

# **Community Viability Committee**

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**Councillor Mike Petryna, Chair  
Councillor Louise Portelance, Vice-Chair**

# Request for Recommendation Priorities Committee



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

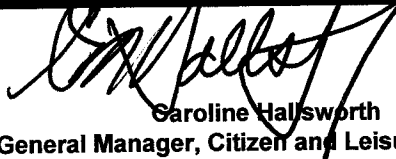
| Sub-Committee Check-Off                                       |                     |                                    |
|---|---------------------|------------------------------------|
| Please indicate which sub-committee will deal with this issue |                     |                                    |
| <input checked="" type="checkbox"/>                           | Community Viability | Public & Intergovernmental Affairs |
|   |                     | Financial & Program Accountability |

| Report Title                             |
|--|
| Approval of School Crossing Guard Policy |

| Policy Implications + Budget Impact |   |
|-------------------------------------|---|
| <input type="checkbox"/>            | This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified |
| <input checked="" type="checkbox"/> | Background attached   |

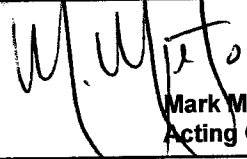
| Recommendation  |                         |
|---|-------------------------|
| That the School Crossing Guard Policy be approved by Council of the City of Greater Sudbury and that all 42 current school crossing locations be grandfathered with Council's option to review each location change as described in the policy. |                         |
| <input type="checkbox"/>  | Recommendation attached |

Recommended by the General Manager



Caroline Hallsworth  
General Manager, Citizen and Leisure Services

Recommended by the C.A.O.



Mark Mieto  
Acting CAO

**Request for Decision  
City Council**



|  |          |                   |
|--|----------|-------------------|
| <b>Recommendation</b> <i>continued</i> | <b>X</b> | <b>Background</b> |
|--|----------|-------------------|

Please indicate if the information below is a continuation of the Recommendation or Background

**Report Prepared By**

*Lisa Church*

Lisa Church  
School Crossing Guard Supervisor

**Division Review**

*Robert Johnston*

Robert Johnston  
Director, Transportation Services

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

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

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

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

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

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

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

**Request for Decision  
City Council**



|  |          |                   |
|--|----------|-------------------|
| <b>Recommendation <i>continued</i></b> | <b>X</b> | <b>Background</b> |
|--|----------|-------------------|

Please indicate if the information below is a continuation of the Recommendation or Background

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

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

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

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

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

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

## **CITY OF GREATER SUDBURY** **SCHOOL CROSSING GUARD POLICY**

### **BACKGROUND**

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

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

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

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

### **WARRANT SYSTEM**

#### **ADDING A SCHOOL CROSSING LOCATION**

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

#### **Criteria I**

##### **Number of School Children**

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

#### **Criteria II**

##### **Gap Time**

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

OR

### **Sight Lines**

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

### **DELETING A SCHOOL CROSSING LOCATION**

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

#### **Criteria III**

##### **Number of School Children**

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

#### **Criteria IV**

##### **Gap Time**

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

### **Sight Lines**

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

### **AUTHORITY**

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

# APPENDIX I

TABLE 1

Adequate Gap Time  
(In Seconds)

