28.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		18.0	18.0		28.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.30	0.30		0.47		0.37	0.37		0.37	0.37	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.35	0.28		0.46		0.79	0.30		0.00	0.03	
Control Delay		18.7	4.7		12.9		31.5	4.6		12.0	8.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		18.7	4.7		12.9		31.5	4.6		12.0	8.3	
LOS		B	A		B		C	A		B	A	
Approach Delay		12.2			12.9			22.6			8.7	
Approach LOS		B			B			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	85	84	102	1557	542	56
Future Volume (vph)	85	84	102	1557	542	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.933				0.986	
Flt Protected	0.975		0.950			
Satd. Flow (prot)	1608	0	1597	3312	3526	0
Flt Permitted	0.975		0.402			
Satd. Flow (perm)	1608	0	676	3312	3526	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	37				24	
Link Speed (k/h)	50			50	50	
Link Distance (m)	1482.6			401.7	1080.0	
Travel Time (s)	106.7			28.9	77.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	13%	13%	9%	0%	10%
Adj. Flow (vph)	92	91	111	1692	589	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	0	111	1692	650	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (m)	2.0		2.0	10.0	10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	
Detector 1 Size(m)	2.0		2.0	0.6	0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	23.0		23.0	23.0	23.0	
Total Split (s)	28.0		92.0	92.0	92.0	
Total Split (%)	23.3%		76.7%	76.7%	76.7%	
Maximum Green (s)	23.0		87.0	87.0	87.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	12.7		49.7	49.7	49.7	
Actuated g/C Ratio	0.17		0.68	0.68	0.68	
v/c Ratio	0.59		0.24	0.75	0.27	
Control Delay	31.9		6.5	10.4	4.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	31.9		6.5	10.4	4.8	
LOS	C		A	B	A	
Approach Delay	31.9			10.2	4.8	
Approach LOS	C			B	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 72.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 61.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 21: Caron & Dr. Corbeil



Lanes, Volumes, Timings
33: Caron & Street No.1

Ultimate Analysis AM
10/22/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	76	137	74	238	331	309	1148	23	104	459	38
Future Volume (vph)	100	76	137	74	238	331	309	1148	23	104	459	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		125.0	30.0		120.0	120.0		0.0	120.0		40.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3529	0	1770	3539	1583
Flt Permitted	0.246			0.703			0.376			0.128		
Satd. Flow (perm)	458	1863	1583	1310	1863	1583	700	3529	0	238	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			149			215		2				155
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		289.2			367.4			197.4			531.3	
Travel Time (s)		20.8			26.5			14.2			38.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	83	149	80	259	360	336	1248	25	113	499	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	83	149	80	259	360	336	1273	0	113	499	41
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0		10.0	23.0	23.0
Total Split (s)	11.0	44.0	44.0	33.0	33.0	33.0	27.0	61.0		15.0	49.0	49.0
Total Split (%)	9.2%	36.7%	36.7%	27.5%	27.5%	27.5%	22.5%	50.8%		12.5%	40.8%	40.8%
Maximum Green (s)	6.0	39.0	39.0	28.0	28.0	28.0	22.0	56.0		10.0	44.0	44.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	0
Act Effct Green (s)	31.8	31.8	31.8	20.8	20.8	20.8	69.2	56.2		57.1	48.8	48.8
Actuated g/C Ratio	0.29	0.29	0.29	0.19	0.19	0.19	0.62	0.50		0.51	0.44	0.44
v/c Ratio	0.54	0.16	0.27	0.33	0.75	0.77	0.57	0.71		0.48	0.32	0.05
Control Delay	41.0	30.2	6.0	42.7	56.5	28.2	14.7	25.1		19.9	22.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.0	30.2	6.0	42.7	56.5	28.2	14.7	25.1		19.9	22.8	0.1
LOS	D	C	A	D	E	C	B	C		B	C	A
Approach Delay		23.0			40.4			23.0			20.9	
Approach LOS		C			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 111.3			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 73.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 33: Caron & Street No.1



Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	33	36	14	31	13	22	540	30	16	219	4
Future Vol, veh/h	4	33	36	14	31	13	22	540	30	16	219	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	6	0	14	6	0	5	3	10	0	1	25
Mvmt Flow	4	36	39	15	34	14	24	587	33	17	238	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.8	10.2	27.3	11.2
HCM LOS	A	B	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	5%	24%	7%
Vol Thru, %	91%	45%	53%	92%
Vol Right, %	5%	49%	22%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	592	73	58	239
LT Vol	22	4	14	16
Through Vol	540	33	31	219
RT Vol	30	36	13	4
Lane Flow Rate	643	79	63	260
Geometry Grp	1	1	1	1
Degree of Util (X)	0.838	0.131	0.112	0.372
Departure Headway (Hd)	4.687	5.937	6.413	5.156
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	759	606	561	701
Service Time	2.783	3.951	4.429	3.168
HCM Lane V/C Ratio	0.847	0.13	0.112	0.371
HCM Control Delay	27.3	9.8	10.2	11.2
HCM Lane LOS	D	A	B	B
HCM 95th-tile Q	9.5	0.4	0.4	1.7

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	10	56	7	63	9	213	76	3	6	42	75
Future Vol, veh/h	11	10	56	7	63	9	213	76	3	6	42	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	22	0	0	0	0	0	2	0	33	0	4	0
Mvmt Flow	12	11	61	8	68	10	232	83	3	7	46	82
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.5	8.9	10.9	8.2
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	73%	100%	0%	9%	5%
Vol Thru, %	26%	0%	15%	80%	34%
Vol Right, %	1%	0%	85%	11%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	11	66	79	123
LT Vol	213	11	0	7	6
Through Vol	76	0	10	63	42
RT Vol	3	0	56	9	75
Lane Flow Rate	317	12	72	86	134
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.41	0.022	0.1	0.122	0.161
Departure Headway (Hd)	4.65	6.526	5.042	5.112	4.346
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	771	547	707	698	822
Service Time	2.687	4.281	2.797	3.167	2.392
HCM Lane V/C Ratio	0.411	0.022	0.102	0.123	0.163
HCM Control Delay	10.9	9.4	8.4	8.9	8.2
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	2	0.1	0.3	0.4	0.6

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	13	0	24	30	208	0	5	7	28	20	12
Future Vol, veh/h	15	13	0	24	30	208	0	5	7	28	20	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	6	0	13
Mvmt Flow	16	14	0	26	33	226	0	5	8	30	22	13
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8	8.5	7.6	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	58%	0%
Vol Thru, %	100%	19%	0%	100%	0%	13%	42%	0%
Vol Right, %	0%	81%	0%	0%	0%	87%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	9	15	13	24	238	48	12
LT Vol	0	0	15	0	24	0	28	0
Through Vol	3	2	0	13	0	30	20	0
RT Vol	0	7	0	0	0	208	0	12
Lane Flow Rate	4	9	16	14	26	259	52	13
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.005	0.012	0.025	0.019	0.037	0.29	0.081	0.016
Departure Headway (Hd)	5.267	4.699	5.419	4.917	5.148	4.035	5.601	4.502
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	683	766	664	732	687	874	643	799
Service Time	2.971	2.402	3.123	2.621	2.945	1.831	3.302	2.204
HCM Lane V/C Ratio	0.006	0.012	0.024	0.019	0.038	0.296	0.081	0.016
HCM Control Delay	8	7.5	8.3	7.7	8.1	8.5	8.8	7.3
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0.1	0.1	1.2	0.3	0

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	32	6	51	254	46	7	3	29	17	1	1
Future Vol, veh/h	9	32	6	51	254	46	7	3	29	17	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	22	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	10	35	7	55	276	50	8	3	32	18	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	326	0	0	42	0	0	471	495	39	487	473	301
Stage 1	-	-	-	-	-	-	59	59	-	411	411	-
Stage 2	-	-	-	-	-	-	412	436	-	76	62	-
Critical Hdwy	4.32	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.398	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1129	-	-	1580	-	-	506	479	1038	494	493	743
Stage 1	-	-	-	-	-	-	958	850	-	622	598	-
Stage 2	-	-	-	-	-	-	621	583	-	938	847	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1129	-	-	1580	-	-	488	458	1038	460	471	743
Mov Cap-2 Maneuver	-	-	-	-	-	-	488	458	-	460	471	-
Stage 1	-	-	-	-	-	-	949	842	-	616	577	-
Stage 2	-	-	-	-	-	-	597	563	-	898	839	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	1.1	9.8	13
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	1129	-	-	1580	-	-	470
HCM Lane V/C Ratio	0.053	0.009	-	-	0.035	-	-	0.044
HCM Control Delay (s)	9.8	8.2	-	-	7.4	-	-	13
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	225	633	82	26	91
Future Vol, veh/h	32	225	633	82	26	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	245	688	89	28	99

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	777	0	-	0	1048	733
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	315	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	839	-	-	-	252	421
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	740	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	839	-	-	-	240	421
Mov Cap-2 Maneuver	-	-	-	-	240	-
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	740	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	20.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	839	-	-	-	361
HCM Lane V/C Ratio	0.041	-	-	-	0.352
HCM Control Delay (s)	9.5	0	-	-	20.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.6

LANE SUMMARY

Site: Poupart / Site Access AM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	260	3.0	678	0.383	100	12.4	LOS B	1.8	13.6	Full	500	0.0	0.0
Approach	260	3.0		0.383		12.4	LOS B	1.8	13.6				
East: St-Jean													
Lane 1	746	3.0	970	0.769	100	9.6	LOS A	9.5	74.2	Full	500	0.0	0.0
Lane 2[d]	746	3.0	970	0.769	100	9.5	LOS A	9.5	74.2	Full	500	0.0	0.0
Approach	1491	3.0		0.769		9.5	LOS A	9.5	74.2				
North: Site Access													
Lane 1[d]	227	3.0	275	0.825	100	30.8	LOS C	5.7	44.4	Full	500	0.0	0.0
Approach	227	3.0		0.825		30.8	LOS C	5.7	44.4				
West: Poupart													
Lane 1	301	3.0	1158	0.259	100	5.6	LOS A	1.5	11.5	Full	500	0.0	0.0
Lane 2[d]	301	3.0	1158	0.259	100	4.5	LOS A	1.5	11.5	Full	500	0.0	0.0
Approach	601	3.0		0.259		5.1	LOS A	1.5	11.5				
Intersection	2579	3.0		0.825		10.6	LOS B	9.5	74.2				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: Poupart Extension AM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Poupart													
Lane 1	927	3.0	1203	0.770	100	4.6	LOS A	10.8	84.5	Full	500	0.0	0.0
Lane 2[d]	927	3.0	1203	0.770	100	4.6	LOS A	10.8	84.5	Full	500	0.0	0.0
Approach	1854	3.0		0.770		4.6	LOS A	10.8	84.5				
North: Poupart													
Lane 1[d]	136	3.0	379	0.358	100	18.7	LOS B	1.6	12.6	Full	500	0.0	0.0
Approach	136	3.0		0.358		18.7	LOS B	1.6	12.6				
West: Poupart Extension													
Lane 1	255	3.0	1091	0.234	100	5.3	LOS A	1.3	10.0	Full	500	0.0	0.0
Lane 2[d]	255	3.0	1091	0.234	100	4.8	LOS A	1.3	10.0	Full	500	0.0	0.0
Approach	510	3.0		0.234		5.1	LOS A	1.3	10.0				
Intersection	2500	3.0		0.770		5.5	LOS A	10.8	84.5				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: St-Jean / Dr Corbeil AM (Ultimate)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	425	3.0	992	0.428	100	5.5	LOS A	3.1	24.3	Full	500	0.0	0.0
Approach	425	3.0		0.428		5.5	LOS A	3.1	24.3				
East: Dr. Corbeil													
Lane 1[d]	390	3.0	767	0.509	100	10.1	LOS B	3.8	29.6	Full	500	0.0	0.0
Approach	390	3.0		0.509		10.1	LOS B	3.8	29.6				
North: St-Jean													
Lane 1[d]	287	3.0	968	0.296	100	7.3	LOS A	2.0	15.2	Full	500	0.0	0.0
Approach	287	3.0		0.296		7.3	LOS A	2.0	15.2				
Intersection	1102	3.0		0.509		7.6	LOS A	3.8	29.6				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Morris Village Access AM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Morris Village Access													
Lane 1[d]	887	3.0	1167	0.760	100	14.7	LOS B	10.2	79.7	Full	500	0.0	0.0
Lane 2	145	3.0	1167	0.124	100	4.8	LOS A	0.7	5.1	Short	60	0.0	NA
Approach	1032	3.0		0.760		13.3	LOS B	10.2	79.7				
East: St-Jean													
Lane 1	167	3.0	444	0.377	100	13.8	LOS B	2.7	21.4	Full	500	0.0	0.0
Lane 2[d]	204	3.0	542	0.377	100	10.1	LOS B	2.9	23.0	Short	60	0.0	NA
Approach	372	3.0		0.377		11.8	LOS B	2.9	23.0				
West: St-Jean													
Lane 1[d]	252	3.0	1357	0.186	100	3.6	LOS A	1.3	9.8	Full	500	0.0	0.0
Lane 2	297	3.0	1357	0.219	100	3.9	LOS A	1.5	12.0	Full	500	0.0	0.0
Approach	549	3.0		0.219		3.8	LOS A	1.5	12.0				
Intersection	1952	3.0		0.760		10.3	LOS B	10.2	79.7				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Poupart AM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	515	3.0	904	0.570	100	13.0	LOS B	4.2	32.4	Full	500	0.0	0.0
Lane 2	227	3.0	937	0.243	100	5.5	LOS A	1.2	9.2	Short	60	0.0	NA
Approach	742	3.0		0.570		10.7	LOS B	4.2	32.4				
East: St-Jean													
Lane 1	604	3.0	738	0.818	100	20.0	LOS C	11.1	86.3	Full	500	0.0	0.0
Lane 2[d]	604	3.0	738	0.818	100	16.6	LOS B	11.1	86.3	Full	500	0.0	0.0
Approach	1208	3.0		0.818		18.3	LOS B	11.1	86.3				
North: Site Access													
Lane 1[d]	249	3.0	253	0.983	100	62.1	LOS E	10.8	83.8	Full	500	0.0	0.0
Approach	249	3.0		0.983		62.1	LOS E	10.8	83.8				
West: Poupart													
Lane 1	278	3.0	801	0.347	100	7.9	LOS A	2.1	16.2	Full	500	0.0	0.0
Lane 2[d]	278	3.0	801	0.347	100	6.9	LOS A	2.1	16.2	Full	500	0.0	0.0
Approach	557	3.0		0.347		7.4	LOS A	2.1	16.2				
Intersection	2755	3.0		0.983		18.0	LOS B	11.1	86.3				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	66	1137	19	96	1718
Future Volume (vph)	13	66	1137	19	96	1718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	30.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.887		0.997			
Flt Protected	0.992				0.950	
Satd. Flow (prot)	1672	0	3564	0	1671	3574
Flt Permitted	0.992				0.204	
Satd. Flow (perm)	1672	0	3564	0	359	3574
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	72		4			
Link Speed (k/h)	50		50			50
Link Distance (m)	196.2		558.9			401.7
Travel Time (s)	14.1		40.2			28.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	8%	1%
Adj. Flow (vph)	14	72	1236	21	104	1867
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	1257	0	104	1867
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.6		3.6			3.6
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.8		4.8			4.8
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15		15	25	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (m)	2.0		10.0		2.0	10.0
Trailing Detector (m)	0.0		0.0		0.0	0.0
Detector 1 Position(m)	0.0		0.0		0.0	0.0
Detector 1 Size(m)	2.0		0.6		2.0	0.6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(m)			9.4			9.4
Detector 2 Size(m)			0.6			0.6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	23.0		23.0		23.0	23.0
Total Split (s)	24.0		96.0		96.0	96.0
Total Split (%)	20.0%		80.0%		80.0%	80.0%
Maximum Green (s)	19.0		91.0		91.0	91.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.5		1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		Min	Min
Walk Time (s)	7.0		7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	7.1		50.8		50.8	50.8
Actuated g/C Ratio	0.11		0.80		0.80	0.80
v/c Ratio	0.34		0.44		0.36	0.65
Control Delay	15.4		3.5		7.4	5.4
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	15.4		3.5		7.4	5.4
LOS	B		A		A	A
Approach Delay	15.4		3.5			5.5
Approach LOS	B		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 63.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 5.0		Intersection LOS: A	
Intersection Capacity Utilization 60.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Caron & David





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2691	208	72	1495	73	112
Future Volume (vph)	2691	208	72	1495	73	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		85.0	125.0		0.0	0.0
Storage Lanes		1	1		1	1
Taper Length (m)			70.0		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3505	1599	1752	3539	1805	1615
Flt Permitted			0.047		0.950	
Satd. Flow (perm)	3505	1599	87	3539	1805	1615
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		149				67
Link Speed (k/h)	50			50	50	
Link Distance (m)	470.1			337.0	115.6	
Travel Time (s)	33.8			24.3	8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	3%	2%	0%	0%
Adj. Flow (vph)	2925	226	78	1625	79	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2925	226	78	1625	79	122
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	10.0	2.0	2.0	10.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	0.6	2.0	2.0	0.6	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Perm	Perm
Protected Phases	4		3	8		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Permitted Phases		4	8		2	2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2	11.2	27.2	23.2	23.2
Total Split (s)	85.0	85.0	11.2	96.2	23.8	23.8
Total Split (%)	70.8%	70.8%	9.3%	80.2%	19.8%	19.8%
Maximum Green (s)	78.8	78.8	5.0	90.0	18.6	18.6
Yellow Time (s)	4.6	4.6	4.6	4.6	3.3	3.3
All-Red Time (s)	1.6	1.6	1.6	1.6	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	5.2	5.2
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		14.0	9.0	9.0
Pedestrian Calls (#/hr)	0	0		0	0	0
Act Effct Green (s)	78.9	78.9	87.7	87.7	18.6	18.6
Actuated g/C Ratio	0.67	0.67	0.74	0.74	0.16	0.16
v/c Ratio	1.25	0.20	0.58	0.62	0.28	0.39
Control Delay	136.2	3.3	30.4	8.3	47.6	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	136.2	3.3	30.4	8.3	47.6	26.1
LOS	F	A	C	A	D	C
Approach Delay	126.7			9.3	34.6	
Approach LOS	F			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 117.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay: 83.5		Intersection LOS: F	
Intersection Capacity Utilization 90.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 12: Carmen Bergeron & CR 17

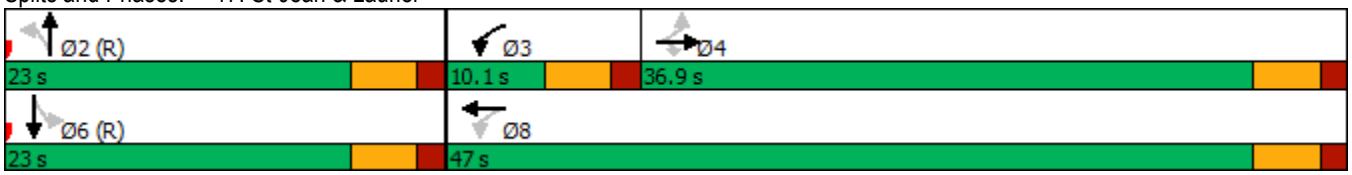


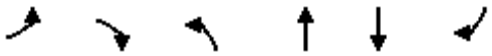
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	406	394	162	341	14	257	13	153	20	11	17
Future Volume (vph)	9	406	394	162	341	14	257	13	153	20	11	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		10.0	0.0		0.0	20.0		0.0	10.0		0.0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			10.0			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.862			0.910	
Flt Protected		0.999			0.985		0.950			0.950		
Satd. Flow (prot)	0	1898	1568	0	1861	0	1752	1638	0	1805	1729	0
Flt Permitted		0.987			0.518		0.738			0.616		
Satd. Flow (perm)	0	1875	1568	0	978	0	1361	1638	0	1170	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		4			166			18	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		549.0			622.7			441.7			187.4	
Travel Time (s)		39.5			44.8			31.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	7%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	441	428	176	371	15	279	14	166	22	12	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	451	428	0	562	0	279	180	0	22	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	23.0	23.0	23.0	10.1	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	36.9	36.9	36.9	10.1	47.0		23.0	23.0		23.0	23.0	
Total Split (%)	52.7%	52.7%	52.7%	14.4%	67.1%		32.9%	32.9%		32.9%	32.9%	
Maximum Green (s)	31.9	31.9	31.9	5.1	42.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0		0	0	
Act Effct Green (s)		31.9	31.9		42.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio		0.46	0.46		0.60		0.26	0.26		0.26	0.26	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.53	0.52		0.86		0.80	0.33		0.07	0.07	
Control Delay		16.5	9.4		26.5		44.0	6.6		20.6	12.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		16.5	9.4		26.5		44.0	6.6		20.6	12.8	
LOS		B	A		C		D	A		C	B	
Approach Delay		13.0			26.5			29.3			16.1	
Approach LOS		B			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 70			
Control Type: Pretimed			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 83.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: St-Jean & Laurier





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	107	147	114	1106	1691	110
Future Volume (vph)	107	147	114	1106	1691	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.922				0.991	
Flt Protected	0.979		0.950			
Satd. Flow (prot)	1715	0	1805	3610	3578	0
Flt Permitted	0.979		0.058			
Satd. Flow (perm)	1715	0	110	3610	3578	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	51				10	
Link Speed (k/h)	50			50	50	
Link Distance (m)	1482.6			401.7	1080.0	
Travel Time (s)	106.7			28.9	77.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	116	160	124	1202	1838	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	276	0	124	1202	1958	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25			15
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (m)	2.0		2.0	10.0	10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	
Detector 1 Size(m)	2.0		2.0	0.6	0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(m)				9.4	9.4	
Detector 2 Size(m)				0.6	0.6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm		pm+pt	NA	NA	
Protected Phases			5	2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4		2			
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	23.0		10.0	23.0	23.0	
Total Split (s)	28.0		13.0	92.0	79.0	
Total Split (%)	23.3%		10.8%	76.7%	65.8%	
Maximum Green (s)	23.0		8.0	87.0	74.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.5		1.5	1.5	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	18.8		77.2	77.2	64.0	
Actuated g/C Ratio	0.18		0.73	0.73	0.60	
v/c Ratio	0.80		0.59	0.46	0.91	
Control Delay	53.8		29.5	6.8	26.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	53.8		29.5	6.8	26.0	
LOS	D		C	A	C	
Approach Delay	53.8			8.9	26.0	
Approach LOS	D			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 106.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 21: Caron & Dr. Corbeil



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	250	341	48	157	217	242	870	78	349	1275	108
Future Volume (vph)	69	250	341	48	157	217	242	870	78	349	1275	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		125.0	30.0		120.0	120.0		0.0	120.0		40.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3497	0	1770	3539	1583
Flt Permitted	0.365			0.592			0.105			0.119		
Satd. Flow (perm)	680	1863	1583	1103	1863	1583	196	3497	0	222	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			284			236		10				131
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		179.3			276.0			177.7			558.9	
Travel Time (s)		12.9			19.9			12.8			40.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	272	371	52	171	236	263	946	85	379	1386	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	272	371	52	171	236	263	1031	0	379	1386	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0	10.0	23.0		10.0	23.0	23.0
Total Split (s)	10.0	33.0	33.0	23.0	23.0	23.0	18.0	41.0		26.0	49.0	49.0
Total Split (%)	10.0%	33.0%	33.0%	23.0%	23.0%	23.0%	18.0%	41.0%		26.0%	49.0%	49.0%
Maximum Green (s)	5.0	28.0	28.0	18.0	18.0	18.0	13.0	36.0		21.0	44.0	44.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	0
Act Effct Green (s)	22.0	22.0	22.0	14.3	14.3	14.3	50.3	38.0		61.1	44.3	44.3
Actuated g/C Ratio	0.23	0.23	0.23	0.15	0.15	0.15	0.54	0.41		0.65	0.47	0.47
v/c Ratio	0.34	0.62	0.63	0.31	0.60	0.54	0.84	0.72		0.84	0.83	0.14
Control Delay	32.5	38.6	13.3	41.7	47.5	9.8	49.2	28.5		38.0	28.1	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	32.5	38.6	13.3	41.7	47.5	9.8	49.2	28.5		38.0	28.1	2.9
LOS	C	D	B	D	D	A	D	C		D	C	A
Approach Delay		24.9			27.5			32.7			28.5	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 93.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 29.1		Intersection LOS: C	
Intersection Capacity Utilization 82.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 33: Caron & Street No.1



Intersection	
Intersection Delay, s/veh	46.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	36	48	31	43	17	59	410	28	33	578	9
Future Vol, veh/h	16	36	48	31	43	17	59	410	28	33	578	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	3	2	0	0	0	2	1	0	0	1	0
Mvmt Flow	17	39	52	34	47	18	64	446	30	36	628	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.4	12.4	33.7	66.7
HCM LOS	B	B	D	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	16%	34%	5%
Vol Thru, %	82%	36%	47%	93%
Vol Right, %	6%	48%	19%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	497	100	91	620
LT Vol	59	16	31	33
Through Vol	410	36	43	578
RT Vol	28	48	17	9
Lane Flow Rate	540	109	99	674
Geometry Grp	1	1	1	1
Degree of Util (X)	0.856	0.217	0.201	1.03
Departure Headway (Hd)	5.703	7.331	7.485	5.504
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	627	492	483	654
Service Time	3.802	5.331	5.485	3.596
HCM Lane V/C Ratio	0.861	0.222	0.205	1.031
HCM Control Delay	33.7	12.4	12.4	66.7
HCM Lane LOS	D	B	B	F
HCM 95th-tile Q	9.6	0.8	0.7	17

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	123	55	232	9	24	17	121	79	14	22	71	99
Future Vol, veh/h	123	55	232	9	24	17	121	79	14	22	71	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	11	0	0	0	0	0	0	2	0
Mvmt Flow	134	60	252	10	26	18	132	86	15	24	77	108
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	11.8	9.6	11.7	10.6
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	57%	100%	0%	18%	11%
Vol Thru, %	37%	0%	19%	48%	37%
Vol Right, %	7%	0%	81%	34%	52%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	123	287	50	192
LT Vol	121	123	0	9	22
Through Vol	79	0	55	24	71
RT Vol	14	0	232	17	99
Lane Flow Rate	233	134	312	54	209
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.36	0.234	0.453	0.089	0.305
Departure Headway (Hd)	5.567	6.304	5.225	5.923	5.265
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	647	571	689	604	682
Service Time	3.6	4.033	2.954	3.969	3.3
HCM Lane V/C Ratio	0.36	0.235	0.453	0.089	0.306
HCM Control Delay	11.7	11	12.2	9.6	10.6
HCM Lane LOS	B	B	B	A	B
HCM 95th-tile Q	1.6	0.9	2.4	0.3	1.3

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	42	3	18	29	125	0	49	31	51	68	21
Future Vol, veh/h	17	42	3	18	29	125	0	49	31	51	68	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	33	0	0	0	0	2	0	0	1	19
Mvmt Flow	18	46	3	20	32	136	0	53	34	55	74	23
Number of Lanes	1	1	0	1	1	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.5	8.6	8.1	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%	43%	0%
Vol Thru, %	100%	35%	0%	93%	0%	19%	57%	0%
Vol Right, %	0%	65%	0%	7%	0%	81%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	47	17	45	18	154	119	21
LT Vol	0	0	17	0	18	0	51	0
Through Vol	33	16	0	42	0	29	68	0
RT Vol	0	31	0	3	0	125	0	21
Lane Flow Rate	36	51	18	49	20	167	129	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.052	0.069	0.03	0.071	0.031	0.214	0.194	0.029
Departure Headway (Hd)	5.309	4.813	5.792	5.242	5.685	4.612	5.413	4.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	673	742	618	682	630	778	662	792
Service Time	3.051	2.555	3.531	2.981	3.417	2.344	3.152	2.25
HCM Lane V/C Ratio	0.053	0.069	0.029	0.072	0.032	0.215	0.195	0.029
HCM Control Delay	8.3	7.9	8.7	8.4	8.6	8.6	9.5	7.4
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1	0.2	0.1	0.8	0.7	0.1

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	202	22	60	94	91	25	13	102	106	13	53
Future Vol, veh/h	66	202	22	60	94	91	25	13	102	106	13	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	72	220	24	65	102	99	27	14	111	115	14	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	0	244	0	0	694	707	232	721	670	152
Stage 1	-	-	-	-	-	-	376	376	-	282	282	-
Stage 2	-	-	-	-	-	-	318	331	-	439	388	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1383	-	-	1334	-	-	360	363	812	345	381	900
Stage 1	-	-	-	-	-	-	649	620	-	729	681	-
Stage 2	-	-	-	-	-	-	698	649	-	601	612	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1383	-	-	1334	-	-	302	327	812	267	344	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	327	-	267	344	-
Stage 1	-	-	-	-	-	-	615	588	-	691	648	-
Stage 2	-	-	-	-	-	-	608	617	-	480	580	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	1.9	13.7	26.7
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	564	1383	-	-	1334	-	-	348
HCM Lane V/C Ratio	0.27	0.052	-	-	0.049	-	-	0.537
HCM Control Delay (s)	13.7	7.7	-	-	7.8	-	-	26.7
HCM Lane LOS	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0.2	-	-	3

Intersection	
Int Delay, s/veh	11.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	97	675	439	55	87	61
Future Vol, veh/h	97	675	439	55	87	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	734	477	60	95	66

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	537	0	-	0	1451	507
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	944	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1031	-	-	-	144	566
Stage 1	-	-	-	-	605	-
Stage 2	-	-	-	-	378	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1031	-	-	-	119	566
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	378	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	99.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1031	-	-	-	176
HCM Lane V/C Ratio	0.102	-	-	-	0.914
HCM Control Delay (s)	8.9	0	-	-	99.9
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	6.9

LANE SUMMARY

Site: Poupart / Site Access PM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	173	3.0	225	0.767	100	33.9	LOS C	4.7	36.4	Full	500	0.0	0.0
Approach	173	3.0		0.767		33.9	LOS C	4.7	36.4				
East: St-Jean													
Lane 1	540	3.0	917	0.589	100	8.2	LOS A	4.7	36.7	Full	500	0.0	0.0
Lane 2[d]	540	3.0	917	0.589	100	7.6	LOS A	4.7	36.7	Full	500	0.0	0.0
Approach	1079	3.0		0.589		7.9	LOS A	4.7	36.7				
North: Site Access													
Lane 1[d]	150	3.0	416	0.360	100	11.5	LOS B	1.7	12.9	Full	500	0.0	0.0
Approach	150	3.0		0.360		11.5	LOS B	1.7	12.9				
West: Poupart													
Lane 1	1004	3.0	1138	0.882	100	7.2	LOS A	16.2	126.6	Full	500	0.0	0.0
Lane 2[d]	1004	3.0	1138	0.882	100	6.1	LOS A	16.2	126.6	Full	500	0.0	0.0
Approach	2009	3.0		0.882		6.6	LOS A	16.2	126.6				
Intersection	3411	3.0		0.882		8.6	LOS A	16.2	126.6				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: Poupart Extension PM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Poupart													
Lane 1	619	3.0	1197	0.517	100	4.4	LOS A	4.7	36.7	Full	500	0.0	0.0
Lane 2[d]	619	3.0	1197	0.517	100	4.4	LOS A	4.7	36.7	Full	500	0.0	0.0
Approach	1238	3.0		0.517		4.4	LOS A	4.7	36.7				
North: Poupart													
Lane 1[d]	382	3.0	533	0.715	100	21.2	LOS C	5.0	39.3	Full	500	0.0	0.0
Approach	382	3.0		0.715		21.2	LOS C	5.0	39.3				
West: Poupart Extension													
Lane 1	821	3.0	871	0.943	100	21.5	LOS C	21.6	168.7	Full	500	0.0	0.0
Lane 2[d]	821	3.0	871	0.943	100	21.3	LOS C	21.6	168.7	Full	500	0.0	0.0
Approach	1642	3.0		0.943		21.4	LOS C	21.6	168.7				
Intersection	3262	3.0		0.943		14.9	LOS B	21.6	168.7				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

LANE SUMMARY

Site: St-Jean / Dr Corbeil PM (Ultimate)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	518	3.0	753	0.689	100	11.4	LOS B	7.7	59.8	Full	500	0.0	0.0
Approach	518	3.0		0.689		11.4	LOS B	7.7	59.8				
East: Dr. Corbeil													
Lane 1[d]	311	3.0	735	0.423	100	9.5	LOS A	2.9	22.6	Full	500	0.0	0.0
Approach	311	3.0		0.423		9.5	LOS A	2.9	22.6				
North: St-Jean													
Lane 1[d]	735	3.0	976	0.753	100	8.9	LOS A	9.7	75.5	Full	500	0.0	0.0
Approach	735	3.0		0.753		8.9	LOS A	9.7	75.5				
Intersection	1564	3.0		0.753		9.9	LOS A	9.7	75.5				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Morris Village Access PM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Morris Village Access													
Lane 1[d]	586	3.0	1009	0.581	100	14.2	LOS B	5.3	41.4	Full	500	0.0	0.0
Lane 2	79	3.0	1009	0.079	100	5.5	LOS A	0.4	3.4	Short	60	0.0	NA
Approach	665	3.0		0.581		13.1	LOS B	5.3	41.4				
East: St-Jean													
Lane 1	225	3.0	703	0.320	100	12.3	LOS B	2.2	16.8	Full	500	0.0	0.0
Lane 2[d]	260	3.0	814	0.320	100	6.9	LOS A	2.3	17.8	Short	60	0.0	NA
Approach	485	3.0		0.320		9.4	LOS A	2.3	17.8				
West: St-Jean													
Lane 1[d]	413	3.0	1225	0.337	100	4.3	LOS A	2.4	19.0	Full	500	0.0	0.0
Lane 2	945	3.0	1225	0.771	100	5.8	LOS A	10.6	82.6	Full	500	0.0	0.0
Approach	1358	3.0		0.771		5.4	LOS A	10.6	82.6				
Intersection	2508	3.0		0.771		8.2	LOS A	10.6	82.6				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

LANE SUMMARY

Site: St-Jean / Poupart PM (Build-out)

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: St-Jean													
Lane 1[d]	477	3.0	471	1.012	100	53.1	LOS F	18.5	144.0	Full	500	0.0	0.0
Lane 2	433	3.0	559	0.774	100	15.1	LOS B	7.0	54.4	Short	60	0.0	NA
Approach	910	3.0		1.012		35.0	LOS D	18.5	144.0				
East: St-Jean													
Lane 1	455	3.0	659	0.691	100	17.6	LOS B	6.9	54.1	Full	500	0.0	0.0
Lane 2[d]	459	3.0	664	0.691	100	13.5	LOS B	7.0	54.3	Full	500	0.0	0.0
Approach	914	3.0		0.691		15.5	LOS B	7.0	54.3				
North: Site Access													
Lane 1[d]	158	3.0	358	0.440	100	14.7	LOS B	2.3	17.6	Full	500	0.0	0.0
Approach	158	3.0		0.440		14.7	LOS B	2.3	17.6				
West: Poupart													
Lane 1	826	3.0	862	0.958	100	25.2	LOS C	23.5	183.3	Full	500	0.0	0.0
Lane 2[d]	826	3.0	862	0.958	100	24.1	LOS C	23.5	183.3	Full	500	0.0	0.0
Approach	1652	3.0		0.958		24.7	LOS C	23.5	183.3				
Intersection	3634	3.0		1.012		24.5	LOS C	23.5	183.3				

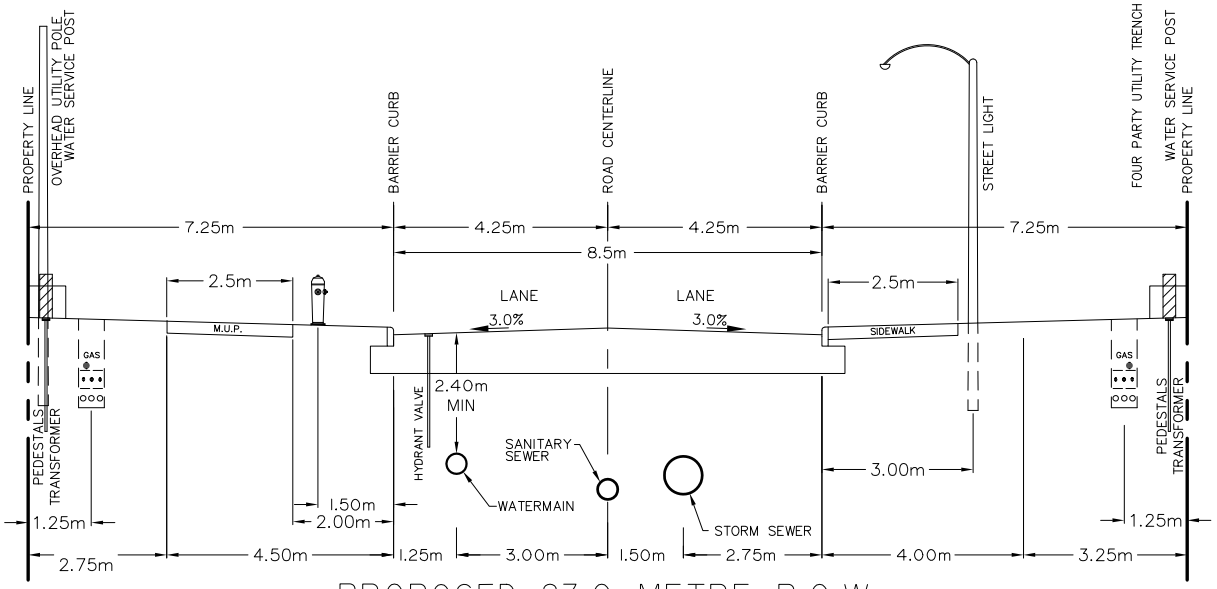
Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Signalised Intersections.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

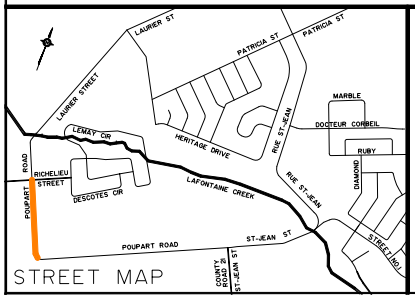
APPENDIX "C"

Typical Cross-Sections

180801-CS1 – Proposed undivided 23.0m R.O.W. (Poupart)
180801-CS2 - Proposed 30.0m divided R.O.W. (Poupart)
180801-CS3 - Proposed 30.0m undivided R.O.W. (St-Jean)
180801-CS4 - Proposed 26.0m undivided R.O.W. (Morris Village)
180801-CS5 - Proposed 26.0m undivided R.O.W. (St-Jean)



PROPOSED 23.0 METRE R.O.W.
POUPART AT WALMART



ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE:
1 : 150
1.5m 0 1.5 3.0 4.5m

CITY OF CLARENCE-ROCKLAND

MORRIS/ROCKLAND
ROAD CROSS-SECTIONS

PLAN

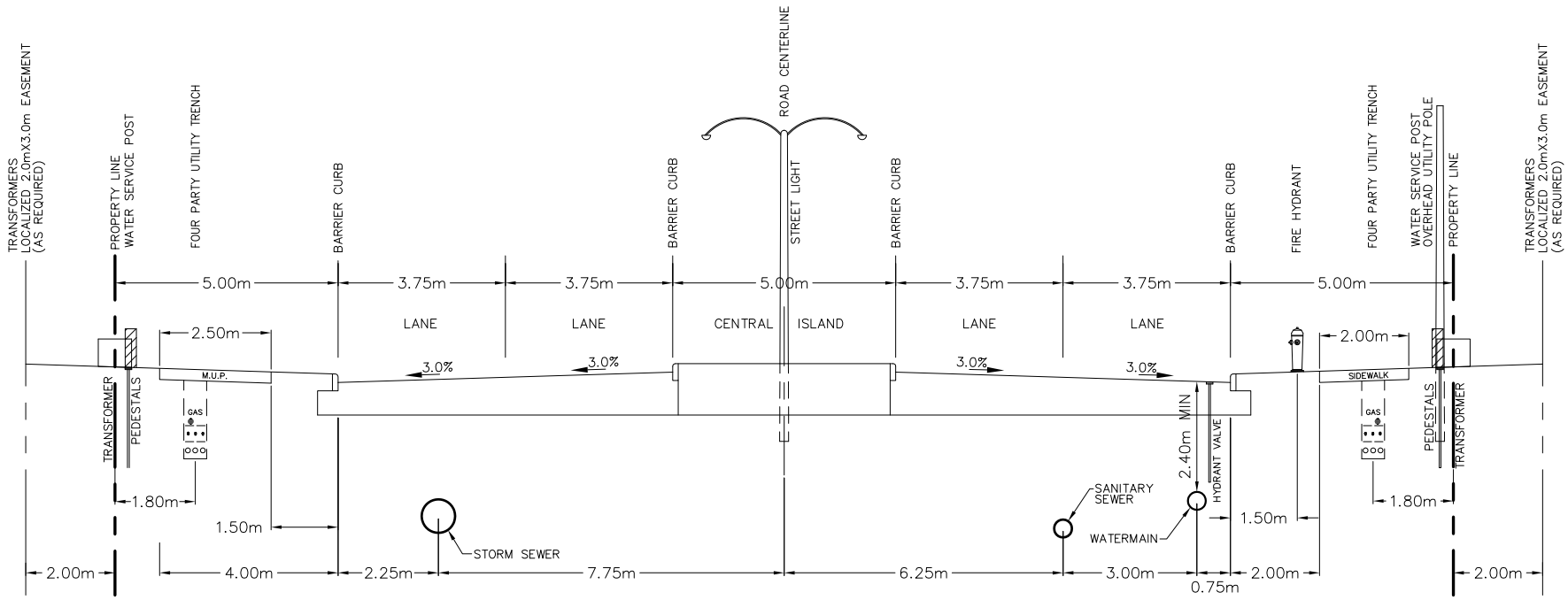
PROPOSED 23.0m R.O.W.
POUPART AT WALMART

CLIENT No.
III

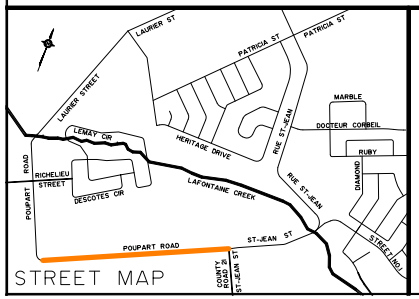
PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-CSI



PROPOSED 30.0 METRE R.O.W.
DIVIDED



ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE:
1 : 150
1.5m 0 1.5 3.0 4.5m

CITY OF CLARENCE-ROCKLAND

MORRIS/ROCKLAND
ROAD CROSS-SECTIONS

PLAN

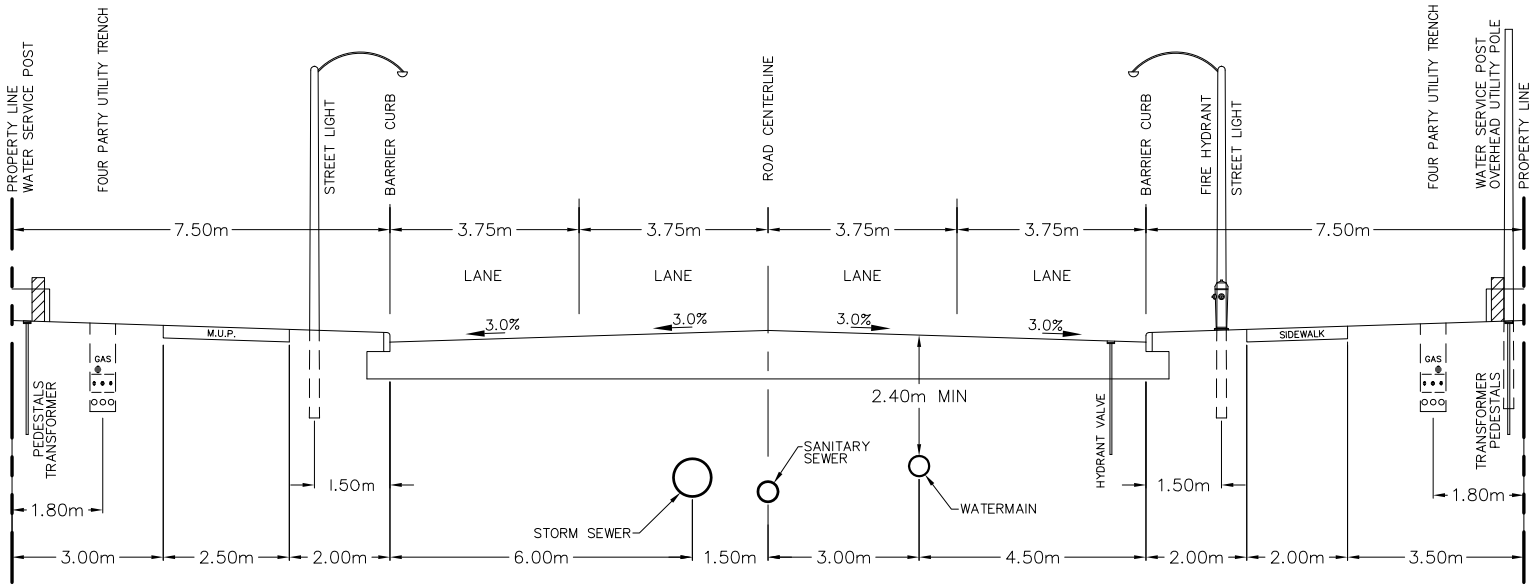
PROPOSED 30.0m R.O.W.
DIVIDED STREET

CLIENT No.
III

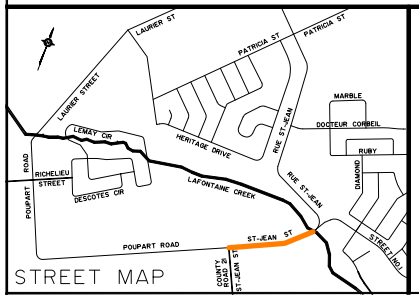
PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-CS2



PROPOSED 30.0 METRE R.O.W. - UNDIVIDED
ST-JEAN - HILL



STREET MAP

ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE:
1 : 150
1.5m 0 1.5 3.0 4.5m

