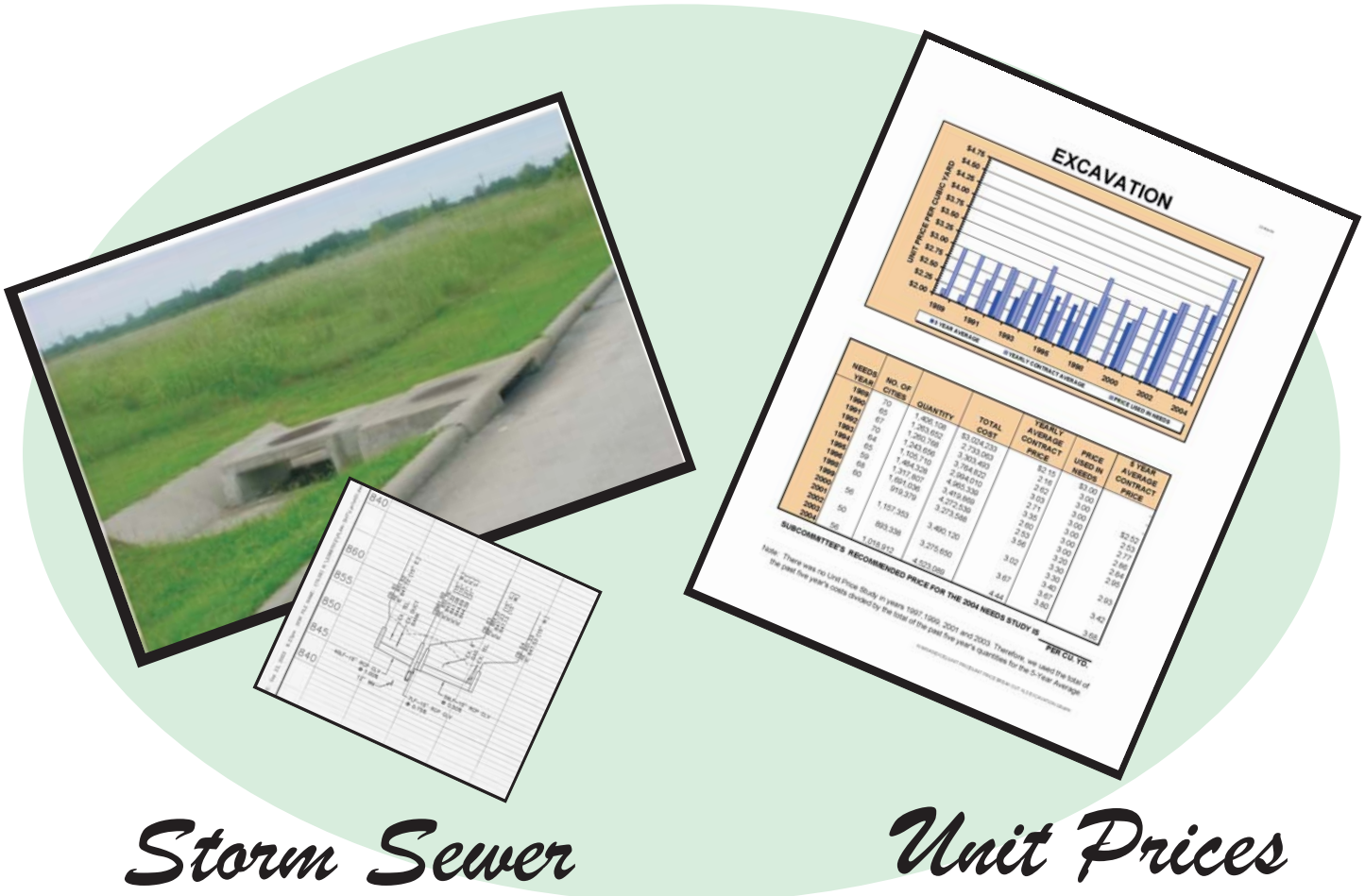
# 2004 MUNICIPAL SCREENING BOARD DATA




*Storm Sewer* *Unit Prices*

## JUNE, 2004

Minnesota Department of Transportation

# Memo

**State Aid for Local Transportation**
395 John Ireland Boulevard
Mail Stop 500
St. Paul, MN 55155-1899

Office Tel.: 651 296-3011
Fax: 651 282-2727

**Date:** **May 4, 2004**

**To:** **Municipal Engineers**
**City Clerks**

**From:** **R. Marshall Johnston** Marshall
**Manager, Municipal State Aid Needs Unit**

**Subject: 2004 Municipal Screening Board Data booklet**

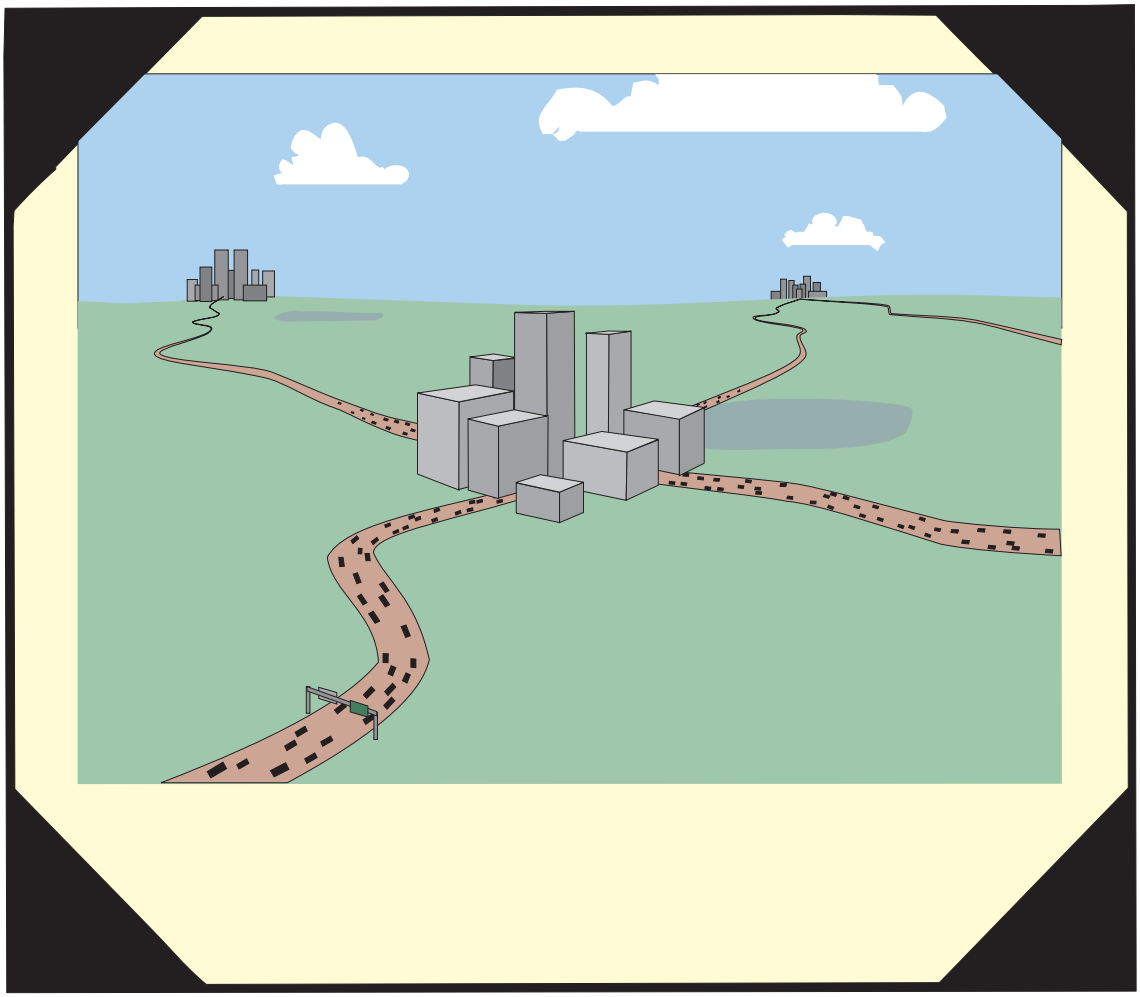
**Enclosed is a copy of the June 2004 Municipal Screening Board Data booklet.**

**The data included in this report will be used by the Municipal Board at its June 1st and 2nd, 2004 meeting to establish unit prices for the 2004 Needs Study that is used to compute the 2005 apportionment. The Board will also review other recommendations of the Needs Study Subcommittee as outlined in their minutes. The Needs Study Subcommittee minutes are found on pages 17 and 18.**

**Should you have any suggestions or recommendations regarding the data in this publication, please refer them to your District Screening Board Representative or call me at (651) 296-6677.**

**This report is distributed to all Municipal Engineers and when the municipality engages a consulting engineer, either a copy is also sent to the municipal clerk or a notice is emailed stating that it is available for either printing or viewing at www.dot.state.mn.us/stateaid .**

**This report is also available for either printing or viewing on the State Aid web site. Go to www.dot.state.mn.us/stateaid and follow the links to the report.**



If you have a scenic picture or photo, new or historical that represents your city, that could be used for a future book cover, please send it to:

Mark Channer
MSAS Needs Unit
395 John Ireland Blvd. MS 500
St. Paul, MN 55155
Phone: (651) 282-2657
Fax: (651) 282-2727
Mark.Channer@ dot.state.mn.us

Maybe you don't like some of the covers. Maybe you just want to show off your city. For any reason, if you would like to see something different on the cover of your MSAS books, we would appreciate your ideas!

Thank you to those that have already contributed!

# 2004 MUNICIPAL SCREENING BOARD

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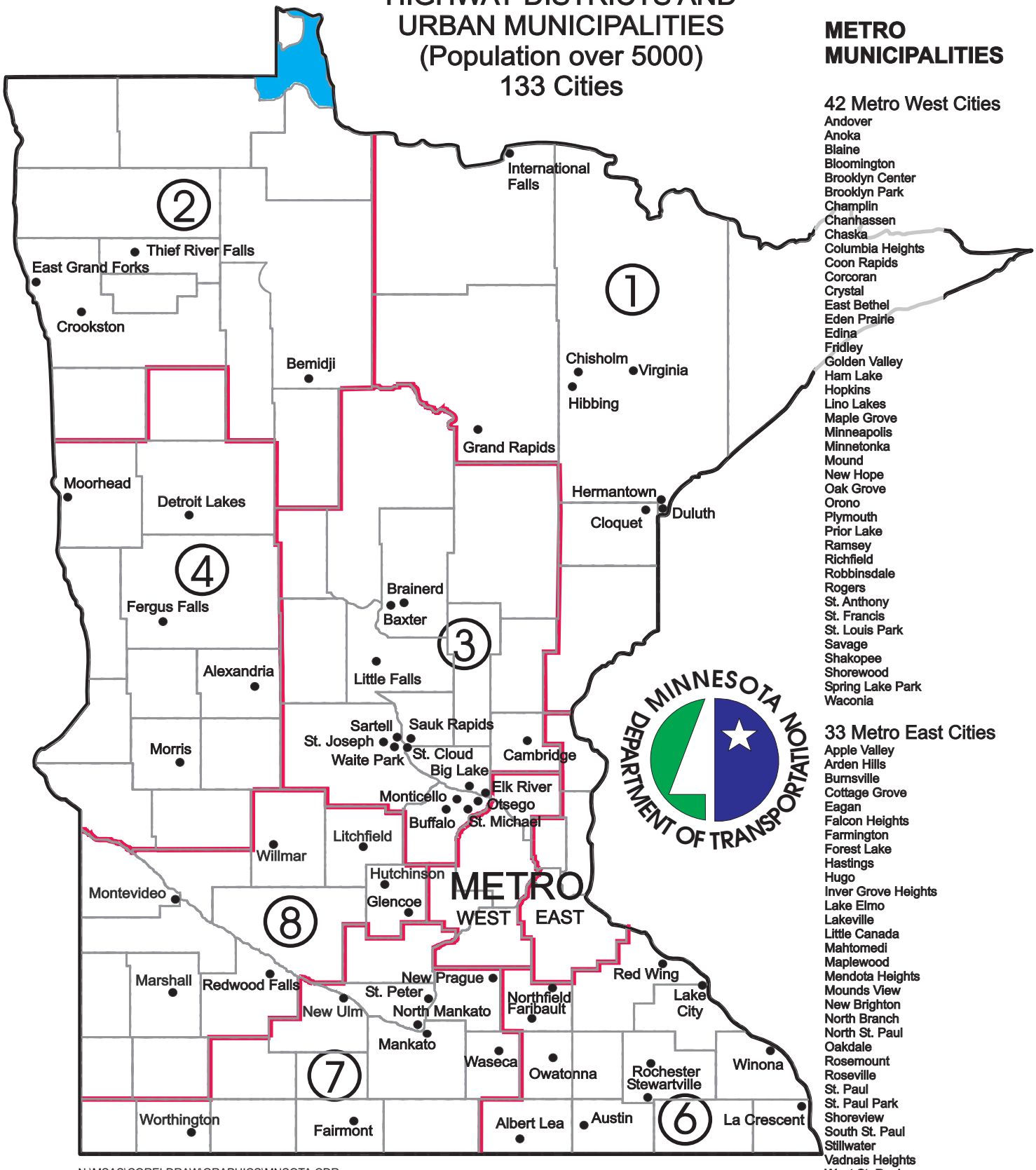
## HIGHWAY DISTRICTS AND URBAN MUNICIPALITIES (Population over 5000) 133 Cities




### METRO MUNICIPALITIES

#### 42 Metro West Cities

Andover
Anoka
Blaine
Bloomington
Brooklyn Center
Brooklyn Park
Champlin
Chanhassen
Chaska
Columbia Heights
Coon Rapids
Corcoran
Crystal
East Bethel
Eden Prairie
Edina
Fridley
Golden Valley
Ham Lake
Hopkins
Lino Lakes
Maple Grove
Minneapolis
Minnetonka
Mound
New Hope
Oak Grove
Orono
Plymouth
Prior Lake
Ramsey
Richfield
Robbinsdale
Rogers
St. Anthony
St. Francis
St. Louis Park
Savage
Shakopee
Shorewood
Spring Lake Park
Waconia

#### 33 Metro East Cities

Apple Valley
Arden Hills
Burnsville
Cottage Grove
Eagan
Falcon Heights
Farmington
Forest Lake
Hastings
Hugo
Inver Grove Heights
Lake Elmo
Lakeville
Little Canada
Mahtomedi
Maplewood
Mendota Heights
Mounds View
New Brighton
North Branch
North St. Paul
Oakdale
Rosemount
Roseville
St. Paul
St. Paul Park
Shoreview
South St. Paul
Stillwater
Vadnais Heights
West St. Paul
White Bear Lake
Woodbury

MINNESOTA DEPARTMENT OF TRANSPORTATION

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JUNE, 2004

# 2004 MUNICIPAL SCREENING BOARD

screening board stuff\Screening Board June 2004.xls 20-Apr-04

| OFFICERS | | | |
|---|---|---|---|
| Chair | Mike Metso | Duluth | (218) 723-3278 |
| Vice Chair | Maria Hagen | St. Louis Park | (952) 924-2687 |
| Secretary | Stephen Gaetz | St. Cloud | (320) 255-7241 |

| MEMBERS | | | | |
|---|---|---|---|---|
| District | Served | Representative | | |
| 1 | 3 | John Suihkonen | Hibbing | (218) 262-3486 |
| 2 | 2 | Dave Kildahl | Crookston, T R Falls | (218) 281-6522 |
| 3 | 2 | Bret Weiss | Monticello | (763) 541-4800 |
| 4 | 1 | Jeff Kuhn | Morris | (320) 762-8149 |
| Metro-West | 1 | Craig Gray | Anoka | (763) 576-2781 |
| 6 | 1 | Jeff Johnson | Owatonna | (507) 444-4350 |
| 7 | 3 | Tim Loose | St. Peter | (507) 625-4171 |
| 8 | 2 | Dave Berryman | Montevideo | (320) 269-7695 |
| Metro-East | 3 | Chuck Ahl | Maplewood | (651) 770-4552 |
| (Three Cities | | Mike Metso | Duluth | (218) 723-3278 |
| of the | | Paul Ogren | Minneapolis | (612) 673-2456 |
| First Class) | | Paul Kurtz | Saint Paul | (651) 266-6203 |

| ALTERNATES | | | |
|---|---|---|---|
| District | | | |
| 1 | Tom Pagel | Grand Rapids | (218) 326-7625 |
| 2 | Brian Freeburg | Bemidji | (218) 759-3576 |
| 3 | Terry Maurer | Elk River | (651) 644-4389 |
| 4 | Robert Zimmerman | Moorhead | (218) 299-5390 |
| Metro-West | Sue McDermott | Prior Lake | (952) 447-4230 |
| 6 | Vacant | | |
| 7 | Fred Salisbury | Waseca | (507) 835-9700 |
| 8 | Glen Olson | Marshall | (507) 537-6774 |
| Metro-East | Deb Bloom | Roseville | (651) 490-2200 |

20-Apr-04

# 2004 SUBCOMMITTEES

The Screening Board Chair appoints one city Engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee.

The past Chair of the Screening Board is appointed to serve a three year term on the Unencumbered Construction Fund Subcommittee.

| NEEDS STUDY SUBCOMMITTEE | UNENCUMBERED CONSTRUCTION FUNDS SUBCOMMITTEE |
|---|---|
| Steve Koehler, Chair<br>New Ulm<br>(507) 359-8245<br>Expires in 2004 | David Jessup, Chair<br>Woodbury<br>(651) 714-3593<br>Expires in 2004 |
| Melvin Odens<br>Willmar<br>(320) 235-4202<br>Expires in 2005 | Thomas Drake<br>Faribault<br>(507) 334-2222<br>Expires in 2005 |
| Shelly Pederson<br>Bloomington<br>(952) 563-4870<br>Expires in 2006 | Lee Gustafson<br>Minnetonka<br>(952) 939-8200<br>Expires in 2006 |

miscellaneous/subcommittees 2004.xls

**2003 MUNICIPAL SCREENING BOARD**
**Fall Meeting Minutes**
**October 21 & 22, 2003**

I. Opening by Municipal Screening Board Chair Lee Gustafson.

The 2003 Fall Municipal Screening Board Meeting was called to order at 1:05 p.m. on October 21, 2003.

A. Chair Gustafson introduced:

Himself – Lee Gustafson, Minnetonka - Chair, Municipal Screening Board
Mike Metso, Duluth - Vice Chair, Municipal Screening Board
Julie Skallman, Mn/DOT- Director, State Aid for Local Transportation Division
Marshall Johnston, Mn/DOT- Manager, Municipal State Aid Needs Unit
Ken Ashfeld, Maple Grove - Chair, Unencumbered Construction Funds Subcommittee and Past Chair, Municipal Screening Board
Tim Schoonhoven, Alexandria – Chair, Needs Study Subcommittee
David Jessup, Woodbury - Past Chair, Municipal Screening Board
Tom Drake, Red Wing – Past Chair, Municipal Screening Board
Maria Hagen, St. Louis Park - Secretary, Municipal Screening Board

The Secretary conducted the roll call of members. All were present as follows:

| | | |
|---|---|---|
| District 1 | John Suihkonen | Hibbing |
| District 2 | Dave Kildahl | Crookston, Thief River Falls |
| District 3 | Bret Weiss | Monticello |
| District 4, Alt. | Jeff Kuhn | Morris |
| Metro-West | Shelly Pederson | Bloomington |
| District 6 | Tim Murray | Faribault |
| District 7 | Tim Loose | St. Peter |
| District 8 | Dave Berryman | Montevideo |
| Metro-East | Chuck Ahl | Maplewood |
| Duluth | Mike Metso | |
| Minneapolis | Paul Ogren | |
| St. Paul | Paul Kurtz | |

The Chair recognized the following Screening Board Alternates:

| | | |
|---|---|---|
| Metro-West | Craig Gray | Anoka |
| District 8 | Randy Peterson | Northfield |

B. The Chair recognized the following Department of Transportation personnel:

| | |
|---|---|
| Mark Gieseke | Program Delivery Engineer |
| Diane Gould | Manager, County State Aid Needs |
| Lou Tasa | District 2 State Aid Engineer |
| Merle Earley | District 4 State Aid Engineer |
| Steve Kirsch | District 6 State Aid Engineer |
| Doug Haeder | District 7 State Aid Engineer |
| Tom Behm | District 8 State Aid Engineer |
| Mark Channer | Asst. Manager, MSAS Needs Unit |
| Dan Erickson | Metro State Aid Division |

C. The Chair also recognized the following others in attendance:

| | |
|---|---|
| Jim Vanderhoof | St. Paul |
| Klara Fabry | Minneapolis |
| Heidi Hamilton | Minneapolis |
| Larry Veek | Minneapolis |
| Dave Sonnenberg | SEH, Inc. |

Bob Brown, Metro District State Aid Engineer, and Rick Kjonaas, Deputy State Aid Engineer, attended the Wednesday morning meeting.

II. 2003 Municipal State Aids Needs Report

The Chair suggested that the entire report be reviewed and discussed on Tuesday, and any action required be taken on Wednesday morning. This would give all members a chance to informally discuss the various items Tuesday evening.

A. The June 2003 Screening Board Minutes were presented for approval (Pages 16-25).

Motion by Weiss / seconded by Ogren that the minutes be approved. Motion carried without opposition.

Johnston began his review of the 2003 Municipal State Aid Needs Report with a comment regarding the preface which requires the Screening Board to recommend the annual construction needs to the Commissioner of Transportation.

Johnston noted that there are currently 134 cities eligible for Municipal State Aid apportionment. This total includes three new cities that were recently added - St. Joseph, New Prague and Rogers.

B. 2002 Screening Board and Subcommittee Members (Pages 12-13).

Johnston reviewed the current membership on the Screening Board and the subcommittees.

C. Review of Unencumbered Construction Funds Subcommittee Matters (Pages 26-38).

Johnston reviewed matters addressed by the Unencumbered Construction Funds Subcommittee (UCFS) at their August 2003 meeting, noting that Ken Ashfeld, UCFS Chair, was available for any explanation of their recommendations. The UCFS reviewed several different positive adjustments, and are recommending the following two revisions to current adjustments:

1. Revision to the Unencumbered Construction Account Needs Adjustment:
Johnston stated that this change was recommended because, currently, a city with a general fund advance receives no adjustment. A city with an account balance receives a negative adjustment for that amount, but a city with an advance does not receive a positive adjustment for the amount advanced. This change would allow a positive adjustment for general fund advances, similar to bonding. Weiss commented that he felt this should have been a part of the program since the advance option was implemented and feels that District 3 is in favor of approving this adjustment. Ahl commented that Metro Division discussed this last week and is generally in favor although the reaction was mixed. He also feels that this is important to encourage advancing; put the money where it's going to be used. Gustafson asked Johnston if this would be a difficult change to implement in the system. Johnston said that it wouldn't. Suihkonen stated that District 1 was not in favor of this adjustment because it negatively impacted even those cities that are living within their apportionment. Berryman stated that District 8 was in favor but that there was vocal opposition. Murray, District 6, said that they had unanimous support. Kuhn, District 4, stated that they had more in support than against it. Loose, District 7, said that there was general approval for the adjustment although a concern was raised that some cities have "difficult" councils and therefore shouldn't be penalized, but that this might be an opportunity to have a discussion with your Council.

   Gustafson summarized the discussion stating that there appeared to be general consensus in favor of the adjustment and noted that this item would come before the group for a vote tomorrow. Ashfeld commented that advancing funds is similar to bonding with 0% interest, therefore, this is another "tool in the toolbox" available to cities for funding options. Schoonhoven stated that saving up for a project was often used by small cities as an argument. Weiss suggested revisiting the general fund advancement amount, i.e. 4 or 5 times a cities apportionment. Gustafson asked Weiss to prepare draft wording for consideration at tomorrow's meeting.

2. Low Balance Incentive:
Johnston noted that this incentive was graphically represented on page 31. He also noted a correction on the graphic that should show $26M being distributed "out". This recommendation is a revision to the new Excess Balance adjustment going into effect for the 2004 allocation. Under this recommended modification, cities with

high balances (greater than 3x their annual apportionment) would be redistributed to cities with low balances (less than 1x their annual apportionment).

Sonnenberg questioned whether adjustments could still be made by cities that will affect these amounts. Johnston responded that payment requests received by the DSAE by December 1 would be deducted from the year end balance, but requests received between December 1 and December 31 could not be guaranteed to be deducted from the year end balance. Also, that the balances as of 12/31 would be used to determine the final amounts to be reapportioned.

Weiss stated that District 3 was generally in favor but questioned why the adjustment was for the full amount-feels this is too harsh. Berryman agreed stating that they had been split over this but that if the adjustment was made it should only be for the amount greater than 3x the apportionment. Murray said that District 6 was unanimously in favor of this but felt that there should be an opportunity to plead a case in special circumstances. Suihkonen and Kuhn reported that their districts were in favor of the adjustment. Kildahl stated that District 2 was in favor of the adjustment but additional discussion was warranted.

Ahl said that the question on the table was how the redistribution should be calculated not whether or not it should be done. Ogren questioned what the thought process was on determining how to redistribute the dollars to those cities with a balance of less than 1. Ashfeld responded that the committee felt that it should be given to those cities that are in a position to spend it. Johnston reviewed an example of how this adjustment would affect the city of Brainerd. Page 36 shows the estimated adjustment to each city if both of these measures were implemented and the two handouts show the estimated effects of each adjustment individually.

D. Review Minutes and Recommendations of the Needs Study Subcommittee (Pages 39-40).

Johnston stated that two items were discussed by the Subcommittee at their Sept. 2003 meeting, noting that Tim Schoonhoven, NSS Chair, was available for any explanation of their recommendations.

1. Storm Sewer Needs:
   Johnston said that currently, if storm sewer is in place, a city can only generate needs for partial storm sewer. Complete storm sewer needs are allowed by the DSAE on a case-by-case basis due to age, condition, capacity, etc. The subcommittee recommended no change to the current procedure. Schoonhoven stated that many options are available but that the committee felt that the current system is workable with discretion given to the DSAE.

   Ahl said that Metro had discussed this and would prefer a uniform standard across the state where a life cycle is established but still retains DSAE discretion.

Suihkonen said that Dist. 1 felt there was no need for change; things are probably more uniform than people think. Metso said that he felt the standard shouldn't be based on life cycle alone. Behm stated that he questions capacity, age, & condition before making a decision.

2. Widening Needs:
Johnston explained the current practice for establishment of widening needs: 0-10 years: no widening needs; 10-20 years: with DSAE approval; > 20 years: full needs. There have been cases where traffic or other situations have changed such that certain roadway segments have met the requirements for Widening Needs prior to reaching their useful life. Ashfeld questioned whether needs would still be generated if a variance was issued for a particular segment. Johnston responded that variances are not tracked in the system, so it is likely needs would be generated. The recommendation from the subcommittee is to revise the language slightly to clarify intent.

General discussion took place on the merits of the language revisions. Gustafson stated that action on this item would take place at tomorrow's meeting.

E. Theoretical Population Apportionment (Pages 41-49).

Johnston reviewed the information provided on Page 41, noting that Dayton was "on the bubble" with a population of just around 4,700. A determination will be made by the Attorney General's office of their 2000 adjusted census figures. Depending on the results of this decision, Dayton's pending allocation (which was computed and set aside until the dispute was resolved) will either be given to them or redistributed. Johnston also noted that the population apportionment is estimated at $16.08 per person. Overall, there was an increase in population of over 50,000 between 2003 & 2004.

F. Effects of the 2003 Needs Study Update (Pages 50-53).

Johnston reviewed the effects of the 2003 Needs Study update, noting that the unadjusted needs increased by $145M or 5.44%. Total needs are $2.8B.

G. Mileage, Needs and Apportionment (Pages 54-56).

Johnston reviewed this section of the Needs Report, noting that the needs apportionment for 2004 is estimated at $19.32 per $1,000 of needs. This is the lowest apportionment since 1961.

H. 2003 Itemized Tabulation of Needs (Pages 57 & Pocket).

Johnston provided a brief overview of the Tabulation of Needs, noting that Crookston had the highest needs cost per mile ($1,634,010), and Lake Elmo had the lowest needs cost per mile ($414,299). Overall, 5 cities exceed $1.2M per mile and 5 cities have an average cost per mile less than $500,000.

I. Comparison of Needs (Page 61).

Johnston reviewed the comparison of needs between 2002 and 2003, noting that street lighting increased the most due to the change in the percentage of deficient segments.

J. Tentative 2004 Construction Needs Apportionment (Pages 62-69).

Johnston reviewed this section of the Needs Report, highlighting the various adjustments made.

K. Adjustments to the Construction Needs (Pages 73-88 & Handout).

Marshall Johnston reviewed Adjustments to 2003 Construction Needs, including the following areas:

- Unencumbered Construction Fund Balance Adjustment – the balance of $99M will likely decrease before the end of the year
- Excess Unencumbered Construction Fund Balance Adjustment (based on 8/31/03 balance the balance of $26M will likely decrease before the end of the year).
- Bond Account Adjustment – if Column D is 0, no adjustment.
- Unamortized Bond Account Adjustment – Metso questioned Lakeville's off-system adjustment. Discussion took place regarding whether or not non-MSA system disbursements should be taken as a positive adjustment. Ahl felt that County State Aid system or Trunk Highway system should still be considered "on system"; he feels the column heading is incorrect. General consensus was that the State Aid system means MSA, CSAH, or Trunk Highways. Gustafson stated that this can be clarified with minor wording adjustments to the resolution or it can be referred to the UCFS for discussion. Metso felt that the existing wording in the resolution is adequate but it could be enhanced.
- Non-Existing Bridge Adjustment. – noting that Woodbury has one additional bridge; Johnston will review an after-the-fact adjustment due to wide fluctuations in cost.
- ROW Adjustment – noting that this is an after-the-fact adjustment of $72.5M and represents the largest adjustment to the needs.
- Individual Adjustments – Robbinsdale, Maple Grove, & Brainerd
- TH Turnback Maintenance (22.3 miles eligible).

L. Construction Needs Recommendations to the Commissioner (Pages 89-91).

Johnston noted that Page 89 contained a copy of the recommendation letter to be signed tomorrow by the Board members and sent to the Commissioner of Transportation with minor adjustments.

M. Theoretical Total Apportionment, Comparison, and Apportionment Rankings (Pages 92-101).

Johnston reviewed this section of the Needs Report, noting that the tentative total apportionment is $109.0 million. Johnston noted that cities with the highest tentative apportionment per needs mile were very urban in nature (Minneapolis and St. Paul), and cities with the lowest tentative apportionment per needs mile were very rural in nature (Lake Elmo, Rogers, and Corcoran).

N. Other Topics (Pages 105-123).

- Certified Complete MSAS systems
  Johnston noted that four cities have certified their MSAS systems as complete and can spend the population portion of their apportionment on their local roads.
- General Fund Advance – status and guidelines
  Johnston summarized the limits for general fund advancement based on a city's annual construction allotment. He noted that the guidelines were revised in June to include wording specifying that advancement for federal projects must also be eligible for State Aid financing. Gustafson stated that revisions to these guidelines would be considered tomorrow.
- Administrative Account
  Johnston briefly reviewed the Administrative Account, noting that 1.5-% of the total funds available is set aside for administrative purposes. The unspent remainder each year is returned for redistribution.
  Skallman commented on a desire for direction from the Board to increase the administrative account from 1.5-% to 2%. This action would require legislative approval. The Counties are considering a similar proposal and Skallman would prefer to take action on both at the same time. The additional funding would go towards special efforts such as training, special requests, etc. She is looking for examples. Pederson stated that it should be designated for something specific and something of benefit to all, i.e. technician certification classes. Murray said that the feedback he heard was that this seemed to be putting the cart before the horse – no one is opposed but they need to know what it will be used for first. Weiss stated that D3 was noncommittal. Skallman said that this request was in order to be able to respond to the requests she receives throughout the year for printing costs, special classes, etc. Recently, due to comments made by Cities and Counties, they were able to add a person to facilitate permitting. Shoonhoven stated that everyone would probably agree that training is needed, however, redistribution of a limited pot means money is being taken away from streets which are funded at the lowest level possible.
  Gustafson felt that more input should be received from the group perhaps by discussing this at the CEAM Winter meeting. Further discussion took place. Motion by Ahl / seconded by Ogren that this item be referred to the CEAM Executive Board for further study. Motion passed without opposition.

- Research Account
  Johnston briefly reviewed the Research Account history, noting that ½ of 1% is historically set aside in this account, and that a motion will be required to set the amount for 2003.
- County Highway Turnback Policy
  Johnston commented that questions on the turnback policy should be referred to the DSAE as the policy is complex.
- Screening Board Resolutions
  Johnston noted that the current screening board resolutions are included in the rear of the book.

III. Chair Gustafson called for any other subjects the representatives or audience would like presented. None were offered.

IV. Chair Gustafson requested a motion for adjournment until Wednesday morning, at which time formal action would be taken on those items before the Board.

Motion by Weiss / seconded by Pederson that the meeting be adjourned until 8:30 a.m. on Wednesday. Motion passed without opposition.

## Wednesday Morning Session

The Municipal Screening Board was reconvened by Chair Gustafson at 8:40 a.m. on October 22, 2003.

Gustafson reminded everyone that a joint meeting with the County Engineers Executive Committee was scheduled for 10:00 a.m.

I. Formal Actions by the 2003 Municipal Screening Board

1. Needs and Apportionment Data (Pages 41-101).

   Motion by Ahl / seconded by Kildahl to approve the Needs and Apportionment Data as presented with minor adjustments to the final amounts. Motion carried without opposition.

   The original of the letter to the Commissioner on page 89 was subsequently signed by all Screening Board members.

2. Research Account (Page 111).

   Motion by Weiss / seconded by Pederson to approve the following resolution:

   *Be it resolved that an amount of $544,962 (not to exceed ½ of 1% of the 2003 MSAS apportionment sum of 108,992,464) shall be set aside from the 2004 Apportionment fund and be credited to the Research Account.*

   Motion carried without opposition.

3. Revised Unencumbered Construction Fund Balance adjustment (Pages 28-30, 36-38, 40 and yellow handout).

   Motion by Ahl / seconded by Murray to approve the following resolution:

   *That for the determination of Apportionment Needs, a city with a positive unencumbered construction fund balance as of December 31st of the current year shall have that amount deducted from its 25-year total Needs. A municipality with a negative unencumbered construction fund balance as of December 31st of the current year shall have that amount added to its 25-year total Needs.*

   Motion carried without opposition.

4. Low Balance Incentive (Pages 31-38, green and blue handout).

   Motion by Pederson / seconded by Ahl to approve the following resolution:

   *That the amount of the Excess Unencumbered Construction Fund Balance Adjustment shall be redistributed to the Construction Needs of all municipalities*

*whose December 31 construction fund balance is less than 1 times their January construction allotment of the same year. This redistribution will be based on a city's prorated share of its Unadjusted Construction Needs to the total Unadjusted Construction Needs of all participating cities times the total Excess Balance Adjustment.*

Motion carried without opposition.

5. Revise Widening Resolution (Pages 39-40 and green handout).

   Motion by Weiss / seconded by Metso to approve the following resolution:

   *That if the construction of a Municipal State Aid Street is accomplished, only the Construction Needs necessary to bring the segment up to State Aid Standards will be permitted in subsequent Needs after 10 years from the date of the letting or encumbrance of force account funds. For the purposes of the Needs Study, these shall be called Widening Needs. Widening Needs shall continue until reinstatement for complete Construction Needs is initiated by the Municipality.*

   Motion carried without opposition.

6. Storm Sewer Needs (Page 39).

   Ahl opened the discussion by making a motion to refer this item back to the Needs Study Subcommittee for establishment of an appropriate life cycle that is consistent with other life cycles in place. This motion was seconded by Weiss.

   Gustafson opened the floor for discussion. Kildahl commented that this may hinder the committee and would instead recommend sending it back to the committee without a specific task. Sonnenberg felt that the important issue was equity and consistency. Life cycle is not necessarily a means of determining effective life, but more for establishing that consistency. Metso questioned other life cycles in place. Johnston replied that only bridges are done in this way, on a 35-year cycle. Schoonhoven stated that we're really looking at a 40-year cycle – 20 years with no needs and 20 years with needs. Discretion between partial and full needs seems to be the question. Doing away with partial needs simplifies the process and eliminates the discretion. This might be more equitable but less representative of the system. Drake questioned whether the computer software would need to be modified. Johnston said that it would, but they could wait and make several changes at once using a consultant. Murray stated that the percentage of storm sewer needs is underrepresenting what's being spent currently. If you receive full needs at 20 years, is this more in line with actual spending? Johnston suggested that Kjonaas or Skallman sit in on the discussion if this is referred back to the Needs subcommittee. Skallman stated that several DSAEs could attend as well and give their perspective on the issue. Metso agrees with subcommittee's recommendation to leave system as is, but feels that if we are going to do something, it should be done on a consistent basis. He described the example of base, which is eligible for full needs after 20 years, but his city

is not necessarily replacing it on that time frame. Reinstating full needs in line with the rest of the roadway provides consistency.

Gustafson called for a vote on the motion. Motion carried without opposition.

7. Bond Account Adjustment (Page 80 & 121).

Drake stated that the intent of the bond account was to reduce needs, if you spend dollars off of the system without reducing needs, you're not doing that. Skallman stated that the current language is consistent with the Board's previous action regarding advancements. Ahl commented that the demand on cities is coming from "off system". Gustafson said that this language is being considered merely to clarify the point to State Aid staff.

Motion by Ahl / seconded by Metso to include additional language in the resolution as follows:

> *Bond account money spent off* ***the Municipal State Aid, CSAH or Trunk Highway System*** *would not be eligible for Bond Account Adjustment. This action would not be retroactive, but would be in effect for the remaining term of the Bond issue.*

Schoonhoven replied that he feels this is contrary to the system – you're generating needs that aren't a part of your MSA system. Per Kjonaas, prior to 1996, there was that exception and recommended additional wording in the final paragraph of the resolution. Metso stated that the confusion is coming form our definition of State Aid system. Gustafson said that this motion is confirming the method that Johnston has used since 1996. So, since 1996, cities have been getting a positive adjustment for spending their dollars off of the MSA system; before 1996, it was a negative adjustment. Metso questioned why a city would be penalized for spending dollars on the State Aid system? According to Skallman all of this needed to be tracked, and it was changed in the early 1990's. Murray felt that this is more of an offset, not a penalty; and feels that its good to have some discretion because sometimes it's the only funding source available. Metso felt that this was a larger issue related to negative adjustment for bonds and advancements. Murray clarified that he believes in being able to use dollars on the State Aid system, he just feels that it shouldn't receive a positive adjustment. Weiss recommended keeping it simple; if you get a positive adjustment for the bonds, you get it for advancements.

Motion carried with Murray in opposition.

8. MSAS General Fund Advances modifications (Pages 108-109).

Motion by Pederson / seconded by Loose to approve the following guidelines wording modifications (amended by Weiss):

*The October 2002 Screening Board discussed the possibility of revising the limits that a smaller city may advance, revising the payback period for larger cities, and allowing General Fund Advances on Federal projects. It was explained that any changes were ultimately an administrative decision by the State Aid Engineer with any input and*

*discussion by the Screening Board being taken into consideration. The Screening Board ~~recommended that the limits a smaller city can advance be raised to $1,000,000, allowing~~ **allows** all cities up to ~~3~~ **5** years to pay back the advance, and to allow advances on Federal projects. After discussing it with State Aid Finance, the following revisions will go into effect for advances from the ~~2003~~ **2004** allocation:*

*Cities ~~with a construction allotment of $1,000,000 or less~~ can now advance up to ~~three~~ **a cumulative maximum of five** times its previous year's construction allotment or ~~$1,000,000~~ **$4,000,000**, whichever is less when advancing for Municipal State Aid projects. (Fig. I 5-892.563 in the State Aid manual).*

*~~Cities with a construction allotment of more than $1,000,000 can now advance up to its previous year's construction allotment up to a maximum of $3,000,000, when advancing for Municipal State Aid projects. (Fig. I 5-892.563 in the State Aid manual).~~*

Gustafson commented that this wording change was in response to concerns expressed by small cities and cities with an apportionment of about $900,000 that the current system was not adequate. This motion appears to address these issues.

Kildahl questioned whether the language should also be amended to apply to all of the State Aid system or the Municipal State Aid system as written, per the previous discussion. Weiss supports amending the language to make it apply to the entire State Aid system. Schoonhoven feels that the point at hand is the amount of advancement but that the issue of whether or not this should be clarified/amended to include non-MSA projects should be brought before the districts for further discussion. Skallman said that the dollars can be allocated to your regular MSA account or your advancement account at a city's discretion. Ashfeld commented that the state and county make the argument that cities should participate in the regional system due to local users. If a city couldn't use the regional system, they would need to construct a parallel route to accommodate them. You would have a need to build that – therefore, the regional system is a "need" in your community. Drake said that we're just dividing up the 9% in a different way – the MSA system is growing every year. Gustafson stated that the objective is to lower the overall account balance.

Gustafson called for a vote on the motion. Motion carried without opposition.

II. Legislative Update

Gustafson described the Transportation Utility bill and the latest information on this effort by the League of Minnesota Cities and CEAM. The intent is to provide legislators and cities with the same message over and over again. This will be done using several promotional pieces which will be developed by a consultant. All of these materials will be sent to City Engineers so that they can make individual contacts with their legislators and/or inform their Councils. One-on-one meetings are also planned with each of the Transportation Committee members.

III. Comments by Julie Skallman and other Mn/DOT personnel

Julie Skallman had nothing to report at this time.

IV. Chair Gustafson thanked Schoonhoven, Chair of the Needs Study Subcommittee, and Ken Ashfeld, Chair of the Unencumbered Construction Funds Subcommittee.

V. Chair Gustafson thanked the past Chairs for their time and appearance at the meeting – Tom Drake, Ken Ashfeld and David Jessup.

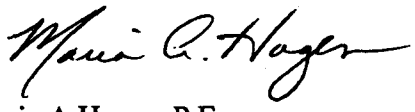
VI. Chair Gustafson commented that this was the last meeting for representatives from Districts 4, 6, and Metro-West. He thanked them for their service.

VII. Chair Gustafson noted that the date and location of the 2004 Spring Screening Board meeting has been tentatively set for June 1 & 2, 2004 at Cragun's.

VIII. Chair Gustafson requested a motion for adjournment.

Motion by Berryman / seconded by Pederson to adjourn. Motion carried without opposition.

Respectfully submitted,



Maria A Hagen, P.E.
MSA Screening Board Secretary
City Engineer – St. Louis Park

# Needs Study Subcommittee Meeting Minutes 4/13/04

The Needs Study Subcommittee (NSS) held a meeting on April 13, 2003 at the City Hall in Hutchinson: Members present were Chairman Steve Koehler- New Ulm; Melvin Odens Willmar; and Shelly Pederson-Bloomington. Also attending were Marshall Johnston; Rick Kjonaas; and Mark Channer of State Aid. The purpose of the meeting was to review the Unit Price Study, make recommendations and to review Storm Sewer Needs (life-cycle). Chairman Steve Koehler called the meeting to order at 10:20 P.M.

Marshall began the discussion with a brief introduction and history on the unit price study. Mark then went on to explain how the information is gathered, which projects are chosen and how the data is computed. The group then reviewed and discussed the methods of computing unit prices and the importance of the study.

The subcommittee's recommended unit prices to be used in the 2005 needs computation are shown on the attached summary sheet. Several unit price items were increased by a factor of 3% +/_, some unit prices were left as is based on the unit price study average or the 5-year average and some were raised more due to the projected increased fuel costs.

The NSS discussed the additional item of Storm Sewer Needs (life-cycle) referred to it by the Municipal Screening Board at the Fall 2003 meeting.

