

## OPERATIONS COMMITTEE

Tuesday, January 12, 2021 - 9:30 a.m.

## AGENDA

1. Call to order.
2. Roll call.
3. Disclosure of pecuniary interest and general nature thereof.
4. Adoption of minutes of previous meeting held on November 10, 2020 (attached).
5. Delegations: None at the time of mailing.
6. Public Works and Engineering Department

## Page

(a) Department Report 2
(b) Infrastructure Division Report
(c) Operations Division Report 124
7. New Business.
8. Closed Meeting - None at time of mailing.
9. Date of next meeting (Tuesday, February 9, 2021) and adjournment.

NOTE: (a) County Council: Wednesday, January 27, 2021.
(b) Submissions received from the public, either orally or in writing may become part of the public record.

## COUNTY OF RENFREW

## PUBLIC WORKS AND ENGINEERING DEPARTMENT REPORT

## TO: Operations Committee

FROM: Lee Perkins, C.E.T., MBA, Director of Public Works and Engineering
DATE: January 12, 2021
SUBJECT: Department Report

## INFORMATION

## 1. Township of Greater Madawaska Requests

On Friday, November 28, 2020 staff from the County of Renfrew (Mr. Lee Perkins, Director of Public Works \& Engineering; Mr. Taylor Hanrath, Acting Manager of Infrastructure; and Mr. Brett Kidd, Acting Infrastructure Coordinator) met with the Mayor Hunt and staff of the Township of Greater Madawaska (Ms. Renee Mask, Treasurer-Deputy CAO/Clerk; and Mr. Luke Desjardins, Manager of Planning and Development) and the following items of concern were discussed:
(a) Grant Application for Eagle's Nest Parking - The tabled letter was provided to the Township of Greater Madawaska in support of a funding grant application the Township intends to submit for a parking lot along County Road 508 (Calabogie Road) in the area of the Eagle's Nest Trail. As a requirement of the grant, the Township must own or lease the land. Currently the County has a 46 metres right-of-way (ROW) ( 23 metres from centerline) and a request from the Township to investigate the possibility of leasing this section of the ROW is underway.
(b) County Road 508 Drainage Issue - Staff were advised of a drainage issue along County Road 508 (Calabogie Road) at Civic Address 1101 Francis Street (Calabogie Medical Centre). Staff have committed to examining this issue with possible solutions.

## 2. Traffic Signal Control System

Attached as Appendix I is the Traffic Signal Control System study completed by Partham Engineering Ltd. and Thompson Technologies for the management of traffic during closures of Highway 417/17 and using the Emergency Detour Routes (EDR) in the Town of Arnprior and for the management of traffic as it enters and exists Garrison Petawawa in the Town of Petawawa. Staff will be implementing the recommendations over the next five years as budget allows for signal upgrades in Arnprior and Petawawa.

## 3. Hardened Shoulders Request - County Road 30 (Lake Dore Road)

Tabled is a request from the OVCATA for consideration for hardened shoulders to be included as part of the rehabilitation planned in 2021/2022 on County Road 30 between Trail Blazers Road and St. Johns Church in Golden Lake. This request comes from the concerns OVCATA is receiving from cyclists and walkers due to the large volume of cars and large truck volumes and high speeds occurring along the road.

## 4. Highway 17 and County Road 508 (Calabogie Road) Interchange

Tabled is correspondence from the Honourable Caroline Mulroney, Minister of Transportation advising that the Ministry is currently undergoing the process to procure a design builder for the intersection.

## RESOLUTIONS

## 5. Public Works and Engineering Department Draft 2021 Budget

Recommendation: THAT the Operations Committee recommends that the Draft 2021 Public Works and Engineering Budget be approved by this Committee and forwarded to the January 18, 2021 County Council Budget Workshop for approval.

## Background

Attached as Appendix II is the Draft 2021 Budget for the Public Works and Engineering Department for the review and consideration of the Committee. The Chief Administrative Officer/Clerk, Mr. Paul Moreau will provide a brief overview of the draft 2021 Corporate Budget. Also attached as Appendix III is a Business Case for the approval of the Public Works

Department to leave the Part-Time Engineering Technician position vacant in 2021 and purchase services from an engineering vendor for contract site supervisors on an as needed basis, if required in 2021. Attached as Appendix IV are two maps which show the location of the various Capital Roads and Structures projects that are included in the draft 2021 Capital Works Program.

In terms of the 2021 draft Budget the following identifies significant budget-to-budget variances for the Operations programs:

## B202 (Cameron Street Bridge)

The rehabilitation of B202 (Cameron Street Bridge) in Killaloe is a project that commenced in 2020. However, due to manufacturing and delivery delays, this project will be completed in 2021.

## Maintenance

The budgeted amount for Winter Control has increased to reflect offset anticipated costs.

## 6. Asset Management Plan - County Road 508 (Calabogie Road)

Recommendation: THAT the Operations Committee recommend to not approve the request to move a section of County Road 508 from Mill Street to County Road 511 (Lanark Road), now scheduled to be completed in 2023 in the 10-year Asset Management Plan back to 2022; AND FURTHER THAT staff continue with the Asset Management Plan as designated.

## Background

The Township of Greater Madawaska has noted that a number of projects related to County Road 508 (Calabogie Road) in the Township have been pushed into subsequent years. Staff advised that due to budget and capacity restraints, some projects were removed from 2020 which resulted in a rippling effect. Staff has advised the Township that County Road 508 projects still remain in the 10-year plan. A request was made by the Township to move a section of County Road 508 from Mill Street to County Road 511 (Lanark Road), now scheduled to be completed in 2023 in the 10year plan back to 2022.

## 7. Town of Arnprior - Realigned Signalized Intersection

Recommendation: THAT the Operations Committee not approve the request for assistance in financing of constructing the intersection of Edey Street and County Road 2 (Daniel Street) in the Town of Arnprior.

## Background

Attached as Appendix V is a request for assistance from the Town of Arnprior in the financing of constructing the intersection of Edey Street and County Road 2 (Daniel Street). An Intersection Review, attached as Appendix VI, was completed by Stantec Consulting Ltd. and the Town has approved Option 1 - Realigned Signalized Intersection and is requesting $23 \%$ of the project cost, to a maximum upset limit of $\$ 292,860$ from the County of Renfrew. The County has offered a solution to the situation of right in and right out and this intersection is developer driven and as such should be funded from other sources.

## 8. SHARE THE ROAD SAFELY, EH! Campaign

Recommendation: THAT staff be directed to write a letter in support of the application to the federal government's Enhanced Road Safety Transfer Payment Program by the Ottawa Valley Cycling and Active Transportation Alliance (OVCATA).

## Background

The Ottawa Valley Cycling and Active Transportation Alliance (OVCATA) has applied to the federal government's Enhanced Road Safety Transfer Payment Program for funding to assist with a road safety education campaign to be held in 2021 that will be aimed at drivers and cyclists in rural and small towns within Renfrew County. The OVCATA has requested that the Public Works and Engineering Department endorse this endeavour and become a partner in this campaign. There is no obligation for the County of Renfrew to provide financial/in-kind support.

## 9. Township of Laurentian Valley - No Parking Request

Recommendation: THAT the Operations Committee recommend to County Council that 'No Parking' signage be installed on a section of County Road 36 (TV Tower Road) in the Township of Laurentian Valley for approximately five hundred metres north and south of the Algonquin Trail on the east side of the road.

## Background

Resolution Number CC20-05-032 from the Township of Laurentian Valley which states "That Council in Committee recommends that Township Council amends By-Law 2004-05-212, a By-law to regulate parking on or obstruction of highways and streets within the Township. Further, that Council in Committee recommends that Township Council pass a resolution to be forwarded to the County of Renfrew requesting that a parking restriction be implemented on TV Tower Road (CR36) adjacent to the Algonquin Trail." was received by staff. Appendix VII includes the report to the Township of Laurentian Valley's Public Works, Property and Protection Committee along with a map depicting the parking restriction location. The Township has advised that they have received several complaints regarding vehicles parked on both sides of the roadway and are often contacted with regards to excessive speed in the area as well.

## BY-LAWS

## 10. Off-Road Vehicles on County of Renfrew Roads

Recommendation: THAT the Operations Committee recommend that a By-law to Regulate the Operation of Off-Road Vehicles on County of Renfrew Roads be passed; AND FURTHER THAT the Operations Committee recommend that By-law Number 99-17 be repealed.

## Background

The County of Renfrew has received notice from the Ministry of Transportation that changes have been made to Ontario Regulations which allow for the operation of dirt bikes and wheeled extreme terrain vehicles along Ontario roadways. These off-road vehicles had previously been prohibited from operating on roadways within Ontario.

In order to affect the change and allow for the additional types of off-road vehicles (ORV) to operate along County Roadways, it is necessary to update the County's Off-Road Vehicle By-Law. A draft copy of the By-law together with the tabled letter was circulated to all Municipalities within the County to request feedback.

The County of Renfrew Public Works and Engineering Department received responses from the Township of Admaston/Bromley, the Town of Renfrew, the Township of Head Clara and Maria and the Township of Bonnechere Valley. None of the responses indicated that any changes were being requested at this time.

Also attached as Appendix VIII is information and provincial requirements that have been received from the Ministry of Transportation with regards to the expanded on-road opportunities for off-road vehicles in certain areas of Ontario that came into effect on January 1, 2021.

## 11. Infrastructure Division

Attached as Appendix IX is the Infrastructure Division Report, prepared by Mr. Taylor Hanrath, Acting Manager of Infrastructure, providing an update on activities.
12. Operations Division

Attached as Appendix X is the Operations Division Report, prepared by Mr. Richard Bolduc, Manager of Operations, providing an update on activities.

Department of Public Works \& Engineering

Experience Our History, Share Our Euture!

## Re: Letter of Support for Application for funding for completion of a parking lot at Eagle's Nest - Township of Greater Madawaska

Dear Review Committee,

On behalf of the County of Renfrew's Department of Public Works and Engineering, we would like to extend our support for the Township of Greater Madawaska in their application for funding for the completion of a parking lot at Eagle's Nest, located on County Road 508 (Calabogie Road) to alleviate parking challgenges along the side of the road.

Trails have always been one of our key attractions for hikers and by improving the parking area on County Road 508 with the creation of a parking lot at the Eagle's Nest Trailhead, this will provide a safe location for motorists to park their vehicles off of a busy County road. As an added measure of safety, a solar pedestrian crossing light has recently been installed in the area to warn approaching vehicular traffic and to assist pedestrians that would be crossing the road from the parking lot to enter the trail.

The Public Works and Engineering Department fully supports the Township of Greater Madawaska in their efforts to create a parking lot for the safety of those who wish to enjoy healthy and active lifestyles within the community.

Sincerely,

Lee Perkins, C.E.T., MBA
Director of Public Works and Engineering

## Town of Arnprior and Petawawa Traffic Signal Control System?



Prepared By: Partham Engineering Ltd AND0

For:

## Background

A traffic signal control system connects intersection traffic signals to a remote computer system which in turn allows someone to monitor and manage the signal operation. Subsequently, this allows signal timing and synchronization to be adjusted efficiently and quickly in real-time. A traffic system makes better use of an existing road network's usage and capacity, which has significant economic advantages over building more roads or right of ways.

Past studies demonstrate the ability of a traffic signal control system to enhance mobility, increase the efficiency of the transportation system, and reduce the impact of automobile traffic on energy consumption and air quality. Coordinated traffic control signals smooth traffic leading to corresponding safety improvements through reduced rear-end collisions.

The County of Renfrew is considering implementing a traffic signal control system to better adapt to changing traffic conditions. A traffic system would allow the adjustment of traffic signal timing remotely to manage ever-changing traffic volumes. Two excellent examples of this include managing the additional vehicle volume during closures of Highway 417/17 when traffic diverts from the Highway to Daniel Street and Madawaska Boulevard. The other example is the three traffic signals in Petawawa to handle traffic better as it enters and exits Canadian Forces Base Petawawa.

Emergency Detour Routes (EDR) are permanent detours marked by EDR signage that guides motorists through the local road network where the main highway is closed due to a traffic incident. The Highway 417 eastbound EDR route is Highway 417-Daniel Street-Madawaska Boulevard-County Road 29 to Highway417. The westbound EDR is Highway 417-County Road 29-Madawaska Boulevard-Daniel Street to Highway 417.

The management of these two EDR would benefit from a signal system that can quickly and efficiently change traffic signal timing remotely. Without a system like this, a technician must visit each traffic control signal and implement appropriate signal timing manually; this is a relatively slow process.

Past studies have shown during off-peak hours, each additional minute taken to correct traffic issues extends the duration of the congestion by four to five minutes. During peak periods, this factor can be as high as 50 to 1 . As a result, the need to manage traffic signal control quickly and effectively in response to traffic incidents such as the EDR traffic diversions.

Congested urban transportation networks adversely affect economic growth, traffic safety, health, and environmental quality. Fiscal constraints limit new road building to add capacity to existing networks. There is a growing awareness of the need to manage existing infrastructure more efficiently.

Traffic signal control systems provide other benefits such as the ability to monitor traffic signals continuously, the ability to troubleshoot problems remotely and the ability to monitor the arterial network performance through CCTV cameras. Finally, if the local traffic signal faults and goes into fourway flash, the condition is automatically reported to the traffic system, and in turn, it is possible to dispatch a technician to investigate and repair the problem in a responsive manner. These are just some of the primary benefits of such a system.

## Arnprior - Daniel Street Madawaska Boulevard

There are eleven traffic control signals in the Arnprior network and eight of these are along Daniel Street-White Lake Road between Madawaska Boulevard and Bev Shaw Parkway/Vanjumar Road. Two of the traffic control signals are under the jurisdiction of Ministry of Transportation Ontario (MTO). The traffic signal locations are shown in Figure 1.

## Town of Arnprior

1. Daniel Street and Staye Court Drive / Winners Circle.
2. Daniel Street and Baskin Drive.
3. Daniel Street and Arthur Street / Canadian Tire.
4. Daniel Street and Edey Street.
5. Daniel Street and Elgin Street.
6. Daniel Street and Madawaska Boulevard
7. Madawaska Boulevard \& Bridge Street/ Jack Crescent
8. Madawaska Boulevard and John Street
9. John Street and Elgin Street
10. White Lake Road and Highway 417 Westbound Off Ramp. (MTO)
11. White Lake Road and Highway 417 Eastbound Off Ramp. (MTO)


Figure 1 Town of Arnprior - Traffic Signal Locations

Since 2015 County of Renfrew has a replacement program in place to upgrade ageing traffic signal control equipment. Typically, cabinets, traffic signal controllers, accessible pedestrian signals and LED signal heads are included in the upgrade. The upgrades include a backup power supply (UPS) to keep traffic signals running in the event of a power failure.

This has resulted in the current traffic signal control equipment along Daniel Street and Madawaska Boulevard being state of the art microprocessor based.

## Petawawa - Petawawa Boulevard

Partham Engineering is upgrading traffic signal control hardware at the three intersections noted below. Much of the older equipment at the traffic signal locations is $15-20$ years old. These upgrades should be complete by October 2020. This includes replacing trouble-some in-ground detector loops with overhead presence radar detection to improve traffic operation. The upgraded local traffic control will allow future connection to a traffic system with relatively minor hardware upgrades.

The critical traffic signal locations are shown in Figure 2.

## Town of Petawawa

1. Petawawa Boulevard /Menin Road and Paquette Road / Festubert Road.
2. Petawawa Boulevard and Portage Road /Victoria Street.
3. Petawawa Boulevard and Mohns Road /Doran Road.


Figure 2 Town of Petawawa - Traffic Signal Locations

Given the current daily congestion along Petawawa Boulevard and any anticipated growth, a remote traffic system would provide significant improvement to traffic operations along Petawawa Boulevard.

## Traffic Signal Control Systems

The simplest traffic system is a time based coordinated (TBC) system in which basic coordination is programmed through each individual local signal controller. There is no monitoring or remote computer system connected to the traffic control signals. The cost is relatively low because there is no on-going equipment cost for a communication network. The local time clock in each controller must be set manually to maintain coordination. With this type of system, the local clocks in the controller tend to float and the intersections get out of sync with each other and the clocks must be manually set by a technician. The cost of modifying the signal timing can be significant, and the system does not have capabilities of system monitoring, data archiving and responding to unexpected traffic conditions. Timing plans and schedules must be updated at the local controller when development, construction, weather, or traffic incidents cause traffic patterns to change. This is the type of control that now exists along Petawawa Boulevard between Doran-Mohns Avenue and Festubert-Paquette Road.

There is a number of different types of Centralized Traffic Systems. This is often a computer control system in which the central computer, central communication facilities and display equipment are all situated at a single location(s), and the center interconnects and communicates directly with each local controller. With this setup a remote operator can coordinate and control traffic signals throughout the area.

Today's traffic systems can be remotely situated so a large, centralized type system is not required. The system can monitor traffic signals for malfunctions or major traffic pattern changes and the system has the capability of maintaining good coordination among intersections. Adjusting and updating the local signal timing is much quicker. However, a communication network must be maintained. Recent cellular wireless communications development has made reliable communication to traffic signals much more economical.

In comparison to previous traffic control signal systems, today's remote systems can be implemented with a computer server, which can reside in any number of locations, over a cellular wireless network. Because the traffic signals in Arnprior and Petawawa have updated traffic signals cabinets and controllers, the only new hardware that is required is a wireless LTE router and possibly an antennae if the wireless signal strength is not adequate at some traffic signal locations. The communication implementation time is also significantly reduced as landlines do not need to be installed.

The local data in the existing Thompson Technologies ATC4 type traffic signal controllers will need to be updated but this is a straight-forward modification at the local traffic signal control cabinet

All three locations in Petawawa should be connected to the traffic system and eight of the nine locations in Arnprior. The only exception to this would be the traffic signal at John Street and Elgin Street which could remain as a stand-alone intersection.

## Traffic Monitoring Cameras

Traffic monitoring cameras are an integral component of traffic monitoring and incident verification. Traffic cameras installed at signalized intersections provide an up-to-date view of traffic patterns along the arterials.

The components of the system include cameras located in the field, camera control accessories, and monitors in the traffic control centre, storage media, and a communications network. For Petawawa Boulevard and Daniel Street pan, tilt, zoom cameras could be implemented at critical locations.

A camera could be installed on Daniel Street at Baskin Drive, to monitor northbound and southbound traffic along Daniel Street while also providing a view of traffic operations from Highway 417. Another camera could be installed at Daniel Street and Madawaska Boulevard to cover all approaches to the intersection.

Two cameras could be installed on Petawawa Boulevard. One at Petawawa Boulevard and PaquetteFestubert Road and another at Petawawa Boulevard and Mohns-Doran Road.

## Operations

In consultation with County of Renfrew staff decisions will need to be made around day-to-day monitoring of the traffic system. Messages and alarms from the traffic system such as signals in red-red flash or communications failures need to be monitored and responded to. These could be sent to County of Renfrew operations staff and or external staff.

## Signal Timing

Decisions will be required around how to implement signal timing changes when an EDR traffic diversion occurs. Who is responsible for modifying the signal timing to adjust to changing traffic conditions? Who is notified? Does staff need to be placed on-call. With some training it is possible to have County of Renfrew staff implement new signal timing remotely. Alternatively, outside staff could implement the new timing.

Traffic counts will be required at all major intersections to update traffic signal timing to better match changing traffic conditions. Traffic counts will also be required for the 417 Eastbound and Westbound to estimate diverted traffic to Daniel Street. The traffic counts can be entered into a program like Synchro Traffic which is a modeling program that is used to provide optimized signal timing for different traffic conditions.

A library of signal timing plans needs to be setup in the traffic signal controller. These timing plans can be developed from updated traffic counts at each signalized intersection. An additional library of timing plans can be developed to help react quickly to traffic incidents on the local roadways. New timing plans can also be developed to improve daily traffic operations.

Traffic counts have recently been completed along Petawawa Boulevard which can be used to implement signal timing which more closely matches day-to-day traffic conditions.

## Costs

The approximate cost for the development of the mobile friendly front-end for the traffic signal control system to meet the specific EDR requirements is approximately $\$ 12,500.00$.

The cost to monitor traffic operations is $\$ 7200.00$ per year for up to 12 locations. This would cover both the Petawawa and Arnprior networks.

Another cost that needs to be considered is on-going data costs for wireless communications. The wireless router is $\$ 400.00$ per intersection. Data costs are approximately $\$ 60.00$ per month per each signalized intersection that is connected to the traffic system, or $\$ 120.00$ if the intersection is equipped with a CCTV camera.

A VPN with firewall to provide enhanced network security would be an additional $\$ 300.00$ per intersection.

The approximate cost for an installed traffic camera is $\$ 7500.00$.

## Future Project - Adaptive System

The first step is to install the traffic signal control system, connect traffic signals and ensure it is operating effectively. In the future a possible upgrade for both Arnprior and Petawawa road networks is implementing an adaptive traffic control system. A system such as this automatically adapts the signal timing in real time to changing traffic conditions on the street. Detector loops must be installed in each lane to measure changing traffic volumes. For example, the adaptive system would change signal timing automatically in response to an EDR event affecting Daniel Street. Adaptive traffic systems operate most effectively in smaller traffic signal networks such as Daniel Street and Petawawa Boulevard.


8 Ridge Drive - Pembroke, ON K8A 6W2 6136383881 - rmoss@nrtco.net

9 International Drive Pembroke K8A 6W5

## Attention Mr. Lee Perkins, Director of Public Works and Engineering

## Re: County Road 30 Lake Dore Road

Dear Mr. Perkins
We understand that Lake Dore Road between Trail Blazers Road and Highway 60 in Golden Lake is in the Capital Works plan for rehabilitation 2021/2022.

We have reviewed County traffic records for 2019 and previous years data that clearly shows the traffic volumes have increased and support consideration for hardened shoulders per Book 18 of the Highway Traffic manual. OVCATA has also become aware of many complaints by cyclists and walkers of the car/large truck traffic volumes and tell us that the high traffic speed, combined with rolling terrain, curves and narrow road surface width, cause real safety concerns for them. They tell us they are afraid to ride this road as a result.

We are concerned that this road is shown on the Ottawa Valley Tourist Association cycle map, which is a County product, as part of the Loop the Lakes Route, attracting both local and out of County cyclists. The riders are telling us they don't feel safe and is a potential liability for Renfrew County.

In this regard, OVCATA requests provision of hardened shoulders on County Road 30 Lake Dore Road between Trail Blazers Road and ( 60 km speed limit) St Johns Church in Golden Lake with the 2021/2022 Capital Works Plan and consideration for hardened shoulders from Trail Blazers Road to Highway 41.

Yours truly,

Ron Moss, Co-Chair
Ottawa Valley Cycling and Active Transportation Alliance
cc: Mayor James Brose North Algona Wilberforce Township
OVCATA - Ish Theilheimer, Bob Peltzer, Co-Chair - Pat Krose

| Ministry of <br> Transportation | Ministère des <br> Transports |
| :--- | :--- |
| Office of the Minister | Bureau de la ministre |
| 777 Bay Street, $5^{\text {th }}$ Floor | 777, rue Bay, $5^{e}$ étage |
| Toronto ON M7A 1Z8 | Toronto ON M7A 1Z8 |
| $416327-9200$ <br> www.ontario.ca/transportation | $416327-9200$ <br> www.ontario.ca/transports |

His Worship Tom Peckett
Mayor
Township of McNab/Braeside
2473 Russett Drive
DEC 012020
Arnprior ON K7S 3G8
Dear Mayor Peckett:
Thank you for your letter regarding the announcement of the new Highway 17 and Calabogie Road interchange within your township. I appreciate the opportunity to respond.

The ministry is excited to deliver on our commitment to designing and building this new interchange. This is a significant milestone for the ministry as it signifies the beginning of the larger 22.5 km expansion of Highway 17 from Scheel Drive to 3 km West of Bruce Street. The ministry is currently undergoing the process to procure a design builder for the Calabogie Road interchange. Design is expected to start in 2021, and construction is anticipated to be complete in December 2023.

Our project team is looking forward to working with the County of Renfrew and your township throughout design and construction. Public consultation is an important part of this project. Dates and times of future public meetings will be shared with you in advance.

The ministry appreciates the enthusiasm shown by you and your community towards this project and is excited to move forward. If you should have any questions, please contact our Project Engineer, Highway Engineering and Construction, Brian Utigard at 613-449-0753.

Thank you again for writing.
Sincerely,

## Corrine Mulroney

Caroline Mulroney
Minister of Transportation
c. The Honourable Doug Ford, Premier of Ontario

The Honourable John Yakabuski, MPP, Renfrew-Nipissing-Pembroke

## Appendix II

## COUNTY OF RENFREW

 2021 BUDGETGENERAL REVENUE FUND

|  | $\frac{2021 \text { Budget }}{\text { Pressure }}$ | 2021 Budget | 2020 Budget | $\underline{\text { Variance \$ }}$ | Variance \% | $\underline{2019}$ Actual | 2018 Actual | 2017 Actual | 2016 Actual | 2015 Actual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PUBLIC WORKS | 500,000 | 8,657,110 | 16,899,091 | $(8,241,981)$ | -48.8\% | 14,360,558 | 16,477,109 | 14,532,147 | 13,675,530 | 15,043,880 |
| Operations Committee | 500,000 | 8,657,110 | 16,899,091 | $(8,241,981)$ | -48.8\% | 14,360,558 | 16,477,109 | 14,532,147 | 13,675,530 | $\underline{15,043,880}$ |

## COUNTY OF RENFREW 2021 BUDGET GENERAL REVENUE FUND

|  | 2021 Budget |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pressure | 2021 Budget | 2020 Budget | $\underline{\text { Variance \$ }}$ | Variance \% | 2019 Actual | 2018 Actual | 2017 Actual | 2016 Actual | 2015 Actual |
| PUBLIC WORKS | 500,000 | 8,657,110 | 16,899,091 | $(8,241,981)$ | -48.8\% | 14,360,558 | 16,477,109 | 14,532,147 | 13,675,530 | 15,043,880 |
| Administration |  | 1,062,694 | 1,121,294 | $(58,600)$ | -5.2\% | 1,019,123 | 1,016,553 | 1,048,633 | 979,212 | 1,020,332 |
| Infrastructure Management |  | 597,660 | 547,634 | 50,026 | 9.1\% | 401,582 | 501,560 | 399,559 | 506,581 | 388,189 |
| Depreciation |  | 9,600,000 | 9,200,000 | 400,000 | 4.3\% | 9,277,309 | 8,919,897 | 8,507,225 | 8,267,825 | 7,786,980 |
| Equipment |  | 1,256,523 | 1,180,577 | 75,946 | 6.4\% | 1,262,845 | 1,254,110 | 1,079,395 | 1,033,860 | 984,190 |
| Housing |  | 186,550 | 186,550 | 0 | 0.0\% | 143,448 | 185,799 | 189,161 | 153,698 | 211,195 |
| Maintenance | 500,000 | 5,628,683 | 5,576,361 | 52,322 | 0.9\% | 5,699,487 | 5,930,531 | 5,361,023 | 5,005,022 | 4,468,886 |
| Donations In Kind |  | 0 | 0 | 0 |  | 0 | $(296,075)$ | $(185,250)$ | 0 |  |
| Recoveries - Federal |  | 0 | $(15,000)$ | 15,000 | -100.0\% | 0 | $(13,765)$ | 0 | $(3,153)$ |  |
| Recoveries - Other |  | $(75,000)$ | $(75,000)$ | 0 | 0.0\% | $(101,249)$ | $(158,142)$ | $(50,428)$ | $(88,249)$ | $(85,253)$ |
| Recoveries - Provincial |  | $(1,357,505)$ | $(1,357,505)$ | 0 | 0.0\% | $(1,317,960)$ | $(864,673)$ | $(605,519)$ | $(317,806)$ | $(1,567,806)$ |
| Surplus Adjustment - Trf To Reserves |  | 0 | 0 | 0 |  | 0 | 0 | 0 | 531,900 | 1,898,647 |
| Surplus Adjustment - Capital |  | 20,352,718 | 23,474,113 | $(3,121,395)$ | -13.3\% | 12,260,528 | 13,828,767 | 13,447,184 | 10,456,151 | 11,583,318 |
| Surplus Adjustment - Temp Loan |  | 0 | $(2,750,000)$ | 2,750,000 | -100.0\% | $(2,409,146)$ | $(170,404)$ | $(2,186,650)$ | $(1,508,058)$ |  |
| Surplus Adjustment - Depreciation |  | $(9,600,000)$ | $(9,200,000)$ | $(400,000)$ | 4.3\% | $(9,277,309)$ | $(8,919,897)$ | $(8,507,225)$ | $(8,267,825)$ | $(7,786,980)$ |
| Surplus Adjustment - Trf From Reserves |  | $(18,995,213)$ | $(10,989,933)$ | $(8,005,280)$ | 72.8\% | $(2,598,100)$ | $(4,737,152)$ | $(3,964,961)$ | $(3,073,628)$ | $(3,857,818)$ |


|  | Budget Pressure | 2021 Budget | 2020 Budget | Variance \$ | Variance \% | 2019 Actual | 2018 Actual | 2017 Actual | 2016 Actual | 2015 Actual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INFRASTRUCTURE MANAGEMENT | $\underline{0}$ | 597,660 | 547,634 | 50,026 | 9.1\% | 401,581 | 501,560 | 399,559 | 506,581 | 388,189 |
| Salaries |  | 292,249 | 259,188 | 33,061 | 12.8\% | 258,772 | 287,530 | 263,360 | 244,067 | 221,603 |
| Benefits |  | 73,861 | 61,696 | 12,165 | 19.7\% | 62,685 | 74,033 | 65,128 | 61,350 | 51,563 |
| Capital Projects - Under Threshold |  |  | 0 | 0 |  | 16,065 | 0 | 21,544 | 41,275 | 16,549 |
| Legal - Right of Way |  |  | 0 | 0 |  | 0 | 0 | 0 | 0 |  |
| Misc |  | 6,000 | 6,000 | 0 | 0.0\% | 3,934 | 8,355 | 14,326 | 18,368 | 12,579 |
| Recoveries |  |  | 0 | 0 |  | 0 | 0 | 0 | 0 | (840) |
| Infrastructure Management |  | 196,250 | 196,250 | 0 | 0.0\% | 45,924 | 112,983 | 32,353 | 119,497 | 56,082 |
| Supplies |  | 29,300 | 24,500 | 4,800 | 19.6\% | 14,201 | 18,659 | 2,848 | 22,024 | 30,653 |
| ADMINISTRATION | $\underline{0}$ | 1,062,694 | 1,121,294 | $(58,600)$ | -5.2\% | 1,019,123 | 1,016,553 | 1,064,727 | 979,066 | 1,020,332 |
| Salaries |  | 477,585 | 525,265 | $(47,680)$ | -9.1\% | 441,851 | 440,818 | 510,832 | 487,731 | 488,981 |
| Benefits |  | 127,239 | 141,781 | $(14,542)$ | -10.3\% | 128,888 | 136,067 | 152,909 | 146,300 | 151,770 |
| Advertising |  | 25,000 | 10,000 | 15,000 | 150.0\% | 14,274 | 9,805 | 9,709 | 12,629 | 8,811 |
| Answering Service |  | 4,600 | 4,500 | 100 | 2.2\% | 4,963 | 4,644 | 4,419 | 4,141 | 3,932 |
| Cell Telephone/Pager |  | 13,200 | 13,000 | 200 | 1.5\% | 13,260 | 10,785 | 11,771 | 10,210 | 11,428 |
| Communications (Radio System) | 100,000 | 71,750 | 70,000 | 1,750 | 2.5\% | 63,378 | 75,316 | 62,915 | 45,306 | 43,300 |
| Computer Supplies |  | 53,000 | 61,900 | $(8,900)$ | -14.4\% | 53,200 | 51,420 | 39,147 | 31,716 | 35,231 |
| Conferences \& Conventions |  | 7,200 | 7,100 | 100 | 1.4\% | 8,849 | 3,500 | 6,432 | 2,717 | 4,041 |
| Courier |  | 770 | 750 | 20 | 2.7\% | 455 | 635 | 332 | 533 | 534 |
| Health \& Safety (Protection) |  | 42,000 | 41,000 | 1,000 | 2.4\% | 35,292 | 34,791 | 33,661 | 33,297 | 31,887 |
| Insurance |  | 107,500 | 105,448 | 2,052 | 1.9\% | 102,876 | 101,490 | 101,490 | 105,226 | 100,435 |
| Insurance Claims |  | 30,000 | 30,000 | 0 | 0.0\% | 46,598 | 41,713 | 30,027 | 17,742 | 46,676 |
| Internet |  | 5,100 | 5,000 | 100 | 2.0\% | 6,605 | 4,193 | 3,350 | 3,347 | 2,912 |
| Legal Fees |  | 20,000 | 20,000 | 0 | 0.0\% | 3,942 | 7,690 | 6,918 | 5,322 | 21,084 |
| Membership Fees |  | 8,500 | 8,300 | 200 | 2.4\% | 6,648 | 6,980 | 7,949 | 7,683 | 8,062 |
| Office Equipment Replacement |  | 4,100 | 4,000 | 100 | 2.5\% | 3,495 | 3,112 | 3,965 | 3,973 | 3,161 |
| Office Supplies/Publications/Awards |  | 10,000 | 13,500 | $(3,500)$ | -25.9\% | 12,954 | 12,709 | 13,287 | 12,531 | 9,419 |
| Photocopier Supplies/Maint |  | 4,200 | 4,200 | 0 | 0.0\% | 2,521 | 3,099 | 2,878 | 3,452 | 2,975 |
| Postage |  | 450 | 450 | 0 | 0.0\% | 303 | 951 | 817 | 559 | 646 |
| Recoveries | $(100,000)$ | 0 | 0 | 0 |  | (60) | $(2,281)$ | 0 | $(3,000)$ | $(11,598)$ |
| Recoveries - County |  | 0 | 0 | 0 |  | 0 | 0 | $(8,257)$ | 0 |  |
| Recruitment |  | 10,000 | 15,000 | $(5,000)$ | -33.3\% | 26,763 | 30,757 | 13,994 | 12,180 | 22,939 |
| Surplus Adjustment - Capital Equipment |  | 16,000 | 0 | 16,000 |  | 0 | 0 | 16,094 | 0 |  |
| Surplus Adjustment - From Reserves |  | $(16,000)$ |  | $(16,000)$ |  |  |  |  |  |  |
| Staff Training |  | 20,000 | 20,000 | 0 | 0.0\% | 21,216 | 19,690 | 19,888 | 16,266 | 15,727 |
| Telephone |  | 11,200 | 11,000 | 200 | 1.8\% | 8,686 | 12,597 | 11,054 | 12,032 | 11,969 |
| Travel |  | 9,300 | 9,100 | 200 | 2.2\% | 12,166 | 6,072 | 9,146 | 7,173 | 6,010 |


