

Request for Recommendation Priorities Committee



Type of Decision

Meeting Date	June 26, 2002				Report Date	June 19, 2002			
Recommendation	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Priority	<input checked="" type="checkbox"/>	High	<input type="checkbox"/>	Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open	<input type="checkbox"/>	Closed

Sub-Committee Check-Off

Please indicate which sub-committee will deal with this issue

<input checked="" type="checkbox"/>	Community Viability	<input type="checkbox"/>	Public & Intergovernmental Affairs	<input type="checkbox"/>	Financial & Program Accountability
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Report Title

Approval of School Crossing Guard Policy

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 School Crossing Guard Policy be approved by Council of the City of Greater Sudbury and that all 42 current school crossing locations be grandfathered with Council's option to review each location change as described in the policy.

Recommendation attached

Recommended by the General Manager

Caroline Hallsworth
General Manager, Citizen and Leisure Services

Recommended by the C.A.O.

Mark Mieto
Acting CAO

**Request for Decision
City Council**



Recommendation <i>continued</i>	X	Background
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Please indicate if the information below is a continuation of the Recommendation or Background

Report Prepared By

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Lisa Church
School Crossing Guard Supervisor

Division Review

Robert Johnston

Robert Johnston
Director, Transportation Services

A school crossing is a form of traffic control where school children are supervised in order to facilitate a safe crossing of a roadway by elementary school aged children. The School Crossing Guard is a vital component of the overall school crossing network. Along with the School Crossing Guard, the policy, warrant criteria, equipment, signage, safety standards and public education are also important safety elements of the school crossing.

The School Crossing Guard service is provided by the municipality in accordance with the Highway Traffic Act. Although school crossings are not a legislative requirement, the City of Greater Sudbury has elected to provide the school crossing service. In the province of Ontario, Municipal School boards do not have the legislated authority to establish new school crossings on their own accord or to provide the school crossing service.

The review of the School Crossing Guard service determined that the existing levels of service between municipalities, prior to amalgamation, varied significantly. City staff have worked towards developing and implementing common policies across the City of Greater Sudbury to achieve a consistent work standard.

There are currently 42 school crossing locations that are staffed by 1 School Crossing Guard per location with the City of Greater Sudbury. To provide for a consistent standard across the City of Greater Sudbury, all School Crossing Guards have had their equipment updated to include Ministry standard equipment.

The 42 School Crossing locations are comprised of the following categories:

- 5 4 way stop crossings
- 19 crossings at an intersection without a stop sign or lights
- 5 mid block crossings
- 8 signalized crossings
- 5 3 way stop crossings

In the review of school crossing locations, the warrant criteria that has been established has been applied to determine the merit of the existing crossings as well as the addition of new crossings. The warrant criteria is based on numbers of children crossing, gap times, sight lines and vehicular traffic flow and speed.

**Request for Decision
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Recommendation <i>continued</i>	X	Background
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Please indicate if the information below is a continuation of the Recommendation or Background

The requirement for the addition or removal of a school crossing location may be influenced by a number of factors. The opening and closing of schools due to changing demographics in the City of Greater Sudbury as well as increased busing options for students are two factors which are given consideration along with the policy, when either adding or removing a location. All four school boards in the City of Greater Sudbury participate in the Sudbury Student Services Consortium which manages transportation for all students in the City of Greater Sudbury. City staff, in cooperation with the consortium have worked cooperatively to provide busing options for children where a school crossing is not warranted.

The approval of the School Crossing Guard Policy will allow for the consistent evaluation of all School Crossing locations as well as assist in the implementation of common policies. The School Crossing Guard Policy will allow for a high standard service for the children our community.

In this document we present to Council the following 2 options:

Option 1 That the School Crossing Guard Policy be approved by Council of the City of Greater Sudbury and that all 42 current school crossing locations be grandfathered with Council's option to review each location change as described in the policy.

Option 2 That the School Crossing Guard Policy be approved by Council of the City of Greater Sudbury and applied immediately which would result in the removal of 11 locations.

Option 1 is recommended by staff as it preserves the current service levels while establishing measurable criteria for the application of the School Crossing Guard Policy.

