2002 MUNICIPAL SCREENING BOARD DATA

JUNE, 2002

10895169

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 1, 2002**

To: Municipal Engineers
City Clerks

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

Subject: 2002 Municipal Screening Board Data booklet

Enclosed is a copy of the June 2002 Municipal Screening Board Data booklet.

The data included in this report will be used by the Municipal Board at its June 5 and 6, 2002 meeting to establish unit prices for the 2001 Needs Study that is used to compute the 2003 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 14 and 15.

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, a copy is also sent to the municipal clerk.

A limited number of copies of this report are available on request.

2002 MUNICIPAL SCREENING BOARD

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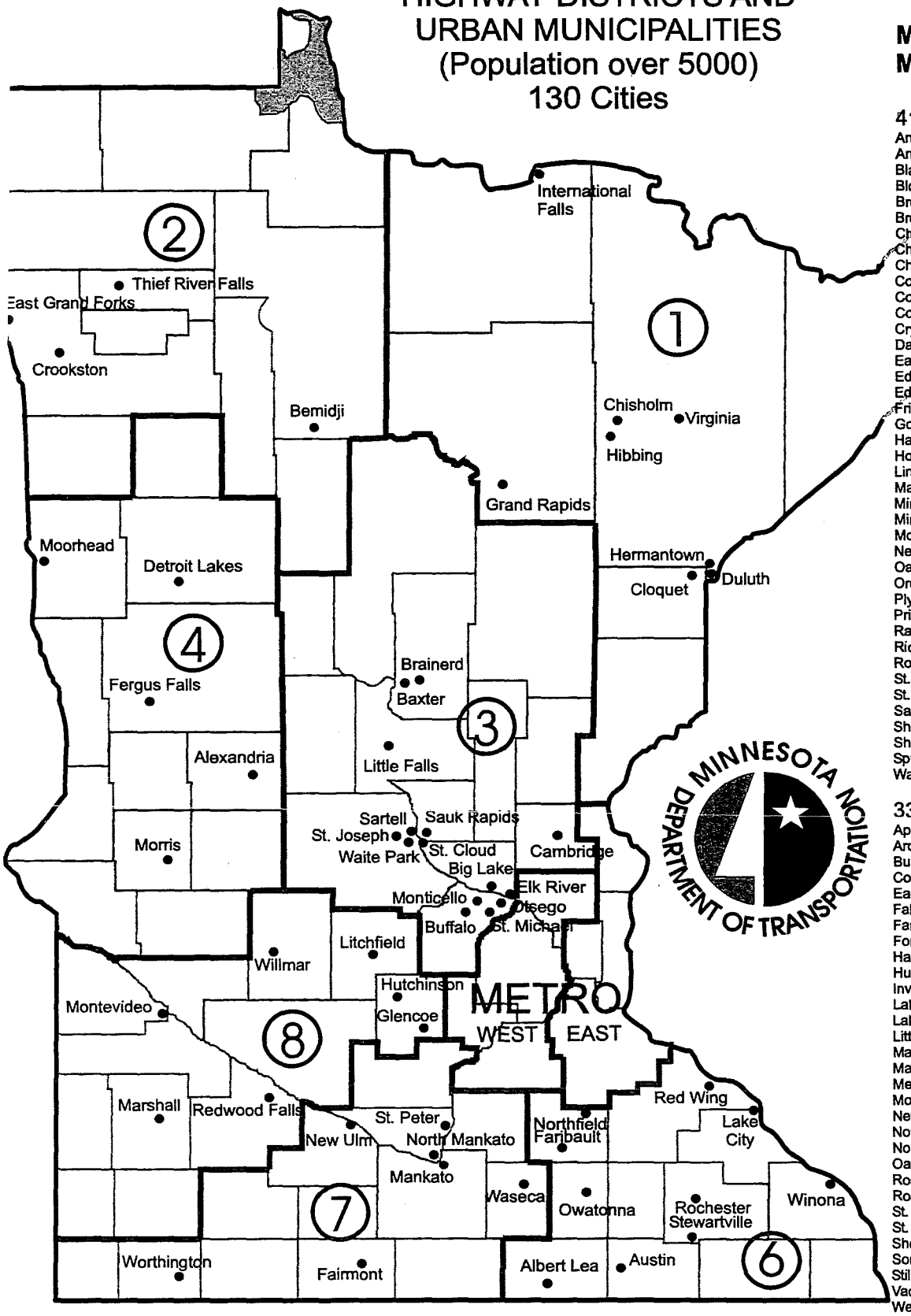
STATE OF MINNESOTA

HIGHWAY DISTRICTS AND URBAN MUNICIPALITIES (Population over 5000) 130 Cities



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METRO MUNICIPALITIES

41 Metro West Cities

Andover
Anoka
Blaine
Bloomington
Brooklyn Center
Brooklyn Park
Champlin
Chanhassen
Chaska
Columbia Heights
Coon Rapids
Corcoran
Crystal
Dayton
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
St. Anthony
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

June, 2002

2002 MUNICIPAL SCREENING BOARD

OFFICERS

Chair	Tom Drake	Red Wing	(651) 385-3623
Vice Chair	Lee Gustafson	Minnetonka	(952) 939-8200
Secretary	Mike Metso	Duluth	(218) 723-3278

MEMBERS

District	Served	Representative		
1	1	John Suihkonen	Hibbing	(218) 262-3486
2	3	Gary Sanders	East Grand Forks	(218) 773-1185
3	3	Bret Weiss	Monticello	(763) 541-4800
4	2	Dan Edwards	Fergus Falls	(218) 739-2251
Metro-West	2	Shelly Pederson	Bloomington	(952) 948-3866
6	2	Tim Murray	Faribault	(507) 334-2222
7	1	Tim Loose	St. Peter	(507) 625-4171
8	3	Melvin Odens	Willmar	(320) 235-4202
Metro-East	1	Chuck Ahl	Maplewood	(612) 895-4400
(Three Cities		Mike Metso	Duluth	(218) 723-3278
of the		David Sonnenberg	Minneapolis	(612) 673-2443
First Class)		Ed Warn	Saint Paul	(651) 266-6142

District	Alternates		
1	Dave Mattei	Virginia	(218) 748-7500
2	Dave Kildahl	Crookston, T R Falls	(218) 281-6522
3	Terry Maurer	Elk River	(651) 644-4389
4	Jeff Kuhn	Morris	(320) 762-8149
Metro-West	Craig Gray	Anoka	(763) 576-2781
6	Randy Peterson	Northfield	(507) 645-8832
7	Fred Salisbury	Waseca	(507) 835-9700
8	Dave Berryman	Montevideo	(320) 269-7695
Metro-East	Deb Bloom	Roseville	(651) 490-2200

2002 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
David Salo, Chair Hermantown (218) 727-8796 Expires in 2002	John Rodeberg, Chair Hutchinson (320) 234-4208 Expires in 2002
Tim Schoonhoven Alexandria (320) 762-8149 Expires in 2003	Ken Ashfeld Maple Grove (612) 494-6000 Expires in 2003
Steve Koehler New Ulm (507) 359-8245 Expires in 2004	David Jessup Woodbury (651) 714-3593 Expires in 2004

The Allocation Study Subcommittee was disbanded by the Municipal Screening Board at it's Spring, 2001 meeting. The minutes read in part:

> The consensus of the Screening Board was to disband the committee since it has been very inactive. The Screening Board felt that ad hoc committees could be formed, if necessary, to review items pertaining to allocations.

2001 MUNICIPAL SCREENING BOARD
Fall Meeting Minutes
October 24 and 25, 2001

I. Opening by Chair Jessup

The 2001 Municipal Screening Board Meeting was called to order at 1:12 p.m., October 24, 2001.

A. Chair Jessup Introduced:

Himself, David Jessup, Woodbury – Chair, Municipal Screening Board
Julie Skallman, Mn/DOT – Director, State Aid for Local Transportation
Tom Drake, Red Wing – Vice Chair, Municipal Screening Board
Marshall Johnston, Mn/DOT – Manager, Municipal State Aid Needs Unit
John Rodeberg, Hutchinson – Past Chair, Municipal Screening Board
Ken Ashfeld, Maple Grove – Past Chair, Municipal Screening Board
Terry Wotzka, Waite Park – Chair, Needs Study Subcommittee
Lee Gustafson, Minnetonka – Secretary, Municipal Screening Board

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

District 1	District 2	District 3
David Salo	Gary Sanders	Larry Koshak
Hermantown	East Grand Forks	Otsego
District 4	**Metro-West**	**District 6**
Dan Edwards	Shelly Pederson	Tim Murray
Fergus Falls	Bloomington	Faribault
District 7	**District 8**	**Metro-East**
Steven Koehler	Mel Odens	Mark Burch
New Ulm	Willmar	White Bear Lake
Duluth	**Minneapolis**	**St. Paul**
Mike Metso	David Sonnenberg	Ed Warn

The Chair recognized Screening Board Alternates:

District 1	District 3	District 7
John Suihkonen	Brett Weiss	Tim Loose
Hibbing	Monticello	St. Peter
Metro-East		
Chuck Ahl		
Maplewood		

B. The Chair recognized Department of Transportation personnel:

Rick Kjonaas, Assistant State Aid Engineer
Mark Gieseke, State Aid Pre-Letting Engineer
Diane Gould, Manager, County State Aid Needs
Walter Leu, District 1 State Aid Engineer
Lou Tasa, District 2 State Aid Engineer
Kelvin Howieson, District 3 State Aid Engineer
Merle Earley, District 4 State Aid Engineer
Greg Paulson, District 6 State Aid Engineer
Doug Haeder, District 7 State Aid Engineer
Tom Behm, District 8 State Aid Engineer
Bob Brown, Metro State Aid Engineer

C. The Chair also recognized others in attendance:

Dave Kreager, Duluth
Paul Ogren, Minneapolis
Larry Veek, Minneapolis
Beth Stiffler, Minneapolis
Mark Channer, Municipal State Aid Needs Unit
Dan Erickson, Assistant Metro State Aid Engineer
Patti Loken, Assistant Metro State Aid Engineer
Jim Vanderhoff, St. Paul
Shirley Slater, Dayton
Rick Hass, Dayton

II. 2001 Municipal State Aid Needs Report

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

A. The June 2001 Screening Board Minutes were presented for approval (pages 6-15). Motion by David Sonnenberg and seconded by Steve Koehler that the minutes be approved. Motion carried without opposition.

B. Marshall Johnston began his review of the 2001 Municipal State Aid Needs Report with the preface at the beginning of the booklet. Marshall noted that the construction needs data contained in the booklet is the result of the 2000 needs study using 1999 construction data. Marshall indicated that the 1999 construction data had to be used because their new oracle based computer program was not completed yet. Marshall stated that everything should be in order so that the needs allocation can be completed in January. He indicated that the Screening Board should provide direction to the State Aid staff on how to handle this issue. David Jessup asked what options the Screening Board had if the computer program update was not completed by year end. Marshall Johnston indicated that one option would be to use the information contained in the book, and a second option would be to use a partial needs update that would include some 2000 construction data and some 1999 construction data. David

Sonnenberg asked what if the board fails to take action. Julie Skallman responded, by default the old numbers, or the 1999 construction data, would be used. David Jessup concluded this item by indicating that the Board would need to provide direction to the State Aid staff on Thursday morning. Marshall Johnston continued his review of the booklet by noting on page 3 that the Chairs for the 2002 subcommittees would be David Salo for the Needs Study Subcommittee and John Rodeberg for the Unencumbered Construction Funds Subcommittee. Marshall also noted that at the bottom of page 3, a notation was added to the booklet stating that the Allocation Study Subcommittee was disbanded by the Municipal Screening Board at the spring 2001 meeting.

