



OPERATIONS COMMITTEE AGENDA

Operations Committee Meeting
Monday, November 16, 2015
Tom Davies Square

COUNCILLOR ROBERT KIRWAN, CHAIR

Evelyn Dutrisac, Vice-Chair

3:00 P.M. OPERATIONS COMMITTEE MEETING
COMMITTEE ROOM C-11

Council and Committee Meetings are accessible. For more information regarding accessibility, please call 3-1-1 or email clerks@greatersudbury.ca.

DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

PRESENTATIONS

1. Report dated November 6, 2015 from the General Manager of Assets and Finance/Chief Financial Officer regarding Transit Standards & Performance Indicators. **5 - 23**
(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)
 - Roger Sauvé, Director of Transit Services

(This report provides an overview to the Operations Committee of Greater Transit's Service Design Standards, Key Performance Indicators and reporting/monitoring service review process.)
2. Report dated October 26, 2015 from the General Manager of Infrastructure Services regarding Solid Waste Strategy - 2015 to 2020. **24 - 84**
(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)

- Chantal Mathieu, Director of Environmental Services
- Renee Brownlee, Manager of Solid Waste & Administrative Services

(Staff will provide a presentation regarding the Solid Waste Strategy.)

3. Report dated October 28, 2015 from the General Manager of Infrastructure Services regarding Speed Limits in the City of Greater Sudbury. **85 - 95**
(ELECTRONIC PRESENTATION) (FOR INFORMATION ONLY)

- David Shelsted, Director of Roads and Transportation Services

(This report will provide information on how speed limits are set within the City of Greater Sudbury and a summary of speed studies that have been conducted over the past several years.)

CONSENT AGENDA

(For the purpose of convenience and for expediting meetings, matters of business of repetitive or routine nature are included in the Consent Agenda, and all such matters of business contained in the Consent Agenda are voted on collectively.

A particular matter of business may be singled out from the Consent Agenda for debate or for a separate vote upon the request of any Councillor. In the case of a separate vote, the excluded matter of business is severed from the Consent Agenda, and only the remaining matters of business contained in the Consent Agenda are voted on collectively.

Each and every matter of business contained in the Consent Agenda is recorded separately in the minutes of the meeting.)

CORRESPONDENCE FOR INFORMATION ONLY

- C-1. Report dated November 2, 2015 from the General Manager of Infrastructure Services regarding Sewer Blockage Process. **96 - 112**
(FOR INFORMATION ONLY)

(New process regarding hiring a Contractor to clear blockages on private and public portions of the sanitary sewer.)

REGULAR AGENDA

MANAGERS' REPORTS

- R-1. Report dated October 28, 2015 from the General Manager of Infrastructure Services regarding MTO Highway 69 and Highway 17 Route Planning Comments - Highway 17 from Estaire Rd interchange to Highway 17 and Highway 17 from Highway 69 to Bancroft Drive. **113 - 115**
(RECOMMENDATION PREPARED)

(This report is seeking direction from Council for Staff to provide comments to the Ministry of Transportation regarding the Highway 69 and Highway 17 Route Planning, Preliminary Design, and Environmental Assessment Study.)

- R-2. Report dated October 27, 2015 from the General Manager of Infrastructure Services regarding Parking Restrictions - Edward Avenue, Coniston. **116 - 117**
(RECOMMENDATION PREPARED)
(The Roads and Transportation Services Division received a request to restrict parking on Edward Avenue in Coniston. The report provides information and a recommendation for consideration.)
- R-3. Report dated October 28, 2015 from the General Manager of Infrastructure Services regarding Speed Limit Review of Various Roadways in Ward 3. **118 - 127**
(RECOMMENDATION PREPARED)
(At the May 2015 Operations Committee meeting, Councillor Montpellier presented a motion asking staff to review the speed limits on Joannette Road, Bradley Road, Vermilion Road and Simmons Road. This report will present the findings of traffic studies that were completed and provide a recommended speed limit for each roadway.)
- R-4. Report dated October 28, 2015 from the General Manager of Infrastructure Services regarding School Zone Speed Limit - Various Schools. **128 - 132**
(RECOMMENDATION PREPARED)
(The report recommends that due to the closures of St. Andrew School, St. Bernadette School and St. Raphael School, the speed limits in those areas be returned to 50 km/h as per the school zone speed reduction policy.)
- R-5. Report dated October 22, 2015 from the General Manager of Infrastructure Services regarding New Traffic Signals - Intersection of Elm Street and the Day Group Entrance. **133 - 135**
(RECOMMENDATION PREPARED)
(New traffic signals are being constructed at the intersection of Elm Street and the Day Group entrance. An amendment to the City's Traffic and Parking By-Law 2010-1 is required to implement the new traffic signals.)

ADDENDUM

CIVIC PETITIONS

QUESTION PERIOD AND ANNOUNCEMENTS

NOTICES OF MOTION

ADJOURNMENT

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Friday, Nov 06, 2015
Type:	Presentations

For Information Only

Transit Standards & Performance Indicators

Recommendation

For Information Only

Signed By

Report Prepared By

Michelle Ferrigan

Transit Planner

Digitally Signed Nov 6, 15

Division Review

Roger Sauvé

Director of Transit & Fleet Services

Digitally Signed Nov 6, 15

Recommended by the Department

Lorella Hayes

General Manager of Assets and

Finance/Chief Financial Officer

Digitally Signed Nov 6, 15

Recommended by the C.A.O.

Kevin Fowke

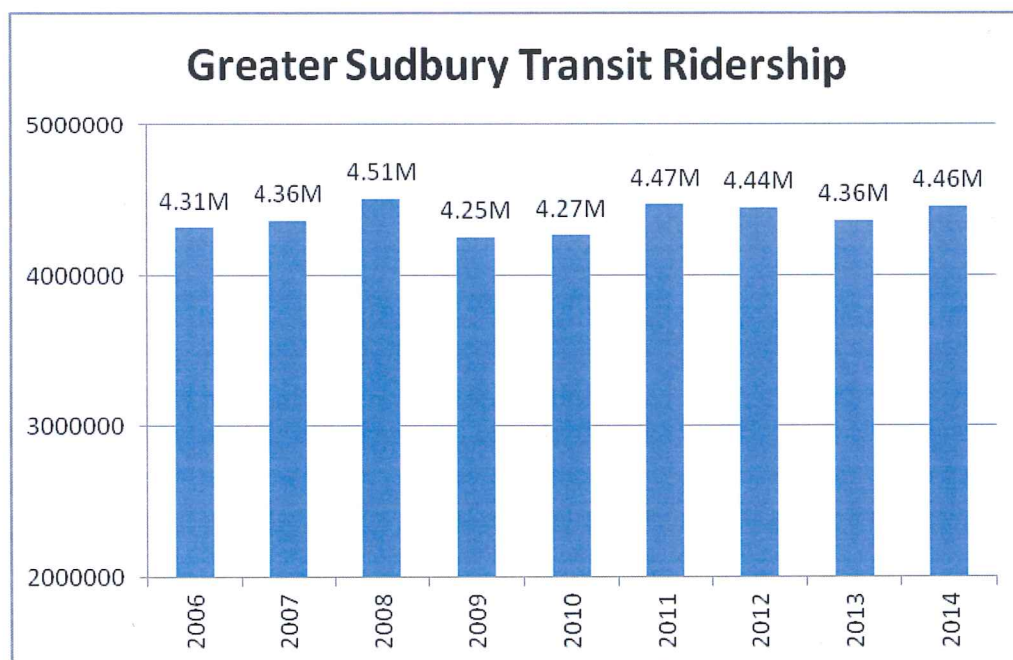
Acting Chief Administrative Officer

Digitally Signed Nov 8, 15

Background

Greater Sudbury Transit's aim is to deliver quality, affordable, accessible transit services that link people, jobs and communities. Greater Sudbury Transit's conventional service provides fixed routes between urban and commuter areas. This service is supplemented with a Trans Cab Service to provide door to door service for passengers in areas of reduced travel demand. Greater Sudbury Transit also offers specialized transit services to persons who have physical disabilities and are unable to use the conventional transit system. Appendix A depicts the area serviced by Greater Sudbury Transit's Conventional, Specialized and Trans-Cab services.

In 2006, Transit staff along with consultants from Entra consulting and the Gooderham Group presented a Ridership Growth Strategy and an Asset Management plan to Council. Further to the presentation, Council reviewed and approved in principle several strategies and initiatives to increase transit ridership. Within these strategies, service standards were introduced. Service standards provide a framework for staff to monitor and analyze data collected from the fare collection and AVL systems.



Ridership levels in the last few years have stabilized. A full assessment of the conventional transit system is required to identify improvements which can be made to the service, which may in turn increase ridership. In order to do so, and continue to meet Greater Sudbury Transit's aim, a systematic approach must be taken.

Purpose

This report will give an overview to the Operations Committee of Greater Transit's Service Design Standards, Key Performance Indicators and reporting/monitoring service review process. These tools will be the foundation for staff to perform a systematic assessment on past and current performance of routes and provide a framework to assess requests for new, modified or extended services.

Service Design Standards

Service design standards guide the design of a transit network by ensuring availability and reliability of service, convenience, and comfort to passengers. They are an important tool in assessing and monitoring the financial and operating performance of the system and individual routes.

Service design standards define the minimum amount of service provided during an entire day regardless of the level of ridership. This is known as "Base service" and is expressed in terms of coverage, hours of service, and frequency of service. Greater Sudbury Transit's base hours of service are from 7 a.m. until 10 p.m, and the frequency of service is provided at minimum intervals of 60 minutes in urban areas, and 9 trips per service day for Commuter areas.

"Customer-based service" is the amount of service provided above the base service where ridership is sufficiently higher to warrant and support additional service. This enhanced service is provided through higher frequencies, where the return on investment is significantly higher than the return achieved in the base service.

Greater Sudbury Transit's current system as a whole consists of 57% base service, and 43% customer base service. The following is a breakdown by Service Day.

Service Day	Base Service	Customer Base Service
Weekday	53%	46%
Saturday	64%	37%
Sunday	83%	23%

The standards in Table 1 were approved in principle by Council in 2006 and are consistent with industry standards. Several amendments have been made to ensure current industry standards are being met. The standards are applied when monitoring and measuring system efficiencies within the Greater Sudbury Transit's System, and for assessment of new service requests from the general public. When performing a complete system review, these standards will be reviewed against the actual service provided.

Table 1: Service Design Standards

Standard	Description	Status and Next Steps
Service area	The Sudbury Transit system serves urbanized areas of Greater Sudbury, including the urban commuter areas, subject to the provisions of the approved service design standards. There are separate standards for Urban and Commuter routes.	Compliant with service standard
Service frequency	Service is provided on urban route base service at a minimum frequency of 60 minutes. Service is provided on Commuter routes with at least 9 trips per service day, comprising three AM peak inbound trips, and three PM peak outbound trips, plus one trip in each direction in the midday and one outbound trip later in the PM.	Compliant with base service standard. Review is required on frequency of customer based trips
Service hours	Base level service on urban routes is generally provided between the hours of 7 a.m. to 10 p.m. Customer-based service is provided outside of the base level service in response to ridership demand. This includes earlier AM trips and after 10 p.m. service. All customer-based service hours are monitored for economic performance and may be adjusted when demand does not meet boarding thresholds. Base level service of Commuter routes include no fewer than 9 trips, with the first AM trip designed to arrive at the Transit Terminal no later than 8 a.m., the last trip designed to leave the Terminal no earlier than 7 p.m. Council approval is required for changes to Base level or customer based service.	Compliant with base service standard. Review is required of service hours on customer based trips to ensure economic performance.
Walking distance	Population served by transit is determined by walking distance to a bus route. Individuals who are within 400 meters of a bus route are considered to be within the service area.	Compliant with service standard.

Stop Spacing	Bus stops are generally placed at interval of 250 metres, unless restricted by reason of safety or areas of high demand. In areas of low density population, bus stop distances are necessarily higher at general intervals of approximately 450 metres.	Standard applied with requests for bus stop installation. Review of stop spacing by route is required where on-time performance is poor.
Shelters	Shelters may be provided pursuant to the Bus Shelter Request Policy in Appendix B, a point based system which is monitored on an ongoing basis.	Existing shelters were grandfathered and are monitored based on the point system. Removal and relocation of these shelters are made in conjunction with capital projects.
Fare Structure	Fare structure offers economic incentive for use through discounted fares with tickets and passes. Approved fare structures are reviewed annually. Adequate lead-time is provided to the public in advance of introducing fare increases.	Fares reviewed annually through user fee by-law.
System Equipment	Low Floor accessible transportation shall be provided, and all vehicles will be equipped with next stop announcement system. Vehicles are required to have 25% Canadian Content.	Compliant with service standard
Passenger loading standards	The number of buses required for a route may be determined by route loading capacities. Urban routes should not exceed a maximum average load of 150% seating capacity; Commuter routes should not exceed a maximum average load of 130% seating capacity.	Passenger loads consistently exceeding or falling below standard targets may trigger a review of service. Automatic Passenger Counter information will shortly be available to review route passenger loading data accurately.
Schedule adherence	No bus should leave published time points earlier than its designated time of departure. Greater Sudbury Transit will strive to meet a target of 90 percent schedule adherence, where buses should be "on time" within three minutes late of schedule."	Schedule adherence and operator performance monitored in order to meet this standard. Adjustments are being made accordingly.
Recovery Time	Used for the recovery of delays and preparation for the next trip, time is built into a schedule between arrival at the end of a route and departure of next trip. Recover time per trip should be no less than 10%. Routes with recovery times	Standard is monitored on an on-going basis

	less than 10% should be reviewed for service improvement.	
Route Directness	An index ratio should be applied to measure route directness. To determine the ratio, the deviated distance between two points is divided by the direct distance. When reviewing route directness, high deviation ratio should attract new passengers to the route and not only reduce walking distances for a few.	Standard is monitored on an on-going basis
Introduction of new service	New service should be guaranteed for a minimum of 12 months, and the minimum performance threshold (Table 2) for the class of service should be met at the end of the trial period. Within the trial period, monitoring should occur at 3, 6 and 9 months intervals to ensure targets of 25, 50 and 75 percent (respectively) of the final target value are met. If targets are not being met during the interim period, the route should be re-examined to identify potential change to improve its performance.	Standard to be used on a “go forward” basis
Introduction of modified service	Routes introducing service in new operating periods where routes exist, or modify the existing route should be guaranteed for a minimum of 6 months, with interim monitoring will occur at 2 and 4 months. Interim targets are established at 33 and 66 percent respectively. If the service change is substantial, staff may recommend a longer trial period at the introduction stage of the service.	Standard to be used on a “go forward” basis
TransCab	Regular route services should be considered for conversion to TransCab service if the route’s performance consistently falls below 5 boardings per hour. An area serviced by TransCab should be considered for regular route service when the cost of the TransCab contract reaches 85 percent of providing minimum base service level of a fixed route.	TransCab service is monitored on an on-going basis.

Key Performance Indicators

A key performance indicator (KPI) is a tool by which numerical thresholds and targets are set for a system, its routes and services. Applied with service standards, KPIs can be used to evaluate existing services, and identify efficiency gaps in the transit network.

Three KPIs have been selected to monitor and measure economic, ridership and operational performance.

Economic Performance: The Recovery Cost ratio (R/C %) is the ratio of the fare revenue to the total operating cost, and is expressed in percentages. The Greater Sudbury Transit System currently has a system performance of a 40% R/C which is above average compared to other transit agencies of its population size. It is important to note that commuter areas in general have a low R/C ratio compared to higher density areas, which impacts the overall performance of the system. See Appendix C for the 2014 recovery cost ratio for each of the City's 6 Commuter Routes and the 30 Urban Routes. The overall recovery ratio is 25% for the Commuter Routes and 44% for the Urban Routes.

Ridership Performance: Boarding per vehicle hour by class and time of day is measured against a set of thresholds. This measure can be applied to the system as a whole, for individual routes, or even for portions of a route. Individual routes whose performance is below the minimum boarding per vehicle hour shall be reviewed to identify changes that may improve the route's economic performance. Table 2 outlines the recommended target threshold established by Entra Consulting. See Appendix D for 2014 detailed performance results of all routes by time of day based on these targets.

Table 2 – Boarding Counts per Hour Performance Targets by Class and Time of day

Urban	Time of day	Target Threshold
Weekday AM Peak	Start of service to 10:00 a.m.	15-45
Weekday Midday	10:00 a.m. to 2:30 p.m.	13-40
Weekday PM Peak	2:30 p.m. to 6:30 p.m.	15-45
All service day Evenings	6:30 p.m. to end of service	6-18
Saturday	Start of service to 6:30 pm	7-22
Sunday	Start of service to 6:30 pm	7-22
Total Urban		10-30
Commuter	Time of day	Target Threshold
Weekday AM Peak	Start of service to 10:00 a.m.	10-26
Weekday Midday	10:00 a.m. to 2:30 p.m.	6-18
Weekday PM Peak	2:30 p.m. to 6:30 p.m.	10-26
All service day Evenings	6:30 p.m. to end of service	5-9
Saturday	Start of service to 6:30 pm	5-13
Sunday	Start of service to 6:30 pm	5-10
Total Commuter		6-18

Operational Performance: Schedule adherence is monitored with the AVL system. Data for schedule adherence can be collected by time, weekday and route, allowing for detailed monitoring of the system's performance. A recent analysis was performed of schedule adherence revealing that performance was not meeting standards.

Sunday Service was identified as being the least performing service day, triggering a review of all routes to improve operational performance. In 2015, the following were reviewed and adjustments were made to Sunday schedules accordingly:

- Recovery Time Ratio Review: Routes with less than 10% recovery time were identified, confirming that these routes were causing delays at the downtown terminal.
- Route Patterns: Route patterns were reviewed and adjusted in various ways based on the recovery time ratios.
 - Routes with less than 10% recovery were measured against Route Directness Standards. In areas where Route Directness ratios were high and boarding counts were low, patterns were adjusted so that time could be saved, increasing the recovery time ratio.
 - Routes with low recovery ratios but high boarding counts were merged during peak times with routes having an excess of recovery time.
 - Where permitted on routes with an excess of 10% recovery time, service was added to provide better access to a commercial area, thus increasing customer service.
- Schedule Time Tables: Historical data was retrieved on actual drive time values between scheduled time points during peak hours. Time points were adjusted on all routes to match actual averages during peak time.

Schedule adherence is currently being monitored for all days of the week, and adjusted as necessary. Appendix E represents a 2014-2015 comparison of schedule adherence between April and September for all days of the week. Improvements are noted in schedule adherence, especially during Weekdays and Sundays. It is important to note that construction in the downtown core has had a negative impact on schedule adherence and coincided with the adjustments made to the schedules in 2015.

Although we will continue to strive for a 90% schedule adherence, we offer real-time information published to the public through mybus.greatersudbury.ca which alleviates the frustration of waiting for a late bus.

Sudbury Transit Reports

Table 3 gives an overview of the types of data which is currently being reviewed by Sudbury Transit Staff on an ongoing basis. These reports can be used to recognize trends and identify areas where service enhancements should be recommended to ensure the most effective allocation of resources to individual routes, and provide quality Transit Service to Greater Sudbury residents.

Table 3: Sudbury Transit Reports

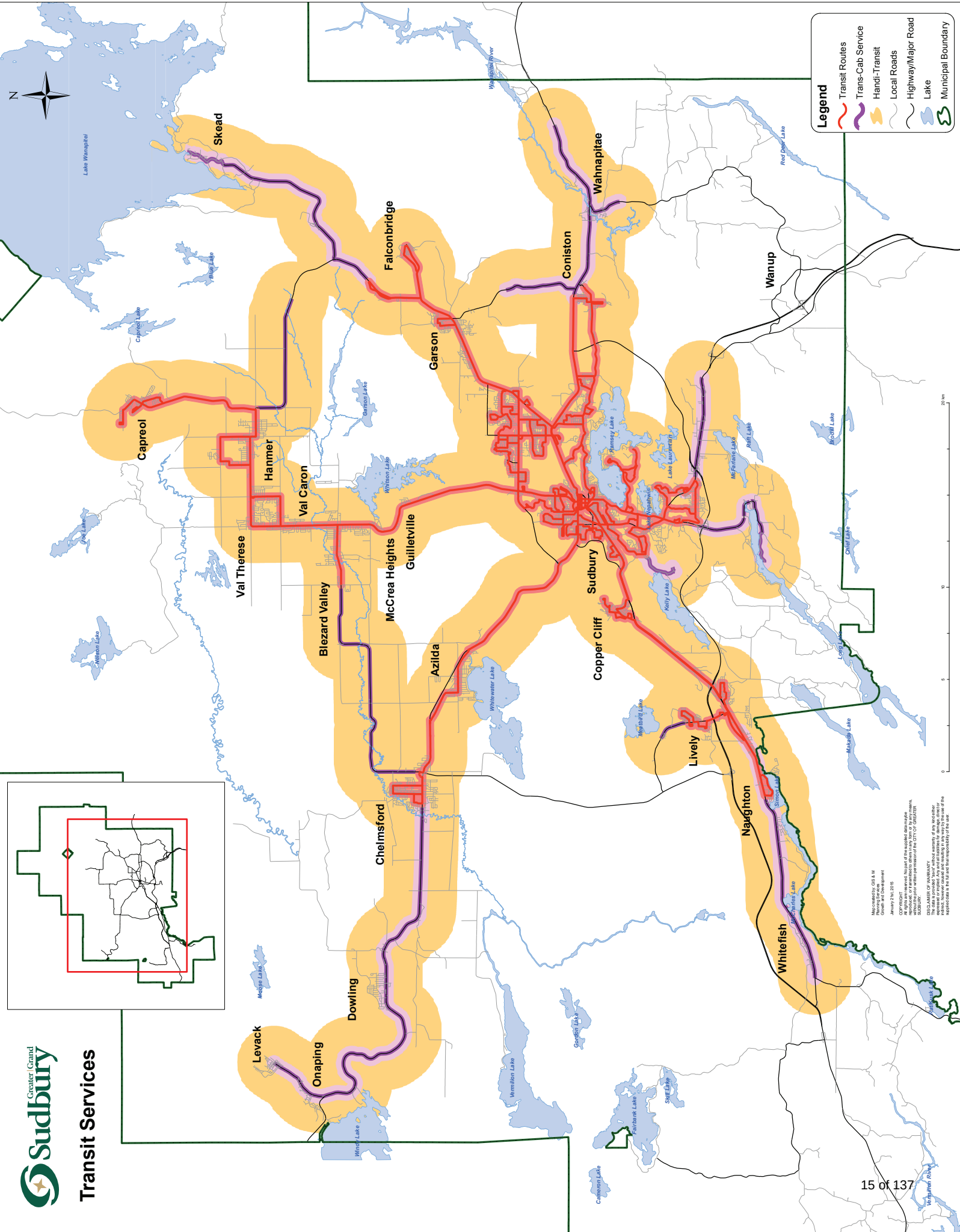
Report Name	Data Reviewed in Report	Annual	Monthly	On-Going
Service Design Standard Reports				
Service Level Information	Service Span, Number of Trips, Frequency and Vehicle Requirement by Route and Service day	X		
Recovery Ratio	Trip times and Recovery Ratio by Route and Service Day	X		
Boarding Threshold Ratio	Percentage of Trips by Threshold Targets, by Route and Service Day.	X		
Fare and Ridership Data	Report of detailed ridership information, fare distribution and operating data on a year to date basis by Route and Service Day.		X	
Key Performance Indicators				
Key Performance Indicator	Annual Economic, Ridership and Operational Key Performance Indicators for Urban and Commuter Routes	X		
Economic & Ridership Performance Indicator	Monthly Economic Performance Indicator (R/C%) and Boarding per Revenue Hours by Route		X	
Schedule Adherence	Schedule Adherence by Route and Service day.	X	X	X
Additional Reports				
CUTA Reports	Statistics submitted to Canadian Urban Transit Association for publication in an annual Transit Fact Book	X		
Shelter Report	Annual Ridership by Stop collected for the purpose of reviewing the performance of shelters, based on the Bus Shelter Policy.	X		
Ridership Comparison	YTD Ridership by Month measured against Previous Year's Ridership Totals.		X	

Route Level Analysis	A detailed performance review of individual routes should be reviewed based on monitored results from monthly and annual reports. From this analysis, service enhancements should be proposed. If a proposal does not require capital budget and there is sufficient operating budget available, it may be implemented in the next service period. If the proposal has insufficient operating budget for implementation, it will be presented by priority to Council for approval.			X
Service Enhancement Monitoring	New service enhancements will be monitored in compliance with Service Design Standards on "Introduction of new service" and "Introduction of modified service".			X

Conclusion

This report provides an overview to the Operations Committee of Greater Transit's Service Design Standards, Key Performance Indicators and reporting/monitoring service review process. These tools will be the foundation for staff to perform a systematic assessment on past and current performance of routes and provide a framework to assess requests for new, modified or extended services.

