OPERATIONS COMMITTEE AGENDA

Operations Committee Meeting
Monday, January 18, 2021
Tom Davies Square - Council Chamber / Electronic Participation

COUNCILLOR DEB MCINTOSH, CHAIR

Mark Signoretti, Vice-Chair

2:00 p.m. OPERATIONS COMMITTEE MEETING COUNCIL CHAMBER / ELECTRONIC PARTICIPATION

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ROLL CALL

DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

APPOINTMENT OF COMMITTEE CHAIR AND VICE-CHAIR

Report dated December 17, 2020 from the General Manager of Corporate Services regarding Appointment of Chair and Vice-Chair - Operations Committee. **4 - 5**
(RESOLUTION PREPARED)

(The current Chair will call the meeting to order and preside until the Operations Committee Chair and Vice-Chair have been appointed, at which time the newly appointed Chair will preside over the balance of the meeting.)

REGULAR AGENDA

PRESENTATIONS

1. Report dated January 5, 2021 from the General Manager of Growth and Infrastructure regarding Winter Control Operations Update - November 2020. **6 - 11**
(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)

    - Brittany Hallam, Relief Director of Linear Infrastructure Services

    (This presentation provides the financial results of the 2020 winter roads operations up to and including the month of November 2020.)

MANAGERS' REPORTS

R-1. Report dated January 5, 2021 from the General Manager of Growth and Infrastructure regarding Enhancing the Residential Inflow and Infiltration Subsidy. **12 - 17**
(RESOLUTION PREPARED)

(This report provides a recommendation regarding enhancing the RIISP program to include connections to the storm sewer as well as modifying by-laws and the associated rates to include a residential sanitary sewer discharge agreement.)

R-2. Report dated January 5, 2021 from the General Manager of Growth and Infrastructure regarding M.R. 80 Corridor Review - Old Hwy 69 North to Cote Blvd. **18 - 28**
(RESOLUTION PREPARED)

(This report provides a recommendation regarding the improvements to the intersection of Old Hwy 69 North and Notre Dame Avenue (Hanmer) and the intersection of Notre Dame Avenue and Cote Blvd. (Hanmer).)

R-3. Report dated December 18, 2020 from the General Manager of Growth and Infrastructure regarding Traffic Control - Nottingham Avenue at Dorsett Drive. **29 - 30**
(RESOLUTION PREPARED)

(This report provides a recommendation regarding establishing traffic control at Nottingham Avenue at Dorsett Drive.)

MEMBERS' MOTIONS

ADDENDUM

CIVIC PETITIONS

QUESTION PERIOD

ADJOURNMENT

Request for Decision

Appointment of Chair and Vice-Chair - Operations Committee

Presented To:	Operations Committee
Presented:	Monday, Jan 18, 2021
Report Date	Thursday, Dec 17, 2020
Type:	Appointment of Committee Chair and Vice-Chair

Resolution

That the City of Greater Sudbury appoints Councillor _____ as Chair and Councillor _____ as Vice-Chair of the Operations Committee for the term ending November 14, 2022, as outlined in the report entitled "Appointment of Chair and Vice-Chair - Operations Committee", from the General Manager of Corporate Services, presented at the Operations Committee meeting on January 18, 2021.

Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

Report Summary

This report outlines the procedure for the election by the Committee of the Chair and Vice-Chair of the Operations Committee for the term ending November 14, 2022.

Financial Implications

The remuneration for the Chair is provided for in the operating budget.

Signed By

Report Prepared By
Christine Hodgins
Legislative Compliance Coordinator
Digitally Signed Dec 18, 20

Manager Review
Brigitte Sobush
Manager, Clerk's Services/Deputy City Clerk
Digitally Signed Dec 18, 20

Division Review
Eric Labelle
City Solicitor and Clerk
Digitally Signed Dec 24, 20

Financial Implications
Steve Facey
Manager of Financial Planning & Budgeting
Digitally Signed Dec 24, 20

Recommended by the Department
Kevin Fowke
General Manager of Corporate Services
Digitally Signed Jan 11, 21

Recommended by the C.A.O.
Ed Archer
Chief Administrative Officer
Digitally Signed Jan 11, 21

Background

This report sets out the procedure for the election by the Committee of the Chair and Vice-Chair of the Operations Committee for the term ending November 14, 2022.

The Procedure By-law provides that a Member of the Committee shall be appointed for a two-year term by the Committee to serve as Chair, and another Member of the Committee as Vice-Chair of the Operations Committee by way of resolution.

Remuneration

The Chair of the Operations Committee is paid $2,604.96 per annum.

Selection

The selection of these positions is to be conducted in accordance with the City of Greater Sudbury's Procedure By-law. Council's procedure requires that in the event more candidates are nominated for the required position(s), those position(s) will be chosen by a simultaneous recorded vote. Once the candidates have been selected for the positions, a resolution will be introduced confirming the appointment of the successful candidate.

It is always in order for a Member of Council to nominate themselves and to vote for themselves.

Once the successful candidates have been selected, a recommendation will be introduced.

Resources Cited

City of Greater Sudbury Procedure By-law 2019-50: https://www.greatersudbury.ca/city-hall/by-laws/

Presented To:	Operations Committee
Presented:	Monday, Jan 18, 2021
Report Date	Tuesday, Jan 05, 2021
Type:	Presentations

For Information Only

Winter Control Operations Update - November 2020

Resolution

For Information Only

Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

Report Summary

This report provides an overview of winter maintenance activities for the 2020-2021 winter control season up to and including the month of November 2020. The report provides general information and financial results for this period on six major winter service categories namely: Roadway Snow Plowing/Sanding/Salting, Snow Removal, Sidewalk Winter Maintenance, Roadway Snow Plowing – Graders/Loaders/4x4's, Winter Ditching/Spring Clean Up, and Miscellaneous Winter Maintenance.

Financial Implications

This report provides the estimated financial results of the 2020 winter roads operations for the City's fiscal year between January and November 2020. As depicted in Table 2 below, the estimated result for 2020 is a surplus of approximately $117,000. The actual year end result may differ from these estimates as certain estimates were necessary to account for outstanding invoices. The actual surplus/deficit will be communicated as part of the 2020 Operating Budget Variance Report that will be presented in Q2 2021. The winter control surplus/deficit will form part of the year-end position.

Signed By

Report Prepared By
Brittany Hallam
Operations Engineer
Digitally Signed Jan 5, 21

Division Review
Brittany Hallam
Operations Engineer
Digitally Signed Jan 5, 21

Financial Implications
Steve Facey
Manager of Financial Planning & Budgeting
Digitally Signed Jan 5, 21

Recommended by the Department
Tony Cecutti
General Manager of Growth and Infrastructure
Digitally Signed Jan 5, 21

Recommended by the C.A.O.
Ed Archer
Chief Administrative Officer
Digitally Signed Jan 7, 21

Winter Control Update - November 2020

Background and Summary

This report is intended to provide a summary of winter maintenance activities for the month of November 2020, including financial variances. It is important to note that due to normal lags in receipt of costs related to these activities, final costs for this period may vary from the information reported at this time.