CITY OF CLARENCE-ROCKLAND

MORRIS/ROCKLAND
ROAD CROSS-SECTIONS

PLAN

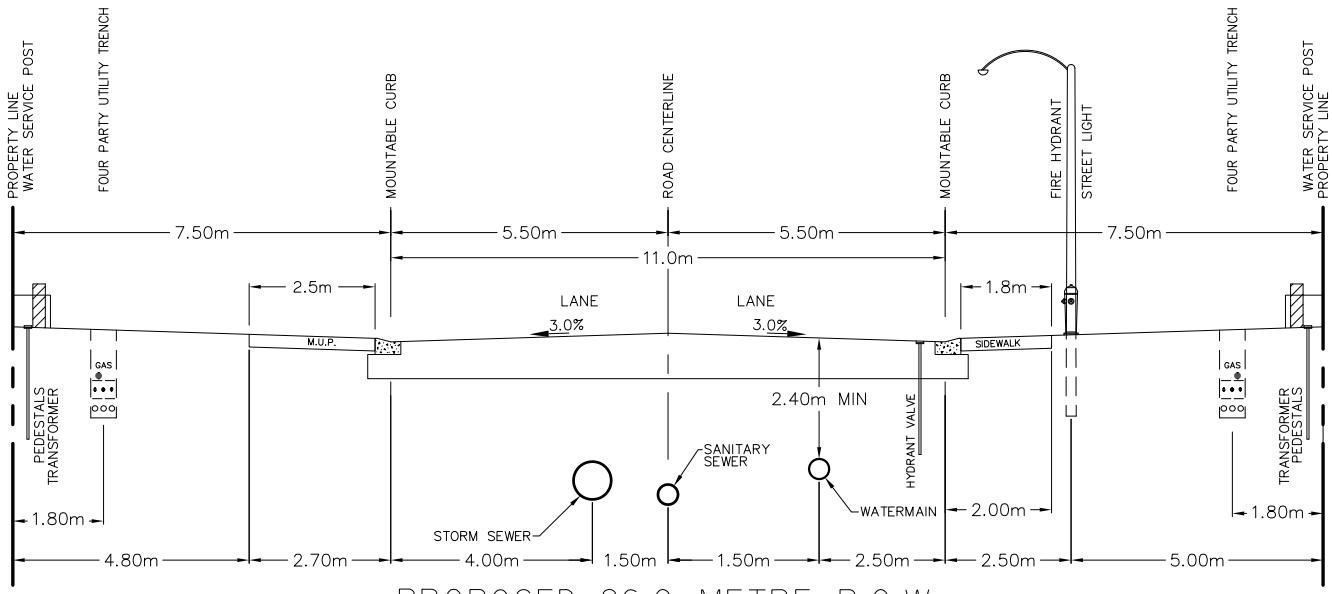
PROPOSED 30.0m R.O.W.
ST-JEAN HILL

CLIENT No.
111

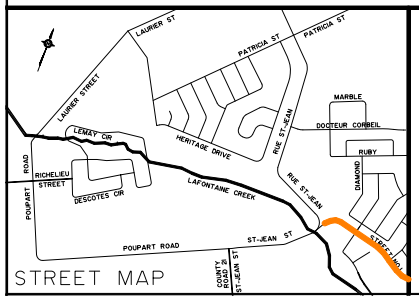
PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-CS3



PROPOSED 26.0 METRE R.O.W.
STREET No.1 (MORRIS VILLAGE)



STREET MAP

ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE:
1 : 150
1.5m 0 1.5 3.0 4.5m

CITY OF CLARENCE-ROCKLAND

MORRIS/ROCKLAND
ROAD CROSS-SECTIONS

PLAN

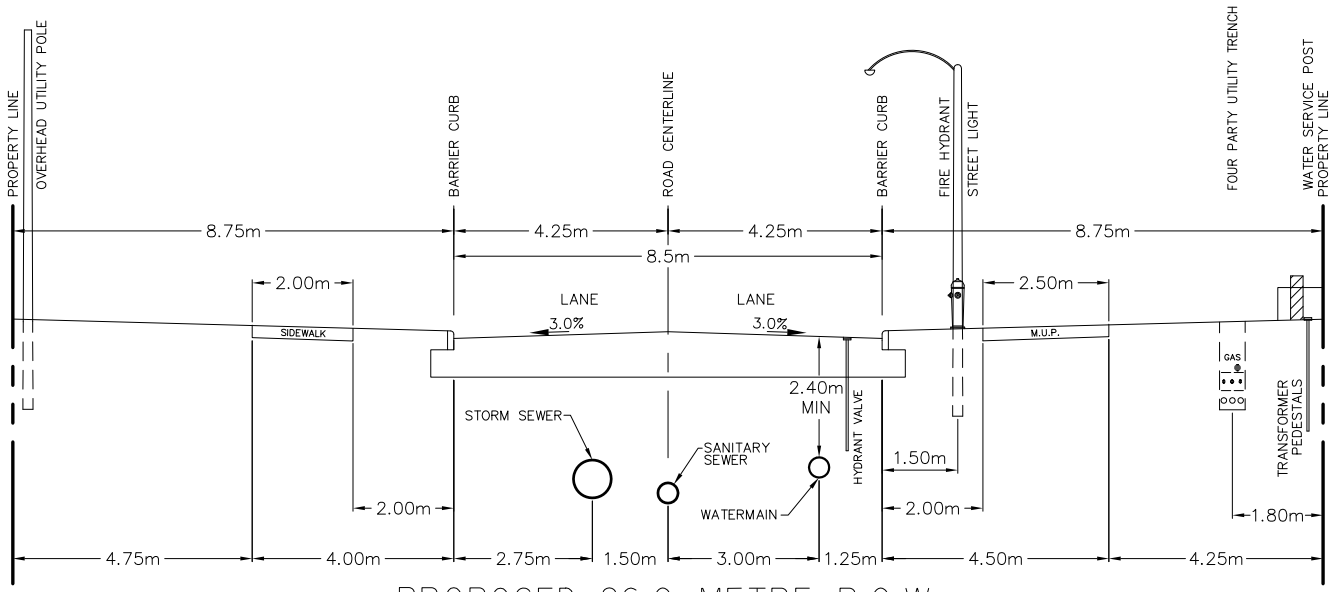
PROPOSED 26.0m R.O.W.
STREET No.1 (MORRIS VILLAGE)

CLIENT No.
111

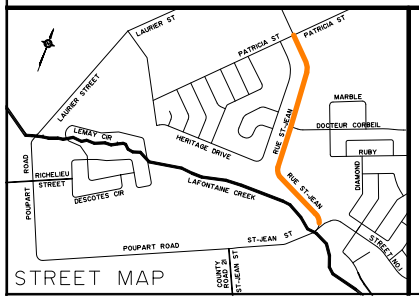
PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-CS4



PROPOSED 26.0 METRE R.O.W.
ST-JEAN AT PARK AND POND



STREET MAP

ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE:
1 : 150
1.5m 0 1.5 3.0 4.5m

CITY OF CLARENCE-ROCKLAND

MORRIS/ROCKLAND
ROAD CROSS-SECTIONS

PLAN

PROPOSED 26.0m R.O.W.
ST-JEAN AT PARK AND POND

CLIENT No.
III

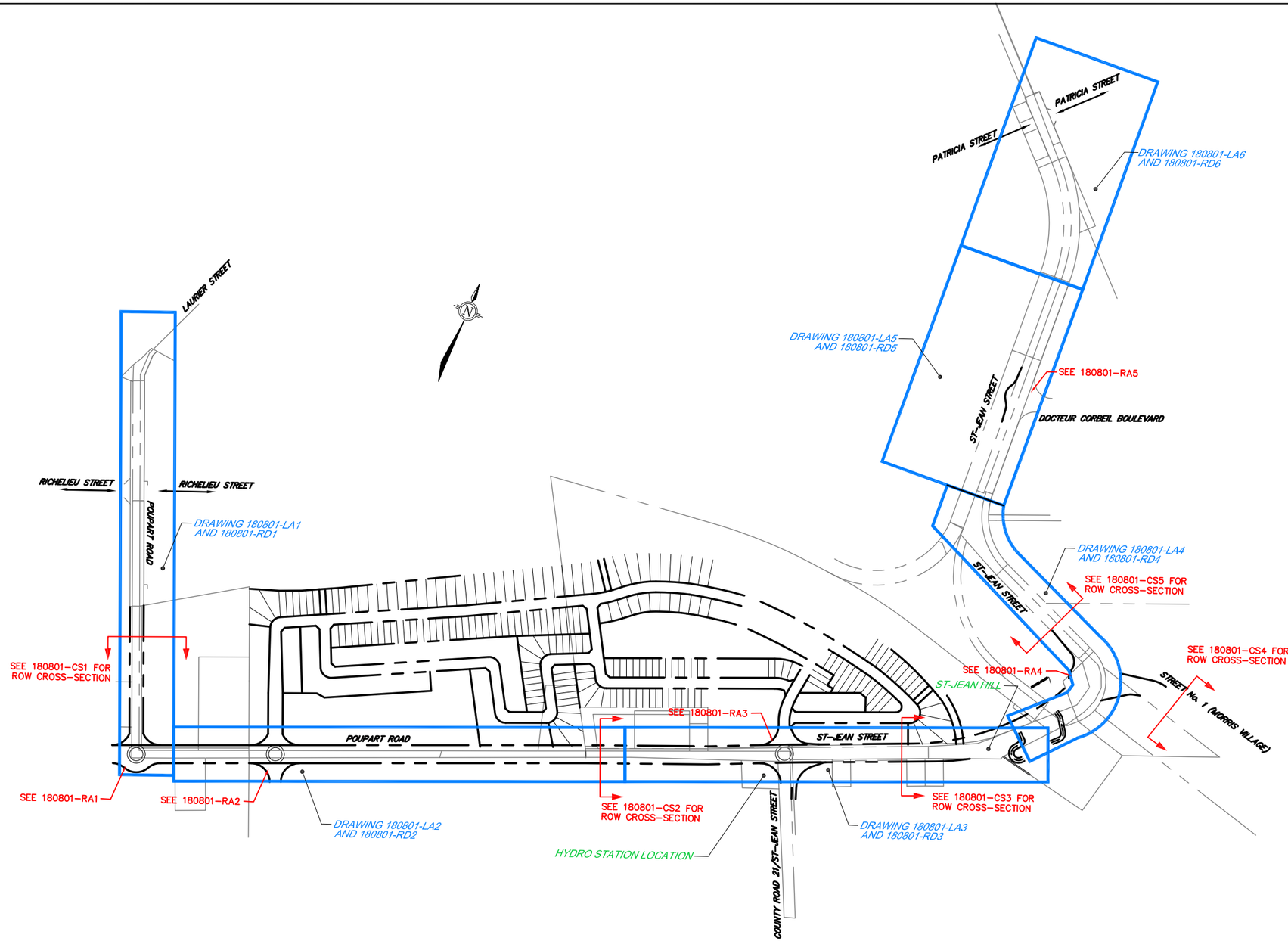
PROJECT No.
180801

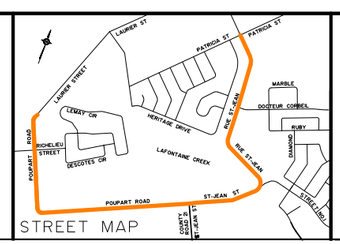
DATE
OCTOBER, 2018

DRAWING No.
180801-CS5

APPENDIX "D"

Reference Plan – 180801-RP1





ATREL Engineering Ltd.
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

POUPART RD/ ST-JEAN ST

CLIENT No.
III

PROJECT No.
180801

SCALE:
N.T.S.

PLAN
REFERENCE PLAN

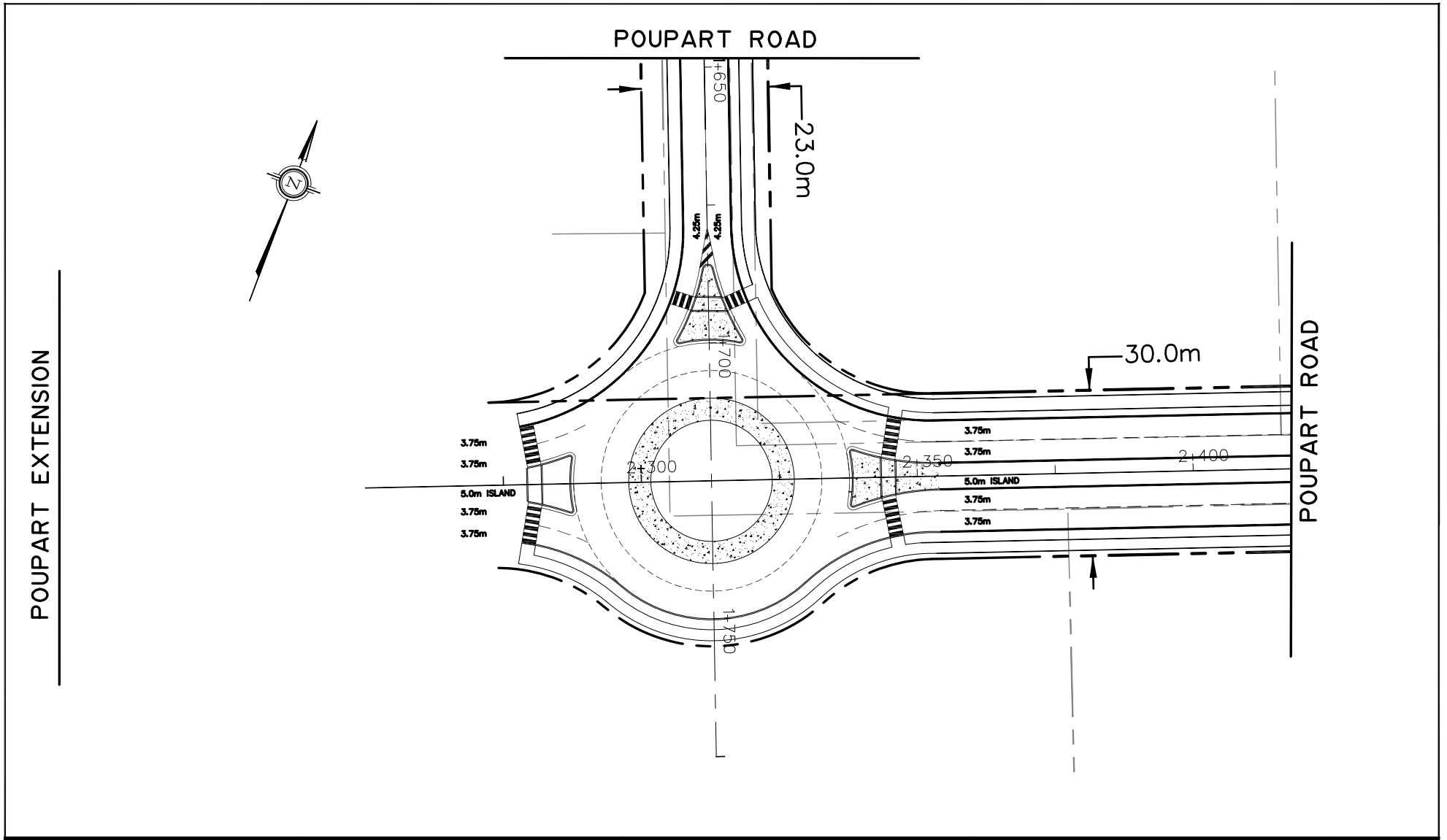
DATE
OCTOBER, 2018

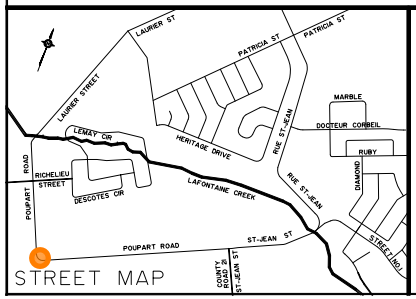
DRAWING No.
180801-RPI

APPENDIX "E"

Roundabout Schematic Plans

180801-RA1 (Poupart)
180801-RA2 (Poupart/Brigil)
180801-RA3 (Poupart/Brigil/St-Jean)
180801-RA4 (St-Jean/Morris)
180801-RA5 (St-Jean/Dr. Corbeil)





ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE: 1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
ROUNDABOUT SCHEMATIC

PLAN

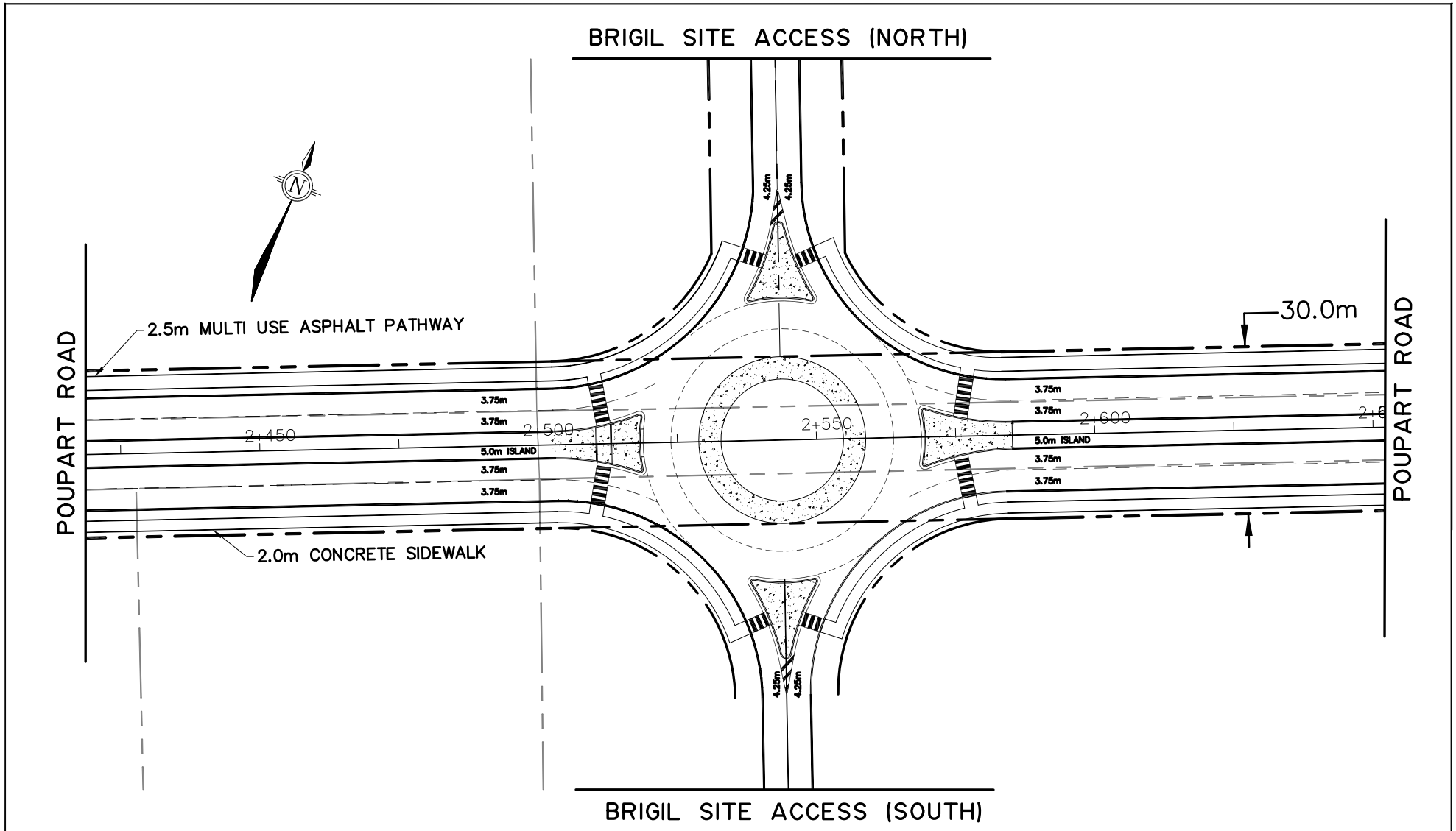
INTERSECTION AT POUPART ROAD EXTENSION

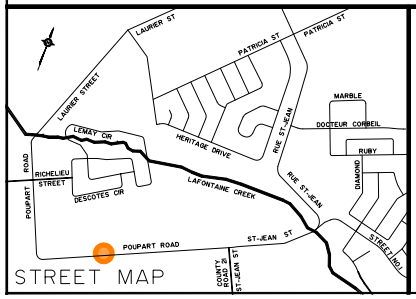
CLIENT No.
111

PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-RAI





ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
ROUNDABOUT SCHEMATIC

SCALE: 1 : 1000
10m 0 10 20 30m

PLAN

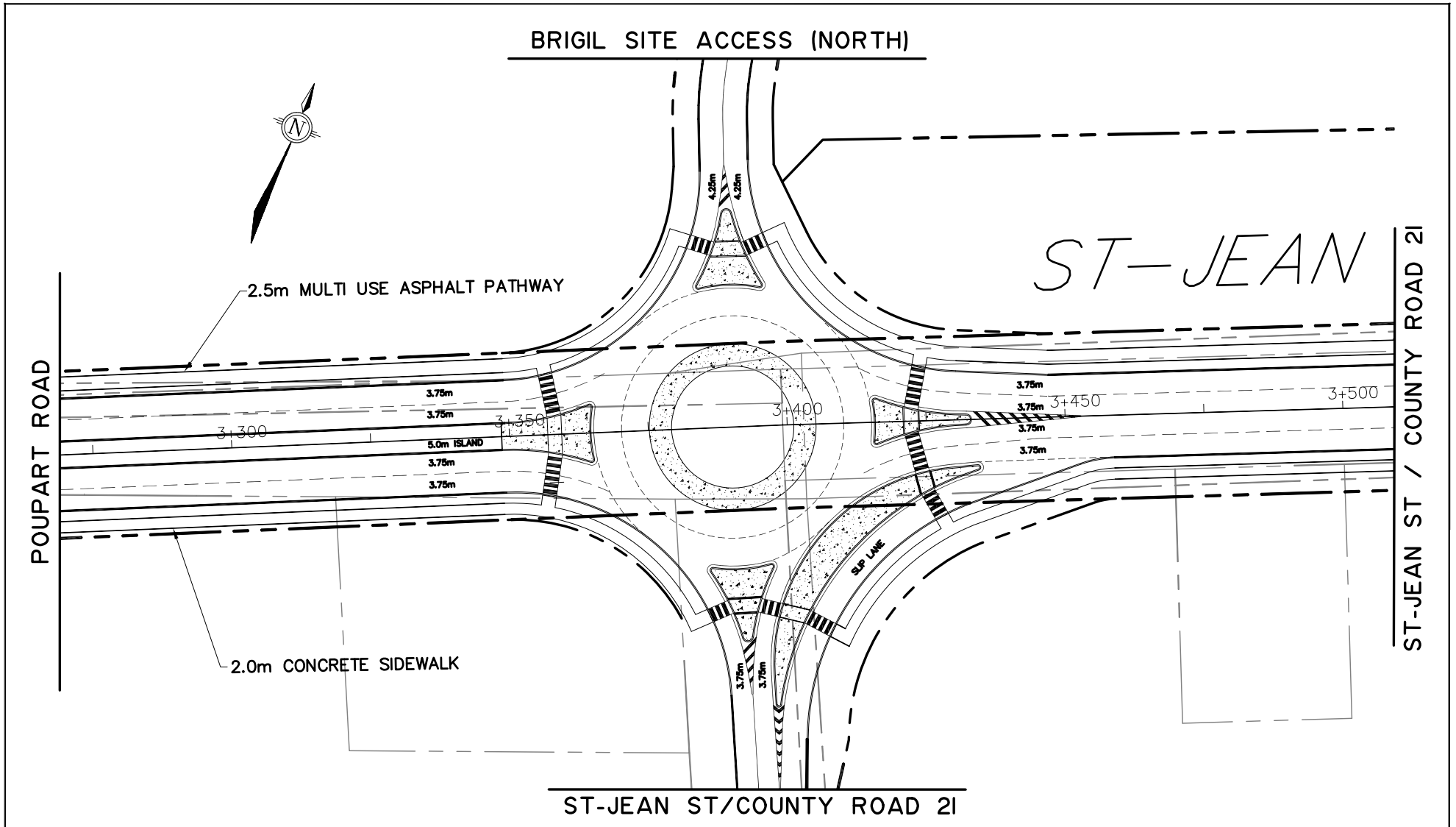
INTERSECTION AT POUPART ROAD AND BRIGIL SITE ACCESS

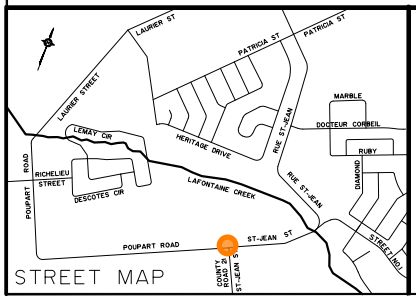
CLIENT No. III

PROJECT No. 180801

DATE OCTOBER, 2018

DRAWING No. 180801-RA2





ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE: 1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
ROUNDABOUT SCHEMATIC

PLAN

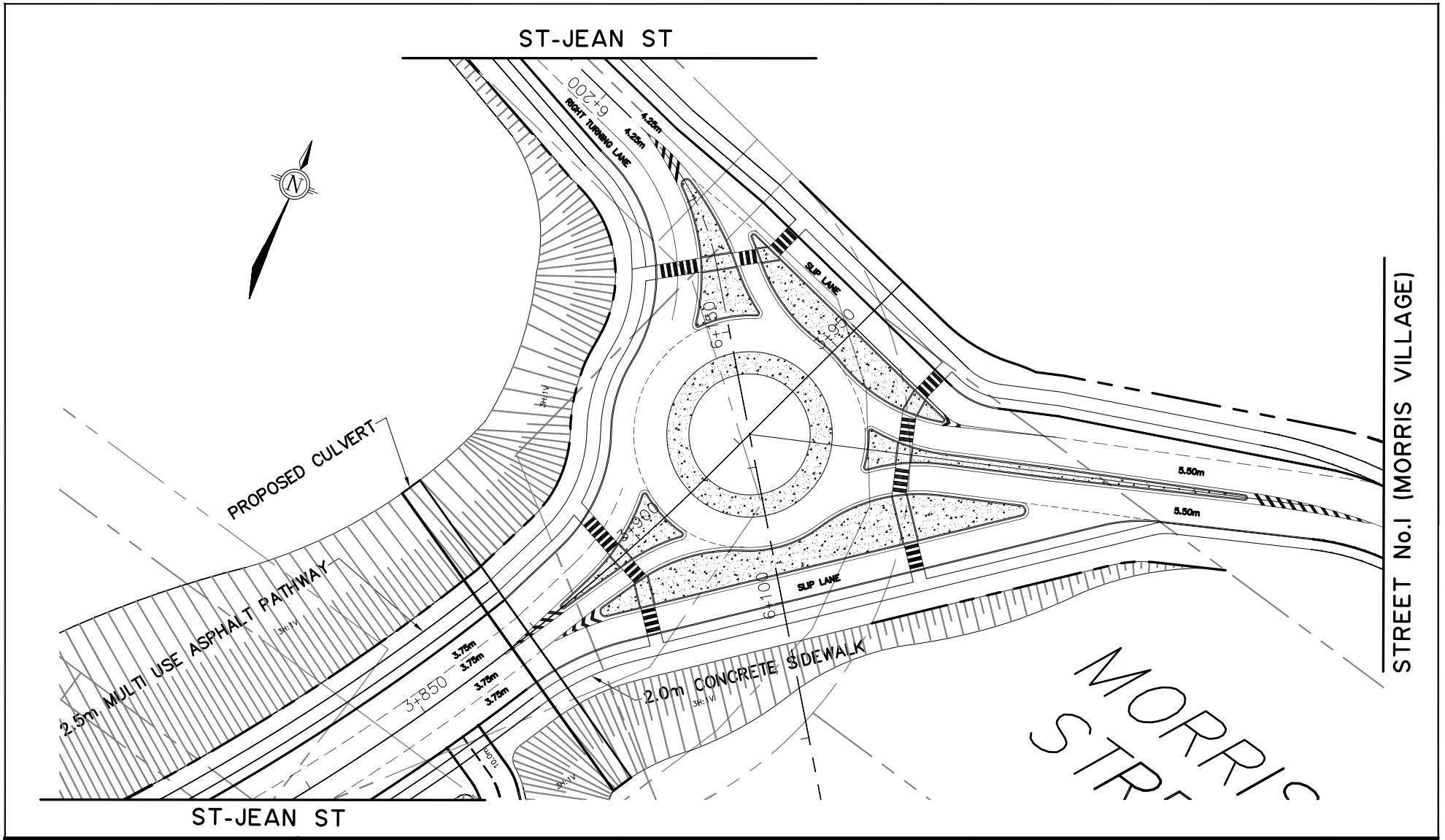
INTERSECTION AT POUPART ROAD AND ST-JEAN ST

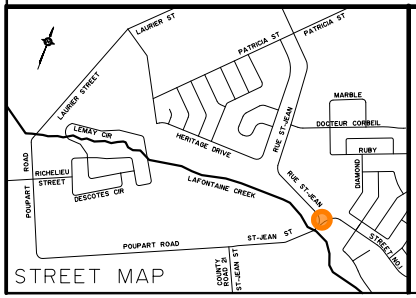
CLIENT No.
111

PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-RA3





ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE: 1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN ROUNDABOUT SCHEMATIC

PLAN

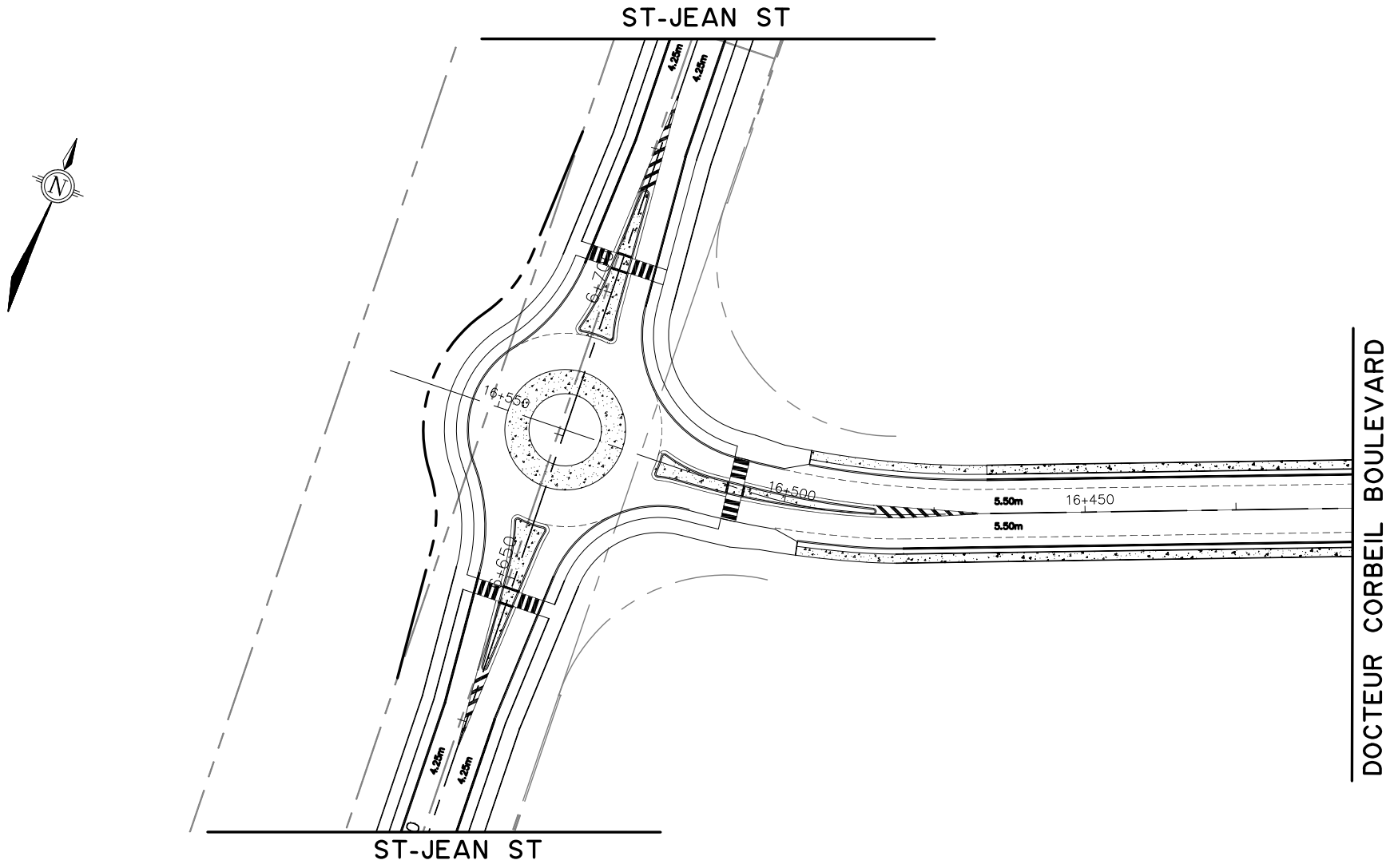
INTERSECTION AT ST-JEAN STREET AND STREET No. 1 (MORRIS VILLAGE)

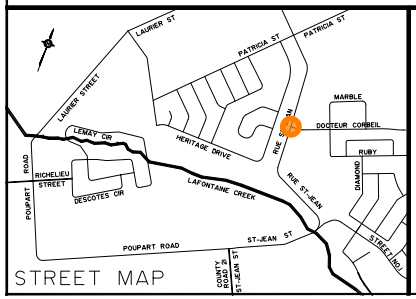
CLIENT No.: III

PROJECT No.: 180801

DATE: OCTOBER, 2018

DRAWING No.: 180801-RA4





ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE: 1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
ROUNDABOUT SCHEMATIC

PLAN

INTERSECTION AT ST-JEAN STREET
AND DR CORBEIL BOULEVARD

CLIENT No. III

PROJECT No. 180801

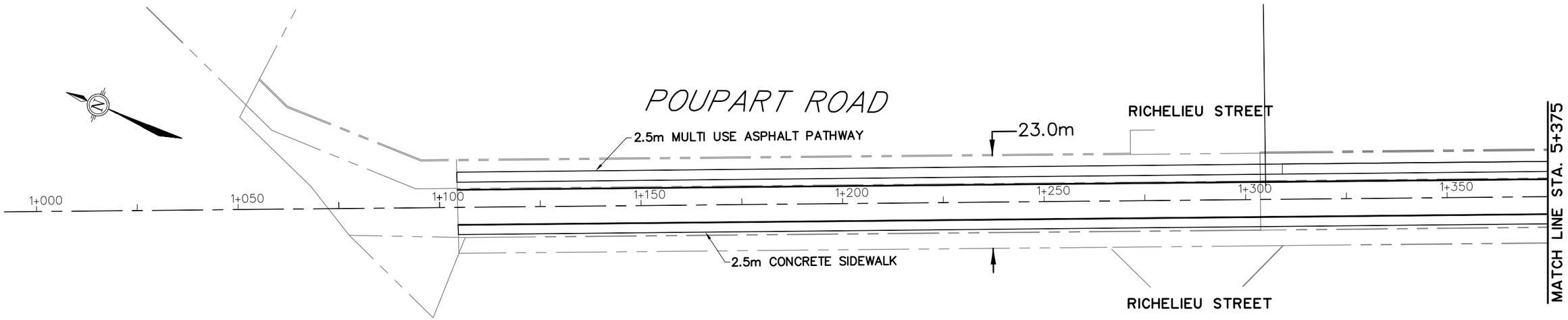
DATE OCTOBER, 2018

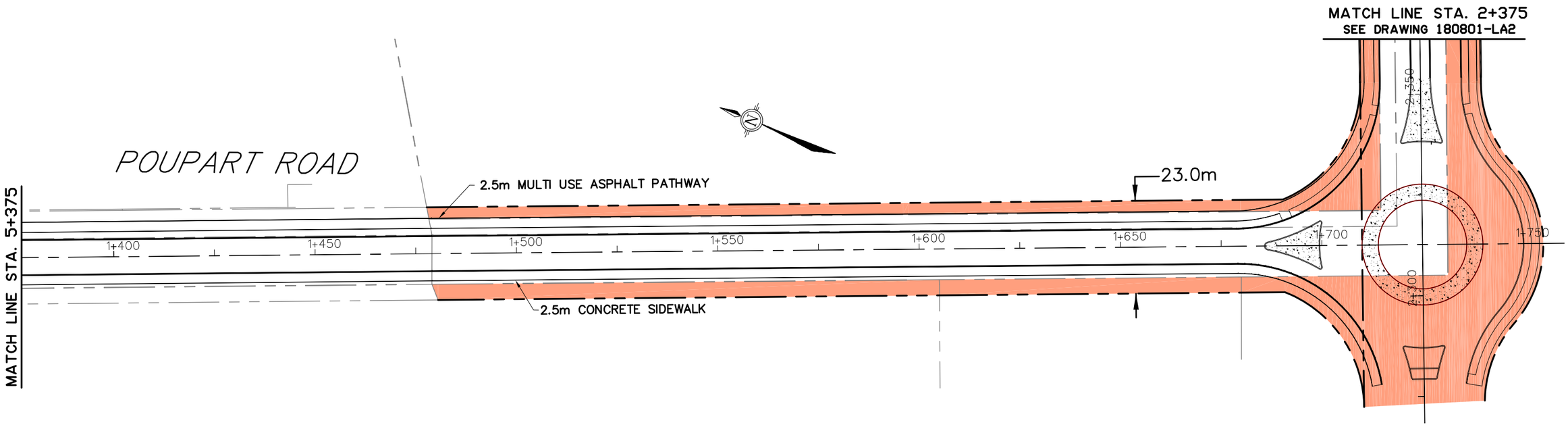
DRAWING No. 180801-RA5

APPENDIX "F"

Land Acquisition Preliminary Plans

180801-LA1 (Poupart)
180801-LA2 (Poupart)
180801-LA3 (Poupart/St-Jean)
180801-LA4 (St-Jean)
180801-LA5 (St-Jean)
180801-LA6 (St-Jean)



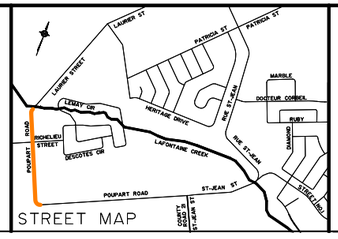


NOTES:

1- EXACT RIGHT OF WAY (R.O.W.) WIDTH "REQUIREMENT" TO BE SURVEYED BY OLS.

LEGEND:

LAND ACQUISITION REQUIREMENT



ATREL Engineering Ltd.
Engineers - Ingénieurs

SCALE:
1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
LAND ACQUISITION PLAN

PLAN

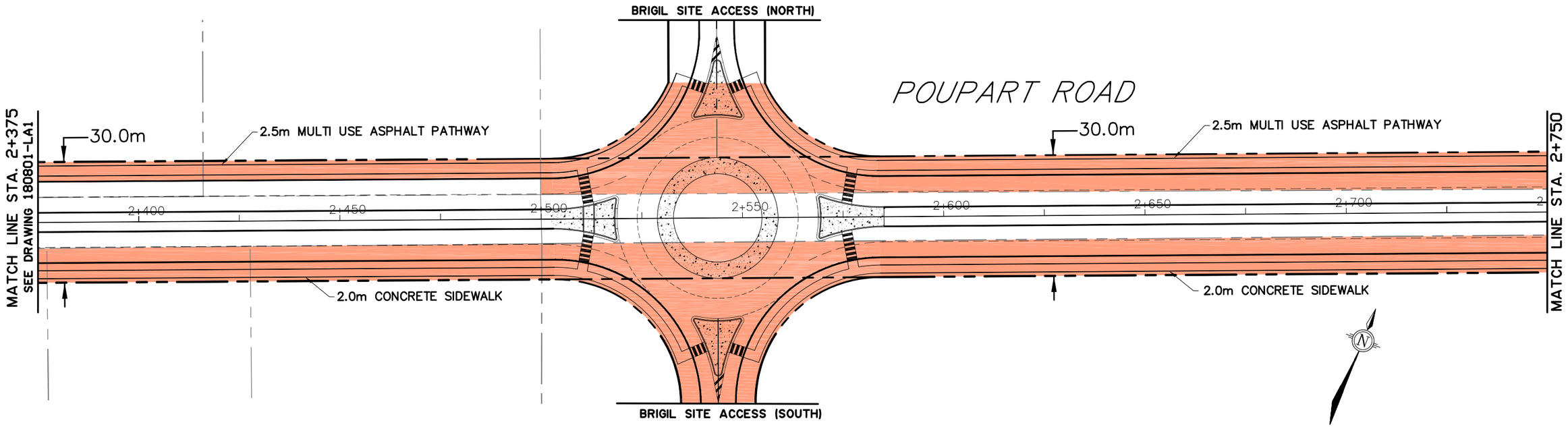
POUPART ROAD
STATION 1+000 TO STATION 2+375

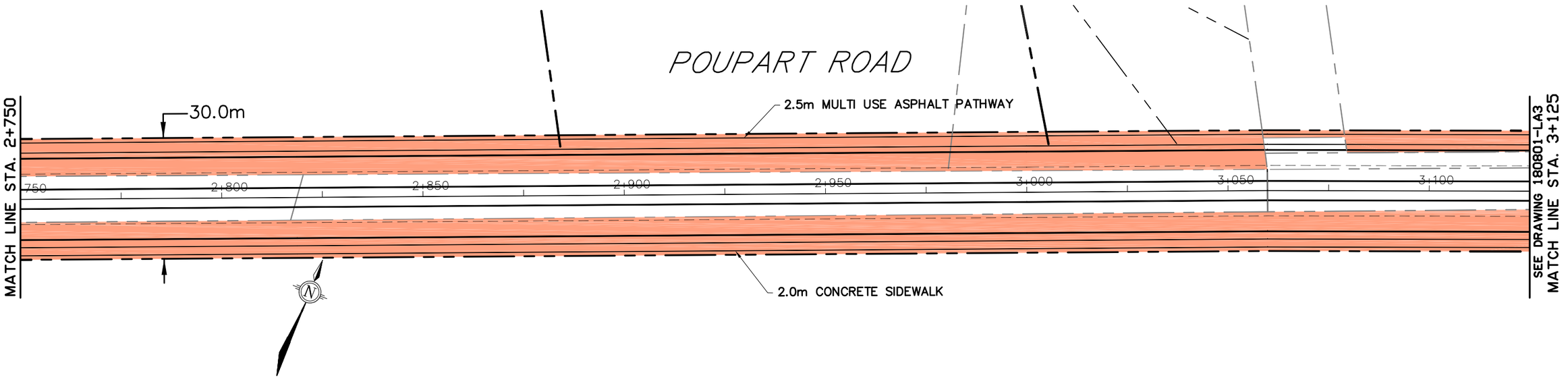
CLIENT No.
111

PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-LA1



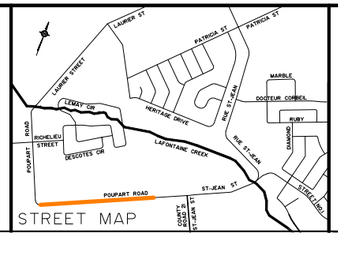


NOTES:

1– EXACT RIGHT OF WAY (R.O.W.) WIDTH "REQUIREMENT" TO BE SURVEYED BY OLS.

LEGEND:

LAND ACQUISITION REQUIREMENT



ATREL Engineering Ltd.
Engineers - Ingénieurs

SCALE:
1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
LAND ACQUISITION PLAN

PLAN

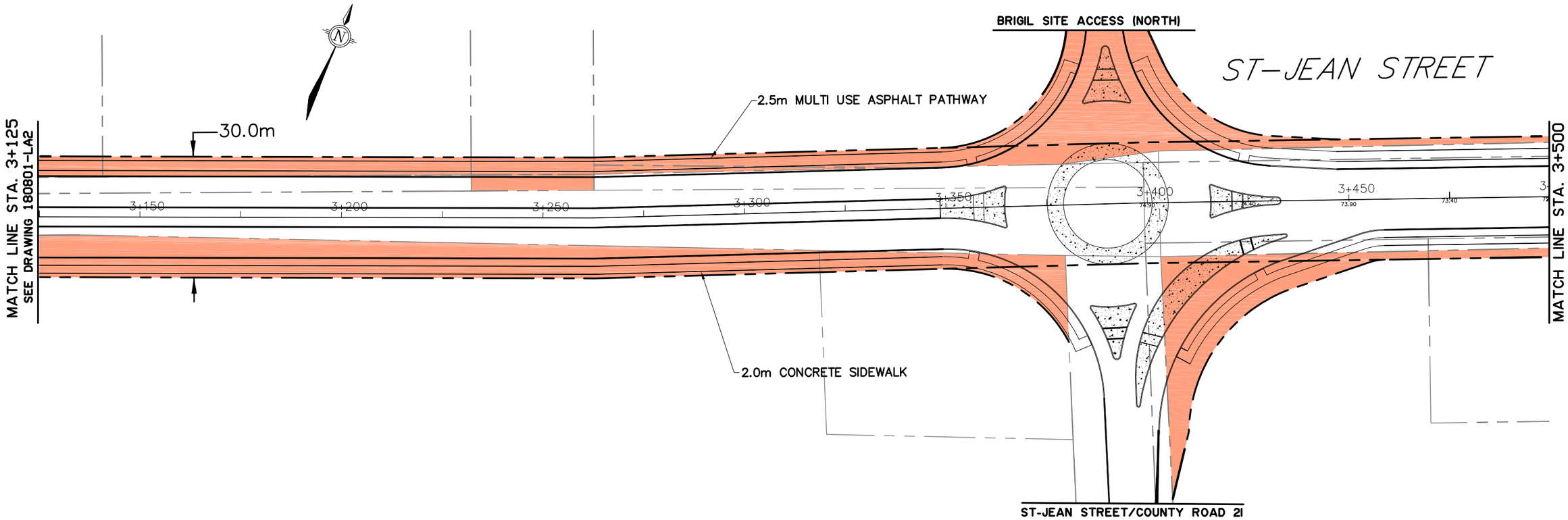
POUPART ROAD
STATION 2+375 TO STATION 3+125

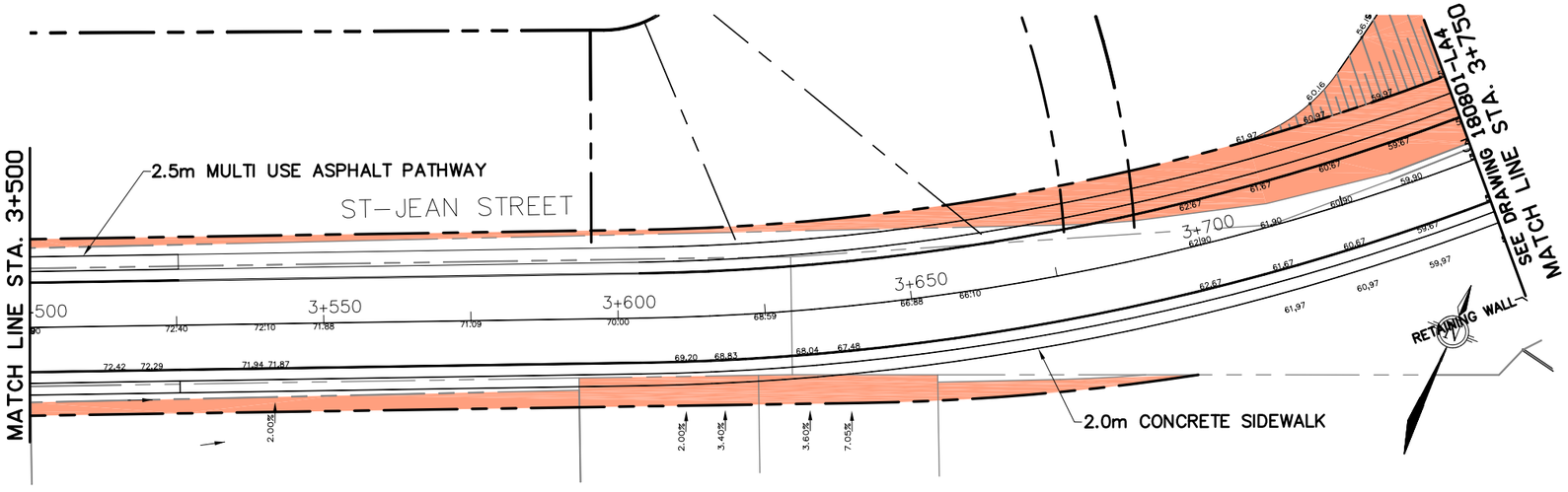
CLIENT No.
111

PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-LA2



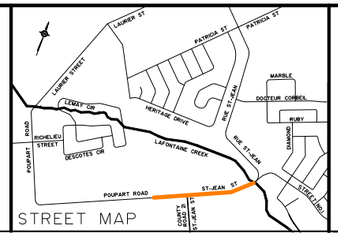


NOTES:

1- EXACT RIGHT OF WAY (R.O.W.) WIDTH "REQUIREMENT" TO BE SURVEYED BY OLS.

