OPERATIONS COMMITTEE AGENDA

Operations Committee Meeting
Monday, October 21, 2013
Tom Davies Square

COUNCILLOR JACQUES BARBEAU, CHAIR

Claude Berthiaume, Vice-Chair

4:00 p.m. OPERATIONS COMMITTEE MEETING
COMMITTEE ROOM C-11

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DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

REGULAR AGENDA

REFERRED & DEFERRED MATTERS

R-1. Report dated August 1, 2013 from the General Manager of Infrastructure Services regarding All-Way Stop Control - One Year Review (1) Bouchard Street at Marcel Street, Sudbury (2) Lansing Avenue at Melbourne Street, Sudbury (3) Hawthorne Drive at Westmount Avenue, Sudbury (4) Madeleine Avenue at Main Street, Sudbury (5) Madeleine Avenue at Alexander Street, Sudbury. **4 - 38**

(RECOMMENDATION PREPARED)

(This matter was deferred at the September 16, 2013 meeting of the Operations Committee. - This report provides the findings of the one-year review and the recommendation for traffic control at each of the intersections.)

MANAGERS' REPORTS

R-2. Report dated October 11, 2013 from the General Manager of Infrastructure Services regarding Parking Restrictions - Westmount Avenue, Sudbury. **39 - 41**

(RECOMMENDATION PREPARED)

(The City's Traffic and Transportation Engineering Services Section received a request from a resident of Westmount Avenue asking that the limits of the time of day parking restrictions across from Westmount Public School be extended. This report recommends that a by-law be passed to amend the Traffic and Parking By-Law 2010-1 to legalize and extend the limits of the existing parking restrictions.)

R-3. Report dated October 11, 2013 from the General Manager of Infrastructure Services regarding School Bus Loading Zone - Baker Street - Lansdowne Public School. **42 - 45**

(RECOMMENDATION PREPARED)

(This report recommends a "School Bus Loading Zone" be relocated from Lansdowne Street to Baker Street adjacent to Lansdowne Public School and that a by-law be passed to amend Traffic and Parking By-Law 2010-1 in the City of Greater Sudbury to implement the recommended changes.)

R-4. Report dated October 10, 2013 from the General Manager of Infrastructure Services regarding Gatchell Outfall Emergency Work and EA Status. **46 - 47**

(FOR INFORMATION ONLY)

(This report outlines the cost of emergency work done in order to review risks and alternative solutions for bank stabilization along a section of Junction Creek that could impact the trunk sewermain.)

MOTIONS

R-5. **Request for all way stop at intersection of Montée Rouleau and Carrière Street**

As presented by Councillor Dutrisac:

WHEREAS there appears to have been a significant increase in traffic volume and speed violators along Montée Rouleau in recent years;

AND WHEREAS the intersection at Montée Rouleau and Carrière Street is a hidden intersection, which creates a hazard to drivers trying to enter Montée Rouleau from Carrière Street;

AND WHEREAS residents in the area claim to have witnessed several accidents at this intersection;

AND WHEREAS residents in the area are requesting that an all way stop be installed at this intersection;

THEREFORE BE IT RESOLVED that City of Greater Sudbury staff be directed to undertake an all way stop review for the intersection of Montée Rouleau and Carrière Street, and that they report their findings to the Operations Committee at its November 18th, 2013 meeting.

ADDENDUM

CIVIC PETITIONS

QUESTION PERIOD AND ANNOUNCEMENTS

NOTICES OF MOTION

ADJOURNMENT

BRIGITTE SOBUSH, DEPUTY CITY CLERK

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2013
Report Date	Tuesday, Oct 08, 2013
Type:	Referred & Deferred Matters

Request for Decision

Report dated August 1, 2013 from the General Manager of Infrastructure Services regarding All-Way Stop Control - One Year Review (1) Bouchard Street at Marcel Street, Sudbury (2) Lansing Avenue at Melbourne Street, Sudbury (3) Hawthorne Drive at Westmount Avenue, Sudbury (4) Madeleine Avenue at Main Street, Sudbury (5) Madeleine Avenue at Alexander Street, Sudbury.

Signed By

No signatures or approvals were recorded for this report.

Recommendation

THAT the City of Greater Sudbury approve the removal of all-way stops at the following locations:

1. Bouchard Street at Marcel Street,
2. Lansing Avenue at Melbourne Street,
3. Hawthorne Drive at Westmount Avenue,
4. Madeleine Avenue at Main Street,
5. Madeleine Avenue at Alexander Street;

AND THAT the procedure to remove the all-way stop signs as outlined in the report dated August 1, 2013 from the General Manager of Infrastructure Services regarding All-Way Stop Control – One Year Review be followed with a communications plan.

Background

This matter was deferred at the September 16, 2013 meeting of the Operations Committee.

Original Report attached.

Presented To:	Operations Committee
Presented:	Monday, Aug 12, 2013
Report Date	Thursday, Aug 01, 2013
Type:	Managers' Reports

Request for Decision

All-Way Stop Control - One Year Review (1) Bouchard Street at Marcel Street, Sudbury (2) Lansing Avenue at Melbourne Street, Sudbury (3) Hawthorne Drive at Westmount Avenue, Sudbury (4) Madeleine Avenue at Main Street, Sudbury (5) Madeleine Avenue at Alexander Street, Sudbury

Recommendation

THAT all-way stops be removed at the following locations:

1. Bouchard Street at Marcel Street
2. Lansing Avenue at Melbourne Street
3. Hawthorne Drive at Westmount Avenue
4. Madeleine Avenue at Main Street
5. Madeleine Avenue at Alexander Street, and;

THAT the procedure to remove the all-way stop signs as outlined in the report be followed with a communications plan.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Aug 1, 13

Division Review
David Shelsted
Director of Roads & Transportation Services
Digitally Signed Aug 1, 13

Recommended by the Department
Tony Cecutti
General Manager of Infrastructure Services
Digitally Signed Aug 1, 13

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Aug 2, 13

Background

At the Operations Committee meeting held on January 9, 2012, the Committee approved the installation of all-way stops at the following intersections:

1. Bouchard Street at Marcel Street
2. Lansing Avenue at Melbourne Street
3. Hawthorne Drive at Westmount Avenue
4. Madeleine Avenue at Main Street
5. Madeleine Avenue at Alexander Street

The Committee also requested “that the controls be reviewed after a period of one year after installation”.

Exhibit 'I' contains the staff report dated December 23, 2011 that presents the all-way stop analysis for each of the above intersections. None of the intersections reviewed satisfied the minimum vehicle volumes, pedestrian volumes and collision experience required to warrant the installation of an all-way stop under the City's All-Way Stop Control Policy.

The signs and pavement markings required to implement all-way stops at the subject intersections were installed in May and June last year. As directed by City Council, staff has conducted a number of follow-up studies to determine the impact the installation of unwarranted all-way stops has had on traffic operations in the area. Information related to delay, compliance, fuel consumption, environmental impacts, speed, traffic volume, safety and public feedback are presented below.

Delay and Queue Length Studies

One way to measure the impact of installing an all-way stop is to undertake delay and queue length studies on the approaches where the new stop signs were installed. A concern with the installation of all-way stops at intersections where the traffic volume split heavily favors the main street, is the delay that may be introduced to residents who legitimately use the roadway.

A review of the all-way stop warrants shows that less than 10 percent of vehicles entering the intersections of Bouchard Street at Marcel Street and Lansing Avenue at Melbourne Street are coming from the side street. Both Bouchard Street and Lansing Avenue serve as major collector roadways for their areas and are used by residents to access their residential neigbourhoods.

City staff conducted site visits at the intersections of Bouchard Street at Marcel Street and Lansing Avenue at Melbourne Street to record the time it took to clear the intersection from the end of the queue. At the intersection of Bouchard Street and Marcel Street, a total of 23 vehicle runs were completed between 4:00 P.M. and 5:30 P.M., while at the intersection of Lansing Avenue and Melbourne Street, a total of 13 runs were completed between 4:30 P.M. and 5:45 P.M. A summary of the results can be found in the following table:

Intersection	Approach	Average Delay (seconds)	Maximum Observed Delay (seconds)
Bouchard Street at Marcel Street	Eastbound	96	225
	Westbound	23	44
Lansing Avenue at Melbourne Street	Northbound	20	27
	Southbound	13	17

The results from the runs were as expected. On Bouchard Street, where traffic volumes during the afternoon peak hours exceed 1,000 vehicles per hour, significant delays were introduced, particularly in the eastbound direction. On Lansing Avenue, where volume exceeds 500 vehicles per hour, the delay introduced was much less. The increased delay to drivers can also be represented as an annual dollar value by using the following formula:

Total Annual Cost = OCC*W*D*SV*AVD/3600 * Average Canadian Wage

OCC = average person occupancy rate = 1.2
W = weeks in a year = 52
D = number of weekdays in a week = 5
SV = study volume = varies per intersection and approach
AVD = average delay= varies per intersection and approach
Average Canadian Wage (June 2013 - from Statistics Canada) = $24.01

The total annual costs for the study times observed are summarized in the following table:

Intersection	Approach	Average Delay (seconds)	Study Volume	Total Annual Cost
Bouchard Street at Marcel Street	Eastbound	96	814	$162,607.24
	Westbound	23	776	$37,139.81
Lansing Avenue at Melbourne Street	Northbound	20	299	$12,443.58
	Southbound	13	533	$14,418.33

The above dollar figures represent only the annual cost associated with the delay introduced during the period of times studied (4 PM to 5:30 PM on Bouchard Street and 4:30 P.M. to 5:45 P.M. on Lansing Avenue). All delay experienced outside of the study times would add additional dollars to those figures.

While staff was on site at each intersection, the length of the queue of vehicles they observed was also recorded. The observed results are summarized in the table below:

Intersection	Approach	Average Queue Length (metres)	Maximum Observed Queue Length (metres)
Bouchard Street at Marcel Street	Eastbound	174	345
	Westbound	23	66
Lansing Avenue at Melbourne Street	Northbound	31	42
	Southbound	15	21

From the table it is apparent that a significant number of vehicles were queued at the intersection of Bouchard Street and Marcel Street. Within a typical queue, each car takes approximately seven metres of space. For eastbound vehicles on Bouchard Street, the average queue length represents almost 25 vehicles while the maximum observed queue was approximately 50 vehicles long. Additionally, the observed eastbound queue lengths on Bouchard Street were often extended beyond the Bouchard Street at Southview Drive intersection, which in turn created additional delays while left turning vehicles waited for vehicles in the queue to allow them to turn in front of them.

Stop Sign Compliance

One of the ways to measure the effectiveness of a stop sign is to measure the number of drivers that actually come to a complete stop as required by the Highway Traffic Act. Staff conducted compliance studies at all of the five newly created all-way stop intersections as well as two control intersections where all-way stops are warranted. The results are presented below.