The City of Greater Sudbury's winter maintenance service levels are defined in Council approved winter control service policies as well as guidelines within the Minimum Maintenance Standards (MMS), O.Reg. 239-02.

During the month of November, there were no winter events that required the full deployment of City crews and/or Contractors. Temperatures were generally favorable for the entire month.

The total snow accumulation for November was less than average, resulting in a $544,000 under expenditure. The overall expenditures for the fiscal year 2020 are now slightly lower than projected for the first eleven months of 2020, estimated at approximately $117,000 under budget.

Weather Statistics

As shown on table 1, from January to end of November there has been six major snow events and one freezing rain event that have required full deployment of all available City and Contractor snow plowing equipment. Furthermore, table 1 highlights the statistical information for the 2020 winter season from Environment Canada including the 10-year average (2011-2020) for snowfall. The total snow accumulation for the 2020 calendar year to date is 7.5 feet or 2.28 meters. The 10-year average for the same period is 8.4 feet or 2.56 meters. This represents an 11% decrease.

Table 1 – Weather Statistics (January through November 2020)

Month	Snow Accumulation (cm)	10 Year Average (cm) (2011-2020)	Percentage Increase/(Decrease) Compared to 10 Year Average (%)	Snow Events	Rain/Freezing Rain Event
Jan	70.8	79.9	-11.4%	2	1
Feb	78.2	61.3	27.5%	2	0
Mar	30.8	39.1	-21.1%	1	0
Apr	7.9	27.3	-71.1%	0	0
May	16.4	2.8	477.5%	1	0
Jun-Sep	-	-		-	-
Oct	8.0	6.4	25.8%	-	-
Nov	15.6	39.0	-60.0%	-	-
Dec					
Totals	227.7	255.8	-11.0%	6	1

Note: All weather data taken from Environment Canada website for weather station Sudbury A.

Winter Control Service Categories

1) Roadway Snow Plowing/Sanding/Salting

Includes work activities such as plowing, sanding, salting, anti-icing roads and winter stockpile management.

Status Update

For the November 2020 reporting period there was minimal snow that resulted in a decrease in efforts required for plowing/sanding/salting roadways.

Challenges

No significant challenges in this reporting period.

2) Snow Removal

Includes work activities such as bus stop clearing, snow removal with loaders, snow dump operation and snow bank removal in the downtown centres.

Status Update

There was no snow removal completed in the month of November.

Challenges

No significant challenges in this reporting period.

3) Winter Sidewalk Maintenance

Includes work activities such as sidewalk plowing and sanding.

Status Update

For the November 2020 reporting period there was minimal snow that has resulted in minimal winter sidewalk maintenance.

Challenges

No significant challenges in this reporting period.

4) Roadway Snow Plowing with Graders/Loaders/4x4s

Includes work activities such as snow plowing with graders, 4x4s and loaders, municipal parking lot maintenance and snow fence maintenance.

Status Update

There was no snow plowing with graders/loaders/4x4's in the month of November.

Challenges

No significant challenges in this reporting period.

5) Winter Ditching/Spring Clean Up

Includes work activities such as winter ditch maintenance and spring clean up with sweepers/flushers on roads and sidewalks.

Status Update

There has been no winter ditching/spring clean up during this reporting period.

Challenges

No significant challenges in this reporting period.

6) Miscellaneous Winter Maintenance

Includes work activities such as property restoration (plow damage), pothole patching, winter road patrol, employee standby, equipment standby, health and safety training (snow school), fringe benefits and tool repairs.

Status Update

Pothole patching and Contractor standby are the main activities that have been utilized under this category during this reporting period. In the summer of 2020 the City

completed a large patching program which is anticipated to mitigate pothole patching. Over the coming months, staff will continue to monitor this program closely to ensure the large patching program addresses the areas of greatest concern.

Challenges

No significant challenges in this reporting period.

Financials

This report provides the estimated financial results of the 2020 winter roads operations for the City's fiscal year between January and November 2020. As depicted in Table 2 below, the estimated result for 2020 is a surplus of approximately $117,000. The actual year end result may differ from these estimates as certain estimates were necessary to account for outstanding invoices. The actual surplus/deficit will be communicated as part of the 2020 Operating Budget Variance Report that will be presented in Q2 2021. The winter control surplus/deficit will form part of the year-end position.

Table 2 – Financial Results

2020 Winter Summary As of November 30, 2020					
	Annual	2020 YTD			
	Budget	Budget	Actual	Variance	% Change YTD
Snow Plowing/Sanding/Salting	7,823,358	6,029,404	4,730,668	1,298,736	78%
Snow Removal	871,321	691,596	1,208,382	(516,786)	175%
Winter Sidewalk Maintenance	1,124,424	843,318	758,767	84,551	90%
Snow Plowing - Graders/Loaders/4x4s	933,969	699,861	951,926	(252,065)	136%
Winter Ditching/Spring Clean Up	2,279,958	2,245,948	2,795,110	(549,162)	124%
Miscellaneous Winter Maintenance	7,350,517	6,241,993	6,189,887	52,106	99%
Totals	20,383,548	16,752,120	16,634,740	117,380	99%

Table 3 – Miscellaneous Winter Maintenance Budget Breakdown

2020 Miscellaneous Winter Maintenance	
Expense Type	**Annual Budget (millions $)**
Employee Benefits	1.57
Asphalt Patching	1.36
Internal Recoveries (HR, Finance, IT)	0.73
Standby (Contractor Services)	0.73
Health & Safety	0.17
Other (Road Patrol, Emergency Response, Tool Repair, Property Restoration, etc.)	0.58
Administration & Supervision	2.21
Total	**$ 7.35**

Table 4 – 2020/2021 Winter Season Financial Summary

2020/2021 Winter Season Summary For the Month of November 2020			
	Season Budget	**Season Actual**	**Variance**
Snow Plowing/Sanding/Salting	871,512	449,890	**421,622**
Snow Removal	-	27,093	**(27,093)**
Winter Sidewalk Maintenance	112,442	61,210	**51,232**
Snow Plowing - Graders/Loaders/4x4s	28,018	20,162	**7,856**
Winter Ditching/Spring Clean Up	-	55,324	**(55,324)**
Miscellaneous Winter Maintenance	1,124,962	979,361	**145,601**
Totals	2,136,934	1,593,040	**543,894**

Presented To:	Operations Committee
Presented:	Monday, Jan 18, 2021
Report Date	Tuesday, Jan 05, 2021
Type:	Managers' Reports

Request for Decision

Enhancing the Residential Inflow and Infiltration Subsidy

Resolution

THAT the City of Greater Sudbury adds a new category to the RIISP program for a connection to the storm sewer system up to a maximum of $15,000 per premises;

AND THAT the City of Greater Sudbury authorizes the transfer of $150,000 from the wastewater holding reserve to the Residential Inflow and Infiltration Subsidy Program account;

AND THAT the City of Greater Sudbury directs staff to prepare a by-law to amend the Water and Wastewater Rates and Charges by-law 2020-194, the Sewer Use by-law 2010-188, and the Residential Inflow and Infiltration Subsidy Program by-law 2018-34 to implement the recommended changes, as outlined in the report entitled “Enhancing the Residential Inflow and Infiltration Subsidy”, from the General Manager of Growth and Infrastructure, presented at Operations Committee meeting on the January 18, 2021.