LEGEND:

LAND ACQUISITION REQUIREMENT



ATREL Engineering Ltd.
Engineers - Ingénieurs

SCALE:
1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
LAND ACQUISITION PLAN

PLAN

POUPART/ST-JEAN
STATION 3+125 TO STATION 3+750

CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-LA3

MATCH LINE STA. 6+175

PROPOSED CULVERT

2.5m MULTI USE ASPHALT PATHWAY

3H:1V

3+750

3+800

3+850

3+900

6+050

6+100

6+150

10.0m

2H:1V

30.5m - 600mmø STM @ 2.0%
HDPE 320 kPa

INV.47.40

INV.46.79

2.0m CONCRETE SIDEWALK

MATCH LINE STA. 3+750
SEE DRAWING 180801-LA3

STREET No.1 (MORRIS VILLAGE)

ST-JEAN STREET

MAY NEED TO ACQUIRE MORE LAND DUE TO LEVEL DROP

2.0m CONCRETE SIDEWALK

2.5m MULTI USE ASPHALT PATHWAY

MATCH LINE STA. 6+175

6+200

6+250

6+300

6+350

6+400

6+450

SEE DRAWING 180801-LA5
MATCH LINE STA. 6+500

NOTES:

1- EXACT RIGHT OF WAY (R.O.W.) WIDTH "REQUIREMENT" TO BE SURVEYED BY OLS.

LEGEND:

LAND ACQUISITION REQUIREMENT

STREET MAP

LAURIER ST
PATRICIA ST
LAURIER STREET
LEMAY CR
HERITAGE DRIVE
RUE ST-ALAIN
MARBLE
DOCTEUR CORBEIL
RUBY
DIAMOND
RUE ST-JEAN
RICHELIEU STREET
DESCOTES CR
LAFONTAINE CREEK
POUPART ROAD
ST-JEAN ST
ESPRIT SAINT DR
ST-JEAN ST
VOYAGEURS

ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

SCALE:
1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
LAND ACQUISITION PLAN

PLAN

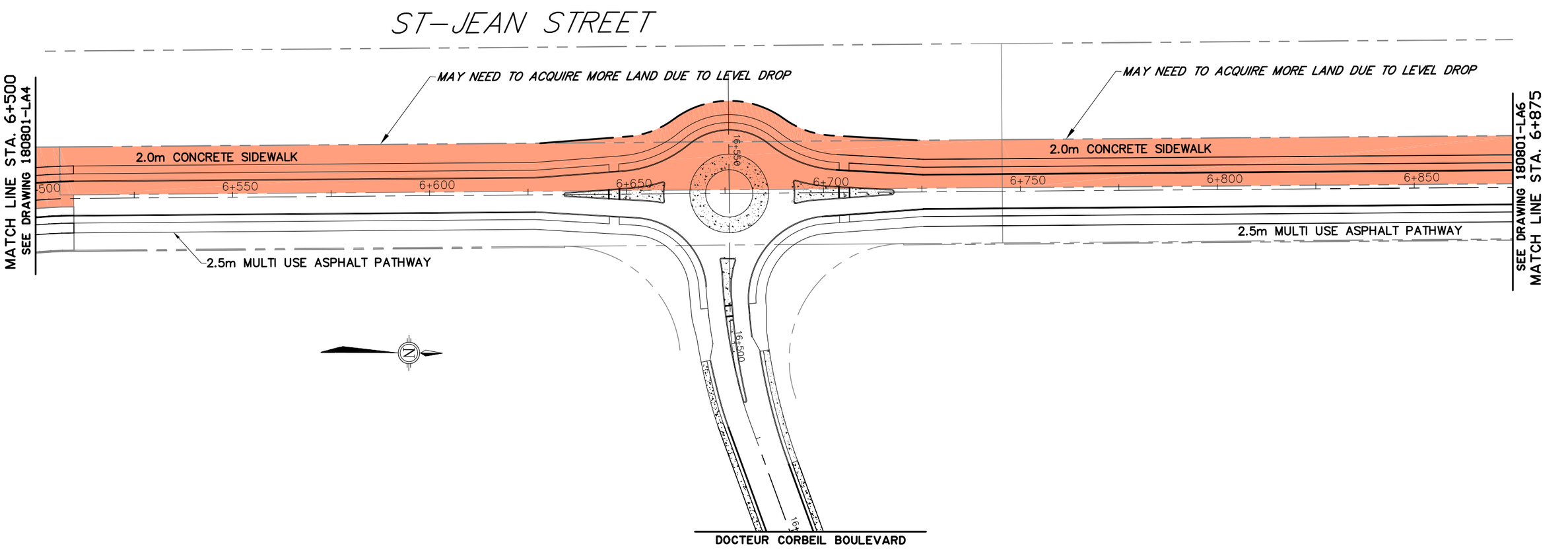
ST-JEAN STREET
STATION 3+750 TO STATION 6+500

CLIENT No.
111

PROJECT No.
180801

DATE
OCTOBER, 2018

DRAWING No.
180801-LA4

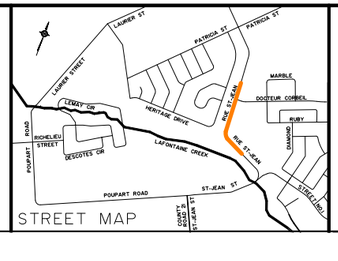


NOTES:

1- EXACT RIGHT OF WAY (R.O.W.) WIDTH "REQUIREMENT" TO BE SURVEYED BY OLS.

LEGEND:

LAND ACQUISITION REQUIREMENT



ATREL Engineering Ltd.
Engineers - Ingénieurs

SCALE: 1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
LAND ACQUISITION PLAN

PLAN

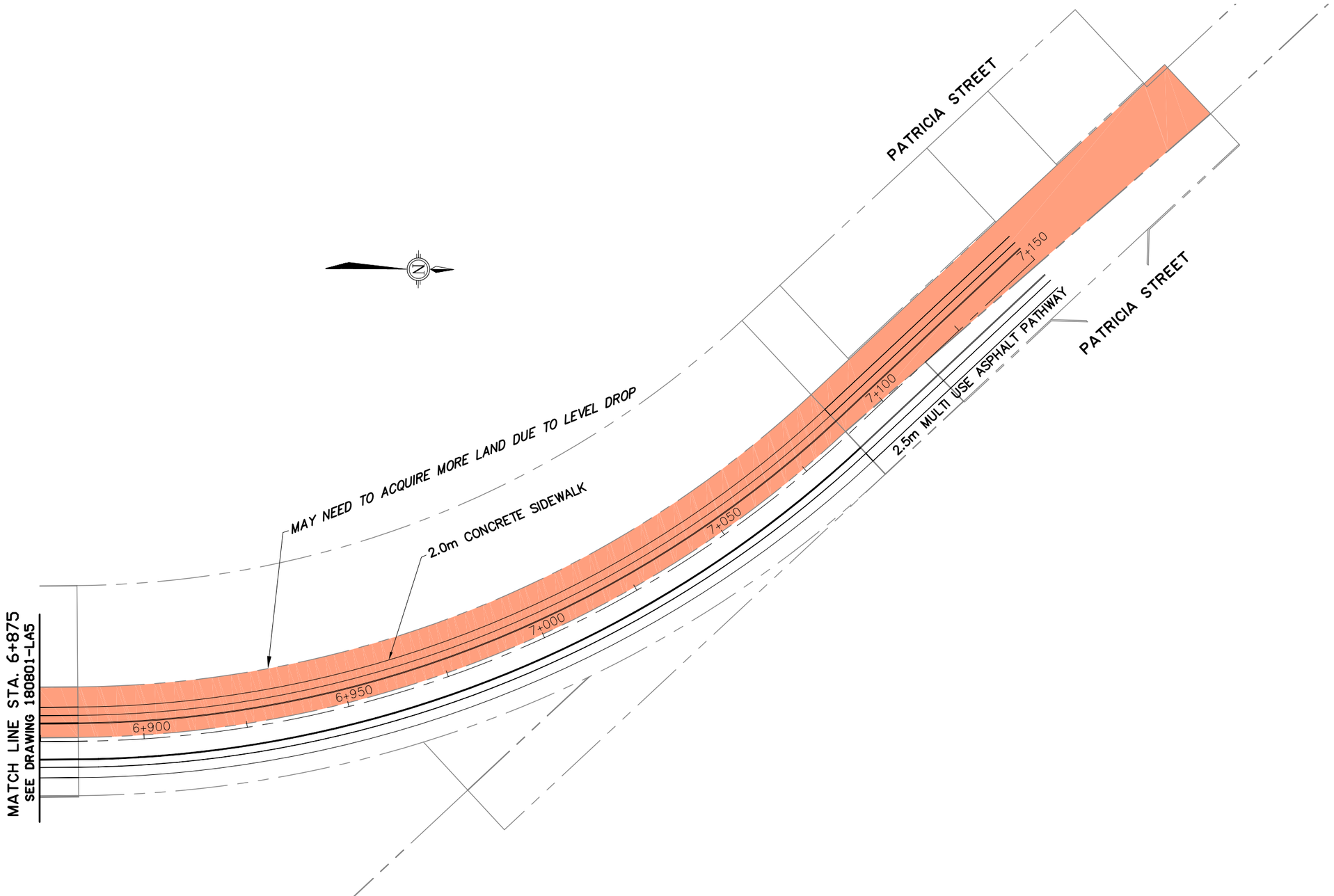
ST-JEAN STREET
STATION 6+500 TO STATION 6+875

CLIENT No. III

PROJECT No. 180801

DATE OCTOBER, 2018

DRAWING No. 180801-LA5

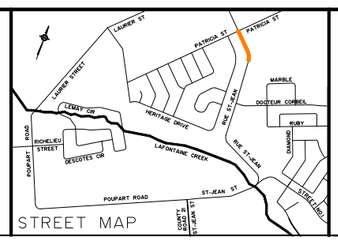


NOTES:

1– EXACT RIGHT OF WAY (R.O.W.) WIDTH "REQUIREMENT" TO BE SURVEYED BY OLS.

LEGEND:

LAND ACQUISITION REQUIREMENT



ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

SCALE:
1 : 1000
10m 0 10 20 30m

CITY OF CLARENCE-ROCKLAND

POUPART/ST-JEAN
LAND ACQUISITION PLAN

PLAN

ST-JEAN STREET
STATION 6+875 TO STATION 7+150

CLIENT No.
111

PROJECT No.
180801

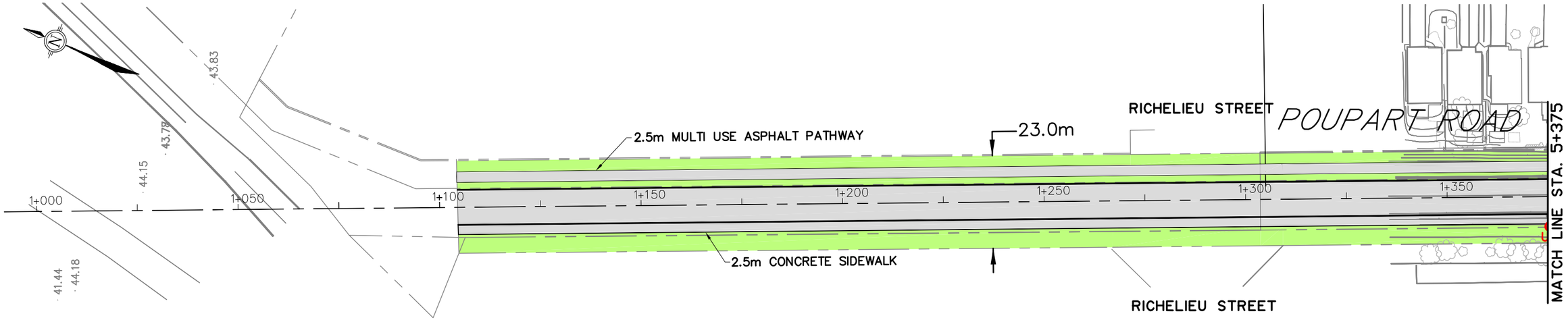
DATE
OCTOBER, 2018

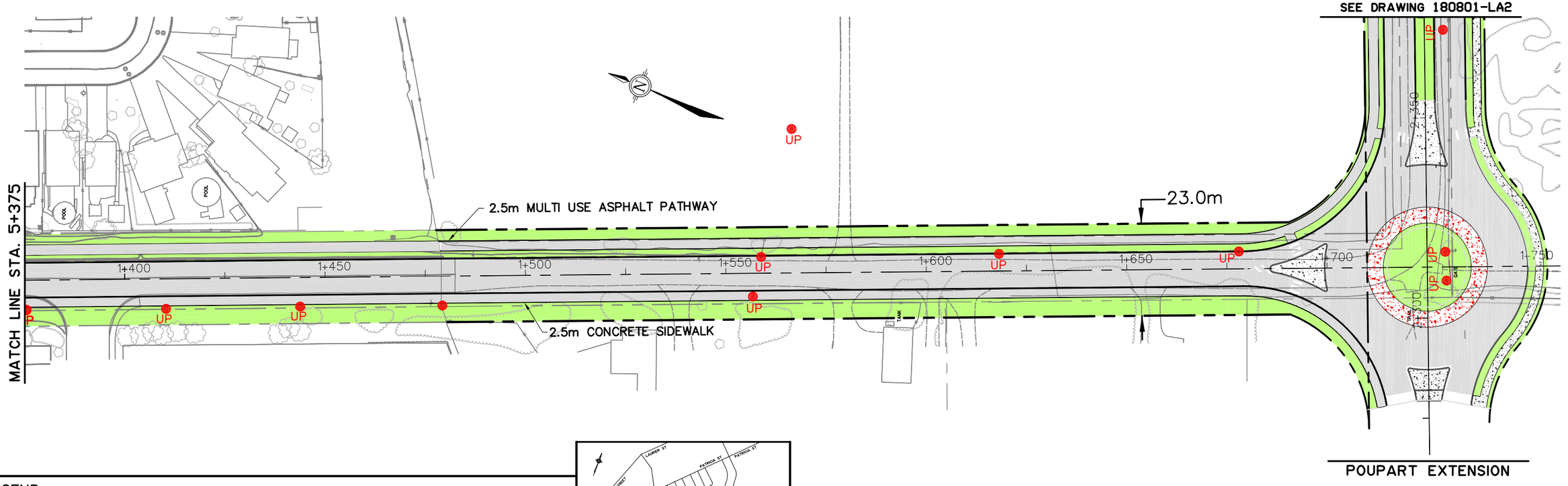
DRAWING No.
180801-LA6

APPENDIX "G"

Road Schematic Plans

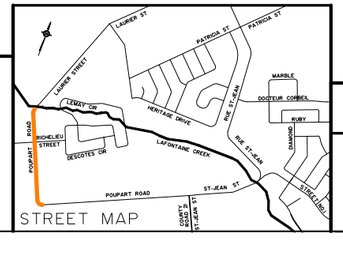
180801-RD1 (Poupart)
180801-RD2 (Poupart)
180801-RD3 (Poupart/St-Jean)
180801-RD4 (St-Jean)
180801-RD5 (St-Jean)
180801-RD6 (St-Jean)





POUPART EXTENSION

LEGEND:
- GRASS AREA
- ASPHALT AREA (ROAD AND MULTI-USE PATHWAY)
- CONCRETE AREA
- OTHER MATERIAL
- UP UTILITY POLE



SCALE:

1 : 1000

10m 0 10 20 30m

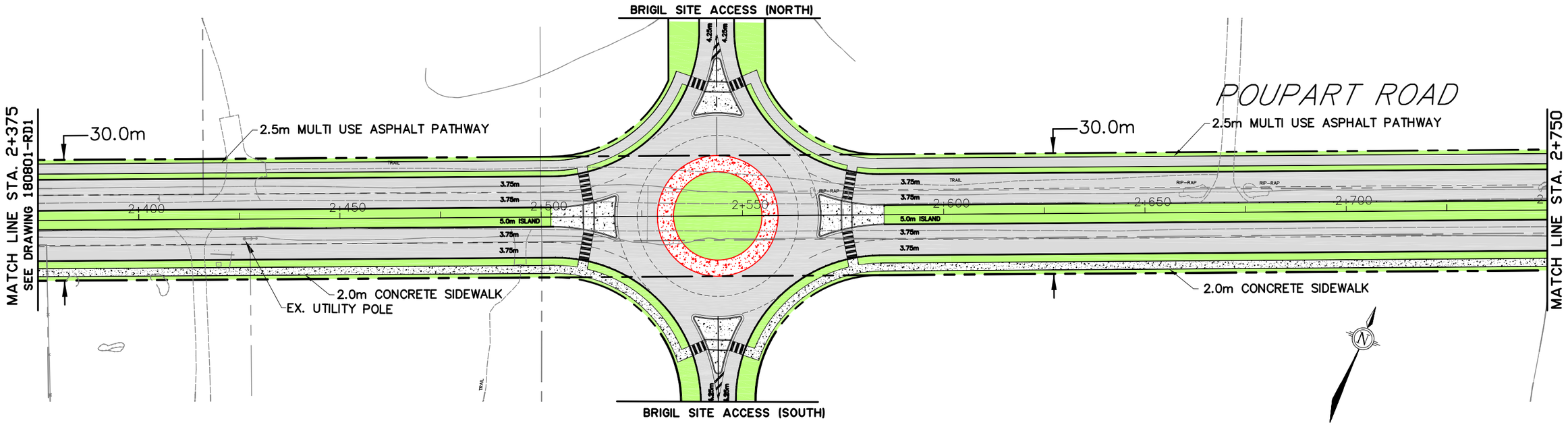
ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

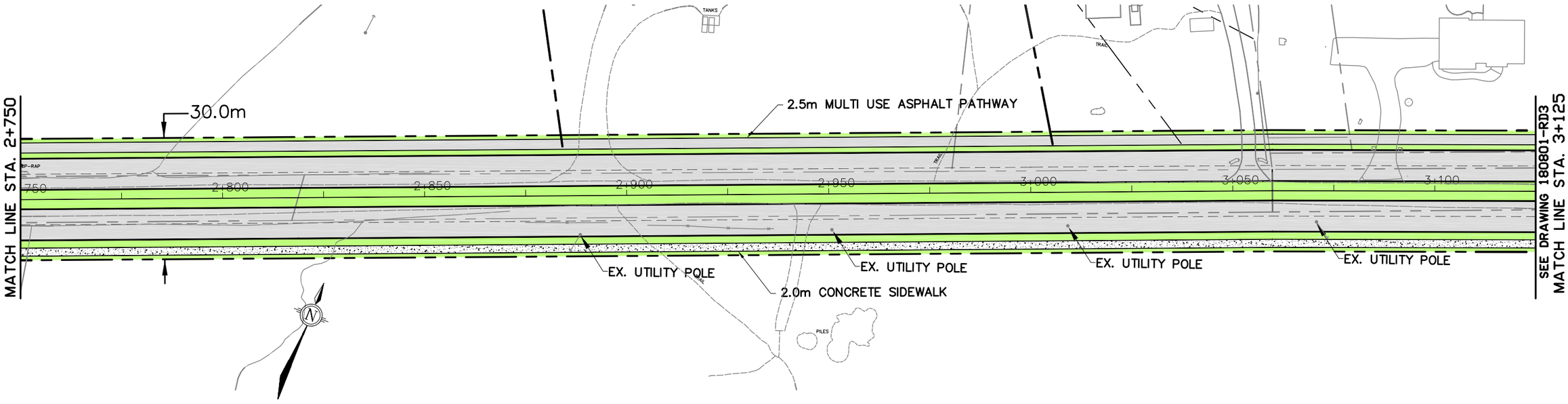
CITY OF CLARENCE-ROCKLAND

POUPART / ST-JEAN ROAD SCHEMATIC PLAN

PLAN
POUPART ROAD
STATION 1+000 TO STATION 2+375

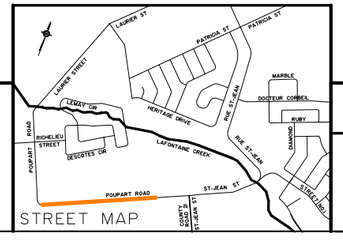
CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-RD1





LEGEND:

- GRASS AREA
- ASPHALT AREA (ROAD AND MULTI-USE PATHWAY)
- CONCRETE AREA
- OTHER MATERIAL



SCALE:

1 : 1000

10m 0 10 20 30m

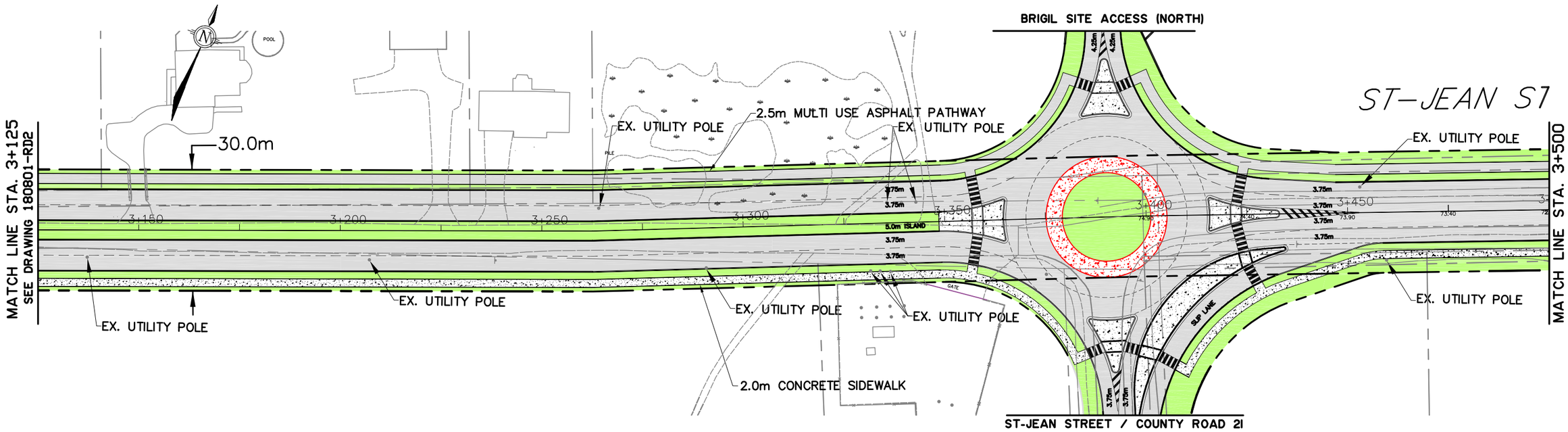
ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

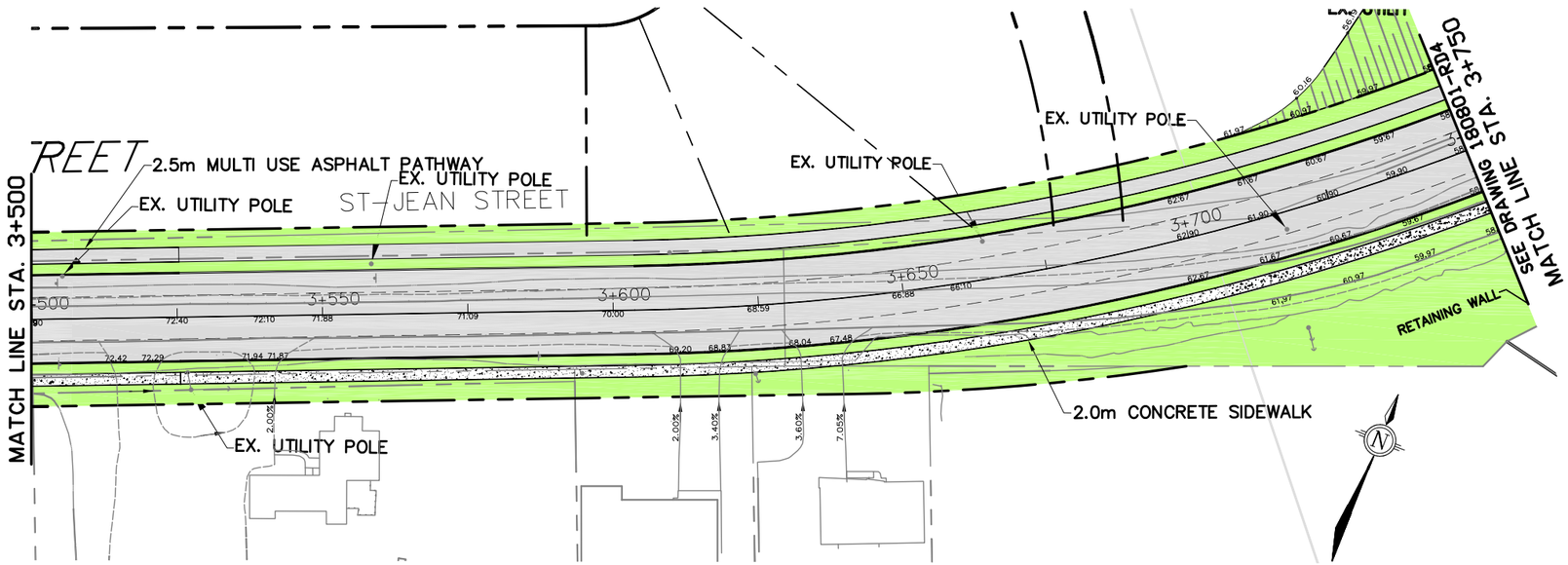
CITY OF CLARENCE-ROCKLAND

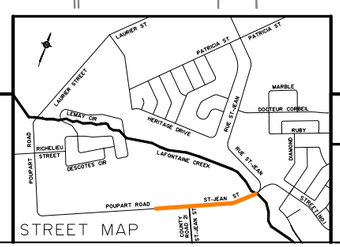
POUPART / ST-JEAN ROAD SCHEMATIC PLAN

PLAN
POUPART ROAD
STATION 2+375 TO STATION 3+125

CLIENT No.	III
PROJECT No.	180801
DATE	OCTOBER, 2018
DRAWING No.	180801-RD2







SCALE:

1 : 1000

10m 0 10 20 30m

LEGEND:

- GRASS AREA
- ASPHALT AREA (ROAD AND MULTI-USE PATHWAY)
- CONCRETE AREA
- OTHER MATERIAL

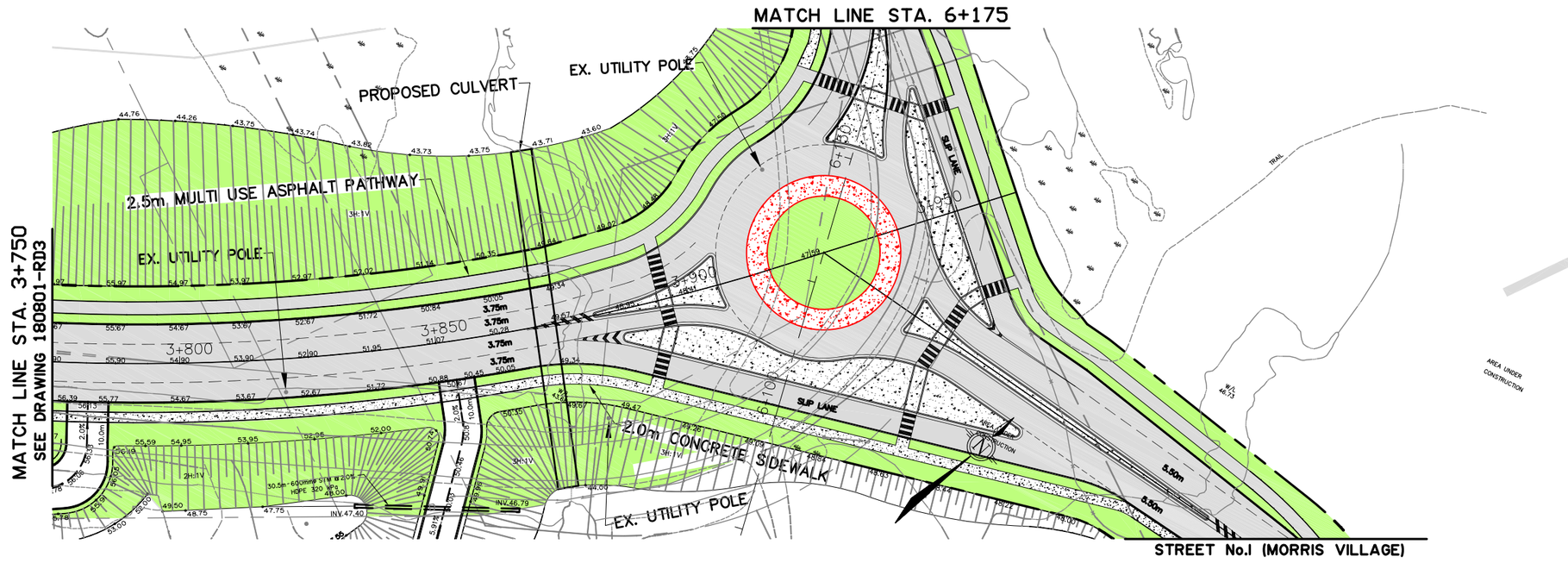
ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

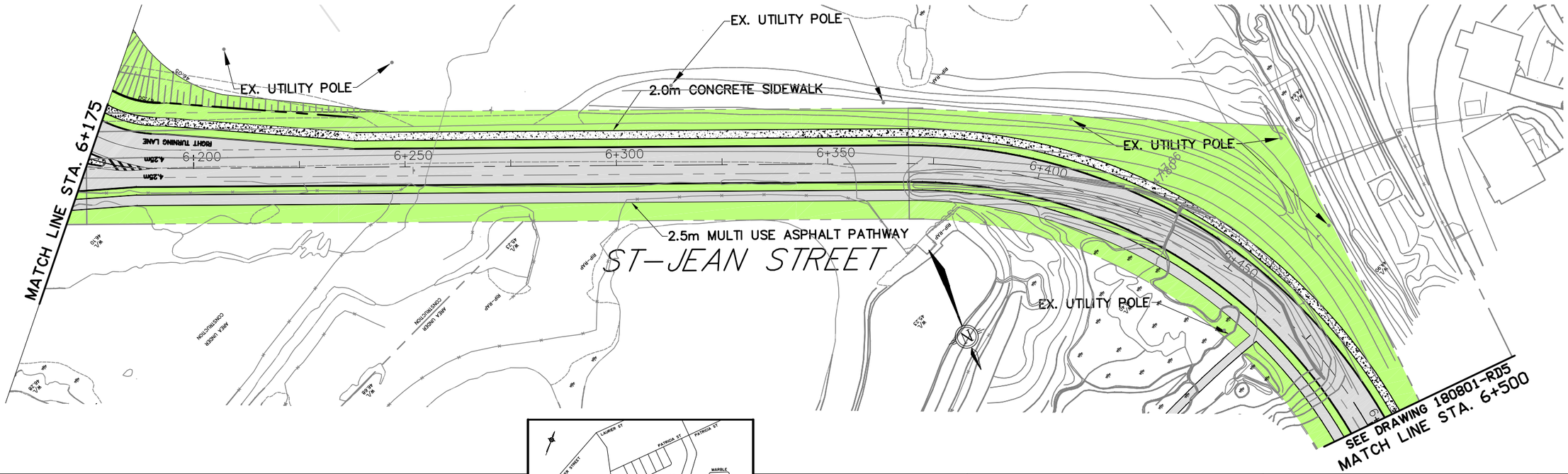
CITY OF CLARENCE-ROCKLAND

POUPART / ST-JEAN ROAD SCHEMATIC PLAN

PLAN
ST-JEAN STREET
STATION 3+125 TO STATION 3+750

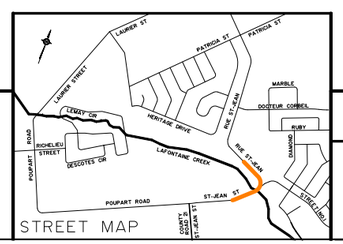
CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-RD3





LEGEND:

- GRASS AREA
- ASPHALT AREA (ROAD AND MULTI-USE PATHWAY)
- CONCRETE AREA
- OTHER MATERIAL



SCALE:

1 : 1000

10m 0 10 20 30m

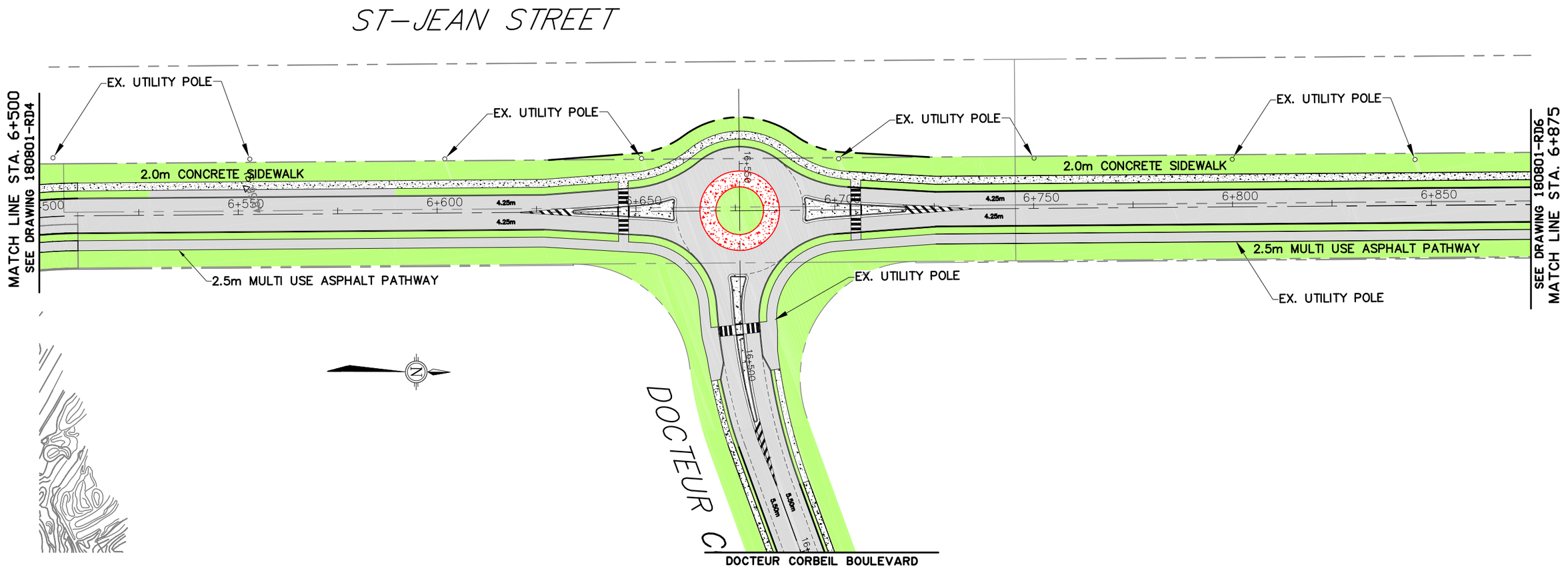
ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

POUPART / ST-JEAN
ROAD SCHEMATIC PLAN

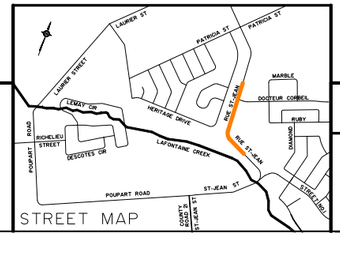
PLAN
ST-JEAN STREET
STATION 3+750 TO STATION 6+500

CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-RD4



LEGEND:

- GRASS AREA
- ASPHALT AREA (ROAD AND MULTI-USE PATHWAY)
- CONCRETE AREA
- OTHER MATERIAL



SCALE:

1 : 1000

10m 0 10 20 30m

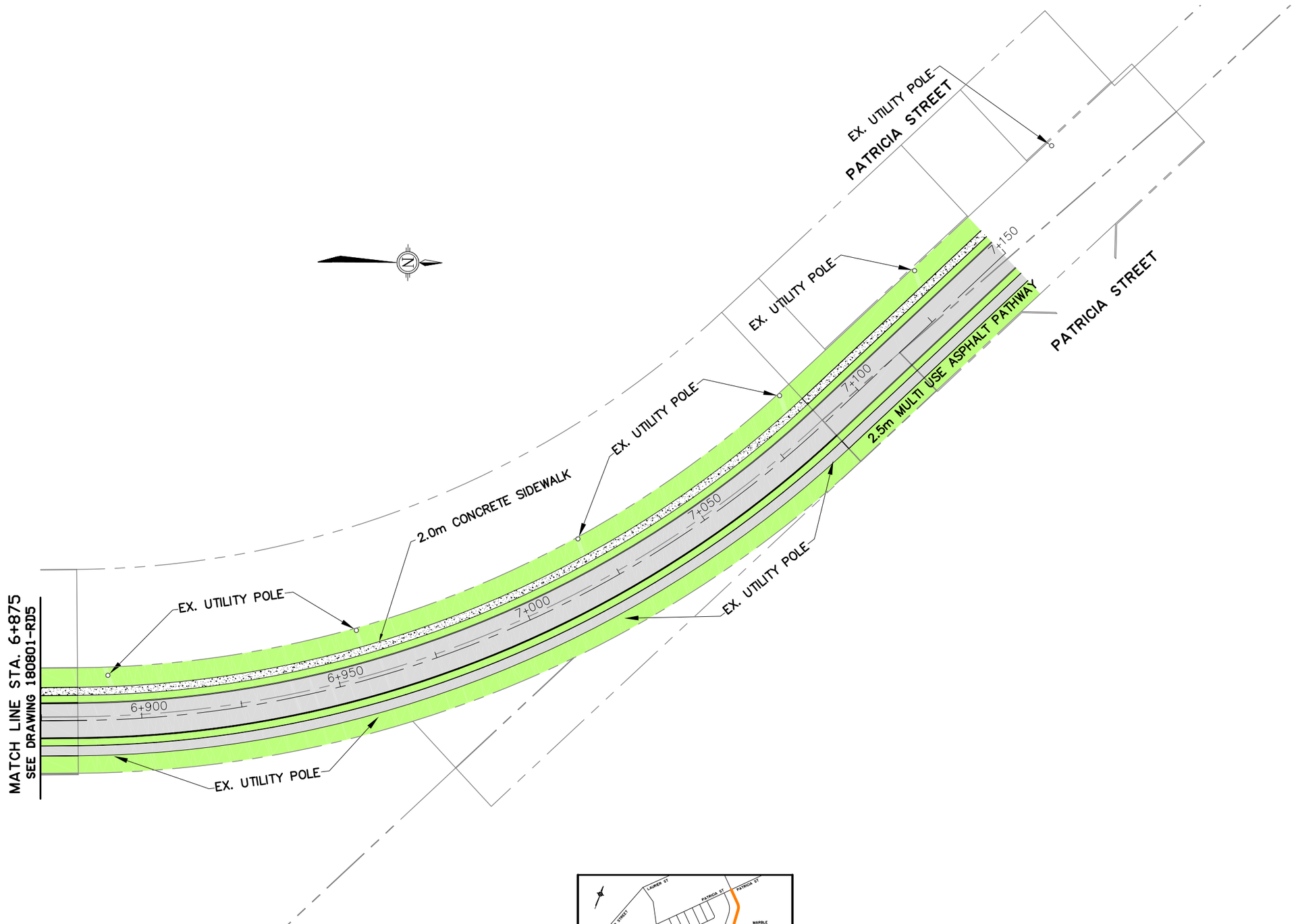
ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

POUPART / ST-JEAN
ROAD SCHEMATIC PLAN

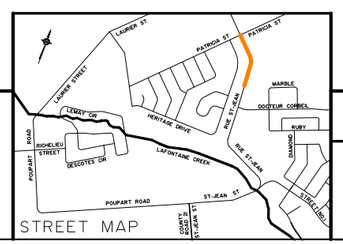
PLAN
ST-JEAN STREET
STATION 6+500 TO STATION 6+875

CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-RD5



LEGEND:

- GRASS AREA
- ASPHALT AREA (ROAD AND MULTI-USE PATHWAY)
- CONCRETE AREA
- OTHER MATERIAL



SCALE:

1 : 1000

10m 0 10 20 30m

ATREL Engineering Ltd. Ltée.
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

POUPART / ST-JEAN
ROAD SCHEMATIC PLAN

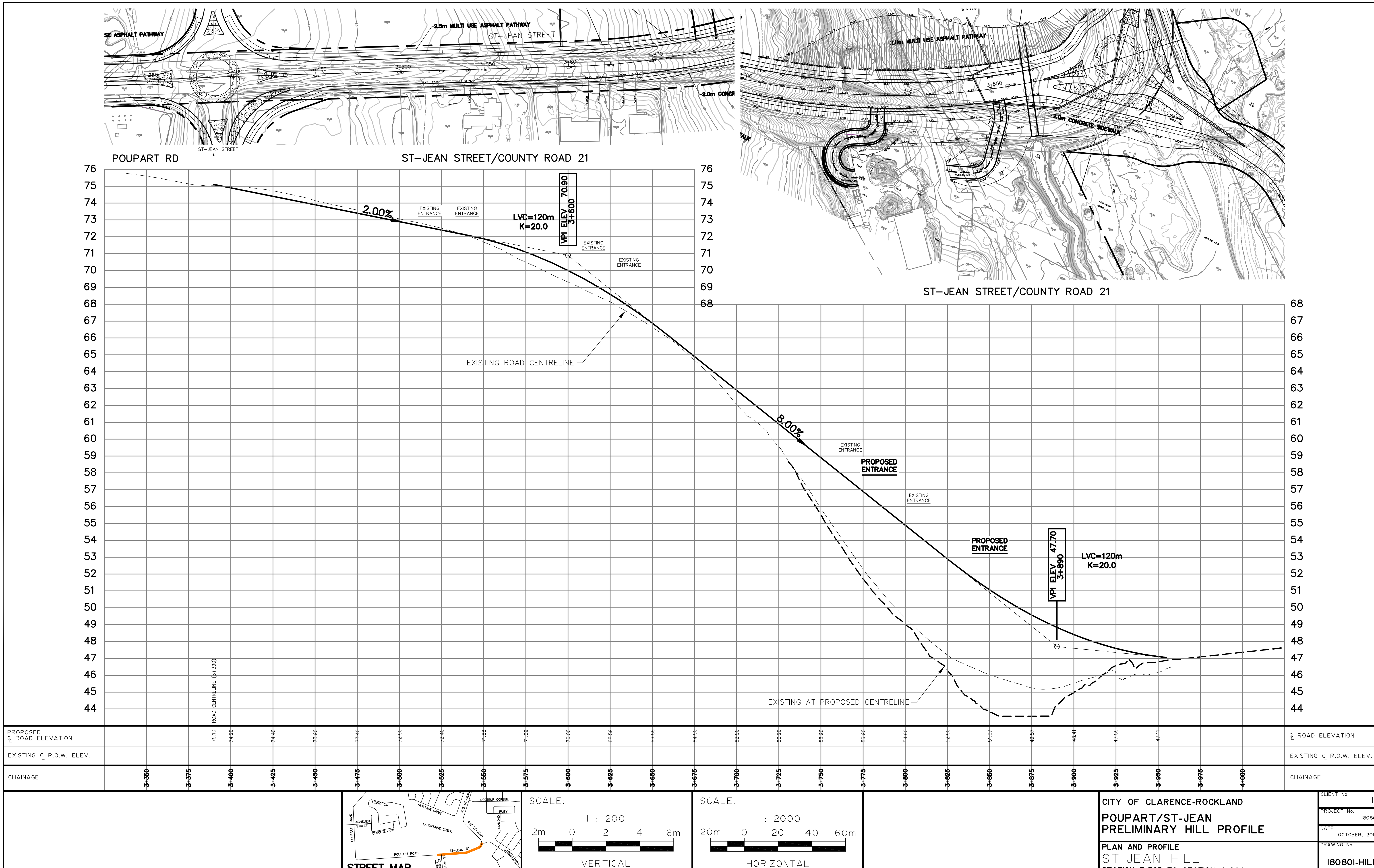
PLAN
ST-JEAN STREET
STATION 6+875 TO STATION 7+150