|  | Budget Pressure | 2021 Budget | 2020 Budget | Variance \$ | Variance \% | 2019 Actual | 2018 Actual | 2017 Actual | 2016 Actual | 2015 Actual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAINTENANCE | 500,000 | 5,628,683 | 5,576,361 | 52,322 | 0.9\% | 5,699,486 | 5,930,531 | 5,361,023 | 5,005,022 | 4,468,886 |
| Salaries |  | 1,890,054 | 1,895,094 | $(5,040)$ | -0.3\% | 1,862,591 | 1,787,275 | 1,782,044 | 1,743,150 | 1,723,563 |
| Benefits |  | 523,356 | 513,917 | 9,439 | 1.8\% | 466,392 | 466,680 | 457,378 | 454,040 | 424,981 |
| Bridges and Culverts |  | 40,000 | 20,000 | 20,000 | 100.0\% | 71,450 | 48,722 | 38,954 | 22,664 | 1,899 |
| Roadside Maintenance |  | 180,000 | 200,000 | $(20,000)$ | -10.0\% | 89,326 | 152,316 | 144,959 | 92,677 | 162,139 |
| Hard Top Maintenance |  | 360,000 | 360,000 | 0 | 0.0\% | 267,836 | 318,704 | 176,354 | 94,709 | 231,694 |
| Winter Control | 250,000 | 2,165,273 | 2,117,350 | 47,923 | 2.3\% | 2,501,106 | 2,757,115 | 2,383,152 | 2,213,120 | 1,480,951 |
| Safety Devices |  | 570,000 | 570,000 | 0 | 0.0\% | 524,840 | 540,840 | 502,571 | 476,194 | 536,543 |
| Misc |  | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 6,981 |
| Surplus Adjustment - Trf To Reserves | 250,000 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |
| Recoveries |  | $(100,000)$ | $(100,000)$ | 0 | 0.0\% | $(84,055)$ | $(141,121)$ | $(124,389)$ | $(91,532)$ | $(99,865)$ |
| EQUIPMENT | 0 | 1,256,523 | 1,180,577 | 75,946 | 6.4\% | 1,980,497 | 1,254,110 | 1,079,395 | 1,931,807 | 1,704,634 |
| Salaries |  | 211,500 | 208,374 | 3,126 | 1.5\% | 214,004 | 198,679 | 204,519 | 193,455 | 194,066 |
| Benefits |  | 65,135 | 61,510 | 3,625 | 5.9\% | 57,366 | 51,124 | 54,240 | 52,642 | 50,126 |
| Salary Allocations |  | $(92,212)$ | $(88,689)$ | $(3,523)$ | 4.0\% | $(86,452)$ | $(85,855)$ | $(84,212)$ | $(82,037)$ | $(80,361)$ |
| Small Equipment, Misc |  | 65,600 | 65,600 | 0 | 0.0\% | 54,541 | 52,250 | 7,177 | 12,806 | 8,854 |
| Vehicle Operating Costs - Fuel |  | 435,000 | 425,000 | 10,000 | 2.4\% | 435,520 | 478,143 | 383,637 | 349,814 | 347,394 |
| Vehicle Operating Costs-Insurance |  | 42,500 | 39,782 | 2,718 | 6.8\% | 38,812 | 40,337 | 37,322 | 50,957 | 49,451 |
| Vehicle Operating Costs-Repairs |  | 500,000 | 444,000 | 56,000 | 12.6\% | 517,322 | 493,642 | 451,744 | 445,812 | 390,198 |
| Vehicle Operating Costs-Licence |  | 59,000 | 55,000 | 4,000 | 7.3\% | 58,956 | 53,440 | 53,404 | 50,665 | 50,508 |
| Vehicle Operating Revenue |  | $(20,000)$ | $(20,000)$ | 0 | 0.0\% | $(12,845)$ | $(14,850)$ | $(16,580)$ | $(28,915)$ | $(14,465)$ |
| Surplus Adjustment - Capital Equipment |  | 893,000 | 889,700 | 3,300 | 0.4\% | 717,652 | 771,024 | 745,378 | 808,767 | 932,285 |
| Surplus Adjustment - Trf To Reserves |  | 0 | 0 | 0 |  | 0 |  | 0 | 531,900 | 575,000 |
| Surplus Adjustment - Trf From Reserves |  | $(893,000)$ | $(889,700)$ | $(3,300)$ | 0.4\% | 0 | $(771,024)$ | $(745,378)$ | $(442,719)$ | $(786,841)$ |
| Recoveries |  | $(10,000)$ | $(10,000)$ | 0 | 0.0\% | $(14,379)$ | $(12,800)$ | $(11,856)$ | $(11,340)$ | $(11,581)$ |
| HOUSING | $\underline{0}$ | 186,550 | 186,550 | 0 | 0.0\% | 400,869 | 185,800 | 189,161 | $\underline{229,466}$ | 276,951 |
| Operating Expenses |  | 162,000 | 162,000 | 0 | 0.0\% | 134,260 | 154,837 | 142,765 | 134,157 | 181,552 |
| Surplus Adjustment - Capital |  | 230,000 | 185,525 | 44,475 | 24.0\% | 257,421 | 73,368 | 82,020 | 75,767 | 65,756 |
| Surplus Adjustment - Trf From Reserves |  | $(230,000)$ | $(185,525)$ | $(44,475)$ | 24.0\% | 0 | $(73,368)$ | $(82,020)$ | 0 |  |
| Major Repairs - Under Threshold |  | 24,550 | 24,550 | 0 | 0.0\% | 9,671 | 31,301 | 47,191 | 19,798 | 29,923 |
| Recoveries |  |  | 0 | 0 |  | (483) | (338) | (795) | (256) | (280) |


|  | Budget Pressure | 2021 Budget | 2020 Budget | Variance \$ | Variance \% | 2019 Actual | 2018 Actual | 2017 Actual | 2016 Actual | 2015 Actual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OTHER | $\underline{0}$ | 19,213,718 | $\underline{22,398,888}$ | $(3,185,170)$ | -14.2\% | 11,285,456 | 12,984,374 | 12,603,692 | $\underline{9,571,617}$ | 11,908,924 |
| Depreciation |  | 9,600,000 | 9,200,000 | 400,000 | 4.3\% | 9,277,309 | 8,919,897 | 8,507,225 | 8,267,825 | 7,786,980 |
| Surplus Adjustment - Depreciation |  | $(9,600,000)$ | $(9,200,000)$ | $(400,000)$ | 4.3\% | $(9,277,309)$ | $(8,919,897)$ | $(8,507,225)$ | $(8,267,825)$ | $(7,786,980)$ |
| Surplus Adjustment - Capital Construction |  | 19,213,718 | 22,398,888 | $(3,185,170)$ | -14.2\% | 11,285,456 | 12,984,374 | 12,603,692 | 9,571,617 | 10,585,277 |
| Surplus Adjustment - TRF to Reserves-Const |  |  |  | 0 |  | 0 | 0 | 0 | 0 | 1,323,647 |
| CONSTRUCTION - LABOUR CLEARING ACC | 0 | 0 | $\underline{0}$ | $\underline{0}$. |  | 0 | $\underline{0}$ | 0 | $\underline{0}$ | $\underline{0}$ |
| Salaries |  | 408,322 | 431,493 | $(23,171)$ | -5.4\% | 419,446 | 402,367 | 405,521 | 374,521 | 395,450 |
| Benefits |  | 81,393 | 105,642 | $(24,249)$ | -23.0\% | 76,283 | 72,643 | 79,731 | 75,119 | 71,699 |
| Charge to Capital Construction above |  | $(489,715)$ | $(537,135)$ | 47,420 | -8.8\% | $(495,729)$ | $(475,010)$ | $(485,252)$ | $(449,640)$ | $(467,149)$ |
| TOTAL EXPENDITURES | 500,000 | 27,945,828 | 31,011,304 | $(3,065,476)$ | -9.9\% | 20,787,012 | 21,872,928 | 20,697,557 | 18,223,559 | 19,767,916 |

## ROADS REVENUES

| Municipal Contribution - Operating | $8,657,110$ | $8,522,416$ | 134,694 | $1.6 \%$ |
| :--- | ---: | ---: | ---: | ---: |
| Municipal Contribution - Capital | 0 | $8,376,675$ | $(8,376,675)$ | $-100.0 \%$ |
| Provincial Grants \& Subsidies | $1,357,505$ | $1,357,505$ | 0 | $0.0 \%$ |
| Surplus Adjustment - TRF from Reserves | $15,062,996$ | $4,085,412$ | $10,977,584$ | $268.7 \%$ |
| Surplus Adjustment - TRF from Gas Tax Reserves | $2,793,217$ | $5,829,296$ | $(3,036,079)$ | $-52.1 \%$ |
| Surplus Adjustment - Temp Loan | 0 | $2,750,000$ | $(2,750,000)$ | $-100.0 \%$ |
| Federal Grants \& Subsidies | 0 | 15,000 | $(15,000)$ | $-100.0 \%$ |
| Donations in Kind |  |  | 0 | $0.0 \%$ |
| Misc | 75,000 | 75,000 | 0 | 0.0 |


| County of Renfre Schedule of Res 2021 BUDGET | erves | $\begin{array}{r} \text { Audited } \\ \text { Balance } \\ \text { 31-Dec-19 } \\ \hline \end{array}$ | $\begin{array}{r} 2020 \text { Budget } \\ \text { Reserve Changes } \end{array}$ | Known Adjustments <br> In 2020 | $\begin{array}{r} \text { Estimated } \\ \text { Balance } \\ \text { 31-Dec-20 } \\ \hline \end{array}$ | Prop-Pembroke | Property-RCP | Property - Base | Prop-Arnprior | IT | POA | Trails | PW | OPP | Transfers To | Transfers From | SDIP | $\begin{array}{r} \text { Net } \\ \text { Change } \end{array}$ | $\begin{array}{r} \text { Estimated } \\ \text { Balance } \\ \text { 31-Dec-21 } \\ \hline \end{array}$ | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Child Care | Child Care | 0 |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| Child Care | Mitigation | 1,510,335 |  |  | 1,510,335 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1,510,335 |  |
| Ec Dev | RED | 35,000 |  |  | 35,000 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 35,000 |  |
| Trail | Algonquin Trail | 14,125 |  |  | 14,125 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 14,125 |  |
| General | Building Reserve | 2,953,061 | (159,799) |  | 2,793,262 |  | (73,147) | 150,009 | 83,375 |  |  |  |  |  |  |  |  | 160,237 | 2,953,499 | c |
| General | Development Reserve | 8,641 |  |  | 8,641 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 8,641 | c |
| General | Federal Gas Tax Reserve | 0 | (3,157,523) | 3,157,523 a | 0 |  |  |  |  |  |  |  | $(2,793,217)$ |  | 2,793,217 |  |  | 0 | 0 |  |
| General | Insurance | 150,000 |  |  | 150,000 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 150,000 |  |
| General | Reforestation Reserve | 141,239 | 2,294 |  | 143,533 |  |  |  |  |  |  |  |  |  | 8,529 | $(14,100)$ |  | $(5,571)$ | 137,962 | c |
| General | OPP Bldg | 705,487 | 65,305 |  | 770,792 |  |  |  |  |  |  |  |  |  | 65,305 |  |  | 65,305 | 836,097 | c |
| General | Sick leave | 69,458 |  |  | 69,458 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 69,458 |  |
| General | TCA Renewal Reserve | 16,199,109 | $(3,853,076)$ | 2,000,000 b | 14,346,033 | $(2,110,000)$ |  |  |  | $(34,400)$ | $(23,000)$ |  | (7,420,649) |  | 5,828,066 |  | 169,149 | (3,590,834) | 10,755,199 | c |
| General | Working Capital | 13,648,343 | $(68,422)$ | 47,000 c | 13,626,921 |  |  |  |  |  |  | $(34,000)$ |  |  |  |  |  | $(34,000)$ | 13,592,921 | c |
| General | WSIB Sched 2 | 621,547 |  |  | 621,547 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 621,547 |  |
| General | Cannabis Reserve | 156,321 |  |  | 156,321 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 156,321 |  |
| General | Provincial Modernization | 725,000 | $(725,000)$ |  | - |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 | c |
| Housing | Non Profit Capital | 116,222 |  |  | 116,222 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | ${ }^{116,222}$ |  |
| Housing | Severance | 195,849 |  |  | 195,849 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 195,849 |  |
| Paramedic | Infrastructure | 1,595,784 | 180,000 |  | 1,775,784 |  |  |  |  |  |  |  |  |  | 1,121,000 | $(1,490,000)$ |  | $(369,000)$ | 1,406,784 | c |
| Paramedic | Severance | 1,378,862 |  |  | 1,378,862 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 1,378,862 |  |
| Paramedic | WSIB Sched 2 | 0 |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| Public Works | Capital | 195,255 |  |  | 195,255 |  |  |  |  |  |  |  | (8,781,347) |  | 8,586,092 |  |  | $(195,255)$ | 0 | c |
| Public Works | Winter Control | ${ }^{0}$ |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| Social Services | Fiscal Pressure | 334,549 |  |  | 334,549 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 334,549 |  |
| County Of Renfrew |  | 40,754,187 | (7,716,221) | 5,204,523 | 38,242,489 | $(2,110,000)$ | $(73,147)$ | 150,009 | 83,375 | $(34,400)$ | $(23,000)$ | $(34,000)$ | $(18,995,213)$ | 0 | 18,402,209 | $(1,504,100)$ | 169,149 | (3,969,118) | 34,273,371 |  |
| вм | WSIB Sched 2 | 447,720 | 49,024 |  | 496,744 |  |  |  |  |  |  |  |  |  | 49,024 |  |  | 49,024 | 545,768 |  |
| вм | Butterfly | 125,000 | 24,318 |  | 149,318 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 149,318 | c |
| вм | Unallocated | 1,872,769 | $(755,000)$ | $310,000 \mathrm{~d}$ | 1,427,769 |  |  |  |  |  |  |  |  |  |  | $(1,151,000)$ |  | (1,151,000) | 276,769 | c |
| вм | LTC CMI Stabilization | 248,242 |  |  | 248,242 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 248,242 |  |
| вм | Equip | 100,000 |  |  | 100,000 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 100,000 | c |
| Bonnechere Manor |  | 2,793,731 | $(681,658)$ | 310,000 | 2,422,073 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49,024 | $(1,151,000)$ | 0 | $(1,101,976)$ | 1,320,097 |  |
| mL | Butterliy | 125,000 | 34,419 |  | 159,419 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 159,419 | c |
| ML | WSIB Sched 2 | 228,442 |  |  | 228,442 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 228,442 |  |
| mL | Unallocated | 864,758 | $(626,615)$ | 25,000 d | 263,143 |  |  |  |  |  |  |  |  |  |  | $(345,000)$ |  | $(345,000)$ | $(81,857)$ | c |
| ML | Equip | 38,782 |  |  | 38,782 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 38,782 | c |
| ML | Sick leave | 186,402 |  |  | 186,402 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 186,402 |  |
| Miramichi Lodge |  | 1,443,384 | (592,196) | 25,000 | 876,188 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $(345,000)$ | 0 | $(345,000)$ | 531,188 |  |
| Opeongo | Capital | 0 |  | 500,000 e | 500,000 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 500,000 | c |
| RCHC | Capital | 2,225,626 | $(60,000)$ | 60,000 f | 2,225,626 |  |  |  |  |  |  |  |  |  |  | (1,776,450) |  | (1,776,450) | 449,176 | c |
| RCHC | AHP Reserve | 0 |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| RCHC | AHP Admin Reserve | 0 |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| RCHC | Home Ownership | 0 |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  |
| ${ }^{\mathrm{RCH}} \mathrm{C}$ | Working Capital | 50,000 |  |  | 50,000 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 50,000 | c |
| RCHC | WSIB Sched 2 | 148,483 |  |  | 148,483 |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 148,483 |  |
| Renfrew County Housing Corp |  | 2,424,109 | (60,000) | 560,000 | 2,924,109 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1,776,450) | 0 | (1,776,450) | 1,147,659 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Surplus Adjustment |  | 47,415,411 | (9,050,075) | 6,099,523 | 44,464,859 | (2,110,000) | (73,147) | 150,009 | 83,375 | (34,400) | (23,000) | $(34,000)$ | (18,995,213) | 0 | 18,451,233 | (4,776,550) | 169,149 | (7,192,544) | 37,272,315 |  |
| Capital Reserves On |  | 41,573,854 | $(5,941,576)$ | 2,942,000 | 38,574,278 | $(2,110,000)$ | (73,147) | 150,009 | 83,375 | $(34,400)$ | $(23,000)$ | $(34,000)$ | $(16,201,996)$ | 0 | 15,608,992 | $(4,776,550)$ | 169,149 | $(7,241,568)$ | 31,332,710 |  |



| Department | Primary Category | Detail | Detail | Road 70  <br> Bridge 75  <br> Culvert 90 Revised <br> or Risk 10 Year Plan |  | Budget \$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Sources of Financing |
|  |  |  |  |  |  |  | Pembroke | Provincial | as Tax Res |  |  |  |
|  |  |  |  |  |  | Taxation/Other | Share | Grant | Reserve | Reserves | Debt | Total |
| PW | Culverts | C012 | Farquharson's Culvert S. McNaughton Road | 54.95 | 15,000 |  | 15,000 | 15,000 15,000 |  |  |  |  |  |  |
| PW | Culverts | C 025 | Borne Road Culvert Borne Road | 27.6 | 30,000 |  | 30,000 |  |  |  |  | 30,000 |  | 30,000 |
| PW | Culverts | C037 | Bagot Creek Culvert Lower Spruce Hedge Road | 20.8 | 38,000 |  | 38,000 |  |  |  |  | 38,000 |  | 38,000 |
| PW | Culverts | C040 | Snake River Culvert CR 8 | 58.1 | 12,000 | 12,000 |  |  |  |  | 12,000 |  | 12,000 |
| PW | Culverts | C058 | Constant Creek Culverts Ferguson Lake Road | 20.67 | 715,000 | 715,000 |  |  |  |  | 715,000 |  | 715,000 |
| PW | Culverts | C099 | Colton Creek Bridge Matawatchan Road | 17.59 | 280,000 | 280,000 |  |  |  |  | 280,000 |  | 280,000 |
| PW | Culverts | C116 | Dunlop Crescent Culvert Dunlop Crescent | 53.75 | 400,000 | 400,000 |  |  |  |  | 400,000 |  | 400,000 |
| PW | Culverts | C134 | Campbell Drive Culvert Campbell Drive | 44.97 | 65,000 | 65,000 |  |  |  |  | 65,000 |  | 65,000 |
| PW | Culverts | C137 | Hanson Creek Culverts Robertson Line | 56.79 | 18,000 | 18,000 |  |  |  |  | 18,000 |  | 18,000 |
| PW | Culverts | C142 | Quade Creek Culvert Burchat Road | 7.57 | 225,000 | 225,000 |  |  |  |  | 225,000 |  | 225,000 |
| PW | Culverts | C152 | Wadsworth Lake Culvert Old Barry's Bay Road | 45.53 | 28,000 | 28,000 |  |  |  |  | 28,000 |  | 28,000 |
| PW | Culverts | C197 | Etmanskie Swamp Culvert CR 62 | 45.24 | 300,000 | 300,000 |  |  |  |  | 300,000 |  | 300,000 |
| PW | Culverts | C201 | Broomes Creek Culvert CR 7 | 35.27 | 1,000,000 | 1,000,000 |  |  |  |  | 1,000,000 |  | 1,000,000 |
| PW | Culverts | C222 | Pleasant Valley Steel Arch Pleasant Valley Road | 19.58 | 200,000 | 200,000 |  |  |  |  | 200,000 |  | 200,000 |
| PW | Culverts | C252 | Vanderploegs Culvert Russett Drive | 52.66 | 200,000 | 200,000 |  |  |  |  | 200,000 |  | 200,000 |
| PW | Culverts | C269 | Jacks Lake Culverts CR 58 | 53.35 | 20,000 | 20,000 |  |  |  |  | 20,000 |  | 20,000 |
| PW | Culverts | С300 | Wolf Road Twin pipes Wolfe Road | 21.56 | 200,000 | 200,000 |  |  |  |  | 200,000 |  | 200,000 |
| PW | Culverts | C302 | Wingle Creek Twin Culverts Rochfort Road | 16.27 | 20,000 | 20,000 |  |  |  |  | 20,000 |  | 20,000 |
| PW | Equipment | SMEQ-17-GA1102 | Retroreflectometer | L | 16,000 | 16,000 |  |  |  |  | 16,000 |  | 16,000 |
| PW | Equipment | Server | Shared with Finance | H |  | 16,000 |  |  |  |  | 16,000 |  | 16,000 |
| PW | Equipment | TRAC-07-12055 | RHINO MOWER | L | 15,000 | 15,000 |  |  |  |  | 15,000 |  | 15,000 |
| PW | Roads | 1 Elgin Street West | Madawaska \& Elgin-to-Cty Rd 10 (Division St) | 46.5 | 557,584 | 557,584 |  |  |  | 557,584 |  |  | 557,584 |
| PW | Roads | 1 River Road | Cty Rd 10 (Division St)-to-Usborne St | 46.7 | 333,025 | 333,025 |  |  |  | 145,697 | 187,328 |  | 333,025 |
| PW | Roads | 1 River Road | Mast Rd-to-Henry Crescent | 26.4 | 600,240 | 600,240 |  |  | 500,000 |  | 100,240 |  | 600,240 |
| PW | Roads | 20 Bruce St | Hwy 60-to-Urban Limit | 78.6 | 60,000 | 60,000 |  |  |  |  | 60,000 |  | 60,000 |
| PW | Roads | 21 Beachburg Rd | Cty Rd 49 (Lapasse Rd)-to-Davidson Rd | 77.9 | 81,142 | 81,142 |  |  | 81,142 |  | . |  | 81,142 |
| PW | Roads | 21 Beachburg Rd | Davidson Rd-to-Zion Line | 75.1 | 121,227 | 121,227 |  |  | 121,227 |  | - |  | 121,227 |
| PW | Roads | 21 Beachburg Rd | Zion Line-to-Valleyview Rd | 70.4 | 128,048 | 128,048 |  |  | 128,048 |  | - |  | 128,048 |
| PW | Roads | 21 Beachburg Rd | Valleyview Rd-to-Hila Rd | 64 | 143,592 | 143,592 |  |  | 143,592 |  | - |  | 143,592 |
| PW | Roads | 5 Stone Road | Culhane Rd-to-1574 Stone Rd | 21 | 532,416 | 532,416 |  |  |  | 532,416 |  |  | 532,416 |
| PW | Roads | 5 Stone Road | Berlanquet Rd-to-Culhane Rd | 33.6 | 636,320 | 636,320 |  |  |  | 636,320 |  |  | 636,320 |
| PW | Roads | 508 Calabogie Rd | Hutson Rd-to-Goshen Rd (culvert) | 68.9 | 50,000 | 50,000 |  |  |  |  | 50,000 |  | 50,000 |
| PW | Roads | 51 Petawawa Blv | Petawawa River Bdge N Exp Jnt-to-Military Camp Rd | 56.6 | 80,000 | 80,000 |  |  |  |  | 80,000 |  | 80,000 |
| PW | Roads | 51 Petawawa Blv | Cty Rd 16 (Victoria St)-to-Petawawa River Bdge S Exp Jnt | 57.1 | 120,000 | 120,000 |  |  |  |  | 120,000 |  | 120,000 |
| PW | Roads | 51 Petawawa Blv | Cty Rd 26 (Doran St)-to-Cty Rd 16 (Victoria St) | 62.1 | 600,000 | 600,000 |  |  |  |  | 600,000 |  | 600,000 |
| PW | Roads | 512 Foymount Rd | Lake Clear Rd-to-Buelow Rd | 1 | 537,680 | 537,680 |  |  |  |  | 537,680 |  | 537,680 |
| PW | Roads | 512 Foymount Rd | Verch Rd-to-Miller Rd (Heidemans Lumber) | 9 | 703,120 | 703,120 |  |  |  |  | 703,120 |  | 703,120 |
| PW | Roads | 512 Foymount Rd | B257-to-Lake Clear Rd | 1 | 704,000 | 704,000 |  |  |  |  | 704,000 |  | 704,000 |
| PW | Roads | 512 Foymount Rd | Buelow Rd-to-Verch Rd | 10.3 | 1,094,500 | 1,094,500 |  |  |  |  | 1,094,500 |  | 1,094,500 |
| PW | Roads | 52 Burnstown Rd | Lime Kiln Rd-to-Pucker St | 57.8 | 217,160 | 217,160 |  |  |  |  | 217,160 |  | 217,160 |
| PW | Roads | 52 Burnstown Rd | $1.8 \mathrm{~km} \mathrm{~N} \mathrm{of} \mathrm{Fraser-to-Lime} \mathrm{Kill} \mathrm{Rd}$ | 44.5 | 224,280 | 224,280 |  |  |  |  | 224,280 |  | 224,280 |
| PW | Roads | 52 Burnstown Rd | Pucker St-to-Graham Ave | 96.2 | 225,000 | 225,000 |  |  |  |  | 225,000 |  | 225,000 |
| PW | Roads | 52 Burnstown Rd | Fraser Rd (McNab/Horton Twp)-to-1.8km N of Fraser | 94.7 | 320,400 | 320,400 |  |  |  |  | 320,400 |  | 320,400 |
| PW | Roads | 52 Raglan St S | Graham Ave-to-Hwy 60 (Coumbes St) | 96.2 | 557,217 | 557,217 |  |  |  |  | 557,217 |  | 557,217 |
| PW | Roads | 635 Swisha Rd | Hwy 17-to-Interprovincial Bdge S Exp Jnt (culvert) | 80.4 | 100,000 | 100,000 |  |  |  |  | 100,000 |  | 100,000 |
| PW | Roads | 65 Centenial Lake Rd | Deer Mountain Rd-to-Chimo Rd North | 7.9 | 1,078,300 | 1,078,300 |  |  |  |  | 1,078,300 |  | 1,078,300 |
| PW | Roads | 67 Simpson Pit Rd | Byers Creek Rd-to-Buck Hill Rd | 38.4 | 921,200 | 921,200 |  |  |  | 921,200 |  |  | 921,200 |
| PW | Roads | 7 Forresters Falls Rd | Government Road-to-Harriet Street (urban begins) | 54.3 | 62,795 | 62,795 |  |  |  |  | 62,795 |  | 62,795 |
| PW | Roads | 7 Forresters Falls Rd | Cty Rd 4 (Queens Line)-to-Cty Rd 21 (Beachburg Rd) | 33.9 | 160,814 | 160,814 |  |  |  |  | 160,814 |  | 160,814 |
| PW | Roads | 7 Forresters Falls Rd | Cty Rd 21 (Beachburg Rd)-to-Government Rd | 43.3 | 449,227 | 449,227 |  |  | 383,496 |  | 65,731 |  | 449,227 |
| PW | Roads | 71 Matawatchan Rd | 4877 Matawatchan Rd-to-Cty Rd 65 (culvert) | 67.7 | 100,000 | 100,000 |  |  |  |  | 100,000 |  | 100,000 |
| PW | Roads | Active Transportation | Various Locations |  | 150,000 | 150,000 |  |  |  |  | 150,000 |  | 150,000 |
| PW | Roads | Scratch Coat | Various Locations |  | 716,431 | 716,431 |  |  |  |  | 716,431 |  | 716,431 |
| PW | Roads | Traffic Signal - upgrades | Various Locations |  |  | 200,000 |  |  |  |  | 200,000 |  | 200,000 |
| PW | Trailer | TRAI-12-1142770 | Float - 7.5 ton tag float-COB | L | 50,000 | 50,000 |  |  |  |  | 50,000 |  | 50,000 |
| PW | Vehicles | AMBU-07-1218615 | Service Van (Mechanic) | H | 115,000 | 115,000 |  |  |  |  | 115,000 |  | 115,000 |
| PW | Vehicles | HDTR-07-J653946 | 6 Ton Truck | L | 345,000 | 345,000 |  |  |  |  | 345,000 |  | 345,000 |
| PW | Vehicles | HDTR-89-H201485 | Water truck | L | 190,000 | 190,000 |  |  |  |  | 190,000 |  | 190,000 |
| PW | Vehicles | LDTR-12-S287313 | Pickup Truck (Mechanic) | L | 60,000 | 60,000 |  |  |  |  | 60,000 | 25 | 60,000 |
| PW | Vehicles | LDTR-14-S344123 | Pickup Truck | L | 34,000 | 34,000 |  |  |  |  | 34,000 |  | 34,000 |

## County of Renfrew <br> County of Renfr

## 2021 BUDGET



## Appendix III

Date: January 12, 2021
Department: Public Works \& Engineering Report Prepared by:

| PROPOSAL | A Part-time Engineering Technician was not hired in 2020. Instead, Public Works used these funds to purchase services from an engineering vendor for two contract site supervisors on an as needed basis. The Public Works Department will continue using this purchased services option for 2021 and beyond. |
| :---: | :---: |
| POSITION(S) <br> Union or Non-Union X | Removal of the PT Engineering Technician Position (1,060 hrs). |
| SUMMARY <br> - Background <br> - Discussion | Background <br> In past years, the County of Renfrew Department of Public Works \& Engineering has employed a contract Engineering Technician to supervise construction projects throughout the construction season as the number of projects being undertaken exceeded staffs capacity to supervise. Staffing of this position has required time and planning to ensure an experienced contract Technician is employed and prepared to oversee projects on an as needed basis. It has become increasingly difficult to attain individuals with the proper experience who are willing to undertake such a short-term position. <br> Discussion <br> As a result of the continued above described difficulties in filling this position, it is proposed that the services of engineering consultant firms be solicited to supervise projects as needed during the 2021 and future construction seasons. A Standing Offer is already in place for the provision of such services in a cost efficient manner. |
| RECOMMENDATION | THAT the Operations Committee recommend to County Council the approval of the Public Works Department to leave the Part-Time Engineering Technician position vacant in 2021 and purchase services from an engineering vendor for contract site supervisors on an as needed basis, if required in 2021. |
| FINANCIAL CONSIDERATIONS | PT Engineering Technician $\underline{\text { HRS }}$ $\underline{\text { Sal/Ben }}$ <br> $(\$ 44,199)$   |



December 3, 2020

Mr. Paul Moreau
CAO
County of Renfrew
9 International Drive
Pembroke, ON K8A 6W5
VIA EMAIL: PMoreau@countyofrenfrew.on.ca

## RE: Edey Street/ Galvin Street/ Daniel Street Intersection

On September 10, 2018 Council held a Public Meeting as per Section 51 (20)(a) and (b) of the Planning Act, regarding an application for the approval of a plan of subdivision (Application 47-T-18004) and regarding the proposed plan of subdivision, for the lands described as Part of Lot 3, Concession B-10 Galvin Street (Arnprior Fairgrounds). Much discussion was had during the meeting regarding traffic issues associated with the proposed development and the existing volume of traffic in the area, particularly on the County Road, Daniel Street. At that time, the Town proposed a staggered intersection be required as part of the new development.

Draft conditions were requested from the Town at that time, which included the potential staggered intersection. During the engineering of the subdivision, the intersection of Edey Street/ Galvin Street/ Daniel Street was further reviewed, a report was prepared by Stantec Consulting to provide Council with the various options to address this issue, as engineering concerns were raised with the proposed staggered intersection option.

At their Regular Meeting on November 23, 2020, Council approved the future realigning of the signalized intersection to address traffic concerns in this area. Attached you will find a copy of the report submitted to Council, along with a copy of Council's approved resolution and an electronic copy of the Stantec Consulting "Edey Street/Galvin Street/Daniel Street Intersection Review".

As you can see from the resolution, Council has directed staff to submit a written request to the County of Renfrew Operations Committee and County Council, requesting that the County of Renfrew contribute a portion of the cost of the Realigned Signalized Intersection (Option \#1), in the amount of 23\% of the total project cost, to a maximum upset limit of $\$ 292,860$. Please consider this our formal request.

If you have any questions, please do not hesitate to contact me. We look forward to Council's response.

Sincerely,

Robin Paquette,
Town of Arnprior
CAO/ Interim Planner
rpaquette@arnprior.ca
613-623-4231 Ext. 1827

## Certified Resolution

1. That Council support Option \#1 Realigned Signalized Intersection as outlined in the
Edey Street \Galvin Street \Daniel Street Intersection Review, prepared by Stantec, dated September 9th, 2020 as the preferred option for the future of the intersection; and
2. That Council direct staff to amend draft conditions 2. v) for the Arnprior Fairgrounds Subdivision File No: 47-T-18004, as follows: The Owner shall contribute a portion of the cost of the Realigned Signalized Intersection (Option \#1) as outlined in the Edey Street \Galvin Street \ Daniel Street Intersection Review, prepared by Stantec, dated September 9th, 2020, in the amount of $\$ 50,000$; and
3. That Council direct staff to submit a written request to the County of Renfrew Operations Committee and County Council, requesting that the County of Renfrew contribute a portion of the cost of the Realigned Signalized Intersection (Option \#1), in the amount of $23 \%$ of the total project cost, to a maximum upset limit of $\$ 292,860$; and
4. That Council direct staff to include the estimated cost to undertake the design in the 2021 draft capital budget and include the Town's portion of the estimated costs required to undertake the project in the 2021 draft Long Range Capital Forecast.
5. That Council direct staff to provide a copy of this report and approved recommendation to any residents who provided comments at the Public Meeting dated September 10, 2018 in regard to the Draft Plan of Subdivision.

I hereby certify that the foregoing is a true copy of the wording for Resolution No. 324-20 passed at a duly called meeting of Council, held on the $23^{\text {rd }}$ day of November, 2020.

Given under the hand of the Deputy Clerk and under the corporate seal of the Town of Arnprior


## ARNPRIOR

## Town of Arnprior Staff Report

## Subject:

Draft Plan of Subdivision - Draft Conditions - Daniel/Edey/Galvin Intersection

Arnprior Fairgrounds Subdivision
File No: 47-T-18004

Report Number: 20-11-23-01

Department: Community Services/
Operations
Report Author: Robin Paquette/ John Steckly

Title: CAO/Planner / GM, Operations
Meeting Date: November 23, 2020

## Recommendations:

1. That Council support Option \#1 Realigned Signalized Intersection as outlined in the Edey Street \Galvin Street \Daniel Street Intersection Review, prepared by Stantec, dated September $9^{\text {th }}, 2020$ as the preferred option for the future of the intersection; and
2. That Council direct staff to amend draft conditions 2. v) for the Arnprior Fairgrounds Subdivision File No: 47-T-18004, as follows:

The Owner shall contribute a portion of the cost of the Realigned Signalized Intersection (Option \#1) as outlined in the Edey Street \Galvin Street \Daniel Street Intersection Review, prepared by Stantec, dated September 9 ${ }^{\text {th }}, 2020$, in the amount of $\$ 50,000$; and
3. That Council direct staff to submit a written request to the County of Renfrew Operations Committee and County Council, requesting that the County of Renfrew contribute a portion of the cost of the Realigned Signalized Intersection (Option \#1), in the amount of $23 \%$ of the total project cost, to a maximum upset limit of $\$ 292,860$; and
4. That Council direct staff to include the estimated cost to undertake the design in the 2021 draft capital budget and include the Town's portion of the estimated costs required to undertake the project in the 2021 draft Long Range Capital Forecast.
5. That Council direct staff to provide a copy of this report and approved recommendation to any residents who provided comments at the Public Meeting dated September 10, 2018 in regard to the Draft Plan of Subdivision.

## Background:

Owner:
Description of Subject Lands:
Legal Description:
Area of Land:

Juliada Holdings Inc.
(See Attachment \#1 - Key Plan)
Part Lot 3, Concession B, Town of Arnprior
8.05 ha (19.9 acres)

The owner of the lands received Draft Approval on the proposed Plan of Subdivision (47-T-18004) and are working towards clearing the draft conditions. Once draft conditions have been satisfied, the Owner can receive final approval from the County of Renfrew and register the Plan. Draft Approval lapses on November 19, 2021.

The draft approved conditions for this development included two traffic related conditions as follows:
2. u) The Owner shall update the Transportation Impact Study (Former Arnprior Fairgrounds - 10 Galvin Street - Revision 1, prepared by Parsons, dated June 15, 2018, 47647701000 ) to provide traffic calming recommendations, including cost estimates to assist in mitigating cut-through traffic concerns from the proposed subdivision north/east via Thomas Street. Further, the Transportation Impact Study shall be updated to include recommendations for installation of traffic signals at Daniel Street and James Street. Recommendations shall include warrant analysis, forecasted timing, conceptual design considerations and cost estimates. The Transportation Impact Study shall be to the satisfaction of, and approved by the Town of Arnprior and the County of Renfrew.
v) The Owner shall amend the Transportation Impact Study (Former Arnprior Fairgrounds - 10 Galvin Street - Revision 1, prepared by Parsons, dated June 15, 2018, 47647701000) to include an engineering analysis and functional design for a signalized intersection at the offset intersections on Daniel St. between Galvin St. and Edey St. to the satisfaction of the County of Renfrew and Town of Arnprior. Upon approval of the functional design by the County of Renfrew and the Town of Arnprior, the Owner shall design and front end the capital construction of the intersection signalization pursuant to the Development Charges Act. Upon completion of construction of the signalization of the intersection noted herein and upon receipt of final acceptance by the County of Renfrew and the Town of Arnprior, the General Manager, Client Services/Treasurer shall reimburse the Owner, within one calendar year, for the capital construction costs of the front ended works up to an upset Development Charge reimbursement limit of $\$ 300,000.00$ subject to provision of final progress payment certificates and other required documentation as determined by the General Manager, Operations.

There were several reasons for these conditions to be imposed. A Transportation Impact Study has been provided in support of the application. The assessment addresses the potential impact of the proposed development on Daniel Street, County Road 2. As County Road 2 is under the jurisdiction of the County of Renfrew, staff at the County had also reviewed and commented on the Assessment.