Signed By

Report Prepared By
Cheryl Beam
Supervisor III Distribution & Collection
Digitally Signed Jan 5, 21

Division Review
Mike Jensen
Director of Water/Wastewater Services
Digitally Signed Jan 5, 21

Financial Implications
Steve Facey
Manager of Financial Planning & Budgeting
Digitally Signed Jan 5, 21

Recommended by the Department
Tony Cecutti
General Manager of Growth and Infrastructure
Digitally Signed Jan 5, 21

Recommended by the C.A.O.
Ed Archer
Chief Administrative Officer
Digitally Signed Jan 11, 21

Relationship to the Strategic Plan / Health Impact Assessment

This report supports objective to “Build Climate Change Resiliency into Existing Programs” and initiative “Demonstrate Innovation and Cost-Effective Service Delivery” as laid out in the City of Greater Sudbury’s Strategic Plan for 2019-2027. More specifically, these initiatives show how Growth and Infrastructure continues to put programs in place to reduce hazards to the public while reducing the environmental footprint through the reduction of Inflow and Infiltration and increasing our infrastructure sustainability.

Report Summary

Since the creation of the Residential Inflow/Infiltration Subsidy Program (RIISP) the City of Greater Sudbury has noted that a number of homeowners, due to restricted ground conditions and the inability to absorb the water onto their lot, have no choice but to discharge the water from their sump pumps, weeping tiles and roof leaders into the sanitary sewer.

Further, directing the water away from the sanitary sewer can lead to localized groundwater flooding and also creates safety hazards during freezing conditions.

The process of remaining connected to the sanitary sewer contravenes the Sewer Use bylaw and the homeowner is therefore only able to take advantage of some (or none) of the RIISP subsidy.

This report proposes two solutions;

1) To allow a connection of sump pumps and weeping tiles to the sanitary sewer system through the residential sanitary sewer agreement when no other reasonable solutions are available. The agreement is temporary in nature until a permanent solution is found for the stormwater to be discharged in a more appropriate location; and 2) Support residents through the RIISP subsidy for a connection to the storm sewer system, where operationally feasible.

These solutions will allow staff the flexibility of mitigating public safety hazards while removing excess stormwater from entering the sanitary sewer system, which have been identified in the Water and Wastewater Master Plan as a priority.

Financial Implications

As of November 30th 2020, there is approximately $163,000 remaining in the RIISP account. Although staff anticipates that the funding is sufficient to meet the needs of the 2021 applications, staff is also recommending that Council approve an increase of $150,000 to the RIISP account from the wastewater holding reserve.

The new recommended subsidy category is to cover 90% of the costs of the installation of the required infrastructure to connect to the storm sewer system up to a maximum of $15,000 per premises. There is no subsidy for connecting to the sanitary sewer system should that be the only available solution for the premises.

Enhancing the Residential Inflow and Infiltration Subsidy Program

Purpose

The solutions presented in this report are intended to assist residential owners who do not have property that is reasonably capable of handling the discharge from their sump pump or weeping tiles and roof leaders in the confines of their property lines. These additional tools are being requested to expand the list of options that are available to help eliminate unnecessary sump pump and weeping tile connections to the wastewater collection system. These changes will help the municipality be more responsive to reduce and mitigate the anticipated risks from Climate Change and contribute to lowering the City's carbon footprint along with deferring or reducing the requirement of some capital expenditures outlined in the Water and Wastewater Master Plan.

Background

As society becomes increasingly aware of actions that must be taken to reduce and mitigate the impacts of Climate Change and minimize large amounts of capital budget expenditures building increasingly larger treatment facilities, processes are put in place to facilitate better decisions.

One such situation that requires attention in the City of Greater Sudbury is to work towards reducing the considerable number of private residences that have connected sump pumps, weeping tiles, and roof leaders to the sanitary sewer collection system. Engineering studies have shown that at least 50% of storm water, or inflow, entering the sanitary collection system during storm and snow melt events originates from private property, resulting in an overwhelming amount of water that quite often is directed untreated to our local water ways and an increase in risk for sewer back-ups into private residences. The Water and Wastewater Master Plan has identified removing Inflow and Infiltration from City systems as a high priority for managing infrastructure risks and offsetting large capital expenditure.

Wet weather flow deficiencies were identified in the Chelmsford, Azilda, Coniston, Sudbury, Valley, and Lively-Walden wastewater systems[1]. Wet weather flow means that after it rains, there is an observed increase in the wastewater collection and treatment facilities from the inflow and infiltration.

The Water and Wastewater Master Plan has identified the following projects (Table 1) to manage the wet weather flow.

Table 1 - Projects Recommended for Wet Weather Flow

Chelmsford - Wet Weather Infrastructure	$24,973,000
Walden WWTP Plant Expansion	$66,105,000
Azilda - Wet Weather Infrastructure	$16,893,500
Valley East - Wet Weather Infrastructure	$22,035,000
Sudbury - Wet Weather Infrastructure	$44,070,000
Coniston - Wet Weather Infrastructure	$13,955,500

The estimated costs could be deferred or eliminated by reducing the volume of inflow and infiltration reaching the plants.

To understand the magnitude of the inflow occurring take the example of a garden hose, which has a volumetric flow rate of about 0.5L/s when fully open. This volume of water would fill 6.4 Olympic sized swimming pools after one year.

Depending on the soil conditions around the premises and the depth of the foundation, some sump pumps run for a few hours a year and others run non-stop. There is a considerable variation in conditions across the City.

Additionally, some homes in the City were not constructed with sump pumps and many have gravity weeping tiles which means many residents are unaware that water from their residence is actually being drained into the sanitary collection system.

If a sump pump or gravity connected weeping tiles were to run for 4 hours a day for 8 weeks of the year at the flow rate mentioned above, that would be contributing an approximate volume of 403,200L at a treatment cost of $316 per year when using the City's MBNCan reported cost of $784.20/ML[2].

At the other end of the spectrum, if there were a sump pump running 24 hours a day for 6 months of the year this will contribute an approximate volume of 7,862,400L at a treatment cost of $6165 per residence. This sensitivity analysis, when multiplied against the number of premises that have gravity weeping tiles and sump pumps shows that the inflow that is contributing to the wet weather flow from private drainage is substantial.

