Managers' Reports

Request for Decision
City Council

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Type of Decision

Meeting Date	August 19th, 2004					Report Date	August 13th, 2004			
Decision Requested		X	Yes		No	Priority		High		Low
			Direction Only			Type of Meeting	X	Open		Closed

Report Title

City of Greater Sudbury Fire Services 2004 Capital Procurement Purchase Plan

Policy Implication + Budget Impact

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

Refer to Report that appeared on July 13th, 2004 Council Agenda.

X	Background Attached

Recommendation

Council will consider Resolution #2004-415

	Recommendation Continued

Recommended by the General Manager

Alan Stephen
General Manager of Emergency Services

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

Report Prepared By	Division Review
Alan Stephen General Manager of Emergency Services	

Summary:

As per the request from Council at their meeting of 12 August 2004, the following information is provided to Council to assist them in their reconsideration of the 2004 Fire Capital Program.

A request to Council (Reference A) was presented to Council on 13 July 2004 requesting that they consider the 2004 Fire Capital Program initially approved by Finance Committee Resolution 2004-415 be replaced with a revised Capital Procurement Plan which would allow the CGS Fire Service to immediately purchase the following vehicles, equipment and personal protective equipment:

a. Four Hundred (400) sets of Bunker Gear

b. Three (3)-75-foot Aerial/Squirt Vehicles

c. Three (3) Bush/Off Road Fire Fighting Vehicles

d. Two (2) Water Rescue Boats with Trailers

e. Convert and existing vehicle into a High Capacity Water Tanker

f. Purchase a variety of miscellaneous fire fighting equipment

g. AlerTech Funding

On July 2004, Emergency Services were given authority to expend IAW Reference A, $3,404,820.00 over a five-year period.

The following is the status of expenditures on the 2004 Fire Capital Procurement Plan:

a. Four Hundred (400) sets of Bunker Gear. 300 sets of Bunker Gear has been ordered, awarded to Metz Fire of Southern Ontario, $495,000.00 is committed.

b. Three (3)-75-foot Aerial/Squirt Vehicles. The RFP for the Aerials was due to be opened on August 17, zero commitment at this time.

c. Three (3) Bush/Off Road Fire Fighting Vehicles. Three bush vehicles have been ordered and awarded. $330,000.00 has been committed. (Locally CrossTown Chev Olds Sudbury has been awarded the chassis portion of the contract and an Ottawa based firm the equipment functions.)

d. Two (2) Water Rescue Boats with Trailers. Specs are currently at Purchasing, zero commitment at this time.

e. Convert an existing vehicle into a High Capacity Water Tanker. Specs at purchasing, zero commitment at this time.

f. Purchase a variety of miscellaneous fire fighting equipment, $126,000.00 awarded, ordered and committed at this time.

g. Alertech Funding Commitment, $53,000.00 committed at this time.

Total Committed is: $1,004,000.00

BACKGROUND

During the 2004 budget process, the staff presented a 2004 Capital Equipment Acquisition requirements list based on Fire Service needs. This included a variety of fire vehicles/apparatus, fire rescue equipment, personal protective equipment and construction requirements.

The 2004 funding allocated to Fire Services fell far short of meeting these needs, and only a limited Capital Program could be undertaken.

The Fire Service determined that there was funding available from current and previous fiscal years as follows:

•2002 Unexpended Capital - firefighting equipment & misc	$ 138,067
•2003 Unexpended Capital - Pumper/rescue vehicle	$ 723,167
•2004 Capital Envelope	$ 179,820
•Capital Financing Reserve Fund - Fire	$ 113,300
•Equipment Replacement Reserve Fund - Fire	$ 520,760
•Total Up-Front Funding	$ 1,675,114

Even with this up-front funding there was a shortfall of $1,729,706.

Emergency Services then approached our Finance Division for assistance. The staff determined that if we were to purchase this equipment over a 5-year "lease to purchase" period, the cost would be approximately $399,519 per year for the five-year period.

The Finance Division recommended financing the vehicles/apparatus and equipment through the Capital Fund and committing a portion of future contributions to the Equipment Replacement Reserve Fund to the repayment schedule.

By not committing future years' capital envelopes, the Fire Service will still have an annual allotment to fund essential minor equipment purchases for needs such as hoses, pumps, generators, SCBA's , etc.

The equipment requirements listed on the Report will only meet the CGS Fire Services current fire and rescue suppression needs. It was detailed that should Council not authorize the expenditures this could severely hamper the Fire Services operational capability. The Report indicated those operational impacts.

REFERENCE DOCUMENTS

The staff has attached the following reference documents to assist Council in providing background prior to our "in-camera " briefing the week of 16 August:

Document 1. Request for Decision. CGS Fire Services 2004 Capital Procurement Plan

Document 2. CGS 2004 Capital Equipment Plan. Power Point presentation.

Document 3. STATUS REPORT CGS MASTER FIRE PLAN. Of particular reference, we would point out pages: VIII, 33, 34,38, 43, and 45.

Document 4. CGS Fire Services FLEET RATIONALIZATION PLAN dated December 2003.

Document 5. Variety of Information on Wildland Fire Fighting background information. This will provide background to our requirement to purchase Bush Fire Fighting vehicles.

Document 6. Variety of information on the use and employment of aerial fire fighting vehicles. This will provide background information to our requirement to purchase aerial/squirt type vehicles for residential and industrial

Document 7. America at Risk. Finding and Recommendations on the role of the fire Service in the prevention and Control of Risks in America. Corner stone document for Fire Services in North America. Of particular interest staff would point out pages: 12, 13, 15, 26, 27, 28.

Document 8. City of Winnipeg – Comprehensive Risk Analysis for Winnipeg Emergency Response Service Department. Of particular interest staff has included the Executive Summary and the Fire Operations portions of their 164 page report. Staff has attached this document as it forms the basis of what CGS is striving to accomplish from a fully integrated Fire and Emergency Medical Services Department. Winnipeg like CGS is struggling with many of the same challenges.

Request for Decision
City Council

Greater | Grand Sudbury
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Type of Decision

Meeting Date	July 13th, 2004				Report Date	July 9 th, 2004				
Decision Requested	X	Yes		No	Priority	X	High		Low	
		Direction Only			Type of Meeting	X	Open		Closed	

Report Title

City of Greater Sudbury Fire Services 2004 Capital Procurement Purchase Plan

Policy Implication + Budget Impact

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

This certifies that this future commitment is within the Annual Repayment Limit for the City of Greater Sudbury as recalculated.

S. Jonasson
City Treasurer/Director of Finance

	Background Attached

Recommendation

That the 2004 Fire Capital Program initially approved by Finance Committee Resolution 2004-45 be replaced with the following capital program:

Four Hundred (400) sets of Bunker Gear	$ 650,000
Three (3) 75-foot Aerial/Squirt Vehicles	2,100,000
Three (3) Bush/Off Road Fire Fighting Vehicles	330,000
Two (2) Water Rescue Boats with Trailers	80,000
One (1) High Capacity Water Tanker	65,000
Miscellaneous equipment	126,820
AlerTech funding commitment	53,000
TOTAL CAPITAL PROGRAM	$ 3,404,820

X	Recommendation Continued

Recommended by the General Manager

A. F Stephen, GM Emergency Services

Recommended by the C.A.O.

Mark Mieto, CAO

Report Prepared By	Division Review
D. Donaldson/ns	
Donald Donaldson, Fire Chief	AF Stephen GM Emergency Services

with up-front funding provided as follows:

Reallocation of 2002 Unexpended Capital	$ 138,067
Reallocation of 2003 Unexpended Capital	723,167
Fire Capital Financing Reserve Fund (at the end of 2003)	113,300
Equipment Replacement Reserve Fund (at the end of 2003)	520,760
2004 Capital Envelope	179,820
Total Up-Front Funding	$ 1,675,114

That the balance of the program, $1,729,706, be financed through an advance from the Capital Fund, amortized over a five-year period at a rate of 5%, all of which is in compliance with the City's Investment Policy; and

That a portion of future contributions to the equipment replacement reserve fund be committed towards lease repayments, which includes interest of $ 267,890, as follows:

2004 Equipment Replacement Reserve Fund contribution	$ 199,760
2005 Equipment Replacement Reserve Fund contribution	399,519
2006 Equipment Replacement Reserve Fund contribution	399,519
2007 Equipment Replacement Reserve Fund contribution	399,519
2008 Equipment Replacement Reserve Fund contribution	399,519
2009 Equipment Replacement Reserve Fund contribution	199,760
Total Reserve Fund Contributions	$ 1,997,596
TOTAL FUNDING	$ 3,672,710

Background

The City of Greater Sudbury has a Composite Fire Service combining the strengths of career, part-time and volunteer firefighters. Within the Fire Services Division, we provide three basic services to the citizens of this city including: Public Safety Education and Prevention; Fire Safety Standards and Enforcement and Emergency Response and Suppression.

The principle objective of our Fire Service is fire avoidance and increased fire prevention effectiveness. That being said, the Fire Service must continue to provide timely response in the event of an emergency to mitigate effects of incidents. On the emergency response side, the Division has been responding to a number of calls for our assistance. During 2003, there were approximately 4500 emergency responses. They are handled by staff from our 25 fire stations, located across the city.

In September of this year, we will be briefing you on our recommendations for the City of Greater Sudbury's Master Fire Plan in order to receive your direction to establish our vision, mission and goals for the period 2005 to 2015. We believe that you will be directing us to enhance and, where required, expand our current capabilities to include the following: fire prevention and education, fire standards enforcement, fire rescue, fire suppression including structure, open field, and aircraft, vehicular extrication, HAZMAT ranging from Level 1 to 3, on-water/over-ice/rough terrain/high angle and confined space rescue. This Plan will include equipment needs, for which no funding is available. Council has committed to implementing a Capital Levy in 2005, and has directed that this Levy be utilized for Roads capital projects in 2005 and 2006. It is hoped that the 2007 Capital Levy will be directed to the funding shortfall for equipment, not only in Fire Services but in Public Works and Transit as well.