Staff will continue to review and identify improvements which can be made to the service, which may in turn increase ridership and will report back to the Operations Committee on a regular basis.



Map prepared by GGS & M
January 2, 2015
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BUS SHELTER REQUEST POLICY

INTRODUCTION

This document outlines the criteria which will be used to evaluate potential shelter locations or requests. The point based system identifies and highlights key items which would merit a shelter at a bus stop. These criteria are derived from other transit agency policies and reports from transportation research publications, which outline best-practices in the transit industry.

PREREQUISITES

In order to be considered as a potential location for a bus shelter, the site in question must obtain a minimum of:

- 10 boarding's per Service Day in "Commuter" areas.¹
- 25 boarding's per Service Day in "Urban" areas.²

Stops which do not meet these minimum ridership requirements will not be considered for further analysis.

SELECTION METHODOLOGY

Each year, existing stops and shelters will be evaluated using a point based system to create a list of potential areas of merit and improvement. To maximize cost efficiencies the Transit and Fleet section will work in conjunction with the Roads and Transportation and Engineering and Construction Services sections. Locations identified on the list that are affected by future road construction projects will be prioritized.

In order to be considered as a potential location for a bus shelter, the site in question must obtain a minimum of 60 points.

¹ "TCRP Report #19: Guidelines for the Location and Design of Bus Stops". Rural ridership requirement.

² *Ibid.* Suburban ridership requirement. Urban ridership requirement is 50 boarding's per day, but due to lack of urban densities the suburban requirement was used.

1. *Ridership*

- a. Ridership is a key element in determining the current use of a bus stop, and will aid in allocating shelters in areas of higher usage. As a result of this, one point will be attributed to each stop for each average boarding per day for Urban locations. Shelters located in Commuter locations will receive 2.5 points for each average boarding per day. For example, if a stop in an Urban area has 40 average boardings per day, that stop will then be attributed 40 points. If a stop in a Commuter area has 10 average boardings, that stop would then be attributed 25 points.

2. *Exposure*

- a. The patrons level of exposure is a key factor in determining the level of priority in shelter placement, the following scale is used to grade the patrons level of exposure:
 - i. Allocate [0] points if the location is perfectly sheltered. For example, there is no exposure to elements whatsoever or there is a large heated shelter near the stop.
 - ii. Allocate [4] point if the exposure is minimal. For example, there is a public or commercial building which can be used by the passengers but access is somewhat limited (in terms of hours, capacity).
 - iii. Allocate [8] points if there are no indoor waiting areas, but a sufficiently large overhang where the wind is blocked by both sides.
 - iv. Allocate [12] points if there is no overhang or indoor waiting areas, or type of shelter, but there are structures which can block the prevailing winds effectively.
 - v. Allocate [16] points if there is no shelter, no overhang, and no buildings blocking the prevailing winds. For example, a residential subdivision.
 - vi. Allocate [20] points if the stop is on vacant, windswept land, and there are absolutely no shelters of any kind.

3. *Transfers*

- a. Transfer zones will be attributed [30] points, due to the potential for longer wait times.

4. *Frequency*

- a. Stops with lower frequency of service will be attributed more points, due to longer wait times between trips. The following scale is used to grade frequency:

- i. 15 minutes [4] points
- ii. 30 minutes [8] points
- iii. 45 minutes [12] points
- iv. 60 minutes [16] points
- v. 60+ minutes [20] points

5. *High Priority Institutions*

- a. Stops which are located in close proximity to a home for ambulant senior citizens, special needs patrons, hospitals or clinics, and if it is used by a reasonable number of seniors/patients will be assigned [30] points.

6. *Additional Factors to Consider*

- a. Available land (no easements required for allocating the shelter).
- b. Line of sight hazards.
- c. Lighting and pad requirements.
- d. Impacts to underground services (utilities, fire hydrants, storm and sewers).
- e. Existing shelters or stops impacted by road construction will receive top priority for evaluation.
- f. New shelters must adhere to any transit specific design requirements in accordance with the Accessibility of Ontarians with Disabilities Act, 2005.

Appendix C
2014 Key Performance Indicators

2014 Commuter Route KPIs		Boarding					KPI						
Route #	Route Name	Mon-Fri	Sat	Sun	Revenue Boarding	Transfers	Total Ridership	Service Hrs	R/C Ratio	Boarding/HR	Early	On-Time	Late
103	Coniston	28488	2519	3798	34592	4278	38870	3752	14%	9	23%	52%	25%
303	Garson/Falconbridge	49113	5889	5665	60647	6972	67619	4038.15	22%	15	26%	44%	30%
701	Lively	48742	4931	5407	59080	7148	66228	6335	14%	9	29%	47%	24%
702	Azilda/Chelmsford	120359	13475	8645	142479	16792	159271	6420.5	33%	22	10%	56%	34%
703	Val Caron/Hammer/Capreol	189490	19400	15740	224484	19534	244018	10648.25	31%	21	20%	45%	35%
704	Bleazard/Elmview	44913	4652	-	49567	3378	52945	2878.5	26%	17	26%	49%	24%
Commuter Route Total		481105	50866	39255	570849	58102	628951	34072.4	25%	17	22%	49%	29%

2014 Urban Route KPIs													
		Boarding							KPI				
Route #	Route Name	Mon-Fri	Sat	Sun	Revenue Boarding	Transfers	Total Boarding	Service Hrs	R/C Ratio	Boarding/HR	Early	On-Time	Late
2	Second Avenue/Shopping Centre	207844	32157	-	240158	27350	267508	8938.5	40%	27	0%	64%	36%
6	West End	124401	15753	-	140160	24375	164535	4242	49%	33	0%	79%	21%
7	North End	31871	3302	-	35176	2757	37933	2272.5	23%	15	15%	75%	9%
12	McKim	36071	5266	-	41337	4124	45461	2272.5	27%	18	0%	86%	14%
14	Kathleen/College Boreal	168731	15961	-	184739	20315	205054	5120.5	54%	36	2%	72%	26%
15	Taxation Special	4988	-	-	4988	165	5153	125.5	59%	40	2%	80%	18%
17	Donovan	161006	19142	-	180009	26550	206559	4242	63%	42	2%	83%	16%
101	Howey/Moonlight	91977	12570	-	104547	12200	116747	4696.5	33%	22	11%	58%	31%
102	Howey/Third Avenue	34391	-	-	34391	3745	38136	1757	29%	20	11%	64%	25%
141	Westmount/Shopping Centre	12449	-	-	12449	677	13126	878.5	21%	14	18%	55%	26%
142	Grandview/Shopping Centre	11520	-	-	11520	907	12427	1004	17%	11	17%	55%	28%
147	Donovan/North End/Kathleen	9375	1578	19903	30845	4742	35587	2068	22%	15	20%	56%	25%
181	Paris/Loellien	157369	17544	-	174913	25586	200499	6581.25	40%	27	5%	55%	41%
182	Ramsey View/Algonquin	132598	18094	-	150709	17687	168396	6176.5	36%	24	29%	50%	21%
189	Paris/Loellien/Four Corners	13964	2068	22445	38471	4527	42998	2068	28%	19	5%	56%	38%
241	Howey/Moonlight/Shopping Centre	11113	2107	20924	34144	3953	38097	2068	25%	17	19%	55%	26%
300	Lasalle/Madison/Shopping Centre	21656	3668	38244	63538	7025	70563	1931.25	49%	33	38%	43%	19%
301	Lasalle/Madison	406851	62080	-	468964	59022	527986	9999	70%	47	10%	57%	33%
302	Lasalle/Cambrian	285307	41368	-	326692	25655	352347	8458	58%	39	12%	64%	24%
304	Lasalle/Shopping Centre	17430	-	-	17430	1216	18646	753	35%	23	33%	36%	31%
400	Cambrian Express	11464	-	-	11495	2116	13611	690.25	25%	17	22%	71%	7%
401	Barrydowne/Cambrian	422539	45817	-	472920	69896	542816	11249	63%	42	13%	63%	24%
402	Barrydowne/Shopping Centre	-	-	21480	18095	1959	20054	488	55%	37	23%	47%	36%
403	Barrydowne/Madison	20322	-	-	20322	1555	21877	1004	30%	20	18%	52%	30%
500	University via Paris	299028	4890	-	330436	18286	348722	15964.5	31%	21	12%	60%	28%
501	Regent/University	196108	35551	-	285279	16324	301603	9588.4	44%	30	31%	57%	11%
502	Regent/University/Four Corners	12455	4503	24850	40983	3192	44175	2037.5	30%	20	7%	54%	39%
503	University/South End	4409	5546	-	8651	18	8669	338	38%	26	10%	81%	9%
640	WestEnd/Gatchell/Coppercliff	8066	1845	16798	28215	5250	33465	2007	21%	14	17%	55%	28%
819	Copper/Four Corners	180945	23069	-	204036	20715	224751	6605	46%	31	4%	52%	43%
940	Gatchell/Copper Cliff	154711	15578	-	170323	20762	191085	6667.75	38%	26	17%	67%	16%
Urban Route Total		3250959	389457	164644	3885935	432651	4318586	132291.9	44%	29	14%	61%	25%
System Total		3732064	440323	203899	4456784	490753	4947537	166364.3	40%	23	18%	55%	27%

Appendix D

Boarding Counts per Hour Performance Targets by Class and Time of day

Weekday Commuter Route Threshold Index

Thresholds	AM Peak	Base	PM Peak	Evening	After 10PM
Above	>26	>18	>26	>9	>9
Average	10 to 26	6 to 18	10 to 26	5 to 9	5 to 9
Below	10	6	10	5	5

2014 Weekday Commuter Route Boarding per Service Hour

Route#	AM Peak	Base	PM Peak	Evening	After 10PM
103	8	6	7	4	3
303	16	11	12	7	3
701	13	12	13	7	3
702	37	26	34	18	6
703	58	33	61	26	11
704	9	15	14	6	

Weekday Urban Route Threshold Index

Thresholds	AM Peak	Base	PM Peak	Evening	After 10PM
Above	>45	>40	>45	>18	>18
Average	15 to 45	13 to 40	15 to 45	6 to 18	6 to 18
Below	15	13	15	6	6

2014 Weekday Urban Route Boarding per Service Hour

Row Labels	AM Peak	Base	PM Peak	Evening	After 10PM
2	47	60	71	29	
6	34	34	40	12	
7	7	10	11	5	
12	15	10	9	5	
14	39	47	64	18	
15			20		
17	43	48	51	18	
101	20	29	27	12	
102	22	8	16		
141	11	4			
142			11	3	
147					7
181	40	35	55	21	
182	32	39	43	15	
189					9
241					9
300					17
301	95	113	121	61	
302	78	90	100	36	
304			19	6	
400	13	6			
401	70	126	152	58	
402					
403			18	8	
500	74	101	116	30	
501	51	71	83	42	
502					10
503		12	12	5	
640					7
819	49	39	65	22	
940	50	31	55	15	

Boarding Counts per Hour Performance Targets by Class and Time of day

Saturday Commuter Route Threshold Index

Thresholds	AM Peak	Base	PM Peak	Evening	After 10PM
Above	>13	>13	>13	>9	>9
Average	5 to 13	5 to 13	5 to 13	5 to 9	5 to 9
Below	5<	5<	5<	5<	5<

2014 Saturday Commuter Route Boarding per Service Hour

Row Labels	AM Peak	Base	PM Peak	Evening	After 10PM
103	3	2	4	2	2
303	7	8	6	5	2
701	4	5	7	5	3
702	11	17	17	13	7
703	11	23	26	21	12
704	4	7	7	4	

Saturday Urban Route Threshold Index

Thresholds	AM Peak	Base	PM Peak	Evening	After 10PM
Above	>22	>22	>22	>22	>18
Average	7 to 22	7 to 22	7 to 22	7 to 22	6 to 18
Below	7<	7<	7<	7<	6<

2014 Saturday Urban Route Boarding per Service Hour

Row Labels	AM Peak	Base	PM Peak	Evening	After 10PM
2	23	51	58	24	
6	12	24	25	11	
7	2	6	5	3	
12	8	8	7	5	
14	11	27	28	11	
17	18	34	29	11	
101	10	19	18	10	
147					8
181	17	24	27	14	
182	13	27	30	14	
189					10
241					10
300					18
301	45	94	96	51	
302	36	69	74	29	
401	22	66	93	48	
501	21	54	65	39	
502					14
503		25	11	5	
640					9
819	20	33	38	17	
940	14	23	23	12	

Boarding Counts per Hour Performance Targets by Class and Time of day

Sunday Commuter Route Threshold Index

Thresholds	AM Peak	Base	PM Peak	Evening	After 10PM
Above	>10	>10	>10	>10	>9
Average	5 to 10	5 to 10	5 to 10	5 to 10	5 to 10
Below	5<	5<	5<	5<	5<

2014 Sunday Commuter Route Boarding per Service Hour

Row Labels	AM Peak	Base	PM Peak	Evening	After 10PM
103	3	5	3	2	3
303	6	7	6	5	2
701	3	7	7	5	2
702	4	9	9	8	5
703	8	16	18	15	7

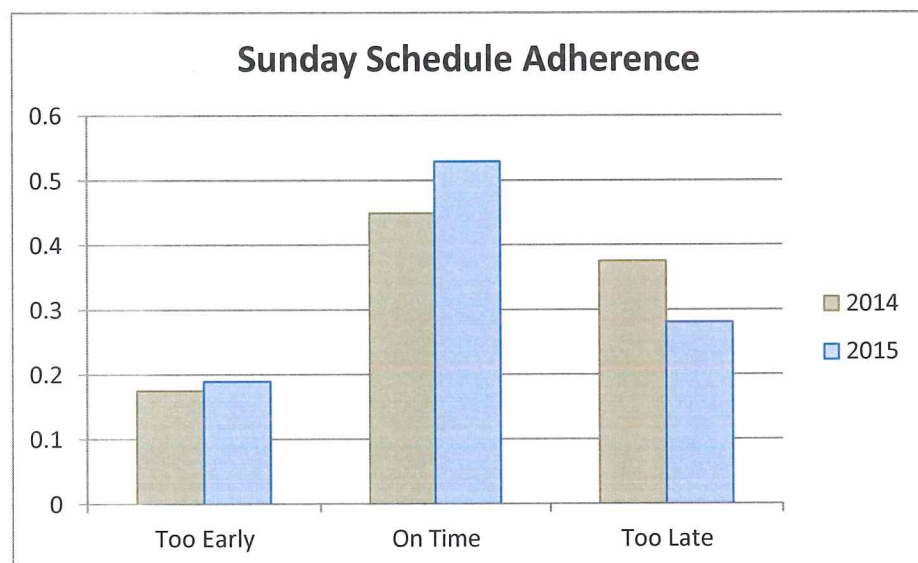
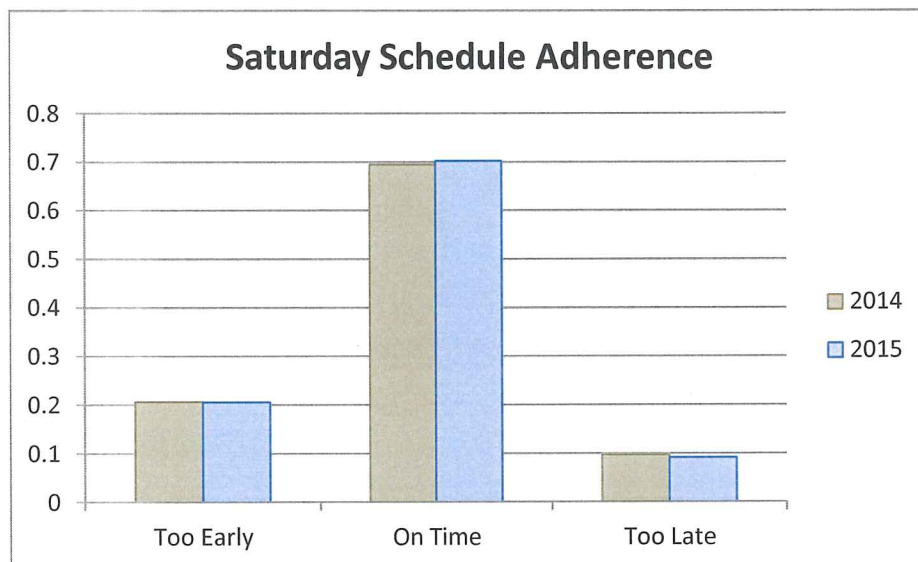
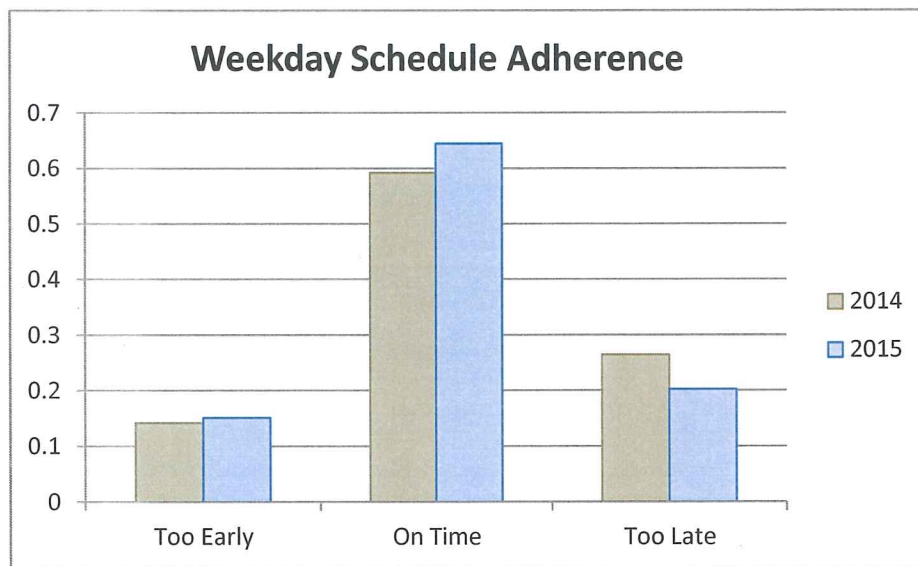
Sunday Urban Route Threshold Index

Thresholds	AM Peak	Base	PM Peak	Evening	After 10PM
Above	>22	>22	>22	>22	>18
Average	7 to 22	7 to 22	7 to 22	7 to 22	6 to 18
Below	7<	7<	7<	7<	6<

2014 Sunday Urban Route Boarding per Service Hour

Row Labels	AM Peak	Base	PM Peak	Evening	After 10PM
147	15	29	27	14	5
189	23	29	31	19	10
241	16	25	25	17	11
300	24	48	55	34	13
402		31	43	16	
502	19	32	37	21	8
640	12	22	21	16	7

Schedule Adherence : April to September 2014 vs 2015



For Information Only

Solid Waste Strategy - 2015 to 2020

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Monday, Oct 26, 2015
Type:	Presentations

Recommendation

For Information Only

Background

The 2015-2020 Solid Waste Strategy is enclosed for the Committee's review. Staff will present the highlights of the document, followed by a question period.

Signed By

Report Prepared By

Chantal Mathieu
Director of Environmental Services
Digitally Signed Oct 26, 15

Division Review

Chantal Mathieu
Director of Environmental Services
Digitally Signed Oct 26, 15

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Oct 28, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

2015 - 2020

Solid Waste Strategy



Our Mission and Values	2
History	3
Preferred Waste Management System	4
A Summary of What We Do	5
Collection Services	6
Diversion Services	7
Disposal Services	8
Clean-up Programs and Litter Abatement	9
3R Equipment	10
Educational Services	11 - 12
Legislated Changes – Waste Reduction	13
Strategic Goals – 2015 to 2020	14
Strategy 1: Focus On Education	
Strategy 2: The Construction and Demolition Material Recycling Site	
Strategy 3: Increase Policies that Induce Waste Diversion	
Strategy 4: Solid Waste Processing and Disposal Capacity	
Strategy 5: Expand The Organic Program	
Strategy 6: Divisional Improvements	



Our Mission

To ensure the delivery of an integrated, cost-effective, and environmentally sound solid waste management system while promoting waste reduction, reuse and recycling.

Our Values

Responsiveness and Education

Continually educating ourselves and our community regarding recycling and proper waste management processes, while anticipating and providing timely responses in an honest and professional manner to our community.

Innovation and Continuous Improvement

Embracing new and better ways to achieve improved results through creativity, cross-training, coordination, inventiveness, teamwork, and adoption of appropriate new processes and technology amongst ourselves and with various stakeholders and organizations.

Environmental Responsibility

Ensuring the collection and management of solid waste and recovered materials in an environmentally sound and safe manner and in accordance with regulatory requirements.

Strategic Thinking

Committed to implementing projects, programs, and processes that promotes the 3R's and that extends the lifespan of our assets while meeting our current needs and challenges while anticipating the needs and challenges of the future.

History

In 2001, the former Regional Municipality of Sudbury and the lower-tiered municipalities, along with two unorganized townships amalgamated as the City of Greater Sudbury. The former Region was responsible for solid waste landfill sites and all waste diversion collection & processing programs. The lower tiered municipalities were responsible for garbage collection services.

The first two years of the 'new' City was focused primarily on the transition process and equalizing service levels.

In 2003, staff identified the need to review the overall solid waste system and Council supported the review. A Waste Optimization Study was commissioned later in the year. The objective of the study was to identify methods or programs in which to increase waste diversion from 15% to 65% while simultaneously reducing greenhouse gas emissions associated with solid waste programs (i.e. co-collection or dual purpose collection vehicles).

A Technical Steering Committee was formed to review study phases and to make recommendations to Council. The Technical Steering Committee comprised of a maximum of 8 individuals, including two members of City Council (chair and vice-chair), the City's Director of Waste Management, the Consultant (no voting privilege) and a minimum of two public members.

In 2004, the Technical Steering Committee narrowed the study approach to the residential waste stream and developed a "Long List" of 13 alternative waste collection and processing management systems. The long list was screened down to a more manageable "Short List". The "Short List" consisted of four systems which were considered the most suitable long term alternatives due to technical, economic/financial, social and/or environmental considerations.

The Study purpose, goals, the existing system and the four short listed systems were presented at several public input meetings throughout Greater Sudbury in October 2004.

The 'Short List' was increased to five systems by the Technical Steering Committee following the review of the 2004 public input meetings.

In 2005, a detailed evaluation of the five systems was conducted, reviewed by the Technical Steering Committee and additional public meetings were held in early 2005.

The Technical Steering Committee reviewed the public input comments and approved the preferred system.

Staff presented the preferred system to Council in February 2005. The preferred system was adopted in principle on February 23rd, 2005.



Preferred System

Co-collection

Household Garbage

- Up to 3 bags per week

Leaf & Yard Trimmings and Christmas Trees

- Unlimited quantity per week

Co-collection

Blue Box Recyclables

- Unlimited quantity per week
- One stream

Household Organics

- Unlimited quantity per week
- One stream

Ensure that the **four waste streams** will be collected:

- on the same day;
- at the same collection location; and
- no earlier than 7 a.m.