There are many homes built prior to 1973 that connected weeping tile drainage to the sanitary collection systems at the time of construction. Many of these homes are now being renovated and weeping tiles updated. Many responsible owners make progressive decisions, by disconnecting their sump pumps, and weeping tiles from the sanitary collection systems. Most of the time this is done without issue and the water can be contained and absorbed on the premises. Due to the varied ground conditions across the municipality, there are some areas where finding a location for the sump

pump to discharge on the premises is more challenging, and in some cases results in creating public safety hazards such as slippery roads and sidewalks.

Solutions must be designed to remove the rainwater from the sanitary systems guided by the principle of leaving the rain closest to where it falls. This means that where possible, sump pump and weeping tile water should be discharged on the premises, but where this is not possible more resource intensive solutions will be investigated such as connecting to the storm system and as a last resort the sanitary sewer system when there is no other reasonable alternative. This will ultimately reduce the energy for pumping, treatment, and discharge and bring the City closer to meeting Climate Change goals by reducing the municipal carbon footprint, and ultimately reduce or offset future capital expenditures related to wet weather flow.

Staff recommends the creation of a residential sanitary sewer discharge agreement so that where the water is causing a public safety hazard, the sump pump or weeping tiles can be temporarily reconnected to the sanitary sewer system to eliminate the hazard while the permanent solution is being designed and built. The agreement is only intended to be used where there are no other reasonable alternatives available. This will provide for an immediate public safety remedy until such time that construction can take place to connect the sump pump or weeping tile discharge to the storm sewer system. Staff is also recommending that the existing RIISP subsidy is enhanced to include a new category to assist with the construction costs for connecting weeping tile, roof leader, or sump pump discharges to the storm sewer system as a last resort for cases where this is the only appropriate solution. Staff recommends that this type of agreement be used on existing residences and that this agreement is not intended to be used for new development or new construction. The residential compliance agreement and connection to the sanitary sewer system is not an option available for roof leaders.

Analysis

The established subsidy that has been assisting owners protect themselves from sewer backups, the Residential Inflow and Infiltration Subsidy Program (RIISP) has funding in several categories to provide owners the assistance in keeping rainwater where it falls. This report is proposing expanding the offerings of this subsidy program to include a subsidy for allowing residential owners to connect to the storm sewer.

The purpose of the subsidy is to allow owners who have exhausted all reasonable alternatives to help offset the cost of connecting to the storm sewer, where the General Manager or designate has made the assessment that the nature of said connection to the storm sewer in that location would not be problematic or cause unacceptable risks for the maintenance and operation of the storm sewer system.

Connections to the storm sewer cannot be made directly from the premises to the storm sewer system, as one might see in a connection to the sanitary sewer collection system or the water distribution system. Storm sewers are designed to overflow, so if the premises were directly connected the premises would experience flooding when the storm sewer surcharges. The connections to the storm sewer must be designed with protection in place such as an air gap to allow the storm sewer to overflow, as designed, without filling basements. One example of a solution could be: the owner discharges their sump pump at ground level, the water then runs across the ground to their private catch basin on private property and their private pipe would convey the water from the private catch basin to the City's storm sewer system.

Due to the design requirements to keep the premises safe from flooding, these types of installations can be costly and the proposed RIISP subsidy is significantly larger than other existing subsidies to reflect that challenge.

Establishing a residential sanitary sewer agreement at an annual fee of $100 per agreement better reflects the volume of work associated with the preparation of a residential agreement. The other comparable existing compliance agreement was put in place for commercial properties and the fee is not reasonable for residential applications.

Next Steps

Staff will keep council updated on the uptake of the new subsidy in the annual RIISP report.

Resources Cited

1 - Water and Wastewater Master Plan, WSP, 2018.

2 – MBNCan : Total operating cost of Wastewater Collection & Wastewater Treatment per megaliter treated $ 784.20 (median of participating municipalities is $683.16) based on costs of $24.05M and 30,667 megaliters treated. Includes all direct and indirect costs (engineering, GM's office, program support, etc.)

Presented To:	Operations Committee
Presented:	Monday, Jan 18, 2021
Report Date	Tuesday, Jan 05, 2021
Type:	Managers' Reports

Request for Decision

M.R. 80 Corridor Review - Old Hwy 69 North to Cote Blvd

Resolution

THAT the City of Greater Sudbury adopts the recommendations, as outlined in the report entitled “M.R. 80 Corridor Review - Old Hwy 69 North to Cote Blvd.”, from the General Manager of Growth and Infrastructure, presented at the Operations Committee on January 18, 2021;

AND THAT the City of Greater Sudbury directs staff to prepare a by-law to amend Traffic and Parking By-Law 2010-1 to implement the recommended changes.

Relationship to the Strategic Plan / Health Impact Assessment

This report supports the 2019-2027 City of Greater Sudbury Strategic Plan in the goal area of ‘Climate Change’ and ‘Create a Healthier Community’, by investing in infrastructure to decrease traffic congestion and support active transportation within the community.

Report Summary

This report provides an update to the M.R. 80 Corridor Review study and provides recommendations for improvements to the intersection of Municipal Road 80 and Notre Dame Avenue (Hanmer) and the intersection of Notre Dame Avenue and Cote Boulevard. In addition, public consultation will be completed for new lane configurations on Municipal Road 80, Notre Dame Avenue and Cote Boulevard to provide enhanced opportunities for active transportation.

Signed By

Report Prepared By
David Knutson
Traffic and Transportation Technologist
Digitally Signed Jan 5, 21

Manager Review
Joe Rocca
Traffic and Asset Management Supervisor
Digitally Signed Jan 5, 21

Division Review
David Shelsted
Director of Infrastructure Capital Planning Services
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Financial Implications
Steve Facey
Manager of Financial Planning & Budgeting
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Recommended by the Department
Tony Cecutti
General Manager of Growth and Infrastructure
Digitally Signed Jan 5, 21

Recommended by the C.A.O.
Ed Archer
Chief Administrative Officer
Digitally Signed Jan 7, 21

Financial Implications

Costs associated with the recommendations of this report will be incorporated into the capital budget for the Notre Dame Avenue rehabilitation project which will be submitted as part of the 2022 capital prioritization

process.

M.R. 80 Corridor Review Study – Preliminary Report

Background:

At the September 24, 2019 City Council meeting, a motion was brought forward directing staff to conduct a review of the Municipal Road 80 (M.R. 80) corridor from Desmarais Road to Cote Boulevard in Hanmer. This review also included a safety review of the intersections of M.R. 80 and Notre Dame Avenue, as well as, Notre Dame Avenue and Cote Boulevard. At the time, Notre Dame Avenue from Dominion Drive to Oscar Street was scheduled for road rehabilitation during the 2020 construction season and any identified improvements to this section of the corridor were to be integrated into the project.