2004 Equipment Requirements

During the 2004 budget process, we presented a 2004 Capital Equipment Acquisition requirements list based on fire service needs. This included a variety of fire vehicles/apparatus, fire rescue equipment, personal protective equipment and construction requirements. The 2004 funding allocated to Fire Services fell far short of meeting these needs, and only a limited capital program could be undertaken. However, Fire Services has an immediate need to procure the following additional apparatus and protective equipment to enable us to meet our current mandated fire suppression and rescue mandate/mission:

a. 400 sets of bunker gear;
b. Three (3) 75 ft aerial/squirt vehicles;
c. Three (3) bush/off road fire fighting vehicles;
d. Two (2) water rescue boats with trailers; and
e. One (1) high capacity water tanker.

The cost to procure the equipment listed above was initially forecast to be $3,375,000. The Fire Service immediately began to research alternative ways to meet our requirements within the budget allocated. This included amending specifications to minimum levels and utilizing a rebuilt vehicle replacement criteria. Through this re-assessment, the Fire Service reduced the overall financial requirements to $3,225,000. With the miscellaneous equipment amount of $126,820 (which is a redirection of previously authorized capital funding for minor equipment needs) and the funding commitment to AlerTech (which remains unchanged at $53,000 as initially approved) the revised financial requirements amount to $3,404,820.

The Fire Service also determined that there was funding available from current and previous fiscal years as follows:

2002 Unexpended Capital - firefighting equipment & misc	$ 138,067	
2003 Unexpended Capital - pumper/rescue vehicle	723,167	
2004 Capital Envelope	179,820	
Capital Financing Reserve Fund - Fire	113,300	(this is the full balance of the reserve fund at the end of 2003)
Equipment Replacement Reserve Fund - Fire	520,760	(this is the full balance of the reserve fund at the end of 2003)
Total Up-Front Funding	$ 1,675,114	

Even with this up-front funding there was a shortfall of $1,729,706. We then approached our Finance Division for assistance. We determined that if we were to purchase this equipment over a 5-year "lease to purchase" period, the cost would be approximately $399,519 per year for the five year period. The Finance Division recommended financing the vehicles/apparatus and equipment through the Capital Fund and committing a portion of future contributions to the equipment replacement reserve fund to the repayment schedule. Under the terms of the City's Investment Policy, this loan could be repaid to the Capital Fund at a rate of 5% whereas a commercial rate would range from 7% to 9%.

By not committing future years' capital envelopes, Fire Services will still have an annual allotment to fund essential minor equipment purchases or replacements for needs such as hoses, pumps, generators, SCBAs, etc. However, the necessity to commit the bulk of future reserve fund contributions to equipment replacement will leave Fire Services with very little contingency funding for any capital procurement requirements that Council may wish to authorize in the Master Fire Plan implementation for the period 2005 to 2015. It cannot be emphasized enough that there is an urgent need to commit the 2007 Capital Levy to meet the funding shortfall for all equipment needs.

The equipment requirements listed above will meet our current fire rescue and suppression needs. Should Council not authorize the expenditures outlined above, this will severely hamper our operational capability.

For example, our Volunteer Bunker Gear is in desperate need of replacement. Without immediate replacement, we might have to limit the rescue capability of the volunteer service to outside fire suppression only. Without this new bunker gear, the volunteers increase their exposure to danger when entering a high risk fire area. As well, the City could face a Ministry of Labour order to replace the Volunteer Bunker Gear.

Three aerial squirts are required to replace an aging aerial and pumper fleet. We are having an extremely difficult time maintaining and keeping these vehicles in service. Currently, we are re-allocating fire apparatus to meet vehicle non-serviceability and, at times, there are areas within CGS that we are having difficulty covering within the prescribed time-frames with appropriate equipment.

We are currently unable to provide the immediate response to all areas (3600 sq km) of the CGS with respect to fighting bush fires and to initiate initial rough terrain fire rescue for incidents such as air crashes and isolated structural fires. The purchase of bush/off road fire fighting vehicles will enable us to respond to these types of calls.

Currently, the Fire Service has withdrawn all non-authorized "fishing type boats" given the threat they represent to our fire-fighters. At this time, our Fire Service can only conduct shore based rescue. Without proper rescue boats, we are unable to respond to an on-water emergency.

Although we are currently taking receipt of three water-tankers, we do not have a full complement of tankers. Our capacity to meet our water haulage capability to rural areas continues to be a challenge. We currently have a "Bronto" vehicle which we can convert to a high capacity water tanker for 10% of the cost of a new tanker.

City of Greater Sudbury Fire Services

2004 Capital Equipment Program

2004 Capital Equipment Program

That the 2004 Fire Capital Program initially approved by Finance Committee Resolution 2004-45 be replaced with the following capital program:

• Four Hundred (400) sets of Bunker Gear	$ 650,000
• Three (3) 75-foot Aerial/Squirt Vehicles	$2,100,000
• Three (3) Bush/Off Road Fire Fighting Vehicle	$ 330,000
• Two (2) Water Rescue Boats with Trailers	$ 80,000
• One (1) High Capacity Water Tanker	$ 65,000
• Miscellaneous equipment	$ 126,820
• AlerTech funding commitment	$ 53,000
TOTAL CAPITAL PROGRAM	**$ 3,404,820**

2004 Capital Equipment Program

Background

- The City of Greater Sudbury has a Composite Fire Service combining the strengths of career, part-time and volunteer firefighters. Within the Fire Services Division, we provide three basic services to the citizens of this city including: Public Safety Education and Prevention; Fire Safety Standards and Enforcement and Emergency Response and Suppression.

- The principle objective of our Fire Service is fire avoidance and increased fire prevention effectiveness. That being said, the Fire Service must continue to provide timely response in the event of an emergency to mitigate effects of incidents. On the emergency response side, the Division has been responding to a number of calls for our assistance. During 2003, there were approximately 4500 emergency responses. They are handled by staff from our 25 fire stations, located across the city.

2004 Capital Equipment Program

- In September of this year, we will be briefing you on our recommendations for the CGS MFP in order to receive your direction to establish our vision, mission and goals for the period 2005 to 2015.
- We believe that you will be directing us to enhance and, where required, expand our current capabilities to include the following: fire prevention and education, fire standards enforcement, fire rescue, fire suppression including structure, open field, and aircraft, vehicular extrication, HAZMAT ranging from Level 1 to 3, on-water / over-ice / rough terrain/high angle and confined space rescue.
- This Plan will include equipment needs, for which no funding is available. Council has committed to implementing a Capital Levy in 2005, and has directed that this Levy be utilized for Roads capital projects in 2005 and 2006.
- It is hoped that the 2007 Capital Levy will be directed to the funding shortfall for equipment, not only in Fire Services but in Public Works and Transit as well.

2004 Capital Equipment Program

2004 Equipment Requirements

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- The 2004 funding allocated to Fire Services fell far short of meeting these needs, and only a limited capital program could be undertaken.
- However, Fire Services has an immediate need to procure the following additional apparatus and protective equipment to enable us to meet our current mandated fire suppression and rescue mandate/mission:
    - a. 400 sets of bunker gear;
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    - d. Two (2) water rescue boats with trailers; and
    - e. One (1) high capacity water tanker.

2004 Capital Equipment Program

- The cost to procure the equipment listed above was initially forecast to be $3,375,000.
- The Fire Service immediately began to research alternative ways to meet our requirements within the budget allocated.
- This included amending specifications to minimum levels and utilizing a rebuilt vehicle replacement criteria.
- Through this re-assessment, the Fire Service reduced the overall financial requirements to $3,225,000. With the miscellaneous equipment amount of $126,820 (which is a redirection of previously authorized capital funding for minor equipment needs) and the funding commitment to AlerTech (which remains unchanged at $53,000 as initially approved) the revised financial requirements amount to $3,404,820.

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  (this is the full balance of the reserve fund at the end of 2003)
- Equipment Replacement Reserve Fund - Fire $ 520,760
  (this is the full balance of the reserve fund at the end of 2003)

- Total Up-Front Funding $ 1,675,114

2004 Capital Equipment Program

- Even with this up-front funding there was a shortfall of $1,729,706.
- We then approached our Finance Division for assistance. We determined that if we were to purchase this equipment over a 5-year "lease to purchase" period, the cost would be approximately $399,519 per year for the five year period.
- The Finance Division recommended financing the vehicles/apparatus and equipment through the Capital Fund and committing a portion of future contributions to the equipment replacement reserve fund to the repayment schedule.
- Under the terms of the City's Investment Policy, this loan could be repaid to the Capital Fund at a rate of 5% whereas a commercial rate would range from 7% to 9%.

2004 Capital Equipment Program

That the balance of the program, $1,129,706, be financed through an advance from the Capital Fund, amortized over a five-year period at a rate of 5%, all of which is in compliance with the City's Investment Policy; and that a portion of future contributions to the equipment replacement reserve fund be committed towards lease repayments, which includes interest of $ 174,964, as follows

2004 Eqpt Repl Res Fund contribution	$ 199,760
2005 Eqpt Repl Res Fund contribution	$ 399,519
2006 Eqpt Repl Res Fund contribution	$ 399,519
2007 Eqpt Repl Res Fund contribution	$ 399,519
2008 Eqpt Repl Res Fund contribution	$ 399,519
2009 Eqpt Repl Res Fund contribution	$ 199,760
Total Reserve Fund Contributions	$ 1,997,596

2004 Capital Equipment Program

- By not committing future years' capital envelopes, Fire Services will still have an annual allotment to fund essential minor equipment purchases or replacements for needs such as hoses, pumps, generators, SCBAs, etc.
- However, the necessity to commit the bulk of future reserve fund contributions to equipment replacement will leave Fire Services with very little contingency funding for any capital procurement requirements that Council may wish to authorize in the Master Fire Plan implementation for the period 2005 to 2015.
- It cannot be emphasized enough that there is an urgent need to commit the 2007 Capital Levy to meet the funding shortfall for all equipment needs.