**The following excerpt is taken form the second day of the October 2003 Municipal Screening Board meeting:**

> Motion from fall 2003: Ahl opened the discussion by making a motion to refer this item back to the Needs Study Subcommittee for establishment of an appropriate life cycle that is consistent with other life cycles in place. Weiss seconded this motion.
>
> Discussion from fall 2003:
>
> Gustafson opened the floor for discussion. Kildahl commented that this may hinder the committee and would instead recommend sending it back to the committee without a specific task. Sonnenberg felt that the important issue was equity and consistency. Life cycle is not necessarily a means of determining effective life, but more for establishing that consistency. Metso questioned other life cycles in place. Johnston replied that only bridges are done in this way, on a 35-year cycle. Schoonhoven stated that we're really looking at a 40-year cycle – 20 years with no needs and 20 years with needs. Discretion between partial and full needs seems to be the question. Doing away with partial needs simplifies the process and eliminates the discretion. This might be more equitable but less representative of the system. Drake questioned whether the computer software would need to be modified. Johnston said that it would, but they could wait and make several changes at once using a consultant. Murray stated that the percentage of storm sewer needs is underrepresenting what's being spent currently. If you receive full needs at 20 years, is this more in line with actual spending? Johnston suggested that Kjonaas or Skallman sit in on the discussion if this is referred back to the Needs subcommittee. Skallman stated that several DSAEs could attend as well and give their perspective on

the issue. Metso agrees with subcommittee's recommendation to leave system as is, but feels that if we are going to do something, it should be done on a consistent basis. He described the example of base, which is eligible for full needs after 20 years, but his city is not necessarily replacing it on that time frame. Reinstating full needs in line with the rest of the roadway provides consistency.

Gustafson called for a vote on the motion. Motion carried without opposition.

The NSS discussed the following possible life-cycles while still allowing DSAE discretion for special cases:

- Generate complete storm sewer Needs after 20 years, similar to other roadway Needs items
- Generate partial or complete Needs at a predetermined number of years, 20, 40 on a deficient segment
- Generate complete storm sewer Needs on a different time frame then other Needs items
- After the Fact storm sewer Needs
- Leave the storm sewer Needs as is

The committee also discussed the items brought up in the excerpt above and data from a questionnaire "Criteria used by DSAE's to approve complete storm sewer needs where there is existing storm sewer".

The DSAE's are using a Report 7, with submitted justification that complete Needs are warranted, to approve complete storm sewer Needs. This may be due to the system being undersized, or worn out or other special condition.

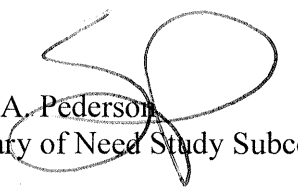
From the past screening board discussions it seemed that equity and consistency are the most important factors.

Many of these options are complex to implement for either MNDOT or the City Engineers. The NSS feels that it is best to keep it simpler and that the DSAE's are doing a fair job.

It was the consensus of the NSS that none of the life cycle scenarios discussed provided an improved system of generating Needs and for that reason the NSS stands behind the previous recommendation that the Storm Needs calculations remain as they presently are. If so directed by the Screening Board, the NSS will further evaluate this matter.

The present policy is to allow only partial Storm Sewer Needs on roadways with inplace storm sewer, unless the city can justify to the satisfaction of the DSAE that complete Storm Sewer Needs are justified.

Meeting adjourned at 2:05 PM.



Shelly A. Pederson
Secretary of Need Study Subcommittee

# 2004 UNIT PRICE RECOMMENDATIONS
# USING 2003 UNIT PRICES

n:msas/excel/2004/June 2004 Book/unit price recommendations.xls 22-Apr-04

| Needs Item | | 2003 Need Prices | Subcommittee Suggested Prices for 2004 | Screening Board Recommended Prices For 2004 |
|---|---|---|---|---|
| Grading (Excavation) | Cu. Yd. | $3.80 | **$4.00** | |
| Aggregate Shoulders #2221 | Ton | 13.40 | **13.40** | |
| Curb and Gutter Removal | Lin.Ft. | 2.60 | **2.60** | |
| Sidewalk Removal | Sq. Yd. | 5.50 | **5.50** | |
| Concrete Pavement Removal | Sq. Yd. | 5.40 | **5.40** | |
| Tree Removal | Unit | 225.00 | **235.00** | |
| Class 5 Base #2211 | Ton | 7.30 | **7.65** | |
| Bituminous Base #2350 | Ton | 31.00 | **33.00** | |
| Gravel Surface #2118 | Ton | 5.35 | **5.67** | |
| Bituminous Surface #2350 | Ton | 31.00 | **33.00** | |
| Curb and Gutter Construction | Lin.Ft. | 8.00 | **8.25** | |
| Sidewalk Construction | Sq. Yd. | 23.50 | **24.00** | |
| Storm Sewer Adjustment | Mile | 82,700 | **83,775** | |
| Storm Sewer | Mile | 257,375 | **262,780** | |
| Special Drainage - Rural | Mile | 37,400 | **40,000** | |
| Street Lighting | Mile | 80,000 | **80,000** | |
| Traffic Signals | Per Sig | 124,000 | **124,000** | |
| **Signal Needs Based On Projected Traffic** | | | | |
| Projected Traffic Percentage | X Unit Price = | Needs Per Mile | | |
| 0 - 4,999 .25 | $124,000 = | $31,000 | **$31,000** | |
| 5,000 - 9,999 .50 | 124,000 = | 62,000 | **62,000** | |
| 10,000 & Over 1.00 | 124,000 = | 124,000 | **124,000** | |
| **Right of Way (Needs Only)** | Acre | 93,000 | **93,000** | |
| **Engineering** | Percent | 20 | **20** | |
| **Railroad Grade Crossing** | | | | |
| Signs | Unit | 1,000 | **1,000** | |
| Pavement Marking | Unit | 750 | **750** | |
| Signals (Single Track-Low Speed | Unit | 120,000 | **150,000** | |
| Signals & Gate (Multiple Track - High & Low Speed) | Unit | 160,000 | **187,500** | |
| Concrete Xing Material(Per Track | Lin.Ft. | 1,000 | **1,000** | |
| **Bridges** | | | | |
| 0 to 149 Ft. | Sq. Ft. | 70.00 | **74.00** | |
| 150 to 499 Ft. | Sq. Ft. | 70.00 | **74.00** | |
| 500 Ft. and over | Sq. Ft. | 70.00 | **74.00** | |
| **Railroad Bridges over Highways** | | | | |
| Number of Tracks - 1 | Lin.Ft. | 9,300 | **9,600** | |
| Additional Track (each) | Lin.Ft. | 7,750 | **8,000** | |

# ANNUAL MAINTENANCE NEEDS COST

The prices below are used to compute the maintenance needs on each segment. Each street, based on its existing data, receives a maintenance need. This amount is added to the segment's street needs. The total statewide maintenance needs based on these costs in 2003 was $23,270,288 or 0.82% of the total Needs. For example, An urban road segment with 2 traffic lanes, 2 parking lanes, over 1,000 traffic, storm sewer and one traffic signal would receive $9000 in maintenance needs per mile.

**EXISTING FACILITIES ONLY**

| | 2003 NEEDS PRICES | | SUBCOMMITTEE SUGGESTED PRICES | | SCREENING BOARD RECOMMENDED PRICES | |
|---|---|---|---|---|---|---|
| | Under 1000 ADT | Over 1000 ADT | **Under 1000 ADT** | **Over 1000 ADT** | Under 1000 ADT | Over 1000 ADT |
| **Traffic Lane Per Mile** | $1,500 | $2,500 | **$1,550** | **$2,575** | | |
| **Parking Lane Per Mile** | 1,500 | 1,500 | **1,550** | **1,550** | | |
| **Median Strip Per Mile** | 500 | 980 | **515** | **1,000** | | |
| **Storm Sewer Per MIle** | 500 | 500 | **515** | **515** | | |
| **Per Traffic Signal** | 500 | 500 | **515** | **515** | | |
| **Normal M.S.A.S. Streets Minimum Allowance Per Mile** | 5,000 | 5,000 | **5,150** | **5,150** | | |

"Parking Lane Per Mile" shall never exceed two lanes, and is obtained from the following formula:

(Existing surface width minus (the # of traffic lanes x 12)) / 8 = # of parking lanes.

| Existing # of Traffic lanes | Existing Surface Width | # of Parking Lanes for Maintenance Computations |
|---|---|---|
| 2 Lanes | less than 32' | 0 |
| | 32' - 39' | 1 |
| | 40' & over | 2 |
| 4 Lanes | less than 56' | 0 |
| | 56' - 63' | 1 |
| | 64' & over | 2 |

n:/msas/excel/2004/JUNE 2004 book/Maintenance Needs Cost.xls

# A HISTORY OF THE ANNUAL MAINTENANCE NEEDS COSTS

(COMPUTED ON EXISTING MILEAGE ONLY)

22-Apr-04

| Year | Traffic Lane Per Mile | | Parking Lane Per Mile | | Median Strip Per Mile | | Storm Sewer Per Mile | | Per Traffic Signal | | Minimum Maintenance Allowance Per Mile | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT |
| **1986** | $300 | $500 | $100 | $100 | $100 | $200 | $100 | $100 | $100 | $100 | $1,000 | $1,000 |
| **1987** | 300 | 500 | 100 | 100 | 100 | 200 | 100 | 100 | 100 | 100 | 1,000 | 1,000 |
| **1988** | 600 | 1,000 | 200 | 200 | 200 | 400 | 200 | 200 | 400 | 400 | 2,000 | 2,000 |
| **1989** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1990** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1991** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1992** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1993** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1994** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1995** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1996** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1998** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1999** | 1,360 | 2,260 | 1,360 | 1,360 | 450 | 900 | 450 | 450 | 450 | 450 | 4,500 | 4,500 |
| **2000** | 1,400 | 2,300 | 1,400 | 1,400 | 460 | 910 | 460 | 460 | 460 | 460 | 4,600 | 4,600 |
| **2001** | 1,450 | 2,400 | 1,450 | 1,450 | 480 | 950 | 480 | 480 | 480 | 480 | 4,800 | 4,800 |
| **2002** | 1,450 | 2,400 | 1,450 | 1,450 | 480 | 950 | 480 | 480 | 480 | 480 | 4,800 | 4,800 |
| **2003** | 1,500 | 2,500 | 1,500 | 1,500 | 500 | 980 | 500 | 500 | 500 | 500 | 5,000 | 5,000 |
| **2004** | | | | | | | | | | | | |



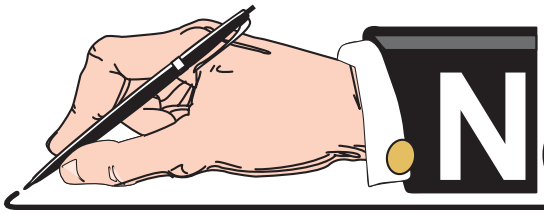
THESE MAINTENANCE COSTS ARE USED IN COMPUTING NEEDS .

ALL MAINTENANCE COSTS FOR COMMON BOUNDARY DESIGNATIONS AND APPROVED ONE WAY STREETS ARE COMPUTED USING THE LENGTH REPORTED IN THE NEEDS STUDY.

# UNIT PRICES


| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1989 | 70 | 1,406,108 | $3,024,233 | $2.15 | $3.00 | |
| 1990 | 65 | 1,263,652 | 2,733,063 | 2.16 | 3.00 | |
| 1991 | 67 | 1,260,768 | 3,303,493 | 2.62 | 3.00 | |
| 1992 | 70 | 1,243,656 | 3,764,822 | 3.03 | 3.00 | |
| 1993 | 64 | 1,105,710 | 2,994,010 | 2.71 | 3.00 | |
| 1994 | 65 | 1,484,328 | 4,965,339 | 3.35 | 3.00 | |
| 1995 | 59 | 1,317,807 | 3,419,869 | 2.60 | 3.00 | $2.52 |
| 1996 | 68 | 1,691,036 | 4,272,539 | 2.53 | 3.00 | 2.53 |
| 1997 | 60 | 919,379 | 3,273,588 | 3.56 | 3.00 | 2.77 |
| 1998 | | | | | 3.20 | 2.86 |
| 1999 | 56 | 1,157,353 | 3,490,120 | | 3.30 | 2.84 |
| 2000 | | | | 3.02 | 3.30 | 2.95 |
| 2001 | 50 | 893,338 | 3,275,650 | | 3.40 | |
| 2002 | | | | 3.67 | 3.67 | 2.93 |
| 2003 | 56 | 1,018,912 | 4,523,089 | | 3.80 | 3.42 |
| 2004 | | | | 4.44 | | 3.68 |

# AND GRAPHS



# NOTES and COMMENTS

# UNIT PRICE STUDY

**The unit price study was done annually until 1997. In 1996, the Municipal Screening Board made a motion not to conduct the unit price study in 1997. There were no changes in the unit prices in 1997. The Screening Board made a motion not to do the unit price study in 1999 but to apply a construction cost index against the 1998 prices. In order to adjust the prices in 1999 due to increases, the Needs Unit arrived at a cost index based on 9 items used in the needs for the past 10 unit price studies.**

**The quantities and unit prices used in this unit price study are compiled from the on system MSAS projects that were let and a 'State Aid Payment Request' form was received by the State Aid Division in 2003. There were a minimum of 141 on system projects and 58 off system projects let in 2003 for which we received a Payment Request. The state average of the on system prices and quantities are used by the Needs Study Subcommittee and the Municipal Screening Board to determine the prices to be used in the 2004 needs study. These prices will be applied against the quantity tables located in the State Aid Manual Figs. C & D 5-892.820 to compute the 2005 construction (money) needs apportionment.**

**Both MN/DOT and State Aid bridges are used so that more bridges determine the unit price. In addition to normal bridge materials and construction costs, prorated mobilization, bridge removal and riprap costs are included if these items are included in the contract. Traffic control, field office, and field lab costs are not included.**

**MN/DOT's hydraulic office furnished a recommendation of costs for storm sewer construction and adjustment based on 2003 construction costs. Special drainage costs are computed for rural roadways by the MN/DOT estimating unit based on the length and number of culverts per mile detailed by the Screening Board.**

**MN/DOT railroad office furnished a letter detailing railroad costs from 2003 construction projects.**

**Due to lack of data, a study is not done for traffic signals, maintenance, and engineering. Every segment, except those eligible for THTB funding, receives needs for traffic signals, engineering, and maintenance. The unit prices used in the 2003 needs study are found in the Screening Board resolutions included in this booklet.**

# 25 YEAR CONSTRUCTION NEEDS
# FOR EACH INDIVIDUAL CONSTRUCTION ITEM

27-Apr-04

| ITEM | 2002 APPORTIONMENT NEEDS COST | 2003 APPORTIONMENT NEEDS COST | DIFFERENCE | 2003 % OF THE TOTAL |
|---|---|---|---|---|
| Grading | $172,796,705 | $183,487,977 | $10,691,272 | 6.50% |
| Special Drainage | 5,860,378 | 5,361,166 | (499,212) | 0.19% |
| Storm Sewer Adjustment | 61,585,152 | 63,307,677 | 1,722,525 | 2.24% |
| Storm Sewer Construction | 227,244,632 | 229,035,824 | 1,791,192 | 8.11% |
| Curb & Gutter Removal | 28,006,020 | 29,793,067 | 1,787,047 | 1.06% |
| Sidewalk Removal | 20,214,891 | 21,273,076 | 1,058,185 | 0.75% |
| Pavement Removal | 53,405,020 | 55,122,549 | 1,717,529 | 1.95% |
| Tree removal | 10,232,640 | 12,983,400 | 2,750,760 | 0.46% |
| **SUBTOTAL GRADING** | **$579,345,438** | **600,364,736** | **$21,019,298** | **21.26%** |
| Gravel Base #2211 | $308,837,592 | $325,914,098 | 17,076,506 | 11.54% |
| Bituminous Base #2350 | 249,329,490 | 262,835,050 | 13,505,560 | 9.31% |
| **SUBTOTAL BASE** | **$558,167,082** | **588,749,148** | **$30,582,066** | **20.85%** |
| Gravel Surface #2118 | $137,757 | $134,815 | ($2,942) | 0.00% |
| Bituminous Surface #2350 | 236,170,200 | 247,636,308 | 11,466,108 | 8.77% |
| Surface Widening | 1,137,510 | 1,612,837 | 475,327 | 0.06% |
| **SUBTOTAL SURFACE** | **$237,445,467** | **$249,383,960** | **$11,938,493** | **8.83%** |
| Gravel Shoulders #2221 | $2,967,289 | $2,687,510 | ($279,779) | 0.10% |
| **SUBTOTAL SHOULDERS** | **$2,967,289** | **$2,687,510** | **($279,779)** | **0.10%** |
| Curb and Gutter | $141,136,028 | $149,481,344 | $8,345,316 | 5.29% |
| Sidewalk | 196,422,674 | 207,930,560 | 11,507,886 | 7.36% |
| Traffic Signals | 170,594,100 | 178,144,290 | 7,550,190 | 6.31% |
| Street Lighting | 139,139,520 | 155,188,000 | 16,048,480 | 5.50% |
| Retaining Walls | 18,582,030 | 18,837,579 | 255,549 | 0.67% |
| **SUBTOTAL MISCELLANEOUS** | **$665,874,352** | **$709,581,773** | **$43,707,421** | **25.13%** |
| **TOTAL ROADWAY** | **$2,043,799,628** | **$2,150,767,127** | **$106,967,499** | **76.16%** |
| Bridge | $122,244,066 | $131,441,230 | $9,197,164 | 4.65% |
| Railroad Crossings | 48,993,500 | 51,640,250 | 2,646,750 | 1.83% |
| Maintenance | 22,138,974 | 23,270,288 | 1,131,314 | 0.82% |
| Engineering | 443,007,532 | 466,769,642 | 23,762,110 | 16.53% |
| **SUBTOTAL OTHERS** | **$636,384,072** | **$673,121,410** | **$36,737,338** | **23.84%** |
| **TOTAL** | **$2,680,183,700** | **$2,823,888,537** | **$143,704,837** | **100.00%** |

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# MSAS UNIT PRICE STUDY
# EXCAVATION - CUBIC YARD

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 5 | 54,187 | $373,395 | $6.89 |
| Grand Rapids | 2 | 12,710 | 40,330 | 3.17 |
| Hermantown | 1 | 26 | 112 | 4.30 |
| Hibbing | 1 | 15,440 | 46,320 | 3.00 |
| Virginia | 1 | 58,596 | 168,896 | 2.88 |
| **District 1 Total** | **10** | **140,959** | **$629,052** | **$4.46** |
| **District 2** | | | | |
| East Grand Forks | 1 | 8,531 | $38,901 | $4.56 |
| Thief River Falls | 2 | 120 | 540 | 4.50 |
| **District 2 Total** | **3** | **8,651** | **$39,441** | **$4.56** |
| **District 3** | | | | |
| Brainerd | 2 | 11,524 | $66,988 | $5.81 |
| Little Falls | 3 | 4,801 | 14,403 | 3.00 |
| Monticello | 2 | 13,520 | 40,420 | 2.99 |
| Otsego | 2 | 55,000 | 233,750 | 4.25 |
| Sartell | 1 | 25,056 | 81,432 | 3.25 |
| St. Cloud | 2 | 28,443 | 157,307 | 5.53 |
| St. Michael | 1 | 60,874 | 190,499 | 3.13 |
| Waite Park | 1 | 19,006 | 113,601 | 5.98 |
| **District 3 Total** | **14** | **218,224** | **$898,399** | **$4.12** |
| **District 4** | | | | |
| Alexandria | 3 | 4,804 | $13,211 | $2.75 |
| Moorhead | 2 | 113,024 | 368,159 | 3.26 |
| **District 4 Total** | **5** | **117,828** | **$381,370** | **$3.24** |
| **Metro West** | | | | |
| Andover | 2 | 494 | $1,530 | $3.10 |
| Anoka | 2 | 2,720 | 19,040 | 7.00 |
| Bloomington | 2 | 42,924 | 291,280 | 6.79 |
| Brooklyn Park | 2 | 42,592 | 87,953 | 2.07 |
| Champlin | 2 | 6,314 | 31,381 | 4.97 |
| Chaska | 2 | 20,900 | 84,200 | 4.03 |
| Coon Rapids | 3 | 4,396 | 28,941 | 6.58 |
| East Bethel | 1 | 4,658 | 24,455 | 5.25 |
| Ham Lake | 1 | 1,180 | 11,859 | 10.05 |
| Hopkins | 1 | 3,132 | 34,949 | 11.16 |
| Lino Lake | 1 | 19,500 | 178,425 | 9.15 |
| Minneapolis | 2 | 15,015 | 161,783 | 10.77 |
| Plymouth | 1 | 1,330 | 21,413 | 16.10 |
| Savage | 1 | 38,500 | 107,800 | 2.80 |
| Shorewood | 1 | 1,000 | 11,200 | 11.20 |
| St. Francis | 1 | 4,784 | 11,523 | 2.41 |
| **Metro West Total** | **25** | **209,439** | **$1,107,731** | **$5.29** |

# MSAS UNIT PRICE STUDY
# EXCAVATION - CUBIC YARD

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 6** | | | | |
| Albert Lea | 1 | 929 | $6,039 | $6.50 |
| Austin | 2 | 3,720 | 14,880 | 4.00 |
| Northfield | 2 | 3,238 | 15,429 | 4.76 |
| Owatonna | 2 | 613 | 6,743 | 11.00 |
| Rochester | 3 | 28,403 | 98,049 | 3.45 |
| Winona | 2 | 11,789 | 38,314 | 3.25 |
| **District 6 Total** | **12** | **48,692** | **$179,454** | **$3.69** |
| **District 7** | | | | |
| Fairmont | 1 | 7,298 | $62,033 | $8.50 |
| Worthington | 1 | 4,214 | 21,070 | 5.00 |
| **District 7 Total** | **2** | **11,512** | **$83,103** | **$7.22** |
| **District 8** | | | | |
| Hutchinson | 4 | 61,896 | $254,957 | $4.12 |
| Montevideo | 1 | 4,191 | 15,088 | 3.60 |
| Redwood Falls | 1 | 9,300 | 41,850 | 4.50 |
| Willmar | 2 | 7,080 | 29,948 | 4.23 |
| **District 8 Total** | **8** | **82,467** | **$341,843** | **$4.15** |
| **Metro East** | | | | |
| Apple Valley | 2 | 58,350 | $91,733 | $1.57 |
| Arden Hills | 1 | 14,569 | 110,725 | 7.60 |
| Burnsville | 2 | 2,375 | 25,358 | 10.68 |
| Eagan | 3 | 2,470 | 32,110 | 13.00 |
| Maplewood | 1 | 8,951 | 74,700 | 8.35 |
| Mendota Heights | 1 | 255 | 14,484 | 56.80 |
| New Brighton | 1 | 700 | 5,600 | 8.00 |
| Oakdale | 2 | 28,826 | 178,403 | 6.19 |
| Rosemount | 2 | 26,417 | 131,094 | 4.96 |
| Roseville | 2 | 268 | 1,742 | 6.50 |
| St. Paul | 7 | 37,959 | 196,748 | 5.18 |
| **Metro East Total** | **24** | **181,140** | **$862,696** | **$4.76** |
| **District Totals** | | | | |
| District 1 Total | 10 | 140,959 | $629,052 | $4.46 |
| District 2 Total | 3 | 8,651 | 39,441 | 4.56 |
| District 3 Total | 14 | 218,224 | 898,399 | 4.12 |
| District 4 Total | 5 | 117,828 | 381,370 | 3.24 |
| Metro West Total | 25 | 209,439 | 1,107,731 | 5.29 |
| District 6 Total | 12 | 48,692 | 179,454 | 3.69 |
| District 7 Total | 2 | 11,512 | 83,103 | 7.22 |
| District 8 Total | 8 | 82,467 | 341,843 | 4.15 |
| Metro East Total | 24 | 181,140 | 862,696 | 4.76 |
| **STATE TOTAL** | **103** | **1,018,912** | **$4,523,089** | **$4.44** |

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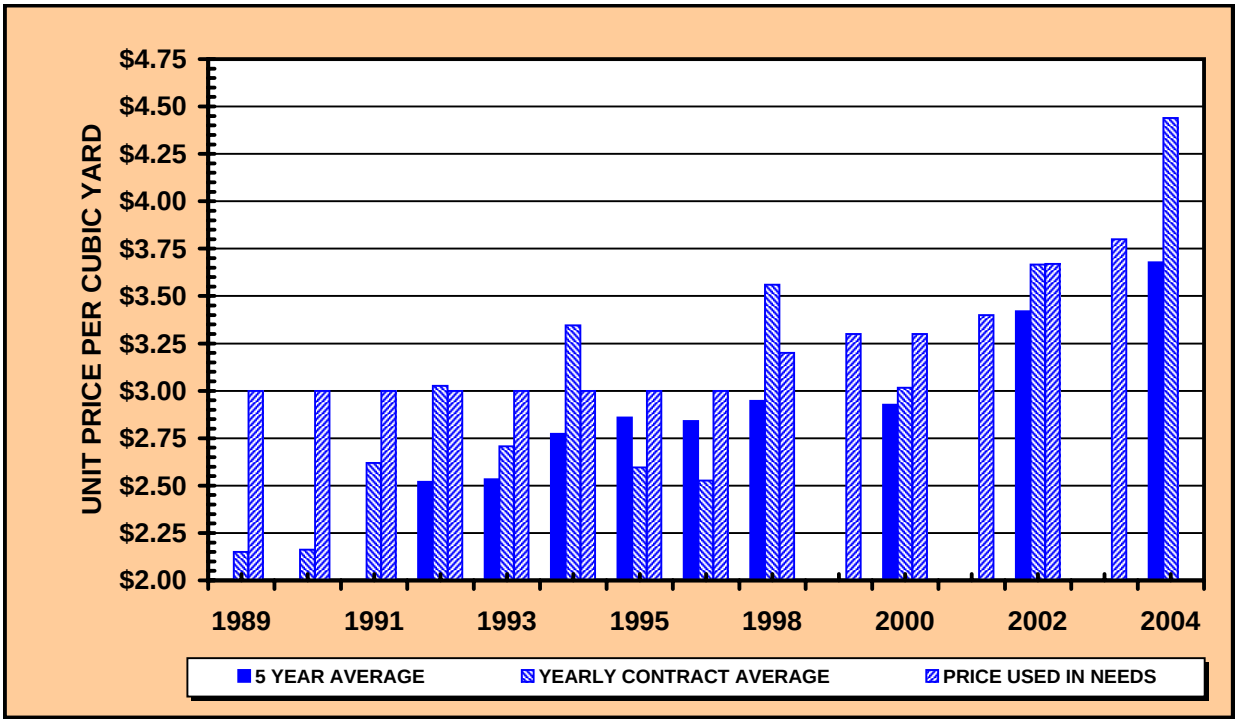
# EXCAVATION




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 70 | 1,406,108 | $3,024,233 | $2.15 | $3.00 | - |
| **1990** | 65 | 1,263,652 | 2,733,063 | 2.16 | 3.00 | - |
| **1991** | 67 | 1,260,768 | 3,303,493 | 2.62 | 3.00 | - |
| **1992** | 70 | 1,243,656 | 3,764,822 | 3.03 | 3.00 | $2.52 |
| **1993** | 64 | 1,105,710 | 2,994,010 | 2.71 | 3.00 | 2.53 |
| **1994** | 65 | 1,484,328 | 4,965,339 | 3.35 | 3.00 | 2.77 |
| **1995** | 59 | 1,317,807 | 3,419,869 | 2.60 | 3.00 | 2.86 |
| **1996** | 68 | 1,691,036 | 4,272,539 | 2.53 | 3.00 | 2.84 |
| **1998** | 60 | 919,379 | 3,273,588 | 3.56 | 3.20 | 2.95 |
| **1999** | | | | | 3.30 | |
| **2000** | 56 | 1,157,353 | 3,490,120 | 3.02 | 3.30 | 2.93 |
| **2001** | | | | | 3.40 | |
| **2002** | 50 | 893,338 | 3,275,650 | 3.67 | 3.67 | 3.42 |
| **2003** | | | | | 3.80 | |
| **2004** | 56 | 1,018,912 | 4,523,089 | 4.44 | | 3.68 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $4.00 PER CU. YD.**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

# MSAS UNIT PRICE STUDY
# AGGREGATE SHOULDERS - TON

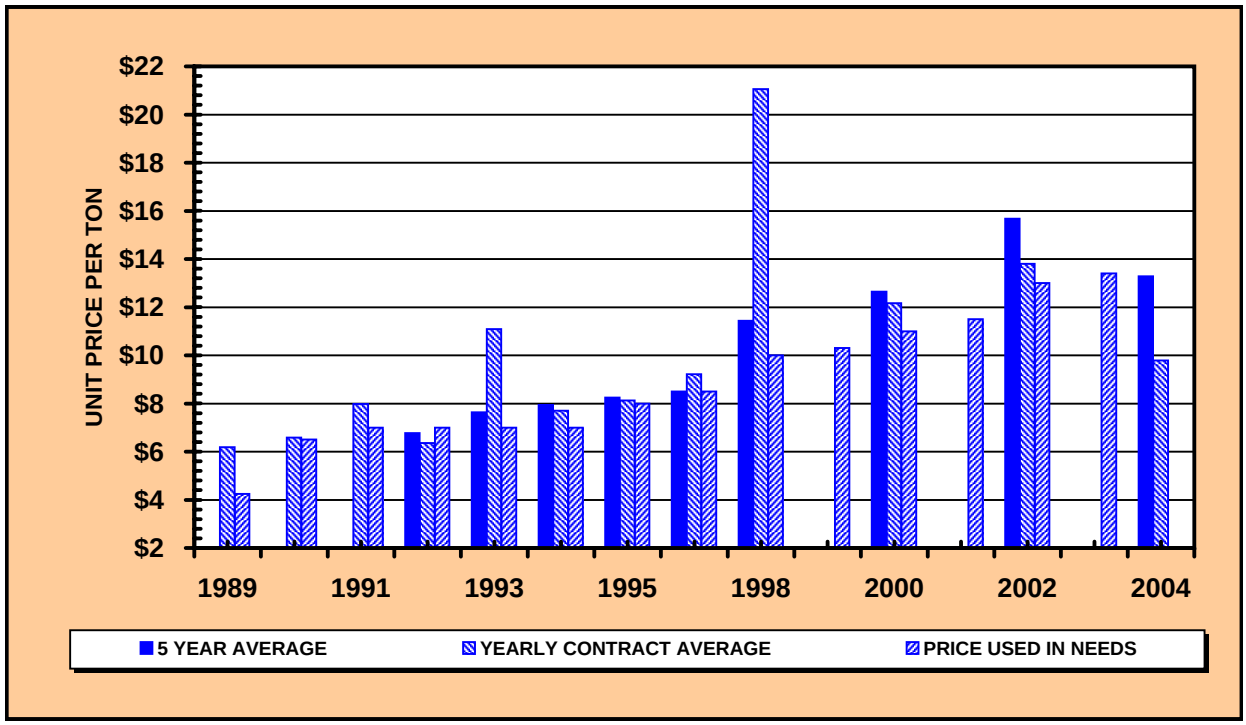
| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 4** | | | | |
| Hermantown | 1 | 10 | $320 | $32.00 |
| **District 1 Total** | **1** | **10** | **$320** | **$32.00** |

| | | | | |
|---|---|---|---|---|
| **District 6** | | | | |
| Alexandria | 3 | 280 | $2,520 | $9.00 |
| **District 4 Total** | **3** | **280** | **$2,520** | **$9.00** |

| | | | | |
|---|---|---|---|---|
| **District Totals** | | | | |
| District 1 Total | 1 | 10 | $320 | $32.00 |
| District 4 Total | 3 | 280 | 2,520 | 9.00 |

| | | | | |
|---|---|---|---|---|
| **STATE TOTAL** | **4** | **290** | **$2,840** | **$9.79** |

# AGGREGATE SHOULDERING




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 7 | 3485 | $21,554 | $6.18 | $4.25 | - |
| **1990** | 6 | 3714 | 24,444 | 6.58 | 6.50 | - |
| **1991** | 3 | 2334 | 18,624 | 7.98 | 7.00 | - |
| **1992** | 7 | 6285 | 39,992 | 6.36 | 7.00 | $6.77 |
| **1993** | 7 | 803 | 9,423 | 11.09 | 7.00 | 7.64 |
| **1994** | 4 | 999 | 7,691 | 7.70 | 7.00 | 7.94 |
| **1995** | 8 | 4923 | 40,009 | 8.13 | 8.00 | 8.25 |
| **1996** | 6 | 3067 | 28,277 | 9.22 | 8.50 | 8.50 |
| **1998** | 2 | 60 | 1,263 | 21.05 | 10.00 | 11.44 |
| **1999** | | | | | 10.30 | |
| **2000** | 4 | 621 | 7,557 | 12.17 | 11.00 | 12.64 |
| **2001** | | | | | 11.50 | |
| **2002** | 7 | 3365 | 46,422 | 13.80 | 13.00 | 15.67 |
| **2003** | | | | | 13.40 | |
| **2004** | 2 | 290 | 2,840 | 9.79 | | 13.29 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $13.40 PER TON**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

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# MSAS UNIT PRICE STUDY
# CURB & GUTTER REMOVAL - LINEAR FEET

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 5 | 33,103 | $66,282 | $2.00 |
| Grand Rapids | 2 | 3,030 | 4,073 | 1.34 |
| Hermantown | 1 | 294 | 441 | 1.50 |
| Hibbing | 1 | 3,996 | 7,992 | 2.00 |
| Virginia | 1 | 24,099 | 14,324 | 0.59 |
| **District 1 Total** | **10** | **64,522** | **$93,112** | **$1.44** |
| **District 2** | | | | |
| Thief River Falls | 2 | 1,260 | $6,300 | $5.00 |
| **District 2 Total** | **2** | **1,260** | **$6,300** | **$5.00** |
| **District 3** | | | | |
| Brainerd | 2 | 10,869 | $21,397 | $1.97 |
| Elk River | 1 | 480 | 1,440 | 3.00 |
| Little Falls | 3 | 2,594 | 7,783 | 3.00 |
| Monticello | 2 | 1,000 | 2,500 | 2.50 |
| Otsego | 2 | 70 | 140 | 2.00 |
| Sartell | 1 | 200 | 420 | 2.10 |
| St. Cloud | 2 | 14,069 | 19,532 | 1.39 |
| St. Michael | 1 | 200 | 730 | 3.65 |
| Waite Park | 1 | 205 | 308 | 1.50 |
| **District 3 Total** | **15** | **29,687** | **$54,250** | **$1.83** |
| **District 4** | | | | |
| Alexandria | 6 | 4,807 | $13,407 | $2.79 |
| Moorhead | 2 | 2,950 | 10,648 | 3.61 |
| **District 4 Total** | **8** | **7,757** | **$24,055** | **$3.10** |
| **Metro West** | | | | |
| Andover | 1 | 325 | $650 | $2.00 |
| Anoka | 2 | 4,290 | 8,580 | 2.00 |
| Bloomington | 2 | 7,800 | 8,403 | 1.08 |
| Brooklyn Park | 2 | 1,660 | 3,329 | 2.01 |
| Champlin | 4 | 3,737 | 6,185 | 1.66 |
| Chaska | 2 | 700 | 2,450 | 3.50 |
| Coon Rapids | 3 | 3,552 | 11,584 | 3.26 |
| East Bethel | 1 | 240 | 360 | 1.50 |
| Hopkins | 1 | 5,478 | 14,517 | 2.65 |
| Lino Lakes | 1 | 280 | 700 | 2.50 |
| Minneapolis | 2 | 12,937 | 32,084 | 2.48 |
| Minnetonka | 1 | 852 | 3,152 | 3.70 |
| Savage | 1 | 800 | 2,400 | 3.00 |
| Shorewood | 1 | 100 | 415 | 4.15 |
| St. Francis | 1 | 174 | 265 | 1.52 |
| **Metro West Total** | **25** | **42,925** | **$95,074** | **$2.21** |

# MSAS UNIT PRICE STUDY
# CURB & GUTTER REMOVAL - LINEAR FEET

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 6** | | | | |
| Austin | 1 | 2,600 | $1,950 | $0.75 |
| Northfield | 2 | 4,814 | 8,431 | 1.75 |
| Owatonna | 2 | 210 | 473 | 2.25 |
| Red Wing | 1 | 460 | 2,990 | 6.50 |
| Rochester | 1 | 180 | 900 | 5.00 |
| **District 6 Total** | **7** | **8,264** | **$14,744** | **$1.78** |
| **District 7** | | | | |
| Fairmont | 1 | 4,512 | $15,792 | $3.50 |
| Worthington | 1 | 4 | 36 | 10.00 |
| **District 7 Total** | **2** | **4,516** | **$15,828** | **$3.51** |
| **District 8** | | | | |
| Hutchinson | 4 | 10,904 | $29,688 | $2.72 |
| Marshall | 2 | 228 | 1,484 | 6.51 |
| Montevideo | 1 | 60 | 180 | 3.00 |
| Redwood Falls | 1 | 3,002 | 8,256 | 2.75 |
| Willmar | 3 | 2,035 | 5,338 | 2.62 |
| **District 8 Total** | **11** | **16,229** | **$44,945** | **$2.77** |
| **Metro East** | | | | |
| Apple Valley | 7 | 4,400 | $15,008 | $3.41 |
| Arden Hills | 1 | 197 | 296 | 1.50 |
| Burnsville | 3 | 5,602 | 19,127 | 3.41 |
| Eagan | 3 | 1,905 | 6,858 | 3.60 |
| New Brighton | 1 | 1,170 | 3,510 | 3.00 |
| Oakdale | 2 | 1,875 | 3,118 | 1.66 |
| Rosemount | 2 | 3,431 | 13,723 | 4.00 |
| Roseville | 2 | 590 | 2,213 | 3.75 |
| South St. Paul | 3 | 101 | 455 | 4.50 |
| St. Paul | 6 | 3,666 | 9,198 | 2.51 |
| **Metro East Total** | **30** | **22,937** | **$73,503** | **$3.20** |
| **District Totals** | | | | |
| District 1 Total | 10 | 64,522 | $93,112 | $1.44 |
| District 2 Total | 2 | 1,260 | 6,300 | 5.00 |
| District 3 Total | 15 | 29,687 | 54,250 | 1.83 |
| District 4 Total | 8 | 7,757 | 24,055 | 3.10 |
| Metro West Total | 25 | 42,925 | 95,074 | 2.21 |
| District 6 Total | 7 | 8,264 | 14,744 | 1.78 |
| District 7 Total | 2 | 4,516 | 15,828 | 3.51 |
| District 8 Total | 11 | 16,229 | 44,945 | 2.77 |
| Metro East Total | 30 | 22,937 | 73,503 | 3.20 |
| **STATE TOTAL** | **110** | **198,097** | **$421,810** | **$2.13** |

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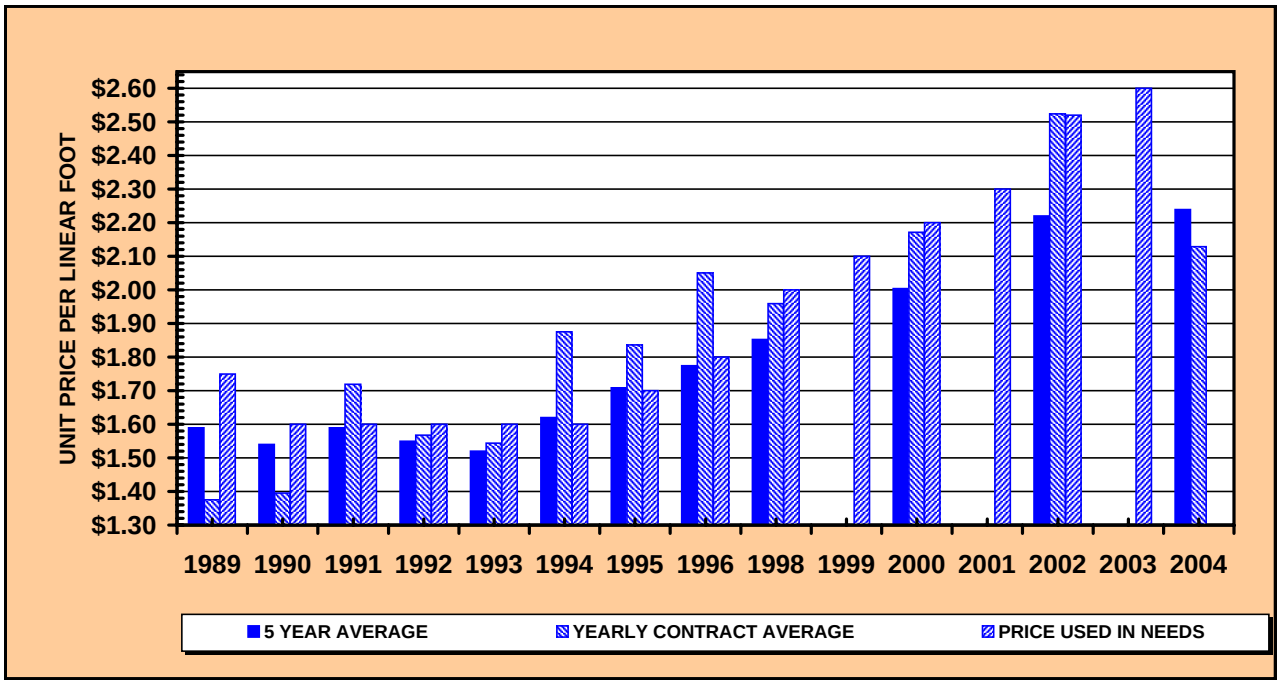
# CURB & GUTTER REMOVAL #2104




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 64 | 211,446 | $290,721 | $1.37 | $1.75 | $1.59 |
| **1990** | 38 | 215,935 | 301,389 | 1.40 | 1.60 | 1.54 |
| **1991** | 59 | 207,105 | 355,996 | 1.72 | 1.60 | 1.59 |
| **1992** | 58 | 152,992 | 239,845 | 1.57 | 1.60 | 1.55 |
| **1993** | 56 | 118,793 | 183,378 | 1.54 | 1.60 | 1.52 |
| **1994** | 59 | 309,891 | 581,256 | 1.88 | 1.60 | 1.62 |
| **1995** | 51 | 209,177 | 384,029 | 1.84 | 1.70 | 1.71 |
| **1996** | 62 | 142,362 | 291,935 | 2.05 | 1.80 | 1.77 |
| **1998** | 63 | 150,083 | 294,046 | 1.96 | 2.00 | 1.85 |
| **1999** | | | | | 2.10 | |
| **2000** | 53 | 114,421 | 248,505 | 2.17 | 2.20 | 2.00 |
| **2001** | | | | | 2.30 | |
| **2002** | 42 | 103,074 | 260,173 | 2.52 | 2.52 | 2.22 |
| **2003** | | | | | 2.60 | |
| **2004** | 54 | 198,097 | 421,810 | 2.13 | | 2.24 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $2.60 PER LIN. FT.**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