C. Theoretical Population Apportionment (pages 16-23)

Marshall Johnston reviewed page 16 of the booklet. He noted that the 2000 census is the basis of what State Aid will use for the 2002 apportionment. He explained that census estimates come from the state demographer. He also noted that State Aid will continue to use estimates as they have in the past, and that they usually get them sometime in July for the upcoming year. Additionally, adjustments to estimates are typically received in December. Marshall indicated that the new census data has the cities of Dayton and St. Joseph with populations below 4,700 resulting in both cities being excluded from receiving State Aid apportionments. David Jessup mentioned that both of these cities were receiving State Aid apportionments prior to this date based on estimates. Their 2000 census has dropped below 4,900, and according to State Statute, triggers a loss in State Aid apportionments. He further indicated that both cities feel the census is in error, and that they would like to present information describing the errors and what they believe their census numbers should be. He explained that the Screening Board's role in this matter is only to provide Mn/DOT with direction on these issues and that the final decision will ultimately be made by the Attorney General. He further stated that Marshall Johnston has prepared two options for the Board to consider in addressing these issues. David Salo, representing Hermantown, commented that they also have a census error that they are currently working to resolve. Marshall Johnston then reviewed the October 23, 2001 memorandum that he prepared to the Screening Board with regards to this matter. He indicated that the two options the Board could consider are as follows:

1. The 2002 allocations for Dayton and St. Joseph could be computed and set aside in a special account until their disputes are resolved. If the disputes show the population to be below 5,000, the dollars could be put back into the distribution formula for 2003. If the disputes show them to be above 5,000, the dollars would be put into their individual accounts.

2. The second option would be not to set aside their 2002 allocations, and if in fact their disputes show the population to be above 5,000, their 2002 allocations would be taken from the State Aid balance, and adjustments would have to be made for the 2003 distribution identifying these adjustments.

Shirley Slater, City Administrator for the City of Dayton, referenced the letter that her city submitted to the Screening Board. She recommended that the Screening Board consider option 1 and set aside the dollars until this issue is resolved. She further

indicated that her city feels that their census situation should be resolved sometime next year, probably in March or April. Terry Wotzka, speaking on behalf of the City of St. Joseph, indicated that the city feels the census missed a portion of the college of St. Benedict, and is confident they will exceed a population of 4,900 when they are finished with their review. He further indicated that they have started the process to resolve their census situation. David Jessup asked if their allocations are set aside, what population should allocations be based on. Julie Skallman stated that populations of 4,900, the minimum threshold before a city does not receive State Aid allocations, is actually based or computed on a minimum population of 5,000. Marshall Johnston added that state statutes clearly state that if a city has a population between 4,900 to 5,000, the allocation is based on a population of 5,000. David Sonnenberg indicated that he would recommend the Screening Board consider option 1, setting aside the 2002 allocations for the cities of Dayton and St. Joseph as a means of addressing this issue. Julie Skallman commented that Mn/DOT staff would greatly appreciate a recommendation from the Screening Board because it would be helpful in her discussions with the Attorney General. David Jessup concluded the discussion on this item by stating he would be looking for the Screening Board to provide a recommendation to Mn/DOT staff on this population apportionment issue.

Marshall Johnston continued his review of the booklet starting on page 17, Population Summary. He highlighted the cities with the largest decreases and increases in population. He noted each person is worth $16.62 of needs.

D. Mileage, Needs and Apportionment (page 25)

Marshall Johnston highlighted the information on page 25 and again stated that State Aid was using numbers from last year.

E. Tentative 2002 Construction Needs Apportionment (handout)

Marshall Johnston reviewed the information contained on pages 27-30 and once again highlighted some of the information in the memorandum that he prepared to the Screening Board. He further indicated that there are 17 cities with over three times their construction allotment in their account, and that the Unencumbered Construction Funds Subcommittee will be meeting before next fall to see if they will be recommending any adjustments on the balances for these cities. Bob Brown noted that year end numbers should be used because final payments will be dispersed between now and then.

F. Adjustments to the 1999 Construction Needs (pages 31-45)

Marshall Johnston began his review of this item by indicating he received a letter from the City of Maple Grove with regards to bridge adjustments. He noted that they had two bridges approved for construction needs adjustments and two denied. The bridge adjustments that were denied were for two ped bridges, one being a free-standing bridge over a freeway. Ken Ashfeld from Maple Grove indicated that their city views these pedestrian bridge installations as providing multi modal transportation systems. Ken further stated that a new bridge with sidewalk qualifies for after-the-fact needs. However, an existing bridge with a new ped bridge does not

qualify. And finally, modifying an existing bridge to add sidewalk qualifies for after-the-fact needs. Marshall Johnston commented that ped bridges have never been included in needs, only sidewalks. Secondly, that bridges over trunk highways have never been included in needs because they are owned and the responsibility of Mn/DOT. David Jessup asked if this was a bad policy, and also, where did this historical practice come from. Marshall Johnston responded that he thought it was established back in the 1960s. He also mentioned that bridges do receive needs for mileage. Patti Loken commented that the situation, paying for a pedestrian bridge, is similar to paying for off-system expenditures. Bob Brown commented that since the original establishment of this policy in the 1960s, the funding environment for projects has changed. Ken Ashfeld emphasized that his situation is with regards to needs within a State Aid corridor, not a highway corridor. Rick Kjonnas commented that Ken Ashfeld's logic is good; however, past history of the Screening Board is to also keep things simple. Discussion occurred amongst the Board with regards to cost participation policies on cooperative agreement projects and county projects. Also, questions arose with regards to how determinations are made whether nonadjacent pedestrian facilities improve an MSA corridor. David Jessup asked what options the Screening Board had to consider this item. Mark Burch suggested that the Needs Study Subcommittee review this matter at their next meeting. Marshall Johnston concluded this discussion by indicating the county has after-the-fact needs for new and reconstructed bridges.

Marshall Johnston finished the discussion on this item by noting the information contained on pages 39-45.

G. Construction Needs Recommendation to the Commissioner (page 46)

Marshall Johnston noted that page 46 contains a copy of the letter that needs to be sent to the Commissioner of Transportation and signed by all members of the Screening Board.

H. Adjusted Construction Needs Recommendation (handout)

Marshall Johnston reminded everyone the Board needs to determine what needs should be used for allocation purposes.

I. Theoretical 2002 Total Apportionment (handout)

Marshall Johnston reviewed the information in the booklet, and also the handout.

J. 2001 to 2002 Total Theoretical Apportionment Comparison (handout)

Marshall indicated that this information had been reviewed previously.

K. Pedestrian and T.H. Bridge Needs (handout)

Marshall Johnston stated that this information had already been reviewed.

L. Proposed Street Lighting Needs Resolution (page 57)

Marshall Johnston reviewed the suggested wording for the street lighting needs that was contained on page 57 of the booklet. David Sonnenberg commented that he wanted to make certain that deficient means deficient in width, structure and other deficiencies, and not just deficient in street lighting needs. Marshall Johnston indicated he will redraft the language for Thursday's meeting. He also noted that the grading date, plus 20 years, determines the deficiency date. The consensus of the Screening Board was to clarify the language on page 57 to clarify the intent as suggested by David Sonnenberg.

M. Duties of the Subcommittee of the Municipal Screening Board (page 58)

Marshall Johnston reviewed the information of the various committees.

N. Certification of MSAS System as Complete (pages 59-60)

Marshall Johnston reviewed the information contained within the book.

O. General Fund Advances (pages 61-63)

Marshall Johnston reviewed the information contained within the book.

P. Research Account Motion (page 64)

Marshall Johnston reviewed the information contained on this page and indicated that each year the Screening Board may recommend to the Commissioner a sum of money that the Commissioner shall set aside from the Municipal State Aid Street Fund and credit to a research account. The amount so recommended shall not exceed one-half of one percent of the preceding apportionment.

Q. Past History of the Administrative Account (page 65)

Marshall Johnston reviewed the information contained on page 65.

R. Disaster Account (page 66)

Marshall Johnston reviewed the new language for the disaster account. The State Legislature lowered the maximum percentage that may be set aside from the MSAS street fund from 5% to 3%.

S. County Highway Turnback Policy (pages 67-68)

Marshall Johnston indicated that this information was for informational purposes only.

T. Current Resolutions of the Municipal Screening Board (pages 69-79)

Marshall Johnston reviewed the information on page 75 and noted that engineering fees were changed from 18 to 20 percent a few years ago, but never changed in this section of the book. Ed Warn questioned the intent of the language for federal projects and other projects. The consensus of the Screening Board was that the information on pages 38 and 75 reflected past intent of the Board, and that changing engineering fees from 18 percent to 20 percent should have a resolution authorizing the amendment.

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

IV. The Chair requested a motion for adjournment until 8:30 a.m. Thursday morning, when formal action will be taken on the items before the Board.

Motion by Steve Koehler and seconded by Mel Odens. Motion carried without opposition.

THURSDAY MORNING SESSION

The Committee reconvened at 8:30 a.m. on Thursday, October 25, 2001.

David Jessup reminded everyone that there is a joint city/county Screening Board meeting at 10:00 a.m. following the Municipal Screening Board meeting to discuss items of common interest.

I. Formal Actions by the 2001 Fall Screening Board.

1. Population Apportionment

Motion by Mark Burch and seconded by Steve Koehler that the 2002 allocations for the cities of Dayton and St. Joseph be computed and set aside in a special account until their disputes are resolved. If the disputes show the population to be below 4,900, the dollars would then be put back into the normal distribution for 2003. If the disputes show them to be above 4,900, the dollars would be put back into their individual accounts. Subsequent discussion clarified that the intent of the motion is to have the 2002 allocations for both cities based on a population of 5,000 even if it is determined that the population of either one of these cities is over 5,000. Ed Warn moved to amend the motion to include a sunset date of the Spring Screening Board Meeting so that the Screening Board could reconsider this action if needed. The amendment was seconded by David Sonnenberg. Upon a vote of the amendment, the amendment passed without opposition. David Jessup then asked for a vote on the motion. Motion carried without opposition.

2. Needs and Apportionment Data (pages 16-46, handout)

   Motion by David Sonnenberg and seconded by David Salo to approve the letter on page 46 to the Commissioner of Transportation regarding the 2002 apportionment. The Board agreed that the intent of the motion is to use the best available data by State Aid staff, and that the motion also approved adjusted construction needs. Motion carried without opposition.

   Marshall Johnston indicated he would like direction on how, or if it's necessary to review updated needs information as it becomes available. He estimated that most of the updated information will be available in December. The Board directed Mn/DOT to distribute the allocation based upon the best available information that will be used for the needs update. David Salo recommended that the Board consider using only the information contained in the book, and not use information as it becomes available to adjust the needs. David Jessup asked if there was support for David Salo' s recommendation. No support was offered.

3. Fund Balances

   Motion by David Sonnenberg and seconded by Dan Edwards that the Unencumbered Construction Funds Subcommittee review the fund balances of all cities, with particular attention to cities with three and four times their fund balance, and provide recommendations for addressing large balances. Larry Koshak asked that the Committee realize in reviewing the fund balances that small cities need to save up their construction allotments before they can typically do a large project. Motion carried without opposition.