2004 Capital Equipment Program

- The equipment requirements listed above will meet our current fire rescue and suppression needs. Should Council not authorize the expenditures outlined above, this will severely hamper our operational capability.

- Volunteer Bunker Gear is in desperate need of replacement. Without immediate replacement, we might have to limit the rescue capability of the volunteer service to outside fire suppression only. Without this new bunker gear, the volunteers increase their exposure to danger when entering a high risk fire area..

- Three aerial squirts are required to replace an aging aerial and pumper fleet. We are having an extremely difficult time maintaining and keeping these vehicles in service. Currently, we are re-allocating fire apparatus to meet vehicle non-serviceability and, at times, there are areas within CGS that we are having difficulty covering within the prescribed time-frames with appropriate equipment.

2004 Capital Equipment Program

- We are currently unable to provide the immediate response to all areas (3600 sq km) of the CGS with respect to fighting bush fires and to initiate initial rough terrain fire rescue for incidents such as air crashes and isolated structural fires. The purchase of bush/off road fire fighting vehicles will enable us to respond to these types of calls.

- Currently, the Fire Service has withdrawn all non-authorized "fishing type boats" given the threat they represent to our fire-fighters. At this time, our Fire Service can only conduct shore based rescue. Without proper rescue boats, we are unable to respond to an on-water emergency.

- Although we are currently taking receipt of three water-tankers, we do not have a full complement of tankers. Our capacity to meet our water haulage capability to rural areas continues to be a challenge. We currently have a "Bronto" vehicle which we can convert to a high capacity water tanker for 10% of the cost of a new tanker.

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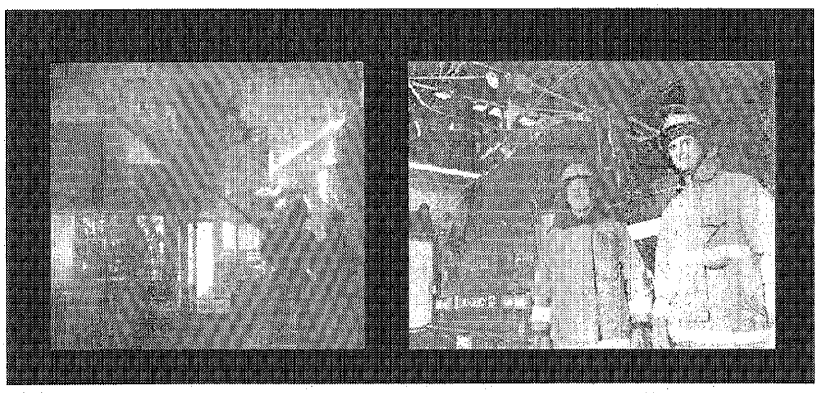
• Miscellaneous equipment	$ 126,820
• AlerTech funding commitment	$ 53,000
TOTAL CAPITAL PROGRAM	**$ 3,404,820**



D R A F T

Master Fire Plan

City of Greater Sudbury
February 25th, 2004

GREATER·GRAND SUDBURY
EMERGENCY SERVICES
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The built up area of the former City of Sudbury is protected predominately by career firefighters based at station. In this area the fire service strives to deliver an ***initial*** response by a minimum of 10 firefighters within 10 minutes of an alarm. By multi-tasking this level of response will enable firefighters to concurrently undertake interior fire suppression and rescue activities. To achieve this objective the common practice is to deploy a minimum of two companies or stations concurrently. If upon arrival at scene, it is determined that the situation warrants additional resources, then they are called in.

The built up area of the former City of Valley East is protected by a composite firefighter force. In this area the fire service strives to deliver a response by a minimum of 10 firefighters within 10 minutes of an alarm. To achieve this objective the common practice is to deploy three stations concurrently (Val Therese, Val Caron and Hanmer stations). The response will consist of two on duty career firefighters and three volunteer brigades.

The rural / remote areas of the community are protected solely by volunteer fire fighting staff. In these areas the fire service strives to deliver a response by a minimum of 10 firefighters within 10 minutes of an alarm. To achieve this objective the common practice is to deploy two volunteer stations concurrently. The response will consist of two volunteer brigades.

The City's fire service will not always achieve these targets. This is particularly true in areas outside of the built up portion of the City core. The reasons include the City's vast geographic area, the mix of small urban communities separated by rural development and vast tracts of undeveloped land, and the numerous relatively isolated population centres.

The fire services' ability to achieve the objectives depends greatly upon a sufficient number of volunteer firefighters responding rapidly when paged. Despite best efforts, unfortunately this does not always happen. A minimum of 4 firefighters are required before interior fire suppression can be commenced. If less than 4 volunteer firefighters arrive scene residents may expect only exterior fire fighting activities.

If it takes longer than 10 minutes for firefighters to arrive at the scene of a structure fire, the resident may expect only exterior fire fighting activities. Another mitigating consideration are concurrent multiple calls originating in the same geographic area, as fire resources may already be preoccupied.

The targets set out above are based on guidelines for firefighter response set out by the OFM. They have been established by the City's fire service as operational objectives; they are not ingrained in municipal public policy. This is a common practice among fire departments as it provides the requisite flexibility to adjust fire suppression services in response to changing needs and circumstances.

Firefighting is not the fire services' sole preoccupation. The division is evolving into a service capable of delivering a multi-risk emergency response. This transformation is consistent with the Emergency Services Department's overall mission, and per North American trends it reflects the increasing needs by communities such as Greater Sudbury, for a broad range of emergency services.

For emergencies other than fire, residents across the Greater City may expect the following of their firefighters: capability to deal with wildland and vehicle fires, to perform basic vehicle extrication and shore-based ice / water rescue, to respond to fire alarm, carbon monoxide and public assistance calls, and to participate in land search and rescue. From stations based in the City core, Dowling, Vermillion, Levack and Capreol, residents may expect firefighters to perform medical assists.

The fire service system is equipped with approximately 80 vehicles. Virtually all fire stations are equipped with a pumper. In addition there are 9 tankers, 9 rescue vehicles, 2 aerials, 3 telesquirts and 8 bush trucks. Despite this array of vehicles there is a relatively limited elevated master stream

capability. Of the two aerials only one is fully operational[1]. Two of three telesquirts are fully operational.

A recently developed fleet replacement schedule proposes that in 2004, one aerial be replaced at a cost of approximately $1.1 million and that three telesquirt be purchased, each at a cost of approximately $750,000. The current capital budget will not cover the entire cost of these vehicle purchases; for this purpose City Council's approval of additional funding will be required.

The fire service plans to increase the number of spare pumpers from the current three to five. This, they propose to accomplish over time by modifying the pumper replacement schedule. Fire service management anticipate that this initiative will not require new funding (i.e., funding beyond the annual capital budget).

In 2003 the City budgeted $13.2 million for fire services operations. The 2004 proposed operating budget is $14.6 million. The proposed budget is to operate the fire services system at the current level. In this regard the proposed budget provides for anticipated wage and benefit increases due to cost-of-living adjustments, and the changes recently approved by City Council including firefighter staffing adjustments for the former Valley East and the organizational realignment approved in June.

The proposed 2004 budget does not address the annual capital under-funding for fleet and equipment replacement. Nor does it provide for newly proposed service improvements and acquisitions such as the acquisition of an electronic records management system, expanded ice and water rescue training, and high angle and confined space rescue training.

Exhibit 7.1 presents a comprehensive list of current and planned fire service system initiatives along with their financial impacts, as estimated by fire services management. As noted therein, relatively few initiatives require new funding. Fire service management are of the opinion that most can be funded from within the current (and anticipated) operating and capital budgets.

Considerations for Change

Prior to amalgamation the former seven municipalities deployed and dispatched their fire resources in accordance to jurisdictional boundaries. The Greater City's composite fire service continues to dispatch its resources in much the same way. This situation exists because the CAD database and dispatch protocols have yet to be adjusted. Fire services management have commenced recently, to make the necessary modifications. They are expected to go into effect mid-year. The modifications are guided by the following recently developed principles, which in the interest of public safety, have been designed to provide balanced emergency response and coverage regardless of the career / volunteer firefighter distinction:

- Emergency responses by the Fire Service shall not be dictated or influenced by City ward boundaries.
- The fire station capable of providing the fastest response with the appropriate resources shall be required to respond, if not pre-occupied elsewhere.
- Within the annual budget envelope approved by City Council, fire services management reserve the right to adjust the deployment of fire resources when required, to meet the fire risk and emergency response needs of the City.

[1] As of the date of this report this aerial is temporarily out of commission; undergoing engine repair.

The fire services' ability to achieve the objectives also depends greatly upon a sufficient number of volunteer firefighters responding rapidly when paged. Despite best efforts, unfortunately this does not always happen. If relatively few volunteer firefighters arrive scene (i.e., less than 4 volunteers) residents may expect only exterior fire fighting activities.

Similarly, in cases of structure fire residents may expect only exterior fire fighting activities if it takes longer than 10 minutes for firefighters to arrive scene. This applies regardless as to whether the residents are located in areas served by career or volunteer firefighters. This notwithstanding, it is the firefighters who upon arrival at the fire scene, will decide whether it is safe to proceed with interior fire suppression and rescue, or to limit their activities solely to exterior fire fighting.