Intersection	Stop	Rolling Stop	No Stop	Total Hourly Volume
Bouchard Street at Marcel Street	23%	74%	3%	930
Lansing Avenue at Melbourne Street	31%	66%	3%	509
Westmount Avenue at Hawthorne Drive	35%	64%	1%	411
Madeleine Avenue at Main Street	28%	65%	7%	90
Madeleine Avenue at Alexander Street	20%	50%	30%	53
Average	27.4%	63.8%	8.8%	

Intersection	Stop	Rolling Stop	No Stop	Total Hourly Volume
Regent Street at Douglas Street	71%	28%	1%	1,004
Mackenzie Street at Baker Street	50%	48%	2%	391
Average	60.5%	38%	1.5%	

The compliance studies were completed by setting up a video camera system at the intersection that records all movements of traffic over the four to seven peak hours of the day, depending if the intersection is on a major or minor collector roadway. The videos were then reviewed by staff who recorded whether each vehicle came to a full stop, a rolling stop or did not attempt to stop.

As shown in the chart below, only about 27 percent of drivers came to a full stop at the unwarranted all-way stop intersections compared to 60 percent at the warranted intersections. Approximately 73 percent of drivers at the unwarranted intersections either made a rolling stop or made no attempt to stop at all. At the intersection of Madeleine Avenue and Alexander Street, a full 30 percent of drivers did not attempt to stop. This intersection has the lowest total traffic volume with only 53 vehicles per hour. With such low conflicting traffic, some drivers see no reason to stop.

The high incidence of non-compliance at the unwarranted stop locations is not unexpected. Drivers and pedestrians become less vigilant when there is onus on the other drivers to stop. This behavior can decrease safety at the intersections, especially for young children who expect adults to obey the law. This bad behavior can also spread to other locations where an all-way stop is warranted.

Fuel Consumption

It is estimated that the additional gasoline that is consumed by the installation of an all-way stop on a typical

collector roadway is 125 litres per day or 45,600 litres per year. Expanding this figure for the five intersections, results in a total of 228,000 litres of gas. At a cost of $1.30 per litre, the subject intersections consume an extra **$296,000** worth of fuel each year.

Environmental Impacts

As reported by the Ministry of Municipal Affairs and Housing, at a typical all-way stop location, the following vehicle emissions are released each year:

- 657 kg of hydro carbons
- 8,760 kg of carbon monoxide
- 675 kg of nitrogen oxide
- 65,700 kg of carbon dioxide

Expanding these figures for the five all-way stop locations under review results in the following harmful gas emissions:

- 3,300 kg of hydro carbons
- 43,800 kg of carbon monoxide
- 3,300 kg of nitrogen oxide
- 328,500 kg of carbon dioxide

Besides increasing harmful greenhouse gas emissions, all-way stops also increase the level of noise pollution near the intersections due to the constant braking and acceleration that occurs.

Speed

Often times, all-way stops are requested by residents to try and slow traffic down. Unfortunately, all-way stops are not effective as speed control devices except within close proximity to the sign. To determine if the all-way stops were effective in reducing speed, staff conducted 24 hour speed studies on Southview Drive, Lansing Avenue and Hawthorne Drive. Southview Drive and Hawthorne Drive had speed studies that were taken before the all-way stops were installed that can be used for comparison purposes. The results are indicated below.

Speed Study Results

		Before		After		Difference	
Location	Direction	Average Speed (km/h)	85th Percentile Speed (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)	Average Speed (km/h)	85th Percentile Speed (km/h)
Southview Drive – 125 Metres West of Bouchard Street	Eastbound	52.1	56.3	47.8	53.1	-4.3	-3.2
	Westbound	53.9	59.5	51.9	56.3	-2.0	-3.2
Lansing Avenue – North of Lamothe Street	Northbound	n/a	n/a	48.7	56.3	n/a	n/a
	Southbound	n/a	n/a	43.4	56.3	n/a	n/a
Lansing Avenue – South of Kelvin Street	Northbound	n/a	n/a	47.3	54.7	n/a	n/a
	Southbound	n/a	n/a	50.9	57.9	n/a	n/a
Hawthorne Drive – East of Sharon Avenue	Eastbound	52.9	59.5	51.0	57.9	-1.9	-1.6
	Westbound	53.2	61.2	58.6	67.6	5.4	6.4

The results of the speed studies show that speeding is still a problem in close proximity to the stop signs. While speeds are lower on Southview Drive, west of Bouchard Street, the difference may be attributed to vehicles slowing as they approach the back of the long queue of vehicles. The studies show that speeding is still a problem on Lansing Avenue, north of Lamothe Street despite there being all-way stops at the adjacent intersections to the north and south.

The largest change in speed occurred on Hawthorne Drive, where the 85th percentile speed for westbound traffic has increased by more than 6 km/h. This may be due to drivers increasing their speed to make up for lost time which is commonly reported at all-way stops.

Traffic Volumes

A common misconception about all-way stops is they will help lower traffic volumes on adjacent roadways by discouraging cut-through traffic. As part of the follow-up review, staff completed new turning movement counts at all five subject intersections. A review of traffic volumes at the intersections before and after the all-way stops were installed revealed that overall traffic volumes did not change significantly. A review of the all-way stop warrants indicates that none of the five intersections currently warrants the installation of an all-way stop.

A closer review of the turning movement count at Bouchard Street and Marcel Street indicates that traffic patterns are changing during the peak hours of the day. The number of left turning vehicles from Marcel Street has increased by 23 percent from the south leg of the intersection and 17 percent from the north leg of the intersection. As previously discussed, a significant delay has been introduced at this intersection since the installation of the all-way stop and queue lengths in the eastbound direction often block the intersection of Bouchard Street and Southview Drive. It is suspected that the increase in traffic on Marcel Street is a result of these vehicles attempting to avoid the long queues and delays on Bouchard Street. The counts show that traffic volumes on Bouchard Street have increased by 6% from the count taken in 2011. It should also be noted that the number of pedestrians that crossed Bouchard Street at Marcel Street has not changed from 2011 to 2013.

Safety

It is difficult to assess the impact that the all-way stops had on safety during the year they have been installed. When reviewing safety at an intersection, it is recommended that a minimum of three years of collision history be reviewed. This wider range of view helps identify if there is a correctable pattern to the collisions or if a rash of collisions may be due to seasonal factors (ie. icy roads).

Typically, the installation of an all-way stop will help reduce the number of angle type collisions at an intersection if they are prevalent. However, the installation of an all-way stop may also increase the frequency of rear end collisions.

The collision history from 2008 to 2012 (pre all-way stop installed) and from 2012 (post all-way stop installed) to June 30, 2013 has been summarized in the table below:

Intersection	Average Number of Collisions per Year		Difference
	Before	After	
Bouchard Street at Marcel Street	0.75	1	+0.25
Lansing Avenue at Melbourne Street	0.5	1	+0.5
Hawthorne Drive at Westmount Avenue	2.25	1	-1.25
Madeleine Avenue at Main Street	0	0	0
Madeleine Avenue at Alexander Street	0	0	0

While Hawthorne Drive at Westmount Avenue has the highest average number of collisions before the all-way stop was installed, a large number of the collisions occurred in 2010. In 2010, three angle type collisions and two rear end collisions were reported. All three angle type collisions involved a northbound vehicle on Westmount Avenue failing to stop and striking a vehicle within the intersection. In 2011, a crosswalk and stop bar were painted on the south leg of Westmount Avenue and a stop bar was painted on the north leg of Westmount Avenue. No additional angle type collisions have occurred since these measures were implemented.

The table shows that none of the intersections were collision prone before the installation of the all-way stops and the collision data does not show a significant change in the past year. In total, three collisions were reported for all five intersections since the all-way stops were installed and all three collisions were rear end type collisions. Additionally, no collisions involving pedestrians have been reported since 2008 at any of the five intersections.

Public Feedback

One of the ways to measure the impact of a change to traffic control is by tracking positive and negative comments that come into the City via email or through 3-1-1. Overall, the City did not receive a significant volume of public feedback. The intersection of Bouchard Street and Marcel Street received the most attention with a total of six complaints and no positive feedback. However, the Ward Councillor has indicated that he has received positive comments from area residents.

The all-way stop at Lansing Avenue and Melbourne Street received one negative comment and the all-way stop at Hawthorne Drive and Westmount Avenue received a single positive comment.

Recommendation

All-way stops are often requested by residents in response to concerns on their street such as vehicle speeding, traffic volume, and safety for pedestrians, children, and cyclists. Road authorities take guidance from the Ontario Traffic Manual when determining when and where to install stop signs. “The purpose of the Ontario Traffic Manual (OTM) is to provide information and guidance for transportation practitioners and to promote uniformity of treatment in the design, application and operation of traffic control devices and systems across Ontario. The objective is safe driving behaviour, achieved by a predictable roadway environment through the consistent, appropriate application of traffic control devices. Further purposes of the OTM are to provide a set of guidelines consistent with the intent of the Highway Traffic Act and to provide a basis for road authorities to generate or update their own guidelines and standards.”

The City has adopted a revised warrant for the installation of all-way stop signs, which reduces the thresholds required to meet the requirements for all-way stop approval. The reduced warrant does not change the purpose of a stop sign. “The purpose of the stop sign is to clearly assign right-of-way between vehicles approaching an intersection from different directions when traffic signals are not warranted or not yet installed and it has been determined that a yield sign is inadequate.”

In general, “all-way stops should only be considered at the intersection of two relatively equal roadways having similar traffic volume demand and operating characteristics”.

As indicated above, the new traffic counts indicate that all-way stops are still not warranted at any of the above intersections. The follow up studies also indicate that there have not been significant changes in any of the concerns that are typically raised by residents, such as speed, volume, and safety. They also result in a significant additional cost to the public in the form of additional delay and fuel consumption. Therefore, Staff recommends that all of the all-way stops be removed.

While Staff are recommending removal of the all-way stop signs, it is recognized that these all-way stop signs were requested for a reason, to address neighbourhood traffic concerns. In May 2010, Council approved the City’s Traffic Calming Policy. Traffic calming represents a component of traffic management techniques to reduce the impacts of traffic on neighbourhood communities. Communities throughout North America have experienced significant growth in traffic due to automobile dependence and urban sprawl. These trends in automobile travel have placed considerable strains on the road network and the ability to safely (e.g., perceived or real collision potential) accommodate all road users within the public right-of-way. In many cases, the lack of arterial road capacity has resulted in motorists choosing to use collector and residential roadways to circumvent a congested turning movement, intersection or corridor.

One response to these problems is the self-enforcing option of traffic calming devices. These devices are physical modifications to the road to address the specific issue of concern. Staff recommends that these areas be considered for the Traffic Calming program, if they have not already been considered.

