
**SEVENTH MEETING OF THE TRAFFIC COMMITTEE
TO BE HELD ON WEDNESDAY, APRIL 8, 2009 AT 3:30 P.M.
IN COMMITTEE ROOM C-11, TOM DAVIES SQUARE**

DECLARATION OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

PRESENTATIONS

1. The Use of Roundabouts
 - Lionel Rudd, C.E. T.**(VERBAL PRESENTATION) (FOR INFORMATION ONLY)**

MANAGERS' REPORTS

PAGE NO.

- R-1 Report dated March 16, 2009 from the General Manager of Infrastructure Services regarding Traffic Control - Various Uncontrolled Intersections. **1 - 10**
(RECOMMENDATION PREPARED)
- (The City's Transportation and Traffic Engineering Services Section received a list of intersections from Operations Staff outlining various uncontrolled intersections in the southeast maintenance area of the City of Greater Sudbury. This report recommends appropriate traffic control at each intersection.)
- R-2 Report dated March 10, 2009 from the General Manager of Infrastructure Services regarding Traffic Control - Community of Rockville, Walden. **11 - 16**
(RECOMMENDATION PREPARED)
- (The report recommends that the intersections at David Street and Selma Avenue, and Suzanne Avenue and John Street be controlled with a Stop sign.)
- R-3 Report dated March 23, 2009 from the General Manager of Infrastructure Services regarding School Zone Speed Limits. **17 - 22**
(RECOMMENDATION PREPARED)
- (The report recommends amendments the School Zone Speed Limit Policy at elementary schools to 40 km/hr on residential streets or residential collector streets.)

MANAGERS' REPORTS (cont'd)

PAGE NO.

- R-4 Report dated March 23, 2009 from the General Manager of Infrastructure Services regarding New Technology and Safety Initiatives. **23 - 29**
(RECOMMENDATION PREPARED)

(The report recommends Capital funding for the installation of one Audible Pedestrian Signal per year; Six (6) Vehicle Activated Traffic Calming Signs (VATCS) for locations where speeding problems have been identified; Uninterruptible Power Supply units for signalized intersections on a priority basis, and the expansion of the Zebra Crosswalk Marking program.)

NEXT MEETING DATE

ADJOURNMENT
(RECOMMENDATION PREPARED)

COMMITTEE MEMBERS

Councillor Cimino
Councillor Rivest
Councillor Landry-Altmann

DISTRIBUTION

Mayor and Members of Council
D. Nadorozny
T. Beadman
G. Clausen
M. Leduc
C. Hallsworth
L. Hayes
C. Matheson
B. Lautenbach
P. Thomson

R. Swiddle
R. Falcioni
D. Kivi
D. Shelstead
A. Haché
L. Oldridge

LISA OLDRIDGE
DEPUTY CITY CLERK

LIZ COLLIN
PLANNING SECRETARY

Request for Recommendation Traffic Committee



Type of Decision

Meeting Date	April 8, 2009				Report Date	March 16, 2009			
Recommendation		Yes	<input checked="" type="checkbox"/>	No	Priority	<input checked="" type="checkbox"/>	High		Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed

Report Title

Traffic Control - Various Uncontrolled Intersections

Policy Implications + Budget Impact

This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

☒ Background attached

Recommendation

That the Traffic Control measures be implemented at the following locations:

That the Dena Court and Benita Boulevard intersection be controlled with a "Yield" sign facing northbound traffic on Dena Court, and;

That the Hillside Court and Rideau Avenue intersection be controlled with a "Yield" sign facing northbound traffic on Hillside Court, and;

That the Cook Street and Walter Street intersection be controlled with a "Stop" sign facing northbound traffic on Cook Street, and;

That the Gloria Avenue and Walter Street intersection be controlled with a "Stop" sign facing northbound traffic on Gloria Avenue, and;

☒ Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Doug Nadorozny
Acting Chief Administrative Officer

Date: March 16, 2009

Report Authored By



Dave Kivi, Coordinator of Transportation and Traffic,
Engineering Services

Division Review



Robert M. Falcioni, P. Eng.
Director of Roads and Transportation

Recommendation Continued:

That the Fram Road and Spencer Road intersection be controlled with a "Yield" sign facing southbound traffic on Fram Road, and;

That the Chesser Street and Mott Street intersection be controlled with a "Yield" sign facing northbound traffic on Chesser Street, and;

That the MacMillan Street and Mott Street intersection be controlled with a "Yield" sign facing northbound traffic on MacMillan Street, and;

That the Cobalt Street and MacMillan Street intersection be controlled with a "Yield" sign facing westbound traffic on Cobalt Street, and;

That a by-law be passed by City Council to amend Traffic and Parking By-Law 2001-1 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 March 16, 2009.

Background:

The City's Traffic and Transportation Engineering Services Section received a list of intersections from Operations Staff outlining various uncontrolled intersections in the southeast maintenance area of the City of Greater Sudbury.

Uncontrolled intersections have no "Stop" or "Yield" signs and operate on the "Right of Way Rule". Under this rule, the driver on the left yields right of way to the vehicle on the right. Uncontrolled intersections are becoming less common in urban areas, and unnecessary conflicts may be created.

The recommended traffic control for each intersection is described below:

1) Dena Court and Benita Boulevard, Sudbury

Dena Court intersects Benita Boulevard forming a "T" intersection. This intersection is located two (2) blocks north of Madison Avenue in Ward 8 (**see Exhibit "A"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection all of these conditions are met; therefore it is recommended that traffic be controlled with a "Yield" sign facing northbound traffic on Dena Court.

Date: March 16, 2009

2) Hillside Court and Rideau Avenue, Coniston

Hillside Court intersects Rideau Avenue forming a "T" intersection. This intersection is located approximately 200 metres north of Caruso Street in Ward 9 (**see Exhibit "B"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection all of these conditions are met; therefore it is recommended that traffic be controlled with a "Yield" sign facing northbound traffic on Hillside Court.

3) Cook Street and Walter Street, Coniston

Cook Street intersects Walter Street forming a "T" intersection. This intersection is located west of Edward Avenue in Ward 9 (**see Exhibit "B"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection there are bushes obstructing the sight line on the southeast corner; therefore it is recommended that traffic be controlled with a "Stop" sign facing northbound traffic on Cook Street.

4) Gloria Avenue and Walter Street, Coniston

Gloria Avenue intersects Walter Street forming a "T" intersection. This intersection is located two (2) blocks west of Edward Avenue in Ward 9 (**see Exhibit "B"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection there are bushes obstructing the sight line on the southwest corner; therefore it is recommended that traffic be controlled with a "Stop" sign facing northbound traffic on Gloria Avenue.

5) Fram Road and Spencer Road, Wahnapiatae

Fram Road intersects Spencer Road forming a "T" intersection. This intersection is located approximately 50 metres west of Highway 17 East in Ward 9 (**see Exhibit "C"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection all of these conditions are met; therefore it is recommended that traffic be controlled with a "Yield" sign facing southbound traffic on Fram Road.

6) Chesser Street and Mott Street, Falconbridge

Chesser Street intersects Mott Street forming a "T" intersection. This intersection is located two (2) blocks east of Edison Road in Ward 7 (**see Exhibit "D"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection all of these conditions are met; therefore it is recommended that traffic be controlled with a "Yield" sign facing northbound traffic on Chesser Street.

7) MacMillan Street and Mott Street, Falconbridge

MacMillan Street intersects Mott Street forming a "T" intersection. This intersection is located one (1) block east of Edison Road in Ward 7 (**see Exhibit "D"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection all of these conditions are met; therefore it is recommended that traffic be controlled with a "Yield" sign facing northbound traffic on MacMillan Street.