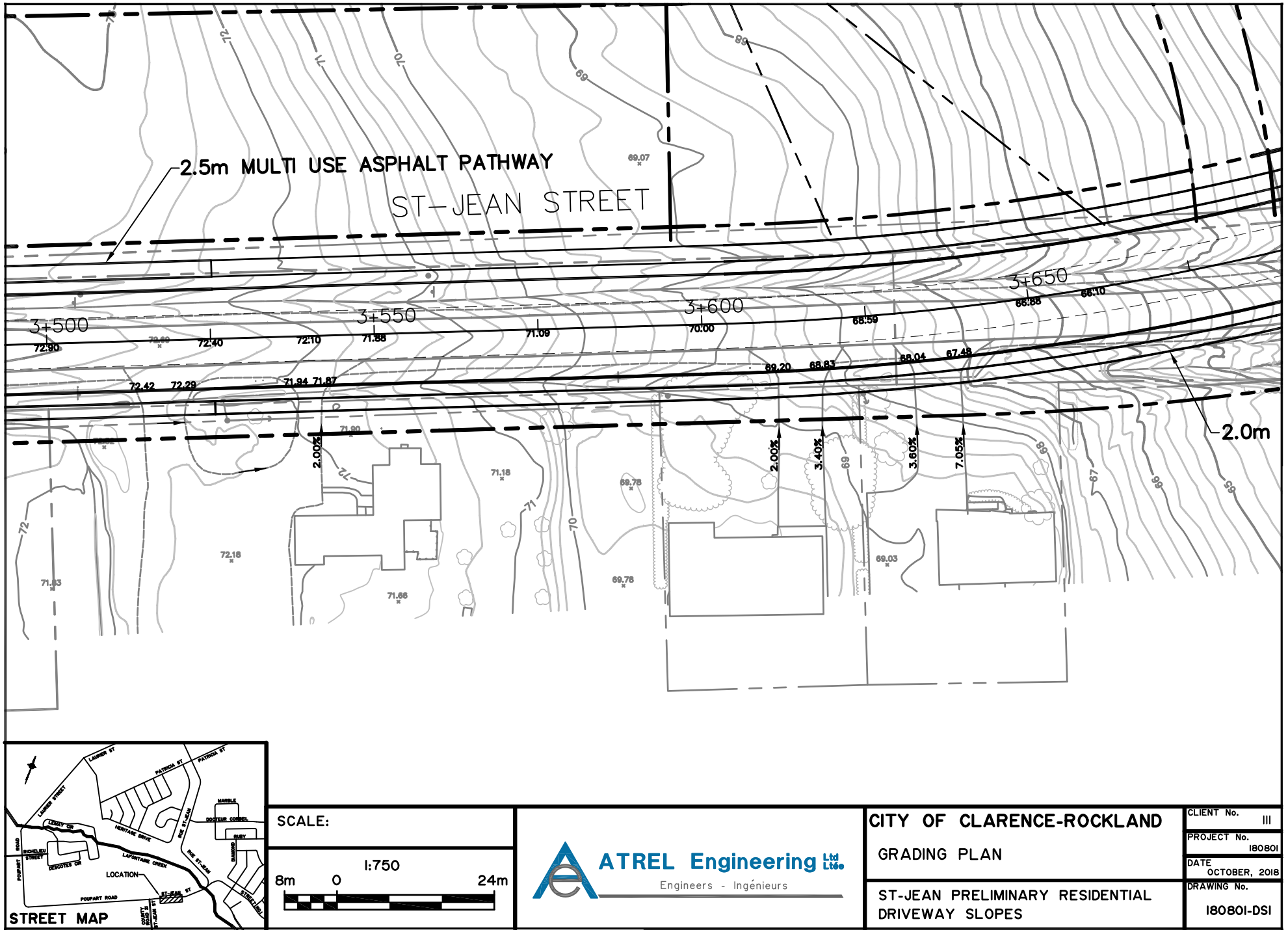
CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-RD6

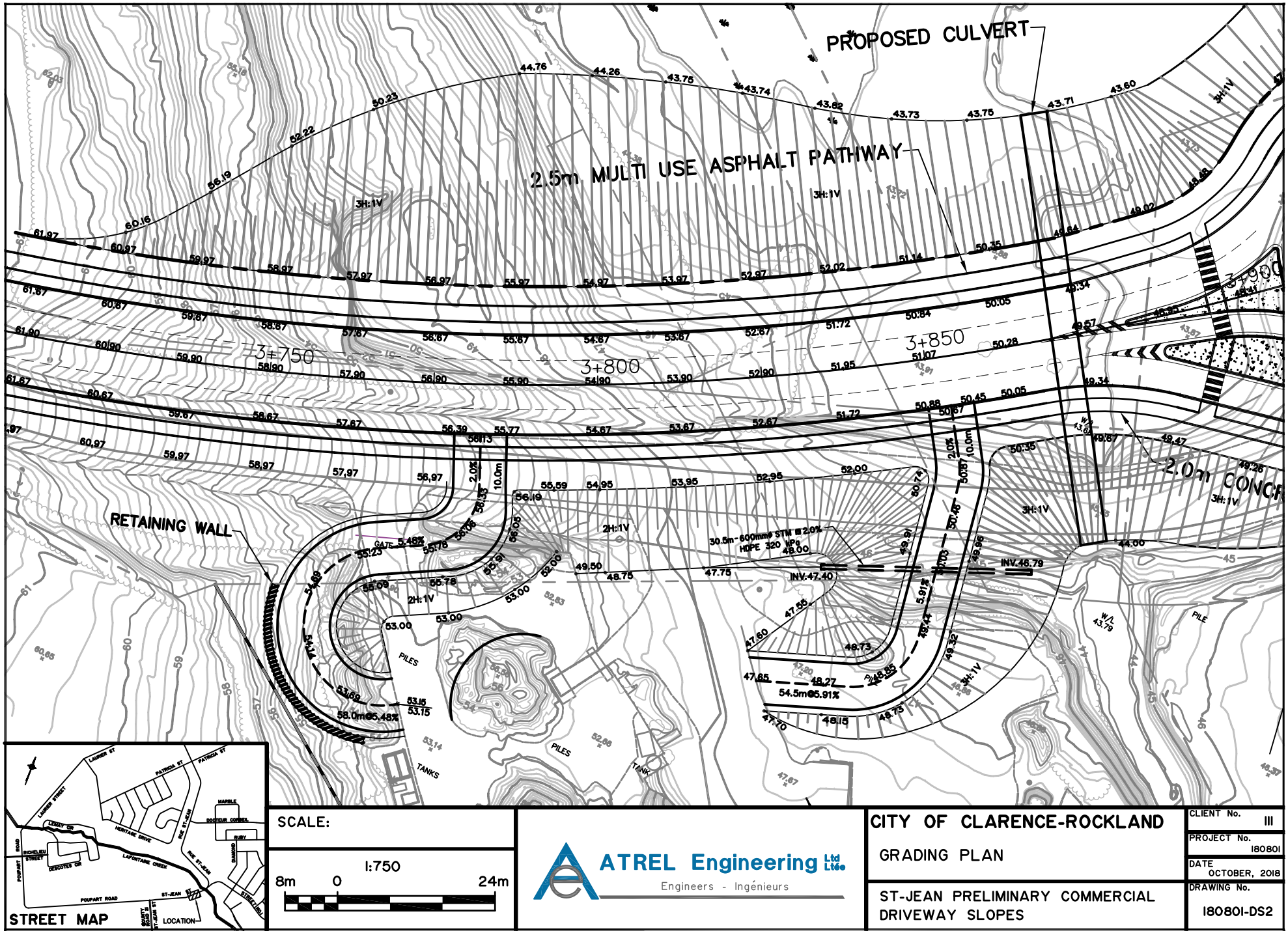
APPENDIX "H"

St-Jean Hill Plans

180801-HILL - St-Jean Preliminary Hill Plan and Profile
180801-DS1 - St-Jean Residential Preliminary Driveway Slopes
180801-DS2 - St-Jean Commercial Preliminary Driveway Slopes


2.5m MULTI USE ASPHALT PATHWAY
ST-JEAN STREET
2.0m CONCRETE SIDEWALK
POUPART RD
ST-JEAN STREET/COUNTY ROAD 21
2.00%
EXISTING ENTRANCE
LVC=120m
K=20.0
VPI ELEV 70.90
3+600
EXISTING ROAD CENTRELINE
8.00%
PROPOSED ENTRANCE
VPI ELEV 47.70
3+890
EXISTING AT PROPOSED CENTRELINE
ROAD CENTRELINE (3+390)
PROPOSED ℄ ROAD ELEVATION
EXISTING ℄ R.O.W. ELEV.
CHAINAGE
75.10 74.90 74.40 73.90 73.40 72.90 72.40 71.88 71.09 70.00 68.59 66.88 64.90 62.90 60.90 58.90 56.90 54.90 52.90 51.07 49.57 48.41 47.59 47.11
3+350 3+375 3+400 3+425 3+450 3+475 3+500 3+525 3+550 3+575 3+600 3+625 3+650 3+675 3+700 3+725 3+750 3+775 3+800 3+825 3+850 3+875 3+900 3+925 3+950 3+975 4+000
STREET MAP
SCALE: 1 : 200
VERTICAL
SCALE: 1 : 2000
HORIZONTAL
CITY OF CLARENCE-ROCKLAND
POUPART/ST-JEAN
PRELIMINARY HILL PROFILE
PLAN AND PROFILE
ST-JEAN HILL
STATION 3+325 TO STATION 4+000
CLIENT No. III
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-HILL


2.5m MULTI USE ASPHALT PATHWAY
ST-JEAN STREET
3+500
3+550
3+600
3+650
2.0m
2.00%
2.00%
3.40%
3.60%
7.05%
STREET MAP
LAURIER ST
PATRICIA ST
LEGAY CR
HERITAGE DRIVE
RUE ST-JEAN
MARBLE
DOCTEUR CORBEIL
RUBY
DIAMOND
RICHELIEU STREET
RESCOTES CR
LAFONTAINE CREEK
POUPART ROAD
LOCATION
ST-JEAN ST
COUNTY ROAD 17 ST-JEAN ST
SCALE:
1:750
8m 0 24m
ATREL Engineering Ltd Ltée
Engineers - Ingénieurs
CITY OF CLARENCE-ROCKLAND
GRADING PLAN
ST-JEAN PRELIMINARY RESIDENTIAL DRIVEWAY SLOPES
CLIENT No. 111
PROJECT No. 180801
DATE OCTOBER, 2018
DRAWING No. 180801-DSI



SCALE:

1:750

8m 0 24m

ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

GRADING PLAN

ST-JEAN PRELIMINARY COMMERCIAL DRIVEWAY SLOPES

CLIENT No. III

PROJECT No. 180801

DATE OCTOBER, 2018

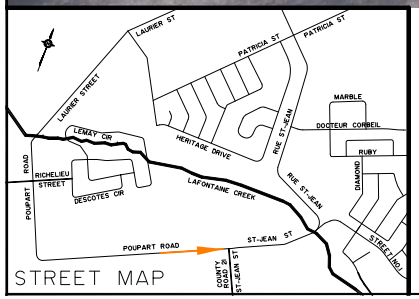
DRAWING No. 180801-DS2

APPENDIX "I"

Hydro Station Sketches

180801-HS1 - Hydro Station Street View
180801-HS2 - Hydro Station Top View





STREET MAP

ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

TRANSPORTATION IMPACT STUDY

PLAN

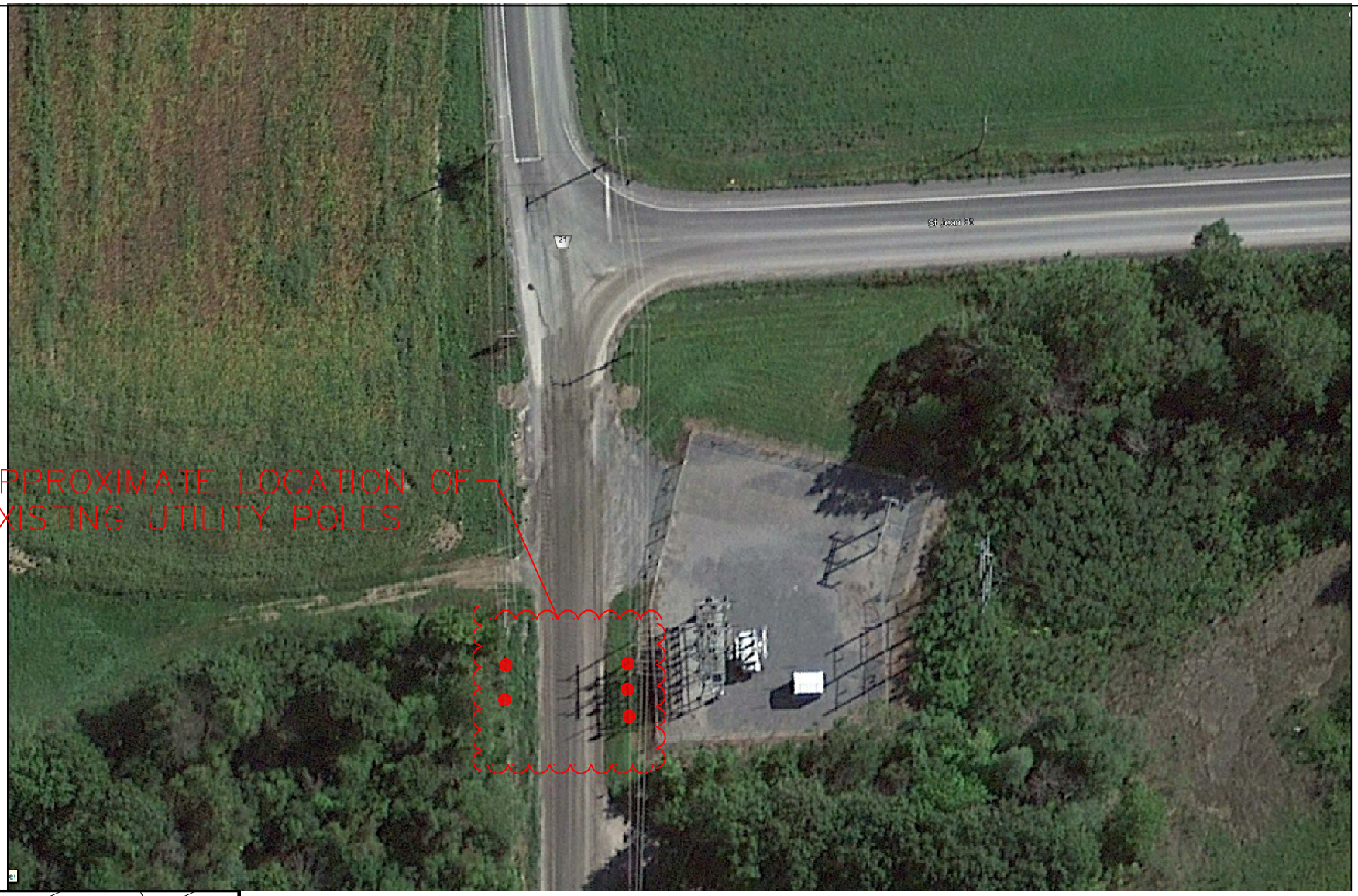
HYDRO STATION STREET VIEW

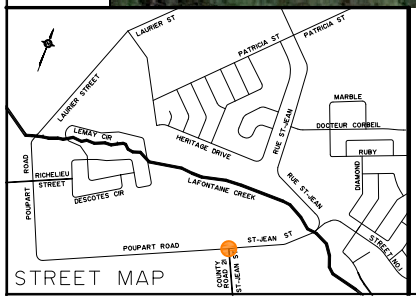
CLIENT No. III

PROJECT No. 180801

DATE OCTOBER, 2018

DRAWING No. 180801-HSI





ATREL Engineering Ltd Ltée
Engineers - Ingénieurs

CITY OF CLARENCE-ROCKLAND

TRANSPORTATION IMPACT STUDY

PLAN

HYDRO STATION TOP VIEW

CLIENT No. III

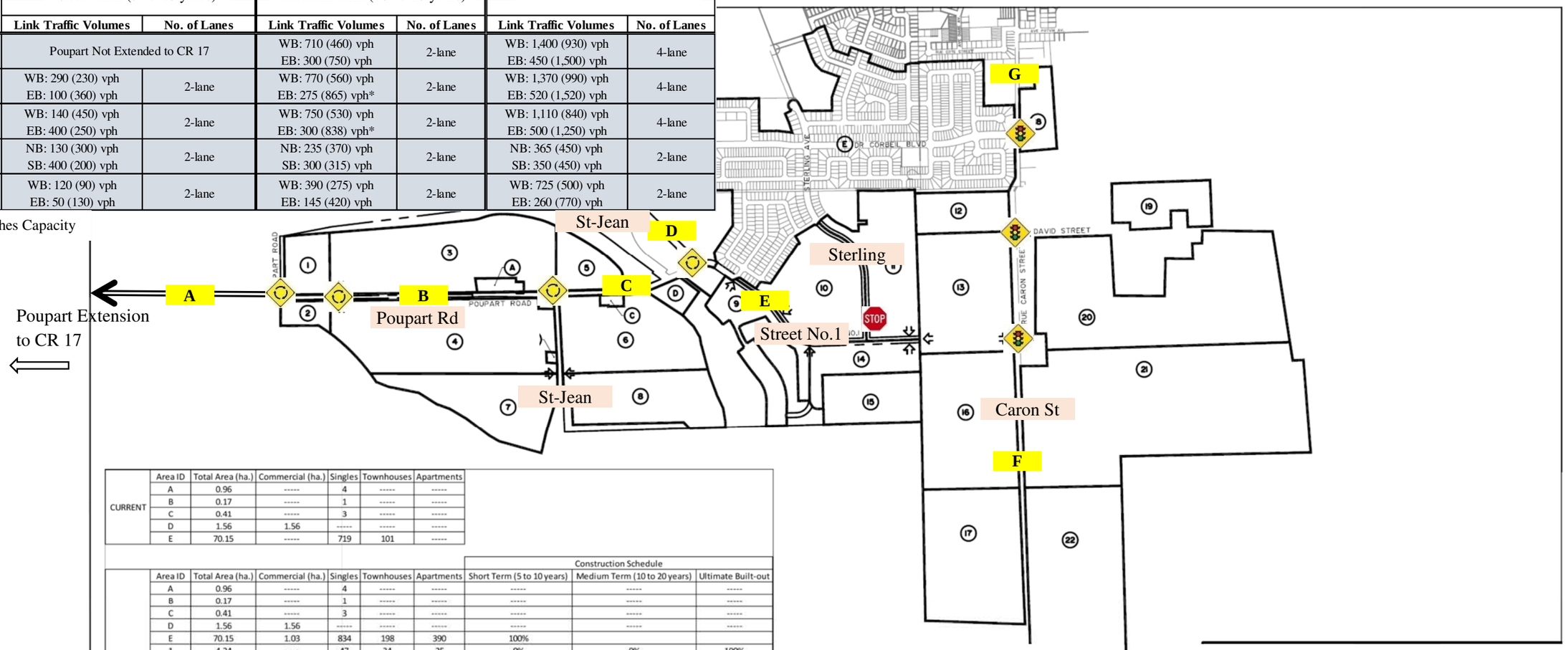
PROJECT No. 180801

DATE OCTOBER, 2018

DRAWING No. 180801-HS2

Links	Short-term (5-to-10 years)		Medium-term (10-to-20 years)		Ultimate Build-out	
	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes
A	Poupart Not Extended to CR 17		WB: 710 (460) vph EB: 300 (750) vph	2-lane	WB: 1,400 (930) vph EB: 450 (1,500) vph	4-lane
B	WB: 290 (230) vph EB: 100 (360) vph	2-lane	WB: 770 (560) vph EB: 275 (865) vph*	2-lane	WB: 1,370 (990) vph EB: 520 (1,520) vph	4-lane
C	WB: 140 (450) vph EB: 400 (250) vph	2-lane	WB: 750 (530) vph EB: 300 (838) vph*	2-lane	WB: 1,110 (840) vph EB: 500 (1,250) vph	4-lane
D	NB: 130 (300) vph SB: 400 (200) vph	2-lane	NB: 235 (370) vph SB: 300 (315) vph	2-lane	NB: 365 (450) vph SB: 350 (450) vph	2-lane
E	WB: 120 (90) vph EB: 50 (130) vph	2-lane	WB: 390 (275) vph EB: 145 (420) vph	2-lane	WB: 725 (500) vph EB: 260 (770) vph	2-lane

*Reaches Capacity



	Area ID	Total Area (ha.)	Commercial (ha.)	Singles	Townhouses	Apartments
CURRENT	A	0.96	-----	4	-----	-----
	B	0.17	-----	1	-----	-----
	C	0.41	-----	3	-----	-----
	D	1.56	1.56	-----	-----	-----
	E	70.15	-----	719	101	-----

							Construction Schedule		
	Area ID	Total Area (ha.)	Commercial (ha.)	Singles	Townhouses	Apartments	Short Term (5 to 10 years)	Medium Term (10 to 20 years)	Ultimate Built-out
FUTURE	A	0.96	-----	4	-----	-----	-----	-----	-----
	B	0.17	-----	1	-----	-----	-----	-----	-----
	C	0.41	-----	3	-----	-----	-----	-----	-----
	D	1.56	1.56	-----	-----	-----	-----	-----	-----
	E	70.15	1.03	834	198	390	100%		
	1	4.24	-----	47	34	25	0%	0%	100%
	2	1.94	-----	21	16	12	0%	0%	100
	3	25.26	-----	199	157	322	25%	100%	
	4	24.63	-----	271	197	148	0%	25%	100
	5	5.44	-----	37	44	-----	100%		
	6	14.96	-----	165	120	90	0%	25%	100
	7	12.33	-----	136	99	74	0%	25%	100
	8	12.34	-----	136	99	74	0%	25%	100
	9	7.97	-----	90	42	-----	50%	100%	
	10	13.92	-----	196	-----	37	50%	100%	
	11	13.61	-----	170	50	-----	50%	100%	
	12	5.85	-----	64	47	35	0%	50%	100
	13	17.40	-----	191	139	104	0%	50%	100%
	14	6.22	-----	90	-----	-----	50%	100%	
	15	7.53	-----	83	60	45	0%	50%	100%
	16	20.10	-----	221	161	121	0%	50%	100%
	17	20.38	-----	224	163	122	0%	50%	100%
	18	3.56	-----	-----	110	-----	100%		
	19	6.40	-----	70	51	38	50%	100%	
	20	38.59	-----	424	309	232	25%	50%	100%
	21	54.84	-----	603	439	329	25%	50%	100%
	22	38.72	-----	426	310	232	25%	50%	100%

Links	Short-term (5-to-10 years)		Medium-term (10-to-20 years)		Ultimate Build-out	
	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes	Link Traffic Volumes	No. of Lanes
F	NB: 340 (360) vph SB: 225 (430) vph	2-lane	NB: 800 (700) vph SB: 415 (930) vph	2-lane	NB: 1,480 (1,190) vph SB: 670 (1,660) vph	4-lane
G	NB: 435 (420) vph SB: 210 (530) vph	2-lane	NB: 940 (750) vph SB: 375 (1,060) vph	2-lane	NB: 1,640 (1,210) vph SB: 600 (1,800) vph	4-lane

TRANSPORTATION IMPACT STUDY

PROJECT No. 18080I

DATE AUGUST 2018

PLAN FUTURE DEVELOPMENT AREA AND STATISTICS

DRAWING No. 18080I-EDASI

Exhibit 4.1: Infrastructure Requirements

Transportation Impact Study for Brigil and Spacebuilders / Étude de circulation pour Brigil et Spacebuilders

Draft Plan of Subdivision Brigil and Spacebuilders / Ébauche de plan de lotissement Brigil et Spacebuiders

- A traffic study was a requirement for both projects to evaluate the impact of the future subdivisions on the existing and new road network.
- The main access to Brigil's lands will be from Poupart Side Road and the main access for the Stage 5 Morris will be from their new Street No.1 (new collector).

- Une étude de la circulation était nécessaire pour les deux projets afin d'évaluer l'impact des subdivisions futures sur les routes existantes et prévues.
- L'accès principal aux terrains de Brigil se fera du chemin Poupart et celui de la phase 5 de Morris se fera de la nouvelle rue No.1 (nouveau collecteur)

Goal of the traffic study / But de l'étude circulation

- The goal of the study was to evaluate the following:
  - Traffic impacts, transit impacts at some key intersections (ex: St-Jean Street and Docteur Corbeil, Poupart and Carmen Bergeron, St-Jean and Poupart, etc..)
  - Sidewalk, multi-use path and bikepath along the study corridor.
  - Lane width of the collector, turning lanes, speed limit, traffic calming measures, etc.
  - Maximum hill slope for St-Jean Street.

- Le but de l'étude était d'évaluer les éléments suivants:
  - Impacts de la circulation, impacts du transit aux intersections clées (ex: rue St-Jean et Docteur Corbeil, Poupart et Carmen Bergeron, St-Jean et Poupart, etc.)
  - Trottoir, sentier multi-usage et piste cyclable le long du couloir d'étude.
  - Largeur du chemin collecteur, voies de virage, limite de vitesse, mesures d'apaisement de la circulation, etc.
  - Pente maximale de la rue St-Jean

Rockland's Official Plan/Plan officiel de Rockland

- Major Collector:
  - intended to distribute traffic from the interior of residential communities or areas of commercial development to an Arterial Road (County Road 17).
  - Designed to accomodate 8000 vehicles/day.
  - Uniterrupted flow
- Minor Collector:
  - Intended to distribute traffic from the interior of residential neighbourhoods to a Major Collector or Arterial.

- Collecteur majeur:
  - Attribué à répartir le trafic de l'intérieur des quartiers résidentiels ou des zones de développement commercial vers un chemin artériel (chemin comté 17).
  - Destiné pour accommoder 800 véhicules/jour
  - traffic ininterrompu
- Collecteur mineur:
  - Destiné à répartir le trafic de l'intérieur des quartiers résidentiels vers un collecteur majeur ou une artère

Key findings / principales découvertes

- Short-term (5-10 years):
  - 2,000 units to be constructed
- Medium term (10-20 years)
  - Additionnal 3,100 units to be constructed
- Full Build-out
  - Additionnal 3,900 units
  - 6,000 vehicle trips during am peak and 8,000 vehicles in the pm peak.

Total of 9,000 units

- Court terme (5-10 ans):
  - 2 000 unités à construire
- Moyen terme (10-20 ans)
  - 3 100 unités supplémentaires à construire
- Construction complète
  - 3 900 unités supplémentaires
  - 6 000 déplacements de véhicules en heure de pointe le matin et 8 000 véhicules en heure de pointe en fin de journée.

Total de 9 000 unités

Key findings / principales découvertes

- Recommendations and observations from the Traffic Engineer in regards to roads:
- **Richelieu, Carmen Bergeron and extension of Poupart:**
  - Majority of the residents of the future developments south of Rockland will travel along St-Jean St. and Poupart Rd to and from the City of Ottawa.
  - Within a 5-10 year timeframe Richelieu and Carmen Bergeron will be at capacity and the system will require another alternative.
  - Alternative is extending Poupart to the west to connect further west to County Road 17.

- Recommandations et observations de l'Ingénieur en circulation en ce qui concerne les routes:
- **Richelieu, Carmen Bergeron et prolongement de Poupart:**
  - La majorité des résidents des nouveaux développements futurs au sud de Rockland circuleront le long des rues St-Jean et Poupart en provenance et à destination d'Ottawa.
  - Dans une plage de temps de 5 à 10 ans, Richelieu et Carmen Bergeron seront à pleine capacité et le système nécessitera une autre solution.
  - Alternative est d'étendre Poupart vers l'ouest pour relier le chemin Comté 17.

Key findings / principales découvertes

- Poupart Rd. (Laurier to 90 degree bend)
  - 2-lane with curbs (23 m. right of way)
  - Multi-use pathway and sidewalk in boulevard.
- Poupart Rd. (from 90 degree bend to St-Jean St.)
  - 4-lane divided asphalt road (5m. Island), curbs (30 m. right-of-way)
  - Multi-use pathway and sidewalk in boulevard

- chemin Poupart (rue Laurier à la courbe de 90 degrés)
  - 2 voies avec bordures de rue (emprise de 23 m)
  - Sentier polyvalent et trottoir dans le boulevard.
- chemin Poupart (courbe de 90 degrés à la rue St-Jean)
  - Route asphaltée 4 voies (île de 5 m), bordures (emprise de 30 m)
  - Sentier polyvalent et trottoir dans le boulevard

Key findings / Principales découvertes

- St-Jean St. from Poupart to Morris Village site entrance-Street No.1):
  - Current slope is 14.6 %
  - Right-of-way min. 30 metres. Will require wider for the slope
  - 4-lane undivided, with concrete curbs
  - Max slope will be 8% (as per Ministry of Transportation for a 4-lane undivided).
  - Multi-use pathway and sidewalk in boulevard
- Morris Village Street No. 1
  - 2-lane undivided (26 m. right of way)
  - Multi-use pathway and sidewalk in boulevard

- Rue St-Jean de Poupart à l'entrée du site du Morris Village - rue no 1):
  - La pente actuelle est de 14,6%
  - Emprise min. 30 mètres. Devra être plus large pour la pente
  - 4 voies non divisées avec des bordures en béton
  - La pente maximale sera de 8% (selon le Ministère de Transport pour un chemin non divisée à 4 voies).
  - Sentier polyvalent et trottoir dans le boulevard
- Morris Village - Rue No. 1
  - 2 voies non divisées (emprise de 26 m)
  - Sentier polyvalent et trottoir dans le boulevard

Key findings / principales découvertes

- St-Jean (from Street No.1 to Patricia):
  - 2-lane (26 m. right of way)
  - Multi-use pathway and sidewalk in boulevard
- Other road alternative (over 20 year horizon)
  - Even with County Rd. 17 widened to 4-lanes, a potential alternative option is evaluating a second east-west corridor (e.i. connecting Baseline to Innes)
  - More detailed network-wide assessment is recommended.

- St-Jean (de la rue no.1 à Patricia):
  - 2 voies (emprise de 26 m)
  - Sentier polyvalent et trottoir dans le boulevard
- Autre alternative routière (dans un horizon de plus de 20 ans)
  - Même avec chemin de Comté 17 élargi à 4 voies, une option alternative est l'évaluation d'un deuxième corridor est-ouest (par exemple, reliant Baseline à Innes)
  - Une évaluation plus détaillée à l'échelle du réseau est recommandée

Traffic calming and speed / Apaisement de la circulation et vitesse

- Speeds are proposed at 50 km/h for all of the network
- Roundabouts are proposed along many intersections within the study area as a calming tool. They naturally slow vehicular traffic and encourage drivers to be more aware of their surroundings. Speed limits will be posted at 30 km/h. By their design, all vehicles approaching slow down (whereas opposed to traffic signals where vehicles are often seen speeding up to ensure they cross on the green)

- Vitesse proposée de 50 km/h pour l'ensemble du réseau
- Les carrefours giratoires sont proposés le long de nombreuses intersections dans la zone d'étude en tant qu'outil apaisant. Ils ralentissent naturellement la circulation des véhicules et incitent les conducteurs à prendre conscience de leur environnement. Les limites de vitesse seront affichées à 30 km/h. Par leur design, tous les véhicules qui les approchent ralentissent (tandis qu’aux feux de signalisation où l'on voit souvent des véhicules qui accélèrent pour s'assurer de passer sur le feu vert)

Conclusion / Conclusion

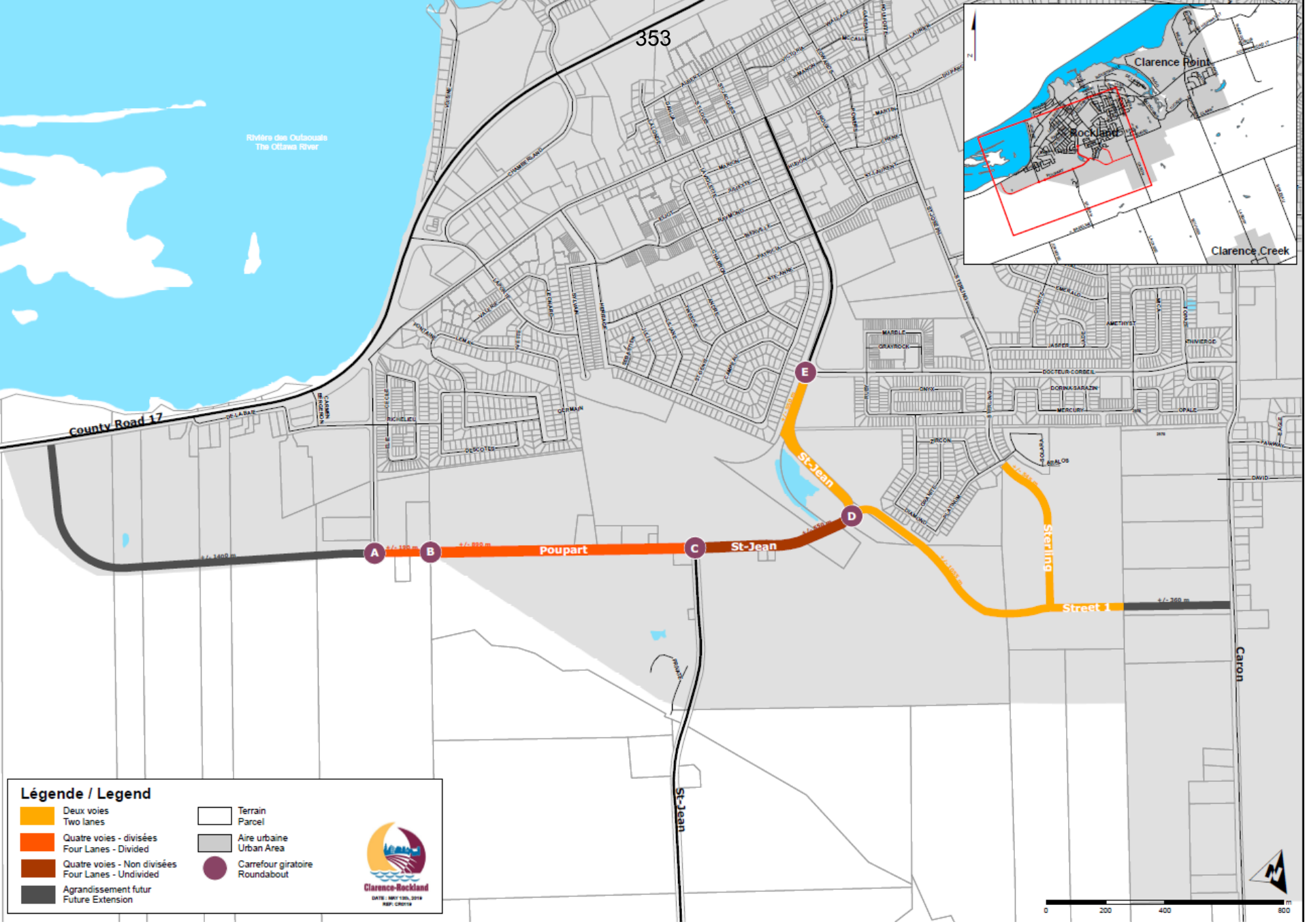
- Over 9,100 units will be built by full build-out.
- Residents in the south of Rockland will travel along St-Jean St. and Poupart Rd. to reach County Rd. 17.
- Necessary to upgrade and build a collector (Poupart, St-Jean and Street No.1) to accept the future growth of Rockland. Current conditions of roads not acceptable for amount of new units.
- City must start the process of planning for the new roads and enlargements of existing roads as developments are approved.

- Plus de 9 100 unités seront construites lorsque le projet sera complété.
- Les résidents du sud de Rockland voyageront le long de la rue Saint-Jean et le chemin Poupart pour accéder le chemin de Comté17
- Il est nécessaire d'améliorer et de construire un collecteur (Poupart, St-Jean et rue No.1) pour supporter la croissance future de Rockland. Les conditions actuelles des routes ne seront pas acceptables pour le nombre de nouvelles unités.
- La Cité doit commencer le processus de planification des nouvelles routes et l'élargissement de celles existantes au fur et à mesure que les aménagements sont approuvés.

Conclusion / Conclusion

- Designing St-Jean Hill slope is the 1st step in the process (as approved in the budget 2019).
- Infrastructure and Planning Department will start preparing a preliminary schedule of works/studies, with the developers involved, for this massive endeavour.

- La conception de la pente de la colline sur la rue St-Jean est la première étape du processus (tel qu'approuvé dans le budget 2019).
- Le Service d’infrastructure et l’aménagement du territoire commenceront à préparer un calendrier préliminaire des travaux/études, avec les développeurs impliquées pour ce projet de grande envergure.


Rivière des Outaouais
The Ottawa River
County Road 17
Poupart
St-Jean
St-Jean
Sterling
Street 1
Caron
A
B
C
D
E
Clarence Point
Rockland
Clarence Creek
Légende / Legend
Deux voies
Two lanes
Quatre voies - divisées
Four Lanes - Divided
Quatre voies - Non divisées
Four Lanes - Undivided
Agrandissement futur
Future Extension
Terrain
Parcel
Aire urbaine
Urban Area
Carrefour giratoire
Roundabout
Clarence-Rockland
0
200
400
800
m

Questions?

RAPPORT N° LOI2019-05-01

Date	22/05/2019
Soumis par	Jean-Luc Jubinville
Objet	Demande de fonds supplémentaires – Terrain de balle de Clarence Creek
# du dossier	#C11 CLA

1) **NATURE / OBJECTIF :**
Le but de ce rapport est d'obtenir l'approbation du conseil municipal afin d'augmenter les fonds alloués au projet de construction de terrain de balle à Clarence Creek afin de combler le manque à gagner.

2) **DIRECTIVE/POLITIQUE ANTÉCÉDENTE :**
Lors du processus budgétaire 2019, le conseil municipal a accepté un montant de 150 000$ au budget capital afin de procéder à la construction d'un terrain de balle à Clarence Creek.

3) **RECOMMANDATION DU SERVICE :**

ATTENDU QUE le budget capital 2019 pour la construction d'un terrain de balle à Clarence Creek est de 150 000$; et

ATTENDU QUE les prix des soumissions obtenues pour la construction du terrain de balle sont plus élevés qu'anticipés ; et

QU'IL SOIT RÉSOLU QUE le comité plénier recommande au conseil municipal d'autoriser le transfert de 21 141$ des fonds de la taxe sur l'essence vers le budget de construction du terrain de balle de Clarence Creek ; Tel que recommandé

WHEREAS the 2019 capital budget for the construction of the Clarence Creek baseball field is $ 150,000; and

WHEREAS the bids for the construction of the Clarence Creek baseball field are much higher than anticipated; and

BE IT RESOLVED THAT the Committee of the whole recommends to Municipal Council to authorize the transfer of $ 21,141 from the Federal gas tax funds to the Clarence Creek Baseball field construction project; As recommended

4) **HISTORIQUE :**

Selon le plan de gestion des actifs, le terrain de balle de Clarence Creek avait atteint sa durée de vie utile en 2015. Le terrain était dans un très mauvais état et devait être remplacé. Un montant a donc été demandé en 2016.

Suite à des demandes de la part des associations de balle locales et de l'augmentation du nombre d'adeptes du baseball, nous avons dû modifier le projet. Des changements dans les spécifications et dans l'ampleur du projet ont donc changé la valeur du projet expliquant pourquoi du financement supplémentaire fut demandé lors du processus budgétaire 2019.

5) **DISCUSSION :**

Soumission reçue : Suite au processus de soumission, les 5 entrepreneurs suivants ont soumis un prix :

Nom de l'entrepreneur	Prix avant taxes
Poupart Excavation	168 440 $
Michanie Construction	176 770 $
Landrock	199 989 $
D&R Maintenance Solution	217 415 $
CSL Group	223 200 $

Explication pour l'augmentation des prix : Lors de la révision finale des plans avant le processus de soumission, une série de drains fût ajoutée dans le projet afin d'assurer une bonne irrigation du terrain. L'ajout de ces drains a occasionné une augmentation du coût du projet. De plus, suite à une discussion avec les entrepreneurs, il fût aussi confirmé que les prix pour la clôture et pour le matériel de l'avant-champ avaient augmentés par rapport à l'an dernier.

Négociation du contrat : Une fois les soumissions reçues les Services communautaires ont rencontré le plus bas soumissionnaire afin d'évaluer les possibilités de réduction des coûts. Après plusieurs échanges et discussions, quelques décisions furent prises pour réduire le contrat d'environ 22 000$. Malgré ces coupures, le budget initial n'a pu être respecté.

Options pour le conseil municipal : Plusieurs options s'offrent au conseil municipal afin de régler cette situation. Voici les 3 options jugées possibles par le département.

1- <u>Libérer les fonds manquants et augmenter le budget :</u>
Tel qu'indiquer dans le présent rapport, les fonds supplémentaires sont disponibles au niveau de la réserve sur la taxe sur l'essence. Le conseil municipal peut donc transférer les fonds manquants vers le projet de construction terrains de balle de Clarence Creek. Comme le projet a déjà été repoussé depuis quelques années et qu'il y a un grand besoin pour un nouveau terrain de balle, les Services communautaires recommandent cette option.

2- <u>Recommencer le processus de soumission :</u>
Le conseil peut décider de recommencer le processus de soumission. Toutefois, le service ne croit pas que les prix du projet diminueront considérant que l'horaire des entrepreneurs se rempli rapidement causant habituellement une augmentation des prix plus la saison avance.

3- <u>Rejeter les réquisitions et abandonner le projet pour 2019 :</u>
Le conseil peut décider d'abandonner complètement le projet et ne rien faire cette année. Les Services communautaires peuvent amener un projet au budget capital 2020 afin de combler le manque à gagner.

6) **CONSULTATION :**
L'association de balle mineure locale fût consultée afin d'avoir leurs commentaires lors de la rédaction des plans.

7) **RECOMMANDATION OU COMMENTAIRES DU COMITÉ :**
N/A

8) **IMPACT FINANCIER (monétaire/matériaux/etc.):**

Tel qu'illustré dans le tableau ci-dessous le manque à gagner est de 21 141$. Afin de combler ce manque à gagner les fonds seront pris de la taxe fédérale sur l'essence.

REVENUS		
BUDGET - 2016		**50 000 $**
Taxe sur l'essence	50 000 $	
BUDGET - 2019		**100 000 $**
Réserve de parc	100 000 $	
REVENUS - TOTAL		150 000 $
DÉPENSES		
Plans		3 419 $
Dépenses internes		4 000 $
Contrat de construction – Renégocié		146 207 $
Taxes (1.8%)		2 632 $
Contingence (10%)		14 883 $
DÉPENSES - TOTAL		171 141 $
BALANCE / DÉFICIT PRÉVU		21 141$

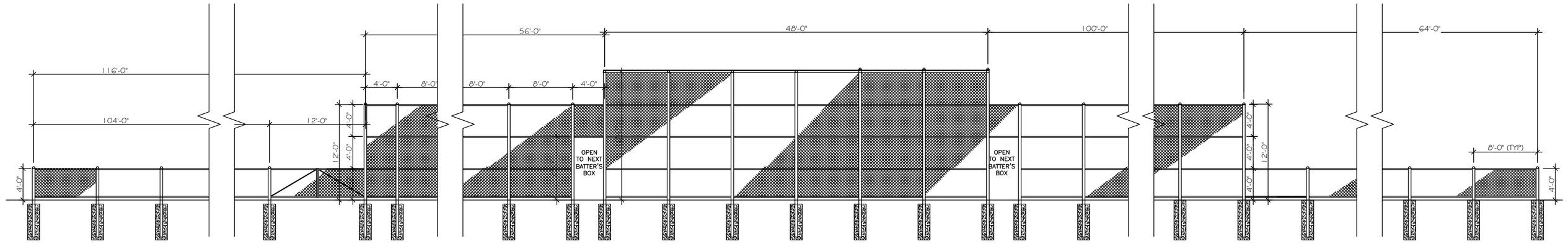
*Si la contingence n'est pas dépensée elle sera retournée à l'intérieur des réserves.

9) **IMPLICATIONS LÉGALES :**
N/A

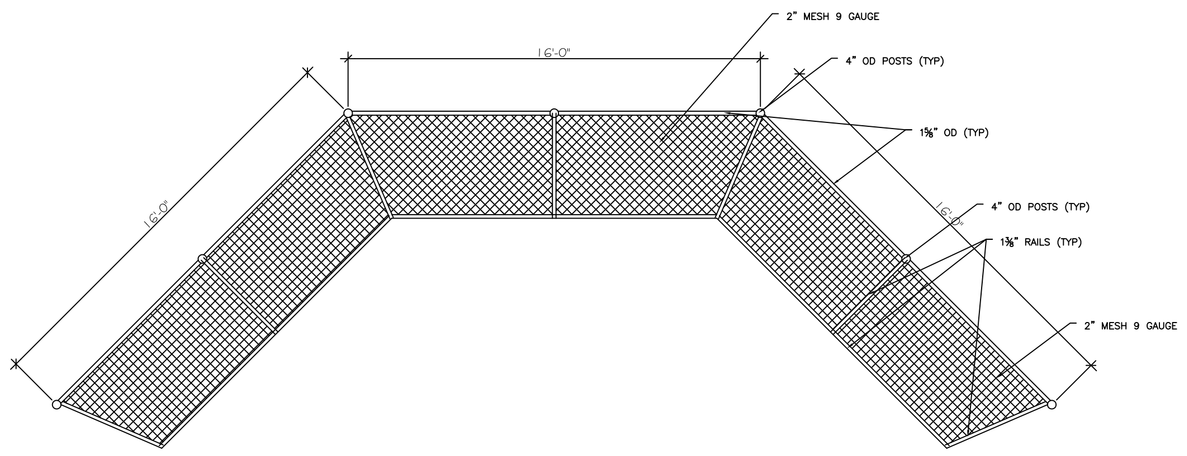
10) **GESTION DU RISQUE (RISK MANAGEMENT) :**
N/A

11) **IMPLICATIONS STRATÉGIQUES :**
Selon le plan de gestion des actifs, le terrain de balle de Clarence Creek avais atteint sa durée de vie utile en 2015.