Another mitigating consideration are concurrent multiple calls originating in the same geographic area, as fire resources may already be preoccupied at a call.

The targets set out above, have been established by the City's fire service as operational objectives; they are not ingrained in municipal public policy. This, as further discussed in Section 6.3 of this report, is a common practice among fire departments as it provides the requisite flexibility to adjust fire services in response to changing needs and circumstances. To a great extent they are based on guidelines for firefighter response set out by the OFM. This too is discussed further in Section 6.3 of this report.

A common practice among emergency service providers is to target response performance to a fractile percentage of total reported incidents. For this purpose the fractile percentage often chosen is 90 percent (i.e., that the standard be achieved in 90 percent of reported incidents); although it does vary among municipal fire services, ranging from 75 percent in some jurisdictions to 90 percent in others.

As discussed previously in Section 4 of this report the City of Greater Sudbury fire service does not presently possess an effective records management system. This is impeding their ability to track calls and response performance with any degree of reliability. Solutions are in the works (also as described previously) which shortly, will enable the City to more rigorously measure response performance.

What Services Residents may Expect in the Event of an Emergency Other than Fire

The fire and rescue call records presented previously in Section 3 demonstrate that firefighting is not the fire department's sole preoccupation. Discussions with fire services management and firefighters confirm that the department is evolving into a service capable of delivering a multi-risk emergency response.

This report is of the view that the ongoing transformation is not only consistent with the Emergency Services Department's overall mission, it is also consistent with North American trends and reflects the increasing needs by communities for a broad range of emergency and risk management services.

For emergencies other than fire, residents across the entire Greater City may expect the following of their firefighters: capability to deal with wildland and vehicle fires, to perform basic vehicle extrication and shore-based ice / water rescue, to respond to fire alarm, carbon monoxide and public assistance calls, and to participate in land search and rescue. From stations based in the City core, Dowling, Vermillion, Levack and Capreol, residents may expect firefighters to perform medical assists.

Again, these expectations are not based on approved public policy. They reflect the current equipment with which the department is furnished and the current level of fire fighter training.

Currently residents should not expect extensive expertise in high angle or confined space rescue, or in dealing with hazardous materials. For these situations, the City's fire service will respond and handle the situation in an appropriate fashion.

5.4 Apparatus

The fire service system is equipped with approximately 80 vehicles. Exhibit 5.7 presents a breakdown of the major equipment by station and City ward. As shown by the exhibit, virtually all fire stations are equipped with a pumper. In addition there are 9 tankers, 9 rescue vehicles, 2 aerials, 3 telesquirts with elevated master stream capability and 8 bush trucks.

EXHIBIT 5.7
FIRE SUPPRESSION & RESCUE STAFFING & FLEET

Station	Suppression Staff				Fleet						
	Description	Captains	F.F's	Total	Pumper	Tanker	Rescue	Aerial	Squirt	Bush	Total
Ward 1											
4 Long Lake (Note 2)	career 4-pers 24/7	4	12	16	1	1		1			3
5 Copper Cliff	vol's	3	10	13	1						1
6 Waters	vol's	3	15	18		1	1		1		3
7 Lively	vol's	2	16	18	1						1
8 Whitefish	vol's	3	15	18	1	1	1				3
9 Beaver Lake	vol's	1	6	7		1					1
Ward 2											
10 Azilda	vol's	3	15	18	1		1				2
11 Chelmsford	vol's	4	19	23	1	1	1		1	1	5
12 Dowling	vol's	4	14	18	1	1	1			1	4
13 Vermillion	vol's	1	6	7	1						1
14 Levack	vol's	3	11	14	1					1	2
Ward 3											
15 Val Caron (Note 3)	vol's	2	15	17	1				1		2
16 Val Therese	career 2-pers 24/7	4	5	9	1	1	1			1	4
	vol's	1	16	17							
17 Hanmer	vol's	1	16	17	1	1					2
Ward 4											
18 Capreol	vol's	3	15	18	1		1				2
19 Railway Ave (Note 1)	vol's				1						1
20 Garson	vol's	3	16	19	1		1			1	3
21 Falconbridge	vol's	2	10	12	1						1
22 Skead	vol's	2	10	12	1					1	2
Ward 5											
1 Van Horne (Main)	career 6-pers 24/7	8	32	40	2		1	1			4
23 Coniston	vol's	2	12	14	1					1	2
24 Wahnapitae	vol's	2	8	10	1	1					2
25 Red Deer	vol's	2	4	6	1						1
Ward 6											
2 Minnow Lake	career 4-pers 24/7	4	12	16	2						2
	vol's	2	12	14							
3 Leon (new Sudbury)	career 4-pers 24/7	4	12	16	1					1	2
TOTAL		73	334	407	25	9	9	2	3	8	56

1. Railway Ave station is staffed from Capreol station
2. The aerial assigned to Station 4 (Long Lake) is 30 years old and of limited operational use. It is not staffed and is maintained strictly for standby purposes.
3. The telesquirt assigned to Station 15 (Val Caron) is used strictly as a spare pumper. The elevated master stream component has been disabled permanently.

Despite the array of vehicles in the fleet, the Fire Services Division possesses a relatively limited elevated master stream capability. Of the two existing aerials only the one stationed at Van Horne (Station 1) is fully operational. The aerial assigned to Long Lake (Station 4) is 30 years old and of limited operational use. It is not staffed and is maintained strictly for standby purposes. Of the three telesquirts, only two are fully operational; those being the ones located at Waters (Station 6) and Chelmsford (Station 11). Due to age and mechanical malfunction, the telesquirt based at Val Caron (Station 15) serves as a spare pumper without an elevated master stream.

The communications centre utilizes a stand-alone VHF voice paging system manufactured by Zetron, to contact volunteer firefighters. The system employs five radio towers. The communicators must manually select the appropriate tower for each page, resorting to a paper-based index to locate the nearest fire station for 1st and 2nd response, and the appropriate tower for paging transmissions. Time out features on paging transmissions require that dispatchers page one volunteer station at a time – repeating the process for 2nd and 3rd response.

In a May 2003 discussion paper entitled 'Greater Sudbury Fire Service Communications', IBI Group offered the following two observations. First, the Greater Sudbury Police Services communications centre is staffed with well-trained professional communicators using state-of-art radio and CAD systems. Second, this notwithstanding, there are technological weaknesses in the communications system, which impact negatively on response time performance and limit the Police Services communications centre's capabilities to carry out automated performance tracking and management information system (MIS) reporting.

The discussion paper offered a number of suggestions by which to improve the Police Services' communications operation. The suggestions pertain predominately to electronically interfacing the fire paging system with the radio / telephone and CAD systems, and to providing a range of management reports to support monitoring, evaluation (quality assurance) and planning of fire and police services.

With City Council's approval senior management of the City's Fire and Police Services have jointly undertaken to implement the suggested improvements. They are expected to be fully implemented by mid-2004.

Other identified technological issues include limited radio access in the more remote fringe areas of the City, limited radio and paging capability at the backup dispatch located in the south end of the City and the need to replace a number of relatively outdated pagers. Fire and Police services are addressing these items.

5.7 Fire Services Operating Costs

Proposed 2004 Fire Operating Budget

Last year (in 2003) the City budgeted $13.2 million for fire services operations. This year's proposed operating budget (2004) is $14.6 million. The proposed budget is to operate the fire services system at the current level. In this regard the proposed budget provides for the changes recently approved by City Council.

The proposed 2004 budget does not address the annual capital underfunding for fleet and equipment replacement (a discussed in Section 4.8). Nor does it provide for newly proposed service improvements and acquisitions such as the acquisition of an electronic records management system, expanded ice and water rescue training, high angle and confined space rescue training, and over time the recruitment of additional staff. The newly proposed initiatives are identified in Exhibit 7.1 along with their financial impacts.

The projected expenditure increase contained within this year's proposed budget is attributed predominately to the following factors. As noted some of the factors were approved by City Council in 2003, while others are subject to City Council's approval as part of the 2004 budget process:

- Valley East firefighter staffing adjustment, approved by City Council and implemented in spring 2003, resulting in the present staffing by two full-time salaried firefighters on duty at station 24/7;

- Organizational realignment, approved by City Council and implemented mid-way through 2003;
- Increase in fire services personnel, corresponding to the approved organizational realignment, to ensure leadership and appropriate levels of staffing of core and support services, with particular emphasis on public safety education, fire prevention, enforcement, firefighter training and quality assurance;
- Increased wages and benefits due to cost-of-living adjustments. Fire services management have earmarked funds pending the outcome of current contract negotiations;
- Recommencement of OMERS contributions in January 2004; and
- Sundry additional costs attributed to increased costs of materials, contract services, professional development and training, etc.

Municipal Performance Measurement Program

In 2001 the provincial government introduced through legislation, the "Municipal Performance Measurement Program" requiring Ontario municipalities to provide taxpayers with information on an annual basis, on the performance of the services which they are mandated to deliver. The program requires municipalities to provide the information in a consistent manner, using a common set of measures, by September 30 each year on the previous year's activities.

Firefighting is one of those services. The government's objective is to promote and ensure efficient municipal fire services. For reporting purposes the chosen performance measure is the operating cost for fire services per $1,000 of assessment.