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# MSAS UNIT PRICE STUDY
# SIDEWALK REMOVAL - SQUARE YARD

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 4 | 6,921 | $19,198 | $2.77 |
| Virginia | 1 | 10,330 | 21,593 | 2.09 |
| **District 1 Total** | **5** | **17,251** | **$40,791** | **$2.36** |
| **District 2** | | | | |
| Thief River Falls | 1 | 44 | $440 | $10.00 |
| **District 2 Total** | **1** | **44** | **$440** | **$10.00** |
| **District 3** | | | | |
| Brainerd | 2 | 9,617 | $20,014 | $2.08 |
| Elk River | 1 | 268 | 1,208 | 4.50 |
| Little Falls | 3 | 3,077 | 13,846 | 4.50 |
| St. Cloud | 1 | 4,451 | 14,021 | 3.15 |
| **District 3 Total** | **2** | **17,413** | **$49,088** | **$2.82** |
| **District 4** | | | | |
| Alexandria | 4 | 91 | $1,233 | $13.50 |
| Moorhead | 2 | 189 | 806 | 4.25 |
| **District 4 Total** | **6** | **281** | **$2,039** | **$7.26** |
| **Metro West** | | | | |
| Andover | 1 | 17 | $310 | $18.00 |
| Anoka | 2 | 1,100 | 3,960 | 3.60 |
| Bloomington | 2 | 1,580 | 9,012 | 5.70 |
| Brooklyn Park | 1 | 841 | 4,921 | 5.85 |
| Champlin | 2 | 1,100 | 4,950 | 4.50 |
| Chaska | 1 | 22 | 200 | 9.00 |
| Coon Rapids | 1 | 39 | 350 | 9.00 |
| Minneapolis | 2 | 7,502 | 51,312 | 6.84 |
| Minnetonka | 1 | 45 | 756 | 16.80 |
| **Metro West Total** | **13** | **12,246** | **$75,771** | **$6.19** |
| **District 6** | | | | |
| Albert Lea | 1 | 13 | $119 | $9.00 |
| Austin | 1 | 350 | 1,733 | 4.95 |
| Northfield | 2 | 179 | 1,613 | 9.01 |
| Rochester | 1 | 114 | 456 | 4.00 |
| **District 6 Total** | **5** | **656** | **$3,921** | **$5.97** |

# MSAS UNIT PRICE STUDY
# SIDEWALK REMOVAL - SQUARE YARD

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 7** | | | | |
| Fairmont | 1 | 2,475 | $18,930 | $7.65 |
| Worthington | 2 | 40 | 392 | 9.90 |
| **District 7 Total** | **3** | **2,514** | **$19,322** | **$7.69** |
| **District 8** | | | | |
| Hutchinson | 2 | 4,711 | $22,895 | $4.86 |
| Marshall | 2 | 172 | 2,048 | 11.91 |
| Montevideo | 1 | 14 | 125 | 9.00 |
| Redwood Falls | 1 | 11 | 100 | 9.00 |
| Willmar | 2 | 136 | 610 | 4.50 |
| **District 8 Total** | **8** | **5,044** | **$25,778** | **$5.11** |
| **Metro East** | | | | |
| Apple Valley | 5 | 210 | $3,420 | $16.29 |
| Burnsville | 2 | 3,199 | 13,402 | 4.19 |
| Maplewood | 1 | 276 | 552 | 2.00 |
| Roseville | 2 | 17 | 300 | 18.00 |
| South St. Paul | 1 | 18 | 161 | 9.00 |
| St. Paul | 6 | 5,892 | 24,895 | 4.22 |
| **Metro East Total** | **17** | **9,612** | **$42,730** | **$4.45** |
| **District Totals** | | | | |
| District 1 Total | 5 | 17,251 | $40,791 | $2.36 |
| District 2 Total | 1 | 44 | 440 | 10.00 |
| District 3 Total | 2 | 17,413 | 49,088 | 2.82 |
| District 4 Total | 6 | 281 | 2,039 | 7.26 |
| Metro West Total | 13 | 12,246 | 75,771 | 6.19 |
| District 6 Total | 5 | 656 | 3,921 | 5.97 |
| District 7 Total | 3 | 2,514 | 19,322 | 7.69 |
| District 8 Total | 8 | 5,044 | 25,778 | 5.11 |
| Metro East Total | 17 | 9,612 | 42,730 | 4.45 |
| **STATE TOTAL** | **60** | **65,062** | **$259,880** | **$3.99** |

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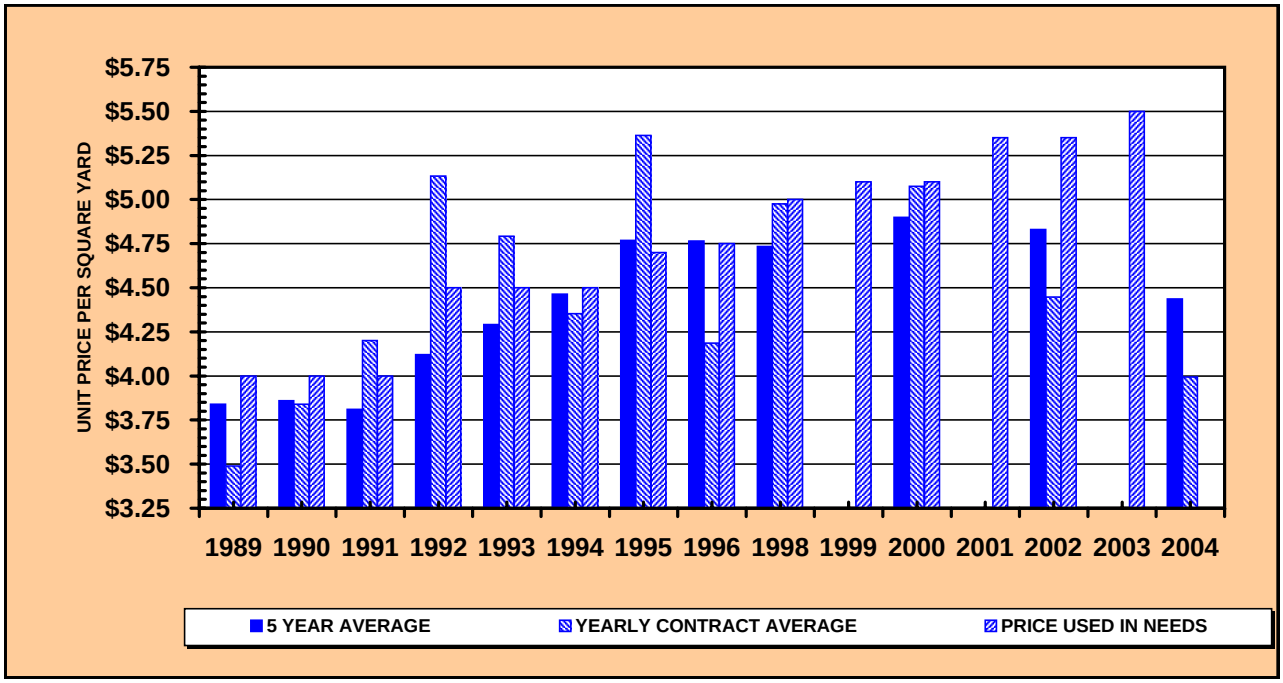
19-Apr-04

# SIDEWALK REMOVAL #2105




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 46 | 77,633 | $270,831 | $3.49 | $4.00 | $3.84 |
| **1990** | 41 | 50,017 | 192,021 | 3.84 | 4.00 | 3.86 |
| **1991** | 43 | 71,868 | 301,912 | 4.20 | 4.00 | 3.81 |
| **1992** | 45 | 57,606 | 295,735 | 5.13 | 4.50 | 4.12 |
| **1993** | 40 | 43,017 | 206,147 | 4.79 | 4.50 | 4.29 |
| **1994** | 39 | 54,206 | 235,995 | 4.35 | 4.50 | 4.46 |
| **1995** | 34 | 73,172 | 392,401 | 5.36 | 4.70 | 4.77 |
| **1996** | 46 | 49,759 | 208,305 | 4.19 | 4.75 | 4.77 |
| **1998** | 41 | 36,967 | 183,894 | 4.97 | 5.00 | 4.73 |
| **1999** | | | | | 5.10 | |
| **2000** | 37 | 44,143 | 224,067 | 5.08 | 5.10 | 4.90 |
| **2001** | | | | | 5.35 | |
| **2002** | 28 | 42,436 | 188,701 | 4.45 | 5.35 | 4.83 |
| **2003** | | | | | 5.50 | |
| **2004** | 35 | 65,062 | 259,880 | 3.99 | | 4.44 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $5.50 PER SQ.YD.**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

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# MSAS UNIT PRICE STUDY
## CONCRETE PAVEMENT REMOVAL - SQUARE YARD

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 5 | 13,572 | $45,556 | $3.36 |
| Hermantown | 1 | 168 | 672 | 4.00 |
| Virginia | 1 | 76,677 | 121,812 | 1.59 |
| **District 1 Total** | **7** | **90,417** | **$168,040** | **$1.86** |
| **District 2** | | | | |
| Brainerd | 2 | 30,790 | $174,982 | $5.68 |
| Little Falls | 1 | 147 | 737 | 5.00 |
| Sartell | 1 | 17 | 65 | 3.85 |
| St. Cloud | 1 | 159 | 954 | 6.00 |
| **District 3 Total** | **5** | **31,113** | **$176,738** | **$5.68** |
| **District 4** | | | | |
| Alexandria | 2 | 182 | $2,867 | $15.75 |
| Moorhead | 1 | 13 | 94 | 7.20 |
| **District 4 Total** | **3** | **195** | **$2,960** | **$15.18** |
| **Metro West** | | | | |
| Coon Rapids | 2 | 1,005 | $6,784 | $6.75 |
| Hopkins | 1 | 2,113 | 18,802 | 8.90 |
| Lino Lakes | 1 | 172 | $772 | 4.50 |
| **Metro West Total** | **4** | **3,289** | **$26,358** | **$8.01** |
| **District 6** | | | | |
| Albert Lea | 1 | 12,721 | $58,516 | $4.60 |
| Austin | 2 | 13,520 | 52,728 | 3.90 |
| Owatonna | 1 | 9 | 76 | 8.40 |
| Rochester | 1 | 492 | 3,444 | 7.00 |
| **District 6 Total** | **5** | **26,742** | **$114,764** | **$4.29** |
| **District 7** | | | | |
| Fairmont | 1 | 11,050 | $65,601 | $5.94 |
| Worthington | 2 | 6,972 | 26,145 | 3.75 |
| **District 7 Total** | **3** | **18,022** | **$91,746** | **$5.09** |
| **District 8** | | | | |
| Hutchinson | 2 | 135 | $967 | $7.17 |
| Willmar | 2 | 2,545 | 11,965 | 4.70 |
| **District 8 Total** | **4** | **2,680** | **$12,932** | **$4.83** |
| **Metro East** | | | | |
| Oakdale | 1 | 20 | $100 | $5.00 |
| Rosemount | 1 | 70 | 703 | 10.00 |
| St. Paul | 4 | 16,127 | 73,002 | 4.53 |
| **Metro East Total** | **6** | **16,217** | **$73,805** | **$4.55** |
| **District Totals** | | | | |
| District 1 Total | 7 | 90,417 | $168,040 | $1.86 |
| District 3 Total | 5 | 31,113 | 176,738 | 5.68 |
| District 4 Total | 3 | 195 | 2,960 | 15.18 |
| Metro West Total | 4 | 3,289 | 26,358 | 8.01 |
| District 6 Total | 5 | 26,742 | 114,764 | 4.29 |
| District 7 Total | 3 | 18,022 | 91,746 | 5.09 |
| District 8 Total | 4 | 2,680 | 12,932 | 4.83 |
| Metro East Total | 6 | 16,217 | 73,805 | 4.55 |
| **STATE TOTAL** | **37** | **188,676** | **$667,342** | **$3.54** |

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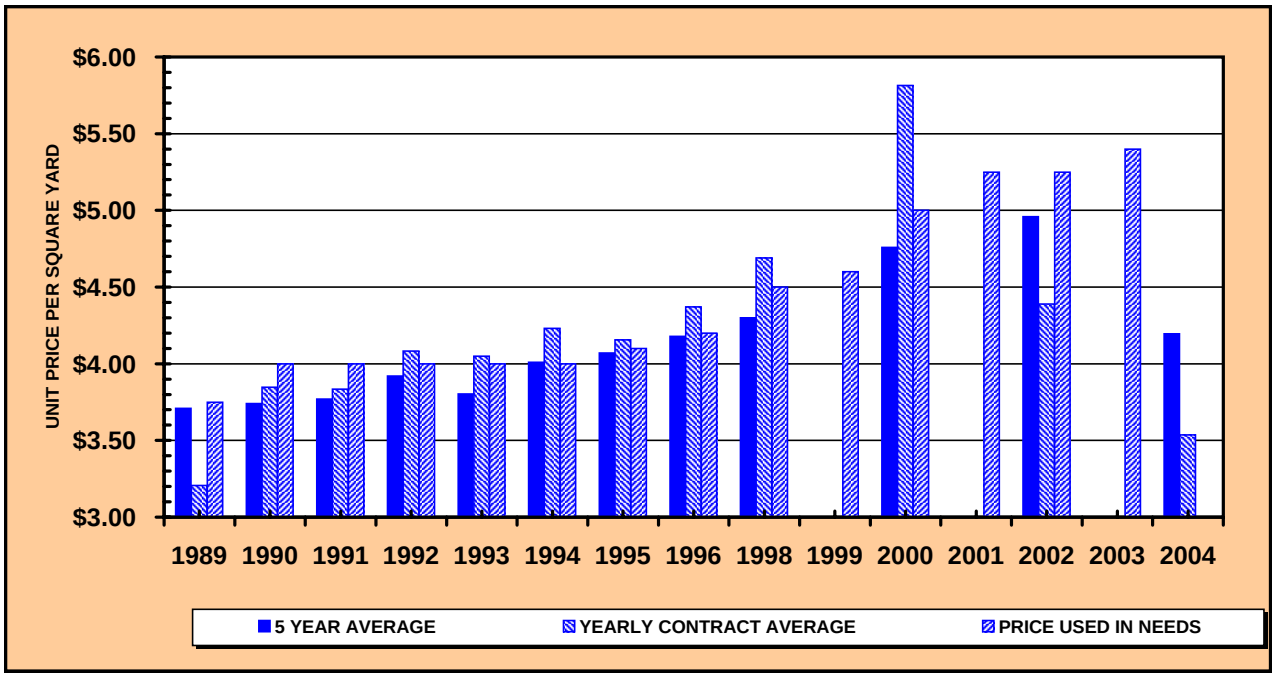
# CONCRETE PAVEMENT REMOVAL #2106




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 44 | 276,630 | $886,757 | $3.21 | $3.75 | $3.71 |
| **1990** | 27 | 88,278 | 339,571 | 3.85 | 4.00 | 3.74 |
| **1991** | 27 | 108,995 | 418,053 | 3.84 | 4.00 | 3.77 |
| **1992** | 23 | 98,752 | 403,278 | 4.08 | 4.00 | 3.92 |
| **1993** | 26 | 190,259 | 770,477 | 4.05 | 4.00 | 3.80 |
| **1994** | 26 | 185,066 | 782,965 | 4.23 | 4.00 | 4.01 |
| **1995** | 27 | 81,258 | 337,753 | 4.16 | 4.10 | 4.07 |
| **1996** | 28 | 78,122 | 341,385 | 4.37 | 4.20 | 4.18 |
| **1998** | 24 | 110,941 | 520,259 | 4.69 | 4.50 | 4.30 |
| **1999** | | | | | 4.60 | |
| **2000** | 15 | 68,760 | 399,759 | 5.81 | 5.00 | 4.76 |
| **2001** | | | | | 5.25 | |
| **2002** | 17 | 64,918 | 284,994 | 4.39 | 5.25 | 4.96 |
| **2003** | | | | | 5.40 | |
| **2004** | 23 | 188,676 | 667,342 | 3.54 | | 4.19 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $5.40 PER SQ. YD.**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

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# MSAS UNIT PRICE STUDY
# TREE REMOVAL - CLEARING

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 4 | 81 | $22,463 | $277.33 |
| Grand Rapids | 1 | 8 | 800 | 100.00 |
| Virginia | 1 | 14 | 2,212 | 158.00 |
| **District 1 Total** | **6** | **103** | **$25,475** | **$247.33** |
| **District 3** | | | | |
| Brainerd | 2 | 7 | $3,352 | $478.80 |
| Little Falls | 2 | 28 | 3,920 | 140.00 |
| Monticello | 1 | 6 | 1,800 | 300.00 |
| Sartell | 1 | 10 | 850 | 85.00 |
| St. Cloud | 2 | 38 | 7,850 | 206.58 |
| Waite Park | 1 | 1 | 75 | 75.00 |
| **District 3 Total** | **9** | **90** | **$17,847** | **$198.30** |
| **District 4** | | | | |
| Alexandria | 1 | 1 | $150 | $150.00 |
| Moorhead | 1 | 3 | 1,500 | 500.00 |
| **District 4 Total** | **2** | **4** | **$1,650** | **$412.50** |
| **Metro West** | | | | |
| Anoka | 2 | 8 | $2,000 | $250.00 |
| Bloomington | 2 | 45 | 5,700 | 126.67 |
| Brooklyn Park | 2 | 61 | 3,760 | 61.64 |
| Coon Rapids | 1 | 13 | 3,575 | 275.00 |
| Lino Lakes | 1 | 139 | 13,900 | 100.00 |
| Minneapolis | 1 | 6 | 3,365 | 560.76 |
| Minnetonka | 1 | 5 | 1,300 | 260.00 |
| **Metro West Total** | **10** | **277** | **$33,600** | **$121.30** |
| **District 6** | | | | |
| Albert Lea | 1 | 19 | $1,900 | $100.00 |
| Northfield | 1 | 3 | 630 | 210.00 |
| Owatonna | 1 | 1 | 160 | 160.00 |
| Rochester | 1 | 28 | 14,000 | 500.00 |
| **District 6 Total** | **4** | **51** | **$16,690** | **$327.25** |
| **District 7** | | | | |
| Worthington | 1 | 1 | $500 | $500.00 |
| **District 7 Total** | **1** | **1** | **$500** | **$500.00** |
| **District 8** | | | | |
| Hutchinson | 2 | 11 | $2,750 | $250.00 |
| Redwood Falls | 1 | 5 | 375 | 75.00 |
| **District 8 Total** | **3** | **16** | **$3,125** | **$195.31** |
| **Metro East** | | | | |
| Arden Hills | 1 | 159 | $31,700 | $200.00 |
| Burnsville | 2 | 17 | 3,875 | 227.94 |
| Maplewood | 1 | 75 | 11,250 | 150.00 |
| Oakdale | 1 | 10 | 750 | 75.00 |
| Rosemount | 2 | 44 | 11,933 | 269.66 |
| **Metro East Total** | **7** | **305** | **$59,508** | **$195.27** |

# MSAS UNIT PRICE STUDY
# TREE REMOVAL - GRUBBING

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 4 | 83 | $7,939 | $95.65 |
| Grand Rapids | 1 | 8 | 800 | 100.00 |
| Virginia | 1 | 14 | 1,232 | 88.00 |
| **District 1 Total** | **6** | **105** | **$9,971** | **$94.96** |
| **District 3** | | | | |
| Brainerd | 2 | 7 | $1,609 | $229.89 |
| Little Falls | 2 | 28 | 3,920 | 140.00 |
| Monticello | 1 | 6 | 1,050 | 175.00 |
| Sartell | 1 | 10 | 850 | 85.00 |
| St. Cloud | 2 | 52 | 6,225 | 119.71 |
| Waite Park | 1 | 1 | 75 | 75.00 |
| **District 3 Total** | **9** | **104** | **$13,729** | **$132.01** |
| **District 4** | | | | |
| Alexandria | 1 | 4 | $600 | $150.00 |
| Moorhead | 1 | 3 | 600 | 200.00 |
| **District 4 Total** | **2** | **7** | **$1,200** | **$171.43** |
| **Metro West** | | | | |
| Anoka | 2 | 8 | $1,200 | $150.00 |
| Bloomington | 2 | 45 | 5,700 | 126.67 |
| Brooklyn Park | 2 | 61 | 2,703 | 44.31 |
| Coon Rapids | 1 | 13 | 2,535 | 195.00 |
| Lino Lakes | 1 | 139 | 4,865 | 35.00 |
| Minneapolis | 1 | 6 | 3,044 | 507.36 |
| Minnetonka | 1 | 5 | 950 | 190.00 |
| **Metro West Total** | **10** | **277** | **$20,997** | **$75.80** |
| **District 6** | | | | |
| Albert Lea | 1 | 19 | $1,425 | $75.00 |
| Northfield | 1 | 3 | 375 | 125.00 |
| Owatonna | 1 | 1 | 120 | 120.00 |
| Rochester | 1 | 28 | 5,600 | 200.00 |
| **District 6 Total** | **3** | **51** | **$7,520** | **$147.45** |
| **District 7** | | | | |
| Worthington | 1 | 1 | $350 | $350.00 |
| **District 7 Total** | **1** | **1** | **$350** | **$350.00** |
| **District 8** | | | | |
| Hutchinson | 2 | 11 | $2,750 | $250.00 |
| Redwood Falls | 1 | 5 | 250 | 50.00 |
| **District 8 Total** | **3** | **16** | **$3,000** | **$187.50** |
| **Metro East** | | | | |
| Arden Hills | 1 | 111 | $8,288 | $75.00 |
| Burnsville | 2 | 17 | 2,075 | 122.06 |
| Maplewood | 1 | 60 | 9,000 | 150.00 |
| Oakdale | 1 | 10 | 500 | 50.00 |
| Rosemount | 2 | 44 | 4,210 | 95.14 |
| St. Paul | 3 | 9 | 4,500 | 500.00 |
| **Metro East Total** | **10** | **251** | **$28,573** | **$113.95** |

# MSAS UNIT PRICE STUDY
# TREE REMOVAL - CLEARING

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District Totals** | | | | |
| District 1 Total | 6 | 103 | $25,475 | $247.33 |
| District 3 Total | 9 | 90 | 17,847 | 198.30 |
| District 4 Total | 2 | 4 | 1,650 | 412.50 |
| Metro West Total | 10 | 277 | 33,600 | 121.30 |
| District 6 Total | 4 | 51 | 16,690 | 327.25 |
| District 7 Total | 1 | 1 | 500 | 500.00 |
| District 8 Total | 3 | 16 | 3,125 | 195.31 |
| Metro East Total | 7 | 305 | 59,508 | 195.27 |
| **TOTAL CLEARING** | **42** | **847** | **$158,394** | **$187.06** |

# MSAS UNIT PRICE STUDY
# TREE REMOVAL - GRUBBING

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District Totals** | | | | |
| District 1 Total | 6 | 105 | $9,971 | $94.96 |
| District 3 Total | 9 | 104 | 13,729 | 132.01 |
| District 4 Total | 2 | 7 | 1,200 | 171.43 |
| Metro West Total | 10 | 277 | 20,997 | 75.80 |
| District 6 Total | 3 | 51 | 7,520 | 147.45 |
| District 7 Total | 1 | 1 | 350 | 350.00 |
| District 8 Total | 3 | 16 | 3,000 | 187.50 |
| Metro East Total | 10 | 251 | 28,573 | 113.95 |
| **TOTAL GRUBBING** | **44** | **812** | **$85,340** | **$105.13** |

# CLEARING AND GRUBBING ARE COMBINED TO COMPUTE TREE REMOVAL

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **TOTAL CLEARING** | **42** | **847** | **158,394** | **$187.06** |
| **TOTAL GRUBBING** | **44** | **812** | **85,340** | **$105.13** |
| **TOTAL** | | **1,659** | **243,734** | **$146.96** |

**1659/2=829.5 TREES**
**AVERAGE COST PER TREE = $243,734/829.5 = $293.83**

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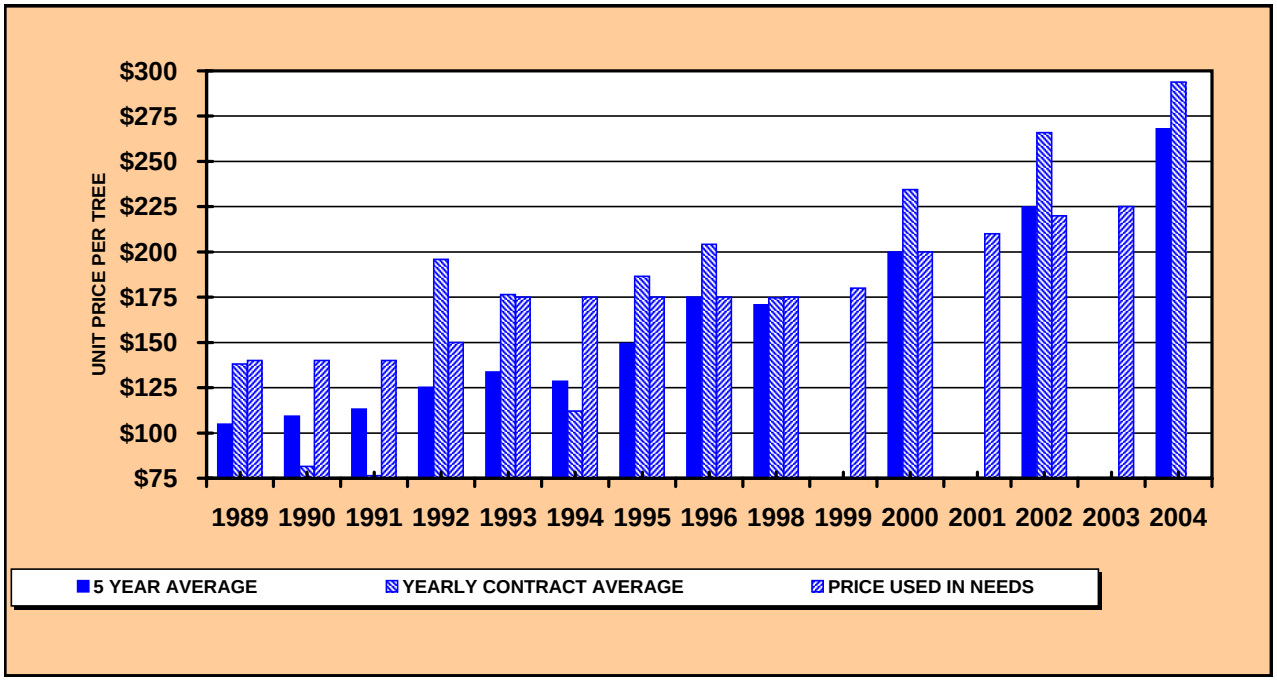
# TREE REMOVAL #2101




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 40 | 884 | $122,030 | $138.04 | $140.00 | $104.88 |
| **1990** | 37 | 1,659 | 135,381 | 81.60 | 140.00 | 109.35 |
| **1991** | 35 | 1,869 | 142,888 | 76.45 | 140.00 | 113.19 |
| **1992** | 39 | 867 | 169,797 | 195.84 | 150.00 | 125.11 |
| **1993** | 34 | 853 | 150,442 | 176.37 | 175.00 | 133.66 |
| **1994** | 35 | 1,876 | 210,444 | 112.18 | 175.00 | 128.49 |
| **1995** | 41 | 1,136 | 211,912 | 186.54 | 175.00 | 149.48 |
| **1996** | 33 | 783 | 159,884 | 204.19 | 175.00 | 175.03 |
| **1998** | 28 | 779 | 136,044 | 174.64 | 175.00 | 170.78 |
| **1999** | | | | | 180.00 | |
| **2000** | 24 | 593 | 138,966 | 234.34 | 200.00 | 199.93 |
| **2001** | | | | | 210.00 | |
| **2002** | 21 | 625 | 166,204 | 265.93 | 220.00 | 224.97 |
| **2003** | | | | | 225.00 | |
| **2004** | 31 | 830 | 243,734 | 293.83 | | 268.08 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $235.00 PER TREE**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

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# MSAS UNIT PRICE STUDY
# AGGREGATE BASE 2211 - TONS

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 6 | 9,429 | $183,471 | $19.46 |
| Grand Rapids | 2 | 4,458 | 38,974 | 8.74 |
| Hermantown | 1 | 22 | 330 | 15.00 |
| Hibbing | 1 | 7,120 | 74,760 | 10.50 |
| Virginia | 1 | 123,092 | 548,862 | 4.46 |
| **District 1 Total** | **11** | **144,121** | **$846,398** | **$5.87** |
| **District 2** | | | | |
| East Grand Forks | 1 | 143 | $5,087 | $35.57 |
| Thief River Falls | 2 | 140 | 770 | 5.50 |
| **District 2 Total** | **3** | **283** | **$5,857** | **$20.69** |
| **District 3** | | | | |
| Brainerd | 2 | 19,313 | $174,448 | $9.03 |
| Elk River | 1 | 640 | 9,600 | 15.00 |
| Monticello | 2 | 3,510 | 35 | 0.01 |
| Otsego | 2 | 29,600 | 223,083 | 7.54 |
| Sartell | 1 | 9,761 | 108,640 | 11.13 |
| St. Cloud | 2 | 12,555 | 212,576 | 16.93 |
| St. Michael | 1 | 28,988 | 188,422 | 6.50 |
| **District 3 Total** | **11** | **104,367** | **$916,803** | **$8.78** |
| **District 4** | | | | |
| Alexandria | 3 | 6,486 | $27,800 | $4.29 |
| Moorhead | 2 | 17,735 | 269,140 | 15.18 |
| **District 4 Total** | **5** | **24,221** | **$296,940** | **$12.26** |
| **Metro West** | | | | |
| Andover | 2 | 430 | $5,628 | $13.09 |
| Anoka | 2 | 3,304 | 38,987 | 11.80 |
| Bloomington | 2 | 15,692 | 211,514 | 13.48 |
| Brooklyn Park | 2 | 17,455 | 165,080 | 9.46 |
| Champlin | 2 | 4,185 | 100,440 | 24.00 |
| Chaska | 2 | 13,155 | 153,914 | 11.70 |
| Coon Rapids | 2 | 582 | 4,889 | 8.40 |
| East Bethel | 1 | 1,757 | 21,383 | 12.17 |
| Ham Lake | 1 | 1,606 | 16,060 | 10.00 |
| Hopkins | 2 | 1,671 | 38,304 | 22.92 |
| Lino Lakes | 1 | 12,000 | 81,600 | 6.80 |
| Minneapolis | 2 | 9,485 | 114,769 | 12.10 |
| Minnetonka | 1 | 1,460 | 19,637 | 13.45 |
| Plymouth | 1 | 475 | 10,640 | 22.40 |
| Savage | 1 | 35,500 | 333,700 | 9.40 |
| Shorewood | 1 | 3,200 | 42,880 | 13.40 |
| St. Francis | 1 | 1,411 | 9,126 | 6.47 |
| **Metro West Total** | **26** | **123,368** | **$1,368,549** | **$11.09** |

# MSAS UNIT PRICE STUDY
# AGGREGATE BASE 2211 - TONS

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 6** | | | | |
| Albert Lea | 1 | 1,841 | $24,854 | $13.50 |
| Austin | 2 | 7,100 | 62,125 | 8.75 |
| Northfield | 2 | 3,456 | 25,441 | 7.36 |
| Owatonna | 2 | 458 | 5,038 | 11.00 |
| Red Wing | 2 | 2,930 | 30,765 | 10.50 |
| Rochester | 3 | 18,185 | 235,568 | 12.95 |
| Winona | 2 | 3,166 | 65,695 | 20.75 |
| **District 6 Total** | **14** | **37,136** | **$449,485** | **$12.10** |
| **District 7** | | | | |
| Fairmont | 1 | 2,280 | $29,640 | $13.00 |
| Worthington | 1 | 2,004 | 44,088 | 22.00 |
| **District 7 Total** | **2** | **4,284** | **$73,728** | **$17.21** |
| **District 8** | | | | |
| Hutchinson | 4 | 37,869 | $295,382 | $7.80 |
| Montevideo | 1 | 4,150 | 29,050 | 7.00 |
| Redwood Falls | 1 | 5,000 | 30,000 | 6.00 |
| Willmar | 2 | 11,400 | 92,910 | 8.15 |
| **District 8 Total** | **8** | **58,419** | **$447,342** | **$7.66** |
| **Metro East** | | | | |
| Apple Valley | 4 | 9,720 | $73,745 | $7.59 |
| Arden Hills | 1 | 6,642 | 79,777 | 12.01 |
| Burnsville | 2 | 4,005 | 45,280 | 11.31 |
| Eagan | 3 | 577 | 8,655 | 15.00 |
| Maplewood | 1 | 10,175 | 91,575 | 9.00 |
| Mendota Heights | 1 | 215 | 3,204 | 14.90 |
| New Brighton | 1 | 40 | 344 | 8.60 |
| Oakdale | 2 | 10,812 | 98,188 | 9.08 |
| Rosemount | 2 | 20,927 | 217,296 | 10.38 |
| Roseville | 1 | 110 | 1,430 | 13.00 |
| South St. Paul | 1 | 850 | 6,375 | 7.50 |
| St. Paul | 7 | 12,881 | 221,834 | 17.22 |
| **Metro East Total** | **26** | **76,954** | **$847,702** | **$11.02** |
| **District Totals** | | | | |
| District 1 Total | 11 | 144,121 | $846,398 | $5.87 |
| District 2 Total | 3 | 283 | 5,857 | 20.69 |
| District 3 Total | 11 | 104,367 | 916,803 | 8.78 |
| District 4 Total | 5 | 24,221 | 296,940 | 12.26 |
| Metro West Total | 26 | 123,368 | 1,368,549 | 11.09 |
| District 6 Total | 14 | 37,136 | 449,485 | 12.10 |
| District 7 Total | 2 | 4,284 | 73,728 | 17.21 |
| District 8 Total | 8 | 58,419 | 447,342 | 7.66 |
| Metro East Total | 26 | 76,954 | 847,702 | 11.02 |
| **STATE TOTAL** | **106** | **573,153** | **$5,252,804** | **$9.16** |

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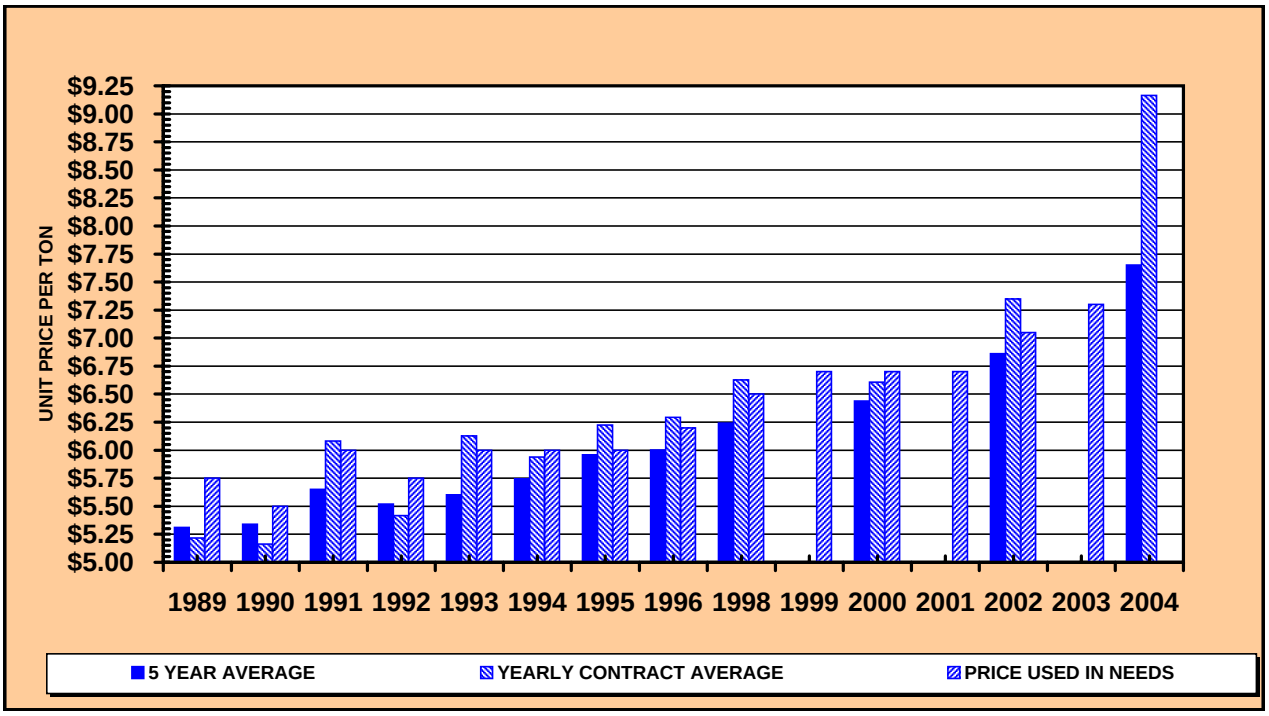
# CLASS 5 AGGREGATE BASE #2211




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 70 | 648,988 | $3,385,938 | $5.22 | $5.75 | $5.31 |
| **1990** | 68 | 715,922 | 3,696,421 | 5.16 | 5.50 | 5.34 |
| **1991** | 70 | 553,874 | 3,368,664 | 6.08 | 6.00 | 5.65 |
| **1992** | 69 | 650,835 | 3,525,629 | 5.42 | 5.75 | 5.52 |
| **1993** | 60 | 621,247 | 3,807,092 | 6.13 | 6.00 | 5.60 |
| **1994** | 70 | 660,174 | 3,921,230 | 5.94 | 6.00 | 5.75 |
| **1995** | 61 | 491,608 | 3,060,585 | 6.23 | 6.00 | 5.96 |
| **1996** | 68 | 593,314 | 3,733,431 | 6.29 | 6.20 | 6.00 |
| **1998** | 67 | 470,633 | 3,118,365 | 6.63 | 6.50 | 6.24 |
| **1999** | | | | | 6.70 | |
| **2000** | 58 | 680,735 | 4,498,220 | 6.61 | 6.70 | 6.44 |
| **2001** | | | | | 6.70 | |
| **2002** | 52 | 527,592 | 3,877,688 | 7.35 | 7.05 | 6.86 |
| **2003** | | | | | 7.30 | |
| **2004** | 58 | 573,153 | 5,252,804 | 9.16 | | 7.65 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $7.65 PER TON**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

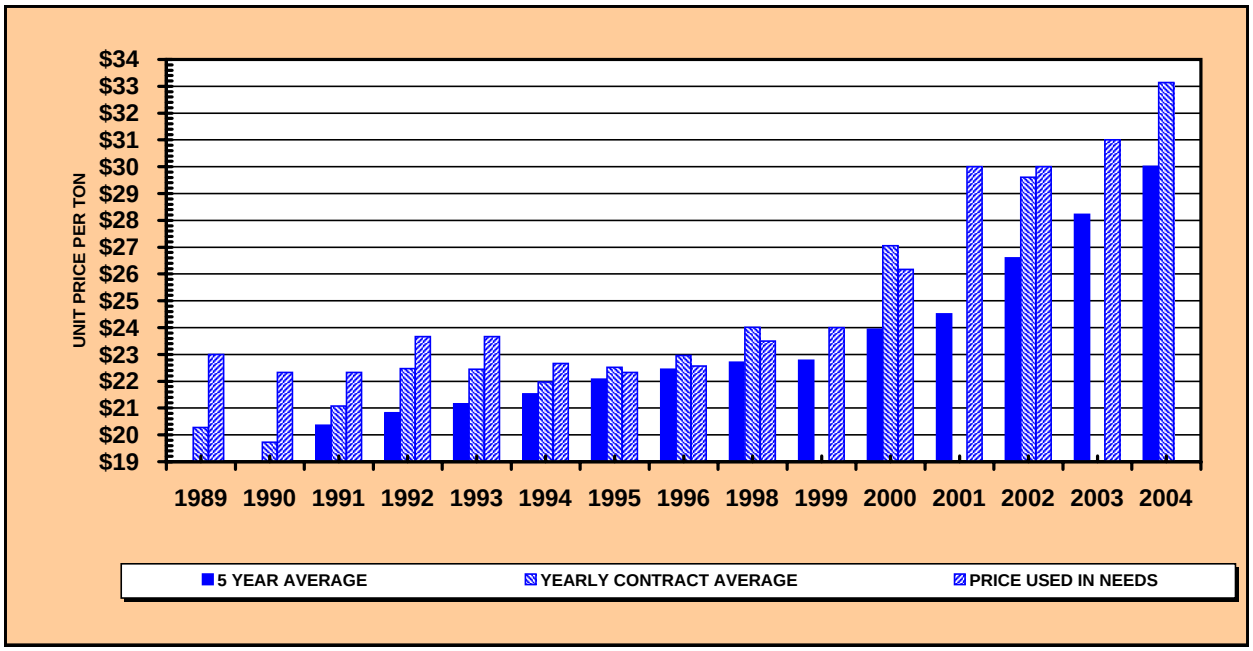
# MSAS UNIT PRICE STUDY
# BITUMINOUS

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 7 | 35,166 | $1,033,885 | $29.40 |
| Grand Rapids | 2 | 4,124 | 166,363 | 40.34 |
| Hermantown | 1 | 528 | 14,124 | 26.75 |
| Hibbing | 1 | 4,245 | 145,915 | 34.37 |
| **District 1 Total** | **11** | **44,063** | **$1,360,287** | **$30.87** |
| **District 2** | | | | |
| East Grand Forks | 1 | 611 | $32,857 | $53.78 |
| Thief River Falls | 2 | 10,920 | 307,081 | 28.12 |
| **District 2 Total** | **3** | **11,531** | **$339,938** | **$29.48** |
| **District 3** | | | | |
| Brainerd | 2 | 11,699 | $352,451 | $30.13 |
| Elk River | 1 | 530 | 29,680 | 56.00 |
| Little Falls | 3 | 3,166 | 95,776 | 30.25 |
| Monticello | 2 | 4,400 | 162,950 | 37.03 |
| Otsego | 2 | 11,200 | 349,351 | 31.19 |
| Sartell | 1 | 7,821 | 237,678 | 30.39 |
| St. Cloud | 2 | 15,747 | 558,576 | 35.47 |
| St. Michael | 1 | 3,726 | 108,054 | 29.00 |
| Waite Park | 1 | 10,648 | 373,660 | 35.09 |
| **District 3 Total** | **15** | **68,937** | **$2,268,176** | **$32.90** |
| **District 4** | | | | |
| Alexandria | 6 | 13,265 | $320,150 | $24.13 |
| Moorhead | 2 | 17,814 | 700,385 | 39.32 |
| **District 4 Total** | **8** | **31,079** | **$1,020,535** | **$32.84** |
| **Metro West** | | | | |
| Andover | 2 | 380 | $13,479 | $35.47 |
| Anoka | 2 | 1,987 | 61,512 | 30.96 |
| Bloomington | 2 | 13,208 | 578,770 | 43.82 |
| Brooklyn Park | 2 | 14,570 | 471,403 | 32.35 |
| Champlin | 4 | 9,405 | 352,643 | 37.50 |
| Chaska | 2 | 5,855 | 179,690 | 30.69 |
| Coon Rapids | 3 | 7,969 | 277,933 | 34.88 |
| East Bethel | 1 | 1,550 | 56,982 | 36.76 |
| Ham Lake | 1 | 1,182 | 40,053 | 33.89 |
| Hopkins | 2 | 4,161 | 156,054 | 37.50 |
| Lino Lakes | 1 | 4,050 | 130,383 | 32.19 |
| Minneapolis | 2 | 23,671 | 869,946 | 36.75 |
| Minnetonka | 1 | 14,667 | 362,201 | 24.69 |
| Plymouth | 1 | 575 | 24,523 | 42.65 |
| Savage | 1 | 11,400 | 354,360 | 31.08 |
| Shorewood | 1 | 20,930 | 725,944 | 34.68 |
| St. Francis | 1 | 1,157 | 26,059 | 22.51 |
| **Metro West Total** | **29** | **136,717** | **$4,681,932** | **$34.25** |

# MSAS UNIT PRICE STUDY
# BITUMINOUS

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 6** | | | | |
| Albert Lea | 1 | 15 | $1,980 | $132.00 |
| Austin | 2 | 262 | 12,816 | 48.92 |
| Northfield | 2 | 3,906 | 119,495 | 30.59 |
| Owatonna | 1 | 10 | 526 | 52.60 |
| Red Wing | 2 | 2,110 | 93,851 | 44.48 |
| Rochester | 3 | 7,659 | 284,021 | 37.08 |
| Winona | 2 | 3,547 | 147,130 | 41.48 |
| **District 6 Total** | **13** | **17,509** | **$659,818** | **$37.68** |
| **District 7** | | | | |
| Fairmont | 1 | 7,270 | $312,784 | $43.02 |
| Worthington | 2 | 2,670 | 121,151 | 45.37 |
| **District 7 Total** | **3** | **9,940** | **$433,935** | **$43.66** |
| **District 8** | | | | |
| Hutchinson | 4 | 14,951 | $456,526 | $30.53 |
| Marshall | 7 | 7,643 | 257,687 | 33.72 |
| Montevideo | 1 | 1,650 | 49,432 | 29.96 |
| Redwood Falls | 1 | 2,650 | 100,688 | 38.00 |
| Willmar | 3 | 13,360 | 331,385 | 24.80 |
| **District 8 Total** | **3** | **40,254** | **$1,195,717** | **$29.70** |
| **Metro East** | | | | |
| Apple Valley | 7 | 9,720 | $304,137 | $31.29 |
| Arden Hills | 1 | 2,816 | 94,074 | 33.40 |
| Burnsville | 3 | 15,514 | 521,455 | 33.61 |
| Eagan | 3 | 5,422 | 195,343 | 36.03 |
| Maplewood | 1 | 2,100 | 70,900 | 33.76 |
| Mendota Heights | 1 | 90 | 11,153 | 123.93 |
| New Brighton | 1 | 1,380 | 43,329 | 31.40 |
| Oakdale | 2 | 13,875 | 437,041 | 31.50 |
| Rosemount | 2 | 12,908 | 440,015 | 34.09 |
| Roseville | 2 | 3,063 | 105,429 | 34.42 |
| South St. Paul | 3 | 4,913 | 147,214 | 29.96 |
| St. Paul | 6 | 27,775 | 899,531 | 32.39 |
| **Metro East Total** | **32** | **99,576** | **$3,269,621** | **$32.84** |
| **District Totals** | | | | |
| District 1 Total | 11 | 44,063 | $1,360,287 | $30.87 |
| District 2 Total | 3 | 11,531 | 339,938 | 29.48 |
| District 3 Total | 15 | 68,937 | 2,268,176 | 32.90 |
| District 4 Total | 8 | 31,079 | 1,020,535 | 32.84 |
| Metro West Total | 29 | 136,717 | 4,681,932 | 34.25 |
| District 6 Total | 13 | 17,509 | 659,818 | 37.68 |
| District 7 Total | 3 | 9,940 | 433,935 | 43.66 |
| District 8 Total | 3 | 40,254 | 1,195,717 | 29.70 |
| Metro East Total | 32 | 99,576 | 3,269,621 | 32.84 |
| **STATE TOTAL** | **117** | **459,606** | **$15,229,960** | **$33.14** |

# BITUMINOUS




| NEEDS YEAR | NO. OF CITIES* | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1989 | 70 | 631,506 [1] | 12,802,798 [2] | $20.27 [3] | $23.00 [4] | |
| 1990 | 68 | 599,083 [1] | 11,821,216 [2] | 19.73 [3] | 22.33 [4] | |
| 1991 | 70 | 613,163 [1] | 12,925,191 [2] | 21.08 [3] | 22.33 [4] | 20.37 [5] |
| 1992 | 69 | 519,900 [1] | 11,685,503 [2] | 22.48 [3] | 23.67 [4] | 20.83 [5] |
| 1993 | 66 | 598,566 [1] | 13,434,379 [2] | 22.44 [3] | 23.67 [4] | 21.16 [5] |
| 1994 | 70 | 692,066 [1] | 15,208,681 [2] | 21.98 [3] | 22.67 [4] | 21.53 [5] |
| 1995 | 61 | 601,173 [1] | 13,535,386 [2] | 22.51 [3] | 22.33 [4] | 22.08 [5] |
| 1996 | 68 | 540,860 [1] | 12,419,802 [2] | 22.96 [3] | 22.57 [4] | 22.45 [5] |
| 1998 | 67 | 505,372 [1] | 12,132,901 [2] | 24.01 [3] | 23.50 [4] | 22.71 [5] |
| 1999 | | | [2] | 0.00 | 24.00 [4] | 22.78 [5] |
| 2000 | 51 | 434,005 [1] | 11,739,821 [2] | 27.05 [3] | 26.17 [4] | 23.94 [5] |
| 2001 | | | [2] | 0.00 | 30.00 [4] | 24.52 [5] |
| 2002 | 50 | 371,198 [1] | 10,989,206 [2] | 29.60 [3] | 30.00 [4] | 26.60 [5] |
| 2003 | | | | | 31.00 [4] | 28.23 [5] |
| 2004 | 60 | 459,606 | 15,229,960 | 33.14 | | 30.01 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $33.00 PER TON**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

* Used highest number of cities from the **BITUMINOUS - PAST YEARS COMBINED** pages

[1] Combined the quantities from the four previous tables together.