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

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

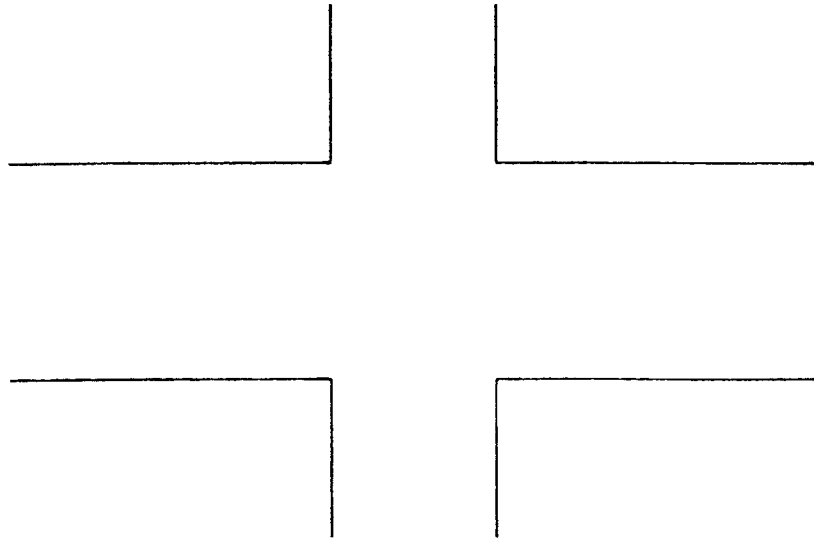
## APPENDIX II

**FIGURE 1**  
**EXISTING BASE DATA**

**LOCATION:**

**DATE:**

**SUBMITTED BY:**



**DATA TO BE COLLECTED:**

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

**TABLE 2**

**Child's Visibility Distance**

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

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

**TABLE 3**  
**Driver Stopping Sight Distance**

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

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

Based on Driver Perception-Reaction Time of 2.5 seconds

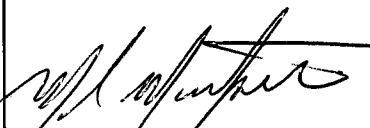


| COEFFICIENT OF FRICTION - METRIC |     |
|----------------------------------|-----|
| KM/H                             | f   |
| 30                               | .40 |
| 40                               | .37 |
| 50                               | .35 |
| 60                               | .32 |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

**Report To: Community Viability Committee**

**Report Date: June 13, 2002**

**Meeting Date: June 26, 2002**

**Subject: City of Greater Sudbury Entrance Culvert Policy**

|  |  |   |
|--|--|---|
| <p><b>Division Review:</b></p>  <p><b>M. Montpellier</b><br/>Director of Operations</p> | <p><b>Department Review:</b></p>  <p><b>D. Bélisle</b><br/>General Manager of<br/>Public Works</p> | <p><b>C.A.O. Review:</b></p>  <p><b>M. Mieto</b><br/>Acting Chief<br/>Administrative Officer</p> |
| <p><b>Report Prepared by: R.M. Falcioni, P.Eng., Operations Engineer.</b></p>  |  |   |

## Recommendation:

That Council establish an Entrance Culvert Policy whereby the property owner pays a rate based on one hundred percent (100%) of the cost for installation of a new culvert and the City subsidizes replacement of residential culverts at a cost of fifty percent (50%) of the new culvert rate. Where the property owner is not in agreement with these cost the City would apply these costs to their municipal taxes. The City will continue to be responsible to maintain flow in the culvert. The details are as outlined in the attached report.

## Background:

With the creation of the City of Greater Sudbury it is necessary to rationalize the entrance culvert policy from the former municipalities to a single policy for the new City. The following chart summarizes briefly what the policies were in each of the former municipalities for residential entrance culverts.

| Municipality      | Initial Installation | Replacement /Reset                                 | Costs  | Comments  |
|-------------------|----------------------|--|--|---|
| Valley East       | home owner           | home owner   | -permit required<br>-Town set grades<br>-installation - \$101/meter<br>-\$500 refundable deposit on application          | -min size 450 mm<br>-may use contractor<br>-deposit refunded if culvert installed to standard   |
| Capreol           | N/A                  | N/A  | N/A  | no residential culverts in Town   |
| Rayside - Balfour | home owner           | home owner   | -permit req'd - \$57 fee<br>-replacement - \$67/meter<br>-reset - \$50/meter<br>-\$400 refundable deposit on application | -min size 450 mm<br>-2 year guarantee if installed by Town<br>-may use contractor<br>-deposit refunded if culvert installed to standard |
| Onaping Falls     | home owner           | home owner   | -permit req'd - \$57<br>-replacement - \$67/meter<br>-reset - \$50/meter<br>-\$400 refundable deposit on application     | -min size 450 mm<br>-2 year guarantee if installed by Town<br>-may use contractor<br>-deposit refunded if culvert installed to standard |
| Walden            | home owner           | after 5 years the Town maintains                   | -permit required<br>-actual costs  | -min size 375 mm<br>-min length 6 meters  |
| Nickel Centre     | home owner           | replacement by the home owner<br>reset by the Town | -no permit required<br>-must inform Town<br>-replacement - \$133/m   | -min size 450 mm<br>-may use contractor<br>-Town inspected after installation   |
| Sudbury           | home owner           | home owner   | -permit required<br>-replacement - 75% of actual cost, about \$115/m<br>-reset - \$145 lump sum                          | -min size 450 mm<br>-may use contractor   |

|                   |            |            |  |   |
|-------------------|------------|------------|--|---|
| Region of Sudbury | home owner | home owner | permit required<br>replacement - \$139/m<br>reset - \$298 lump sum | -min size 450 mm<br>-may use contractor |
|-------------------|------------|------------|--|---|

Ongoing maintenance, in all cases, such as cleaning and thawing is done by the municipality.