<u>All-Way Stop Removal Procedure</u>

The following process should be followed as prescribed by the Ontario Traffic Manual to remove any of the all-way stops:

1) Install large warning signs stating “Crossing Traffic Does Not Stop” on the approaches where the stop control is to remain. The sign is to be installed at least 15 days before the removal of control.

Install a “New” sign above this sign as well as a sign below indicating “After” stating the month and day when the control on the crossing roadway will be removed.

2) On the appointed date, remove the “Stop Ahead” signs and “Stop” signs on the crossing roadway. Crosswalk lines and stop bars must also be removed on these approaches. The “After” sign with the starting date must also be removed at this time.

3) After an additional period of at least 15 days, the “New” sign and “Crossing Traffic Does Not Stop” warning sign can also be removed.

A communication plan should also be developed to advertise the change in traffic control. Police, Fire and EMS are also to be advised of the change.

Greater Grand Sudbury
www.greatersudbury.ca

Presented To:	Operations Committee
Presented:	Monday, Jan 09, 2012
Report Date	Friday, Dec 23, 2011
Type:	Managers' Reports

Request for Decision

All-Way Stop Control - Various Intersections

Recommendation

That the current traffic control at the intersections of Bouchard Street at Marcel Street, Lansing Avenue at Melbourne Street, Hawthorne Drive at Westmount Avenue, Madeleine Avenue at Main Street and Madeleine Avenue at Alexander Street be maintained.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Dec 23, 11

Division Review
David Shelsted, MBA, P.Eng.
Acting Director of Roads & Transportation
Digitally Signed Dec 23, 11

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Dec 23, 11

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Dec 23, 11

Background

1. Bouchard Street at Marcel Street, Sudbury

At the March 21, 2011 Traffic Committee meeting, Staff presented a report regarding all-way stop control at the intersection of Bouchard Street and Marcel Street **(see Exhibit A2)**. At the time, Staff reported higher than normal traffic volumes may have been a result of the ongoing construction on Regent Street. A decision to install all-way stop at this intersection was deferred until construction on Regent Street was completed and traffic volumes could be recounted. Subsequently, traffic volumes were recounted on October 4 th, 2011.

Bouchard Street at Marcel Street is a cross intersection located west of Regent Street **(see Exhibit B2)**. Currently this intersection is controlled with "Stop" signs facing northbound and southbound traffic on Marcel Street. This portion of Bouchard Street was also part of the Traffic Calming Pilot Project and had a median island installed on the east leg of this intersection.

Applying the data from the October 4th, 2011 turning movement count to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from the side street meets approximately 43 percent of the volume requirements. The traffic volume split is 91percent on Bouchard Street and 9 percent on Marcel Street. This is outside the ratio of 70/30 warrant for an all-way stop **(see Exhibit C2)**.

Comparing the 2011 turning movement counts to the previous counts from 2010 and 2007, indicates that while volumes on Marcel Street at this intersection have increased from the 2007 volumes, they have

significantly decreased from the 2010 levels. The volumes are summarized below:

	2007	2010	2011
Southbound Trafffic on Marcel Street	222	282	261
Northbound Traffic on Marcel Street	363	738	399

A review of the City's collision information from July 2008 to July 2011 revealed that there were two collisions that may be susceptible to relief through an all-way stop during this three year period. While all collisions are undesirable, the collision experience would not be considered high, and does not show a pattern that could be corrected with an all-way stop. For a major collector roadway, the Collision Warrant requires a minimum of four collisions per year over a three year period.

Councillor Cimino has also expressed concerns about the safety of pedestrians crossing Bouchard Street at this intersection to access Marcel Park. The existing median island on the east leg of this intersection was recommended by IBI Group during the Traffic Calming Pilot Project to "provide a pedestrian refuge that supports a two-stage crossing when traffic volumes make crossing difficult." During the count, we recorded 21 pedestrians crossing Bouchard Street (18 crossing the east leg and 3 crossing the west leg).

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Bouchard Street and Marcel Street is not warranted.

2. Lansing Avenue at Melbourne Street, Sudbury

Councillour Belli requested that a peak hour traffic count be conducted to determine if an all-way stop is warranted at the intersection of Lansing Avenue at Melbourne Street. The Traffic Committee approved the request for a study at its meeting on June 17, 2011.

Lansing Avenue at Melbourne Street is a cross intersection located two blocks north of Lasalle Boulevard in Ward 8 **(see Exhibit D2)**. The east and west approaches of Melbourne Street intersect Lansing Avenue on a skew angle of approximately 60 degrees. Currently this intersection is controlled with "Stop" signs facing eastbound and westbound traffic on Melbourne Street.

Applying the data from the turning movement count that was conducted on September 28th, 2011 to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from Melbourne Street meets only 20 percent of the requirements. The traffic volume split is 92 percent on Lansing Avenue and 8 percent on Melbourne Street. This is also outside the ratio of 70/30 needed to warrant an all-way stop **(see Exhibit E2)**. During the count, we recorded 10 pedestrians crossing Lansing Avenue at Melbourne Street.

A review of collision information showed this intersection has had two reported collisions in the last 3 years that may be susceptible to relief through an all-way stop. The all-way stop warrant for a major collector road (Lansing Avenue) requires there be a minimum of 4 collisions per year over a 3 year period. While the collision history does not warrant an all-way stop, review indicated that both collisions involved vehicles from the east leg of Melbourne Street not yielding to southbound traffic on Lansing Avenue. There is a private large bush in the northeast corner of the intersection which may be restricting visibility at the intersection. Staff have asked the By-law Department to review and have it trimmed if possible. A crosswalk and stop bar will be painted on the east leg of Melbourne Avenue. These measures will help improve safety at the intersection by highlighting the requirement to stop.

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Lansing Avenue and Melbourne Street is not warranted.

3. Hawthorne Drive at Westmount Avenue, Sudbury

Councillour Belli requested that a peak hour traffic count be conducted to determine if an all-way stop is warranted at the intersection of Hawthorne Drive and Westmount Avenue.

Hawthorne Drive at Westmount Avenue is a cross intersection located between Barry Downe Road and Auger Avenue in Ward 8 **(see Exhibit F2)**. Currently this intersection is controlled with "Stop" signs facing northbound and southbound traffic on Westmount Avenue.

Applying the data from the turning movement count that was conducted on June 16th, 2011 to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from Westmount Avenue meets only 25 percent of the requirements. The traffic volume split is 88 percent on Hawthorne Drive and 12 percent on Westmount Avenue. This is also outside the ratio of 70/30 needed to warrant an all-way stop **(see Exhibit G2)**. During the count, we recorded 17 pedestrians crossing Hawthorne Drive at Westmount Avenue.

A review of our collision information showed this intersection has had three collisions in the last three years that may be susceptible to relief through an all-way stop. The all-way stop warrant for a major collector road (Hawthorne Avenue) requires there be a minimum of 4 collisions per year over a 3 year period. While the collision history does not warrant an all-way stop, our review indicated that the collisions involved vehicles from Westmount Avenue not yielding to traffic on Hawthorne Drive. A crosswalk and stop bar has been painted on the south leg of Westmount Avenue and a stop bar was also painted on the north leg of Westmount Avenue. These measures will help improve safety at the intersection by highlighting the requirement to stop.

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Hawthorne Drive at Westmount Avenue is not recommended.

4. Madeleine Avenue at Main Street and Madeleine Avenue at Alexander Street, Sudbury

Councillour Landry-Altmann forwarded a petition dated February 16, 2011 from area residents requesting that All-Way Stops be installed at the intersections of Madeleine Avenue at Main Street and Madeleine Avenue at Alexander Street **(see Exhibit H2)** to slow traffic down.

These intersections are both T intersections located south of Lasalle Boulevard in Ward 12 **(see Exhibit I2)**. Currently, both intersections are controlled with a stop sign facing eastbound traffic on Main Street and Alexander Street. Also, Ecole Felix-Ricard has a pedestrian access to its school yard on the east side of the Madeleine Avenue at Main Street entrance. Due to the proximity of the school, turning movement counts were conducted during the school year.

Applying the data from the turning movement count conducted at the Madeleine Avenue at Main Street intersection on June 27, 2011, to the City's new Minimum Vehicle Volume warrant indicates that the vehicle and pedestrian volume from the side street meets only 15 percent of the volume requirements. The traffic volume split is 76 percent on Madeleine Avenue and 24% on Main Street. This is outside the ratio of 70/30 needed to warrant an all-way stop **(see Exhibit J2)**. During this count, we recorded 11 pedestrians crossing Madeleine Avenue at Main Street.

Applying the data from the turning movement count conducted at the Madeleine Avenue at Alexander Street intersection on June 28, 2011, to the City's new Minimum Vehicle Volume warrant indicates that the vehicle and pedestrian volume from the side street meets only 12 percent of the volume requirements. The traffic volume split is 68 percent on Madeleine Avenue and 32 percent on Main Street. This is within the ratio of 70/30 needed to warrant an all-way stop **(see Exhibit K2).** During this count, we recorded 4 pedestrians crossing Madeleine Avenue.

A review of collision information showed that both intersections had no reported collisions in the last three years. The all-way stop warrant for a minor collector road requires there be a minimum of 3 collisions per year over a 3 year period.

Based on the traffic volumes, pedestrian volume and collision history, installing an all-way stop at the intersection of Madeleine Avenue at Main Street or Madeleine Avenue at Alexander Street is not warranted.

EXHIBIT: A2

Greater Grand Sudbury
www.greatersudbury.ca

Presented To:	Traffic Committee
Presented:	Monday, Mar 21, 2011
Report Date	Thursday, Mar 10, 2011
Type:	Managers' Reports

Request for Decision

All Way Stop Control - 1) Bouchard Street at Marcel Street, Sudbury and 2) Balsam Street at Garrow Road and Power Street, Copper Cliff

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Mar 10, 11

Division Review
Robert Falcioni, P.Eng.
Director of Roads and Transportation Services
Digitally Signed Mar 10, 11

Recommended by the Department
Greg Clausen, P.Eng.
General Manager of Infrastructure Services
Digitally Signed Mar 10, 11

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Mar 10, 11

Recommendation

That the intersection of Balsam Street at Garrow Road at Power Street be controlled by an all-way-stop, 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 change all in accordance with the report from the General Manager of Infrastructure Services dated March 10, 2011.

Background

1) Bouchard Street at Marcel Street

On August 4th, 2010, Councillor Cimino requested that a turning movement count be conducted to determine if an all-way stop would be warranted at the intersection of Bouchard Street and Marcel Street.

Bouchard Street at Marcel Street is a cross intersection located west of Regent Street (**see Exhibit "A"**). There is also a playground located in the southeast corner of the intersection. Currently this intersection is controlled with "stop" signs facing northbound and southbound traffic on Marcel Street. This portion of Bouchard Street was also part of the Traffic Calming Pilot Project, and had a median island installed on the east leg of this intersection.