   Marshall Johnston asked that the intent of the motion is to use year end fund balances, not mid year. The Screening Board members agreed.

4. Research Account (page 64)

   Motion by Ed Warn and seconded by David Sonnenberg that the Screening Board recommend to the Commissioner that an amount of $542,790 (not to exceed 1/2 of 1% of the 2001 MSAS Apportionment sum of $108,558,171) shall be set aside from the 2002 Apportionment Fund and be credited to the research account. Motion carried without opposition.

5. Street Lighting (page 57)

   Motion by David Sonnenberg and seconded by David Salo that all segments considered deficient for needs purposes and receiving complete needs shall receive street lighting needs at the current unit cost per mile. The motion is intended to direct State Aid staff to correct the language on page 57 and clarify the Spring Screening Board minutes contained within the booklet. Motion carried without opposition.

6. Pedestrian Bridges and MSAS Bridges Over Trunk Highways

Motion by Ed Warn and seconded by Mark Burch to have the Needs Study Subcommittee examine local participation, and the possibility of a needs adjustment, for bridge reconstruction of MSAS routes over trunk highways in view of Maple Grove's situation, including pedestrian bridge construction. Motion carried with 10 in support and 2 against (Larry Koshak and Steve Koehler voted no).

II. Any other Items the Representatives would like to bring up

Marshall Johnston was directed to take care of the housekeeping issues that were identified in the book. The Screening Board referenced page 75 and instructed Marshall to have the engineering fees remain at 18% and not be adjusted to 20% as earlier discussed.

III. Comments by Julie Skallman

Julie said she had none to report.

IV. The Chair thanked Terry Wotzka, Chair of the Needs Study Subcommittee, and Brian Bachmeier, Chair of the Unencumbered Construction Fund Subcommittee.

The Chair thanked the past Chairs for their time and appearance at the meeting – Brian Bachmeier, John Rodeberg, and Ken Ashfeld.

The Chair thanked the Screening Board and especially the Representatives who will be leaving the Board – David Salo, Steven Koehler, and Mark Burch, and also to Larry Koshak who will be retiring.

The Chair gave special thanks to the State Aid staff for all their hard work

David Jessup thanked the Board for the opportunity to serve as the Chair.

Tom Drake then thanked David Jessup as Chair of the Screening Board for all of his hard work.

V. The time and place of the Spring 2002 Screening Board meeting has not yet been determined.

VI. Adjournment

Motion by Steve Koehler and seconded by Larry Koshak for adjournment. Motion carried without opposition.

Respectfully submitted,

Lee Gustafson, P.E.
MSA Screening Board Secretary
City Engineer, Minnetonka

April 18, 2002

To the Members of the 2002 Municipal Screening Board:

RE: Minutes of the Needs Study Subcommittee

The Needs Study Subcommittee (NSS) met at the Mn/DOT Central Office in St. Paul on Thursday, April 11, 2002. Members of the subcommittee present were David Salo (Chair), Tim Schoonhoven and Steve Koehler. Others present were Marshall Johnston, Mark Channer, Julee Puffer and Rick Kjonaas from the Division of State Aid and Dave Conkel, the State Aid Bridge Engineer. The meeting was called to order by Chairman Salo at 10:30 A.M.

The first order of business for the NSS was to review the Unit Price Study. The subcommittee's recommended unit prices to be used in the 2002 needs computation are shown on the attached summary sheet. Pertinent discussion relative to the unit price study was as follows:

Traffic Signals: Tim Schoonhoven suggested that the $30,000 per mile for signal needs on segments with less than 5,000 ADT was too low and not reflective of the actual cost to construct the needed signalization. Marshall Johnston will attempt to determine the reasoning for the Projected Traffic Split currently used to calculate needs which was implemented in 1989. The NSS recommended the MSAS Needs Unit present a study at the spring 2002 Screening Board meeting on the effects of changing the range in the Needs to $60,000, $90,000, $120,000.

Bridges: Tim Schoonhoven suggested that a substantial portion of the actual cost to construct MSAS bridges is usually funded by Federal and/or sources other than MSAS. Therefore, the unit price used for needs is too high, as it is not reflective of the actual amount of MSAS and local funds that are expended on bridge construction. It was suggested that a 15 year after-the-fact needs adjustment may be a better way to handle Bridge Needs. After considerable discussion, the NSS recommended that the Bridge Needs remain at $68.00 per square foot for all lengths.

The subcommittee then discussed other items referred to the NSS by the Municipal Screening Board as follows:

1. *Drainage Issues*: After a lengthy discussion, the NSS decided to not recommend a needs adjustment for retention or detention ponds at this time. The NSS suggested that it would be prudent to wait to study the cost and effect associated with the new NPDES Phase II Storm Water Rules before a needs adjustment was recommended, and that a future needs adjustment could be tied to the existing storm sewer needs or could be tied to an existing unit cost such as excavation. Everyone agreed it would be difficult to predict future costs at this time and it will also be difficult to estimate after-the-fact needs, as the hydraulics engineer would have to determine the proportion of participation.

2. *MSAS Bridges over Trunk Highways and Interstates*: Dave Conkel stated that these bridges are usually owned by Mn/DOT and that they normally maintain, repair and reconstruct them. Local agencies are usually responsible for any sidewalks and other associated improvements to these bridges. Therefore, the NSS recommends no needs adjustments for these bridges but that the roadway needs continue to be applied to deficient roadway segments after 20 years.

3. *Pedestrian Bridges*: Currently, these types of bridges draw needs for sidewalk construction and removal on deficient roadway segments. Local pedestrian bridges are typically owned by a City, therefore, the NSS Recommends an "After the Fact" Needs adjustment for the local and State Aid costs associated with Ped bridges for 15 years.

Other discussion topics as follows:

1. *Population Status of St. Joseph and Dayton* – Nothing new to report. This has not been resolved by either City.

2. *Design Charts and Bituminous Types* – State Aid is working on revisions to the Design Charts. The goal is to unify City and County charts into one design chart for rural and one for urban. They hope to have the chart completed prior to the June Screening Board meeting for Screening Board comments. If only one rural design chart is used, the NSS recommends using the CSAH unit cost for gravel surfacing on rural segments with projected ADT of less than 150, as gravel surface is not included in the City's Needs Study.

3. *Revising Screening Board Resolutions* – Marshall distributed a handout of the current rules with suggested editing and additions. The editing and additions are minor in nature and are intended to update and clarify the meaning of the various resolutions. Chairman Salo suggested that the revised resolutions be handed out to the District Screening Board members at the District meetings for local review and comment and that the representatives come to the Screening Board meeting prepared to comment on the revisions.

The meeting was adjourned at 2:35 P.M.

Respectfully submitted,

Steve Koehler
Secretary of Needs Study Subcommittee

2002 UNIT PRICE RECOMMENDATIONS
USING AVERAGE CONSTRUCTION COST INDEX

Needs Item		2001 Need Prices	Subcommittee Suggested Prices for 2002	Screening Board Recommended Prices For 2002
Grading (Excavation)	Cu. Yd.	$3.40	**$3.67**	
Aggregate Shoulders #2221	Ton	11.50	**13.00**	
Curb and Gutter Removal	Lin.Ft.	2.30	**2.52**	
Sidewalk Removal	Sq. Yd.	5.35	**5.35**	
Concrete Pavement Removal	Sq. Yd.	5.25	**5.25**	
Tree Removal	Unit	210.00	**220.00**	
Class 5 Base #2211	Ton	6.70	**7.05**	
Bituminous Base #2331	Ton	30.00	**30.00**	
Bituminous Surface #2331	Ton	30.00	**30.00**	
Bituminous Surface #2341	Ton	30.00	**30.00**	
Bituminous Surface #2361	Ton	30.00	**30.00**	
Curb and Gutter Construction	Lin.Ft.	7.70	**7.70**	
Sidewalk Construction	Sq. Yd.	22.00	**22.50**	
Storm Sewer Adjustment	Mile	80,400	**81,600**	
Storm Sewer	Mile	248,000	**254,200**	
Special Drainage - Rural	Mile	37,400	**37,400**	
Street Lighting	Mile	78,000	**78,000**	
Traffic Signals	Per Sig	120,000	**120,000**	
Signal Needs Based On Projected Traffic				
Projected Traffic Percentage	X Unit Price =	Needs Per Mile		
0 - 4,999 .25	$120,000 =	$30,000	**$60,000**	
5,000 - 9,999 .50	120,000 =	60,000	**90,000**	
10,000 & Over 1.00	120,000 =	120,000	**120,000**	
Right of Way (Needs Only)	Acre	90,000	**90,000**	
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	**120,000**	
Signals & Gate (Multiple Track - High & Low Speed)	Unit	160,000	**160,000**	
Concrete Xing Material(Per Track	Lin.Ft.	900	**1,000**	
Bridges				
0 to 149 Ft.	Sq. Ft.	68.00	**68.00**	
150 to 499 Ft.	Sq. Ft.	68.00	**68.00**	
500 Ft. and over	Sq. Ft.	68.00	**68.00**	
Railroad Bridges over Highways				
Number of Tracks - 1	Lin.Ft.	9,000	**9,000**	
Additional Track (each)	Lin.Ft.	7,500	**7,500**	

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 2001 was $21,541,141.
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 $8660 in maintenance needs per mile.

EXISTING FACILITIES ONLY

	2001 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	$1,450	$2,400	**$1,450**	**$2,400**		
Parking Lane Per Mile	1,450	1,450	**1,450**	**1,450**		
Median Strip Per Mile	480	950	**480**	**950**		
Storm Sewer Per Mile	480	480	**480**	**480**		
Per Traffic Signal	480	480	**480**	**480**		
Normal M.S.A.S. Streets Minimum Allowance Per Mile	4,800	4,800	**4,800**	**4,800**		

"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

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A HISTORY OF THE ANNUAL MAINTENANCE NEEDS COSTS

(COMPUTED ON EXISTING MILEAGE ONLY)