As part of developing a new policy, the policies of several other municipalities around the Province were investigated. The following chart summarizes the policies from six other municipalities.

| Municipality         | Initial Installation | Replacement /Reset | Costs   | Comments  |
|----------------------|----------------------|--------------------|---|---|
| North Bay            | home owner           | city               | permit required<br>-installation - \$75/m plus \$25/coupling<br>-\$200 min charge | -allow poly,<br>-will reset if they get a 6" heave /rusted out /causing a liability for City,<br>- do about 200/yr<br>-may use registered contractors             |
| Sault Ste. Marie     | home owner           | city               | -permit required<br>-installation~\$100/m   | -allow poly<br>-must be scraping before resetting/ will pad before resetting/<br>-restore with asphalt if hard surfaced<br>-\$122,000/ditching<br>- \$55,000/mtce |
| London               | home owner           | city               | -permit required  | -allow poly<br>-must use contractor   |
| Hamilton             | home owner           | city               | permit required   | -allow poly<br>-new policy being developed by consultant expected in April/May  |
| County of Wellington | home owner           | county             | -permit required<br>-\$300 refundable deposit on application                      | -allow poly<br>-may use contractor<br>-deposit refunded if installed correctly<br>- no problems with heaving  |

From the chart it can be seen that these other municipalities look after all future maintenance of entrance culverts once they are installed. North Bay and Sault Ste. Marie are the only municipalities that experience significant heaving problems with culverts and replace and reset up to 200 culverts each year. The City of Greater Sudbury covers a larger geographical area with a large rural component, so we could expect to do a larger number of resets. If Council wishes to cover the cost of future maintenance of entrance culverts, the budget for culvert replacements should be increased by \$220,000.00. This represents the cost of 150 replacement culverts and 100 resets annually. There would also be the need for strict guidelines under which culverts would be replaced, otherwise the budget increase would have to be substantially larger.

**Summary:**

The former Municipalities of the City of Greater Sudbury had a user pay policy with respect to entrance culverts and on going maintenance and unless Council is prepared to improve service levels with a corresponding increase in costs it is recommended that the new culvert policy reflect that philosophy. The following summarizes the recommended policy and process that should be followed.

| Description                  | Responsibility | Cost  | Comments  |
|------------------------------|----------------|---|---|
| entrance culvert application | home owner     | \$50 00 fee if work to be done by home owner or contractor<br>- Cost of application included in installation charge if done by City | -Covers the cost of administration<br>-Application to be processed through Transportation and Operations Departments for location, sizing and grades<br>-Permit issued after application is approved<br>-Grades and final inspection done by Operations |
| new installation             | home owner     | \$100 00 per meter for all sizes up to 1 meter diameter<br>- Over 1 meter the charges will be based on actual costs                 | -Minimum size 450mm<br>-This fee is based on the actual cost of a culvert installation<br>-Home owner may use an approved contractor to do installation   |
| reset or replacement         | home owner     | \$50 00 per meter   | -This fee is based on 50 % cost of a new culvert<br>-City will reset or replace culvert<br>- Surface restoration and head wall replacement is the responsibility of the property owner  |

The minimum length of an entrance culvert is 6 meters (20 feet) and would cost the average

home owner \$600.00 plus taxes.

The policy recommends that Council pass a by-law establishing that should an entrance culvert not be installed in accordance with municipal standards or a home owner refuse to replace or reset a culvert that has collapsed or heaved, causing interference with roadside drainage or property flooding, the city may proceed with corrective work and recover the costs through the home owners municipal taxes. The by-law should include that the proposed fees identified in this recommended policy be adjusted annually with the user fee bylaw.

When the City does road reconstruction, drainage improvements or sewer and water work that requires the excavation of the entrance culverts there would be no cost to the home owner for replacement or resets.. The City would not be responsible to put back culvert head walls, but would install longer culverts to maintain the entrance width and provide for side sloping.

Commercial, industrial and institutional entrance culverts that fall under a Site Plan Control Agreement would not require an entrance permit. All future maintenance and alterations or replacement of those culverts would be the responsibility of the property owner.

**Policy:**

The policy shall:

- 1) Establish that all entrance culverts require an application and permit by the property owner.
- 2) Establish charges for this work if performed by City forces.
- 3) Establish that reset and future replacements be subsidized and the rate be 50% of the new installation charge.
- 4) Include that Council pass a By-Law establishing that should an entrance culvert not be installed in accordance with municipal standards or a home owner refuse to replace or reset a culvert that has collapsed or heaved, causing interference with roadside drainage or property flooding, the City may proceed with corrective work and recover the costs through the home owner's municipal taxes. The By-Law should include that the proposed fees identified in this recommended policy be adjusted annually with the User Fee By-Law.
- 5) Include that when the City does road reconstruction, drainage improvements or sewer and water work that requires the excavation of the entrance culverts there would be no cost to the home owner for replacement or resets. The City would not be responsible to put back culvert head walls, but would install longer culverts to

maintain the entrance width and provide for side sloping.

- 6) Include that all commercial, industrial and institutional entrance culverts would not be subsidized. If they fall under a Site Plan Control Agreement they would not require an entrance permit and all future maintenance and alterations or replacement of those culverts would be the responsibility of the property owner.