Applying the data from the turning movement count that was conducted on August 25th, 2010 to the City's new Minimum Volume Warrant indicates that the vehicle and pedestrian volume from the side street meets approximately 75 percent of the volume requirements. The traffic volume split is 80 percent on Bouchard Street and 20 percent on Marcel Street. This is outside the ratio of 70/30 needed to warrant an "all-way" stop (**see Exhibit "B"**).

Comparing the 2010 turning movement count to a previous count conduct in 2007, indicates that volumes at this intersection may be artificially high due to the ongoing construction on Regent Street. Southbound traffic

from Marcel Street has increased by 27 percent (222 in 2007 vs. 282 in 2010) while northbound traffic from Marcel Street has more than doubled (363 in 2007 vs. 738 in 2010).

A review of the City's collision information from 2008 to 2010 revealed that there were no collisions that may be susceptible to relief through an all-way stop during this three (3) year period. For a Major Collector roadway, the Collision Warrant requires a minimum of four (4) collisions per year over a three (3) year period.

Councillor Cimino also expressed concerns about the safety of pedestrians while crossing Bouchard Street at this intersection. The existing median island on the east leg of this intersection was recommended by the IBI Group as part of the Traffic Calming Pilot Project in order to "provide a pedestrian refuge that supports a two-stage crossing for times when traffic volumes make crossing difficult". During the seven (7) hour count, we recorded a total of five (5) pedestrians crossing Bouchard Street at this intersection (four (4) crossing the east leg and one (1) crossing the west leg).

Based on the traffic volumes, pedestrian volume and collision history, staff does not recommend installing an all-way stop at the intersection of Bouchard Street and Marcel Street. Staff will arrange to recount this intersection once construction is completed on Regent Street to ensure that traffic volumes on Marcel Street do not remain high.

2) Balsam Street at Garrow Road at Power Street

Councillor Barbeau requested that a turning movement count be conducted to determine if an all-way stop is warranted at the intersection of Balsam Street at Garrow Road/Power Street.

Balsam Street at Garrow Road/Power Street is a cross intersection located in Copper Cliff (**see Exhibit "C"**). The Copper Cliff Library is located on the northwest corner of the intersection and the McClelland Arena and R.G. Dow Pool are located northeast of the intersection. Currently this intersection is controlled with "stop" signs facing northeast bound traffic on Power Street and southwest bound traffic on Garrow Road.

Applying the data from the turning movement count that was conducted on May 25th, 2010 to the City's new Minimum Volume Warrant indicates that the traffic volume at this intersection meets the minimum vehicle volume requirements (**see Exhibit "D"**). A review of the City's collision information from 2008 to 2010 revealed that there were three (3) collisions that may be susceptible to relief through an all-way stop during this three (3) year period. For a Minor Collector roadway, the Collision Warrant requires a minimum of three (3) collisions per year over a three (3) year period.

Since the traffic volume meets the minimum vehicle volume warrant, staff recommends installing an all-way stop at the intersection of Balsam Street at Garrow Road/Power Street. Also, staff recommends that physical changes be made to the intersection to better define the approaches and to improve safety for pedestrians. These changes will be funded from the 2011 Capital Roads budget.

EXHIBIT: A

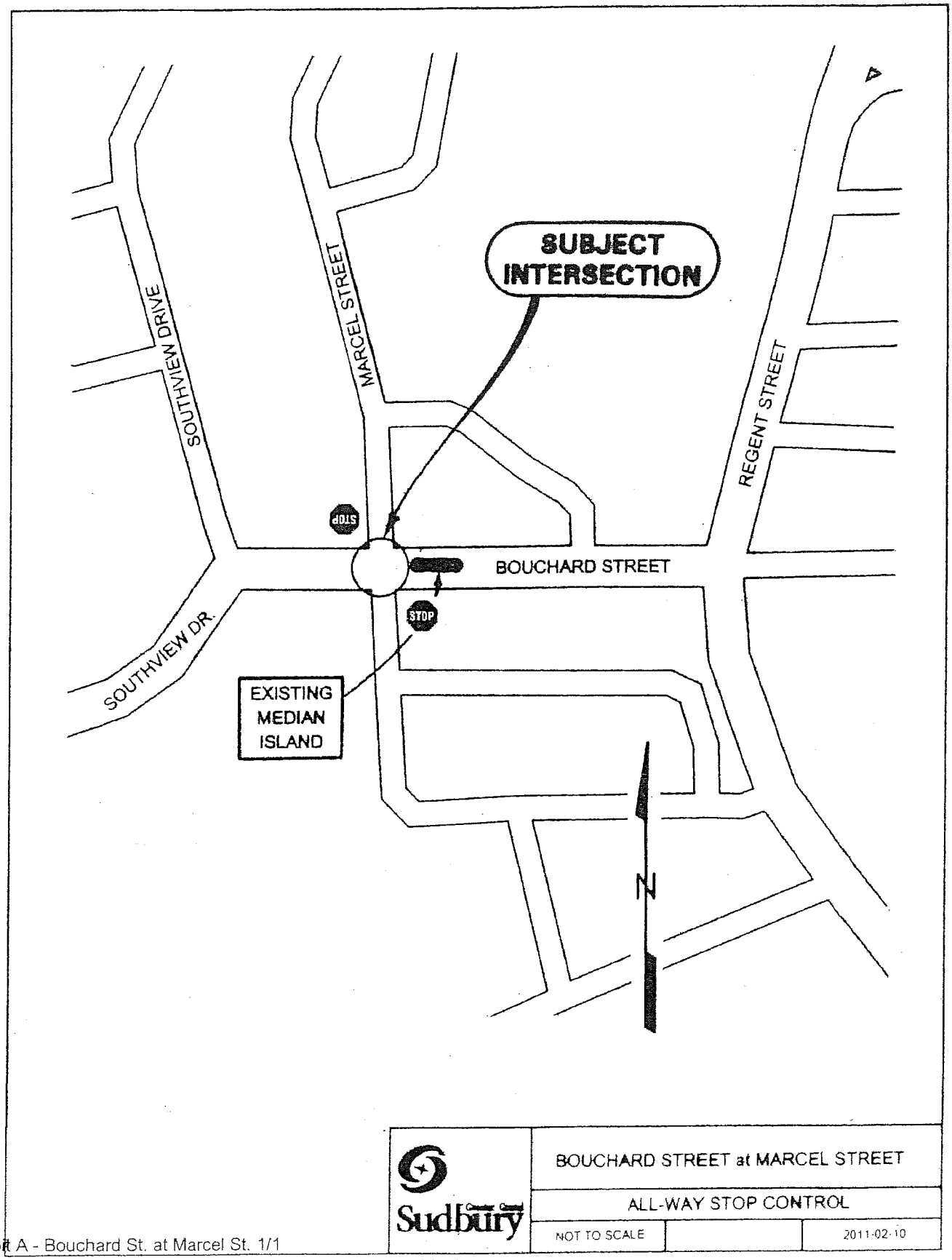

SUBJECT INTERSECTION
MARCEL STREET
SOUTHVIEW DRIVE
REGENT STREET
BOUCHARD STREET
STOP
STOP
SOUTHVIEW DR.
EXISTING MEDIAN ISLAND
N
Sudbury
BOUCHARD STREET at MARCEL STREET
ALL-WAY STOP CONTROL
NOT TO SCALE
2011-02-10

EXHIBIT: B

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Bouchard Street at Marcel Street	Date:	March 3, 2011
Date of TM Count:	August 25, 2010	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Arterial/Major Collector		
AADT of Main Road:	10500		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	63.3	%
Warrant #2	Collision History	0.0	%
Warrant #3	Traffic Control Signals	No	Y/N

All-Way Stop Warranted? **No** Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	**Arterial/Major Collector**	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	**> 5000**	1000 - 5000	< 1000		
Count Period	**7 hours**	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	**500/hr**	350/hr	250/hr	**780**	**100.0%**
Veh + Pedestrian volume from side street is ≥	**200/hr**	140/hr	N/A	**146**	**73.2%**
Traffic Split	**70/30**	70/30	70/30	**81 / 19**	**63.3%**

Warrant #2 - Collision History

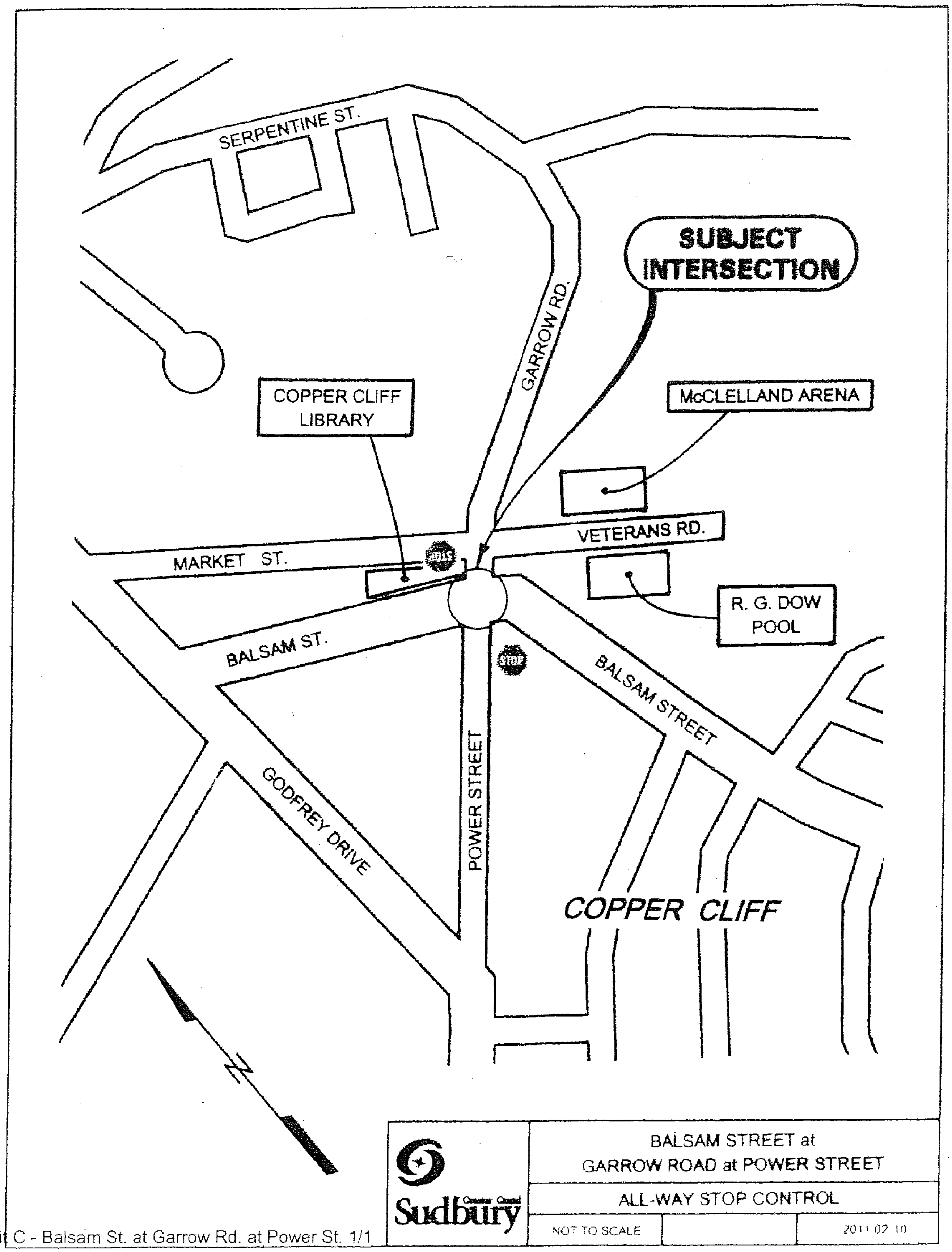
Roadway Type	**Arterial/Major Collector**	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	**4***	3*	2*	**0**	**0.0%**