After their initial review, the County of Renfrew Department of Public Works and Engineering provided the following comment: "Left turn movements from Galvin Street to Daniel Street will not be permitted. The study is to be updated to distribute the left turn movements to James Street or Michael Street."

The developer revised the Transportation Impact Study to reflect this requirement and provided the following conclusions:

1. At full occupancy, all study area intersections are projected to operate with acceptable delays of 18 seconds or less (LoS 'B' or better), and therefore no modifications are required to the existing intersections to support the proposed development.
2. Traffic volumes along James Street and to/from the site are relatively low, and as such, signalization of the intersection of Daniel Street / James Street is not warranted based on projected vehicle volumes.
3. The Daniel Street / Galvin Street intersection traffic volumes to/from the site are relatively low and the delays are $15-20 \mathrm{~s}$. Based on the foregoing traffic impact analysis a southbound left turn lane is not recommended.

Further to discussions with both the applicant and the County Public Works staff with regard to restricting the access from the development to Daniel Street raised some significant concerns with the impact of this restriction on the existing residents on both Michael and James Streets, as well as the intersections of those streets with Daniel Street. Furthermore, it would appear that, even with the proximity of the two intersections, there might have been some opportunity to increase the signalization at the intersections of Galvin/Daniel and Edey/Daniel to alleviate the concerns regarding the left turn movement from Galvin onto Daniel Street.

On September 10 th , 2018, Council held a required Public Meeting to consider the comments and concerns raised by the public. The meeting was well attended by residents of the surrounding community. Traffic concerns were raised, specifically with the current volumes of traffic and perceived need for additional signalization on Daniel Street, as well as the flows from Michael, Havey, William, Edey and Galvin Streets onto what is perceived to be a very busy Daniel Street.

As a result of this review and the public comments, staff recommended that the two draft conditions, 2. u) and v), whereby the developer is required to update the Transportation Study to:

- provide traffic calming recommendations, including cost estimates to assist in mitigating cut-through traffic concerns from the proposed subdivision north/east via Thomas Street;
- include recommendations for installation of traffic signals at Daniel Street and James Street;
- include an engineering analysis and functional design for a signalized intersection at the offset intersections on Daniel St. between Galvin St. and Edey St.

Furthermore the developer is required to design and front end the capital construction of the intersection signalization pursuant to the Development Charges Act.

## Discussion:

## Staggered Intersection Review

In undertaking the required review of the engineering analysis and functional design of the proposed offset intersections signalization, Partham Engineering, a specialized engineering firm focused on providing design and installation of Traffic Control Signals and Street lighting, provided the following opinion on the proposed signalization at Daniel Street and Galvin Street:
"This is not an ideal location to implement traffic signals. If traffic signals are added at Daniel St and Galvin St, they would need to operate from one controller at Daniel St and Edey St. Ideally the controller setup would provide an extended green signal on Daniel St EB at Galvin St and on Daniel St WB at Edey St. This is required to reduce the number of rear-end collisions caused by closely spaced signals. But this setup would cause an "amber trap" situation on Daniel St eastbound at Edey St and Daniel St westbound at Galvin St. The eastbound direction is shown an amber while the opposing westbound direction is still shown an extended green signal. Motorists facing the eastbound amber signal assume westbound motorists also have an amber signal and that traffic will stop. This leads to a potential for angle type accidents. This same condition would exist for Daniel St eastbound at Galvin St.

The second option would be to eliminate the extended green operation and display amber to all directions on Daniel St at the same time. Due to the close spacing of signals motorists may react differently. Some may try to stop between signals while other will try to clear the intersection. This can lead to rear-end type collisions.

Closely spaced signals such as these will always cause traffic related issues. If traffic signals are not warranted at Daniel St and Galvin St then consideration should be given to not install signals."

## Daniel/James Streets Intersection Review

Having determined that a staggered intersection at Daniel/Edey/Galvin Streets is not recommended, CGH Transportation Inc. proceeded to evaluate the intersection at Daniel/James Streets per condition 2.u) with the assumption that the development would be restricted to a right-in, right-out only intersection configuration at Daniel/Galvin Streets, per the County's original condition of development. The conclusions provided are as follows:

1. A right-in, right-out intersection configuration is proposed for the development access at Galvin Street and Daniel Street.
a. This configuration will be enforced by the addition of a concrete median between the northbound and southbound lanes of Daniel Street at this intersection.
b. Site-generated traffic will be redistributed to the second site access at the intersection of Daniel Street and James Street.
2. Using the Ontario Traffic Manual Book 12 - Traffic Signals methodology, a signal warrant was examined and indicated signalization at the intersection of James Street and Daniel Street is not required.
3. A Level of Service analysis using Synchro models indicated the LOS of the movements at the intersection of James Street and Daniel Street in the signalized scenario will remain generally the same as the LOS of those movements in an unsignalized scenario. However, by signalizing this intersection, the northbound and southbound movements no longer operate as free flow movements.

## Stantec Edey Street \Galvin Street \Daniel Street Intersection Review

In September of 2020, Stantec provided staff with a review of options for the improvement of the Edey / Galvin / Daniel Street Intersection to assist in understanding the options available for the improvement to the traffic flows in this area, recognizing the developments which have and are occurring in the vicinity, impacting the existing signalization and intersections, and the future traffic impacts. A copy of the review form Document \#1 to this Report.

The Project objectives included:

- Develop realigned signalized intersection option
- Discuss other intersection options
- Identify and discuss constraints and impacts of option
- Determine Class Environmental Assessment (EA) requirement

Four Options have been identified at this intersection:

- Option 1 - Realigned signalized intersection. Stantec will review and develop an option for the realignment and signalization of this intersection.
- Option 2A - Right-in, Right-out access to Galvin St. Signals at Edey St to remain as is.
- Option 2B - Right-in, Right-out access to Galvin St. Signals at Edey St to remain as is. As part of this option, new signals will be added at Daniel St $\backslash$ James St.
- Option 3 - Offset signalized intersection at Edey St \Galvin St \Daniel St.
- Option 4 - Roundabout at Edey St $\backslash$ Galvin St \Daniel St.

The review of the options included six criteria:

1. Safety Improvements
2. Traffic Operations
3. Site Access
4. Utility Impacts
5. Land Requirements
6. Cost/Implementation

Table 2 in Appendix D to the report provides a comparative review and summary of the intersection design options. It should be noted that a functional design study has not been completed for each option. This review identifies the strengths and weaknesses for each option and provides magnitude of costs for each.

Staff have reviewed the Stantec options report and are of the opinion that Option \#1 Realigned Signalized Intersection is the best option for the future operation of this intersection when considering all of the criteria outlined in the report. The report suggest that option \#1 provides the best solution for three main long term criteria being safety improvements, traffic operations, and site access, however unfortunately the cost impacted criteria being utility impacts, land requirements and other costs to implement the works all come at a significant cost totaling an estimated $\$ 1,171,440.00$. A further review and breakdown of the potential funding sources that may be available to fund this option are discussed under the financial considerations section below.

Staff have also circulated a copy of the Stantec options report to the County of Renfrew Public Works Department for their comment. The response from the County's Public Works Department was as follows:
"Option 1 is the preferred proposal to avoid any future liabilities for the County of Renfrew. It has been the past practice of the County of Renfrew that situations such as these are not a County responsibility and that it is the sole obligation of the Town and the developer. With that said, should the Town of Arnprior wish to submit a proposal to the Operations Committee and County Council, approved by Resolution from the Arnprior Town Council outlining any cost sharing agreement, will be required."

Appreciating that the design and construction of Option \#1 could take several years to complete, staff have also initiated discussions with the County of Renfrew's Public Works Department as to what temporary measures, if any, might be required in the interim. These discussions are ongoing and any requirement for temporary measures will be largely driven by the speed at which the Fairgrounds development is built out.

## Impacts on Subdivision Draft Conditions 2. u) and v)

As a result of the various reviews undertaken, it would appear that draft condition 2. v) as identified is no longer applicable or achievable by the developer. As such, Council is asked to give consideration to the removal of this condition. The County of Renfrew, per their original comments on the proposed subdivision, would be expected to add a condition requiring the restriction of a right-in, right-out only movements from Galvin Street to Daniel Street. This would address their traffic impact concerns. However, staff note that during the public meeting, there were concerns raised with traffic impacts on adjacent, existing residential streets, namely Thomas, Michael and James. The imposition of a right-in, right-out only on Galvin would suggest that the traffic impacts on these streets would only increase without the left turn movements at Galvin and Daniel Streets.

Recognizing the need for a long-term solution to the traffic issues on Daniel in the vicinity, and with the information from the Stantec Review concluding that a realigned intersection is the best long-term option for this area, staff would suggest that the County may consider a 'temporary right-in, right-out' in the interim.

The future implementation of Option \#1 Realigned Signalized Intersection as outlined in the Edey Street \Galvin Street \Daniel Street Intersection Review, prepared by Stantec, dated September 9th, 2020, would address the public's concerns raised during the public meeting of September 10, 2018, which as indicated above, specifically raised the current volumes of traffic and perceived need for additional signalization on Daniel Street, as well as the flows from Michael, Havey, William, Edey and Galvin Streets onto what is perceived to be a very busy Daniel Street. As such, staff recommend that this report be provided to those members of the public who provided comments at the public meeting. This will allow for transparency in the final recommendations to address the traffic concerns raised.

## Options:

## Long-term Intersection Improvements

Per the Stantec Review, four options are provided for Council's consideration in the longterm.

## Subdivision Draft Conditions

Council could refuse to consider the proposed revised Draft Conditions however, staff are of the opinion that the proposed changes are necessary and appropriate for the development.

## Policy Considerations:

The proposed development of a vacant lot within the settlement area of the Town of Arnprior is a positive investment supporting the Town's strategic vision of robust sustainable growth with new residential development. The units will provide a housing option for our residents. Furthermore, timely and efficient processing of requests provides effective service delivery and shows the Town is business friendly. By supporting this request, the development is permitted to proceed in a suitable and expeditious manner.

## Financial Considerations:

The estimated costs to undertake each of the options listed in the Stantec report are outlined in appendix $C$ of the attached report.

The estimated total cost to undertake the recommended Option \#1 is $\$ 1,171,440.00$. This estimated cost however does not include the potential cost to acquire any necessary property beyond the Town and County road allowances. For the purposes of this estimate, an additional $\$ 100,000$ has been added as the estimated cost of the required land.

Staff have had preliminary discussions with the Town's development charge consultant Watson and Associates Economists Ltd and this project could be funded up to 50\% through the provision for roads line item currently included in the Town's development charge bylaw, with the remaining percentage of the project being considered a benefit to existing.

Staff have also had preliminary discussions with the Fairgrounds developer and have advised them that the Town will expect them to contribute towards this project on the basis that their original draft condition required them to construct a right-in-right-out and the current revised draft condition requires them to undertake the functional design of an offset intersection.

Each of these previous draft conditions would have been valued in the range of $\$ 50,000$, therefore staff believes it is a reasonable amount to require as their developer contribution. It should be noted that the developer will also be contributing towards this project through the cost of development charges on their future building permits as well.

Based on the original Transportation Impact Study prepared by Parsons, dated June 15, 2018, over $88 \%$ of the traffic that currently approaches the Daniel/Edey/Galvin intersection is travelling along the north-bound and south-bound approaches of Daniel Street. With Daniel Street being a County road under the authority and control of the County, staff believe that it is reasonable to request that the County contribute $50 \%$ of the remaining cost to implement Option \#1 once the development charges and developer contribution amounts have been subtracted. This results in a County contribution in the estimated amount of $\$ 292,860$. As indicated above, the County of Renfrew has advised that should Council wish to request a funding contribution from the County that it will need to be sent to County Council by way of a Council resolution.

In summary, staff believe that there are currently four potential funding sources available to fund the total cost of this project as follows:

| Projected Funding Source | Percent of Total <br> Cost | Estimated Total <br> Contribution <br> Amount |
| :--- | :---: | :---: |
| Arnprior Development Charge Reserve Fund <br> (Provision for Roads) | $50 \%$ | $\$ 635,720$ |
| Arnprior Capital Expenditure Reserve Fund | $23 \%$ | $\$ 292,860$ |
| County of Renfrew contribution | $23 \%$ | $\$ 292,860$ |
| Developer contribution (design) | $4 \%$ | $\$ 50,000$ |
| Estimated Total | $\mathbf{1 0 0 \%}$ | $\mathbf{\$ 1 , 2 7 1 , 4 4 0}$ |

Should Council be supportive of the proposed option \#1 for the future of the intersection, Staff will endeavor to include the estimated cost to undertake the design in the 2021 draft capital budget and incorporate the Town's portion of the remaining estimated costs required to undertake the project in the years 1-5 range of the 2021 Long Range Capital Forecast while giving consideration to the projected timeframe for full build out of the subdivision.

## Meeting Dates:

August 27, 2018 - Staff Report - Draft Plan of Subdivision
September 10, 2018 - Public Meeting - Council Meeting
October 9, 2018 - Staff Report - Draft Plan Conditions
November 13, 2018 - Staff Report - Rezoning Application
December 10, 2018 - Public Meeting - Rezoning
March 25, 2019 - Staff Report - Draft Plan Revision

## Consultation:

Angelo Renon, Stantec Engineering
Lee Perkins, Director of Public Works and Engineering, County of Renfrew
Mark Crockford, CGH Transportation

Gary Scandlan, Watson and Associates Economists Ltd Jim Hutton, Contract Planner

## Documents:

Edey Street \Galvin Street \Daniel Street Intersection Review, Stantec Consulting, September 9, 2020

## Reviewed By Department Head:

Reviewed By General Manager, Client Services/Treasurer:
Jennifer Morawiec

## CAO Concurrence:

Robin Paquette

Workflow Certified By Town Clerk:

| To: | John Steckly, A.Sc.T. <br> General Manager Operations | From: | Angelo Renon |
| :--- | :--- | :--- | :--- |
|  | Town of Arnprior |  |  |
|  | 105 Elgin Street W. |  | Stantec Consulting Ltd <br>  <br>  <br> File: $1300-1331$ Clyde Ave |
|  | 163601380 | Date: | Ottawa, ON |
|  |  |  |  |

## Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

### 1.0 INTRODUCTION

Stantec Consulting Ltd (Stantec) has been retained by the Town of Arnprior (Town) to undertake a review of the intersections of Edey Street and Daniel Street as well as Galvin Street and Daniel Street. As part of this review, Stantec will review \develop options to realign the intersections as well provide comment on other options (right-inlright out, staggered signalized intersection, roundabout) that may be considered at this location. Stantec understands that the Galvin Street $\backslash$ Daniel Street intersection has been designated as one of two primary entrances for the new Fairgrounds subdivision in the Town of Arnprior. The developments will include 161 residential units with a mix of unit types including single-detached (43), semi-detached (84) and townhomes (28). For descriptive purposes for this report, Daniel St is considered to be oriented in a northsouth direction with Edey St located on the west side of Daniel St and Galvin St located on the east side of Daniel St.

As part of the new Fairgrounds development the Town has requested that Stantec's mandate includes the development of a realigned intersection at Edey St $\backslash$ Galvin St \Daniel St and discussion of 3 other Options. A cost estimate will be developed for these options.

### 1.1 SITE DESCRIPTION

The location of the study area, identified in Figure 1, includes Daniel Street and its intersection with Edey St and Galvin St. Area roadways serve the needs of commuter traffic and local commercial traffic on Edey St. The Edey St \Daniel St intersection is signalized, while the existing Galvin St $\backslash$ Daniel St intersection is a stop control (for Galvin St).

## Existing Roadways

Daniel Street South is a north-south arterial roadway that provides access to Highway 417. Within the study area, Daniel Street South has a three-lane cross-section, with the center lane acting as a two-way left-turn lane, and auxiliary right-turn lanes provided at major intersections (Daniel Street /Baskin Drive). South of Baskin Drive, Daniel Street has a five-lane cross-section. The posted speed limit is $40 \mathrm{~km} / \mathrm{h}$ north of Baskin Drive and $50 \mathrm{~km} / \mathrm{h}$ south of Baskin Drive.

Edey Street is an east-west urban local roadway that extends from Daniel Street in the east to Edward Street South in the west. Edey Street has a two-lane cross-section and sidewalks at the north and south sides. The posted speed limit is $40 \mathrm{~km} / \mathrm{h}$.

John Steckly, A.Sc.T.General Manager Operations
Page 2 of 16

## Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

Galvin Street is an east-west local roadway that extends from the Site in the east to Daniel Street South in the west. Galvin Street has a two-lane cross-section and continuous access to Michelson Auto Centre parking lot at the north. . Galvin St will be one of the two main access roads for the new Fairground development. A $40 \mathrm{~km} / \mathrm{h}$ speed limit is proposed.

The study area also includes:

- Arnprior Motor Inn located directly across Edey St. The traffic signal includes one of the two entrances to the Arnprior Motor Inn.
- A garage (Michelson Auto Centre) located in the north-east quadrant of Galvin St $\backslash$ Daniel St intersection
- Arnprior Curling Club located behind the Arnprior Motor Inn on Galvin St.
- There is a ravine with a 1600 csp culvert located on Edey St approximately 47 m from the intersection with Daniel St.


## Existing Intersections

## Daniel Street / Edey Street

The Daniel Street / Edey Street intersection is a signalized ' $T$ '-intersection with pedestrian crossings on all approaches. On the east side of the intersection an entrance to the Arnprior Motor Inn connects to the intersection and is controlled by the traffic control signals. The southbound approach consists of a shared left/through/right lane. The northbound approach consists of a through and dedicated left-turn lane. The eastbound approach consists of a shared left/through/right lane. There is a southern driveway from Daniel Street South to the Arnprior Motor Inn approximately 30 metres south of the intersection. All movements are permitted at this location.

## Daniel Street / Galvin Street

The Daniel Street South/Galvin Street intersection is an unsignalized ' $T$ ' intersection with stop control on the minor approach. The southbound approach consists of a shared through/left-turn lane. The northbound approach consists of a shared through/right-turn lane. The westbound approach is the minor approach and consists of a shared left/through/right lane. All movements are permitted at this location. Upon completion of the development left turns out at this location will be restricted based on the Traffic Impact Study.

September 9, 2020
John Steckly, A.Sc.T.General Manager Operations
Page 3 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review


Figure 1 - Project Location

Photos of the site can be found in Appendix A - Photos.

### 1.1.1 Project Objectives

The project objectives are:

- Develop realigned signalized intersection option
- Discuss other intersection options
- Identify and discuss constraints and impacts of option
- Determine Class Environmental Assessment (EA) requirements

John Steckly, A.Sc.T.General Manager Operations
Page 4 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

### 1.1.2 Municipal Class Environmental Assessment Implications

Within the Municipal Class Environmental Assessment document, published by the Municipal Engineers Association in 2011 (with 2013 errata corrections), the Municipal Road Projects schedules in Appendix 1 outline the different types of road projects and the EA requirements for each. The project descriptions that are most suitable for the intersection improvements for the Edey St $\backslash$ Galvin St $\backslash$ Daniel St is as follows:
12. a) Construction of localized operational improvements at specific locations (e.g. the realignment of the intersection)
13. Installation, construction or reconstruction of traffic control devices (e.g. signing, signalization)

For the construction of localized operational improvements, these projects fall under a Schedule A+ process and have no prescribed cost limit. These projects are pre-approved and require notification to the public prior to implementation.

For the installation of traffic control devices, these projects fall under a Schedule A process and have a prescribed cost limit of $\$ 9.5$ million before triggering a Schedule B process. It is anticipated that the intersection improvements for this location will be under the $\$ 9.5$ million limit. Schedule A activities are pre-approved. The proponents may proceed without following the procedures set out in any other part of the Municipal Class EA.

### 2.0 PROJECT OPTIONS

The study required the development of the realigned signalized intersection option and discussion of 3 other intersection options.

### 2.1 INTERSECTION OPTIONS

Four Options have been identified at this intersection:

- Option 1 - Realigned signalized intersection. Stantec will review and develop an option for the realignment and signalization of this intersection.
- Option 2A - Right-in, Right-out access to Galvin St. Signals at Edey St to remain as is.
- Option 2B - Right-in, Right-out access to Galvin St. Signals at Edey St to remain as is. As part of this option, new signals will be added at Daniel St $\backslash$ James St.
- Option 3 - Offset signalized intersection at Edey St $\backslash$ Galvin St \ Daniel St.

John Steckly, A.Sc.T.General Manager Operations
Page 5 of 16

## Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

- Option 4 - Roundabout at Edey St \Galvin St \Daniel St.


### 2.2 DESIGN CRITERIA

## Standards

The Transportation Association of Canada's (TAC) Geometric Design Guide for Canadian Roads and the Ontario Ministry of Transportation (MTO) Geometric Design Standards for Ontario Highways were the primary design standards used to establish the design criteria to be used for this intersection review.

The proposed Design Criteria below is also based on the following:

- TAC's Geometric Design Guide for Canadian Road, 2017
- Ontario Highway Traffic Act, R.S.O. 1990
- Ontario Traffic Manual - Books 1, 2, 5, 11, 12, 15, 18.

The items below identify the proposed design criteria required for the proposed intersection Options.

## Daniel Street

| Element | Design Standard |
| :---: | :---: |
| Roadway Classification | UAU (Urban Arterial Undivided) |
| Posted Speed | 40 kmlhr |
| Design Speed | $50 \mathrm{~km} / \mathrm{hr}$ |
| Design Vehicle | Aerial Fire Truck |
| Minimum Stopping Sight Distance | 65 m |
| Equivalent Minimum "K" Factor - <br> Crest (SSD) | 13 |

September 9, 2020
John Steckly, A.Sc.T.General Manager Operations
Page 6 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

| Equivalent Minimum "K" Factor - Sag <br> (Headlight Control) | 10 |
| :---: | :---: |
| Radius Minimum | 80 m |
| Minimum Radius for 50 kmlhr D.S. for <br> Normal Crown | 150 m |
| Pavement Width | 2 @ @ 5.35m (south of Edey St) <br> 2 |
| Sidewalk Width | 1.5 m |
| Approach Grades at Intersection | $0.5 \%-3 \%$ |
| Maximum Grade through Intersection | $0.5 \%-2.0 \%$ |
| Boulevard / Green Zone Width | $0.5 \mathrm{~m}-5.0 \mathrm{~m}$ |
| Cycling Facility | Shared lane |

## Edey Street

| Element | Design Standard |
| :---: | :---: |
| Roadway Classification | ULU (Urban Local Undivided) |
| Posted Speed | 40 kmlhr |
| Design Speed | 40 kmlhr |
| Design Vehicle | Aerial Fire Truck |

September 9, 2020
John Steckly, A.Sc.T.General Manager Operations
Page 7 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

| Minimum Stopping Sight Distance | 50 m |
| :---: | :---: |
| Equivalent Minimum "K" Factor Crest (SSD) | 11 |
| Equivalent Minimum "K" Factor - Sag (Headlight Control) | 9 |
| Radius Minimum | 50 m |
| Minimum Radius for 50 km hr D.S. for Normal Crown | 120 m |
| Pavement Width | 2 @ 5.35m |
| Sidewalk Width | 1.5m |
| Approach Grades at Intersection | 0.5\%-3\% |
| Maximum Grade through Intersection | 0.5\%-2.0\% |
| Boulevard / Green Zone Width | 0.5m-5.0m |
| Cycling Facility | Shared lane |

## Galvin Street

| Element | Design Standard |
| :---: | :---: |
| Roadway Classification | ULU (Urban Local Undivided) |
| Posted Speed | 40 kmlhr |

September 9, 2020
John Steckly, A.Sc.T.General Manager Operations
Page 8 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

| Design Speed | $40 \mathrm{~km} / \mathrm{hr}$ |
| :---: | :---: |
| Design Vehicle | Aerial Fire Truck |
| Minimum Stopping Sight Distance | 50 m |
| Equivalent Minimum "K" Factor Crest (SSD) | 11 |
| Equivalent Minimum "K" Factor - Sag (Headlight Control) | 9 |
| Radius Minimum | 50 m |
| Minimum Radius for 50 km hhr D.S. for Normal Crown | 120 m |
| Pavement Width | 2 @ 4.50m |
| Sidewalk Width | 1.5m |
| Approach Grades at Intersection | 0.5\% - 3\% |
| Maximum Grade through Intersection | 0.5\%-2.0\% |
| Boulevard / Green Zone Width | 0.5m-5.0m |
| Cycling Facility | Shared lane |

John Steckly, A.Sc.T.General Manager Operations
Page 9 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

### 2.2.1 Description of Options

### 2.2.1.1 Option 1 - Realigned Signalized Intersection

Option 1 includes realigning Edey St and Galvin St, intersecting Daniel St at a skew of $70^{\circ}$. Edey St and Galvin St are currently at an offset of 39.6 m . Ideally, intersections should be at a skew angle of $90^{\circ}$ with a $70^{\circ}$ angle as a minimum. A realigned intersection has been developed based on a $70^{\circ}$ intersection skew angle. Refer to Figure 2 in Appendix B for the layout for this option. Increasing skew angle results in substantial property impacts as well as substantial impacts to the Arnprior Curling Club and the large culvert. The alignment has been developed with horizontal curves with a radius of 95.0 m , resulting in a reverse crown (which connects to intersection at standard grades as noted in the design criteria). The realigned signalized intersection results in stop blocks being located offset from the pedestrian crossing lines in order to accommodate turning movements (Figure 3-5). The design vehicle used is an aerial fire truck. The realigned intersection results in:

- Relocation of above ground utilities (Hydro One and Bell poles) and underground (gas, Bell)
- Adjustment and relocation of catchbasins (storm sewer modifications to match realignment). Drainage will be addressed by connecting to the existing storm sewer system.
- Relocation of fire hydrant and adjustment to water valves
- Impacts to ravine and extension of the 1600 mm CPS culvert by $4-5 \mathrm{~m}$
- Entrance modifications including closure of one of the entrances at the Arnprior Motor Inn and modification to the Michelson Auto Centre Galvin Street entrance.
- Property acquisition. Property will be required in the south-east quadrant (vacant lot 79) and Arnprior Curling Club. There may be property impacts in the north-west quadrant due to culvert extension.
- Installation of traffic signals
- Dedicated cycling infrastructure is not included with the improvements.
- Guide rail to be re-instated adjacent to ravine.


### 2.2.1.2 Option 2A - Right-in, Right-out access at Galvin St.

Option 2 was identified in the 10 Galvin Street - James Street Signal Warrant Technical Memorandum (September 12, 2019) prepared by CGH Transportation. This option includes:

John Steckly, A.Sc.T.General Manager Operations
Page 10 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

- The addition of a concrete median between the northbound and southbound lanes of Daniel St and will begin at the Edey St intersection. The existing roadway width through this area varies between 10.70 m and 9.70 m . Minor roadway widening will be required to accommodate the new median.
- Existing traffic signals at Edey St to remain as is.
- This option limits the number of movements in and out of the development.


### 2.2.1.3 Option 2B - Right-in, Right-out access at Galvin St including New Traffic Signals at Daniel St and James St.

Option 2 was identified in the 10 Galvin Street - James Street Signal Warrant Technical Memorandum (September 12, 2019) prepared by CGH Transportation. This option includes:

- The addition of a concrete median between the northbound and southbound lanes of Daniel St and will begin at the Edey St intersection. The existing roadway width through this area varies between 10.70 m and 9.70 m . Minor roadway widening will be required to accommodate the new median.
- Existing traffic signals at Edey St to remain as is.
- This option includes the addition of new traffic signals at Daniel St and James Street.
- This option limits the number of movements in and out of the development.


### 2.2.1.4 Option 3-Offset signalized intersection at Edey St \Galvin St \Daniel St.

Option 3 was discussed in the 10 Galvin Street - James Street Signal Warrant Technical Memorandum (September 12, 2019) prepared by CGH Transportation. The technical memorandum includes input from Partham Engineering (engineering firm specialized in design and installation of traffic control signals and illumination) that identifies issues with implementing signals at Galvin St. Specifically Partham identifies the following:

> "This is not an ideal location to implement traffic signals. If traffic signals are added at Daniel St and Galvin St, they would need to operate from one controller at Daniel St and Edey St. Ideally the controller setup would provide an extended green signal on Daniel St EB at Galvin St and on Daniel St WB at Edey St. This is required to reduce the number of rear-end collisions caused by closely spaced signals. But this setup would cause an "amber trap" situation on Daniel St eastbound at Edey St and Daniel St westbound at Galvin St. The eastbound direction is shown an amber while the opposing westbound direction is still shown an extended green signal. Motorists facing the eastbound amber signal assume westbound motorists also have an amber signal and that traffic will stop. This leads to a potential for angle type accidents. This same condition would exist for Daniel St eastbound at Galvin St.

John Steckly, A.Sc.T.General Manager Operations
Page 11 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

The second option would be to eliminate the extended green operation and display amber to all directions on Daniel St at the same time. Due to the close spacing of signals motorists may react differently. Some may try to stop between signals while other will try to clear the intersection. This can lead to rear-end type collisions.

Closely spaced signals such as these will always cause traffic related issues. If traffic signals are not warranted at Daniel St and Galvin St then consideration should be given to not install signals."

This option can be found in various municipalities throughout Ontario and is still being implemented. It is not a preferred option due to safety issues.

### 2.2.1.5 Option 4 - Roundabout at Edey St $\backslash$ Galvin St $\backslash$ Daniel St.

A functional design study would be required to fully assess the feasibility of a roundabout at this location. Based on our preliminary review of the traffic volumes, roadway geometrics and site constraints, offset intersections are not ideal candidates for roundabouts. Based of the information provided, an inscribed circle diameter of 52.0 m and an island diameter (including truck apron) of 39.0 m would be required resulting in a larger footprint impact than the proposed realigned intersection. The roundabout would impact the following quadrants from a property perspective:

- South-east quadrant including the Arnprior Motor Inn
- North-east quadrant
- North-west quadrant

Impacts will include:

- Relocation of above ground utilities (Hydro One and Bell poles) and underground (gas, Bell)
- Adjustment and relocation of catchbasins (storm sewer modifications to match realignment)
- Relocation of fire hydrant and adjustment to water valves
- Impacts to ravine and extension of the 1600 mm CPS culvert by 5-6 m
- Entrance modifications including closure of one of the entrances at the Arnprior Motor Inn and modification to the Michelson Auto Centre Galvin Street entrance.
- Property acquisition. Property will be required in the south-east quadrant (vacant lot 78 and 79), Arnprior Curling Club and potential impact to Arnprior Motor Inn property. There may also be property impacts in the north-west quadrant due to culvert extension.

September 9, 2020
John Steckly, A.Sc.T.General Manager Operations
Page 12 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

### 3.0 COST ESTIMATES

Class C cost estimates have been developed for each alternative and are summarized below in Table 1 below. Table 1 can also be found in Appendix C.

Table 1 - "Class C" Cost Estimates

| Section | Description |  | Option 1 <br> Realigned <br> Intersection |  | ption 2A <br> -in \| Risht- <br> Out |  | Option 2B <br> t-in \Risht- <br> Out <br> w New <br> ersection at <br> iel \James |  | Option 3 <br> Offset <br> tersection |  | Option 4 Roundabout |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | General | \$ | 10,000.00 | \$ | 5,000.00 | \$ | 5,000.00 | \$ | 8,000.00 | \$ | 20,000.00 |
| B | Removals | \$ | 95,000.00 |  |  |  |  |  |  | \$ | 115,000.00 |
| C | Storm | \$ | 80,000.00 | \$ | - | \$ | - |  |  | \$ | 135,000.00 |
| D | Road ${ }^{1}$ | \$ | 313,000.00 | \$ | 25,000.00 | \$ | 100,000.00 | \$ | 30,000.00 | \$ | 555,000.00 |
| E | Landscaping | \$ | 16,000.00 | \$ | - | \$ | 5,000.00 | \$ | 4,000.00 | \$ | 35,000.00 |
| F | Traffic Signals ${ }^{2}$ | \$ | 185,000.00 | \$ | - | \$ | 195,000.00 | \$ | 120,000.00 |  |  |
| G | Streetlighting ${ }^{3}$ | \$ | 35,000.00 | \$ | - | \$ | 40,000.00 | \$ | 30,000.00 | \$ | 140,000.00 |
| Estimated Construction Tender Total |  | \$ | 734,000.00 | \$ | 30,000.00 | \$ | 345,000.00 | \$ | 192,000.00 | \$ | 1,000,000.00 |
| Engineering Services (20\% of Construction Total) |  | \$ | 146,800.00 | \$ | 6,000.00 | \$ | 69,000.00 | \$ | 38,400.00 | \$ | 200,000.00 |
| Utilities |  | \$ | 22,000.00 | \$ | - | \$ | 20,000.00 | \$ | - | \$ | 38,000.00 |
| Property ${ }^{4}$ |  | TB |  | \$ | - | \$ | - | \$ | - |  |  |
| Town Internal Costs (5\% of Construction Total) |  | \$ | 36,700.00 | \$ | 1,500.00 | \$ | 17,250.00 | \$ | 9,600.00 | \$ | 50,000.00 |
| Miscellaneous (5\% of Construction Total) |  | \$ | 36,700.00 | \$ | 1,500.00 | \$ | 17,250.00 | \$ | 9,600.00 | \$ | 50,000.00 |
| Sub-Total |  | \$ | 976,200.00 | \$ | 39,000.00 | \$ | 468,500.00 | \$ | 249,600.00 | \$ | 1,338,000.00 |
| Contingency (20\%) |  | \$ | 195,240.00 | \$ | 7,800.00 | \$ | 93,700.00 | \$ | 49,920.00 | \$ | 267,600.00 |
| Total |  | \$ | 1,171,440.00 | \$ | 46,800.00 | \$ | 562,200.00 | \$ | 299,520.00 | \$ | 1,605,600.00 |

${ }^{1}$ Assume 2 lifts 60 mm SuperPave, 150 mm Granular A, 400mm Granular B, Type II
${ }^{2}$ Does not include cost for PXO at roundabout
${ }^{3}$ Assume that streetlighting will entail of 400 W equivalent LED luminaires in all splitter islands within the intersection and with a spacing of 35 m to 50 m on each of the approaches
${ }^{4}$ Property costs unknown for Option 1 and Option 4

## $3.1 \quad$ COMPARATIVE REVIEW OF INTERSECTION DESIGN OPTIONS

Using the information available, including topographic mapping, utility information, conceptual designs of the options were developed for the Edey St \Galvin St \Daniel St intersection.
The following provides a high-level review of the intersection options identified in this memo. Six key criteria will be used to summarize each alternative. These include:

John Steckly, A.Sc.T.General Manager Operations
Page 13 of 16

## Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

## Safety Improvements:

The safety improvement potential of the traffic control options was evaluated.

- Option 1 - Realigned signalized intersection. The traffic signal option is expected to improve safety on the sideroads as the eastbound and westbound movements would operate under dedicated signal phases. The intersection skew angle $\left(70^{\circ}\right)$ does not provide the best geometry resulting in reduced sight triangles.
- Option 2A - Right-in, Right-out access to Galvin St. This option is relatively neutral in terms of safety improvements. It results in a reduced number of movements and thus a reduction in potential conflicts at the Galvin St intersection but increases number of vehicles accessing and leaving the development through the James St \Daniel St intersection.
- Option 2B - Right-in, Right-out access to Galvin St including new traffic signals at Daniel St and James St. This option is relatively neutral in terms of safety improvements. It results in a reduced number of movements and thus a reduction in potential conflicts. It also directs certain movement to the development through James St $\backslash$ Daniel St intersection. The addition of traffic signals at James St $\backslash$ Daniel St improves the safety at the intersection given the existing sight line constraints that are present there.
- Option 3 - Staggered signalized intersection at Edey St $\backslash$ Galvin St \Daniel St. This option is not recommended given that it creates additional safety concerns.
- Option 4 - Roundabout at Edey St $\backslash$ Galvin St $\backslash$ Daniel St. The roundabout option is expected to improve the overall safety at the intersection as it reduces the conflict points from 32 points to 8 points. In addition, the roundabout design option is expected to result in reduced speeds at all entry approaches.


## Traffic Operations:

Based on the traffic operational analysis in 10 Galvin Street - James Street Signal Warrant Technical Memorandum (September 12, 2019) prepared by CGH Transportation, the signalized intersection options are anticipated to operate acceptably under projected future conditions. The right-in \right-out will also function based on the CGH Transportation Technical Memorandum but will direct traffic to James Street. As part of the right-in \right-out option (Option 2B), traffic signals will be installed at the intersection of Daniel St and James Street. It should be noted that there are sightline issues at the intersection of James St and Daniel Street that will need to be addressed $\$ mitigated. It is assumed that the roundabout would also be able to operate acceptably under project future conditions.