CITY OF GREATER SUDBURY SCHOOL CROSSING GUARD POLICY

BACKGROUND

A School Crossing is a form of traffic control where school children are supervised by a School Crossing Guard in order to facilitate a safe crossing of a roadway

The purpose of a school crossing **warrant system** is to ensure the safety of school children by providing safe, reliable, and consistent criteria for the determination of crossing locations. *Section 176 of the Highway Traffic Act R.S.O. 1990*, provides the legislation governing the deployment of the School Crossing Guards. The warrant criteria established in this policy document is based upon recommendations of the "1992 School Crossing Review" undertaken by the Ministry of Transportation, which has been recognized and adopted by municipalities in Ontario as a uniform standard.

Although municipal school crossings are not a legislative requirement, the City of Greater Sudbury has elected to provide this service for the children of our community. All School Crossing Guards are employed by the City. This service may also be delivered by a firm under contract to the City. In the province of Ontario, School Boards do not have the legislated authority to establish School Crossings on their own accord or to provide the service.

The warrant criteria established for the City of Greater Sudbury is based on the number of children crossing at a school location in conjunction with established engineering principles such as "Gap Times" and "Sight Visibility" which quantifies and tests the safety factors of a school crossing location, as defined by the Ministry of Transportation Review document standards.

WARRANT SYSTEM

ADDING A SCHOOL CROSSING LOCATION

A School Crossing Guard will be added at a location within the City of Greater Sudbury when both Criteria I (Number of School Children) & Criteria II (Gap Time or Sight Lines) are met.

Criteria I

Number of School Children

A minimum of 40 elementary school children cross a two lane street with a regulatory speed limit of 40 km/hour or 50 km/hour or, 20 children crossing a major arterial road with two or four lanes with a regulatory speed limit of 60 km/hour.

Criteria II

Gap Time

Fewer than 5 sufficient time gaps (based on five minute time frames) during the defined periods children go to school, namely before and after school, are available for children to cross a roadway safely. Appendix I attached to this report provides the Gap Time formula calculations.

OR

Sight Lines

Insufficient sight visibility distances are provided for either the child or the driver at a crossing location. Appendix II attached to this report defines the sight visibility distances formula calculations.

DELETING A SCHOOL CROSSING LOCATION

A school crossing guard location will be deleted when either criteria III & IV are met.

Criteria III

Number of School Children

The number of elementary school children crossing a two lane street with a regulatory speed limit of 50 km/hour decreases to 20 students or less; or the number of school children crossing a major arterial road with two or four lanes with a regulatory speed limit of 60 km/hour decreases to 10 students or less.

Criteria IV

Gap Time

Street conditions are altered either through design or other external factors which results in an increase in Gap Times such that there are five (5) or more sufficient gaps (based on five minute time frames) during the defined periods children go to school, namely before and after school, which are available for children to cross a roadway safely.

Sight Lines

The sight visibility distances improve through design or external factors which are sufficient to provided for the safe crossing of elementary school children at the crossing location.

AUTHORITY

Any changes in service levels will be brought before Council for their consideration.

APPENDIX I

TABLE 1

Adequate Gap Time
(In Seconds)

$$G = \frac{w}{1.1} + 4 + (N-1)2$$

Critical Width w, (metres)	Number of Rows, N									
	1	2	3	4	5	6	7	8	9	10
4	8	10	12	14	16	18	20	22	24	26
5	9	11	13	15	17	19	21	23	25	27
6	10	12	14	16	18	20	22	24	26	28
7	11	13	15	17	19	21	23	25	27	29
8	12	14	16	18	20	22	24	26	28	30
9	13	15	17	19	21	23	25	27	29	31
10	14	16	18	20	22	24	26	28	30	32
11	14	16	18	20	22	24	26	28	30	32
12	15	17	19	21	23	25	27	29	31	33
13	16	18	20	22	24	26	28	30	32	34
14	17	19	21	23	25	27	29	31	33	35
15	18	20	22	24	26	28	30	32	34	36
16	19	21	23	25	27	29	31	33	35	37
17	20	22	24	26	28	30	32	34	36	38
18	21	23	25	27	29	31	33	35	37	39
19	22	24	26	28	30	32	34	36	38	40
20	23	25	27	29	31	33	35	37	39	41
21	24	26	28	30	32	34	36	38	40	42
22	24	26	28	30	32	34	36	38	40	42
23	25	27	29	31	33	35	37	39	41	43
24	26	28	30	32	34	36	38	40	42	44
25	27	29	31	33	35	37	39	41	43	45