EXHIBIT 5.11
COMPARISON OF MUNICIPAL FIRE SERVICE OPERATING COSTS

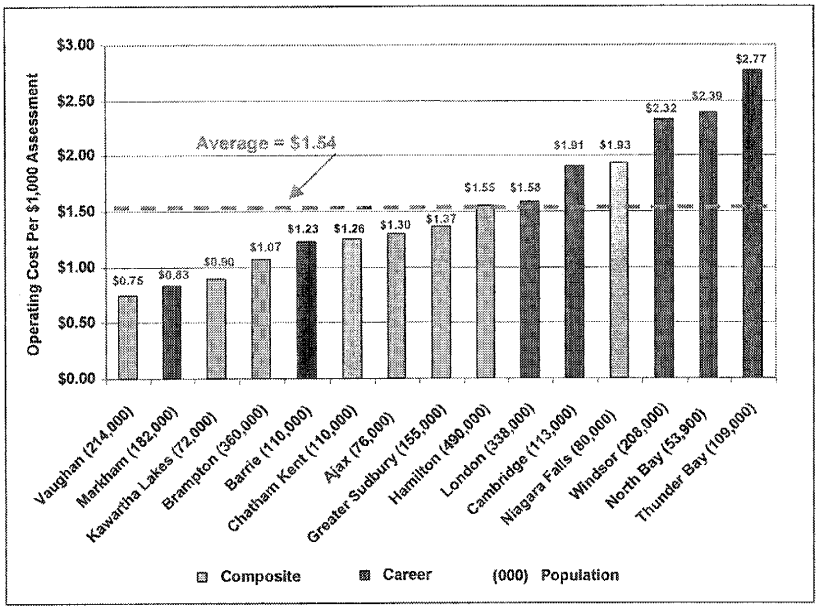

Exhibit 5.11 presents a summary of the fire costs reported under the Municipal Performance Measurement Program, by 15 municipal fire services including the City of Greater Sudbury. The data shown is for 2002, which is the most current information available.

Of the 15 municipal fire services surveyed, Greater Sudbury ranked 8th, reporting a cost of $1.37 per $1,000 assessment. Seven municipalities reported costs lower than Greater Sudbury's and seven reported higher fire service costs.

risk occupancies, management are considering a multi-vehicle response involving up to three stations. If the dispatcher is unsure of the call type, they are required to dispatch the nearest station. On arrival the firefighters will determine whether additional resources are required, and if so call for additional assistance.

6.2 Fleet Rationalization

Another option under consideration is to reorganize / rationalize the fleet within the five fire districts, so as to enable each fire district to function somewhat independently on its own.

Also in the event of an emergency requiring additional resources, each fire district would be capable to either provide / call upon an adjacent area for rapid assistance.

The following are the basic elements under consideration in this option:

- Each fire station be equipped with a pumper.
- Each of the five fire districts be provided with an aerial master stream capability and rescue truck.
- Outlying districts be provided with two tankers (thus assuring a continuous supply of water via tanker shuttle).

EXHIBIT 6.1
DISPATCH PROTOCOLS

TYPE OF CALL	MINIMUM NORMAL RESPONSE
Structure fire	2 pumpers, 1 rescue, 1 aerial or telesquirt
Automatic alarm	2 pumpers, 1 rescue, 1 aerial or telesquirt
High risk occupancy fire call	2 pumpers, 1 rescue, 1 aerial or telesquirt (proposing plus 1 pumper)
Hydro pole fire	1 pumper
Garbage bin fire	1 pumper
Vehicle fire	1 pumper
Medical call	1 crew - pumper or rescue unit
CO call or smell of gas	1 crew - pumper or rescue unit
Assistance calls	1 crew - pumper or rescue unit as required by the incident details
Bush fire	1 pumper/bush and also 1 tanker if required
Motor vehicle collision (MVC)	1 pumper, 1 rescue
Flooding	1 pumper
Rescue - ice/water	1 pumper and 1 rescue (with appropriate equipment)
Rescue - confined space	1 pumper and 1 rescue (with appropriate equipment)
Rescue - high angle	1 pumper and 1 rescue (with appropriate equipment), 1 aerial
Spills	1 pumper and 1 rescue (gas detection)
Authorized control burns	1 pumper
Unauthorized control burns	1 pumper

- Bush trucks, utility vans and specialty units (e.g., boats) to be assigned to districts according to where they can be of greatest value.

6.3 Structure Fire Response Target

Fire departments throughout North America rely extensively on the suggested guidelines and standards promoted by National Fire Protection Association (NFPA). Ontario municipalities also rely upon the suggested guidelines promoted by the Ontario Fire Marshal's Office.

For incidents of fire, both agencies strongly promote a firefighting response by a sufficient number of trained and properly equipped firefighters, within a time frame which allows for efficient, effective and safe conduct of emergency operations (preferably prior to flashover).

Both agencies recognize that most structure fires will require either a multi-station, or multi-company, response if a sufficient number of firefighters are to be deployed to the fire ground scene. Both agencies promote, where practical, that a minimum of 4 firefighters be dispatched and arrive together

on the initial apparatus, and both encourage a coordinated response to be managed by a single company officer.

Exhibit 6.2 summarizes the NFPA and OFM suggested guidelines for a firefighter response to a two-storey residential fire in an *urban* setting. This as identified previously, is the largest occupancy category in most municipalities including Greater Sudbury. Also, it has a relatively high fire incident rate. The information presented was extracted from various guideline documents including NFPA 1710 and the OFM's Public Fire Safety Guideline PFSG 04-08-12.

The OFM guideline suggests that a minimum of 10 firefighters be on scene within 10 minutes of an alarm; also if practical, a minimum of two vehicles, one preferably to be a triple combination pumper. The guideline is designed to provide sufficient staffing to accommodate either interior fire suppression or rescue operations – not both.

EXHIBIT 6.2
GUIDELINES FOR FIREFIGHTER RESPONSE TO
TWO STOREY RESIDENTIAL DWELLING IN URBAN SETTING

OFM	NFPA
10 firefighters on scene within 10 minutes of alarm	14 to 16 firefighters on scene within 10.5 minutes of alarm
Provides interior fire suppression *OR* rescue operations	Provides full interior attack *AND* rescue, with aerial operations as required
1.5 minutes for call taking & dispatch 1 minute turnout for full-time salaried (career) firefighters 90th percentile performance target	

The NFPA guideline calls for a full first alarm assignment to be on scene within 10.5 minutes, the time interval being calculated by this report as follows: a stated 8 minutes for deployment plus a stated 1 minute turnout and a 1.5 minute dispatch. The full first alarm assignment contingent is 14 firefighters if an aerial is not in operation and if the Incident Manager does not require aid. Otherwise for full fire attack, the required team could be up to 16 firefighters.

Both agencies promote the tracking of performance and as a measure of performance that the above standards be achieved in 90 percent of reported incidents.

As indicated previously, FPPA does not prescribe the level of emergency response that a fire department should provide. It leaves that responsibility to municipalities.

According to available information, fire suppression capabilities vary among Ontario municipalities and within municipalities, between built up and rural areas. Relatively few municipalities can afford fire services systems, which will consistently achieve the firefighter response standards promoted by NFPA or OFM throughout their entire community. The approach taken by most municipalities is to realign their firefighting resources placing greater emphasis on the attainment of a more rapid firefighter response to their higher fire risk areas and occupancies (e.g., downtown commercial core, institutions, assemblies).

The position commonly taken by municipal fire service agencies is to use the guidelines promoted by NFPA / OFM as an ***operational objective***, rather than as an official standard. In this way they reserve the necessary flexibility to adjust response levels within their community, taking into account changing local fire risks and circumstances, and the costs that their community can afford.

As described previously in Section 5.3 this is the approach taken by Greater Sudbury's fire service. Their operational objectives are based on the less stringent of the two guidelines, namely those suggested by the OFM. The decision not to promote an official standard is considered reasonable

particularly when one considers the City's records of urban structure fires, which indicate that the City's fire service is unable to attain the OFM standard consistently, and that to be able to do so would require a prohibitive investment in the City's fire services system.

6.4 Expanded Technical Capabilities

As noted previously in Section 5, the fire service is evolving into a service capable of delivering a multi-risk emergency response. Also, this transformation is consistent with the Emergency Services Department's mission and North American trends, and reflects the increasing needs by communities for a broad range of emergency and risk management services.

Currently the fire service lacks expertise, beyond a basic level training, in the following areas: expanded ice and water rescue beyond the present shore-based capability, high angle and confined space rescue and in dealing with hazardous materials. Presented below are the options under consideration:

- **Expanded ice and water rescue beyond the present shore-based capability**: Of the options under consideration, this one is considered to be of highest priority. Firefighters are already receiving a basic level training in shore-based ice and water rescue. The proposal is to provide training and equipment for a higher level ice and water rescue response to a select number of stations and firefighters: as a minimum to Van Horne station in fire District 1, and to two stations in each of the other four volunteer fire districts. Equipment needs will include several boats and cold water immersion suits, as well as the seasonal rental of several snowmobiles. The cost to implement this option is estimated at a one-time expenditure of $200,000.

- **Confined space and high angle rescue**: These two situations utilize the same equipment and require similar training and thus are treated together. The proposal is to ensure that all firefighters are given a basic level training as part of their ongoing in-service training program. In addition, that a select number of stations and firefighters be provided with training for a higher level response: as a minimum to Van Horne station in fire District 1, and to two stations in each of the other four volunteer fire districts. Equipment needs will include tripods, ropes, harnesses, spreader bars etc. The cost to implement this option is estimated at a one-time equipment expenditure of $100,000 plus $20,000 annually for training and equipment maintenance.

- **Hazardous materials (HAZMAT) response**: There are three defined levels of HAZMAT response: awareness, operations and technician. At the awareness level emergency responders are appraised of local hazards, placards used for the transport of dangerous goods and basic mitigation strategies. At the operations level emergency responders are equipped and trained in basic containment, rescue and decontamination (e.g., chemical spills). At the technician level emergency responders are trained to a higher level of decontamination, clean up and removal of contaminants. Very few fire services are trained to the technician level; provincially designated technician teams have been established in Toronto, Ottawa and Windsor. The evolving proposal is initially, to train all of Greater Sudbury's firefighters to the awareness level and over time expand the fire services' capabilities to include a multi station response at the operations level. Current information indicates that the City's fire service should be able to achieve the initial objective within the existing budget and training program. However before proceeding to the longer term objective, a further analysis is required of options and costs.