## Site Access:

Site access arrangements were evaluated for all options, particularly for the existing garage, motor inn as well as access to the community.

John Steckly, A.Sc.T.General Manager Operations
Page 14 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

- Option 1 - Realigned signalized intersection. This option will result in adjustment of the Michelson Auto Centre entrance. Stantec is recommending the closure of one of the entrances to the Arnprior Motor Inn.
- Option 2A - Right-in, Right-out access to Galvin St. This option is relatively neutral in terms of site access. There are no access impacts to nearby sites. It is noted that this option limits the movements into the Fairground development at Galvin St.
- Option 2B - Right-in, Right-out access to Galvin St including new traffic signals at Daniel St and James St. This option is relatively neutral in terms of site access. There are no access impacts to nearby sites. It is noted that this option limits the movements into the Fairground development at Galvin St.
- Option 3 - Staggered signalized intersection at Edey St $\backslash$ Galvin St $\backslash$ Daniel St. Site access is not impacted by this option.
- Option 4 - Roundabout at Edey St $\backslash$ Galvin St $\backslash$ Daniel St. Site access to the Arnprior Motor Inn and Michelson Auto Centre will be impacted.


## Utility Impacts:

Impacts to existing utilities were reviewed for all options.

- Option 1 - Realigned signalized intersection. Three utility poles are directly impacted by this option, resulting in relocation of up to 6 utility poles. Illumination poles are also impacted.
- Option 2A - Right-in, Right-out access to Galvin St. It is anticipated that no utilities are impacted under this option.
- Option 2B - Right-in, Right-out access to Galvin St including new traffic signals at Daniel St and James St. It is anticipated that no utilities are impacted under this option. A preliminary design is required to determine property and utility impacts at this location.
- Option 3 - Staggered signalized intersection at Edey St $\backslash$ Galvin St \Daniel St. It is anticipated that one utility pole will be impacted by this option. Underground utility plant is not anticipated to be impacted.
- Option 4 - Roundabout at Edey St $\backslash$ Galvin St \Daniel St. Four utility poles are directly impacted by this option, resulting in relocation of up to 6 utility poles. Illumination poles are also impacted. Underground utility plant is not anticipated to be impacted.


## Land Requirements:

Property impacts were reviewed for each option.

John Steckly, A.Sc.T.General Manager Operations
Page 15 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

- Option 1 - Realigned signalized intersection. This option results in the property impacts on the northwest quadrant, and the south-east quadrant including the Arnprior Curling Club.
- Option 2A Right-in, Right-out access to Galvin St. Signals at Edey St to remain as is. No property impacts resulting from this option
- Option 2B Right-in, Right-out access to Galvin St including new traffic signals at Daniel St and James St. Signals at Edey St to remain as is. No property impacts resulting from this option
- Option 3 - Staggered signalized intersection at Edey St \Galvin St \Daniel St. It is anticipated that no property impacts will result from this option. A preliminary design is required to determine property and utility impacts at this location.
- Option 4 - Roundabout at Edey St \Galvin St $\backslash$ Daniel St. This option results in the property impacts on the north-west quadrant, and the south-east quadrant including the Arnprior Curling Club and the Arnprior Motor Inn.


## Costs / Implementation:

'Class C' cost estimates were prepared for the options using typical unit prices (based on local municipal client 2019 rates); these estimates considered all the improvements identified for each design option.

- Option 1 - Realigned signalized intersection. Improvement costs are moderate.
- Option 2A - Right-in, Right-out access to Galvin St. Improvement costs for this option are low.
- Option 2B - Right-in, Right-out access to Galvin St including new traffic signals at Daniel St and James St. Improvement costs for this option are low.
- Option 3 - Staggered signalized intersection at Edey St $\backslash$ Galvin St $\backslash$ Daniel St. Improvement costs for this option are moderate.
- Option 4 - Roundabout at Edey St \Galvin St \Daniel St. Improvement costs for this option are high.


### 4.0 REVIEW OF OPTIONS

This section provides an overview of the intersection Options.

September 9, 2020
John Steckly, A.Sc.T.General Manager Operations
Page 16 of 16

Reference: Edey Street \Galvin Street \Daniel Street Intersection Review

### 4.1 COMPARATIVE REVIEW OF INTERSECTION DESIGN OPTIONS

Table 2 in Appendix $\mathbf{D}$ provides a comparative review and summary of the intersection design options. It should be noted that a functional design study has not been completed for each option. This review provides identifies the strengths and weaknesses for each option and provides magnitude of costs for each.

## Stantec Consulting Ltd

Angelo Renon, P.Eng.

Phone: 613-799-8773

Attachment:
Appendix A - Photos
Appendix B - Figure 2-5-Realigned Signalized Intersection \Turning Templates Appendix C - Class C Cost Estimates
Appendix D - Comparative Review of Intersection Design Options
c.

## APPENDIX A

Photos


Galvin St looking west toward Daniel St


Daniel St at Galvin St looking north


Daniel St \Edey St intersection looking toward Edey St


Galvin St looking west toward Daniel St


Daniel St looking south toward Edey St intersection


Daniel St looking south near intersection with Edey St.


Daniel St at Edey St looking south


Edey St looking west near culvert crossing


Daniel St at Edey St looking north


Edey St looking east toward Daniel St


1600 csp culvert


Utilities on north-west corner of Edey St \} \backslash Daniel St.


## APPENDIX B

Figure 2-5

## Realigned Signalized Intersection

## Turning Templates





APPENDIX C
Figure $\mathbf{C}$
Class C Cost Estimate

TABLE 2 - Comparative Review of Intersection Design Options

| CRITERIA | OPTION 1 REALIGNED SIGNALIZED INTERSECTION | OPTION 2A RIGHT-IN \RIGHT-OUT | OPTION 2B RIGHT-IN \RIGHT-OUT, SIGNALS AT DANIEL \JAMES | OPTION 3 OfFSET SIGNALIZED INTERSECTION | OPTION 4 ROUNDABOUT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SAFETY IMPROVEMENTS | Improved safety on Edey St and Galvin St | (1) Reduces conflicts at intersection | (4) Reduces conflicts at intersection | Safety concerns due to increased conflicts associated with offset intersection. | Improved safety at intersection. Number of conflict points reduced. Reduced speeds at all entry approaches |
| TRAFFIC OPERATIONS | Intersection to operate acceptably under projected future conditions | Intersection operate acceptably under future conditions with concentration of traffic to Fairground development at Daniel \James intersection | Intersection operate acceptably under future conditions with concentration of traffic to Fairground development at Daniel $\backslash$ James intersection | Intersection to operate acceptably under projected future conditions | Intersection to operate acceptably under projected future conditions |
| SITE ACCESS | Site access maintained. Recommend closing on access to Arnprior Motor Inn. | (1) $\begin{aligned} & \text { Limits access to Fairground } \\ & \text { development at Galvin St }\end{aligned}$ | (C) Limits access to Fairground development at Galvin St | (1) Limits access to properties | Garage access to be impacted to potentially one (1) point of access. |
| UTILITY IMPACTS | Significant impacts to existing utilities. Will require relocation of a number of utility poles | No impacts to utilities | (1)No impacts to utilities <br> anticipated | Minor impacts to utilities | Significant impacts to existing utilities. Will require relocation of a number of utility poles |
| LAND REQUIREMENTS | $\bigcirc$ Larger Property requirements | Potential for property acquisition \easements | Potential for property acquisition \easements | No Property requirements | Significantly larger property requirements |
| COSTS / IMPLEMENTATION | Additional Traffic Signal infrastructure costs. Higher roadway construction and property costs. Higher maintenance and operating costs | Low cost. | Mid -low cost. | Additional Traffic Signal infrastructure costs. Higher maintenance and operating costs. Low roadway construction costs | No Traffic Signal infrastructure costs. Higher roadway construction and property costs. |Performs Poorly Against CriteriaPerforms Adequately Against Criteria

Performs Well Against Criteria

## APPENDIX D

Figure D
Comparative Review of Intersection Design Options

Table 1 - "Class C" Cost Estimates

| Section | Description |  | Option 1 <br> Realigned <br> Intersection |  | tion 2A <br> in $\backslash$ RightOut |  | ption 2B t-in \ RightOut w New rsection at iel \James |  | Option 3 Offset tersection |  | Option 4 Roundabout |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | General | \$ | 10,000.00 | \$ | 5,000.00 | \$ | 5,000.00 | \$ | 8,000.00 | \$ | 20,000.00 |
| B | Removals | \$ | 95,000.00 |  |  |  |  |  |  | \$ | 115,000.00 |
| C | Storm | \$ | 80,000.00 | \$ | - | \$ | - |  |  | \$ | 135,000.00 |
| D | Road ${ }^{1}$ | \$ | 313,000.00 | \$ | 25,000.00 | \$ | 100,000.00 | \$ | 30,000.00 | \$ | 555,000.00 |
| E | Landscaping | \$ | 16,000.00 | \$ | - | \$ | 5,000.00 | \$ | 4,000.00 | \$ | 35,000.00 |
| F | Traffic Signals ${ }^{2}$ | \$ | 185,000.00 | \$ | - | \$ | 195,000.00 | \$ | 120,000.00 |  |  |
| G | Streetlighting ${ }^{3}$ | \$ | 35,000.00 | \$ | - | \$ | 40,000.00 | \$ | 30,000.00 | \$ | 140,000.00 |
| Estimated Construction Tender Total |  | \$ | 734,000.00 | \$ | 30,000.00 | \$ | 345,000.00 | \$ | 192,000.00 | \$ | 1,000,000.00 |
| Engineering Services (20\% of Construction Total) |  | \$ | 146,800.00 | \$ | 6,000.00 | \$ | 69,000.00 | \$ | 38,400.00 | \$ | 200,000.00 |
| Utilities |  | \$ | 22,000.00 | \$ | - | \$ | 20,000.00 | \$ | - | \$ | 38,000.00 |
| Property ${ }^{4}$ |  | TB | D | \$ | - | \$ | - | \$ | - |  |  |
| Town Internal Costs (5\% of Construction Total) |  | \$ | 36,700.00 | \$ | 1,500.00 | \$ | 17,250.00 | \$ | 9,600.00 | \$ | 50,000.00 |
| Miscellaneous (5\% of Construction Total) |  | \$ | 36,700.00 | \$ | 1,500.00 | \$ | 17,250.00 | \$ | 9,600.00 | \$ | 50,000.00 |
| Sub-Total |  | \$ | 976,200.00 | \$ | 39,000.00 | \$ | 468,500.00 | \$ | 249,600.00 | \$ | 1,338,000.00 |
| Contingency (20\%) |  | \$ | 195,240.00 | \$ | 7,800.00 | \$ | 93,700.00 | \$ | 49,920.00 | \$ | 267,600.00 |
| Total |  | \$ | 1,171,440.00 | \$ | 46,800.00 | \$ | 562,200.00 | \$ | 299,520.00 | \$ | 1,605,600.00 |

${ }^{1}$ Assume 2 lifts 60 mm SuperPave, 150 mm Granular A, 400 mm Granular B, Type II
${ }^{2}$ Does not include cost for PXO at roundabout
${ }^{3}$ Assume that streetlighting will entail of 400W equivalent LED luminaires in all splitter islands within the intersection and with a spacing of 35 m to 50 m on each of the approaches
${ }^{4}$ Property costs unknown for Option 1 and Option 4

Appendix V..

## PUBLIC WORKS, PROPERTY \& PROTECTION COMMIT'TEE

TO:
Mayor Bennett, Chair Watt \& Members of Council
FROM:
Mark Behm, Public Works Manager
DATE:
May 1, 2020
SUBJECT: Parking Restrictions and By-Law Table Revision

## RECOMMENDATION

That Council in Committee recommends that Township Council amends By-Law 2004-05-212, a By-law to regulate parking on or obstruction of highways and streets within the Township. Further, that Council in Committee recommends that Township Council pass a resolution to be forwarded to the County of Renfrew requesting that a parking restriction be implemented on TV Tower Road (CR36) adjacent to the Algonquin Trail.

## BACKGROUND

Two parking related matters and been discussed at recent Council Meetings. The first location is TV Tower Road, County Road 36 adjacent to the Algonquin Trail and the second is the Township portion of Drive-In Road, running between Highway 148 and Burn Drive.

## DISCUSSION

It has been brought forward to Township Council that vehicles are parking on both side of TV Tower Road (CR36) at the intersection with Algonquin Trail. When vehicles are parked on both sides of a roadway in the same location, the travelled portion of the road can become narrow, requiring passing motorists to swerve into the opposing lane of Traffic. It has also been noted previously that motorist's tendency is to travel at a higher rate of speed on the section of TV Tower Road. The posted speed limit is $80 \mathrm{~km} / \mathrm{h}$ and previous requests to the County of Renfrew by the Township to lower the rate of speed have been unsuccessful due to the rural classification of the roadway.

It is proposed that a 200 -metre-long no parking restriction be implemented for both sides of TV Tower Road, at its intersection with Algonquin Trail. A map has been included for references purposes. As the road is under the County of Renfrew's jurisdiction, the Township must pass a
resolution for the proposed change. If approved, the County will provide the signage to the Township at no cost, but the Municipality will be required to complete the installation.

The second area which was recently discussed at the March 3, 2020 Council in Committee Meeting is the Township maintained portion of Drive In Road running from Pembroke Street East (Highway 148) to Burns Drive which is a privately owned and maintained road.

This recommendation would be for a parking restriction running the complete length and along both sides of the road. As the road platform is narrow, it is not a suitable location for on street parking. The thought is that once the Algonquin Trail is opened in this area, it will become a busy location for people looking for a public access point. Implementing the parking restriction in advance, will avoid any concerns or safety related issues in the future. A reference map has been included for Council's review.

## PEOPLE CONSULTED

Dean Sauriol, C.A.O.

## FINANCIAL IMPLICATIONS

It is estimated that the cost for signs, posts and installation will be approximately $\$ 800$. Funds are available in the Township's operating budget to complete the proposed works.

## ATTACHMENTS

- TV Tower Road Reference Map
- Drive In Road Reference Map
- Draft By-Law Schedule

Respectfully Submitted
Township of Laurentian Valley

## "Original Signed"

Mark Behm, C. Tech.
Public Works Manager




#### Abstract

BEING A BY-LAW TO AMEND BY-LAW NO. 04-03-206 A BY-LAW TO REGULATE PARKING ON OR OBSTRUCTION OF HIGHWAYS AND STREETS WITHIN THE TOWNSHIP OF LAURENTIAN VALLEY.


WHEREAS, Sub-paragraph 1 of Section 314(1) of the Municipal Act, R.S.O. 1990 c.m. 45 as amended authorizes a Municipality to enact a By-Law for the purpose of prohibiting or regulating the obstructing, encumbering, injuring or fouling of highways and bridges;

AND WHEREAS, the Council of the Township of Laurentian Valley recommends that an amendment be made to the list of streets affected;

NOW THEREFORE, the Council of the Corporation of the Township of Laurentian Valley enacts that:

1. That Schedule "A" of By-Law Number 04-03-206 is hereby amended by deleting it entirely therefrom and by substituting the attached Schedule "A".
2. Schedule "A" attached hereto forms part of this By-Law.
3. This By-Law shall come into force and take effect upon passing.

READ A FIRST AND SECOND TIME THIS $19^{\text {TH }}$ DAY OF MAY, 2020
READ A THIRD TIME AND FINALLY PASSED THIS $19{ }^{\text {TH }}$ DAY OF MAY, 2020

[^0]
## THE CORPORATION OF THE TOWNSHIP OF LAURENTIAN VALLEY SCHEDULE "A" <br> BY-LAW 2020-XX-XXX

| Road Name | Side |  | Prohibition <br> Times |
| :---: | :---: | :--- | :---: |
| Roy Street West | Both | Indian Ct to Karen St | Anytime |
| Karen Street | Both | Roy St W \& Hamilton St W | Anytime |
| Third Avenue South | Both | Boundary Rd E \& Stafford St | Anytime |
| Lorne Street West | Both | Third Ave S \& Stafford St | Anytime |
| First Avenue | Both | Boundary Rd E \& Lorne St W | Anytime |
| Mountainview Drive | Both | Rankin St to Dead End | Anytime |
| Rankin Street | Both | Pembroke St E \& Mountainview Dr | Anytime |
| Valley Street | Both | Forest Lea Rd 50m northerly | Anytime |
| Valley Street | West |  <br> Meadowbrook Dr | Anytime |
| Meadowbrook Drive | Both | Forest Lea Rd 50m northerly | Anytime |
| Meadowbrook Drive | East | $50 \mathrm{5m}$ N of Forest Lea Rd \& Valley St | Anytime |
| Richardson Crescent | Both | Highway 41 \& 80 Richardson Cr | Anytime |
| Richardson Crescent | West | 80 Richardson Cr to Highway 41 | Anytime |
| Drive In Road | Both | Pembroke Street East (Highway 148) to <br> Burns Drive | Anytime |



BY-LAW

## A BY-LAW TO REGULATE THE OPERATION OF OFF-ROAD VEHICLES ON COUNTY OF RENFREW ROADS

[^1]NOW THEREFORE the Council of the Corporation of the County of Renfrew enacts as follows:

1. Definitions.

In this by-law,
"Highway" shall include a common and public highway, street, avenue, parkway and driveway, any part of which is intended for use or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.
"Off-Road Vehicle" shall mean an off-road vehicle within the meaning of the Off-Road Vehicles Act, R.S.O. 1990, c. O.4, as amended.
2. Regulation of Off-Road Vehicles on Highways.

An Off-Road Vehicle shall not be operated on Highways unless it meets and is operated in accordance with the requirements of Ontario Regulation

316/03 -Operation of Off-Road Vehicles on Highways under the Highway Traffic Act, R.S.O. 1990, c. H.8, as amended by O. Reg. 315/20..

## General

Operation of Off-Road Vehicles shall be permitted on all Highways under the jurisdiction of the Corporation of the County of Renfrew with the exceptions of those Highways or parts of such Highways listed on Schedule " A " attached to this By-Law.
3. Penalties

Any person who contravenes any section of this by-law is guilty of an offence and upon conviction is liable to a fine as provided for in the Provincial Offences Act.
4. Validity

If any section, clause or provision of this By-Law is for any reason declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of the By-Law as a whole or any part thereof other than that section, clause or provision so declared to be invalid and it is hereby declared to be the intention that all the remaining sections, clauses or provisions of the By-Law shall remain in full force and effect until repealed, notwithstanding that one or more provisions thereof shall have been declared to be invalid.
6. That By-Law 99-17, being a By-Law to Regulate the Operation of Off-Road Vehicles on County of Renfrew Roads is hereby repealed.
7. That this By-law shall come into force and take effect immediately upon the date of its passing.

READ a first time this 27th day of January 2021.
READ a second time this 27th day of January 2021.
READ a third time and finally passed this 27th day of January 2021.

SCHEDULE "A"

| County Road/Name | From | To | Municipality |
| :---: | :---: | :---: | :---: |
| 1 - Madawaska Boulevard, Elgin Street | East limit of the Madawaska River Bridge | The intersection with County Road 10 (Division Street) | Arnprior |
| 2 - Daniel Street and White Lake Road | Madawaska Street | County Road 10 (Baskin Drive) | Arnprior |
| 2 - White Lake Road | Staye Court Drive/ Winners Circle | County Road 45 (Vanjumar Drive) | Arnprior |
| 16 - Victoria Street | Laurentian Drive | Petawawa Boulevard | Petawawa |
| 25 - Laurentian Dr | Victoria Street | Petawawa Boulevard | Petawawa |
| 26 - Doran Road | Petawawa Boulevard | Highway 17 | Petawawa |
| 35 - Boundary Road East | Jean Avenue | Trafalgar Road | Laurentian Valley |
| 37 - Murphy Rd | Petawawa Boulevard | Highway 17 | Petawawa |
| 51 - Pembroke St. <br> W. and Petawawa Boulevard | Pembroke City Limit | Paquette Road | Laurentian Valley Petawawa |
| 52 - Raglan Street | Highway 60 | Pine Street | Renfrew |
| 55 - Paquette Road | Highway 17 | Petawawa Boulevard | Petawawa |
| 72 - Ridge Road | Highway 17 | Deep River Road | Deep River |
| 73 - Deep River Road | Highway 17 | Ridge Road | Deep River |

October 1, 2020

Robert Tremblay, CAO/Clerk
Township of Whitewater Region
Box 40, 44 Main Street
Cobden, ON KOJ 1K0

Dear Mr. Tremblay:

## RE: A By-Law to Regulate the Operation of Off-Road Vehicles (ORVs) on County of Renfrew Roads

The County of Renfrew has received notice from the Ministry of Transportation that changes have been made to Ontario Regulations which allow for the operation of dirt bikes and wheeled extreme terrain vehicles along Ontario roadways. These off-road vehicles had previously been prohibited from operating on roadways within Ontario.

In order to affect the change and allow for the additional types of ORV's to operate along County Roadways, it is necessary to update the County's Off-Road Vehicle By-Law. A copy of a draft update to the most recent by-law, 99-17, is attached for your review.

We would appreciate if you could review the by-law and notify us of any additions or subtractions in roadways that your Municipality wishes to include in this update. It is our intention to amend the by-law at the November Committee and Council meetings and would appreciate your comments being received by the end of October. However, if this date does not provide sufficient timing for your review, please notify us of your request for extension.

If you have any questions, please do not hesitate to contact myself or Nathan Kuiack of this office.

Yours truly,

Lee Perkins, MBA, CET
Director of Public Works \& Engineering
Lperkins@countyofrenfrew.on.ca

Dear Municipal Stakeholder,

I am pleased to announce that effective January 1, 2021 , the province has expanded the on-road opportunities for off-road vehicle riders in some parts of Ontario. Off-road vehicle riders are expected to experience enhanced trail access resulting from the increased on-road connections to Ontario's off-road vehicle trail network. The changes apply only to municipalities listed in Ontario Regulation 8/03 and amend the way permitted off-road vehicles are allowed on-road access to municipal highways.

In municipalities listed in Ontario Regulation 8/03, permitted off-road vehicles will be allowed by default on municipal highways unless the municipality has an existing by-law that restricts their use or creates a new by-law to prohibit or restrict the use of some or all off-road vehicles. These new provisions replace the previous requirement that municipalities had to enact a by-law to permit off-road vehicles to operate on municipal highways. The updated regulations can be found at Ontario Regulation 316/03, and Ontario Regulation 863.

It is important to note that the on-road access rules for off-road vehicles in municipalities that are not listed in Ontario Regulation 8/03 will continue to be subject to the existing regulatory framework under Ontario Regulation 316/03 and these municipalities are not affected by this change.

The equipment configuration and performance requirements for off-road vehicles as set out in Section 10 of Ontario Regulation 316/03 also remain unchanged. The Highway Traffic Act prohibition of drivers of any motor vehicles causing the vehicle to make unnecessary noise, for example through modification, also applies and violations are subject to fines.

In order to support municipalities with these changes, the ministry has provided a Municipal Guidance Document (attached) to help municipalities decide whether they need to take action to revoke, update or pass new by-laws related to on-road access by off-road vehicles on the highways under their jurisdiction.

I ask you to kindly forward this notice and the attached Municipal Guidance Document to municipal staff responsible for traffic safety and those responsible for enforcing offroad vehicle laws in your area. Although changes have been previously announced on the Ontario Newsroom site and there will be a communication in the backgrounder issued by the Premier's Office, municipalities should ensure that the public and off-road vehicle riders are made aware of the rules in their area.

Municipal Stakeholder
Page 2
If there are any questions regarding off-road vehicles licencing, operation or equipment requirements referenced in the attached guidance material, please contact Angela Litrenta, Manager, Road Safety Program Development Office at (416) 235-5130 or Angela.Litrenta@ontario.ca.

If there are any questions regarding amendments to Ontario Regulation 316/03, and Ontario Regulation 863, please contact Ron Turcotte, Head, Safety Information Management Section, Provincial Traffic Office at (289)-407-9880 or Ron.Turcotte@ontario.ca.

Thank you for your assistance in communicating this change.
Sincerely,

Jasan Boparai
Director

Attachment - Municipal Guidance document

# Municipal Guidance Document 

Operation of Off-road Vehicles on Municipal Roadways
January 1, 2021

Effective January 1, 2021, the Ministry of Transportation (MTO) is changing the way the province manages how offroad vehicles (ORVs) are allowed on-road in some municipalities.

The use of ORVs on highways is controlled under Section 191.8 of the Highway Traffic Act (HTA), Ontario Regulation 316/03 made under the HTA, and municipal by-laws passed in accordance with the legislation and regulations. Currently, ORVs that meet the requirements in Ontario Regulation 316/03 are allowed on some provincial highways and municipal highways where a municipality has passed a by-law allowing the use of such ORVs on highways under their jurisdiction.

## WHAT'S NEW?

Effective January 1, 2021, all ORVs that meet the requirements in Ontario Regulation 316/03 for ORVs permitted onroad, will be allowed by default on municipal highways under the jurisdiction of municipalities listed in Ontario Regulation 8/03 unless the municipality has a by-law prohibiting or restricting the use of some or all such ORVs.

Municipalities that are not listed in Ontario Regulation 8/03 will continue to be subject to the existing regulatory framework and are not affected by this change. In these municipalities, ORVs will continue to be allowed only if the municipality has passed a by-law to allow permitted ORVs on municipal highways under their jurisdiction.

Municipalities listed in Ontario Regulation 8/03 will continue to have the authority and make decisions about ORVs through by-law to:

Prohibit ORVs on some or all highways


- Permit only specific ORVs on road

Prohibit ORVs at specific hours of the day

Impose additional lower speed limits

$F / 1$

Local municipalities listed in Ontario Regulation 8/03 that wish to prohibit ORVs; or restrict the permitted types of ORVs; or restrict the time of day or the season when permitted types of ORVs are allowed on-road; or establish lower speed limits for these vehicles; may need to pass a new by-law.

Where a local municipality affected by the change has an existing by-law providing a blanket permission for ORVs on all municipal highways, the by-law would not be in conflict with the new regulations. If an existing by-law only permits some ORVs or restricts ORVs to only some highways, the municipality may have to revoke the by-law and pass a new by-law as outlined above if the municipality wishes to continue such restrictions.

There is no change to the enforcement of laws related to the use of ORVs. Any issues with the day-to-day operations of police services and the actions of police officers related to ORVs should be raised with the local chief of police or their designated representatives. All set fines can be found on the Ontario Court of Justice website.

This document is provided primarily as a guide. For additional information please refer to the Highway Traffic Act, associated regulations and visit Ontario.ca/ATV for information and tips related to the operation of ORVs in Ontario.

## Off-road Vehicles Allowed On-road

Effective July 1, 2020, MTO made changes to add off-roadmotorcycles (ORM) and extreme terrain vehicles (XTV) to the existing list of ORVs permitted on-road. These two new ORV types are in addition to the currently permitted 4wheeled ORV types.

MUNICIPAL BY-LAWS: Effective July 1, 2020, the two new ORV types added to the list of ORVs permitted on-road can be allowed on municipal highways in accordance with the HTA and Ontario Regulation 316/03.

ORV is a general term used to capture several different vehicles designed for off-road use, however, only certain off-road vehicles that meet the requirements in Ontario Regulation 316/03 are permitted on-road:

All-Terrain Vehicles


Side-by-Sides

New Off-Road Vehicle Types
"A "single-rider" all-terrain vehicle (ATV) is designed to travel on four tires, having a seat designed to be straddled by the operator, handlebars for steering control and it must be designed by the manufacturer to carry a driver only and no passengers.

A two-up ATV is designed and intended for use by an operator or an operator and a passenger. It is equipped with straddle-style seating and designed to carry only one passenger.


A recreational off-highway vehicle (ROV) has two abreast seats, typically built with a hood, and uses a steering wheel instead of a motorcycle steering handlebar.

A utility terrain vehicle (UTV) has similar characteristics to an ROV but typically also features a box bed. UTVs are generally designed for utility rather than for recreational purposes.


Extreme Terrain Vehicles (XTVs), commonly referred to as Argos are 6+ wheeled off-road vehicles capable of riding in multiple terrains, including through water. These vehicles sometimes come with tracks, however, tracked versions are not being permitted on road and are restricted to
 off-road use only.

Off-Road Motorcycles (ORMs) are 2 wheeled off-road vehicles that come in varying configurations such as, but not limited to: Recreational ORMs, Trail ORMs or Competition ORM.


INFRASTRUCTURE DIVISION REPORT<br>Prepared by: Taylor Hanrath, Acting Manager of Infrastructure<br>Prepared for: Operations Committee<br>January 12, 2021

## INFORMATION

## 1. Project Carry-Over: PWC-2020-09 - Rehabilitation of B202 (Cameron Street Bridge)

Manufacture and delivery of the superstructure required for the rehabilitation of County Structure B202 (Cameron Street Bridge) was delayed due to repercussions of COVID-19. The superstructure of the bridge was installed on December 9, 2020 at which time temperatures were not ideal to complete much of the remaining works. As temperatures were not anticipated to rise significantly that time of year, the Contractor for the project was directed to complete any required works to secure the site and to complete any works requiring warm weather conditions in 2021.

The completion date for the project has been extended to June 30, 2021. The remaining works are estimated to total $\$ 170,000$ plus HST. The cost of the 2021 works for Cameron Street Bridge will be funded from anticipated savings on 2021 Capital Projects.

## RESOLUTIONS

## 2. County Road 512 (Queen Street) Retaining Wall near Calvary Baptist Church

Recommendation: THAT the Operations Committee recommend that staff discuss the option of a cost sharing agreement with the Township of Killaloe, Hagarty and Richards to replace the existing and failing stone wall with a continuous reinforced concrete retaining wall.

## Background

Attached as Appendix IN-I is a memorandum received December 1, 2020 from Borden Ladner Gervais (BLG) stating their legal opinion regarding responsibility for the stone retaining wall in front of the Calvary Baptist Church along County Road 512 (Queen Street) in Killaloe. The
memorandum concludes that without evidence proving who was responsible for construction of the retaining wall, a certain answer for who is responsible for its maintenance cannot be given. However, given the location of the retaining wall within the County's right-of-way, and the principle of affixation, the County could be held responsible for its maintenance and repair.

A meeting was conducted at the Calvary Baptist Church on Queen Street in Killaloe on Wednesday, December 2, 2020 to discuss the current state of the retaining wall along Queen Street and Coll Street. In attendance at the meeting were Mr. Lee Perkins, Director of Public Works and Engineering and Mr. Taylor Hanrath, Acting Manager of Infrastructure from the County of Renfrew; Mr. Dean Holly, Works Superintendent from the Township of Killaloe, Hagarty and Richards; and Pastor Mike Andrews and Mr. Weber Hubert from Calvary Baptist Church.

Staff were advised that the wall was constructed in 2001 by Eaton Landscaping and was contracted by the Village of Killaloe; County staff continue to search for supporting data. County staff has conferred with Mr. Holly regarding the legal opinions obtained by the County.

## BY-LAWS

## 3. County Road 1 (River Road) - Road Access Agreement

Recommendation: THAT the Operations Committee recommend to County Council that a Road Access Agreement between 1230381 Ontario Inc. and the County of Renfrew be approved; AND FURTHER THAT a By-law to Authorize Execution of the Road Access Agreement be passed.

## Background

1230381 Ontario Inc. is the owner of property adjacent to County Road 1 (River Road) in the geographic Township of Horton. The owners have made application for the severance of a new lot fronting onto River Road. The creation of the new lot has been granted on the condition that the applicant enters into an agreement with the County regarding access to County Road 1 due to restrictions in entrance spacing. The new lot is described as Part of Lot 7, Concession 9, in the geographic Township of Horton, shown as Parts 1 and 2 on Registered Plan 49R-19627. The mutual
access will serve as the access point for both the severed lot and the retained lands.

The new lot could not meet the County's requirements for entrance spacing. It is therefore necessary to have a Road Access Agreement identifying the entrance for the lot described above and shown on the Registered Plan 49R-19627 attached as Appendix IN-II. A map showing the property is attached to this report as Appendix IN-III. The Road Access Agreement is to be registered and run with the title to the lands so that future owners are aware of the Road Access Agreement.

## 4. County Road 6 (Lochwinnoch Road) Acquisition of Road Widening Land

Recommendation: THAT the Operations Committee recommend to County Council that a By-law be passed to acquire Parts 6, 7 and 8 on Registered Plan 49R-19635 from 1230381 Ontario Inc. for the sum of Five Hundred Dollars ( $\$ 500$ ); AND FURTHER THAT Parts 6, 7 and 8 on Registered Plan 49R-19635 be dedicated as part of the public highway upon registration of the transfer documents.

## Background

In the winter of 2017, 1230381 Ontario Inc. submitted an application for a severance of property along a portion of County Road 6 (Lochwinnoch Road) within Part of Lot 6, Concession 5 in the geographic Township of Horton. As a condition of consent and in accordance with Corporate Policy PW-12 - Right-of-Way Protection and Acquisition, the applicants are to convey road widening lands to the County of Renfrew fronting along Lochwinnoch Road.

The property to be transferred to the County is identified as Parts 6, 7 and 8 on Registered Plan 49R-19635 which is attached as Appendix IN-IV. As compensation for the land, the County is to pay fair market value which has been established as $\$ 5,000$ per acre. With the total area of the land to be conveyed measuring 0.097 acres, the total value of the land is $\$ 485$. However, in accordance with Corporate Policy PW-12, the minimum compensation shall be $\$ 500$. In addition, the County of Renfrew will pay for its portion of the legal survey as well as the legal fees associated with the transfer. A map has been included as Appendix IN-V to depict the area of the lands to be acquired.

## 5. County Road 512 (Foymount Road) Acquisition of Road Widening Land

Recommendation: THAT the Operations Committee recommend that a By-law be passed at County Council to acquire Part 2 on Registered Plan 49R-19650 from Sandra Elizabeth Wigmore for the sum of Five Hundred Dollars (\$500); AND FURTHER THAT Part 2 on Registered Plan 49R-19650 be dedicated as part of the public highway upon registration of the transfer documents.

## Background

In the spring of 2020, Sandra Wigmore submitted an application for a severance of property along a portion of County Road 512 (Foymount Road) within Part of Lot 7, Concession 1, in the geographic Township of South Algona, in the Township of Bonnechere Valley. As a condition of consent, and in accordance with Corporate Policy No. PW-12 - Right-ofWay Protection and Acquisition, the applicants are to convey road widening lands to the County of Renfrew fronting along Foymount Road.

The property to be transferred to the County is identified as Part 2 on Registered Plan 49R-19650 which is attached as Appendix IN-VI. As compensation for the land, the County is to pay fair market value which has been established as $\$ 1,100$ per acre. With the total area of the land to be conveyed measuring 0.178 acres, the total value of the land is $\$ 195.80$. However, in accordance with Corporate Policy PW-12, the minimum compensation shall be $\$ 500$. In addition, the County of Renfrew will pay for its portion of the legal survey, as well as the legal fees associated with the transfer. A map has been included as Appendix IN-VII to depict the area of the lands to be acquired.

## 6. Admaston/Bromley Culvert Assumption

Recommendation: THAT the Operations Committee recommend to County Council that a By-Law be passed to amend Schedule 'B' of By-law 10-15 to add County Structure C337 (Berlanguet Creek Culvert) to the County Road System effective February 1, 2021.

## Background

Attached as Appendix IN-VIII is a letter from the Township of Admaston/Bromley requesting the County of Renfrew assume a culvert replaced in 2019.

The new culvert is located on Culhane Road, approximately 0.1 km northeast of Foy Road, and crosses over Berlanguet Creek. The culvert was designed to meet the requirements of the Canadian Highway Bridge Design Code as well as Corporate Policy PW-02 - Bridge Design and Construction. As per Policy PW-02, "All highway structures designed in accordance with the provisions of this policy and meeting the definition of a bridge shall upon the recommendation of the County Engineer and with the approval of the Operations Committee and County Council, be given a county bridge status."

The Township of Admaston/Bromley has provided all design and construction information for the culvert. County staff have reviewed the culvert and found it to be in good condition.

## 7. Bridge Load Posting By-Law

Recommendation: THAT the Operations Committee recommend to County Council that By-Law 101-18 Restricting the Weight of Vehicles Passing Over Bridges in the County of Renfrew be repealed; AND FURTHER THAT a new By-law for the same purpose be passed with updated load restrictions as shown in Schedule A.