# Request for Recommendation Priorities Committee




| Type of Decision         |                |     |                                     |    |                 |                                     |      |  |        |
|--------------------------|----------------|-----|-------------------------------------|----|-----------------|-------------------------------------|------|--|--------|
| Meeting Date             | June 26, 2002  |     |                                     |    | Report Date     | June 17, 2002                       |      |  |        |
| Recommendation Requested |                | Yes | <input checked="" type="checkbox"/> | No | Priority        | <input checked="" type="checkbox"/> | High |  | Low    |
|                          | Direction Only |     |                                     |    | Type of Meeting | <input checked="" type="checkbox"/> | Open |  | Closed |


| Sub-Committee Check-Off                                       |                     |                          |                                    |
|---|---------------------|--------------------------|------------------------------------|
| Please indicate which sub-committee will deal with this issue |                     |                          |                                    |
| <input checked="" type="checkbox"/>                           | Community Viability | <input type="checkbox"/> | Public & Intergovernmental Affairs |
| <input type="checkbox"/>                                      |                     | <input type="checkbox"/> | Financial & Program Accountability |

| Report Title   |
|--|
| City of Greater Sudbury, Capital and Current Road Expenditures |

| Policy Implications + Budget Impact |   |
|-------------------------------------|---|
| <input type="checkbox"/>            | This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified |
|                                     |   |
| <input checked="" type="checkbox"/> | Background attached   |

| Recommendation           |                         |
|--------------------------|-------------------------|
|                          |                         |
| <input type="checkbox"/> | Recommendation attached |

| Recommended by the General Manager   |
|--|
| <br>D Bélisle,<br>General Manager of Public Works |

| Recommended by the C.A.O.   |
|---|
| <br>M Mieto,<br>Acting Chief Administrative Officer |

# Request for Recommendation Priorities Committee



|  |          |                   |
|--|----------|-------------------|
| <b>Recommendation</b> <i>continued</i> | <b>x</b> | <b>Background</b> |
|--|----------|-------------------|

Please indicate if the information provided below is a continuation of the Recommendation or Background

|   |                        |
|---|------------------------|
| <b>Report Authored By</b>                     | <b>Division Review</b> |
| D Bélisle,<br>General Manager of Public Works |                        |

Council has asked for a report on road expenditures since the inception of the City of Greater Sudbury. The perceptions shared by several Councillors are that less money is being spent on roads since amalgamation, and that certain roads, particularly rural roads in outlying areas, are deteriorating at an accelerated pace. By and large, both observations are correct.

Prior to amalgamation, the eight (8) former Area Municipalities had varying practices with respect to budgeting for roads. The following observations are offered in explanation for the tables that follow.

### Capital Roads Budgets

- The former City of Sudbury and the former Region established and practiced clear delineations between Capital and Current Budgets. Capital Budgets for roads were dedicated to new construction, reconstruction, and significant physical improvements to existing road networks. Their Current Budgets on the other hand, were used for on-going maintenance and operating expenditures, such as patching, gravelling, dust control, street light and traffic light maintenance, plowing, sanding, ditching, etc...
- By comparison, the six (6) other Area Municipalities did not have clear delineations between Capital and Current Budgets. Road expenditures, whether they were of a capital or maintenance nature, were funded from either Capital or Current Budgets from year to year, as suited the circumstances in any particular year.
- The former Region used an envelope system for Capital allocations to its various delivery sectors. From time to time, this was topped up by Provincial assistance as former Provincial highways were transferred to the Region. A good example in recent years, is the four-laning of MR #80 from Val Caron to Val Therese, which was fully paid for by the Province. In addition, the Province deposited funds with the Region for the completion of the four-laning into Hanmer at some future time.
- Other municipalities did not use an envelope system, and Capital Budgets within service delivery sectors varied annually based on emerging priorities from year to year. It is therefore difficult to establish historical Capital roads expenditures in most municipalities, as priorities changed annually between roads, arenas, civic buildings, equipment, and so on. Further, whenever some of these non-road delivery sectors became eligible for grants or subsidies, the new-found money enabled larger allocations to road initiatives. The overall historical perspective reflects wide swings in Capital road expenditures from year to year.