Warrant #3	**Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.**	**No**	Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

EXHIBIT: C



SERPENTINE ST.
SUBJECT INTERSECTION
GARROW RD.
COPPER CLIFF LIBRARY
McCLELLAND ARENA
MARKET ST.
VETERANS RD.
R. G. DOW POOL
BALSAM ST.
STOP
BALSAM STREET
POWER STREET
GODFREY DRIVE
COPPER CLIFF
N
Sudbury
BALSAM STREET at
GARROW ROAD at POWER STREET
ALL-WAY STOP CONTROL
NOT TO SCALE
2011 02 10

EXHIBIT: D

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Balsam Street at Power Street	Date:	March 3, 2011
Date of TM Count:	May 25, 2010	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Minor Collector		
AADT of Main Road:	3998		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	100.0	%
Warrant #2	Collision History	33.3	%
Warrant #3	Traffic Control Signals	No	Y/N

All-Way Stop Warranted? **Yes** Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	Arterial/Major Collector	**Minor Collector**	Local	Vehicles per hour	Percent Compliance
AADT	> 5000	**1000 - 5000**	< 1000		
Count Period	7 hours	**4 peak hours**	4 peak hours		
Total vehicle volume from all approaches is ≥	500/hr	**350/hr**	250/hr	**461**	**100.0%**
Veh + Pedestrian volume from side street is ≥	200/hr	**140/hr**	N/A	**185**	**100.0%**
Traffic Split	70/30	**70/30**	70/30	**62 / 38**	**100.0%**

Warrant #2 - Collision History

Roadway Type	Arterial/Major Collector	**Minor Collector**	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	**3***	2*	**1**	**33.3%**

Warrant #3 **Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.** **No** Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

EXHIBIT: B2

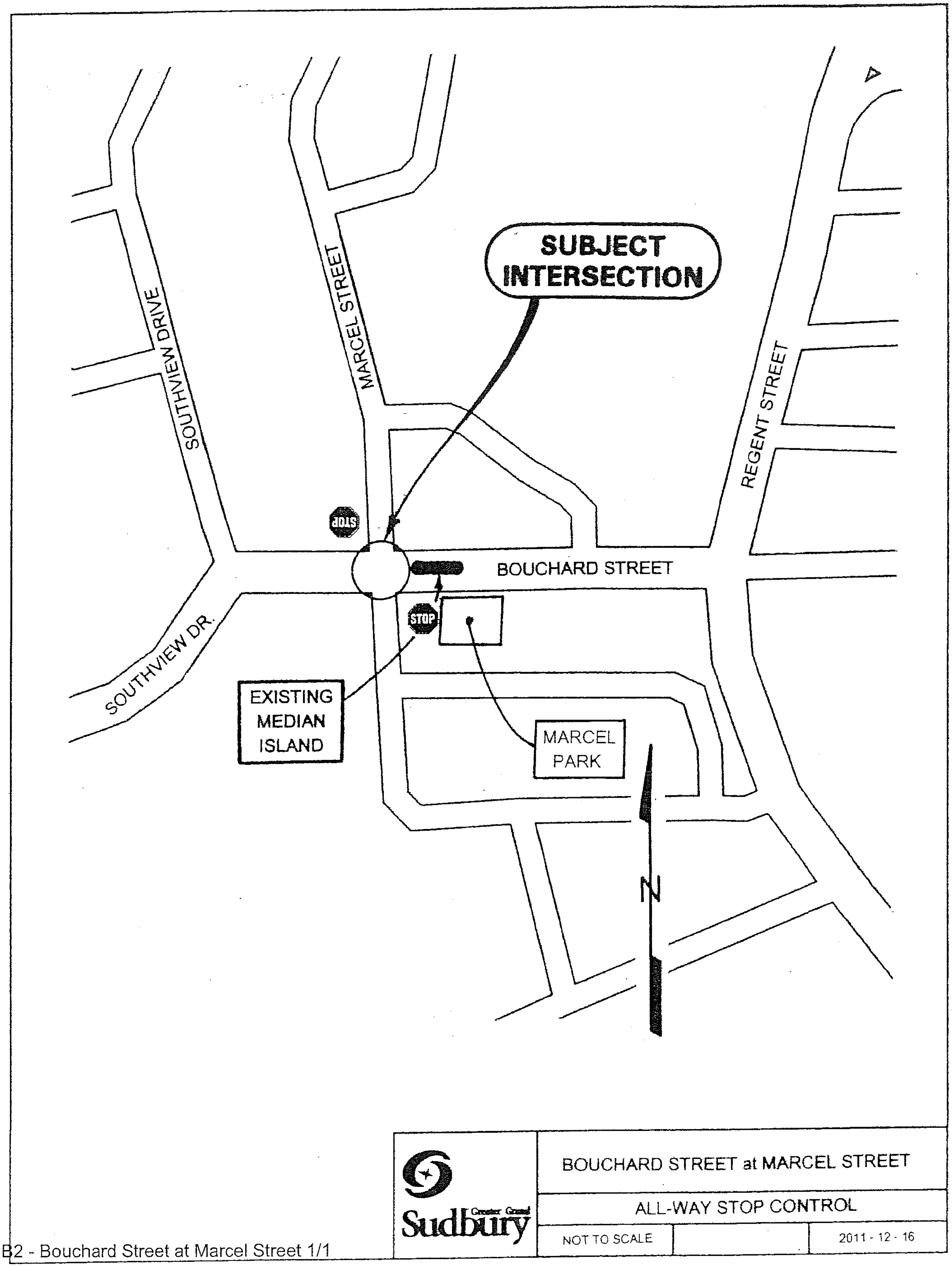


Exhibit B2 - Bouchard Street at Marcel Street 1/1

EXHIBIT: C2

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Bouchard Street at Marcel Street	Date:	October 25, 2011
Date of TM Count:	10/04/2011	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Arterial/Major Collector		
AADT of Main Road:	10000		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	30.0	%
Warrant #2	Collision History	16.7	%
Warrant #3	Traffic Control Signals	No	Y/N

All-Way Stop Warranted? **No** Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	**Arterial/Major Collector**	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	**> 5000**	1000 - 5000	< 1000		
Count Period	**7 hours**	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	**500/hr**	350/hr	250/hr	**930**	**100.0%**
Veh + Pedestrian volume from side street is ≥	**200/hr**	140/hr	N/A	**87**	**43.4%**
Traffic Split	**70/30**	70/30	70/30	**91 / 9**	**30.0%**

Warrant #2 - Collision History

Roadway Type	**Arterial/Major Collector**	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	**4***	3*	2*	**2/3**	**16.7%**

Warrant #3 — **Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.** No Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

EXHIBIT: D2

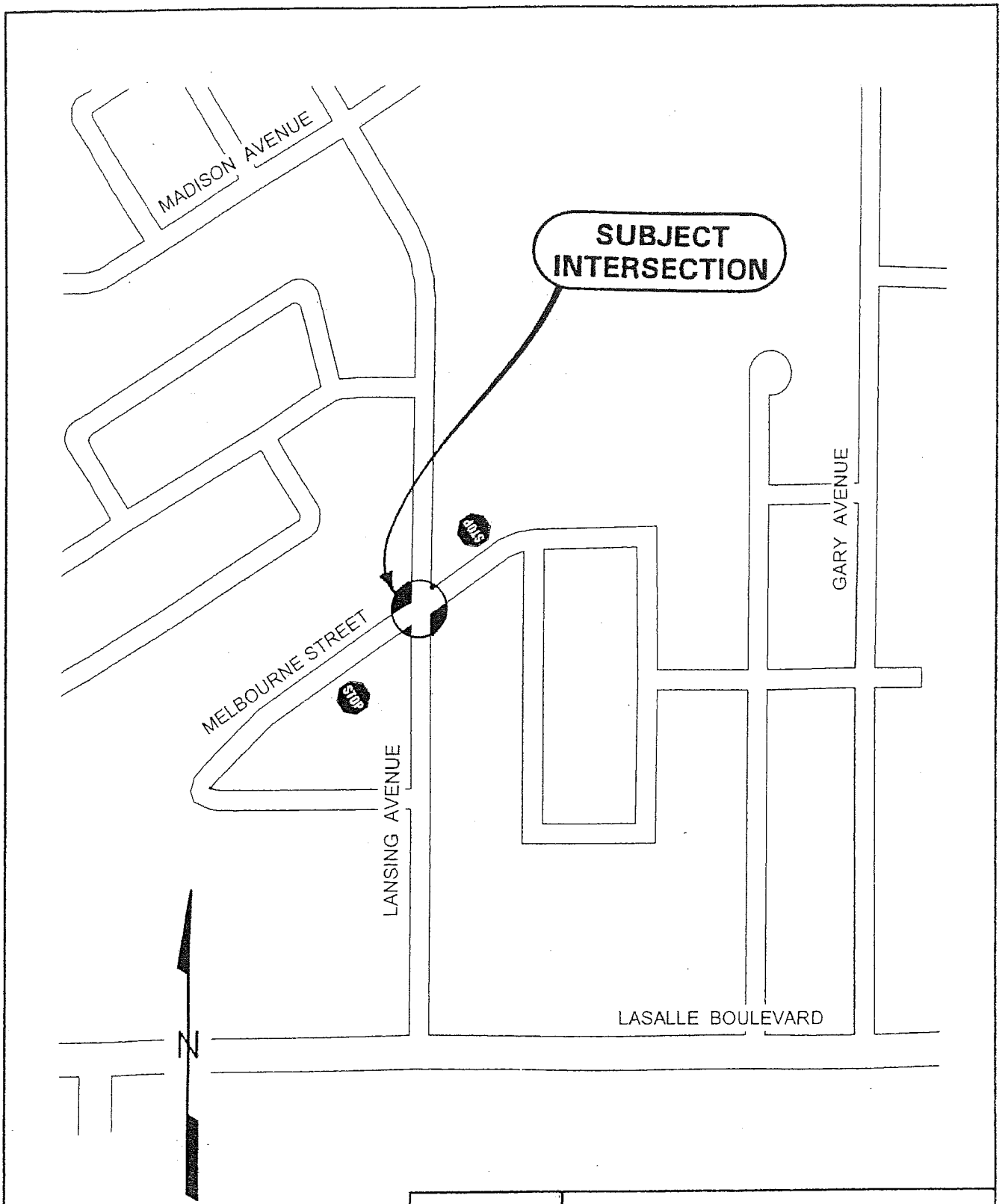

MADISON AVENUE
SUBJECT INTERSECTION
GARY AVENUE
MELBOURNE STREET
STOP
LANSING AVENUE
LASALLE BOULEVARD
N
Greater Grand Sudbury
ALL WAY STOP CONTROL
VARIOUS INTERSECTIONS
LANSING AVE. at MELBOURNE ST., SUDBURY
NOT TO SCALE
2011 - 12 - 16