Processing

Blue Box Materials

- Invest in a one-stream processing system
 - To facilitate co-collection of blue box recyclables with another stream of waste (green cart organics).
 - To attract blue box recyclables generated from municipalities outside City of Greater Sudbury boundaries.
- Expand and segregate the drop-off pad at the Recycling Centre

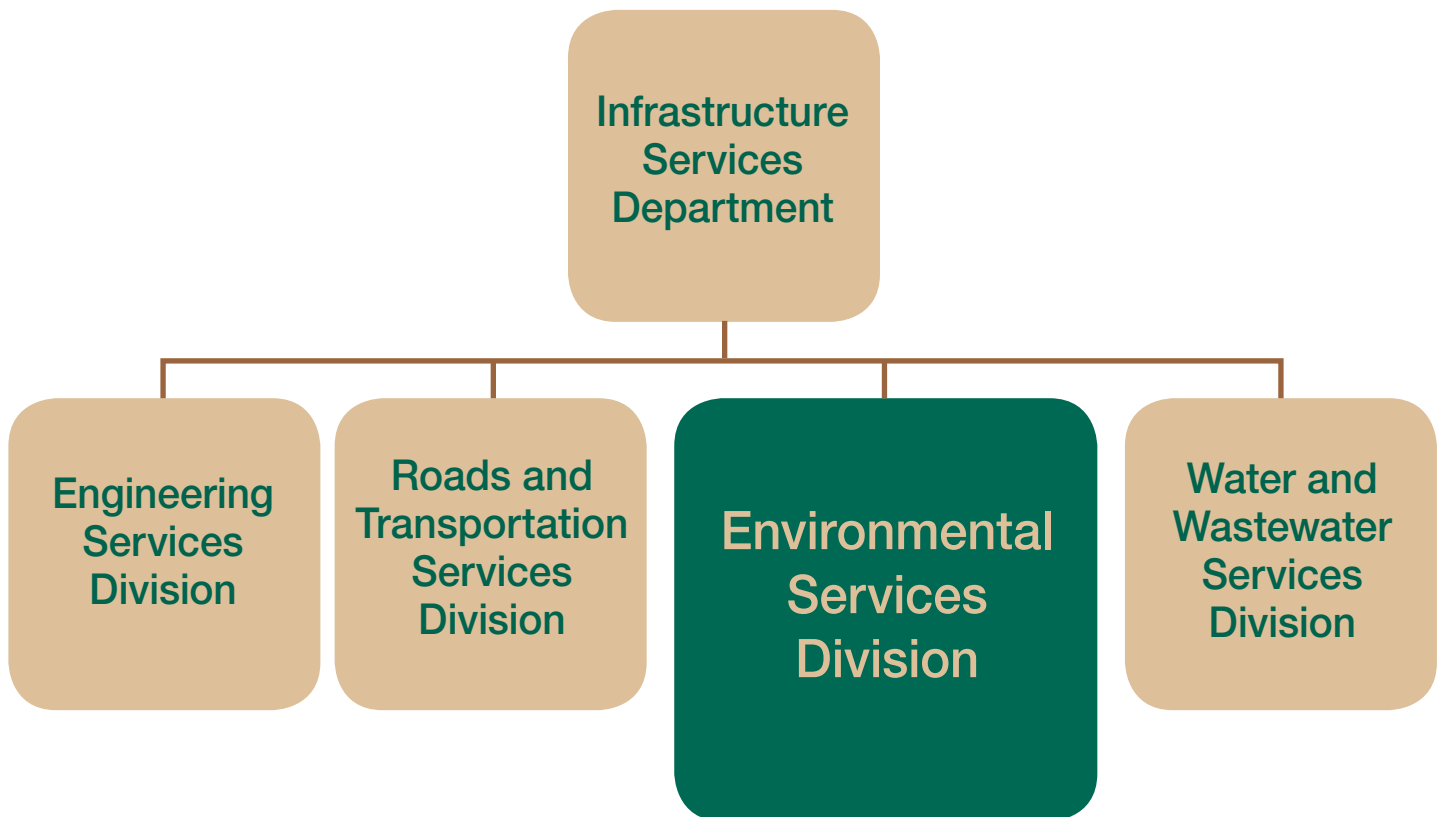
Organics

- Establish windrow organic pad within the Sudbury Landfill Site
 - Cost to construct organic pad to be funded from Solid Waste Reserves
 - Turning equipment – use existing landfill equipment
- Review “Greener” processing systems (i.e. anaerobic digester) at a later date

Disposal

- Residue to be landfilled
- Generate electricity from the landfill gas collection system
- Greater Sudbury should continue to lobby the federal and provincial governments to support municipalities with waste management programs with appropriate legislation, funding and fiscal policy
- Greater Sudbury should monitor the waste composition regularly to provide feedback on the effectiveness of the overall waste management system and public communication program
- Review additional waste diversion options for the high density residential, multi-type, commercial, institutional and industrial sectors.

A Summary of What We Do



Solid Waste Advisory Panel

Mandate:

Function as Council's public liaison committee on current solid waste management issues.

Primary Objectives:

- increase waste diversion and recycling efforts
- dissemination, review and exchange of solid waste information

Membership:

- One (1) to two (2) Members of City Council (Optional)
- Six (6) to eight (8) citizens

Time Commitment:

The Solid Waste Advisory Panel meets twice per year, with additional meetings schedules as required.

Term:

To coincide with the term of Council.

The Environmental Services Division's principle responsibility

is the planning, design, approvals and operation of all solid waste programs and facilities.

Additional details are provided on page 6 to 12.

A Summary of what we do:

Collection Services

Environmental Services provides the following waste collection services to residents within the City of Greater Sudbury:

Low-density residential buildings (6 units or less) receive:

- Weekly garbage collection for up to 3 approved garbage containers
- Weekly leaf and yard trimmings collection for an unlimited amount of approved containers
- Weekly furniture and appliance collection
- Weekly blue box recycling collection for an unlimited amount of approved containers
- Weekly Green Cart organics collection for an unlimited amount of approved containers
- Collection of household hazardous waste by appointment



High-density residential buildings (7 units or more) on a curbside collection system receive:

- Weekly garbage, leaf and yard trimmings, recycling and Green Cart organics collection by agreement with property owner
- Collection of household hazardous waste by appointment

High-density residential buildings (7 units or more) on a centralized collection system receive:

- Weekly garbage and recycling collection by agreement with property owner
- Collection of household hazardous waste by appointment

Industrial, commercial and institutional buildings receive:

- Weekly yellow box recycling collection by agreement
- Weekly yellow bag garbage collection by agreement

Multi-type properties receive:

- Weekly waste collection services to the residential dwellings within the property (based on terms and conditions listed in agreement with the property owner)

Diversion Services

The following waste is processed for residents of the City of Greater Sudbury:

- Blue box recyclables
- Leaf and yard trimmings, Christmas trees
- Scrap metal and white goods
- Electronic waste
- Clean and non-treated wood waste
- Other wood waste
- Sod
- Concrete, brick and block
- Tires
- Reusable cloth items
- Organics
- Household Hazardous Waste

Leaf and yard trimmings, Christmas trees



CLEAN
CONCRETE

Concrete, brick and block



Other wood waste



Wood Chipping Process



Household Hazardous Waste Depot



Organics



Disposal Services

The City of Greater Sudbury owns and operates (via private contractors) three active landfill sites, two closed landfill sites and one small vehicle transfer station.

The operating landfill sites are located in Sudbury, Hanmer and Azilda.

The small vehicle transfer station is located in Walden.

Anatomy of a Landfill



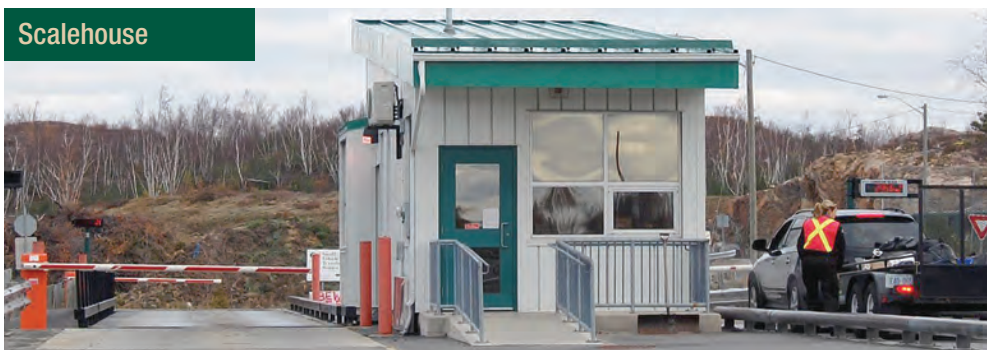
Landfill



Capped landfill with passive gas vents



Scalehouse



Small Vehicle Transfer Station



Clean Up Programs



Adopt-a-Road: Adoption of 2 km section of roadway. The group would have the responsibility of picking up litter in that section of the roadway twice a year.

Adopt-a-Spot: Adoption of a public spot. The group would have the responsibility of picking up litter in their spot twice per year.

Adopt-a-Bin: Adoption of a public roadside litter bin. The group would have the responsibility to service that bin over and above the once a week service provided by the City.



Get rid of that old vehicle from your yard and give it a second life with the Derelict Motor Vehicle Removal and Recycling Program. The parts will be reused and the metals and fluids recycled.

Litter Abatement

One part-time City crew collects roadside litter and maintains litter containers across the City. This service is supplemented each spring with two Automated Litter Collection Units and with student crews that collect roadside litter.

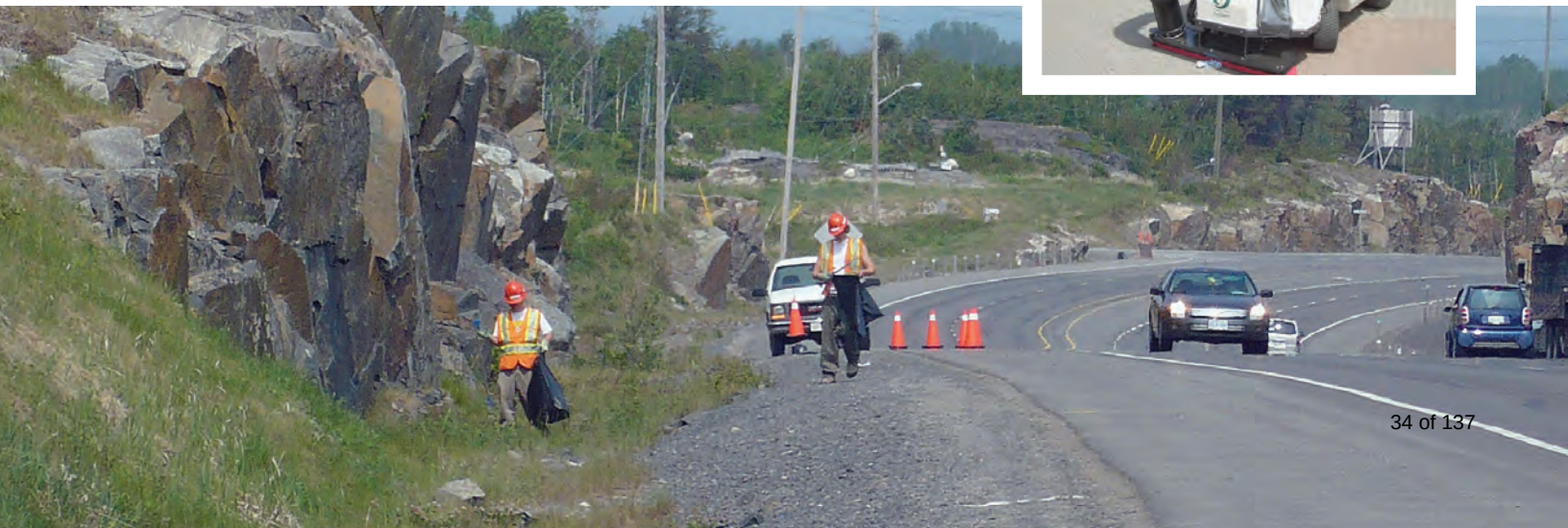


The 20 Minute Makeover is scheduled every April. Interested individuals are asked to collect loose litter on their property and adjacent public property. Residents that register and

provide the before, during and after photographs of their clean-up efforts will have an opportunity to win a prize.



The annual two-hour Clean Up Blitz is scheduled every Spring. Interested individuals are asked to pre-register to participate in this two hour collection of roadside litter.



3R Equipment

The provision of:

- Backyard composters
- Green carts and Kitchen collectors
- Blue Boxes
- Big Blue large-capacity recycling container with lid
- Big Yellow large-capacity recycling container with lid (for businesses)
- Yellow Recycling Boxes (for businesses)
- Big Green large-capacity leaf and yard trimmings container with lid (Pilot Project)



Educational Services

The Promotional and Educational Program is intended to provide residents with the necessary information to properly dispose of waste and to encourage the 3R's - reduction, reuse or recycling of waste.

The program is reviewed annually and typically includes the following activities:

- Letters, flyers or newsletters to residents
- In person at the resident's home
- Public Service Announcements
- Oops Stickers
- By phone via City Services at 3-1-1
- By electronic mail
- In person at City Locations
- Information sheets or flyers at Citizen Service Centres
- Local newspaper ads or articles
- Local radio spots
- Local television spots
- City's website
- City's Facebook and Twitter Page
- Signage
- Posters
- Presentations and Training at the Education Centre
- Displays at various functions
- Videos

Oops! Désolés!

Help us to better serve you. Aidez-nous à mieux vous servir.

We had to leave items at the curb because:

Leaf and Yard Trimmings

- ❑ Unapproved bag or container – use compostable paper bags only
- ❑ Other waste mixed with leaf & yard trimmings – remove unacceptable waste.
- ❑ Apples – place apples in a certified compostable bag in or beside your Green Cart.
- ❑ Heavier than the 18kg/40 lb weight limit.
- ❑ Loose branches – branches must be securely bundled.
- ❑ Bundles too large – cut to no more than 1.2 m/4 feet in length by 60 cm/24 inches in width.
- ❑ Stump or root ball – call 3-1-1 for disposal options.
- ❑ Sod – call 3-1-1 for disposal options.
- ❑ Soil – call 3-1-1 for disposal options.
- ❑ Saw dust – place in an approved garbage bag.
- ❑ Christmas tree in bag or packaging – remove bag or packaging.
- ❑ Christmas tree still has decorations – remove decorations.

Feuilles et résidus de jardin

- Sac ou contenant non approuvé – Utilisez uniquement des sacs en papier compostable
- Déchets parmi les feuilles et résidus de jardin – Retirez les déchets inacceptables.
- Pommes – Placez les pommes dans un sac certifié compostable ou à côté de votre bac vert.
- Les articles pèsent plus des 18 kg (40 lb) permis.
- Branches en vrac – Les branches doivent être bien attachées.
- Dimensions des boîtes – Les boîtes ne doivent pas dépasser 1,2 mètre (4 pieds) de longueur, 60 centimètres (2 pieds) de largeur.
- Souche ou racines – Composez le 3-1-1 pour connaître vos choix d'élimination.
- Mottes de gazon – Composez le 3-1-1 pour connaître vos choix d'élimination.
- Terre – Composez le 3-1-1 pour connaître vos choix d'élimination.
- Sécurité de bois – Placez la sécurité de bois dans un sac à ordures approuvé.
- L'arbre de Noël est dans un sac ou emballage – Enlevez le sac ou l'emballage.
- L'arbre de Noël est décoré – Enlevez les décorations.

3-1-1 Service 

www.greatersudbury.ca/wastemanagement | www.grandsudbury.ca/gestiondesdechets

Household Hazardous Waste Depot
1853 Frobisher Street, Sudbury

Don't throw hazardous waste in the garbage, down the sink or in the sewer. Bring it to the Household Hazardous Waste Depot for free disposal.

Examples of materials accepted

Common examples of household hazardous waste include:

- medicines
- car wax
- motor oil
- paints
- rust removers
- fire extinguishers
- fluorescent tubes
- household batteries
- antifreeze
- thinners
- ammonia
- pool chemicals
- thermometers
- butane lighters and cylinders
- kerosene
- windshield washer
- stains and preservatives
- aerosols
- propane tanks and cylinders
- weed and bug killers
- transmission fluid
- car batteries
- glues
- turpentine
- drain openers
- fertilizers
- brake fluid
- gasoline
- cements
- paint strippers
- oven cleaners
- syringes

Materials not accepted:
No commercial, industrial, institutional, pathological, PCB, explosive, radioactive or unknown waste will be accepted.

Please note:

- All waste must be clearly labelled and in sealed containers.
- Reusable containers will not be returned (i.e. plastic gas cans).
- Do not mix different products together.
- Syringes must be in a puncture-proof container.

For further information, please call City Services at 3-1-1 or visit our website at www.greatersudbury.ca/wastemanagement.

It starts with you! We'll take it from here. 

Place these items in the Blue Box.

Déposez ces articles dans la boîte bleue.









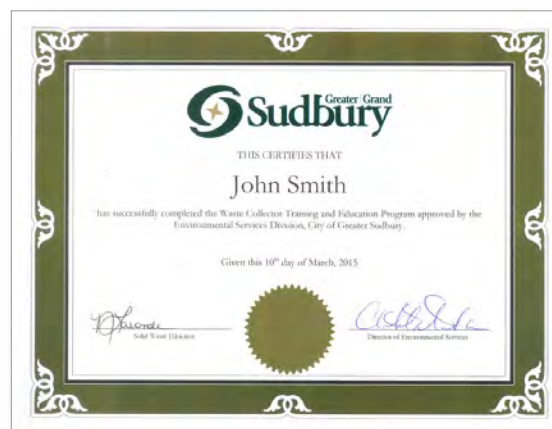
Environmental Services Division

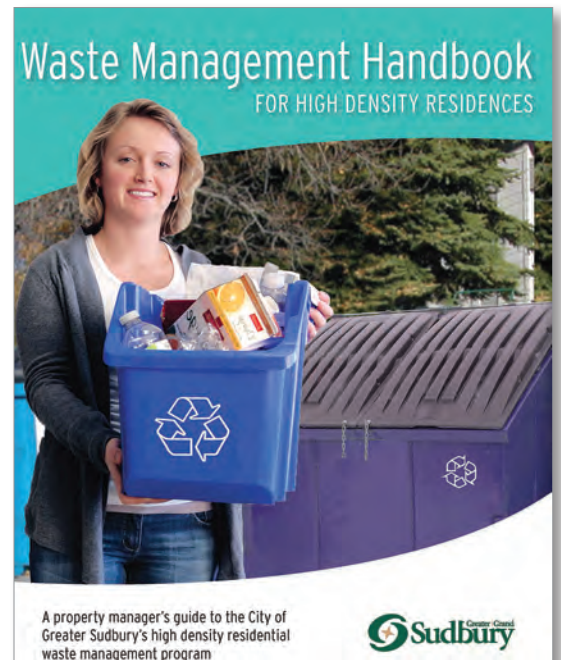
Tel: 3-1-1

Fax: 705-671-1148

wastemanagement@greatersudbury.ca

www.greatersudbury.ca/wastemanagement





Legislated Changes – Waste Reduction

Pending Legislative Change

On September 24, 2014, Premier Kathleen Wynne advised Glen Murray, Minister of the Environment and Climate Change to prioritize Waste Diversion Efforts.

“Developing and implementing improved approaches to waste diversion. Your ministry will do so by building on the release of the Waste Reduction Strategy and working with industry, municipalities and other stakeholders toward the objective of re-introducing waste reduction legislation.

The goal for your ministry is to ensure the ongoing sustainability and appropriate governance of waste diversion programs. This is critical to protecting the environment, recovering economic value in the waste stream and reaping GHG reduction benefits by using resources more efficiently.”

New waste management legislation is expected to be introduced in the Ontario legislature in 2015. The new legislation is based on the new Waste Reduction Act.

If passed the Act would:

- Make individual producers responsible for the end-of-life management of their products and packaging.
- Kick-start waste diversion to recycling in the industrial, commercial and institutional sector by designating wastes for diversion, beginning with designating paper and packaging supplied to the sector.
- Recognize the important role that municipalities – and property taxpayers – play in recycling waste by lifting the producer funding cap on the Blue Box program so that over time, producers pay more than 50%.
- Protect consumers from surprise eco-fees by requiring recycling costs to be included in the advertised, displayed and shelf prices of products.
- Transform Waste Diversion Ontario into the Waste Reduction Authority, with robust compliance, oversight and enforcement responsibilities. The Authority would also be responsible for ensuring a timely transition of existing diversion programs in a way that is easy and convenient for residents.

Strategic Goals – 2015 to 2020

Strategy 1 to 5 were reviewed and supported by the Solid Waste Advisory Panel.

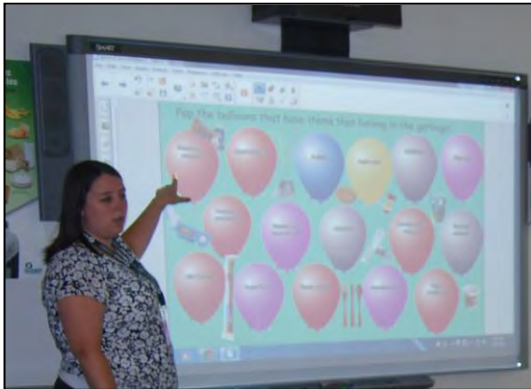
Strategy 6 is a compilation of Divisional improvements developed in-house.



Strategy 1

Focus on Education



Planned Actions	Status
Develop interactive learning tools – Smart Board	Completed and on-going
Learning games and activities have been developed with Smart Board technology and students can interact with smart response remotes. This allows us to quiz the students on what they learned and have them answer anonymously through use of the remotes. The remotes connect to a responder which displays the submitted answers on the smart board. Getting this feedback instantly allows us to realize if the students have thoroughly understood a question and if not, gives us the opportunity to elaborate or re-explain the information.	
	
Develop interactive learning tools – Hands-on	Completed and on-going

Craft or Activity	Description	Time (min.)
Grade 3, 4 and 5		
Newspaper Gift Bows	Create bows to put on gift wrap from old newspaper and flyers	20
Newspaper Wrapping Paper	Create your own wrapping paper out of old newspaper. Paint it how you like or use some of our stamps created from Styrofoam.	30
Redesign that package!	Students are given flyers and are asked to pick out an item that they would redesign to be more sustainable or have less packaging. This activity can be done in small groups and will develop the students' creative writing, thinking and communication skills. Students will then present their ideas to the class.	40
Who am I?	The students will have pictures taped to their back showing compostable, recyclable, garbage and hazardous waste items. By asking yes or no questions, they must figure out exactly what item they are.	20
Conduct a waste audit	A garbage bag full of recyclables, hazardous waste, garbage and compostable items is given to the students. They must work together to correctly divert the items and see just how little we should actually be placing in the garbage. Divide your group in two and have them race to the finish. For younger students, a 'lighter' version of the game is available, using plastic imitations of the items.	60
Grade 4 and 5		
Jeopardy!	The classic game with a waste diversion twist! Subjects include Green Cart, Blue Box, Plastics, Garbage and Household Hazardous Waste.	45

Planned Actions		Status	
Develop a 3R curriculum for school aged children		Completed and on-going	
The curriculum was developed in-house and based on the Ministry of Education’s guidelines. Schools on the City’s organic program are invited to participate. The lessons are provided at the Education Centre, located at 1805 Frobisher Street. Transportation costs from the schools to the Education Centre have been graciously donated by Canada Fibers Ltd. and Waste Management of Canada.			
Subject and sub-category	Curriculum section and lesson	City Environmental Program	Time (min.)
Grade 3			
Science and Technology <i>Understanding Life Systems</i> – <i>Soils in the Environment</i> <i>Suggested additional activities related to this lesson:</i> - Who am I? - Conduct a waste audit (See crafts and activities section).	2.4 Investigate the process of composting, and explain some advantages and disadvantages of composting	Students are introduced to the school and residential organic composting programs in Sudbury. Students will learn which items are and are not acceptable in the program, how to package the organics and why composting is beneficial. They will learn what happens to their organics after they place it at the curb and how it eventually becomes compost. Home composting methods will also be explored. After the lesson, the students’ knowledge will be tested and key points will be reinforced via SMART quiz.	60
Science and Technology <i>Understanding Earth and Space systems</i> – <i>Soil in the environment</i>	3.2 Identify additives that might be in the soil but that cannot always be seen (e.g., pesticides, fertilizers, salt)	Students are introduced to natural soil composition (humus, air, water, minerals). They will discuss what can and can’t be seen in soils. A distinction will be made between natural and chemical fertilizers and pesticides. They will explore the disadvantages of chemical products and how they can be replaced by less harmful natural products. Students will learn about hazardous waste, how to dispose of it properly and why it is important that they do not throw it in the garbage or pour it down the drain. After the lesson, their knowledge will be tested and key points will be reinforced via SMART quiz.	45

Planned Actions		Status
Develop a 3R curriculum for school aged children - continued		Completed and on-going
Grade 4		
Science and Technology <i>Understanding Earth and space systems</i> <i>Suggested additional activities related to this lesson:</i> - Tour of the Recycling Centre - Create a newspaper gift bow - Create newspaper gift wrap - Create a cereal box pencil case - Redesign that package - Conduct a waste audit (See crafts and activities section).	1.2 Analyze the impact on society and the environment of extracting and refining rocks and minerals for human use, taking different perspectives into account	Students are introduced to the lifecycle of a product via a case study of an aluminum can. They will learn the destination and end product of each waste stream (green cart, blue box and garbage). Emphasis is placed on the importance of recycling rather than depleting non-renewable resources. The lesson is concluded with tips on how to reduce, reuse and recycle. After the lesson, the students' knowledge will be tested and key points will be reinforced via SMART quiz. It is suggested that the teacher goes over mining and its effects before coming to education centre.
		75
Grade 5		
Science and Technology <i>Understanding Matter and Energy</i> <i>Suggested additional activities related to this lesson:</i> - Jeopardy! (See crafts and activities section).	1.2 Assess the social and environmental impact of using processes that rely on chemical changes to produce consumer products, taking different perspectives into account and make a case for maintaining the current level of use of the product or for reducing it	Chemical changes can be dangerous and they are a common practice today. The lesson focuses on household hazardous waste (HHW): what makes waste hazardous, different properties and symbols used to identify HHW, common examples of hazardous waste at home and school, where to dispose of HHW, the dangers of HHW products, safe disposal and unsafe disposal, environmental effects, and how some HHW is recycled. The lesson is concluded with tips on how to reduce hazardous waste usage and how one can help stay safe with hazardous waste at home. After the lesson, the students' knowledge will be tested and key points will be reinforced via SMART quiz.
		60
Science and Technology <i>Conservation of energy and resources</i> <i>Suggested additional activities related to this lesson:</i> - Tour of the Recycling Centre - Create a newspaper gift bag - Create a newspaper gift bow - Create newspaper gift wrap - Create a cereal box pencil case - Redesign that package - Conduct a waste audit - Jeopardy! (See crafts and activities section).	1.1 Analyze the long-term impacts on society and the environment of human uses of energy and natural resources, and suggest ways to reduce these impacts <i>(e.g., turning off the faucet while brushing teeth or washing and rinsing dishes conserves water; reusing or recycling products, or using fewer products, conserves natural resources and energy)</i>	In this lesson, students will learn about the lifecycle of garbage, recyclable and compostable items, as well as the positive and/or negative environmental effects of putting items in the garbage, Blue Box or Green Cart. The lesson focuses on 'closing the loop', or creating a continuous cycle where items get recycled rather than ending their life in a landfill. There will be an open discussion on how to use fewer resources at home. After the lesson, the students' knowledge will be tested and key points will be reinforced via SMART quiz.
		120

<i>Planned Actions</i>	<i>Status</i>
Pilot a Community Door to Door 3R Educational Campaign	Update in 2016
Research suggests that one of the best ways to provide residents with meaningful information is to conduct a door to door campaign. Residents would be provided information, the information would be reviewed and the resident would have an opportunity to ask questions. Staff would also determine any barriers and seek a commitment from residents to participate in waste reduction and diversion efforts. These campaigns would then be followed up by a participation study or waste audit to determine a success rate. A door to door campaign was completed in August 2015 and staff will report back once the results of the Fall audit are finalized.	