# Request for Recommendation Priorities Committee



|  |          |                   |
|--|----------|-------------------|
| <b>Recommendation</b> <i>continued</i> | <b>x</b> | <b>Background</b> |
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Please indicate if the information provided below is a continuation of the Recommendation or Background

- In previous years, and more so as amalgamation approached, several municipalities increased capital roads expenditures beyond historical patterns, depleting reserves, using grants or other unusual revenues to maximize road improvements. As a result, actual capital road expenditures often exceeded annual Capital Budgets. Previous spending levels could not be replicated following amalgamation, and could not be used as the "base line" expenditure pattern going into amalgamation.
- During the Transition process, Financial staff from various former Municipalities established a working group to reconstruct and reconcile, among other things, the capital spending history of all former municipalities. This exercise was essential in order to establish a "base line" of capital expenditures for the new City. The following table was generated based on the best available data collected from all municipalities for the five years preceding amalgamation. It should be noted that all municipalities used grants, reserves, and unusual revenues, from year to year, in setting annual Capital road expenditures. No such grants, reserves, or usual revenues were available in 2001 and 2002. A Northern Ontario Heritage Fund grant for MR #35 widening may be available later this year, and provincial Ministry of Transportation funds have been set aside for the completion of MR #80 four-laning to Hanmer. These one-time revenues are not included in the 2001 and 2002 Budget allocations in the following Table.

**TABLE 1**

### Capital Road Expenditures

| Municipality    | 1996 Expenditures | 1997 Expenditures | 1998 Expenditures | 1999 Expenditures | 2000 Expenditures | 2001 Budget      | 2002 Budget      |
|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|
| Capreol         | 70,000            | 53,207            | 70,640            | 54,448            | 3,177             |                  |                  |
| Nickel Centre   | 400,474           | 268,224           | 385,614           | 356,513           | 524,111           |                  |                  |
| Onaping Falls   | 14,484            | 76,902            | 7,052             | 113,318           | 213,083           |                  |                  |
| Rayside-Balfour | 4,370             | 267,568           | 240,662           | 277,100           | 1,976,430         |                  |                  |
| Region          | 6,617,911         | 6,213,555         | 8,802,221         | 5,843,192         | 4,795,419         |                  |                  |
| Sudbury         | 4,855,882         | 5,354,337         | 7,400,607         | 5,018,345         | 5,450,142         |                  |                  |
| Valley East     | 303,566           | 1,025,246         | 1,311,884         | 860,047           | 1,726,392         |                  |                  |
| Walden          | 421,802           | 366,895           | 422,283           | 1,099,832         | 1,091,295         |                  |                  |
| <b>TOTAL</b>    | <b>12,688,489</b> | <b>13,625,934</b> | <b>18,640,963</b> | <b>13,622,795</b> | <b>15,780,049</b> | <b>9,560,127</b> | <b>8,647,204</b> |

# Request for Recommendation Priorities Committee



Recommendation *continued*

x Background

Please indicate if the information provided below is a continuation of the Recommendation or Background

## Current Roads Budgets

- As stated earlier, Capital and Current road expenditures were interchangeable in many former municipalities. Just like it was difficult to document Capital road expenditures in prior years, the same difficulty existed in nailing down historical spending patterns on road maintenance activities, since maintenance and capital expenditures were often interchanged.
- Past Current Budget spending patterns were further confused as a result of historical inter-departmental sharings/aggregations/accounting practices. It was commonplace in many former municipalities that Public Works employees worked on roads, in parks, arenas, cemeteries, or did maintenance on buildings. Since there was no need or advantage to do so, costs were not diligently tracked by service delivery sector. As a consequence, when financial staff attempted to construct a base line Current Budget for 2001, based on 2000 data, a lot of "best guesses" and "best fits" were used. The process yielded fairly acceptable results, as a starting point, but there is little doubt that portions of former roads budgets landed in parks, arenas, cemeteries, buildings, and vice versa. It will take several more years to sort these things out, before we can align departmental expenditures with public expectations and Council's priorities. The following table depicts our best guess of the aggregated 2000 Current Roads Budgets for all former municipalities, the base line 2001 Current Roads Budget, the 2001 Actual road expenditures, and the 2002 Current Roads Budget.

**TABLE 2**

### **Current Road Expenditures (Maintenance)**

|                       | Base Line<br>2000 Budget<br>All Area Municipalities | 2001 Budget       | Actual<br>Expenditures<br>2001 | 2002 Budget       |
|-----------------------|---|-------------------|--------------------------------|-------------------|
| Summer<br>Maintenance | 8,140,625   | 6,524,508         | 7,530,530                      | 7,491,292         |
| Winter<br>Maintenance | 7,149,435   | 7,626,080         | 11,679,058                     | 7,407,860         |
| <b>TOTAL</b>          | <b>15,290,060</b>                                   | <b>14,150,588</b> | <b>19,209,588</b>              | <b>14,899,152</b> |

The next table merges Capital and Current allocations and expenditures for roads for the years 2000, 2001, and 2002.