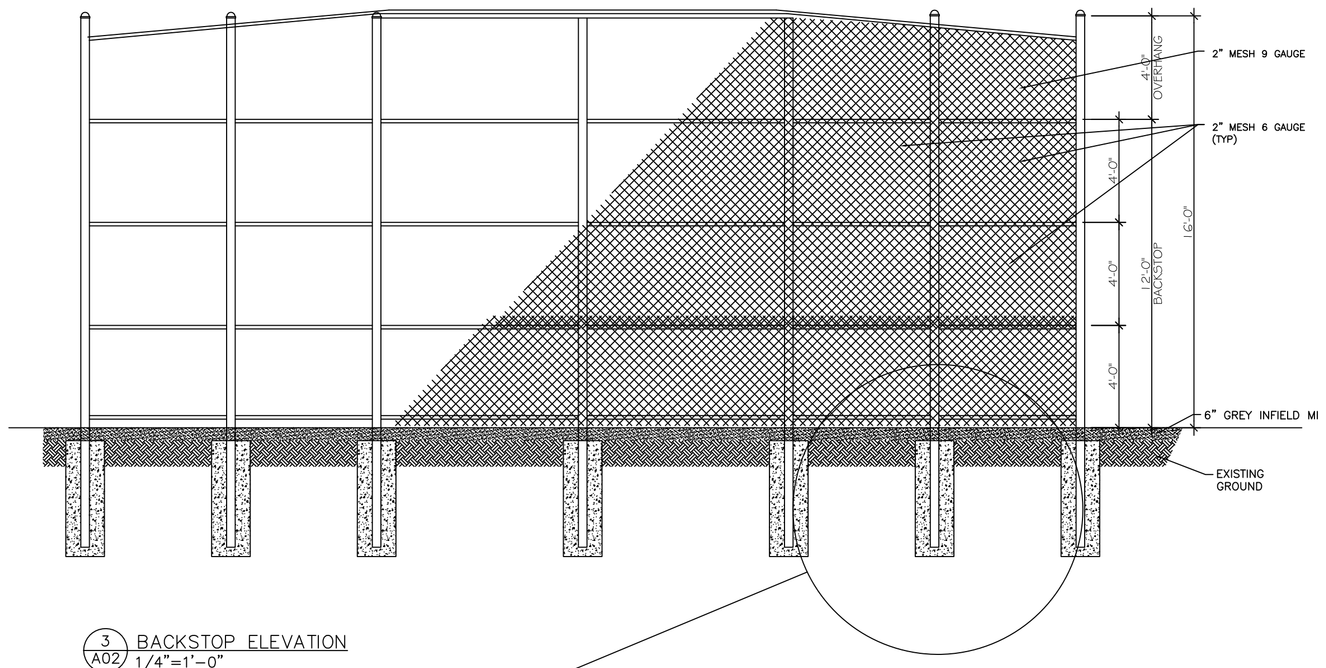
12) **DOCUMENTS D'APPUI :**
- Plan du terrain de balle de Clarence Creek



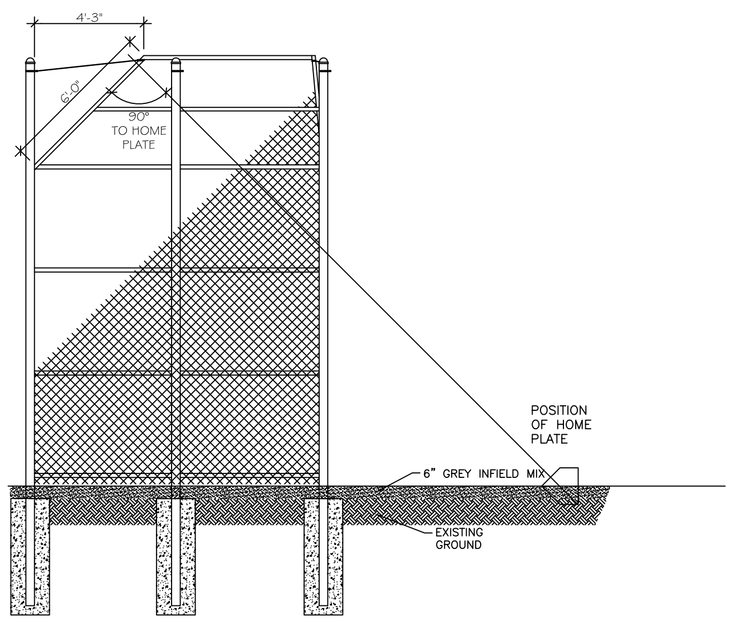
1 A02 BACKSTOP AND FOUL SIDE STRETCHED ELEVATION
1/8"=1'-0"



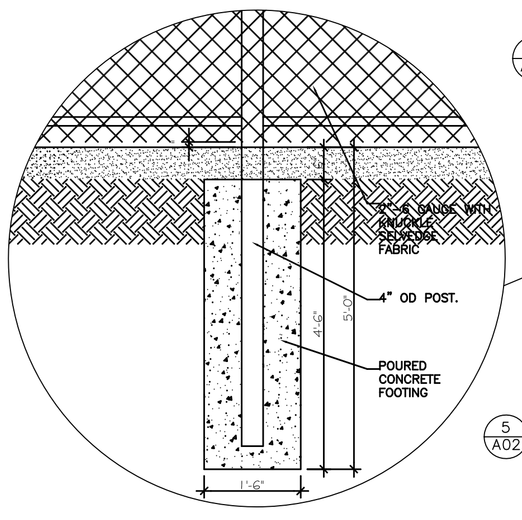
2 A02 BACKSTOP PLAN
1/4"=1'-0"



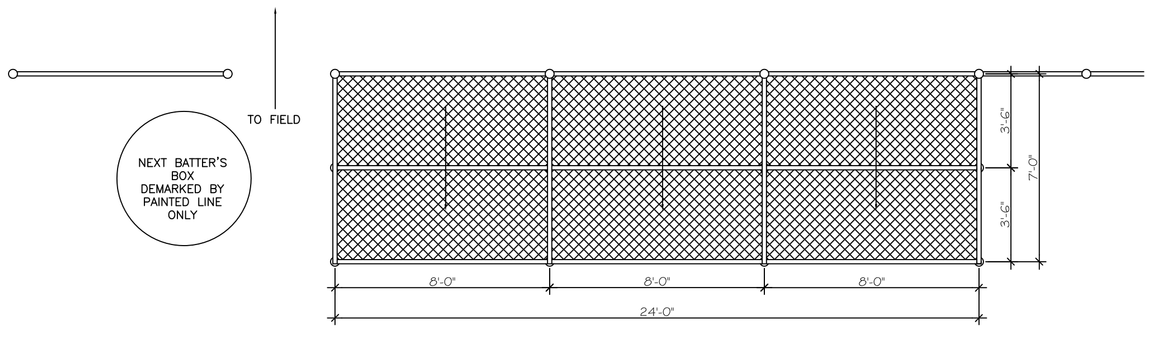
3 A02 BACKSTOP ELEVATION
1/4"=1'-0"



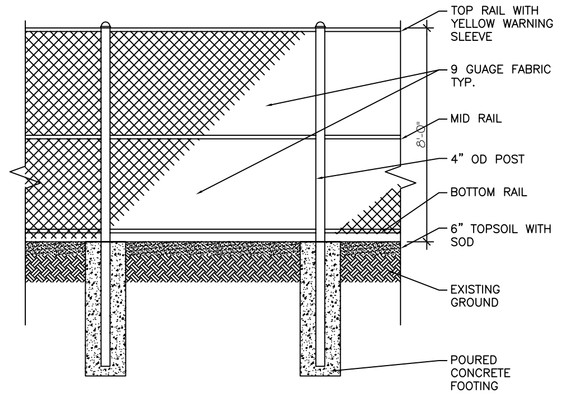
4 A02 BACKSTOP ELEVATION
1/4"=1'-0"



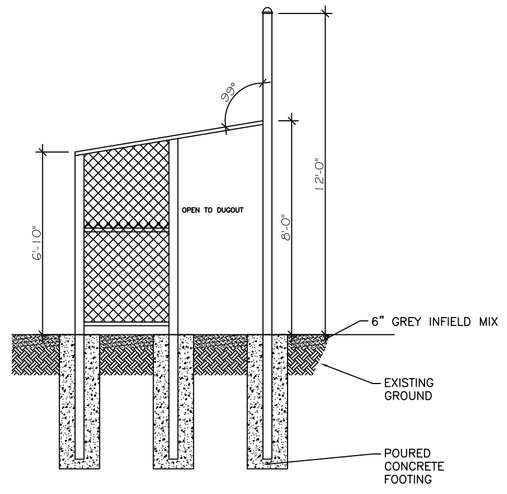
5 A02 FOUNDATION AND FABRIC DETAIL
1/4"=1'-0"



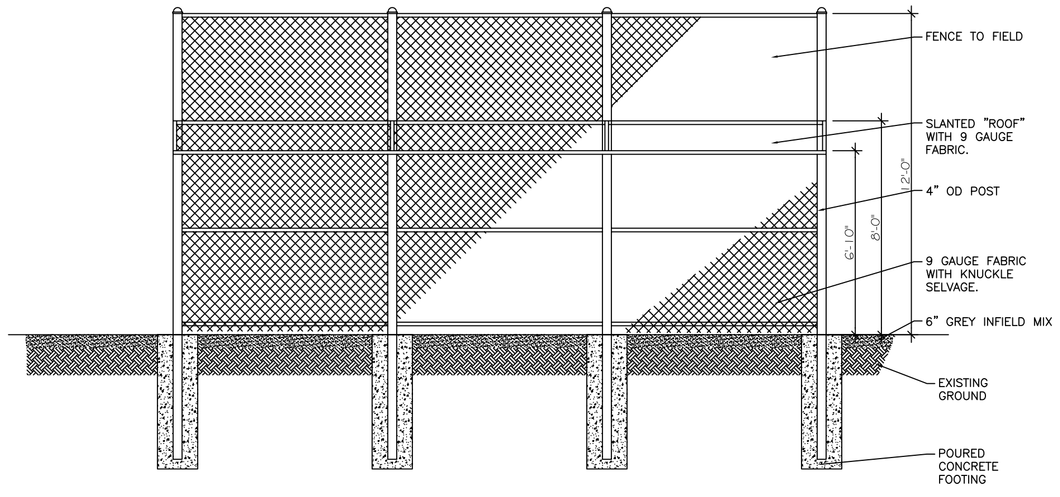
7 A02 DUGOUT PLAN
1/2"=1'-0"



6 A02 TYPICAL 8'-0" OUTFIELD FENCE SECTION
1/2"=1'-0"



8 A02 BACKSTOP PLAN
1/2"=1'-0"



9 A02 DUGOUT REAR ELEVATION
1/2"=1'-0"

FABRIC: 2" PVC COATED CHAIN LINK FABRIC
FRAMEWORK: GALVANIZED

BACKSTOP

FABRIC: 2" BLACK PVC COATED CHAIN LINK FABRIC
6 GAUGE, KNUCKLE SALVEDGE

POSTS: 4" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) HIGH STRENGTH (50,000 psi YIELD STRENGTH)

TOP RAIL: 1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) HIGH STRENGTH (50,000 psi YIELD STRENGTH)

BOTTOM AND MID RAIL:
1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) HIGH STRENGTH (50,000 psi YIELD STRENGTH)

BACKSTOP OVERHANG

FABRIC; 2" BLACK PVC COATED CHAIN LINK FABRIC
9 GAUGE, KNUCKLE SALVAGE

RAILS: 1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 PSI YIELD STRENGTH)

8'-0" AND 12'-0" FENCES

FABRIC; 2" BLACK PVC COATED CHAIN LINK FABRIC
9 GAUGE, KNUCKLE SALVAGE

POSTS: 4" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 psi YIELD STRENGTH)

TOP RAIL: 1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 psi YIELD STRENGTH)

BOTTOM AND MID RAIL: 1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 psi YIELD STRENGTH)

8'-0" FENCE TO HAVE YELLOW SAFETY TOP AND 12'-0" FOUL POLES AT THE END OF EACH FOUL LINE

4'-0" FENCES

FABRIC; 2" BLACK PVC COATED CHAIN LINK FABRIC
9 GAUGE, KNUCKLE SALVAGE

POSTS: 3½" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 PSI YIELD STRENGTH)

TOP RAIL: 1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 PSI YIELD STRENGTH)

BOTTOM AND MID RAIL: 1⅝" OD GROUP 1A
(ASTM F1043) SCHEDULE 40 STEEL PIPE
(ASTM F1083) REGULAR GRADE (30,000 PSI YIELD STRENGTH)

BRACE AND TENSION BANDS: FROM 12 GAUGE X ¾" TO ⅜" X 1"
GALVANIZED STEEL BANDS

CONCRETE FOR POST FOOTINGS: SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI. (20 MPA).

TOPSOIL: LOAM SOIL

SOD OR HYDROSEED MIX: 50% KENTUCKY BLUEGRASS AND 50% PERENNIAL RYEGRASS

INFIELD MIX: GREELEY'S GREY INFIELD MIX OR EQUIVALENT

DIMENSIONS ON DRAWING ARE FOR ESTIMATING PURPOSE ONLY. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR AND SUBCONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE.

ALL CONTRACTORS MUST COMPLY WITH ALL APPLICABLE CODES AND BYLAWS.

CONSTRUCTION DOCUMENTS INCLUDING PLANS AND SPECIFICATIONS SHALL BE READ IN WHOLE NOT IN PART. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO READ ALL CONSTRUCTION DOCUMENTS. PERFORMANCE AND COMPLETION OF ALL WORK SHALL INCLUDE ALL NECESSARY LABOUR, SERVICES, MATERIALS, PRODUCTS CONSTRUCTION MACHINERY AND EQUIPMENT NECESSARY FOR THE WORK IN ACCORDANCE WITH ALL CONSTRUCTION DOCUMENTS. CITY OF CLARENCE-ROCKLAND SHALL NOT BE RESPONSIBLE FOR ERRORS OR OMISSIONS DUE TO CONTRACTOR OR SUBCONTRACTORS FAILURE TO READ ALL CONSTRUCTION DOCUMENTATION.

Clarence-Rockland

PROJECT:
418 LEMAY ST.
CLARENCE CREEK,
ONTARIO

issue no:

issued for client approval	1
issued for permit and tender	2
	3
	4
	5
	6

drawn by:
project no: SOFTBALL FIELD
scale: NTS
date: 13/03/19

drawing name: FENCE PLANS AND ELEVATIONS

PAGE NO:
A02

359



ESTIMATED QUANTITIES.

THESE QUANTITIES ARE FOR ESTIMATION PURPOSES ONLY. THE CONTRACTOR MUST VERIFY QUANTITIES ON SITE.

GRASS AREA: 2 352 SQUARE YARDS
**CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR SOD AND ALSO A UNIT PRICE FOR HYDRO SEEDING (26kg/ha) FOR THE SAME AMOUNT OF AREA. IT IS AT THE CITY's DISCRETION TO CHOOSE WHAT TYPE OF SURFACE TREATMENT THE GRASSED AREA SHALL RECEIVE (EITHER SOD OR HYDRO SEEDING)

INFIELD MIX: 1 926 SQUARE YARDS

TOP SOIL INFILL: 1176 CUBIC YARDS

INFILL MIX INFILL: 1283 CUBIC YARDS

8'-0" FENCE: 362'-0" LINEAR FEET (INCLUDES ALL HARDWARE, FABRIC, YELLOW SAFETY POSTS AND CONCRETE)

8'-0" FENCE: (FOUL POSTS) 2

12'-0" FENCE: 156'-0" LINEAR FEET (INCLUDES ALL HARDWARE, FABRIC, POSTS AND CONCRETE)

4'-0" FENCE: 168'-0" LINEAR FEET (INCLUDES ALL HARDWARE, FABRIC, POSTS AND CONCRETE)

4'-0" DOUBLE SWING DOOR GATE: 1 (INCLUDES ALL HARDWARE, FABRIC, POSTS AND CONCRETE)

16' HIGH BACKSTOP + OVERHANG: 48'-0" LINEAR FEET (INCLUDES ALL HARDWARE, FABRIC, POSTS AND CONCRETE)

831' OF 6" DIA. PERFORATED SMOOTH WALL PIPE c/w FILTER SOCK

LEGEND

- 6" TOP SOIL WITH SOD
- 8" GREY INFIELD MIX
- EXISTING GROUND

GENERAL NOTES:

EXISTING UTILITIES

CONTRACTOR MUST HAVE LOCAL UTILITIES TO BE LOCATED BEFORE THE COMMENCEMENT OF THE PROJECT. ANY DISCREPANCIES WITH THE LOCATION OF THE UTILITIES AND THE PLACEMENT OF THE FENCE AND/OR SUBDRAIN MUST BE BROUGHT FORTH TO THE OWNER PRIOR TO PROCEEDING WITH ANY WORK.

EXISTING DRAIN INFILL

OTHERS TO REMOVE AND DISPOSE OF EXISTING DRAIN. INFILL TO ALLOW PROPER FIELD SLOPE. GENERAL CONTRACTOR TO CONFIRM DRAIN HAS BEEN REMOVED AND INFILLED PRIOR TO COMMENCEMENT OF LAYING FIELD.

HOME PLATE REMOVAL AND REINSTATEMENT

CONTRACTOR TO REMOVE EXISTING HOME PLATE, AND REINSTALL IN NEW LOCATION.

TOPSOIL AND SOD

CONTRACTOR TO ENSURE GRADE IS 1% SLOPING AWAY FROM PITCHERS AREA. ENSURE EXISTING SOIL CAN DRAIN. SUPPLY, PLACE AND COMPACT SIX INCHES OF DEBRIS FREE TOPSOIL OVER EXISTING GRAVEL, THEN LAY SOD. SOD TO BE WATERED FREQUENTLY AND PINNED TO ALLOW GROWTH UNTIL SOD HAS REACHED SUBSTANTIAL GROWTH. PROVIDE OWNER WITH MAINTENANCE INSTRUCTIONS.

INFIELD MIX

CONTRACTOR TO ENSURE GRADE IS 1% SLOPING AWAY FROM PITCHERS AREA. ENSURE EXISTING SOIL CAN DRAIN. INSTALL INFIELD MIX TO ALIGN WITH HEIGHT OF ROOT ZONE SOIL. TRANSITION FROM GRASS AREA TO INFIELD MIX AREA TO BE SMOOTH.

CLEARING FENCE LINE

CONTRACTOR TO SURVEY, CLEAR, GRUB, GRADE AND REMOVE ALL OF THE DEBRIS FOR THE FENCE LINE OR ANY REQUIRED CLEAR AREAS ADJACENT TO THE FENCE.

THE CONTRACT DRAWINGS INDICATE THE EXTENT OF THE AREA TO BE CLEARED AND GRUBBED.

FRAMEWORK INSTALLATION

INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

POSTS: POSTS SHALL BE SET PLUMB IN CONCRETE FOOTINGS IN ACCORDANCE WITH ASTM F567. MINIMUM FOOTING DEPTH, 60 IN.

MINIMUM FOOTING DIAMETER FOUR TIMES THE LARGEST CROSS SECTION OF THE POST UP TO 4.00" O.D. AND THREE TIMES THE LARGEST CROSS SECTION OF POST GREATER THAN 4.00". O.D. GATE POSTS REQUIRE LARGER FOOTINGS;

MINIMUM REQUIREMENTS ARE LISTED IN ASTM F567. CONDITIONS, LOCAL FROST DEPTH, FENCE HEIGHT AND WIND LOAD MAY REQUIRE LARGER DIAMETER OR DEEPER FOOTINGS. TOP OF POST CONCRETE FOOTING TO BE 6 INCHES BELOW GRADE CROWNED TO SHED WATER AWAY FROM THE POST. LINE POSTS INSTALLED AT INTERVALS NOT EXCEEDING 8 FT. ON CENTER.

TOP RAIL: WHEN SPECIFIED, INSTALL 21 FT. LENGTHS OF RAIL CONTINUOUS THRU THE LINE POST. SPLICE RAIL USING TOP RAIL SLEEVES MINIMUM 6 IN. LONG. THE RAIL SHALL BE SECURED TO THE TERMINAL POST BY A BRACE BAND AND RAIL END. BOTTOM RAIL OR INTERMEDIATE RAIL SHALL BE FIELD CUT AND SECURED TO THE LINE POSTS USING BOULEVARD BANDS OR RAIL ENDS AND BRACE BANDS. FENCES 12 FEET HIGH OR HIGHER REQUIRE MID RAIL

TERMINAL POSTS: END, CORNER, PULL AND GATE POSTS SHALL BE BRACED AND TRUSSED FOR FENCE 6 FT. THE HORIZONTAL BRACE RAIL AND DIAGONAL TRUSS ROD SHALL BE INSTALLED IN ACCORDANCE WITH ASTM F567.

CHAIN LINK FABRIC INSTALLATION

INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

CHAIN LINK FABRIC: INSTALL FABRIC TO INSIDE OF THE FRAMEWORK.

ATTACH FABRIC TO THE TERMINAL POST BY THREADING THE TENSION BAR THROUGH THE FABRIC; SECURE THE TENSION BAR TO THE TERMINAL POST WITH TENSION BANDS AND 5/16 IN.

CARRIAGE BOLTS SPACED NO GREATER THAN 12 INCHES ON CENTER.

CHAIN LINK FABRIC TO BE STRETCHED TAUT FREE OF SAG. FABRIC TO BE SECURED TO THE LINE POST WITH TIE WIRES SPACED NO GREATER THAN 12 INCHES ON CENTER AND TO RAIL SPACED NO GREATER THAN18 INCHES ON CENTER. SECURE FABRIC TO THE TENSION WIRE WITH HOG RINGS SPACED NO GREATER THAN 18 INCHES APART.

EXCESS WIRE SHALL BE CUT OFF AND BENT OVER TO PREVENT INJURY. THE INSTALLED FABRIC

SHALL HAVE A GROUND CLEARANCE ON NO MORE THAN 2 INCHES.

GATE INSTALLATION

INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

SWING GATES: INSTALLATION OF SWING GATES AND GATEPOSTS IN COMPLIANCE WITH ASTM F567. DIRECTION OF SWING SHALL BE OUTWARD. GATES SHALL BE PLUMB IN THE CLOSED POSITION HAVING A BOTTOM CLEARANCE OF 3 IN. GRADE PERMITTING. HINGE AND LATCH OFFSET OPENING SPACE FROM THE GATE FRAME TO THE POST SHALL BE NO GREATER THAN 3 IN. IN THE CLOSED POSITION. DOUBLE GATE DROP BAR RECEIVERS SHALL BE SET IN A CONCRETE FOOTING MINIMUM 6 IN. DIAMETER 60 IN. DEEP.

GATE LEAF HOLDBACKS SHALL BE INSTALLED FOR ALL DOUBLE GATES.

NUTS AND BOLTS

BOLTS: CARRIAGE BOLTS USED FOR FITTINGS SHALL BE INSTALLED WITH THE HEAD ON THE SECURE SIDE OF THE FENCE. ALL BOLTS SHALL BE PEENED OVER TO PREVENT REMOVAL OF THE NUT.

ELECTRICAL GROUNDING

GROUNDING: GROUNDING OF THE FENCE AND GATES IS NOT THE RESPONSIBILITY OF THE FENCE CONTRACTOR AND NOT INCLUDED IN THE FENCING SCOPE OF WORK FOR THIS CONTRACT.

GROUNDING: A LICENSED ELECTRICAL CONTRACTOR SHALL INSTALL GROUNDING.

CLEAN UP

CLEAN UP: THE AREA OF THE FENCE LINE SHALL BE LEFT NEAT AND FREE OF ANY DEBRIS CAUSED BY THE INSTALLATION OF THE FENCE.

CHALK LINES AND ACCESSORIES

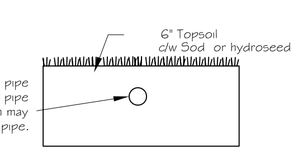
CHALK LINES FOR BATTER'S BOX, COACH'S BOX, BASE LINES AND FOUL LINES BY OWNER.

BASES BY OTHERS.

CONTRACTOR TO SUPPLY AND INSTALL 2 PITCHERS PLATES.

CONTRACTOR IS RESPONSIBLE FOR THE FENCE AND SUBDRAIN LAYOUT ON-SITE. AUTOCAD FILE CAN BE SUPPLIED TO CONTRACTOR TO FACILITATE LAYOUT.

PLEASE NOTE THAT THERE IS N GEOTECHNICAL REPORTS AVAILABLE FOR THIS AREA. EXCAVATION REQUIRED FOR THIS SITE IS VERY SHALLOW AND SHALL



CROSS-SECTION
TYP.
N.T.S.

DIMENSIONS ON DRAWING ARE FOR ESTIMATING PURPOSE ONLY. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR AND SUBCONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE.

ALL CONTRACTORS MUST COMPLY WITH ALL APPLICABLE CODES AND BYLAWS.

CONSTRUCTION DOCUMENTS INCLUDING PLANS AND SPECIFICATIONS SHALL BE READ IN WHOLE NOT IN PART. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO READ ALL CONSTRUCTION DOCUMENTS. PERFORMANCE AND COMPLETION OF ALL WORK SHALL INCLUDE ALL NECESSARY LABOUR, SERVICES, MATERIALS, PRODUCTS CONSTRUCTION MACHINERY AND EQUIPMENT NECESSARY FOR THE WORK IN ACCORDANCE WITH ALL CONSTRUCTION DOCUMENTS. THE CITY OF CLARENCE-ROCKLAND SHALL NOT BE RESPONSIBLE FOR ERRORS OR OMISSIONS DUE TO CONTRACTOR OR SUBCONTRACTORS FAILURE TO READ ALL CONSTRUCTION DOCUMENTATION.

Clarence-Rockland

PROJECT LOCATION:
418 LEMAY ST.
CLARENCE CREEK,
ONTARIO

issue no:

issued for client approval	1
issued for permit and tender	2
	3
	4
	5
	6

drawn by:

project no:
SOFTBALL FIELD

scale:
1:150

date:
13/03/19

drawing name:
SITE PLAN AND NOTES

PAGE NO:
A01

RAPPORT N° IMIT-2019-003

Date	22/05/2019
Soumis par	Michel Cousineau
Objet	Mises-à-point des Systèmes de sécurité (Portes, alarmes et caméras)
# du dossier	

1) **NATURE / OBJECTIF :**
D'annuler le projet de "Système d'extinction des feux pour la salle de serveur de l'hôtel de ville de Clarence Creek" et de réaffecter les fonds pour un projet qui nous permettra d'investir dans notre système de sécurité.

2) **DIRECTIVE/POLITIQUE ANTÉCÉDENTE :**
En 2018, le Conseil avait approuvé l'ajout du projet "Système d'extinction des feux pour la salle de serveur de l'hôtel de ville de Clarence Creek" dans la liste des projets capitaux pour 2019.

3) **RECOMMANDATION DU SERVICE :**
QUE le Comité plénier recommande au Conseil d'approuver que le projet de "Système d'extinction des feux pour la salle de serveur de l'hôtel de ville de Clarence Creek" soit retiré de la liste des projets capitaux; et

QUE le Comité plénier recommande au Conseil d'approuver l'ajout d'un projet qui consiste à faire une importante mise-à-point du système de sécurité avec un budget de 25 000 $.

THAT the Committee of the Whole recommends that Council approves the removal of the "Clarence Creek Server Room Fire Extinguishing System" project from the 2019 Capital Projects list; and

THAT the Committee of the Whole recommends that Council approves the addition of a project to make significant improvements to the security system with a budget of $25,000.

4) **HISTORIQUE :**
La liste de projet capitaux pour 2018 comprenait un projet pour un système d'extinction de feu pour la salle de serveur située dans l'Hôtel de Ville de Rockland. La décision avait alors été prise de mettre un système semblable dans la salle de serveur de Clarence Creek puisque ces deux salles de serveur agissent comme un système de sauvegarde

pour l'autre. Ce projet a été approuvé et ajouté à la liste des projets capitaux pour 2019.

5) **DISCUSSION :**

Mise-à-point du système actuel

Notre système de sécurité comprend les services suivants :
- Les caméras de sécurités
- Les alarmes
- Clés électronique pour les portes

Ces trois services sont décentralisés et ont des déficiences qui en rendent la gestion difficile et occasionnent des coûts souvent évitables.

EX 1: Quand une alarme est déclenchée à une de nos locations, les services d'immeubles doivent envoyer du personnel pour investiguer la situation. Ces appels de services occasionnent des coûts de surtemps pour la ville (moyenne de 2000$ à 3000$ par année) et sont souvent pour rien. Le nouveau système permettrait aux services d'immeubles d'utiliser une application mobile pour voir ce qui se passe à la location de l'alarmes et gérer les alarmes ou accès de porte au besoin. Tout sans se déplacer.

EX 2 : Dans les années récentes, il y a eu des exemples de vandalisme à l'Hôtel de ville, au garage, au dépotoir municipal et des autos dans le stationnement de l'aréna de Clarence. Dans ces cas, nous avions aucune capture vidéo (ou d'assez bonne qualité) pour fournir aux forces de l'ordre afin d'identifier les potentiels vandales. Le nouveau système offre une importante amélioration de couverture et qualité vidéo, le tout enregistré dans notre centre de données.

Extinction des feux dans la salle de serveur de Clarence

Depuis l'installation du système d'extinction dans notre salle de serveur à Rockland, nous avons constaté que l'ajout d'un tel système à Clarence est superflu puisqu'il y a, en moyenne, 3 personnes qui travaillent dans ce bureau pendant la journée et que leurs données sont sauvegardées à Rockland à chaque heure. Plusieurs des employés de Clarence devraient aussi relocaliser à Rockland dans la prochaine année réduisant d'avantage le besoin de ce système.

6) **CONSULTATION :**
N/A

7) **RECOMMANDATION OU COMMENTAIRES DU COMITÉ :**
N/A

8) **IMPACT FINANCIER (monétaire/matériaux/etc.):**
Le montant alloué dans les projets capitaux pour le Système d'extinction des feux pour Clarence Creek est de 25 000 $. Les estimés que nous avons reçus pour la mise-à-point du système de sécurité sont de même valeur ou moins. Ainsi il n'y pas d'impact financier additionnel.

9) **IMPLICATIONS LÉGALES :**
N/A

10) **GESTION DU RISQUE (RISK MANAGEMENT) :**
La mise-à-point du système de sécurité réduit nos risques de pertes financières dues au vandalisme.

11) **IMPLICATIONS STRATÉGIQUES :**
N/A

12) **DOCUMENTS D'APPUI:**
N/A

REPORT N° PRO2019-013

Date	03/06/2019
Submitted by	Brian Wilson
Subject	National Disaster Resilience Profile Project Proposal – Municipal Champion
File N°	Click here to enter text.

1) **NATURE/GOAL :**
To obtain council approval and direction in order to become a municipal partner in a grant application to Defence Research and Development Canada (DRDC), which would look to find ways to improve disaster resilience in municipalities across Canada. This grant application would include a request for funding from DRDC to pay for a term FTE position to oversee this project.

2) **DIRECTIVE/PREVIOUS POLICY :**
None.

3) **DEPARTMENT'S RECOMMENDATION :**
BE IT RESOLVED THAT Council directs the Director of Protective Services to proceed with working to have the City of Clarence-Rockland become the Lead Government Department of the joint proposal to DRDC to develop and improve the National Resilience Profile; and

BE IT ALSO RESOLVED THAT Council authorizes the Director of Protective Services to sign any related paperwork necessary to submit this project proposal; and

BE IT FURTHER RESOLVED THAT subject to the approval of the project proposal to DRDC, Council authorizes the administration to hire a term full-time position to oversee the research work and also to better improve disaster and emergency management and resilience for the City of Clarence-Rockland, which shall be fully funded by the grant.

QU'IL SOIT RÉSOLU QUE le conseil mandate le Directeur des services de la protection de continuer à travailler pour que la Cité de Clarence-Rockland devienne le palier gouvernemental responsable de la proposition conjointe de RDDC visant à développer et à améliorer le profil national de résilience; et

QU'IL SOIT ÉGALEMENT RÉSOLU QUE le conseil autorise le Directeur des services de la protection à signer tous les documents nécessaires à la soumission de cette proposition de projet; et

QU'IL SOIT FINALEMENT RÉSOLU QUE sujet à l'approbation par le RDDC du projet proposé, le Conseil autorise l'administration à embaucher un poste de durée déterminée à temps plein afin de superviser les travaux de recherche et d'améliorer davantage la gestion des catastrophes et des situations d'urgence et la résilience de la Cité de Clarence-Rockland, et ce, totalement financé par la subvention.

4) **BACKGROUND :**

Public Works and Government Services Canada has issued a call for proposals on behalf of Defence Research and Development Canada (DRDC), to invide bidders to submit innovative science and technology proposals in support of Canada's public safety (among other things).

During the recent flooding, the Director of Protective Services was approached by a representative from a company called Jacobs. This individual, Alan Rebane, is their Emergency Management & Disaster Resilience Business Practice Leader. Mr. Rebane has been working tirelessly on a proposal for consideration for funding from the Government of Canada to build and improve the National Resilience Profile and better inform various levels of government across Canada on strengths, weaknesses, opportunities and threats to their current disaster resilience.

One of the items in his proposal is to have a Lead Government Department who would be the key point of contact with DRDC in managing this research project. The proposal would require the Lead Government Department to manage the flow of funding from DRDC to the Lead Bidder (Jacobs) and to ensure that work is being completed on-time and satisfactorily by the Lead Bidder (and their partners). The project is anticipated to last 2.5 years. As most municipal governments do not have extra capacity for this work, this proposal would include a request for funding to hire a municipal full-time-employee (FTE) for the duration of the project. This employee would effectively function as a project oversight person, overseeing Jacobs, who would be working as the project manager.

The details of the proposal are outlined below:

Opportunity Timeline:

The RFP will be coming out in approximately 2 weeks (attached is the Draft RFP that was recently released with the RFI) with an end of June closing date. From there, DRDC will evaluate and announce winners 8 months after that with projects to commence 2 to 4 months afterwards. Further, given this long timeline, Jacobs is actively seeking interim funding to start things off earlier.

Stream, Theme and Challenge (DRDC is investing over $22M in innovative solutions to current problems):

Stream A
Public Safety and Security - Smart Communities and Systems
The introduction of smart technologies (artificial intelligence (AI), Internet of Things (IoT), automated learning systems, robotics, data analytics, broadband communications, and connected, driverless vehicles) into public safety and security systems and into urban, rural, or remote, isolated communities can be rapid, complex, non-systematic. The convergence of these technologies coupled with multiple dynamic factors introduced by an ever changing threat, hazard and risk landscape presents significant challenges for public safety and security. Keeping pace with these changes is necessary for society to exploit the benefits of the new technologies while countering the vulnerabilities these same technologies are introducing or exacerbating. The core challenge is to optimize the utility of these inexorable technology advancements in a manner that is coherent, safe, secure, and preserves the privacy of individuals in deployed safety or security systems.

For this CFP, in Stream A, DRDC is looking for novel ideas and innovative solutions to S&T Challenges under the themes of mitigating the impact of climate change, mitigating national security risks and protecting and connecting safety and security professionals.

THEME 1: Mitigating the Safety and Security Impact of Climate Change

The implications of the gradual warming of the planet and changes in hydrological cycles include an increase in the number and severity of extreme weather events and natural disasters, new vectors for diseases, changes in sea ice, and melting permafrost in the Canadian North. In this call, DRDC will seek innovative solutions to identify and mitigate the impact of these changes on the safety and security of Canadians.

S&T Challenge:
Develop scalable tools, methodologies, and novel S&T solutions for risk reduction and mitigation at the individual, family, community, regional, and national level, which consider disasters of all types and include geographical, economic, cultural, and social factors, and which aim to inform disaster risk reduction initiatives with considerations of cost-effective mitigation, climate adaptation, and smart recovery or re-building, in alignment with the Sendai Framework for Disaster Risk Reduction (DRR) requirements.

Updated Project Overview:

National Disaster Resilience Profile (Considers All-Hazards including Climate Change plus general chronic stressors and impacts on the: population, built environment, natural environment and economy. As this is for the DRDC Canadian Safety and Security Program we are choosing to use the title of Disaster Resilience as they have that as a priority area.)

The goal of this project is to develop a GIS-based Canadian disaster resilience profile tool leveraging the existing UN Office for Disaster Risk Reduction (UNDRR's) Disaster Resilience Scorecard methodology and spreadsheet tool, the Rural Disaster Resilience Planning tool and a map-based tabletop exercise and to use that tool during the conduct of 30 small to medium sized communities across Canada. After the disaster resilience assessments are conducted, a resilience enhancement project planning and prioritization workshop will be conducted with each participating community resulting in an evidence-based resilience enhancement plan. The Canadian Disaster Resilience Profile will be developed using local assessment data from 30 communities across Canada: 12 of which participated already participated in the QUEST-led Community Resilience Project and 18 of which will be from the ICLR-led Cities Adapt to Extreme Weather, Extreme Heat and Extreme Rainfall Project. The project takes an all-hazards risk assessment approach with consideration give to climate change and the impacts to the population, built environment, national environment, and the economy.

The project will build on existing methods and tools that have been used during the conduct of 12 community-level Resilience Assessments (see overview below), extend those tools based on the current literature and knowledge to incorporate Disaster Recovery Planning and broader chronic stress aspects of Resilience (i.e. social inequity, high unemployment, high crime rates, youth engagement, etc.). The 100 Resilient Cities City Resilience Index will be used to augment the resilience assessment methodology of large cities. Further, an aggregation scheme will be developed to enable anonymized regional, P/T and National Resilience profiles and will support DRR reporting requirements related to the Sendai Framework. The National Resilience Profile will be an enduring capability for Canada with the Institute for Catastrophic Loss Reduction as the custodian into the future.

Outcomes:

1. Secure (controlled access to Emergency Management and planning related community members only) online GIS-based tool with pan-Canadian aggregated (regional) disaster risk

reduction information via Public Safety Canada's National Emergency Management System;
2. Participation by communities will lead to engagement of disaster risk reduction stakeholders in that community and the establishment of a national network;
3. A National resilience Assessment Methodology that is tailored to both small and medium sized communities as well as large cities.
4. Participating communities receive local disaster resilience assessment reports which they can use to inform mitigation and adaptation decision-making;
5. System will allow for additional communities to participate after project completion thereby providing a better and better approximation of disaster resilience across Canada;
6. Federal Government will obtain a better understanding of the state of disaster resilience across Canada which will allow for targeted disaster risk policies and funding programs aimed at increasing disaster resiliency at the local level.
7. Federal Government will have resilience information as input to for International Sendai Framework reporting requirements.

Project Phases (2/3 Year Duration)

Phase 1 – Project Initiation - 1 Month

Introductory Web Conference (All Project Participants)
Project Overview
Information Sharing Requirements (plan is for controlled access and for aggregation of individual community scorecard information up to regional and national levels)
Community Knowledge Sharing
Update Project Plan

Phase 2 - Review and Update Disaster Resilience Assessment Methodology

Update DRR Scorecard (UN tool) for Canadian Context and Sendai Framework Reporting Requirements - 8 Months
Adapt 100 Resilient Cities - City Resilience Index Methodology for Canadian Context

Phase 3 - Resilience Data Collection – 2 Years

QUEST Project Communities (12 communities that participated in the 2018/2019 QUEST resiliency assessment project – see overview below)

- Develop Simplified Survey (based on previous level of engagement)

- Execute Survey
- 2 Hour Web Conference to discuss results for each community

ICLR QUEST-led Project: Municipalities & Utilities Partnering for Community Resilience (18 Communities)

- Develop Pre-workshop material
- Communities review pre-workshop material
- 1-Day Disaster Resilience Scorecard workshop at each participating community
- Post-Workshop 2-hour Web Conference to discuss results for each community

Assess Resilience at Four Large Cites using CRI

Phase 4 - GIS-based National Disaster Resilience Profile Tool Development – 6 Months

1. Design
2. Development and Information Upload
3. Testing
4. Deployment
5. Documentation
    - User Guide
    - Final Report

Final Presentation (Via Web Conference Call)

Phase 5 – Reporting – 6 Months

Project Partners

The project has attracted participation from a broad range of groups who are interested in developing this national capability. Project partners are:

1. Jacobs (Lead Bidder)

Role: writing proposal, project management, software development (aggregating results for national GIS data layer to ID how Canada is doing with resilience planning), facilitation (French), report writing.

2. City of Clarence-Rockland (Lead Government Department)

Role: Contracting, Methodology and question review of tools, in-kind contribution, workshop participation, contracting with DRDC.

3. QUEST (Not-for-profit Organization)

Role: Engagement, communications, facilitation and Methodology development. Municipal Partner Liaison.

4. Institute for Catastrophic Loss Reduction (Not-for-profit Organization)

Role: Methodology and question review of tools, have access to historical disaster data, literature review, business analysis. Home for tool and data in the future.

5. Atlantic Council (Not-for-profit Organization)

Role: 100 RC transitioned funding to the Atlantic Council. Methodology development review, resources and possibly $ and in-kind.

6. Vancouver, Calgary, Toronto and Montreal?

7. Other Communities (Participating Communities) - leverage 12 existing communities from QUEST Project and 12 communities from ICLR Project.

8. NRCan - advisory role and possibly $ and in-kind

Co-Investment:

The aim is to get in-kind labour and cash support from the partners because the CSSP evaluators will look more favourably on proposals with multiple partners that are co-investing.

QUEST-led Project: Municipalities & Utilities Partnering for Community Resilience Project Description

Purpose

QUEST will support 12 municipalities through the Municipalities and Utilities Partnering for Community Resilience initiative in 2018 and 2019. The initiative will offer a climate resilience implementation readiness survey and develop a vulnerability/risk assessment and risk reduction strategies based on an intensive and interactive two-day charrette process, and include peer-to-peer learning and information exchange.
On completion of the two-day workshop charrette, participating municipalities will receive the following:
· A completed vulnerability risk/assessment.
· Risk reduction strategy with a focus on the impact of energy and an approach to working with local utilities.
· An action plan for the implementation of the risk reduction strategy.

· Access to a network of municipalities from across Canada that are actively working with their utilities to respond to the impacts of climate change.

The information and reports can be used by a municipality to meet their provincial adaptation requirements and support access to infrastructure funding.

Overview

An increasing number of municipalities across Canada are faced with similar climate change impacts, such as flooding and extreme weather, and are working to reduce the risks from a loss of power. Whether urban, rural, remote, coastal or an interior community, more people, property, and infrastructure are at risk, especially water and wastewater systems, transportation systems, energy systems, health care systems and emergency response capability.

Almost 90 percent of Canadian natural gas, thermal and electric utility distributors have been significantly impacted by a weather event in the past decade. Despite concerns that climate-related events like high winds, heavy rains, ice storms, extended extreme cold weather, heat waves and storm surges are threatening the reliability and resiliency of Canadian energy distribution services, there remains limited tools and assessment processes to help local governments and utilities effectively plan together to reduce risk, respond to emergencies, maximize limited funding, and reduce overall costs to residents and businesses.

QUEST is best known for its work to advance Smart Energy Communities in Canada, which not only reduce greenhouse gas emissions (GHGs) but also help improve resilience at a local level. Smart Energy Communities, for example, plan energy services and infrastructure in a way that mitigates risk (of failure) from flood events, ice storms, etc., while providing ancillary power and heat in communities during prolonged power outages, which could help prevent outages altogether.

Through the initiative, QUEST aims to improve climate change resilience at a local level, by helping participating municipalities develop vulnerability/risk assessments and risk reduction strategies, to advance specific climate adaptation measures for reducing impacts to municipal infrastructure, utilities that service them, and the community at large.

Developed over the course of two daylong workshop charrettes, the risk assessment and strategy will be informed through:

- Community consultation (including local municipal champions, staff, and utility partners);
- The use of existing tools such as the
  - 10 Essentials for Resilient Cities,
  - Rural Disaster Resilience Portal and,
  - Climate Infrastructure Risk Assessment Protocol; and,
  - An interactive map-based exercise.

The learnings of the workshop charrettes and the assessment and strategy will be enhanced through two webinars, and a series of consultations and phone interviews.

The initiative will contribute to climate change resilience at a regional level.

The peer to peer exchange will ensure best practices are shared between municipalities/jurisdictions. For instance, through the two webinars, QUEST will provide an opportunity for sharing approaches and learning about relevant tools. Guidance developed through this project will be shared regionally through municipal associations/conferences and will help improve resilience and reliability of energy distribution grids at a regional level.

The initiative will also contribute to climate change resilience at a national level.

The results and lessons learned will be compiled into a guide, tentatively titled Municipalities and Utilities Partnering for Community Resilience. The results will be shared through QUEST's Municipal Working Groups across Canada, via its listserve, newsletters, website, and events.

<u>Commitment by a Participating Municipality</u>
Participating municipalities will be expected to contribute approximately $5,000 of in-kind contributions. Contributions can include:

· Staff or Council time allocated to participate in the workshops,
· Access to workshop or meeting rooms space,
· Provision of refreshments and/or meals during workshops, and,
· Other contributions and donations made by the participating municipality.

Participating Municipalities

· Town of Cochrane, AB
· Town of Devon, AB
· Town of Okotoks, AB
· Rural Municipality of Alexander, MB

- Dauphin, MB
- Town of Woodstock, NB
- City of Campbellton, NB
- City of Saint John, NB
- Ville de Tracadie, NB
- City of Charlottetown, PE
- Town of Montague, PE
- City of Summerside, PE

ICLR – Cities Adapt to Extreme Weather, Extreme Heat and Extreme Rainfall Project Description

Local governments are taking action to reduce the risk to Canadians from extreme weather. Cities adapt to extreme weather: Celebrating local leadership is the third book by the Institute for Catastrophic Loss Reduction extolling local governments adapting to climate change and building more resilient communities. The three books include a total of 60 case studies describing local action in Canada that is consistent with best practices for climate resilience as identified by the Institute. The Institute is pleased to share these narratives praising successful local action. These communities are demonstrating their commitment to 'get ahead' of the risk damage from severe weather and climate change by building back better in recovery or through proactive investments in anticipation of future risks.