Staff retained a consultant to complete this review. During the initial discussions with the consultant, it was identified that additional traffic counts would be required through the M.R. 80 corridor in order to give the best understanding of the current traffic volumes as well as the volume trends. This section of M.R. 80, in addition to other municipal roads, acts as an alternate route to access Valley East for many motorists looking to avoid congestion along Lasalle Boulevard and Notre Dame Avenue (Sudbury). With the opening of the Maley Drive extension in late 2019, staff felt it would be appropriate to have new counts conducted in the spring of 2020 to identify what effect this would have on the corridor and to better provide recommendations for how the corridor should operate going forward.

The arrival of the COVID-19 pandemic provided a challenge to obtain meaningful traffic counts along the corridor. With the closure of schools, workplaces and with many people working from home and limiting trips out of the home to essential trips only, the traffic volumes and patterns along the M.R. 80 corridor and in the City as a whole were impacted.

Given the impact to traffic volumes brought on by the pandemic, staff paused the review of the M.R. 80 corridor and focused on identifying potential safety improvements that could be incorporated into the scheduled rehabilitation project along Notre Dame Avenue. Staff will resume work on the full review of the remaining portions of the M.R. 80 corridor when traffic patterns return to normal or stabilize at a “new normal”. Staff are continuing to monitor traffic volumes and the ongoing effect the pandemic is having as it relates to traffic within the City.

Recommended Corridor Improvements:

Intersection Controls

The intersection of M.R. 80 and Notre Dame Avenue and the intersection of Notre Dame Avenue and Cote Boulevard are currently stop controlled and function in an unorthodox manner with traffic along the M.R. 80 corridor (M.R. 80 – Notre Dame Avenue – Cote Blvd.) having either the right-of-way at the intersection or being only yield controlled (Figure 1 & 2).

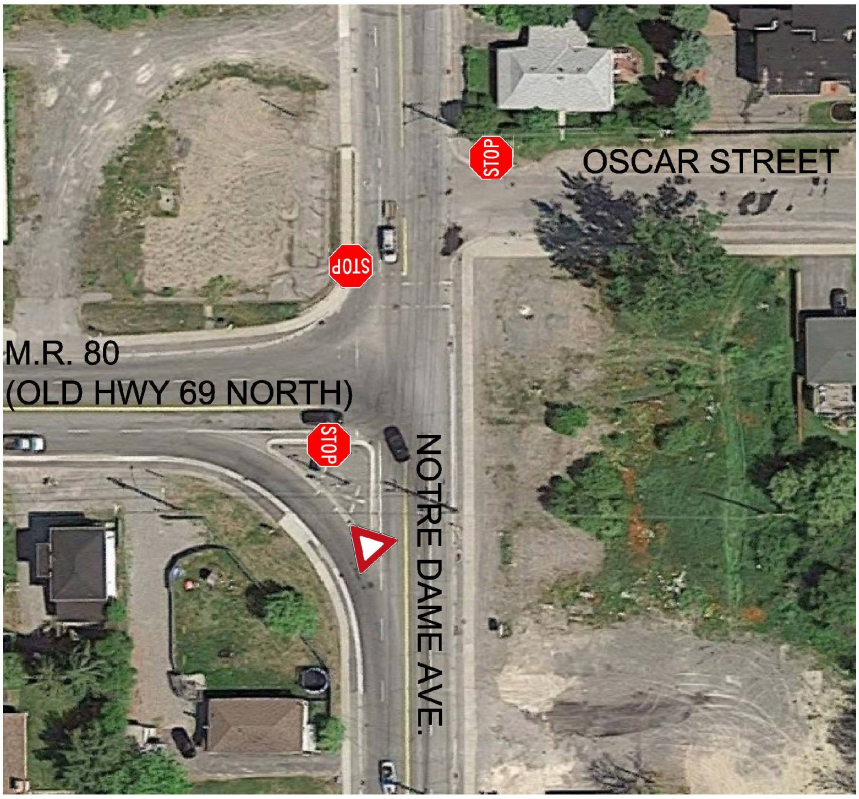

Figure 1 – M.R. 80 and Notre Dame Avenue – Existing Intersection Control

Figure 2 – Notre Dame Avenue and Cote Boulevard – Existing Intersection Control

Originally, M.R. 80 was under the jurisdiction of the Ontario Ministry of Transportation (MTO) and traffic control at the intersections along the corridor has remained relatively unchanged since the corridor was part of Highway 69. Staff have been updating the traffic control along this corridor as the need arises, with the most notable example being the elimination of the west bound stop control at the intersection of Cote Boulevard and M.R. 84 in 2012.

The current configuration at the intersections is due to the majority of the traffic volumes following the M.R. 80 corridor (M.R. 80 – Notre Dame Avenue – Cote Boulevard). However, this configuration represents challenges for motorists who are accessing the intersection from the less predominate approaches as the free flow of vehicles can lead to extended periods of time without a safe gap. In addition, pedestrians looking to cross the main flow of traffic can experience long wait times and the free flow nature of traffic can lead to a higher risk of conflict with drivers not expecting a pedestrian to be crossing their pathAlso, with the unusual traffic control configuration, motorists who are unfamiliar with the area can find it difficult to determine which approaches have the right-of-way at the two intersections.

A combined total of 14 reported collisions occurred at the two intersections over the five year period from 2015 to 2019, with five collisions occurring at M.R. 80 and Notre Dame Avenue and nine occurring at Notre Dame Avenue and Cote Boulevard. No fatal collisions were reported and three collisions resulted in injuries. No collisions involving pedestrians were reported. Of the 14 collisions, 57% were either angle or turning movement type collisions, while another 29% were single motor vehicle and the remaining 14% were rear end type collisions.

As part of the study, the intersections of M.R. 80 at Notre Dame Avenue and Notre Dame Avenue at Cote Boulevard were analyzed for all-way stop controls, traffic signals, as well as roundabout control. Using traffic volume data, the justifications of each type of traffic control and their effectiveness at moving both vehicles and pedestrians through the corridor were compared.

All-Way Stop Control

City staff applied the traffic volume data to the City's All-Way Stop policy and determined that all-way stop control is warranted at these two locations due to their volumes. A summary of the all-way stop warrants for each intersection can be found below in Table 1.

Intersection (Peak Hour)	Total Vehicles (must be >500/hr)	Minor Street Volumes (must be >200/hr)	Volume Spilt of Minor Street (must be >30%)
M.R. 80 & Notre Dame	692	308	44.5%
Notre Dame & Cote	688	311	45.2%
Warranted	YES	YES	YES

Table 1 – All-way Stop Warrant Summary

In order for an intersection to warrant an all-way stop due to its collision history, an average of five or more collisions need to occur per year, over a three year period, in which the collisions

were susceptible to correction with an all-way stop. M.R. 80 and Notre Dame Avenue has an average of only one correctable collision per year over a three year period and Notre Dame Avenue and Cote Boulevard has an average of 0.6 correctable collisions per year over a three year period. Neither intersection meets the threshold to warrant an all-way stop based on the collision history.