EXHIBIT: E2

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Lansing Avenue at Melbourne Street	Date:	October 4, 2011
Date of TM Count:	09/28/2011	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Arterial/Major Collector		
AADT of Main Road:	7300		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	19.6	%
Warrant #2	Collision History	16.7	%
Warrant #3	Traffic Control Signals	No	Y/N
	All-Way Stop Warranted?	**No**	Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	> 5000	1000 - 5000	< 1000		
Count Period	7 hours	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	500/hr	350/hr	250/hr	509	100.0%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	39	19.6%
Traffic Split	70/30	70/30	70/30	92 / 8	26.7%

Warrant #2 - Collision History

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	2*	2/3	16.7%

Warrant #3	Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.	No	Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

EXHIBIT: F2

Greater Grand Sudbury	ALL WAY STOP CONTROL VARIOUS INTERSECTIONS
	HAWTHORNE DR. at WESTMOUNT AVE., SUDBURY
	NOT TO SCALE | | 2011 - 12 - 16

Exhibit F2 - Hawthorne Drive at Westmount Avenue 1/1

EXHIBIT: G2

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Westmount Avenue at Hawthorne Drive	Date:	August 9, 2011
Date of TM Count:	06/16/2011	Analyst:	JR
Type of Intersection:	Cross		
Roadway Type	Arterial/Major Collector		
AADT of Main Road:	5600		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	25.1	%
Warrant #2	Collision History	25.0	%
Warrant #3	Traffic Control Signals	No	Y/N

All-Way Stop Warranted? **No** Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	> 5000	1000 - 5000	< 1000		
Count Period	7 hours	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	500/hr	350/hr	250/hr	411	82.3%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	50	25.1%
Traffic Split	70/30	70/30	70/30	88 / 12	40.0%

Warrant #2 - Collision History

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	2*	1	25.0%

Warrant #3	Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.	No	Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

EXHIBIT: H2

FEBRUARY 16, 2011

We, the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-Way Stop Sign at the corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	ADDRESS	TELEPHONE
Robert Mack	[redacted] Madeleine	[redacted]
Alphonse LaRose	[redacted] Madeleine	[redacted]
BARB INGRAM	[redacted] Madeleine	[redacted]
Jack Ingram	[redacted] "	[redacted]
M. L. Quenneville	[redacted] Madeleine	[redacted]
Maxine Quenneville	[redacted] Madeleine	
Lynn Jackson	[redacted] Madeleine	
P Jackson	[redacted] "	
Jennifer Whiting	[redacted] Madeleine	[redacted]
Doug Hodgins	[redacted] Madeleine	[redacted]
CHRISTOS Kitsos	[redacted] MADELEINE AVE	[redacted]
Tina Kitsos	[redacted] Madeleine Ave	[redacted]
Chrysoula Kitsos	Madeleine ave	
Konstantinos Kitsos	[redacted] madeleine	
[illegible]	[redacted] Madeleine	[redacted]
[illegible]	[redacted] Madeleine Ave	[redacted]
[illegible]	[redacted] Madeleine Ave	[redacted]
[illegible]	[redacted] MADELEINE AVE	[redacted]

FEBRUARY 16, 2011

We, the residents of Madeleine, Martin, Main + Alexander Streets are requesting a 3-way Stop Sign at the Corner of Madeleine + Main + Madeleine + Alexander Streets. We have serious speeding issues. Local children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	ADDRESS	TELEPHONE
Mike Landry	[redacted] Martin Ave Sudbury ON	[redacted]
Suzanne Landry	[redacted] Martin Ave Sudbury ON	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
Julie Valade	[redacted] Madeleine Ave	[redacted]
Joan Valade	[redacted] Sagebrush PL	[redacted]
Janie Valade	[redacted] Madeleine Ave	[redacted]
R. Valade	[redacted] Sagebrush Pl	
Katie Desjardins	[redacted] Madeleine Ave	[redacted]
Norm Aubin	[redacted] Madeline St	[redacted]
Leo H. Bisson	[redacted] Madeleine Ave	[redacted]
Diane Bisson	[redacted] Madeleine Ave	[redacted]
Malena Audette	[redacted] Madeleine Ave	[redacted]
Richard Audette	[redacted] Madeleine Ave	[redacted]
[illegible]	[redacted] Madeleine	[redacted]
[illegible]	[redacted] Madeleine Ave	
Judy [illegible]	[redacted] Madeleine Ave	[redacted]
Claudette Macki	[redacted] Madeleine	[redacted]
Nancy + Jim Howard	[redacted] Madeleine Ave	[redacted]

FEBRUARY 16, 2011

We, the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-Way Stop Sign at the Corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	ADDRESS	TELEPHONE
Ethel Campbell	[redacted] Madeleine St.	[redacted]
Dorothy Deschamps	[redacted] Madeleine St	[redacted]
René Deschamps	[redacted] Madeleine St.	[redacted]
André Lefebvre	[redacted] Madeleine	[redacted]
Louise Lefebvre	[redacted] Madeleine	[redacted]
Jacqueline Pelon	[redacted] Madeleine	[redacted]
Edgar Pelon	[redacted] Madeleine	[redacted]
Rachelle Scott	[redacted] Madeleine	[redacted]
[illegible] Quesnel	Madeleine	
[illegible] Quesnel	[redacted] Madeleine	[redacted]
D. Carlson	[redacted] Madeleine	[redacted]
S Carlson	[redacted] Madeleine.	[redacted]
I. NTAGANDA	[redacted] A. Martin	[redacted]
A Martin		
GARY KOIVU	[redacted] MADELEINE AVE.	[redacted]
Ea Knopf	[redacted] Madeleine Ave	[redacted]
C Haggart	Madeleine ave.	
[illegible] Haggart	[redacted] Madeline ave	
S. Manitowabi	[redacted] Madeleine Ave	[redacted]
L. Manitowabi	[redacted] Madelein Ave	[redacted]

FEBRUARY 16, 2011

We, the residents of Madeleine, Martin, Main + Alexander Streets are requesting a 3-Way Stop Sign at the Corner of Madeleine + Main + Madeleine + Alexander Streets. We have serious speeding issues. Local Children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	ADDRESS	TELEPHONE
Cecile Duchaine	[redacted] Madeleine ave	[redacted]
Madeleine Rocca	[redacted] Madeleine Ave	[redacted]
Roy Arcand	[redacted] Madeleine Ave	
[illegible]	[redacted] Somers St	
K. McCarthy	[redacted] MADELEINE ST	[redacted]
Joe Shields	Madeleine AV	
Bernice Murray	Madeleine ave	
GARRY HODGE	[redacted] MADELEINE [redacted]	[redacted]
Kevin Roy	[redacted] Alexander. St.	[redacted]
James + Kathy Donnelly	[redacted] ALEXANDER ST [redacted]	[redacted]
Mathieu Landry	[redacted] Martin Ave [redacted]	[redacted]
[illegible] Forget [illegible] Martin St [redacted]		

Exhibit H2 - Resident Petition dated February 16, 2011 4/6

FEBRUARY 16, 2011

We, the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-way Stop Sign at the Corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	ADDRESS	TELEPHONE
Michel Guerin	[redacted] Martin St	[redacted]
Carole Guerin	[redacted] Martin St	[redacted]
Joseph Pelletier	[redacted] Martin Ave	[redacted]
Joseph Bone	[redacted] Martin	[redacted]
Chris McLaughlin	[redacted] Martin Ave	[redacted]
Jackie Scott	[redacted] Martin St.	[redacted]
[illegible]	[redacted] Martin	[redacted]
[illegible]	[redacted] Martin	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
Jeannette Noel	[redacted] Alexander St	[redacted]
Matthew Roach	[redacted] Martin Ave	[redacted]
Lindsay Roach	[redacted] Martin Ave	[redacted]
Jeannine Marko	[redacted] Madeleine Ave	[redacted]
Peter Marko	[redacted] Madeleine Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
Lorraine Edwards	[redacted] Martin Ave	
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave.	[redacted]
Paul Lemega	[redacted] Martin Ave (upper)	
Anna Lemega	[redacted] Martin Ave	[redacted]
[illegible]		

FEBRUARY 16, 2011

We, the residents of Madeleine, Martin, Main & Alexander Streets are requesting a 3-Way Stop Sign at the Corner of Madeleine & Main & Madeleine & Alexander Streets. We have serious speeding issues. Local children access the school entrance off of Madeleine and parents also drop off their children at this entrance to avoid congestion on Starlight Ave and turning challenges onto Lasalle Blvd

NAME	ADDRESS	TELEPHONE
Maxine Lemieux	[redacted] Martin Ave	[redacted]
Paulette Bonin	[redacted] Martin	[redacted]
Jacques Bonin	Martin	[redacted]
Pierre G. Bonin	Martin	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	Martin Ave	[redacted]
[illegible]		
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
[illegible]	[redacted] Martin Ave	[redacted]
Aimé Lacasse	[redacted] Martin Ave	[redacted]
Hélène Lacasse	[redacted] Martin Ave	[redacted]
Pat Lacasse	[redacted] Martin Ave	[redacted]
Liliane Potv...	[redacted] Main St	[redacted]
[illegible]	[redacted] Main St	[redacted]