- Craig Snodgrass, Mayor of High River, reports "We went through hell in 2013. We had a 'build back better' mentality and now we are the most well protected community in Canada for flood risk."
- Linda Hepner, Mayor of Surrey advises "By getting ahead of the issue [coastal flooding] and setting direction now for where we want to be in 100 years, we are positioning Surrey to make smarter investments in the protection of residential neighbourhoods, businesses, significant habitat areas and provincially critical infrastructure."
- Montreal is the first community in Canada to establish a resilience office, appoint a Chief Resilience Officer, and, in 2018, publish a City Resilience Strategy. Mayor Valérie Plante said that "our strategy will enable the population, institutions, businesses and systems to react and resist more effectively and efficiently to unforeseen events."
- Josie Osborne, Mayor of Tofino, said "A prepared community is one that can take care of itself, and that starts in our homes and schools by educating children and families about emergency preparedness and response."
- Marianne Tiessen Bell, Mayor of Perth-Andover, reports that following devastating flooding in 2012, homes at risk were relocated or flood-proofed, and "If the flooding cannot be prevented, then all of the businesses need to move away from the river."

· Following a fatal avalanche in 1999, Kangiqsualujjuaq introduced regulations to prohibit new construction with 100 metres of the bottom of any steep slopes, and all homes and businesses in the new exclusion zone were relocated or demolished.
· The District of North Vancouver has won international awards for its disaster risk reduction efforts, including its pioneering use, since 2005, of risk tolerance criteria to guide its landslide, wildfire, flood and earthquake risk reduction strategy.
· Fort Nelson First Nation launched an innovative pilot study in 2017 to use drones to develop a FireSmart wildfire damage reduction plan for every building in the community.
· Victoriaville introduced financial incentives in 2011 for homeowners and builders to promote sustainable homes, including incentives to install hurricane clips, window shutters, high performance windows, and other risk reduction for new and existing homes.

Cities adapt to extreme weather also recognizes actions in Brampton, Dufferin County, Fort McMurray, Kamloops, Kingston, Moncton, Perth County, Percé, Prince Albert, Richmond and Vancouver.

Cities adapt to extreme weather: Celebrating local leadership was written by Paul Kovacs, Sophie Guilbault, Leila Darwish and Mikaela Comella. The report builds on previous Institute reports – Cities adapt to extreme rainfall and Cities adapt to extreme heat. These communities are leading the way in Canada with risk reduction action that other communities should consider.

Paul Kovacs, Executive Director of the Institute for Catastrophic Loss Reduction said "Extreme rainfall, heat and weather will increasingly affect many communities as a result of climate change. The Institute is excited to identify and celebrate actions that have been implemented by community leaders across Canada to successfully adapt to climate risks. The identified actions are consistent with the Institute's views about best practices to reduce the risk of loss and damage from extreme events. We are confident that similar actions will benefit most communities. Damage due to extreme weather is rising across Canada, and most of these losses are preventable through the application of research by the Institute and others. This report puts a spotlight on local officials that demonstrate leadership through their actions to build a more resilience society adapted to cope with extreme weather risks."

5) **DISCUSSION :**

Jacobs is looking for a municipal government to become the Lead Government Department for oversight of this project. Jacobs is proposing to include a funding request of $250,000 to cover the cost

of a term, full-time employee, to be hired by the Lead Government Department to oversee this project, for the duration of the 2.5 year project.

It is anticipated that there will be some time availability with this funded position, which could be utilized to better improve disaster and emergency planning, preparation, and resilience for the City of Clarence-Rockland.

This opportunity also allows the City of Clarence-Rockland to take a leadership role in mapping and identifying resilience weaknesses, and thereby develop plans and strategies to improve our own resilience.

If the proposal is not accepted by DRDC, there would not be anyone hired, and therefore no cost incurred by the City. If the proposal is accepted, the City would then look to hire someone who would be responsible for oversight of the project. This position would be a term position, fully paid for within the funding of the project. If the funding is insufficient for a full-time position, the City will explore hiring a term part-time person to fulfill these requirements, with the ultimate intention to ensure that there is no financial outlay from the City.

6) **CONSULTATION:**
None.

7) **RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS :**
None.

8) **FINANCIAL IMPACT (expenses/material/etc.):**
This project would be fully funded by the federal government. There would be some administrative tasks (processing funds, issuing payment, hiring of the project oversight person, etc.) which are expected to be absorbed within the existing municipal structure.

9) **LEGAL IMPLICATIONS :**
None.

10) **RISK MANAGEMENT :**
None.

11) **STRATEGIC IMPLICATIONS :**
This project allows the City of Clarence-Rockland to take a leadership role in identifying resilience weaknesses, and also be seen on the regional, provincial, and federal levels as an active partner towards improving disaster and emergency resilience.

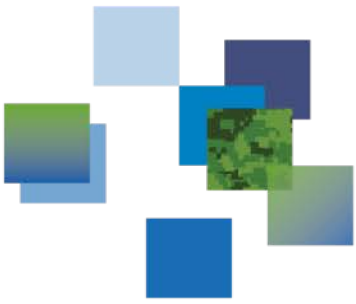
12) **SUPPORTING DOCUMENTS:**

DRDC Innovation Call for Proposals

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

Canada

Defence Research and Development Canada (DRDC) Innovation Call For Proposals (CFP) 2019 W7714-19DRDC



DRDC | RDDC

SCIENCE, TECHNOLOGY AND KNOWLEDGE FOR CANADA'S DEFENCE AND SECURITY

SCIENCE, TECHNOLOGIE ET SAVOIR POUR LA DÉFENSE ET LA SÉCURITÉ DU CANADA

TABLE OF CONTENTS

PART 1 – GENERAL INFORMATION 1

1.1 SUMMARY 1
1.2 CALL FOR PROPOSALS PROCUREMENT APPROACH 2
1.3 TRADE AGREEMENTS 2
1.4 SECURITY REQUIREMENTS 2
1.5 CANADIAN CONTENT 2
1.6 CONTROLLED GOODS PROGRAM (SEE PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION) 3
1.7 EMPLOYMENT EQUITY 3
1.8 CONFLICT OF INTEREST 3
1.9 COMPREHENSIVE LAND CLAIMS AGREEMENTS 3
1.10 TERMINOLOGY 3

PART 2 – INSTRUCTIONS FOR BIDDERS 4

2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS 4
2.2 ENQUIRIES ABOUT THE CALL FOR PROPOSALS 5
2.3 CONTRACTING AUTHORITY 5
2.4 APPLICABLE LAWS 5
2.5 COMMUNICATIONS NOTIFICATION 5
2.6 FUNDING 6

PART 3 – PROPOSAL PREPARATION INSTRUCTIONS 7

3.1 WHO MAY APPLY 7
3.2 ELECTRONIC PROPOSAL SUBMISSION FORM 8
3.3 CLASSIFIED PROPOSALS 9
3.4 TECHNICAL PROPOSAL 10
3.5 FINANCIAL PROPOSAL 10
3.6 CERTIFICATIONS 12

PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION 13

4.1 EVALUATION PROCEDURES 13
4.2 EVALUATION CRITERIA 13
4.3 POOL OF PRE-QUALIFIED PROPOSALS 14
4.4 PROPOSAL SELECTION 14
4.5 DEBRIEFING 15
4.6 CONTRACTING PROCESS 15
4.7 INTELLECTUAL PROPERTY 16
4.8 HUMAN AND ANIMAL ETHICS 16

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION 17

5.1 CERTIFICATIONS REQUIRED WITH THE PROPOSAL 17
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION 18

PART 6 – SECURITY, FINANCIAL AND OTHER REQUIREMENTS 25

6.1 SECURITY CONSIDERATIONS 25
6.2 FINANCIAL CAPABILITY 25
6.3 CONTROLLED GOODS PROGRAM - BID 25

DRAFT

PART 7 – RESULTING CONTRACT/MEMORANDUM OF AGREEMENT CLAUSES 26

1. STATEMENT OF WORK 26
2. STANDARD CLAUSES AND CONDITIONS 26
3. SECURITY REQUIREMENT 27
4. TERM OF CONTRACT 27
5. COMPREHENSIVE LAND CLAIM AGREEMENTS 27
6. AUTHORITIES 27
7. PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS 28
8. PAYMENT 28
9. INVOICING INSTRUCTIONS 30
10. CERTIFICATIONS 31
11. APPLICABLE LAWS 31
12. PRIORITY OF DOCUMENTS 31
13. FOREIGN NATIONALS (CANADIAN CONTRACTOR OR FOREIGN CONTRACTOR) 32
14. INSURANCE 32
15. CONTROLLED GOODS PROGRAM 32
16. GOVERNMENT AND/OR CANADIAN FORCES SITE REGULATIONS 33
17. JOINT VENTURE 33

ANNEX A – PROJECT TYPES AND PARAMETERS 34

ANNEX B – SCIENCE & TECHNOLOGY CHALLENGES 38

ANNEX C – EVALUATION CRITERIA 48

ANNEX D(1) – WORK PLAN – MILESTONE BREAKDOWN 69

ANNEX D(2) – RISKS AND MITIGATION 70

ANNEX E – DETAILED BUDGET TABLE 71

ANNEX F – PROJECT MANAGER AND KEY PROJECT TEAM MEMBERS' EXPERIENCE 72

ANNEX G – PARTNERSHIP SIGNATURE FORM (STREAM A ONLY) 76

ANNEX H – SOLUTION READINESS LEVELS 78

ANNEX I – CO-INVESTMENT INFORMATION 79

ANNEX J – FUNDING FLOW CHART FOR RESULTING CONTRACT(S)/MEMORANDUM OF AGREEMENT(S) 82

ANNEX K – PROJECT PARTNER'S ROLES AND RESPONSIBILITIES 85

ANNEX L – STATEMENT OF WORK TEMPLATE 87

ANNEX M – MILESTONE COST BREAKDOWN TEMPLATE 88

DRAFT

PART 1 – GENERAL INFORMATION

1.1 Summary

Public Works and Government Services Canada (PWGSC) is issuing a Call for Proposals (CFP) on behalf of Defence Research and Development Canada (DRDC). DRDC is an agency of Canada's Department of National Defence (DND) that provides DND, the Canadian Armed Forces (CAF) and other government departments, as well as the broader public safety and security communities, the knowledge and technological advantage needed to defend and protect Canada's interests at home and abroad.

The CFP is an invitation to bidders to submit innovative science and technology (S&T) proposals in support of Canada's defence, security and public safety.

More specifically, this CFP identifies S&T Challenges (see Annex B) for which innovative solutions are sought that relate to the following DRDC programs or client support:

Stream A: Public Safety and Security

DRDC is looking for novel ideas and innovative solutions to resolve public safety and security S&T Challenges under the following 3 themes: Mitigating the Safety and Security Impact of Climate Change, National Security Risks, and Protecting and Connecting Safety and Security Professionals. Stream A is in support of Canada's resilience primarily through the Canadian Safety and Security Program (CSSP) S&T investments. The CSSP mission is to strengthen Canada's ability to anticipate, prevent, mitigate, prepare for, respond to and recover from natural disasters, serious accidents, and crime and terrorism through the convergence of S&T with policy, operations, and intelligence.

Stream B: **Support to Canada's Defence Policy "Strong, Secure, Engaged"**

One of the initiatives of the "Strong, Secure, Engaged" Canadian Defence Policy, is to acquire space capabilities to improve situational awareness and targeting, including the replacement of the current RADARSAT systems to improve the identification and tracking of threats and improve situational awareness of routine traffic in and through Canadian territory, as well as in other areas of interest around the world.

Assistant Deputy Minister (ADM) S&T in DND has a program focused on conducting cutting-edge research and development (R&D) on space-based earth observation technologies in collaboration with allies, industry, and academia to maintain, enhance, and replace situational awareness capabilities for the CAF. This program provides advice and recommendations to DND stakeholders concerning viable and cost effective solutions that are available, or will be available in the near future, and that could be considered in upcoming options analysis phases of space-based intelligence, surveillance and reconnaissance (ISR) projects.

1.2 Call for Proposals Procurement Approach

This CFP process involves a two-stage procurement process:

Stage 1: Proposal Submission, Evaluation and Selection
Stage 2: Contracting

The information provided in Stage 1 will be used to establish a pool of pre-qualified proposals. Proposals selected for funding from the pool of pre-qualified proposals will be subject to Stage 2.

The establishment of the pool of pre-qualified proposals and the selection of proposals for funding does not constitute a guarantee on the part of Canada that a contract will be awarded.

In addition, no payment will be made for costs incurred in the preparation, submission, and contract negotiation related to a proposal under this CFP. Costs associated with these activities, including the development of any supporting documentation and any bidder costs incurred associated with the submission of the proposal, are the sole responsibility of the bidder.

1.3 Trade Agreements

The Canadian Free Trade Agreement (CFTA) (https://www.cfta-alec.ca/), applies to this procurement. The CFP process is organized in a manner consistent with the principles of the CFTA in terms of equal access, fairness and transparency and is open to public and private sector entities.

This procurement is excluded from the North American Free Trade Agreement (NAFTA) as per Annex 1001.1b-2 R&D, all classes, excluded from the application of the World Trade Organization – Agreement on Government Procurement (WTO-AGP) under Appendix 1, Annex 4, as well as excluded from the Canada-European Union Comprehensive Economic and Trade Agreement (CETA).

1.4 Security Requirements

There may be security requirements associated with the resulting contracts. For more information on personnel and organization security screening or security clauses, the bidder should refer to PWGSCs Industrial Security Program (ISP) (https://www.tpsgc-pwgsc.gc.ca/esc-src/index-eng.html).

1.5 Canadian Content

This procurement is conditionally limited to Canadian goods and services (see Section 5.1.2.1 Canadian Content Certification).

1.6 Controlled Goods Program (see Part 5 – Certifications and Additional Information).

This procurement is subject to the Controlled Goods Program. The Defence Production Act (DPA) defines Canadian Controlled Goods as certain goods listed in Canada's Export Control List, a regulation made pursuant to the Export and Import Permits Act (EIPA).

1.7 Employment Equity

The Federal Contractors Program (FCP) for Employment Equity may apply to this procurement (see Part 5 – Certifications and Additional Information).

1.8 Conflict of Interest

A successful bidder (the contractor), its subcontractor(s) or any of their agent(s) directly or indirectly involved in the performance of the work and/or in the production of the deliverables under any resulting contract will not be precluded from bidding on any potential future CFP related to the production or exploitation of any concept or prototype developed or delivered.

1.9 Comprehensive Land Claims Agreements

Depending on the proposal received, the region of delivery for the goods and/or services may be in an area subject to Comprehensive Land Claims Agreements (CLCA). If this occurs, the procurement will be subject to the applicable CLCA.

1.10 Terminology

In this document, terms are identified below and their meaning referenced in the 2003 (2017-04-27) Standard Instructions are identified in the below table.

Term (used this document)	Term (used 2003 Standard Instructions)
Call for Proposals	Solicitation/Bid Solicitation
Proposal	Bid

PART 2 – INSTRUCTIONS FOR BIDDERS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in this CFP by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (SACC) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by PWGSC.

A bidder who submits a proposal agrees to be bound by the instructions, clauses and conditions of this CFP and accepts the clauses and conditions of the resulting contract.

The 2003 (2018-05-22) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of this CFP; some sections have been amended and are listed below.

a. At section 04 – Definition of a Bidder, is amended as follows:

Delete: It does not include the parent, subsidiaries or other affiliates of the bidder, or its subcontractors.

_____

b. At section 05 – Submission of Bids, subsection 4, is amended as follows:

Delete: Proposals will remain open for acceptance for a period of not less than 60 days from the closing date of the proposal solicitation, unless specified otherwise in the bid solicitation.

Insert: Proposals will remain open for acceptance for a period of not less than 365 days from the closing date of the proposal solicitation. The Contracting Authority may modify this period by sending written notice to the bidder following Canada's completion (partial or entire) of Stage 2 and at any other time.

_____

c. At section 14 – Price Justification, is amended as follows:

Delete: In the event that the bidder's proposal is the sole responsive proposal received, the bidder must provide, on Canada's request, one or more of the following price justification:

Insert: For all pre-qualified proposals eligible for contract award, the bidder must provide, on Canada's request, one or more of the following price justification:

2.2 Enquiries about the Call for Proposals

All enquiries must be submitted in writing to the Contracting Authority no later than 10 calendar days before the CFP closing date. Enquiries received after that time may not be answered.
The bidder should reference as accurately as possible the numbered item of this CFP to which the enquiry relates. Care should be taken by the bidder to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as “proprietary” will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

2.3 Contracting Authority

The Contracting Authority for this CFP is:

Joseph Hulse
Public Works and Government Services Canada
Acquisitions Branch
Defence Sciences Division
Telephone: 613-203-1159
E-mail address: joseph.hulse@tpsgc-pwgsc.gc.ca

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

The bidder may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their proposal, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidder.

2.5 Communications Notification

The Government of Canada retains the right to make primary contract announcements. Canada and the contractor shall consult with each other after contract award, about all proposed news releases or public announcements relating to the contract. This is to provide all parties sufficient notice of key project communications and, where appropriate, the time to determine a course of action (including a mutually agreed date and location), coordinate representatives and prepare joint material. Notwithstanding the advance notice requirement, consent shall not be unreasonably withheld by either party if a news release or public announcement must be issued in less than 15 working days as the result of unforeseeable circumstances, including matters of public safety or where an emergency response is required.

2.6 Funding

For this CFP, approximately $22M* has been allocated for the cumulative value of all resulting contracts. All proposals must be costed in Canadian dollars.

Canada reserves the right to modify project funding via one or more alternate programs or mechanisms.

*These amounts are subject to change.

PART 3 – PROPOSAL PREPARATION INSTRUCTIONS

3.1 Who May Apply

This CFP is open to all public, academic, and private sector entities. The bidder will assume the responsibility of submitting the proposal and serve as the point of contact for the duration of the CFP process.

3.1.1 A proposal submission must be comprised of a team that includes a Canadian Lead Government Department (LGD) (federal, provincial, territorial, municipal) and a public or private sector partner organization that is different than the LGD. Additional Canadian or international partners in the public or private sector are permitted as long as the partnership requirements are satisfied. DRDC can be listed as a partner but can neither be the bidder nor LGD in any proposal for this CFP.

For Stream A S&T Challenges, proposals must meet the requirements as defined below:

3.1.1.1 To qualify as a Canadian LGD, an organization must fit into 1 of the following 3 categories:

1. Be listed under Schedules I through V of the Financial Administration Act;

-OR-

2. Be a government corporation or any other public authority designated by regulation of a Lieutenant Governor in Council;

-OR-

3. Satisfy each of the following criteria:

    a. the entity was created by legislation;
    b. the government determines the general policy or program of the entity;
    c. the government appoints members to the board of directors of the entity;
    d. direct control of the entity is held by possessing 100 percent of the voting equity;
    e. the entity's assets revert to the government in the event of liquidation or dissolution;
    f. the entity’s budget is approved by the government;
    g. the entity submits an annual, audited report to a government; and,
    h. the entity’s financial accounts are subject to examination by an Auditor General.

3.1.1.2 The LGD is prepared to be the project champion and Technical Authority (TA), and at a minimum will:

a. commit resources to initiate the requisition for the resulting contract;
b. work with PWGSC to create and issue the resulting contract;
c. manage the resulting contract (between itself and the bidder);
d. review and approve deliverables; and,
e. pay claims/invoices and facilitate project reporting requirements to DRDC.

3.1.1.3 Submission of a complete Partnership Signature Form as set out in Annex G. All entities/organizations identified as partners involved in a proposal must sign, and at a minimum, be at a level:

a. of Director General (DG) or higher for the federal government; and,
b. acceptable for a provincial/territorial/municipal government, academic institution or a private industry to authorize the financial and operational commitment of its organization for the proposal.

3.1.2 For Stream B S&T Challenges, there is no partnership requirement. DRDC will be the TA, and the resulting contract will be between DRDC and the Bidder. DRDC can be listed as a partner but can neither be the bidder nor LGD in any proposal for this CFP.

3.2 Electronic Proposal Submission Form

3.2.1 Bidders are requested to complete and submit their proposal using the electronic Proposal Submission Form at the website specified: https://drdc-rddc-cfp-adp-2019.fluidreview.com.

3.2.2 In order to complete and submit a proposal, the bidder must first register and obtain a username and password.

3.2.3 When a proposal is successfully submitted, an automated email is sent to the bidder. This email confirms the account was successfully created.

3.2.4 All proposals must be received by the CFP closing date and time specified on the Buy and Sell website. Proposals received after the specified period will not be evaluated.

3.2.5 If a large number of bidders access the web-based system at the same time, the electronic submission of proposals may be delayed. Bidders are solely responsible for ensuring their proposal is submitted properly in its entirety and on time.

3.2.6 Should there be technical difficulties accessing or using the online system, bidders must use the contact information located on the website. Technical assistance is restricted to issues associated with the mechanics of the online system. The personnel providing technical assistance are not associated with the CFP and are not in a position to comment on or provide interpretation on the CFP.

3.2.7 All non-technical assistance for proposal submission is to be directed to the Contracting Authority.

3.3 Classified Proposals

3.3.1 Bidders submitting a classified proposal must contact the Contracting Authority to obtain the Classified Submission Form (Microsoft Word format) and to arrange delivery of the proposal using procedures designed to protect the sensitivity of the content.

3.3.2 Proposals are deemed classified if they contain information related to Canada's national interest that may qualify for an exemption or exclusion under the Access to Information Act or Privacy Act and the compromise of which would reasonably be expected to cause injury to the national interest as defined in the PWGSC Supply Manual Glossary, and in accordance with the Treasury Board's Policy on Government Security. It is expected that the majority of proposals will not qualify for the exemption or exclusion and they will therefore be submitted as unclassified proposals.

3.3.2.1 Classified Information specific to Project Management and Key Team Member expertise: In the event that it is not possible to demonstrate project management expertise commensurate to the proposal's complexity without providing classified information, bidders must use the classified form for this portion of the bid. The bidder will be required to populate a table related to project management experience using the Classified Submission Form and include a reference to the Classified Submission Form in the online form.

3.3.3 Bidders submitting a classified proposal must use and fully populate the Classified Submission Form, identify the proposal using an unclassified title, and adhere to the word limits imposed by different sections (as applicable).

3.3.4 All classified proposals must be received by the specified CFP closing date and time indicated on the Buy and Sell website. Proposals received after the specified closing date and time will not be evaluated.

3.3.5 Due to the nature of this CFP, proposals transmitted by facsimile to PWGSC will not be accepted.

3.3.6 Canada requests that the Bidder provides the proposal in separately bound sections as follows:

Section I: Technical Proposal (4 hard copies)

Section II: Financial Proposal (4 hard copies)

Section III: Certifications (1 hard copy)

Section IV: Additional Information (4 hard copies)

3.4 Technical Proposal

3.4.1 The bidder's response to the criteria in Part 4 will form the bidder's Technical Proposal. The bidder must respond to each criterion in a thorough, concise and clear manner within the allotted character count for each criterion. The bidder must provide Technical Proposal content that clearly addresses in sufficient depth the points that are subject to the evaluation criteria against which the proposal will be evaluated.

3.4.2 To maintain the integrity of the evaluation, evaluators will consider only information presented in the proposal. No information will be inferred and personal knowledge or beliefs will not be utilized in the evaluation. Bidders should explicitly demonstrate, in sufficient detail, how all criteria are met.

3.5 Financial Proposal

3.5.1 The bidder must complete the Detailed Budget Table set out in Annex E which will form the bidder's financial proposal. All financial proposals must be in Canadian dollars.
The bidder's financial proposal should be within amounts identified in Table A, within Annex A, Project Types and Parameters. Any dollar value largely exceeding the funding amounts may require additional justification and/or may be considered the bidder's commitment of co-investment funding to a resulting contract.

3.5.2 The financial proposal submitted will be negotiated and finalized during Stage 2. These negotiations will be in accordance with the Statement of Work (SOW). The bidder's original proposal must be in accordance with the PWGSC Contract Cost Principles 1031-2 (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/3/1031-2/6), except for academic institutions for which the costs must be in accordance with article 10.40 (a) to (i) of the PWGSC Supply Manual (https://buyandsell.gc.ca/policy-and-guidelines/Supply-Manual).

3.5.3 Exchange Rate Fluctuation
Requests for exchange rate fluctuation risk mitigation are not permitted as per C3011T (2013-11-06) Exchange Rate Fluctuation.

3.5.4 Eligible Costs
3.5.4.1 Goods (A) – When the final ownership of tangible, non-consumable goods, that will have a residual value at the end of the contract, will rest with the bidder/contractor/non-federal LGD (for Memorandum of Agreement (MOA)'s), the following will apply:

DRDC funds can be used for incremental resourcing costs associated with delivering a project - for example, consumable materiel and supplies, equipment rentals, subcontractors and casual employees (incremental labour costs for indeterminate employees at the federal level of the government in Canada cannot be included). Therefore, DRDC funds can only be used for expenditures that are not amortized. This means that Canada cannot pay for goods and other tangible, non-consumable items that will have a residual value at the end of the contract. If the proposed project requires the purchase of

items that will have a residual value at the end of the contract, the bidder can either purchase the item(s) using their in kind/cash contribution, or charge Canada fair market rental price for the item(s

3.5.4.2 Goods (B) - When the final ownership of tangible, non-consumable goods, that will have a residual value at the end of the contract, will rest with the federal LGD/TA, the following will apply:

DRDC funds can be used for incremental resourcing costs associated with delivering a project - for example, materiel and supplies, equipment rentals, subcontractors and casual employees (incremental labour costs for indeterminate employees at the federal level of the government in Canada cannot be included). Also, DRDC funds can be used for expenditures that are amortized (tangible, non-consumable items that will have a residual value at the end of the contract).

In the event that materiel ownership will reside with the federal LGD/TA, materiel must accurately be accounted for in the mandatory system of record to ensure sound financial stewardship and achieve full asset visibility. For further information please reference, Treasury Board Policy on Management of Materiel (http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12062).

There may be some situations where the federal LGD/TA may not be in a position to accept ownership of the tangible, non-consumable goods that will have a residual value at the end of the contract. If such a situation becomes evident, during the contract negotiation phase(s) Canada will work with the bidder to, revise, reallocate, and/or adjust the bidder's financial proposal accordingly.

3.5.5 Travel expenses using DRDC funding must be compliant with the National Joint Council Travel Directive (http://www.njc-cnm.gc.ca/directive/d10/en) and with the other provisions of the directive referring to "travellers", rather than those referring to "employees" and be justified in the work plan (see Annex D).

3.5.6 Salary Wage Envelope Conversion for Federal Government Participants
As per Treasury Board of Canada Secretariat requirements, the Employee Benefit Plan (EBP) amount (20 percent of personnel costs) must be included in costing calculations. The EBP fee is applicable to incremental federal government salaries and does not apply to other orders of government or the private sector.

3.5.7 Ineligible Costs
DRDC funds cannot be used to pay for salaries of indeterminate employees at the federal level of government in Canada; however, indeterminate employee salaries (including the EBP amount) may be included in the proposal as an in kind contribution.

3.5.8 Use of DRDC Resources - *Stream B only*
If any proposals under Stream B include the request to use a DRDC resource, the proposal should articulate the requirements from DRDC for the project to succeed and the mitigation

and impact should DRDC be unable to fulfill those requirements. This should be captured within Annex D (2) - Risks and Mitigation table.

3.6 Certifications

Required certifications and additional information are identified in Part 5.

PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

4.1.1 Proposals will be assessed in accordance with the entire requirement of this CFP including the technical and financial evaluation criteria.

4.1.2 Representatives of Canada will evaluate the proposals. If required, Canada may use external Subject Matter Experts (SMEs) to evaluate any proposal. External SMEs will be required to confirm they are not in a conflict of interest, and sign a non-disclosure agreement.

4.1.3 For each S&T Challenge, Canada will determine first if there are two or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than two responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

4.1.4 In conducting its evaluation of the proposals, Canada may, but will have no obligation to, verify any information provided by the bidder through independent research, use of any government resources or by contacting third parties.

4.2 Evaluation Criteria

4.2.1 Mandatory Criteria

Stream A:
Proposals must meet all mandatory criteria (MC) identified in Annex C to be in compliance with the CFP. Proposals that fail to meet all MC will be declared non-responsive.

Stream B:
Proposals must meet MC1, MC2, MC3 and MC4 (not MC5) as identified in Annex C to be in compliance with the CFP. Proposals that fail to meet these MC will be declared non-responsive.

4.2.2 Supporting Information

In the event that the bidder fails to submit supporting information pursuant to the MC, the Contracting Authority may, but is not required to, request it after in writing. It is mandatory that the bidder provide the supporting information within one business day of the written request or within such period as specified or agreed to by the Contracting Authority in the written notice to the bidder. Failure to provide the supporting information in the allotted time will render the proposal non-responsive.

4.2.3 Point-Rated Evaluation Criteria

Each proposal that meets all of the applicable MC will be evaluated and scored in accordance with the point-rated evaluation criteria identified in Annex C. Proposals must obtain a minimum score for the technical merit, as well as a minimum overall pass mark identified in Annex C. Proposals that do not meet both specified minimum pass marks will be deemed non-responsive.

4.2.4 Evaluation of Price

The price of the proposal will be evaluated in Canadian dollars; including travel and living costs and shipping. Custom duties are included and applicable taxes are extra.

For evaluation purposes only, the price of the proposal will be determined as detailed in Annex E - Detailed Budget Table.

4.3 Pool of Pre-Qualified Proposals

Proposals that satisfy all of the applicable MC, achieve the specified minimum pass marks and meet all other requirements of the CFP will be considered responsive and placed in the pool of pre-qualified proposals and submitted to the Proposal Selection Committee (PSC). This is not a guarantee that a responsive proposal will be selected for funding or that a contract will be awarded.

4.4 Proposal Selection

All responsive proposals will be considered for funding in accordance with the selection steps summarized below. Both Stream A and Stream B will follow separately the steps described below.

Proposal Selection Committee (PSC): The PSC is chaired by a DG of DRDC and is composed of representatives from DRDC and as needed, other government department SMEs. The Contracting Authority will also participate in the PSC in an observational capacity. The PSC considers the evaluation results of the proposals and examines the distribution of investment across multiple parameters, such as:

- program priorities;
- number of proposals across priorities and S&T Challenges;
- previous years' investments;
- the strength of individual proposals;
- changes to Government of Canada priorities;
- similar S&T initiatives being funded by DRDC's partners;
- project types;
- level of LGD involvement and support;
- solution readiness levels (SRLs);
- amount of funding requested for travel; and,

- level of co-investment, particularly cash co-investment, as an indicator of shared risk.

This results in the creation of a prioritized pool of pre-qualified proposals that are recommended to receive funding within the budget allocated for the CFP and a list of proposals not recommended for funding. The results are then sent for endorsement to the Steering Committee (SC).

Steering Committee (SC): The SC is chaired by the DND ADM (S&T) and is composed of representatives from DRDC and, as needed, other government department SMEs. The Contracting Authority will also participate in the SC in an observational capacity. The role of the SC is to review and endorse and/or modify the PSC's prioritized pool of pre-qualified proposals recommended and not recommended for funding. The SC will consider the same factors as the PSC. The result is a final prioritized pool of pre-qualified proposals. Canada will communicate the results of this process.

4.5 Debriefing

After the prioritized pool of pre-qualified proposals is finalized, PWGSC will inform all bidders of their individual results via email. Canada may, on request by the bidder, provide unsuccessful bidders with additional clarification. Bidders must make their requests to the Contracting Authority within 15 working days after the receipt of their individual results.

4.6 Contracting Process

Recommendation for award will be determined based on the available budget and the success in completing the following steps:

4.6.1 Financial Capability and Certifications

The Contracting Authority may undertake the following:

a) obtain financial information to verify the bidder's capacity to undertake the work; and,
b) request certifications and other information required before Contract Award.

If a bidder fails to demonstrate adequate financial resources to complete the work or fails to provide the certifications and additional information, the proposal will be considered non-responsive and given no further consideration.

4.6.2 Contract Negotiations

Upon completion of the SOW, the Contracting Authority will initiate the negotiations for the following:

a) contract terms and conditions, as applicable;
b) pricing and cost breakdown; and,
c) the provision by the bidder of price support to substantiate the costs to Canada.

Failure to achieve consensus on any aspect of the negotiations will result in the proposal being set aside and not given any further consideration. If an agreement cannot be reached

between Canada and the bidder within a reasonable timeline determined by Canada, Canada reserves the right to stop negotiations with the bidder.

4.6.3 Contract Award
Upon completion of contract negotiations, Canada will recommend contracts to be awarded.

4.6.4 Funding Flow Chart (Stream A only)
The table in Annex J describes the different project structures based on who is the bidder (e.g. government, private sector) and who is the LGD (federal, provincial, territorial, municipal) and what the resulting funding flow and mechanisms will be.

- Note that this is a typical funding flow model for most projects; however, depending on the particular project, it may change.
- LGD is the equivalent of the Government Department for Stream B.

4.7 Intellectual Property

The default position of Canada is to allow contractors to retain the IP rights. In some cases, the IP rights could be negotiated with the bidders. Information on IP is available from the following sources:

General Conditions 2040 30 (2018-06-21) Licenses to Intellectual Property Rights in Foreground and Background Information, found at: https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/3/2040/18.

Policy on Title to Intellectual Property Arising under Crown Procurement Contracts, found at: http://www.ic.gc.ca/eic/site/068.nsf/eng/00005.html.

4.8 Human and Animal Ethics

A proposal that includes human subjects, human tissues, laboratory animals or animal tissues, must not proceed without prior approval of the project team's Human Subjects Research Ethics Committee or the institutional Animal Care Committee and must not be conducted in contravention of the respective committee's conditions of approval.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

The bidder must certify the certifications and additional information to be deemed compliant.

The certifications provided by the bidder to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a proposal non-responsive or will declare a contractor in default if any certification made is found to be untrue, whether made knowingly or unknowingly, during the proposal evaluation period or during the contract period.

The Contracting Authority has the right to ask for additional information to verify the bidder's certifications. Failure to comply and cooperate with any request or requirement imposed by the Contracting Authority will render the proposal non-responsive or constitute a default under the contract.

5.1 Certifications Required with the Proposal

Bidders must submit the following duly completed certifications as part of their proposal.

5.1.1. In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide, as part of their bid, if applicable, the Integrity declaration form (http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) available on the Forms for the Integrity Regime website, to be given further consideration in the procurement process.

This declaration is to be sent to the Contracting Authority, as identified in Section 2.3 of the solicitation.

5.1.2 Additional Certifications Required with the Proposal

5.1.2.1 Canadian Content Certification

This procurement is conditionally limited to Canadian goods and services.

Subject to the evaluation procedures contained in the CFP, the bidder acknowledges that only bids with a certification that the goods and services offered are Canadian goods and services, as defined in clause A3050T (SACC) Manual as modified below, may be considered.

Failure to provide this certification completed with the bid will result in the goods and services offered being treated as non-Canadian goods and services.

The bidder certifies that:

(__) a minimum of 50 percent of the total bid price consists of Canadian goods and services as defined in paragraph 5 of clause A3050T, as amended herein. For more information on how to determine the Canadian content for a mix of goods, a mix of services or a mix of goods and services, consult Annex 3.6.(9), Example 2, of the Supply Manual (https://buyandsell.gc.ca/policy-and-guidelines/supply-manual/annex/3/6).

5.1.2.2 SACC Manual clause A3050T (2014-11-27), Canadian Content Definition, is amended as follows:

DELETE: 80 percent
INSERT: 50 percent

5.1.2.3 Canadian Content Percentage Declaration Certification

In addition to the above minimum requirement for 50 percent Canadian content, the bidder is requested to certify the actual Canadian content percentage of the total bid price.

The bidder certifies that:

(__) percent of the total bid price consists of Canadian goods and services as defined in paragraph 5 of clause A3050T, as amended herein.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the proposal but may be submitted afterwards. If any of these required certifications or additional information are not completed and submitted as requested, the Contracting Authority will inform the bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the proposal non-responsive.

5.2.1 Integrity Provisions – Required Documentation
In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the Ineligibility and Suspension Policy (http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity
By submitting a bid, the bidder certifies that the bidder and any of the bidder's members, if the bidder is a joint venture, is not named on the FCP for Employment Equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) – Labour's website (https://www.canada.ca/en/employment-social-development/programs/employment-equity.html).

Canada will have the right to declare a bid non-responsive if the bidder, or any member of the bidder if the bidder is a joint venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

For contracts receiving funds over $1,000,000.00:

Canada will also have the right to terminate the contract for default if a contractor, or any member if the entity is a joint venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the contract.

The bidder must provide the Contracting Authority with a completed FCP for Employment Equity - Certification (below), before contract award. If the bidder is a joint venture, the bidder must provide the Contracting Authority with a completed FCP for Employment Equity - Certification, for each member of the joint venture.

5.2.3 Federal Contractors Program for Employment Equity – Certification

A bidder's signature constitutes a confirmation to the effect that:

I, the bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the contract.

For further information on the FCP for Employment Equity visit: Employment and Social Development Canada – Labour's website (https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html).

Date: _____ YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

( ) A1. The bidder certifies having no work force in Canada.

( ) A2. The bidder certifies being a public sector employer.

( ) A3. The bidder certifies being a federally regulated employer (https://www.canada.ca/en/employment-social-development/programs/employment-equity/regulated-industries.html) being subject to the Employment Equity Act (https://laws-lois.justice.gc.ca/eng/acts/E-5.401/).

( ) A4. The bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

( ) A5. The bidder has a combined workforce in Canada of 100 or more employees; and

( ) A5.1. The bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) (https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html) in place with ESDC-Labour.

-OR-

( ) A5.2. The bidder certifies having submitted the AIEE (https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form AIEE (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

( ) B1. The bidder is not a joint venture.

-OR-

( ) B2. The bidder is a joint venture and each member of the joint venture must provide the Contracting Authority with a completed annex FCP for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

5.2.4 Former Public Servant Certification

Contracts awarded to a former public servant (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, the bidder must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the bidder of a timeframe within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

Definitions: For the purposes of this clause:

"former public servant" is any former member of a department as defined in the Financial Administration Act, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A FPS may be:

a) an individual;
b) an individual who has incorporated;
c) a partnership made of FPSs; or,

d) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c. C-17, the Defence Services Pension Continuation Act, 1970, c. D-3, the Royal Canadian Mounted Police Pension Continuation Act , 1970, c. R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c. R-11, the Members of Parliament Retiring Allowances Act, R.S. 1985, c. M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c. C-8.

5.2.5 Former Public Servant in Receipt of a Pension
As per the above definitions, is the bidder a FPS in receipt of a pension? **Yes ( ) No ( )**

If so, the bidder must provide the following information for all FPSs in receipt of a pension, as applicable:

a) name of FPS; and,
b) date of termination of employment or retirement from the Public Service.

By providing this information the bidder agrees that the successful bidder's status, with respect to being a FPS in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts..

5.2.6 Work Force Adjustment Directive
Is the bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive?

YES ( ) NO ( )

If so, the bidder must provide the following information:

a) name of FPS;
b) conditions of the lump sum payment incentive;
c) date of termination of employment;
d) amount of lump sum payment;
e) rate of pay on which lump sum payment is based;
f) period of lump sum payment including start date, end date and number of weeks; and,

g) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is $5,000, including applicable taxes.

5.2.7 Controlled Goods

Will the resulting contract involve controlled goods.

YES ( ) NO ( )

For further information on the Controlled Goods Program, visit the website: http://ssi-iss.tpsgc-pwgsc.gc.ca/dmc-cgd/index-eng.html.

5.2.8 Status and Availability of Resources

The bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the bidder is unable to provide the services of an individual named in its bid, the bidder may propose a substitute with similar qualifications and experience. The bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the bidder has proposed any individual who is not an employee of the bidder, the bidder certifies that it has the permission from that individual to propose his/her services in relation to the work to be performed and to submit his/her résumé to Canada. The bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

5.2.9 Procurement Business Number

Bidders are required to have a Procurement Business Number (PBN) prior to contract award in order to receive a PWGSC contract. Bidders may register for a PBN online at Supplier Registration Information (https://srisupplier.contractscanada.gc.ca). For non-Internet registration, bidders may contact the Info Line at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.

PBN: _____

5.2.10 Rate or Price Certification

The bidder is requested to provide one (1) of the following certifications, as applicable, in its financial bid:

_____The bidder certifies that the price proposed is based on costs computed in accordance with Contract Cost Principles 1031-2, and includes an estimated amount of profit of _____.

-OR-

_____The bidder certifies that the price proposed:

a) is not in excess of the lowest price charged anyone else, including the bidder's most favoured customer, for the like quality and quantity of the goods, services or both;
b) does not include an element of profit on the sale in excess of that normally obtained by the bidder on the sale of goods, services or both of like quality and quantity; and,
c) does not include any provision for discounts to selling agents.

-OR-

_____The bidder certifies that the price proposed is based on costs computed in accordance with 10.40 (a) to (i) of the Supply Manual, Public Works and Government Services Canada, on the pricing of R&D contracts with universities and colleges.

5.2.11 Education and Experience

The bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the bidder to be true and accurate. Furthermore, the bidder warrants that every individual proposed by the bidder for the requirement is capable of performing the work described in the resulting contract.

5.2.12 Certification Acknowledgement

The bidder certifies that the information submitted herein and the information submitted in its bid, is accurate and complete.

The bidder has read, understands and acknowledges the instructions and the clauses and conditions contained in all parts of the solicitation document.

By signing below the signatory certifies the above and that he or she is an authorized signing officer of the bidder.

Print Name:	
Signature:	
Position Title:	
Name of Organization:	
Date:	

PART 6 – SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Considerations

Contractors may be required to possess valid security clearances, depending on the nature of the project, in order to have access to information and/or sites necessary for its execution. DRDC will determine the level of security required and will be responsible for establishing a SRCL. The Contracting Authority will communicate such requirements to bidders at Stage 2.

Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful bidder time to obtain the required clearance will be at the discretion of the Contracting Authority.

For additional information on security requirements, Bidders should refer to the Industrial Security Program - visit the website: http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html.

6.2 Financial Capability

Additional financial information may be required during the evaluation of bids as per the following clause:
SACC Manual clause A9033T (2012-07-16), Financial Capability

6.3 Controlled Goods Program - Bid

The following clause may be required if the contract will require the production of or access to controlled goods:
SACC Manual clause A9130T (2014-11-27), Controlled Goods Program

PART 7 – RESULTING CONTRACT/MEMORANDUM OF AGREEMENT CLAUSES

The instructions, clauses and conditions identified below, are provided as an example of the standard terms and conditions that could form part of any resulting contract/MOA and do not represent a complete list. PWGSC may update, add or delete, as applicable, the standard terms and conditions contained herein.

1. Statement of Work

The contractor must perform the work in accordance with the SOW at Annex ____.

1.1 Work Authorization

To Be Determined (TBD) (9) at each individual contract/MOA.
Despite any other condition of the contract, the contractor is only authorized to perform the work required to complete _____ of the contract _____ at a cost not to exceed $_____. Upon completion of _____, the work will be reviewed before the contractor is authorized to commence any work for _____. Depending on the results of the review and evaluation of the work, Canada will decide at its discretion whether to continue with the work.
If Canada decides to continue with _____, the Contracting Authority will advise the contractor in writing to commence work on _____. The contractor must immediately comply with the notice.
If Canada decides not to proceed with _____, the Contracting Authority will advise the contractor in writing of the decision and the contract will be considered completed at no further costs to Canada. In no event will the contractor be paid for any cost incurred for unauthorized work.

2. Standard Clauses and Conditions

All clauses and conditions identified in the contract by number, date and title are set out in the SACC Manual (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by PWGSC.

2.1 General Conditions

2040 (2018-06-21), General Conditions - Research & Development, apply to and form part of the contract.

2.2 Supplemental General Conditions

The following supplemental general conditions apply to and form part of the contract TBD for each individual contract/MOA):
4001 (2015-04-01), Hardware Purchase, Lease and Maintenance
4002 (2010-08-16), Software Development or Modification Services
4003 (2010-08-16), Licensed Software

4004 (2013-04-25), Maintenance and Support Services for Licensed Software
4008 (2008-12-12), Personal Information

3. Security Requirement

The following security requirements (SRCL and related clauses) apply to and form part of the contract/MOA.

TBD or no security requirement applies.

4. Term of Contract

The work is to be performed during the period TBD at the time of negotiations.

5. Comprehensive Land Claim Agreements

TBD at each individual contract/MOA, as detailed in Part 1 of the CFP.

6. Authorities

6.1 Contracting Authority

The Contracting Authority for the contract is:

TBD for each individual contract/MOA

The Contracting Authority is responsible for the management of the contract and any changes to the contract must be authorized in writing by the Contracting Authority. The contractor must not perform work in excess of or outside the scope of the contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.2 Technical Authority

The TA for the contract is:

TBD for each individual contract/MOA

The TA is the representative of the department or agency for whom the work is being carried out under the contract and is responsible for all matters concerning the technical content of the work under the contract. Technical matters may be discussed with the TA; however, the TA has no authority to authorize changes to the scope of the work. Changes to the scope of the work can only be made through a contract amendment issued by the Contracting Authority.

6.3 Procurement Authority

The Procurement Authority for the contract is:

TBD for each individual contract/MOA

The Procurement Authority is the representative of the department or agency. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the contract. The contractor may discuss administrative matters identified in the contract with the Procurement Authority; however, the Procurement Authority has no authority to authorize changes to the scope of the work. Changes to the scope of work can only be made through a contract amendment issued by the Contracting Authority.

6.4 Contractor's Representative

TBD for each individual contract/MOA

7. Proactive Disclosure of Contracts with Former Public Servants

SACC Manual Clause A3025C (2013-03-21)

8. Payment

8.1 Basis of Payment – Firm Price

In consideration of the contractor satisfactorily completing all of its obligations under the contract, the contractor will be paid a firm price, as specified in Annex TBD for a cost of $ TBD. Customs duties, and excise taxes are included and applicable taxes are extra, if applicable.

Canada will not pay the contractor for any design changes, modifications or interpretations of the work.

-OR-

Basis of Payment – Ceiling Price

The contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the work, as determined in accordance with the Basis of Payment in Annex TBD, to a ceiling price of $TBD.

Customs duties, and excise taxes are included and applicable taxes are extra, if applicable.

The ceiling price is subject to downward adjustment so as not to exceed the actual costs reasonably incurred in the performance of the work and computed in accordance with the Basis of Payment.