The installation of an all-way stop on arterial roads is generally undesirable due to the volume of traffic on these roads and the additional delay that is introduced to all vehicles traveling through the intersection. An additional analysis was completed to determine the amount of delay that would be introduced with the installation of an all-way stop.

Currently during the afternoon peak hour, each vehicle traveling through the intersection of M.R. 80 and Notre Dame Avenue and the intersection of Notre Dame Avenue and Cote Boulevard is delayed by an average of 8.6 seconds. Under all-way stop control, the average delay to each vehicle would increase to 14.9 seconds for M.R. 80 and Notre Dame Avenue and increase to 17.9 seconds for Notre Dame Avenue and Cote Boulevard. An increase to vehicle delay has a negative environmental impact as idling vehicles emit additional greenhouse gases and consume more fuel.

Multiple lane approaches at all-way stops are also not desirable as they create confusion over who has the right of way at the intersection. In order to implement an all-way stop, it would be recommended that each approach be reduced to a single lane in each direction with no dedicated left turn lane. This would further add to the delay that would be introduced by the installation of an all-way stop.

All-way stop control does however give the right-of-way at all times to crossing pedestrians, which would increase pedestrian safety.

Roundabout Control

There is no formal warrant for roundabouts but they are considered when traffic signals are warranted. Roundabout control was analyzed at the two intersections. While providing semi-free flow operation for vehicles, pedestrian and cyclist access across these intersections would be more difficult. Roundabout control also has the potential to require property acquisition from adjacent properties due to the increased footprint required compared to stop controlled or traffic signal controlled intersections.

Traffic Signal Control

City staff applied the traffic volume data to the warrant in Book 12 of the Ontario Traffic Manual. Table 2 below shows the percentage of the listed traffic signal justifications each intersection meets. For signals to be warranted due to traffic volume or vehicle delay, both criteria need to

be 100% for either justification. However, it should also be noted that if both criteria under both justifications meet or exceed 80% then the traffic signal will also be warranted.

Intersection	Justification 1	Justification 2	Justification 3
	Minimum Vehicle Volume	Delay to Cross Traffic	Combination Warrant
M.R. 80 & Notre Dame	64%	53%	66%
Notre Dame & Cote	71%	42%	53%
Warranted?	No	No	No

Table 2 – Traffic Signal Warrant Summary

In order for an intersection to warrant traffic signals due to its collision history, five or more collisions need to occur per year on average, over a three year period, in which the collisions were susceptible to correction with traffic signals. M.R. 80 and Notre Dame Avenue has an average of only one correctable collision per year over a three year period and Notre Dame Avenue and Cote Boulevard has an average of 0.6 correctable collisions per year over a three year period. Neither intersection meets the threshold to warrant a traffic signal based on the collision history.

At the M.R. 80 and Notre Dame Avenue intersection, concerns have been raised regarding errant vehicles travelling eastbound on M.R. 80 disobeying the stop sign and proceeding through the intersection and into a nearby residential property. These types of collisions are rare and have involved exceptional circumstances. Traffic signals do offer greater visibility to approaching motorists than a stop controlled intersection provides and may help prevent future collisions of this nature.

While installing traffic signals at either intersection is not warranted based on the traffic volumes or collision history, they offer the greatest benefit to all intersection users due to the non-standard operation of the intersection.

Traffic signals would allow vehicles traveling along the main corridor to have adequate green time to keep delays to these users to a minimum, while vehicles using the minor approaches will have actuated green phases to reduce their wait times at the intersection and further increase safety. Pedestrians will also have actuated walk phases across all approaches of the intersection, thereby reducing their wait times and increasing the safety of the crossings. During the afternoon peak hour, average vehicle delay at M.R. 80 and Notre Dame Avenue would be reduced to 7.4 seconds from the current 8.6 seconds. Similarly, during the afternoon peak hour, average vehicle delay at Notre Dame Avenue and Cote Boulevard would be reduced to 6.6 seconds from the current 8.6 seconds. Given the above considerations, traffic signals are recommended as the preferred control method for both intersections.

School Crossing Guards

The school crossing guard at M.R. 80 and Dennie Street, as well as at Notre Dame Avenue and Cote Boulevard were recently removed due to safety concerns. The addition of traffic signals at these locations can provide a safer location to place a school crossing guard as they are not required to stop traffic, only to assist in pressing the crossing button and guiding students across. Staff consulted the Sudbury Student Services Consortium to determine what the impact of adding traffic signals at the intersections would be for students transportation to and from school. Grade 7 & 8 students are considered able to use a pedestrian crossing at a signalized intersection safely without the assistance of a school crossing guard. All grade 6 and lower students still require a school crossing guard to safely cross at a signalized intersection. This means all grade 6 and lower students would continue to be bussed to school unless a school crossing guard was present.

Should the recommendations of this report be adopted as part of the upcoming road rehabilitation of Notre Dame Avenue, transit staff will conduct a review of the removed school crossing guard locations to determine if the safety concerns that were part of the decision to remove the school crossing guard have been remedied.

Traffic Lane Configuration

In 2016, City Council adopted a sustainability-focused Transportation Master Plan which aims to find a balance between expanding our road network and ensuring that we are making the best use of our existing network. The Transportation Master Plan is also guided by the three main principles of healthy communities, sustainability and economic vitality.

In July 2018, City Council approved a Complete Streets Policy for the City of Greater Sudbury. This policy guides current and future transportation infrastructure planning and delivery to ensure citizens, of all ages and abilities, using all modes of transportation are best accommodated during the planning, design, construction and maintenance of City infrastructure.

The Infrastructure Capital Planning division is responsible for the implementation of the Transportation Master Plan, associated policies and programs. Over the last four years, significant strides have been made to deliver on the recommendations of the Transportation Master Plan and staff are continuing to develop new policies and programs to serve the transportation needs of all Greater Sudbury residents.

Staff completed a preliminary analysis of past vehicle traffic volumes along M.R. 80, Notre Dame Avenue and Cote Boulevard and have identified that the area indicated on Figure 3 can be reconfigured from the existing four lane cross section to a three lane cross section. The reconfiguration of these roadways would include a two-way centre left turn lane, one general purpose vehicle travel lane in each direction and on-road bike lanes on both sides of the street. Public consultation will be held to gather feedback from the area residents regarding the

proposed road diet prior to staff giving their recommendation and it being added to part of the planned capital work.

The average daily traffic volume on these roadways range between 7,500 and 10,500 vehicles per day. A three lane cross section will be sufficient to handle these traffic volumes. As a comparison, these traffic volumes are similar to those of other two and three lane roadways within the city such as Bancroft Drive, College Street, and Elm Street.