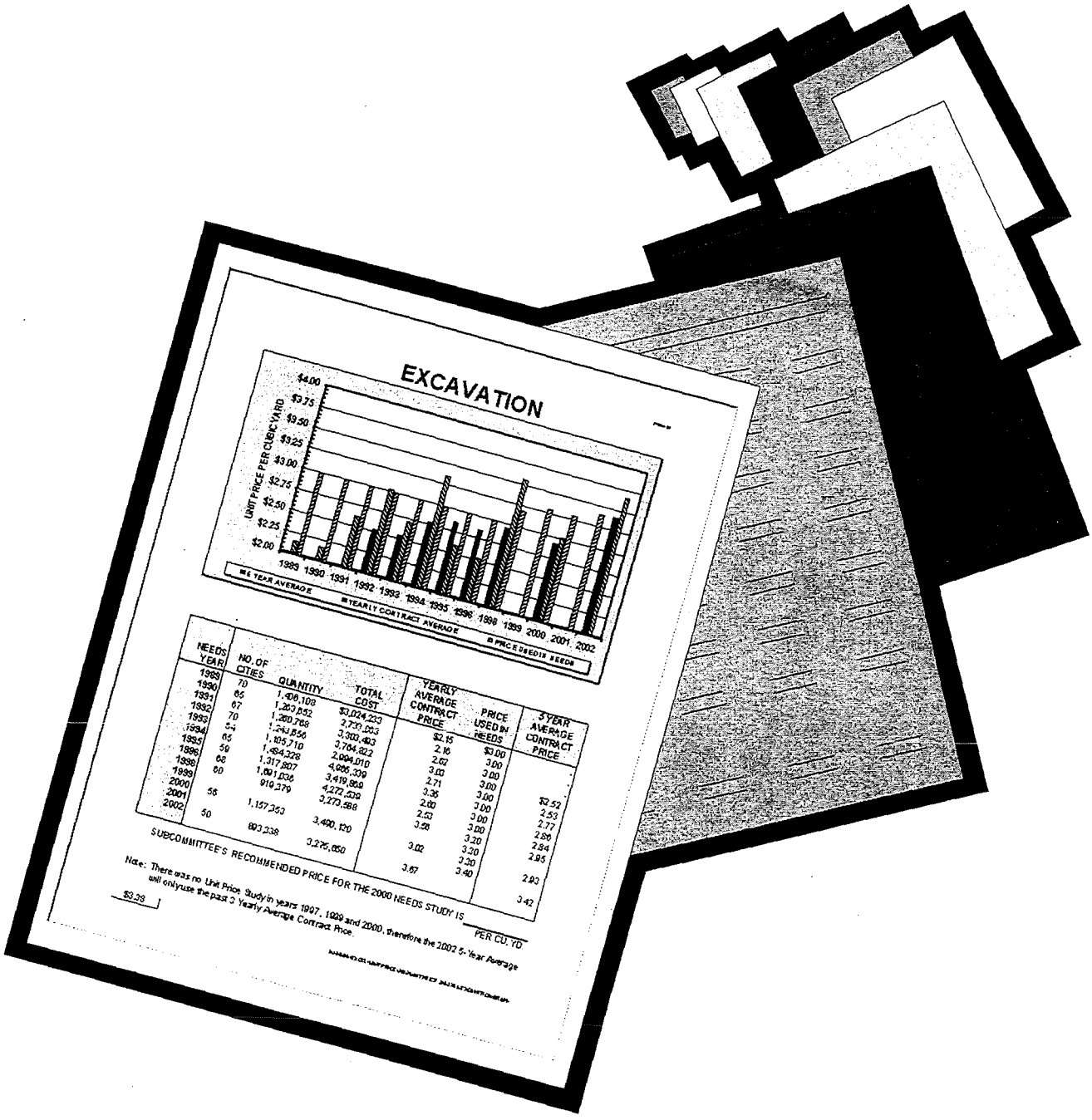
4-Apr-02

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												

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



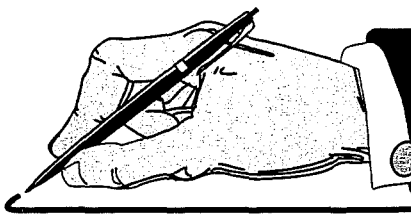
NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5 YEAR AVERAGE CONTRACT PRICE
1989				$2.15	$3.00	
1990	70	1,400,108	$3,024,233	2.16	3.00	
1991	65	1,263,852	2,739,093	2.62	3.00	
1992	67	1,260,768	3,303,493	3.00	3.00	
1993	70	1,243,858	3,704,922	2.71	3.00	
1994	64	1,105,710	2,994,010	3.35	3.00	
1995	65	1,454,226	4,955,339	2.80	3.00	$2.52
1996	59	1,317,807	3,419,960	2.53	3.00	2.53
1998	68	1,691,036	4,277,209	3.58	3.00	2.77
1999	60	919,379	3,273,588		3.00	2.86
2000				3.02	3.20	2.84
2001	56	1,157,353	3,490,120		3.20	2.95
2002				3.67	3.40	
	50	893,238	3,276,850			2.93
						3.42

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2000 NEEDS STUDY IS _____ PER CU. YD

Note: There was no Unit Price Study in years 1997, 1999 and 2000, therefore the 2002 5- Year Average will only use the past 3 Yearly Average Contract Price.

$3.29

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 received by the State Aid Division in 2001. There were 112 on system projects and 49 off system projects let in 2001 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 2002 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 2003 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 2001 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 2001 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 2001 needs study are found in the Screening Board resolutions included in this booklet.

25 YEAR CONSTRUCTION NEEDS
FOR EACH INDIVIDUAL CONSTRUCTION ITEM

04-Apr-02

ITEM	2000 APPORTIONMENT NEEDS COST	2001 APPORTIONMENT NEEDS COST	DIFFERENCE	2001 % OF THE TOTAL
Grading	$147,387,078	$157,951,428	$10,564,350	6.07%
Special Drainage	6,023,154	5,415,248	(607,906)	0.25%
Storm Sewer Adjustment	56,127,168	58,275,528	2,148,360	2.31%
Storm Sewer Construction	210,027,230	217,052,080	7,024,850	8.64%
Curb & Gutter Removal	22,742,724	24,318,417	1,575,693	0.94%
Sidewalk Removal	18,152,363	19,384,143	1,231,780	0.75%
Pavement Removal	48,362,205	50,798,708	2,436,503	1.99%
Tree removal	6,962,220	9,029,160	2,066,940	0.29%
SUBTOTAL GRADING	**$515,784,142**	**$542,224,712**	**$26,440,570**	**22.31%**
Gravel Base #2211	$262,799,878	$276,708,461	13,908,583	11.39%
Bituminous Base #2331	107,222,205	145,827,570	38,605,365	6.00%
SUBTOTAL BASE	**$370,022,083**	**$422,536,031**	**$52,513,948**	**17.39%**
Bituminous Surface #2331	$2,878,837	$3,244,920	$366,083	0.13%
Bituminous Surface #2341	159,572,951	188,244,330	28,671,379	7.75%
Bituminous Surface #2361	24,270,689	22,943,910	(1,326,779)	0.94%
Surface Widening	1,162,636	1,268,880	106,244	0.05%
SUBTOTAL SURFACE	**$187,885,113**	**$215,702,040**	**$27,816,927**	**8.88%**
Gravel Shoulders #2221	$1,714,493	$1,835,360	$120,867	0.08%
SUBTOTAL SHOULDERS	**$1,714,493**	**$1,835,360**	**$120,867**	**0.08%**
Curb and Gutter	$132,880,987	$136,194,186	$3,313,199	5.60%
Sidewalk	176,747,885	186,325,876	9,577,991	7.67%
Traffic Signals	135,357,367	164,541,600	29,184,233	6.77%
Street Lighting	146,790,500	138,201,180	(8,589,320)	5.69%
Retaining Walls	15,650,379	16,139,977	489,598	0.66%
SUBTOTAL MISCELLANEOUS	**$607,427,118**	**$641,402,819**	**$33,975,701**	**26.40%**
TOTAL ROADWAY	**$1,682,832,949**	**$1,823,700,962**	**$140,868,013**	**75.05%**
Bridge	$123,859,056	$135,987,544	$12,128,488	5.60%
Railroad Crossings	48,992,000	47,333,100	(1,658,900)	1.95%
Maintenance	19,507,294	21,541,749	2,034,455	0.89%
Engineering	334,023,275	401,404,287	67,381,012	16.52%
SUBTOTAL OTHERS	**$526,381,625**	**$606,266,680**	**$79,885,055**	**24.95%**
TOTAL	**$2,209,214,574**	**$2,429,967,642**	**$220,753,068**	**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		
Chisholm	4	1,446	$8,230	$5.69
Cloquet	1	7,743	25,060	3.24
Duluth	6	21,787	150,444	6.91
Grand Rapids	1	240	4,560	19.00
Hibbing	1	9,310	41,895	4.50
International Falls	1	6,470	29,115	4.50
District 1 Total	**14**	**46,996**	**$259,304**	**$5.52**
		District 2		
Bemidji	3	24,157	$66,760	$2.76
Crookston	1	1,133	4,532	4.00
District 2 Total	**4**	**25,290**	**$71,292**	**$2.82**
		District 3		
Cambridge	3	6,459	$51,672	$8.00
Sartell	1	285,994	428,991	1.50
District 3 Total	**4**	**292,453**	**$480,663**	**$1.64**
		District 4		
Alexandria	1	67	$350	$5.25
Detroit Lakes	1	35,268	111,342	3.16
Morris	1	3,999	10,997	2.75
District 4 Total	**3**	**39,334**	**$122,689**	**$3.12**
		Metro West		
Andover	2	7,249	$33,708	$4.65
Anoka	1	970	8,662	8.93
Blaine	4	61,454	271,852	4.42
Bloomington	4	5,041	38,417	7.62
Brooklyn Center	1	1,585	7,529	4.75
Brooklyn Park	1	1,585	7,529	4.75
Champlin	1	4,594	25,772	5.61
Chaska	1	20,600	116,596	5.66
Corcoran	1	13,055	117,495	9.00
Crystal	1	7,897	58,043	7.35
Edina	3	80,579	192,853	2.39
Ham Lake	1	1,029	5,470	5.32
Hopkins	1	4,750	43,463	9.15
Minneapolis	4	6,112	54,549	8.92
Richfield	1	4,745	35,588	7.50
Metro West Total	**27**	**221,245**	**$1,017,526**	**$4.60**

MSAS UNIT PRICE STUDY
EXCAVATION - CUBIC YARD

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 6				
Albert Lea	1	771	$5,012	$6.50
Austin	4	7,511	43,487	5.79
Owatonna	1	1,128	6,317	5.60
Rochester	2	5,270	37,944	7.20
District 6 Total	**8**	**14,680**	**$92,760**	**$6.32**
District 7				
Faribault	1	7,781	$35,012	$4.50
New Ulm	1	1,802	5,857	3.25
Waseca	1	3,220	17,388	5.40
District 7 Total	**3**	**12,803**	**$58,257**	**$4.55**
District 8				
Hutchinson	2	45,901	$140,935	$3.07
Montevideo	2	13,564	$55,612	4.10
Willmar	1	3,400	17,850	5.25
District 8 Total	**5**	**62,865**	**$214,397**	**$3.41**
Metro East				
Apple Valley	1	5,885	$41,195	$7.00
Farmington	1	13,003	65,015	5.00
Forest Lake	1	27,400	172,505	6.30
Inver Grove Heights	2	16,979	95,410	5.62
Lake Elmo	2	25,394	110,327	4.34
Oakdale	1	33,518	183,204	5.47
Roseville	2	21,835	107,767	4.94
Shoreview	1	6,800	33,660	4.95
South St Paul	1	100	1,000	10.00
Stillwater	1	2,500	8,050	3.22
White Bear Lake	2	18,239	74,780	4.10
Woodbury	2	6,019	65,850	10.94
Metro East Total	**17**	**177,672**	**$958,763**	**$5.40**
District Totals				
District 1 Total	14	46,996	$259,304	$5.52
District 2 Total	4	25,290	71,292	2.82
District 3 Total	4	292,453	480,663	1.64
District 4 Total	3	39,334	122,689	3.12
Metro West Total	27	221,245	1,017,526	4.60
District 6 Total	8	14,680	92,760	6.32
District 7 Total	3	12,803	58,257	4.55
District 8 Total	5	62,865	214,397	3.41
Metro East Total	17	177,672	958,763	5.40
STATE TOTAL	**85**	**893,338**	**$3,275,650**	**$3.67**