-OR-

Basis of Payment – Limitation of Expenditure

The contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the work, as determined in accordance with the Basis of Payment in Annex TBD, to a limitation of expenditure of $TBD.
Customs duties, and excise taxes are included and applicable taxes are extra, if applicable.

8.2 Limitation of Price

SACC Manual Clause C6000C (2011-05-16), Limitation of Price

8.3 Method of Payment

Method of Payment – Progress Payments (for Ceiling Price Basis and Limitation of Expenditure Basis of Payments)

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the work up to TBD percent of the amount claimed and approved by Canada if:

a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111 (http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf), Claim for Progress Payment and any other document required by the contract have been submitted in accordance with the invoicing instructions provided in the contract;
b) the amount claimed is in accordance with the Basis of Payment;
c) the total amount for all progress payments paid by Canada does not exceed TBD percent of the total amount to be paid under the contract; and,
d) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.

2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the work has been accepted by Canada and a final claim for the payment is submitted.

-OR-

Method of Payment – Milestone Payments (for Firm Price Basis of Payment)

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex TBD and the payment provisions of the contract if:

a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111 (http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf), Claim for Progress Payment and any other document required by the contract have been submitted in accordance with the invoicing instructions provided in the contract;
b) all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives; and,

c) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

8.4 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department
C0305C (2014-06-26), Cost Submission – Limitation of Expenditure or Ceiling Price
C4005C (2014-06-26), Travel and Living Expenses – National Joint Council Travel Directive

8.5 Discretionary Audit

SACC Manual Clause C0101C (2010-01-11), Discretionary Audit – Non-commercial Goods and/or Services

-OR-

SACC Manual Clause C0102C (2010-01-11), Discretionary Audit – Canadian Universities and Colleges

-OR-

SACC Manual Clause C0705C (2010-01-11), Discretionary Audit

8.6 Time Verification

SACC Manual Clause C0711C (2008-05-12), Time Verification

9. Invoicing Instructions

1. The contractor must submit a claim for progress payment using form PWGSC-TPSGC 1111 (http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf), Claim for Progress Payment.

Each claim must show:

a) all information required on form PWGSC-TPSGC 1111;
b) all applicable information detailed under the section entitled “Invoice Submission” of the general conditions;
c) a list of all expenses; and,
d) the description and value of the milestone claimed as detailed in the contract.

Each claim must be supported by (TBD at each individual contract/MOA):

a) a copy of time sheets to support the time claimed;
b) a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses; and,
c) a copy of the monthly progress report.

2. Applicable taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no applicable taxes payable as it was claimed and payable under the previous claims for progress payments.

3. The contractor must prepare and certify an original claim on Form PWGSC-TPSGC 1111 and forward it to the Contracting Authority for certification in an electronic format to the electronic mail address identified under section entitled "Authorities" of the contract. Portable Document Format (.pdf) format is acceptable. The Contracting Authority will then forward the certified claim, in an electronic format, to the TA for appropriate certification after inspection and acceptance of the work takes place and onward submission to the Payment Office for the remaining certification and payment.

4. The contractor must not submit claims until all work identified in this claim is completed.

10. Certifications

10.1 Compliance

Compliance with the certifications (attestations) and related documentation provided by the contractor in its bid is a condition of the contract and subject to verification by Canada during the entire contract period. If the contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the contract, to terminate the contract.

10.2 Federal Contractors Program for Employment Equity – Default by the Contractor

The contractor understands and agrees that, when an AIEE exists between the contractor and ESDC-Labour, the AIEE must remain valid during the entire period of the contract. If the AIEE becomes invalid, the name of the contractor will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC will constitute the contractor in default as per the terms of the contract.

10.3 SACC Manual Clauses

A3060C (2008-05-12), Canadian Content Certification

11. Applicable Laws

The contract must be interpreted and governed and the relations between the parties determined, by the laws in force in (to be inserted at contract/MOA award).

12. Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list:

a) the Articles of Agreement;
b) the supplemental general conditions _____;
c) the general conditions _____;
d) Annex __, Statement of Work;
e) Annex __, Basis of Payment;
f) Annex __, Security Requirements Check List;
g) Annex __, Insurance – Specific Requirements; and,
h) The contractor's proposal dated _____.

13. Foreign Nationals (Canadian Contractor OR Foreign Contractor)

SACC Manual clause A2000C (2006-06-16) Foreign Nationals (Canadian Contractor)

-OR-

SACC Manual clause A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)

14. Insurance

SACC Manual clause G1005C (2016-01-28), Insurance – No Specific Requirement

-OR-

Insurance – Specific Requirements
The contractor must comply with the insurance requirements specified in Annex ____. The contractor must maintain the required insurance coverage for the duration of the contract. Compliance with the insurance requirements does not release the contractor from or reduce its liability under the contract.

The contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the contractor's expense and for its own benefit and protection.

The contractor must forward to the Contracting Authority within 10 calendar days after the date of award of the contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than “A-”. The contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

15. Controlled Goods Program

SACC Manual clause A9131C (2014-11-27), Controlled Goods Program - Contract

-OR-

SACC Manual clause B4060C (2011-05-16), Controlled Goods

16. Government and/or Canadian Forces Site Regulations

SACC Manual clause A9068C (2010-01-11) Government Site Regulations

-OR-

SACC Manual clause A9062C (2011-05-16) Canadian Forces Site Regulations

17. Joint Venture

a) The contractor confirms that the name of the joint venture is _____ and that it is comprised of the following members: [list all the joint venture members named in the contractor's original bid].
b) With respect to the relationship among the members of the joint venture contractor, each member agrees, represents and warrants (as applicable) that:
    i. _____ has been appointed as the "representative member" of the joint venture contractor and has full authority to act as an agent for each member regarding all matters relating to the contract;
    ii. by giving notice to the representative member, Canada will be considered to have given notice to all the members of the joint venture contractor; and,
    iii. all payments made by Canada to the representative member will act as a release by all the members.
c) All the members agree that Canada may terminate the contract in its discretion if there is a dispute among the members that, in Canada's opinion, affects the performance of the work in any way.
d) All the members are jointly and severally or solitarily liable for the performance of the entire contract.
e) The contractor acknowledges that any change in the membership of the joint venture (i.e. a change in the number of members or the substitution of another legal entity for an existing member) constitutes an assignment and is subject to the assignment provisions of the General Conditions.
f) The contractor acknowledges that all security and controlled goods requirements in the contract, if any, apply to each member of the joint venture contractor.

Note to bidders: This Article will be deleted if the bidder awarded the contract/MOA is not a joint venture. If the contractor is a joint venture, this clause will be completed with information provided in its bid.

Annex A – Project Types and Parameters

Project Types:

The types of projects that will be considered for this CFP are:

- Studies;
- Concepts;
- Research and Development;
- Technology Demonstrations; and,
- Technology Pilots.

Each project type covers a SRL range. A SRL is a measure that evaluates the maturity of evolving technology – which includes, for example, devices, materials and software (refer to Annex H).

Studies

Studies are evidence-based examinations or analysis that address known defence, security, or safety issues, define problems or propose options that require investigation. Studies can provide operational research tools and methods, including risk, capability and foresight analysis or road-mapping to define operational needs and/or aid in prioritizing investment decisions. Studies can vary considerably in scale and complexity. Studies analyze key issues with rigour but the scope of the analysis is managed so as to be both feasible and attainable with limited time-frames and resources (including funding). Examples include conducting scoping studies or developing emergency response scenarios that help define needs.

Concepts

Concepts provide a more in-depth analysis of the issues and solution options than studies. Typically, these include an analysis of problems as well as potential solutions taking into account technological, operational, environmental, policy, governance, and regulatory aspects where applicable. Concepts usually include a comprehensive environmental scan that covers the scientific, technological and operational landscapes to ensure the analysis is up-to-date. Often there is broad consultation with a variety of SMEs.

Research and Development

R&D projects involve applied research in scientific or technological fields that may generate new knowledge or awareness while addressing user-defined capability gaps in critical areas. R&D projects include analytical research, laboratory studies and experiments that mature earlier findings. R&D projects can also validate analytical predictions of existing S&T or enable ‘proof-of-concept’ validation.

Technology Demonstrations

Technology demonstrations are projects that advance the maturity of a technology, application or capability by embedding S&T in an operational context. These projects foster collaboration between operational and S&T communities. They integrate basic technological elements that can be tested in a simulated or realistic environment. Technology demonstrations test the applicability of a SRL solution to address a capability gap. This project type usually does not transition directly into implementation or operationalization as additional development may still be required.

Technology Pilots

Technology pilots, which are sometimes referred to as feasibility studies or experimental trials, are projects that involve the implementation of a known solution on a small-scale to evaluate its full impact, strengths and weaknesses prior to full implementation. This project type allows for the collection of information to adequately learn how the solution might work in practice.

Project Parameters

The table below identifies project parameters for each project type. Proposals should not exceed the parameters identified for funding, and must not exceed the parameters identified for project duration, including for phased projects.

The financial proposal for a Phased Project must not exceed the sum of amounts listed in the project parameters for the selected project types, including applicable taxes. The combined total duration of phased projects must not exceed 36 months, regardless of the project parameters identified for Table A and Table B.

Table A: Project Parameters (Challenges 1 to 14 only)

Project Type	SRL Range	Project Duration (from initiation to close-out)	Funding/Resulting Contract Value (applicable taxes included)
Concept	1-3	≤ 24 months	≤ $250K
R&D	3-4	≤ 36 months	≤ $1.0M
Technology Demonstration	5-7	≤ 36 months	≤ $1.5M
Technology Pilot	7-9	≤ 36 months	≤ $2.0M
Study	1-9	≤ 12 months	≤ $125K

Table B: Project Parameters (Challenges 15 and 16 only)

Project Type	SRL Range	Project Duration (from initiation to close-out)	Funding/Resulting Contract Value (applicable taxes included)
Concept	1-3	≤ 24 months	≤ $200K
R&D	3-4	≤ 36 months	≤ $400K
Study	1-9	≤ 12 months	≤ $500K

Phased Projects:

This CFP allows for phased projects. Such projects include two distinct proposals and must demonstrate progression of solution maturity (i.e. SRLs) from one project type (Phase I) to the subsequent project type (Phase II). The bidder must identify the Go/No-Go considerations to transition from Phase I to Phase II of the phased project. Go/No-Go clauses will be included in any resulting contract that spans project types and it will be Canada's decision whether to proceed to the next project. This means that all resulting proposals are dependent on the successful approval/results of the first proposal. If this is not the case, do not submit phased projects.

When submitting a phased project, each proposal must be distinctive. Proposals should be treated as separate work packages and each will be evaluated on its own merits. An evaluator must be able to discern the work described in one proposal from beginning to end, without relying on information from a second proposal submitted as part of the phased project.

The financial proposal for a phased project must not exceed the sum of amounts listed in the project parameters for the selected project types, including applicable taxes. The combined total duration of phased projects must not exceed 36 months, regardless of the project parameters identified for Table A and Table B.

Canada may award one or more or no contracts for each and/or all of the phased projects.

Example:

Bidder ABC submits a proposal and identifies it as a phased project for Stream A or Stream B consisting of the following:

Phase I:
Project Type: Concept
DRDC Funding (maximum): $250K
Duration (maximum 24 months): X months (TBD by the bidder)
Submits a distinct proposal.

Phase II:
Project Type: R&D
DRDC Funding(maximum): $1.0M
Duration (maximum 36 months): X months (TBD by the bidder)
Submits a distinct proposal.

Notes:
Total DRDC funding that can be requested: $1.25M
Total duration not to exceed: 36 months

Both proposals must be in the pool of pre-qualified proposals. Phase II can only proceed if Phase I is selected for funding, contracted, and a go decision to proceed with Phase II is made by the TA at the end of the Phase I contract.

Annex B – Science & Technology Challenges

For this CFP, the following S&T Challenges have been identified:

a) Stream A: Public Safety and Security: Smart Communities and Systems
b) Stream B: Support to Canada's Defence Policy "Strong, Secure, Engaged"

Stream A
Public Safety and Security - Smart Communities and Systems
The introduction of smart technologies (artificial intelligence (AI), Internet of Things (IoT), automated learning systems, robotics, data analytics, broadband communications, and connected, driverless vehicles) into public safety and security systems and into urban, rural, or remote, isolated communities can be rapid, complex, non-systematic. The convergence of these technologies coupled with multiple dynamic factors introduced by an ever changing threat, hazard and risk landscape presents significant challenges for public safety and security. Keeping pace with these changes is necessary for society to exploit the benefits of the new technologies while countering the vulnerabilities these same technologies are introducing or exacerbating. The core challenge is to optimize the utility of these inexorable technology advancements in a manner that is coherent, safe, secure, and preserves the privacy of individuals in deployed safety or security systems.

For this CFP, in Stream A, DRDC is looking for novel ideas and innovative solutions to S&T Challenges under the themes of mitigating the impact of climate change, mitigating national security risks and protecting and connecting safety and security professionals.

THEME 1: Mitigating the Safety and Security Impact of Climate Change

The implications of the gradual warming of the planet and changes in hydrological cycles include an increase in the number and severity of extreme weather events and natural disasters, new vectors for diseases, changes in sea ice, and melting permafrost in the Canadian North. In this call, DRDC will seek innovative solutions to identify and mitigate the impact of these changes on the safety and security of Canadians.

1. **Community Resilience and Risk Reduction**

Problem:
Risk reduction and mitigation is a challenging and complex problem that includes technical, societal and legal aspects with many interdependencies at different levels of government and society. While many Canadian communities have risk assessments for a variety of disasters, methods to mitigate and reduce the risk are needed. Furthermore, emerging innovative technologies and advances in data science, such as real-time data collection, fusion, distribution, analysis and predictive analytics, have created opportunities that have yet to be fully explored.

S&T Challenge:
Develop scalable tools, methodologies, and novel S&T solutions for risk reduction and mitigation at the individual, family, community, regional, and national level, which consider disasters of all types and include geographical, economic, cultural, and social factors, and which aim to inform disaster risk reduction initiatives with considerations of cost-effective mitigation, climate adaptation, and smart recovery or re-building, in alignment with the Sendai Framework for Disaster Risk Reduction (DRR) requirements.

2. **Health Consequences of Climate Change**

Problem:
A changing climate and environmental-driven disasters can lead to new interactions between different agents, site and atmospheric contamination and long-term human, animal and environmental health. Melting permafrost and species migration can also lead to emerging and re-emerging diseases.

S&T Challenge:
A) Innovative S&T post-disaster health research to help build community resilience that includes the need to understand toxic and/or long term health effect of short-lived chemical or radiological exposures, and data on how chemicals that are released intentionally or during an accident, react with the environment.

B) Innovative S&T solutions that improve situational awareness and anticipation capability for outbreaks of zoonotic diseases, or emerging infectious disease risk resulting from melting permafrost, international travel, trade or migration.

THEME 2: Mitigating National Security Risks

The threat landscape for national security continues to evolve and DRDC will continue to invest in S&T solutions to mitigate threats to the safety and security of Canadians.

3. **Securing Soft Targets**

Problem:
Recent events around the world demonstrate the vulnerability of public spaces where people congregate to study, shop, dine, conduct business, be entertained, worship, or travel. In general, these spaces are open to facilitate access to the public and thus have little or no security. Soft targets include publically accessible government facilities, schools, hospitals, hotels, restaurants, nightclubs, shopping malls, tourist sites, concert halls, museums, religious facilities, sports stadiums, parks and streets, and public areas around transportation systems; anywhere people assemble. These spaces are exposed to a broad spectrum of tactics that may include firearms, bladed weapons, improvised explosive devices (IEDs), vehicle ramming, and improvised incendiary devices (IIDs), unmanned autonomous systems (air and surface vehicles).

S&T Challenge:
Innovative S&T solutions for protecting soft targets that tailor both visible and non-visible security measures and coordinate a focus on R&D to generate the knowledge, technologies, and behavioural analytics to develop effective security capabilities. All proposed solutions must protect personal information and respect Canadian privacy legislation and expectations. Areas of interest include developing solutions for physical protection of public facilities, new sensors and analytical tools such as video processing and behavioural biometrics, and AI -based techniques that exploit information sources such as social media, and the Internet-of-Things. Note that mitigation of threats to VIPs or critical infrastructure from unmanned autonomous aircraft is not considered in this challenge and should be addressed in the Protection from Drones Challenge below.

4. **Detection, Forensics, Attribution and Non-Proliferation for Chemical, Biological, Radiological, and Nuclear**

Problem:
Globalization has served to increase the exposure to, access to, and transportation of threat agents. As a result of dissemination of knowledge, both the spectrum of threat agents and event probability have increased significantly. Definitive attribution of Chemical, Biological, Radiological, and Nuclear (CBRN) events remains a challenge, which allows both state and non-state actors plausible deniability. Furthermore, global efforts in nuclear threat-reduction and non-proliferation as well as verification of adherence to nuclear, chemical weapons and biological weapons conventions need to fully exploit new tools and techniques in arms control technology.

S&T Challenge:
A) Innovative S&T solutions to develop the ability of identifying DNA signatures of microorganism that have been cultured and or modified in a laboratory setting prior to the appearance in nature vs naturally occurring strains.
B) Innovative S&T solutions to develop methodologies and solutions to improve the forensic analysis of noble gas emissions and thereby improve and accelerate deductions on nuclear activities.

5. **Intelligence for National Security**

Problem:
The Government of Canada’s first priority is to protect Canadians and Canadian sovereignty. To do so, national security and intelligence agencies are required to identify threat actors, their intent and their capabilities, in order prevent, disrupt or mitigate the threat they pose.

S&T Challenge:
Innovative S&T solutions to enhance the national security and intelligence agencies’ capabilities and performance, with a particular emphasis on reliable and validated analytical tools. This includes:

- new tools to counter the threat from disinformation and foreign influence in democratic processes;

- innovative tools that address terrorists use of the Dark Web or block chain technologies as a tool for recruitment, training, propaganda, and financing; and,
- innovative digital forensics and interception techniques to enhance the ability of evidence collection.

6. **Understanding the Threat from Disruptive Technology**

Problem:
Disruptive technologies bring unknown safety and security risks. They have the capability to significantly change the way we operate on a daily basis and can have dramatic societal impact. As new technologies are introduced into society, safety and security partners need an understanding and assessment of associated risks and mitigations, and the challenges and opportunities their adoption poses with regard to counterterrorism, counter-terrorist financing, and law enforcement efforts.

S&T Challenge:
Innovative S&T solutions or analytical approaches that further our understanding of the risk associated with disruptive technologies such as AI, increased digital connectivity, networked sensors, advanced robotics, and advanced manufacturing.

7. **Security, Privacy and Identity Management**

Problem:
Governments are required to authenticate and verify the identity of individuals for a multitude of purposes, from establishing the identity of persons entering the country or applying for official documents such as passports and driver's licenses, to conducting criminal and national security-related investigations, among other purposes. However, the increasing digitization of Canadians' personal data has created the potential for adversarial/criminal exploitation of that information. Canadian governments at all levels (federal, provincial, and municipal) are seeking ways to protect Canadians' information, while facilitating the continued modernization of government in the digital era

S&T Challenge:
A) Innovative S&T solutions to enhance the management of privacy threats and vulnerabilities, with a particular emphasis on developing solutions to support lawful and responsible sharing of Canadians' personal information and data within and between government departments and agencies
B) Innovative S&T solutions to enhance the government's identity management capabilities, with a particular emphasis on capabilities, including forensic capabilities that support (i) border control/security and immigration, (ii) law enforcement or national security operations, or (iii) access control to government facilities.

8. **Border Security**

Problem:
Canada's vast territory, including its maritime regions, and its remote points of entry, presents daunting border security and domain awareness challenges, including the need to secure the long Canadian land border with the United States, perform surveillance of our maritime and Arctic approaches, and ensure the efficient and secure flow of goods and materials at border Ports of Entry or in transit to the border (i.e. transportation pathways).

S&T Challenge:
Innovative S&T solutions to enhance Canada's ability to protect and secure its land and/or maritime borders, with a particular emphasis on enhancing Canada's border services and search and rescue capabilities in the North/Arctic, combatting organized crime and the trade in firearms and illegal narcotics, addressing irregular migration, and ensuring efficient and effective screening of cargo and travellers.

9. **Protection from Drones**

Problem:
Drones pose a particular threat to VIPs at outdoor events or in a moving vehicle, and may be an effective means of delivering a threat payload, such as explosives, listening device or camera to critical infrastructure. VIP security currently lacks the ability to stop drones in the last 100m even if detected early. The threat to critical infrastructure is not well-understood and response methodologies and procedures are not well-defined. Drone activity around airports is of particular concern. There is currently no truly effective technology to counter the threat to critical infrastructure from drones.

S&T Challenge:
A) Innovative S&T solutions for stopping identified drones within 100m using means that do not require emissions from the drone or ground station, and that are man-portable and easily operated by a single operator with minimal training, ideally lowering the drone safely to the ground.
B) Innovative S&T solutions for novel autonomous hard-kill or soft-kill response technologies along with response tactics techniques and procedures to defend critical infrastructure such as power stations, airports, buildings or other fixed structures.

THEME 3: Protecting and Connecting Safety and Security Professionals

10. **Enabling DND Operations Alongside Safety and Security Partners**

Problem:
Through requests for assistance, the Canadian Armed Forces (CAF) are called upon to provide assistance to local emergency operations across the country. There is an opportunity to exploit new technologies or enhance tactics, techniques or procedures to improve the interconnection between military and non-military responders and systems to improve the overall effectiveness of a combined response.

S&T Challenge:
Innovative S&T solutions that improve the interoperability between military and non-military actors, aid the transition after a request for assistance is made, improve integrated operations, or enhance the preparedness of the CAF for domestic emergency response.

11. **Support Tools for Incident Operations**

Problem:
The exchange of essential information between front-line operators, their dispatch and/or command personnel and community, currently relies mostly on voice communications and actions, which are subject to technical issues, misunderstanding, and cognitive loading. In addition, IoT sensors are being deployed amongst personnel, in communities, and the general population that have the capability to provide increased situational awareness. Recent advances have opened up the field of AI to a level where it may be effective for use in decision making and support in emergency response situations, thereby improving cognitive/behavioural performance of operators and organizations and their ability to process data.

S&T Challenge:
Innovative S&T solutions that demonstrate seamless communications among multiple disparate wireless technologies including 4G LTE, 5G and Wi-Fi, the ability to enable a secure exchange of information between local end users and IoT sensors, and provide the best available situational awareness.

12. **Supporting Next Generation 911**

Problem:
The introduction of Next Generation 911 (NG911) in Canada through regulation is a paradigm shift from both a technical and concept-of-operations perspective. There is currently a lack of understanding by operators and responders how it will interoperate with existing systems and operations

S&T Challenge:
Explore approaches, methods and tools for capturing, aggregating, fusing, analyzing, and distributing data that is relayed to Public-Safety Answering Points (PSAPs) through the NG911 system. Develop concepts of operation and best practices for how to deal with the changes brought about by NG911.

Stream B:

Support to Canada's Defence Policy "Strong, Secure, Engaged"

In support of Canada's Defence Policy, "Strong, Secure, Engaged", released in June 2017, the policy states that "Innovative technology, knowledge, and problem solving are critical for Canada and its allies to mitigate new threats, stay ahead of potential adversaries, and meet evolving defence and security needs, while generating economic benefits for Canada."
The Stream B S&T Challenges support portfolios related to joint force development and force employment.

13. **The Right to be Cool**

(Although this challenge is listed under Stream B, Public Safety and Security will be the TA)
Climate change is increasing the frequency and intensity of extreme weather events such as heatwaves, as well as natural disasters such as wildland fires. Vulnerable populations and first responders will likely face increased exposure to extreme heat conditions.

Problem:
With the inevitable threat of climate change and the consequential effects on human health, there has been a need to develop new or adapt existing technologies to protect the health of the particularly vulnerable population such as the elderly, the sick and children exposed to excessive overheating conditions in buildings and as well, first responders working in remote areas under direct conditions of extreme heat. Portable cooling technologies are effective measures to reduce the heat-related risk to the health of people exposed to conditions of extreme heat.

S&T Challenge:
The goal of this research challenge is to develop a portable, self-contained (powered), cost effective, and energy efficient cooling unit that can serve vulnerable people and first responders exposed to extreme heat conditions in indoor spaces or open outdoor environments. The cooling unit should provide cooling effects to individuals or a group of individuals for at least one hour under typical Canadian indoor and outdoor temperature exposures during extreme heat events (temperature range from 30°C to 40°C with dry or humid conditions). The cooling unit can be a wearable garment, or a compact cooling unit or a combination of both, intended to be used for:

1. Building interior spaces to protect the health of vulnerable occupants during heat wave events. In non-air conditioned buildings such as multi-unit residential buildings, the indoor temperature may be higher than outdoor temperature and reach values over 30°C for several hours per day.
2. Outdoor deployable structures (e.g., tents) to provide emergency care for people affected by heat during heat events.
3. First responders (e.g. firefighters, paramedics, rescuers, police) directly exposed to outdoor extreme heat conditions; protective clothing and work level of first responders add additional risk to their heat related health.

This research is limited to new emerging technologies for personal cooling for short periods (several hours) of exposure during heat events. The new technologies should be at SRL of 4 and up, and near or ready for commercialisation.

The expected outcomes of the proposed research are to develop a cooling unit with the following characteristics:

- Portable, compact, and light weight;
- Self-powered and resilient. The unit should use no power (passive), generate its own power, or use low power sources. Energy consumption of the unit should be very low so it does not add on greenhouse gas effect (environmentally friendly);
- Provide effective cooling effects to individuals or a group of individuals for at least one hour under the Canadian typical temperature exposures for indoor and outdoor environments; and,
- Not expensive so that it can be produced in mass for market deployment.

THEME 1: Unmanned Autonomous Systems (air) for Intelligence, Surveillance and Reconnaissance

Intelligence, Surveillance and Reconnaissance (ISR) from the air has been greatly enhanced through the use of Unmanned Autonomous Systems. This is especially important in situations where the ISR task requires constant attention for long periods of time, or requires a platform to be put in harm's way. DND has a strong S&T program in the investigation of the applicability of such systems to operations.

14. **High Endurance, Small Footprint ISR UAV**

Problem:
One of the main features of UAS for ISR is their high endurance, meaning their ability to stay on mission and on site for at least 10 hours. This is done using fixed-wing UAS. Helicopter-based and multirotor aircraft are also used for short missions that last minutes instead of hours. These are used in urban settings and at close range because of their ease of deployment, their small size, their portability and their maneuverability. What is needed is a UAS that has the endurance of a fixed-wing ISR platform and the portability, maneuverability and small size of multirotor aircraft.

S&T Challenge:
Operators, such as Canadian Special Operations Forces Command, are seeking S&T support to investigate and generate a novel solution to create an ISR UAS that has the following features at a minimum:

1. Vehicle is to be transportable and be capable to be launched by two persons.
2. The vehicle launching system is to be self-contained.
3. Must be able to take off and land in both urban and semi-urban environments (rooftops, parking lots, fields 50x50m).
4. Minimum range of 400 km.
5. Minimum flight endurance 10 hours.
6. Vehicle is to be capable of accepting modular payloads to include but not be limited to cameras, radars and sensors.
7. Payloads must be able to be installed by operators.

Proposals should describe the visual and noise signatures of the proposed solution.

THEME 2: Space-Based Intelligence, Surveillance and Reconnaissance

One of the initiatives of the "Strong, Secure, Engaged" Canadian Defence Policy is to acquire space capabilities to improve situational awareness and targeting, including the replacement of the current RADARSAT system to improve the identification and tracking of threats and improve situational awareness of routine traffic in and through Canadian territory, as well as in other areas of interest around the world.

DND has a program focused on conducting cutting-edge R&D on space-based earth observation technologies in collaboration with allies, industry, and academia to maintain, enhance, and contribute to continuous situational awareness capabilities for the CAF. This program provides advice and recommendations to DND stakeholders concerning viable and cost effective technological solutions that are available, or will be available in the near future, and that could be considered in upcoming options analysis phases of space-based ISR projects.

15. **Hyper-Spectral Imaging Satellites**

Problem:
DND and CAF require a better understanding of how HSI technology deployed from space could provide novel and significant solutions to ISR problems such as counter IEDs, Search and Rescue, Chemical, Biological, Radiological, Nuclear, High Yield Explosive (CBRNE), Arctic ISR, and Intelligence Preparation of the Operational Environment.

S&T Challenge:
This challenge is seeking proposals that would evolve their current SRL through studies, concepts and/or R&D and be centered on compact imaging spectrometers that can be carried aboard nano-to-medium size satellites. These proposals should identify how existing sensors (commercial of the shelf (COTS) or previously built) can best exploit the visible and near infrared (VNIR), the short-wave infrared (SWIR) or their combined ranges, in order to provide imagery with sufficient quality (signal-to-noise-ratio (SNR), ground sample distance (GSD), etc.) to support various DND/CAF applications. The inclusion of preliminary work phases (components and system concept validation and design, build and/or tests) and of broad cost projections are encouraged.

THEME 3: Space Situational Awareness (SSA)

Recognizing that space capabilities are essential to the current and future operations of the CAF, the "Strong, Secure, Engaged" Canadian Defence Policy directs DND to conduct cutting-edge R&D on new space technologies and to invest and employ a range of space capabilities, including Space Situational Awareness (SSA). Given the essential role of space capabilities in CAF operations, new SSA technologies ensuring timely responsiveness, and enhanced understanding of Earth orbiting space objects is of particular interest.

16. **Demonstration of a multi-purpose SSA microsatellite**

Problem:
Space assets are playing an increasingly important role for CAF and allied operations. The increasingly complex and dynamic nature of the space environment requires timely and accurate SSA to ensure the safety of space assets – and their associated effects on CAF capabilities – in the face of natural, man-made, and potentially hostile threats.

S&T Challenge:
DRDC is seeking new high-performance capabilities to track space objects under stressing observing conditions, to monitor and assess the state of Canadian space objects on orbit, to maintain awareness of space objects in the orbital proximity around a Canadian satellite, and to task, obtain data from, and monitor telemetry of a Canadian SSA satellite asset in near real-time.

Annex C – Evaluation Criteria

#	Applicable Stream	Evaluation Criteria & Demonstration of Criteria		Evaluation Grid
		Evaluation Criteria	**Required information to support the criteria**	**Assessment**
		Mandatory Criteria (MC)	**Unless otherwise stated below, the following information must be provided as a minimum to demonstrate the criteria and enable Canada's assessment of each criterion.**	**Schema (Pass or Fail)**
MC-1	**A, B**	**One S&T Challenge of Annex B**	**Required information to support the criteria**	**Assessment**
		The proposal must identify one primary S&T Challenge of Annex B that the proposal is addressing. If the proposed project addresses more than one S&T Challenge of Annex B, the secondary S&T Challenge can be addressed in other sections, including in MC-4, at the bidder's discretion.	The submission must identify a Primary S&T Challenge.	The proposal identifies one primary S&T Challenge of Annex B.
MC-2	**A, B**	**Project Type Duration**	**Supporting Information**	**Assessment**
		The proposal must not exceed a combined total project duration period of 36 months.	Show the duration in the work plan.	The proposal meets the criterion.

MC-3	A, B	Financial Support Disclosure	Required information to support the criterion	Assessment
		The proposal must disclose all financial support received (if any) and to be received (if any) from all Canadian federal government organizations and programs (including DRDC) for the proposed project. Bidders are advised that this criterion does not include the financial support requested as program funds from DRDC for this CFP.	The submission must list all financial support and identify the following information for each: • name of the Canadian federal government organization and program; • amount; and, • the Fiscal Year of receipt of the funding received or to be received. If financial support is not applicable, indicate "nil".	The proposal discloses all required financial support.
MC-4	**A, B**	**Alignment with Primary S&T Challenge**	**Required information to support the criterion**	**Assessment**
		The proposal objective(s) must align with the primary S&T Challenge.	In a maximum of 750 words, the submission must identify how the proposal's objective(s) meet the criterion.	The proposal identifies how the objective(s) align with the primary S&T Challenge.

MC-5	A	Partnerships	Required information to support the criteria	Assessment
		The proposal must have a minimum of two partner organizations that include the bidder and a LGD. These partners must meet the requirements as set out in Part 3.1 - Who May Apply.	The submission must include a complete Partnership Signature Form as set out in Annex G for the bidder as well as all entities/organizations identified as partners in the proposal. All signatures, at a minimum, must be at a level: • of DG or higher for the federal government; and, • acceptable for a provincial, territorial, municipal government, academic institution or a private industry to authorize the financial and operational commitment of its organization for the proposal.	The proposal meets the criterion and contains the completed Partnership Signature Form.

Annex C – Evaluation Criteria

	Evaluation Criteria	Required Information to Support the Criteria	Assessment and Proposal Rating
	Point-Rated Criteria (PR) **Stream A and B**	**In a maximum of 500 words for each criterion, the proposal should demonstrate all supporting information with a degree of information sufficient to enable Canada's assessment of the proposal against the criteria and the Evaluation Schema.**	**Evaluation Schema and Points** **PR-1 to PR-12**
PR-1	**Project Feasibility**	**Required Information to Support the Criteria**	**Maximum 15 points**
	The bidder's approach to complete the proposed project (how they intend to carry out and complete the work) is feasible.	The proposal should provide the following details at a minimum: 1. Specific details of the approach; and, 2. Demonstration that the approach is feasible and that the project has a high probability of producing the proposed project objective(s).	**0 points** The description of the approach has insufficient detail and lacks evidence of the feasibility of the project. **5 points** The approach can be understood at a high level, but few details are provided. OR The evidence provided of the feasibility of the approach is weak, not relevant, or not logical. **10 points** The approach is described and understandable, with sufficient details provided to allow analysis of its

			feasibility. Minor details may be missing; however, overall the information provided is clear and logical. AND Minor details may be missing; however, the evidence provided is relevant and logical, showing that the project should be feasible. **15 points** The description of the approach includes substantial details so as to leave the evaluator with no questions as to how the project will be conducted. AND The evidence provided is of sufficient quality and logic that there is no doubt for the evaluator that the project will achieve the proposed objective(s).
PR-2	**Project Applicability in Canada**	**Required Information to Support the Criteria**	**Maximum 6 points**
	The proposed solution applies in Canada and/or can be utilized by a government organization within Canada. (Federal, Provincial/Territorial, Municipal)	The proposal should provide the following details at a minimum: 1. The geographical or jurisdictional area(s) of Canada and the level of government to which the proposed solution is applicable; and, 2. Demonstration of why the proposed solution is applicable in Canada and/or how it can	**0 points** The areas of Canada and the level of government are not identified, and/or those identified are not applicable. **2 points** The applicable level of government or geographic area is ambiguous. OR The proposal does not identify how the project can be used by a government organization in Canada.

		be utilized by a Canadian government organization.	**4 points** The proposal identifies at least one appropriate government organization to which the project applies, and explains the impact on that government organization. AND The proposal shows why the solution is applicable in a Canadian context and the benefits of its use by the identified government organization in Canada. **6 points** The proposal identifies multiple government organizations in Canada that would use or be impacted by the project, and explains the relationship(s) between the government organizations in the context of the project. AND The proposal demonstrates that the end result/deliverable(s) of the project provides benefit to multiple Canadian governments.
PR-3	**Scientific and/or Technical Merit of the Proposal**	**Required Information to Support the Criteria**	**Maximum 15 points**
	The proposed project is supported by sound and logical, scientific concepts and/or technical evidence.	The proposal should provide the following details at a minimum: 1. The specific scientific concepts and/or technical evidence that support the proposed project; and,	**0 points** The S&T concepts and/or evidence of the project are not provided. **5 points** Limited information is provided about the scientific

		2. Demonstrate how the scientific concepts and/or technical evidence support the project to maximize its success.	concepts and/or technical evidence, and/or information provided is unclear and/or not logical. OR The relationship between the scientific concepts and/or technical evidence and the implementation of the project is not clear. **10 points** Adequate detail and information is provided and supported by valid scientific concepts and/or technical evidence. Minor details may be missing, however, overall the Information provided is clear and logical. AND The relationship between the scientific concepts and/or technical evidence and the implementation of the project is clear. Minor details may be missing, however overall it is clear how the S&T concepts and/or evidence support the project. **15 points** Great detail and information is provided and supported by valid scientific concepts and/or technical evidence above. All information provided is clear and logical. AND The relationship between scientific concepts and/or technical evidence and the implementation of the project is very clear. It is very clear how the scientific concepts and/or technical evidence support the project and suggests a high probability of success.

PR-4	Novel and Innovative	Required Information to Support the Criteria	Maximum 12 points
	The implementation of the proposed project exploits novel* and/or innovative** concepts, methodologies, tools, and/or technologies. ***Novel:** An original idea. ****Innovative** (examples but not limited to): • A new technology or new process that is not currently available in the marketplace. • Advancing knowledge in social science. • Application of existing technologies/processes that are applied in a setting or condition for which current applications are not possible or feasible. • An improvement to an existing technology/process that represents a significant improvement in functionality, cost or performance of goods and services that are considered state-of-the-art or the current industry best practice.	The proposal should provide the following details at a minimum: 1. A description of existing concepts, methodologies, tools, or technologies; and, 2. Demonstration that the proposed concepts, methodologies, tools, or technologies are novel* and innovative** compared to existing solutions described in point 1. above.	**0 points** The proposal does not exploit novel and/or innovative concepts, methodologies, tools, and/or technologies in the implementation of the project, or those identified are incorrect/ not logical. **4 points** The proposal provides some description, however, does not demonstrate a good understanding of existing concepts, methodologies, tools, and/or technologies OR Little evidence is provided about novel and innovative concepts, methodologies, tools, and/or technologies, and the implementation of the novel concepts within the project is not clear. **8 points** The proposal adequately describes existing concepts, methodologies, tools, or technologies that apply to the implementation of the project. Minor details may be missing, however, overall the information provided is clear and logical. AND It is clear how novel and innovative concepts, methodologies, tools, or technologies will be implemented in the project. Minor details may be missing, however, overall the information provided is clear and logical.

			12 points The proposal fully describes the existing concepts, methodologies, tools, or technologies. AND It is very clear how novel and innovative concepts, methodologies, tools, or technologies exploited can be considered advanced thinking or breakthroughs with little or no previous application, and the proposal details the difference and logic behind their use compared to existing concepts, methodologies, tools, or technologies.
PR-5	**New Knowledge/Technology and/or Enhancements**	**Required Information to Support the Criteria**	**Maximum 6 points**
	The resulting solution of the proposed project will create new knowledge and/or a technology enhancement, over current state-of-the-art and existing solutions, by addressing a gap or critical barrier in the S&T Challenge.	The proposal should provide the following details at a minimum: 1. Identify the gap or critical barrier and current state-of-the-art and existing solutions to the S&T Challenge; and, 2. Demonstrate that new knowledge and/or technology enhancement, over the items mentioned in 1. above, will result from the proposed work, and resulting solution.	**0 points** The proposal does not identify the gap or critical barrier and does not provide information on new knowledge or technology enhancement over current solutions. **2 points** The proposal provides some description, but does not clearly identify the gap or critical barrier but demonstrates a good understanding of existing solutions to the S&T Challenge. OR The proposal provides limited evidence to show that it will result in a new knowledge and/or technology, the logic linking the implementation to the solution is not

			clear, or the relationship between the solution and the gap or critical barrier in the S&T Challenge is not logical. **4 points** The proposal adequately describes and identifies the gap or critical barrier in the S&T Challenge that is being addressed, and describes the existing state-of-the-art solutions. Minor details may be missing, however, overall the information provided is clear and logical. AND It is clear how new knowledge and/or technology enhancements will be created in the project to address a gap or critical barrier in the S&T Challenge. Minor details may be missing, however, overall the information provided is clear and logical. **6 points** The proposal fully explains why existing solutions are unacceptable, and identifies a gap or critical barrier in the S&T Challenge and any associated operational requirements. AND The new knowledge and/or technology enhancements proposed would be a 'game changer' and the proposal clearly demonstrates how the solution will be achieved in the project.

PR-6	Project Impact	Required Information to Support the Criteria	Maximum 12 points
	The proposed solution will result in a positive change for the end user* and the bidder has defined in the response who is considered to be the end user. *depending on the type of project and S&T Challenge, the 'end user' may be the user of a capability, the future conductor of S&T activities, recipient of the knowledge or other.	The proposal should provide the following details at a minimum: 1. Elements of user requirements that are unaddressed in current environment; and, 2. Demonstrate how the proposed solution will improve the end user capabilities that address these requirements, for example by providing a simpler user interface, producing novel insights by synthesizing a body of knowledge, integrating existing capabilities, employing novel user technologies, or through other means.	**0 points** The proposal does not identify the end user, provides no information about improved user experience, or the information is not logical. **4 points** The proposal does not identify the end user, provides limited information about end user requirements, or demonstrates a lack of understanding about end user concerns. OR The improvements to end user capabilities suggested are self-evident and minor, or not relevant to the S&T Challenge. **8 points** The proposal clearly identifies the end user, and addresses previously unexplained requirements relative to the S&T Challenge. Minor details may be missing, however, overall the information provided is clear and logical. AND The proposal adequately explains how implementation of the project will improve the end user capabilities. Minor details may be missing, however, overall the information provided is clear and logical.

			12 points The proposal identifies critical deficiencies in the existing end user capabilities. AND The proposed enhancements to end user capabilities would be a true 'game changer', and the proposal clearly demonstrates how that solution will be achieved in the project.
PR-7	**Gender-Based Analysis Plus (GBA+) Factors**	**Required Information to Support the Criteria**	**Maximum 10 points**
	The proposed solution describes how GBA+ factors have been considered in the project and resulting solution. *GBA+ as defined by the Treasury Board Secretariat of Canada: https://www.tbs-sct.gc.ca/hgw-cgf/oversight-surveillance/tbs-pct/gba-oacs-eng.asp. It is encouraged to also refer to the Status of Women Canada website: http://www.swc-cfc.gc.ca/gba-acs/index-en.html.	The proposal should provide the following details at a minimum: Describe how GBA+ factors have been considered for the following project stages: a. In the development of the project solution. b. In the implementation of the project solution. When GBA+ factors are not applicable in neither a nor b, explain why.	**0 points** The proposal provides no information on GBA+ factors, asserts that GBA+ is not relevant without justification, or describes GBA+ issues in the bidder's organization without reference to the project. **5 points** GBA+ factors are not fully accounted for and described for all project stages. **10 points** All relevant GBA+ factors are clearly accounted for and described for all project stages.

PR-8	**Work Plan** Work Plan, Risk and Mitigation Strategy, and Costs.	**Required Information to Support the Criteria (maximum of 1000 words per milestone)**	**Maximum 20 points**
	The fields listed below, as set out in Annex D (1), are completed, the tasks and deliverables show measurable progress, and the work plan demonstrates completion of the project. Fields:	The proposal should provide the following details at a minimum:	
	• Milestone description	Provide overall milestone description and what will be accomplished.	**0 points** Milestones not listed, or are unsuitable. **4 points** Suitable description of technical and programmatic milestones listed throughout project lifespan.
	• Milestone dates: o Start o End	Show month and year (MM/YY).	**0 points** Most dates are not provided, or are not logical. **2 points** Logical dates are provided that match the project schedule.
	• Task Description	Articulate the specific sequential tasks that must be completed in order to accomplish the milestone.	**0 points** Most task descriptions are not provided. **2 points** The task(s) to be conducted is not suitably described, or not logical.

		For each task for which travel is proposed, the travel is explained and logical.	**4 points** The task(s) are explained in detail with logic.
	• Task Lead	Identify who (LGD, partner) is responsible/doing the work for each task.	**0 points** Leads are not identified, or are not logical for the task to be performed. **2 points** Appropriate leads are identified and logical.
	• Deliverables	Identify all resulting deliverables for each milestone.	**0 point** Deliverables are not described, or do not correspond to the task(s), or are not appropriate for the project. **4 points** Deliverables are described appropriately, correspond to the task(s), and are appropriate for the project.
	• Deliverable Due Date	Identify when each deliverable is planned to be completed.	**0 points** Not all due dates for deliverables are provided and/or appropriate. **2 points** Appropriate due dates are provided.
	• Go/No-Go decision points	Articulate the specific reasons why a Go/No-Go decision should or should not be made. Should include triggers and action plans.	**0 points** Go/No-Go points are not identified, or do not include triggers and action plans. **2 points** Suitable Go/No-Go points are identified and include triggers and action plans.

PR-9	Work Plan – Risks and Mitigation	Supporting Information	Maximum 10 points
	The proposal should identify risks* and include a mitigation strategy for each identified risk, as set out in Annex D (2), are completed. *Risks can be identified as items that could delay and/or prevent the completion of the work. Examples of risks include, but are not limited to, unexpected financial overruns, schedule delays, third party approvals, unforeseen scope changes, technical challenges, change or loss of key personnel, weather or seasonal requirements, Intellectual Property issues, results and deliverables delays etc.	The proposal should answer the following questions at a minimum: • Explain and articulate the anticipated risks, if any, for the project. Include a logical explanation, appropriately identified probability and impact, realistic and adequately articulated mitigation strategy and correlate with the proposed project. • For each risk identified, show: o the probability as high, medium or low; o the impact as high, medium or low; o the Risk Type**; and o Provide the mitigation strategy and show the steps to be taken to lessen the impact of the risk. If no risks are identified, an explanation as to why must be entered in Annex D (2) of the Submission Form.	**0 points** Obvious programmatic or technical risks are not identified, probability and impact are not included, or risk mitigation plans are insufficient and not logical. **5 points** Some major risks that could derail the project appear to be missing; however, as a whole, the majority of the risks and resulting mitigation plans described are appropriate, include logical explanation(s), appropriately identify probability and impact, are realistic and adequately articulate a mitigation strategy and correlate with the proposed project. **10 points** All known major technical and programmatic risks are included, risks and resulting mitigation plans are fully and realistically described,

		**Examples of Risk Type include but are not limited to financial, schedule, scope, technical, operational, or resources.	
PR-10	**Work Plan – Cost Estimate**	**Supporting Information**	**Maximum 8 points**
	The proposal should provide a cost estimate that is commensurate and directly reflects the work plan. Information should form part of the Submission Form at Annex D "Milestone(s) cost breakdown".	The proposal should demonstrate the following at a minimum: a) The cost estimate aligns with, and is relative to the correlating Milestone(s) including: • Milestone description(s); • Tasks; and, • Deliverables b) For each task for which travel is proposed, the travel costs are captured and correspond to the descriptions in the Milestone(s). c) The cost estimate includes the Total (project) amount of costs for each of: • Canada's contribution (DRDC Requested Funds); and • Bidder's LGD's and Partner's Co-investments	**0 points** A significant amount of information is missing and/or there are many errors in calculation and/or the costs do not appear to relate to and adequately represent the milestone(s). **4 points** All requested information is provided, with minimal errors or potential flaws in cost allocation. Costs somewhat appear to relate and adequately represent the milestone(s). Some minor items appear to be missing but overall the costing is completed. **8 points** All requested information is provided, cost estimate is detailed and error-free. Relation to the milestone description is clear.

		contribution(s) (In Kind and Cash)	
PR-11	**Project Management (PM) Plan Project Team**	**Supporting Information (maximum of 2000 words)**	**Maximum 8 points**
	The proposal should provide the combined experience and qualifications of the proposed project team to demonstrate the ability to manage and complete the project. The bidder should complete the information required in Annex F – "Project Manager and Key Project Team Members Experience" of the submission form.	The proposal should answer the following questions at a minimum: • The combined experience of the project team* commensurate with both the complexity of the proposed project and the funding amount requested to manage the project; and • The combined experience of the project team* is sufficient to undertake the scientific and/or technical elements required by the proposed project. *Project team = project manager (or Principal Investigator for Studies and Concepts) and all key project team members, including the LGD.	**0 points** Information on the project team is not provided, or they are clearly as a combined team not suitable for the project. **4 points** The project team does not include suitable project management experience, in terms of PM training, several projects of similar length, complexity and cost. OR The project team does not include suitably qualified technical team members for each of the technical areas to be addressed in the project and suitable operationally experienced team members concerning the operational requirements of the project. **8 points** The project team includes project manager(s) with appropriate training and project experience, technical team members with experience in all relevant technical fields and member(s) with appropriate operational experience.