Date: March 16, 2009

8) Cobalt Street and MacMillan Street, Falconbridge

Cobalt Street intersects MacMillan Street forming a "T" intersection. This intersection is located north of Longyear Drive (M.R. 89) in Ward 7 (**see Exhibit "D"**). A "Yield" sign is appropriate when the traffic volume is low, sight lines are good and stopping is not always required. At this intersection all of these conditions are met; therefore it is recommended that traffic be controlled with a "Yield" sign facing westbound traffic on Cobalt Street.

EXHIBIT: A

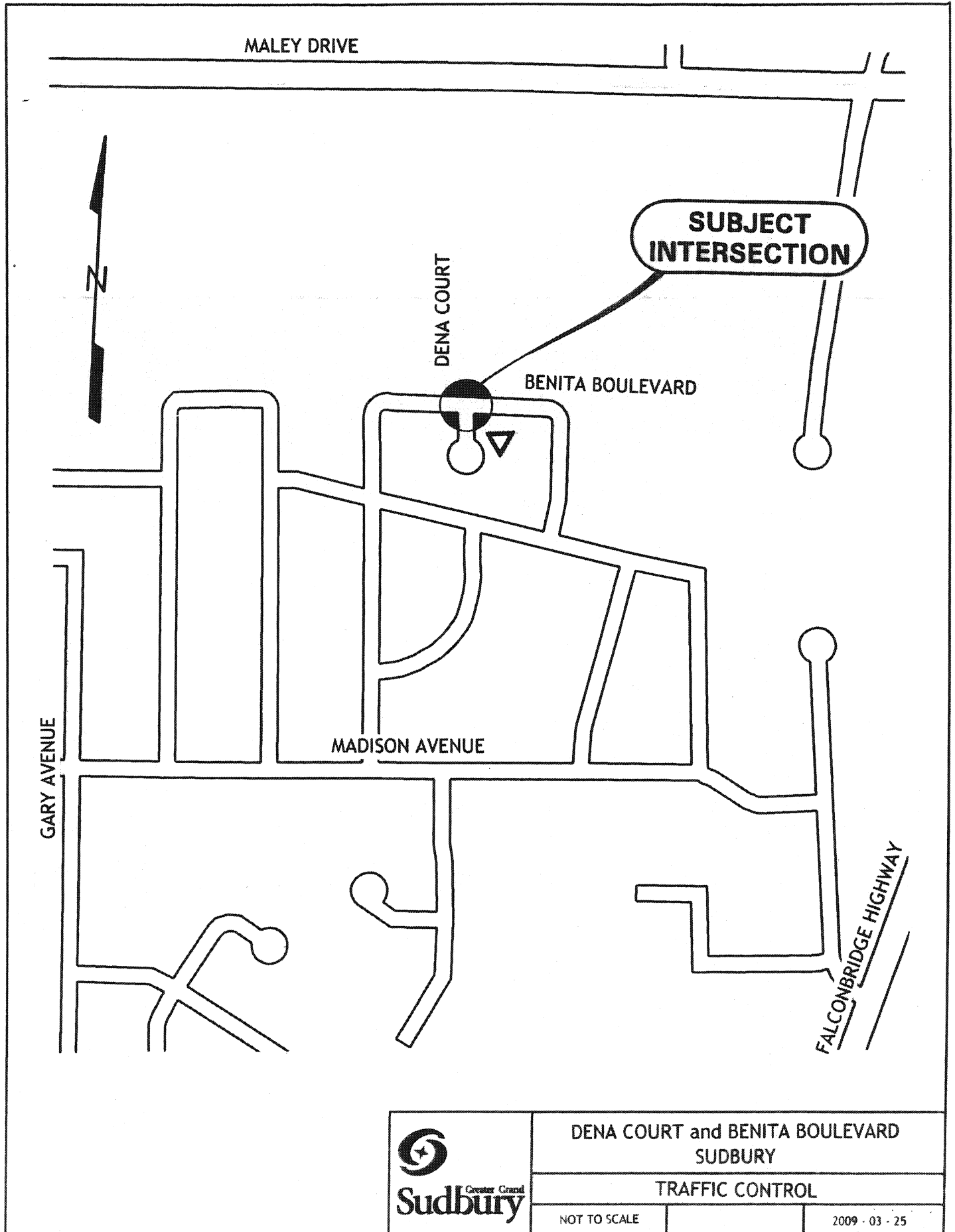


EXHIBIT: B

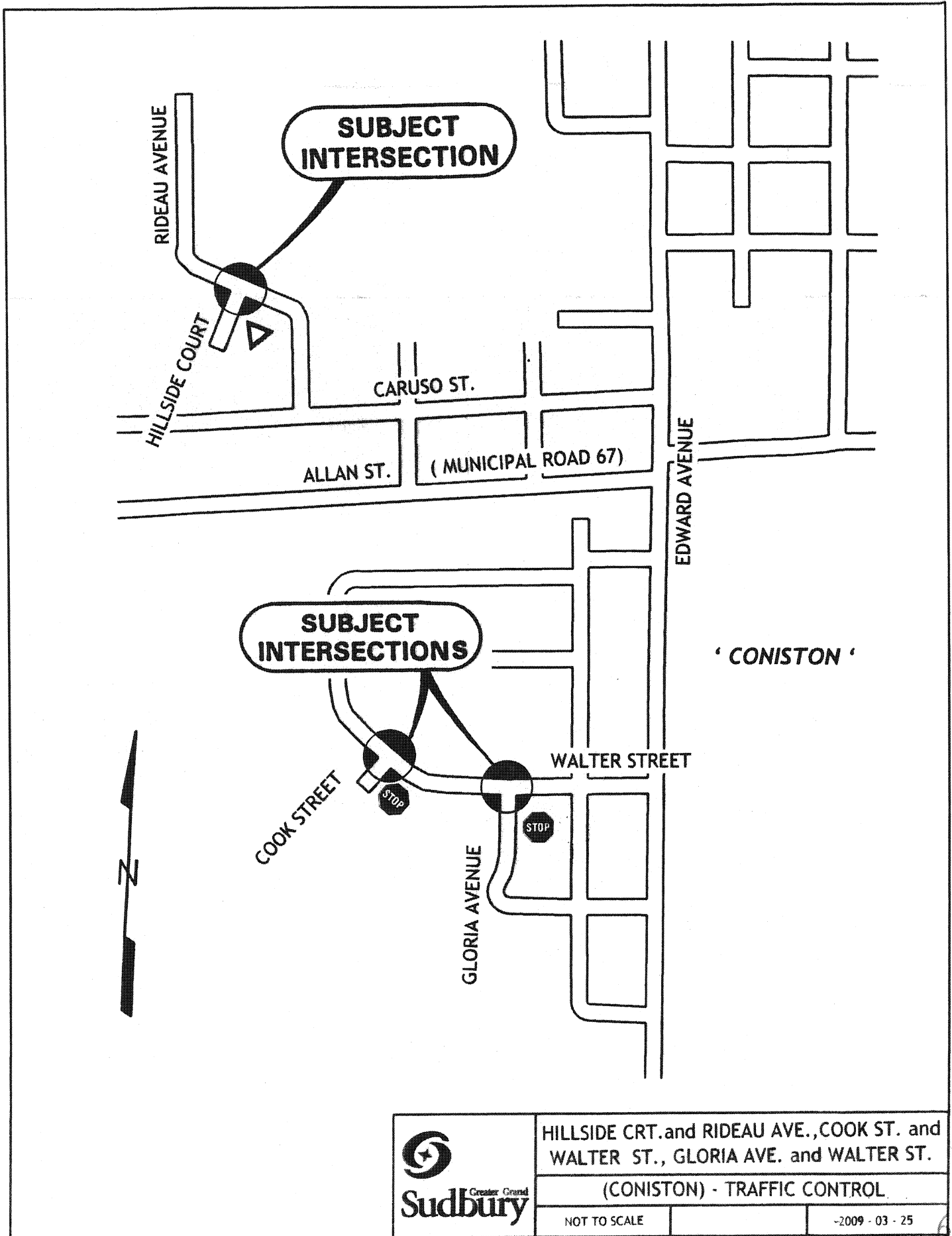
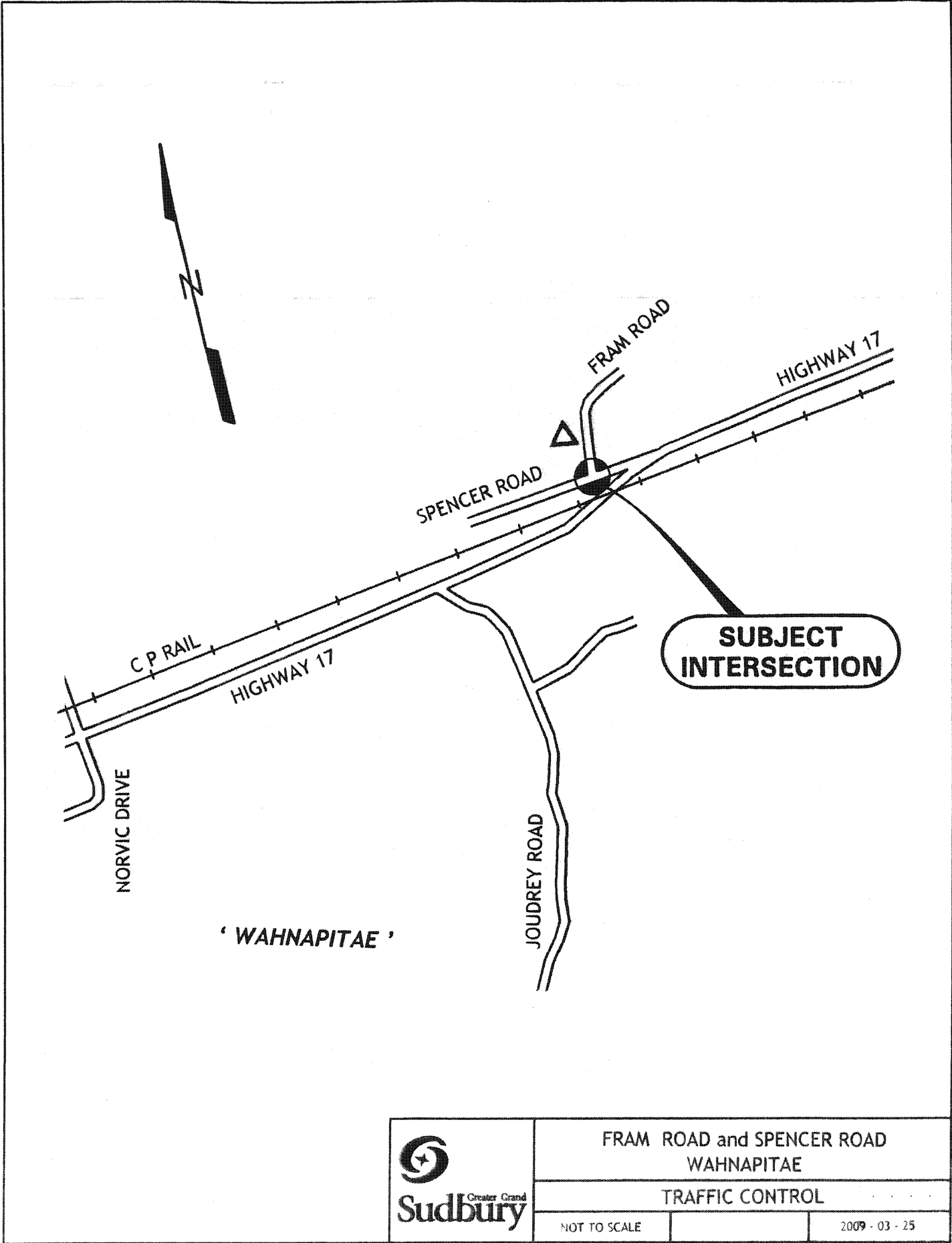


EXHIBIT: C




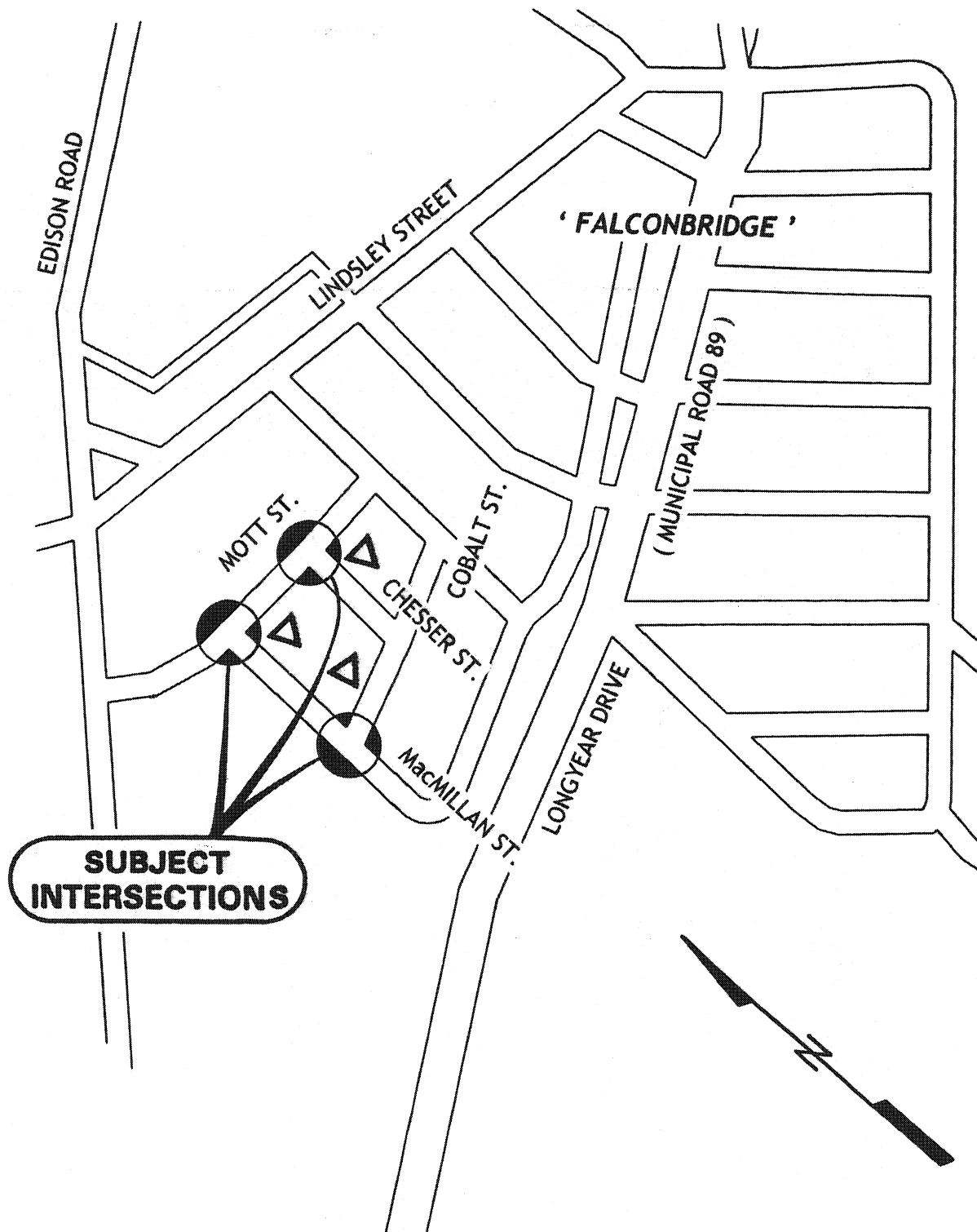
	FRAM ROAD and SPENCER ROAD WAHNAPIITAE		
	TRAFFIC CONTROL		
	NOT TO SCALE		2009 - 03 - 25

EXHIBIT: D



CHESSER ST., and MOTT ST., MacMILLAN ST. and
MOTT ST., COBALT ST. and MacMILLAN ST.