6.5 Geographic Coverage

Herein the investigation focused on the following questions: Are the current fire stations situated in the appropriate geographic areas of the community, so as to afford a rapid emergency response in

the event of a fire. Should any of the fire stations be relocated. Would coverage be significantly improved by the construction of an additional fire station(s). Are any of the fire stations redundant.

Numerous options were considered. They are grouped into three categories: expansion, concentration and rationalization.

- ***Expansion***: In this category the dominant theme is recruiting additional full-time salaried firefighters, relocating stations and constructing new stations. In addition specific volunteer stations are closed. Note, the volunteer contingent would not be reduced; the options proposed suggest that they be realigned to other adjacent stations.

- ***Concentration***: These options involve replacing the existing 25 stand-alone stations with fewer stations strategically located to provide better protection to areas of relatively higher risk concentration. Firefighter resources would be adjusted and increased as follows: career firefighters to be assigned to the City core (area of highest risk concentration); composite crews of career and volunteer firefighters to be assigned to stations within relatively developed suburban communities; and volunteer firefighters to be assigned to stations in the more rural areas.

- ***Rationalization***: These options involve a potential re-alignment of the existing fire service resources (rather than the recruitment of additional staff) to achieve a better matching of resources to geographic areas prone to relatively higher incidents of fire. The options included moving career firefighters out of the City core to suburban communities, and shifting volunteer resources from outlying areas into the core.

The options were assessed using a number of criteria including the impact of changes on the fire services' capability to protect the City's infrastructure; impact on response coverage; impact on the distribution of fire suppression and emergency services across the City; impact on core service programs; impact on the Fire Service Division's annual operating budget; and capital cost implications. The findings of the analysis are summarized below.

The analysis demonstrates a reasonable matching of career and volunteer fire resources to fire risks. The majority of career firefighters are stationed in the City core i.e., the area of highest risk concentration. A smaller career contingent augmented by volunteers, is stationed in the Valley, an area of lesser but notable risks. Volunteer firefighters serve in communities of relatively low risk.

Despite the array of alternatives examined, none stand out as a major improvement over the existing station arrangement. Response coverage does not improve appreciably under any of the proposed station re-arrangements. It does however, decrease substantially under the Concentration options.

From the analysis of currently available data, it is concluded that the present configuration of stations and resources provides a reasonable level of fire suppression coverage and that major changes are not presently required. The analysis highlighted two areas warranting more detailed consideration; Valley East and the City core. These areas are discussed further in Sections 6.6 and 6.7.

The assessment of station closings included potentially shutting down one of the Core area stations (Minnow Lake) and the consolidation of several volunteer stations including Waters and Lively, Val Caron and Val Therese (which is actually a composite station), Capreol and Railway, and Wahnapitae and Red Deer Lake. The assessment took into consideration call volumes, overlaps in emergency response coverage and potential cost savings.

From the data generated it was concluded that the City would save *up to* $25,000 annually in operating costs for each consolidation / station shut down. However, for many such actions there

would be significant capital cost implications, in the order of $300,000 or more to accommodate the realignment of volunteers, vehicles and equipment to other stations (e.g., for building expansions, additional parking, etc). Moreover, local coverage within the immediate proximity of the exiting stations would be reduced. In light of these facts this report does not recommend the closure of any existing fire stations.

Closing the Azilda volunteer station and converting Chelmsford station from volunteer to composite by introducing a career firefighter contingent, to work alongside the volunteer firefighters, are other suggestions considered by this analysis. It was argued by some, that the proposed changes would improve the fire response capability within those areas. In consideration of the area's relatively low annual volume of calls and the likelihood that local coverage within the immediate proximity of the Azilda station would be reduced, it was concluded that the proposed changes are unnecessary in the short term.

Options by which to increase firefighting resources in the following fringe areas were discussed at length: Kukagami (in the northeast), Wahnapitae Lake (in the northeast), Panache Lake (in the southwest), Fairbanks Lake (in the southwest), Windy Lake (in the northwest) and Wanup (at the City's south end). It was concluded that the costs involved to increase firefighting resources in these and other rural and remote communities, cannot be justified. For such areas the predominate lines of defence are public fire safety education, fire prevention and enforcement. It was recommended however, that fire service management should review and if necessary adjust, the existing inter-municipal aid agreements.

6.6 Valley East

The former City of Valley East has been identified as an area of concern. It is a relatively large residential area. In 2001 the area was the location of a fire tragedy involving three deaths. It generates a relatively large annual volume of fire and rescue calls. It is a bedroom community, which is becoming increasingly difficult to protect predominately with volunteers. Volunteer retention is also becoming an issue.

For the past year the Fire Services Division and OFM have monitored the response time performance of the three locally based fire stations at Val Therese, Val Caron and Hanmer using as a benchmark, the OFM guideline for firefighter response to a residential structure fire i.e., 10 firefighters at scene within 10 minutes of alarm. Not unexpected, the results confirm that the three stations frequently do not attain the guideline.

While there is no legislation requiring a fire department to meet the suggested guideline, its use as a comparative benchmark is reasonable. A fire station, which under-performs relative to the benchmark, either by a slight margin or on an occasional basis, may yet be deemed a reasonable operation. However, if a station located in an area prone to fire incidents consistently under-performs by a significant margin, then closer investigation is warranted.

Presented below is a summary of the area's call volumes.

EXHIBIT 6.3
2003 FIRE & RESCUE CALLS – VALLEY EAST

	Total Calls		Fire Calls		
	No.	%	No.	% Fire	% Total
Weekdays					
08:00 to 19:59	135	45%	31	44%	10%
20:00 to 07:59	68	23%	9	13%	3%
Sub-total	203	68%	40	57%	13%
Weekends					
08:00 to 19:59	62	21%	23	33%	8%
20:00 to 07:59	32	11%	7	10%	2%
Sub-total	94	32%	30	43%	10%
Total	297	100%	70	100%	24%

December 10, 2003

Fleet Rationalization

This report discusses the intent of Fire Services Administration as to the rationalization of the fire fighting vehicle fleet for the entire city. This report makes assumptions that the deployment strategy that Fire Services Administration is suggesting is also implemented.

It also needs to be stated that the city has been sub-divided into 5 geographical districts. Each district has approximately 5 fire stations in it. Each district should be able to function somewhat independently as its own entity. That being said, the Incident Commander at any scene has the authority to call for additional resources, with the expectation they would be filled by the next closest resource available, either within or external to the district.

1. Pumpers

This discussion needs to be broken down into urban and rural pumpers, in the sense that an urban pumper may be more applicable to some stations versus a rural pumper. However, a pumper is still required in every station. The pumps in each station will not necessarily be identical. Some pumps will have 1000 Us gallon tanks and others will be smaller, depending on the availability of hydrants in their first due areas.

Currently, some of the small stations have tankers with small pumps hard mounted. This is not the optimal solution, since the insurance industry will not give you a rating for a small pump now, in the past they did. Over the next few years, as we progress with the fleet replacement and subsequent re-alignment of the pumper resources, this should be easily accommodated.

Some of the existing fleet only have two man cabs for the pumpers. All new trucks should be ordered with crew cab seating capability in order to transport a sufficient number of Fire Fighters. The pumps with the smaller cabs should be placed into service in the smaller stations.

2. Aerials

Currently, there are only three units in service. There is a 30 m. aerial with a career Fire Fighter on duty 24/7 at #1 Station. In Station #6, squirt #6 with a 15m. aerial is their front line pumper being run as a quint (this means it has an elevated master stream capability and ladder way). In Station #11, there is a spare squirt, squirt #11 with the ladder being 15 m.

The overall intent is to have an aerial device in each district. Currently we will be ordering a 30 m. tower ladder to go into service as aerial #1. The existing aerial #1 will become aerial #4, which is a spare unit. The existing aerial #4 is due to come out of service. This is an older unit and we are having trouble getting it to pass the required tests of the ladder way. There is probably no residual value to this 30 year old unit. However, it may be prudent to keep it as a reserve unit (not in service)???

The next truck to be ordered will be a 23 m. aerial for District #4. It will go into service as a quint in

probably Station #15. The existing pump #15 and Squirt #15 will come available as a result. One of these could be left in District #4 as a spare pumper (squirt #15 has that role now, since the aerial device is permanently disabled). The other truck, pump #15 (a two man cab) can be put into service in one of the smaller stations requiring a pump, such as Station #25, where pump #25 is on its last legs.

In the 2004 Capital request, there is a submission for money to buy two more 23 m. aerials. These units would be put into service in Districts #2 and #5. One will replace pump #7 as a front line quint for Lively. The existing pump #7 would become pump #6. The existing squirt #6 would be put into service as squirt #11, a front line quint. The existing squirt #11 would stay as a spare aerial unit. Pump #11 would be then also re-assigned or would come out of service.

The other new 23 m. quint would become pump #20 or #21 as a front line quint. That pumper would be re-assigned. Once the unit size has been determined the exact station it is assigned to can be determined.

This will then allow for an aerial in each district:
District 1 - aerial #1 and aerial #4 (spare).
District #2 - quint #7.
District #3 - squirt #11.
District #4 - quint #15.
District #5 - quint #20.
For simplicity, it may be more reasonable to call them all aerials with a number.

Rescue

Each district needs to have rescue truck capability. Currently, there is an excess of rescue units in service. The intent is to have one rescue unit per district plus a rescue pumper in service in each district. A rescue pumper functions as a pumper but also carries more equipment that is rescue oriented, such as heavy hydraulics - jaws of life.