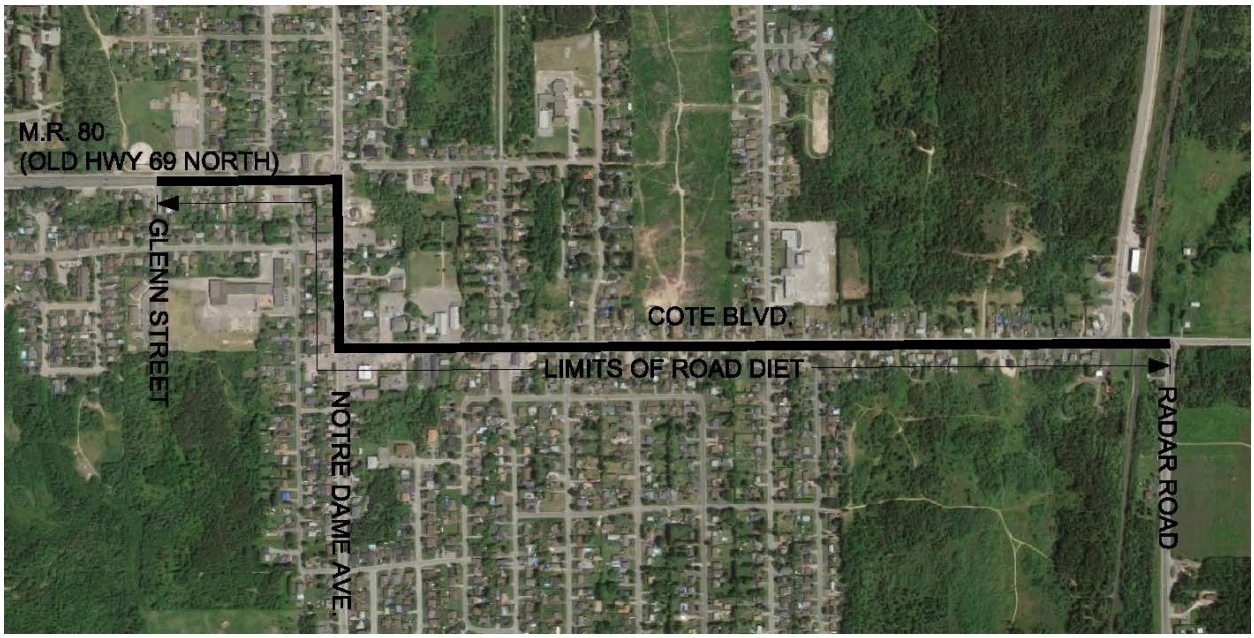

Figure 3 – Limits of Road Diet

Figure 4 below illustrates the conceptual traffic lane configuration along M.R. 80, Notre Dame Avenue and Cote Boulevard.

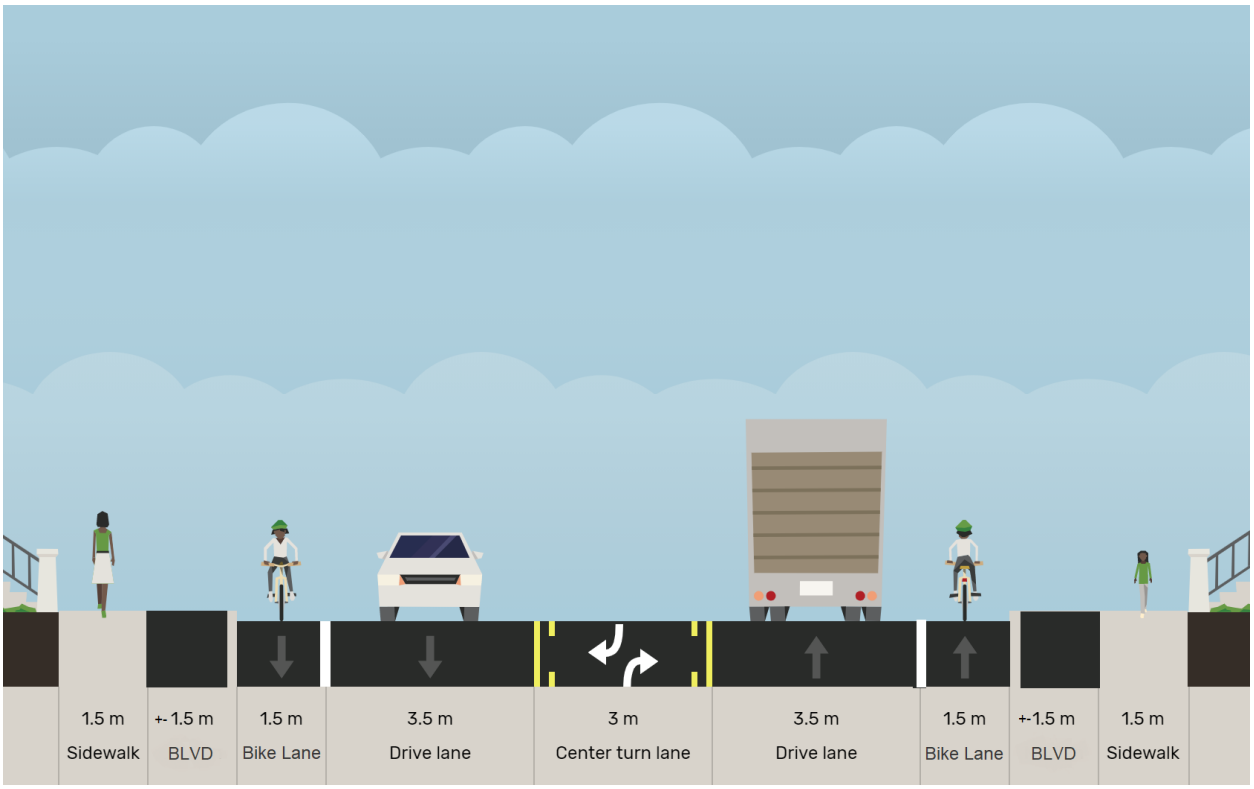

Figure 4 – Conceptual Cross Section

In addition to the construction of the new sidewalk on the south side of M.R. 80 between Glenn Street and Notre Dame Avenue, the addition of cycling infrastructure in this area will provide new opportunities for area residents to participate in active transportation.

It is also recommended as part of the upgrade to traffic signal control, that the right turn channels be removed at both intersections. The removal of the right turn channels will reduce the operating speeds of vehicles traveling through this area and have positive impact on safety for vulnerable road users.