TRAFFIC CONTROL

NOT TO SCALE

2009 - 03 - 25

CITY OF GREATER SUDBURY
SCHEDULE "N" TO BY-LAW 2001-1

THROUGH HIGHWAYS

(1)
Highway

(2)
From

(3)
To

ADD:

Walter Street (Nickel Centre)

West Limit, William Avenue

West Limit, William

Mott Street (Nickel Centre)

East Limit, Edison Road

West Limit, Franklin

CITY OF GREATER SUDBURY
SCHEDULE "P" TO BY-LAW 2001-1

YIELD RIGHT-OF-WAY

(1)
Intersection

(2)
Direction of Travel

ADD:

Dena Court – Benita Boulevard (Sudbury)

North on Dena Court

Hillside Court – Rideau Avenue (Nickel Centre)

North on Hillside Court

Fram Road – Spencer Road (Nickel Centre)

South on Fram Road

Cobalt Street – MacMillan Street (Nickel Centre)

West on Cobalt Street

Request for Recommendation Traffic Committee



Type of Decision

Meeting Date	April 8, 2009				Report Date	March 10, 2009			
Recommendation		Yes	<input checked="" type="checkbox"/>	No	Priority	<input checked="" type="checkbox"/>	High		Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed

Report Title

Traffic Control - Community of Rockville, Walden

Policy Implications + Budget Impact

This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

☒ Background attached

Recommendation

That Traffic Control be installed at the following intersections with the Community of Rockville in Walden, as follows:

That the David Street and Selma Avenue intersection be controlled with a "Stop" sign facing eastbound traffic on David Street, and;

That the Suzanne Avenue and John Street intersection be controlled with a "Stop" sign facing southbound traffic on Suzanne Avenue, and;

That a By-Law be passed by City Council to amend Traffic and Parking By-Law 2001-1 in the City of Greater Sudbury to legalize the existing "Stop" signs, and;

Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Doug Nadrozny
Acting Chief Administrative Officer

Date: March 16, 2009

Report Authored By



Dave Kivi, Coordinator of Transportation and Traffic,
Engineering Services

Division Review



for Robert M. Falcioni, P. Eng.
Director of Roads and Transportation

Recommendation continued:

That a By-Law be passed by City Council to amend Traffic and Parking By-Law 2001-1 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 March 16, 2009.

Background:

The City's Traffic and Transportation Engineering Services Section received a request to review traffic control at the intersection of Suzanne Avenue and John Street, in the Community of Rockville located in Walden (**see Exhibit "A"**). While reviewing the traffic control at this intersection, staff also noted that traffic control was absent at the David Street and Selma Avenue intersection and that by-laws were not in place for any of the existing traffic control in this area.

Suzanne Avenue at John Street is a four (4) legged intersection which is currently controlled with a "Stop" sign facing northbound traffic on Suzanne Avenue and no traffic control for the other three (3) legs of the intersection (**see Exhibit "B"**). It is recommended southbound traffic on Suzanne Avenue be controlled with a "Stop" sign. This would be a more standard form of traffic control at this intersection.

David Street intersects Selma Avenue forming a "T" intersection. Currently this is an uncontrolled intersection. Uncontrolled intersections have no "Stop" or "Yield" signs and operate under the "Right of Way Rule". Under this rule, the driver on the left yields right of way to the vehicle on the right. Uncontrolled intersections are becoming less common in urban areas and can create unnecessary conflicts. Due to the restricted sight lines on the northwest and southwest corners of this intersection, it is recommended that a "Stop" sign be installed facing eastbound traffic on David Street.

The remaining intersections in the Community of Rockville are currently controlled with "Stop" signs but do not have by-laws to support them. It is recommended that a by-law be passed to amend Traffic and Parking By-Law 2001-1 to legalize the existing "Stop" signs.