There are several pumpers that will have to be converted over to rescue pumpers and then the rescue units in those stations can come out of service. However, there will be a need to ensure sufficient vehicles are in each station. This will be addressed under bush-utility vehicles.

The rescue units that would stay in service are:
District #1 - rescue #1.
District #2 - rescue #6.
District #3 - rescue #11.
District #4 - rescue #16.
District #5 - rescue #20.

The rescue - pumpers that are required are:
District #1 - pump #4, currently set up this way to a certain extent.
District #2 - pump #8, currently set up this way to a certain extent.

District #3 - pump #12, currently set up this way to a certain extent.
District #4 - pump #18, not currently set up.
District #5 - pump #24, currently set up this way to a certain extent.

Once this has been completed, there may be a decrease in the overall fleet requirements since currently there are 9 rescue units in service.

Tankers

Not all of the city has the under the street network of water pipes and fire hydrants available for fire fighting efforts. In those cases, the Fire Service needs to find a local source of water to draw from or bring the water to the scene in tankers.

When a tanker shuttle is necessary, the first pumper at the scene will be set up as the pumper with a portable tank set up beside it. The pumper will draught water from the porta-tank. The water supply for this porta-tank will be handled by a fleet of tankers shuttling the water from a nearby hydrant or other source of water to the scene. The tanker fleet is the oldest part of the fleet in general and is in the process of undergoing major upgrades. One new unit was received in 2003 and three more are on order to be delivered mid-2004.

Currently, there are nine tankers. One of these, tank #9 is actually a tanker - pumper with a small pump. This should be replaced with a full pumper with a 1000 US gallon tank as per the discussion on pumpers. The existing tank #9 can be re-assigned.

Each of the outlying districts (#2-3-4-5) should have two tankers available in the district. For District #1, only one tanker is required at this time.

The tanks that need to be in place are:
District #1 - tanker #4 (current).
District #2 - tanker #6 (current) and tanker #8 (current, new unit to be ordered in 2004).
District #2 - tanker #10 (currently #11) and tanker #12 (current). Both units to be replaced with new units in the 2004 order delivery.
District #2 - tanker #16 (current, but being replaced in the 2004 order delivery) and tanker #17 (current, new unit to be ordered in 2004).
District #2 - tanker #24 (current) and tanker #22 (does not exist at this time).

With the future truck replacement schedule, the tanker required for station #22 can be accommodated, perhaps by using the existing tanker #9.

Bush - Utility

In each of the districts there is a definite requirement for trucks that are more rugged and have the capability to go off the paved road, albeit not true four-wheeling. There are currently nine bush trucks and two utility vans which fall into this category.

If we address this by district, it is more applicable than standardizing a number of units for every district being the same. Reason is that the bush requirements vary across the districts.

However, all bush trucks should be ordered as similar units which is better for overall fleet rotation through the life of a vehicle. Thus each unit should be crew cab, four wheel drive with a back end which has a small water tank, pump, foam system built in, along with other smaller equipment. This concept could also be taken a step further in that if we set up the foam systems correctly, they may also double as quick attack units as required.

District #1 currently has bush #3 at Station #3 off Lasalle Blvd. This unit is in the north end of the city core, where there are a considerable number of bush related calls. At the south end of the city core, a similar situation exists, but it is addressed with a tanker so should be okay. Bush #3 is due to be replaced in 2004 and should be replaced with a unit that closely resembles the bush concept discussed above.

District #2 has van #7 in Lively Station #7 and bush #8 in Whitefish Station #8. Van #7 is on its last legs and will need to be replaced. It should be replaced with a newer style bush unit as above. Bush #8 is also due for replacement shortly and the replacement vehicle should be as discussed. Bush #7 can handle the calls for station #6 and #7 area (East end of District #2) in conjunction with the trucks and crews at those stations. Bush #8 can handle the West end of District #2.

District #3 has Bush #11 in Chelmsford, Bush #12 in Dowling and bush #14 in Levack. With the fleet rationalization, bush #11 could be re-assigned as bush #10 in Azilda, but covering the area for stations #10 and #11 as required. Bush #12 is also soon to be replaced. A crew cab unit here and other fleet rationalization within this station should result in one less truck in that station. Bush #14 is not due for replacement for several years, so is okay.

District #4 has bush #16 at Station #16 in Val Therese. This is a new unit and is well set up with an on board foam system. This unit should be re-assigned to station #15 in Val Caron when the new aerial comes in for that station, as above. This will then allow for a pumper to be freed up from station #15. There is no other unit in this district. In Station #18 there is a rescue truck and a pumper. The rescue unit may change status but the unit will remain in service in Capreol. As we evolve there may be a need for a bush truck in the Capreol part of the community, for now, we are okay. There was formerly van #18 in Capreol for use as an auxiliary vehicle, but it was taken out of service in 2003 and never replaced due to high cost of mechanical repairs. Thus a bush truck out there is not an overall fleet increase.

In District #5 several bush trucks are in service - bush #20 in Garson Station #20, bush #22 in Skead Station #22, bush #23 in Coniston Station #23, plus van #25 in Red Deer Lake area. Bush #20 is in good shape and can stay put. Bush #22 should be replaced with some form of tanker as above discussions. Bush #22 can then be re-assigned as bush #21. Bush #23 is due to be replaced soon and should be set up as per the new concept above. Van #25 is in need of replacement and should be replaced with a bush truck as per these discussions. The report from Bill Jones on Red Deer station also addresses the exact units in service at that station.

Following this logic, we will then no longer have any vans in service at a station for the sole purpose of carrying equipment or Fire Fighters. This function will be handled by a true fire truck or these bush unit pick up style crew cab trucks.

Specialty units

The first units to be discussed is boats. The Fire Service has several boats on paper but most are out of service. Reason being is that we were using aluminum fishing boats as rescue units, which they were not designed for.

As per other discussions on technical rescue capability, there is going to be shore based rescue capability at all 25 fire stations. Within each district there will be a higher level of response. This would include actual water or on ice entry and could involve boats.

The intent for the most part is to use inflatable style boats, such as Zodiacs. These units are light weight yet durable and rugged enough for the purpose we are suggesting. There is a capital request for 2004 for funding of approximately $50,000 for two of these units. They could be transported inside a rescue unit or strapped onto the top of the pumper when required.

For the larger lakes, example Lake Wahnapitae, a larger more stable boat is required. Currently in Station #10 in Azilda there is a boat on a trailer. Although this is not a rescue boat, it is a much larger, more stable unit than an aluminum fishing boat. It can still be used as we move forward getting the right equipment. The crews at #10 Station all have documented training on this unit.

A similar situation exists out in Skead. However, this area is home to Lake Wahnapitae, a very large and treacherous lake. A larger, more appropriate unit is required. Ice and Water rescue is one of the areas, that depending on the outcome of the Master Fire Planning process that more money for equipment and training may be required.

In the Onaping area of the community with Windy Lake, there is an aluminum boat at station #14 which is not designed for this purpose. Th is unit may not necessarily be required in the longer term.

Other specialty vehicles required are ATV units. There is one unit, an older unit purchased used from another city department in 2003, located at Station #11 in Chelmsford. There could be a requirement for other units. However, an assessment needs to be done of what these units could accomplish and what equipment would be required to support their use. During 2004, a study on the abilities of these units on a year round basis and what they could be used for re: fire fighting or rescue will be undertaken by the Fire Services staff.

In conjunction with the discussion about ATV, we need to also consider snow mobiles. However, the expectation is that there could be a need for snow mobiles for 2 -3 months of the year. It would more likely be better to set up a short term lease arrangement with a local dealer or have an arrangement where we could borrow the use of machines if required. Fire Services Administration is not recommending purchase of snow mobiles at this time.

The only other vehicle not discussed is a HAZMAT unit. As part of the Master Fire Plan, there is going to have to be a decision made as to the level of HAZMAT that we will provide. Based on this discussion, the existing truck which is sitting at station #4 may need to be modified or replaced with a more appropriate vehicle.

Cars and Vans

There are a number of small people carrying units in service. Some are assigned permanently to an employee such as the Chief, others are assigned against a division, such as Fire Prevention or Training.

These vehicles are paid for via a monthly charge back from corporate Fleet Services. This allows for all costs of the vehicle to be paid by Fleet Services, including replacement cost for a new unit further down the road. The following chart shows which units are in this category and which of these small units are not. Some of the vans have not been put under the Fleet Services umbrella and a decision will need to be made if this is required.

The overall requirement for these small units is:

Administration - Chief, two Deputy Chiefs, fleet coordinator
Training - two van units
Fire Prevention - six cars for Fire Prevention Offices, two vans for Public Safety Officers
Emergency response - two District Chiefs, two spare vans (spare rescue and crew transport).

Two former EMS units are either on the way to Fire or are currently being painted. These will be sued for the District Chiefs. The two existing units in use by the D/C will go to Deputy Battison and Training.

The unit currently being used by Deputy Battison will go to the Public Safety Officer as will the avn currently assigned for use by CFPO Bourque. The CFPO can use a fleet vehicle as required, but does not need a dedicated vehicle.

Should another Dodge Caravan become available from EMS it will round out the complement for 18 small vehicles.