Next Steps:

Based on the review completed by staff in conjunction with the consultant, staff recommend that as part of the upcoming road rehabilitation project, traffic signals be installed at the intersections of M.R. 80 at Notre Dame Avenue and Notre Dame Avenue at Cote Boulevard control and that the right turn channels also be removed. Staff will also complete public consultation regarding the proposed implementation of a road diet on M.R. 80, Notre Dame Avenue, and Cote Boulevard which will reduce the number of general purpose travel lanes to a single lane in each direction, a two-way continuous centre left turn lane and on-road bike lanes on both sides of the

roadway. Staff will return to the committee with a report at a future date prior to the end of the third quarter outlining the results of the public consultation and the recommended lane configuration. Staff will also work with transit staff if the proposed roadway improvements have sufficiently reduced the safety concerns that lead to the removal of the school crossing guards.

Resources Cited:

City of Greater Sudbury, *Complete Streets Policy 2018*, Accessed online: https://www.greatersudbury.ca/live/transportation-parking-and-roads/complete-streets/

City of Greater Sudbury, Crossing Guard Location Review, June 2020, Accessed online: https://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&id=1499&itemid=18455&lang=en

City of Greater Sudbury, *Transportation Master Plan 2016*, Accessed online: http://www.greatersudbury.ca/living/roads/draft-transportation-master-plan1/

Presented To:	Operations Committee
Presented:	Monday, Jan 18, 2021
Report Date	Friday, Dec 18, 2020
Type:	Managers' Reports

Request for Decision

Traffic Control - Nottingham Avenue at Dorsett Drive

Resolution

THAT the City of Greater Sudbury controls the intersection of Nottingham Avenue at Dorsett Drive with a stop sign facing eastbound traffic on Dorsett Drive as outlined in the report entitled “Traffic Control – Nottingham Avenue at Dorsett Drive”, from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on January 18, 2021;

AND THAT the City of Greater Sudbury directs staff to prepare a by-law to amend Traffic and Parking By-Law 2010-1 to implement the recommended change.

Relationship to the Strategic Plan / Health Impact Assessment

This report refers to operational matters.

Report Summary

The City will assume the extension of Nottingham Avenue south of Dorsett Drive as a public road. This will form a “T” intersection at Nottingham Avenue and Dorsett Drive. This report presents a recommendation for traffic control at the intersection of Nottingham Avenue and Dorsett Drive.

Financial Implications

Recommendations of this report may be carried out within existing approved budget and staff complement.

Signed By

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Digitally Signed Dec 18, 20

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Recommended by the C.A.O.
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Traffic Control – Nottingham Avenue at Dorsett Drive

Background

The City of Greater Sudbury will assume the extension of Nottingham Avenue south of Dorsett Drive as a public road. Dorsett drive intersects Nottingham Avenue forming a “T” intersection as shown in Figure 1 below.

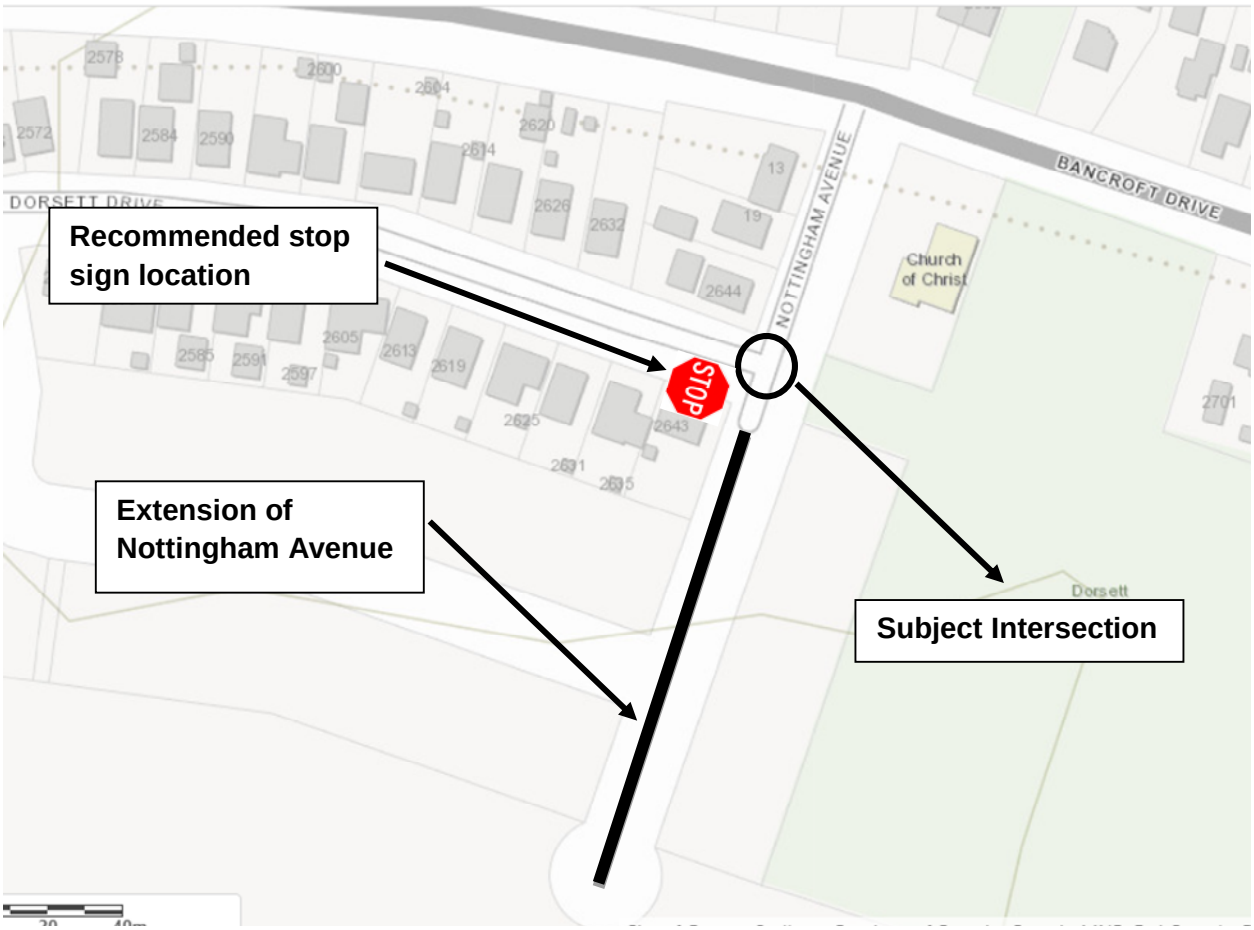

Figure 1: Intersection of Nottingham Drive and Dorsett Drive

The standard form of traffic control at a “T” intersection would have a stop or yield sign installed facing Dorsett Drive as shown in Figure 1. It is expected that traffic volumes will be higher on Nottingham Avenue with the construction of Scenic View subdivision and the long term care facility. Therefore, it is recommended that traffic at this intersection be controlled with a stop sign facing eastbound traffic on Dorsett Drive.