## Background

In 2018, the County of Renfrew solicited the services of an Engineering Consultant to inspect and perform structural analysis on a number of structures to check and confirm required load postings. By-Law 101-18 was passed following the recommendations stemming from these inspections and analysis.

A number of structures included under By-Law 101-18 have since had major rehabilitation completed or are in the process of being rehabilitated. The rehabilitations completed on these structures have brought the structures into compliance with the Canadian Highway Bridge Design Code and negated the need for load posting. Additionally, the County solicited the services of J.L. Richards \& Associates to inspect a number of County structures and perform structural analysis to check or confirm required load postings in September 2020. The analysis of these structures has been completed and one additional bridge, B179 (Paugh Lake Road Bridge), has been recommended for load posting.

A summary table of the load restrictions currently required on County of Renfrew bridges is included in Schedule A, which is attached to the new ByLaw.

To:<br>The County of Renfrew<br>From: Borden Ladner Gervais LLP<br>Client/Matter No: 337402-000037<br>Subject: Retaining Wall Issue with the Calvary Baptist Church in the Township of Killaloe

## I. Introduction

Calvary Baptist Church (the "Church") owns the property municipally known as 148 Queen Street, Killaloe, ON and legally described in Schedule "A" (the "Church Property"). The Church Property is adjacent to two public highways: Queen Street and Coll Street, both of which are also legally described in Schedule "A". The Church Property sits at a higher elevation than the bordering roadways and to provide shoring support due to the elevation change, a retaining wall was constructed along the Church Property's boundary (the "Retaining Wall"). The Retaining Wall is constructed out of different materials in two separate segments: 1) interlaid stone brick; and 2) poured concrete. Photos of the two segments are attached hereto at Schedule "B". We understand the original construction of the Retaining Wall was done solely with poured concrete, and that the remaining segment of poured concrete today is the portion of the Retaining Wall which was not replaced by the recent construction of the interlaid stone brick segment.

The interlaid brick segment of the Retaining Wall has now begun to deteriorate, causing a hazard to pedestrians and drivers using the adjacent roadway. The Retaining Wall requires repairs to correct the issue, however, there is uncertainty over who owns the Retaining Wall, and both the Church and the County of Renfrew (the "County") have taken the position that the other party is responsible for the wall. In this regard, the County has requested our opinion to determine the ownership of the Retaining Wall and the responsibility for its maintenance and repair. To this end, we have examined legal title to the Church Property, Queen Street, and Coll Street, and considered and applied the relevant legal principles possible as set out below.

For the purposes of this analysis we are addressing the interlaid brick portion of the Retaining Wall which fronts upon Queen Street. We understand the poured concrete portion of the Retaining Wall is not at issue. That being said, the legal principles below can be applied generally, and in resolving the present concerns related to the interlaid brick portion, we would recommend a written exchange to document future expectations.

## II. The Law

We will superficially review a number of principles of law which may be applicable to the present circumstances.

## A. Affixation

A key factor in determining responsibility for the Retaining Wall will be determining the ownership of the real property upon which it resides. It is a principle of law that when personal property (i.e. the materials comprising the Retaining Wall) become affixed or physically attached to real property, the personal property becomes a part of the real property, and ownership aligns upon the real property. ${ }^{1}$ This presumption can be rebutted by a written agreement to the contrary. ${ }^{2}$ For example, in many circumstances the construction of a retaining wall on the property of another would be documented by an easement agreement reserving ownership (and responsibility) for the retaining wall.

## B. Trespass

The tort of trespass occurs when a person enters upon the land of another, or places, throws, or erects some material object upon the land of another, without the legal justification or legal right to do so. To constitute trespass, the infringing party must directly interfere with the land that is owned by another. ${ }^{3}$ This interference does not require actual damage to the other's land, but the violation must be direct; indirect actions will not be enough to cause the tort. ${ }^{4}$ There are some defences to the tort of trespass, including necessity, justification, and consent, which will protect against any liability. ${ }^{5}$

The courts have found property owners guilty of trespass a number of times where the trespass stems from a retaining wall or other wall being built on a neighbouring property. In the case of Chua v. Jassal, the plaintiff replaced the fence between their property and their neighbour's property. The plaintiff mistakenly believed that the old fence was the dividing line between the two properties and constructed the new fence in the same location. It was later determined via survey that the new fence was in fact located entirely on the Jassal's property, and the court accordingly declared that the new fence constituted a trespass. ${ }^{6}$ A similar outcome occurred in Bellini Custom Cabinetry Ltd. v. Delight Textiles Ltd., where a predecessor of the defendant had installed a retaining wall that encroached upon the plaintiff's property. The predecessors of the both defendant and the plaintiff had settled the issue and the plaintiff's predecessor had provided their consent which was conditional upon the encroachment not increasing. When the defendant purchased the property, their actions caused the encroachment to expand, and the

[^2]court found that while the plaintiff was bound by their predecessor's consent, that consent was vitiated as soon as the encroachment increased, and the defendant was guilty of trespass. ${ }^{7}$

## C. Adverse Possession

In factual circumstances where trespass might be asserted, the conditions for a person to assert a claim for adverse possession may also exist. Title may obtained by, and dispossessed from another, by adverse possession of land.

In respect of private owned land, a claim for adverse possession arises when a person exercises possession of the property of another in a manner that is "actual", "continuous", "open", "visible", "notorious" and "exclusive" for not less than ten years. ${ }^{8}$ Adverse possession is classically exemplified in the construction of a fence on a neighbor's property, and that neighbor objects and does not consent, but does nothing to end the circumstances.

Adverse possession cannot accrue under the land titles system of land registration. The present lands were converted to land titles on May 10, 1999 and consequently, any such rights must have accrued prior to that time.

Claims for adverse possession as against the crown and municipalities require the longer period of sixty years to accrue. ${ }^{9}$

## D. Nuisance

The tort of nuisance, unlike trespass, can occur through a person's indirect actions. A nuisance is created through the substantial interference with an owner or occupier's right to the use and enjoyment of land, provided that the interference is unreasonable in the circumstances. ${ }^{10}$ The bar for proving a nuisance is higher than proving a trespass and requires more than the act itself; there must be a either substantial interference or unreasonable damage. If this cannot be proven, the interference does not constitute a nuisance.

Case law on the creation of a nuisance via the construction of a retaining wall is rarer than in trespassing cases. This stems from the difference between the two, as the erection of a wall is often a direct intentional act, while nuisances are often indirect interferences. In the case of Mann $v$ Saulnier for instance, the defendant erected a wooden fence along the property line. At the time of the construction the fence was neither trespassing nor causing a nuisance. However, over time the snow and wind caused the fence to lean, such that it now encroached upon the plaintiff's property. The court held that this encroachment was a nuisance, as it was not the defendant's direct actions which caused the encroachment, but it was their indirect actions of

[^3]not maintaining and repairing the fence as it began to lean, and the interference was
therefore a nuisance. ${ }^{11}$
We note however, that the standard for nuisance will be more difficult to prove than trespass, as nuisance requires damage or substantial interference. The courts have found previously that a few rocks falling from a neighbour's gabion wall is not enough to constitute damage or substantial interference. ${ }^{12}$ Proving the deterioration of the Retaining Wall constituted a nuisance must involve a substantial interference with the use of the roadway or actual damage.

## III. Review of Title Documents and Retaining Wall Location

Based upon its proximity to property lines, the Retaining Wall may be located on three properties: 1) the Church Property, highlighted in green in the drawing attached hereto at Schedule "C"; and 2) Queen Street, owned by the County and highlighted in red in the drawing attached hereto at Schedule "C"; and 3) Coll Street, owned by the Township of Killaloe (the "Township") and highlighted in yellow in the drawing attached hereto at Schedule "C".

We have reviewed the titles to the Church Property, Coll Street, and Queen Street, and there are no references to, or depictions of the Retaining Wall which would assist in ascertaining which side of the property boundaries the Retaining Wall lies upon.

The only item which depicts the Retaining Wall is a recent sketch conducted by Adam Kasprzak Surveying Ltd., attached hereto at Schedule "D". The sketch shows that the interlaid brick portion of the Retaining Wall, highlighted in orange, has been built mostly upon Queen Street, while the remaining poured concrete portion of the Retaining Wall and a small segment of the interlaid brick portion have been constructed on Coll Street. We note that said sketch has not been certified by a surveyor, and will assume for our discussion of outcomes below that location of the Retaining Wall as indicated on the sketch is correct.

## IV. Outcomes for Maintenance Responsibility

On the basis of the information you have provided, we have assumed that the Ministry of Transportation (and by succession, the County) constructed the original poured concrete Retaining Wall, and that part of this was later replaced by interlaid brick in the early 2000's by the Church.

As the sketch attached hereto at Schedule "D" indicates that the interlaid brick portion of the Retaining Wall is mostly located on Queen Street and based upon our assumption above, it is presumed that Church trespassed onto the County's property at Queen Street, and constructed the Retaining Wall without the required permission, before later abandoning the Retaining Wall on Queen Street. As a result of this construction and abandonment, as well as the principle of affixation described above, the Retaining Wall will be owned by, and be the responsibility of, the County. To rebut this presumption of ownership, evidence will need to 11 hadraviged thater, th9959] N.B.J. No. 12, at para 12.
12 Bellini, supra, note 7 at 126 .

Retaining Wall was constructed by another party (e.g. the Church) and that it was the intention of the constructing party and the County that the ownership of the Retaining Wall was always intended to remain with the constructing party. In the current circumstances, we have been provided with some documentation, but none proves conclusively that the Retaining Wall was constructed by another party and that the intention was to retain ownership, and as observed above, nothing was registered on title in this regard.

If the above is correct, the County could assert a claim for trespass and demand the forced removal of the Retaining Wall. However, this may be an impractical position for the County to take for two reasons: 1) the Retaining Wall protects the operation of Queen Street; and 2) given the passage of time since the Retaining Wall was constructed, the assertion of a trespass could also support a claim by the Church for adverse possession, which would implicate the fundamental ownership and responsibility of the Retaining Wall being the Church's, but would also shift the property boundaries of the County at Queen Street. We do note however, that there has not been any evidence provided which points towards the Church meeting the 60 year requirement for adverse possession against a municipality, and as such, a claim for adverse possession if made by the Church, would not be worth much consideration without further evidence.

As an alternative to the above, it may be possible to argue there was an implicit agreement between the Church and the County at the time of the construction of the interlaid brick portion Retaining Wall, wherein the County agreed to let the Church onto the Queen Street property and construct the Retaining Wall on the implicit (or explicit if it can be proven) agreement that the Church would continue to be responsible for the maintenance and repair of said wall. Proving this argument, however, would require additional evidence beyond what we have been provided, and even if such evidence is provided, if it not possible to predict how a court would evaluate these uncertain facts.

Whomever is found to be responsible for the maintenance of the Retaining Wall, if damage or injury is suffered on the property of another, as a consequence, the principles of nuisance would be applied making that person responsible for the same.

Notwithstanding all of the above, if the MTO as predecessor in title to Queen Street, or another party on behalf of the County, was responsible for the replacement and reconstruction of the Retaining Wall with the interlaid brick portion, the principle of affixation, trespass, and adverse possession are irrelevant, and the County would be the owner of the Retaining Wall with the accompanying maintenance and repair obligations.

## V. Conclusion

We trust that the foregoing review is assistive in understanding the relevant legal principles and how they might be applied to the Retaining Wall. Without evidence proving who was responsible for the construction of the Retaining Wall, a certain answer for who is responsible for its maintenance cannot be given. However, given the location of the Retaining Wall on Queen Street and the principle of affixation, the County could be found to be the owner of the Retaining Wall and would therefore be responsible for its maintenance and repair, as well as,
all claims for nuisance that result from its failure to do so. It could also alternatively be found that there was an agreement between the Church and the County, wherein the Church was responsible for the Retaining Wall, however, evidence would need to be adduced that indicates the Church was only authorized to enter onto Queen Street and build the Retaining Wall on the implicit (or explicit if it can be proven) condition and agreement between the Church and County that the Church would nonetheless continue to be responsible for the Retaining Wall's maintenance and repair. If no additional evidence beyond what has been provided can be adduced in support of this argument it is unlikely to succeed.

# Schedule "A" 

## Legal Description

## Church Property:

PIN 57521-0102 (LT)
PT LT 6 CON 5 HAGARTY AS IN HA490 \& KI654; VILLAGE OF KILLALOE

## Queen Street:

57522-0249 (LT)
RDAL BTN LT 5\&6 HAGARTY AKA CAMERON ST; PT LT 5 CON 6 HAGARTY; PT LT 6 CON 6 HAGARTY; PT LT 6 CON 5 HAGARTY; PT LT 26 PL 127 HAGARTY; PT LT 27 PL 127 HAGARTY; QUEEN ST PL 127 HAGARTY; QUEEN ST PL 138 HAGARTY; PT LAND UNDER THE WATERS OF BRENNAN'S CREEK HAGARTY; RDAL BTN CON 4\&5 HAGARTY AS IN R46380, PT 2-13, 49R585, PT 1, 49R1200, PT 13, 49R1283, PT 1, 49R1007, PT 1, R148394, PT 1, R145666 LYING S OF PT 3, 49R6950 AKA SECONDARY HWY \#512; S/T UNREGISTERED HYDRO EASEMENT ; HAGARTY \& RICHARDS

## Coll Street:

PIN 57521-0114 (LT)
COLL ST PL 140 HAGARTY; COLL ST PL 138 HAGARTY LYING W OF QUEEN ST N; VILLAGE OF KILLALOE

Schedule "B"

## The Retaining Wall



Schedule "C"
Properties


Schedule "D"
Survey of the Properties


## BY-LAW NUMBER

## A BY-LAW TO ENTER INTO A ROAD ACCESS AGREEMENT ON COUNTY ROAD 1 (RIVER ROAD) WITH 1230381 ONTARIO INC.

WHEREAS under Section 11(3) of the Municipal Act, 2001, S.O. 2001, as amended, a municipality may pass by-laws respecting highways under its jurisdiction;

AND WHEREAS under Section 35 of the Act, a municipality may pass by-laws restricting access to a highway under its jurisdiction by an owner of land abutting that highway;

AND WHEREAS Renfrew County Road 1 (River Road) is under the jurisdiction of the Council of the Corporation of the County of Renfrew;

AND WHEREAS it is necessary to control access to lands described as Part of Lot 7, Concession 9, being Parts 1, 2 and 3 on Reference Plan 49R-19627, in the geographic Township of Horton in the Township of Horton in the County of Renfrew;

AND WHEREAS the above described lands are currently held under the title of 1230381 Ontario Inc.

NOW THEREFORE the Council of the Corporation of the County of Renfrew hereby enacts as follows:

1. That the Council of the Corporation of the County of Renfrew enter into a Road Access Agreement with 1230381 Ontario Inc., as described in Schedule ' $A$ ' attached to this By-law for the purpose of controlling access to County Road 1 (River Road).
2. That the Warden and Clerk be empowered to do and execute all things, papers and documents necessary to the execution of the said contract.

READ a first time this 27th day of January 2021.
READ a second time this 27th day of January 2021.
READ a third time and finally passed this 27th day of January 2021.

## SCHEDULE ' $\mathbf{A}^{\prime}$

## ROAD ACCESS AGREEMENT

THIS ROAD ACCESS AGREEMENT made as of the __ day of __, 2020.

## BETWEEN:

## 1230381 ONTARIO INC.

2740 Harbison Road
Richmond, Ontario
K0A 2Z0
(hereinafter called the "Owner")
OF THE FIRST PART

- and -


## THE CORPORATION OF THE COUNTY OF RENFREW <br> County Administration Building <br> 9 International Drive, <br> Pembroke, ON K8A 6W5 <br> (hereinafter collectively called the "County")

OF TIEE SECOND PART

## WITNESSES THAT WHEREAS:

1. Under its File B173/16(1) County of Renfrew Land Division Committee granted provisional consents to the creation of one new lot from the Owner's land more particularly described in Schedule "A" annexed hereto (hereinafter called the "Owner's" Land), in the case of the said lot together with a right-of-way in, over, along and upon Part of Lot 7, Concession 9, being Part 3, Plan 49R-19627, Township of Horton, County of Renfrew for purposes of ingress and egress to and from the said lots; and
2. It is a condition of the said provisional consents that the parties enter into this Road Access Agreement; and
3. 1230381 Ontario Inc. is the owner of Part of Lot 7, Concession 9, being Part 3, Plan 49R19627, Township of Horton, County of Renfrew. The owner(s) intend(s) that this agreement satisfy the requirement.
4. Section 53(2) of the Planning Act, R.S.O. 1990, c. P. 13 as amended, affords to the council of a municipality the same powers with respect to a consent with respect to the approval of a plan of subdivision under Section 51 (25) of the said Act; and
5. The County deems it expedient and in the public interest that this Road Access Agreement be entered into.

NOW THEREFORE in consideration of the sum of One Dollar (\$1.00) of lawful money of Canada now paid by each party to the other, the receipt and sufficiency whereof is hereby by each of them respectively acknowledged, and further in consideration of the covenants hereinafter set forth, the parties hereto agree as follows:

1. The following Schedules are annexed hereto and form part of this Agreement:
"A" - Legal Description of the Owner's Land;
"B" - Legal Description of the New Lots; and
"C" - Description of Access Point (as hereinafter defined).
2. The parties acknowledge that the County of Renfrew Land Division Committee has granted provisional consents to the severance from the Owner's Land one lot, having a frontage on River Road which lots are more particularly described in Schedule "B" annexed hereto (hereinafter referred to as the "Lots").
3. (a) The Owners acknowledge that the consents were granted only on the condition that road access to the Lots from River Road be via a single entrance located along the frontage on that part of the Owner's land more particularly described in Schedule "C" to this Agreement (hereinafter referred to as the "Access Point").
(b) The Owners undertake and agree to apply in the prescribed form and to pay the prescribed fee and to obtain from the County an entrance in accordance with the permit. Prior to granting a permit, the County may identify entrance works within their right-ofway, for the Owner to complete, prior to granting the permit. The County hereby undertakes and agrees to issue an entrance permit allowing access to the lots by means of
the entrance located at the Access Point upon presentation of the Owners' application in prescribed form, payment of the prescribed fee, and upon completion of the identified entrance works.
(c) The owner agrees to be responsible for the construction, operation, maintenance of the Access Point on an ongoing basis in compliance with the terms and conditions of the entrance permit and if required modify the Access Point so as to ensure that the Access Point remains in good and safe condition, in accordance with the policies, practices and design standards of the County or that Road Authority having jurisdiction over the Public Roadway.
(d) The Road Authority retains the right to require modifications to the Access Point at the sole cost of the owner so as to ensure the safety of the users of the Public Roadway.
(e) The ownership of the entrance and ancillary components shall remain that of the property Owner, his heirs and successors whose responsibility it shall be for the proper maintenance including replacement of the entrance and ancillary components whether located within the public right-of-way or on lands referenced in this agreement.
4. The Owners acknowledge that the County does not now and will not or in the future ever agree to allow access to either of the Lots or issue an entrance permit with respect to either of the Lots except for the common entrance at the Access Point provided for in paragraph 3 of this Agreement.
5. The Owners hereby release and agree to indemnify and save harmless the County, its elected officials, its agents and employees, from any and all claims, costs, expenses and damages arising from the existence of the entrance at the Access Point, or as a result of the use of the said entrance extending from the said entrance to the Lots by the Owners, the survivor of them, their successors in title to any of the Lots or any other person, whether due to the inability of emergency vehicles to access any of the Lots or otherwise.
6. The Owners agree to pay to the County that amount which is equivalent to the total of all legal and planning fees and disbursements incurred by the County in connection with the review, authorization and execution of this Agreement.
7. This Agreement shall be registered at the expense of the Owners against the title to the Lots and shall run with the title to the Lots.
8. This Agreement shall enure to the benefit of the County and its successors and shall be binding upon the Owners, the survivors of the Owners, and their respective personal representatives, heirs, successors and assigns, including in particular their successors in title to the Lots.

IN WITNESS WHEREOF this Agreement has been executed by the Owners and by the County, which has affixed its seal attested by the signatures of the Warden or his designate and the Chief Administrative Officer/Clerk or his designate, pursuant to an authorizing by-law.

| SIGNED and DELIVERED in the presence of: | ) |  | 1230381 Ontario Inc. <br> I have authority to bind the corporation |
| :---: | :---: | :---: | :---: |
|  | ) |  |  |
|  | ) |  |  |
|  | ) |  |  |
| Witness |  | Per: |  |

THE CORPORATION OF THE COUNTY OF RENFREW

Per:
Name: Debbie Robinson
Title: Warden

Per:
Name: Paul V. Moreau
Title: Clerk

## SCHEDULE "A"

## Owners' Land:

PART OF LOT 7, CONCESSION 9, AS IN R299788 SAVE \& EXCEPT PTS 1-3 $49 R 18592$ AND EXCEPT PARTS 1,2,3,4 ON 49R18595; TOWNSHIP OF HORTON, COUNTRY OF RENFREW

## SCHEDULE "B"

## Lots:

Part of Lot 7, Concession 9, being Part 1, Plan 49R-19627, Township of Horton, County of Renfrew

## SCHEDULE "C"

Access Point:

Part of Lot 7, Concession 9, being Part 3, Plan 49R-19627, Township of Horton, County of Renfrew

## ACKNOWLEDGEMENT AND DIRECTION

TO:
Tricia Agnes Mary Schouten
(Insert lawyer's name)
AND TO:
TRICIA A SCHOUTEN LAW OFFICE
(Insert firm name)

RE:


This will confirm that:

IWe have reviewed the informatlon set out in this Acknowledgement and Direction and in the documents described below (the "Documents"), and that this infornation is accurate;

- You, your agent or employee are authorized and directed to sign, deliver, and/or register electronically, on my/our behalf the Documents in the form attached
- You are hereby authorized and directed to enter into an escrow closing arrangement substantially in the form attached hereta being a copy of the version of the Document Registration Agreement, which appears on the website of the Law Society of Upper Canada as the date of the Agreement of Purchase and sale herein. I We hereby acknowledge the said Agreement has been reviewed by me/us and that I/Ne shall be bound by its terms:
- The effect of the Documents has been fully explained to me/us, and l/we understand that l/we are parties to and bound by the terms and provisions of the Documents to the same extent as if l/we had signed them; and
- IWe are in fact the parties named in the Documents and l/we have not misrepresented our identities to you
- 


 youto-indicats-my-consent-on-zill the-Documents-fer-whichitis foquiped.

## DESCRIPTION OF ELECTRONIC DOCUMENTS

The Document(s) described in the Acknowledgement and Direction are the document(s) selected below which are attached hereto as "Document in Preparation" and are:
[1 A Transfer of the land described above.

- A Charge of the land described above.
© Other documents set out in Schedufe " $B$ " attached hereto.



## WITNESS

(As to all signatures, if required) $\quad$ We have authority to bind the County of Renfrew

Name

Name

| LRO \# 49 Notice <br> This document has not been submitted and may be incomplate. |  | In preparation on 20201101 yyyy mm dd | at 16:50 |
| :---: | :---: | :---: | :---: |
| Properties |  |  |  |
| PIN | 57298-0303 LT |  |  |
| Description | PT LT 7, CON 9, AS IN R299788 SAVE \& EXCE PARTS 1,2,3,4 ON 49R18595; TOWNSHIP OF | AND EXCEPT OF RENFREW |  |
| Address | RIVER ROAD RENFREW |  |  |

## Consideration

Considaration $\$ 1.00$
Applicant(s)

The notice is based on or affects a valid and existing estate, right, Interest or equity in land

| Name | COUNTY OF RENFREW |
| :---: | :---: |
| Address for Service | Acting as a company |
|  | 9 International Drive |
|  | Pembroke, Ontario |
|  | K8A 6W5 |
|  |  |

## Statements

This notice is pursuant to Section 71 of the Land Titles Act.
This notice is for an Indeterminate perlod
Schedule:

## File Number

Applicant Client Filo Number :




## COUNTY OF RENFREW

## BY-LAW NUMBER

## A BY-LAW TO PURCHASE LAND ON COUNTY ROAD 6 (LOCHWINNOCH ROAD)

WHEREAS under Section 6(1) and Section 8 of the Municipal Act, S.O. 2001, c.25, as amended, a municipality may pass by-laws to acquire land;

AND WHEREAS under Section 5(3) of the Act, the County of Renfrew's capacity, rights, powers and privileges must be exercised by By-law;

AND WHEREAS under Section 31(6) of the Act, if a municipality acquires land for the purpose of widening a highway, the land acquired forms part of the highway to the extent of the designated widening;

AND WHEREAS the County Operations Committee has reviewed and approved the purchase of the land described, for the purpose of structure rehabilitation.

NOW THEREFORE the Council of the Municipal Corporation of the County of Renfrew hereby enacts as follows:

1. That the lands located on Lochwinnoch Road (County Road 6) Part Lot 6, Concession 5 in the geographic Township of Horton, described as Parts 6, 7 and 8 on Registered Plan 49R-19635 be purchased from 1230381 Ontario Inc. for the sum of Five Hundred Dollars ( $\$ 500$ ).
2. That the lands are hereby dedicated as part of the highway immediately upon registration of the transfer documents.
3. That this By-law shall come into force and take effect upon the passing thereof.

READ a first time this 27th day of January 2021.
READ a second time this 27th day of January 2021.
READ a third time and finally passed this 27th day of January 2021.

LRO \# 49 Transfer
This document has not been submilted and may be incomplete.

| Properties |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| PIN | 57293-0242 LT | Intenest/Estato | Fee Simple | (V) Spllt |
| Doscription | PART LOT 6 CONCESSION 5 HORTON; BEING PARTS 6 \& 7. PLAN 49R-19635. TOWNSHIP OF HORTON |  |  |  |
| Address | GOSHEN ROAD RENFREW |  |  |  |

## Consideration

Consideration $\$ 1.00$

## Transferor(s)

The transferor(s) hereby transfers the land to the transferee(s).

| Name | 1230381 ONTARIO INC. |
| :--- | :--- |
|  | Acting as a company |
| Address for Service | 2740 Harbison Road |
|  | Richmond, Ontario |
|  | KOA 2zo |

1, Adrian Schouten, have the authorily to bind the corporation.
This document is not authorized under Power of Aftomey by this party.

| Transferee(s) |  | Capacity | Share |
| :---: | :---: | :---: | :---: |
| Name | COUNTY OF RENFREW |  |  |
| Address for Service | Acting as a company 9 international Drive Pembroke, Oniario KBA GWS |  |  |
| Statements |  |  |  |

Schedule: Transfer to Counly of Renfrew ior road widening.

| Calculated Taxes |
| :--- |
| Provinclal Land Transter Tax |
| Fille Number |
| Transferor Client File Number: |


| This document has not been submitted and may be incomplote. |  |  |  | yyyy mm cld | $\text { ade } 1 \text { of } 1$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Properties |  |  |  |  |  |
| PIN | 57293-0242 LT | Interest/Estale | Fee Simple |  |  |
| Descriptlon | PART LOT 6 CONCESSION 5 HORTON; BEING PART 8, PLAN 49R-19635. TOWNSHIP OF HORTON |  |  |  |  |
| Address | GOSHEN ROAD RENFREW |  |  |  |  |

## Consideration

Consideration $\$ 1.00$

## Transferor(s)

The transferor(s) hereby transfers the land to the transferee(s).

| Name | 1230381 ONTARIO INC. |
| :--- | :--- |
|  | Acting as a company |
| Address for Service | 2740 Harbison Road |
|  | Richmond, Ontario |
|  | KOA 270 |

1. Adrian Schouten, have the aulhorily to bind the corporation.

This document is not authorized under Power of Altomey by this party.

| Transferee(s) | Capacity | Share |
| :--- | :--- | :--- |
| Name | COUNTY OF RENFREW <br> Acting as a company <br> 9 International Drive <br> Pembroke, Ontario <br> K8A 6W5 |  |
| Ca/culated Taxes | $\$ 0.00$ |  |
| Frovincial Land Transfor Tax |  |  |
| File Number |  |  |
| Transferor Cllent File Number: |  |  |




## BY-LAW NUMBER

## A BY-LAW TO PURCHASE LAND ON COUNTY ROAD 512 (FOYMOUNT ROAD)

WHEREAS under Section 6(1) and Section 8 of the Municipal Act, S.O. 2001, c.25, as amended, a municipality may pass by-laws to acquire land;

AND WHEREAS under Section 5(3) of the Act, the County of Renfrew's capacity, rights, powers and privileges must be exercised by By-law;

AND WHEREAS under Section 31(6) of the Act, if a municipality acquires land for the purpose of widening a highway, the land acquired forms part of the highway to the extent of the designated widening;

AND WHEREAS the County Operations Committee has reviewed and approved the purchase of the land described, for the purpose of structure rehabilitation.

NOW THEREFORE the Council of the Municipal Corporation of the County of Renfrew hereby enacts as follows:

That the lands located on Foymount Road (County Road 512) Part Lot 7, Concession 1 in the Geographic Township of South Algona, in the Township of Bonnechere Valley, described as Part 2, Registered Plan 49R-19650 be purchased from Sandra Elizabeth Wigmore for the sum of Five Hundred Dollars (\$500.00).

1. That the lands are hereby dedicated as part of the highway immediately upon registration of the transfer documents.
2. That this By-law shall come into force and take effect upon the passing thereof.

READ a first time this 27th day of January 2021.

READ a second time this 27th day of January 2021.

READ a third time and finally passed this 27th day of January 2021.


County Road 512 (Foymount Road)
Acquisition of Road Widening Land Sandra Elizabeth Wigmore


## COUNTY OF RENFREW

## BY-LAW NUMBER

## A BY-LAW TO AMEND BY-LAW 10-15, BEING A BY-LAW TO CONSOLIDATE ALL BY-LAWS WITH RESPECT TO ROADS AND BRIDGES INCLUDED IN THE COUNTY ROAD SYSTEM

WHEREAS By-Law 10-15 was passed in February 2015 establishing the County Road System and designating the roads and bridges in the municipality that formed the County Road System;

AND WHEREAS under Section 52(4) of the Municipal Act, 2001, S.O. 2001, c.25, as amended, an upper-tier municipality may add a highway, which includes a bridge, to its system.

NOW THEREFORE the Council of the Corporation of the County of Renfrew hereby enacts:

1. That Schedule ' $B$ ' of By-Law 10-15 be amended by the addition of County Structure C337 (Berlanguet Creek Culvert) to the County Road System and be designated as a County Bridge effective February 1, 2021.
2. That this By-law shall come into force and take effect upon the passing thereof.

READ a first time this 27th day of January, 2021.
READ a second time this 27th day of January, 2021.
READ a third time and finally passed this 27th day of January, 2021.

# Township of Admaston/Bromley 



December 29, 2020

County of Renfrew Operations Committee

## Subject: Culhane Road Culvert-Request for County of Renfrew to Adopt the Structure

Please consider this letter a formal request for the County of Renfrew to assume the Culhane Culvert in the Township of Admaston/Bromley.

The Culhane Culvert has been designed and upgraded to meet the below requirements of the County of Renfrew:
"The County of Renfrew Bridge Design and Construction Policy states the following:
Bridge - A structure or series of structures, which provides a roadway or walkway for the passage of vehicles and pedestrians across an obstruction, gap or facility, which has a cumulative span of 3.0 m or greater.

Where a highway structure meeting the Definition of a Bridge and situated on All-Season Maintained Roadways and having minimum Average Annual Daily Traffic (AADT) volume of 100 vehicles is located on a local municipal roadway and is to be replaced, a hydraulic design shall be prepared in accordance with the provisions detailed in the policy. The cost of the hydraulic design and the review of the design by County staff shall be at the expense of the local municipality.

Where the proposed replacement structure will meet the definition of a bridge, the local municipality may request the structure to be adopted by the County. All requests will be reviewed by the County Engineer and a recommendation regarding assumption will be forwarded to the Operations Committee. Operations Committee's recommendation will subsequently be forwarded to County Council for approval. It is emphasized that the County of

Renfrew will be the ultimate authority in determining whether or not the structure (being requested for assumption) qualifies as a County structure.

When the structure is approved for adoption by the County, the cost of the design and replacement or repair shall be shared equally between the County and the local municipality. Subsequent to the replacement, the bridge structure shall be under the jurisdiction of the County thereafter. The timing of the replacement or repair of the structure shall be at the discretion of the County and subject to the availability of funding and other priorities."

All financial information relating to the Culvert works has been provided to the County of Renfrew.

If you require any further information, please do not hesitate to contact us.

Regards,

## Chris Kunopaski

Chris Kunopaski
Roads Superintendent CRS-I

## BY-LAW NUMBER

## A BY-LAW TO RESTRICTING THE WEIGHT OF VEHICLES PASSING OVER BRIDGES IN THE COUNTY OF RENFREW

WHEREAS Subsection 2 of Section 123 of the Highway Traffic Act, R.S.O. 1990, as amended, provides that the municipal corporation of other authority having jurisdiction over a bridge may, by by-law, limit the gross vehicle weight of any vehicle, or any class thereof, passing over such bridges, and the requirements of subsection 1 with respect to the posting of notice apply thereto;

AND WHEREAS it is deemed expedient to limit the weight of vehicles passing over a bridge in the Corporation of the County of Renfrew.

NOW THEREFORE the Council of the Corporation of the County of Renfrew hereby enacts:

1. That no vehicle, or combination of vehicles, or any class thereof, whether empty or loaded, shall be operated over the bridges listed on Schedule ' $A$ ' with weights in excess of the limits listed in Schedule ' $A$ '.
2. Any person violating the provisions of this By-Law shall be subject to the penalties provided under Section 125 of the Highway Traffic Act, R.S.O. 1990, as amended.
3. That this By-law shall not become effective until notice of the limit of weight permitted in compliance with the regulations under the Highway Traffic Act has been posted in a conspicuous place at each end of the bridge.
4. That By-law 101-18 is hereby repealed.

READ a first time this 27th day of January, 2021.
READ a second time this 27th day of January, 2021.
READ a third time and finally passed this 27th day of January, 2021.

Schedule A

| Bridge No. | Name of Bridge | Road Name | Geographic Location | Level | Gross <br> Vehicle <br> Weight <br> Limit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B005 | Scollard Bridge | Pucker Street | Boundary between Admaston Township and Bagot Township | Level III Level II Level I | 11 tonnes <br> 20 tonnes <br> 26 tonnes |
| 8026 | Old Highway 62 Bridge | Borne <br> Road | Lot 7, Concession 10 Alice Township | tevel'II | 4 tonnes |
| B057 | Mount St. <br> Patrick <br> Bridge | Mount St. Patrick Road | Lot 1, Concession 14 Brougham Township | Level III Level II Level I | 14 tonnes <br> 22 tonnes <br> 27 tonnes |
| B091 | Danny Constant Bridge | Constant <br> Lake Road | Lot 23, Concession 7 Grattan Township | Level III Level II Level I | 23 tonnes 35 tonnes 55 tonnes |
| B103 | Coslews Bridge | O'Grady Settlement Road | Lot 20 and 21, Concession A Hagarty Township | Level III Level II Level I | 16 tonnes 28 tonnes 38 tonnes |
| B108 | Tramore Bridge | Tramore Road | Lot 5 and 6, Concession 13 Hagarty Township | Level III Level II Level I | 20 tonnes <br> 34 tonnes <br> 47 tonnes |
| B176 | Paugh Lake <br> Road Bridge | Paugh Lake Road | Lot 7, Concession 9 Burns Township | Level III Level II Level I | 20 tonnes 35 tonnes 55 tonnes |
| B188 | Turcotte <br> Bridge | Code Road | Lot 9 and 10, Concession 3 Stafford Township | Level III Level II Level I | 11 tonnes <br> 20 tonnes <br> 27 tonnes |
| B202 | Gameron <br> Street <br> Bridge | Gameron Street | Cameron Street Village of Killaloe | tevel! | $z$ tonnes |
| B226 | Black Creek Bridge | Black Creek Road | Lot 24, Concession 20 Willberforce Township | tevel II tevelH Levelt | 17 tonnes 24 tonnes 30 tonnes |
| B257 | Harrington Creek Bridge | Foymount <br> Road (512) | Lot 26, Concessions 13 and 14 Sebastopol Township | Level III Level II Levell | 20 tonnes <br> 37 tonnes <br> 52 tonnes |

## OPERATIONS DIVISION REPORT

Prepared by: Richard Bolduc, A.Sc.T., Manager of Operations
Prepared for: Operations Committee
January 12, 2021

## INFORMATION

## 1. Winter Operations

The early portion of the 2020/2021 winter season provided a variety of winter weather conditions that required responses by staff. Table 1 provides a summary of winter events, material usage and precipitation amount to date. Staff continues to be ready to respond to winter events as they occur.