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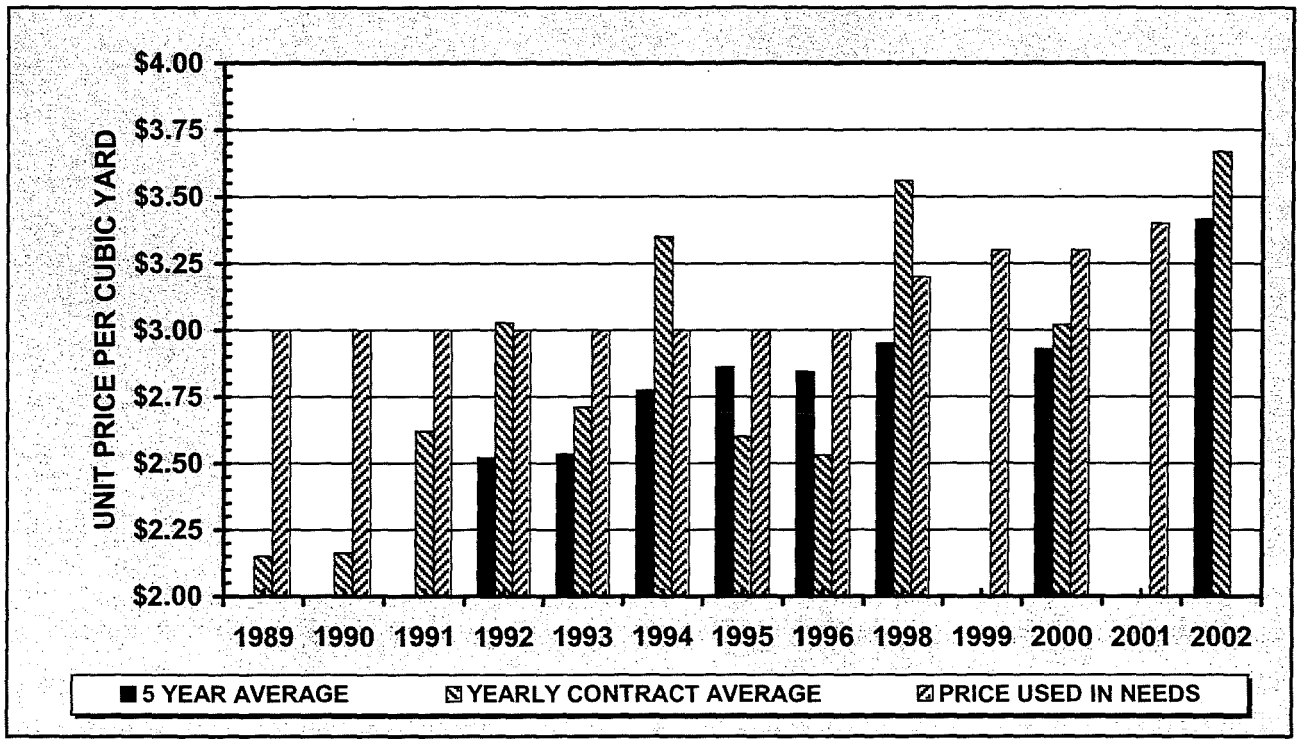
EXCAVATION



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		3.42

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS **$3.67 PER CU. YD.**

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$3.38

MSAS UNIT PRICE STUDY
AGGREGATE SHOULDERS - TON

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 4				
Andover	1	331	$3,369	$10.18
Corcoran	1	1,330	19,950	15.00
Metro West Total	**2**	**1,661**	**$23,319**	**$14.04**
District 8				
Marshall	1	40	$600	$15.00
District 8 Total	**1**	**40**	**$600**	**$15.00**
Metro East				
Farmington	1	1,250	$16,875	$13.50
Lake Elmo	1	214	2,568	12.00
Stillwater	1	100	1,560	15.60
Woodbury	1	100	1,500	15.00
Metro East Total	**4**	**1,664**	**$22,503**	**$13.52**
District Totals				
Metro West Total	2	1,661	$23,319	$14.04
District 8 Total	1	40	600	15.00
Metro East Total	4	1,664	22,503	13.52
STATE TOTAL	**7**	**3,365**	**$46,422**	**$13.80**

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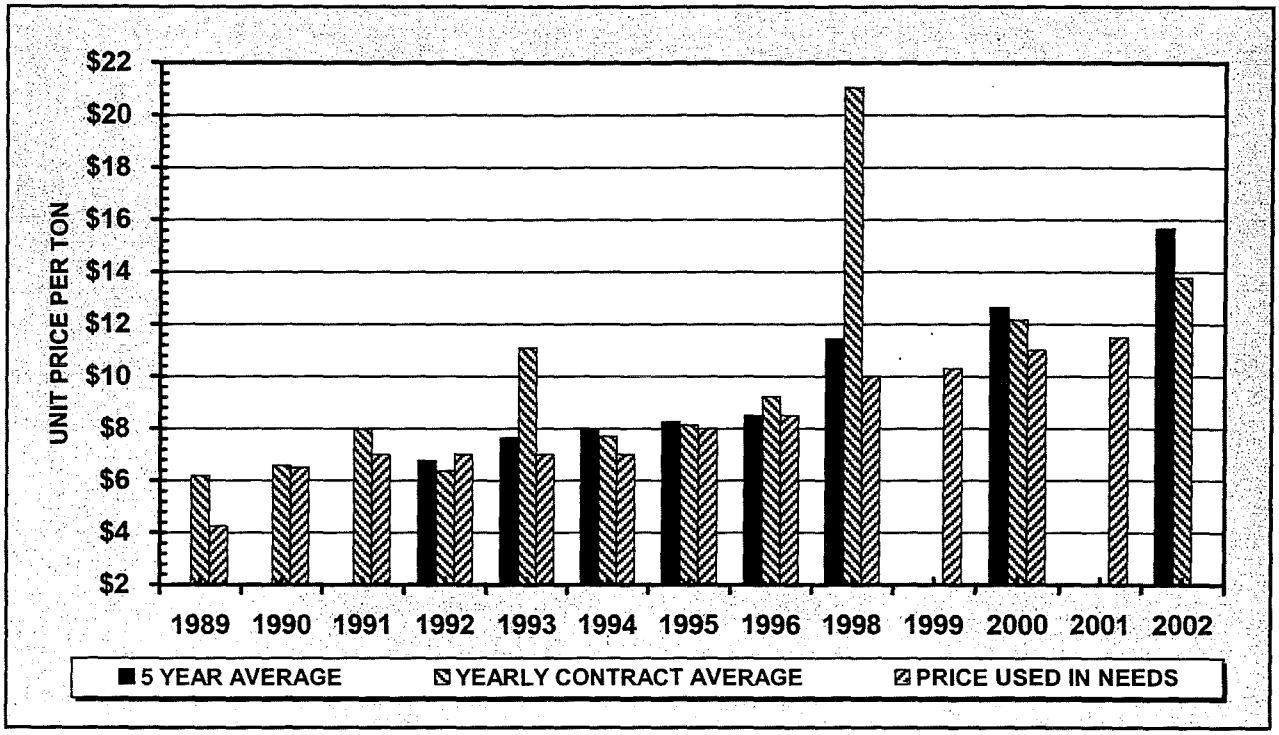
23-Apr-02

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		15.67

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $13.00 PER TON

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$13.65

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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				
Chisholm	3	1,391	$2,087	$1.50
Cloquet	1	394	788	2.00
Duluth	5	8,729	10,694	1.23
Grand Rapids	1	161	483	3.00
Hibbing	1	69	345	5.00
International Falls	1	164	656	4.00
District 1 Total	**12**	**10,908**	**$15,053**	**$1.38**
District 2				
Bemidji	2	5,780	$20,230	$3.50
Crookston	1	497	994	2.00
Thief River Falls	1	810	2,430	3.00
District 2 Total	**4**	**7,087**	**$23,654**	**$3.34**
District 3 Total				
Cambridge	1	8,493	$12,740	$1.50
District 3 Total	**1**	**8,493**	**$12,740**	**$1.50**
District 4				
Alexandria	2	270	$540	$2.00
Detroit Lakes	1	30	144	4.80
District 4 Total	**3**	**300**	**$684**	**$2.28**
Metro West				
Andover	1	902	$2,796	$3.10
Anoka	1	2,108	2,382	1.13
Blaine	5	5,915	37,652	6.37
Bloomington	4	5,067	16,640	3.28
Brooklyn Center	1	150	300	2.00
Brooklyn Park	2	3,650	10,450	2.86
Champlin	4	4,003	7,416	1.85
Chaska	1	1,900	3,800	2.00
Crystal	1	514	987	1.92
Edina	3	8,463	19,342	2.29
Hopkins	1	3,870	14,126	3.65
Minneapolis	4	5,659	12,710	2.25
Richfield	1	6,892	6,892	1.00
Metro West Total	**29**	**49,093**	**$135,493**	**$2.76**

MSAS UNIT PRICE STUDY
CURB & GUTTER REMOVAL - LINEAR FEET

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 6		
Albert Lea	2	170	$1,020	$6.00
Austin	4	3,546	4,997	1.41
Rochester	2	2,175	10,440	4.80
District 6 Total	**8**	**5,891**	**$16,457**	**$2.79**
		District 7		
Faribault	1	20	$200	$10.00
New Ulm	1	8	200	25.00
Waseca	2	1,797	5,391	3.00
District 7 Total	**4**	**1,825**	**$5,791**	**$3.17**
		District 8		
Hutchinson	2	453	$1,644	$3.63
Montevideo	2	5,495	$13,738	2.50
Willmar	2	2,460	6,525	2.65
District 8 Total	**6**	**8,408**	**$21,907**	**$2.61**
		Metro East		
Apple Valley	2	5,750	$15,813	$2.75
Inver Grove Heights	2	3,337	7,119	2.13
Oakdale	1	200	600	3.00
Roseville	2	80	88	1.10
Saint Paul	1	30	120	4.00
South St Paul	1	50	300	6.00
White Bear Lake	2	1,252	2,504	2.00
Woodbury	1	370	1,850	5.00
Metro East Total	**12**	**11,069**	**$28,394**	**$2.57**
		District Totals		
District 1 Total	12	10,908	$15,053	$1.38
District 2 Total	4	7,087	23,654	3.34
District 3 Total	1	8,493	12,740	1.50
District 4 Total	3	300	684	2.28
Metro West Total	29	49,093	135,493	2.76
District 6 Total	8	5,891	16,457	2.79
District 7 Total	4	1,825	5,791	3.17
District 8 Total	6	8,408	21,907	2.61
Metro East Total	12	11,069	28,394	2.57
STATE TOTAL	**79**	**103,074**	**$260,173**	**$2.52**