[2] Combined the total costs from the four previous tables together.

[3] Total Costs divided by quantity.

[4] Average of the Price Used in Needs from the four previous tables.

[5] Used past 5 year's costs divided by the past 5 year's quantity.

N:\MSAS\EXCEL\UNIT PRICE\UNIT PRICE BREAK OUT.XLS BIT. BASE & SURF. - 2341 GRAPH

# BITUMINOUS - PAST YEARS COMBINED

In 2001, the Screening Board decided to combine all bituminous and use a single unit price. This woorksheet combines all bituminous types (2331, 2341 and 2350, 2361) from past years and combines them together.

## BITUMINOUS BASE OR SURFACE #2331

N:\MSAS\EXCEL\UNIT PRICE\UNIT PRICE BREAK OUT.XLS Bit - Past Years Combined

| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 70 | 316,333 | $5,793,245 | $18.31 | $21.00 | $19.87 |
| **1990** | 68 | 313,022 | 5,517,034 | 17.63 | 20.00 | 19.19 |
| **1991** | 70 | 349,058 | 6,952,316 | 19.92 | 20.00 | 19.09 |
| **1992** | 69 | 358,244 | 7,739,246 | 21.60 | 22.00 | 19.48 |
| **1993** | 60 | 243,491 | 4,791,236 | 19.68 | 22.00 | 19.43 |
| **1994** | 70 | 265,414 | 5,339,712 | 20.12 | 21.00 | 19.79 |
| **1995** | 61 | 190,763 | 3,791,009 | 19.87 | 20.00 | 20.24 |
| **1996** | 68 | 188,898 | 4,000,168 | 21.18 | 20.50 | 20.49 |
| **1998** | 67 | 183,962 | 4,197,677 | 22.82 | 21.50 | 20.73 |
| **1999** | | | | | 22.00 | |
| **2000** | 48 | 152,926 | 3,954,123 | 25.86 | 25.50 | 22.43 |
| **2001** | | | | | 30.00 | |
| **2002** | 29 | 60,040 | 1,726,266 | 28.75 | 30.00 | 25.81 |
| **2003** | | | | | | 27.30 |

## BITUMINOUS SURFACE #2341

| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 58 | 144,986 | $3,119,592 | $21.52 | $24.00 | $23.14 |
| **1990** | 44 | 127,267 | 2,707,906 | 21.28 | 23.50 | 22.83 |
| **1991** | 48 | 125,102 | 2,804,228 | 22.42 | 23.50 | 22.31 |
| **1992** | 31 | 77,735 | 1,873,836 | 24.11 | 24.50 | 22.48 |
| **1993** | 66 | 160,587 | 3,825,967 | 23.82 | 24.50 | 22.63 |
| **1994** | 52 | 201,120 | 4,584,015 | 22.79 | 23.50 | 22.88 |
| **1995** | 58 | 190,983 | 4,448,398 | 23.29 | 23.50 | 23.29 |
| **1996** | 65 | 169,911 | 4,023,193 | 23.68 | 23.60 | 23.54 |
| **1998** | 60 | 158,320 | 3,895,038 | 24.60 | 24.50 | 23.64 |
| **1999** | | | | | 25.00 | |
| **2000** | 51 | 137,663 | 3,792,496 | 27.55 | 26.50 | 24.78 |
| **2001** | | | | | 30.00 | |
| **2002** | 28 | 63,693 | 1,879,624 | 29.51 | 30.00 | 27.22 |
| **2003** | | | | | | |

# BITUMINOUS - PAST YEARS COMBINED

## BITUMINOUS SURFACE #2341 & 2350

| NEEDS YEAR | NO. OF CITIES* | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 58 | 144,986 | $3,119,592 | $21.52 | $24.00 | $23.14 |
| **1990** | 44 | 127,267 | 2,707,906 | 21.28 | 23.50 | 22.83 |
| **1991** | 48 | 125,102 | 2,804,228 | 22.42 | 23.50 | 22.31 |
| **1992** | 31 | 77,735 | 1,873,836 | 24.11 | 24.50 | 22.48 |
| **1993** | 66 | 160,587 | 3,825,967 | 23.82 | 24.50 | 22.63 |
| **1994** | 52 | 201,120 | 4,584,015 | 22.79 | 23.50 | 22.88 |
| **1995** | 58 | 190,983 | 4,448,398 | 23.29 | 23.50 | 23.29 |
| **1996** | 65 | 169,911 | 4,023,193 | 23.68 | 23.60 | 23.54 |
| **1998** | 60 | 158,320 | 3,895,038 | 24.60 | 24.50 | 23.64 |
| **1999** | | | | | 25.00 | |
| **2000** | 51 | 137,663 | 3,792,496 | 27.55 | 26.50 | 24.78 |
| **2001** | | | | | 30.00 | |
| **2002** | 50 | 242,437 | 7,175,392 | 29.60 | 30.00 | 27.25 |
| **2003** | | | | | | 28.57 |

## BITUMINOUS SURFACE #2361

| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 17 | 25,201 | $770,369 | $30.57 | $34.00 | $31.81 |
| **1990** | 14 | 31,527 | 888,370 | 28.18 | 33.00 | 31.18 |
| **1991** | 13 | 13,901 | 364,419 | 26.22 | 30.00 | 29.79 |
| **1992** | 3 | 6,186 | 198,585 | 32.10 | 32.00 | 29.41 |
| **1993** | 13 | 33,901 | 991,209 | 29.14 | 32.00 | 29.24 |
| **1994** | 11 | 24,412 | 700,939 | 28.71 | 30.00 | 28.87 |
| **1995** | 8 | 28,444 | 847,581 | 29.80 | 30.00 | 29.19 |
| **1996** | 7 | 12,140 | 373,248 | 30.75 | 30.10 | 30.10 |
| **1998** | 5 | 4,770 | 145,148 | 30.43 | 30.50 | 29.77 |
| **1999** | | | | | 31.50 | |
| **2000** | 4 | 5,753 | 200,706 | 34.89 | 31.50 | 31.47 |
| **2001** | | | | | 30.00 | |
| **2002** | 3 | 5,028 | 207,923 | 41.35 | None | 35.56 |
| **2003** | | | | | | 38.12 |

# ALL BITUMINOUS COMBINED

| NEEDS YEAR | NO. OF CITIES* | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 70 | 631,506 [1] | 12,802,798 [2] | $20.27 [3] | $23.00 [4] | |
| **1990** | 68 | 599,083 [1] | 11,821,216 [2] | 19.73 [3] | 22.33 [4] | |
| **1991** | 70 | 613,163 [1] | 12,925,191 [2] | 21.08 [3] | 22.33 [4] | 20.37 [5] |
| **1992** | 69 | 519,900 [1] | 11,685,503 [2] | 22.48 [3] | 23.67 [4] | 20.83 [5] |
| **1993** | 66 | 598,566 [1] | 13,434,379 [2] | 22.44 [3] | 23.67 [4] | 21.16 [5] |
| **1994** | 70 | 692,066 [1] | 15,208,681 [2] | 21.98 [3] | 22.67 [4] | 21.53 [5] |
| **1995** | 61 | 601,173 [1] | 13,535,386 [2] | 22.51 [3] | 22.33 [4] | 22.08 [5] |
| **1996** | 68 | 540,860 [1] | 12,419,802 [2] | 22.96 [3] | 22.57 [4] | 22.45 [5] |
| **1998** | 67 | 505,372 [1] | 12,132,901 [2] | 24.01 [3] | 23.50 [4] | 22.71 [5] |
| **1999** | | | | | 24.00 [4] | 22.78 [5] |
| **2000** | 51 | 434,005 [1] | 11,739,821 [2] | 27.05 [3] | 26.17 [4] | 23.94 [5] |
| **2001** | | | | | 30.00 [4] | 24.52 [5] |
| **2002** | 50 | 371,198 [1] | 10,989,206 [2] | 29.60 [3] | 30.00 [4] | 26.60 [5] |
| **2003** | | | | | 31.00 | 28.23 [5] |
| **2004** | | | | | | |

* Used highest number of cities from the **BITUMINOUS - PAST YEARS COMBINED** pages

[1] Combined the quantities from the four previous tables together.

[2] Combined the total costs from the four previous tables together.

[3] Total Costs divided by quantity.

[4] Average of the Price Used in Needs from the four previous tables.

[5] Used past 5 year's costs divided by the past 5 year's quantity.

# MSAS UNIT PRICE STUDY
# CURB AND GUTTER CONSTRUCTION - LIN. FT.

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 6 | 45,556 | $417,323 | $9.16 |
| Grand Rapids | 2 | 6,215 | 45,549 | 7.33 |
| Hermantown | 1 | 372 | 6,696 | 18.00 |
| Hibbing | 1 | 5,258 | 42,064 | 8.00 |
| Virginia | 1 | 26,878 | 236,927 | 8.81 |
| **District 1 Total** | **11** | **84,279** | **$748,559** | **$8.88** |
| **District 2** | | | | |
| East Grand Forks | 1 | 3,758 | $43,367 | $11.54 |
| Thief River Falls | 2 | 1,260 | 12,600 | 10.00 |
| **District 2 Total** | **3** | **5,018** | **$55,967** | **$11.15** |
| **District 3** | | | | |
| Brainerd | 2 | 14,012 | $112,748 | $8.05 |
| Elk River | 1 | 1,345 | 14,795 | 11.00 |
| Little Falls | 3 | 5,540 | 44,633 | 8.06 |
| Monticello | 2 | 3,285 | 39,420 | 12.00 |
| Otsego | 2 | 15,200 | 106,400 | 7.00 |
| Sartell | 1 | 10,635 | 74,445 | 7.00 |
| St. Cloud | 1 | 15,724 | 105,178 | 6.69 |
| St. Michael | 1 | 9,159 | 65,584 | 7.16 |
| Waite Park | 1 | 9 | 119 | 13.20 |
| **District 3 Total** | **14** | **74,909** | **$563,322** | **$7.52** |
| **District 4** | | | | |
| Alexandria | 6 | 4,807 | $63,168 | $13.14 |
| Moorhead | 3 | 28,740 | 304,935 | 10.61 |
| **District 4 Total** | **9** | **33,547** | **$368,103** | **$10.97** |
| **Metro West** | | | | |
| Andover | 2 | 696 | $7,342 | $10.55 |
| Anoka | 2 | 4,290 | 30,674 | 7.15 |
| Bloomington | 2 | 13,242 | 111,890 | 8.45 |
| Brooklyn Park | 2 | 17,992 | 131,217 | 7.29 |
| Champlin | 4 | 6,262 | 55,957 | 8.94 |
| Chaska | 2 | 7,960 | 73,180 | 9.19 |
| Coon Rapids | 3 | 4,864 | 54,067 | 11.12 |
| East Bethel | 1 | 3,465 | 24,775 | 7.15 |
| Ham Lake | 1 | 2,560 | 18,944 | 7.40 |
| Hopkins | 1 | 6,177 | 61,770 | 10.00 |
| Lino Lakes | 1 | 10,540 | 75,888 | 7.20 |
| Minneapolis | 2 | 13,542 | 173,879 | 12.84 |
| Minnetonka | 1 | 857 | 11,227 | 13.10 |
| Savage | 1 | 11,100 | 83,250 | 7.50 |
| Shorewood | 1 | 430 | 6,880 | 16.00 |
| St. Francis | 1 | 2,638 | 17,656 | 6.69 |
| **Metro West Total** | **27** | **106,615** | **$938,594** | **$8.80** |

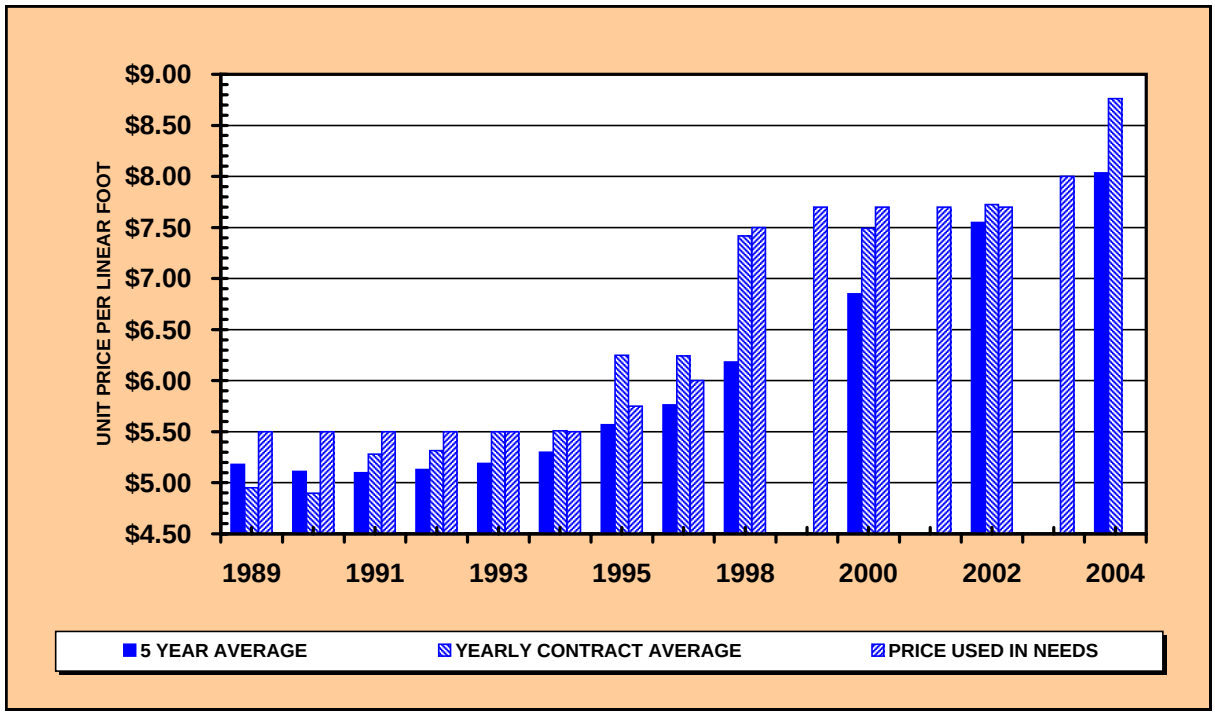
# MSAS UNIT PRICE STUDY
# CURB AND GUTTER CONSTRUCTION - LIN. FT.

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 6** | | | | |
| Albert Lea | 1 | 4,952 | $49,090 | $9.91 |
| Austin | 1 | 200 | 4,212 | 21.06 |
| Northfield | 2 | 8,789 | 65,158 | 7.41 |
| Owatonna | 2 | 181 | 1,810 | 10.00 |
| Red Wing | 2 | 1,455 | 18,105 | 12.44 |
| Rochester | 3 | 12,987 | 122,023 | 9.40 |
| Winona | 2 | 4,067 | 34,325 | 8.44 |
| **District 6 Total** | **13** | **32,631** | **$294,724** | **$9.03** |
| **District 7** | | | | |
| Fairmont | 1 | 4,560 | $38,760 | $8.50 |
| Worthington | 1 | 2,372 | 22,534 | 9.50 |
| **District 7 Total** | **2** | **6,932** | **$61,294** | **$8.84** |
| **District 8** | | | | |
| Hutchinson | 4 | 20,285 | $141,014 | $6.95 |
| Marshall | 2 | 220 | 3,960 | 18.00 |
| Montevideo | 1 | 1,850 | 13,690 | 7.40 |
| Redwood Falls | 1 | 3,002 | 29,270 | 9.75 |
| Willmar | 3 | 2,085 | 19,753 | 9.47 |
| **District 8 Total** | **11** | **27,442** | **$207,687** | **$7.57** |
| **Metro East** | | | | |
| Apple Valley | 7 | 11,220 | $115,540 | $10.30 |
| Arden Hills | 1 | 8,411 | 63,072 | 7.50 |
| Burnsville | 3 | 7,420 | 77,489 | 10.44 |
| Eagan | 2 | 3,512 | 38,042 | 10.83 |
| Maplewood | 1 | 6,755 | 57,353 | 8.49 |
| New Brighton | 1 | 1,200 | 10,800 | 9.00 |
| Oakdale | 2 | 16,750 | 142,063 | 8.48 |
| Rosemount | 2 | 14,085 | 118,219 | 8.39 |
| Roseville | 2 | 590 | 6,195 | 10.50 |
| South St. Paul | 3 | 101 | 1,515 | 15.00 |
| St. Paul | 6 | 27,715 | 241,675 | 8.72 |
| **Metro East Total** | **30** | **97,759** | **$871,961** | **$8.92** |
| **District Totals** | | | | |
| District 1 Total | 11 | 84,279 | $748,559 | $8.88 |
| District 2 Total | 3 | 5,018 | 55,967 | 11.15 |
| District 3 Total | 14 | 74,909 | 563,322 | 7.52 |
| District 4 Total | 9 | 33,547 | 368,103 | 10.97 |
| Metro West Total | 27 | 106,615 | 938,594 | 8.80 |
| District 6 Total | 13 | 32,631 | 294,724 | 9.03 |
| District 7 Total | 2 | 6,932 | 61,294 | 8.84 |
| District 8 Total | 11 | 27,442 | 207,687 | 7.57 |
| Metro East Total | 30 | 97,759 | 871,961 | 8.92 |
| **STATE TOTAL** | **120** | **469,131** | **$4,110,211** | **$8.76** |

N:\MSAS\EXCEL\UNIT PRICE\UNIT PRICE BREAK OUT.XLS C & G CONST.

19-Apr-04

# CURB AND GUTTER CONSTRUCTION




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 73 | 606,413 | $3,002,995 | $4.95 | $5.50 | $5.18 |
| **1990** | 57 | 603,356 | 2,954,409 | 4.90 | 5.50 | 5.11 |
| **1991** | 67 | 559,342 | 2,952,849 | 5.28 | 5.50 | 5.10 |
| **1992** | 68 | 523,717 | 2,783,163 | 5.31 | 5.50 | 5.13 |
| **1993** | 69 | 515,687 | 2,836,644 | 5.50 | 5.50 | 5.19 |
| **1994** | 70 | 460,898 | 2,538,790 | 5.51 | 5.50 | 5.30 |
| **1995** | 64 | 528,679 | 3,303,027 | 6.25 | 5.75 | 5.57 |
| **1996** | 72 | 453,022 | 2,828,565 | 6.24 | 6.00 | 5.76 |
| **1998** | 64 | 347,973 | 2,581,523 | 7.42 | 7.50 | 6.18 |
| **1999** | | | | | 7.70 | |
| **2000** | 55 | 418,211 | 3,133,900 | 7.49 | 7.70 | 6.85 |
| **2001** | | | | | 7.70 | |
| **2002** | 50 | 363,497 | 2,807,345 | 7.72 | 7.70 | 7.55 |
| **2003** | | | | | 8.00 | |
| **2004** | 59 | 469,131 | 4,110,211 | 8.76 | | 8.04 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $8.25 PER LIN. FT.**

Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total o the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

N:\MSAS\EXCEL\UNIT PRICE\UNIT PRICE BREAK OUT.XLS C & G CONST. GRAPH

# MSAS UNIT PRICE STUDY
# SIDEWALK CONSTRUCTION - SQUARE YARD

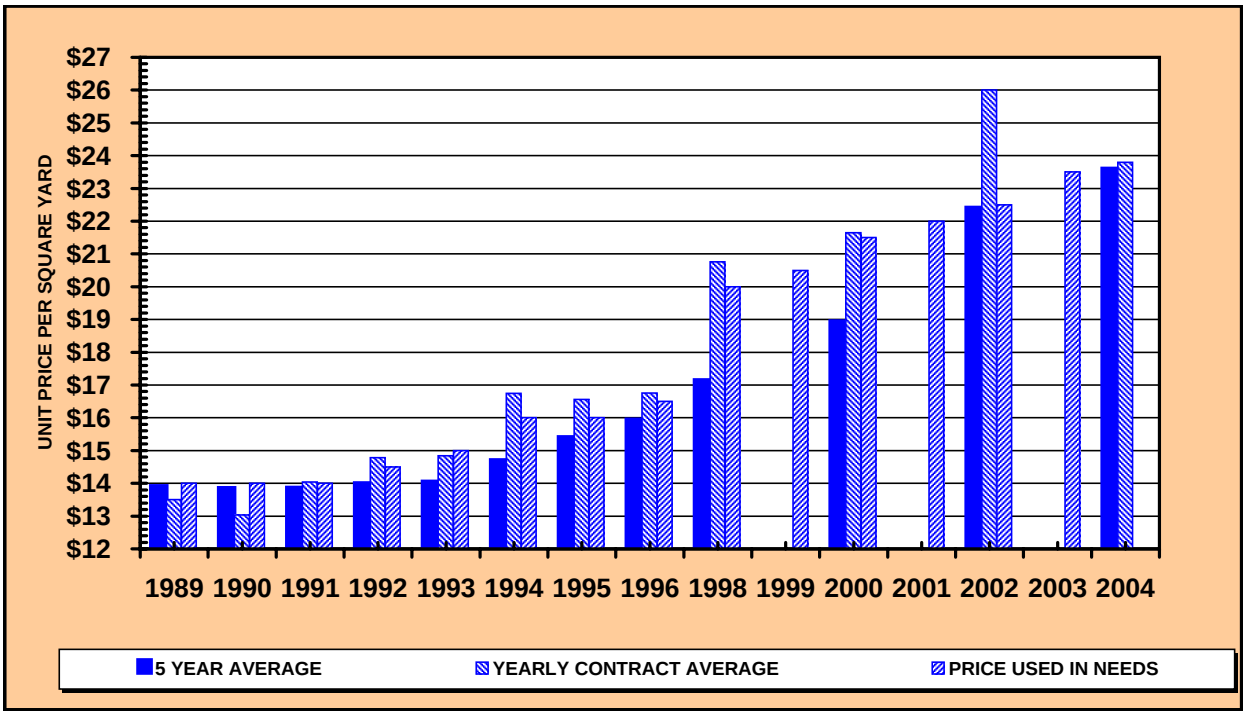
| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 1** | | | | |
| Duluth | 4 | 12,111 | $283,641 | $23.42 |
| Grand Rapids | 2 | 1,683 | 39,570 | 23.51 |
| Hibbing | 1 | 1,353 | 31,668 | 23.40 |
| Virginia | 1 | 13,893 | 287,496 | 20.69 |
| **District 1 Total** | **8** | **29,040** | **$642,375** | **$22.12** |
| **District 2** | | | | |
| Thief River Falls | 1 | 28 | $750 | $27.00 |
| **District 2 Total** | **1** | **28** | **$750** | **$27.00** |
| **District 3** | | | | |
| Brainerd | 2 | 10,721 | $207,374 | $19.34 |
| Elk River | 1 | 114 | 3,090 | 27.00 |
| Little Falls | 3 | 3,771 | 79,269 | 21.02 |
| St. Cloud | 2 | 7,788 | 147,808 | 18.98 |
| Waite Park | 1 | 2,267 | 43,393 | 19.14 |
| **District 3 Total** | **9** | **24,661** | **$480,935** | **$19.50** |
| **District 4** | | | | |
| Alexandria | 4 | 91 | $3,575 | $39.14 |
| Moorhead | 3 | 1,752 | 65,531 | 37.41 |
| **District 4 Total** | **7** | **1,843** | **$69,106** | **$37.50** |
| **Metro West** | | | | |
| Andover | 1 | 150 | $3,551 | $23.67 |
| Anoka | 2 | 919 | 19,853 | 21.60 |
| Bloomington | 1 | 6,702 | 214,425 | 31.99 |
| Brooklyn Park | 2 | 6,959 | 128,676 | 18.49 |
| Champlin | 2 | 2,174 | 39,624 | 18.23 |
| Chaska | 2 | 647 | 17,460 | 27.00 |
| Coon Rapids | 3 | 1,065 | 29,330 | 27.54 |
| Hopkins | 2 | 1,818 | 48,455 | 26.66 |
| Minneapolis | 2 | 8,417 | 239,356 | 28.44 |
| Savage | 1 | 3,080 | 67,255 | 21.84 |
| Shorewood | 1 | 169 | 6,232 | 36.90 |
| St. Francis | 1 | 628 | 13,493 | 21.49 |
| **Metro West Total** | **20** | **32,727** | **$827,709** | **$25.29** |
| **District 6** | | | | |
| Albert Lea | 1 | 12 | $523 | $42.75 |
| Austin | 1 | 350 | 10,910 | 31.17 |
| Northfield | 2 | 733 | 16,488 | 22.50 |
| Owatonna | 2 | 1,453 | 30,148 | 20.74 |
| Red Wing | 2 | 59 | 2,064 | 35.05 |
| Rochester | 3 | 4,343 | 116,607 | 26.85 |
| **District 6 Total** | **11** | **6,951** | **$176,738** | **$25.43** |

# MSAS UNIT PRICE STUDY
# SIDEWALK CONSTRUCTION - SQUARE YARD

| CITY NAME | No. Of Projects | TOTAL QTY. | TOTAL COST | AVERAGE UNIT PRICE |
|---|---|---|---|---|
| **District 7** | | | | |
| Fairmont | 1 | 2,131 | $62,332 | $29.25 |
| Wothington | 1 | 38 | 2,197 | 58.50 |
| **District 7 Total** | **2** | **2,169** | **$64,529** | **$29.76** |
| **District 8** | | | | |
| Hutchinson | 4 | 4,807 | $100,631 | $20.94 |
| Marshall | 2 | 170 | 8,404 | 49.50 |
| Montevideo | 1 | 27 | 784 | 28.80 |
| Redwood Falls | 1 | 9 | 560 | 63.00 |
| Willmar | 2 | 747 | 17,136 | 22.95 |
| **District 8 Total** | **10** | **5,759** | **$127,515** | **$22.14** |
| **Metro East** | | | | |
| AppleValley | 7 | 188 | $8,150 | $43.40 |
| Burnsville | 2 | 1,309 | 33,628 | 25.69 |
| Eagan | 2 | 2,114 | 52,322 | 24.75 |
| Maplewood | 1 | 989 | 26,715 | 27.00 |
| New Brighton | 1 | 640 | 17,561 | 27.44 |
| Oakdale | 2 | 156 | 4,150 | 26.68 |
| Rosemount | 2 | 4,361 | 111,799 | 25.64 |
| Roseville | 2 | 3 | 105 | 31.50 |
| South St. Paul | 1 | 19 | 936 | 49.26 |
| St. Paul | 7 | 10,504 | 292,531 | 27.85 |
| **Metro East Total** | **27** | **20,283** | **$547,897** | **$27.01** |
| **District Totals** | | | | |
| District 1 Total | 8 | 29,040 | $642,375 | $22.12 |
| District 2 Total | 1 | 28 | 750 | 27.00 |
| District 3 Total | 9 | 24,661 | 480,935 | 19.50 |
| District 4 Total | 7 | 1,843 | 69,106 | 37.50 |
| Metro West Total | 20 | 32,727 | 827,709 | 25.29 |
| District 6 Total | 11 | 6,951 | 176,738 | 25.43 |
| District 7 Total | 2 | 2,169 | 64,529 | 29.76 |
| District 8 Total | 10 | 5,759 | 127,515 | 22.14 |
| Metro East Total | 27 | 20,283 | 547,897 | 27.01 |
| **STATE TOTAL** | **95** | **123,460** | **$2,937,553** | **$23.79** |

N:\MSAS\EXCEL\UNIT PRICE\UNIT PRICE BREAK OUT.XLS SIDEWALK CONST.

# SIDEWALK CONSTRUCTION #2521




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 62 | 159,205 | $2,150,360 | $13.51 | $14.00 | $13.90 |
| **1990** | 54 | 125,748 | 1,639,735 | 13.04 | 14.00 | 13.85 |
| **1991** | 60 | 179,115 | 2,514,996 | 14.04 | 14.00 | 13.86 |
| **1992** | 62 | 141,946 | 2,097,863 | 14.78 | 14.50 | 13.99 |
| **1993** | 55 | 119,082 | 1,767,834 | 14.85 | 15.00 | 14.04 |
| **1994** | 56 | 89,662 | 1,501,608 | 16.75 | 16.00 | 14.69 |
| **1995** | 49 | 134,724 | 2,230,974 | 16.56 | 16.00 | 15.39 |
| **1996** | 60 | 94,140 | 1,577,035 | 16.75 | 16.50 | 15.94 |
| **1998** | 54 | 71,578 | 1,486,101 | 20.76 | 20.00 | 17.13 |
| **1999** | | | | | 20.50 | |
| **2000** | 45 | 88,562 | 1,917,075 | 21.65 | 21.50 | 18.93 |
| **2001** | | | | | 22.00 | |
| **2002** | 38 | 61,390 | 1,596,409 | 26.00 | 22.50 | 22.40 |
| **2003** | | | | | 23.50 | |
| **2004** | 47 | 123,460 | 2,937,553 | 23.79 | | 23.59 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $24.00 PER SQ. YD.**

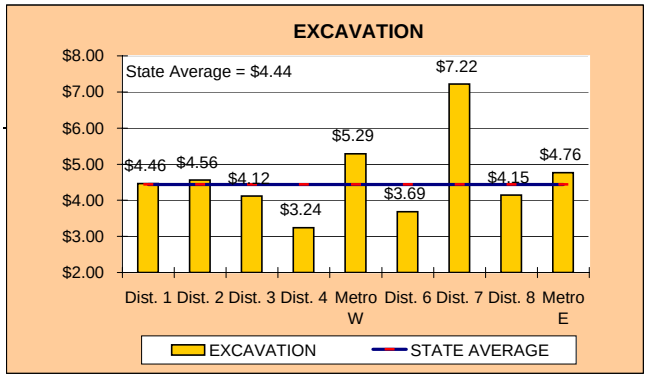
Note: There was no Unit Price Study in years 1997,1999, 2001 and 2003. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

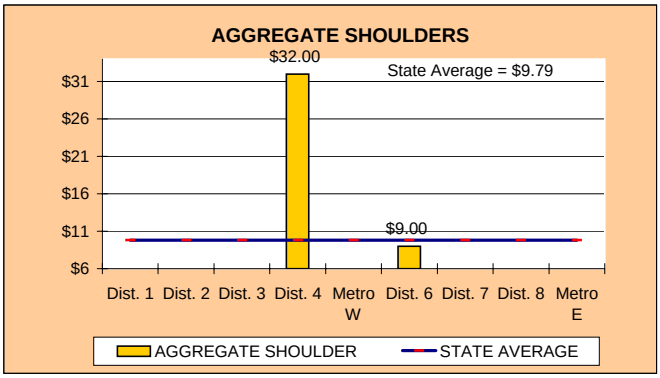
# 2003 UNIT PRICES BY DISTRICT

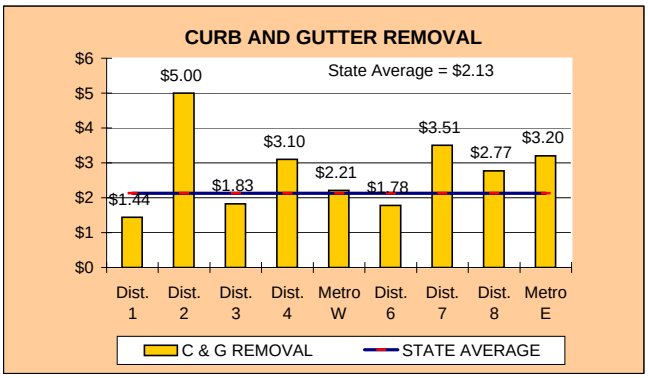
**For the 2004 Unit Price Study**

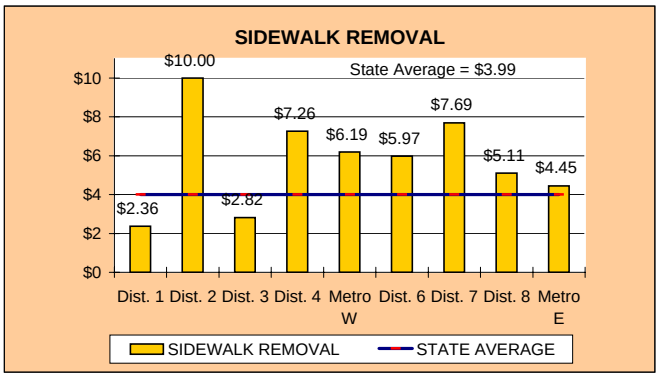
| | Dist. 1 | Dist. 2 | Dist. 3 | Dist. 4 | Metro West | Dist. 6 | Dist. 7 | Dist. 8 | Metro East | State Average |
|---|---|---|---|---|---|---|---|---|---|---|
| **Excavation** | $4.46 | $4.56 | $4.12 | $3.24 | $5.29 | *$3.69* | **$7.22** | $4.15 | $4.76 | $4.44 |
| **Aggregate Shoulders** | -- | -- | -- | **$32.00** | -- | *$9.00* | -- | -- | -- | $9.79 |
| **C & G Removal** | *$1.44* | **$5.00** | $1.83 | $3.10 | $2.21 | $1.78 | $3.51 | $2.77 | $3.20 | $2.13 |
| **Sidewalk Removal** | *$2.36* | **$10.00** | $2.82 | $7.26 | $6.19 | $5.97 | $7.69 | $5.11 | $4.45 | $3.99 |
| **Conc. Pave. Removal** | *$1.86* | -- | $5.68 | **$15.18** | $8.01 | $4.29 | $5.09 | $4.83 | $4.55 | $3.54 |
| **Tree Removal (Clear)** | $247.33 | -- | $198.30 | $412.50 | *$121.30* | $327.25 | **$500.00** | $195.31 | $195.27 | $187.06 |
| **Tree Removal (Grub)** | $94.96 | -- | $132.01 | $171.43 | *$75.80* | $147.45 | **$350.00** | $187.50 | $113.95 | $105.13 |
| **Agg. Base - 2211** | *$5.87* | $20.69 | $8.78 | $12.26 | $11.09 | $12.10 | **$17.21** | $7.66 | $11.02 | $9.16 |
| **Bituminous - All** | $30.87 | *$29.48* | $32.90 | $32.84 | $34.25 | $37.68 | **$43.66** | $29.70 | $32.84 | $33.14 |
| **C & G Const.** | $8.88 | **$11.15** | *$7.52* | $10.97 | $8.80 | $9.03 | $8.84 | $7.57 | $8.92 | $8.76 |
| **Sidewalk Const.** | $22.12 | $27.00 | $19.50 | **$37.50** | $25.29 | *$25.43* | $29.76 | $22.14 | $27.01 | $23.79 |

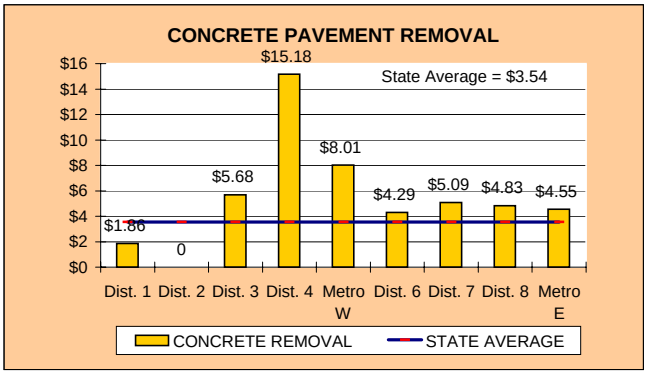
**BOLD = Highest District Cost in That Category** *ITALIC = Lowest District Cost in That Category*

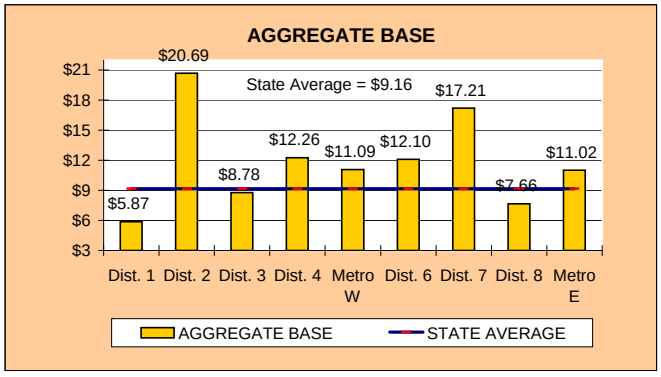


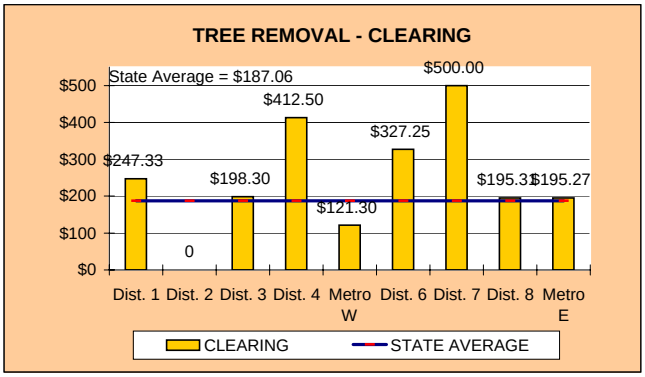



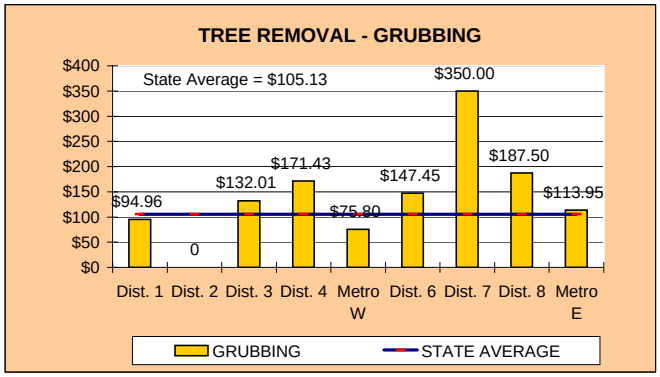



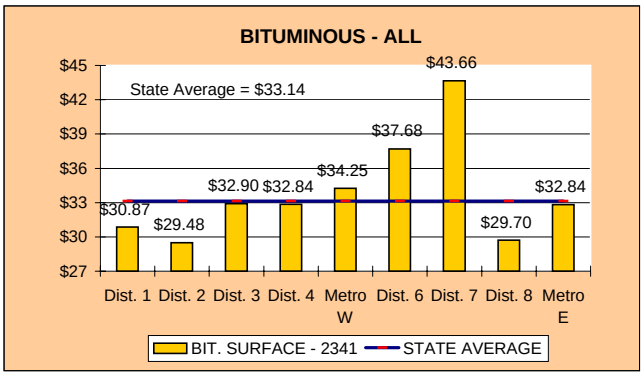



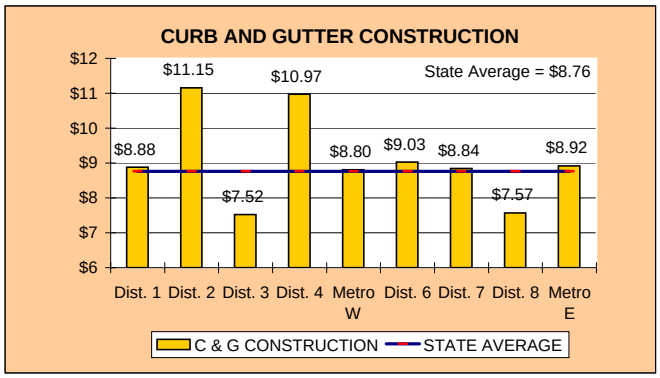
# 2003 UNIT PRICES BY DISTRICT

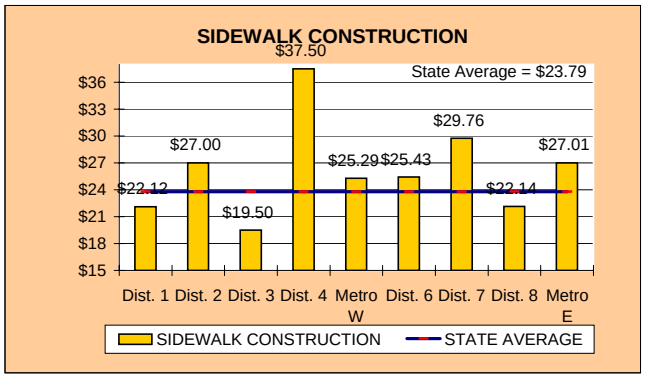
## Graphs (Continued)

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# STORM SEWER, LIGHTING AND SIGNAL NEEDS COSTS

| NEEDS YEAR | STORM SEWER ADJUSTMENT (Per Mile) | STORM SEWER CONSTRUCTION (Per Mile) | LIGHTING (Per Mile) | SIGNALS (Per Mile) |
|---|---|---|---|---|
| 1987 | 62,000 | 196,000 * | 2,000 | 12,000 |
| 1988 | 62,000 | 196,000 * | 16,000 | 15,000 |
| 1989 | 62,000 | 196,000 * | 16,000 | 15,000-45,000 |
| 1990 | 62,000 | 196,000 | 16,000 | 15,000-45,000 |
| 1991 | 62,000 | 196,000 | 16,000 | 18,750-75,000 |
| 1992 | 62,000 | 199,500 | 20,000 | 20,000-80,000 |
| 1993 | 64,000 | 206,000 | 20,000 | 20,000-80,000 |
| 1994 | 67,100 | 216,500 | 20,000 | 20,000-80,001 |
| 1995 | 69,100 | 223,000 | 20,000 | 20,000-80,002 |
| 1996 | 71,200 | 229,700 | 20,000 | 20,000-80,003 |
| 1998 | 76,000 | 245,000 | 20,000 | 24,990-99,990 |
| 1999 | 79,000 | 246,000 | 35,000 | 24,990-99,991 |
| 2000 | 80,200 | 248,500 | 50,000 | 24,990-99,992 |
| 2001 | 80,400 | 248,000 | 78,000 ** | 30,000-120,000 |
| 2002 | 81,600 | 254,200 | 78,000 | 30,000-120,001 |
| 2003 | 82,700 | 257,375 | 80,000 | 31,000-124,000 |
| 2004 | | | | |

* Years that "After the Fact Needs" were in effect. 1986 to 1989 price was used only for needs purposes.
** Lighting needs were revised to deficient segment only.