Strategy 2

The Construction and Demolition Material Recycling Site



Overview – The Construction and Demolition (C&D) Material Recycling Site

The dedicated C&D Material Recycling Site will receive, sort, store, and process C&D waste generated within Greater Sudbury for future use. The C&D area will be located within a buffer area of the Sudbury Landfill Site. The main objective of the C&D Area is to divert waste from landfill in order to extend the site life. The site will have an area that is flexible in design and layout, is capable of accommodating variations in C&D waste inflow, and allows the accepted C&D waste stream to be enhanced as viable market options occur.

Planned Actions

Status

Environmental Compliance Approvals

Completed

The establishment of a specific C&D area within the buffer area of the Sudbury Landfill required an amendment to the site's Environmental Compliance Approval. The application was submitted in 2012 and the approval was received in 2015.

Construction of the Site

To be finalized in 2016 – 2017

Phase 1 of the project was approved by Council in 2010 during the Capital Budget process; this involves site remediation, design, and Ministry of the Environment (MOE) approvals.

Phase 2 involves the actual construction of the site, including an internal road leading to and from the site, drop-off areas, processing pads, storage areas, and construction of a fire/emergency exit for the site; this portion was approved by Council in the 2011 Capital Budget process.

Construction of the site began in 2012. This involved the removal of a pole line, clearing and grubbing the area, fencing and the commencement of an internal access road. Staff held off completing the site in the event the MOE had specific requirements.

The site is expected to be finalized in 2016/17.



<i>Planned Actions</i>	<i>Status</i>
Review expanding the current program	Update in 2018-2019
The City currently processes various categories (wood waste, scrap metal, concrete, brick and block) of source-separated construction and demolition waste materials. Staff will review expanding the program to include the processing of mixed materials and the processing of additional source separated materials. The additional source separated items will include: Asphalt Shingles  Non-Recyclable Glass  <i>Includes broken window panes, mirrors, glass tiles, etc.</i> Non-Metal Fixtures  <i>Includes toilets, sinks, granite counter tops, etc.</i> Non-Wooden Flooring  <i>Includes carpeting, vinyl flooring, etc.</i> The site may also be used to sort mixed granular materials from City projects.	

Strategy 3

Increase Policies that Induce Waste Diversion



<i>Planned Actions</i>	<i>Status</i>
Reduce the Residential Garbage Bag Limit from Three (3) to Two (2)	Update in early 2016.
In 2011, the recommendation to reduce the garbage bag limit from three to two was defeated. Staff was requested to re-introduce the motion in a few years. A more detailed report (business case) will be provided by staff in late 2015 or early 2016.	
<i>Planned Actions</i>	<i>Status</i>
Change the Garbage Collection Frequency from Weekly to Every Other Week	Update in early 2016.
Municipalities that have switched from weekly garbage collection to every other week garbage collection have experienced an increase in waste diversion and a reduction in garbage generation. Net savings associated with this change varies across municipalities. A more detailed report (business case) will be provided by staff in late 2015 or early 2016.	
<i>Planned Actions</i>	<i>Status</i>
Eliminate the weekly residential landfill exemption (from 50kg to 0 kg)	Not recommended at this time.
This item was reviewed but not recommended at this time. Staff can re-introduce this item at a later date or proceed to implementation. Direction from the Committee is requested.	

Strategy 4

Solid Waste Processing and Disposal Capacity



<i>Planned Actions</i>	<i>Status</i>
Participate in the Development of the RPWCO Landfill Disposal Capacity Value Model and Input Details	2016
Golder Associates was retained by the Regional Municipality of Halton on behalf of the the Regional Public Works Commissioners of Ontario (RPWCO) to develop a detailed model template that can be used by municipalities in Ontario that own and/or operate landfill sites. The purpose of the model is to calculate and develop site specific projections of the value of landfill disposal capacity (on the basis of dollar per tonne disposed). The City of Greater Sudbury participated on the sub-committee that reviewed the development of the model. The model is based on the US EPA handbook on full cost accounting to assess the true cost of landfill disposal. Once completed, the model will be used to estimate the tipping fee that should be charged to cover the full costs of landfill disposal.	
<i>Planned Actions</i>	<i>Status</i>
Future Disposal Requirements	2017-2018
Staff will be bringing forward a few options for the funding of future disposal requirements in either 2017 or 2018. The Solid Waste Advisory Panel had previously recommended a phased increase to the tipping fee, however staff will review the previous estimate based on the new model presented above.	

<i>Planned Actions</i>	<i>Status</i>
Update Landfill Life Projections	One year following the program expansion of the Construction & Demolition Material Recycling Site
The expansion of the Construction & Demolition Material Recycling Site is expected to have significant impacts on landfill life if fully developed. Staff will undertake a detailed exercise to update landfill life projections approximately one year following the full development of the site. This information will impact the amount required to fund future sites and will be valuable information for any master plan updates.	
<i>Planned Actions</i>	<i>Status</i>
Review Options to Increase Processing Capacity for Organics	2019-2020
The City currently has sufficient capacity to process organic waste materials. Additional capacity may be warranted, if the program is offered to other sectors. This will be reviewed at a later date and the review will include processing at other City locations and the processing capacity of private facilities (local and non-local). The review will be required for the master plan update, tentatively scheduled to commence in 2021.	

Strategy 5

Expand the Organic Program



<i>Planned Actions</i>	<i>Status</i>
Organic Collection for Multi-Unit Residential Properties on a Centralized Collection System	Update in 2017
Multi-unit residential properties on a centralized collection system are currently not mandated to have a source separated organic collection system. However, property owners may request the service and the service would then be provided on a cost recovery basis. Staff will be requesting pricing for the provision of this service in the next collection contracts. Staff will then report back to the Committee seeking direction on whether the program should be mandatory (similar to recycling) and how the program should be funded.	
<i>Planned Actions</i>	<i>Status</i>
Industrial, Commercial & Institutional Organic Waste	Update in 2017
The City currently does not provide collection or acceptance of organic materials from the Industrial, Commercial & Institutional sector. To establish a program, City staff would: - take in service request applications and meet with the applicant at their facility - draft the service agreement and finalize execution - train the staff contact - co-ordinate collection services with the designated collector Collection costs would be fully paid by the IC&I facility. The Solid Waste Advisory Panel recommended that the processing fee be waived and that the additional operational costs be funded by the tax levy. Staff will be requesting pricing for the provision of this service in the next collection contracts. Staff will then report back to the Committee seeking direction on whether the program should be offered and how the program should be funded.	

<i>Planned Actions</i>	<i>Status</i>
Special Events Organic Collection Program	Update in 2017
The Special Events Organic Collection program, if approved, would be set-up similar to the City’s Special Event Recycling Program. Special Event Organizers would submit an application and City staff would review the application. If approved, the City would arrange for the delivery and servicing of the equipment. Staff will be requesting pricing for the provision of this service in the next collection contracts. Staff will then report back with additional details and seek direction. The above photograph is an example of a portable special event station.	

Strategy 6

Divisional Improvements



<i>Planned Actions</i>	<i>Status</i>
The Waste Wizard	2016
The Waste Wizard is an online waste sorting tool that provides information on how to properly handle and dispose of waste items. This web-based program will be imbedded within the Division's website section. The program will allow employees and residents to determine how to dispose or recycle various waste items. The user simply has to type in the waste material and hit the search button. The tool will also be used by 3-1-1 operators responding to call ins from the general public.	
<i>Planned Actions</i>	<i>Status</i>
What's my collection day?	2017
Residents will be able to access their personal collection day by simply entering their home address in the on-line program. This web-based program will be imbedded within the Division's website section. The tool will also be used by 3-1-1 operators responding to call ins from the general public.	
<i>Planned Actions</i>	<i>Status</i>
Custom integrated software for AVL/GPS technology systems	2016-2017 for City owned vehicles 2020-2021 for Contractor vehicles
Staff have been working diligently with the service provider to develop a customized software program that will provide an inventory of collection points, collection point details, a digital route sheet and a touch screen exception reporting mechanism. The system will provide near real time details to the administrative office. This will improve customer service, reporting and routing capabilities.	



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2015-2020

Solid Waste Strategy

Presented by:
Chantal Mathieu & Renee Brownlee
November 16, 2015

Overview

- History
- Preferred System
- What we do
- Pending legislated changes and future plans
- Strategy 1 to Strategy 6
- Questions

History

- Waste Management System Plan initiated in 1994
 - Approved 2002
 - Planning period of 20 years (2022)
- Amalgamation in 2001
- Preferred System review initiated in 2003
 - Adopted 2005
 - Major components in place by 2009

Preferred System (main components)

Co-collection

Household Garbage

- Up to 3 bags per week

Leaf & Yard Trimmings and Christmas Trees

- Unlimited quantity per week

Co-collection

Blue Box Recyclables

- Unlimited quantity per week
- One stream

Household Organics

- Unlimited quantity per week
- One stream

Ensure that the **four waste streams** will be collected:

- on the same day;
- at the same collection location; and
- no earlier than 7 a.m.

Preferred System (main components)

Co-Collection

- Household Garbage
 - Up to 3 bags per week
- Leaf & Yard Trimmings and Natural Christmas Trees
 - Unlimited quantity per week



Preferred System (main components)



Co-Collection

- Blue Box Recyclables
 - Unlimited quantity per week
- Green Cart Organics
 - Unlimited quantity per week

Preferred System (main components) – con't

- Blue Box Processing
- Organic Processing
- Landfill Disposal



What we do – Collection Services



- Residential curbside co-collection
- Residential centralized collection
- Specialized collection
- Limited IC&I Sector

What we do – Diversion Services



- Blue Box Recycling Materials
- Household Hazardous Waste
- Leaf & Yard Trimmings
- Organics
- Electronic Waste & Tires
- Miscellaneous Items

What we do – Disposal Services

- Landfill & Waste Diversion Sites
- Small Vehicle Transfer Site
- Closed Sites



What we do – Various



- Clean-up Programs
 - Adoptions, The Blitz, Trash Troopers, roadside litter containers and automated litter collection units
- 3R Equipment
 - Recycling and Composting
- Education
 - Training, website, print & video, education centre

Pending Legislation & Future Plans

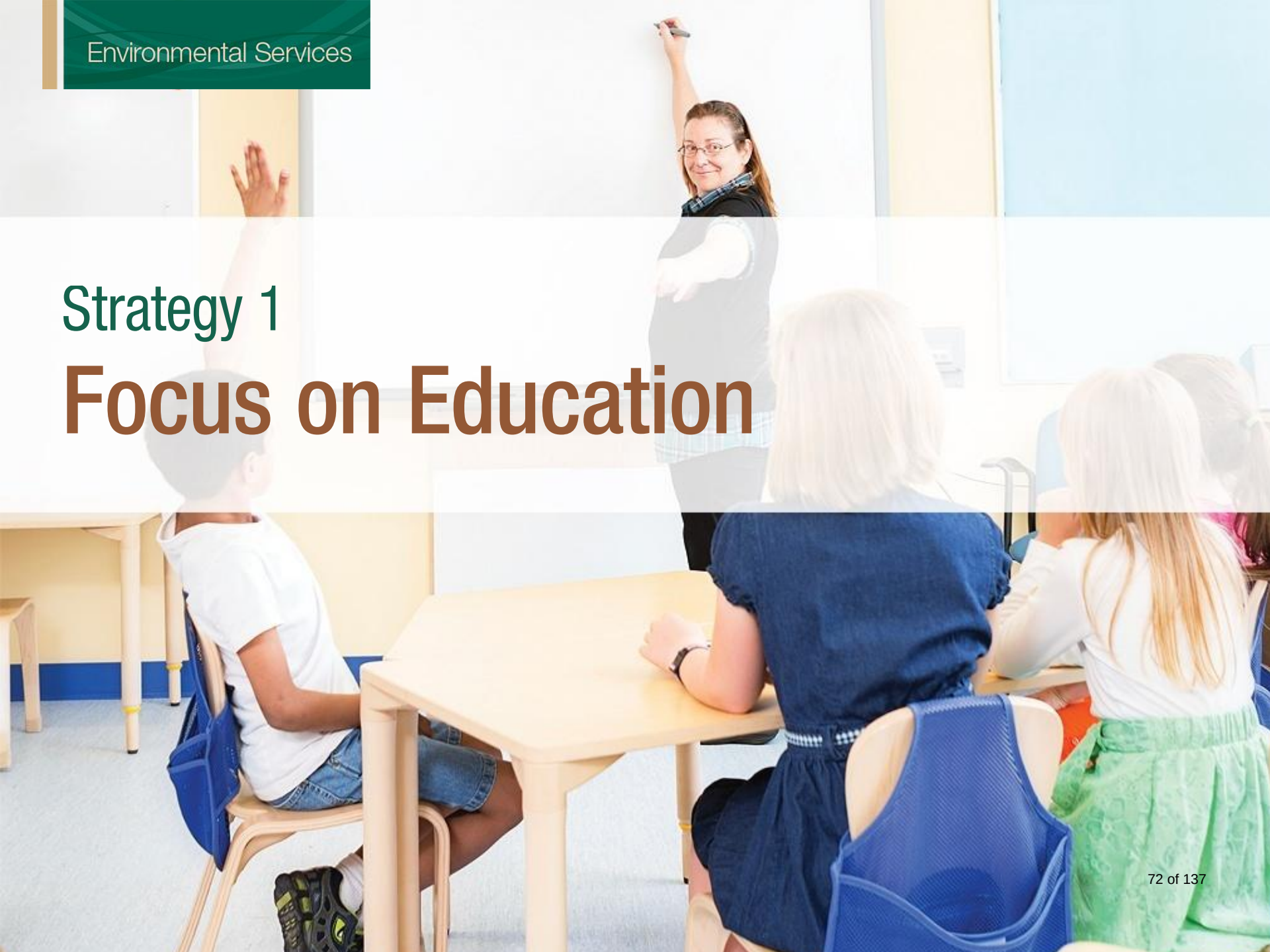
- Pending changes for waste reduction expected in 2015
 - High level, enabling legislation
 - Expected to transfer 100% responsibility for end of life management of designated packaging and products to producers
 - Anticipate that all the details and transition will need to be worked out in development of regulations
- Preferred System (Master Plan) update tentatively scheduled to commence in 2021

Solid Waste Strategies

- Strategy 1 – Focus on Education
- Strategy 2 – The Construction & Demolition Material Recycling Site
- Strategy 3 – Increase Policies that Induce Waste Diversion
- Strategy 4 – Solid Waste Processing & Disposal
- Strategy 5 – Expand the Organic Program
- Strategy 6 – In House Initiatives

Strategy 1

Focus on Education





- Develop interactive learning tools – Smart Board
- Develop interactive learning tools – Hands on
- Develop a 3R curriculum for school aged children
- Pilot a Community Door to Door 3R Educational Campaign

Completed & Ongoing

Completed & Ongoing

Completed & Ongoing



Thank you to Canada Fibers Ltd. and Waste Management of Canada for their generous donations towards reimbursement of transportation costs.

Update in 2016

Strategy 2

The Construction and Demolition Material Recycling Site



- Environmental Compliance Approvals
- Construction of the Site
- Review expanding the current program

Completed

To be finalized in 2016-17

Update in 2018-19

Asphalt Shingles



Non-Recyclable Glass



Includes broken window panes, mirrors, glass tiles, etc.

Non-Metal Fixtures



Includes toilets, sinks, granite counter tops, etc.

Non-Wooden Flooring



Includes carpeting, vinyl flooring, etc.

Strategy 3

Increase Policies that Induce Waste Diversion





- Eliminate the weekly residential landfill exemption (from 50kg to 0 kg)
- Reduce the Residential Garbage Bag Limit from Three (3) to Two (2)
- Change the Garbage/Leaf & Yard Trimmings Co-Collection Frequency from Weekly to Every Two Weeks

Not recommended at this time.

Update in early 2016

Update in early 2016

Strategy 4

Solid Waste Processing and Disposal Capacity





- Participate in the Development of the RPWCO Landfill Disposal Capacity Value Model and Input Details
- Future Disposal Requirements
- Update Landfill Life Projections
- Review Options to Increase Processing Capacity for Organics

Update in 2016

Update in 2016/17

One year following the full expansion of the C&D Material Recycling Program

2019/2020

Strategy 5

Expand the Organic Program



- Organic Collection for Multi-Unit Residential Properties on a Centralized Collection System
- Industrial, Commercial & Institutional Organic Waste
- Special Events Organic Collection Program

Update in 2017

Update in 2017

Update in 2017

Strategy 6

Divisional Improvements



- The Waste Wizard
- What's my collection day?
- Custom integrated software for AVL/GPS technology systems

2016

2017

2016-2017

City owned vehicles

2020-2021

Contractor vehicles

QUESTIONS?

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Wednesday, Oct 28, 2015
Type:	Presentations

For Information Only

Speed Limits in the City of Greater Sudbury

Recommendation

For Information Only

Background

The Ontario Highway Traffic Act (HTA) states that “no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour (km/h) on a highway within a local municipality or within a built-up area. This speed limit is commonly referred to as the Statutory Speed Limit.

The HTA also allows a municipality, via by-law, to set speed limits which differ from the Statutory Speed Limit. Schedule U of the Traffic and Parking By-Law 2010-1 lists the roads within the City of Greater Sudbury which have a speed limit which differs from the Statutory Speed Limit.

How Are Speed Limits Set Within the City of Greater Sudbury?

A common question received is “How do we change the speed limit on a road?”

The way the City of Greater Sudbury determines the speed limit for a road is based on its planning classification and whether there is a school adjacent to the road.

Local Roads

For most local roads, the City of Greater Sudbury uses the Statutory Speed Limit of 50 km/h. This allows the City to post signs at the provincial highway entry points indicating that the speed limit is “50 km/h unless otherwise posted.”

Collector and Arterial Roads

In 2010, City Council adopted the Canadian Guidelines for Establishing Posted Limits published by the Transportation Association of Canada (TAC) for establishing posted speed limits on arterial and major collector roads.

These guidelines were developed to provide guidance and to enhance consistency in evaluating posted speed limits across the country. As stated in the guidelines,

“road safety may be enhanced through credible posted speed limits that match the expectation of drivers for a given roadway and its surrounding area.”

The guidelines are based on the classification, function and engineering characteristics of a roadway. The risks associated with the engineering characteristics determine the appropriate speed limit. The higher the risks, the lower the recommended speed limit.

Signed By

Report Prepared By

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Digitally Signed Oct 28, 15

Division Review

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The engineering characteristics used in the analysis include: horizontal and vertical alignment; lane widths; roadside hazards; pedestrian and cyclist exposure; pavement surface; number of intersections and driveways; and whether on-street parking is permitted and utilized.

School Zone Speed Limits of 40 km/h

To deal with numerous requests to reduce the speed limit near schools, City Council adopted a School Zone Speed Reduction Policy in 2001 and further revised the policy in 2009. The approved policy states the following:

That staff be directed to bring to the attention of City Council requests for speed reduction zones adjacent to schools based on the following considerations:

- That a school speed zone be installed at schools with primary grade aged students.
- That the school speed zone be limited to residential streets or residential collector streets.
- That the maximum speed of the roadways considered for school speed zones be 50 km/h.
- That if schools are closed, the speed limit will revert back to 50 km/h.
- That only those requests that meet the above four criteria be brought forward by staff to City Council for consideration.

In 2014, this policy was further expanded to include all secondary schools.

School zone speed limits were implemented for all schools which met the above criteria prior to the 2014/2015 school year.

Residential 40 km/h Speed Limits

In light of the Ontario Chief Coroner's Report into Pedestrian Deaths, a common question asked is "Why don't we lower the speed limit to all residential roads to 40 km/h?"

The Coroner's report recommended that the Ontario Ministry of Transportation "amend the Highway Traffic Act to allow municipalities to set the unsigned default speed limit at 40 kilometers an hour on residential speeds."

As stated previously, the HTA has set the Statutory Speed Limit at 50 km/h. Without the amendment recommended by the Coroner's report, a 40 km/h speed limit on all residential roads could only be enforced under the HTA by installing maximum speed limit signs on every road affected.

In January 2014, staff presented a report to the Operations Committee (see Exhibit A) which estimated that more than 9,600 signs would be required to implement 40 km/h speed limits on all local and collector roads. The total cost for the installation of these signs would be approximately \$2.5 million and the sign maintenance budget would need to be increased by \$125,000 annually based on a 20 year life expectancy.

Despite the financial implications of implementing a 40 km/h speed limit on all roads, the effectiveness of simply lowering the speed limit is limited without significant police enforcement. The Coroner's report recognized this and stated "although supportive of changes to lower the speed limit for local municipalities, there was a strong view that in the absence of enforcement, drivers will drive the speed at which they are comfortable, irrespective of the posted speed, unless speed reduction is accompanied by engineering changes to the road to encourage adoption of slower speeds."

Summary of Speed Studies

The City of Greater Sudbury has collected vehicle operating speed data on many roads with various speed limits throughout the city. A summary of the data is presented below:

Speed Limit (km/h)	Number of Studies	Number of Vehicles Recorded	Weighted Average Speed (km/h)	Weighted 85th Percentile Speed* (km/h)
40	37	121,660	47	55
50	424	1,095,799	48	56
60	18	96,974	67	76
70	4	6,627	73	85

* The 85th percentile speed is the speed at or below which 85 percent of drivers are travelling and is generally accepted as a good indicator of an appropriate speed limit.

As can be seen from the data, the posted speed limit of a roadway does not limit the speed of drivers. For each speed limit where data was collected, the 85th percentile speed exceeds the speed limit and for roads with a posted 40 km/h speed limit, the average and 85th percentile speeds are only 1 km/h lower than roads with a 50 km/h speed limit.

As previously mentioned, school zone speed limits of 40 km/h have been implemented in the area of all schools. On many of the roads, speed studies had been previously conducted. This presented an opportunity to conduct follow up studies to measure the effect of lowering the speed limit on these roads.