# Request for Recommendation Priorities Committee



|  |   |                   |
|--|---|-------------------|
| <b>Recommendation</b> <i>continued</i> | x | <b>Background</b> |
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Please indicate if the information provided below is a continuation of the Recommendation or Background

**TABLE 3**

**Total Road Budgets, Capital and Current**

|              | Baseline 2000     | 2001 Budget       | 2002 Budget       |
|--------------|-------------------|-------------------|-------------------|
| Capital      | * 15,780,049      | 9,560,127         | 8,647,204         |
| Maintenance  | ** 15,290,060     | 14,150,588        | 14,899,152        |
| <b>TOTAL</b> | <b>31,070,109</b> | <b>23,710,715</b> | <b>23,546,356</b> |

\* Actual Capital Expenditures  
 \*\* Budgeted Maintenance Expenditures

The budget and expenditure data from Table 3 affirms Councillors' observations: there have been significant reductions in roads expenditures in recent years. Most of the variances can be attributed to the application of grants, reserves, or unusual revenues in the years leading up to 2000, followed by the absence of any such grants, reserves or other revenues in 2001 and 2002.

**Urban vs Rural Roads**

City Councillors from predecessor outlying municipalities perceive that less money has been spent on rural roads since amalgamation. This is difficult to validate one way or another, given the inconsistent spending patterns of the former municipalities in the past. What is evident is that a significant re-priorization of urban vs rural spending allocations is emerging, driven primarily by the overall decline in road budget allocations. The proper mix between urban and rural road spending is a work-in-progress that will require several years to sort out, with input from Councillors, staff, and residents. In the meantime, we are constrained by the budgets allocated for road purposes, with no relief in sight for the foreseeable future.

The attached 2002 Roads Capital Budget, marked Appendix 'A', demonstrates the meagre allocations dolled out to the various roads needs, ranging from bridges, resurfacing, drainage, storm sewers, sidewalks, and street lights. There just is not enough money to meet all the needs.

**2001 Actual Expenditures and the 2002 Current Roads Budget**

The 2001 actual road expenditures depicted in Table 2 reflect the following realities:

- Pre-amalgamation service levels and methods of operations were sustained throughout 2001. The Transition Board model for road maintenance operations was not implemented in 2001, and projected amalgamation savings, real or otherwise, were not achieved.

# Request for Recommendation Priorities Committee



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

- The winter of 2000-2001 was truly unusual, resulting in over expenditures of \$4 million in winter control activities alone. It could be argued that these over-expenditures could have been reduced if the Transition Board model had been fully implemented. We will never know, as it has become clear that the Transition Board model did not adequately respond to the service level expectations of the public and elected Councillors. Further, road maintenance route rationalization, and the redeployment of employees and equipment, have been substantially delayed because two of the five proposed Works Depots/Yards will not be available for at least another 24 months.

Many people perceive that the past winter of 2001-2002 was mild compared to past winters. This is true for the months of November and December 2001, which saw very little snow precipitation. It is also true in terms of the mild temperatures experienced from January to April 2002. But snow precipitation from January to April 2002 far exceeded historical norms, notwithstanding the milder temperatures.

Environment Canada's historical average annual snowfall for Sudbury is 263 cm. For the period of January to April, Environment Canada reports historical snow precipitations of 162 cm. This year, from January to April alone, Sudbury received 260 cm of snow, the equivalent of an entire year's average snowfall. As a result, the entire annual winter control budget was used up from January to April, leaving nothing to cope with November and December snowfalls. In an effort to avoid or curb an annual deficit in roads expenditures, Public Works staff were instructed to curtail summer maintenance activities for the balance of the year in order to free up funds for winter control work in November and December. During the Council meeting of June 13, Councillor Gainer correctly alluded to this directive issued to Public Works Managers in May of this year. Appendix 'B' lists proposed service level reductions in summer maintenance activities, in order to free up \$1.4 million for the upcoming winter season.

The majority of proposed service level reductions in Appendix 'B' can be tolerated for this year, recognizing that they are preventive in nature, and could be resumed at an accelerated pace in 2003. The exceptions are surface and gravel patching, at an estimated value of \$550,000. These reductions would visibly impact service levels this year. Council may be of a mind not to curtail these activities, on the assumption, albeit risky, that underexpenditures or new found revenues elsewhere in the Corporation may become available from now until year end to fund these summer activities.

# Request for Recommendation Priorities Committee



|  |          |                   |
|--|----------|-------------------|
| <b>Recommendation</b> <i>continued</i> | <b>x</b> | <b>Background</b> |
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Please indicate if the information provided below is a continuation of the Recommendation or Background

## Summary

The following key messages emerge from all of the foregoing.