**MN\DOT'S HYDRAULIC OFFICE RECOMMENDED PRICES FOR 2004:**

| | Storm Sewer Adjustment | Storm Sewer Construction |
|---|---|---|
| **2004** | **$83,775** | **$262,780** |

**SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2004:**

| | Storm Sewer Adjustment | Storm Sewer Construction | Lighting | Signals |
|---|---|---|---|---|
| **2004** | **$83,775** | **$262,780** | **$80,000** | **$124,000** |

## RAILROAD CROSSINGS NEEDS COSTS

| NEEDS YEAR | SIGNS (Per Unit) | PAVEMENT MARKING | SIGNALS (Low Speed) (Per Unit) | SIGNALS & GATES (High Speed) (Per Unit) | CONCRETE CROSSING MATERIAL (Per foot) |
|---|---|---|---|---|---|
| 1987 | 300 | | 65,000 | 95,000 | |
| 1988 | 300 | | 65,000 | 95,000 | $700 |
| 1989 | 300 | | 70,000 | 99,000 | 700 |
| 1990 | 400 | | 75,000 | 110,000 | 750 |
| 1991 | 500 | | 80,000 | 110,000 | 850 |
| 1992 | 600 | $750 | 80,000 | 110,000 | 900 |
| 1993 | 600 | 750 | 80,000 | 110,000 | 900 |
| 1994 | 800 | 750 | 80,000 | 110,000 | 750 |
| 1995 | 800 | 750 | 80,000 | 110,000 | 750 |
| 1996 | 800 | 750 | 80,000 | 110,000 | 750 |
| 1998 | 1,000 | 750 | 80,000 | 130,000 | 750 |
| 1999 | 1,000 | 750 | 85,000 | 135,000 | 850 |
| 2000 | 1,000 | 750 | 110,000 | 150,000 | 900 |
| 2001 | 1,000 | 750 | 120,000 | 160,000 | 900 |
| 2002 | 1,000 | 750 | 120,000 | 160,000 | 1,000 |
| 2003 | 1,000 | 750 | 120,000 | 160,000 | 1,000 |
| 2004 | | | | | |

**MN\DOT'S RAILROAD OFFICE RECOMMENDED PRICES FOR 2004:**

| | Signs | Pavement Marking | Signals | Sig. & Gates | Concrete X-ing Surf. |
|---|---|---|---|---|---|
| **2004** | **$1,000** | **$750** | **$150,000** | **$150-225,000** | **$1,000** |

**SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2004:**

| | | | | | |
|---|---|---|---|---|---|
| **2004** | **$1,000** | **$750** | **$150,000** | **$187,500** | **$1,000** |

**Minnesota Department of Transportation**

# Memo

Bridge Office
3485 Hadley Avenue North
Oakdale, MN 55128-3307

Date: March 22, 2004

To: Marshall Johnston
Manager, Municipal State Aid Street Needs Section

From: Mike Leuer MWL
State Aid Hydraulic Specialist

Phone: (651) 747-2167

Subject: State Aid Storm Sewer
Construction Costs for 2003

We have completed our analysis of storm sewer construction costs incurred for 2003 and the following assumptions can be utilized for planning purposes per roadway mile:

- Approximately $262,780 for new construction, and
- Approximately $83,775 for adjustment of existing systems

The preceding amounts are based on the average cost per mile of State Aid storm sewer using unit prices from approximately 142 plans for 2003.

CC: Andrea Hendrickson

**Minnesota Department of Transportation**

# Memo

**Office of Freight & Commercial Vehicle Operations**
Railroad Administration Section
Mail Stop 420
1110 Centre Pointe Curve
Mendota Heights, MN 55120-4798

Office Tel: 651/406-4798
Fax: 651/406-4811

March 18, 2004

To: Marshall Johnson
Needs Unit – State Aid

From: Susan H. Aylesworth
Director, Rail Administration Section

Subject: Projected Railroad Grade Crossing Improvements – Cost for 2004

We have projected 2004 costs for railroad/highway improvements at grade crossings. For planning purposes, we recommend using the following figures:

| | |
|---|---|
| Signals (single track, low speed, average price)* | $150,000.00 |
| Signals & Gates (multiple track, high/low speed, average price)* | $150,000 - $225,000.00 |
| Signs (advance warning signs and crossbucks) | $1,000 per crossing |
| Pavement Markings (tape) | $5,500 per crossing |
| Pavement Markings (paint) | $ 750 per crossing |
| Crossing Surface (concrete, complete reconstruction) | $1,000 per track ft. |

*Signal costs include sensors to predict the motion of train or predictors which can also gauge the speed of the approaching train and adjust the timing of the activation of signals.

Our recommendation is that roadway projects be designed to carry any improvements through the crossing area – thereby avoiding the crossing acting as a transition zone between two different roadway sections or widths. We also recommend a review of all passive warning devices including advance warning signs and pavement markings – to ensure compliance with the MUTCD and OFCVO procedures.

## ***Special Drainage Costs for Rural Segments***
## ***2004***

On April 19, 1996, the Needs Study Subcommittee requested background information on how this unit price is determined. The following minutes are taken from the Needs Study Subcommittee meeting of March 19, 1990:

> *Rural section drainage needs: some cities have a certain amount of rural section streets or roads which are unlikely to ever require curb and gutter section and storm sewers, that is, urban section needs. It would seem that they should draw some needs however for ditching, driveway culverts, centerline culverts, rip-rap, etc. There are two ways to handle this inequity, come up with an average cost per mile, or have cities submit special drainage needs. After considerable discussion it was decided to recommend cost of $25,000 per mile - based on an average of 25 driveways per mile and four centerline pipes per mile. If cities feel this does not represent their needs or if they have out of the ordinary drainage needs they have the option of submitting special drainage needs. These would be subject to approval by the District State Aid Engineer.*

At the April 19, 1994 meeting of the Needs Study Subcommittee, the unit price for special drainage was changed to $26,000 per mile. There is no indication in the minutes as to why this change was made.

After consulting with the MN/DOT estimating unit and research in the State Aid manual and the Drainage manual, the following determinations have been made:

***For Entrance Culverts:***

1) The recommended residential driveway width onto a state aid roadway is 16 feet. (State Aid Manual Fig. D(2) 5-892.210).
2) The minimum pipe diameter of Side Culverts shall be 18 inches. The minimum cover shall be one foot, however, it is desirable to have 1.25 feet or more of cover on side roads. (Drainage Manual 5-294.302).
3) The MN/DOT estimating unit recommends using a 18-inch Galvanized Steel Pipe and two aprons as the standard for an entrance culvert to a rural segment on the Municipal State Aid Street system.
4) For construction needs purposes the MN/DOT estimating unit recommends using $24.00 per foot as a cost for 18" GSP and $150.00 per apron.
5) Using a 3:1 inslope for the driveway with a 4' deep ditch (the culvert would have 2.5 feet of cover), the length of the pipe would be 31 feet plus two aprons.
6) Therefore, the estimated construction needs cost per entrance would be $1,044.00.

Using the 1990 Needs Study Subcommittee recommended number of 25 entrances per mile, the cost of Side Culverts per mile would be $26,100.

***For ℄ Culverts:***

1) The minimum pipe diameter of ℄ culverts shall be 24 inches. The minimum cover shall be 1.25 feet to the top of rigid pavement and 1.75 feet to the top of flexible pavement. (Drainage Manual 5-294.302).
2) The MN/DOT estimating unit recommends using a 30-inch Reinforced Concrete Pipe and two aprons as the standard for a centerline culvert on a rural segment of the Municipal State Aid Street system.
3) For construction needs purposes the MN/DOT estimating unit recommends using $55.00 per foot as a cost for 30" RCP and $650 per apron.
4) Using a 40' roadbed width, a 4:1 inslope and a 4' ditch depth (the culvert would have 1.5 feet of cover), the length of the culvert would be 52' plus two aprons.
5) Therefore, the estimated construction needs cost per culvert would be $4,160.

Using the 1990 Needs Study Subcommittee recommended number of four culverts per mile, the cost of centerline culverts per mile would be $16,640.

By adding the cost of the 25 Side Culverts and the 4 ℄ culverts, the estimated construction needs cost per mile for Special Drainage would be **$42,470** per mile.

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS __$40,000_____PER MILE.**

The 2003 Cost per Mile was $37,400
The 2002 Cost per Mile was $37,400

# 2004 COUNTY SCREENING BOARD DATA

## JUNE, 2004

### C.S.A.H. Roadway Unit Price Report

| Construction Item | 2003 CSAH Needs Study Average | 1999-2003 CSAH 5-Year Const. Average | 2003 CSAH Const. Average | 2004 MSAS Needs Study Unit Price Recommended by MSAS Subcommittee |
|---|---|---|---|---|
| **Rural & Urban Design** | | | | |
| Grav. Base Cl 5 & 6/Ton | $5.76 | $5.58 | $5.81 | |
| Outstate(Grav. Base Cl 5 & 6/Ton) | $5.47 | $5.34 | $5.57 | |
| Metro (Grav. Base Cl 5 & 6/Ton) | $7.79 | $7.31 | $8.84 | |
| **Rural Design** | | | | |
| Combine Bit. Base & Surface (2331, 2341, 2350, & 2361)/Ton | $22.74 | $21.59 | $22.91 | |
| Outstate(2331,2341,2350,& 2361)/Ton) | $22.48 | $21.41 | $22.78 | |
| Gravel Surf. 2118/Ton | 5.35 | 5.27 | 5.67 | 5.50 |
| Gravel Shldr. 2221/Ton | 6.44 | 6.12 | 6.41 | |
| **Urban Design** | | | | |
| Combine Bit. Base & Surface (2331, 2341, 2350, & 2361)/Ton | $29.92 | $28.68 | $32.73 | |
| Outstate(2331,2341,2350,& 2361/Ton) | $27.18 | $28.05 | $32.16 | |
| Metro (Rural & Urban) (2331, 2341, 2350, & 2361) | $31.81 | $28.91 | $33.47 | |

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## RURAL SEGMENTS WITH PROJECTED TRAFFIC LT 150

| CITY NAME | SEGMENT | PROPOSED DESIGN CODE | PROJECTED TRAFFIC | SEGMENT LENGTH |
|---|---|---|---|---|
| Hibbing | 131-186-010 | 2 RURAL/EXISTING RURAL | 90 | 0.20 |
| Hibbing | 131-186-030 | 2 RURAL/EXISTING RURAL | 136 | 0.73 |
| Hibbing | 131-203-010 | 2 RURAL/EXISTING RURAL | 75 | 0.76 |
| Hibbing | 131-203-020 | 2 RURAL/EXISTING RURAL | 75 | 0.19 |
| Hibbing | 131-203-030 | 2 RURAL/EXISTING RURAL | 75 | 0.46 |
| Hibbing | 131-209-010 | 2 RURAL/EXISTING RURAL | 70 | 0.93 |
| Hibbing | 131-214-010 | 2 RURAL/EXISTING RURAL | 90 | 0.71 |
| Andover | 198-104-010 | 2 RURAL/EXISTING RURAL | 30 | 1.01 |
| North Branch | 225-114-010 | 2 RURAL/EXISTING RURAL | 72 | 0.50 |
| St. Michael | 227-102-030 | 2 RURAL/EXISTING RURAL | 143 | 0.25 |
| St. Michael | 227-102-040 | 2 RURAL/EXISTING RURAL | 143 | 0.38 |
| **TOTAL** | | | | **6.12** |

# BRIDGES LET IN CALENDAR YEAR 2003

BRIDGE LENGTH 0-149 FEET

| NEW BRIDGE NUMBER | PROJECT NUMBER | | LENGTH | DECK AREA | BRIDGE COST | COST PER SQ. FT. |
|---|---|---|---|---|---|---|
| 1522 | SAP | 1-599-022 | 132.88 | 3,990 | 393,996 | 99 |
| 4522 | SAP | 4-611-010 | 98.10 | 4,214 | 452,584 | 107 |
| 8543 | SAP | 8-599-039 | 100.58 | 3,535 | 250,025 | 71 |
| 8545 | SAP | 8-599-040 | 124.50 | 3,901 | 263,686 | 68 |
| 10537 | SAP | 10-640-003 | 116.08 | 7,081 | 582,409 | 82 |
| 11523 | SAP | 11-599-012 | 55.50 | 1,960 | 180,251 | 92 |
| 11518 | SAP | 11-613-003 | 90.50 | 3,510 | 300,706 | 86 |
| 12547 | SAP | 12-599-049 | 95.30 | 3,325 | 238,260 | 72 |
| 12548 | SAP | 12-599-068 | 92.50 | 3,268 | 232,630 | 71 |
| 14540 | SAP | 14-602-020 | 142.50 | 6,175 | 435,828 | 71 |
| 17525 | SAP | 17-599-027 | 77.50 | 2,418 | 179,266 | 74 |
| 19542 | SAP | 19-647-015 | 104.50 | 4,929 | 323,982 | 66 |
| 19541 | SAP | 19-666-009 | 87.67 | 4,135 | 305,973 | 74 |
| 22598 | SAP | 22-613-019 | 125.67 | 5,418 | 321,585 | 59 |
| 23565 | SAP | 23-599-154 | 94.67 | 3,325 | 316,664 | 95 |
| 23567 | SAP | 23-638-004 | 129.46 | 4,515 | 466,669 | 103 |
| 25593 | SAP | 25-598-009 | 82.58 | 2,918 | 205,765 | 71 |
| 27A76 | SAP | 27-597-005 | 37.00 | 1,159 | 201,102 | 174 |
| 28532 | SAP | 28-599-058 | 73.67 | 2,294 | 203,000 | 88 |
| 28524 | SAP | 28-605-010 | 37.01 | 4,446 | 256,280 | 58 |
| 31548 | SAP | 31-598-016 | 89.69 | 3,510 | 237,439 | 68 |
| 31541 | SP | 31-629-013 | 53.67 | 2,106 | 217,830 | 103 |
| 31547 | SP | 31-672-002 | 101.50 | 3,570 | 272,150 | 76 |
| 32545 | SP | 32-599-078 | 68.00 | 2,040 | 166,324 | 82 |
| 33534 | SAP | 33-599-009 | 86.25 | 3,010 | 200,071 | 66 |
| 36529 | SAP | 36-629-011 | 112.50 | 4,368 | 353,576 | 81 |
| 37548 | SAP | 37-598-015 | 119.50 | 4,222 | 253,222 | 60 |
| 38J04 | SAP | 38-602-020 | 24.00 | 2,016 | 253,592 | 126 |
| 39521 | SAP | 39-598-023 | 71.25 | 2,232 | 226,065 | 101 |
| 40522 | SAP | 40-599-016 | 83.25 | 2,905 | 227,375 | 78 |
| 40521 | SAP | 40-602-017 | 51.58 | 2,028 | 176,189 | 87 |
| 42559 | SAP | 42-599-125 | 83.50 | 2,604 | 185,140 | 71 |
| 42560 | SAP | 42-599-128 | 86.54 | 2,712 | 186,828 | 69 |
| 43544 | SAP | 43-599-025 | 129.76 | 4,030 | 281,673 | 70 |
| 43547 | SAP | 43-603-026 | 122.60 | 5,781 | 491,634 | 85 |
| 45552 | SAP | 45-599-108 | 77.50 | 2,730 | 240,824 | 88 |
| 45565 | SP | 45-599-134 | 117.58 | 3,658 | 312,110 | 85 |
| 46550 | SP | 46-599-053 | 106.58 | 3,766 | 299,989 | 80 |
| 48527 | SAP | 48-599-041 | 122.67 | 4,305 | 261,761 | 61 |
| 55574 | SAP | 55-599-062 | 120.06 | 3,720 | 292,961 | 79 |
| 55573 | SAP | 55-606-004 | 109.92 | 4,730 | 433,354 | 92 |
| 91932 | SP | 56-696-002 | 61.67 | 3,608 | 374,898 | 104 |
| 58544 | SAP | 58-598-018 | 77.70 | 3,042 | 324,116 | 107 |
| 58543 | SAP | 58-598-021 | 45.70 | 1,794 | 224,036 | 125 |
| 58546 | SAP | 58-599-029 | 56.25 | 1,736 | 179,361 | 103 |
| 58546 | SAP | 58-599-029 | 56.25 | 1,736 | 179,361 | 103 |
| 59535 | SAP | 59-599-041 | 99.50 | 3,500 | 229,985 | 66 |
| 60545 | SAP | 60-599-166 | 80.50 | 2,844 | 289,884 | 102 |
| 60550 | SAP | 60-599-188 | 115.83 | 4,093 | 348,631 | 85 |
| 60549 | SAP | 60-599-190 | 84.17 | 2,974 | 287,703 | 97 |
| 62570 | SP | 62-597-002 | 45.94 | 2,301 | 280,770 | 122 |
| 64573 | SAP | 64-599-066 | 77.25 | 2,730 | 181,708 | 67 |
| 64572 | SAP | 64-599-079 | 132.94 | 4,655 | 327,735 | 70 |
| 64570 | SAP | 64-599-082 | 120.87 | 4,235 | 258,071 | 61 |
| 64571 | SAP | 64-599-083 | 117.50 | 4,130 | 248,496 | 60 |
| 66540 | SAP | 66-599-033 | 49.00 | 1,666 | 171,010 | 103 |
| 67548 | SP | 67-599-062 | 77.50 | 2,428 | 183,183 | 75 |
| 67547 | SP | 67-599-066 | 140.50 | 4,900 | 316,766 | 65 |
| 68535 | SP | 68-599-076 | 83.50 | 2,940 | 257,390 | 88 |
| 69653 | SP | 69-609-034 | 27.26 | 1,404 | 406,570 | 290 |
| 69642 | SP | 69-703-011 | 24.00 | 1,568 | 166,686 | 106 |

# BRIDGES LET IN CALENDAR YEAR 2003

BRIDGE LENGTH 0-149 FEET

| NEW BRIDGE NUMBER | PROJECT NUMBER | | LENGTH | DECK AREA | BRIDGE COST | COST PER SQ. FT. |
|---|---|---|---|---|---|---|
| 76538 | SAP | 76-631-022 | 74.60 | 2,925 | 208,797 | 71 |
| 78511 | SP | 78-598-022 | 74.00 | 2,318 | 147,779 | 64 |
| 78512 | SAP | 78-598-024 | 54.00 | 1,674 | 160,507 | 96 |
| 78513 | SAP | 78-613-006 | 47.00 | 1,473 | 145,416 | 99 |
| 81528 | SP | 81-598-009 | 126.83 | 4,988 | 391,310 | 78 |
| 83543 | SP | 83-599-057 | 86.00 | 2,580 | 192,270 | 75 |
| 84531 | SAP | 84-598-040 | 146.00 | 5,110 | 285,804 | 56 |
| 85547 | SAP | 85-598-005 | 90.50 | 3,560 | 298,676 | 84 |
| 85547 | SAP | 85-598-005 | 90.50 | 3,560 | 298,676 | 84 |
| 86520 | SP | 86-614-008 | 43.17 | 2,020 | 414,555 | 205 |
| 87579 | SAP | 87-599-040 | 80.50 | 2,800 | 262,000 | 94 |
| 27A77 | SAP | 98-080-027 | 113.17 | 3,131 | 923,404 | 295 |
| | | | | | | |
| 10044 | TH | | 73.75 | 2,630 | 241,013 | 92 |
| 19094 | TH | | 126.17 | 8,874 | 587,301 | 66 |
| 19095 | TH | | 63.00 | 3,234 | 284,055 | 88 |
| 23023 | TH | | 87.00 | 4,466 | 321,318 | 72 |
| 55073 | TH | | 119.83 | 8,751 | 609,029 | 70 |
| 55074 | TH | | 118.50 | 6,794 | 486,400 | 72 |
| 55075 | TH | | 118.50 | 6,735 | 516,863 | 77 |
| 60023 | TH | | 98.42 | 4,658 | 348,782 | 75 |
| 69127 | TH | | 149.92 | 6,801 | 663,067 | 97 |
| **State Aid Projects** | | | | **240,982** | **20,646,322** | **$86** |
| **Trunk Hwy Projects** | | | | **52,943** | **4,057,828** | **$77** |
| **TOTALS** | | | | **293,925** | **24,704,150** | **$84** |

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## BRIDGES LET IN CALENDAR YEAR 2003

### BRIDGE LENGTH 150-499 FEET

| NEW BRIDGE NUMBER | | PROJECT NUMBER | LENGTH | DECK AREA | BRIDGE COST | COST PER SQ. FT. |
|---|---|---|---|---|---|---|
| 7577 | SP | 7-603-008 | 443.50 | 40069 | $3,075,219.00 | 77 |
| 18524 | SAP | 18-611-020 | 200.33 | 8600 | $498,538.00 | 58 |
| 19540 | SAP | 19-598-010 | 152.67 | 7191 | $467,242.00 | 65 |
| 23575 | SAP | 23-640-002 | 216.67 | 4515 | $288,893.00 | 64 |
| 37547 | SP | 37-631-008 | 169.58 | 6670 | $460,523.00 | 69 |
| 43545 | SAP | 43-599-027 | 186.25 | 7254 | $562,499.00 | 78 |
| 45547 | SP | 45-598-011 | 163.81 | 6396 | $413,772.00 | 65 |
| 53535 | SP | 53-635-014 | 181.00 | 8567 | $455,228.00 | 53 |
| 55569 | SP | 55-598-050 | 171.63 | 6064 | $431,792.00 | 71 |
| 69644 | SP | 69-598-028 | 168.58 | 5239 | $436,860.00 | 83 |
| 86528 | SAP | 86-599-024 | 165.25 | 6499 | $477,155.00 | 73 |
| 86528 | SAP | 86-599-024 | 165.25 | 6499 | $494,746.00 | 76 |
| 69578 | SP | 98-080-001 | 348.00 | 16472 | $1,038,167.00 | 63 |
| 62598 | SP | 164-288-003 | 767.00 | 64770 | $5,119,888.00 | 79 |
| 82027 | SP | 184-080-002 | 394.23 | 23390 | $2,926,013.00 | 125 |
| | | | | | | |
| | | | | | | |
| 19R01 | TH | | 233.58 | 23,200 | 1,646,037 | 71 |
| 19R02 | TH | | 198.35 | 10,570 | 848,208 | 80 |
| 19R03 | TH | | 198.35 | 10,570 | 831,920 | 79 |
| 19R04 | TH | | 240.25 | 25,546 | 1,484,658 | 58 |
| 27V33 | TH | | 319.09 | 34,670 | 3,119,072 | 90 |
| 27V38 | TH | | 205.85 | 37,380 | 3,652,312 | 98 |
| 18007 | TH | | 179.93 | 10,366 | 730,027 | 70 |
| 18008 | TH | | 179.93 | 8,030 | 553,701 | 69 |
| 27273 | TH | | 492.33 | 23,585 | 1,929,564 | 82 |
| 27274 | TH | | 223.69 | 14,018 | 1,078,368 | 77 |
| 27275 | TH | | 245.17 | 15,446 | 1,082,295 | 70 |
| 27280 | TH | | 206.77 | 19,843 | 1,392,453 | 70 |
| 36024 | TH | | 420.25 | 16,530 | 1,587,005 | 96 |
| 54006 | TH | | 326.17 | 14,134 | 1,433,148 | 101 |
| 55068 | TH | | 235.65 | 27,255 | 1,817,556 | 67 |
| 63002 | TH | | 321.08 | 13,914 | 1,300,227 | 93 |
| 69125 | TH | | 223.23 | 10,127 | 716,059 | 71 |
| 69126 | TH | | 223.10 | 12,597 | 872,022 | 69 |
| 69128 | TH | | 150.20 | 7,375 | 723,319 | 98 |
| 73022 | TH | | 213.26 | 19,763 | 1,461,542 | 74 |
| 73566 | TH | | 277.69 | 27,912 | 1,807,749 | 65 |
| **State Aid Projects** | | | | **218,195** | **$17,146,535** | **$79** |
| **Trunk Hwy Projects** | | | | **382,831** | **$30,067,242** | **$79** |
| **TOTALS** | | | | **601,026** | **$47,213,777** | **$79** |

## BRIDGES LET IN CALENDAR YEAR 2003

### BRIDGE LENGTH 500 FEET AND OVER

| NEW BRIDGE NUMBER | | PROJECT NUMBER | LENGTH | DECK AREA | BRIDGE COST | COST PER SQ. FT. |
|---|---|---|---|---|---|---|
| 62545 | SP | 164-128-006 | 654.88 | 36025 | $3,997,953.00 | 111 |
| | | | | | | |
| 27A74 | TH | | 721.46 | 24,730 | 1,423,804 | 58 |
| 27R08 | TH | | 667.71 | 21,694 | 1,188,456 | 55 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| **State Aid Projects** | | | | **36,025** | **3,997,953** | **111** |
| **Truck Hwy Projects** | | | | **46,424** | **$2,612,260** | **$56** |
| **TOTALS** | | | | **82,449** | **$6,610,213** | **$80** |

## BRIDGES LET IN CALENDAR YEAR 2003

### Railroad Bridges

| NEW BRIDGE NUMBER | PROJECT NUMBER | Number of Tracks | Bridge Cost | Cost Per Lin. Ft. | Bridge Length |
|---|---|---|---|---|---|
| | | | | | |
| **TOTALS** | | | **$0** | **$0** | **0** |

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# BRIDGE COST

## O-149 FEET


| NEEDS YEAR | NUMBER OF PROJECTS | DECK AREA | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5-YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 11 | 35,733 | $1,966,077 | $55.02 | $55.00 | $45.78 |
| **1990** | 42 | 214,557 | 14,003,285 | 65.27 | 55.00 | 39.64 |
| **1991** | 37 | 136,770 | 7,472,265 | 54.63 | 55.00 | 50.46 |
| **1992** | 39 | 147,313 | 7,929,250 | 53.83 | 55.00 | 54.05 |
| **1993** | 38 | 190,400 | 10,709,785 | 56.25 | 55.00 | 57.00 |
| **1994** | 49 | 208,289 | 11,362,703 | 54.55 | 55.00 | 56.91 |
| **1995** | 32 | 124,726 | 6,627,018 | 53.13 | 55.00 | 54.48 |
| **1996** | 35 | 152,105 | 8,900,177 | 58.51 | 55.00 | 55.25 |
| **1998** | 52 | 191,385 | 13,651,209 | 71.33 | 60.00 | 58.76 |
| **1999** | 53 | 193,950 | 13,219,596 | 68.16 | 63.50 | 61.14 |
| **2000** | 54 | 210,895 | 14,341,592 | 68.00 | 65.00 | 63.83 |
| **2001** | 62 | 221,590 | 16,085,383 | 72.59 | 68.00 | 67.72 |
| **2002** | 62 | 274,232 | 23,435,194 | 85.46 | 68.00 | 73.93 |
| **2003** | 64 | 299,132 | 25,806,454 | 86.27 | 70.00 | 77.42 |
| **2004** | 85 | 293,925 | 24,704,150 | 84.05 | | 80.30 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $70.00 PER SQ. FT.**

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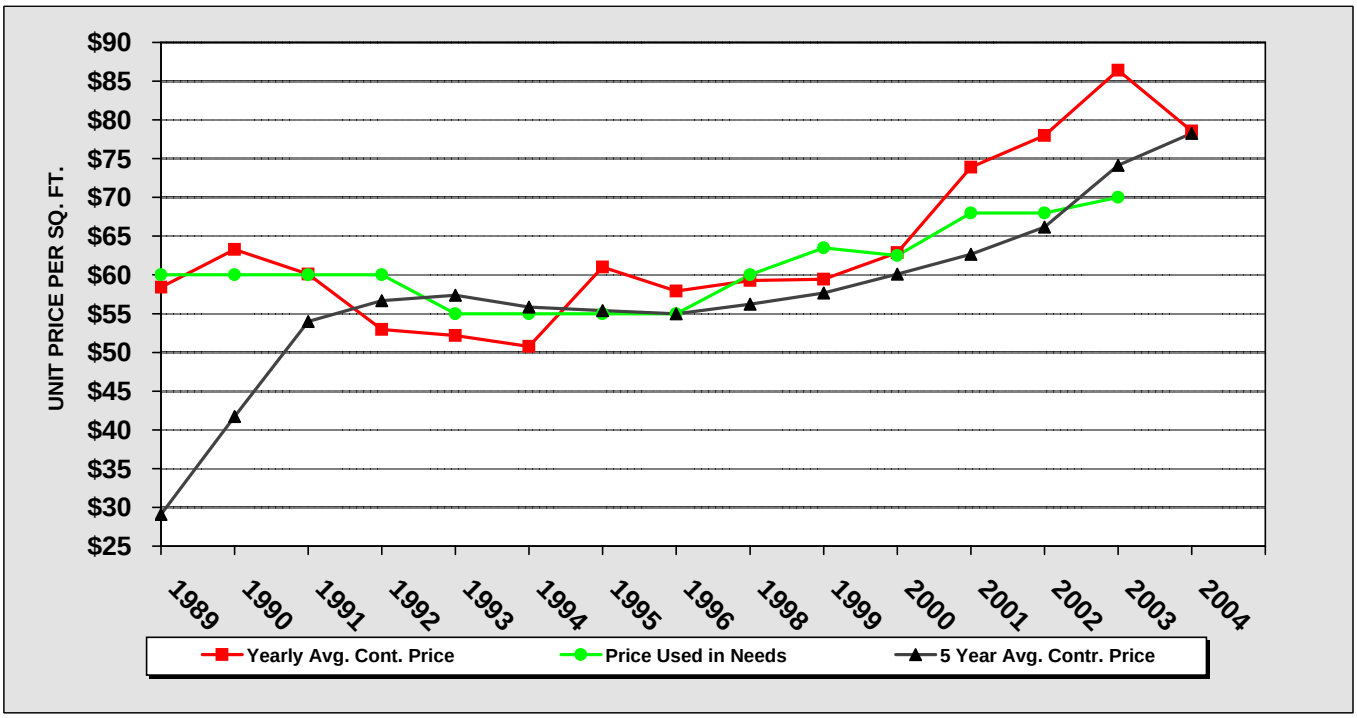
# BRIDGE COST

## 150-499 FEET




| NEEDS YEAR | NUMBER OF PROJECTS | DECK AREA | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5-YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 11 | 116,378 | $6,796,566 | $58.40 | $60.00 | $29.07 |
| **1990** | 25 | 418,376 | 26,483,631 | 63.30 | 60.00 | 41.73 |
| **1991** | 27 | 368,709 | 22,167,571 | 60.12 | 60.00 | 54.00 |
| **1992** | 24 | 331,976 | 17,582,542 | 52.96 | 60.00 | 56.66 |
| **1993** | 31 | 421,583 | 21,987,208 | 52.15 | 55.00 | 57.39 |
| **1994** | 29 | 307,611 | 15,619,506 | 50.78 | 55.00 | 55.86 |
| **1995** | 28 | 381,968 | 23,310,410 | 61.03 | 55.00 | 55.41 |
| **1996** | 27 | 385,230 | 22,302,967 | 57.90 | 55.00 | 54.96 |
| **1998** | 30 | 483,315 | 28,642,031 | 59.26 | 60.00 | 56.22 |
| **1999** | 29 | 455,964 | 27,104,753 | 59.44 | 63.50 | 57.68 |
| **2000** | 22 | 275,074 | 17,296,406 | 62.88 | 62.50 | 60.10 |
| **2001** | 21 | 272,162 | 20,110,670 | 73.89 | 68.00 | 62.67 |
| **2002** | 37 | 443,458 | 34,577,147 | 77.97 | 68.00 | 66.18 |
| **2003** | 40 | 667,548 | 57,671,538 | 86.39 | 70.00 | 74.15 |
| **2004** | 38 | 601,026 | 47,213,777 | 78.56 | | 78.29 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $74.00 PER SQ. FT.**

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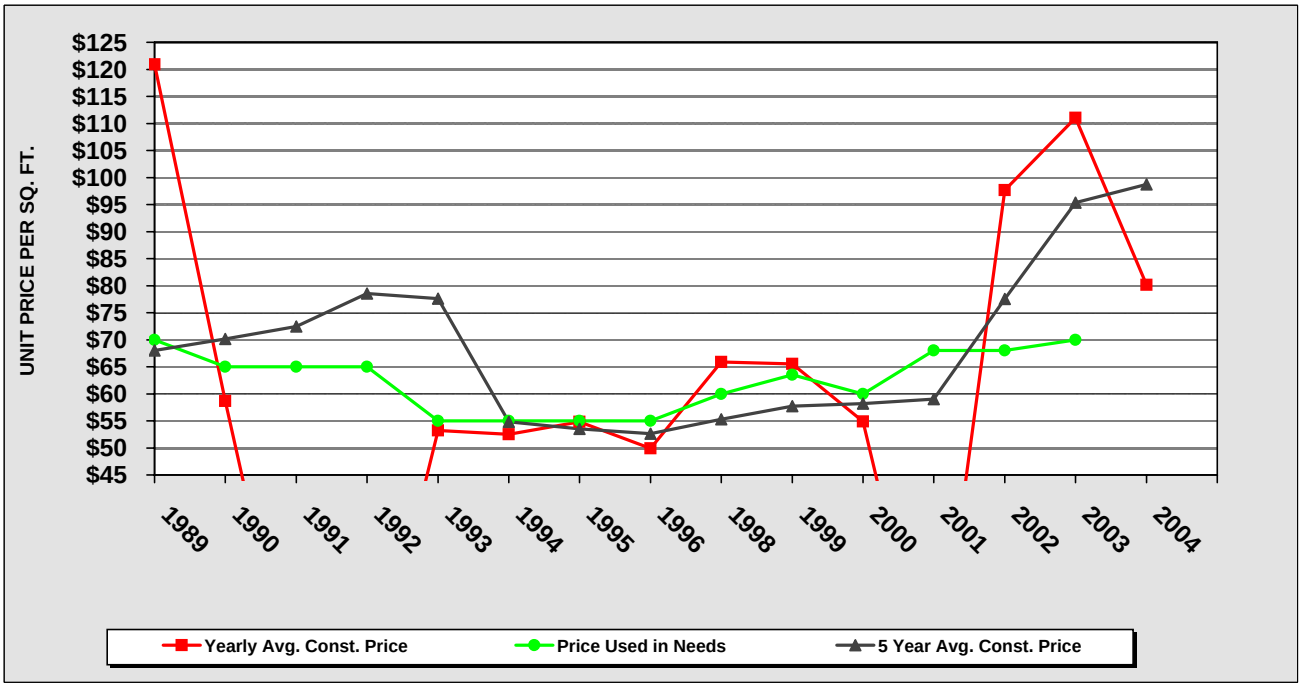
19-Apr-04

# BRIDGE COST

## 500 & OVER




| NEEDS YEAR | NUMBER OF PROJECTS | DECK AREA | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5-YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 8 | 335,830 | $40,615,626 | $120.94 | $70.00 | $68.02 |
| **1990** | 13 | 684,812 | 40,178,274 | 58.67 | 65.00 | 70.15 |
| **1991** | 0 | 0 | 0 | 0 | 65.00 | 72.44 |
| **1992** | 0 | 0 | 0 | 0 | 65.00 | 78.55 |
| **1993** | 6 | 245,572 | 13,068,106 | 53.21 | 55.00 | 77.61 |
| **1994** | 3 | 75,425 | 3,959,504 | 52.50 | 55.00 | 54.79 |
| **1995** | 2 | 174,991 | 9,595,341 | 54.83 | 55.00 | 53.51 |
| **1996** | 4 | 157,751 | 7,875,932 | 49.93 | 55.00 | 52.62 |
| **1998** | 3 | 182,129 | 12,002,782 | 65.90 | 60.00 | 55.27 |
| **1999** | 6 | 201,931 | 13,228,740 | 65.51 | 63.50 | 57.73 |
| **2000** | 2 | 162,652 | 8,922,542 | 54.86 | 60.00 | 58.21 |
| **2001** | 0 | 0 | 0 | 0.00 | 68.00 | 59.05 |
| **2002** | 6 | 409,395 | 39,986,160 | 97.67 | 68.00 | 77.54 |
| **2003** | 10 | 741,892 | 82,381,125 | 111.04 | 70.00 | 95.34 |
| **2004** | 3 | 82,449 | 6,610,213 | 80.17 | | 98.75 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS $74.00**

**Per Sq. Ft.**

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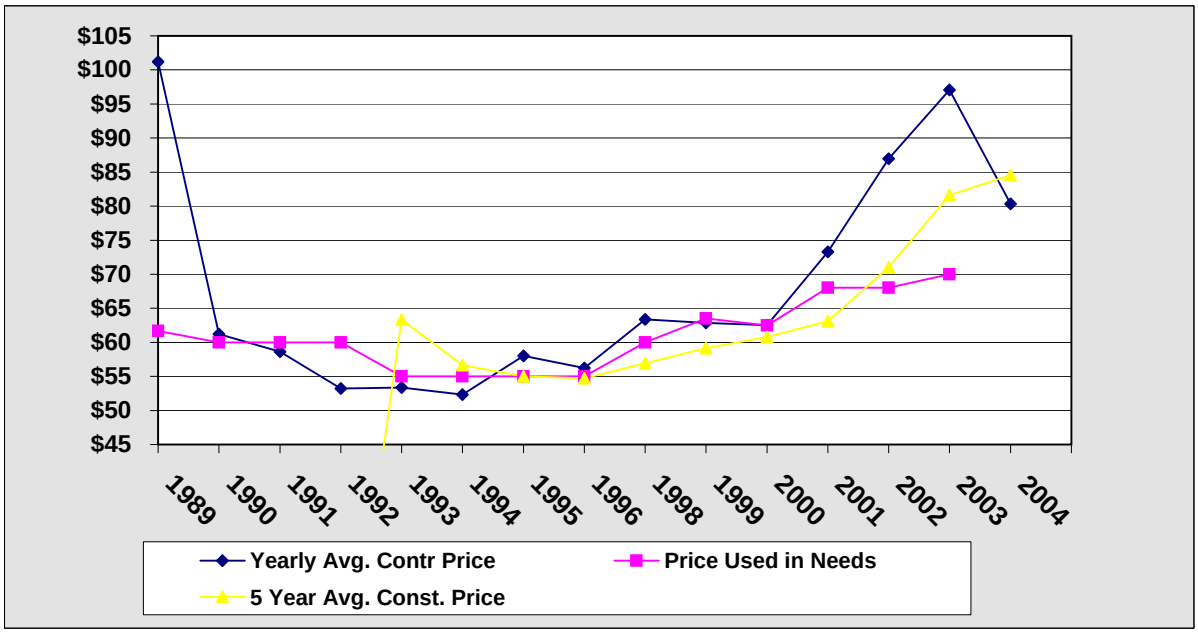
# ALL BRIDGES COMBINED




| NEEDS YEAR | NO. OF PROJECTS* | DECK AREA | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| **1989** | 30 | 487,941 [1] | $49,378,269 [2] | $101.20 [3] | $61.67 [4] | |
| **1990** | 80 | 1,317,745 [1] | 80,665,190 [2] | 61.21 [3] | $60.00 [4] | |
| **1991** | 64 | 505,479 [1] | 29,639,836 [2] | 58.64 [3] | $60.00 [4] | |
| **1992** | 63 | 479,289 [1] | 25,511,792 [2] | 53.23 [3] | $60.00 [4] | |
| **1993** | 75 | 857,555 [1] | 45,765,099 [2] | 53.37 [3] | $55.00 [4] | $63.31 [5] |
| **1994** | 81 | 591,325 [1] | 30,941,713 [2] | 52.33 [3] | $55.00 [4] | 56.65 [5] |
| **1995** | 62 | 681,685 [1] | 39,532,769 [2] | 57.99 [3] | $55.00 [4] | 55.02 [5] |
| **1996** | 66 | 695,086 [1] | 39,079,076 [2] | 56.22 [3] | $55.00 [4] | 54.72 [5] |
| **1998** | 85 | 856,829 [1] | 54,296,022 [2] | 63.37 [3] | $60.00 [4] | 56.92 [5] |
| **1999** | 88 | 851,845 [1] | 53,553,089 [2] | 62.87 [3] | $63.50 [4] | 59.13 [5] |
| **2000** | 78 | 648,621 [1] | 40,560,540 [2] | 62.53 [3] | $62.50 [4] | 60.80 [5] |
| **2001** | 83 | 493,752 [1] | 36,196,053 [2] | 73.31 [3] | $68.00 [4] | 63.08 [5] |
| **2002** | 105 | 1,127,085 [1] | 97,998,501 [2] | 86.95 [3] | $68.00 [4] | 71.04 [5] |
| **2003** | 114 | 1,708,572 [1] | 165,859,117 [2] | 97.07 | $70.00 [4] | 81.61 [5] |
| **2004** | 126 | 977,400 [1] | 78,528,140 | 80.34 | | 84.58 [5] |

* Combined the number of projects from the three different bridge graphs
[1] Combined the quantities from the three previous tables together.
[2] Combined the total costs from the three previous tables together.
[3] Total Costs divided by quantity.
[4] Average of the Price Used in Needs from the four previous tables.
[5] Used past 5 year's costs divided by the past 5 year's quantity.