EXHIBIT: I2

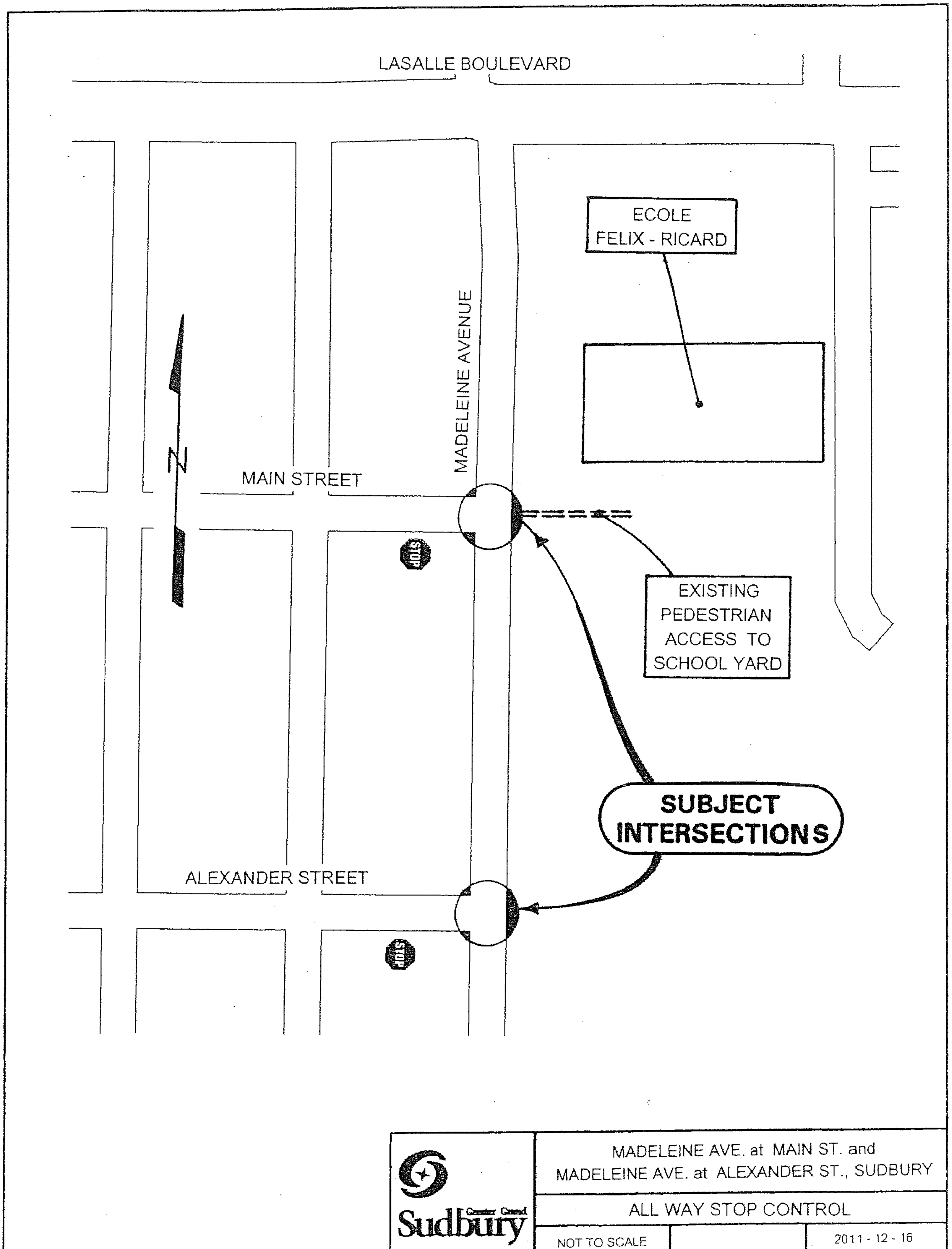


Exhibit I2 - T Intersections Located South of Lasalle Boulevard 1/1

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Madeleine Avenue at Main Street	Date:	October 3, 2011
Date of TM Count:	06/27/2011	Analyst:	JR
Type of Intersection:	T		
Roadway Type	Minor Collector		
AADT of Main Road:	1500		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	15.4	%
Warrant #2	Collision History	0.0	%
Warrant #3	Traffic Control Signals	No	Y/N
	All-Way Stop Warranted?	**No**	Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	> 5000	1000 - 5000	< 1000		
Count Period	7 hours	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	500/hr	350/hr	250/hr	90	25.6%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	22	15.4%
Traffic Split	70/30	70/30	70/30	76 / 24	80.0%

Warrant #2 - Collision History

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	2*	0	0.0%

Warrant #3	Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.	No	Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

Greater Grand Sudbury

CITY OF GREATER SUDBURY
ALL-WAY STOP WARRANTS

Location:	Madeleine Ave at Alexander St	Date:	October 3, 2011
Date of TM Count:	June 28, 2011	Analyst:	JR
Type of Intersection:	T		
Roadway Type	Local		
AADT of Main Road:	500		

All-Way Stop Warrant Summary

Warrant #1	Minimum Vehicle Volume	12.1	%
Warrant #2	Collision History	0.0	%
Warrant #3	Traffic Control Signals	No	Y/N

All-Way Stop Warranted? No Y/N

Warrant #1 - Minimum Vehicle Volume

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Vehicles per hour	Percent Compliance
AADT	> 5000	1000 - 5000	< 1000		
Count Period	7 hours	4 peak hours	4 peak hours		
Total vehicle volume from all approaches is ≥	500/hr	350/hr	250/hr	53	15.1%
Veh + Pedestrian volume from side street is ≥	200/hr	140/hr	N/A	17	12.1%
Traffic Split	70/30	70/30	70/30	68/32	100.0%

Warrant #2 - Collision History

Roadway Type	Arterial/Major Collector	Minor Collector	Local	Number of Collisions per year	Percent Compliance
Collisions per Year over 3 year period	4*	3*	2*	0	0.0%

Warrant #3	Traffic Control Signals are warranted and urgently needed, signs to be used as interim measures.	No	Y/N

* Only those collisions susceptible to relief through multi-way stop control must be consider (i.e. right angle and turning types).

- If the intersection meets warrant # 1, then the all-way stop is recommended regardless of the remaining warrants.
- If the intersection does not meet warrant #1 and does not meet warrant #2, then the all-way stop is not recommended.
- If the intersection does not meet warrant #1 and does meet warrant #2, then the all-way stop is recommended.

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2013
Report Date	Friday, Oct 11, 2013
Type:	Managers' Reports

Request for Decision

Parking Restrictions - Westmount Avenue, Sudbury

Recommendation

THAT the City of Greater Sudbury prohibit parking on the south side of Westmount Avenue from the east leg of Galway Court to the east leg of Elmhurst Court from Monday to Friday between the hours of 7:30 a.m. and 4:30 p.m., 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 11, 2013.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Oct 11, 13

Division Review
David Shelsted
Director of Roads & Transportation Services
Digitally Signed Oct 11, 13

Recommended by the Department
Tony Cecutti
General Manager of Infrastructure Services
Digitally Signed Oct 11, 13

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Oct 11, 13

Background

The City's Transportation and Traffic Engineering Services Section received a request from an area resident asking that the limits of the 'No Parking' zone across from Westmount Public School be extended further west to include the front of their home. Westmount Public School is located on Westmount Avenue in Ward 8 and is approximately 250 metres east of Barry Downe Road (see Exhibit 'A').

Currently, signs have been posted prohibiting parking from Monday to Friday between the hours of 7:30 a.m. and 4:30 p.m. The signs are located on the south side of Westmount Avenue from the east leg of Elmhurst Court to the west limit of the school. The signs were installed under the general provision of the by-law which prohibits parking at anytime adjacent to school property where signs are installed.

Prohibiting parking for specific time periods is much less restrictive for residents of the street then a full-time no parking zone. However, enforcement of these types of restrictions has proven to be problematic without a specific amendment to Schedule 'C' of the City's Traffic and Parking By-Law 2010-1.

In order to facilitate enforcement of the current parking restrictions and incorporate the area resident's request, staff recommends that a by-law be passed prohibiting parking on the south side of Westmount Avenue from the east leg of Galway Court to the east leg of Elmhurst Court, from Monday to Friday between the hours of 7:30 a.m. and 4:30 p.m. One additional sign will need to be installed to incorporate the area

resident’s request. The Councillor for Ward 8 supports this recommendation.

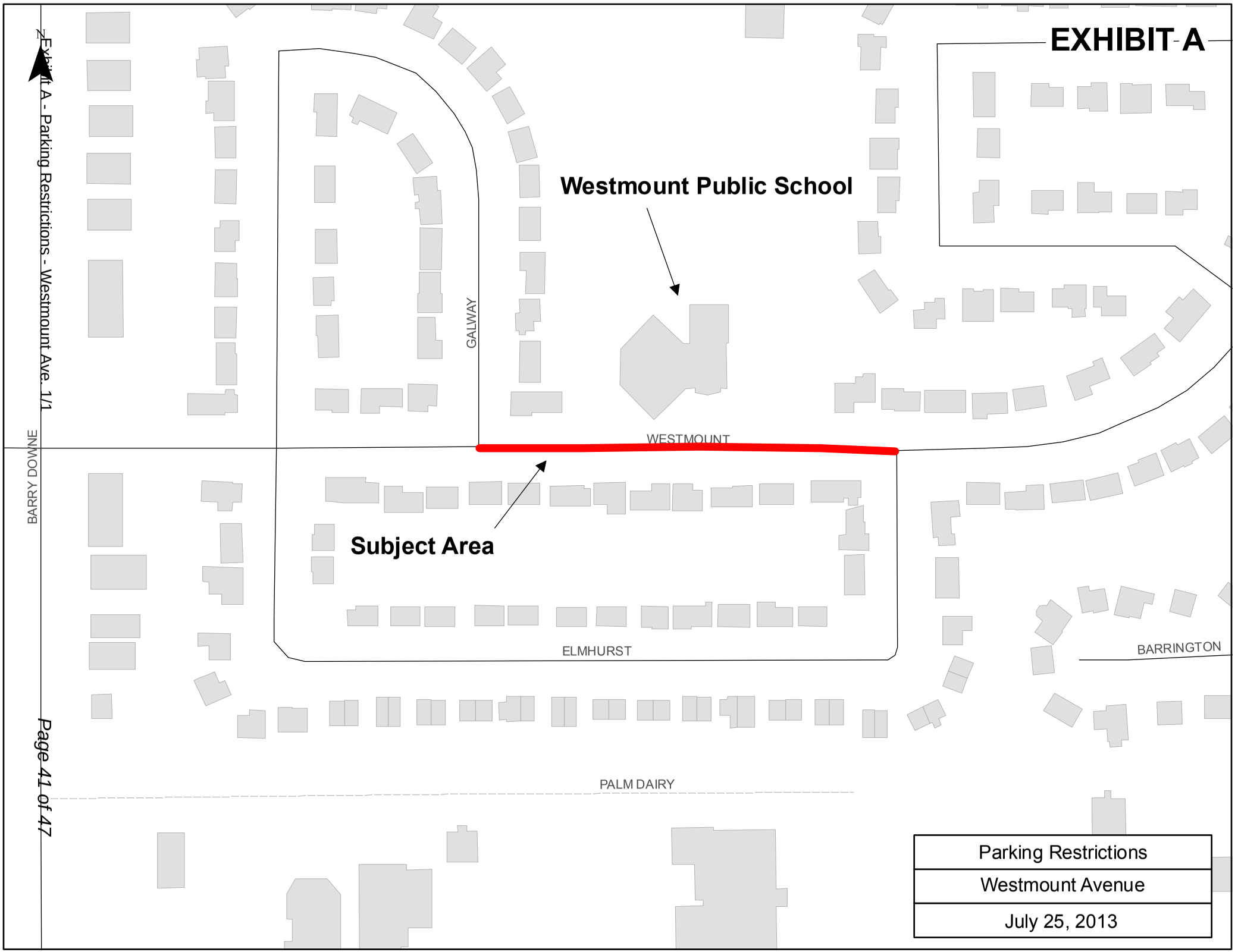


EXHIBIT A
Exhibit A - Parking Restrictions - Westmount Ave. 1/1
Westmount Public School
GALWAY
WESTMOUNT
BARRY DOWNE
Subject Area
ELMHURST
BARRINGTON
PALM DAIRY
Parking Restrictions
Westmount Avenue
July 25, 2013