It is important to note that school zone speed limits are typically limited to approximately 150 metres before and after a school. It is within this area that school buses and parents drop off and pick up students. The purpose to limiting the speed reduction to this area is to emphasize to motorists that a school is nearby and extra caution is required.

Flourescent yellow/green school area signs are also installed in advance of schools to alert motorists of an upcoming school. This colour of sign is exclusively used for school area and school crossing signs. Also, the pentagonal shape of the school area sign is not used for any other sign.

Speed studies were completed prior to the end of the school year within 11 different school zones. A summary of each speed study can be found in Exhibit B.

The effect of reducing the speed limit varied. On eight of the roadways, operating speeds were reduced between 2 and 12 km/h. One roadway, Kennedy Street in Sudbury, had no change in operating speeds. On two of the roadways, Houle Avenue and Loach's Road, the recorded speeds increased when compared to the 50 km/h speed limit. In the case of Loach's Road, speeds have likely increased due to the asphalt resurfacing that took place between the initial study in 2012 and this spring.

The following table provides a summary of the 11 school zone speed studies.

Speed Limit (km/h)	Number of Vehicles Recorded	Weighted Average Speed (km/h)	Weighted 85 th Percentile Speed (km/h)
50	12,414	42	52
40	14,141	44	52

As shown in the table above, a 10 km/h reduction in speed has yielded no reduction in overall operating speeds. Also, while the majority of drivers were obeying the 50 km/h speed limits, only a small minority are obeying the 40 km/h speed limits.

Similar before and after studies have been completed on other roads that have had their speed limit reduced. Exhibit 'C' provides a summary of each study.

Once again, the effect of reducing the speed limits varied on each road. On Municipal Road 15, operating speeds were greatly reduced in some areas, while increased in others. Most notably, however, is the 85th percentile speed on each segment exceeded the posted speed limit of 60 km/h by at least 20 km/h.

On Montee Rouleau, South Bay Road and Vermilion Lake Road, operating speeds were reduced between 2 and 4 km/h despite the posted speed limit being reduced by 10 km/h.

How Do You Lower Operating Speeds of Vehicles?

As the studies have shown, simply lowering the speed limit alone is not enough to lower operating speeds. It is through Engineering, Enforcement and Education that operating speeds on roads can be reduced.

Engineering

As detailed in the Canadian Guidelines for Establishing Posted Speed Limits, the physical characteristics of a road play a large part in vehicle operating speeds. By altering these physical characteristics the operating speeds on roads can be reduced.

Throughout North America, communities have utilized traffic calming as a method to alter the physical characteristics to improve neighbourhood liveability and increase road user safety. Traffic calming measures are generally defined as the installation of mainly physical measures to reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users.

In May 2010, City Council adopted a Traffic Calming Policy for the City of Greater Sudbury. The policy details the roads where traffic calming is permitted, the types of traffic calming measures that can be used, the method to determine if a road qualifies for traffic calming and the process used to implement traffic calming.

Some examples of roads that the City has installed traffic calming measures include:

- Attlee Avenue
- Jeanne D'Arc Street, Val Therese
- Kathleen Street
- Niemi Road
- Southview Drive

The advantage to traffic calming measures is they are self-enforcing. By physically altering the road a reasonable driver will reduce their operating speed without the need for police enforcement.

Follow up studies have been completed on many roads where traffic calming measures have been installed. A selection of these studies is presented in the table below:

Location	Year of Study	Speed Limit (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)
Attlee Avenue between Gemmell Street and Beatrice Crescent	2010 (pre)	50	50	55
	2014 (post)	50	46	52
	Difference:		-4	-3
Attlee Avenue between Peel Street and Belfry Street	2010 (pre)	50	58	66
	2014 (post)	50	49	56
	Difference:		-9	-10
Jeanne D'Arc Street, Val Therese West of Heritage Drive	2011 (post)	50	43	50
Niemi Road East of Santala Road	2009 (pre)	50	44	52
	2014 (post)	50	39	53
	Difference:		-5	1
Southview Drive East of the East leg of Cranbrook Crescent	2008 (pre)	50	47	54
	2010 (Traffic Circle)	50	41	49
	2013 (removed)	50	51	57
	2014 (Speed Table)	50	28	35

As the studies indicate, some measures have been more effective than others. For example, on Attlee Avenue, although operating speeds have been reduced, the 85th percentile speeds remain above the posted speed limit. The effectiveness of traffic calming measures varies by the type of measure used. Horizontal devices (median islands, curb extensions) are not as effective at reducing speeds as vertical devices (speed humps and tables).

Enforcement

Police enforcement is an effective measure to have drivers reduce their operating speed to the posted speed limit. It not only affects the drivers who violate the speed limit but also those who hear about or see others get caught. The

challenge with enforcement is the effects are both limited in time and place. Without constant and rigorous enforcement of the speed limit, drivers tend to return to operating their vehicle at the speed they feel most comfortable, regardless of the posted speed limit. Also, police enforcement in one area of the city will not affect the operating speeds in other areas.

Education

An important aspect of trying to reduce operating speeds is educating the public on the effect of speeding in residential areas. Speed Watch is a program offered by the City to help raise awareness of speeding. Speeding concerns are most commonly raised on residential roads, however, it is most often the area residents themselves who are the most frequent speeders. Speed Watch allows residents to borrow radar equipment, a speed limit sign and a digital display to show drivers how fast they are travelling and what the speed limit is on that road. Residents who participate in Speed Watch are encouraged to record license plate information if possible. This information is forwarded to Greater Sudbury Police Services who may issue cautionary letters to motorists identified by Speed Watch volunteers and may schedule a “zero tolerance” speed enforcement campaign in the area identified.



Presented To:	Operations Committee
Presented:	Monday, Jan 20, 2014
Report Date	Monday, Jan 13, 2014
Type:	Managers' Reports

Request for Decision

Residential 40 km/h Speed Limits

Recommendation

THAT the City of Greater Sudbury maintain the statutory 50 km/h speed limits on residential roads, all in accordance with the report from the General Manager of Infrastructure Services dated January 13, 2014.

Background

At the Operations Committee meeting held on September 16, 2013, the following recommendation was approved:

OP2013-43 Caldarelli/Berthiaume: WHEREAS at its May 23, 2007 meeting, Greater Sudbury City Council unanimously passed the following resolution: "AND BE IT FURTHER RESOLVED that the City of Greater Sudbury accept the challenge to become the most pedestrian friendly City in Ontario by 2015";

AND WHEREAS the City of Greater Sudbury cannot afford to provide the pedestrian and cycling infrastructure necessary to encourage more people to use active transportation to get safely to their destinations;

AND WHEREAS there is clear evidence that physical activity from active transportation generates important health benefits;

AND WHEREAS at page 37 of the Ontario Chief Coroner's Report into Pedestrian Deaths, it is recommended that the Ministry of Transportation amend the "Highway Traffic Act, to allow local municipalities to set the unsigned default speed limit at 40 kilometres an hour on residential streets, a decrease from the current 50 kilometres an hour;

AND WHEREAS slower streets make for more livable and safer neighbourhoods;

AND WHEREAS an increase in speed is directly related both to the likelihood of a crash occurring and to the severity of the crash consequences;

Signed By

Report Prepared By

Dave Kivi
Co-ordinator of Transportation & Traffic
Engineering Services
Digitally Signed Jan 13, 14

Division Review

David Shelsted
Director of Roads & Transportation
Services
Digitally Signed Jan 13, 14

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Jan 13, 14

Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jan 13, 14

AND WHEREAS the Sustainable Mobility Panel recommended that the City of Greater Sudbury be bold and modify its Traffic and Parking By-Law 2010-1 to reduce speed limits on all residential streets to 40 kilometres per hour unless otherwise posted, rather than the current 50 kilometres per hour;

AND WHEREAS the City of North Bay has instituted a by-law establishing 40 kilometre per hour speed limits on residential streets and the City of Ottawa has established a method where by means of petition, residents can request a reduction in the speed limit to 40 kilometres per hour on local residential streets provided there is a consensus of 66 percent of the residents on the entire street;

THEREFORE BE RESOLVED that the City of Greater Sudbury direct staff to investigate options to amend the Traffic and Parking By-Law 2010-1 to reduce speed limits on residential streets to 40 kilometres per hour unless otherwise posted, rather than the current 50 kilometres per hour and that those options be presented to the Operations Committee at it January 2014 meeting.

Statutory Speed Limit

Section 128 (1) of the Ontario Highway Traffic Act states that “no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour (km/h) on a highway within a local municipality or within a built-up area”. This speed limit is commonly referred to the Statutory Speed Limit. The City of Greater Sudbury has signs posted at the provincial highway entry points into the City indicating that the speed limit is “50 km/h unless otherwise posted”. The Ontario Traffic Manual (OTM) indicates that “maximum speed” signs are required when the speed limit is different than the statutory speeds. They may also be used to supplement the statutory speed limit. Based on the Highway Traffic Act and OTM requirements, it is the City’s practice to install 50 km/h maximum speed limit signs only when there is a change from a higher or lower maximum speed limit.

Speed and Driver Behavior

A report prepared for the British Columbia Ministry of Transportation titled Review and Analysis of Posted Speed Limits and Speed Limit Setting Practices in British Columbia states the following:

“Based on years of experience and observation, the following fundamental concepts have been used to establish realistic speed zones.

The majority of motorists drive at a speed they consider reasonable, and safe for road, traffic, and environmental conditions. Posted limits which are set higher or lower than dictated by roadway and traffic conditions are ignored by the majority of motorists.

The normally careful and competent actions of a reasonable person should be considered legal.

A speed limit should be set so that the majority of motorists observe it voluntarily and enforcement can be directed to the minority of offenders.

A driver’s choice of speed can impose risks on other road users. Crash severity increases with increasing speeds because in a collision, the amount of kinetic energy dissipated is proportional to the square of the velocity. Crashes, however, appear to depend less on speed and more on the variation in speeds. The likelihood of a crash occurring is significantly greater for motorists traveling at speed slower and faster than the mean speed of traffic.

Maximum speed limits are set for ideal road, traffic, and environmental conditions.

The Coroner's report recognized this and stated "although supportive of changes to lower the speed limit for local municipalities, there was a strong view that in the absence of enforcement, drivers will drive the speed at which they are comfortable, irrespective of the posted speed, unless speed reduction is accompanied by engineering changes to the road to encourage adoption of slower speeds."

Effectiveness of 40 km/h Speed Limits

It is the City's current policy to reduce the speed limit to 40 km/h on local and collector roadways adjacent to elementary schools. However, there are some streets with 40 km/h limits that are not adjacent to elementary schools.

As part of the Traffic Calming Program, City staff has undertaken many spot speed studies on residential roads with both 40 and 50 km/h speed limits. The following table provides a summary of the speed study results from 2009 to 2012 inclusive.

Speed Study Summary

Speed Limit (km/h)	Number of Studies	Weighted Average Speed (km/h)
40	33	46.3
50	292	48.8

While the studies do not represent actual before versus after data, they do provide some insight into the effectiveness and acceptance of 40 km/h speed zones. As indicated, a 10 km/h reduction in the speed limit has yielded a 2.5 km/h reduction in average operating speed. Also, while the majority of drivers obey 50 km/h speed limits, only a small minority are currently obeying 40 km/h speed limits.

The Coroner's report also recognized this, stating "when the City of Ottawa reduced speed from 50 km/h to 40 km/h, studies which followed indicated that there was no substantial change in speed which motorists travelled the roads."

40 km/h Speed Limit on All Residential Roadways

In order for a 40 km/h speed limit to be enforced under the Highway Traffic Act, maximum speed limit signs will be required on every roadway affected. It is difficult to determine the exact number of speed limit signs that would be required to lower the speed limit on all residential roadways. However, the OTM recommends that the signs be spaced at 300 metres, and/or after each major intersection. There are more than 1,800 local and collector roads in the city totaling more than 2,900 lane kilometres. Installing speed limit signs every 300 metres will result in the need for more than 9,600 signs at a total cost of approximately \$2.5 million.

In order to maintain such a large inventory of new signs, the sign maintenance budget would need to be increased by \$125,000 annually based on a 20 year life expectancy.

The Coroner's recommendation to the Ministry of Transportation (MTO) is to amend the *Highway Traffic Act* to allow local municipalities to lower the unsigned default speed limit to 40 km/h. This amendment would

significantly reduce the costs associated in reducing the speed limit on residential roadways.

Many studies have shown that majority of pedestrian fatalities have been on arterial streets, which are wide roads (multiple lanes) and higher volumes. During the review period of the Coroner's report, 75 % of pedestrian fatalities occurred on arterial roads. The City has similar distribution of pedestrian collisions between arterial and local roads. Therefore, the proposed change in speed limit will affect a minority of pedestrian collisions.

40 km/h Speed Limits On All New Residential Roadways

It is possible to implement 40km/h speed limits on all newly assumed residential roadways without significantly impacting current sign maintenance budgets. As part of the subdivision approval process, the developer is responsible for the cost of any traffic control signs that are required. Therefore, the cost of installing 40 km/h signs on newly assumed roads can be passed on to the developer.

Implementing 40km/h speed limits on new roads, and maintaining 50km/h on existing roads will create a double standard, which is not recommended by staff. Also, often times newer streets are built to a higher standard than older streets with respect to the provision of curbs, sidewalks and illumination.

40 km/h Speed Limits Adjacent To Public Playgrounds

It is currently the City's policy to bring forward requests to lower the speed limit to 40 km/h on local and collector roads adjacent to elementary schools. In the last six years, the City has implemented school zone speed limits at many locations. However, there are still twenty schools that qualify for a reduced limit, but have not yet been completed. Based on the current budget, it will take approximately four years to have the speed limit reduced at all the elementary schools that qualify.

School zone speed limits have been implemented by Council due to the high concentration of young children in these areas. Once the elementary school areas are completed, Council may consider implementing 40 km/h speed limits adjacent to public playgrounds on local and collector roadways. Playgrounds represent another area where high numbers of young children can be found near to the road.

There are nearly 200 playgrounds in the city. Should Council decide to reduce the speed limit near playgrounds, it would cost approximately \$300,000 to supply and install the required signs. Council may consider a budget option of \$30,000 per year as part of the 2015 budget process to complete the school zone speed limits in 2015 and all playgrounds by 2025.

School Zone Speed Study Summary

Roadway	Year of Study	Speed Limit (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)	Speed Limit Compliance Rate
Creighton Road, Copper Cliff Between School Street and Club Road	2014	50	33	42	96%
	2015	40	32	40	85%
	Difference:		-1	-2	-9%
Holland Road, Sudbury Between Lamothe Street and Woodbine Avenue	2010	50	48	55	65%
	2015	40	43	52	30%
	Difference:		-5	-3	-35%
Houle Avenue, Dowling Between Riverside Drive and Arlington Drive	2013	50	45	53	74%
	2015	40	47	56	65%
	Difference:		2	3	-9%
Kennedy Street, Sudbury East of Barrydowne Road	2013	50	43	52	83%
	2015	40	41	52	40%
	Difference:		-2	0	-43%
Kirkwood Drive, Sudbury North of Ramsey Lake Road	2012	50	41	48	90%
	2015	40	39	46	59%
	Difference:		-2	-2	-31%
Lamothe Street, Sudbury Between Arvo Avenue and Holland Road	2013	50	36	44	97%
	2015	40	33	40	89%
	Difference:		-3	-4	-8%
Lansdowne Street, Sudbury Between Patterson Street and Bloor Street	2013	50	39	48	92%
	2015	40	36	44	96%
	Difference:		-3	-4	4%
Loach's Road, Sudbury Between Lady Ashley Court and Windle Drive	2012	50	40	52	49%
	2015	40	52	60	5%
	Difference:		12	8	-44%
Roy Avenue, Sudbury Between Lamothe Street and Sparks Street	2012	50	47	55	70%
	2015	40	35	43	76%
	Difference:		-12	-12	6%
Spruce Street, Garson West of Falconbridge Road	2012	50	52	61	44%
	2015	40	42	58	48%
	Difference:		-10	-3	4%
St. Nicholas Street, Sudbury Between Edmund Street and St. Brendan Street	2014	50	28	37	100%
	2015	40	26	32	96%
	Difference:		-2	-5	-4%

EXHIBIT C

Speed Study Summary

Roadway	Year of Study	Speed Limit (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)	Speed Limit Compliance Rate
Municipal Road 15 Between Ford Drive and Radisson Avenue	2007	80	69	77	*
	2009	60	73	82	*
	Difference:		4	5	N/A
Municipal Road 15 1.4 km East of Dupont Street	2006	80	85	98	*
	2007	60	76	86	*
	2009	60	71	80	*
	Difference (2009 vs. 2006):		-14	-18	N/A
Municipal Road 15 1.5 km West of Montee Principale	2006	80	77	85	*
	2007	60	72	79	*
	2009	60	71	84	*
	Difference (2009 vs. 2006):		-6	-1	N/A
Municipal Road 15 1.5 km East of Montee Principale	2007	80	86	95	*
	2009	60	74	82	*
	Difference:		-12	-13	N/A
Montee Rouleau 200 m South of Bonin Road	2010	80	78	89	55%
	2015	70	73	85	41%
	Difference:		-5	-3	-14%
South Bay Road 230 m South of Ramsey Lake Road	2011	50	63	71	5%
	2013	40	59	66	1%
	2015	40	58	67	3%
	Difference (2015 vs. 2011):		-5	-4	-2%
Vermilion Lake Road Near Davey's Road	2010	80	80	93	42%
	2015	70	78	92	25%
	Difference:		-2	-2	-17%

**Due to the method used to collect data for these speed studies, we are unable to provide the speed limit compliance rate.*

For Information Only

Sewer Blockage Process

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Monday, Nov 02, 2015
Type:	Correspondence for Information Only

Recommendation

For Information Only

Finance Implications

The required funds have been identified in the operating budget.

Background

An earlier report for information was provided to council in February of 2015 (see Attached) with the expectation that the new process would be in place in 2015. This report provides a summary of the new business process which is now in effect. This new business process applies to private sewer lines between the building and property line.

Sewer backups can be caused by numerous factors, but the one thing that is consistent with any of these events is that they are inconvenient and stressful for the property owner. Most often, they are caused by aging infrastructure where pipes become cracked, allowing roots to enter, or a broken pipe creates an obstruction or a ridge where material cannot pass. The pipe could also settle and create a sag where sediment can accumulate and block normal flow. There are also instances where something improper has been flushed down a drain or toilet which can obstruct the pipe such as grease and rags. Regardless of the cause, W/WW would like to better support our customers through this process by making improvements to our existing business process.

The anticipated customer service improvements of the new process include:

- increased transparency and better information sharing with customers;
- a streamlined process to minimize the number of calls a customer needs to make to obtain service; and,
- better use of widely available and affordable technology to aid in more precise

Signed By

Report Prepared By

Paul Javor
Water/Wastewater Operations
Engineer
Digitally Signed Nov 2, 15

Division Review

Nick Benkovich
Director of Water/Wastewater Services
Digitally Signed Nov 2, 15

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Nov 2, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

decision making.

Current Process

The current process when experiencing a sewer backup is outlined below:

1. Customer both arranges for a sewer safety inspection with Union Gas and calls a plumber.
2. If the plumber suspects that the blockage is on the City side, the plumber contacts the City so that property line information can be verified while the plumber is onsite with their snake in the sanitary sewer service
3. If City staff determine that the blockage is on City side, then the plumber is instructed to send their invoice to the City for reimbursement (to a maximum of 2 hours)
4. The City will take any necessary follow-up actions to rectify any deficiencies on the City's portion of the sanitary sewer service to avoid future recurrences if the backup was a result of a problem on the City side.

New Process Description

Customers will have two options (A or B) that they can follow in the future, which are outlined below:

A) Customer Chooses City Service

1. Customer places a call to 311 to report a sewer backup.
2. The City contracted plumbing service is dispatched to the location of the blockage. The Plumber will call and arrange for the sewer safety inspection from Union Gas prior to mobilizing. The plumber will clear the blockage for the customer as well as perform a CCTV inspection of the sanitary sewer service.
3. The customer will get a copy of the CCTV inspection and report.
4. The next business day the responsible supervisor will review information related to the backup to determine responsibility for the blockage (cause of blockage, property line information, etc)
5. If the cause of the blockage is determined to be the responsibility of the City, the City will take any necessary remedial actions to address the situation. If the cause of the blockage is determined to be the responsibility of the customer, a fee will apply along with an explanation of the assessment of the information from the City.

B) Customer Chooses to hire a plumber of their choice

1. Customer will arrange for a sewer safety inspection from Union Gas
2. Customer will arrange for a plumber of their choice to attend to the blockage.
3. If the plumber and customer suspect that the blockage is the City's responsibility, the customer will need to submit information as part of the reimbursement process. This

process will have the same enhanced requirements for information as the contracted plumber requires so that all parties are operating with the same requirements

4. Should the information meet the requirements of the reimbursement policy, a reimbursement to the customer in the amount defined by the policy shall be paid (consistent with rates paid to the City's contracted service)
5. If the cause of the blockage is determined to be the responsibility of the City, the City will take any necessary remedial actions to address the situation.

Discussion

The new process still allows the customer to choose their service provider. Should the customer choose the City to provide service, a more streamlined process with less calls is available to help them through the event they have experienced. It is anticipated that decisions will increase transparency and be easier to understand by using CCTV technology where a video of the service lateral will be obtained so that all parties can see what is going on inside the pipe. A copy of this diagnostic tool will be given to both the customer and to the City so that all parties have the same information. This is not a requirement in the current process and has been added to improve the transparency in decision making.

Costing will be controlled by changing the policy from a payment of two hours to paying either the contractor or the plumber through the reimbursement policy under the same rules. If the customer chooses to use the City service, they will not have to make any further calls for reimbursement as no invoice for service will be generated and the City will have the information required to schedule and act on repairing the deficiency.

Currently a tender has been issued to procure the services of a preferred provider. The tender is requesting a fee structure for the sewer cleaning. Once the tender is closed, staff will prepare a corresponding fee proposal that will be charged to the resident for blockages that have occurred on the private side. This fee will be included in the Water Wastewater Rates Bylaw and presented to Council during budget deliberations.

Conclusion & Timelines

Staff coordinated a meeting with the members of the plumbing community in February of 2015. Changes were communicated, their input was received and incorporated. A competitive process to obtain a service provider is underway with an anticipated start date of January 18, 2016. This update report also serves to launch a communication program to educate the residents of the upcoming new process to have a sewer backup cleared.

For Information Only

Improved Sewer Service Surcharge Response

Presented To:	Operations Committee
Presented:	Tuesday, Feb 03, 2015
Report Date	Wednesday, Jan 21, 2015
Type:	Presentations

Recommendation

For Information Only

Finance Implications

There are no financial impacts identified at this time.

Background

Introduction

One of the priorities identified in the Water Wastewater Tactical Plan was to examine and prioritize business processes that required improvements. Given the sensitive nature of the sewer backup business process, it was given a top priority for improvements which are outlined in this report.

Background

According to the Ontario Municipal Benchmarking Initiative (OMBI), the City of Greater Sudbury has a higher than average sewer backup rate when compared to other OMBI municipalities. Water and Wastewater Services is focusing on initiatives to improve not only this statistic but also the customer experience in this area. One such initiative is revamping the CGS's sewer backup process in an effort to improve the overall customer experience.

Sewer backups can be caused by numerous factors, but the one thing that is consistent with any of these events is that they are a huge inconvenience and often stressful for anyone who experiences them. Most often, they are caused by aging infrastructure where pipes become cracked, allowing roots to enter, or a broken pipe piece may create an obstruction or a ridge where things cannot pass. The pipe could also settle and create a sag where the gravity flow does not move along properly anymore. There are also instances where something improper has been flushed down a drain or toilet which can obstruct the pipe such as grease that hardens and constricts the pipe or an object that plugs the pipe.. Regardless of the cause, W/WW would like to better support our customers through this process by making some improvements to our existing business process.

Signed By

Report Prepared By

Cheryl Beam
Supervisor III Distribution & Collection
Digitally Signed Jan 21, 15

Division Review

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Director of Water/Wastewater Services
Digitally Signed Jan 21, 15

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
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Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
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In developing the revised program, other Canadian municipalities were surveyed to determine what the City of Greater Sudbury could learn from other municipalities' response practices. The new sewer backup program that is being proposed in this report is very similar to many programs that have been received successfully by customers in other municipalities.

The goals of the new process include:

- increased transparency and better information sharing with customers;
- a streamlined process to minimize the number of calls a customer needs to make; and,
- better use of widely available and affordable technology to aid in more precise decision making.