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# RAILROAD BRIDGES OVER HIGHWAYS

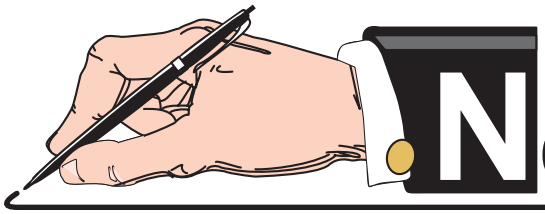
| Needs Year | Number of Projects | Number of Tracks | Bridge Length | Bridge Cost per Lin. Ft. (Actual) | Cost per Lin. Ft. of 1st Track (Unit Price Study) | Cost per Lin. Ft. of Additional Tracks (Unit Price Study) |
|---|---|---|---|---|---|---|
| **1986** | 0 | 0 | | | $2,250 | $1,750 |
| **1987** | 0 | 0 | | | 2,250 | 1,750 |
| **1988** | 1 | 3 | 103.71 | $13,988 | 2,250 | 1,750 |
| **1989** | 2 | 1 | 161.51 | 8,499 | 2,250 | 1,750 |
| | | 1 | 317.19 | 5,423 | 2,250 | 1,750 |
| **1990** | 1 | 2 | 433.38 | 8,536 | 4,000 | 3,000 |
| **1991** | 0 | 0 | | | 4,000 | 3,000 |
| **1992** | 1 | 1 | 114.19 | 7,619 | 4,000 | 3,000 |
| **1993** | 1 | 1 | 181.83 | 7,307 | 5,000 | 4,000 |
| **1994** | 0 | 0 | | | 5,000 | 4,000 |
| **1995** | 0 | 0 | | | 5,000 | 4,000 |
| **1996** | 1 | 1 | 80.83 | 12,966 | 5,000 | 4,000 |
| **1998** | 1 | 1 | 261.02 | 8,698 | 8,000 | 6,500 |
| **1999** | 1 | 1 | 150.3 | 8,139 | 8,200 | 6,700 |
| **2000** | 2 | 1 | 108.58 | 12,112 | | |
| | | 1 | 130.08 | 10,569 | 9,000 | 7,500 |
| **2001** | 1 | 1 | 163.00 | 14,182 | 9,000 | 7,500 |
| **2002** | 0 | | | | 9,000 | 7,500 |
| **2003** | 0 | | | | 9,300 | 7,750 |
| **2004** | | | | | | |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS PER LINEAL FOOT FOR THE FIRST TRACK** **$9,600**

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2004 NEEDS STUDY IS PER LIN. FT. FOR ADDITIONAL TRACKS** **$8,000**

# OTHER


# TOPICS



# NOTES and COMMENTS

## FIVE YEAR HISTORY OF STORM SEWER NEEDS

| YEAR | Needs Cost for Complete SS | Percent of Total Needs | Miles | Needs Cost/Mile for Complete SS Contruction | Needs Cost for Partial SS | Percent of Total Needs | Miles | Needs Cost/Mile for Partial SS Contruction | Comp & Part. % of Total Needs |
|---|---|---|---|---|---|---|---|---|---|
| 1999 | $204,034,860 | 10.49 | 835.03 | $246,000 | $53,341,590 | 2.46 | 694.72 | $79,000 | 12.95 |
| 2000 | 210,027,230 | 9.90 | 851.22 | 248,500 | 56,127,168 | 2.32 | 719.36 | 80,200 | 12.22 |
| 2001 | 217,052,080 | 8.64 | 879.26 | 248,000 | 58,275,528 | 2.31 | 742.44 | 80,400 | 10.95 |
| 2002 | 227,244,632 | 8.48 | 898.22 | 254,200 | 61,585,152 | 2.30 | 771.19 | 81,600 | 10.78 |
| 2003 | 229,035,824 | 8.11 | 891.70 | 257,375 | 63,307,677 | 2.24 | 780.64 | 82,700 | 10.35 |

Trunk Highway Turnbacks eligible for TB Funding are not included

# ***STORM SEWER NEEDS***

***Appropriate life cycle of Storm Sewer***

***Report for the Needs Study Subcommittee***
***April 13, 2004***

At the direction of the Municipal Screening Board, the Needs Study Subcommittee (NSS) discussed Storm Sewer Needs at its September 10, 2003 meeting. The following is an excerpt from the minutes of that meeting:

> Marshall then explained the issue of Complete Storm Sewer Needs where there is existing storm sewer. Currently, Municipalities are only eligible for Complete Storm Sewer Needs if the segment doesn't have any storm sewer. In some cases, there have been situations where the storm sewer is old, large development has occurred, or parking lots installed, etc. where is seems logical to receive complete needs as the existing system will need to be completely replaced. The committee discussed at length and reviewed the process, State Aid involvement, how often this has been requested. It was the consensus of the committee that there seems to be adequate checks and balances in the process and recommended no change to process.

**The following excerpt is taken from the first day (discussion day) of the October 2003 Municipal Screening Board meeting**

Johnston stated that two items were discussed by the Subcommittee at their Sept. 2003 meeting, noting that Tim Schoonhoven, NSS Chair, was available for any explanation of their recommendations.

1. Storm Sewer Needs:
   Johnston said that currently, if storm sewer is in place, a city can only generate needs for partial storm sewer. Complete storm sewer needs are allowed by the DSAE on a case-by-case basis due to age, condition, capacity, etc. The subcommittee recommended no change to the current procedure. Schoonhoven stated that many options are available but that the committee felt that the current system is workable with discretion given to the DSAE.

Ahl said that Metro had discussed this and would prefer a uniform standard across the state where a life cycle is established but still retains DSAE discretion. Suihkonen said that Dist. 1 felt there was no need for change; things are probably more uniform than people think. Metso said that he felt the standard shouldn't be based on life cycle alone. Behm stated that he questions capacity, age, & condition before making a decision.

**The following excerpt is taken from the second day (motion day) of the October 2003 Municipal Screening Board meeting:**

1. Storm Sewer Needs (Page 39).

   Ahl opened the discussion by making a motion to refer this item back to the Needs Study Subcommittee for establishment of an appropriate life cycle that is consistent with other life cycles in place. This motion was seconded by Weiss.

   Gustafson opened the floor for discussion. Kildahl commented that this may hinder the committee and would instead recommend sending it back to the committee without a specific task. Sonnenberg felt that the important issue was equity and consistency. Life cycle is not necessarily a means of determining effective life, but more for establishing that consistency. Metso questioned other life cycles in place. Johnston replied that only bridges are done in this way, on a 35-year cycle. Schoonhoven stated that we're really looking at a 40-year cycle – 20 years with no needs and 20 years with needs. Discretion between partial and full needs seems to be the question. Doing away with partial needs simplifies the process and eliminates the discretion. This might be more equitable but less representative of the system. Drake questioned whether the computer software would need to be modified. Johnston said that it would, but they could wait and make several changes at once using a consultant. Murray stated that the percentage of storm sewer needs is underrepresenting what's being spent currently. If you receive full needs at 20 years, is this more in line with actual spending? Johnston suggested that Kjonaas or Skallman sit in on the discussion if this is referred back to the Needs subcommittee. Skallman stated that several DSAEs could attend as well and give their perspective on the issue. Metso agrees with subcommittee's recommendation to leave system as is, but feels that if we are going to do something, it should be done on a consistent basis. He described the example of base, which is eligible for full needs after 20 years, but his city is not necessarily replacing it on that time frame. Reinstating full needs in line with the rest of the roadway provides consistency.

   Gustafson called for a vote on the motion. Motion carried without opposition.

DISCUSSION POINTS

1) Generate Complete Needs after 20 years, same as other Roadway Needs items
    a. Urban segments, whether Inplace SS or not?
    b. No longer have Partial SS Needs?
    c. Only allow Partial SS Needs on Widening Needs?
2) Generate Partial SS Needs after 20 years from last year graded and Complete Needs after XX years.
    a. Urban segments, whether Inplace SS or not?
    b. Would require a new Report in the Needs Update program (Data Collector).
    c. City would reinstate Needs itself- like other Needs.
    d. Criteria for DSAE approval?
3) Generate Complete Needs on a different life cycle than roadway needs- like structures are on a 35 year lifecycle, i.e. 30, 40 or 50 years.
    a. New report in (Data Collector)
    b. New field in Data Collector program
    c. Reprogramming of Computation Program
    d. New tables behind the scenes in the Data Collector program
    e. DSAE approval for generating Needs differently than the normal
4) Leave Storm Sewer Needs as is
    a. Propose state wide guidelines for DSAE approval of Complete SS where existing
5) Leave SS Needs as is
    a. Require only one criteria for DSAE approval- The city must convince the DSAE that the next construction project on that roadway will include Storm Sewer Construction.
6) Leave SS Needs as is
    a. Leave DSAE approval as is. Each segment looked at and approved on an individual basis.
7) “After the Fact” Storm Sewer Needs adjustment
    a. Generate Needs on amount actually spent
    b. Length of adjustment?

**Discussion Point 1**

# 2003 Storm Sewer Needs

***if complete SS Needs were reinstated after 20 years***
***Needs Value decreases from $19.08 per $1000 to $18.24***
***Allocation increases for 52 cities and decreases for 81 cities***
***Currently, 10.36% of Needs are based on SS. In proposed method, 14.06% would be based on SS***

| MUNICIPALITY | Current Complete Storm Sewer Needs | Current Partial Storm Sewer Needs | Total Storm Sewer Needs if all Partial were Complete | Increase in Needs | Actual 2004 Construction Needs Apportionment | Proposed 2004 Construction Needs Apportionment | Difference in 2004 Allocation if Complete SS Needs Reinstated after 20 Years |
|---|---|---|---|---|---|---|---|
| ALBERT LEA | $221,343 | $789,785 | $2,679,274 | $1,668,146 | $335,643 | $351,263 | $15,620 |
| ALEXANDRIA | 990,894 | 348,994 | 2,077,017 | 737,129 | 227,635 | 231,039 | 3,404 |
| ANDOVER | 3,886,367 | 0 | 3,886,367 | 0 | 481,264 | 460,034 | (21,230) |
| ANOKA | 1,912,306 | 66,160 | 2,118,206 | 139,740 | 212,767 | 205,930 | (6,837) |
| APPLE VALLEY | 2,066,726 | 1,173,513 | 5,718,877 | 2,478,638 | 607,510 | 625,921 | 18,411 |
| ARDEN HILLS | 970,305 | 18,194 | 1,026,928 | 38,429 | 106,658 | 102,654 | (4,004) |
| AUSTIN | 1,842,812 | 559,052 | 3,582,667 | 1,180,803 | 584,353 | 580,113 | (4,240) |
| BAXTER | 1,438,728 | 100,894 | 1,752,726 | 213,104 | 150,312 | 147,568 | (2,744) |
| BEMIDJI | 342,312 | 264,640 | 1,165,912 | 558,960 | 195,098 | 196,687 | 1,589 |
| BIG LAKE | 975,454 | 31,426 | 1,073,257 | 66,377 | 104,094 | 100,713 | (3,381) |
| BLAINE | 4,179,776 | 222,463 | 4,872,115 | 469,876 | 516,202 | 502,002 | (14,200) |
| BLOOMINGTON | 8,302,937 | 2,106,369 | 14,858,278 | 4,448,972 | 1,808,591 | 1,809,957 | 1,366 |
| BRAINERD | 185,311 | 484,622 | 1,693,529 | 1,023,596 | 155,311 | 167,129 | 11,818 |
| BROOKLYN CENTER | 715,503 | 697,988 | 2,887,748 | 1,474,257 | 350,006 | 361,456 | 11,450 |
| BROOKLYN PARK | 2,470,804 | 543,339 | 4,161,758 | 1,147,615 | 529,474 | 527,050 | (2,424) |
| BUFFALO | 2,113,055 | 95,105 | 2,409,036 | 200,876 | 273,015 | 264,635 | (8,380) |
| BURNSVILLE | 1,562,269 | 1,164,416 | 5,186,109 | 2,459,424 | 723,142 | 736,101 | 12,959 |
| CAMBRIDGE | 947,144 | 73,603 | 1,176,208 | 155,461 | 158,020 | 154,476 | (3,544) |
| CHAMPLIN | 1,281,732 | 39,696 | 1,405,272 | 83,844 | 173,976 | 167,831 | (6,145) |
| CHANHASSEN | 1,474,760 | 176,978 | 2,025,543 | 373,805 | 189,764 | 188,402 | (1,362) |
| CHASKA | 1,328,056 | 133,147 | 1,742,430 | 281,227 | 221,118 | 216,494 | (4,624) |
| CHISHOLM | 620,277 | 156,303 | 1,106,716 | 330,136 | 113,071 | 114,105 | 1,034 |
| CLOQUET | 2,344,693 | 90,143 | 2,625,232 | 190,396 | 315,383 | 304,944 | (10,439) |
| COLUMBIA HEIGHTS | 967,732 | 371,323 | 2,123,346 | 784,291 | 245,921 | 249,378 | 3,457 |
| COON RAPIDS | 362,899 | 573,938 | 2,149,082 | 1,212,245 | 636,177 | 630,224 | (5,953) |
| CORCORAN | 275,391 | 0 | 275,391 | 0 | 130,931 | 125,155 | (5,776) |
| COTTAGE GROVE | 3,165,717 | 426,732 | 4,493,772 | 901,323 | 571,570 | 562,797 | (8,773) |
| CROOKSTON | 671,750 | 309,298 | 1,634,333 | 653,285 | 342,989 | 339,775 | (3,214) |
| CRYSTAL | 1,485,057 | 310,125 | 2,450,213 | 655,031 | 272,921 | 272,829 | (92) |
| DETROIT LAKES | 1,320,337 | 118,261 | 1,688,383 | 249,785 | 169,739 | 166,807 | (2,932) |
| DULUTH | 5,376,576 | 2,817,589 | 14,145,342 | 5,951,177 | 2,229,950 | 2,243,219 | 13,269 |

| MUNICIPALITY | Current Complete Storm Sewer Needs | Current Partial Storm Sewer Needs | Total Storm Sewer Needs if all Partial were Complete | Increase in Needs | Actual 2004 Construction Needs Apportionment | Proposed 2004 Construction Needs Apportionment | Difference in 2004 Allocation if Complete SS Needs Reinstated after 20 Years |
|---|---|---|---|---|---|---|---|
| EAGAN | $576,519 | $1,098,256 | $3,994,459 | $2,319,684 | $474,716 | $496,085 | $21,369 |
| EAST BETHEL | 3,170,864 | 0 | 3,170,864 | 0 | 415,350 | 397,028 | (18,322) |
| EAST GRAND FORKS | 1,006,339 | 76,911 | 1,245,698 | 162,448 | 256,827 | 248,461 | (8,366) |
| EDEN PRAIRIE | 3,574,941 | 1,359,588 | 7,806,186 | 2,871,657 | 738,319 | 758,128 | 19,809 |
| EDINA | 2,040,987 | 858,426 | 4,712,540 | 1,813,127 | 609,040 | 615,244 | 6,204 |
| ELK RIVER | 3,600,679 | 75,257 | 3,834,890 | 158,954 | 451,166 | 434,164 | (17,002) |
| FAIRMONT | 3,384,488 | 67,814 | 3,595,536 | 143,234 | 467,120 | 449,127 | (17,993) |
| FALCON HEIGHTS | 141,557 | 46,312 | 285,687 | 97,818 | 35,907 | 36,107 | 200 |
| FARIBAULT | 1,657,498 | 358,918 | 2,774,506 | 758,090 | 480,781 | 473,400 | (7,381) |
| FARMINGTON | 2,416,754 | 7,443 | 2,439,918 | 15,721 | 284,997 | 272,712 | (12,285) |
| FERGUS FALLS | 1,292,025 | 444,099 | 2,674,129 | 938,005 | 409,753 | 410,028 | 275 |
| FOREST LAKE | 5,096,030 | 53,755 | 5,263,324 | 113,539 | 410,173 | 394,150 | (16,023) |
| FRIDLEY | 617,700 | 771,591 | 3,019,009 | 1,629,718 | 236,944 | 256,217 | 19,273 |
| GLENCOE | 903,389 | 126,531 | 1,297,173 | 267,253 | 143,249 | 141,804 | (1,445) |
| GOLDEN VALLEY | 1,335,781 | 598,748 | 3,199,176 | 1,264,647 | 340,561 | 348,605 | 8,044 |
| GRAND RAPIDS | 1,358,940 | 200,961 | 1,984,361 | 424,460 | 217,003 | 215,173 | (1,830) |
| HAM LAKE | 3,196,605 | 49,620 | 3,351,030 | 104,805 | 397,789 | 382,153 | (15,636) |
| HASTINGS | 725,800 | 15,713 | 774,701 | 33,188 | 231,153 | 221,562 | (9,591) |
| HERMANTOWN | 2,385,867 | 0 | 2,385,867 | 0 | 211,921 | 202,573 | (9,348) |
| HIBBING | 3,073,067 | 459,812 | 4,504,072 | 971,193 | 769,763 | 753,521 | (16,242) |
| HOPKINS | 903,389 | 280,353 | 1,775,890 | 592,148 | 185,545 | 188,161 | 2,616 |
| HUGO | 630,570 | 0 | 630,570 | 0 | 187,270 | 179,009 | (8,261) |
| HUTCHINSON | 1,178,779 | 413,500 | 2,465,654 | 873,375 | 301,764 | 304,383 | 2,619 |
| INTERNATIONAL FALLS | 138,983 | 305,163 | 1,088,697 | 644,551 | 128,072 | 134,179 | 6,107 |
| INVER GROVE HEIGHTS | 2,401,309 | 379,593 | 3,582,660 | 801,758 | 405,991 | 402,706 | (3,285) |
| LA CRESCENT | 136,409 | 95,932 | 434,964 | 202,623 | 108,250 | 107,170 | (1,080) |
| LAKE CITY | 432,390 | 215,020 | 1,101,565 | 454,155 | 107,577 | 111,115 | 3,538 |
| LAKE ELMO | 694,913 | 37,215 | 810,732 | 78,604 | 91,669 | 89,059 | (2,610) |
| LAKEVILLE | 6,457,546 | 500,335 | 8,014,665 | 1,056,784 | 1,051,581 | 1,024,469 | (27,112) |
| LINO LAKES | 3,242,928 | 0 | 3,242,928 | 0 | 344,495 | 329,387 | (15,108) |
| LITCHFIELD | 1,456,745 | 47,139 | 1,603,449 | 99,565 | 146,348 | 141,708 | (4,640) |
| LITTLE CANADA | 1,096,418 | 324,184 | 2,105,328 | 684,726 | 207,931 | 211,248 | 3,317 |
| LITTLE FALLS | 2,097,610 | 224,117 | 2,795,096 | 473,369 | 298,413 | 293,883 | (4,530) |
| MAHTOMEDI | 774,699 | 52,101 | 936,845 | 110,045 | 95,898 | 93,675 | (2,223) |
| MANKATO | 1,636,905 | 708,739 | 3,842,609 | 1,496,965 | 548,347 | 551,462 | 3,115 |
| MAPLE GROVE | 4,913,291 | 325,011 | 5,924,775 | 686,473 | 1,160,306 | 1,121,644 | (38,662) |
| MAPLEWOOD | 3,814,302 | 693,853 | 5,973,678 | 1,465,523 | 642,779 | 641,155 | (1,624) |
| MARSHALL | 1,384,681 | 431,694 | 2,728,179 | 911,804 | 237,861 | 244,000 | 6,139 |
| MENDOTA HEIGHTS | 1,034,647 | 220,809 | 1,721,838 | 466,382 | 163,934 | 165,209 | 1,275 |

| MUNICIPALITY | Current Complete Storm Sewer Needs | Current Partial Storm Sewer Needs | Total Storm Sewer Needs if all Partial were Complete | Increase in Needs | Actual 2004 Construction Needs Apportionment | Proposed 2004 Construction Needs Apportionment | Difference in 2004 Allocation if Complete SS Needs Reinstated after 20 Years |
|---|---|---|---|---|---|---|---|
| MINNEAPOLIS | 9,010,723 | 10,267,205 | 40,963,829 | 21,685,901 | 5,716,746 | 5,860,107 | 143,361 |
| MINNETONKA | $3,950,711 | $683,929 | $6,079,202 | $1,444,562 | $809,288 | $799,936 | ($9,352) |
| MONTEVIDEO | 401,508 | 136,455 | 826,177 | 288,214 | 101,532 | 102,310 | 778 |
| MONTICELLO | 1,243,124 | 40,523 | 1,369,238 | 85,591 | 136,968 | 132,488 | (4,480) |
| MOORHEAD | 615,128 | 956,839 | 3,592,957 | 2,020,990 | 618,836 | 628,399 | 9,563 |
| MORRIS | 715,505 | 57,890 | 895,668 | 122,273 | 116,215 | 113,319 | (2,896) |
| MOUND | 687,193 | 376,285 | 1,858,249 | 794,771 | 148,028 | 155,995 | 7,967 |
| MOUNDS VIEW | 1,436,155 | 138,109 | 1,865,971 | 291,707 | 170,366 | 168,172 | (2,194) |
| NEW BRIGHTON | 718,078 | 173,670 | 1,258,566 | 366,818 | 190,788 | 189,063 | (1,725) |
| NEW HOPE | 15,443 | 727,760 | 2,280,343 | 1,537,140 | 252,844 | 269,727 | 16,883 |
| NEW PRAGUE | 185,310 | 14,059 | 229,064 | 29,695 | 31,878 | 30,472 | (1,406) |
| NEW ULM | 792,716 | 550,782 | 2,506,834 | 1,163,336 | 314,151 | 321,512 | 7,361 |
| NORTH BRANCH | 939,419 | 28,945 | 1,029,500 | 61,136 | 272,545 | 261,638 | (10,907) |
| NORTH MANKATO | 586,815 | 377,112 | 1,760,445 | 796,518 | 253,310 | 256,664 | 3,354 |
| NORTH ST PAUL | 658,882 | 352,302 | 1,755,300 | 744,116 | 150,630 | 157,558 | 6,928 |
| NORTHFIELD | 496,735 | 241,484 | 1,248,270 | 510,051 | 208,660 | 208,759 | 99 |
| OAK GROVE | 2,118,197 | 0 | 2,118,197 | 0 | 277,749 | 265,497 | (12,252) |
| OAKDALE | 823,601 | 81,046 | 1,075,829 | 171,182 | 190,111 | 184,847 | (5,264) |
| ORONO | 2,360,130 | 0 | 2,360,130 | 0 | 259,151 | 247,719 | (11,432) |
| OTSEGO | 2,632,947 | 0 | 2,632,947 | 0 | 286,681 | 274,035 | (12,646) |
| OWATONNA | 1,230,258 | 192,691 | 1,829,942 | 406,993 | 345,756 | 337,927 | (7,829) |
| PLYMOUTH | 4,985,358 | 963,455 | 7,983,777 | 2,034,964 | 975,572 | 969,654 | (5,918) |
| PRIOR LAKE | 2,306,083 | 80,219 | 2,555,737 | 169,435 | 294,401 | 284,505 | (9,896) |
| RAMSEY | 3,242,930 | 57,063 | 3,420,519 | 120,526 | 282,170 | 271,921 | (10,249) |
| RED WING | 2,715,310 | 329,146 | 3,739,663 | 695,207 | 452,051 | 444,791 | (7,260) |
| REDWOOD FALLS | 859,635 | 228,252 | 1,569,990 | 482,103 | 163,667 | 165,241 | 1,574 |
| RICHFIELD | 1,732,137 | 873,312 | 4,450,017 | 1,844,568 | 492,797 | 504,703 | 11,906 |
| ROBBINSDALE | 725,800 | 163,746 | 1,235,403 | 345,857 | 95,373 | 97,475 | 2,102 |
| ROCHESTER | 2,020,399 | 1,550,625 | 6,846,180 | 3,275,156 | 1,149,387 | 1,158,422 | 9,035 |
| ROGERS | 548,210 | 9,924 | 579,095 | 20,961 | 82,814 | 79,161 | (3,653) |
| ROSEMOUNT | 3,670,169 | 0 | 3,670,169 | 0 | 369,499 | 353,199 | (16,300) |
| ROSEVILLE | 1,433,583 | 759,186 | 3,796,286 | 1,603,517 | 405,763 | 417,111 | 11,348 |
| ST ANTHONY | 324,294 | 229,079 | 1,037,223 | 483,850 | 134,221 | 137,126 | 2,905 |
| ST CLOUD | 4,879,834 | 1,084,197 | 8,254,020 | 2,289,989 | 987,767 | 986,182 | (1,585) |
| ST FRANCIS | 1,554,547 | 43,004 | 1,688,382 | 90,831 | 193,597 | 186,714 | (6,883) |
| ST JOSEPH | 308,851 | 31,426 | 406,654 | 66,377 | 43,439 | 42,734 | (705) |
| ST LOUIS PARK | 684,619 | 1,357,107 | 4,908,143 | 2,866,417 | 580,786 | 607,448 | 26,662 |
| ST MICHAEL | 1,956,051 | 0 | 1,956,051 | 0 | 326,387 | 311,989 | (14,398) |
| ST PAUL | 1,876,269 | 9,736,271 | 32,177,028 | 20,564,488 | 4,625,906 | 4,796,932 | 171,026 |

| MUNICIPALITY | Current Complete Storm Sewer Needs | Current Partial Storm Sewer Needs | Total Storm Sewer Needs if all Partial were Complete | Increase in Needs | Actual 2004 Construction Needs Apportionment | Proposed 2004 Construction Needs Apportionment | Difference in 2004 Allocation if Complete SS Needs Reinstated after 20 Years |
|---|---|---|---|---|---|---|---|
| ST PAUL PARK | 728,374 | 113,299 | 1,080,978 | 239,305 | 89,904 | 90,303 | 399 |
| ST PETER | 2,293,213 | 152,168 | 2,766,783 | 321,402 | 263,870 | 258,092 | (5,778) |
| SARTELL | $2,270,049 | $38,869 | $2,391,015 | $82,097 | $292,202 | $280,810 | ($11,392) |
| SAUK RAPIDS | 1,052,664 | 179,459 | 1,611,168 | 379,045 | 231,429 | 228,133 | (3,296) |
| SAVAGE | 2,383,296 | 14,886 | 2,429,624 | 31,442 | 363,421 | 347,963 | (15,458) |
| SHAKOPEE | 1,366,664 | 268,775 | 2,203,133 | 567,694 | 315,919 | 312,362 | (3,557) |
| SHOREVIEW | 1,042,369 | 170,362 | 1,572,562 | 359,831 | 185,393 | 183,778 | (1,615) |
| SHOREWOOD | 1,930,316 | 15,713 | 1,979,217 | 33,188 | 142,633 | 136,947 | (5,686) |
| SOUTH ST PAUL | 301,131 | 334,108 | 1,340,926 | 705,687 | 231,905 | 234,547 | 2,642 |
| SPRING LAKE PARK | 0 | 102,548 | 319,145 | 216,597 | 50,218 | 51,953 | 1,735 |
| STEWARTVILLE | 458,129 | 71,122 | 679,472 | 150,221 | 77,419 | 76,744 | (675) |
| STILLWATER | 730,948 | 309,298 | 1,693,531 | 653,285 | 203,291 | 206,239 | 2,948 |
| THIEF RIVER FALLS | 2,004,960 | 119,915 | 2,378,154 | 253,279 | 344,747 | 334,159 | (10,588) |
| VADNAIS HEIGHTS | 594,537 | 92,624 | 882,797 | 195,636 | 110,511 | 109,204 | (1,307) |
| VIRGINIA | 676,899 | 292,758 | 1,588,007 | 618,350 | 271,735 | 271,820 | 85 |
| WACONIA | 23,164 | 317,568 | 1,011,484 | 670,752 | 75,880 | 84,767 | 8,887 |
| WAITE PARK | 507,030 | 38,042 | 625,423 | 80,351 | 92,029 | 89,435 | (2,594) |
| WASECA | 612,557 | 26,464 | 694,917 | 55,896 | 109,475 | 105,665 | (3,810) |
| WEST ST PAUL | 823,602 | 189,383 | 1,412,991 | 400,006 | 160,633 | 160,843 | 210 |
| WHITE BEAR LAKE | 1,093,847 | 395,306 | 2,324,100 | 834,947 | 268,730 | 272,105 | 3,375 |
| WILLMAR | 2,187,688 | 224,117 | 2,885,174 | 473,369 | 358,598 | 351,414 | (7,184) |
| WINONA | 898,239 | 339,897 | 1,956,050 | 717,914 | 310,769 | 310,153 | (616) |
| WOODBURY | 5,731,747 | 210,885 | 6,388,053 | 445,421 | 1,089,037 | 1,049,121 | (39,916) |
| WORTHINGTON | 100,377 | 249,754 | 877,650 | 527,519 | 168,545 | 170,731 | 2,186 |
| | **$229,035,824** | **$63,349,027** | **$426,187,648** | **$133,802,797** | **$55,445,291** | **$55,445,291** | **$0** |

**DISCUSSION POINT 2**

## 2003 Storm Sewer Needs

***if all Storm Sewer Needs between 20 and 39 years generated Partial Needs and all SS Needs Greater Than 39 years generated Complete SS Needs***

***Needs Value decreases from $19.08 per $1000 to $19.02***

***Allocation increases for 53 cities and decreases for 80 cities***

***Currently, 10.36% of Needs are based on SS. In proposed method, 10.63% would be based on SS***

| MUNICIPALITY | Current Complete Storm Sewer Needs | Current Partial Storm Sewer Needs | Proposed Complete Storm Sewer Needs | Proposed Partial Storm Sewer | Change in Storm Sewer Needs | Actual 2004 Construction Needs Apportionment | Proposed 2004 Construction Needs Apportionment | Difference in 2004 Construction Needs Apportionment using Proposed Method of Computing SS Needs |
|---|---|---|---|---|---|---|---|---|
| ALBERT LEA | $221,343 | $789,785 | $1,335,776 | $482,141 | $806,789 | $335,643 | $349,989 | $14,346 |
| ALEXANDRIA | 990,894 | 348,994 | 1,080,975 | 305,990 | 47,077 | 227,635 | 227,851 | 216 |
| ANDOVER | 3,886,367 | 0 | 3,047,320 | 156,303 | (682,744) | 481,264 | 466,838 | (14,426) |
| ANOKA | 1,912,306 | 66,160 | 1,608,594 | 269,602 | (100,270) | 212,767 | 210,224 | (2,543) |
| APPLE VALLEY | 2,066,726 | 1,173,513 | 2,192,835 | 1,073,446 | 26,042 | 607,510 | 606,191 | (1,319) |
| ARDEN HILLS | 970,305 | 18,194 | 903,386 | 39,696 | (45,417) | 106,658 | 105,475 | (1,183) |
| AUSTIN | 1,842,812 | 559,052 | 2,174,819 | 512,740 | 285,695 | 584,353 | 588,043 | 3,690 |
| BAXTER | 1,438,728 | 100,894 | 993,468 | 138,936 | (407,219) | 150,312 | 142,116 | (8,196) |
| BEMIDJI | 342,312 | 264,640 | 375,768 | 243,138 | 11,954 | 195,098 | 194,743 | (355) |
| BIG LAKE | 975,454 | 31,426 | | 313,433 | (693,447) | 104,094 | 90,591 | (13,503) |
| BLAINE | 4,179,776 | 222,463 | 3,098,795 | 569,803 | (733,641) | 516,202 | 500,704 | (15,498) |
| BLOOMINGTON | 8,302,937 | 2,106,369 | 3,098,795 | 4,034,106 | (3,276,405) | 1,808,591 | 1,740,859 | (67,732) |
| BRAINERD | 185,311 | 484,622 | 736,093 | 384,555 | 450,715 | 155,311 | 163,421 | 8,110 |
| BROOKLYN CENTER | 715,503 | 697,988 | 872,501 | 647,541 | 106,551 | 350,006 | 350,988 | 982 |
| BROOKLYN PARK | 2,470,804 | 543,339 | 2,290,638 | 578,073 | (145,433) | 529,474 | 525,126 | (4,348) |
| BUFFALO | 2,113,055 | 95,105 | 1,351,219 | 307,644 | (549,297) | 273,015 | 261,749 | (11,266) |
| BURNSVILLE | 1,562,269 | 1,164,416 | 1,446,448 | 1,185,918 | (94,320) | 723,142 | 719,188 | (3,954) |
| CAMBRIDGE | 947,144 | 73,603 | 1,196,794 | 155,476 | 331,523 | 158,020 | 163,895 | 5,875 |
| CHAMPLIN | 1,281,732 | 39,696 | 784,994 | 103,375 | (433,059) | 173,976 | 165,218 | (8,758) |
| CHANHASSEN | 1,474,760 | 176,978 | 1,423,284 | 71,949 | (156,505) | 189,764 | 186,233 | (3,531) |
| CHASKA | 1,328,056 | 133,147 | 1,024,353 | 230,733 | (206,118) | 221,118 | 216,537 | (4,581) |
| CHISHOLM | 620,277 | 156,303 | 957,435 | 145,552 | 326,407 | 113,071 | 118,943 | 5,872 |
| CLOQUET | 2,344,693 | 90,143 | 1,315,186 | 420,943 | (698,707) | 315,383 | 301,149 | (14,234) |
| COLUMBIA HEIGHTS | 967,732 | 371,323 | 1,073,254 | 427,559 | 161,758 | 245,921 | 248,264 | 2,343 |
| COON RAPIDS | 362,899 | 573,938 | 301,129 | 611,980 | (23,728) | 636,177 | 633,825 | (2,352) |
| CORCORAN | 275,391 | 0 | 275,391 | | 0 | 130,931 | 130,540 | (391) |
| COTTAGE GROVE | 3,165,717 | 426,732 | 2,908,338 | 524,318 | (159,794) | 571,570 | 566,823 | (4,747) |
| CROOKSTON | 671,750 | 309,298 | 676,896 | 286,142 | (18,010) | 342,989 | 341,622 | (1,367) |
| CRYSTAL | 1,485,057 | 310,125 | 2,215,999 | 74,430 | 495,247 | 272,921 | 281,528 | 8,607 |
| DETROIT LAKES | 1,320,337 | 118,261 | 388,636 | 417,635 | (632,327) | 169,739 | 157,202 | (12,537) |
| DULUTH | 5,376,576 | 2,817,589 | 15,684,433 | 1,668,886 | 9,159,154 | 2,229,950 | 2,397,745 | 167,795 |
| EAGAN | 576,519 | 1,098,256 | 576,520 | 1,098,256 | 1 | 474,716 | 473,298 | (1,418) |
| EAST BETHEL | 3,170,864 | 0 | 2,105,328 | 323,357 | (742,180) | 415,350 | 399,990 | (15,360) |
| EAST GRAND FORKS | 1,006,339 | 76,911 | 862,206 | 187,729 | (33,315) | 256,827 | 255,426 | (1,401) |
| EDEN PRAIRIE | 3,574,941 | 1,359,588 | 3,150,270 | 1,097,429 | (686,830) | 738,319 | 723,048 | (15,271) |

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|---|---|---|---|---|---|---|---|---|
| EDINA | $2,040,987 | $858,426 | $2,419,325 | $676,486 | $196,398 | $609,040 | $610,957 | $1,917 |
| ELK RIVER | 3,600,679 | 75,257 | 3,399,924 | 50,447 | (225,565) | 451,166 | 445,528 | (5,638) |
| FAIRMONT | 3,384,488 | 67,814 | 3,649,578 | 490,411 | 687,687 | 467,120 | 478,808 | 11,688 |
| FALCON HEIGHTS | 141,557 | 46,312 | 15,443 | 86,835 | (85,592) | 35,907 | 34,171 | (1,736) |
| FARIBAULT | 1,657,498 | 358,918 | 586,815 | 745,127 | (684,474) | 480,781 | 466,324 | (14,457) |
| FARMINGTON | 2,416,754 | 7,443 | 2,398,735 | 33,907 | 8,445 | 284,997 | 284,306 | (691) |
| FERGUS FALLS | 1,292,025 | 444,099 | 2,393,588 | 396,133 | 1,053,597 | 409,753 | 428,657 | 18,904 |
| FOREST LAKE | 5,096,030 | 53,755 | 4,303,310 | 261,332 | (585,143) | 410,173 | 397,816 | (12,357) |
| FRIDLEY | 617,700 | 771,591 | 156,999 | 917,143 | (315,149) | 236,944 | 230,241 | (6,703) |
| GLENCOE | 903,389 | 126,531 | 869,928 | 136,455 | (23,538) | 143,249 | 142,373 | (876) |
| GOLDEN VALLEY | 1,335,781 | 598,748 | 949,714 | 734,376 | (250,439) | 340,561 | 334,780 | (5,781) |
| GRAND RAPIDS | 1,358,940 | 200,961 | 638,290 | 467,255 | (454,356) | 217,003 | 207,711 | (9,292) |
| HAM LAKE | 3,196,605 | 49,620 | 1,912,296 | 418,462 | (915,467) | 397,789 | 379,185 | (18,604) |
| HASTINGS | 725,800 | 15,713 | 388,636 | 142,244 | (210,633) | 231,153 | 226,456 | (4,697) |
| HERMANTOWN | 2,385,867 | 0 | 996,041 | 173,670 | (1,216,156) | 211,921 | 188,152 | (23,769) |
| HIBBING | 3,073,067 | 459,812 | 3,510,595 | 672,351 | 650,067 | 769,763 | 779,831 | 10,068 |
| HOPKINS | 903,389 | 280,353 | 481,291 | 415,981 | (286,470) | 185,545 | 179,541 | (6,004) |
| HUGO | 630,570 | 0 | 630,569 | | (1) | 187,270 | 186,710 | (560) |
| HUTCHINSON | 1,178,779 | 413,500 | 1,196,794 | 405,230 | 9,745 | 301,764 | 301,048 | (716) |
| INTERNATIONAL FALLS | 138,983 | 305,163 | 1,101,565 | 49,620 | 707,039 | 128,072 | 141,141 | 13,069 |
| INVER GROVE HEIGHTS | 2,401,309 | 379,593 | 602,258 | 957,666 | (1,220,979) | 405,991 | 381,551 | (24,440) |
| LA CRESCENT | 136,409 | 95,932 | 231,638 | 52,928 | 52,225 | 108,250 | 108,920 | 670 |
| LAKE CITY | 432,390 | 215,020 | 537,914 | 181,113 | 71,617 | 107,577 | 108,618 | 1,041 |
| LAKE ELMO | 694,913 | 37,215 | 458,128 | 113,299 | (160,702) | 91,669 | 88,338 | (3,331) |
| LAKEVILLE | 6,457,546 | 500,335 | 5,389,433 | 702,950 | (865,499) | 1,051,581 | 1,031,976 | (19,605) |
| LINO LAKES | 3,242,928 | 0 | 3,242,925 | | (3) | 344,495 | 343,472 | (1,023) |
| LITCHFIELD | 1,456,745 | 47,139 | 1,209,663 | 155,476 | (138,746) | 146,348 | 143,271 | (3,077) |
| LITTLE CANADA | 1,096,418 | 324,184 | 1,685,806 | 160,438 | 425,642 | 207,931 | 215,407 | 7,476 |
| LITTLE FALLS | 2,097,610 | 224,117 | 1,819,641 | 425,905 | (76,181) | 298,413 | 296,073 | (2,340) |
| MAHTOMEDI | 774,699 | 52,101 | 756,683 | | (70,118) | 95,898 | 94,278 | (1,620) |
| MANKATO | 1,636,905 | 708,739 | 1,680,659 | 734,376 | 69,391 | 548,347 | 548,029 | (318) |
| MAPLE GROVE | 4,913,291 | 325,011 | 4,787,175 | 300,201 | (150,926) | 1,160,306 | 1,153,970 | (6,336) |
| MAPLEWOOD | 3,814,302 | 693,853 | 3,026,730 | 946,915 | (534,510) | 642,779 | 630,691 | (12,088) |
| MARSHALL | 1,384,681 | 431,694 | 1,304,891 | 485,449 | (26,035) | 237,861 | 236,656 | (1,205) |
| MENDOTA HEIGHTS | 1,034,647 | 220,809 | 463,275 | 389,517 | (402,664) | 163,934 | 155,784 | (8,150) |
| MINNEAPOLIS | 9,010,723 | 10,267,205 | 16,299,559 | 7,651,404 | 4,673,035 | 5,716,746 | 5,788,574 | 71,828 |
| MINNETONKA | 3,950,711 | 683,929 | 3,783,413 | 669,870 | (181,358) | 809,288 | 803,421 | (5,867) |
| MONTEVIDEO | 401,508 | 136,455 | 195,605 | 214,193 | (128,165) | 101,532 | 98,790 | (2,742) |
| MONTICELLO | 1,243,124 | 40,523 | 483,865 | 292,758 | (507,024) | 136,968 | 126,914 | (10,054) |
| MOORHEAD | 615,128 | 956,839 | 1,953,476 | 640,925 | 1,022,434 | 618,836 | 636,439 | 17,603 |
| MORRIS | 715,505 | 57,890 | 478,718 | 148,033 | (146,645) | 116,215 | 113,078 | (3,137) |
| MOUND | 687,193 | 376,285 | 205,900 | 537,550 | (320,028) | 148,028 | 141,498 | (6,530) |
| MOUNDS VIEW | 1,436,155 | 138,109 | 445,259 | 439,137 | (689,868) | 170,366 | 156,733 | (13,633) |
| NEW BRIGHTON | 718,078 | 173,670 | 491,586 | 200,134 | (200,028) | 190,788 | 186,413 | (4,375) |
| NEW HOPE | $15,443 | $727,760 | $1,155,614 | $349,821 | $762,232 | $252,844 | $266,590 | $13,746 |

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|---|---|---|---|---|---|---|---|---|
| NEW PRAGUE | 185,310 | 14,059 | 185,310 | 14,059 | 0 | 31,878 | 31,783 | (95) |
| NEW ULM | 792,716 | 550,782 | 1,271,433 | 395,306 | 323,241 | 314,151 | 319,362 | 5,211 |
| NORTH BRANCH | 939,419 | 28,945 | 738,666 | 75,257 | (154,441) | 272,545 | 268,793 | (3,752) |
| NORTH MANKATO | 586,815 | 377,112 | 187,884 | 505,297 | (270,746) | 253,310 | 247,403 | (5,907) |
| NORTH ST PAUL | 658,882 | 352,302 | 846,764 | 310,125 | 145,705 | 150,630 | 152,952 | 2,322 |
| NORTHFIELD | 496,735 | 241,484 | 527,619 | 254,716 | 44,116 | 208,660 | 208,877 | 217 |
| OAK GROVE | 2,118,197 | 0 | 1,142,745 | 313,433 | (662,019) | 277,749 | 264,325 | (13,424) |
| OAKDALE | 823,601 | 81,046 | | 296,893 | (607,754) | 190,111 | 177,981 | (12,130) |
| ORONO | 2,360,130 | 0 | 1,873,690 | 156,303 | (330,137) | 259,151 | 252,096 | (7,055) |
| OTSEGO | 2,632,947 | 0 | 2,488,816 | | (144,131) | 286,681 | 283,083 | (3,598) |
| OWATONNA | 1,230,258 | 192,691 | 1,222,531 | 320,876 | 120,458 | 345,756 | 347,015 | 1,259 |
| PLYMOUTH | 4,985,358 | 963,455 | 3,677,889 | 1,362,069 | (908,855) | 975,572 | 955,368 | (20,204) |
| PRIOR LAKE | 2,306,083 | 80,219 | 2,241,736 | 100,894 | (43,672) | 294,401 | 292,691 | (1,710) |
| RAMSEY | 3,242,930 | 57,063 | 2,280,343 | 366,361 | (653,290) | 282,170 | 268,899 | (13,271) |
| RED WING | 2,715,310 | 329,146 | 2,344,686 | 454,023 | (245,747) | 452,051 | 446,026 | (6,025) |
| REDWOOD FALLS | 859,635 | 228,252 | 1,155,614 | 141,417 | 209,144 | 163,667 | 167,157 | 3,490 |
| RICHFIELD | 1,732,137 | 873,312 | 419,521 | 1,273,580 | (912,348) | 492,797 | 473,969 | (18,828) |
| ROBBINSDALE | 725,800 | 163,746 | 738,666 | 200,961 | 50,081 | 95,373 | 96,041 | 668 |
| ROCHESTER | 2,020,399 | 1,550,625 | 3,111,664 | 1,111,488 | 652,128 | 1,149,387 | 1,158,361 | 8,974 |
| ROGERS | 548,210 | 9,924 | 496,734 | | (61,400) | 82,814 | 81,398 | (1,416) |
| ROSEMOUNT | 3,670,169 | 0 | 3,538,906 | 42,177 | (89,086) | 369,499 | 366,700 | (2,799) |
| ROSEVILLE | 1,433,583 | 759,186 | 1,636,905 | 709,566 | 153,702 | 405,763 | 407,475 | 1,712 |
| ST ANTHONY | 324,294 | 229,079 | 638,290 | 162,919 | 247,836 | 134,221 | 138,535 | 4,314 |
| ST CLOUD | 4,879,834 | 1,084,197 | 5,543,858 | 803,017 | 382,844 | 987,767 | 992,115 | 4,348 |
| ST FRANCIS | 1,554,547 | 43,004 | 1,595,725 | 20,675 | 18,849 | 193,597 | 193,378 | (219) |
| ST JOSEPH | 308,851 | 31,426 | 332,014 | 23,983 | 15,720 | 43,439 | 43,609 | 170 |
| ST LOUIS PARK | 684,619 | 1,357,107 | 1,006,336 | 1,253,732 | 218,342 | 580,786 | 583,205 | 2,419 |
| ST MICHAEL | 1,956,051 | 0 | 1,956,050 | | (1) | 326,387 | 325,412 | (975) |
| ST PAUL | 1,876,269 | 9,736,271 | 19,717,499 | 4,098,612 | 12,203,571 | 4,625,906 | 4,844,253 | 218,347 |
| ST PAUL PARK | 728,374 | 113,299 | 748,961 | 106,683 | 13,971 | 89,904 | 89,902 | (2) |
| ST PETER | 2,293,213 | 152,168 | 1,739,855 | 454,850 | (250,676) | 263,870 | 258,313 | (5,557) |
| SARTELL | 2,270,049 | 38,869 | 2,254,605 | 10,751 | (43,562) | 292,202 | 290,501 | (1,701) |
| SAUK RAPIDS | 1,052,664 | 179,459 | 1,268,859 | 129,839 | 166,575 | 231,429 | 233,906 | 2,477 |
| SAVAGE | 2,383,296 | 14,886 | 1,145,319 | 377,939 | (874,924) | 363,421 | 345,691 | (17,730) |
| SHAKOPEE | 1,366,664 | 268,775 | 715,503 | 450,715 | (469,222) | 315,919 | 306,050 | (9,869) |
| SHOREVIEW | 1,042,369 | 170,362 | 929,124 | 206,750 | (76,857) | 185,393 | 183,377 | (2,016) |
| SHOREWOOD | 1,930,316 | 15,713 | 1,979,214 | | 33,185 | 142,633 | 142,838 | 205 |
| SOUTH ST PAUL | 301,131 | 334,108 | 316,571 | 329,146 | 10,478 | 231,905 | 231,412 | (493) |
| SPRING LAKE PARK | 0 | 102,548 | | 102,548 | 0 | 50,218 | 50,068 | (150) |
| STEWARTVILLE | 458,129 | 71,122 | 126,114 | 177,805 | (225,332) | 77,419 | 72,901 | (4,518) |
| STILLWATER | 730,948 | 309,298 | 512,176 | 334,935 | (193,135) | 203,291 | 199,010 | (4,281) |
| THIEF RIVER FALLS | 2,004,960 | 119,915 | 1,384,678 | 468,082 | (272,116) | 344,747 | 338,541 | (6,206) |
| VADNAIS HEIGHTS | 594,537 | 92,624 | 543,061 | 109,164 | (34,936) | 110,511 | 109,516 | (995) |
| VIRGINIA | $676,899 | $292,758 | $1,459,316 | $275,391 | $765,050 | $271,735 | $285,531 | $13,796 |
| WACONIA | 23,164 | 317,568 | 1,011,484 | 0 | 670,752 | 75,880 | 88,414 | 12,534 |

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|---|---|---|---|---|---|---|---|---|
| WAITE PARK | 507,030 | 38,042 | 476,144 | 41,350 | (27,578) | 92,029 | 91,230 | (799) |
| WASECA | 612,557 | 26,464 | 123,540 | 208,404 | (307,077) | 109,475 | 103,306 | (6,169) |
| WEST ST PAUL | 823,602 | 189,383 | 102,950 | 377,112 | (532,923) | 160,633 | 150,015 | (10,618) |
| WHITE BEAR LAKE | 1,093,847 | 395,306 | 1,976,640 | 172,843 | 660,330 | 268,730 | 280,490 | 11,760 |
| WILLMAR | 2,187,688 | 224,117 | 1,503,070 | 685,583 | (223,152) | 358,598 | 353,282 | (5,316) |
| WINONA | 898,239 | 339,897 | 1,065,533 | 323,357 | 150,754 | 310,769 | 312,708 | 1,939 |
| WOODBURY | 5,731,747 | 210,885 | 3,708,774 | 827,827 | (1,406,031) | 1,089,037 | 1,059,035 | (30,002) |
| WORTHINGTON | 100,377 | 249,754 | 684,618 | 104,202 | 438,689 | 168,545 | 176,386 | 7,841 |
| | **$229,035,824** | **$63,349,027** | **$236,911,114** | **$64,155,352** | **$8,681,615** | **$55,445,291** | **$55,445,291** | **($0)** |

## STORM SEWER NEEDS

Change Implementation Options
Rick Kostohryz, SALT ITS
March 30, 2004

The following are SALT ITS perspectives on the Storm Sewer Needs options being discussed by the Municipal Screening Board this spring.