Table 1

| Month | No. of Event Days |  | Type of Event (days) |  |  | Material Used <br> (tonnes) | Precipitation |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Weekday | Weekend | Snow | Blowing <br> Snow | Freezing <br> Rain | Salt | Sand | Weather <br> Station | Amount <br> (mm) |
|  |  |  |  |  |  |  |  |  |  |
| Nov | 8 | 3 | 9 | 0 | 3 | 1,749 | 312 | Petawawa | 39.0 |
|  |  |  |  |  |  |  |  | Bancroft | 86.8 |
| Dec | 18 | 11 | 19 | 0 | 6 | 5,227 | 1,359 | Petawawa | 56.0 |
|  |  |  |  |  |  |  |  | Bancroft | 94.9 |
| Totals | $\mathbf{2 6}$ | $\mathbf{1 4}$ | $\mathbf{2 8}$ | $\mathbf{0}$ | $\mathbf{9}$ | $\mathbf{6 , 9 7 6}$ | $\mathbf{1 , 6 7 1}$ | Petawawa | $\mathbf{9 5}$ |
|  |  |  |  |  |  |  |  | Bancroft | $\mathbf{1 8 1 . 7}$ |

Table 2 outlines the Significant Weather Events declared in November and December 2020.

Table 2

| Declaration |  |  | Declaration |  |  | Reason |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month | Day | Time | Month | Day | Time |  |
| Nov | 22 | $3: 15 \mathrm{PM}$ | Nov | 23 | $10: 50 \mathrm{AM}$ | Snow |
| Nov | 25 | $5: 00 \mathrm{PM}$ | Nov | 26 | $1: 00 \mathrm{PM}$ | Ice |
| Dec | 12 | $6: 24 \mathrm{AM}$ | Dec | 13 | $7: 03 \mathrm{AM}$ | Ice |

## 2. Spring Load Restrictions

In keeping with the County's By-law pertaining to spring load restrictions, such restrictions may be imposed commencing March 1 and extend to May 31. Over the coming weeks, staff will be monitoring the spring weather conditions to determine the optimum time to impose the spring load restrictions. The County will be placing advertisements in the local newspapers to advise haulers of the spring load restrictions.

## 3. Quotations and Tenders

A letter has been circulated to the local municipal staff advising them of the planned tenders and requesting that if they would like to participate to provide a response to the questionnaire included as part of the letter by Friday, February 12, 2021. The tenders included in the circulation and balance of the tenders that form part of the approved budget will be released from the Operations Division starting in early March.

## 4. Municipal Cooperation

The Operations Division of the Public Works and Engineering Department received a request from the Township of Horton to borrow one of the two backup combination plow/spreader tandem trucks for winter operations until January 4, 2021. The Township is waiting for the delivery of a new truck and advised that the loan of the spare unit would assist with their winter operations should severe winter weather arise during their waiting period.

The standard indemnity agreement and insurance was completed and the backup unit 604-01 was picked up by the Township on December 22, 2020.

On January 4, 2021 the Township requested to extend the loan of the truck until the revised delivery date of their new truck on January 15, 2021. The County was pleased to confirm the extension.

## 5. Health and Safety

One staff member in the Operations Division has tested positive for COVID-19 and is off work in self-isolation. One other staff member who was identified as a close contact, was tested and is also off work in isolation. At the time of writing of this report no results were received.

As a precaution all the staff members of the patrol in question and three other staff members that had visited the facility for work purposes were offered tests through the Renfrew County Virtual Triage and Assessment Centre (VTAC) as an extra safety measure.

## RESOLUTIONS

## 6. Winter Road Maintenance Agreement - Town of Arnprior

Recommendation: WHEREAS the County of Renfrew has granted the local Municipalities to construct sidewalks and parking lanes within the original Right-of-Way of the County right-of-way;

AND WHEREAS the decrease in the right-of-way has resulted in the loss of snow storage for winter operations;

BE IT RESOLVED THAT the Operations Committee recommend to County Council that the proposed cost increase for snow removal on County Roads from the Town of Arnprior be rejected and further that staff be directed to continue to negotiate a Winter Maintenance contract as per past practice.

## Background

The Town of Arnprior has requested to add snow removal costs to the Agreement. The Town of Arnprior currently provides sidewalk winter maintenance (e.g. plowing/placement of winter material) and sidewalk snow removal along portions of County of Renfrew roadways as part of their ongoing operations.

The Town of Arnprior has requested to include an estimated 20\% of their budgeted total costs of their winter sidewalk maintenance budget, for snow removal along County Roads.

The Town of Arnprior reported that their estimate is based on a 5.5 year average and includes the following costs:

- Trackless sidewalk plows;
- Tri-axle dump trucks for snow removal/hauling;
- Grader/loader for snow removal operation; and,
- Dozer to manage snow disposal facility.

The Town of Arnprior staff advise that their estimate is conservative and that the actual costs could be substantially higher if/when detailed tracking is completed.

There are historically three local municipalities within the County of Renfrew that have entered into agreements to provide winter maintenance as follows:

The current and past practice regarding snow removal has been that when a local municipality has facilities (parking, sidewalks, etc.) within the County of Renfrew right-of-way (ROW) where the area is normally reserved for the roadway snow storage, the local Municipality is responsible for the removal of the snow that is normally deposited in those areas.

The status of the agreements are as follows:

- Town of Arnprior - Currently under negotiation
- Town of Renfrew - 10 year Agreement - Approved in 2019
- Town of Deep River - Submitted to County for Approval

The current approved and submitted for approval agreements do not include snow removal. If snow removal was to be approved, the respective municipal representatives have indicated that they would like to add/change the contracts to include this work.

## Financial

The rate proposed by the Town of Arnprior would apply to the entire length of the roadway in the Agreement that include areas when snow removal is not carried out. Based on the requested $16.7 \%$ increase of $\$ 700$ per kilometre, the cost increase would total $\$ 10,990$.

The table below provides the historical rates, the requested rate increase and the proposed rates going forward.

Arnprior Winter Maintenance Agreement

| Year | Rate Per KM | Requested <br> \% Increase | Previous <br> Rate Per KM | Proposed <br> \% Increase | Proposed Rate Per KM | Proposed \% Increase |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2015-2016 |  |  | \$3,800.00 | N/A |  |  |
| 2016-2017 |  |  | \$3,900.00 | 2.63\% |  |  |
| 2017-2018 |  |  | \$4,000.00 | 2.56\% |  |  |
| 2018-2019 |  |  | \$4,100.00 | 2.50\% |  |  |
| 2019-2020 |  |  | \$4,200.00 | 2.44\% | \$4,200.00 |  |
| 2020-2021 | \$4,900.00 | 16.67\% |  |  | \$4,300.00 | 2.38\% |
| 2021-2022 | \$5,000.00 |  |  |  | \$4,400.00 | 2.33\% |
| 2022-2023 | \$5,100.00 |  |  |  | \$4,500.00 | 2.27\% |
| 2023-2024 | \$5,200.00 |  |  |  | \$4,600.00 | 2.22\% |
| 2024-2025 | \$5,300.00 |  |  |  | \$4,700.00 | 2.17\% |
| 2025-2026 | \$5,400.00 |  |  |  | \$4,800.00 | 2.13\% |
| 2026-2027 | \$5,500.00 |  |  |  | \$4,900.00 | 2.08\% |
| 2027-2028 | \$5,600.00 |  |  |  | \$5,000.00 | 2.04\% |
| 2028-2029 | \$5,700.00 |  |  |  | \$5,100.00 | 2.00\% |
| 2029-2030 | \$5,800.00 |  |  |  | \$5,200.00 | 1.96\% |

## General

In consideration of the request from the Town of Arnprior, the details of the current and past practice, and future consideration of the balance of agreements, staff is requesting Committee direction regarding the Town of Arnprior request.

## BY-LAWS

## 7. Winter Road Maintenance Agreement - Town of Deep River

Recommendation: THAT the Operations Committee recommend to County Council that a By-law be passed to authorize the Warden and Clerk to execute the 10-year Winter Maintenance Agreement from 2020/21 to 2030/31 with the Town of Deep River.

## Background

The Department has deemed it expedient and in the best interest of the public, to enter into a new 10-year agreement from 2020/21 to 2030/31 with the Town of Deep River, to provide winter maintenance services on small portions of County Roads where Town forces routes pass over these areas.

The roads covered under this contract are as follows:

| TOWN OF DEEP RIVER |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Road <br> No. | Road Name | From | To | Centre <br> Lane <br> (KM) | Winter <br> Maintenance <br> Level |  |
| 72 | Ridge Road | Highway 17 | Deep River <br> Road | 1.56 <br> km | । |  |
| 73 | Deep River Road | Highway 17 | Ridge Road | .678 m | I |  |

## BY-LAW NUMBER

## A BY-LAW TO AUTHORIZE THE ENTERING INTO AN AGREEMENT WITH THE TOWN OF DEEP RIVER FOR THE 2020/21 - 2030/31 WINTER MAINTENANCE OF CERTAIN COUNTY ROADS

WHEREAS Section 44(1) of the Municipal Act, 2001, S.O. 2001, c25, as amended, provides for the maintenance of highways and bridges;

AND WHEREAS Section 20(1) of the Municipal Act, 2001, S.O. 2001, c25, as amended, provides that a municipality may enter into an agreement with one or more municipalities, to jointly provide for their joint benefit, any matter which all of them have the power to provide;

AND WHEREAS the Municipal Corporation of the County of Renfrew has requested that the Town of Deep River undertake winter maintenance operations on County Roads in and around the Municipality, described as: County Road 72 (Ridge Road) from Highway 17 to Deep River Road, being 1.56 centre lane kilometres; and County Road 73 (Deep River Road) from Highway 17) to Ridge Road being .678 centre lane metres.

NOW THEREFORE the Council of the Municipal Corporation of the County of Renfrew enacts as follows:

1. That the Warden and Clerk are hereby authorized to execute and to affix the seal of the Corporation to the agreement.
2. That By-law $86-15$ and 100-14 being By-laws to authorize the entering into of an agreement with the Town of Deep River for winter maintenance of certain County Roads is herby repealed.
3. That this By-law shall come into force and take effect upon the passing thereof.

READ a first time this 27th day of January 2021.
READ a second time this 27th day of January 2021.
READ a third time and finally passed this 27th day of January 2021.

## THE CORPORATION OF THE TOWN OF DEEP RIVER

BY-LAW NUMBER 37-2020

## A BY-LAW TO AUTHORIZE THE TOWN OF DEEP RIVER TO ENTER INTO AN AGREEMENT WITH THE COUNTY OF RENFREW FOR THE 2020/21 2030/31 WINTER MAINTENANCE OF CERTAIN ROADS

WHEREAS Section 317 of the Municipal Act, 2001, S.O. 2001, C. 25, as amended, provides for the maintenance of highways and bridges;

AND WHEREAS Section 20(1) of the Municipal Act, 2001, S.O. 2001, c25, as amended, provides that a municipality may enter into an agreement with one or more municipalities, to jointly provide for their joint benefit, any matter which all of them have the power to provide;

AND WHEREAS the Municipal Corporation of the County of Renfrew has requested that the Town of Deep River undertake winter maintenance operations on County Roads in and around the Municipality;

THEREFORE BE IT RESOLVED THAT the Council of the Corporation of the Town of Deep River enacts as follows:

1) That the Mayor and the Clerk are hereby authorized for and in the name of the Corporation to execute and to affix the seal of the Corporation to the Agreement.
2) That this By-law shall come into force and effect upon passing by the Council of the Corporation of the Town of Deep River.

READ A FIRST, SECOND AND THIRD TIME, AND PASSED THIS 23RD DAY OF SEPTEMBER, 2020.



# WINTER MAINTENANCE CONTRACT TOWN OF DEEP RIVER 

## County Road 72

From Highway 17 to Deep River Road and
County Road 73
From Highway 17 to Ridge Road

2020/21-2030/31

## CONTENTS

SECTION A NOT APPLICABLE ..... WHITE
SECTION B FORM OF AGREEMENT ..... BLUE
SECTION C GENERAL CONDITIONS FOR MAINTENANCE ..... GREEN
SECTION D SPECIAL PROVISIONS - GENERAL ..... PINK
SECTION E STANDARD SPECIFICATIONS ..... YELLOW
SECTION F SPECIAL PROVISIONS - WINTER MAINTENANCE ..... YELLOW
SECTION G ATTACHMENTS ..... WHITE

SECTION B

## FORM OF AGREEMENT

## INDEX FOR SECTION B - FORM OF AGREEMENT

FORM OF AGREEMENT ..... B-1 to B-2
ATTACHMENTS
Roads to be Maintained ..... I
By-law Authorizing Execution of the Agreement (sample) ..... II
Certificate of Insurance ..... III

## FORM OF AGREEMENT

## BETWEEN:

The Corporation of the Town of Deep River<br>Box 400, 100 Deep River Road<br>Deep River, Ontario, KOJ 1P0<br>(613) 584-2000<br>(Hereinafter the Municipality)

AND:

The Municipal Corporation of the County of Renfrew<br>9 International Drive<br>Pembroke, Ontario, K8A 6W5<br>(613) 732-4353 or 1-800-273-0183<br>(Hereinafter the County)

AND WITNESSES that the Municipality and the County agree as follows:

1. That the Municipality shall provide winter maintenance services on those County Roads as specified in attachments hereto for the 2020/21 up to and including 2030/31 winter seasons.
2. That works shall be performed in accordance with the specifications.
3. The Country shall pay the Municipality in accordance with the schedule of prices pursuant to the contract documents.
4. The provisions of the contract documents shall attribute to the benefit of and be binding upon the Municipality and the County and their respective heirs, legal representatives and successors.
5. No implied contract by or on behalf of the County shall arise from anything in this contract. Any rights against the County shall be founded on the express covenants and agreements contained herein.

## FORM OF AGREEMENT

August 2020
IN WITNESS THEREOF the Municipality and the County execute this Agreement and affix their respective Corporate Seals hereto.

For the Municipality:


## For the County:

| 2020/21-2030/31 WINTER SEASONS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Road <br> No. | Road Name | From | To | Centre <br> Line <br> (KM) | Winter <br> Maintenance <br> Level |
| 72 | Ridge Road | Highway 17 | Deep River Road | 1.56 km | I |
| 73 | Deep River Road | Highway 17 | Ridge Road | .678 m | 1 |

*Please see attached map.

| Year | Rate Per KM |
| :---: | ---: |
| $2020-2021$ | $\$ 7,900.00$ |
| $2021-2022$ | $\$ 8,050.00$ |
| $2022-2023$ | $\$ 8,200.00$ |
| $2023-2024$ | $\$ 8,350.00$ |
| $2024-2025$ | $\$ 8,500.00$ |
| $2025-2026$ | $\$ 8,650.00$ |
| $2026-2027$ | $\$ 8,800.00$ |
| $2027-2028$ | $\$ 8,950.00$ |
| $2028-2029$ | $\$ 9,100.00$ |
| $2029-2030$ | $\$ 9,350.00$ |
| $2030-2031$ | $\$ 9,500.00$ |

In accordance with Section C 6.0 Certificate of Insurance is to be provided by the Town of Deep River naming the County of Renfrew as an additionally insured.

75 Main Street North, Princeton, ON NOJ 1Vo Phone: 800-265-4000 Fax: 519-458-4366


## SECTION C

## GENERAL CONDITIONS FOR MAINTENANCE

## INDEX FOR SECTION C - GENERAL CONDITIONS FOR MAINTENANCE

1.0 INTERPRETATION C-1 to C-6
2.0 CONTRACT DOCUMENTS ..... C-7 to C-8
3.0 ADMINISTRATION OF THE CONTRACT ..... C-9 to C-13
4.0 COUNTY'S RESPONSIBILITIES AND RIGHTS ..... C-14 to C-20
5.0 MATERIAL ..... C-20 to C-22
6.0 INSURANCE, PROTECTION AND DAMAGE ..... C-23 to C-24
7.0 MUNICIPALITY'S RESPONSIBILITIES AND CONTROL
OF THE WORK ..... C-25 to C-28
8.0 PAYMENT ..... C-28 to C-31

## GENERAL CONDITIONS FOR MAINTENANCE <br> August

## $\underline{2020}$

### 1.0 INTERPRETATION

### 1.01 Definitions

Unless specified otherwise for the purposes of this Contract the following definitions apply:
Actual Measurement means the field Measurement of that quantity within the Approved limits of the Work.

Activity means single or combined maintenance operation intended to address a deficiency in the highway system.

Additional Work means Work that is not specifically mentioned or implied in this Contract but is requested by the Contract Administrator and/or Approved by the County.

Addendum means supplementary conditions to the original Contract package.
Agreement, this Agreement, the Agreement, hereto, hereof, herein, hereby, hereunder and similar expressions means this maintenance contract, which defines the undertaking by the County and the Municipality to perform their respective duties, responsibilities and obligations, as defined by Section 2.01.

Approval, Approve, Approved and similar expressions means the approval of or approved by the County in writing in accordance with the provisions of this Agreement.

Change in the Work means the deletion, extension, increase, decrease or alteration of lines, grades, dimensions, quantities, methods, drawings, changes in the character of the Work to be done or Materials of the Work or part thereof, within the intended scope of the Contract.

Change Order means a written order to the Municipality covering contingencies, Additional Work, increase or decrease in Contract quantities and additions or alterations to the plans or specifications, within the scope of the Contract and establishing the basis of payment and the time allowed for the adjustment of the Contract Time. This means also, written authorization covering Additional Work.

Claim means any claim, demand, liability, damage, loss, cost, expense, suit action or cause of action.

Construction Signs mean all traffic control devices and signs, including vehicles, trailers, and the like, provided to support signs, and Equipment to supply sign lighting, but excluding Contract identification signs and Highway number markers, all as may be described in the OTM.

Contract, this Contract, the Contract has the same meaning as "Agreement".

## $\underline{2020}$

Contract Administrator means the person, partnership or corporation designated by the County to be the County's representative(s) for the purposes of the Contract. For the purposes of the Contract, the Contract Administrator shall be the Operations Manager.

Contract Documents means the executed Agreement between the County and the Municipality and as described in Section 2.01 and includes any addenda incorporated in a Contract Document before the execution of the Agreement, such other documents as may be listed in the Agreement and subsequent amendments to the Contract Documents made pursuant to the provisions of the Agreement.

Contract Time means the time stipulated in the Contract Documents including any extension of Contract Time made pursuant to the Contract Documents.

Cost of Labour means the amount of wages, salary and Payroll Burden paid or incurred directly by the Municipality to or in respect of labour and supervision actively and necessarily engaged on the Work based on the recorded time and hourly rates of pay for such labour and supervision, but shall not include any payment of costs incurred for general supervision, administration or management time spent on the entire Work or any wages, salary or Payroll Burden for which the Municipality is compensated by any payment made by the County for Equipment.

Cost of Material means the cost of material purchases, or supplied from stock, and valued at current market prices, for the purpose of carrying out extra Work, by the Municipality, or by others when such arrangements have been made by the Municipality for completing the Work, as shown by itemized invoices.

County means the Corporation of the County of Renfrew and/or the party to the Contract for whom the Work is being performed, as identified in the Agreement, and includes, with the same meaning and import, "Authority" and "County".

Daily Work Records means daily Records kept dealing with the number and categories of workers and hours worked or on standby; types and quantities of Equipment and number of hours in use or on standby; description and quantities of Material utilized, and working conditions at the time of operations.

## Day/Diem means a calendar Day.

Default means any breach by omission or commission, of any of the terms of this agreement, in accordance with Section 4.01, Default by the Municipality.

Director of Public Works \& Engineering means the officer of the Corporation of the County of Renfrew appointed under the authority of the Public Transportation and Highway Improvement Act or any successor legislation. The Director of Public Works \& Engineering is the ultimate County's representative. Any matters referred to the Director of Public Works \& Engineering shall be fairly and expeditiously adjudicated and his/her decisions shall be final.

## GENERAL CONDITIONS FOR MAINTENANCE

August

## $\underline{2020}$

Dollars or \$ means Canadian Dollars.
Engineer means a professional engineer licensed by the Professional Engineers of Ontario to practice in the Province of Ontario.
Environmental Laws means:

1. Any and all requirements under or prescribed by the common law and all applicable federal, provincial, or municipal laws, statutes or by-laws, including, but not limited to, the following: the Environmental Protection Act (Ontario), the Environmental Assessment Act (Ontario), the Gasoline Handling Act (Ontario), the Ontario Heritage Act, the Pesticides Act (Ontario), the Dangerous Goods Transportation Act (Ontario), the Planning Act (Ontario), the Ontario Water Resources Act, the Transportation of Dangerous Goods Act, 1992 (Canada), the Canadian Environmental Assessment Act, the Endangered Species Act (Ontario), the Navigable Waters Protection Act (Canada), the Fisheries Act (Canada), the Conservation Authorities Act (Ontario), the Trees Act, (Ontario), the Forest Fire Prevention Act (Ontario), the Lakes and Rivers Improvement Act (Ontario), the Beds of Navigable Waters Act (Ontario), the Provincial Parks Act (Ontario), the Wilderness Areas Act (Ontario), the Cemeteries Act (Ontario), the Canada Wildlife Act, the Canada Water Act, the Migratory Birds Convention Act, 1994 (Canada), the Pest Control Products Act (Canada), and the Environmental Contaminants Act (Canada);
2. all rules, regulations, protocols, guidelines, procedures, judgements, concessions, grants, franchises, licenses, agreements or any other government requirements, promulgated under or pursuant to any laws referred to in paragraph 1;
3. all applicable orders, decisions and exemptions rendered by any governmental authority; and
4. any other applicable laws, rules, regulations, policies, orders or decisions (including Laws and Regulations) relating to environmental matters and which (with respect to paragraphs 1, 2 and 3) would in the ordinary and usual course of the development, design, construction and/or maintenance of a County Road in the Province of Ontario, be recognized, followed and/or implemented by the County.

Equipment means all machinery and equipment used for preparing, fabricating, conveying or erecting the Work and normally referred to as construction and maintenance machinery and equipment.

Event of Default has the meaning described thereto in Section 4.01.
Event means one or a combination of winter maintenance activities that occur over a day.
Final Completion means the occurrence when the Contract Administrator is satisfied that to the best of the Contract Administrator's knowledge at that time, the Municipality has rectified all imperfect Work and has discharged all of the Municipality's obligations under the Contract.

Force Account sees definition of Time and Material.

## 2020

Governmental Authorization means any approval, authorization, consent, waiver, license, filing, registration, permit, notarization, special lease or other requirement of any federal, provincial, municipal or local governmental, quasi-governmental, judicial, public or statutory authority, commission, tribunal, local board, agency, department, ministry, body or entity which shall be necessary to proceed with the Work or any part thereof which, in the ordinary and usual course of the development, design, construction or maintenance of a County Road in the Province of Ontario, would be recognized, followed and/or implemented by the County.

Hazardous Substance means, but is not limited to, any solid, liquid, gas or other substance or emission which is a contaminant, pollutant, dangerous substance, liquid waste, industrial waste, hazardous material or hazardous substance which is or becomes regulated by Environmental Laws or occupational health and safety law or which is classified as hazardous or toxic under Environmental Laws.

Highway means a common and public highway any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.

Inspector means any person, partnership or corporation appointed by the Contract Administrator to participate in the inspection of the Work and the Material to be used in the Work.

Laws and Regulations means any and all applicable federal, provincial, municipal or local, laws, regulations or statutes, by-laws, codes, orders, directives, rules, regulations or statutes affecting the Work, including, but not limited to, the following: the Municipal Act (Ontario), the Aggregate Resources Act (Ontario), the Drainage Act (Ontario), the Public Transportation and Highway Improvement Act (Ontario), the Public Service Work on Highways Act (Ontario), the Labour Relations Act (Ontario), the Occupational Health and Safety Act (Ontario), the Pay Equity Act (Ontario), the Bridges Act (Ontario), the Public Utilities Act (Ontario), the Public Lands Act (Ontario), Weed Control Act (Ontario),the Workers Compensation Act (Ontario), the Criminal Code (Canada), Environmental Laws and those relating to fire, safety, land use, health, labour, seismic design, conservation, parking, handicapped access, zoning, building, taxation and financing which, in connection with any of the foregoing, in the ordinary and usual course of the development, design and/or construction of a controlled access King's Highway in the Province of Ontario, would be recognized, followed and/or implemented by the Crown and applicable Provincial Advisors.

Made Aware means when the Municipality has been advised by the County.
Maintenance means the activities required to keep the Highway in a safe and passable condition and prolong the life of the asset and other activities.

Material means material, machinery, equipment and fixtures forming part of the Work.
Municipality means the Town of Deep River.

## 2020

MOE means the Ministry of Environment.
MTO or M.T.O. means the Ministry of Transportation (Ontario).
Operational Constraint means a condition of the Contract that the Municipality shall adhere.
Operated Rented Equipment means Rented Equipment rented or leased for the special purpose of Work on a Time and Material basis for which an operator is provided by the supplier of the equipment and for which the rent or lease includes the cost of the operator.

OTM means the Ontario Traffic Manual.

Payroll Burden means the payments in respect of workers' compensation, vacation pay, unemployment insurance, public liability and property damage insurance, sickness and accident insurance, pension fund and such other welfare and benefit payments forming part of the Municipality's normal labour costs and shall include any cost or expense as the Contract Administrator may approve, which has been incurred by the Municipality for travel, travel time, food, lodging or similar items.

Rate of Interest means the rate prescribed by the County, from time to time, for accounts payable.

Records means any books, payrolls, forms, accounts or other information, which relate to the Work or any Change in the Work or Claims arising there from.

Rented Equipment means equipment that is rented or leased for the special purpose of Work on a Time and Material basis from a person, firm or corporation that is not an associate or affiliate of the lessee as defined by the Securities Act, R.S.O. 1990, Chapter S.5, as amended, and is approved the Contract Administrator.

Roadway means that part of the Highway designed or intended for use by vehicular traffic and includes the Shoulders.

Shoulder means that portion of the Roadway between the edge of the traveled surface and the top inside edge of the ditch, fill slope, sidewalk, walkway, path, etc.

Special Provisions mean special directions containing requirements peculiar to the Work.
Standard Specification means a standard practice required and stipulated by the County for performance of the Work.

Subcontractor means a person, partnership or corporation undertaking the execution of a part of the Work by virtue of an agreement with the Municipality.

## GENERAL CONDITIONS FOR MAINTENANCE

August $\underline{2020}$

Superintendent means the Municipality's authorized representative in charge of the Work. Time and Material means costs calculated for changes in the Work and Additional Work approved by the Contract Administrator for payment on a Time and Material basis. Where "cost

Plus" and "Force Account" are used, Work on a Time and Material basis shall be subject to all the terms, conditions, specifications and provisions of the Contract.

Utility means a facility maintained by a municipality, public utility authority or regulated authority and includes sanitary sewer, storm sewer, water, electric, gas, steam, telephone and cable television services.

Work means the total Maintenance and related services required by the Contract Documents.
Working Area means all the lands and easements owned or acquired by the County within the Contract limits.

Working Day means any Day

1. as it pertains to winter control activities any day in which winter conditions persist.

Work Order means an agreement between the Municipality and the County to undertake a Maintenance activity or operation, which is not included in the contract price. Payment for the activity will be negotiated between the Municipality and the County.

Written Instruction means written notice given to the Municipality by the Contract Administrator identifying specific terms of the Contract the Municipality has failed to meet.

## GENERAL CONDITIONS FOR MAINTENANCE

August

## $\underline{2020}$

### 2.0 CONTRACT DOCUMENTS

### 2.01 Agreement

### 2.01.01 Contract Documents

1. Each of the following documents will form part of this Agreement (also referred to as the 'Contract') and are incorporated herein by reference:
a. Documents issued by the County, including:
(i) Form of Agreement
(ii) General Conditions for Maintenance
(iii) Special Provisions - General
(iv) Standard Specifications
(v) Special Provisions - Winter Maintenance
(vi) Map (if any)
(vii) Any Addenda to the above
b. Any document specification manual or guideline referred to in the aforementioned documents.

### 2.01.02 Hierarchy of Documents

1. In the event of any inconsistency or conflict in the contents of the following documents, such documents shall take precedence and govern in the following order:
a. Addenda
b. Special Provisions - Winter Maintenance
c. Map (if any)
d. Standard Specifications and Drawings
e. Special Provisions - General
f. General Conditions for Maintenance
2. Within each of the above categories of documents, any addenda and/or later dates shall govern.
3. In the event of any conflict in the contents of Standard Specifications, the following order of precedence shall govern:
a. Ontario Provincial Standard Specifications; then
b. other standard specifications, such as those produced by CSA, CGSB, ASTM and ANSI and referenced in the Ontario Provincial Standard Specifications or any other industry standard.

### 2.01.03 Freedom of Information and Disclosure

1. Subject to the provisions and disclosure requirements of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, Chapter M.56, as amended, any disclosure required by law or any disclosure required in the course of enforcement or arbitration proceedings, or any disclosure permitted hereunder, no public disclosure of any kind shall be made or permitted in respect of the subject matter of this Agreement by any party without consultation with and the consent of the other parties (such consent not to be unreasonably withheld).
2. Any press release to be issued by the Municipality relating to this Agreement, its subject matter or any agreement or transaction contemplated herein, shall be in form and substance as mutually agreed upon by the County and the Municipality. The Municipality shall not permit any public announcement or ceremony in connection with the Work without approval of the County.

### 3.0 ADMINISTRATION OF THE CONTRACT

### 3.01 Contract Administrator's Authority

1. The Contract Administrator will be the County's representative for the routine matters until the Final Completion. All instructions to the Municipality will be issued by the Contract Administrator. The Contract Administrator will have the authority to act on behalf of the County only to the extent provided in the Contract Documents.
2. All Claims, disputes and other matters in question relating to the performance and the quality of the Work or the interpretation of the Contract Documents shall be initially referred to the Contract Administrator in writing by the Municipality. The Contract Administrator will give a decision in writing within a reasonable time.
3. The Contract Administrator will inspect the Work for its conformity with the plans and specifications, and to record the necessary data to verify and process payment.
4. The Contract Administrator will investigate all allegations of a change in the character of the Work made by the Municipality and issue appropriate instructions.
5. The Contract Administrator will prepare Change Orders for the Municipality's signature and the County's Approval.
6. The Contract Administrator will be, in the first instance, the interpreter of the Contract Documents and the judge of the performance there under by both parties to the Contract. Interpretations and decisions of the Contract Administrator shall be consistent with the intent of the Contract Documents and in making these decisions the Contract Administrator will not show partiality to either party.
7. The Contract Administrator will have the authority to reject Work or Material, which does not conform to the Contract Documents.
8. Defective Work, whether the result of poor Workmanship, use of defective Material, or damage through carelessness or other act or omission of the Municipality and whether incorporated in the Work or not, which has been rejected by the Contract Administrator as failing to conform to the Contract Documents shall be removed promptly from the Work by the Municipality and replaced or re-executed promptly in accordance with the Contract Documents at no additional cost to the County.
9. The Contract Administrator will have the authority to temporarily suspend the Work for such reasonable time as may be necessary to facilitate the inspection of any portion of the Work. There shall not be any extra compensation for this suspension of Work.

### 3.02 Right of the Contract Administrator to Modify Methods and Equipment

1. The Municipality shall, when requested in writing, make alterations in the method, Equipment or Work force at any time the Contract Administrator considers the Municipality's actions to be unsafe, or damaging to either the Work or existing facilities or the environment.
2. The Municipality shall alter the sequence of operations on the Contract, when requested in writing, so as to avoid interference with other Municipality's work.
3. Notwithstanding the foregoing, the Municipality shall ensure that all necessary safety precautions and protection are maintained throughout the Work.

### 3.03 Emergency Situations

1. The Contract Administrator has the right to determine the existence of any emergency situation, and when such an emergency situation is deemed to exist, the Contract Administrator may instruct the Municipality to take action to remedy the situation. If the Municipality does not take timely action, or if the Municipality is not available, the Contract Administrator may direct others to remedy the situation.
2. If the emergency situation was the fault of the Municipality, the remedial Work shall be done at the Municipality's expense. If the emergency situation was not the fault of the Municipality, the County will pay for the remedial Work if appropriate.

### 3.04 Working Area

1. In the course of performing the Work, the Municipality shall not enter upon or occupy any private property for any purpose, unless the Municipality has received prior written permission from the County.

### 3.05 Extension of Contract Time

1. An application for an extension of Contract Time shall be made in writing by the County of Renfrew to the Municipality as soon as the need for such extension becomes evident and at least 15 Days prior to the expiration of the Contract Time. The application for an extension of Contract Time shall enumerate the reasons, and state the length of extension required.
2. Circumstances suitable for consideration include the following:
a. Delays; See subsection 3.06 .
b. Changes in the Work; See clause 3.09.01.
c. Additional Work; See clause 3.09.02.
3. The Contract Time shall be extended for such additional time deemed fair and reasonable by the Director of Public Works \& Engineering and as approved by the respective Councils.
4. The terms and conditions of the Contract shall continue for such extension of Contract Time.

### 3.06 Delays

1. If the Municipality is delayed in the performance of the Work by:
a. war, blockades, and civil commotions, errors in the Contract Documents; an act or omission of the County, Contract Administrator, other Municipalities, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the Contract Documents; or
b. a stop work order issued by a court or public authority, provided that such order was not issued as the result of an act or omission of the Municipality or anyone employed or engaged by the Municipality directly or indirectly;
c. the Contract Administrator giving notice under subsection 7.09, Suspension of Work; or
d. Extension of Contract Time will be granted in accordance with subsection 3.05, Extension of Contract Time.

### 3.07 Assignment of Contract

1. The Municipality shall not assign the Contract, either in whole or in part, without the written consent of the County.

### 3.08 Subcontracting by the Municipality

1. The Municipality may not subcontract any portion of the work without the express written consent from the Contract Administrator.
2. Where permission is granted, the Municipality may subcontract any part of the Work, but the total of all sublets shall not exceed $49 \%$ of the total contract value, without the written consent of the Contract Administrator, subject to these General Conditions for Maintenance and any limitations established by the County.
3. The Municipality shall notify the Contract Administrator, in writing, of the intention to subcontract. Such notification shall identify the part of the Work, and the subcontract with whom it is intended.
4. The Municipality shall not, without the written consent of the County, change a subcontractor who has been engaged in accordance with this General Conditions for Maintenance.

## 2020

5. The Municipality shall preserve and protect the rights of the parties under the Contract with respect to the Work to be performed under subcontract and shall:
a. enter into agreements with the intended Subcontractors to require them to perform their Work in accordance with the Contract Documents; and
b. be as fully responsible to the County for acts and omissions of the Subcontractors and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the Municipality.
6. Neither subcontracting, nor the County's consent to subcontract by the Municipality, shall be construed to relieve the Municipality from any obligation under the Contract or to impose any liability upon the County. Nothing contained in the Contract Documents shall create a contractual relationship between a Subcontractor and the County.

### 3.09 Changes in the Work and Additional Work

### 3.09.01 Changes in the Work

1. The Contract Administrator may, by order in writing, make Changes in the Work without invalidating the Contract. The Municipality shall not be required to proceed with a change in the Work until in receipt of a Change Order. Upon the receipt of such written order the Municipality shall proceed with the Work.
2. The respective Councils may approve an extension of Contract Time according to the terms of subsection 3.05, Extension of Contract Time.
3. If the Changes in the Work relate solely to quantities, payment for the Work will be made according to the conditions specified in clause 8.01.01, Variations in Quantities. If the changes in the Work do not solely relate to quantities, payment may be negotiated pursuant to Section 4.13; Dispute Resolution in accordance with terms of the Contract, or payment may be made according to County current procedures for payment on a Time and Material basis.

### 3.09.02 Additional Work

1. The Contract Administrator may instruct the Municipality to perform Additional Work without invalidating the Contract. The Municipality shall not be required to proceed with the Additional Work until in receipt of a Change Order. Upon receipt of the written order the Municipality shall proceed with the Work.
2. The Municipality may apply for an extension of Contract Time according to the terms of subsection 3.05, Extension of Contract Time.
3. Payment for the Additional Work, will be as per Section C 28.8 .