The process changes are not anticipated to create any new budgetary impacts, only an improvement to the service that we offer our community, and an improvement in the consistency of the quality of the information that we use operationally to make decisions.

Current Process

The current process that a customer experiencing a sewer backup would follow is outlined below:

- 1) Customer both arranges for a sewer safety inspection with Union Gas and calls a plumber.
- 2) If the plumber suspects that the blockage is on the City side, the plumber contacts the City so that property line information can be verified while the plumber is onsite with their snake in the sanitary sewer service
- 3) If City staff determine that the blockage is on City side, then the plumber is instructed to send their invoice to the City for reimbursement (to a maximum of 2 hours)
- 4) The City will take any necessary follow-up actions to rectify any deficiencies on the City's portion of the sanitary sewer service to avoid future recurrences if the backup was a result of a problem on the City side

New Process Description

Customers will have two options (A or B) that they can follow in the future, which are outlined below:

A) Customer Chooses City service

- 1) Customer places a call to 311 to report a sewer backup. Customer will be advised to call back once they have arranged for their sewer safety inspection from Union Gas.
- 2) A contracted plumbing service is dispatched to the location of the blockage. The plumber will clear the blockage for the customer as well as perform a CCTV inspection of the sanitary sewer service.
- 3) The customer will get a copy of the CCTV inspection
- 4) The next business day the responsible supervisor will review information related to the backup to determine responsibility for the blockage (cause of blockage, property line information, etc)
- 5) If the cause of the blockage is determined to be the responsibility of the City, the City will take any necessary remedial actions to ensure that there aren't future recurrences; if the cause of the blockage is determined to be the responsibility of the customer, a flat rate fee will apply along with an explanation of the assessment of the information from the City.

B) Customer chooses to hire a plumber of their choice

- 1) Customer will need to arrange for a sewer safety inspection from Union Gas
- 2) Customer both arranges for a sewer safety inspection with Union Gas and calls a plumber
- 3) If the plumber and customer suspect that the blockage is the City's responsibility, the customer will need to submit information as part of the reimbursement process. This process will have the same enhanced requirements for information as the contracted plumber requires so that all parties are operating with the same requirements
- 4) Should the information meet the requirements of the reimbursement policy, a reimbursement to the customer in the amount defined by the policy shall be paid (consistent with rates paid to the City's contracted service)
- 5) If the cause of the blockage is determined to be the responsibility of the City, the City will take any necessary remedial actions to ensure that there aren't future recurrences

Discussion

The new process still allows the customer to choose their service provider. Should the customer choose the City to provide service, a more streamlined process with less calls is available to help them through the event they have experienced. It is anticipated that decisions will increase transparency and be easier to understand by using CCTV technology where a video of the service lateral will be obtained so that all parties can see what is going on inside the pipe. A copy of this diagnostic tool will be given to both the customer and to the City so that all parties have the same information. This is not a requirement in the current process and has been added to improve the transparency in decision making.

Costing will be controlled by changing the policy from a payment of two hours to paying either the contractor or the plumber through the reimbursement policy under the same rules. If the customer chooses to use the City service, they will not have to make any further calls for reimbursement as no invoice for service will be generated and the City will have the information required to schedule and act on repairing the deficiency.

Conclusion & Timelines

The next step in the process is to meet with interested parties in the plumbing community to present the proposed changes to them in a forum that allows them to ask questions and get the information that they may require to make changes to their processes or to get information to get better aligned to bid on our tender. The consultation meeting is anticipated to take place in February.

The City will issue a service contract for competitive bidding in March with an anticipated start date at the beginning of April. Corporate communications is compiling new reference material for customers to be posted on the website in March ahead of the implementation of the new procedure as well as hand-outs.



Updated Sewer Backup Process: (for backups in sewer service lines)

Presentation By:

Nick Benkovich, Director of Water & Wastewater Services;

Cheryl Beam, Supervisor III - Water Distribution and
Wastewater Collection

February 3, 2015



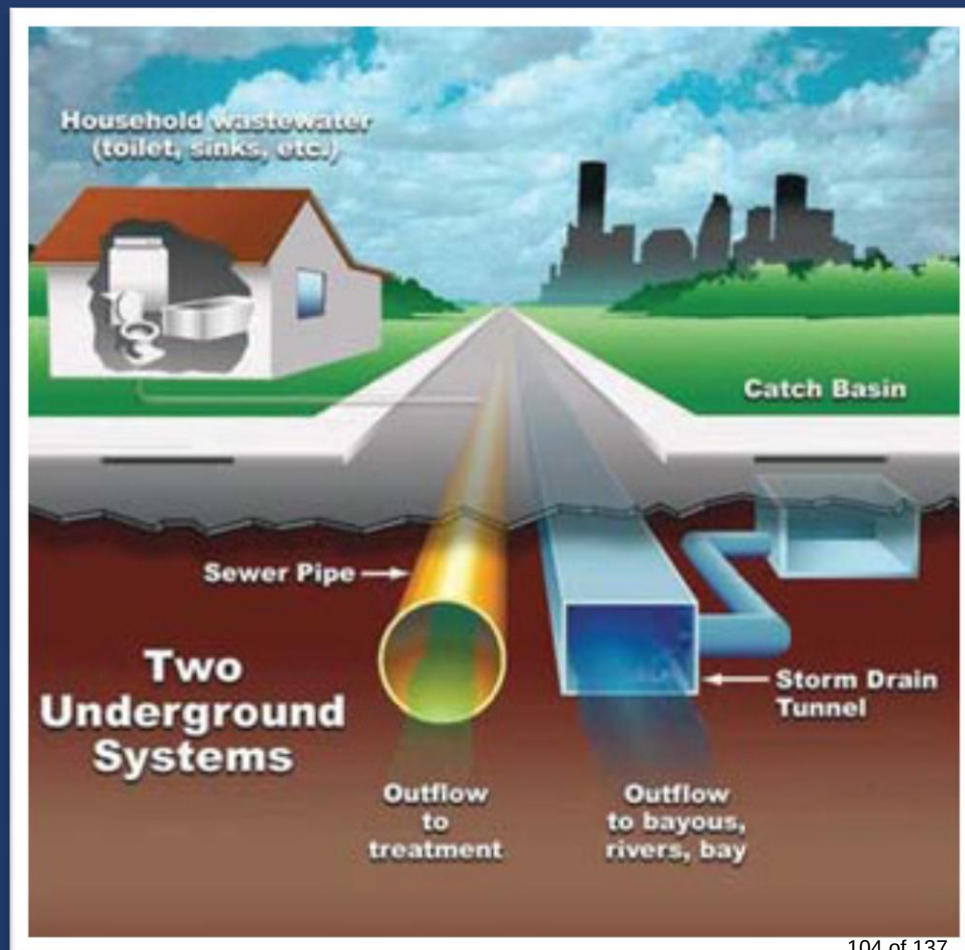
Tonight's Topics

1. Introduction / Overview
2. Current Process
3. Updated New Process
4. Timelines



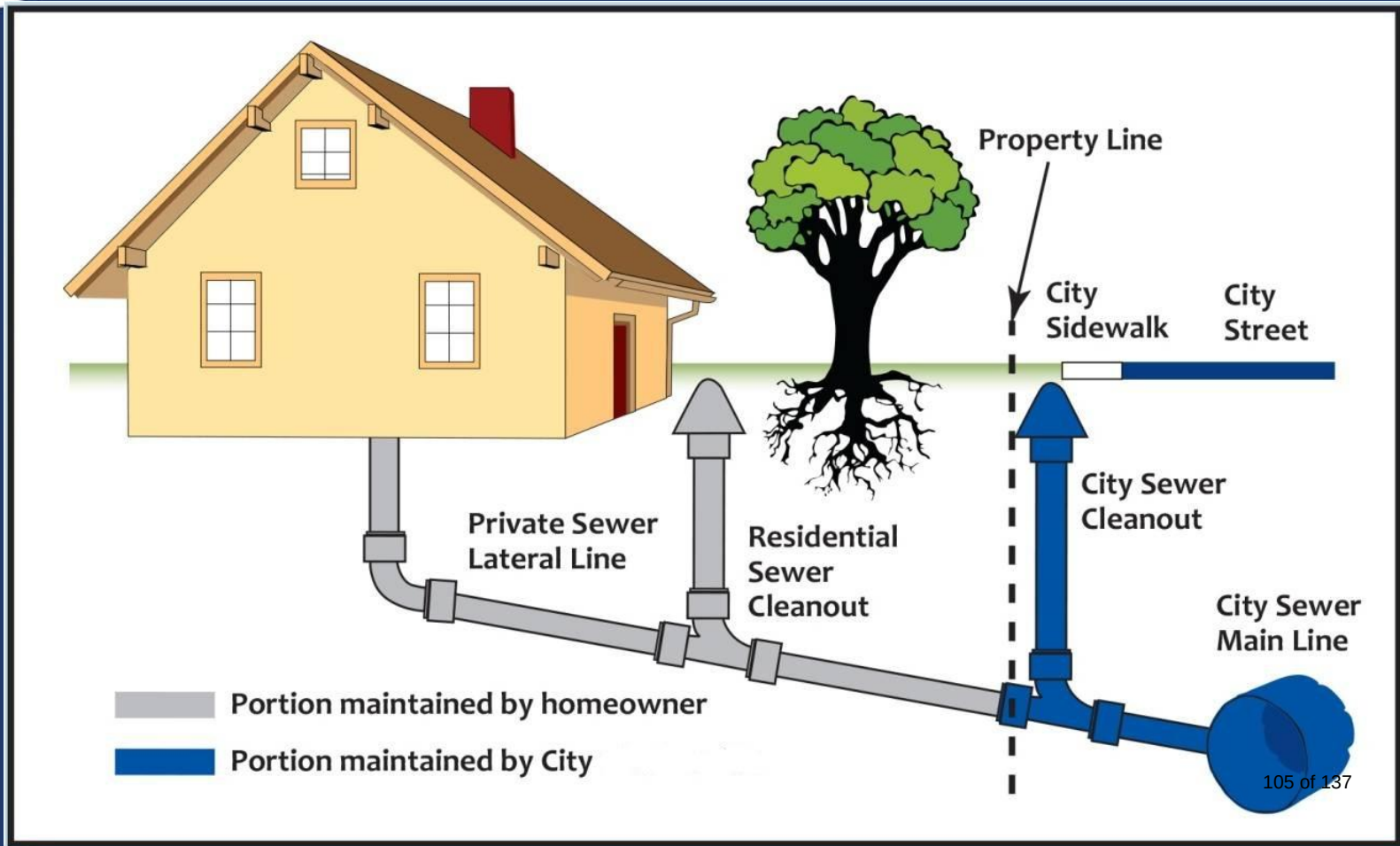
Introduction: Two Sewer Systems

- Sanitary Collection Systems: **(773 km)**;
- Average Pipe Age (Public): **(about 48 years)**;
- Customer connections: **(approx. 46,000)**;
- Typical annual reported call volume: **(approx 200)**



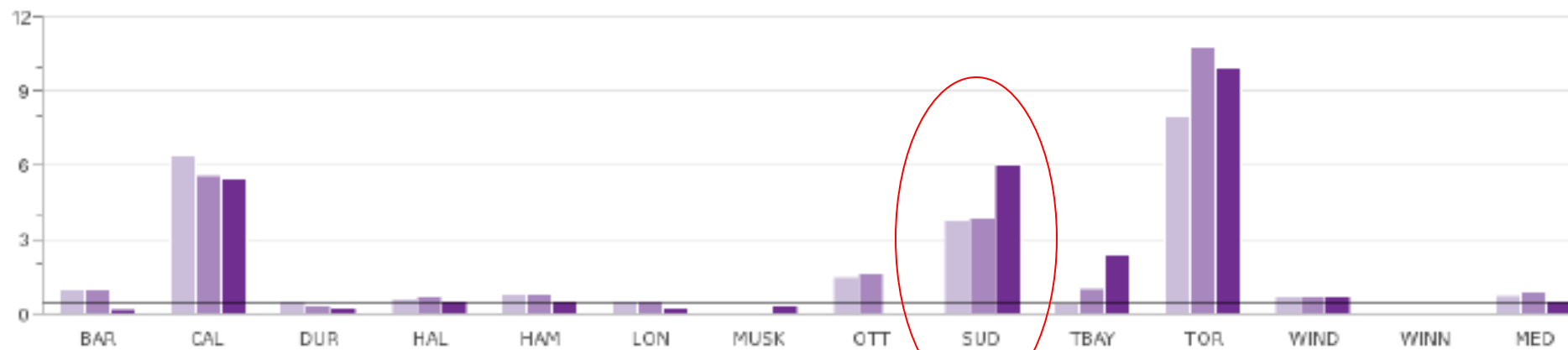


Shared Responsibilities: Property Owner & City





Benchmarking Comparison: Sewer main backups per 100 km

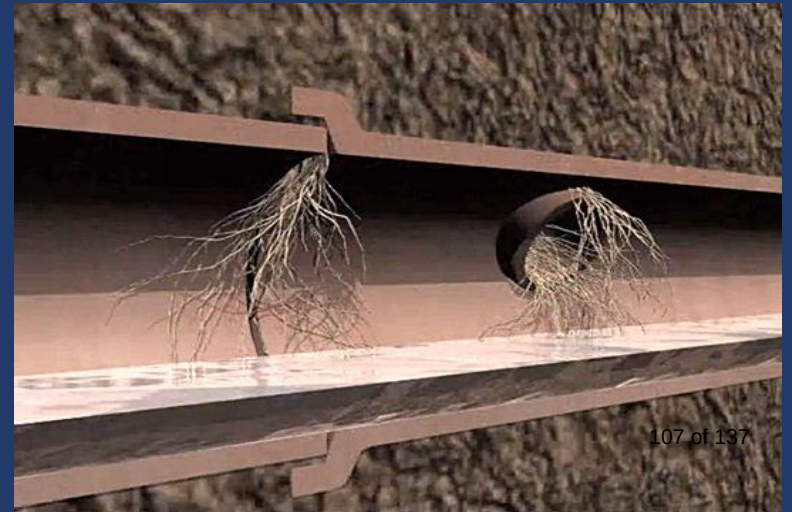


2010	0.93	6.42	0.54	0.56	0.81	0.51	0.00	1.46	3.77	0.39	8.01	0.69	N/A	0.75
2011	0.94	5.57	0.34	0.67	0.80	0.43	0.00	1.62	3.90	0.98	10.79	0.69	N/A	0.87
2012	0.19	5.42	0.24	0.49	0.45	0.23	0.32	0.01	5.97	2.35	9.96	0.69	N/A	0.47



What might cause a sewer backup in the service?

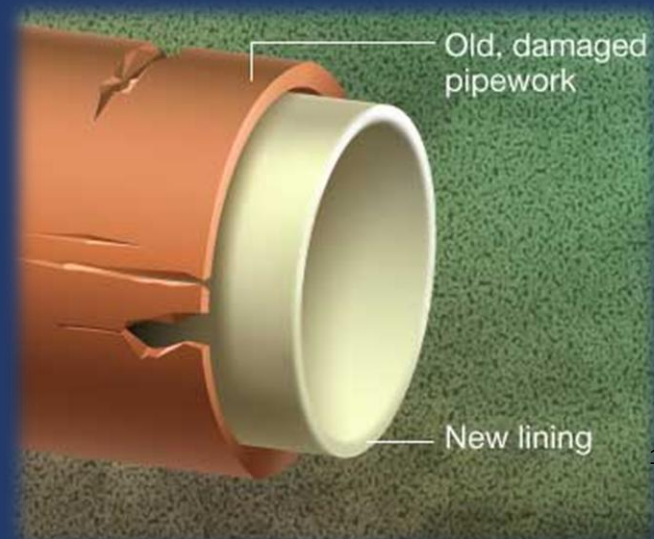
- FOG
- Roots / Debris
- Structural





Types of repairs

1. Clear blockage (FOG, debris);
2. New service line required ;
3. Install service liner (structural, roots)





Current Process

Customer
Experiences
Backup

Plumber
relieves
blockage

CGS called as
witness to
determine
responsibility;

Private:
Plumber
invoices
customer

Public: City
pays;
(maximum of
2 hours)



Technology = Improved Information

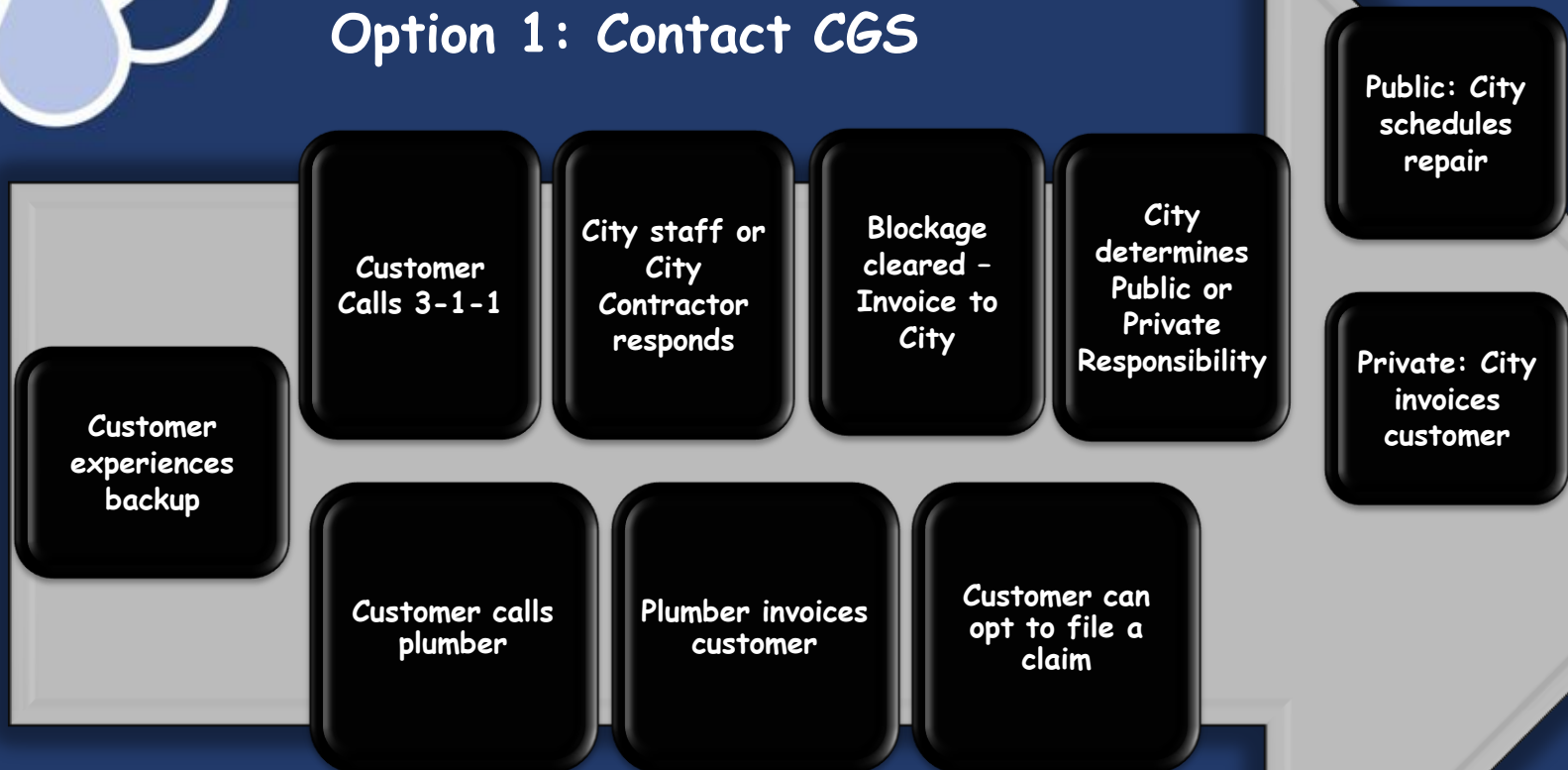
- CCTV
- Transmitter indicates precise location





Updated Service Options

Option 1: Contact CGS



Option 2: Contact Plumber



Timelines:

- Feb 2015 - Operations Committee;
- Feb 2015 - Plumbers stakeholder meeting;
- Mar 2015 - Release Tender documents;
- Public Communications;
- April 2015 - Award Tender & Go live

Questions?

Request for Decision

MTO Highway 69 and Highway 17 Route Planning Comments - Highway 17 from Estaire Rd interchange to Highway 17 and Highway 17 from Highway 69 to Bancroft Drive

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Wednesday, Oct 28, 2015
Type:	Managers' Reports

Recommendation

THAT the City of Greater Sudbury directs staff to forward comments to the Ministry of Transportation regarding the Transportation Environmental Study Report Highway 69 and Highway 17 Route Planning, Preliminary Design, and Environmental Assessment Study from Estaire Road to Bancroft Drive as outlined in the report dated October 28, 2015 from the General Manager of Infrastructure Services.

Background

The Ministry of Transportation (MTO) retained Stantec Consulting Ltd. (Stantec) to carry out a Route Planning, Preliminary Design, and Environmental Assessment Study for Highway 69 from the existing Estaire Road interchange to Highway 17, and for the Highway 17 Southeast By-Pass from Highway 69 to Bancroft Drive, a distance of approximately 16.5 km.

The purpose of the study was to determine and designate a route for a four-lane Controlled Access Highway. The study identified a Recommended Plan for a four-lane Controlled Access Highway 69 and Highway 17 that will improve safety and operations, and is consistent with the provincial mandate to provide a transportation system that supports the Province's economic, social and environmental objectives.

Highway 69 and the Highway 17 Sudbury Southeast By-Pass in the Greater Sudbury area form a strategic link in the provincial highway system and provide provincial highway access between Southern Ontario to the City of Greater Sudbury. Highway 69 also connects the Richard Lake, McFarlane Lake and Burmac communities to the City and supports both local and provincial traffic.

Signed By

Report Prepared By

David Shelsted
Director of Roads & Transportation Services
Digitally Signed Oct 28, 15

Division Review

David Shelsted
Director of Roads & Transportation Services
Digitally Signed Oct 28, 15

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure Services
Digitally Signed Oct 28, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

The development of corridor and route alternatives and the selection of a Preferred Plan for a Controlled Access Highway 69 from the Estaire Road interchange to Highway 17 (Appendix A), and for Highway 17 from Highway 69 to Bancroft Drive (Appendix B), and the Possible Highway 69 Implementation Plan (Appendix C) followed a systematic process, which included a consultation process.

The consultation process notified interested parties of the project and provided an opportunity for input to the study and decision-making processes. This was accomplished by presenting the findings of each stage of work to the public, and through ongoing discussions with various government agencies and ministries, non-government interest groups, businesses and property owners, including meetings with the Ministry of Natural Resources and Forestry, City of Greater Sudbury, Richard Lake Stewardship Committee, and the Friends of McFarlane Lake Stewardship Committee.

Public input was received at four Public Information Centres (PICs) and continuously during the study through correspondence and emails from the project website. As the project progressed, on-going contact was also maintained with groups and organizations with interests in the study area.

The Preferred Plan for Highway 69 from the Estaire Road interchange to Highway 17, and for the Highway 17 Southeast By-Pass from Highway 69 to Bancroft Drive includes upgrading both highways to Controlled Access Highways with access restricted to interchange locations only. The Plan includes a new interchange between Highway 69 and Highway 17, and a new interchange at South Lane Road.

The Transportation Environmental Study Report commits to future consultation and provides a summary of identified concerns, mitigating measures and other future commitments. Future consultation during Detail Design will include dealing with all outstanding issues, including permits/approvals from external agencies, detailed environmental investigations regarding impacts and mitigation and engineering investigations to confirm the final design, and future consultation with the public, municipalities, and ministries/ agencies, as well as a summary of environmental effects and proposed mitigation.

In regards to the City, the MTO has agreed to future consultation on the following:

- Confirm design details during Detail Design
- Ongoing consultation regarding interim improvements to existing Highway 69.
- VETAC/Re-greening Committee to identify potential re-greening opportunities and develop landscape and replanting plan during Detail Design.