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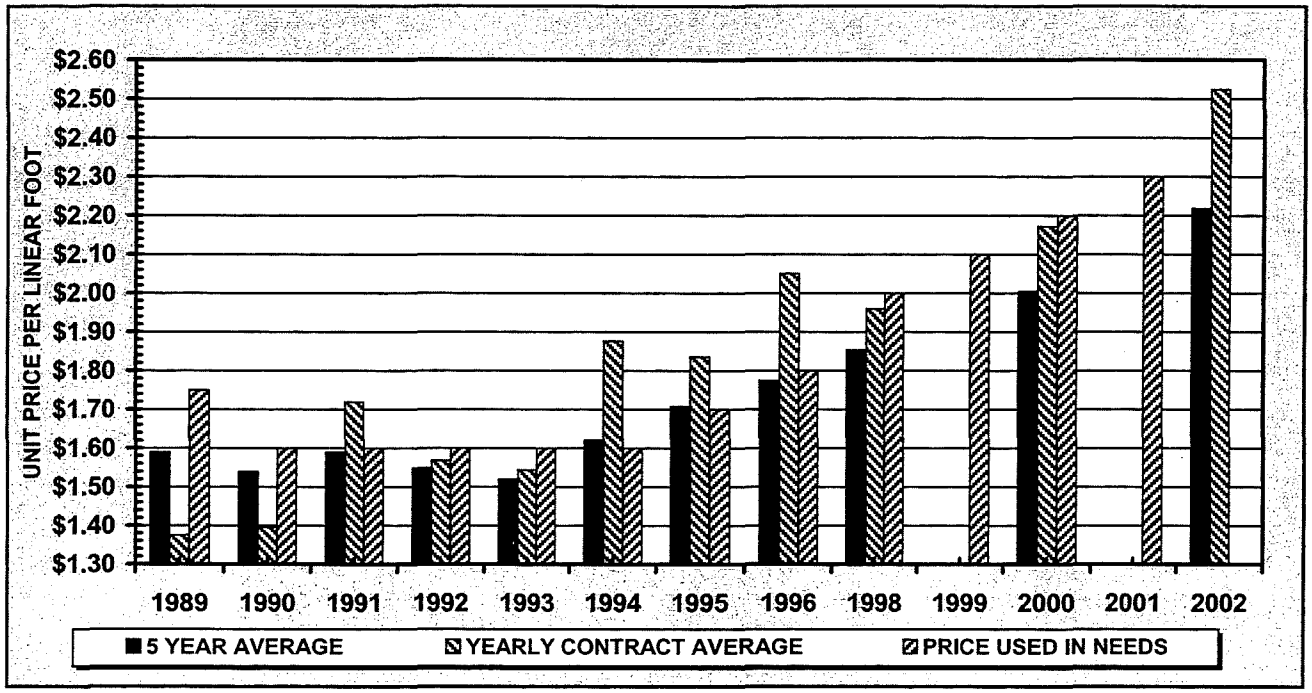
CURB & GUTTER REMOVAL #2104



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		2.22

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $2.52 PER LIN. FT.

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$2.18

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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		
Chisholm	4	1,702	$8,795	$5.17
Cloquet	1	1,156	5,200	4.50
Duluth	6	3,629	8,985	2.48
Grand Rapids	1	217	2,925	13.50
International Falls	1	1,531	10,331	6.75
District 1 Total	**13**	**8,234**	**36,236**	**$4.40**
		District 2		
Bemidji	2	2,627	$12,087	$4.60
Crookston	1	546	2,950	5.40
Thief River Falls	1	18	180	10.00
District 2 Total	**4**	**3,191**	**$15,217**	**$4.77**
		District 3 Total		
Cambridge	3	5,760	$16,338	$2.84
District 3 Total	**3**	**5,760**	**$16,338**	**$2.84**
		District 4		
Alexandria	2	213	$440	$2.06
Detroit Lakes	1	7	120	18.00
District 4 Total	**3**	**220**	**$560**	**$2.55**
		Metro West		
Bloomington	4	4,000	$19,137	$4.78
Brooklyn Center	1	165	830	5.03
Brooklyn Park	2	384	2,758	7.18
Edina	3	2,937	13,510	4.60
Minneapolis	4	4,060	26,579	6.55
Richfield	1	3,860	23,160	6.00
Metro West Total	**15**	**15,406**	**$85,974**	**$5.58**
		District 6		
Albert Lea	1	970	$8,734	$9.00
Austin	4	1,103	5,813	5.27
Rochester	2	3,510	2,106	0.60
District 6 Total	**7**	**5,583**	**$16,653**	**$2.98**

MSAS UNIT PRICE STUDY
SIDEWALK REMOVAL - SQUARE YARD

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 7				
Waseca	1	412	$2,678	$6.50
District 7 Total	**1**	**412**	**$2,678**	**$6.50**
District 8				
Montevideo	2	650	$4,092	$6.30
Willmar	1	160	864	5.40
District 8 Total	**3**	**810**	**$4,956**	**$6.12**
Metro East				
Apple Valley	2	128	$575	$4.49
Inver Grove Heights	1	377	1,755	4.66
Roseville	1	9	44	4.95
Saint Paul	1	1,552	6,208	4.00
White Bear Lake	2	754	1,508	2.00
Metro East Total	**7**	**2,820**	**$10,090**	**$3.58**
District Totals				
District 1 Total	13	8,234	$36,236	$4.40
District 2 Total	4	3,191	15,217	4.77
District 3 Total	3	5,760	16,338	2.84
District 4 Total	3	220	560	2.55
Metro West Total	15	15,406	85,974	5.58
District 6 Total	7	5,583	16,653	2.98
District 7 Total	1	412	2,678	6.50
District 8 Total	3	810	4,956	6.12
Metro East Total	7	2,820	10,090	3.58
STATE TOTAL	**56**	**42,436**	**$188,701**	**$4.45**

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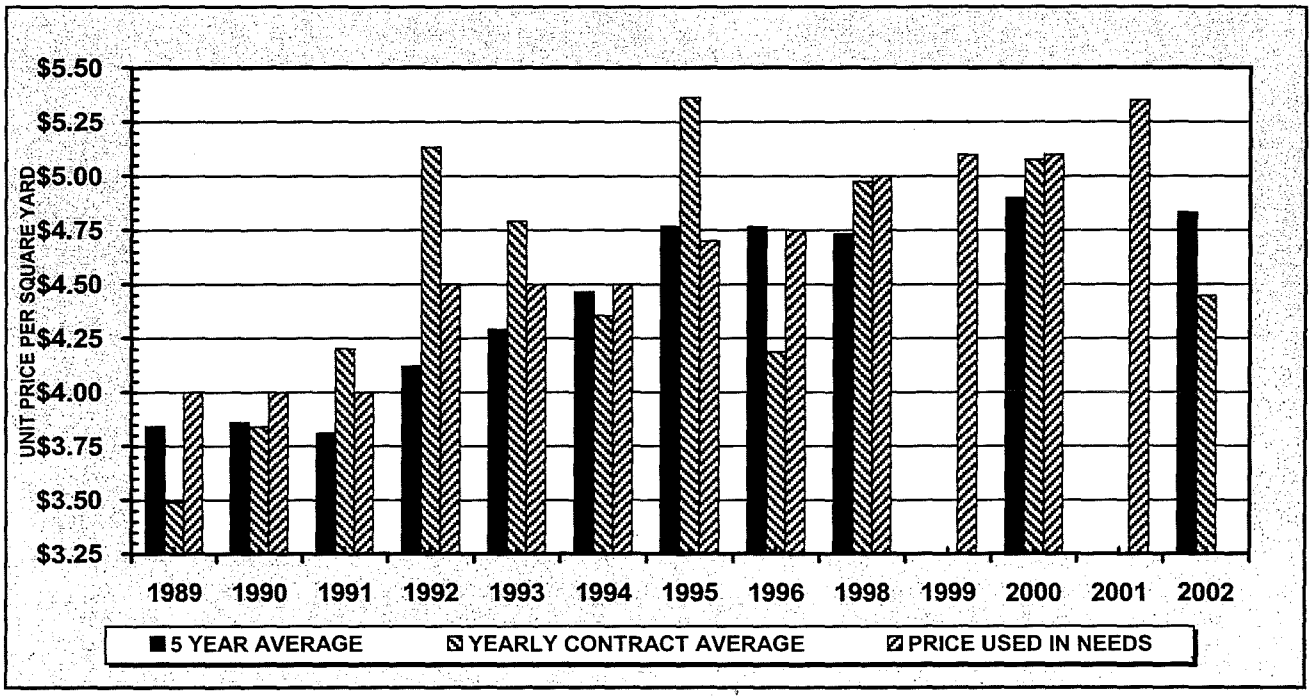
23-Apr-02

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		4.83

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $5.35 PER SQ.YD.

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$4.83

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS SIDEWALK REM. GRAPH

MSAS UNIT PRICE STUDY
CONCRETE PAVEMENT REMOVAL - SQUARE YARD

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Chisholm	3	1,623	$8,502	$5.24
Duluth	5	29,985	85,329	2.85
International Falls	1	368	1,840	5.00
District 1 Total	**9**	**31,976**	**$95,671**	**$2.99**
District 2				
Bemidji	2	14,000	$56,000	$4.00
Crookston	1	35	245	7.00
District 2 Total	**3**	**14,035**	**$56,245**	**$4.01**
District 4				
Alexandria	1	5	$25	$5.00
District 4 Total	**1**	**5**	**$25**	**$5.00**
Metro West				
Anoka	1	546	$2,800	$5.13
Blaine	2	464	2,556	5.51
Edina	1	875	6,037	6.90
Hopkins	1	196	864	4.40
Minneapolis	3	4,704	36,455	7.75
Richfield	1	5,866	43,995	7.50
Metro West Total	**1**	**12,651**	**$92,707**	**$7.33**
District 6				
Albert Lea	1	3,603	$23,960	$6.65
Austin	3	1,861	11,402	6.13
District 6 Total	**4**	**5,464**	**$35,361**	**$6.47**
District 7				
Waseca	1	154	$1,232	$8.00
District 7 Total	**1**	**154**	**$1,232**	**$8.00**

MSAS UNIT PRICE STUDY
CONCRETE PAVEMENT REMOVAL - SQUARE YARD

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		Metro East		
Oakdale	1	10	$15	$1.50
St. Paul	1	623	3,738	6.00
Metro East Total	**2**	**633**	**$3,753**	**$5.93**

		District Totals		
District 1 Total	9	31,976	$95,671	$2.99
District 2 Total	3	14,035	56,245	4.01
District 4 Total	1	5	25	5.00
Metro West Total	1	12,651	92,707	7.33
District 6 Total	4	5,464	35,361	6.47
District 7 Total	1	154	1,232	8.00
Metro East Total	2	633	3,753	5.93

STATE TOTAL	**21**	**64,918**	**$284,994**	**$4.39**

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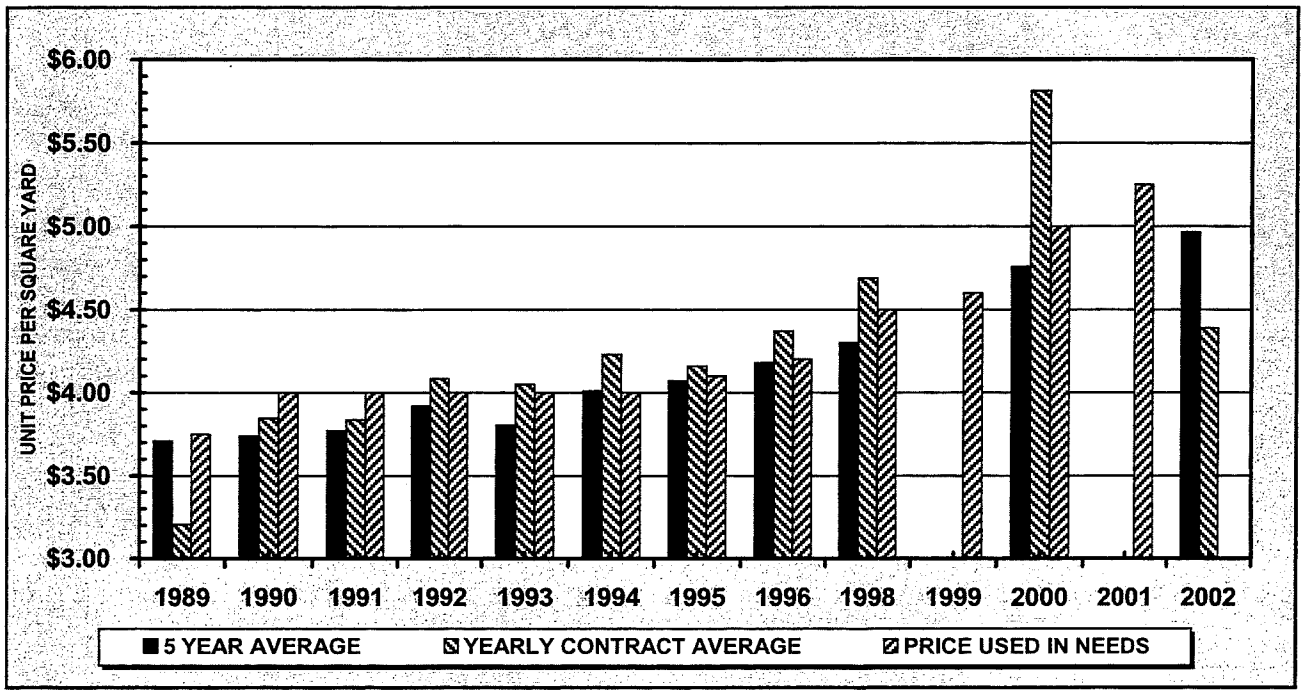
CONCRETE PAVEMENT REMOVAL #2106



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		4.96

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $5.25 PER SQ. YD.