1. Total road expenditures, whether Capital or Current, have decreased substantially in recent years. The funding shortfall is fuelling road deterioration at an accelerated pace.
2. During the 2002 Capital Budget process, it was demonstrated that a minimum of \$23 million is required annually to maintain the riding surface of existing roads in fair condition. By comparison, the 2002 Roads Capital allocation is \$8,647,204, and this amount also has to take care of bridges, sidewalks, drainage, streetlights and traffic lights.
3. We need a healthy reserve to cope with uncontrollable winter expenditures. A renewable reserve in the order of \$3 million is required to avoid annual road maintenance deficits. A policy is in place to establish this reserve, but the only identified source is future underexpenditures in winter control activities, which may or may not ever materialize. A firmer source for this reserve is warranted.
4. In the short term, public service level expectations for roads must be re-aligned with the fiscal realities we face. Less travelled rural roads, and roads in the annexed areas, will inevitably bear the brunt of these service level reductions.
5. While it is still a work-in-progress, the Transition Board Model for road maintenance activities will not respond to service level expectations in all instances. As time goes on, we need to build a new model, striking a reasonable balance between service level expectations and our ability to pay. In the short term, we are committed to the full implementation of the Transition Board Model, and once it has been tried for a period of time, we will be in a position to recommend adjustments.
6. So far in 2002, we have experienced two major unforeseen road and land drainage culvert failures; one on MR #80 in the four lane section through McCrae Heights, and the other within a major pipe drainage course east of MR #80 in Val Caron. Unbudgeted repair costs will range between \$0.5 and \$0.75 million. We have recommended that emergency funding be provided from the Roads Capital Reserve Fund which has a balance of \$2,472,000. The balance of this Reserve Fund must remain available for future unforeseen emergencies.

# Request for Recommendation Priorities Committee



|                                 |   |            |
|---------------------------------|---|------------|
| Recommendation <i>continued</i> | x | Background |
|---------------------------------|---|------------|

Please indicate if the information provided below is a continuation of the Recommendation or Background

## Options

The fundamental problem is that there are insufficient funds available for Roads. A reasonable solution can only emerge over a long period of time, and we suggest that the City's upcoming Long Range Financial Plan is the proper forum to address this matter. In the short term, dealing only with 2002, the following options are available to Council.

- A Support the internal directive to reduce summer maintenance activities in the amount of \$1.4 million in order to offset winter overexpenditures.
- B Delete surface and gravel patching activities from the proposed reductions in Appendix 'B' at an estimated cost of \$550,000. This work would proceed this year on the assumption that underexpenditures or new revenues would materialize in the Corporation by the end of the year.
- C Take a greater risk, and delete Appendix 'A' entirely, counting on offsetting underexpenditures or new revenues elsewhere in the amount of \$1.4 million by year end, recognizing that there may be a deficit should underexpenditures or new revenues not materialize.

We await Council's direction on this matter.

## 2002 CAPITAL PROJECTS PUBLIC WORKS

### ROADS & DRAINAGE ENVELOPE

#### Structures

|   |                    |
|---|--------------------|
| MR 55, west of Copper Cliff over CPR, eastbound bridge    | \$1,200,000        |
| MR 71, Lasalle extension over CPR                         | 2,000,000          |
| Various engineering condition evaluations & contingencies | 200,000            |
| <b>Sub total structures</b>                               | <b>\$3,400,000</b> |

#### Drainage

|   |                  |
|---|------------------|
| Spruce & Birch streets, Garson, storm sewer replacement | \$50,000         |
| Ester & Dunbar, Sudbury, storm outlet                   | 250,000          |
| South End of Sudbury, master surface drainage plan      | 70,000           |
| Miscellaneous   | 10,000           |
| <b>Sub total drainage</b>                               | <b>\$380,000</b> |

#### Sidewalks & walkways

|   |                  |
|---|------------------|
| Countryside, Algonquin to arena, new sidewalk | \$70,000         |
| Sidewalk & curb replacement                   | 700,000          |
| <b>Sub total sidewalks &amp; walkways</b>     | <b>\$770,000</b> |

#### New Streetlights

|                                      |                 |
|--------------------------------------|-----------------|
| MR80 house 1321                      | \$700           |
| Garson Coniston Rd. house 333        | 700             |
| Armstrong Street, Coniston house 121 | 700             |
| Stanley St., Val Caron house 2976    | 700             |
| Old Wanup Rd.                        | 700             |
| Gauthier St. houses 1505,1525, 1555  | 2,000           |
| Dugas St. house 4515                 | 700             |
| St Pothier Rd. house 855             | 700             |
| Vermillion Lake Rd. houses 1064,950  | 1,400           |
| Horseshoe Lake Rd. @ Birch           | 700             |
| Horseshoe Lake Rd. @ Hwy 69          | 700             |
| Matson Rd.                           | 1,400           |
| South Lane house 1590                | 700             |
| South Lane house 1742                | 700             |
| Lalonde St. house 1520               | 3,000           |
| Fleming St. house 2293               | 1,200           |
| Koti Rd. @ turnaround                | 3,000           |
| Lane south of Patterson              | 700             |
| Footpath house 1487 Agincourt        | 3,000           |
| Landings Rd. house 524               | 800             |
| Unspecified                          | 800             |
| <b>Total new streetlights</b>        | <b>\$25,000</b> |