Infrastructure Services and Planning staff have reviewed MTO's Preferred Plans and have the following additional comments:

- That the City of Greater Sudbury be consulted on the construction of new local/service roads and their potential transfer to the City. This consultation shall include the impact of future capital and operation costs. The MTO has not made a recommendation on future ownership.
- The east end of Pioneer Road is designated General Industrial and these existing businesses currently have direct access to Highway 69. The Preferred Plan removes this direct access and forces all traffic to the proposed interchange (or traffic signals on the Implementation Plan) at South Lane. This General Industrial traffic is routed through a residential area (designated Living Area 2) to access the provincial highway on roads that are currently seasonally load restricted. As a minimum, the surrounding roads from the industrial area to the relocated provincial highway access need to be reconstructed to a standard such that there are no seasonal load restrictions. This will minimize the impact to the existing local businesses and future economic growth.
- Ongoing consultation with the City of Greater Sudbury for interim improvements will include the potential for active transportation opportunities with the goal of minimizing the separation of the community by the highway. This will include discussions on the timing of the multi-use trail and the pedestrian/snowmobile bridges/culverts shown on the Implementation Plan.

It is recommended that these comments be forwarded to the MTO for inclusion into the Transportation Environmental Study Report.

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Tuesday, Oct 27, 2015
Type:	Managers' Reports

Request for Decision

Parking Restrictions - Edward Avenue, Coniston

Recommendation

THAT the City of Greater Sudbury prohibits parking on the west side of Edward Avenue from 20 metres south of Allan Street to 50 metres north of Morris Street;

AND THAT a by-law be prepared to amend Traffic and Parking By-Law 2010-1 in the City of Greater Sudbury to implement the recommended changes in accordance with the report from the General Manager of Infrastructure Services dated October 27, 2015.

Background

The City's Roads and Transportation Services Division received a request from Lopes Limited to restrict parking on Edward Avenue in Coniston (see Exhibit 'A') due to the difficulties they are having entering and exiting their site when vehicles are parked on both sides of the road.

Edward Avenue is a collector roadway located in Coniston. It is constructed to a semi-urban standard with curb and sidewalk on the west side of the road, a gravel shoulder on the east side and an asphalt surface width of approximately 9 metres. The required parking space for many of the homes in this area is located in the rear of the property and is accessed through the laneway.

The primary function of a public road is for the safe and efficient movement of traffic. On-street parking is usually permitted when this criteria is met. In this case, when vehicles are parking on both sides of Edward Avenue it becomes difficult for heavy vehicles to travel on the roadway.

Councillor McIntosh has solicited feedback from area residents. Based on this feedback, staff recommend that parking be restricted on the west side of Edward Avenue, from the CP Rail line to the Lopes Limited entrance, between the hours of 7:00 a.m and 6:00 p.m, Monday to Friday.

Signed By

Report Prepared By

Joe Rocca
Acting Co-ordinator of Transportation &
Traffic Engineering Services
Digitally Signed Oct 27, 15

Division Review

David Shelsted
Director of Roads & Transportation
Services
Digitally Signed Oct 27, 15

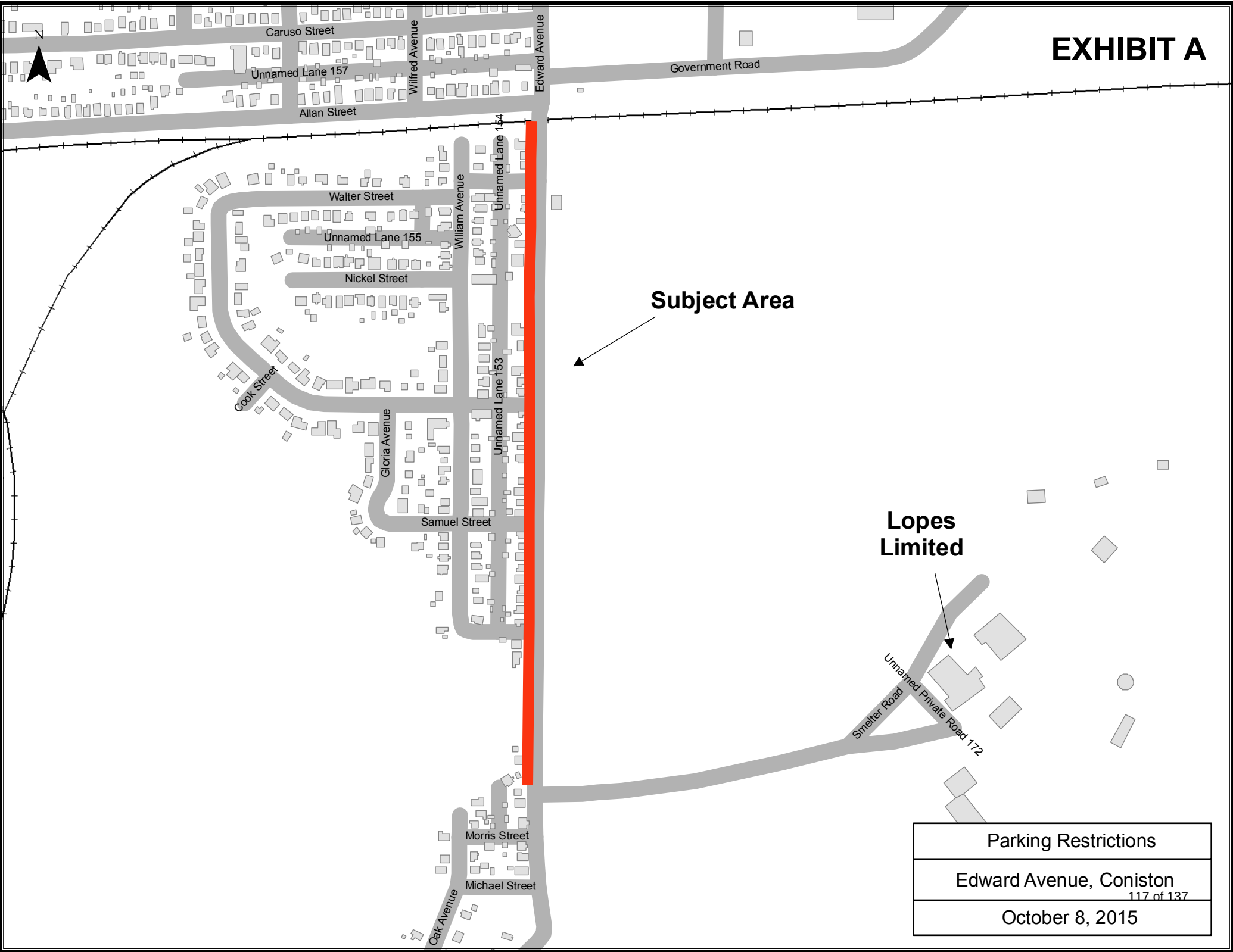
Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Oct 28, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

EXHIBIT A



Subject Area

Lopes Limited

Parking Restrictions
Edward Avenue, Coniston
October 8, 2015

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Wednesday, Oct 28, 2015
Type:	Managers' Reports

Request for Decision

Speed Limit Review of Various Roadways in Ward 3

Recommendation

THAT the City of Greater Sudbury increases the speed limit on Vermillion Lake Road from 260 metres north of Bradley Road to Nickel Basin Road from 60 km/h to 70 km/h;

AND THAT the City of Greater Sudbury maintains the existing speed limit on Vermillion Lake Road from Highway 144 to 260 metres north of Bradley Road and from Nickel Basin Road to the east end;

AND THAT the City of Greater Sudbury maintains the existing speed limit on Bradley Road, Joannette Road and Simmons Road;

AND THAT a by-law be prepared to amend Traffic and Parking By-Law 2010-1 in the City of Greater Sudbury to implement the recommended changes in accordance with the report from the General Manager of Infrastructure Services dated October 28, 2015.

Background

At the Operations Committee meeting held on May 4, 2015, the following recommendation was approved:

OP2015-14 Montpelier/Cormier: WHEREAS speed limit sign postings on Joannette, Bradley, Vermillion Lake and Simmons Roads in Chelmsford vary from 50 to 70 kilometres per hour;

AND WHEREAS residents in the area have expressed concerns about the inconsistency of speed limits and excessive speeding on Joannette, Bradley, Vermillion Lake and Simmons Roads;

AND WHEREAS a consistent lowered speed limit along these roadways may help to alleviate the speeding and safety concerns of the area residents;

THEREFORE BE IT RESOLVED that the City of Greater Sudbury directs staff to undertake a review and speed limit analysis along Joannette, Bradley, Vermillion Lake and Simmons Roads this spring, and report their findings to the Operations Committee as soon as possible.

In 2010, City Council adopted the Canadian Guidelines for Establishing Posted Limits published by the Transportation Association of Canada (TAC) for establishing posted speed limits on arterial and major collector roads. From the list of roads presented in the recommendation, Vermillion Lake Road is classified as a collector road and the remaining roads are classified as local roads.

The goal when setting speed limits is to post safe and reasonable speed limits that the majority of motorists will follow.

Signed By

Report Prepared By

Joe Rocca
Acting Co-ordinator of
Transportation & Traffic Engineering
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Digitally Signed Oct 28, 15

Division Review

David Shelsted
Director of Roads & Transportation
Services
Digitally Signed Oct 28, 15

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Oct 28, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

This is especially challenging in rural areas where residents have to travel long distances, development is limited, setbacks from the road are at greater distances, and traffic volumes are typically low.

Vermilion Lake Road

Vermilion Lake Road is collector road, located west of Chelmsford, which provides a connection for the agricultural and residential properties to Highway 144 (see Exhibit A). It is constructed to a rural standard with a width which varies from 6.5 to 7.0 metres and gravel shoulders.

Currently, the speed limit is 60 km/h from Highway 144 to Nickel Basin Road. From Nickel Basin Road, the speed limit is 70 km/h for 7 km. The speed limit on this section of the road was reduced from 80 km/h in 2010. At this point, there is increased residential development and the speed limit changes back to 60 km/h. The 60 km/h speed zone continues for another 850 metres west and is then further reduced to 50 km/h until the westerly end of the road.

Greater Sudbury Police conducted a speed enforcement campaign on Vermilion Lake Road during the spring. They visited the area on nine separate occasions and issued a total of 28 tickets for speeding.

Speed studies were completed on Vermilion Lake Road and the other area roads to determine the operating speeds on these roads. The results of the studies can be seen in Exhibit B. Two of the speed studies were completed in locations where studies had been completed in 2010. A comparison of the recorded speeds is below.

Location	Year of Study	Speed Limit (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)
Vermilion Lake Road South of Bradley Road (950 Vermilion Lake Road)	2010	60	74	87
	2015	60	74	85
	Difference:		0	-2
Vermilion Lake Road At Davey Road	2010	80	80	93
	2015	70	78	92
	Difference:		-2	-1

The comparison shows that despite the 10 km/h speed limit reduction in 2010, there has been almost no change in the eighty fifth percentile speed on Vermilion Lake Road. The eighty fifth percentile speed is the speed at or below which eighty five percent of drivers are travelling and is generally accepted as a good indicator of an appropriate speed limit. It is commonly referred to as the operating speed.

Staff also reviewed collision data for Vermilion Lake Road. From 2009 to 2014, there was one reported collision where it was indicated that speed was a contributing factor to the collision.

To determine the recommended speed limit from the Canadian Guidelines for Establishing Posted Speed Limits, staff divided Vermilion Lake Road into 4 segments based on the residential density and existing speed limits. The risk score and recommended posted speed limit for each segment can be found in the table below. The complete evaluations based on the Canadian guidelines can be found in Exhibits C, D, E and F.

Location	Existing Speed Limit (km/h)	Risk Score	Recommended Posted Speed Limit (km/h)
Highway 144 to 260 metres north of Bradley Road	60	42	60
260 metres north of Bradley Road to Nickel Basin Road	60	32	70
Nickel Basin Road to the 60 km/h zone west of Gordon Lake Road	70	29	70
60 km/h zone west of Gordon Lake Road to the 50 km/h zone	60	39	60

The Canadian guidelines indicate that based on the engineering characteristics of the road, three of the evaluated segments have appropriate speed limits while the segment from 260 metres north of Bradley Road to Nickel Basin road should have a posted speed limit of 70 km/h. When evaluating the speed limit on Vermilion Lake Road, staff divided the segment from Highway 144 to Nickel Basin Road into 2 segments. From Highway 144 to 260 metres north of Bradley Road there is a high density of residential development while the remainder is mainly agricultural land with very few driveways. This is reflected in the risk score for each segment. The segment with a greater number of driveways has an increased risk for motorists and as a result has a lower recommended speed limit. Based on the Canadian guidelines, staff recommend raising the speed limit of Vermilion Lake Road from 260 metres north of Bradley Road to Nickel Basin Road to 70 km/h. This will be a more appropriate speed limit for this segment of road which will help to emphasize to motorists the change in residential density and the need for a reduction in speed.

Bradley Road, Joannette Road, Simmons Road

Bradley Road, Joannette Road and Simmons Road are all local roads located west of Chelmsford which are constructed to a rural standard with gravel shoulders. Bradley Road and Joannette Road are surface treated roads with a roadway width of 6.1 metres. Simmons Road from New Cobden Road to Gordon Lake Road is surface treated with a roadway width of 6.9 metres and a gravel surface from Gordon Lake Road to Pilon Crescent. The speed limit of each road can be found on Exhibit A.

Speed studies were completed on all three roads to determine the operating speeds. The results of the studies can be seen in Exhibit B. On Bradley Road, Joannette Road and Simmons Road, between New Cobden Road and Gordon Lake Road, the recorded operating speeds exceed the speed limit between 11 km/h and 24 km/h. These operating speeds are typical for these types of rural roads. Significant police enforcement would be required to bring operating speeds more closely in line with the existing speed limits. On Simmons Road, between Gordon Lake Road and Pilon Crescent, the operating speeds are 5 km/h below the posted speed limit of 60 km/h. This is likely due to the gravel surface and the sharp horizontal curve which has a posted advisory speed of 40 km/h.

Staff also reviewed collision data for the three roads. From 2009 to 2014, there was one reported collision where it was indicated that speed was a contributing factor on Joannette Road and one on Simmons Road. There were no collisions where speed was a contributing factor on Bradley Road.

For most local roads, the City of Greater Sudbury uses the Statutory Speed limit of 50 km/h. However, on some local rural roads higher posted speed limits have been set. Typically these are set based mainly on the operating speed of traffic with considerations given to the design of the road, collisions, and the level of development adjacent to the road. This approach is supported by the Canadian guidelines which state:

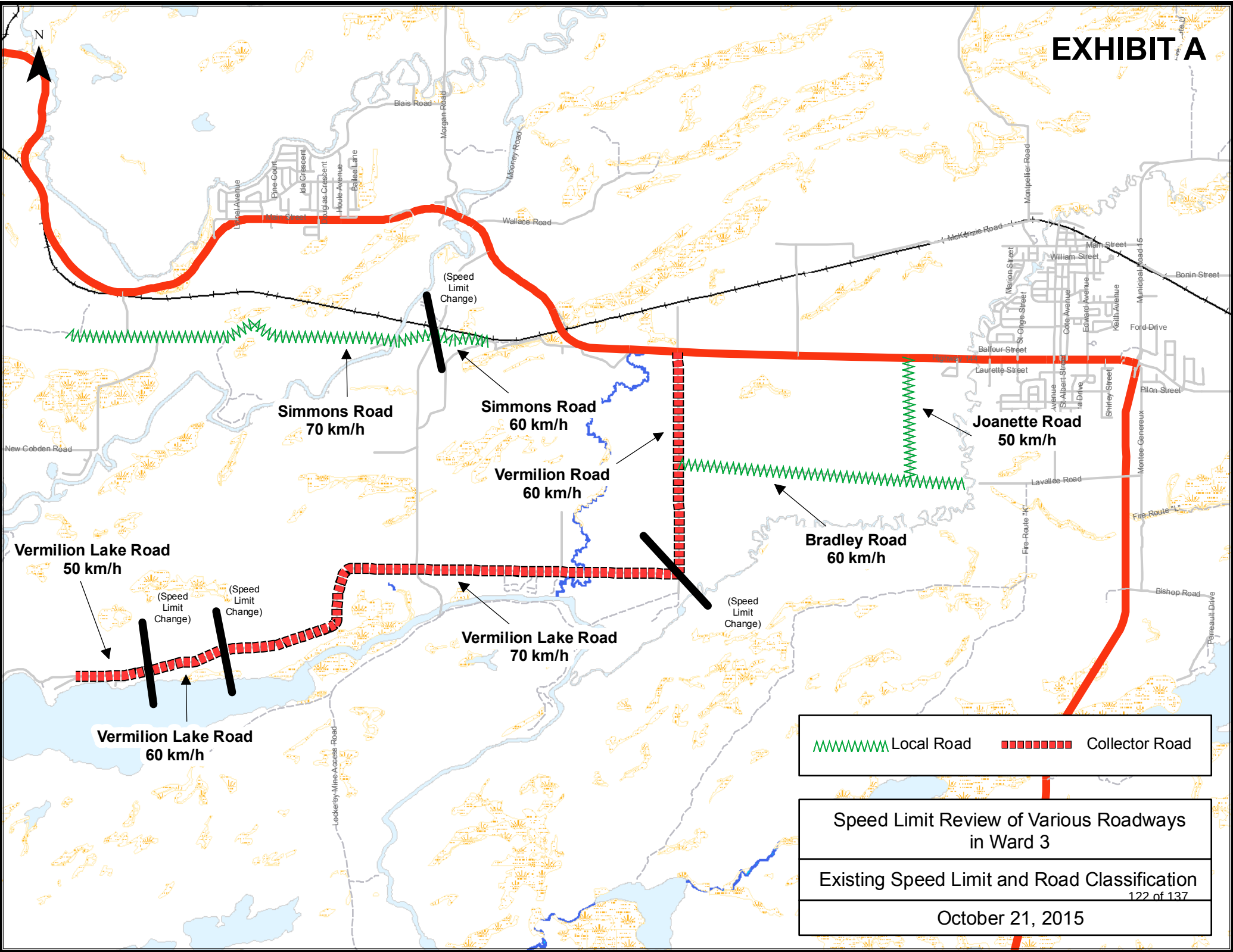
“Road safety may be enhanced through credible posted speed limits that match the expectation of drivers for a given roadway and its surrounding area.”

Development on Bradley Road is predominantly agricultural with a few residential properties. The existing dwellings are well setback from the road and the average annual daily traffic volume (AADT) is just over 200 vehicles. Based on the existing operating speeds, low volume of traffic and the level of development on Bradley Road, it is recommended that the speed limit remain 60 km/h.

Development on Joannette Road is similar to Bradley Road except there is a higher density of residential development on the east side of the road near Highway 144. This is reflected in the operating speeds on the road as they are 5 km/h lower than those recorded on Bradley Road. The AADT on Joannette is approximately 450 vehicles. Based on the existing operating speeds, low volume of traffic and the level of development on Joannette Road, it is recommended that the speed limit remain 60 km/h.

Simmons Road near New Cobden Road, has several open pits which are accessed from Simmons Road. There is a small amount of residential development near Gordon Lake Road. Similar to other local roads in this area, the AADT is only 300 vehicles. The gravel portion of Simmons Road between Gordon Lake Road and Pilon Crescent has four residential properties which access the road. The remainder of the road frontage is undeveloped. The AADT on this section of road is approximately 100 vehicles. Operating speeds on this road are below the posted speed limit. Based on the existing operating speeds, low volume of traffic and the level of development on Simmons Road, it is recommended that the speed limit remain 70 km/h between New Cobden Road and Gordon Lake Road and 60 km/h

between Gordon Lake Road and Pilon Crescent.

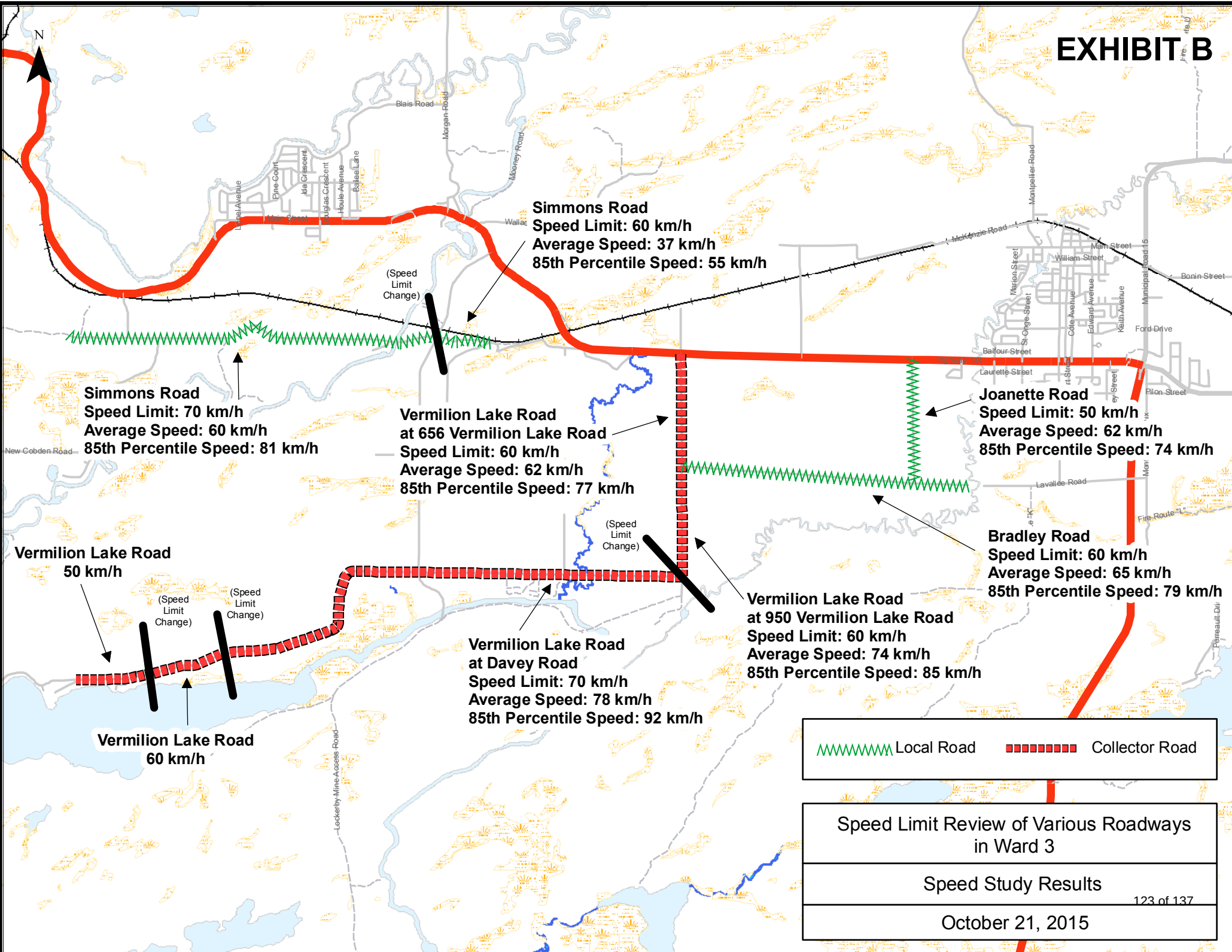


Speed Limit Review of Various Roadways
in Ward 3

Existing Speed Limit and Road Classification

122 of 137

October 21, 2015





Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

10-Apr-09

Name of Corridor:	Vermilion Lake Road		
Segment Evaluated:	Highway 144	to	260 m North of Bradley Road
Geographic Region:	Chelmsford		
Road Agency:	City of Greater Sudbury		
Road Classification:	Collector	Length of Corridor:	1,310 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	77 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	2
B	ROADSIDE HAZARDS	Higher	9
C1	PEDESTRIAN EXPOSURE	Medium	2
C2	CYCLIST EXPOSURE	Higher	3
D	PAVEMENT SURFACE	Medium	6
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	Number of Occurrences	0
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	Number of Occurrences	15
	Left turn movements permitted	50	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	Number of Occurrences	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	1

Total Risk Score:

42

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

No policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Vermilion Lake Road		
Segment Evaluated:	260 m North of Bradley Road	to	Nickel Basin Road
Geographic Region:	Chelmsford		
Road Agency:	City of Greater Sudbury		
Road Classification:	Collector	Length of Corridor:	1,800 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	85 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	2
B	ROADSIDE HAZARDS	Higher	9
C1	PEDESTRIAN EXPOSURE	Medium	2
C2	CYCLIST EXPOSURE	Higher	3
D	PAVEMENT SURFACE	Medium	6
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	Number of Occurrences	1
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	Number of Occurrences	4
	Left turn movements permitted	14	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	Number of Occurrences	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	1

Total Risk Score:

32

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

No policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

10-Apr-09

Name of Corridor:	Vermilion Lake Road		
Segment Evaluated:	Nickel Basin Road	to	60 km/h zone West of Gordon Lake Road
Geographic Region:	Chelmsford		
Road Agency:	City of Greater Sudbury		
Road Classification:	Collector	Length of Corridor:	7,030 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	70 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	92 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	2
B	ROADSIDE HAZARDS	Medium	6
C1	PEDESTRIAN EXPOSURE	Medium	2
C2	CYCLIST EXPOSURE	Higher	3
D	PAVEMENT SURFACE	Medium	6
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	Number of Occurrences	1
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	3	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	Number of Occurrences	4
	Left turn movements permitted	58	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	Number of Occurrences	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	1

Total Risk Score:

29

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

No policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Vermilion Lake Road		
Segment Evaluated:	60 km/h zone West of Gordon Lake Road	to	50 km/h zone
Geographic Region:	Chelmsford		
Road Agency:	City of Greater Sudbury		
Road Classification:	Collector	Length of Corridor:	850 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	No policy

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	2
B	ROADSIDE HAZARDS	Higher	9
C1	PEDESTRIAN EXPOSURE	Medium	2
C2	CYCLIST EXPOSURE	Higher	3
D	PAVEMENT SURFACE	Medium	6
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	Number of Occurrences	0
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	Number of Occurrences	12
	Left turn movements permitted	20	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	Number of Occurrences	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	1

Total Risk Score:

39

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

No policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

Request for Decision

School Zone Speed Limit - Various Schools

Presented To: Operations Committee

Presented: Monday, Nov 16, 2015

Report Date: Wednesday, Oct 28, 2015

Type: Managers' Reports

Recommendation

THAT the speed limits on Holland Road, from Woodbine Avenue to Sparks Street, Arvo Avenue, from Sparks Street to the North End and Lamothe Street, from Leon Avenue to Barry Downe Road, be returned to 50 km/h due to the closure of St Andrew School;

AND THAT the speed limit on Auger Avenue, from Hawthorne Drive to Huntington Drive be returned to 50 km/h due to the closure of St Bernadette School;

AND THAT the speed limit on Dublin Street, from Arthur Street to Attlee Avenue be returned to 50 km/h due to the closure of St Raphael School;

AND THAT a by-law be passed by City Council to amend Traffic and Parking By-Law 2010-1 in the City of Greater Sudbury to implement the recommended changes all in accordance with the report from the General Manager of Infrastructure Services dated October 28, 2015.