	F00 #	CAR #	ASSIGNED TO	FLEET COSTS	NOT IN FLEET
1	F00082	7	DEPUTY BATTISON		NO
2	F002	5	NORM BUCHY	$1020	
3	F0021	1	CHIEF	$660	
4	F0022	10	FPO PLANTE	$660	
5	F0023	11	FPO GIROUX	$660	
6	F0026	VAN 3	D/C RANCOURT		NO
7	F0027	3	FPO	$660	
8	F0028	VAN 4	CFPO BOURQUE		
9	F0031	4	FPO EATON	$660	
10	F0032	12	FPO O'BRIEN	$660	
11	F0035	VAN 1	#1		NO
12	F0038	2	DEPUTY LEDUC	$660	
13	F008	VAN		TRAINING	NO
14	F0083	VAN 12		SPARE - SUPPRESSION	NO
15	F0150	6	D/C ROPP	$1020	
16	EMS 1		D/C 1		NO
17	EMS 2		D/C 2		NO
18	EMS VAN			TRAINING	

Total Fleet Requirements

The following two charts show the fleet today (except for small units) and what is proposed. Essentially, what this will do is to put the most appropriate vehicle in each station. Overall fleet size will increase by five units as a result.

The pumper fleet will go up by two. The number of tankers will go up by one. The aerial fleet will go up by three. Bush/vans will stay constant. The number of rescue units will decrease by three. Number of boats will increase by two.

CURRENT FLEET SET UP

STATION	PUMP	TANK	AERIAL	BUSH/VAN	BOAT	RESCUE
1	1,26		1			1
2	2,27					
3	3			3		
4	4	4	4			
5	5					
6		6	6			6
7	7			7		
8	8	8		8		8
9		9				
10	10				10	
11	11	11	11	11		11
12	12	12		12		12
13	13					
14	14			14	14	
15	15					
16	16			16		16
17	17	17				
18	18					18
19	19					
20	20			20		20
21	21					
22	22			22	22	
23	23			23		
24	24	24				

25	25			25		

PROPOSED FLEET SET UP

STATION	PUMP	TANK	AERIAL	BUSH/VAN	BOAT	RESCUE
1	1,26		1			1
2	2,27				2	
3	3			3		
4	4	4	4			
5	5					
6	6	6				6
7	SPARE		7	7		
8	8	8		8	8	
9	9					
10	10	10		10	10	
11	SPARE		11, SPARE			11
12	12	12		12		
13	13					
14	14			14		
15	SPARE		15	15		
16	16	16			16	16
17	17	17				
18	18			18		
19	19					
20	20			20		20
21	SPARE		21			
22	22	22			22	
23	23			23		

24	24	24				
25	25			25		

Request for Recommendation
Priorities Committee

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Type of Decision

Meeting Date	September 15th, 2004					Report Date	September 8th, 2004			
Recommendation		x	Yes		No	Priority	x	High		Low
		Direction Only				Type of Meeting	x	Open		Closed

Report Title

School Zone Speed Policy

Policy Implications + Budget Impact

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

X	Background attached

Recommendation

That Option 1 regarding the 2001 School Zone Speed Policy be confirmed.

	Recommendation attached

Recommended by the General Manager

Don Belisle
General Manager of Public Works

Recommended by the C.A.O.

Mark Mieto
Chief Administrative Officer

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Revised: January 8, 2003

Report Authored By	Division Review
Nathalie Mihelchic, P. Eng. Manager of Transportation Engineering Services	R.G. (Greg) Clausen, P. Eng. Director of Engineering Services

Background

In 2001, City Council adopted a School Zone Speed Policy (attached as Exhibit 'A') to deal with the numerous requests to implement lower speed limits on roadways adjacent to schools. Section 128(5) of the Highway Traffic Act allows for reduced speed limits in school zones during normal school times only. The required signage includes flashing amber lights in conjunction with a school area and speed limit sign as shown in Exhibit 'B' attached. The reduced speed limit is in effect only when the lights are flashing during regular school periods. The cost to implement the Section 128(5) sign installations range from $6,000 to $11,000 per location, depending on the availability of hydro at each site. In the absence of hydro, the units can be powered with solar energy.

Within the City of Greater Sudbury there are a total of 96 schools including 78 elementary and 18 secondary. Currently, 27 schools, (25 elementary and 2 secondary), are located in 40 km/h speed zones. Sixty-six schools are located in 50 km/h speed limit zones and three schools are located in areas with a speed limit above 50 km/h.

Options

Various options related to speed limits in school zones are available for Council's consideration

1) Maintain existing 40 km/h speed zones with existing signage. New requests will be dealt with in accordance with the 2001 school zone speed policy complete with flashing beacons.

2) Maintain existing 40 km/h speed zones with existing signage. New request will be dealt with in accordance with the 2001 school zone speed policy except that the speed limit will be posted as full time 40 km/h zone (no flashing beacons).

3) Permanently reduce speed limit to 40 km/h on all roadways adjacent to all schools located on residential and collector roadways at an approximate cost of $55,000 for changes in signage (no flashing beacons).

4) Retrofit all existing 40 km/h speed limit school zones to comply with the 2001 school zone speed policy complete with flashing beacons at a cost estimate of $170,000 to $300,000.

Unjustifiably lowering the speed limit permanently in all school zones may create a false sense of security among parents and children who believe that traffic will abide by the lower speed limit. Generally, the speed motorists choose to travel is based on the level of development adjacent to the road, the geometric design of the road, traffic volumes and prevailing road and weather conditions. Research indicates that drivers tend to select speeds which they consider safe rather than the posted speed limit. It has been found that the 85th percentile speed represents the speed at which motorists feel safe and is commonly used for establishing appropriate speed limits. The 85th percentile speed is the speed at or below which 85 percent of vehicles surveyed are traveling.

The flashing beacons sign advises drivers that the reduced speed is only applicable when the beacon is flashing, ie. only during normal school times. This may have the effect of encouraging drivers to better comply with the speed limit. As with any new regulation, significant police enforcement and public education would be required to familiarize motorists with the new signs and their implication.

Because of the significant costs included in Options 3 and 4, staff is suggesting that Option 1 be implemented. This will permit staff to monitor the effectiveness of the new signs and report back to Council. In the interim, staff is currently researching the practices of other municipalities with respect to speed limits in school zones.

Which ever option Council selects, applicable charges in either the current (maintenance) or capital budgets will be required.

EXHIBIT: A

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City Agenda Report

Report To: CITY COUNCIL

Report Date: September 12, 2001 **Meeting Date:** September 27, 2001

Subject: Speed Reduction School Zones

Department Review:	Recommended for Agenda:
for D. Bélisle General Manager of Public Works	J.L. (Jim) Rule Chief Administrative Officer
Report Authored by:	R.R. Hortness, Co-ordinator of Traffic & Transportation

Recommendation:

That the City of Greater Sudbury adopt the attached **School Zone Speed** policy to deal with the numerous requests to implement lower rates of speed on roadways adjacent to Schools, and:

That City Council approve the required amendment to the Traffic and Parking By-law to implement a School Zone Speed reduction.

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Executive Summary:

There is a desire of many residents to implement some form of speed control in the area of neighbourhood schools. The Highway Traffic Act allows municipalities to implement school zone speed limits. This report recommends a policy for the implementation of these school zones.

Background:

Traffic and Transportation staff often receives requests for speed reduction adjacent to schools. Based on a request from a councillor (see exhibit "A"), the Traffic and Transportation Section carried out a review of school zone speed reductions.

The request for speed reduction adjacent to Westmount Public School was previously dealt with by staff from the 'old' City of Sudbury. Their analysis of the information provided from the City of Greater Sudbury Police Services, and empirical data, supported the retention of the existing speed limit within the area.

In response to the request by the Councillor the City of Greater Sudbury Traffic and Transportation staff carried out a speed study in the area and found that the average speed on Westmount Avenue in the vicinity of the school is only 45 km/hr and the 85th percentile speed was 57 km/hr. This data, as well as a lack of speed related collisions along Westmount Avenue, again did not support a general reduction in speed within the area.

The presence of children walking to or playing around school zones creates a instinctive response in any parent to make the areas around schools as safe as possible. The first response is to lower the speed limit. The Highway Traffic Act offers municipalities the ability to address citizen's concerns by designating areas near specific schools as reduced speed zones during normal school times.

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The following is the appropriate section of the Highway Traffic Act.

> Rate in school zones -- s. 128(5)
> (5) The council of a municipality and the trustees of a police village may by by-law,
>
> (a) designate a portion of a highway under its jurisdiction that adjoins the entrance to or exit from a school and that is within 150 metres along the highway in either direction beyond the limits of the land used for the purposes of the school; and
>
> (b) prescribe a rate of speed of 40 kilometres per hour for motor vehicles driven on the portion of a highway so designated on days on which school is regularly held and prescribe the time or times between the hours of 8.00 a.m. and 5.00 p.m. at which the speed limit is effective.

There are speed reduction zones that were previously implemented specifically to address concerns around school areas.

In some instances the implementation of a 40 km/h zone around a school can in of itself be a hazard. As an example, a reduction of speeds to 40 km/h by time of day, day of week and time of year, is confusing. The requirement for these speed zones to be variable by time of day and day of week on higher volume, higher speed roadways will create confusion and is a hazard, for unlike residential streets. Many of the drivers on these roadways do not travel a route on a regular basis.

The implementation of school speed zones should be limited to residential streets and residential collectors that have a posted speed of 50 km/h. If this form of control is installed on arterials or higher volume/speed collector roadways, it would in effect create speed traps for the drivers and increase hazards to both pedestrians and motorists.

Should City Council recommend the implementation of school speed zones, it is recommended that the following policy be used as the criteria for the recommendation of school zone speed reductions to City Council.

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School Zone Speed Reductions.

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

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

The implementation period of this policy will be required so that;

1) staff can work with the City of Greater Sudbury Police Services to carry out an information campaign to inform the public of this new incentive by the City of Greater Sudbury;

2) a survey of existing speed reduction zones that were implemented due to adjacent schools, can be carried out and implemented into the new legislation;

3) staff can work with the school boards to develop a process of review and implementing those school speed zones as per the existing policy.

EXHIBIT: B