PR-12	Transition/Exploitation Plan	Supporting Information (maximum of 2000 words)	Maximum 16 points
	The proposal includes a plan to transition and/or exploit the knowledge, science or technology that is developed through the proposed project.	The proposal should provide details at a minimum on the following aspects (A, B, C and D): A) Steps that are beyond the scope of the proposal (the transition, exploitation and/or dissemination plan; for example, user validation trials, regulatory approvals, ongoing maintenance and licensing renewal, additional research, technology exploitation and/or commercialization).	**0 points** No or very little information provided. OR The majority of information provided is heavily flawed and not logical. **2 points** All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws. **4 points** All aspects are adequately described and are logical.
		B) Financing the next steps including how additional research, technology exploitation and/or commercialization are to be financed. This may include the intent to form strategic partnerships or alliances with other stakeholders. In addition, the bidder may provide support letters from stakeholders, who are not named project partners, indicating their interest in the work. Support letters from	**0 points** No or very little information provided. OR The majority of information provided is heavily flawed and not logical. **2 points** All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws. **4 points** All aspects are adequately described and are logical.

		named project partners will not be considered.	
		C) Describe the ultimate project result (desired final outcome), including the product (or knowledge), technology, device, method, process, systems, etc., that are expected to ultimately result from this project.	**0 points** No or very little information provided. OR The majority of information provided is heavily flawed and not logical. **2 points** All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws. **4 points** All aspects are adequately described and are logical.
		D) Information on the intellectual property dependencies, as well as the disposition and management on foreground intellectual property.	**0 points** No or very little information provided. OR The majority of information provided is heavily flawed and not logical. **2 points** All of the aspects are described; however, some of the information appears to be lacking minor details, and or has some logic flaws. **4 points** All aspects are adequately described and are logical.

Point-rated Criteria – Scoring Breakdown

Consensus Score			
Technical Criteria	**Score**	**Operational Criteria**	**Score**
PR-1 Scientific Feasibility	/15	PR-8 Work Plan – Risk and Mitigation, Strategy and Costs	/20
PR-2 Applicable in Canada	/6	PR-9 Work Plan – Risks and Mitigation	/10
PR-3 Scientific and/or Technical Merit of the Proposal	/15	PR-10 Work Plan – Cost Estimate	/8
PR-4 Novel and Innovative	/12	PR-11 Project Management Plan	/8
PR-5 New Knowledge	/6	PR-12 Transition/Exploitation Plan	/16
PR-6 Impact	/12		
PR-7 GBA+ Factors	/10		
Subtotal (minimal pass score required for Technical Criteria = 49)	/76	Subtotal (minimal pass score for Operational Criteria = 12)	/62
		Total Points (minimal pass score required overall = 88)	**/138**

To complete Table 1, the Work Plan – Milestone breakdown table (Annex D1) as shown on the following page, bidders should specify the work activities to be performed, being sure to decompose the work activities at a level that exposes all risk factors and that allows accurate estimation of the requirements and the schedule duration for each task activity. The following should be taken into consideration when completing the Milestone(s) tables:

a. The Milestone Table should directly correlate with the milestone cost breakdown.
b. Milestone start dates/end dates – these are used to get a sense of the duration of the project and are not firm dates. Timelines will be adjusted (forward or backwards) at time of contract award. If a project is seasonally sensitive, indicate this in the milestone description and it will help with expectations and planning during future contract negotiations. For project planning purposes/bid consistency, assume a project start date of 1st April 2020 for Milestone 1.
c. Lead – this section provides the evaluation team with an appreciation of who is doing the work and the level of involvement, interest and shared responsibility of the LGD/TA/partners. At time of contract negotiations, this section will be removed and only the tasks, that the contractor and partners (subcontractors) are responsible for, will be included in the final SOW within the resulting contract/MOA. The task/responsibilities of the LGD/TA will be moved to the client support section of the SOW.
d. Deliverables – deliverables are the tangible project takeaways of the Milestones. Once the deliverables are accepted by the LGD/TA, they become assets of the LGD/TA. Payment is released, per milestone, once all deliverables indicated in the milestone are accepted and approved by the LGD/TA.

Annex D(1) – Work Plan – Milestone breakdown			
Input overall milestone description and what will be accomplished.			
Milestone Activities			
Anticipated Milestone Start Date (mm yyyy)		**Milestone End Date** (mm yyyy)	
Tasks (Articulate the specific tasks that must be completed in order to accomplish the milestone)	Lead for task (Identify the project participant organization.)	**Deliverables** (Articulation of the deliverable(s) or product(s) to be provided to the TA for review and approval)	**Deliverable Due Date** (mm yyyy)
Input Task 1 Description Here	Input lead	Input	Input
Input Task 2 Description Here	Input lead		
Input Task 3 Description Here	Input lead		
Bidder to add/delete rows as required			
Go/No Go point Articulate the specific reasons why a go/no-go decision should or should not be made.			

Annex D(2) – Risks and Mitigation				
Risk(s) **(Articulate risks that could delay and/or prevent the completion of the work)**	**Probability* (H/M/L) Strategy (ies)**	**Impact* (H/M/L)**	**Risk Type ******	**Mitigation Strategy** **(**Articulate the appropriate steps to be taken to lessen the impact of the risk.)
Input	Input	Input	Input	Input
Input	Input	Input	Input	Input
Input	Input	Input	Input	Input

* Note 1: (H/M/L) = high, medium or low (probability and Impact)

** Note 2: Examples of “Risk Type” include but are not limited to: financial, schedule, scope, technical, operational, or resources.

Annex E – Detailed Budget Table

Attached is the template of the Microsoft Excel document, by fiscal year, which must be completed using the online submission tool or the classified submission form

Proposals submissions for projects longer than 36 months will not be considered. If the proposed project has a duration of less than three years, the column(s) corresponding to the additional year(s) should be left blank. Additional columns (e.g. Year four) cannot be added.

Note: The Federal Government fiscal year is April 1st to March 31st. For planning purposes, it is estimated that contracts will be awarded starting 1st April 2020; however, Canada may require that some contracts be awarded earlier. For planning purposes, it is suggested that the detailed budget start 1st April 2020 if possible.



W7714-19DRDC.xlsx

Annex F – Project Manager and Key Project Team Members' Experience

(Bidder, LGD **(Stream A only)** and partners)

Project Manager:

For the project manager identified, list three projects that show that the project manager or project management team has project management expertise that is commensurate with both the complexity and funding amount being requested in the proposal and provide details on what activities they will be undertaking/responsible for on this proposed project.

Project Manager Name:	
Organization:	

Project 1:

Project Title:				
Description	**Start Date**	**End Date**	**Cost**	**Responsibilities**

Project 2:

Project Title:				
Description	**Start Date**	**End Date**	**Cost**	**Responsibilities**

Project 3:

Project Title:				
Description	**Start Date**	**End Date**	**Cost**	**Responsibilities**

Describe key responsibilities for this proposed project (400 words maximum).

Key Project Team Members

For each Key Project Team Member identified, list the relevant experience and/or qualifications to undertake the scientific or technical elements required by the proposal. It is expected, at a minimum, that the Key Project Team Members will be made up of representatives from all project partners. Also, provide details on what activities they will be undertaking/responsible for on this proposed project.

Key Project Team Member:	
Organization:	

Experience:

Required scientific or technical contribution (related to task number in work plan)	Past Experience	Start Date	End Date	Achievements

-AND/OR-

Qualifications:

Required scientific or technical element (related to task number in work plan)	Qualification	Year

Describe key responsibilities on this proposed project (400 words maximum):

Annex G – Partnership Signature Form (Stream A only)

This template for the Partnership Signature Form is to be filled out. Signatures must include the bidder's signature, as well as all partners involved in a proposal and at a minimum, be at a level:

a) of DG level for the federal government; and,
b) acceptable for a provincial/territorial/municipal government, academic institution, or a private industry to authorize the financial and operational commitment of its organization for the proposal, as set out in Part 3.1 Who May Apply

Partnership Signature Form						
DRDC Reference ID:						
Proposal Title:						
Signatory Section						
Organization Name (print)	**Organization Type** (select one)	**Full Name (First, Last)** (print)	**Position Title** (print)	**Signature**	**Date** (YYYY/MM/DD) (print)	**Certification Statement** (check box)
	☐ Academia ☐ Federal ☐ Provincial /Territorial ☐ Municipal ☐ Private	Bidder		X Bidder		☐ "I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.
	☐ Federal ☐ Provincial /Territorial ☐ Municipal	Lead Government Department		X Lead Government Organization		☐ "I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.

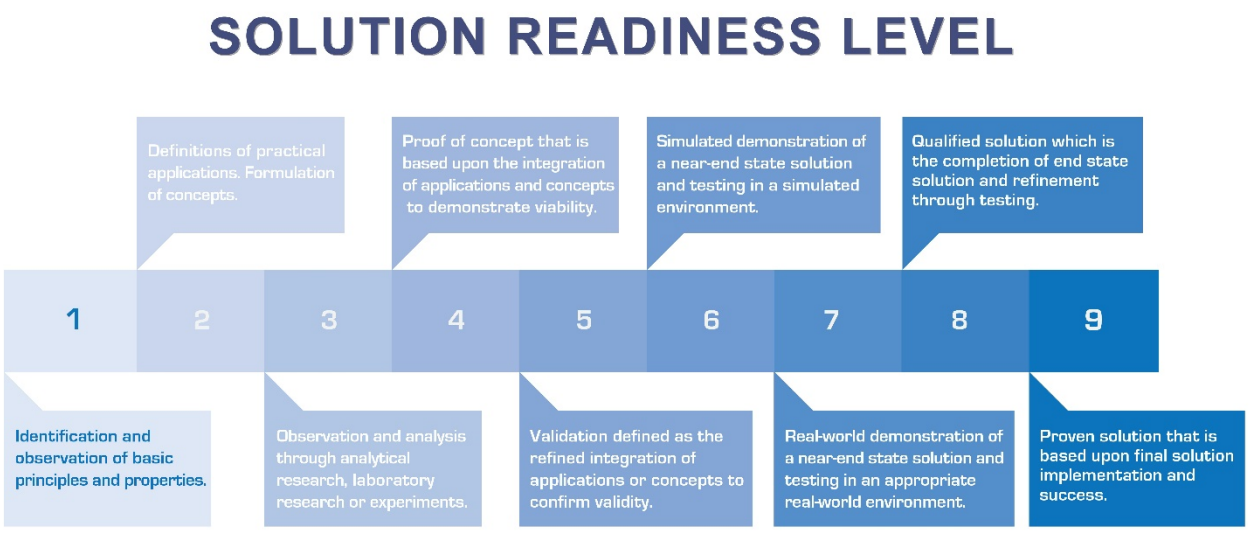
	☐ Academia ☐ Federal ☐ Provincial /Territorial ☐ Municipal ☐ Private	Partner 2		X Partner 2		☐ "I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.
	☐ Academia ☐ Federal ☐ Provincial /Territorial ☐ Municipal ☐ Private	Partner 3		X Partner 3		☐ "I have read this Call for Proposals in full and understand my role in this proposed project as per the roles and responsibilities detailed in Annex K.

Bidder to add rows for additional partners, as needed. A signature on this form constitutes an agreement to the certifications set out above. All proposed project partners must be fully aware of their Roles and Responsibilities as listed in Annex K in this solicitation document. The signature of a partner in an acting capacity must be specified.

The sector classification (public, industry, academia, etc.) of an organization is to be identified. Public organizations are to identify which level of government they represent - federal, provincial, territorial or municipal. Other than the signature, all entries should be printed.

Annex H – Solution Readiness Levels

The SRLs are indicated below:



SRLs (https://www.canada.ca/en/department-national-defence/programs/defence-ideas/solution-readiness-level.html)

1. Identification and observation of basic principles and properties.
2. Definitions of practical applications. Formulation of concepts.
3. Observation and analysis through analytical research, laboratory research or experiments.
4. Proof of concept that is based upon the integration of applications and concepts to demonstrate viability.
5. Validation defined as the refined integration of applications or concepts to confirm validity.
6. Simulated demonstration of a near-end state solution and testing in a simulated environment.
7. Real-world demonstration of a near-end state solution and testing in an appropriate real-world environment.
8. Qualified solution which is the completion of end state solution and refinement through testing.
9. Proven solution that is based upon final solution implementation and success.

Annex I – Co-Investment Information

There are two types of co-investment contributions, as detailed below.

1) **Cash Contributions**: Partners (LGD, bidder and other project stakeholders) are strongly encouraged to demonstrate their direct support for the project (defined in the proposal) with cash contributions. Cash contributions are project expenses paid for directly by a partner organization for goods or services acquired solely for activities related to the project. Two examples include:

    a) partner organization funds that will be used to purchase new equipment or software that no partner had at the time of project initiation; and,

    b) services of a resource that will work on the project that were not engaged by a partner prior to the initiation of the project.

    Cash contributions are very useful when tangible, non-consumable assets (equipment, instruments, hardware) need to be purchased and the bidder or other project partner intends to maintain ownership of the assets.

2) **In kind Contributions**: In kind contributions are direct costs to the project that are considered essential to project execution. They are most often in the form of cash equivalent goods or services that are pre-existing within a partner's inventory at the initiation of the project. For example, the salary of a full time employee, use of equipment, licences and/or laboratory space all qualify as in kind contributions to the project. Contributions will only be taken into consideration if they are from participating partners.

    Partners may solicit financial support from other federal programs as a contribution to the project. Such contributions must respect the limitations imposed – if any – by the partner organizations (for example, stacking provisions associated with some federal programs) and must be clearly articulated in the proposal.

    If a proposal is selected, co-investment contribution information must be supported by detailed calculations, explaining all proposed inputs and valuations in the project implementation phase.

Table I – 1: In Kind Contributions

In Kind Category	Acceptable	Unacceptable
Access to Databases	- Incremental costs of access	- Cost of developing a database and collecting data
Analytical and Other Services	- Internal rates or incremental cost of providing service	- Commercial rates
Equipment	- Donated (used) - fair-market value - company book value - price for internal transfers - Donated (new) - selling price to most favoured customer (if stock item) - cost of manufacture (if one of a kind) - Loaned - rental equivalent based on depreciation - rental equivalent to highest-volume rate	-List price or discounted list price - Rentals exceeding the acceptable values had the rental equipment been donated or sold - Development costs
Faculty Remuneration	- Payment to the university/college for release time from teaching duties	- Payments as consulting fees or honoraria (additional to normal salary)
Materiels	- Unit cost of production for commercial products - Selling price to most favoured customer - Price for internal transfers - Cost of production of prototypes and samples	- Development costs
Patents and Licences	- Licences acquired from third parties for use by the project	- Fees related to applying for and maintaining patents - Licensing fees
Salaries	- Actual salary cost (including benefits)	- External charge-out or consultant rates - Salary and costs of administrative support staff - Salary and costs of management activities not directly related to scientific and technical contributions to the project
Software	- Cost of training and support for software required - Most-favoured-customer cost for one licence per software package - Cost of equivalent commercial product (where donated software is not commercially available)	- Development costs

Travel	Justified in Work Plan and compliant with the National Joint Council's Travel Directive (https://www.canada.ca/en/treasury-board-secretariat/services/travel-relocation/travel-government-business.html) - Travel costs to meet with project stakeholders	- Conference travel
Use of Facilities	- Internal rates for logistical support, food and lodging for project personnel working on stakeholder premises or on field work - Internal rates for use of specialized equipment by project personnel or use of process or production lines - Internal rates for value of lost production resulting from downtime	- Space for stakeholder activities outside the scope of the specific proposal - Equivalent commercial rates

Annex J – Funding flow chart for resulting Contract(s)/Memorandum of Agreement(s)

Type	Bidder	LGD	1st a. flow of funding: from DRDC to LGD	1st b. flow of funding: from DRDC to other federal department partner (if applicable)	2nd a. flow of funding: from LGD to bidder	3rd a. flow of funding: from bidder to other project partners (private, P/T/M) (if applicable)	Key takeaways
Private							
1.	Private	Federal	DRDC will send funding to the LGD by an interdepartmental settlement (IS).	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by a contract. PWGSC will set up the contract on behalf of the LGD.	The bidder will send funding to all other non-federal partners using their own internal processes.	The LGD will need to create a 9200 and send to PWGSC so the contract can be created. The LGD will be the TA on the contract. PWGSC nor DRDC is involved in the 3rd flow of funding.
2.	Private	Provincial / Territorial / Municipal (P/T/M)	DRDC will send funding to the LGD by a MOA. PWGSC will set up the MOA on behalf of the DRDC.	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by their own internal process.	None – this will be handled by the LGD	The MOA will use the same terms, conditions and layout, as a contract, in principle, but be non-legally binding. DRDC will be the TA on resulting MOA and have to send PWGSC a 9200 to set up the MOA. PWGSC nor DRDC is involved in the 3rd flow of funding.

Federal							
3	Federal	Federal	DRDC will send funding to the LGD by an IS.	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by an IS.	The bidder will send funding to all other non-federal partners by their own internal processes (if the bidder has the ability) or by contract/MOA that PWGSC will set up on behalf of the LGD.	PWGSC is only involved if there are non-federal government departments/private partners that are requesting funding/doing work on the project and the bidder's (federal) cannot transfer funding directly themselves.
4	Federal	P/T/M	DRDC will send funding to the LGD by a MOA. PWGSC will set up the MOA on behalf of DRDC.	The DRDC will send funding to other federal department partner by an IS.	DRDC will send funding to the bidder by an IS. A transfer from the non-federal LGD to federal is not possible.	The LGD will send funding to all other non-federal partners by their own internal processes.	Funding cannot flow from a non-federal government department to a federal government department. PWGSC nor DRDC is involved on the 3rd flow of funding.

Provincial/Territorial/Municipal							
5	P/T/M	Federal	DRDC will send funding to the LGD by an IS.	The DRDC will send funding to other federal department partner by an IS.	The LGD will send funding to the bidder by a MOA. PWGSC will set up the MOA on behalf of the LGD.	The bidder will send funding to all other non-federal partners by their own internal processes.	The MOA will use the same terms, conditions and layout, as a contract, in principle, but be non-legally binding. The LGD will be the TA on resulting MOA and have to send PWGSC a 9200 to set up the MOA. PWGSC nor DRDC is involved on the 3rd flow of funding.
6	P/T/M	P/T/M	DRDC will send funding to the LGD by a MOA.	DRDC will send funding to other federal department partner(s) by an IS.	The LGD will send funding to the bidder by their own internal processes.	The bidder will send funding to all other non-federal partners by their own internal processes.	The MOA will use the same terms, conditions and layout, as a contract, in principle, but be non-legally binding. DRDC will be the TA on resulting MOA and have to send PWGSC a 9200 to set up the MOA. PWGSC nor DRDC is involved on the 3rd flow of funding.

Annex K – Project Partner's Roles and Responsibilities

This chart describes the roles and responsibilities for the three key project partners and provides context to what each partner is agreeing to complete in the event that your proposal is selected for funding.

A signature on the Partnership Form in Annex G validates your acceptance of these responsibilities. (Stream A only)

Project Partner Role	Key Responsibilities
Bidder	As the bidder, I have read this Call for Proposals in full and agree to the collaboration of myself and my organization as described in the project description and budget information. This may include the following activities: 1. Work in collaboration with the LGD, Stream A only, DRDC, PWGSC, other project partners to create and finalize all required documents (Project Charter Stream A only, SOW, revise Cost Breakdown) in order to begin the contract/MOA negotiation process. 2. Set-up and manage working relationships/contracts with partners and subcontractors.
LGD (Stream A only)	As the LGD, I have read this Call for Proposals in full and agree to the collaboration of myself and my department as described in the project description and budget information. This may include the following activities: 1. Assume the role of project champion. 2. Work in collaboration with the bidder, other government department(s), DRDC, PWGSC, other project partners to create and finalize all required documents (project charter, SOW, revise cost breakdown) in order to begin the contract/MOA negotiation process. 3. Commit resources to initiate the requisition for the resulting contract (prepare the 9200) federal LGD only. 4. Work with PWGSC to create and issue the resulting contract to the bidder when the bidder is a private contractor. 5. Manage the resulting contract (between yourself and the bidder when the bidder is a private contractor). 6. Support the contractor/other partners in completing the work outlined in the contract. 7. Review and approve deliverables resulting from the contract. 8. Pay claims/invoices.

	9. Facilitate project reporting requirements to DRDC as per the project charter. 10. Set-up and manage working relationships/contracts with partners and subcontractors for provincial/municipal LGDs only (MOA's).
Partner	As a project partner, I have read this Call for Proposals in full and agree to the collaboration of myself and my organization as described in the project description and budget information. This may include the following activities: 1. Work in collaboration with the bidder, LGD, DRDC, PWGSC, other project partners to create and finalize all required documents (project charter, SOW, revise cost breakdown) in order to begin the contract/MOA negotiation process. 2. Set-up and manage working relationships/contracts with LGD provincial/municipal LGDs only (MOA's) and bidders.

Annex L – Statement of Work Template

***This document is not required at time of bid submission. Example only.**

Below is the SOW template that all successful bidders will complete, in collaboration with the LGD (Stream A only), DRDC, and other project partners during the contract negotiation stage. It will form part of the resulting contract/MOA and contain milestone breakdowns and other information extracted directly from the proposal.



W7714-19DRDC_Sta
tement of Work Tem

Annex M – Milestone Cost Breakdown Template

***This document is not required at time of bid submission. Example only.**

Below is the Milestone Cost Breakdown template that all successful bidders will complete, in collaboration with the LGD (Stream A only), DRDC, and other project partners during the contract negotiation stage. This is the required level of granularity required for PWGSC to determine that the proposed prices are fair and reasonable (funding being requested from Canada).



EN_Annex M –
Milestone Cost Brea

RAPPORT N° LOI2019-06-03

Date	21/05/2019
Soumis par	Martin Irwin
Objet	Demande au programme de subvention aux projets communautaires pour l'inclusion des aînés
# du dossier	Cliquez ici pour entrer du texte.

1) **NATURE / OBJECTIF :**

L'objectif de ce rapport est de recommander au Conseil municipal d'autoriser les Services communautaires à soumettre une demande au programme de subvention aux projets communautaires pour l'inclusion des aînés du Ministère des Services aux aînés et de l'Accessibilité de l'Ontario.

2) **DIRECTIVE/POLITIQUE ANTÉCÉDENTE :**
N/A

3) **RECOMMANDATION DU SERVICE :**

QU'IL SOIT RÉSOLU QUE le Conseil municipal autorise les Services communautaires à soumettre une demande de subvention dans le cadre du programme de subvention aux projets communautaires pour l'inclusion des aînés du Ministère des Services aux aînés et de l'Accessibilité pour aider à financer l'édition 2020 des Jeux des aînés et aînées de Clarence-Rockland.

BE IT RESOLVED THAT Municipal Council hereby authorizes the Community Services to submit a grant application to the Ministry for Seniors and Accessibility's Seniors Community Grant Program to help fund the Canada Day Celebration activities as part of the 2020 edition of the Clarence-Rockland Senior Games.

4) **HISTORIQUE :**

Les Jeux des aînés et aînées de Clarence-Rockland, existants depuis 2003, est un événement annuel qui est organisé en collaboration avec les six clubs sociaux afin de célébrer le mois des aînés (juin). Les gens de 55 ans et plus ont l'occasion de fraterniser et de socialiser en participant à des activités sportives, récréatives et culturelles.

5) **DISCUSSION :**

Ce programme favorise la participation communautaire des personnes âgées en appuyant les projets axés sur le bénévolat, l'apprentissage, la sensibilisation aux problèmes financiers, l'inclusion sociale, la prévention de la maltraitance des personnes âgées, le bien-être mental et l'activité physique.

6) **CONSULTATION :**
N/A

7) **RECOMMANDATION OU COMMENTAIRES DU COMITÉ :**
N/A

8) **IMPACT FINANCIER (monétaire/matériaux/etc.):**

Si la demande au programme de subvention aux projets communautaires pour l'inclusion des aînés est approuvée, le montant financé par le Ministère des Services aux aînés et de l'Accessibilité permettra d'augmenter la qualité des activités et assurera la participation gratuite de tous les membres.

9) **IMPLICATIONS LÉGALES :**

Si la Cité de Clarence-Rockland reçoit un financement, les Services communautaires seront tenus de soumettre un rapport final incluant un rapport financier. La municipalité devra aussi reconnaître publiquement l'aide financière reçue du Ministère des Services aux aînés et de l'Accessibilité dans toutes les activités promotionnelles.

10) **GESTION DU RISQUE (RISK MANAGEMENT) :**
N/A

11) **IMPLICATIONS STRATÉGIQUES :**

La section 2.8 – Événements du Plan directeur des parcs et loisirs de la Cité de Clarence-Rockland (p. 45) cite que « La Cité … considère que la fourniture d'événements à l'échelle communautaire est un mandat important des Services communautaires. »

12) **DOCUMENTS D'APPUI:**
N/A

Clarence-Rockland

REPORT N° PRO2019-015

Date	03/06/2019
Submitted by	Brian Wilson
Subject	Addition of a training fire hydrant to the fire training grounds in Bourget
File N°	Click here to enter text.

1) **NATURE/GOAL :**
To obtain Council approval to have a training hydrant installed for the new fire training grounds during the new fire station construction project, to be funded by the revenues from the Regional Training Centre.

2) **DIRECTIVE/PREVIOUS POLICY :**
This training hydrant was originally included within the scope of work for the new fire station. It was removed during a value engineering exercise in order to bring the station costs down to within Council's approved budget.

3) **DEPARTMENT'S RECOMMENDATION :**
BE IT RESOLVED THAT Council hereby authorizes the Director of Protective Services to sign a change order for not more than $25,000+HST in order to re-instate a training fire hydrant for the new fire training grounds adjacent to the new fire station; and

BE IT FURTHER RESOLVED THAT the funding for this training hydrant be taken from the Regional Training Centre's 2019 budget.

QU'IL SOIT RÉSOLU QUE le conseil autorise le Directeur des Services de protection à signer un ordre de modification d'un montant maximal de 25 000$ +TVH afin de rétablir une borne fontaine de formation pour le nouveau terrain d'entraînement situé adjacente à la nouvelle caserne de pompiers; et

QU'IL SOIT AUSSI RÉSOLU QUE le financement de cette borne fontaine de formation provienne du budget 2019 du Centre de formation régional.

4) **BACKGROUND :**
The Clarence-Rockland Regional Training Centre runs a number of Ontario Fire College courses, including live-fire training, pumper operations, along with basic firefighting skills (advancing hoselines, etc.).

In the scope of work for the new fire stations, the Fire Department had originally included a requirement for an additional fire hydrant located

to the south of the new fire station to be used for in-house and Regional Training Centre training evolutions. This hydrant was removed during the value engineering exercise in order to get the overall project within budget.

The new fire station is now nearing completion, with paving expected to happen within the next couple of weeks. The existing water main is located underneath where the paving will done, which means that if the training hydrant is not installed now, any future connection would require cutting the new paved asphalt surface. This creates potential openings in the asphalt surface where water can penetrate and cause heaving issues in the winter, resulting in rapid degradation of the paved surface.

5) **DISCUSSION :**

The City is now at its last reasonable opportunity to have the new training hydrant installed prior to completion of the site works at the new Bourget Fire Station.

While there is still approximately $100,000 in remaining contingency, it is felt by senior administration that this project would be best funded by the Regional Training Centre, given the intended use of the hydrant is for training evolutions.

It is currently anticipated, based on current registrations and YTD activity that the RTC will have ample funding to pay for this training hydrant, based on the following financial activity and projected 2019 revenues and expenses.

Period	**Amount**
2018 Surplus (in RTC Reserve)	$5,267.23
2019 YTD Revenue	$17,926.34
2019 YTD Expenses	-($5,300.12)
2019 Projected Additional Revenue	$34,000
2019 Projected Additional Expenses	-($8,000)
Projected 2019 Year-End Balance	**$43,893.45**

Quotes were sought from other providers to install the training hydrant, however because Asco is currently the general contractor on-site and is responsible for site safety and liability, other contractors are unable to complete the work during the fire station construction. It is therefore preferable to award the work to Asco, who were also the lowest price.

6) **CONSULTATION:**

None.

7) **RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS :**
None.

8) **FINANCIAL IMPACT (expenses/material/etc.):**
As noted above, it is anticipated that the Regional Training Centre revenues and 2018 reserve will be sufficient to cover the costs of the training hydrant, therefore there should be no financial impact outside of the current 2019 budget.

9) **LEGAL IMPLICATIONS :**
None.

10) **RISK MANAGEMENT :**
None.

11) **STRATEGIC IMPLICATIONS :**
Establishing a proper live-fire training ground provides a means for the City to work towards building a live-fire training prop. In the 2017 Master Fire Plan, it was a key recommendation that annual live-fire training be conducted for all Clarence-Rockland Firefighters. This is also covered under the Occupational Health and Safety Act which requires that adequate training be provided to employees.

12) **SUPPORTING DOCUMENTS:**
Asco Change Order to re-instate the training fire hydrant

1-1125 Tupper Street,
Hawkesbury, ON K6A 3T5
Ph: (613) 632-0121

CHANGE REQUEST

Project #:	180012	**Change #:**	CRX0013R1
Project Name:	Rockland Bourget Fire & EMS Stations (Design Build)	**Consultant Ref#:**	CCN #18
Project Location:	2130 Laval Street, Bourget,ON	**Issue Date:**	2018-10-24
Issued To:	Corporation of the City of Clarence-Rockland 1560 Laurier Street Rockland, ON *Hereinafter referred to as the Owner*	**Attention:**	Luc Frechette Luc.Frechette@colliersprojectleaders.com
		Consultant:	J. L. Richards & Associates Limited *Hereinafter referred to as the Consultant*

We are pleased to submit our revised lump sum quotation in the amount of **$23,051.23** (HST extra) for the additional work described as follows and as per the terms and conditions attached herewith.

Description:	Training Fire Hydrant - Bourget
Scope of Work:	Reinstatement of the supply & install of a fire hydrant for training purposes in Bourget, removed for Value Engineering. *With respect to the Terms & Conditions 1, 2, 6, 7 & 8, these shall not be applicable if this quotation is signed & returned to Asco Construction Ltd. on or before Novem**ber 15, 2018**. Further, clause 5 is amended as follows: 5) The Contract Price and the Contract Time are subject to adjustment if the Contractor does not receive the signed Owner Change Order or a clear direction from Owner as described in 4 above, prior to the expiry of the validity period of this Change Request or the date noted in the Scope of Work field, whichever is sooner.

Total Amount Of Change Request	**$23,051.23**

HST EXTRA

Project Name:	Rockland Bourget Fire & EMS Stations (Design Build)	Project#:	180012	Change #:	CRX0013R1

Term and Conditions

The work quoted in this Change Request is based on the following terms and conditions.

1) The Owner, the Consultant and the Contractor agree that they cannot, at this time, reasonably assess the delay impact of this Change Request on the Contract Time and Contract Price and the Owner wish to pay the Contractor an amount, on account of this Change Request, based on the agreed sum to date. Both parties agree to review this at a later time.
2) Unless otherwise strictly noted in writing on this Change Request, the Owner and Consultant acknowledge and agree that only the direct costs of the Work covered by this Change Request and the Contractor's fee for office overhead and profit on the said cost is included at this time. For greater clarity and unless specifically noted herein, this Change Request does not include indirect, delay, disruption, acceleration, impact and consequential costs. The Contractor reserves the right to future claims for additional costs and/or Contract Time and/or damage related to this Change Request. The Owner agrees to review any claim brought forward by the Contractor in relation to this Change Request and to negotiate with the Contractor in good faith a fair settlement satisfactory to both parties.
3) This quotation in this Change Request is **valid for 15 calendar days**, unless otherwise specified herein.
4) The Work covered under this Change Request will not proceed until the Contractor receives a signed Change Order from the Owner, or a clear written confirmation that the Contractors' Change Request is accepted and a clear direction to proceed with the Work.
5) The Contract Price and the Contract Time are subject to adjustment if the Contractor does not receive the signed Owner Change Order or a clear direction from Owner as described in 4 above, prior to the expiry of the validity period of this Change Request.
6) The Contractor reserves the right to review this Change in the Work in conjunction with all previous and subsequent Changes to determine if there is an overall accumulative effect on the Contract Time and seek reimbursement for costs associated with a Contract Time extension that cannot be foreseen at this time or that the parties cannot agree upon at this time.
7) Cost of the Contractors' general expenses, which if not included for in this Change Request, may be claimed for at a later date upon evaluation of the total accumulative effect that all Changes in the Work have had on the Contract Time. This cost will be evaluated based on the Contractor's daily project costs multiplied by the total number of schedule extension days being claimed.
8) The Contractor's general expenses do not include subcontractors' general expenses, which could potentially be claimed by subcontractors.
9) Additional cost for bonding and insurance, if not included in this quotation, will be submitted for payment at the end of the Project once the final Contract Price has been established.

ASCO Construction Ltd	For **Colliers Project Leaders**
Contractor _____ Signature	Authorized Owner Representative _____ Signature - Luc Frechette, Project Manager
Date:_____	Date:_____
	For **Corporation of the City of Clarence-Rockland**
	Authorized Representative _____ Signature - Brian Wilson, Director of Protective Services/Fire Chief
	Date:_____

1-1125 Tupper Street,
Hawkesbury, ON K6A 3T5
Ph: (613) 632-0121

CHANGE REQUEST Breakdown

Project #:	180012	**Change #:**	CRX0013R1
Project Name:	Rockland Bourget Fire & EMS Stations (Design Build)	**Consultant Ref#:**	CCN #18
Project Location:	2130 Laval Street, Bourget,ON	**Issue Date:**	2018-10-24
Issued To:	Corporation of the City of Clarence-Rockland 1560 Laurier Street Rockland, ON *Hereinafter referred to as the Owner*	**Attention:**	Luc Frechette Luc.Frechette@colliersprojectleaders.com
		Consultant:	J. L. Richards & Associates Limited *Hereinafter referred to as the Consultant*

Cat	Description	U/M	Qty	Unit Cost	Amount (HST extra)
S	Material (Pipe, hydrant, valve, valve box & restrainers)	NA	1	$7,107.00	$7,107.00
S	Reinstate Parking Area	NA	1	$1,975.00	$1,975.00
S	Granular A (Bedding & cover)	NA	1	$897.00	$897.00
S	Installation	NA	1	$5,116.00	$5,116.00
S	Additional Fill Substitute	NA	1	$1,750.00	$1,750.00
S	Commissioning	NA	1	$1,500.00	$1,500.00
S	Connection to Existing Line	NA	1	$3,160.00	$3,160.00
G	Bonds & Insurance (reference CCA Doc. 16, 1992)	NA	1	$452.53	$452.53

Markups

Z	Profit (5% on balance of difference only, $10,937.00)	$546.85
G	Overhead (5% on balance of difference only, $10,937.00)	$546.85

Total Amount Of Change Request	**$23,051.23**

HST EXTRA

RavCon
RAVARY CONTRACTING

1927 St-Anne Rd.
L'Orignal, ON
K0B 1K0
(613) 577-0453

Price for extra hydrant at Bourget fire station
As requested by Jason Assaly

Material……7,107
Gran A bedding……897
Installation……5,116

Additional expenses

Extra fill to replace unsuitable native to backfill…1,750
Commissioning (pressure test and chlorination)….1,500
Connection to existing line……3,160
Reinstatement of parking area……1,975

Total……$21,505

CORPORATION OF THE CITY OF CLARENCE-ROCKLAND

BY-LAW 2019-50

BEING A BY-LAW TO AUTHORIZE THE COUNCIL OF THE CORPORATION OF THE CITY OF CLARENCE-ROCKLAND TO EXEMPT FROM THE PLAN OF SUBDIVISION APPROVAL PROCESS, THE CONDOMINIUM DESCRIPTION OF THE PROJECT AT 535-545 RUSSELL ROAD, PROPERTY OF 1847305 ONTARIO INC

WHEREAS the Council of the Corporation of the City of Clarence-Rockland is the approval authority for the implementation of Sections 51, 51.1 and 51.2 of the *Planning Act*; and

WHEREAS the Council of the Corporation of the City of Clarence-Rockland already concluded a Site Plan Agreement for the construction and development of the project at 535-545 Russell Road; and

WHEREAS the Council of the Corporation of the City of Clarence-Rockland deems appropriate to exempt from the plan of subdivision approval process, the condominium description of 535-545 Russell Road, to permit its registration;

NOW THEREFORE, the Council of the Corporation of the City of Clarence-Rockland enacts as follows:

Section 1. The property located at 535-545 Russell Road, in the City of Clarence-Rockland, shall be the property concerned by this by-law;

Section 2. The Corporation of the City of Clarence-Rockland exempts from the plan of subdivision approval process, the condominium's description of 535-545 Russell Road, property of 1847305 Ontario Inc.;

Section 3. The Mayor and the Clerk of the Corporation of the City of Clarence-Rockland be and they are hereby authorized to sign the exemption certificate under their hands and the seal of the Corporation and to do all things as Counsel for the Corporation may advise in order to exempt from the plan of subdivision approval process, the condominium's description.

ENACTED AND PASSED IN OPEN COUNCIL, THIS XX, DAY OF XXXX, 2019.

Guy Desjardins, Mayor **Monique Ouellet, Clerk**

REPORT N° AMÉ-19-47-R

Date	22/05/2019
Submitted by	Marie-Eve Bélanger
Subject	Condominium conversion – 535-545 Russell Road, Cheney
File N°	D-11-276, D-11-277

1) **NATURE/GOAL :**
A request was submitted by Mr. Jean-Paul Vincelette, being one of the owners of 535, 545 Russell Road in Cheney, to obtain an exemption from the condominium approval process for those properties.

2) **DIRECTIVE/PREVIOUS POLICY :**
n/a

3) **DEPARTMENT'S RECOMMENDATION :**
QUE le comité plénier recommande au conseil l'adoption du règlement 2019-50 en vue de soustraire de la procédure d'approbation de plan de lotissement, la description de condominiums du projet au 535-545 Russell Road à Cheney, appartenant à 1847305 Ontario Inc. et que le maire et la greffière soient désignés pour signer le certificat à cet effet.

THAT the Committee of the Whole recommends to Council to adopt By-law 2019-50 to exempt from the plan of subdivision approval process, the condominiums' description of the subject property of 1847305 Ontario Inc., located at 535-545 Russell Road, and that the Mayor and the Clerk be authorized to sign the appropriate certificate.

4) **BACKGROUND :**
Sections 51 and 51.1 of the *Planning Act* establishes the requirements for subdivision approvals. The *Condominium Act*, 1998, imposes the same requirements as the *Planning Act* for the approval of a Condominium project. The *Condominium Act* also has provisions that allow the Approving Authority (the municipality) to exempt a project from the plan of subdivision requirements of Sections 51 and 51.1 of the *Planning Act*.

Therefore, the Approval Authority may grant an exemption if it believes that the exemption is appropriate in circumstances.

5) **DISCUSSION :**
Mr. Jean-Paul Vincelette communicated with the City in order to obtain information on the conversion of the rental units to condominium units. He advised the City that the property was not financially viable as rental units and wish to sell them individually instead.



Figure 1: Location of the property

The intent of the *Condominium Act*, 1998, was to have Council consider a faster process for approvals when all planning issues have been dealt with. The planning requirements for the land in question have, in staff's opinion, been appropriately dealt with.

Staff believes that it is appropriate for Council to exempt the project from the Draft Plan of Condominium, effectively approving the condominium project for registration. This project complies with the direction of the Official Plan and Zoning By-law of the City of Clarence-Rockland. There are no further planning issues that need further investigation at this time.

6) **CONSULTATION:**
n/a

7) **RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS :**
n/a

8) **FINANCIAL IMPACT (expenses/material/etc.):**
n/a

9) **LEGAL IMPLICATIONS :**
n/a

10) **RISK MANAGEMENT :**
n/a

11) **STRATEGIC IMPLICATIONS :**
n/a

12) **SUPPORTING DOCUMENTS:**
2019-50

CORPORATION OF THE CITY OF CLARENCE-ROCKLAND

BY-LAW 2019-60

BEING A BY-LAW TO ESTABLISH THE REMUNERATION OF THE MEMBERS OF THE MUNICIPAL COUNCIL OF THE CORPORATION OF THE CITY OF CLARENCE-ROCKLAND.

WHEREAS Section 283, Subsection (1) of the Municipal Act, 2001 provides that a municipality may pay any part of the remuneration and expenses of the members of any local board of the municipality and of the officers and employees of the local board; and

WHEREAS Council adopted resolution number 2018-287 on December 17, 2018, which establishes the remuneration of the Municipal Council, further to the changes in "one-third" federal tax exemption for elected officials as of January 1, 2019;

WHEREAS it is deemed necessary to establish the remuneration of the members of the Municipal Council by By-Law;

NOW THEREFORE be it enacted by the Municipal Council of the Corporation of the City of Clarence-Rockland, that:

1. **THAT** Members of Municipal Council for the 2019 calendar year, shall be remunerated as follows:
   Mayor $52,083.20
   Councillors $29,777.28

2. **THAT** the remuneration for the Members of Council be adjusted each year according to the same rate increase negotiated with the non-union employees.

3. **THAT** By-law 2007-103 is hereby repealed.

4. **THAT** this By-law shall remain in force until it is repealed.

READ, PASSED AND ADOPTED IN OPEN COUNCIL THIS 3RD DAY OF JUNE, 2019.

Guy Desjardins, Mayor

Monique Ouellet, Clerk

CORPORATION OF THE CITY OF CLARENCE-ROCKLAND

BY-LAW 2019-61

BEING A BY-LAW TO AMEND BY-LAW 2015-160 FOR GOVERNING PERMANENT SIGNS, TEMPORARY SIGNS AND BILLBOARDS INSTALLED ON THE TERRITORY OF THE CORPORATION OF THE CITY OF CLARENCE-ROCKLAND

WHEREAS the Municipal Act 2001, S.O., Chapter 25, Section 11 (3) (7), provides that municipalities may pass by-laws respecting advertising devices, including signs; and

WHEREAS By-law 2015-160 is a By-law for governing permanent signs, temporary signs and billboards installed on the territory of the Corporation of the City of Clarence-Rockland;

NOW THEREFORE the Council of the Corporation of the City of Clarence-Rockland hereby enacts as follows:

1. **THAT** By-law 2015-160 be amended by modifying section 8.8.1 to read as follows:

8.8.1 Unilingual schools, churches and the "Club Optimiste de Rockland" shall be exempt from conforming with section 8.8 of this by-law.

3. **THAT** this by-law shall come into force on the day of its adoption and shall remain in force until it is repealed.

READ AND PASSED IN OPEN COUNCIL, THIS 3RD DAY OF JUNE, 2019.

_____ _____

Guy Desjardins, Mayor **Monique Ouellet, Clerk**

CORPORATION OF THE CITY OF CLARENCE-ROCKLAND
BY-LAW 2019-59

BEING A BY-LAW OF THE CITY OF CLARENCE-ROCKLAND TO CONFIRM PROCEEDINGS OF THE COUNCIL OF THE CITY OF CLARENCE-ROCKLAND AT ITS REGULAR MEETING HELD ON JUNE 3, 2019.

WHEREAS Sub-section 5(1) of the Municipal Act, 2001, as amended, provides that the powers of a municipal corporation are to be exercised by its Council;

AND WHEREAS Sub-section 5(3) of the said Municipal Act provides that the powers of every council are to be exercised by By-law;

AND WHEREAS it is deemed expedient that the proceedings of the Council of the City of Clarence-Rockland at this meeting be confirmed and adopted by By-law;

THEREFORE the Council of the City of Clarence-Rockland enacts as follows:

1. **THE** action of the Council of the City of Clarence-Rockland in respect of each recommendation contained in any reports of committees and of local boards and commissions and each motion and resolution passed and other action taken by the Council of the City of Clarence-Rockland at this meeting is hereby adopted and confirmed as if all such proceedings were expressly embodied in this by-law.

2. **THE** Mayor and the appropriate officials of the City of Clarence-Rockland are hereby authorized and directed to do all things necessary to give effect to the action of the Council of the City of Clarence-Rockland referred to in the proceeding section.

3. **THE** Mayor and the Clerk, are authorized and directed to execute all documents necessary in that behalf and to affix thereto the corporate seal of the City of Clarence-Rockland.

READ, PASSED AND ADOPTED IN OPEN COUNCIL THIS 3RD DAY OF JUNE, 2019.

_____ _____

Guy Desjardins, Mayor Monique Ouellet, Clerk