Signed By

Report Prepared By

Joe Rocca
Acting Co-ordinator of Transportation &
Traffic Engineering Services
Digitally Signed Oct 28, 15

Division Review

David Shelsted
Director of Roads & Transportation
Services
Digitally Signed Oct 28, 15

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Oct 28, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

Background

St. Andrew School, St. Bernadette School and St. Raphael School have closed and 40 km/h school zone speed limits are still in effect for those areas.

To deal with numerous requests to reduce the speed limit near schools, City Council adopted a school zone speed reduction policy in 2001 and further revised the policy in 2009. The approved policy states the following:

That staff be directed to bring to the attention of City Council request for speed reduction zones adjacent to schools based on the following considerations:

- That a school speed zone be installed at schools with primary grade aged students.
- That the school speed zone be limited to residential streets or residential collector streets.
- That the maximum speed of the roadways considered for school speed zones be 50 km/h.

- That if schools are closed, the speed limit will revert back to 50 km/h.
- That only those requests that meet the above four criteria be brought forward by staff to City Council for consideration.

1. St. Andrew School – Holland Road, Sudbury

St. Andrew School was a primary grade aged school situated on Holland Road in Ward 12 (see Exhibit A). The Sudbury Catholic School Board closed St. Andrew School this summer.

As per the City's policy, staff recommends that the speed limits on Holland Road, from Woodbine Avenue to Sparks Street, Arvo Avenue, from Sparks Street to the North End and Lamothe Street, from Leon Avenue to Barry Downe Road be returned to 50 km/h.

2. St. Bernadette School – Auger Avenue, Sudbury

St. Bernadette School was a primary grade aged school situated on Auger Avenue in Ward 8 (see Exhibit B). The Sudbury Catholic School Board closed St. Bernadette School this summer.

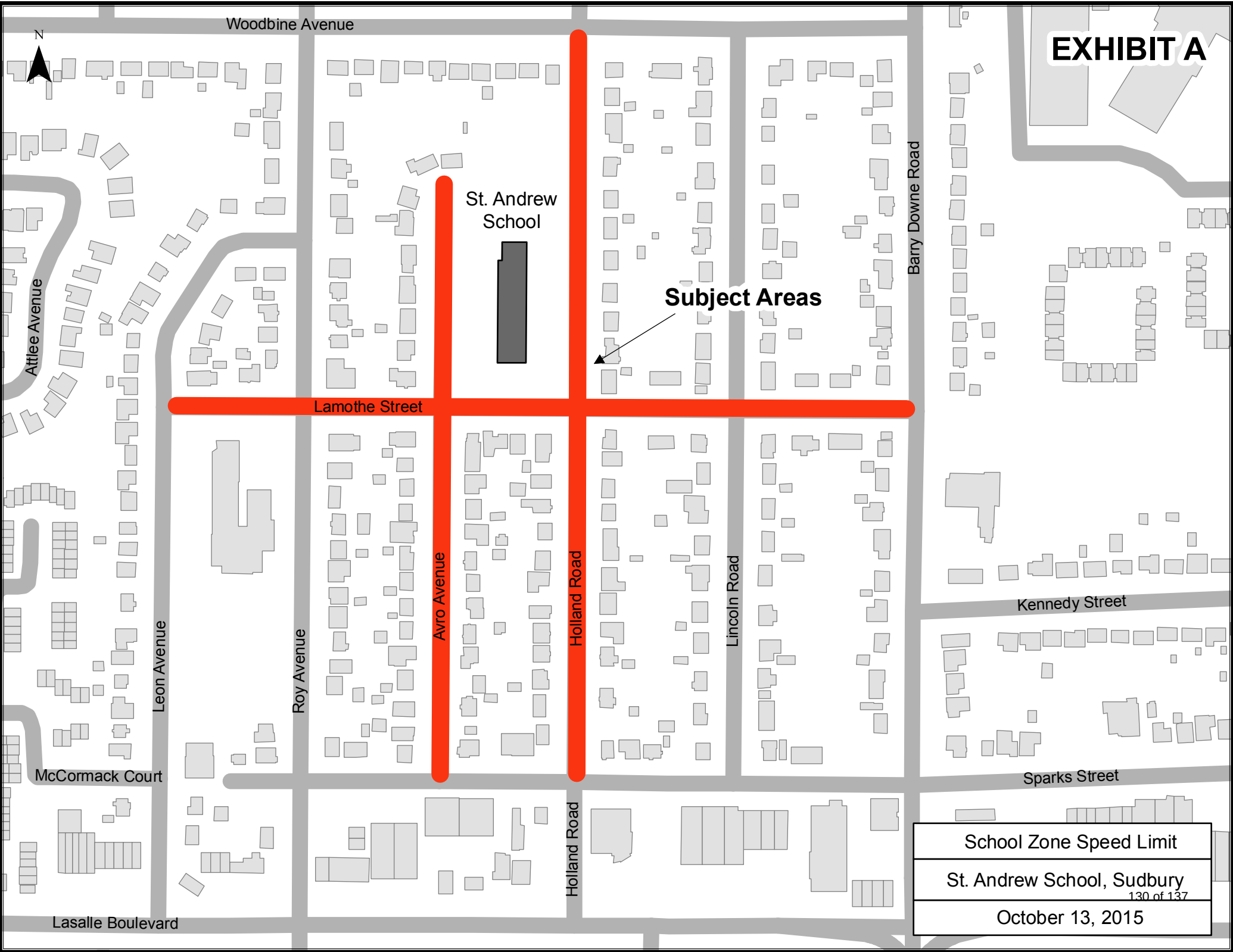
As per the City's policy, staff recommends that the speed limit on Auger Avenue, from Hawthorne Drive to Huntington Drive be returned to 50 km/h.

3. St. Raphael School – Dublin Street, Sudbury

St. Raphael School was a primary grade aged school situated on Dublin Street in Ward 11 (see Exhibit C). The Sudbury Catholic School Board closed St. Raphael School this summer.

As per the City's policy, staff recommends that the speed limit on Dublin Street, from Arthur Street to Attlee Drive be returned to 50 km/h.

EXHIBIT A



St. Andrew School

Subject Areas

Lamothe Street

Avro Avenue

Holland Road

Lincoln Road

Barry Downe Road

Kennedy Street

Sparks Street

School Zone Speed Limit

St. Andrew School, Sudbury
130 of 137

October 13, 2015

EXHIBIT B



Danforth Avenue

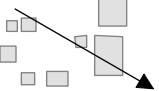
Churchill Avenue

Velray Court

Claudia Court

Hawthorne Drive

Subject Area



St. Bernadette School

Welsh Street

Auger Avenue

Courtland Drive

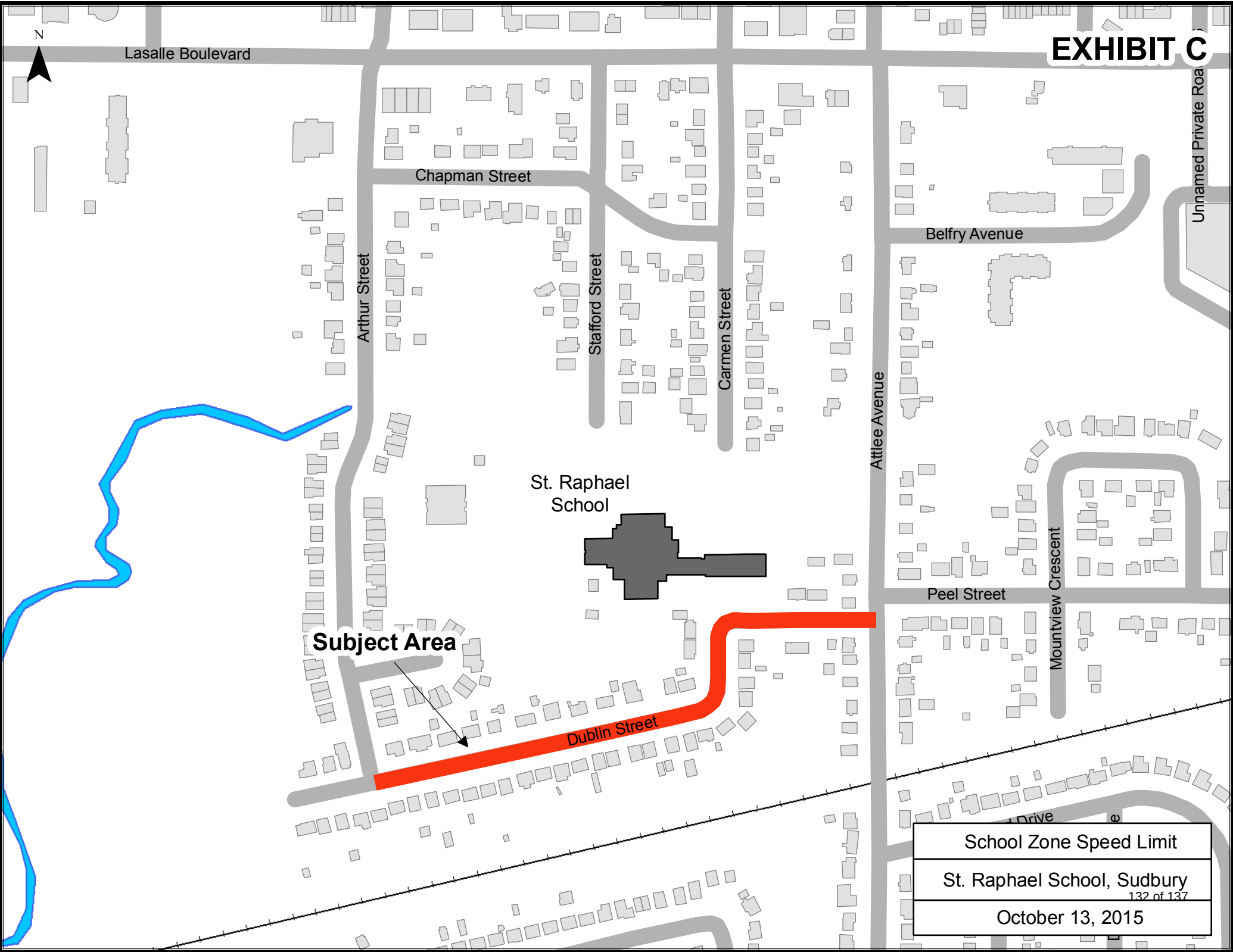
Morningside Crescent

Huntington Drive

Summerhill Crescent

Coral Court

School Zone Speed Limit
St. Bernadette School, Sudbury 131 of 137
October 13, 2015



School Zone Speed Limit
St. Raphael School, Sudbury 132 of 137
October 13, 2015

Presented To:	Operations Committee
Presented:	Monday, Nov 16, 2015
Report Date	Thursday, Oct 22, 2015
Type:	Managers' Reports

Request for Decision

New Traffic Signals - Intersection of Elm Street and the Day Group Entrance

Recommendation

THAT a by-law be prepared to amend Traffic and Parking By-Law 2010-1 in the City of Greater Sudbury to implement the new traffic signals at the intersection of Elm Street (Municipal Road 35) and the Day Group entrance, all in accordance with the report from the General Manager of Infrastructure Services dated October 22, 2015

Background

An application for rezoning was submitted by Greener North Inc. to amend the permitted uses of the lands at 2500 Elm Street. As per City Council resolution CC2015-213, "prior to the enactment of the amending By-law, the owner shall have obtained an occupancy permit from the City of Greater Sudbury for the installation of the traffic signals and illumination at the entrance to Municipal Road 35 to the satisfaction of the General Manager of Infrastructure Services."

The entrance to 2500 Elm Street (Municipal Road 35) is commonly referred to as the Day Group entrance and is located approximately 3.7 km east of Gagnon Street (see Exhibit "A"). In this area, Elm Street has a posted maximum speed limit of 80 km/h and carries an Annual Average Daily Traffic volume of 18,000. The City has received concerns in the past about the safety of the existing entrance. A high volume of large trucks utilize the entrance to this site. With the number of slow turning trucks and the high operating speed of vehicles on Elm Street there is a greater potential for more severe collisions at this location. In addition, traffic volumes from the existing site are approaching the warrant for traffic signals. Based on the high volume of slow turning vehicles at this intersection, the operating speed of traffic on Elm Street and the existing traffic volumes from the site, staff supports the installation of traffic signals at this location.

Once the final design of the traffic signals and illumination is approved by the City, a road occupancy permit will be issued to the developer. The contract for this project will be tendered by the developer. It is expected that the project will be completed later this fall.

Signed By

Report Prepared By

Joe Rocca
Acting Co-ordinator of Transportation &
Traffic Engineering Services
Digitally Signed Oct 22, 15

Division Review

David Shelsted
Director of Roads & Transportation
Services
Digitally Signed Oct 22, 15

Recommended by the Department

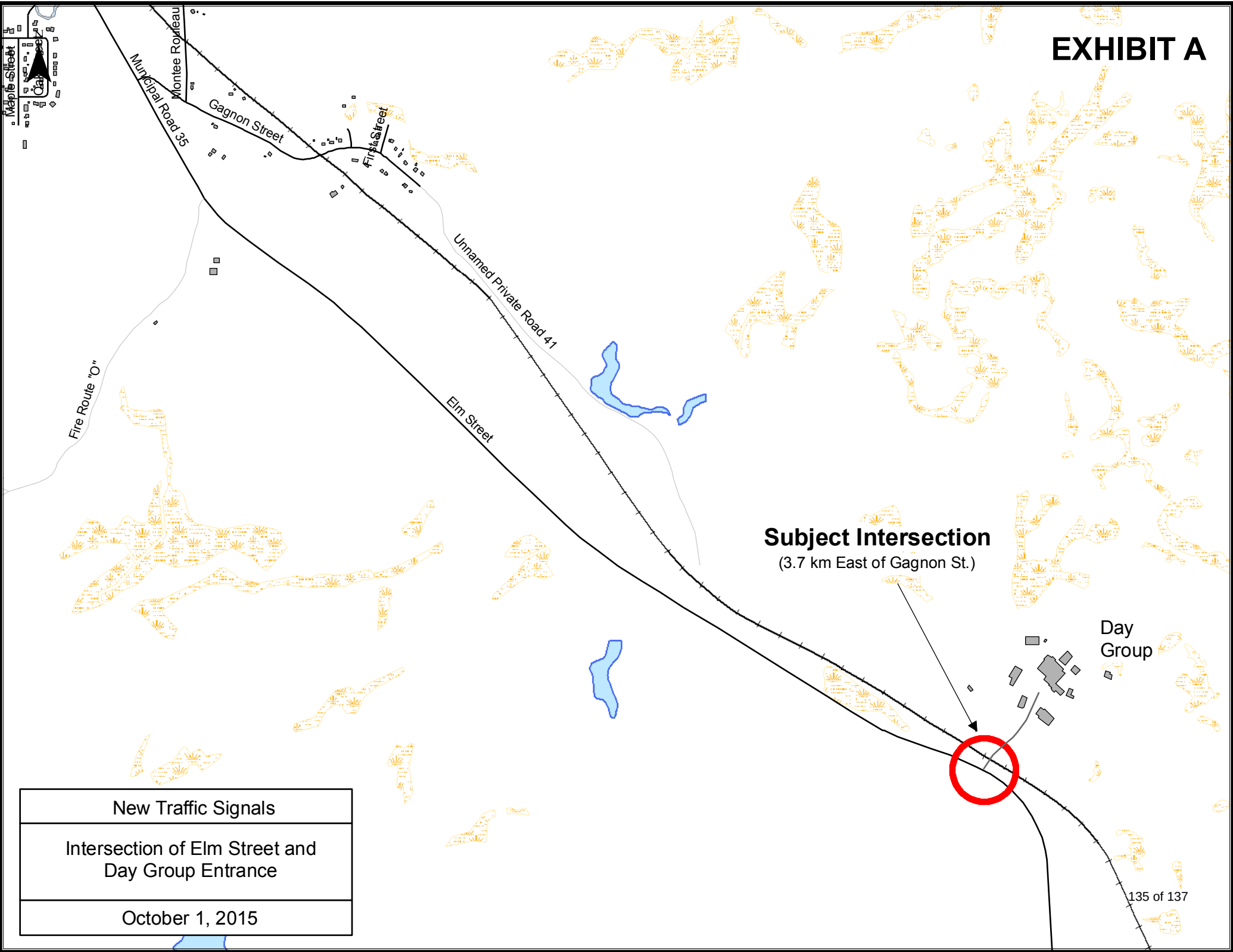
Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Oct 28, 15

Recommended by the C.A.O.

Kevin Fowke
Acting Chief Administrative Officer
Digitally Signed Nov 8, 15

An amendment to the City's Traffic and Parking By-Law 2010-1 is required to implement the new traffic signals.

EXHIBIT A



New Traffic Signals
Intersection of Elm Street and Day Group Entrance
October 1, 2015



City of Greater Sudbury Charter

WHEREAS Municipalities are governed by the Ontario Municipal Act, 2001;

AND WHEREAS the City of Greater Sudbury has established Vision, Mission and Values that give direction to staff and City Councillors;

AND WHEREAS City Council and its associated boards are guided by a Code of Ethics, as outlined in Appendix B of the City of Greater Sudbury's Procedure Bylaw, most recently updated in 2011;

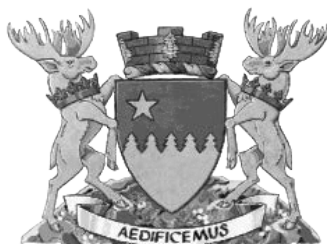
AND WHEREAS the City of Greater Sudbury official motto is "Come, Let Us Build Together," and was chosen to celebrate our city's diversity and inspire collective effort and inclusion;

THEREFORE BE IT RESOLVED THAT Council for the City of Greater Sudbury approves, adopts and signs the following City of Greater Sudbury Charter to complement these guiding principles:

As Members of Council, we hereby acknowledge the privilege to be elected to the City of Greater Sudbury Council for the 2014-2018 term of office. During this time, we pledge to always represent the citizens and to work together always in the interest of the City of Greater Sudbury.

Accordingly, we commit to:

- Perform our roles, as defined in the Ontario Municipal Act (2001), the City's bylaws and City policies;
- Act with transparency, openness, accountability and dedication to our citizens, consistent with the City's Vision, Mission and Values and the City official motto;
- Follow the Code of Ethical Conduct for Members of Council, and all City policies that apply to Members of Council;
- Act today in the interest of tomorrow, by being responsible stewards of the City, including its finances, assets, services, public places, and the natural environment;
- Manage the resources in our trust efficiently, prudently, responsibly and to the best of our ability;
- Build a climate of trust, openness and transparency that sets a standard for all the City's goals and objectives;
- Always act with respect for all Council and for all persons who come before us;
- Ensure citizen engagement is encouraged and promoted;
- Advocate for economic development, encouraging innovation, productivity and job creation;
- Inspire cultural growth by promoting sports, film, the arts, music, theatre and architectural excellence;
- Respect our historical and natural heritage by protecting and preserving important buildings, landmarks, landscapes, lakes and water bodies;
- Promote unity through diversity as a characteristic of Greater Sudbury citizenship;
- Become civic and regional leaders by encouraging the sharing of ideas, knowledge and experience;
- Work towards achieving the best possible quality of life and standard of living for all Greater Sudbury residents;



Charte de la Ville du Grand Sudbury

ATTENDU QUE les municipalités sont régies par la Loi de 2001 sur les municipalités (Ontario);

ATTENDU QUE la Ville du Grand Sudbury a élaboré une vision, une mission et des valeurs qui guident le personnel et les conseillers municipaux;

ATTENDU QUE le Conseil municipal et ses conseils sont guidés par un code d'éthique, comme l'indique l'annexe B du Règlement de procédure de la Ville du Grand Sudbury dont la dernière version date de 2011;

ATTENDU QUE la devise officielle de la Ville du Grand Sudbury, « Ensemble, bâtissons notre avenir », a été choisie afin de célébrer la diversité de notre municipalité ainsi que d'inspirer un effort collectif et l'inclusion;

QU'IL SOIT RÉSOLU QUE le Conseil de la Ville du Grand Sudbury approuve et adopte la charte suivante de la Ville du Grand Sudbury, qui sert de complément à ces principes directeurs, et qu'il y appose sa signature:

À titre de membres du Conseil, nous reconnaissons par la présente le privilège d'être élus au Conseil du Grand Sudbury pour le mandat de 2014-2018. Durant cette période, nous promettons de toujours représenter les citoyens et de travailler ensemble, sans cesse dans l'intérêt de la Ville du Grand Sudbury.

Par conséquent, nous nous engageons à :

- assumer nos rôles tels qu'ils sont définis dans la Loi de 2001 sur les municipalités, les règlements et les politiques de la Ville;
- faire preuve de transparence, d'ouverture, de responsabilité et de dévouement envers les citoyens, conformément à la vision, à la mission et aux valeurs ainsi qu'à la devise officielle de la municipalité;
- suivre le Code d'éthique des membres du Conseil et toutes les politiques de la municipalité qui s'appliquent à eux;
- agir aujourd'hui pour demain en étant des intendants responsables de la municipalité, y compris de ses finances, biens, services, endroits publics et du milieu naturel;
- gérer les ressources qui nous sont confiées de façon efficiente, prudente, responsable et de notre mieux;
- créer un climat de confiance, d'ouverture et de transparence qui établit une norme pour tous les objectifs de la municipalité;
- agir sans cesse en respectant tous les membres du Conseil et les gens se présentant devant eux;
- veiller à ce qu'on encourage et favorise l'engagement des citoyens;
- plaider pour le développement économique, à encourager l'innovation, la productivité et la création d'emplois;
- être une source d'inspiration pour la croissance culturelle en faisant la promotion de l'excellence dans les domaines du sport, du cinéma, des arts, de la musique, du théâtre et de l'architecture;
- respecter notre patrimoine historique et naturel en protégeant et en préservant les édifices, les lieux d'intérêt, les paysages, les lacs et les plans d'eau d'importance;
- favoriser l'unité par la diversité en tant que caractéristique de la citoyenneté au Grand Sudbury;
- devenir des chefs de file municipaux et régionaux en favorisant les échanges d'idées, de connaissances et concernant l'expérience;
- viser l'atteinte de la meilleure qualité et du meilleur niveau de vie possible pour tous les résidents du Grand Sudbury.