EXHIBIT: A

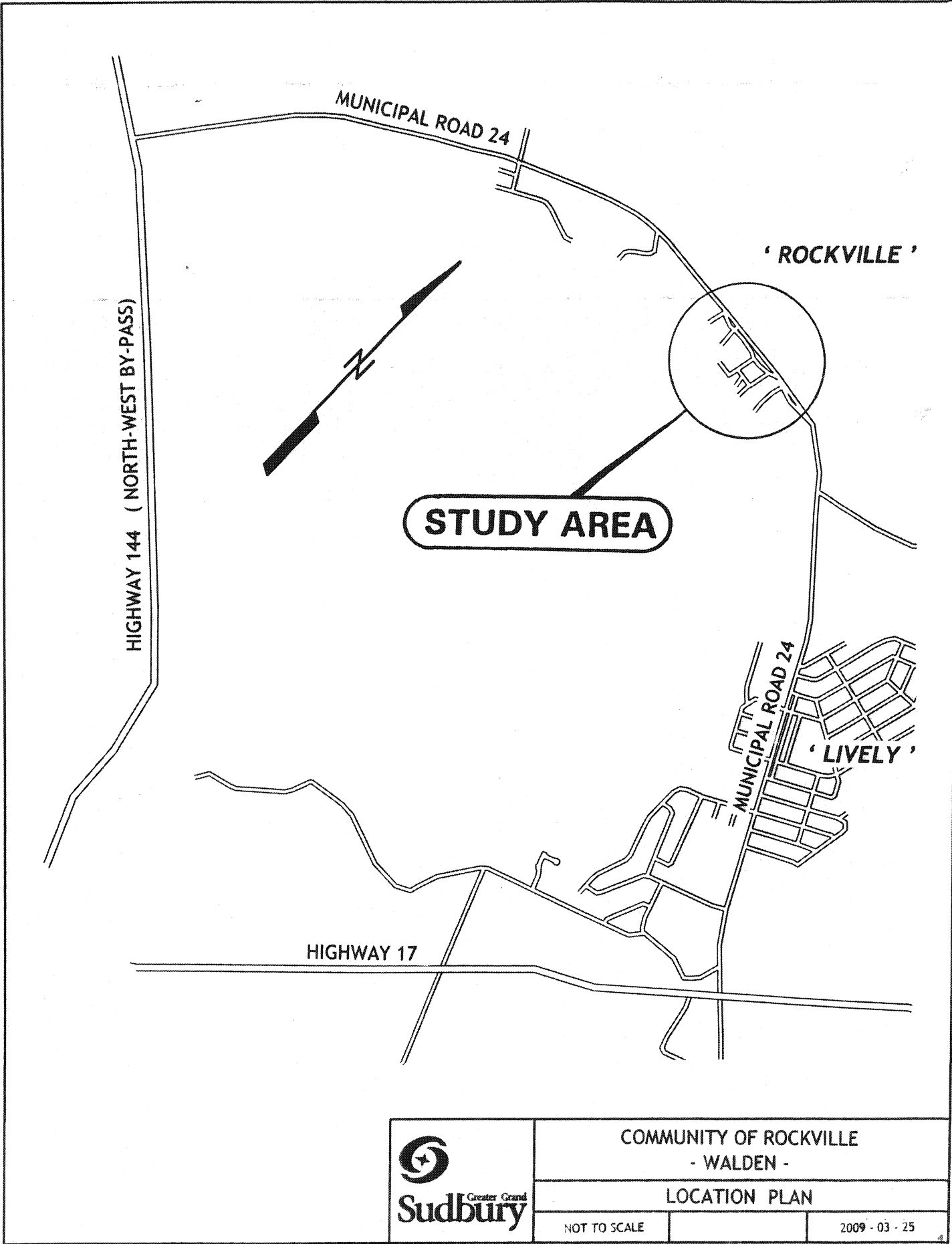
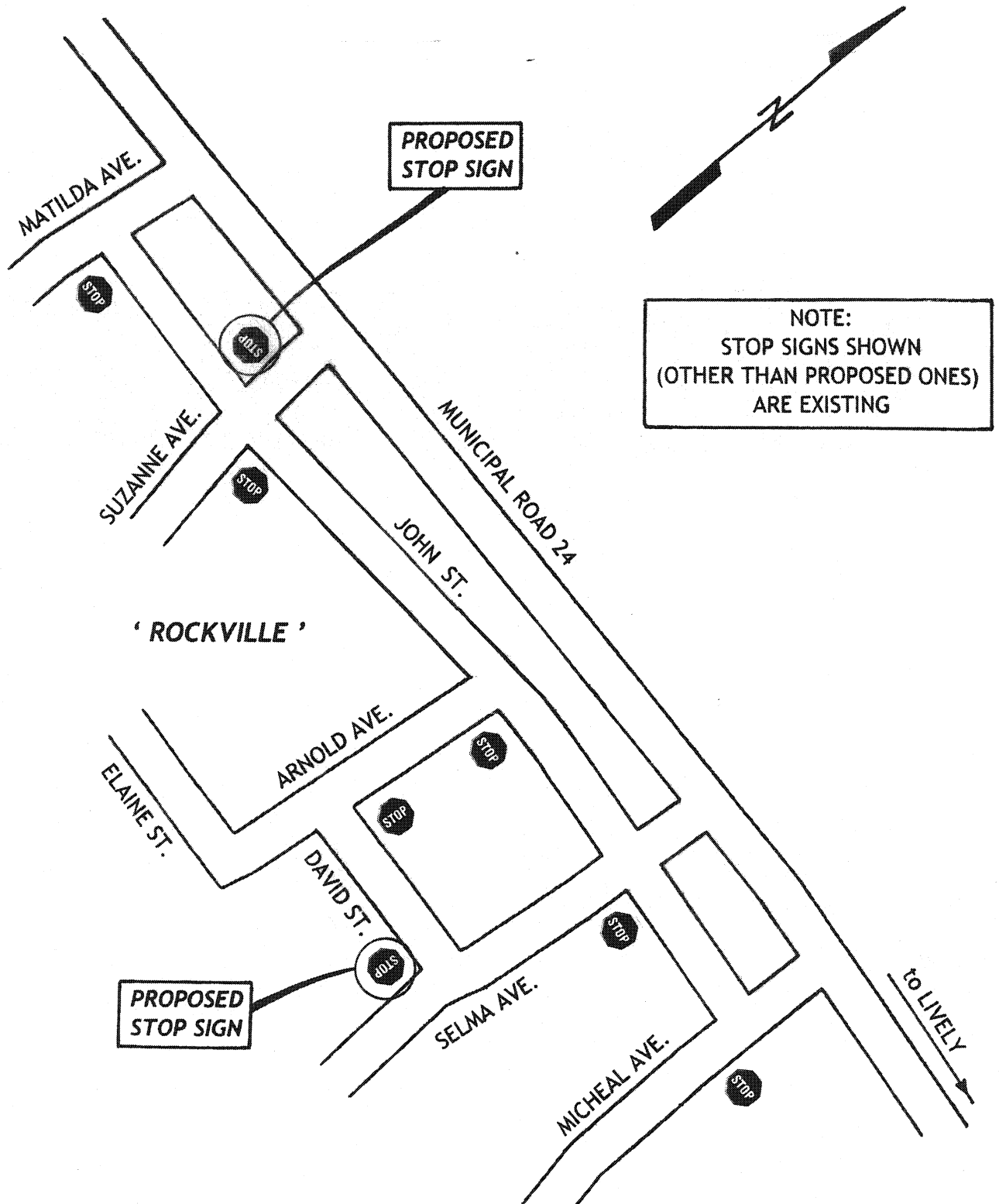


EXHIBIT: B



COMMUNITY OF ROCKVILLE
- WALDEN -

TRAFFIC CONTROL

NOT TO SCALE

2009 - 03 - 25

CITY OF GREATER SUDBURY
SCHEDULE "O" TO BY-LAW 2001-1

STOPS AT INTERSECTIONS

(1)
Intersection

(2)
Direction of Travel

ADD:

David Street – Arnold Avenue (Walden)

West on David Street

David Street – Selma Avenue (Walden)

East on David Street

Matilda Avenue – John Street (Walden)

North on Matilda Avenue

CITY OF GREATER SUDBURY
SCHEDULE "N" TO BY-LAW 2001-1

THROUGH HIGHWAYS

(1)
Highway

(2)
From

(3)
To

ADD:

John Street (Walden)

East Limit, Matilda Avenue

East End

Request for Recommendation Traffic Committee



Type of Decision

Meeting Date	April 8, 2009				Report Date	March 23, 2009			
Recommendation		Yes	<input checked="" type="checkbox"/>	No	Priority	<input checked="" type="checkbox"/>	High		Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed

Report Title

School Zone Speed Limits

Policy Implications + Budget Impact

☒ This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

That the City's Sign Maintenance Budget for new signs be increased by \$20,000 in the years of 2010 and 2011, and;

That the City's Sign Maintenance Budget be increased by \$4,000.

☒ Background attached

Recommendation

That the School Zone Speed Limit Policy be amended to indicate the following:

That a 40 km/h school zone speed limit be installed at schools with primary grade aged students, and;

That the school speed zone be limited to residential streets or residential collector streets, and;

That the maximum speed of the roadways considered for school speed zones be 50 km/h, and;

That if schools are closed, the speed limit will revert back to 50 km/h, and;

Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Doug Nadon
Acting Chief Administrative Officer

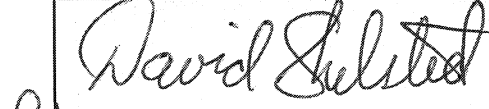
Date: March 23, 2009

Report Authored By



Dave Kivi, Coordinator of Transportation and Traffic,
Engineering Services

Division Review



for Robert M. Falcioni, P. Eng.
Director of Roads and Transportation

Recommendation continued:

That staff be directed to implement the school zone speed limits over a two (2) year period, and;

That only those requests that meet the above criteria be brought forward to City Council for consideration, all in accordance with the report from the General Manager of Infrastructure Services, dated March 23, 2009.

Background:

At the September 11, 2008 Traffic Committee meeting, the Transportation and Traffic Engineering Services Section was asked to prepare a report concerning school zone speed limits.

There are a total of 69 elementary schools in the City of Greater Sudbury, of which 27 (**see Exhibit "A"**) already have an established school zone speed limit of 40 km/h. The City's current School Zone Speed Limit 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 the request for the reduction be brought forward by both the Transportation Officer for the School Board, the Principal of the school and the Parent School Council.
- That only those requests that meet the above four (4) criteria be brought forward by staff to City Council for consideration.

To determine how other Ontario jurisdictions deal with school zone speed limits, staff conducted a survey of ten (10) municipalities. The results of the survey show that seven (7) municipalities currently implement 40 km/h speed limits in their school zones. These municipalities include the City of Barrie, the City of Brockville, the City of Cambridge, the City of Guelph, the City of Newmarket, the City of Oakville and the City of Vaughn.

Should City Council decide to apply the above School Zone Speed Limit Policy without the need for a formal request from school officials, 37 of the remaining 42 elementary schools would meet the criteria for a 40 km/h speed limit (**see Exhibit "B"**).