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2013
Report Date	Friday, Oct 11, 2013
Type:	Managers' Reports

Request for Decision

School Bus Loading Zone - Baker Street - Lansdowne Public School

Recommendation

THAT the City of Greater Sudbury designate a “School Bus Loading Zone” on the south side of Baker Street adjacent to Lansdowne Public School, and;

THAT a by-law be passed 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 11, 2013.

Signed By

Report Prepared By
Dave Kivi
Co-ordinator of Transportation & Traffic Engineering Services
Digitally Signed Oct 11, 13

Division Review
David Shelsted
Director of Roads & Transportation Services
Digitally Signed Oct 11, 13

Recommended by the Department
Tony Cecutti
General Manager of Infrastructure Services
Digitally Signed Oct 11, 13

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Oct 11, 13

Background

The attached letter from the Sudbury Student Services Consortium dated August 27, 2013 (see Exhibit ‘A’), requests that the “School Bus Loading Zone” for Lansdowne Public School be relocated from Lansdowne Street to the south side of Baker Street (see Exhibit ‘B’).

The purpose of a “School Bus Loading Zone” is to protect school bus users while they are boarding and exiting the bus. The signs that are installed serve to caution drivers to be on guard for school bus pedestrian traffic. While loading and unloading school children within the “School Bus Loading Zone”, bus drivers do not activate the flashing red lights nor extend the “Stop” sign. Therefore, drivers do not have to stop.

As indicated by the Sudbury Student Services Consortium, parents are dropping off and picking up students across from the school on Lansdowne Street, creating an unsafe condition with children crossing between the busses. Relocating the “School Bus Loading Zone” to Baker Street will reduce the level of congestion in front of the school.

Currently parking is prohibited on the south side of Baker Street and the west side of Lansdowne Street on weekdays from 8:00 a.m. to 4:30 p.m., adjacent to the school. These restrictions will remain in place.

While staff has no objection to the request, loading school busses from the public road can result in the need for additional snow removal requirements for the safety of the children. The Sudbury Student Services

Consortium has been informed that snow removal within the “School Bus Loading Zone” will be their responsibility.

It is recommended that a by-law be passed to amend the City of Greater Sudbury Traffic and Parking By-Law 2010-1 to relocate the school bus loading zone to Baker Street. Ward 4 Councillor, Evelyn Dutrisac has indicated her support for the change.

EXHIBIT A

Sudbury Student Services Consortium
de services aux élèves de Sudbury

1760 Regent Street South, 1st floor • Sudbury • Ontario • P3E 3Z8 • Tel./ Tél. (705) 521-1234 • Fax / Téléc. (705) 521-1344

Sent via email - Original copy mailed
Our File : E14-SAF

August 22nd, 2013

Dave Kivi
Coordinator of Transportation and Traffic Engineering
Box 5000, Station A
200 Brady Street
Sudbury (Ontario) P3A 5P3

Re: Lansdowne Public School – Baker Street, Sudbury *Bus Loading Zone*

Dear Mr. Kivi:

We would like to request a modification to the existing "No Parking" signs on Baker Street as well as the "Bus Loading Zone" on Lansdowne Street in order to reflect a new bus loading zone on Baker Street.

With the current situation, we are experiencing issues with parents dropping off their students across the existing bus loading zone and have had very unsafe situations with students and parents crossing in between school buses.

If we move the bus loading zone to Baker Street, students would be able to exit the school yard safely from the gate in the fence on Baker Street. This would allow parents to pick up/drop off students in front of the school on Lansdowne on the right side of the street. After loading or unloading, the busses could then proceed across Lansdowne and continue on Baker Street towards College, thus leaving the street in front of the school clear.

Should you require any additional information please contact me at 521-1234 ext. 8150.

Thanking you in advance for your continued cooperation in ensuring the safety of our students.

Sincerely,

Renée Boucher

Renée Boucher
Executive Director

cc: Lisa Piquette, Principal, Lansdowne Public School
Diane Cayen-Arnold, Superintendent, Rainbow District School Board


EXHIBIT B
Exhibit B - Aerial View - Landsdowne Public School 1/1
NEW School Bus
Loading Zone
Baker St.
Frood Rd.
Lansdowne
Public
School
Lansdowne St.
Remove School Bus
Loading Zone
Adie St.
School Bus Loading Zone
Baker Street - Lansdowne Public School
August 28, 2013

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2013
Report Date	Thursday, Oct 10, 2013
Type:	Managers' Reports

For Information Only

Gatchell Outfall Emergency Work and EA Status

Recommendation

For Information Only. Report to Council in accordance with the CGS Purchasing By-law, Section 22 - Emergency Purchases.

Finance Implications

Emergency Costs:

Costs related to the 2013 Emergency Work were approximately $415,000.00. The previous capital budget allocation for the detailed design of this trunk sewermain was utilized to complete the emergency work.

EA & Geotechnical / Monitoring Costs:

Costs (previous and future) to complete the EA are approximately $500,000.00, which include:

1) EA Study by RV Anderson Associates Ltd. =$125,000
2)Geotechnical Study to Support the EA & On-going creek bank monitoring by AMEC Environment & Infrastructure = $375,000

The previous capital budget allocation for the detailed design of this trunk sewermain was also utilized to fund the deficits in the EA and Geotechnical accounts.

A final report will be presented to Council including a breakdown of the emergency and related costs, once known.

Estimated Future Costs:

The 2014-2018 Wastewater Capital budget submission includes for the detailed design / contract administration and construction of the long term solution (as determined by the EA), including:

1) Detailed Design, Contract Administration & Inspection (2014) = $1,000,000 2) Construction (2015) = $5,000,000

Signed By

Report Prepared By
Wendi Mannerow
Water & Wastewater Engineer
Digitally Signed Oct 10, 13

Division Review
Nick Benkovich
Director of Water/Wastewater Services
Digitally Signed Oct 11, 13

Recommended by the Department
Tony Cecutti
General Manager of Infrastructure Services
Digitally Signed Oct 11, 13

Recommended by the C.A.O.
Doug Nadorozny
Chief Administrative Officer
Digitally Signed Oct 11, 13

Background

In late April 2013, citizens reported a notable slippage of the north bank of Junction Creek along the newly constructed walking trail, just east of Kelly Lake Road.

City staff attended the site and confirmed that the trunk sanitary sewer that is located under the trail (along the creek bank) had not been impacted. Staff then began to review immediate risks and alternative solutions for creek bank stabilization. During the weeks following the initial inpsection, the bank continued to move and the sanitary sewer was at risk of catastrophic failure. This would have impacted the sanitary service to the residents of Gatchell and caused an environmental spill of sewage to the creek. As well, the newly constructed trail along the sewer easement was closed for safety reasons, with signs posted and security fencing installed.

The City initiated an operational contingency plan which included bypass pumping of the wastewater around the impacted area (requiring 24 hour surveillance) and placing stabilization materials along the impacted creek bank. Access to the site was graciously afforded by Centis Tile and Terrazzo, Remacan Industries and CanWelBroadleaf.

Geotechnical experts monitored the bank for movement. The sanitary sewer main was inspected using Closed Circuit Television (CCTV) equipment through the impacted section. On June 22, 2013, it was confirmed that the creek bank had stopped moving and the sewer functionality had not been impacted. The bypass pumping system was then turned off, with the piping remaining in-place for the future if required. The trail was repaired and re-opened on August 2, 2013. Bank monitoring is currently on-going. A more extensive monitoring system is being reviewed, which is intended to provide indication of a problem before a catastrophic failure occurs. This system will remain in-place until a long term solution for the replacement of the sanitary sewer is implemented. Security fencing also remains on-site and will be utilized if deemed necessary by the bank slope monitoring results.

Class EA Study:

In May 2007, the north bank of Junction Creek, upstream of Kelly Lake Road experienced a slope failure. This exposed and caused a break in a portion of the City's trunk sanitary sewermain, known as the Gatchell Outfall Sewer. Emergency repairs were implemented to maintain sanitary sewer service to the residences and businesses in the Gatchell area as well as a portion of Copper Street serviced by this section of sewer.

It was determined that permanent repairs to the failed section of sewer would be extremely complex and costly. The City concluded to undertake a Municipal Class EA to identify, evaluate, and confirm the preferred long-term solution for the replacement of this section of the Gatchell Outfall Sewer. The City retained R.V. Anderson Associates Limited to complete the EA and also retained AMEC Environment & Infrastructure to complete a geotechnical investigation to support the EA. As AMEC was already completing the geotechnical investigation for the EA, they were also retained to review immediate risks and alternative solutions for creek bank stabilization at the time of the 2013 bank failure. As well, they are performing the on-going monitoring of the creek bank, until a long term solution for the replacement of the sanitary sewer is implemented.

Historical records confirm that the construction of the trunk sanitary sewer along the creek bank experienced many challenges during its original installation due to poor soils. Replacement of this sewermain requires much consideration due to the added complexity of adjacent land use changes and more stringent approvals processes since the original construction. The evaluation matrix for the EA alternatives is currently being updated to include consideration for the newly constructed walking trail. The anticipated completion date for the EA Study is late 2013. The detailed design for the preferred solution will occur during 2014 and it is anticipated that construction will commence in 2015.