### 3.10 Notices

1. The Municipality and the County shall provide each other with the mailing and email addresses, Cellular, Office and Fax numbers for the Contract Administrator and the Municipality's Superintendent at the commencement of the Work.
2. Any notice permitted or required to be given to the Contract Administrator or the Superintendent in respect of the Work shall be deemed to have been given to and received by the addressee on the date of delivery if delivered by hand or by facsimile transmission and on the fifth Day after the date of mailing if sent by mail, as long as the address of the facsimile number has corresponded to that given in Section 3.10 (1.).
3. In the event of an emergency situation or other urgent matter the Contract Administrator or the Superintendent may give a verbal notice, provided that such notice is confirmed in writing within 5 Days.

### 4.0 COUNTY'S RESPONSIBILITIES AND RIGHTS

### 4.01 Default by the Municipality

1. The occurrence of any one or more of the following events shall constitute a Default by the Municipality under this Agreement but shall not be considered an event of default unless such Default is not remedied prior to the expiry of the relevant notice period (if any) and the relevant cure period (if any) applicable to such Default ("Event of Default") as hereinafter set out:
a) if the Municipality fails to make any payment of any amount due to the County under this Agreement and such default shall continue unremedied for thirty (30) days following Notice thereof from the County to the Municipality;
b) if any representation or warranty made by the Municipality, shall prove to have been incorrect in any material respect when made and such incorrect representation or warranty if capable of being remedied, has not been remedied within thirty (30) days following notice thereof (giving particulars of the incorrect representation, warranty or covenant in reasonable detail) from the County to the Municipality;
c) if the Municipality fails to perform or observe any of its obligations under this Agreement, unless expressly stated in this Agreement to the contrary, and such failure shall continue unremedied for a period of one (1) day following notice thereof (such notice to give particulars of the failure in reasonable detail) from the County to the Municipality, or such other period of time to cure such failure as otherwise indicated in the notice;
d) if any proceedings are commenced or taken for the dissolution, liquidation or winding-up of the Municipality or for the suspension of operations of the Municipality whether by extra-judicial means or under any statute of any applicable jurisdiction or otherwise, unless such proceedings have been stayed within thirty (30) days of commencement and have been withdrawn or dismissed within thirty (30) days of commencement;
e) if a decree or order of a court having jurisdiction is entered adjudging the Municipality bankrupt or insolvent, or proving as properly filed a petition seeking a winding-up or arrangement or compromise of the Municipality under the Companies Creditors Arrangement Act (Canada), the Bankruptcy and Insolvency Act (Canada) or the Winding Up and Restructuring Act (Canada) or any other bankruptcy, insolvency or analogous law or issuing process or execution against the Municipality or against any substantial part of the property of the Municipality or ordering the winding-up or liquidation of the Municipality, and any such decree or order continues unstayed and in effect for a period of thirty (30) days from its issuance and is not withdrawn or discharged within thirty (30) days of issuance, or if a trustee, receiver, receiver and manager, interim receiver, custodian or other person with similar powers is appointed in respect of the Municipality or in respect of all or a substantial portion of its property or assets and any such appointment continues unstayed and in effect for thirty (30) days;

## $\underline{2020}$

f) if the Municipality admits its inability to or fails to pay its debts generally as they become due, or otherwise acknowledges its insolvency, makes any assignment in bankruptcy or makes any other assignment for the benefit of creditors, makes any proposal under the Bankruptcy and Insolvency Act (Canada) or any comparable law seeks relief under the Company's Creditors Arrangement Act (Canada), the Winding Up and Restructuring Act (Canada) or any other bankruptcy, insolvency or analogous law;
g) if there is a change in the financial condition, business or affairs of the Municipality which has a material and adverse effect on the ability of the Municipality to meet its obligations under this Agreement;
h) if there is an abandonment or attempted abandonment of the Work or any part thereof;
i) if the Municipality ceases to carry on all or substantially all of its business or except as permitted hereunder, transfers all or substantially all of its undertaking and assets, within one (1) Day;
j) if any of the insurance policies required to be obtained and maintained by the Municipality under this Agreement are terminated or cancelled, or amended in a manner which is materially adverse to the County as a result of any matter in respect to which the Municipality is obligated to indemnify the County, within one (1) Day.

### 4.02 Notification of Default

1. The County shall give written notice of a Default to the Municipality as soon as the County becomes aware of the alleged Default but failure to give such notice in a timely way shall not constitute condemnation of the Default. Unless expressly stated in this Agreement to the contrary, a notice will include instructions to correct the Default within five (5) Days or such time as the County deems appropriate.

### 4.03 Municipality's Right to Correct a Default

1. Unless expressly stated in this agreement to the contrary, the Municipality shall have the right within the five (5) full Days or such time as the County deems appropriate following the receipt of a notice of Default to correct the Default and provide the County with satisfactory proof that appropriate corrective measures have been taken.
2. If the correction of the Default cannot be completed within the five (5) full Days or such time specified in the notice following receipt of the notice, the occurrence shall not constitute an event of default if the Municipality:
a. commences the correction of the Default within the five (5) full Days or other time specified following receipt of the notice; and
b. provides the County with an acceptable schedule for the progress of such correction; and
c. completes the correction in accordance with such schedule.

### 4.04 County's Right to Correct Default

1. If the Municipality fails to correct the Default within the time specified in subsection 4.03, or subsequently agreed upon, the County, without prejudice to any other right or remedy the County may have, may correct such Default with the permission from the Municipality.

### 4.05 Defective Work

1. Defective Work, whether the result of poor workmanship, use of defective Material, or damage through carelessness or other act or omission of the Municipality and whether incorporated in the Work or not, which has been rejected by the Contract Administrator as failing to conform to the Contract Documents, shall be removed promptly from the Work by the Municipality and replaced or re-executed promptly in accordance with the Contract Documents at no additional cost to the County.
2. Any part of the Work destroyed or damaged by such removals, replacements or reexecutions shall be made good promptly at no additional cost to the County.
3. If, in the opinion of the Contract Administrator, it is not expedient to correct defective Work or Work not performed in accordance with the Contract Documents, the County may deduct from monies otherwise due to the Municipality the difference in value between the Work as performed and that called for by the Contract Documents, the amount of which will be determined in the first instance by the Contract Administrator.
4. Notwithstanding any inspections made by the Contract Administrator or the making of any payment by the County, the failure of the Contract Administrator to reject any defective Work or Material shall not constitute acceptance of defective Work or Material.

### 4.06 Termination of Municipality's Right to Continue the Work

1. Upon the occurrence of an event of default, the County may without prejudice to any other right or remedy the County may have, terminate the Municipality's right to continue the Work in whole or in part by giving written notice to the Municipality.
2. If the County terminates the Municipality's right to continue with the Work in whole or in part, the County will be entitled to take possession of the Working Area or that portion of the Working Area devoted to that part of the Work terminated.

### 4.07 Termination of the Contract

1. Upon the occurrence of an event of default, the County may, without prejudice to any other right or remedy the County may have, terminate the Contract by giving written notice of termination to the Municipality.
2. If the County elects to terminate the Contract the County will provide the Municipality with a complete accounting to the date of termination.
3. If this Agreement is terminated by the County by reason of the occurrence of an event of default, all rights of the Municipality under this Agreement shall cease and determine and the County shall be under no further obligation or liability whatsoever to the Municipality with respect thereto. Without limiting the foregoing, the County shall be entitled without hindrance or interference, to enter into such contracts, agreements and instruments with such other person or persons (other than the Municipality), as the County shall, in its sole discretion, determine with respect to the Work and the Municipality shall have no right or basis to make any Claim or pursue, initiate or take any action against the County for so doing.
4. The County is statutorily obligated to maintain the Highways and keep them in repair. In awarding this Contract, the County is relying on the Municipality to carry out its obligations as specified in the Agreement. The County may, acting reasonably, terminate the Contract if any of the following occurs:
a) The Contract Administrator issues five (5) Written Instructions to the Municipality for violation of the terms of the contract including but not limited to utilization of inferior products; failure to meet response time requirements; failure to meet the requirements of the Occupational Health and Safety Act.
b) The Municipality fails to comply with any condition of the Contract, which causes the public to be exposed to a safety hazard or expose the public or Municipality's staff to an immediate or serious danger.
c) The Municipality commits any illegal act.

### 4.08 Continuation of Municipality's Obligations

1. The Municipality's obligations under the Contract as to quality, correction and warranty of the Work performed prior to the time of termination of the Contract or termination of the Municipality's right to continue with the Work in whole or in part shall continue to be in force after such termination.
2. Notwithstanding the termination of this Agreement, whether as a result of the Municipality's Default or otherwise, the Municipality shall remain liable to the County for any breach or Default committed by the Municipality hereunder prior to such termination. In addition, the Municipality's obligations under this Agreement as to quality, correction and warranty of the Work performed by the Municipality up to the time of termination shall continue in force after such termination.

### 4.09 Termination for Reasons Other Than Default

1. The County reserves the right and entitlement to suspend performance of the Work or terminate this Agreement at any time, without cause, by giving notice to that effect to the Municipality, in which event the Country will pay the Municipality the value of the Work performed to the date of termination.

### 4.10 Assignment of Rights

1. Upon termination of this Agreement, for any reason whatsoever, the Municipality shall, for no consideration, deliver or cause to be delivered to the County, copies of all related agreements, and copies of all Contract Documents and other documents, instruments and agreements relating to the Work which are in the possession or control of the Municipality and the Subcontractors. Upon written request, the Municipality shall be allowed to keep one (1) copy of all documents for legal and archive purposes with respect to this winter maintenance agreement.

### 4.11 No Suspension of Work

### 4.11.01 Dispute Between County and Municipality

1. In the event that any dispute arises between the County and the Municipality, the Municipality shall continue to cause the Work to be performed in accordance with the Agreement.

### 4.11.02 Labour Disputes Affecting the Municipality's Ability to Perform the Work

1. The County has a statutory obligation under the Municipal Act and the Public Transportation and Highway Improvement Act to maintain and keep the Highway in repair. The County considers Maintenance activities, which affect the safety of the travelling public to be essential and not to be interrupted.
2. In the event of a labour dispute between the Municipality and its workers, or a Subcontractor and the Subcontractor's workers, the Municipality shall make alternative provisions and shall continue to cause the Work to be performed in accordance with the Contract Documents, for all activities which affect the safety of the travelling public.

### 4.12 Dispute Resolution

### 4.12.01 Procedure

1. From time to time, issues will require review and interpretation during the performance of the Work. In the event of a dispute (other than with respect to a Default) arising between the Municipality and the County under this Agreement, unless otherwise provided herein, the County and Municipality shall use their best efforts to resolve such dispute. If the dispute is not resolved to the mutual satisfaction of the parties, the following process shall be utilized.
2. This process sets out a progressive approach to ensure that such disputes are dealt with in a fair and timely manner. It is intended that, wherever possible, disputes shall be addressed and resolved at the lowest appropriate level. The following stages make up the dispute resolution process: notification and negotiation (two levels).
3. This process, written as though the Municipality is initiating the dispute, shall also be utilized where the Contract Administrator deems recovery of costs from the Municipality appropriate. The relative roles and responsibilities shall be reversed accordingly.
4. Except for the limitation period specified in Subsection 4.13.05, any time limits may be extended as the County reasonably deems appropriate. The County will consider requests from the Municipality to extend such time limits. This will not be done on a regular basis as expedient resolution of disputes is one of the underlying principles of this procedure. in any event, the limitation period in Subsection 4.13.05, will not be extended.
5. Any offer of settlement will become null and void when either party requests that the dispute resolution process proceed to the next step, or when the time limitation has passed.

### 4.12.02 Notification

1. The Municipality shall give oral notice to the Contract Administrator of any situation, which may lead to a request for additional payment, immediately upon becoming aware of the situation.
2. The oral notice shall be followed within fourteen (14) Days by a written notice. Such written notice shall be specific, be directed to the Contract Administrator, outline the Work affected and reasoning for the additional payment, and provide an estimate of the potential extra costs.
3. The Municipality shall provide the written notice as soon as possible, but in any event, before the limitation period set out in Subsection 4.13.05, Limitation Period.

### 4.12.03 Proceeding With the Work

1. Unless the Agreement has already been terminated or completed, the Municipality shall in every case, after serving or receiving written notice of a dispute, continue to proceed with the Work with all due diligence and expedition.

### 4.12.04 Negotiation Levels

1. Following written notice, the County and the Municipality shall use their best efforts to resolve such dispute on the following two (2) successive levels of negotiations between the Municipality and:

## $\underline{2020}$

a. the Contract Administrator ("Site Negotiations"), and
b. the Director of Public Works \& Engineering, ("Engineer Negotiations").
2. Corresponding levels of authority shall be involved in negotiations on behalf of the Municipality.
3. Site Negotiations shall be completed as soon as possible and are limited to a period of fourteen (14) Days following receipt of the written notice. Engineer Negotiations shall be completed as soon as possible following failed Site Negotiations and are limited to a further period of fourteen (14) Days. The Director's decision shall be final.
4. Each party shall be permitted to elevate an issue to the next level of Negotiation Levels if they feel the issue is not being addressed in a forthright manner at the current level. If any issue is not being negotiated at a particular Negotiation Level and it is not within the relevant negotiator's level of authority to decide, such issue shall be automatically elevated to the next level of Negotiation Levels.
5. The Municipality shall indicate to the Contract Administrator when he intends to pursue an issue to the next level in the negotiation process.

### 4.12.05 Limitation Period

Notwithstanding the notice and submission timelines set out in Section 4.12, Dispute Resolution, the County will not consider any Claim for extra payment submitted after the expiry of a ninety (90) Day period following the expiration or earlier termination of this Agreement. The ninety (90) day limitation period replaces any limitation provided for in any legislation where it is legal to do so.

### 5.0 MATERIAL

### 5.01 Supply of Material

1. All Material necessary for the proper completion of the Work, shall be supplied by the Municipality. The contract prices for the appropriate contract items shall be deemed to include full compensation for the supply of such Material.
5.02 Quality of Material
2. All Material provided by the Municipality shall be new, except as approved by the Contract Administrator.
3. Material supplied by the Municipality shall conform to the requirements of the Contract.
4. As specified or as requested by the Contract Administrator, the Municipality shall make available for inspection or testing a sample of any Material to be provided by the Municipality.
5. The Municipality shall not change the source of supply of any Material without the written authorization of the Contract Administrator.
6. Material which is not specified shall be of a quality best suited to the purpose required and the use of such Material shall be subject to the Approval of the Contract Administrator.

### 5.03 Rejected Material

1. Rejected Material shall be removed from the Work site expeditiously at the Municipality's expense after the notification to that effect from the Contract Administrator.

### 5.04 Substitutions

1. Where the specifications require the Municipality to supply a Material designated by a trade or other name, the contract shall be based only upon supply of the Material so designated, which shall be regarded as the standard of quality required by the specification. After the acceptance of this contract, the Municipality may apply to the Contract Administrator to substitute another Material identified by a different trade or other name for the Material designated as aforesaid. The application shall be in writing and shall state the price for the proposed substitute Material designated as aforesaid, and such other information as the Contract Administrator may require.
2. Rulings on a proposed substitution will not be made prior to the acceptance of this contract. Substitutions shall not be made without the prior Approval of the Contract Administrator. The Approval or rejection of a proposed substitution will be made the discretion of the Contract Administrator.

### 5.05 County Supplied Material

### 5.05.01 Care of Material

1. The Municipality shall, in advance of receipt of shipments of Material supplied by the County, provide adequate and proper storage facilities acceptable to the Contract Administrator; and on the receipt of such Material shall promptly place it in storage except where it is to be incorporated forthwith into the Work.
2. The Municipality shall be responsible for acceptance of Material supplied by the County, at the specified delivery point and for its safe handling and storage. If such Material is damaged while under the control of the Municipality it shall be replaced or repaired by the Municipality at no expense to the County, and to the satisfaction of the Contract

Administrator. If such Material is rejected by the Contract Administrator for reasons which are not the fault of the Municipality it shall remain in the care and at the risk of the Municipality until its disposition has been determined by the Contract Administrator.
3. Where Material supplied by the County arrives at the delivery point in a damaged condition or where there are discrepancies between the quantities received and the quantities shown on the bills of lading, the Municipality shall immediately report such damage or discrepancies to the Contract Administrator who shall arrange for an immediate inspection of the shipment and provide the Municipality with a written release from responsibility for such damage or deficiencies. Where damage or deficiencies are not so reported, it will be assumed that the shipment arrived in good order and any damage or deficiencies reported thereafter shall be made good by the Municipality at no extra cost to the County.
4. The full amount of Material supplied by the County in each shipment shall be accounted for by the Municipality and such Material shall be at the risk of the Municipality after taking delivery. Such Material shall not, except with the written permission of the Contract Administrator, be used by the Municipality for purposes other than the performance of the Work under the Contract.
5. Empty reels, crates, containers and other types of packaging from Material supplied by the County shall become the property of the Municipality when they are no longer required for their original purpose and shall be disposed of by the Municipality unless otherwise specified in the Contract Documents.
6. The Municipality shall provide the Contract Administrator, immediately upon receipt of each shipment, copies of bills of lading or such other documentation the Contract Administrator may require to substantiate and reconcile the quantities of Material received.
7. Where Material supplied by the County is ordered and stockpiled prior to the award of the contract, the Municipality shall, at no extra cost to the County, immediately upon commencement of operations, check the Material, report any damage or deficiencies to the Contract Administrator and take charge of the Material at the stockpile site. Where damage or deficiencies are not so recorded by the Municipality it shall be assumed that the stockpile was in good order when the Municipality took charge of it and any damage or deficiencies reported thereafter shall be made good by the Municipality at no extra cost to the County.

## GENERAL CONDITIONS FOR MAINTENANCE

### 6.0 INSURANCE, PROTECTION AND DAMAGE

### 6.01 Protection of Work, Persons, Environment and Property

1. The Municipality, the Municipality's agents and all Workers employed by or under the control of the Municipality, including Subcontractors, shall protect the Work, persons, environment and property from damage or injury, and shall be responsible for all losses and damage which may arise as the result of the Municipality's operations under the Contract unless indicated to the contrary below.
2. The Municipality is responsible for the full cost of any necessary temporary works and the final restoration of all damage, where the Municipality damages the Work or property in the performance of the Contract. If the Municipality is not responsible for the damage that occurs to the Work or property the damages shall be restored as directed by the Contract Administrator.
3. The Municipality shall immediately inform the Contract Administrator of all damage and injuries which occur during the term of the Contract.
4. The Municipality shall not be responsible for loss and damage that occurs as a result of:
a. war;
b. blockades and civil commotions;
c. errors in the Contract Documents;
d. acts or omissions of the County, the Contract Administrator, their agents and employees, or others not under the control of the Municipality, but within the Working Area with the County's permission.

### 6.02 Indemnification

1. The Municipality covenants and agrees that it shall indemnify, defend and save harmless the County from any liability, cost, demands, damages, expenses, claims and suits arising out of or in any way related to the obligations of the Municipality to carry out the work or otherwise meet the obligations provided for in this Agreement, including the failure to perform such work adequately or at all, except to the extent that same is caused by the negligence or wilful misconduct of the County. This indemnity shall survive the early termination or expiry of this Agreement.
2. The County covenants and agrees that it shall indemnify, defend and save harmless the Municipality from any liability, cost, demands, damages, expenses, claims and suits arising out of or in any way related to the obligations of the County to carry out the work or otherwise meet the obligations provided for in this Agreement, including the failure to perform such work adequately or at all, except to the extent that same is caused by the negligence or wilful misconduct of the Municipality. This indemnity shall survive the early termination or expiry of this Agreement.
3. Notwithstanding anything to the contrary contained in this Agreement, and subject to any applicable legislation and the ability of a party to protect its own rights in the face of litigation against that party, each party agrees to assist the other party in a timely manner in terms of the provision of information relevant to any claims that are made against the other party with respect to either party's obligations assumed under this Agreement.

### 6.03 RECIPROCAL INSURANCE

1. Municipal Liability and Automobile Insurance

During the term of this Agreement, each party shall obtain and maintain in full force and effect:
a) Municipal Liability Insurance naming the other party as an additional insured regarding their respective obligations under the Agreement and underwritten by an insurer licensed to conduct business in the Province of Ontario.
b) Automobile Liability Insurance for owned vehicles and Non-Owned Automobile Liability Insurance for non- owned vehicles as may be used under this Agreement.

Each of the coverage's shall have limits of not less than Twenty Million Dollars $(\$ 20,000,000)$ per occurrence, and shall be issued by insurance companies licensed to carry on business in the Province of Ontario.
2. Environmental Insurance
a) Each party shall obtain and maintain in full force, an Environmental Policy with a limit of not less than $\$ 2,000,000 / \$ 4,000,000$ and underwritten by an insurer licensed to conduct business in the Province of Ontario. The policy shall provide coverage for sudden and accidental and gradual release.
b) Upon request, each party shall deposit with the Contract Administrator for the other party such evidence of its insurance as provided in or required under this Agreement. Each party shall take all reasonable steps to not do or omit to do anything that would impair or invalidate the insurance policies.
c) The insurance coverage shall in no manner discharge, restrict or limit the liabilities and obligations assumed by the parties under this Agreement.

### 6.04 Bonding

Bonding is not a requirement of this contract.

### 7.0 MUNICIPALITY'S RESPONSIBILITIES AND CONTROL OF THE WORK

### 7.01 General

1. The Municipality warrants that the site of the Work has been visited during the preparation of the contract and the character of the Work and all local conditions which may affect the performance of the Work are known.
2. The Municipality shall carry out its duties under this Agreement, and shall cause, and take all steps and actions necessary to cause, the Work and each portion of the Work, to be provided and performed strictly in accordance with and so as to implement:
a) all of the terms of this Agreement, as amended in accordance with the terms hereof, including the following additional duties in connection with the Work;
b) all applicable technical standards and specifications;
c) all Governmental Authorizations;
d) all Laws and Regulations, including all Environmental Laws;
e) all Contract Documents; and
f) the results of any studies and tests related to the Work and carried out in accordance with the provisions of this Agreement.
3. The Municipality shall attend a pre-start meeting if required by the Contract Administrator.
4. The Municipality shall not commence the Work until the Municipality has received Approval to commence the Work, from the Contract Administrator.
5. The Municipality shall have complete control of the Work and shall effectively direct and supervise the Work so as to ensure conformity with the Contract Documents. The Municipality shall be responsible for construction means, methods, techniques, sequences and procedures and for coordinating the various parts of the Work.
6. The Municipality shall have an authorized representative responsible for all the Work that is being performed, to act for or on the Municipality's behalf. Prior to commencement of the Work, the Municipality shall notify the Contract Administrator of the name(s), address(es), position(s) and cellular and work telephone number(s) and email address(es) of the Municipality's representative(s) who can be contacted at any time to deal with matters relating to the Contract.
7. The Municipality shall, at no additional cost to the County, furnish all reasonable aid, facilities and assistance required by the Contract Administrator for the proper inspection and examination of the Work or the taking of measurements for the purpose of payment.
8. Where the Municipality finds any errors, inconsistency or omission relating to the Contract, the Municipality shall promptly report it to the Contract Administrator and shall not proceed with the Work affected until receiving direction from the Contract Administrator.
9. When the Municipality is undertaking Work within the vicinity of another contractor or agency, the Municipality shall conduct his Work so as to minimize interference with progress or completion of the Work being performed by others. The Municipality shall cooperate with others working on or near the Work.

The Municipality shall have no Claim against the County for any inconvenience, delays or loss arising from the presence and operation of others.
10. The Municipality shall cooperate with contractors, Utility companies and the County which shall be allowed access to their respective work or facilities at all reasonable times.

### 7.02 Occupational Health and Safety

1. The Municipality shall execute the terms of the Contract in strict compliance with the requirements of the Occupational Health and Safety Act, R.S.O. 1990, c.O. 1 and its regulations (the "OHSA"). The Municipality shall ensure that:
a) All reasonable precautions are taken to protect the health and safety of the workers and the public;
b) its officers and supervisory employees have a working knowledge of the duties of a "constructor", "supervisor" and "employer" under the OHSA applicable to the Work;
c) all supervisors at the Working Area shall be "competent" persons as defined in the OHSA;
d) its supervisory employees carry out their occupational health and safety duties in a diligent and responsible manner with due consideration for the health and safety of the workers;
e) a copy of the most current version of the OHSA is available at the Municipality's office within the Working Area, or, in the absence of an office, in the possession of the supervisor responsible for the performance of the Work;
f) workers employed to carry out the Work shall possess the knowledge, skills and protective devices required by law;
g) the Municipality shall retain all documentation related to Occupational Health and Safety matters for a minimum of two (2) years after the completion or termination of the Contract or longer if there is an ongoing or pending Occupational Health and Safety related investigation;
h) the Municipality covenants and agrees to require in any and all contract(s) with any Subcontractors retained in connection with Work that all Subcontractors shall comply with the OHSA;
i) the Municipality shall be responsible for fulfilling the requirements of WHMIS regulations when any WHMIS controlled products are handled, or used in the workplace.
2. The Municipality shall provide the County with a copy of its health and safety policy and program.
3. The Municipality shall cooperate with representatives of the County in any investigations of worker health and safety in the performance of the Work.
4. The Municipality shall indemnify and save the County harmless from any additional expense which the County may incur to have the Work performed as a result of the Municipality's failure to comply with the requirements of the OHSA.

### 7.04 Access to Properties Adjoining the Work and Interruption of Utility Services

1. The Municipality shall provide at all times, and at no extra cost to the County:
a) adequate pedestrian and vehicular access; and
b) continuity of Utility services to properties adjoining the Working Area.
2. The Municipality shall provide at all times and at no extra cost to the County access to fire hydrants, and water and gas valves located in the Working Area.
3. Where any interruptions in the supply of services are required and when authorized by the Contract Administrator, the Municipality shall give the County notice in accordance with subsection 7.10, Notices by the Municipality, and shall arrange such interruptions so as to create a minimum of interference to those affected.

### 7.05 Approvals and Permits

1. The Municipality shall obtain any permits, licences, and certificates required for the performance of the Work.
2. The Municipality shall arrange for all necessary inspections.

### 7.06 Suspension of Work

1. The Municipality shall, upon written notice from the Contract Administrator, discontinue or delay any or all of the Work and Work will not be resumed until the Contract Administrator will, in writing, so direct.

### 7.07 Notices by the Municipality

1. Before Work is carried out which may affect the property or operations of any County or agency of government or any person, company, partnership or corporation, including a municipal corporation or any board or commission thereof, and in addition to such notices of the commencement of specified operations as are prescribed elsewhere in the Contract Document, the Municipality shall give at least 48 hours advance written notice of the date of commencement of such Work to the person, company, partnership, corporation, board, or commission so affected.
2. In the case of damage to, or interference with any utilities, pole lines, pipe lines, conduits, farm tiles, or other public or privately owned works or property, the Municipality shall immediately notify the Country and the Contract Administrator of the location and details of such damage or interference.

### 7.08 Limitations of Operations

1. The Municipality shall cooperate with other Municipalities, Utility companies and the County and they shall be allowed access to their respective work or plant at all reasonable times.

### 7.09 Cleaning Up Before Acceptance

1. The Work shall not be deemed to have reached Final Completion until the Municipality has removed surplus materials, tools, construction machinery and equipment. The Municipality shall also have removed debris, other than that caused by the County, or others.

### 7.10 Standard of Care

1. Without limiting the obligations and liabilities of the Municipality under this Agreement, the Municipality shall carry out his duties hereunder diligently and expeditiously, in good faith, in a safe, reasonable and prudent manner, in accordance with good business practices and management techniques, and in the spirit of environmental protection.

### 7.11 Notice of Litigation

The Municipality shall promptly give notice to the County of all claims, proceedings, disputes (including labour disputes) or litigation in respect of the Municipality or the Work of which the Municipality is aware or ought to be aware, using all reasonable due diligence.

### 8.0 PAYMENT

### 8.01 Price for Work

## 2020

1. Prices for the Work shall be full compensation for all labour, Equipment and Material required in its performance. The term "all Labour, Equipment and Material" shall include supplies and other incidentals.
2. Payment for Work not specifically detailed as part of any one item and without specified details of payment will be deemed to be included in the item(s) with which it is associated.
3. The total price shall be calculated by multiplying the centre line length by the applicable yearly rate. (e.g. 1.5 centreline length by $\$ 5,000$ rate per $\mathrm{KM}=\$ 7,500$ )

### 8.02 Payments by Invoice

1. Payment shall be made on the basis of an invoice and records submitted by the Municipality or as specified elsewhere in the Contract.
2. Where payment is based on an invoice, the Municipality shall provide an invoice and records to the Contract Administrator in a format approved by the Contract Administrator, at least once a month after commencing Work on the Contract, indicating the amount of Work done, Material furnished, and the value thereof according to the terms of the contract.

### 8.03 Interest for Dispute Resolution

1. Where the Municipality does not attempt to resolve the negotiation or the Claim, in an expeditious manner, interest shall be negotiable.
2. Where the Municipality fails to give notice of a Claim within the time limit prescribed by Section 4.13, Dispute Resolution, interest shall not be paid.
3. Where a Municipality fails to comply with the 30-Day time limit and the procedures prescribed by Section 4.13, Dispute Resolution, for submission of Claims, interest shall not be paid for the delay period.

### 8.04 Payment on a Time and Material Basis

### 8.04.01 Payment for Work

1. Work performed under a Work Order shall be on a Time and Material basis wherever possible.
2. No mark-up will be applied regardless of the extent to which the Work is assigned or subcontracted to others. If Work is assigned or sublet to an associate, as defined by the Securities Act, R.S.O. 1990, Chapter S.5, as amended, no mark-up whatsoever will be applied.

GENERAL CONDITIONS FOR MAINTENANCE
August
$\underline{2020}$

### 8.04.02 Payment for Labour

1. The County will pay the Municipality for Labour employed on each Time and Material project of the Cost of Labour.

### 8.04.03 Payment for Material

1. The County will pay the Municipality for Material used on each Time and Material project.

### 8.05 Payment for Equipment

### 8.05.01 Equipment Working Time

1. The County will pay the Municipality for the Working Time of all Equipment other than Rented Equipment and Operated Rented Equipment used on the Work on a Time and Material basis.
2. The County will pay the Municipality for the Working Time of Rented Equipment used on the Work on a Time and Material basis at the invoice price Approved by the Contract Administrator.
3. The County will pay the Municipality for the Working Time of Operated Rented Equipment use on the Work on a Time and Material basis at $110 \%$ of the Operated Rented Equipment invoice price Approved by the Contract Administrator prior to the use of the Equipment on the Work on a Time and Material basis.

### 8.05.02 Payment for Hand Tools

1. Notwithstanding any other provision of this Section, no payment shall be made to the Municipality for or in respect of hand tools or Equipment that are tools of the trade.

### 8.05.03 Payment for Work by Subcontractors

1. Where the Municipality arranges for Work on a Time and Material basis, or a part of it, to be performed by Subcontractors on a Time and Material basis and has received Approval prior to the commencement of the Work, in accordance with the requirements of subsection 3.08, Subcontracting by the Municipality, the County will pay the cost of Work on a Time and Material basis by the Subcontractors calculated in the Contract price.
2. The Municipality shall pay all taxes, customs duties, and excise taxes on all fuels and Materials with respect to the Contract. Where applicable, the Municipality shall apply for any refunds of taxes and duties to the appropriate tax levying authority.

### 8.06 Records

1. The Municipality shall maintain and keep accurate Records relating to the Work, Changes in the Work, Additional Work and Claims arising there from. Such Records shall be of sufficient detail to support the total cost of the Work, Changes in the Work, and Additional Work. The Municipality shall preserve all such original Records until 12 months after the Final Completion or until all Claims have been settled, whichever is longer. The Municipality shall require that Subcontractors employed by the Municipality preserve all original Records pertaining to the Work, Changes in the Work, Additional Work and Claims arising there from for the same period of time.
2. The County may inspect and audit the Municipality's Records relating to the Work, Additional Work and Changes in the Work at any time during the period of the Contract in accordance with paragraph 1 of this clause. The Municipality shall supply certified copies of any part of his Records required whenever requested by the County.

### 8.07 Inspection and Audit

1. The Municipality shall maintain and keep accurate Records relating to all Work and Payment and Claims arising there from. The Municipality shall preserve such original Records for the longest limitation period applicable thereto pursuant to any law, after the Work is completed or until all Claims have been settled, whichever is longer. The Municipality shall require its advisors to preserve all original Records pertaining to the Work, Change Orders, and Claims arising there from for a similar period of time.

The County may cause its auditor or an independent auditor acceptable to both the County and the Municipality, each acting reasonably:
(a) during normal business hours;
(b) upon three (3) business days prior notice;
(c) without Material interference with the performance by the Municipality of the Work; and
(d) at the sole cost and expense of the County, to carry out such inspection of information, including Records, required to be maintained and/or delivered by the Municipality under this Agreement in connection with the performance of the Work for the purpose of verifying the information contained therein and shall be entitled to make copies thereof and to take extracts there from, solely at the expense of the party making or taking the same and the Municipality shall make available or cause to be made available to any such party such reasonable information and Material as may be required by such party for its purposes and otherwise give such cooperation may be required by such party.

### 8.08 Taxes and Duties

1. Taxes, customs duties and excise taxes on all fuels, materials and services, except for refundable taxes and duties, shall be included/negotiated in advance of the Work to be

GENERAL CONDITIONS FOR MAINTENANCE
August 2020
done on a Time and Material basis. Payment as herein provided shall be full compensation for all Labour, Equipment and Material to do the Work on a Time and Material basis.

## SECTION D

## SPECIAL PROVISIONS GENERAL

## INDEX FOR SECTION D - SPECIAL PROVISIONS GENERAL

D-M001 Time for Completion ..... D-1
D-M002 Damages ..... D-2
D-M003 Payment ..... D-3
D-M004 Occupational Health and Safety ..... D-4

The Municipality is hereby advised that winter weather events may be expected to occur prior to the official start date of winter operations (November 1) or after its official completion date (April 15). Should this be the case, the Municipality will be expected to respond as called for in the contract. Such work will be deemed Municipality to be excluded from the work of the contract and additional payment shall be made based on actual costs incurred.

The County of Renfrew is the road authority and as such is responsible to the public for the provision of safe driving conditions on their roads. The County of Renfrew has adopted O. Reg. 239/02 for roadway maintenance including the standards of maintenance and response times. Failure of the Municipality to achieve the mandated response times or meet the requisite standards places the travelling public unnecessarily at risk. Such situations are deemed to be extremely serious and the Municipality shall be held responsible for all damages.

If it is observed that the Municipality's performance is not meeting the standards, the County shall have the right to terminate the contract at its discretion.

For the purpose of this contract the payment provisions of the General Conditions for Maintenance Contracts are hereby amended as follows:

Payment shall be based on the unit rate per kilometre for winter maintenance of the road(s) for the duration of the contract.

Payment shall be made in two (2) instalments to the Municipality. The first instalment shall be $60 \%$ of the total amount owing to the Municipality. Such amounts will be due and payable on or about the $31^{\text {st }}$ day of December.

The final instalment shall be the balance of the amount owing to the Municipality. The payment shall become due and payable on or about the $31^{\text {st }}$ day of January.

The Municipality and all staff must comply with the Occupational Health and Safety Act (which are minimum requirements), and will be responsible for the compliance therewith while working for the County and shall take all reasonable precautions to ensure worker safety.

The Municipality shall supply and ensure that all staff uses protective clothing and/or devices as set out in the Occupational Health and Safety Act.

In compliance with the Occupational Health and Safety Act and WHMIS regulations, the Municipality is cautioned that the workplace may contain hazardous products. It shall be the responsibility of the Municipality to make it aware of these products. These products are controlled under the WHMIS regulations.

In the event of an accident causing death, critical injury (as defined in the OHS Act) or disabling injury to the Municipality's employee, the Municipality shall notify the Contract Administrator immediately and within five (5) days of such an event, provide the Contract Administrator with a detailed report which shall include the following information:
a) Municipality contact person name and telephone number;
b) description of accident (who, what, when, where, how);
c) description of injury;
d) recommendations to prevent a future occurrence; and
e) confirmation that all legislative notification requirements have been fulfilled.

The Municipality shall immediately notify the Contract Administrator of all Ministry of Labour (MOL) orders or charge issued to the Municipality. In addition copies of all MOL orders and Charges shall be provided to the Contract Administrator immediately.