Date: March 23, 2009

Exhibit "B" lists two (2) schools, École Felix-Ricard and École publique Jean-Ethier Blais, which have addresses on LaSalle Boulevard. According to the stated policy these schools would not qualify because LaSalle Boulevard is a Secondary Arterial roadway. Since access to these schools only occurs from local roadways and not LaSalle Boulevard, it is recommended that only the speed limits on each local roadway be reduced to 40 km/h.

Exhibit "C" outlines the five (5) remaining schools that do not qualify for school zone speed limits as per the policy. Each school's situation is described below:

Larchwood Public School and Wanup Public School are both located on provincial highways and as a result the City does not have the jurisdiction to lower the existing speed limits.

Long Lake Public School fronts Long Lake Road which is classified as a Tertiary Arterial roadway. In the area of the school, Long Lake Road has two (2) lanes with a posted speed limit of 50 km/h and an AADT of 3,900.

École Jean-Paul II has access to both MR 15 and Hope Street in Val Caron. Hope Street already has a posted speed limit of 40 km/h while the posted speed limit on MR 15 is 60 km/h. In the area of the school, MR 15 is a Secondary Arterial roadway with five (5) lanes and an AADT of 14,500.

École publique Jeanne-Sauvé is situated east of Paris Street in the area of Van Horne Street that is classified as a Secondary Arterial roadway. In the area of the school, Van Horne Street is a two (2) lane roadway with a posted speed limit of 50 km/h and an AADT of 8,000.

To implement the speed limit reductions, a minimum of four (4) speed limit signs and two (2) hours of labour will be required per school. Many schools have frontage on more than one (1) street which will require even more signs. Therefore, the total estimated cost to install the signs at the remaining 37 schools is approximately \$40,000. The City's Sign Maintenance Budget should also be increased by \$4,000 per year.

There are a number of benefits to implementing 40 km/h speed limits adjacent to all elementary schools on local and collector roads, including the following:

- Drivers are more likely to obey a reduced speed limit when it is confined to the immediate area of the school on relatively minor roadways.
- It will apply a consistent speed limit to elementary schools in the City of Greater Sudbury.
- It will eliminate some of the "Red Tape" perceived with the existing School Zone Speed Limit Policy.
- It will be consistent with the practices of a number of other Ontario municipalities, and the belief of many residents.

Therefore, based on the above information, staff recommends that the existing school zone speed limit be amended as follows:

- 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 criteria be brought forward by staff to City Council for consideration.

It is also recommended that the speed limit be reduced 150 metres in advance of the school property.

Existing 40 km/h School Zone Speed Limits (Sorted by Ward)

	Name	Speed Limit	Address	Ward
1.	Corpus Christi School	40	811 Robinson Drive	1
2.	École St Paul	40	185 Sixth Avenue	2
3.	George Vanier Public School	40	249 Sixth Avenue	2
4.	Jessie Hamilton Public School	40	16 Jessie Street	2
5.	St. James School	40	280 Anderson Drive	2
6.	Chelmsford Public School	40	121 Charlotte Street	3
7.	St. Charles School	40	26 Charlotte Avenue	3
8.	École Ste-Marie	40	25 Marier Street	4
9.	École publique de la Decouverte	40	1450 Main Street	5
10.	Immaculate Conception School	40	1748 Pierre Street	5
11.	Valleyview Public School	40	1840 Valleyview Road	5
12.	École Notre-Dame	40	4503 Dennie Street	6
13.	École Ste-Therese	40	4617 Ste Therese Street	6
14.	École St-Joseph	40	1215 St Anthony Street	6
15.	Pinecrest Public School	40	1650 Dominion Drive	6
16.	Redwood Acres Public School	40	4625 Carl Street	6
17.	St. Anne School	40	4500 St Michel Street	6
18.	Cyril Varney Public School	40	1545 Gary Street	8
19.	St. Bernadette School	40	870 Auger Avenue	8
20.	Algonquin Road Public School	40	2560 Algonquin Road	9
21.	École St-Denis	40	347 Hyland Drive	10
22.	St. Theresa School	40	56 Walford Road	10
23.	Wembley Public School	40	408 Wembley Drive	10
24.	St. Raphael School	40	1096 Dublin Street	11
25.	Carl A. Nesbitt Public School	40	1241 Roy Street	12
26.	Ernie Checkeris Public School	40	1570 Agincourt Avenue	12
27.	Queen Elizabeth Public School	40	32 Dell Street	12

Schools Qualify for School Zone Speed Limits According to School Zone Speed Reduction Policy (Sorted by Ward)

	Name	Speed Limit	Address	Ward
1.	Alexander Public School	50	39 St Brendan	1
2.	École publique Helene-Gravel	50	1412 Stephen Street	1
3.	Gatchell School	50	31 Tuddenham Avenue	1
4.	Princess Anne Public School	50	500 Douglas Street	1
5.	St. Francis School	50	691 Lilac Street	1
6.	Copper Cliff Public School	50	50 School Street	2
7.	R.H. Murray Public School	50	3 Henry Street	2
8.	Alliance St-Joseph	50	3634 Errington Avenue	3
9.	École St-Etienne	50	79 Houle Avenue	3
10.	École publique Pavillion de l'Avenir	50	370 Cote Avenue	3
11.	Levack Public School	50	100 High Street	3
12.	École publique Franco-Nord	50	178 Junction Avenue	4
13.	Lansdowne Public School	50	185 Lansdowne Street	4
14.	St. David School	50	350 Jean Street	4
15.	École publique Foyer-Jeunesse	50	4752 Notre Dame Avenue	6
16.	C.R. Judd Public School	50	8 Lincoln Street	7
17.	École St-Augustin	50	648 O'Neil Drive	7
18.	Northeastern Elementary School	50	45 Spruce Street	7
19.	St. John School	50	181 William Avenue	7
20.	St. Mary School	50	26 Meehan Avenue	7
21.	Churchill Public School	50	1722 Fielding Street	8
22.	École publique Jean-Ethier-Blais	50	2190 Lasalle Boulevard	8
23.	École St-Dominique	50	2096 Montfort Street	8
24.	Westmount Ave. Public School	50	511 Westmount Avenue	8
25.	École Notre-Dame de la Merci	50	2 Edward Avenue	9
26.	St. Christopher School	50	2843 CKSO Road	9
27.	St. Paul School	50	1 Edward North	9
28.	MacLeod Public School	50	310 Laval Street	10
29.	R.L. Beattie Public School	50	102 Loach's Road	10
30.	Ruth MacMillan Centre	50	674 Kirkwood Drive	10
31.	St. Michael School	50	41 Samson Avenue	10
32.	Adamsdale Public School	50	181 First Avenue	11
33.	École St-Pierre	50	70 Wilfred Street	11
34.	Pius XII School	50	44 Third Avenue	11
35.	École Felix-Ricard	50	691 Lasalle Boulevard	12
36.	École St Joseph	50	100 Bruyere Road	12
37.	St. Andrew School	50	1305 Holland Road	12

Exhibit: C

Schools That Do Not Qualify for School Zone Speed Limits According to School Zone Speed Reduction Policy (Sorted by Ward)

	Name	Speed Limit	Address	Reason	Ward
1.	Larchwood Public School	60	43 Main Street	School is situated on Highway 144	3
2.	École Jean-Paul II	60	1795 Main Street	Main Street (M.R. 15) is a Secondary Arterial roadway in the area of the school and the posted speed limit is 60 km/h	5
3.	Long Lake Public School	50	4420 Long Lake Road	Long Lake Road is a Tertiary Arterial roadway in the area of the school	9
4.	Wanup Public School	70	4543 Highway 537	School is situated on Highway 537	9
5.	École publique Jeanne-Sauvé	50	300 Van Horne Street	Van Horne Street is a Secondary Arterial roadway in the area of the school	10

Request for Recommendation Traffic Committee



Type of Decision

Meeting Date	April 8, 2009				Report Date	March 23, 2009			
Recommendation		Yes	<input checked="" type="checkbox"/>	No	Priority	<input checked="" type="checkbox"/>	High		Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed

Report Title

New Technology and Safety Initiatives - Traffic Control
 1) Audible Pedestrian Signals
 2) Vehicle Activated Traffic Calming Signs
 3) Uninterruptible Power Supplies
 4) Zebra Painted Crosswalks

Policy Implications + Budget Impact

This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified

That the City's budget for new signs be increased by \$50,000 in 2010 to purchase and install 6 new Calming Signs;

That the Annual Sign Maintenance Budget be increased by \$5,000 per year to cover the cost of relocating the Calming Signs on a semi annual basis.