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$4.93

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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	1	6	$1,200	$200.00
International Falls	1	5	500	100.00
District 1 Total	**2**	**11**	**$1,700**	**$154.55**
		District 2		
Thief River Falls	1	4	$400	$100.00
District 2 Total	**1**	**4**	**$400**	**$100.00**
		District 3 Total		
Cambridge	1	28	$4,200	$150.00
District 3 Total	**1**	**28**	**$4,200**	**$150.00**
		District 4		
Detroit Lakes	1	54	$540	$10.00
District 4 Total	**1**	**54**	**$540**	**$10.00**
		Metro West		
Andover	1	10	$1,550	$155.00
Bloomington	2	119	13,700	115.13
Brooklyn Center	1	12	3,300	275.00
Brooklyn Park	1	12	3,300	275.00
Crystal	1	4	1,700	425.00
Edina	3	144	17,850	123.96
Minneapolis	3	52	16,100	309.62
Richfield	1	65	12,675	195.00
Metro West Total	**13**	**418**	**$70,175**	**$167.88**
		District 6		
Albert Lea	1	2	$850	$425.00
District 6 Total	**1**	**2**	**$850**	**$425.00**
		District 7		
Montevideo	1	6	$1,800	$300.00
District 8 Total	**1**	**6**	**$1,800**	**$300.00**
		Metro East		
Inver Grove Heights	2	91	$7,007	$77.00
Lake Elmo	1	14	2,800	200.00
Oakdale	1	5	750	150.00
Roseville	2	9	1,010	112.22
Shoreview	1	10	1,100	110.00
White Bear Lake	1	8	960	120.00
Woodbury	1	2	200	100.00
Metro East Total	**9**	**139**	**$13,827**	**$99.47**

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS TREE REMOVAL - CLEARING

MSAS UNIT PRICE STUDY
TREE REMOVAL - GRUBBING

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Duluth	1	6	$600	$100.00
International Falls	1	5	500	100.00
District 1 Total	**2**	**11**	**$1,100**	**$100.00**
		District 2		
Thief River Falls	1	1	$100	$100.00
District 2 Total	**1**	**1**	**$100**	**$100.00**
		District 3 Total		
Cambridge	1	28	$4,200	$150.00
District 3 Total	**1**	**28**	**$4,200**	**$150.00**
		District 4		
Detroit Lakes	1	54	$7,560	$140.00
District 4 Total	**1**	**54**	**$7,560**	**$140.00**
		Metro West		
Andover	1	10	$1,550	$155.00
Bloomington	2	120	13,300	110.83
Brooklyn Center	1	12	960	80.00
Brooklyn Park	1	12	960	80.00
Crystal	1	4	600	150.00
Edina	3	144	14,400	100.00
Minneapolis	3	53	14,155	267.08
Metro West Total	**12**	**355**	**$45,925**	**$129.37**
		District 6		
Albert Lea	1	2	$400	$200.00
District 6 Total	**1**	**2**	**$400**	**$200.00**
		Metro East		
Inver Grove Heights	2	91	$7,007	$77.00
Lake Elmo	1	12	2,400	200.00
Oakdale	1	5	750	150.00
Roseville	2	9	1,010	112.22
Shoreview	1	10	1,100	110.00
White Bear Lake	1	8	960	120.00
Woodbury	1	2	200	100.00
Metro East Total	**9**	**137**	**$13,427**	**$98.01**

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS TREE REMOVAL - GRUBBING

MSAS UNIT PRICE STUDY
TREE REMOVAL - CLEARING

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District Totals		
District 1 Total	2	11	$1,700	$154.55
District 2 Total	1	4	400	100.00
District 3 Total	1	28	4,200	150.00
District 4 Total	1	54	540	10.00
Metro West Total	13	418	70,175	167.88
District 6 Total	1	2	850	425.00
District 8 Total	1	6	1,800	300.00
Metro East Total	9	139	13,827	99.47
TOTAL CLEARING	**29**	**662**	**$93,492**	**$141.23**

MSAS UNIT PRICE STUDY
TREE REMOVAL - GRUBBING

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District Totals		
District 1 Total	2	11	$1,100	$100.00
District 2 Total	1	1	100	100.00
District 3 Total	1	28	4,200	150.00
District 4 Total	1	54	7,560	140.00
Metro West Total	12	355	45,925	129.37
District 6 Total	1	2	400	200.00
Metro East Total	9	137	13,427	98.01
TOTAL GRUBBING	**27**	**588**	**$72,712**	**$123.66**

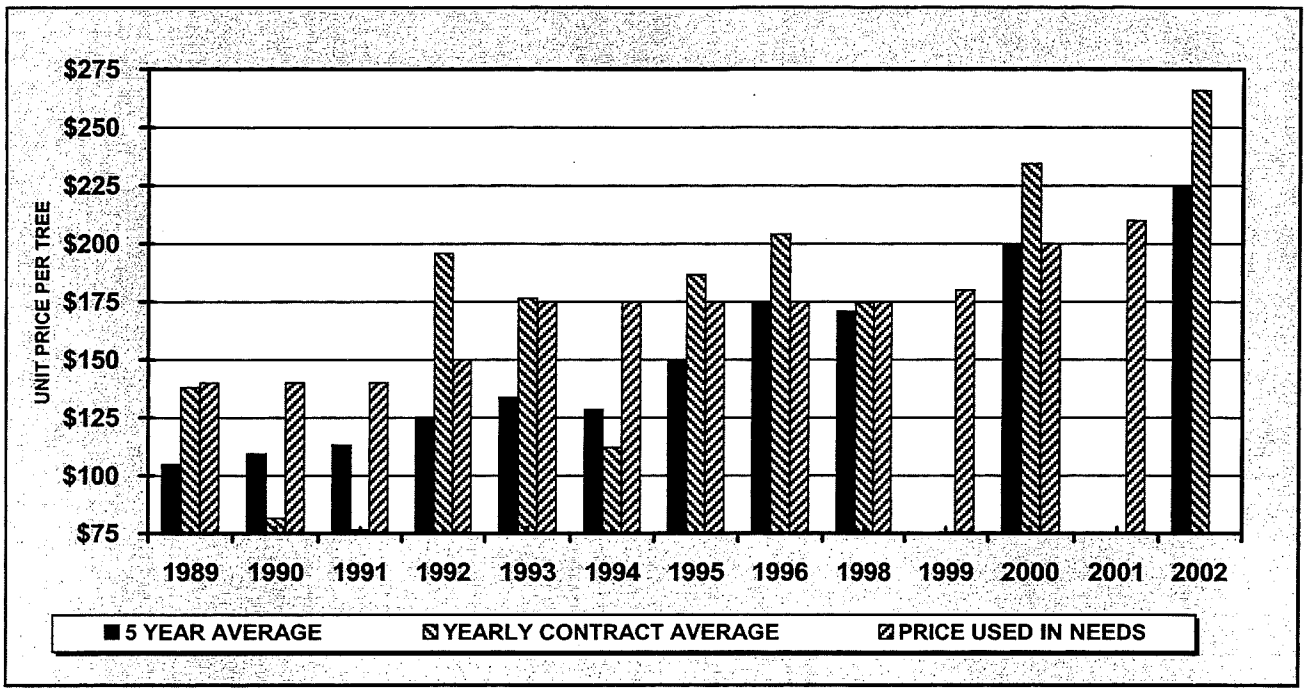
CLEARING AND GRUBBING ARE COMBINED TO COMPUTE TREE REMOVAL

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
TOTAL CLEARING	**29**	**662**	**$93,492**	**$141.23**
TOTAL GRUBBING	**27**	**588**	**$72,712**	**$123.66**
TOTAL		**1,250**	**$166,204**	**$132.96**

1250/2=625 TREES
AVERAGE COST PER TREE = $166,204/625 = $265.93

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS CLEARING & GRUBBING COMBINATION

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	176.47	175.00	133.68
1994	35	1,876	210,444	112.15	175.00	128.50
1995	41	1,136	211,912	186.54	175.00	149.49
1996	33	783	159,884	204.19	175.00	175.04
1998	28	779	136,044	174.64	175.00	170.80
1999					180.00	
2000	24	593	138,966	234.34	200.00	199.93
2001					210.00	
2002	21	625	166,204	265.93		224.97

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS **$220.00 PER TREE**

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$220.94

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS CLEARING & GRUBBING GRAPH

MSAS UNIT PRICE STUDY
AGGREGATE BASE 2211 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Chisholm	3	877	$11,844	$13.51
Cloquet	1	3,139	25,380	8.09
Duluth	7	14,426	112,647	7.81
Grand Rapids	1	299	3,950	13.21
Hibbing	1	15,026	79,500	5.29
International Falls	1	12,166	96,555	7.94
District 1 Total	**14**	**45,933**	**$329,876**	**$7.18**
		District 2		
Bemidji	3	21,306	$143,562	$6.74
Crookston	1	1,542	8,160	5.29
Thief River Falls	1	2,956	15,204	5.14
District 2 Total	**5**	**25,804**	**$166,926**	**$6.47**
		District 3 Total		
Cambridge	1	7,368	62,629	8.50
Sartell	1	58,008	352,189	6.07
District 3 Total	**2**	**65,376**	**$414,818**	**$6.35**
		District 4		
Alexandria	1	165	$2,859	$17.33
Detroit Lakes	1	8,680	47,740	5.50
Morris	1	7,955	51,708	6.50
District 4 Total	**3**	**16,800**	**$102,307**	**$6.09**
		Metro West		
Andover	2	10,639	$100,759	$9.47
Anoka	1	1,500	17,145	11.43
Blaine	5	41,552	412,780	9.93
Bloomington	4	6,321	60,741	9.61
Brooklyn Center	1	1,128	9,020	8.00
Brooklyn Park	2	1,233	10,333	8.38
Champlin	1	3,968	47,700	12.02
Chaska	1	23,000	2,300	0.10
Corcoran	1	13,960	101,210	7.25
Crystal	1	2,190	24,090	11.00
Edina	3	21,438	190,627	8.89
Ham Lake	1	1,628	16,023	9.84
Hopkins	1	6,250	75,000	12.00
Minneapolis	4	5,011	57,336	11.44
Richfield	1	22,412	168,090	7.50
Metro West Total	**29**	**162,229**	**$1,293,155**	**$7.97**