**Option 1**

Generate complete storm sewer Needs after 20 years, in the same manner as other roadway Needs items. The city would adjust the partial or complete storm sewer mileage fields on the data collector tool as needed if the last year graded is over 20 years.

No database or program changes necessary for this option.

The MSAS Needs User Manual would need to include specific instructions on how and when to adjust the storm sewer mileage fields.

**Option 2**

Generate complete or partial storm sewer Needs based on a pre-determined number of years past the last year graded. The city would adjust the partial or complete storm sewer mileage fields on the data collector tool as needed if the last year graded is beyond the pre-determined number of years.

No database changes necessary.

A new Data Collector report would need to be developed and implemented, similar to Report 3- 20 yr Reinstatement. The report would list segments in which the last year graded is beyond the pre-determined number of years. The city would adjust their complete or partial storm sewer mileage based on the results of the report.

MSAS Needs User Manual would need to include specific instructions on the use of the new report and how and when to adjust the storm sewer mileage fields.

**Option 3**

Generate Complete storm sewer Needs on a different life cycle than roadway needs. The city would adjust the partial or complete storm sewer mileage fields on the data collector tool as needed if a new field called ‘Last Year Storm Sewer Constructed’ is beyond a pre-determined number of years.

A new field on the database would be necessary - Year Storm Sewer Constructed

The Grading tab form on the Data Collector would need to be modified to include the new field.

A new Data Collector report would need to be developed and implemented, similar to Report 3- 20 yr Reinstatement. The report would list segments in which the new field 'Last Year Storm Sewer Constructed' is beyond the pre-determined number of years. The city would adjust their complete or partial storm sewer mileage based on the results of the report.

MSAS Needs User Manual would need to include specific instructions on the use of the new field, the new report, and how and when to adjust the storm sewer mileage fields.

Provided current staffing and resource levels remain consistent, it's possible to implement any of the 3 options prior to the start of the 2005 Needs cycle (1/1/2005) with little or no assistance from outside consultants.

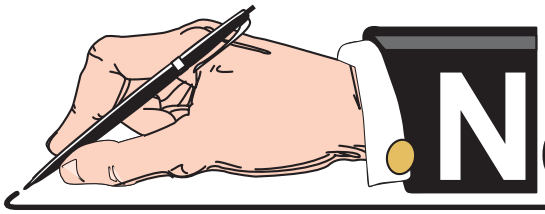
The above options 1, 2 and 3, are in order of complexity, with option 1 being the easiest to implement, and option 3 being the most complex. Actual time commitments to implement each option have not been determined.

## *CRITERIA USED BY DSAE'S TO APPROVE COMPLETE STORM SEWER NEEDS WHERE THERE IS EXISTING STORM SEWER*

The DSAE's were asked the following 5 questions about approving SS Needs. In no particular order, their answers are in bold below each question.

1) What criteria (or guidelines) do you use to approve Complete SS Needs where there is existing SS. And what do you think is the most important?
    a. **Hydraulic inadequacy, poor condition, too shallow to serve**
    b. **It has to have used its half life (about 35 – 40 years old) or future development will require upgrading the SS.**
    c. **…requires significant grade change, and/or significant drainage changes**
    d. **40 years old or older or greatly increased impervious area, lots of new development, etc.**
    e. **Usually anything that is 40 – 50 years old or more is allowed, and sometimes younger if they argue strongly that it is worn out.**
    f. **If they need added capacity or it is really old. Usually need both to be approved.**
2) What info do you require the city to provide you?
    a. **Hand written note on Report 7 form**
    b. **Explanation on Report 7 form or to me when I call them**
    c. **Any current plans under review or other evidence that future development is being planned.**
    d. **…I always ask for their justification of why it needs to be replaced. The most usual response is something to the effect that it's "old and worn out and when we rebuild the road we'll need to replace the storm sewer". I typically ask the age of the existing storm sewer and they usually have a construction date for it. Sometimes it's unclear exactly when it was built, but that's usually on systems that appear to be VERY old.**
    e. **Note on the Report 7 form, usually followed up by a phone call. If it seems borderline, ask for drainage info. Usually can resolve with a phone call.**
3) About what percent of the requests you receive do you approve or not approve?
    a. **About 100% approved**
    b. **About 50% approved and 50% not (because they just reinstated with the grading needs at 20 years)**
    c. **I have had 3 or 4 requests in the time I've been DSAE and approved them all as best I can recall.**
    d. **I'm not real sure what percentage we disallow now, but it is significantly less than 2 or 3 years ago. I'd estimate that better than 85 or 90% is approved now.**
    e. **Have had 5 to 8 requests. As best as I can recall, have approved them all.**

4) What do you think about having statewide guidelines for the approval of Complete SS where there is Existing SS?
    a. **It's okay, but the guideline ought to be, "If complete grading needs, then complete SS need." I realize that complete SS is not always required, but neither is complete grading.**
    b. **We feel a guideline at least on the life of the storm sewer should be set, but still have DSAE be able to approve the special cases.**
    c. **This could be a good thing.**
    d. **It would be very helpful to me to have well defined guidelines to apply to Storm Sewer needs, for instance an age criteria. …Report 7 could still be used for unusual circumstances which warranted replacement earlier.**
    e. **I'm ok with that.**
5) Any other info on this subject you would like presented to the subcommittee?
    a. **Needs are theoretical**
    b. **Maybe consider an after the fact need for several years rather than trying to second guess if it is to be upgraded from development. The development could take anywhere from 2 – 10 years to occur and by then it may be over 30 years old. It may be better to do after the fact if objective criteria is difficult to develop.**
    c. **I still think AFTER THE FACT is the purist way.**
    d. **My big fear is that we are being more strict than the rest of the state and therefore I am creating a disadvantage for the cities and counties in my district.**
    e. **There may be inconsistencies, and maybe there should be consistent guidelines, but I think that the DSAE's are approving ones that need to be approved**.



# NOTES and COMMENTS

# 2004 Municipal Screening Board Data

**JUNE, 2004**

**Advancement of MSAS Construction Funds from the**

**General MSAS Construction Account**

| Actual Expenditures as of 5/02/04 | |
|---|---|
| **Maximim $'s Allowable to Advance:** | **$27,000,000** |
| **Less $'s Actual Advances:** | **$9,829,012** |
| **Less Outstanding Reserve $ Amount:** | **$6,726,397** |
| **Remaining Available to Advance:** | **$10,444,591** |

**2004 SUMMARY TO DATE**

| County | $'s Approved for Advancing | $'s Actually Advanced |
|---|---|---|
| Alexandria | $406,000 | $31,089 |
| Brooklyn Park | 841,728 | 841,728 |
| Eagan | 4,000,000 | 1,867,100 |
| Elk River | 299,542 | 0 |
| Glencoe | 62,032 | 62,032 |
| Hibbing | 190,851 | 0 |
| Lake City | 400,000 | 0 |
| Lakeville | 4,000,000 | 131,057 |
| Maple Grove | 535,666 | 0 |
| Morris | 586,289 | 250,010 |
| Oakdale | 1,623,274 | 618,521 |
| Otsego | 435,140 | 435,140 |
| Red Wing | 2,155,530 | 825,827 |
| Redwood Falls | 213,039 | 213,039 |
| Rochester | 4,000,000 | 0 |
| Sartell | 1,415,274 | 1,250,389 |
| Savage | 850,000 | 0 |
| Shakopee | 2,122,233 | 361,466 |
| Shoreview | 1,857,177 | 1,857,177 |
| St. Anthony | 22,766 | 22,766 |
| St. Francis | 107,433 | 0 |
| St. Michael | 596,632 | 256,721 |
| White Bear Lake | 450,000 | 246,004 |
| Woodbury | 558,946 | 558,946 |
| **TOTAL** | **$27,729,552** | **$9,829,012** |

**If the cities were to advance the total amount on the City Council resolutions submitted, they would have a balance available to advance of ($729,552). Historical data shows that cities have requested approximately 1 1/2 times more than they have actually advanced.**

May 4, 2004

# MSAS FUND ADVANCES

**Revised June 1999 November 2000 November 2002 June 2003, October 2003 June 2004**

## Guidelines

### General Fund Advance for State Aid Projects

Any city may advance up to a cumulative maximum of five times its annual construction allotment or $4,000,000 whichever is less. This amount may be exceeded by advances for Federal Aid projects. **Per State Statute 162.14 subp. 6 advances "shall not exceed the city's total estimated apportionment for the three years following the year the advance is made." At times, a city using our guidelines may exceed the State Statute guidelines. If this happens, the city will be limited to the statutory limits. This issue will be addressed in the 2005 legislative session.**

The maximum Municipal State Aid construction dollars that can be advanced from the General Fund account in any one year shall be the difference between the Municipal State Aid construction fund balance at the end of the preceding calendar year, current year projected disbursements, and $20 million. SALT may revise the amount of the required reserve as the year progresses.

A City Council Resolution is required to advance funds for an MSAS project. A sample resolution can be found in the State Aid manual (**SALT 512(4/04)**) **on the SALT website**. The City Council Resolution can be passed at any time, but must be submitted with or prior to, any payment requests. It need not be project specific, but must include the maximum amount of advance the City Council is authorizing for financing approved Municipal State Aid Street projects. A mutually acceptable repayment schedule not to exceed five years shall be included in the resolution**.** The resolution should be mailed directly to State Aid Finance. The resolution does not reserve the funds. The funds are paid on a first come first served basis established by payment requests. As payment requests are processed by State Aid Finance, the amount on the 'State Aid Payment Request' form (up to the resolution/allowable amount) will be deducted from the city's account.

To "reserve" the funds, the City Engineer may submit a "Request to Reserve Advanced Funding" form (**SALT 513(4/04) on the SALT website**) up to **12** weeks prior to anticipating or incurring an obligation where advanced funding is required. This form "reserves" the funds in the city's account. Once the request has been approved by State Aid and the funds added to the city's account, a copy of the approved request will be returned to the City Engineer. The "Request to Reserve Advanced Funding" form should be mailed to Sandra Martinez in State Aid Finance. This form is not required, but will allow the funds to be set aside up to **twelve** weeks in advance of the payment request.

**General Fund Advance for Federal Aid Projects**

Cities may advance for Federal Projects that are programmed by the ATP in the STIP and are eligible for State Aid financing**.** Repayment to the General Fund will be made at the time federal funds are converted. The city will agree to authorize repayments from their state aid account or from local funds under a mutually acceptable repayment schedule should said project fail to receive Federal funds for any reason

A City Council Resolution and an Advance Construction Agreement are required to advance funds for a Federal Aid project. A sample resolution can be found in the State Aid manual (**SALT 515(4/04) on the SALT website**). The actual Agreement that must be processed will be written by Lynnette Roshell. Contact her directly at (651) 282-6479 to get the agreement started. This resolution must be project specific and must include the maximum amount of advance the City Council is authorizing. The resolution and signed Agreement should be mailed directly to Lynnette.

**Additional Guidelines**

General Fund Advance repayments may be relaxed to accommodate the payment on the principal of State Aid bonds.

In any one year, if the maximum advance amount available is reached, a city has to submit a new city council resolution when more funds become available the following year.

Advances will always be processed on a ‘first come first served’ basis.

All revisions to these guidelines are ultimately an administrative decision by the State Aid Engineer with any input and discussion by the Screening Board being taken into consideration.

SALT 512(4/04)

# MUNICIPAL
# STATE AID STREET FUNDS ADVANCE RESOLUTION

WHEREAS, the Municipality of _____ is planning to implement Municipal State Aid Street Project(s) in 20___ which will require State Aid funds in excess of those available in its State Aid Construction Account, and

WHEREAS, said municipality is prepared to proceed with the construction of said project(s) through the use of an advance from the Municipal State Aid Street Fund to supplement the available funds in their State Aid Construction Account, and

WHEREAS, the advance is based on the following determination of estimated expenditures:

| | | |
|---|---|---|
| Account Balance as of date _____ | | $_____ |
| Less estimated disbursements: | | |
| Project # _____ | $_____ | |
| Project #_____ | $_____ | |
| Project #_____ | $_____ | |
| Project #_____ | $_____ | |
| Bond Principle (if any) | $_____ | |
| Project Finals (overruns-if any) | $_____ | |
| Other_____ | $_____ | |
| Total Estimated Disbursements | | $_____ |
| Advance Amount (amount in excess of acct balance) | | $_____ |

WHEREAS, repayment of the funds so advanced will be made in accordance with the provisions of Minnesota Statutes 162.14, Subd. 6 and Minnesota Rules, Chapter 8820.1500, Subp. 10b, and

WHEREAS, the Municipality acknowledges advance funds are released on a first-come-first-serve basis and this resolution does not guarantee the availability of funds.

NOW, THEREFORE, Be It Resolved: That the Commissioner of Transportation be and is hereby requested to approve this advance for financing approved Municipal State Aid Street Project(s) of the Municipality of _____ in an amount up to $_____. I hereby authorize repayments from subsequent accruals to the Municipal State Aid Street Construction Account of said Municipality in accordance with the schedule herein indicated: (initial one)

___Repayment from entire future year allocations until fully repaid.
___Repayment in _____ equal annual installments
___Repayment from future year allocations in amounts listed below until fully repaid (maximum 5 year repayment).

$_____ CY_____ $_____ CY_____ $_____ CY_____
$_____ CY_____ $_____ CY_____

I HEREBY CERTIFY that the above is a true and correct copy of a resolution presented to and adopted by the Municipality of _____, County of _____, State of Minnesota, at a duly authorized Municipal Council Meeting held in the Municipality of _____, Minnesota on the _____ day of _____, 20___, as disclosed by the records of said Municipality on file and of record in the office.

Municipality of _____ _____
Municipal Clerk

SALT 513(4/04)

# MUNICIPAL
# REQUEST TO RESERVE ADVANCE FUNDING

The Municipality of _____ requests that the amount of $_____ be reserved from the Municipal State Aid Street Construction Fund for the State Aid Project(s) listed below.

Project # _____ Project #_____

Project #_____ Project #_____

MUNICIPAL APPROVAL

The Municipality agrees that a "State Aid Payment Request" form will be submitted within 12 weeks of the signing of this document. A Municipal Council Resolution authorizing this advance funding is attached or has been previously submitted.

_____ _____

Municipal Engineer Date

STATE AID APPROVAL

Construction funds in the amount of $_____ has been approved and reserved from the Municipal State Aid Street Construction Fund for a period of 12 weeks from the date the Municipal Engineer signed this form.

_____ _____

State Aid Finance Date

Original retained in SAF Finance file, one copy to Municipal Engineer

# RELATIONSHIP OF CONSTRUCTION BALANCE TO CONSTRUCTION ALLOTMENT

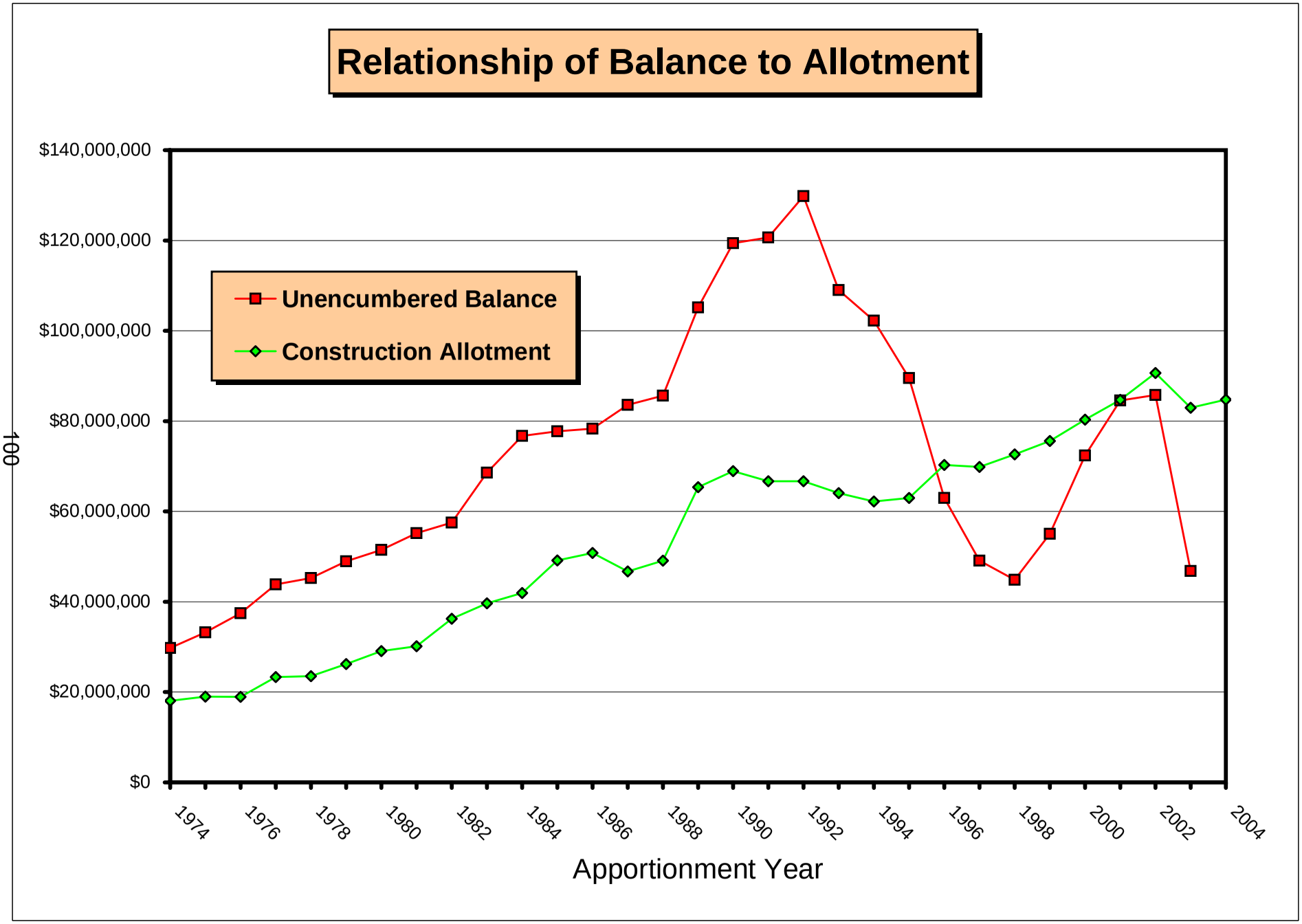
The amount spent on construction projects is computed by the difference between the previous year's and current years unencumbered construction balances plus the current years construction apportionment.



| App. Year | | No. of Municipalities | Needs Mileage | January Construction Allotment | 31-Dec Unencumbered Construction Balance | Amount Spent on Construction Projects | Ratio of Construction Balance to Construction Allotment | Ratio of Amount spent to Amount Received |
|---|---|---|---|---|---|---|---|---|
| **1973** | | 94 | 1,580.45 | $15,164,273 | $26,333,918 | $12,855,250 | 1.7366 | 0.8477 |
| **1974** | | 95 | 1608.06 | 18,052,386 | 29,760,552 | 14,625,752 | 1.6486 | 0.8102 |
| **1975** | | 99 | 1629.30 | 19,014,171 | 33,239,840 | 15,534,883 | 1.7482 | 0.8170 |
| **1976** | | 101 | 1718.92 | 18,971,282 | 37,478,614 | 14,732,508 | 1.9755 | 0.7766 |
| **1977** | | 101 | 1748.55 | 23,350,429 | 43,817,240 | 17,011,803 | 1.8765 | 0.7285 |
| **1978** | | 104 | 1807.94 | 23,517,393 | 45,254,560 | 22,080,073 | 1.9243 | 0.9389 |
| **1979** | | 106 | 1853.71 | 26,196,935 | 48,960,135 | 22,491,360 | 1.8689 | 0.8585 |
| **1980** | | 106 | 1889.03 | 29,082,865 | 51,499,922 | 26,543,078 | 1.7708 | 0.9127 |
| **1981** | | 106 | 1933.64 | 30,160,696 | 55,191,785 | 26,468,833 | 1.8299 | 0.8776 |
| **1982** | | 105 | 1976.17 | 36,255,443 | 57,550,334 | 33,896,894 | 1.5874 | 0.9349 |
| **1983** | | 106 | 2022.37 | 39,660,963 | 68,596,586 | 28,614,711 | 1.7296 | 0.7215 |
| **1984** | | 106 | 2047.23 | 41,962,145 | 76,739,685 | 33,819,046 | 1.8288 | 0.8059 |
| **1985** | | 107 | 2110.52 | 49,151,218 | 77,761,378 | 48,129,525 | 1.5821 | 0.9792 |
| **1986** | | 107 | 2139.42 | 50,809,002 | 78,311,767 | 50,258,613 | 1.5413 | 0.9892 |
| **1987** | * | 107 | 2148.07 | 46,716,190 | 83,574,312 | 41,453,645 | 1.7890 | 0.8874 |
| **1988** | | 108 | 2171.89 | 49,093,724 | 85,635,991 | 47,032,045 | 1.7443 | 0.9580 |
| **1989** | | 109 | 2205.05 | 65,374,509 | 105,147,959 | 45,862,541 | 1.6084 | 0.7015 |
| **1990** | | 112 | 2265.64 | 68,906,409 | 119,384,013 | 54,670,355 | 1.7326 | 0.7934 |
| **1991** | | 113 | 2330.30 | 66,677,426 | 120,663,647 | 65,397,792 | 1.8097 | 0.9808 |
| **1992** | | 116 | 2376.79 | 66,694,378 | 129,836,670 | 57,521,355 | 1.9467 | 0.8625 |
| **1993** | | 116 | 2410.53 | 64,077,980 | 109,010,201 | 84,904,449 | 1.7012 | 1.3250 |
| **1994** | | 117 | 2471.04 | 62,220,930 | 102,263,355 | 68,967,776 | 1.6436 | 1.1084 |
| **1995** | | 118 | 2526.39 | 62,994,481 | 89,545,533 | 75,712,303 | 1.4215 | 1.2019 |
| **1996** | | 119 | 2614.71 | 70,289,831 | 62,993,508 | 96,841,856 | 0.8962 | 1.3778 |
| **1997** | ** | 122 | 2740.46 | 69,856,915 | 49,110,546 | 83,739,877 | 0.7030 | 1.1987 |
| **1998** | | 125 | 2815.99 | 72,626,164 | 44,845,521 | 76,891,189 | 0.6175 | 1.0587 |
| **1999** | | 126 | 2859.05 | 75,595,243 | 55,028,453 | 65,412,311 | 0.7279 | 0.8653 |
| **2000** | | 127 | 2910.87 | 80,334,284 | 72,385,813 | 62,976,924 | 0.9011 | 0.7839 |
| **2001** | | 129 | 2972.16 | 84,711,549 | 84,583,631 | 72,513,731 | 0.9985 | 0.8560 |
| **2002** | | 130 | 3020.39 | 90,646,885 | 85,771,900 | 89,458,616 | 0.9462 | 0.9869 |
| **2003** | | 131 | 3080.67 | 82,974,496 | 46,835,689 | 121,910,707 | 0.5645 | 1.4693 |
| **2004** | | 133 | 3116.44 | 84,740,941 | | | | |

* The date for the unencumbered balance deduction was changed from June 30 to September 1. Effective September 1,1986.

** The date for the unencumbered balance deduction was changed from September 1 to December 31. Effective December 31,1996.


Relationship of Balance to Allotment
$140,000,000
$120,000,000
$100,000,000
$80,000,000
$60,000,000
$40,000,000
$20,000,000
$0
Unencumbered Balance
Construction Allotment
100
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
Apportionment Year

# 2004 APPORTIONMENT RANKINGS

5/3/2004

Rankings are from highest apportionment per Needs mile to lowest. Bridges in some cities increases the costs.

MSAS\Excel\January 2004 Book\2004 Apportionment Rankings.xls

## POPULATION APPORTIONMENT

| Rank | Municipality | 2003 Total Needs Mileage | 2004 Population Apportionment Per Need Mile |
|---|---|---|---|
| 1 | Falcon Heights | 2.54 | $35,981 |
| 2 | Minneapolis | 203.00 | 30,887 |
| 3 | Hopkins | 9.32 | 30,857 |
| 4 | St. Paul | 165.13 | 28,534 |
| 5 | New Hope | 12.70 | 26,966 |
| 6 | Vadnais Heights | 8.32 | 26,083 |
| 7 | Waseca | 6.42 | 24,805 |
| 8 | Oakdale | 18.39 | 24,492 |
| 9 | Columbia Heights | 12.53 | 24,441 |
| 10 | New Brighton | 14.92 | 24,436 |
| 11 | Coon Rapids | 41.82 | 24,351 |
| 12 | Robbinsdale | 9.51 | 24,323 |
| 13 | West St. Paul | 13.54 | 23,769 |
| 14 | St. Joseph | 3.47 | 23,713 |
| 15 | Northfield | 12.36 | 23,648 |
| 16 | St. Anthony | 5.63 | 23,570 |
| 17 | St. Louis Park | 31.19 | 23,496 |
| 18 | Anoka | 12.64 | 23,480 |
| 19 | Brooklyn Park | 48.08 | 23,368 |
| 20 | Shoreview | 18.57 | 23,353 |
| 21 | Eagan | 46.15 | 22,962 |
| 22 | Stewartville | 3.99 | 22,807 |
| 23 | Burnsville | 44.05 | 22,643 |
| 24 | Waconia | 5.53 | 22,509 |
| 25 | Richfield | 25.08 | 22,495 |
| 26 | Rochester | 66.55 | 22,466 |
| 27 | Brooklyn Center | 21.56 | 22,169 |
| 28 | Apple Valley | 35.54 | 22,010 |
| 29 | Champlin | 17.01 | 21,780 |
| 30 | Arden Hills | 7.42 | 21,323 |
| 31 | Inver Grove Heights | 23.86 | 21,079 |
| 32 | Crystal | 17.88 | 20,922 |
| 33 | Owatonna | 18.19 | 20,783 |
| 34 | Eden Prairie | 45.40 | 20,563 |
| 35 | Chaska | 15.13 | 20,525 |
| 36 | Winona | 21.77 | 20,365 |
| 37 | Plymouth | 54.72 | 20,301 |
| 38 | White Bear Lake | 20.35 | 19,840 |
| 39 | South St. Paul | 16.82 | 19,780 |
| 40 | Roseville | 28.70 | 19,460 |

## MONEY NEEDS APPORTIONMENT

| Rank | Municipality | 2003 Total Needs Mileage | 2004 Money Needs Apportionment Per Need Mile |
|---|---|---|---|
| 1 | Crookston | 11.71 | $29,290 |
| 2 | Minneapolis | 203.00 | 28,161 |
| 3 | St. Paul | 165.13 | 28,014 |
| 4 | Bloomington | 75.02 | 24,108 |
| 5 | Fairmont | 19.49 | 23,967 |
| 6 | St. Anthony | 5.63 | 23,840 |
| 7 | Woodbury | 46.03 | 23,659 |
| 8 | Maple Grove | 49.10 | 23,631 |
| 9 | Thief River Falls | 15.06 | 22,892 |
| 10 | Austin | 27.70 | 21,096 |
| 11 | Faribault | 22.80 | 21,087 |
| 12 | Moorhead | 29.74 | 20,808 |
| 13 | Redwood Falls | 7.87 | 20,796 |
| 14 | Orono | 12.58 | 20,600 |
| 15 | Farmington | 13.85 | 20,577 |
| 16 | Glencoe | 6.98 | 20,523 |
| 17 | New Ulm | 15.33 | 20,493 |
| 18 | Sartell | 14.28 | 20,462 |
| 19 | Maplewood | 31.71 | 20,271 |
| 20 | Lakeville | 51.95 | 20,242 |
| 21 | New Hope | 12.70 | 19,909 |
| 22 | Hopkins | 9.32 | 19,908 |
| 23 | Duluth | 112.18 | 19,878 |
| 24 | Little Canada | 10.49 | 19,822 |
| 25 | Richfield | 25.08 | 19,649 |
| 26 | Columbia Heights | 12.53 | 19,627 |
| 27 | Sauk Rapids | 11.87 | 19,497 |
| 28 | Stewartville | 3.99 | 19,403 |
| 29 | Buffalo | 14.17 | 19,267 |
| 30 | La Crescent | 5.66 | 19,125 |
| 31 | Owatonna | 18.19 | 19,008 |
| 32 | Red Wing | 23.82 | 18,978 |
| 33 | North Mankato | 13.38 | 18,932 |
| 34 | Grand Rapids | 11.47 | 18,919 |
| 35 | Little Falls | 15.98 | 18,674 |
| 36 | St. Francis | 10.37 | 18,669 |
| 37 | St. Louis Park | 31.19 | 18,621 |
| 38 | St. Peter | 14.24 | 18,530 |
| 39 | Mound | 8.05 | 18,389 |
| 40 | Forest Lake | 22.35 | 18,352 |

## TOTAL APPORTIONMENT

| Rank | Municipality | 2003 Total Needs Mileage | 2004 Total Apportionment Per Need Mile |
|---|---|---|---|
| 1 | Minneapolis | 203.00 | $59,049 |
| 2 | St. Paul | 165.13 | 56,548 |
| 3 | Hopkins | 9.32 | 50,765 |
| 4 | Falcon Heights | 2.54 | 50,117 |
| 5 | St. Anthony | 5.63 | 47,410 |
| 6 | New Hope | 12.70 | 46,875 |
| 7 | Columbia Heights | 12.53 | 44,067 |
| 8 | Bloomington | 75.02 | 42,753 |
| 9 | Stewartville | 3.99 | 42,210 |
| 10 | Richfield | 25.08 | 42,144 |
| 11 | St. Louis Park | 31.19 | 42,117 |
| 12 | Waseca | 6.42 | 41,857 |
| 13 | Maple Grove | 49.10 | 41,645 |
| 14 | Woodbury | 46.03 | 41,155 |
| 15 | Crookston | 11.71 | 40,748 |
| 16 | Northfield | 12.36 | 40,530 |
| 17 | Anoka | 12.64 | 40,313 |
| 18 | Owatonna | 18.19 | 39,791 |
| 19 | Rochester | 66.55 | 39,737 |
| 20 | Coon Rapids | 41.82 | 39,563 |
| 21 | Vadnais Heights | 8.32 | 39,366 |
| 22 | Apple Valley | 35.54 | 39,104 |
| 23 | Burnsville | 44.05 | 39,060 |
| 24 | Maplewood | 31.71 | 38,819 |
| 25 | Moorhead | 29.74 | 38,746 |
| 26 | Brooklyn Center | 21.56 | 38,403 |
| 27 | Plymouth | 54.72 | 38,129 |
| 28 | Inver Grove Heights | 23.86 | 38,095 |
| 29 | Mound | 8.05 | 37,636 |
| 30 | Farmington | 13.85 | 37,435 |
| 31 | New Brighton | 14.92 | 37,223 |
| 32 | Eden Prairie | 45.40 | 36,826 |
| 33 | Faribault | 22.80 | 36,515 |
| 34 | St. Joseph | 3.47 | 36,232 |
| 35 | Waconia | 5.53 | 36,231 |
| 36 | Crystal | 17.88 | 36,186 |
| 37 | Arden Hills | 7.42 | 35,697 |
| 38 | West St. Paul | 13.54 | 35,633 |
| 39 | Sauk Rapids | 11.87 | 35,259 |
| 40 | St. Paul Park | 4.92 | 35,234 |

| POPULATION APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2003 Total Needs Mileage | 2004 Population Apportionment Per Need Mile |
| 41 | Blaine | 40.52 | $19,431 |
| 42 | Edina | 40.27 | 19,347 |
| 43 | Mound | 8.05 | 19,247 |
| 44 | Spring Lake Park | 5.82 | 19,207 |
| 45 | Big Lake | 6.37 | 18,700 |
| 46 | Bloomington | 75.02 | 18,645 |
| 47 | Maplewood | 31.71 | 18,548 |
| 48 | Fridley | 24.81 | 18,128 |
| 49 | Maple Grove | 49.10 | 18,014 |
| 50 | Moorhead | 29.74 | 17,938 |
| 51 | Waite Park | 6.12 | 17,904 |
| 52 | Woodbury | 46.03 | 17,496 |
| 53 | Stillwater | 15.45 | 17,268 |
| 54 | North St. Paul | 11.40 | 17,181 |
| 55 | St. Paul Park | 4.92 | 16,961 |
| 56 | Monticello | 9.04 | 16,935 |
| 57 | Minnetonka | 49.89 | 16,887 |
| 58 | Farmington | 13.85 | 16,857 |
| 59 | Mounds View | 12.51 | 16,758 |
| 60 | St. Cloud | 60.26 | 16,668 |
| 61 | Mankato | 33.27 | 16,425 |
| 62 | Hastings | 19.27 | 16,321 |
| 63 | Worthington | 11.39 | 16,230 |
| 64 | Cottage Grove | 31.44 | 16,141 |
| 65 | Albert Lea | 18.74 | 16,051 |
| 66 | Prior Lake | 17.58 | 15,993 |
| 67 | Shakopee | 24.53 | 15,960 |
| 68 | Sauk Rapids | 11.87 | 15,762 |
| 69 | Chanhassen | 22.27 | 15,698 |
| 70 | Faribault | 22.80 | 15,428 |
| 71 | Little Canada | 10.49 | 15,340 |
| 72 | Savage | 24.92 | 15,261 |
| 73 | Mahtomedi | 8.62 | 15,257 |
| 74 | Shorewood | 8.24 | 15,086 |
| 75 | North Mankato | 13.38 | 14,944 |
| 76 | New Prague | 5.52 | 14,892 |
| 77 | Lakeville | 51.95 | 14,592 |
| 78 | La Crescent | 5.66 | 14,547 |
| 79 | New Ulm | 15.33 | 14,524 |
| 80 | Golden Valley | 23.57 | 14,340 |
| 81 | Lino Lakes | 20.55 | 14,300 |
| 82 | Austin | 27.70 | 13,996 |
| 83 | Brainerd | 16.12 | 13,884 |
| 84 | International Falls | 8.06 | 13,629 |
| 85 | Marshall | 15.48 | 13,520 |
| 86 | Mendota Heights | 14.39 | 13,203 |
| 87 | Buffalo | 14.17 | 13,202 |
| 88 | Hutchinson | 16.65 | 13,188 |

| MONEY NEEDS APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2003 Total Needs Mileage | 2004 Money Needs Apportionment Per Need Mile |
| 41 | St. Paul Park | 4.92 | $18,273 |
| 42 | Cottage Grove | 31.44 | 18,180 |
| 43 | Hutchinson | 16.65 | 18,124 |
| 44 | Albert Lea | 18.74 | 17,911 |
| 45 | Plymouth | 54.72 | 17,828 |
| 46 | Otsego | 16.37 | 17,513 |
| 47 | Shorewood | 8.24 | 17,310 |
| 48 | St. Michael | 18.88 | 17,287 |
| 49 | Rochester | 66.55 | 17,271 |
| 50 | Apple Valley | 35.54 | 17,094 |
| 51 | Virginia | 15.93 | 17,058 |
| 52 | Litchfield | 8.58 | 17,057 |
| 53 | Waseca | 6.42 | 17,052 |
| 54 | Inver Grove Heights | 23.86 | 17,016 |
| 55 | East Grand Forks | 15.19 | 16,908 |
| 56 | Northfield | 12.36 | 16,882 |
| 57 | Fergus Falls | 24.32 | 16,848 |
| 58 | Anoka | 12.64 | 16,833 |
| 59 | Lino Lakes | 20.55 | 16,764 |
| 60 | Prior Lake | 17.58 | 16,746 |
| 61 | Lake City | 6.50 | 16,550 |
| 62 | Mankato | 33.27 | 16,482 |
| 63 | Burnsville | 44.05 | 16,416 |
| 64 | St. Cloud | 60.26 | 16,392 |
| 65 | Big Lake | 6.37 | 16,341 |
| 66 | Eden Prairie | 45.40 | 16,263 |
| 67 | Brooklyn Center | 21.56 | 16,234 |
| 68 | Minnetonka | 49.89 | 16,221 |
| 69 | International Falls | 8.06 | 15,890 |
| 70 | Cloquet | 20.14 | 15,660 |
| 71 | East Bethel | 26.91 | 15,435 |
| 72 | Marshall | 15.48 | 15,366 |
| 73 | Crystal | 17.88 | 15,264 |
| 74 | Coon Rapids | 41.82 | 15,212 |
| 75 | Monticello | 9.04 | 15,151 |
| 76 | Edina | 40.27 | 15,124 |
| 77 | Hermantown | 14.08 | 15,051 |
| 78 | Waite Park | 6.12 | 15,037 |
| 79 | Ham Lake | 26.51 | 15,005 |
| 80 | Hibbing | 51.31 | 15,002 |
| 81 | Willmar | 23.91 | 14,998 |
| 82 | Elk River | 30.42 | 14,831 |
| 83 | Worthington | 11.39 | 14,798 |
| 84 | Chaska | 15.13 | 14,615 |
| 85 | Savage | 24.92 | 14,584 |
| 86 | Golden Valley | 23.57 | 14,449 |
| 87 | Arden Hills | 7.42 | 14,374 |
| 88 | Morris | 8.11 | 14,330 |