☒ Background attached

Recommendation

1) Audible Pedestrian Signals

That the Capital Roads Budget continue to include funding for the installation of Audible Pedestrian Signals at one (1) intersection per year as identified by the Canadian National Institute for the Blind, and;

2) Vehicle Activated Traffic Calming Signs

That the 2010 Sign Maintenance Budget be increased by \$50,000 to purchase six (6) Vehicle Activated Traffic Calming Signs. The signs are to be installed at locations where speeding problems have been identified on a six (6) month rotational basis, and;

☒ Recommendation attached

Recommended by the Department Head

Greg Clausen, P. Eng.
General Manager of Infrastructure Services

Recommended by the C.A.O.

Doug Nadorozny
Acting Chief Administrative Officer

23

Date: March 23, 2009

Report Authored By



Dave Kivi, Coordinator of Transportation and Traffic,
Engineering Services

Division Review



Robert M. Falcioni, P. Eng.
Director of Roads and Transportation

Recommendation Continued:

3) Uninterruptible Power Supplies (UPS)

That staff continue to purchase and install Uninterruptible Power Supply units for signalized intersections on a priority basis within the existing Capital Roads Budget, and;

4) Zebra Crosswalk Markings

That the Zebra Crosswalk Marking program be expanded to other intersections within current budget limitations where pedestrian conflicts occur such as near schools, hospitals and other high pedestrian generators.

Background:

That Transportation and Traffic Engineering Services Section is responsible for the safe and efficient movement of people and goods in the City of Greater Sudbury. The Section reviews new devices on a continuous basis and implements new programs aimed at increasing safety for pedestrians, vehicles and other road users. This report will be one of a series outlining some new technology and safety initiatives currently being used:

- 1) Audible Pedestrian Signals
- 2) Vehicle Activated Traffic Calming Signs
- 3) Uninterruptible Power Supplies (UPS)
- 4) Zebra Painted Crosswalks

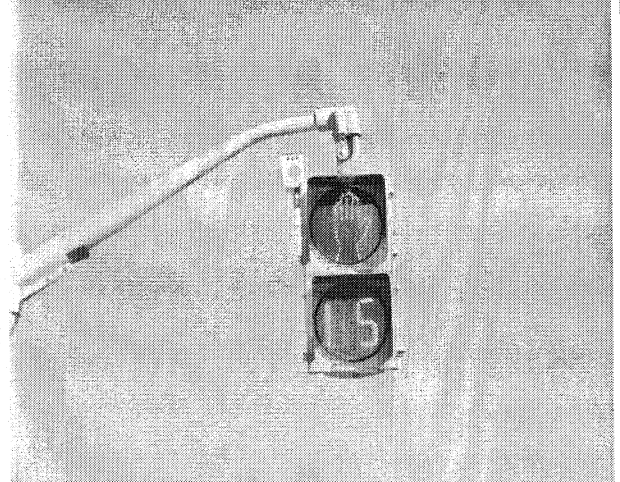
1) Audible Pedestrian Signals

Audible Pedestrian Signals (APS) supplement traditional traffic control signals to help pedestrians with vision loss cross the road. These audible signals act as the walk display for pedestrians who need additional sensory prompts. The "cuckoo" sound indicates that pedestrians may cross in a north-south direction, and the "peep-peep" sound is for east-west crossings.

Date: March 23, 2009

In 1996, the former Regional Municipality of Sudbury partnered with the CNIB to retrofit existing traffic signals with APS units at locations identified by the CNIB. The CNIB paid for the APS units, and the City paid to install and maintain them. Below are the current locations which have the APS units:

- 1) Regent Street at York Street
- 2) Elm Street at Lisgar Street
- 3) Barrydowne Road at New Sudbury Shopping Centre
- 4) MR 80 at MR 15 / Main Street
- 5) Paris Street at Rumball Terrace - Pedestrian Signal
- 6) LaSalle Boulevard, East of Holland Road - Pedestrian Signal

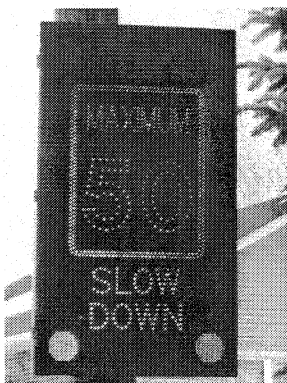


New guidelines recently published by the Transportation Association of Canada changes the “peep-peep” sound for east-west crossings to a “melody” sound. In addition, emphasis is placed on push button locating tones and audible and vibrotactile indications for crossing guidance rather than beaconing, which is currently used.

A typical cross intersection will require eight (8) APS units. The cost to purchase and install them is approximately \$7,000 for the old units and \$ 11,000 for the new push button units. For the last number of years, the CNIB has been unable to fund the cost of purchasing the APS units. Therefore, it is recommended that the Capital Roads Budget include funding for the installation of Audible Pedestrian Signals at one (1) intersection per year as identified by the Canadian National Institute For The Blind. As approved in the 2009 budget, the City will be installing APS at the intersection of Regent Street and Walford Road / Martindale Road this year program.

2) Vehicle Activated Traffic Calming Signs

The City of Greater Sudbury has installed two (2) Vehicle Activated Traffic Calming Signs (Calming Signs) along Southview Drive as a pilot project to raise driver awareness of speeding with the aim to slow operating speed and increase safety.



The Calming Signs are pole mounted devices equipped with radar speed detectors and a LED display (see photo below). The signs are capable of detecting the speed of an approaching vehicle and providing a feedback display to the driver. When combined with a regulatory speed limit sign, a clear message is sent to the drivers that they are travelling too fast.

Date: March 23, 2009

The Calming Signs were installed on Southview Drive on June 5, 2008. The signs operated in covert mode for a period of one (1) week to gather background speed data. After this one (1) week period, the signs were placed into normal operation. In normal operation mode, the signs illuminate to display the speed limit graphic and a "Slow Down" message with flashing beacons when the approaching vehicle is travelling faster than a preset speed. In order to determine the effectiveness of the signs, staff has downloaded the data collected by the Calming Signs from before and after the units were placed into normal operation.

The results are summarized in the following table:

Operating Speed: Before and After Calming Sign Activated

Operating Speed	Before	After
Less than 50 km/h	38 %	59 %
51 km/h - 60 km/h	53 %	38 %
61 km/h - 70 km/h	8 %	3 %
71 km/h - 80 km/h	0.03 %	0.03 %

The preliminary results show that since the Calming Signs have been activated, approximately 59 percent of drivers are now travelling below the 50 km/h speed limit. This is an improvement of 21 percent prior to the activation of the signs. The percentage of vehicles travelling at more than 10 km/h above the speed limit has been reduced from eight (8) percent to only (3) three percent.

The Calming Signs have shown significant improvement in speed limit compliance in their first eight (8) months of operation. Response from the general public has also been positive and staff have received a number of requests for the signs at other locations.

Based on the preliminary analysis, it is recommended that the Transportation and Traffic Engineering Services Section expand the program by purchasing six (6) additional units. The units will be rotated on a six (6) month basis at the most problematic locations. The estimated cost to purchase each unit is \$7,000. The City's Sign Maintenance Budget will need to increase by \$50,000 in 2010 and \$5,000 annually to operate the recommended program.