## SECTION E

## STANDARD SPECIFICATIONS

## INDEX FOR SECTION E - STANDARD SPECIFICATIONS

STANDARD SPECIFICATIONS
E-1

## SS-1 Standard Specifications

1.1 The Municipality acknowledges that certain standard specifications, which are provisions of this Contract, have not been reproduced for inclusion in the Contract Documents. These standard specifications are listed in Section E 1.3 and in Section F.
1.2 The Municipality acknowledges that the standard specifications referred to in subsection Section E 1.3 are Ontario Provincial Standard Specifications (OPSS) as produced and amended by the government of the Province of Ontario and the Environmental Canada Code of Practice for the Environmental Management of Road Salts (TECCOPFTEMORS)
1.3 The OPSS standard specifications which are provisions of this contract are:

| OPSS | DESCRIPTION | LATEST VERSION |
| ---: | :--- | ---: |
| MUNI 1004 | Material Specification for | NOV 2012 |
|  | Aggregates - Miscellaneous |  |
| MUNI 2502 | Material Specification for | APR 2017 |
|  | Chloride Solid and Chloride |  |
|  | Solution |  |

## SECTION F

## SPECIAL PROVISIONS - WINTER MAINTENANCE

INDEX FOR SECTION F - SPECIAL PROVISIONS - WINTER MAINTENANCE

1. SCOPE OF WORK ..... F-1
2. REFERENCES ..... F-2
3. DEFINITIONS ..... F-3
4. MATERIALS ..... F-4
5. EQUIPMENT ..... F-5 to F-7
6. WINTER OPERATIONS ..... F-8 to F-21
7. MEASUREMENT FOR PAYMENT ..... F-22
8. BASIS OF PAYMENT ..... F-22

### 1.0 SCOPE OF WORK

Under this contract the Municipality will provide winter maintenance services on county roads identified in the contract documents to the standards detailed herein. Without limiting the generality of the foregoing the Municipality shall be responsible for providing all labour, equipment and materials necessary to plow, sand, salt etc., to achieve the desired surface condition 24 hours per day, 7 days per week within the requisite response time and for the duration of the contract. This shall include but not be limited to the following activities and as per the latest version of O . Reg. / 02 and industry standard practices:
O. Reg. 239/02

- Patrolling
- Weather Monitoring
- Snow Accumulation on Roadways, Significant Weather Event
- Ice Formation on Roadways and Icy Roadways
- Icy Roadways, Significant Weather Event


## Industry Standard Practices

- See Special Provisions - Section F
- Winging back banks
- Application of de-icing chemicals
- Spring Drainage


### 2.0 REFERENCES

This specification refers to the following standards, specifications or publications:
2.01 Ontario Provincial Standards

| OPSS | DESCRIPTION | LATEST VERSION |
| ---: | :--- | ---: |
| MUNI 1004 | Material Specification for | NOV 2012 |
|  | Aggregates - Miscellaneous |  |
| MUNI 2502 | Material Specification for | APR 2017 |
|  | Chloride Solid and Chloride |  |
|  | Solution |  |

2.02

Ontario Legislation and Regulation
Highway Traffic Act and Regulations hereunder
Occupational Health and Safety Act and Regulations there under
O. Reg. 239/02
O. Reg. 555/06

### 3.0 DEFINITIONS

The following terms are used throughout this specification and the following definitions shall apply:

Bare Pavement Surface means the driven portion of the roadway is free of all snow and ice.
Centre Bare Pavement Surface refers to the centre four (4) metres of the roadway are free of all snow and ice.

Track Bare means the wheel tracks in each travelling lane are free of snow and ice.
Snow-packed Surface occurs if the travelled portion of the roadway is covered with packed snow for its full width.

Response Time means the length of time from the point at which the Municipality becomes aware or should have become aware of the existence of winter conditions until the dispatch of its response to those conditions.

### 4.0 MATERIALS

4.01 Winter Sand

Winter sand shall conform to the general requirements of MUNI 1004 as amended herein.
4.02 Treatment of Sand

Winter rock salt, shall be mixed thoroughly with the sand in a $5 \%$ proportion, to provide a homogeneous mixture.
4.03 Sodium Chloride

Sodium Chloride shall be coarse highway road salt and meet the requirements of MUNI 2502.
4.04 Treatment \& Handling of Sand

MUNI 1004 Material Specification for NOV 2012
Aggregates - Miscellaneous

SPECIAL PROVISIONS - WINTER MAINTENANCE
August 2020

### 5.0 EQUIPMENT

The following minimum requirements are applicable to all licensed equipment in this Contract.

1. The unit(s) shall be equipped with a speedometer and odometer that accurately record speed and distances.
2. The unit(s) shall display a sticker indicating that it has passed a current Periodic Mandatory Commercial Vehicle Inspection (PMCVI) dated after September 1 in each year of the Contract. Stickers must be valid for the duration of the winter season.
3. The unit(s) shall be of Industry Standard (sufficient mechanical and physical condition to carry out all operations required as per the County Maintenance Standards).

### 5.01 Plow Truck and Snowplow Equipment

Section 5.0 is the minimum requirements applicable to all trucks that may be completing winter maintenance operations.

### 5.02 Spreader Equipment

All plow equipment shall be in conformance with industry standards and shall be of Industry Standard (sufficient mechanical and physical condition to carry out all operations required as per the County Maintenance Standards).

Section 5.03 is the minimum requirements applicable to all spreader equipment.

### 5.03 Controls

Each spreader unit may be equipped with an automatic electronic spreader control unit matching the County of Renfrew current Standard, or a unit that is in conformance with Industry Standard (sufficient mechanical and physical condition to carry out all operations required as per the County Maintenance Standards) or a manual spreader control.

Units shall be calibrated for salt and sand and be programmed for applicable application rates.
The Municipality should be prepared to alter or add to these programmed rates necessary and as directed by the Contract Administrator.

The Municipality shall complete and submit the Calibration Record upon request.

## SPECIAL PROVISIONS - WINTER MAINTENANCE

August 2020

### 5.04 Carrier Safety Compliance

### 5.04.01 Definitions

For the purposes of this Special Provision, the following terms shall have the meanings set forth in this section:

Business Day means any day.
Commercial Motor Vehicle is as defined under section 16 of the Highway Traffic Act, R.S.O. 1990, c.H.8, as amended.

Contract means this agreement between the Municipality and the County to which this Special Provision is attached.

Contract Administrator means the person, partnership or corporation designated by the County to be the County's representative for the purposes of the Contract.

Municipality means the party with which the County is contracting under the Contract.
CVOR Abstract means a Level 2 CVOR Abstract obtained from the Province.
CVOR Certificate means a Commercial Vehicle Operator's Registration certificate issued under the Highway Traffic Act, R.S.O. 1990, c.H.8, as amended.

CVOR Holder means a Person to whom a CVOR Certificate was issued that has not been cancelled.

County means the Municipality of the Corporation of the County of Renfrew.
Person means an individual, corporation, partnership, joint venture, association, trust, pension fund, union, governmental agency, board, tribunal, County, commission or department and the heirs, beneficiaries, executors, legal representatives or administrators of a person to whom the context can apply according to law.

Unacceptable CVOR Record means a CVOR Abstract in which either:

- the "Current Violation Rate" exceeds the "Threshold Default" or "Threshold Override";
- "WRN" (warning letter) or "INT" (interview) appear as an "Event" and the date of either "event" is within six (6) months of the date on which the CVOR Abstract is provided to the Contract Administrator or Municipality, as the case may be; or
- the value recorded in the "Threshold Override" is .9999.

Work means the total maintenance and related services required by the contract documents.

Working Area means all the lands and easements owned or acquired by the County in which the Work is to be conducted.

### 5.04.02 Intent

No CVOR Holder with an Unacceptable CVOR Record shall operate a Commercial Motor Vehicle in the performance of the Contract or in the haulage of materials to, on or from the Working Area.

### 5.04.03 Municipality Operation of a Commercial Motor Vehicle

The County expects that the Municipality is a CVOR Holder who intends to operate a Commercial Motor Vehicle in the performance of the Contract or in the haulage of materials to, on or from the Working Area, the Municipality shall keep their CVOR in good standing during the execution of the contract.

If at any time, the Municipality holds an Unacceptable CVOR Record, the Municipality shall advise immediately the Contract Administrator and shall not operate a Commercial Motor Vehicle in the performance of the Contract or in the haulage of materials to, on or from the Working Area.

### 5.04.04 Subcontractor and Other Operation of a Commercial Motor Vehicle

The Municipality shall, at all times throughout the duration of the Contract, ensure that no CVOR Holder with an Unacceptable CVOR Record works, directly or indirectly, for the Municipality in the operation of a Commercial Motor Vehicle in the performance of the Contract or in the haulage of materials to, on or from the Working Area. The Municipality shall require its subcontractors, in turn, to require compliance with this Special Provision from any Person with whom they contract.

SPECIAL PROVISIONS - WINTER MAINTENANCE
August 2020

### 6.0 WINTER OPERATIONS

### 6.01 Levels of Service

Per O. Reg. 239/02

### 6.02 General

1. While this Maintenance Special Provision establishes levels of service, it is acknowledged that conditions may occur, which temporarily prevent achieving levels assigned. In such cases, attempts shall be made to keep highways open by utilizing all the Municipality's equipment as defined in the Proposal at maximum efficiency.
2. When it becomes evident to the Municipality that available resources are not sufficient to maintain highways open and passable, the Municipality is to notify the County and it will determine if the road shall be closed.
3. Snow drifting shall not be permitted to accumulate on the driving surface and should be removed from the shoulder before the snowdrift accumulates on the driving surface.
4. Once equipment is dispatched for winter control purposes, the Municipality shall continue the operation until the prescribed level of service is achieved where conditions permit. Should conditions not permit accomplishment of the prescribed level of service, operations shall continue as required to maintain a good driving service.
5. From the time unfavourable road conditions are detected and winter equipment is required, the Municipality has a maximum of $1 / 2$ hour to have the required operator(s) in the vehicle(s) and equipment ready to begin Work. For spreaders, this means in the process of having the spreader(s) filled with sand or salt. For plowing, this means en-route to the area of concern. For the safety of the public, it is essential that the response time is kept to a minimum.
6. Plowing operations shall commence on or before 2 cm of snow or slush has accumulated on the road surface. However, if the roads are Hazardous, slippery, or ice or slush is developing, the winter operation shall be deployed.
7. The use of salt shall be limited to Class I, II and III roads at the recommended rate of application to prevent snow and ice from sticking to the pavement, or to remove ice or snow pack once formed on the pavement.
8. It is recommended that de-icers be applied a minimum 30 minutes before plowing.
9. During and after a storm, the Municipality shall apply de-icer and abrasives at the specified spreading route to improve the friction of the road surface when required for safety reasons and to attain the specified level of service.
10. The Municipality may apply mixtures of de-icer and abrasives. The percentage of each component shall be such as dictated by conditions.

### 6.03 Preseason Preparations

### 6.03.01 Personnel

The following shall be carried out prior to the winter maintenance season:

1. All the Municipality's personnel engaged in snow removal or associated operations (communications, inspections, etc.), shall be informed of their specific duties as it relates to shift schedules, reporting procedures and safety precautions.
2. Procedures for the proper disposal of snow from bridges and roadways are to be reviewed with all operators and patrollers.
3. Review procedures to be followed for Emergency Road Closing, Closing Highways to Traffic (Winter Conditions), Placement of Signs and Traffic Control Devices for an Emergency Road Closing.
4. The following date identifies the median for the first and last snowfall of 2 cm or more. Depending on local needs, these dates should be considered when maintaining resources at full readiness. Staff and equipment, however, should be "phased in" one month before and "phased out" for one month after the dates shown, in order to cope with early and/or late storms. Date: October 15 to April 15.

### 6.03.02 Materials

### 6.03.02.01 Sand

The following is to be carried out prior to the winter season:

1. Sand shall be sharp and free from quantities of clay and loam. For further specifications concerning winter sand and grading requirements refer to MUNI 531. The use of screened sand is essential to prevent damage to turntable and conveyor type sand spreaders, as well as to reduce risk of damage to automobiles from flying stones.

### 6.03.03.02 Salt

Salt used for winter maintenance shall conform to MUNI 531 and shall be stored indoors.

### 6.03.03.03 Miscellaneous

The following will be carried out prior to the winter season.
Staff shall be informed of the importance of maintaining accurate details of Work accomplishment, as well as being familiar with pertinent reporting documents and their preparation.

### 6.04 Winter Maintenance Operations

The following outlines the recommended best practices to ensure that the requirements of the contract are met. These are provided for the information of the Municipality.

### 6.04.01 Beginning of Storm

This section covers those activities required during the period when a storm is expected, or just beginning.

1. Weather Reports should be monitored closely to ascertain what might be expected in adverse weather conditions. Attention should be given to weather and road conditions on adjoining Patrols, Districts, Provinces and States.
2. Monitor road conditions regularly and determine the following when adverse weather conditions become apparent:
a. Storm severity and duration;
b. Type of precipitation (wet snow, dry snow, sleet, etc.);
c. Visibility (good, fair, poor, nil);
d. Condition of pavement (wet, dry, icy, ice patches, etc.);
e. Wind direction and velocity;
f. Existing temperature;
g. Temperature changes (failing or rising);
3. Establish contact with the County for any additional information, which may be relevant. Information received from the County may include conditions reported on adjacent patrols in order that adequate preparations can be made. This information will be provided for information purposes only.
4. Inspect equipment to ensure proper working order. Have any breakdown repaired immediately or have replacement equipment brought on site. Special attention should be given to the gate opening and electronic sand/salt controllers on spreaders.
5. Organize or call out spreader operators and/or plow operators and begin snow clearing and spreading operations according to conditions. Under certain conditions, it may be beneficial to apply de-icers immediately before precipitation begins.
6. Continue road patrolling as the storm begins, to direct and monitor effectiveness of winter maintenance operations and to relay road and weather information to the County as warranted.
7. Ensure that there is adequate salt and sand available.

### 6.04.02 During Storm Conditions

This section covers the activities required during the storm.

1. Continue to perform road patrol duties to monitor weather and road conditions, and ensure that necessary operations are undertaken with minimum delay.

Plow operators can assist in monitoring weather and road conditions.
2. Ensure that the sand or salt is being applied at the correct rate and time and at the required speed. Also ensure that the sand or salt being applied, is effective.
3. Ensure that plowing operations are continuous to maintain the established level of service for the highway.

### 6.04.03 After Storm Conditions

This section covers those activities, which are required during the 24 -hour period following the end of a storm.

1. Continue road inspections to determine the extent and priority of clean up operations required, as well as any driving conditions that may require additional operations, e.g. icy patches from melting windrow.
2. Continue to clear snow from the traveled portion of the roadway and paved shoulders, to achieve the County Standard. Ice blade or sand any snow packed sections, which have become icy, or are developing ice, potholes or washboard.
3. Ensure that salt and sand are being applied under the recommended weather conditions and at the required speeds and rates. Also ensure that the sand or salt being applied is effective.
4. Truck climbing and passing lanes, right turn lanes, crossovers and gore areas shall be plowed within the 24 -hour period following the end of a storm.

## SPECIAL PROVISIONS - WINTER MAINTENANCE

August 2020

### 6.04.04 Periods between Storms

This section covers those activities required after a storm has passed and the traveled portions of the highway are at their designated service level. These periods are normally during clear weather or when continuous plowing is not required.

1. Road inspections should be carried out to ensure clean up operations are being performed.
2. Check drainage facilities (ditches, culverts, catch basins, storm sewer systems, etc.) and complete appropriate work to have them functioning properly. Water, running along, across, or ponding on, the shoulder or road surface, shall be removed as soon as possible, as well as the cause.
a. Arrange for removal of any obstructions to drainage by winging snow back from the shoulder, and/or removing blockages to drainage facilities.
b. Arrange to sand or salt road surfaces, if water freezes.
c. Wing back or remove melting windrows.

If drifting snow is causing localized flooding conditions or isolated areas of water on the road, and the rest of the pavement is dry, plow, sand and/or salt only the affected areas. Note these locations for future corrective action (such as the erection of snow fence at these areas etc.), if required.
3. Check the effectiveness of snow fence and snow hedge locations. Note areas where snow drifts are nearing or have reached the top of snow fence.

Record observations on the Road Patrol Form to assist in next year's planning.
4. Check all signs and highway markers to ensure their message is visible to motorists.

Remove snow and/or dirt. Do not use shovels or wash with a solvent de-icer, as this may damage sign sheeting material.
5. Snowbanks that are creating visibility or drifting problems or are too high to provide future snow storage shall be lowered. Wing back, where practical.
6. Remove snow build-up from all areas where storage space is restricted/limited:
a. Where snow or ice is loaded and hauled away, it shall be disposed of in a suitable snow disposal site. Disposal should never be into the water or onto the ice or ponds, lakes, rivers, creeks, etc.
b. Where snow or ice is moved or removed from a bridge or causeway over water, using a loader or by other mechanical means, disposal shall not be into water or onto ice covering water.
c. Accumulation of snow at subways (bridges) and approaches shall be removed as soon as possible.
d. Excessive accumulations of snow at guiderail, median barriers and energy attenuators, e.g. inertial barriers, which could cause ramping, shall be removed immediately.
7. Note any damages, which resulted from the storm and report these to the Contract Administrator or designate.
a. Guiderail - Repair or replace as soon as possible.
b. Snowplow Markers - Replace or repair as necessary.
c. Mailboxes - Record location, owner's name and date in the Patrol Supervisor's Diary for future reference. The Municipality shall replace or repair all damaged mail boxes.
d. Sign Faces and Posts - Repair or replace in accordance with MSP6.
8. Where accessible, check that snow fence ties and braces are not loose or broken. Repair as necessary.
6.04.05 Equipment

1. All equipment shall be in conformance with Industry Standards (sufficient mechanical and physical condition to carry out all operations required as per the County Maintenance Standards).

### 6.04.06 Communications

1. Radio equipment in all patrol vehicles with the responsibility of communicating to maintenance units shall be checked daily. Prior to leaving the yard, the operator, will ensure that it is functioning properly. If repairs or adjustments are required, they shall be repaired or replaced immediately, but shall not delay the operation.
2. Industry Standard (sufficient mechanical and physical condition to carry out all operations required as per County Maintenance Standards).

### 6.04.07 Criteria for Snow and Ice Control

This section outlines the criteria for the various snow and ice control operations.

## SPECIAL PROVISIONS - WINTER MAINTENANCE

August 2020

### 6.04.07.01 Plowing

The priority for clearing of County Roads shall be as follows:

1. It is required that for County Roads, plowing of the through lanes of the highway be given first priority. Clearing of shoulders (gravel, partially or fully paved) or other facilities, are given lower priority and are usually cleared after the traveled portion has been adequately cleared.
a. Through Lanes and Left Turn Lanes.
b. Interchange Ramps and Acceleration and Deceleration Lanes.
c. Auxiliary Passing Lanes (2-lane highways) - During a storm, the through lanes are to be plowed first. The auxiliary passing lanes will be cleared when conditions permit. However, clearing the outside lanes or truck climbing lanes, while in the vicinity, will sometimes assist in keeping the through lanes/centre lanes cleared, such as preventing snow from being dragged onto the centre lanes by trucks, then this is permissible. This will be dependent on the type of storm. However, extreme caution should be exercised during a storm when, turning around to clear any outside lanes.
d. Right Turn Lanes - Right turn lanes on a two lane highways are generally cleared after the storm, however, it may be beneficial to sometimes clear the right turn lanes during excessive storm conditions to assist in keeping the through lane clear.
e. Shoulder, Gore Areas and Crossovers - Shoulders are to be cleared after a storm to prevent drifting and provide additional storage for future storms. However, if accumulations are excessive, due to the intensity of the storm and high windrows have resulted from plowing through lanes, then the shoulders can be cleared during a storm to provide greater storage.
f. Lowering Snow banks - Step winging and lowering snow banks on shoulders at traffic islands and intersections shall be performed during periods between storms.

### 6.04.07.02 Sanding

1. Sand is used as an abrasive to provide traction on slippery surfaces. It will be used most often when the temperature is too low for salt to be effective. Sand is most effective in providing traction on dry, hard snow.
2. As a general rule, sand will be used when the temperature is falling below, or not expected to rise above $-12^{\circ} \mathrm{C}$. However, sand will be used at higher temperatures if traction is required immediately.
3. Sanding, when required, should normally follow after the plowing operations. This minimizes the amount of sand being pushed off to the side of the road.
4. As a general rule, if the pavement is dry and the snow is not packing or sticking - sanding is not required.

### 6.04.07.03 Salting

1. Salt applied to snow, forms a brine mixture. This reduces the possibility of the snow sticking to, or packing on the pavement. It also prevents ice build-up and allows the plow to remove the snow easier. Salt, assisted by sun, traffic and warmer daytime temperatures, is also used as a melting agent to eliminate icy conditions.
2. As the temperature decreases, the effectiveness of the salt reduces until it becomes ineffective. Normally, salt should not be applied when the temperature is below $-12^{\circ} \mathrm{C}$. However, in the presence of sun and/or heavy traffic volume, which creates a higher road surface temperature, salt can be effective down to a temperature of $-18^{\circ} \mathrm{C}$.
3. In general salt should be applied a minimum of 0.5 hours in advance of plowing to prevent the salt from being pushed off before it has had a chance to work. This is consistent with salt being used to assist in the plowing operations. The lower the temperature, the longer it will take for the salt to work.
4. If the pavement is dry and the snow is not packing, salting is not recommended.
5. Salting operations shall begin as soon as ice is detected on the pavement. Salting shall not take place in anticipation of a storm.
6. Salt is usually applied in a narrow strip; however, a spinner should be used to distribute the salt in a uniform layer across the full width of the lane on open graded pavements, where the pavement is severely distorted or where the pavement has no crossfall.

For the purpose of these spreader route calculations only, the minimum rate of salt at $130 \mathrm{~kg} / 2$ lane km is to be used for Classes I, II, and III.

NOTE: As specified elsewhere the actual spreading rate for sand and salt is 570 and $130 \mathrm{~kg} / 2$ lane km respectively.

### 6.04.08 Procedures for Snow and Ice Control Operation

This section sets out "HOW' and "WHERE" the various snow and ice control operations are to be carried out.

### 6.04.08.01 Plowing

1. Accumulation of precipitation is to be plowed to the right of the traveled portion of the roadway.
2. On multi-lane highways, where echelon plowing is performed, the following should be noted:
a. On four lane roads (two lanes in each direction) plow vehicles shall be spaced from 150 m to 300 m apart.
b. On multi-lane roads, where more than two plow vehicles are operating, the spacing of 150 to 300 m applies only to the plows in the extreme left lane and adjacent driving lane.
c. Plow vehicles in all other lanes should operate at a much closer spacing of 15 to 30 m to avoid the possibility of motorists crossing through the windrows which result from the movement of accumulated precipitation from the left lanes to the shoulder area.
d. Motorists should be prevented from passing plowing vehicles, by operating the plows tight together, when in the plow operator's judgement:
(i) the passing maneuver is Hazardous due to the lead plow leaving a heavy windrow of snow; or
(ii) the road ahead is known to be in Hazardous condition (due to heavy drifts, slipperiness, accidents, etc.) or
(iii) visibility is limited, rendering passing too Hazardous, or
(iv) traffic volume is so heavy that, even if passing were permitted, only a small percentage of the overtaking vehicles could actually make their way through the one passing route available. This situation will apply commonly to urban freeways, where plow routes are relatively short and operating speeds are usually high ( $70 \mathrm{Km} / \mathrm{h}$ ).
3. Special attention and priority shall be given to ramps and legs leading to emergency services, such as hospitals, fire stations and police stations, etc.
4. Plowing activities shall be co-ordinated to eliminate or minimize windrows of snow being left along the through lane, where it connects with a ramp or transfer lane.
5. When plowing at railway crossings, the following procedures shall be followed:
a. When the weather, visibility, or any other condition at a crossing does not justify a stop during plow operations:
(i) Reduce speed on approaching the crossing; engage low gear; raise the plow blade and wing or other attachments to clear the highest part of the crossing and then drive over the crossing without changing gears. Reduction of speed will vary according to the weather, visibility and amount of traffic.
(ii) After driving over the crossing, lower the plow blade and wing or other attachments and resume plowing.
b. When the view is obstructed due to weather, snow embankment etc., during snow plow operations:
(i) stop the plow before reaching the crossing;
(ii) ensure that it is safe to cross the tracks;
(iii) raise the plow blade and wing or other attachments, drive over the crossing, lower the blade and wing or other attachments and resume plowing.
c. For safe operation while crossing the tracks, when not plowing, the plow blade and wing or other attachments shall be raised sufficiently to clear the highest part of the crossing.
d. When it is necessary to examine a railway crossing to check for damage to the tracks, to sand the crossing, remove any obstruction or Hazard, or to perform any other necessary task, the plow operator is to:
(i) drive over the crossing, making a visual inspection of the crossing while doing so;
(ii) stop the truck with the rear of the truck at least 15 m clear of the crossing. When the weather and visibility are poor, place "fusees" on the highway, at least 30 m in both directions from the area occupied by the plow and railway crossing;
(iii) if the track is damaged, set up warning devices, as required and notify the Contract Administrator, the Ontario Provincial Police and the Railway Authority immediately.
6. Early in the season when gravel shoulders are not frozen and are still soft, snow shall be removed from the shoulders using the wing only. Only when the shoulders become frozen may the plow and wing be used (with extreme caution).
7. Winging back shoulders should usually be done after the storm.
8. When winging shoulders, to avoid or reduce the windrow of compacted ice and snow from being carried across an intersection, the following should be done:
a. clear out the wing when the near side of the intersection is reached and slightly raise the wing to prevent plowing the windrow across the intersection and
b. wing back the 'point' of the snow bank at the far side of the intersection.
9. Plowing speed shall be reduced over structures to prevent snow and ice being thrown over parapets or through railings onto the roadway or railway beneath.
10. The Municipality is responsible for providing visibility where recreational trails, e.g. snowmobile, cross country skiing, horse riding, and cross a Provincial highway and the safety of the trail and/or highway users are in doubt. To accomplish this, the snow banks at these locations shall be lowered to provide adequate visibility between the crossing signs. This operation will be carried out, as required, with other clean-up operations, after normal plowing is completed.

### 6.04.08.02 Sanding

1. Areas, which might require a heavier application of sand, are: curves; bridge decks; intersections; ramps; Styrofoam patch areas and hills.
2. Ensure that sand is not applied within 3 m of railway crossing tracks, to prevent sand from being carried onto the tracks. Sand carried onto the tracks must be removed from the flange-ways as soon as occurrence.

### 6.04.08.03 Salting

1. Salt is to be applied in a narrow strip, approximately 30 cm wide, down the centre (crown) of a two lane highway and between lanes on a multi-lane highway at the rate of
$130-170 \mathrm{~kg} /$ two lane km . On super-elevated sections (curves) the salt shall be kept as high up on the curve as possible to allow the brine to flow across the two lanes.
2. The spinner shall be used only to spread salt on pavements with:
a. surfaces made of open friction course material; or
b. distorted cross-fall; or
c. no cross-fall.

In these situations, the brine cannot flow across the pavement, and consequently a narrow strip will not be effective.
3. Specific attention shall be given to potentially Hazardous locations, such as hills, curves, intersections, bridge decks, Styrofoam patch areas, shaded areas and rock cuts. These locations are potentially Hazardous because they could be slippery when the rest of the road is not, or they are areas which may require braking.

### 6.04.08.04 Patrolling

1. Winter road patrol shall be carried out by designated personnel, who are trained and competent. Patrols shall be carried out when winter events are forecasted and/or when there is a substantial probability of conditions that will require this activity to be undertaken and shall include the completion record suitable for use in the defence of claims.

## THE MUNICIPALITY SHALL KEEP ACCURATE AND LEGIBLE RECORDS OF ALL ROAD CONDITIONS AND OPERATIONS.

Inspection by road patrols shall cover all routinely observed road conditions, in addition to ensuring that winter levels of service are maintained.
2. When highways appear to be reaching an impassable or blocked condition due to snow, ice or lack of visibility, the OPP and the County shall be alerted by the Municipality.

Information that shall be passed on includes: location; length of impassable or blocked section; visibility; number of stranded vehicles; additional equipment required, etc.

NOTE: The County or the Municipality does not formally close roads to traffic. This is the responsibility of the Police forces having jurisdiction over the road in question (generally OPP). The Municipality's forces shall support the action of police in this regard, with resources available. The highway shall be opened again only upon receipt of authorization by the Police. Once the OPP close a section of road, the County shall be responsible for placing and removing the appropriate road closed signs.
3. Employees coming upon stranded motorists in isolated areas, should inquire if assistance for towing or other services is required. The Municipality shall render all reasonable assistance wherever possible.

If the incapacitated vehicle is posing a Hazard to the other vehicular traffic, i.e. on a hill or curve, it should be removed immediately by calling the OPP or local police force for their assistance.
4. Abandoned vehicles which interfere with clearing operations are to be reported to the appropriate police authorities for action.

### 6.05 Spring Drainage

Periodically snow and ice conditions result in the blockage of drainage systems. The blockage or the impediment of drainage by snow or ice can cause flooding of property and/or the road. The Municipality is responsible for completing all necessary Work such as snow ditching, culvert thawing etc. to ensure flooding does not occur on any portion of the roadway, and if it does occur the Municipality is responsible for taking all actions required immediately to eliminate the flooded condition.

### 6.06 Emergencies

Occasionally emergency work is required on the highway right-of-way such as accidents, spills (Hazardous and Non-Hazardous), flooding, water ponding, tree removal etc.

When the Municipality is Made Aware of an emergency situation within the right-of-way, the Municipality shall immediately notify the Contract Administrator and shall provide assistance if requested to do so. The Municipality shall take all action required to keep the travelling public, adjacent land owner and staff safe. This could include, but not limited to, providing any or all of the following;
a. traffic control at accidents;
b. removing debris from the right-of-way;
c. completing ditching/spill containment;

## SPECIAL PROVISIONS - WINTER MAINTENANCE

August 2020
d. advising appropriate authorities i.e. police, Provincial Environmental Authority.

Pictures complete with dates, time and signature of the photographer and accurate information identifying the incident and road condition shall be taken and documented by the Municipality of the incident and road conditions.

Response time to all emergency work shall be 1 hour or less. This means a maximum of 1 hour from the time the Municipality receives notification of the emergency until an appropriate complement of human resources; material and equipment are en route to the emergency.

### 6.07 Documentation

The Municipality shall maintain complete and accurate records of Work completed by the Municipality and events that occur relating to the contract. The following information shall be documented and copies provided to the Contract Administrator on a weekly basis.

### 6.07.01 Supervisor's Records

Records/forms shall be completed, dated and signed. The Municipality shall document the information, including but not limited to;

- weather
- date
- signature
- work completed during the day and equipment and material used on County Roads
- when patrols are completed, areas patrolled, deficiencies noted
- discussions with the public (name the individual)
- discussions with the County (name the individual)
- direction given by the County (name the individual)
- information provided to the County regarding winter road reports
- calls from the police and action taken
- accidents


### 6.07.02 Winter Operations Record

The Municipality shall complete the Winter Operations Record or a report of similar nature which will record the following information for each plow, combination unit and sand/salt spreader:

- date and time unit called in to work
- time operator arrived at yard
- time unit left yard
- operation code for type of work performed (salting, sanding, combination)
- quantity of salt/sand used
- kilometres serviced


## SPECIAL PROVISIONS - WINTER MAINTENANCE

- rate of sand/salt application
- routes taken or area serviced
- time unit is sent home or parked for the day
- total hours worked

Each entry shall be signed by the equipment operator and by the person dismissing the unit for the day.

### 6.07.03 Meeting(s)

Meetings may be held upon request and as appropriate, between the Municipality's Superintendent and the Contract Administrator. At the meeting, the Municipality shall complete a report summarizing the deficiencies that have been discussed with the Contract Administrator as well as action taken and/or pending.

The Municipality and Contract Administrator or designate shall also discuss Work being performed, the Municipality's performance and any potential claims. The County shall complete and distribute minutes of the meeting.

### 6.08 Accidents

The Municipality shall promptly notify the County of any and all accidents, which occur on roads under its care.

The Municipality shall take pictures and make documentation regarding all accidents within the right-of-way for which the Municipality is called out or there is personal injury, or damage to County property or the possibility of litigation. The pictures and documentation shall identify the occurrence as well as the road conditions, general operations and staff on site. This is particularly important when a fatality occurs. All pictures must be dated, time recorded and signed by the photographer. Polaroids are not acceptable.

The Municipality is also responsible for completing the applicable County of Renfrew accident report forms and identifying the occurrence to the Contract Administrator. At the request of the Contract Administrator, the Municipality shall provide onsite staff to attend meetings/debriefing sessions with police and/or County staff and/or other associated agencies.

## SPECIAL PROVISIONS - WINTER MAINTENANCE

### 7.0 MEASUREMENT FOR PAYMENT

Payment will be by the per kilometre rate for the winter season.

### 8.0 BASIS OF PAYMENT

Payment at the contract rate shall be full compensation for all labour, equipment and materials required to maintain the roadway to the required standard within the permitted response times and undertake such other duties as provided for herein.

## SECTION G

## ATTACHMENTS

## INDEX FOR SECTION G - ATTACHMENTS

1. MAP ..... G-1
2. ROADS TO BE MAINTAINED ..... G-2
3. RATE SCHEDULE ..... G-3


## ROADS TO BE MAINTAINED

| 2020/21-2030/31 WINTER SEASONS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Road <br> No. | Road Name | From | To | Centre <br> Line <br> (KM) | Winter <br> Maintenance <br> Level |  |
| 72 | Ridge Road | Highway 17 | Deep River Road | 1.56 km | 1 |  |
| 73 | Deep River Road | Highway 17 | Ridge Road | .678 m | 1 |  |

## RATE SCHEDULE

| Year | Rate Per KM |
| :---: | ---: |
| $2020-2021$ | $\$ 7,900.00$ |
| $2021-2022$ | $\$ 8,050.00$ |
| $2022-2023$ | $\$ 8,200.00$ |
| $2023-2024$ | $\$ 8,350.00$ |
| $2024-2025$ | $\$ 8,500.00$ |
| $2025-2026$ | $\$ 8,650.00$ |
| $2026-2027$ | $\$ 8,800.00$ |
| $2027-2028$ | $\$ 8,950.00$ |
| $2028-2029$ | $\$ 9,100.00$ |
| $2029-2030$ | $\$ 9,250.00$ |


[^0]:    Steve Bennett, Mayor

[^1]:    WHEREAS Section 191.8, subsection (3), the Highway Traffic Act, R.S.O. 1990, Ch. 8 , as amended, provides that a municipality may pass by-laws:
    (a) Permitting the operation of Off-Road Vehicles with three or more wheels on any Highway within the municipality that is under the jurisdiction of the municipality, or on any part or parts of such Highways;
    (b) permitting the operation of off-road vehicles or classes of off-road vehicles on any highway within the municipality that is under the jurisdiction of the municipality, or on any part or parts of such highway, subject to any limitations prescribed under clause (2.1) (b);
    (c) (b)-prohibiting the operation of off-road vehicles on any highway within the municipality that is under the jurisdiction of the municipality, or on any part or parts of such highway, in accordance with a regulation under clause (2.1) (a).

[^2]:    ${ }^{1}$ Diana Ginn, Anger \& Honsberger Law of Real Property, Third Edition (Toronto: Thompson Reuters) at §20:20. ${ }^{2} \mathrm{Ibid}$.
    ${ }^{3}$ Gerald Fridman, The Law of Torts (Toronto: Carswell) at 29.
    ${ }^{4}$ Ibid, at 32.
    ${ }^{5}$ Ibid, at 46-56.
    ${ }^{6}$ Chua v Jassal, 2019 BCSC 1686, at para 20.

[^3]:    ${ }^{7}$ Bellini Custom Cabinetry Ltd. v. Delight Textiles Ltd., [2005] O.J. No. 3687 at para 129.
    ${ }^{8}$ Ginn, supra, note 1, at §29:60.60.
    ${ }^{9}$ Real Property Limitations Act, R.S.O. 1990, c. L.15, s. 3(1).
    ${ }^{10}$ Linden, Feldthusen, Hall, Knutsen, Young, Canadian Tort Law (Toronto: LexisNexis) at §12.1.