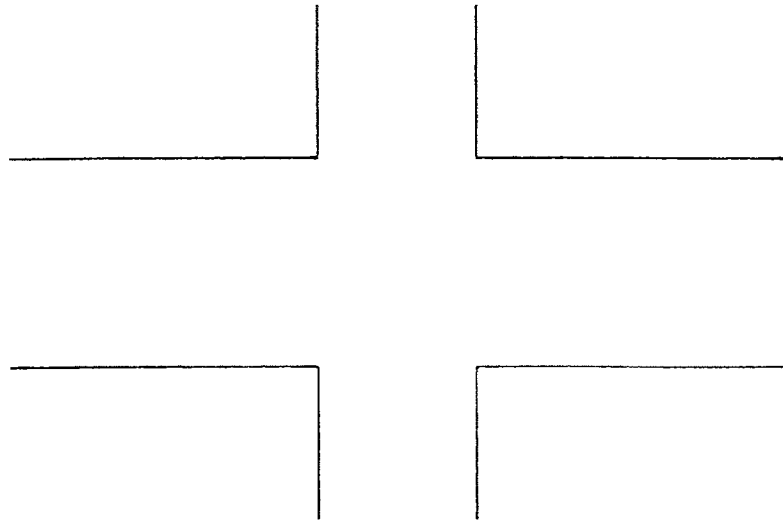
APPENDIX II

FIGURE 1
EXISTING BASE DATA

LOCATION:

DATE:

SUBMITTED BY:



DATA TO BE COLLECTED:

- critical width of the roadway (the distance children must actually walk measured at the point from which a child starts onto the roadway to the point at which they leave the roadway)
- pavement width - type and condition
- shoulder width - type and condition
- sidewalks - type, width, condition
- pavement markings
- adjoining property - type, usage, driveways, ramps
- poles - purpose and location
- signs - type and position
- bus stops
- parking restrictions
- grade of roads
- speed limit (and 85th percentile on each approach)
- existing pedestrian and traffic control
- sight restrictions

TABLE 2

Child's Visibility Distance

$$V_m = \frac{w}{1.1} \times \text{Speed Limit (km/h)} \times .2777$$

Critical Width w, (metres)	Speed Limit (km/h)					
	10	20	30	40	50	60
4	11	21	31	41	51	61
5	13	26	39	51	64	76
6	16	31	46	61	76	91
7	18	36	54	71	89	107
8	21	41	61	81	101	122
9	23	46	69	91	114	137
10	26	51	76	101	127	152
11	28	56	84	112	139	167
12	31	61	91	122	152	182
13	33	66	99	132	165	197
14	36	71	107	142	177	213
15	38	76	114	152	190	228
16	41	81	122	162	202	243
17	43	86	129	172	215	258
18	46	91	137	182	228	273
19	48	96	144	192	240	288
20	51	101	152	202	253	303
21	54	107	160	213	266	319
22	56	112	167	223	278	334
23	59	117	175	233	291	349
24	61	122	182	243	303	364
25	64	127	190	253	316	379

TABLE 3

Driver Stopping Sight Distance

$$SSD = .278PV + \frac{v^2}{255(f+g)}$$

% GRADE	Speed Limit (km/h)					
	30	40	50	60	70	80
-10	33	51	74	106	140	181
- 9	32	50	72	103	136	175
- 8	32	49	71	101	132	170
- 7	32	49	70	98	129	165
- 6	31	48	69	96	126	160
- 5	31	47	67	94	123	156
- 4	31	47	66	92	120	152
- 3	30	46	65	90	117	149
- 2	30	46	64	89	115	145
- 1	30	45	64	87	113	142
0	30	45	63	86	111	139
1	29	44	62	84	109	137
2	29	44	61	83	107	134
3	29	43	61	82	105	132
4	29	43	60	81	104	129
5	29	43	59	80	102	127
6	29	42	59	79	101	125
7	28	42	58	78	99	123
8	28	42	58	77	98	122
9	28	41	57	76	97	120
10	28	41	57	75	96	118

Based on Driver Perception-Reaction Time of 2.5 seconds

COEFFICIENT OF FRICTION - METRIC	
KM/H	f
30	.40
40	.37
50	.35
60	.32
70	.31
80	.30