3) Uninterruptible Power Supplies (UPS)

The City has recently installed and tested Uninterruptible Power Supply (UPS) units at the following three (3) intersections:

- Kingsway at Barrydowne Road
- Kingsway at Falconbridge Highway / Second Avenue
- Regent Street at Paris Street / Long Lake Road

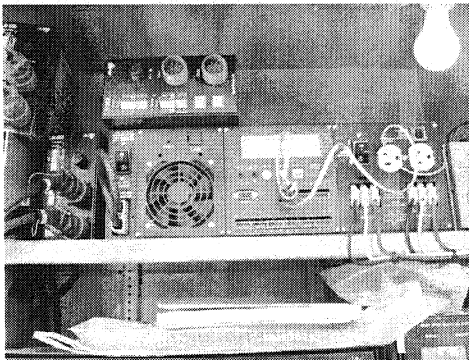
When traffic signals go out due to a power failure, the approaching motorists must yield right-of-way to any other vehicles already in the intersection. In the case where two (2) motorists approach at the same time, the driver on the left must yield to the vehicle on the right. This unusual condition can create operational and safety problems at busy intersections.

Date: March 23, 2009

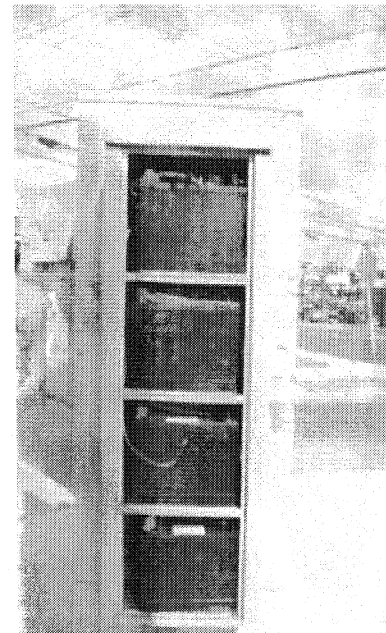
In the event of a power failure, a UPS will provide battery backup power to the traffic signals for up to four (4) hours of normal operation. If power is off for longer than four (4) hours, the signals will continue to operate for another six (6) hours in a flashing mode. In most cases, hydro power will be back on before the initial four (4) hour period is over. The switch over from hydro power to UPS will occur with no interruption to the traffic signals.

To implement a UPS system, the conversion of the signal displays from incandescent bulbs to light emitting diodes (LED) is required. LED signal heads use 90 percent less power than traditional incandescent displays. The lower energy requirement makes the UPS system feasible at any traffic signal in the City, regardless of the number of signal displays.

The initial (3) intersections tested were given high priority to have a UPS installed, due to their high traffic volumes and complexity. Also, these intersections already had LED signal displays installed. Staff will continue to monitor the success of the initial installations, and is planning to expand the UPS system to a number of other intersections this year. Under current budget limits, it will take approximately 25 years to install UPS at all the City's Traffic Signals.



Control Unit



Batteries

Staff recommends that the following criteria be used to establish a priority list of locations for the installation of UPS control:

- 1) Intersections with railroad preemption plans
- 2) Intersections located on high speed roads
- 3) Intersections with high traffic volumes and complex signal phasing

Date: March 23, 2009

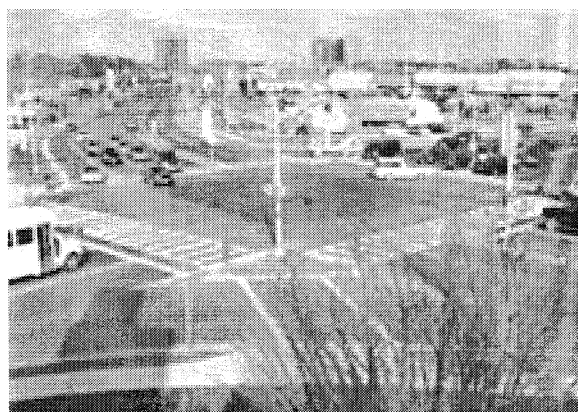
As the UPS program expands, additional criteria can be established to rank the remaining intersections for retrofitting. All newly constructed traffic signals will include a UPS unit. The typical cost to install a UPS unit, which is already equipped with LED displays, is approximately \$4,200. The cost to install a UPS unit at an intersection, which is not equipped with LED displays, is approximately \$7,000 to \$10,000.

As previously approved under this years Capital Roads Budget, we will be installing UPS control at the following intersections. These intersections ranked very high using the above criteria:

- MR 35 at Marier Street
- MR 35 at Montee Principale
- Lorne Street at Regent Street
- Lorne Street at Martindale Road
- Lorne Street at Douglas Street



Zebra Markings

Zebra Markings - Regent Street at
Paris Street / Long Lake Road

4) Zebra Crosswalk Markings

In 2008, the City of Greater Sudbury painted "Zebra Crosswalk" markings at fourteen (14) intersections as a trial, to enhance the visibility of the crosswalk and improve safety for pedestrians.

Zebra crosswalk markings consist of longitudinal white lines painted across the pedestrian crosswalk, parallel to the drivers direction of travel. The lines are 60 cm wide and are spaced 60 cm apart and are painted within the existing crosswalks giving the appearance of a ladder, which is also a common name for the markings (see photo below).

Due to the distinct pattern and large increase in the amount of paint used, zebra striped crosswalks are much more visible to drivers both during the day and at night. The increased visibility helps define the crosswalk as a pedestrian space which is more likely to be respected by drivers. Before and after studies completed by the Region of Waterloo and the City of Toronto have shown that vehicle / pedestrian conflicts are reduced with zebra markings. Both of these municipalities are expanding their zebra marking program, as are many others.

Date: March 23, 2009

The following intersections were chosen as trial locations in 2008 due to previous concerns about pedestrian safety, high volume of pedestrian and vehicle traffic and high percentage of seniors and school aged children:

1. Lasalle Boulevard at Falconbridge Highway
2. Lasalle Boulevard at East of Holland Road - Pedestrian Signal
3. Lasalle Boulevard at Lasalle Court Mall
4. MR 80 at MR 15 / Main Street
5. MR 80 at Dominion Drive
6. MR 80 at Elmview Drive / Deschene Road
7. Paris Street at Brady Street
8. Regent Street at Paris Street / Long Lake Road
9. Regent Street at Lorne Street / Riverside Drive / Ontario Street
10. Paris Street at Rumball Terrace - Pedestrian Signal
11. Paris Street at Southwind Development - Pedestrian Signal
12. Elm Street at Regent Street / Beatty Street
13. Second Avenue North of Kenwood Street - Pedestrian Signal
14. Regent Street at Hazel Street - Pedestrian Signal

As part of the trial for the new zebra markings, staff was asked to track the time and cost to install the markings. The results of the trial shows that a typical four (4) legged intersection takes approximately seven (7) hours to paint at a cost of above \$1,000 with a three (3) person crew. This is approximately double the cost of painting an intersection with conventional crosswalk markings.

One of the draw backs of using standard traffic paint for zebra markings is they are subject to fading through the winter and need to be repainted every year. For comparison purposes, staff received a quotation to install a durable marking material that is inlaid into heated asphalt. While this product will last much longer than paint, the cost was prohibitive at approximately \$40,000 per intersection. The high cost is due to the special equipment that is required which is currently only available in southern Ontario. Staff will continue to look for ways to install zebra markings that will provide longer life in a cost effective manner.

Over the past year, the response from the public to the zebra markings has been very positive. While the City does not currently have budget to implement zebra markings at all 110 signalized intersections. It is recommended that the program be expanded to other locations in 2009 within existing budgets, where pedestrian conflicts regularly occur. High priority will be given to intersections near schools, hospitals and high pedestrian generators such as downtown.