| TOTAL APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2003 Total Needs Mileage | 2004 Total Apportionment Per Need Mile |
| 41 | Little Canada | 10.49 | $35,162 |
| 42 | Chaska | 15.13 | 35,140 |
| 43 | Austin | 27.70 | 35,091 |
| 44 | Big Lake | 6.37 | 35,041 |
| 45 | New Ulm | 15.33 | 35,016 |
| 46 | Lakeville | 51.95 | 34,835 |
| 47 | Oakdale | 18.39 | 34,830 |
| 48 | Winona | 21.77 | 34,640 |
| 49 | Edina | 40.27 | 34,471 |
| 50 | Brooklyn Park | 48.08 | 34,381 |
| 51 | Robbinsdale | 9.51 | 34,352 |
| 52 | Cottage Grove | 31.44 | 34,321 |
| 53 | Albert Lea | 18.74 | 33,962 |
| 54 | North Mankato | 13.38 | 33,876 |
| 55 | La Crescent | 5.66 | 33,672 |
| 56 | Roseville | 28.70 | 33,598 |
| 57 | South St. Paul | 16.82 | 33,567 |
| 58 | Glencoe | 6.98 | 33,543 |
| 59 | Shoreview | 18.57 | 33,337 |
| 60 | Eagan | 46.15 | 33,248 |
| 61 | Fairmont | 19.49 | 33,118 |
| 62 | Minnetonka | 49.89 | 33,109 |
| 63 | St. Cloud | 60.26 | 33,060 |
| 64 | White Bear Lake | 20.35 | 33,045 |
| 65 | Sartell | 14.28 | 33,036 |
| 66 | Waite Park | 6.12 | 32,941 |
| 67 | Mankato | 33.27 | 32,906 |
| 68 | Prior Lake | 17.58 | 32,739 |
| 69 | Duluth | 112.18 | 32,481 |
| 70 | Buffalo | 14.17 | 32,469 |
| 71 | Shorewood | 8.24 | 32,396 |
| 72 | Blaine | 40.52 | 32,170 |
| 73 | Redwood Falls | 7.87 | 32,157 |
| 74 | Monticello | 9.04 | 32,086 |
| 75 | Thief River Falls | 15.06 | 32,078 |
| 76 | Champlin | 17.01 | 32,008 |
| 77 | Hutchinson | 16.65 | 31,312 |
| 78 | Lino Lakes | 20.55 | 31,064 |
| 79 | Worthington | 11.39 | 31,028 |
| 80 | Grand Rapids | 11.47 | 30,714 |
| 81 | Orono | 12.58 | 30,528 |
| 82 | Stillwater | 15.45 | 30,426 |
| 83 | North St. Paul | 11.40 | 30,395 |
| 84 | Mounds View | 12.51 | 30,376 |
| 85 | Red Wing | 23.82 | 30,164 |
| 86 | St. Peter | 14.24 | 30,008 |
| 87 | Savage | 24.92 | 29,845 |
| 88 | Litchfield | 8.58 | 29,738 |

| POPULATION APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2003 Total Needs Mileage | 2004 Population Apportionment Per Need Mile |
| 89 | Glencoe | 6.98 | $13,021 |
| 90 | Lake City | 6.50 | 12,984 |
| 91 | Bemidji | 16.25 | 12,786 |
| 92 | Andover | 36.72 | 12,785 |
| 93 | Litchfield | 8.58 | 12,681 |
| 94 | Willmar | 23.91 | 12,681 |
| 95 | Duluth | 112.18 | 12,603 |
| 96 | Sartell | 14.28 | 12,574 |
| 97 | Grand Rapids | 11.47 | 11,795 |
| 98 | St. Peter | 14.24 | 11,478 |
| 99 | Crookston | 11.71 | 11,458 |
| 100 | Redwood Falls | 7.87 | 11,361 |
| 101 | Red Wing | 23.82 | 11,186 |
| 102 | Forest Lake | 22.35 | 11,060 |
| 103 | Montevideo | 8.25 | 10,887 |
| 104 | Rogers | 7.71 | 10,643 |
| 105 | Lake Elmo | 11.42 | 10,594 |
| 106 | Ramsey | 29.32 | 10,519 |
| 107 | Morris | 8.11 | 10,516 |
| 108 | Chisholm | 7.99 | 10,249 |
| 109 | Rosemount | 25.93 | 10,176 |
| 110 | Alexandria | 15.90 | 10,173 |
| 111 | Orono | 12.58 | 9,927 |
| 112 | Elk River | 30.42 | 9,735 |
| 113 | St. Michael | 18.88 | 9,713 |
| 114 | Hermantown | 14.08 | 9,513 |
| 115 | Virginia | 15.93 | 9,415 |
| 116 | Detroit Lakes | 13.33 | 9,294 |
| 117 | Cloquet | 20.14 | 9,253 |
| 118 | Fergus Falls | 24.32 | 9,228 |
| 119 | Thief River Falls | 15.06 | 9,186 |
| 120 | Fairmont | 19.49 | 9,151 |
| 121 | St. Francis | 10.37 | 8,971 |
| 122 | Cambridge | 11.07 | 8,649 |
| 123 | Little Falls | 15.98 | 8,416 |
| 124 | Ham Lake | 26.51 | 8,375 |
| 125 | Otsego | 16.37 | 8,214 |
| 126 | East Grand Forks | 15.19 | 8,161 |
| 127 | Baxter | 12.77 | 7,857 |
| 128 | Hugo | 16.79 | 7,706 |
| 129 | East Bethel | 26.91 | 6,815 |
| 130 | North Branch | 22.53 | 6,527 |
| 131 | Corcoran | 14.80 | 6,415 |
| 132 | Oak Grove | 19.50 | 5,955 |
| 133 | Hibbing | 51.31 | 5,449 |
| | AVERAGE | | $16,265 |

| MONEY NEEDS APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2003 Total Needs Mileage | 2004 Money Needs Apportionment Per Need Mile |
| 89 | Alexandria | 15.90 | $14,317 |
| 90 | Winona | 21.77 | 14,275 |
| 91 | Cambridge | 11.07 | 14,275 |
| 92 | Rosemount | 25.93 | 14,250 |
| 93 | Oak Grove | 19.50 | 14,244 |
| 94 | Chisholm | 7.99 | 14,152 |
| 95 | Roseville | 28.70 | 14,138 |
| 96 | Falcon Heights | 2.54 | 14,137 |
| 97 | South St. Paul | 16.82 | 13,787 |
| 98 | Waconia | 5.53 | 13,722 |
| 99 | Mounds View | 12.51 | 13,618 |
| 100 | Vadnais Heights | 8.32 | 13,283 |
| 101 | North St. Paul | 11.40 | 13,213 |
| 102 | White Bear Lake | 20.35 | 13,205 |
| 103 | Stillwater | 15.45 | 13,158 |
| 104 | Andover | 36.72 | 13,106 |
| 105 | Shakopee | 24.53 | 12,879 |
| 106 | New Brighton | 14.92 | 12,787 |
| 107 | Blaine | 40.52 | 12,739 |
| 108 | Detroit Lakes | 13.33 | 12,734 |
| 109 | St. Joseph | 3.47 | 12,518 |
| 110 | Montevideo | 8.25 | 12,307 |
| 111 | North Branch | 22.53 | 12,097 |
| 112 | Bemidji | 16.25 | 12,006 |
| 113 | Hastings | 19.27 | 11,995 |
| 114 | West St. Paul | 13.54 | 11,864 |
| 115 | Baxter | 12.77 | 11,771 |
| 116 | Mendota Heights | 14.39 | 11,392 |
| 117 | Hugo | 16.79 | 11,154 |
| 118 | Mahtomedi | 8.62 | 11,125 |
| 119 | Brooklyn Park | 48.08 | 11,012 |
| 120 | Rogers | 7.71 | 10,741 |
| 121 | Oakdale | 18.39 | 10,338 |
| 122 | Eagan | 46.15 | 10,286 |
| 123 | Champlin | 17.01 | 10,228 |
| 124 | Robbinsdale | 9.51 | 10,029 |
| 125 | Shoreview | 18.57 | 9,983 |
| 126 | Brainerd | 16.12 | 9,635 |
| 127 | Ramsey | 29.32 | 9,624 |
| 128 | Fridley | 24.81 | 9,550 |
| 129 | Corcoran | 14.80 | 8,847 |
| 130 | Spring Lake Park | 5.82 | 8,629 |
| 131 | Chanhassen | 22.27 | 8,521 |
| 132 | Lake Elmo | 11.42 | 8,027 |
| 133 | New Prague | 5.52 | 5,775 |
| | AVERAGE | | $16,137 |

| TOTAL APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2003 Total Needs Mileage | 2004 Total Apportionment Per Need Mile |
| 89 | Lake City | 6.50 | $29,535 |
| 90 | International Falls | 8.06 | 29,519 |
| 91 | Forest Lake | 22.35 | 29,413 |
| 92 | Marshall | 15.48 | 28,885 |
| 93 | Shakopee | 24.53 | 28,839 |
| 94 | Golden Valley | 23.57 | 28,789 |
| 95 | Hastings | 19.27 | 28,316 |
| 96 | Spring Lake Park | 5.82 | 27,835 |
| 97 | Willmar | 23.91 | 27,679 |
| 98 | Fridley | 24.81 | 27,678 |
| 99 | St. Francis | 10.37 | 27,640 |
| 100 | Little Falls | 15.98 | 27,090 |
| 101 | St. Michael | 18.88 | 27,001 |
| 102 | Virginia | 15.93 | 26,473 |
| 103 | Mahtomedi | 8.62 | 26,382 |
| 104 | Fergus Falls | 24.32 | 26,077 |
| 105 | Andover | 36.72 | 25,891 |
| 106 | Otsego | 16.37 | 25,727 |
| 107 | East Grand Forks | 15.19 | 25,069 |
| 108 | Cloquet | 20.14 | 24,912 |
| 109 | Morris | 8.11 | 24,845 |
| 110 | Bemidji | 16.25 | 24,792 |
| 111 | Mendota Heights | 14.39 | 24,595 |
| 112 | Elk River | 30.42 | 24,567 |
| 113 | Hermantown | 14.08 | 24,564 |
| 114 | Alexandria | 15.90 | 24,490 |
| 115 | Rosemount | 25.93 | 24,426 |
| 116 | Chisholm | 7.99 | 24,401 |
| 117 | Chanhassen | 22.27 | 24,219 |
| 118 | Brainerd | 16.12 | 23,519 |
| 119 | Ham Lake | 26.51 | 23,380 |
| 120 | Montevideo | 8.25 | 23,194 |
| 121 | Cambridge | 11.07 | 22,924 |
| 122 | East Bethel | 26.91 | 22,250 |
| 123 | Detroit Lakes | 13.33 | 22,027 |
| 124 | Rogers | 7.71 | 21,384 |
| 125 | New Prague | 5.52 | 20,667 |
| 126 | Hibbing | 51.31 | 20,451 |
| 127 | Oak Grove | 19.50 | 20,199 |
| 128 | Ramsey | 29.32 | 20,142 |
| 129 | Baxter | 12.77 | 19,628 |
| 130 | Hugo | 16.79 | 18,860 |
| 131 | North Branch | 22.53 | 18,624 |
| 132 | Lake Elmo | 11.42 | 18,621 |
| 133 | Corcoran | 14.80 | 15,262 |
| | AVERAGE | | $32,402 |

## CY 2004 Local Road Research Board Program

| INV | TITLE | PROJECT TOTAL | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| 645 | Implementation of Research | Ongoing | $ 150,000 | **$150,000** | *$150,000* |
| 668 | Technology Transfer Center, U of M - Base | Ongoing | 150,000 | **150,000** | *150,000* |
| | Technology Transfer Center, U of M - Cont. Projects: | | | | |
| | Circuit Training and Assist.Program (CTAP), Instructor-$50,000, $T^2$ Center-$77,500 | Ongoing | 127,500 | **127,500** | *127,500* |
| | Minnesota Maintenance Research Expos | Ongoing | 20,000 | **20,000** | *20,000* |
| | Transportation Student Development | Ongoing | 4,000 | **4,000** | *4,000* |
| 676 | Materials & Road Research -- Mn/ROAd Facility Support-$500,000, Staff Support-$60,000 | Ongoing | 560,000 | **560,000** | *560,000* |
| 745 | Library Services for Local Governments | Ongoing | 60,000 | **60,000** | *60,000* |
| 768 | Geosynthetics in Roadway Design | 30,000 | 3,000 | **3,000** | **3,000** |
| 792 | Pavement Research Institute Director | 300,000 | 60,000 | **60,000** | **60,000** |
| 793 | Design & Construction of Low Volume Roads Training | 56,000 | 37,000 | **19,000** | 0 |
| 797 | Urbanization of MN's Countryside: 2000-2005 - Future Geographics & Trans. Impacts | 40,000 | 10,000 | **20,000** | **10,000** |
| 799 | Impact of Alternative Storm Water Management Approaches on Highway Infrastructure | 121,896 | 63,375 | **58,521** | 0 |
| 800 | Cost Effectiveness Analysis of Storm Water Runoff Best Management Practices | 98,000 | 49,000 | **49,000** | 0 |
| 801 | Adaptation of Mechanistic-Empirical 2003 Guide for Design of MN Low-Volume PCC | 25,000 | 12,500 | **12,500** | 0 |
| 802 | Perf. Of Pvmt. Crack Sealants Beneath Bituminous Overlays | 60,000 | 48,000 | **12,000** | 0 |
| 803 | Determination of Optimum Time for Application of Surface Treatments to Asphalt Concrete Pavements | 28,400 | 28,400 | **0** | 0 |
| 804 | Investigation of the Low-Temperature Fracture Properties of Three MnRoad Asphalt Mixtures | 59,800 | 29,900 | **29,900** | 0 |
| 805 | Safety Impacts of Street Lighting at Isolated Rural Intersections – Phase II | 51,180 | 17,060 | **17,060** | 17,060 |
| 806 | Snow and Ice Maintenance Operation Field Guide | 24,000 | 24,000 | **0** | 0 |
| 807 | Evaluating Completed Research Projects for Implementation | 25,000 | 0 | **25,000** | 0 |
| 808 | Pavement Rehabilitation Selection | 101,000 | 0 | **50,500** | 50,500 |
| 809 | Research Tracking LRRB | 60,000 | 0 | **12,000** | 12,000 |
| 810 | Coal Ash Utilization in Gravel Roads | 149,280 | 0 | **73,445** | 75,835 |
| 811 | Match for Snow Plow Routing Study | 30,000 | 0 | **30,000** | 0 |
| 812 | Resilient Modulus & Strength of Base Course with Recycled Asphalt Pavements | 94,000 | 0 | **47,000** | 47,000 |
| 813 | Human-Centered Interventions Toward Zero Deaths in Rural Minnesota: Psychological Factors, Driver Risk Tasking, and Acceptable Interventions | 188,961 | 0 | **188,961** | 0 |
| 814 | Implications of State Aid Cuts for Local Road Funding | 45,000 | 0 | **45,000** | 0 |
| 815 | Calibration of the 2002 AASHTO Pavement Design Guide for Minnesota Portland Cement Concrete Pavements and Hot Mix Asphalt Pavements | 126,600 | 0 | **63,300** | 63,300 |
| 816 | Low Temperature Cracking of Flexible Pavements Due to Thermal Fatigue and Combined Effects of Loading and Temperature | 155,000 | 0 | **95,000** | 60,000 |
| 817 | Determination of Optimum Time for the Application of Surface Treatments to Asphalt Concrete Pavements | 226,000 | 0 | **113,000** | |
| 818 | Synthesis of Benefit/Cost Spring Load Restrictions | 20,000 | 0 | **20,000** | |
| 819 | Cell 26 Reconstruction at Mn/ROAD | 30,000 | 0 | **30,000** | |
| 998 | Operational Research Program | 140,000 | 0 | **70,000** | 70,000 |
| 999 | Program Administration | Ongoing | 150,000 | **225,000** | *225,000* |
| | **TOTALS** | | | **$2,440,687** | *$1,765,195* |

***Italicized*** **= Anticipated**

**Bold = Funding Previously Approved**

**C.Y. 2004 SUMMARY:**

| | | | |
|---|---|---|---|
| Funds Allotted for 2004 | $ 2,223,195 | City | $544,962 |
| Unprogrammed Funds Carried over from 2003 | 63,595 | County | 1,678,233 |
| Funds from Cancelled Projects* | 165,000 | Total | $2,223,195 |
| Inv. 999 Carry Forward from C.Y. 03** | 75,000 | | |
| Total Funds Available for 2004 | $2,526,790 | | |
| Total 2004 Commitments, Carryover & Continuation Projects | $2,277,687 | | |
| **CY 2004 Funds Available for Programming** | **$249,103** | | |

*Board action taken 9/17/03 to cancel Inv. 678, 718, 719 and 740

**C.Y. 03 funds budgeted for Inv. 999 but not used

**January 3, 2003**

# ***COUNTY HIGHWAY TURNBACK POLICY***

***Definitions:***

County Highway – Either a County State Aid Highway or a County Road

County Highway Turnback- A CSAH or a County Road which has been released by the county and designated as an MSAS roadway. A designation request must be approved and a Commissioner's Order written. A County Highway Turnback may be either County Road (CR) Turnback or a County State Aid (CSAH) Turnback. (See Minnesota Statute 162.09 Subdivision 1). A County Highway Turnback designation has to stay with the County Highway turned back and is not transferable to any other roadways.

Basic Mileage- Total improved mileage of local streets, county roads and county road turnbacks. Frontage roads which are not designated trunk highway, trunk highway turnback or on the County State Aid Highway System shall be considered in the computation of the basic street mileage. A city is allowed to designate 20% of this mileage as MSAS. (See Screening Board Resolutions in the back of the most current booklet).

## *MILEAGE CONSIDERATIONS*

### *County State Aid Highway Turnbacks*

A CSAH Turnback **is not** included in a city's basic mileage, which means it **is not** included in the computation for a city's 20% allowable mileage. However, a city may draw Construction Needs and generate allocation on 100% of the length of the CSAH Turnback

### *County Road Turnbacks*

A County Road Turnback **is** included in a city's basic mileage, so it **is** included in the computation for a city's 20% allowable mileage. A city may also draw Construction Needs and generate allocation on 100% of the length of the County Road Turnback.

## *Jurisdictional Exchanges*

### *County Road for MSAS*

Only the **extra** mileage a city receives in an exchange between a County Road and an MSAS route **will be** considered as a County Road Turnback.

If the mileage of a jurisdictional exchange is **even**, the County Road **will not be** considered as a County Road Turnback.

If a city receives **less** mileage in a jurisdictional exchange, the County Road **will not be** considered as a County Road Turnback.

***CSAH for MSAS***

Only the **extra** mileage a city receives in an exchange between a CSAH and an MSAS route **will be** considered as a CSAH Turnback.

If the mileage of a jurisdictional exchange is **even**, the CSAH **will not be** considered as a CSAH Turnback.

If a city receives **less** mileage in a jurisdictional exchange, the CSAH **will not be** considered as a CSAH Turnback

NOTE:
When a city receives **less** mileage in a CSAH exchange it will have less mileage to designate within its 20% mileage limitation and may have to revoke mileage the following year when it computes its allowable mileage.
*Explanation*: After this exchange is completed, a city will have more CSAH mileage and less MSAS mileage than before the exchange. The new CSAH mileage was included in the city's basic mileage when it was MSAS (before the exchange) but is not included when it is CSAH (after the exchange). So, after the jurisdictional exchange the city will have less basic mileage and 20% of that mileage will be a smaller number.
If a city has more mileage designated than the new, lower 20% allowable mileage, the city will be over designated and be required to revoke some mileage. **If a revocation is necessary, it will not have to be done until the following year after a city computes its new allowable mileage.**

***MSAS designation on a County Road***

County Roads can be designated as MSAS. If a County Road which is designated as MSAS is turned back to the city, it will not be considered as County Road Turnback.

## *MISCELLANEOUS*

A CSAH which was previously designated as Trunk Highway turnback on the CSAH system and is turned back to the city will lose all status as a TH turnback and only be considered as CSAH Turnback.

A city that had previously been over 5,000 population, lost its eligibility for an MSAS system and regained it shall revoke all streets designated as CSAH at the time of eligibility loss and consider them for MSAS designation. These roads will not be eligible for consideration as CSAH turnback designation.

In a city that becomes eligible for MSAS designation for the first time all CSAH routes which serve only a municipal function and have both termini within or at the municipal boundary, should be revoked as CSAH and considered for MSAS designation. These roads will not be eligible for consideration as CSAH turnbacks.

# STATUS OF MUNICIPAL TRAFFIC COUNTING

The current Municipal State Aid Traffic Counting resolution reads:

That future traffic data for State Aid Needs Studies be developed as follows:

1. The municipalities in the metropolitan area cooperate with the State by agreeing to participate in counting traffic every two or four years at the discretion of the city.

2. The cities in the outstate area may have their traffic counted and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and have state forces prepare the maps.

3. Any city may count traffic with their own forces every two years at their discretion and expense, unless the municipality has made arrangements with the Mn/DOT district to do the count.

In 1998, cities were given the option of counting on a 2 or 4 year cycle. The following traffic counting schedules are in effect:

**Metro District**
**Two year** traffic counting schedule -counted in 2003 and updated in the needs in 2004

Andover
Apple Valley
Blaine
Bloomington
Brooklyn Center
Brooklyn Park
Burnsville
Champlin
Chanhassen
Chaska
Coon Rapids
Corcoran
Cottage Grove
Dayton
Eagan
East Bethel
Eden Prairie
Farmington
Forest Lake
Ham Lake
Hastings
Hugo
Inver Grove Heights
Lake Elmo
Lakeville
Lino Lakes
Little Canada
Maple Grove
Mendota Heights
Minneapolis
Minnetonka
Mounds View
Oakdale
Plymouth
Prior Lake
Ramsey
Rosemount
St. Anthony
St. Paul Park
Savage
Shakopee
Shoreview
Vadnais Heights
Woodbury

**Metro District**
**Four year** traffic counting schedule - to be counted in 2005 and updated in the needs in 2006

Anoka
Arden Hills
Columbia Heights
Crystal
Edina
Falcon Heights
Fridley
Golden Valley
Hopkins
Mahtomedi
Maplewood
Mound
New Brighton
New Hope
North Branch
North St. Paul
Oak Grove
Orono
Richfield
Robbinsdale
Roseville
Shorewood
South Saint Paul
Spring Lake Park
Stillwater
St. Louis Park
St. Paul
West St. Paul
White Bear Lake

**Outstate**
**Two year** traffic counting schedule - to be counted in 2003 and updated in the needs in 2004

Northfield
St. Cloud
Sartell

**Outstate**
**Two year** traffic counting schedule - to be counted in 2004 and updated in the needs in 2005

Rochester

**Outstate**
**Two year** traffic counting schedule - to be counted in 2005 and updated in the needs in 2006

Brainerd

**Outstate**
**Four year** traffic counting schedule - to be counted in 2003 and updated in the needs in 2004

Bemidji
Cambridge
Chisholm
Elk River
Fergus Falls
Hermantown
Hibbing
Hutchinson
La Crescent
Lake City
Litchfield
North Mankato
Owatonna
Red Wing
St. Peter
Sauk Rapids
Thief River Falls
Virginia
Waite Park
Waseca
Winona

**Outstate**
**Four year** traffic counting schedule - to be counted in 2004 and updated in the needs in 2005

| | | |
|---|---|---|
| Austin | International Falls | Otsego |
| Buffalo | Montevideo | |
| Detroit Lakes | Monticello | |

**Outstate**
**Four year** traffic counting schedule - to be counted in 2005 and updated in the needs in 2006

| | | |
|---|---|---|
| Albert Lea | Faribault | Moorhead |
| Baxter | Grand Rapids | Morris |
| Crookston | Little Falls | New Ulm |
| East Grand Forks | Mankato | |
| Fairmont | Marshall | |

**Outstate**
**Four year** traffic counting schedule - to be counted in 2006 and be updated in the needs in 2007

| | | |
|---|---|---|
| Alexandria | Stewartville | Worthington |
| Cloquet | Willmar | |

Duluth counts 1/4 of the city each year.

**CURRENT RESOLUTIONS**
**OF THE**
**MUNICIPAL SCREENING BOARD**

June 2004

**Wording in bold (except headings) are the most recent Screening Board revisions**

**BE IT RESOLVED:**

## ADMINISTRATION

**Appointments to Screening Board** - Oct. 1961 (Revised June 1981)

That annually the Commissioner of Mn/DOT will be requested to appoint three (3) new members, upon recommendation of the City Engineers Association of Minnesota, to serve three (3) year terms as voting members of the Municipal Screening Board. These appointees are selected from the Nine Construction Districts together with one representative from each of the three (3) major cities of the first class.

**Screening Board Chair, Vice Chair and Secretary**- June 1987 (Revised June, 2002)

That the Chair Vice Chair, and Secretary**,** nominated annually at the annual meeting of the City Engineers association of Minnesota and subsequently appointed by the Commissioner of the Minnesota Department of Transportation shall not have a vote in matters before the Screening Board unless they are also the duly appointed Screening Board Representative of a construction District or of a City of the first class.

**Appointment to the Needs Study Subcommittee** - June 1987 (Revised June 1993)

That the Screening Board Chair shall annually appoint one city engineer, who has served on the Screening Board, to serve a three year term on the Needs Study Subcommittee. The appointment shall be made at the annual winter meeting of the City's Engineers Association. The appointed subcommittee person shall serve as chair of the subcommittee in the third year of the appointment.

**Appointment to Unencumbered Construction Funds Subcommittee** - Revised June 1979

That the Screening Board past Chair be appointed to serve a three-year term on the Unencumbered Construction Fund Subcommittee. This will continue to maintain an experienced group to follow a program of accomplishments.

**Appearance Screening Board** - Oct. 1962 (Revised Oct. 1982)

That any individual or delegation having items of concern regarding the study of State Aid Needs or State Aid Apportionment amounts, and wishing to have consideration given to these items, shall, in a written report, communicate with the State Aid Engineer. The State Aid Engineer with

concurrence of the Chair of the Screening Board shall determine which requests are to be referred to the Screening Board for their consideration. This resolution does not abrogate the right of the Screening Board to call any person or persons before the Board for discussion purposes.

**Screening Board Meeting Dates and Locations** - June 1996

That the Screening Board Chair, with the assistance of the State Aid Engineer, determine the dates and locations for that year's Screening Board meetings.

**Research Account** - Oct. 1961

That an annual resolution be considered for setting aside a reasonable amount of money for the Research Account to continue municipal street research activity.

That an amount of ***$544,962*** (not to exceed 1/2 of 1% of the ***2003*** MSAS Apportionment sum of ***$108,992,464***) shall be set aside from the ***2004*** Apportionment fund and be credited to the research account.

**Soil Type** - Oct. 1961

That the soil type classification as approved by the 1961 Municipal Screening Board, for all municipalities under Municipal State Aid be adopted for the 1962 Needs Study and 1963 apportionment on all streets in the respective municipalities. Said classifications are to be continued in use until subsequently amended or revised by Municipal Screening Board action.

That when a new municipality becomes eligible to participate in the MSAS allocation, the soil type to be used for Needs purposes shall be based upon the City Engineer's recommendation with the concurrence of the District State Engineer.

**Improper Needs Report** - Oct. 1961

That the State Aid Engineer and the District State Aid Engineer are requested to recommend an adjustment of the Needs reporting whenever there is a reason to believe that said reports have deviated from accepted standards and to submit their recommendations to the Screening Board, with a copy to the municipality involved, or its engineer.

**New Cities Needs** - Oct. 1983

That any new city having determined its eligible mileage, but does not have an approved State Aid Street System**,** will have its money Needs determined at the cost per mile of the lowest other city.

**Construction Cut Off Date** - Oct. 1962 (Revised 1967)

That for the purpose of measuring the Needs of the Municipal State Aid Street System, the annual cut off date for recording construction accomplishments shall be based upon the project award date and shall be December 31st of the preceding year.

**Construction Accomplishments** - Oct. 1988 (Revised June 1993, October 2001, October 2003)

That when a Municipal State Aid Street is constructed to State Aid Standards, said street shall be considered adequate for a period of 20 years from the date of project letting or encumbrance of force account funds.

That in the event sidewalk or curb and gutter is constructed for the total length of the segment**,** those items shall be removed from the Needs for a period of 20 years.

All segments considered deficient for Needs purposes and receiving complete Needs shall receive street lighting Needs at the current unit cost per mile.

That if the construction of a Municipal State Aid Street is accomplished ~~with local funds~~, only the Construction Needs necessary to bring the ~~roadway~~ **segment** up to State Aid Standards will be permitted in subsequent Needs ~~for 20~~ **after 10** years from the date of the letting or encumbrance of force account funds. For the purposes of the Needs Study, these shall be called Widening Needs. ~~At the end of the 20 year period~~, **Widening Needs shall continue until** reinstatement for complete Construction Needs shall be initiated by the Municipality.

That Needs for resurfacing, and traffic signals shall be allowed on all Municipal State Aid Streets at all times.

That any bridge construction project shall cause the Needs of the affected bridge to be removed for a period of 35 years from the project letting date or date of force account agreement. At the end of the 35 year period, Needs for complete reconstruction of the bridge will be reinstated in the Needs Study at the initiative of the Municipal Engineer.

That the adjustments above will apply regardless of the source of funding for the road or bridge project. Needs may be granted as an exception to this resolution upon request by the Municipal Engineer and justified to the satisfaction of the State Aid Engineer (e.g., a deficiency due to changing standards, projected traffic, or other verifiable causes).

That in the event that an M.S.A.S. route earning "After the Fact" Needs is removed from the M.S.A.S. system, then, the "After the Fact" Needs shall be removed from the Needs Study, except if transferred to another state system. No adjustment will be required on Needs earned prior to the revocation.

**Population Apportionment** - October 1994, 1996

That beginning with calendar year 1996, the MSAS population apportionment shall be determined using the latest available federal census or population estimates of the State Demographer and/or the Metropolitan Council. However, no population shall be decreased below that of the latest available federal census, and no city dropped from the MSAS eligible list based on population estimates.

## DESIGN

**Design Limitation on Non-Existing Streets** - Oct. 1965

That non-existing streets shall not have their Needs computed on the basis of urban design unless justified to the satisfaction of the State Aid Engineer.

**Less Than Minimum Width** - Oct. 1961 (Revised 1986)

That if a Municipal State Aid Street is constructed with State Aid funds to a width less than the design width in the quantity tables for Needs purposes, the total Needs shall be taken off such constructed street other than Additional Surfacing Needs.
Additional surfacing and other future Needs shall be limited to the constructed width as reported in the Needs Study, unless exception is justified to the satisfaction of the State Aid Engineer.

**Greater Than Minimum Width** (Revised June 1993)

That if a Municipal State Aid Street is constructed to a width wider than required, Resurfacing Needs will be allowed on the constructed width.

**Miscellaneous Limitations** - Oct. 1961

That miscellaneous items such as fence removal, bituminous surface removal, manhole adjustment, and relocation of street lights are not permitted in the Municipal State Aid Street Needs Study. The item of retaining walls, however, shall be included in the Needs Study.

**MILEAGE** - Feb. 1959 (Revised Oct. 1994. 1998)

That the maximum mileage for Municipal State Aid Street designation shall be 20 percent of the municipality's basic mileage - which is comprised of the total improved mileage of local streets, county roads and county road turnbacks.

Nov. 1965 – (Revised 1969, October 1993, October 1994, June 1996, October 1998)

However, the maximum mileage for State Aid designation may be exceeded to designate trunk highway turnbacks after July 1, 1965 and county highway turnbacks after May 11, 1994 subject to State Aid Operations Rules.

Nov. 1965 (Revised 1972, Oct. 1993, 1995, 1998)

That the maximum mileage for Municipal State Aid Street designation shall be based on the Annual Certification of Mileage current as of December 31st of the preceding year. Submittal of a supplementary certification during the year shall not be permitted. Frontage roads not designated Trunk Highway, Trunk Highway Turnback or County State Aid Highways shall be considered in the computation of the basic street mileage. The total mileage of local streets, county roads and county road turnbacks on corporate limits shall be included in the municipality's basic street mileage. Any State Aid Street that is on the boundary of two adjoining urban municipalities shall be considered as one-half mileage for each municipality.

That all mileage on the MSAS system shall accrue Needs in accordance with current rules and resolutions.

Oct. 1961 (Revised May 1980, Oct. 1982, Oct. 1983, June 1993, June 2003)

That all requests for revisions to the Municipal State Aid System must be received by the District State Aid Engineer by March first to be included in that years Needs Study. If a system revision has been requested, a City Council resolution approving the system revisions and the Needs Study reporting data must be received by May first, to be included in the current year's Needs Study. If no system revisions are requested, the District State Aid Engineer must receive the Normal Needs Updates by March 31st to be included in that years' Needs Study.

**One Way Street Mileage** - June 1983 (Revised Oct. 1984, Oct. 1993, June 1994, Oct. 1997)

That any one-way streets added to the Municipal State Aid Street system must be reviewed by the Needs Study Sub-Committee, and approved by the Screening Board before any one-way street can be treated as one-half mileage in the Needs Study.

That all approved one-way streets be treated as one-half of the mileage and allow one-half complete Needs. When Trunk Highway or County Highway Turnback is used as part of a one-way pair, mileage for certification shall only be included as Trunk Highway or County Turnback mileage and not as approved one-way mileage.

**NEEDS COSTS**

That the Needs Study Subcommittee shall annually review the Unit Prices used in the Needs Study. The Subcommittee shall make its recommendation the Municipal Screening Board at its annual spring meeting.

| **Roadway Item Unit Prices** (Reviewed Annually) | | | |
|---|---|---|---|
| **Right of Way (Needs Only)** | | | $93,000 per Acre |
| **Grading (Excavation)** | | | $3.80 per Cu. Yd. |
| **Base:** | | | |
| | Class 5 Gravel | Spec. #2211 | $7.30 per Ton |
| | Bituminous | Spec. #2350 | $31.00 per Ton |
| **Surface:** | | | |
| | Gravel | Spec. #2118 | $5.35 per Ton |
| | Bituminous | Spec. #2350 | $31.00 per Ton |
| **Shoulders:** | | | |
| | Gravel | Spec. #2221 | $13.40 per Ton |
| **Miscellaneous:** | | | |
| | Storm Sewer Construction | | $257,375 per Mile |
| | | | |

| | | | |
|---|---|---|---|
| | Storm Sewer Adjustment | | $82,700 per Mile |
| | Special Drainage (rural segments only) | | $37,400 per Mile |
| | Street Lighting | | $80,000 per Mile |
| | Curb & Gutter Construction | | $8.00 per Lineal Foot |
| | Sidewalk Construction | | $23.50 per Sq. Yd. |
| | Project Development | | 20% |
| **Removal Items:** | | | |
| | Curb & Gutter | | $2.60 per Lineal Foot |
| | Sidewalk | | $5.50 per Sq. Yd. |
| | Concrete Pavement | | $5.40 per Sq. Yd. |
| | Tree Removal | | $225.00 per Unit |

| **Traffic Signal Needs Based On Projected Traffic (every segment)** | | | |
|---|---|---|---|
| Projected Traffic | Percentage X | Unit Price = | Needs Per Mile |
| 0 - 4,999 | 25% | *$124,000* | $31,000 per Mile |
| 5,000 - 9,999 | 50% | *$124,000* | $62,000 per Mile |
| 10,000 and Over | 100% | *$124,000* | $124,000 per Mile |

**Bridge Width & Costs** - (Reviewed Annually)

That after conferring with the Bridge Section of Mn/DOT and using the criteria as set forth by this Department as to the standard design for railroad structures, that the following costs based on number of tracks be used for the Needs Study:

| **Bridge Unit Costs** | |
|---|---|
| Bridges 0 to 149 Feet long | $70.00 per Sq. Ft. |
| Bridges 150 to 499 Feet long | $70.00 per Sq. Ft. |
| Bridges 500 Feet and Over | $70.00 per Sq. Ft. |

| **Railroad Over Highway** | |
|---|---|
| One Track | $9,300 per Linear Foot |
| Each Additional Track | $7,750 per Linear Foot |

**"Non-existing" bridge costs** - Revised October 1997

That the Construction Needs for all "non-existing" bridges and grade separations be removed from the Needs Study until such time that a construction project is awarded. At that time a Construction Needs adjustment shall be made by annually adding the total amount of the structure cost, project development cost and construction engineering that is eligible for State Aid reimbursement for a 15-year period excluding all Federal or State grants. Project Development costs, at the current percentage, shall be included with all Non Existing Bridge Needs.

## RAILROAD CROSSINGS

**Railroad Crossing Costs** - (Reviewed Annually)

That for the study of Needs on the Municipal State Aid Street System, the following costs shall be used in computing the Needs of the proposed Railroad Protection Devices:

| **Railroad Grade Crossings** | |
|---|---|
| Signals - (Single track - low speed) | $120,000 per Unit |
| Signals and Gates (Multiple Track – high speed) | $160,000 per Unit |
| Signs Only & (low speed) | $1,000 per Unit |
| Concrete Crossing Material Railroad Crossings (Per Track) | $1,000 per Linear Foot |
| Pavement Marking | $750 per Unit |

**Maintenance Needs Costs** - June 1992 (Revised 1993)

That for the study of Needs on the Municipal State Aid Street System, the following costs shall be used in determining the Maintenance Apportionment Needs cost for existing segments only.

| **Maintenance Needs Costs** | **Cost For Under 1000 Vehicles Per Day** | **Cost For Over 1000 Vehicles Per Day** |
|---|---|---|
| Traffic Lanes<br>Segment length times number of Traffic lanes times cost per mile | $1,500 per Mile | $2,500 per Mile |
| Parking Lanes:<br>Segment length times number of parking lanes times cost per mile | $1,500 per Mile | $1,500 per Mile |
| Median Strip:<br>Segment length times cost per mile | $500 per Mile | $980 per Mile |
| Storm Sewer:<br>Segment length times cost per mile | $500 per Mile | $500 per Mile |
| Traffic Signals: | $500 per Unit | $500 per Unit |

| | | |
|---|---|---|
| Number of traffic signals times cost per signal | | |
| Minimum allowance per mile is determined by segment length times cost per mile. | $5,000 per Mile | $5,000 per Mile |

## NEEDS ADJUSTMENTS

**Bond Adjustment** - Oct. 1961 (Revised 1976, 1979, 1995***, 2003***)

That a separate annual adjustment shall be made in total money Needs of a municipality that has sold and issued bonds pursuant to Minnesota Statutes, Section 162.18, for use on State Aid projects.

That this adjustment, which covers the amortization (payment) period, and which annually reflects the net unamortized bonded debt (remaining principal payments due) shall be accomplished by adding said net unamortized (principal) amount to the computed Construction needs of the municipality.

That for the purpose of this adjustment, the net unamortized bonded debt (remaining principal) shall be the total unamortized bonded indebtedness (deducted from the amount of projects applied against the bond) less the unexpended bond amount (less the amount of projects not encumbered) as of December 31st of the preceding year. The charges for selling the bond issue shall be deducted from the amount that projects are applied against.

"Bond account money spent off ~~State Aid System~~ **the Municipal State Aid, CSAH, or Trunk Highway system** would not be eligible for Bond Account Adjustment. This action would not be retroactive, but would be in effect for the remaining term of the Bond issue."

Effective January 1, 1996
The Construction Needs shall be annually reduced by 10% of the total bond issue amount. The computation of Needs shall be started in the year that bond principal payments are made to the city.

**Unencumbered Construction Fund Balance Adjustment** - Oct. 1961 (Revised October 1991, 1996, October, 1999, ***2003***)

That for the determination of Apportionment Needs, ~~the amount of the~~ **a city with a positive** unencumbered construction fund balance as of December 31st of the current year shall ~~be~~ **have that amount** deducted from ~~the~~ **its** 25-year total Needs**.** ~~of each individual municipality~~. **A municipality with a negative unencumbered construction fund balance as of December 31st of the current year shall have that amount added to its 25 year total Needs.**

That funding Requests received before December 1st by the District State Aid Engineer for payment shall be considered as being encumbered and the construction balances shall be so adjusted.

**Excess Unencumbered Construction Fund Balance Adjustment – Oct. 2002**

That the December 31 construction fund balance will be compared to the annual construction allotment from January of the same year.
If the December 31 construction fund balance exceeds 3 times the January construction allotment and $1,000,000, the first year adjustment to the Needs will be 1 times the December

31 construction fund balance. In each consecutive year the December 31 construction fund balance exceeds 3 times the January construction allotment and $1,000,000, the adjustment to the Needs will be increased to 2, 3, 4, etc. times the December 31 construction fund balance until such time the Construction Needs are adjusted to zero.

If the December 31 construction fund balance drops below 3 times the January construction allotment and subsequently increases to over 3 times, the multipliers shall start over with one. This adjustment will be in addition to the unencumbered construction fund balance adjustment and takes effect for the 2004 apportionment.

**Low Balance Incentive – Oct. 2003**

**That the amount of the Excess Unencumbered Construction Fund Balance Adjustment shall be redistributed to the Construction Needs of all municipalities whose December 31st construction fund balance is less than 1 times their January construction allotment of the same year. This redistribution will be based on a city's prorated share of its Unadjusted Construction Needs to the total Unadjusted Construction Needs of all participating cities times the total Excess Balance Adjustment.**

**Right of Way** - Oct. 1965 (Revised June 1986, 2000)

That Right of Way Needs shall be included in the Total Needs based on the unit price per acre until such time that the right of way is acquired and the actual cost established. At that time a Construction Needs adjustment shall be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a 15-year period. Only right of way acquisition costs that are eligible for State-Aid reimbursement shall be included in the right-of-way Construction Needs adjustment. This Directive to exclude all Federal or State grants. The State Aid Engineer shall compile right-of-way projects that are funded with State Aid funds.
When "After the Fact" Needs are requested for right-of-way projects that have been funded with local funds, but qualify for State Aid reimbursement, documentation (copies of warrants and description of acquisition) must be submitted to the State Aid Engineer.

**Trunk Highway Turnback** - Oct. 1967 (Revised June 1989)

That any trunk highway turnback which reverts directly to the municipality and becomes part of the State Aid Street system shall not have its Construction Needs considered in the Construction Needs apportionment determination as long as the former trunk highway is fully eligible for 100 percent construction payment from the Municipal Turnback Account. During this time of eligibility, financial aid for the additional maintenance obligation, of the municipality imposed by the turnback shall be computed on the basis of the current year's apportionment data and shall be accomplished in the following manner.

That the initial turnback adjustment when for less than 12 full months shall provide partial maintenance cost reimbursement by adding said initial adjustment to the Construction Needs which will produce approximately 1/12 of $7,200 per mile in apportionment funds for each month or part of a month that the municipality had maintenance responsibility during the initial year.

That to provide an advance payment for the coming year's additional maintenance obligation, a Needs adjustment per mile shall be added to the annual Construction Needs. This Needs adjustment per mile shall produce sufficient apportionment funds so that at least $7,200 in

apportionment shall be earned for each mile of trunk highway turnback on Municipal State Aid Street System.

That Trunk Highway Turnback adjustments shall terminate at the end of the calendar year during which a construction contract has been awarded that fulfills the Municipal Turnback Account Payment provisions; and the Resurfacing Needs for the awarded project shall be included in the Needs Study for the next apportionment.

**TRAFFIC** - June 1971

**Traffic Limitation on Non-Existing Streets** - Oct. 1965

That non-existing street shall not have their Needs computed on a traffic count of more than 4,999 vehicles per day unless justified to the satisfaction of the Commissioner.

**Traffic Manual** - Oct. 1962

That for the 1965 and all future Municipal State Aid Street Needs Studies, the Needs Study procedure shall utilize traffic data developed according to the Traffic Estimating section of the State Aid Manual (section 700). This manual shall be prepared and kept current under the direction of the Screening Board regarding methods of counting traffic and computing average daily traffic. The manner and scope of reporting is detailed in the above mentioned manual.

**Traffic Counting** - Sept. 1973 (Revised June 1987, 1997, 1999)

That future traffic data for State Aid Needs Studies be developed as follows:

1. The municipalities in the metropolitan area cooperate with the State by agreeing to participate in counting traffic every two or four years at the discretion of the city.

2. The cities in the outstate area may have their traffic counted and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and have state forces prepare the maps.

3. Any city may count traffic with their own forces every two years at their discretion and expense, unless the municipality has made arrangements with the Mn/DOT district to do the count.