#### Streetlight & pole replacements/upgrading

**\$175,000**

#### Traffic lights replacements/upgrading

**\$70,000**

#### Road reconstruction

|   |                    |
|---|--------------------|
| Bancroft Drive, Kingsway to Waterview Apt., Phase 1 | <b>\$1,100,000</b> |
|---|--------------------|

# 2002 CAPITAL PROJECTS PUBLIC WORKS

## ROADS & DRAINAGE ENVELOPE (continued)

### Road resurfacing, minor upgrading & spot repairs

( subject to refinements from results of Pavement Management Study )

|   |                    |
|---|--------------------|
| Lasalle Blvd., Montrose to Attlee   | \$600,000          |
| Kingsway, Bancroft to Bruno's Alignment                                   | 500,000            |
| Brookfield Ave , Sudbury  | 20,000             |
| Cawthorpe St , Sudbury  | 30,000             |
| Douglas St., Sudbury  | 30,000             |
| Fourth Ave., Sudbury  | 30,000             |
| Front St., Sudbury  | 20,000             |
| Gordon Ave., Sudbury  | 25,000             |
| Kelley Lake Rd , Sudbury  | 20,000             |
| Martindale Rd., Sudbury   | 40,000             |
| Moonlight Beach Rd , Sudbury  | 30,000             |
| Normandy Cr., Sudbury   | 30,000             |
| Southlane Rd , Sudbury  | 40,000             |
| Stonegate Dr , Sudbury  | 10,000             |
| Telstar Ave., Sudbury   | 30,000             |
| Tennis Club Lane Sudbury  | 10,000             |
| Winchester Ave., Sudbury  | 30,000             |
| Whipporwill Ave., Sudbury   | 20,000             |
| Various lanes Sudbury   | 20,000             |
| Bruno St., Azilda   | 10,000             |
| Charlebois St., Azilda  | 20,000             |
| Labine St., Azilda  | 10,000             |
| Edward St., Chelmsford  | 30,000             |
| Moose Mtn. Road, Capreol  | 20,000             |
| Ella Lake Rd., Capreol  | 20,000             |
| Lakeview Ave., Onaping  | 20,000             |
| Sturgeon St., Dowling   | 10,000             |
| Gordon Lake Rd., Dowling  | 30,000             |
| Martin Rd., Blezard   | 20,000             |
| Valley View Rd., Val Caron  | 30,000             |
| Main St., Val Caron   | 30,000             |
| Bodson Dr., Hanmer  | 45,000             |
| Laurier Crs , Val Therese   | 20,000             |
| Panache Lake Rd , Whitefish   | 30,000             |
| Santala Rd., Lively   | 10,000             |
| 'B' St., Lively   | 20,000             |
| Hillside Cr., Coniston  | 12,000             |
| Second Ave., Coniston   | 20,000             |
| Donnelly Dr., Garson  | 36,000             |
| Old Skead Rd., Garson   | 16,000             |
| Long Year Dr., Falconbridge   | 20,000             |
| Mill Rd , Wahnapiatae   | 6,000              |
| <b>Sub total road resurfacing, minor upgrading<br/>&amp; spot repairs</b> | <b>\$2,020,000</b> |

Contingencies, structures, drainage, streetlights,  
sidewalks, reconstruction, resurfacing

\$707,204

**TOTAL ROADS & DRAINAGE ENVELOPE**

**\$8,647,204**

## FUNDING

2002 Capital Allocation from Current

**\$8,647,204**

**APPENDIX 'B'**

|                               | Annual Budget | Proposed Reduction |
|-------------------------------|---------------|--------------------|
| Surface Patching              | 301,000       | 250,000            |
| RR Crossing Patching          | 68,210        | 60,000             |
| Gravel Patching               | 667,630       | 300,000            |
| Gravel Grading                | 289,690       | 50,000             |
| Tractor Mowing                | 55,400        | 25,000             |
| Concrete Sidewalk Repairs     | 87,450        | 50,000             |
| Curb Repairs                  | 144,490       | 100,000            |
| Mechanical Ditching           | 298,940       | 200,000            |
| Roadside & Offtake Ditching   | 200,040       | 100,000            |
| Road Culvert Maintenance      | 262,410       | 150,000            |
| Catch Basin & Manhole Repairs | 303,340       | 100,000            |
| Sign Maintenance              | 251,570       | 25,000             |
| Total Proposed Reductions     |               | 1,410,000          |