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	985	$10,420	$10.58
Austin	4	4,050	35,737	8.82
Owatonna	1	943	6,601	7.00
Red Wing	1	4,050	40,500	10.00
Rochester	2	2,950	26,550	9.00
District 6 Total	**9**	**12,978**	**$119,808**	**$9.23**
		District 7		
Faribault	1	4,740	$30,620	$6.46
New Ulm	1	2,408	14,448	6.00
Waseca	1	945	9,923	10.50
District 7 Total	**3**	**8,093**	**$54,991**	**$6.79**
		District 8		
Hutchinson	2	24,268	$177,994	$7.33
Montevideo	2	16,400	94,301	5.75
Willmar	1	4,330	27,279	6.30
District 8 Total	**5**	**44,998**	**$299,574**	**$6.66**
		Metro East		
Apple Valley	1	3,700	$22,200	$6.00
Farmington	1	15,200	163,400	10.75
Forest Lake	1	9,762	82,861	8.49
Inver Grove Heights	2	13,757	135,409	9.84
Lake Elmo	2	50,745	257,474	5.07
Mendota Heights	1	180	2,250	12.50
Oakdale	1	5,000	25,000	5.00
Roseville	2	31,400	255,441	8.14
Saint Paul	1	119	945	7.94
Shoreview	1	6,500	56,745	8.73
Stillwater	1	3,750	37,238	9.93
Woodbury	2	5,268	57,270	10.87
Metro East Total	**16**	**145,381**	**$1,096,233**	**$7.54**
		District Totals		
District 1 Total	14	45,933	$329,876	$7.18
District 2 Total	5	25,804	166,926	6.47
District 3 Total	2	65,376	414,818	6.35
District 4 Total	3	16,800	102,307	6.09
Metro West Total	29	162,229	1,293,155	7.97
District 6 Total	9	12,978	119,808	9.23
District 7 Total	3	8,093	54,991	6.79
District 8 Total	5	44,998	299,574	6.66
Metro East Total	16	145,381	1,096,233	7.54
STATE TOTAL	**86**	**527,592**	**$3,877,688**	**$7.35**

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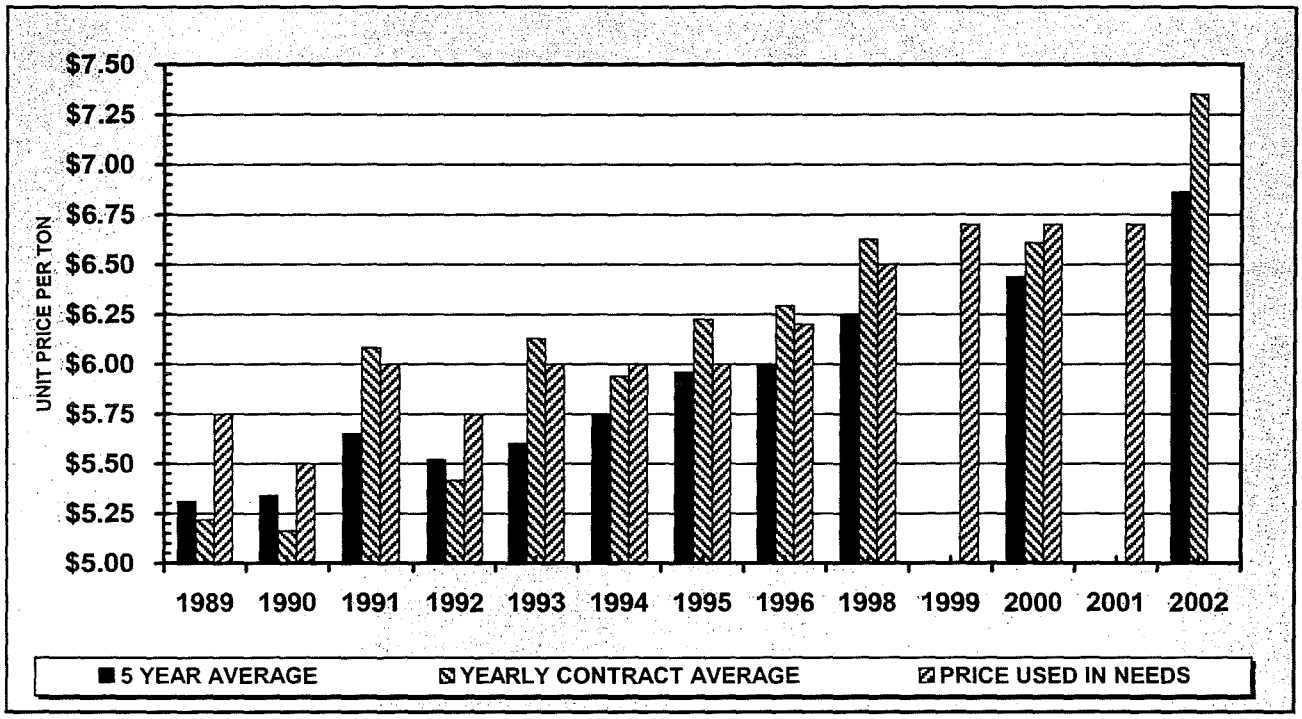
23-Apr-02

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		6.86

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $7.05 PER TON

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$6.85

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MSAS UNIT PRICE STUDY
BIT. BASE & SURF. 2331 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Cloquet	1	1,422	$40,854	$28.73
Duluth	1	34	2,890	85.00
Hibbing	1	3,410	109,120	32.00
International Falls	1	1,597	62,283	39.00
District 1 Total	**4**	**6,463**	**$215,147**	**$33.29**
District 2				
Bemidji	2	4,345	$112,970	$26.00
Crookston	1	229	7,328	32.00
Thief River Falls	1	278	8,896	32.00
District 2 Total	**4**	**4,852**	**$129,194**	**$26.63**
District 4				
Alexandria	2	2,680	$64,792	$24.18
Morris	1	1,929	50,154	26.00
District 4 Total	**3**	**4,609**	**$114,946**	**$24.94**
Metro West				
Bloomington	3	2,599	$72,095	$27.74
Brooklyn Center	1	1,697	50,807	29.95
Brooklyn Park	1	1,697	50,807	29.94
Corcoran	1	2,415	62,790	26.00
Crystal	1	1,330	36,194	27.21
Ham Lake	1	439	15,128	34.46
Metro West Total	**8**	**10,177**	**$287,821**	**$28.28**
District 7				
Faribault	1	1,820	$47,775	$26.25
New Ulm	1	401	11,629	29.00
Waseca	2	804	24,120	30.00
District 7 Total	**4**	**3,025**	**$83,524**	**$27.61**
District 8				
Montevideo	2	5,200	159,120	30.60
District 8 Total	**2**	**5,200**	**$159,120**	**$30.60**
Metro East				
Apple Valley	1	750	$19,725	$26.30
Farmington	1	2,700	62,100	23.00
Inver Grove Heights	2	3,968	101,701	25.63
Mendota Heights	1	3,800	156,620	41.22
Oakdale	1	3,450	89,700	26.00
Roseville	2	3,377	94,263	27.91
Shoreview	1	1,900	53,188	27.99
Stillwater	1	715	18,104	25.32
White Bear Lake	2	3,398	78,358	23.06
Woodbury	2	1,656	62,756	37.90
Metro East Total	**14**	**25,714**	**$736,514**	**$28.64**
District Totals				
District 1 Total	4	6,463	215147	33.29
District 2 Total	4	4,852	129,194	26.63
District 4 Total	3	4,609	114,946	24.94
Metro West Total	8	10,177	287,821	28.28
District 7 Total	4	3,025	83,524	27.61
District 8 Total	2	5,200	159,120	30.60
Metro East Total	14	25,714	736,514	28.64
STATE TOTAL	**39**	**60,040**	**$1,726,266**	**$28.75**

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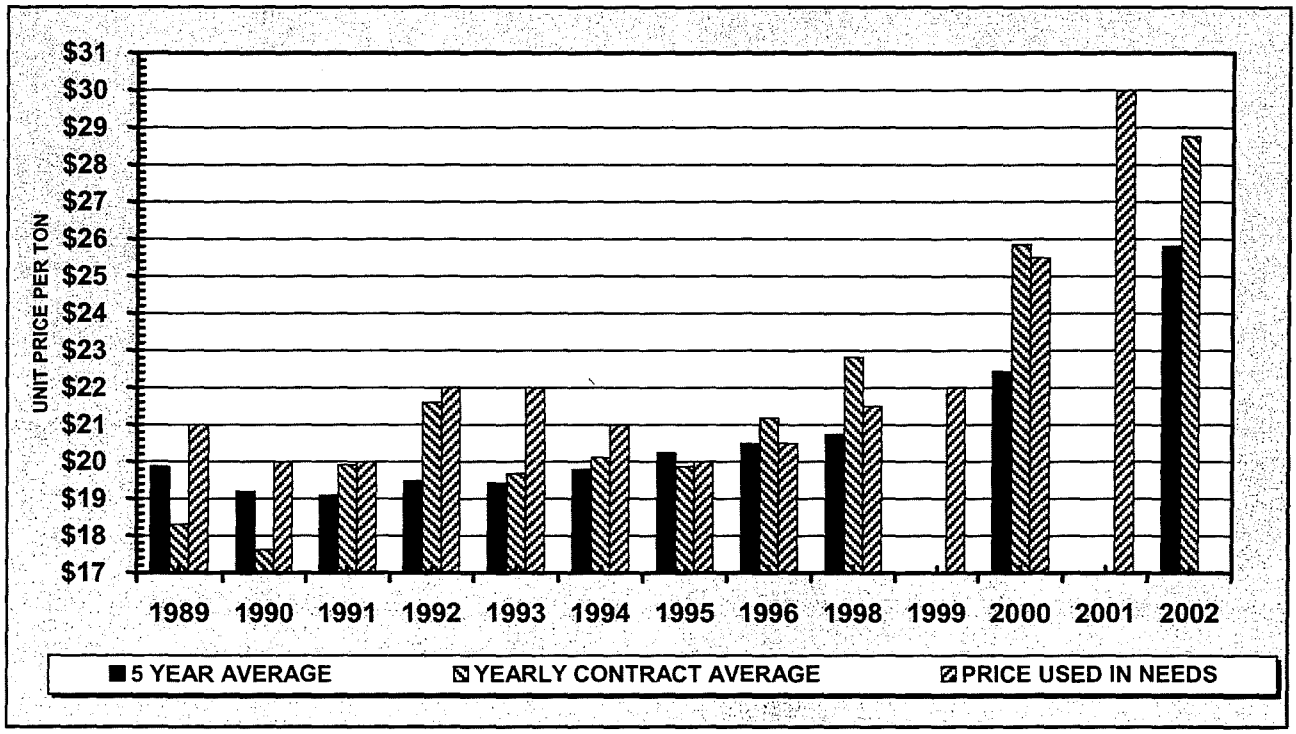
23-Apr-02

BITUMINOUS BASE OR SURFACE #2331



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		25.81

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $30.00 PER TON

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$24.89

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MSAS UNIT PRICE STUDY
BIT. SURF. 2341 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Cloquet	1	616	$24,154	$39.21
Duluth	1	25	2,200	88.00
International Falls	1	799	31,680	39.65
District 1 Total	**3**	**1,440**	**$58,034**	**$40.30**
District 2				
Bemidji	3	8,385	$241,045	$28.75
Thief River Falls	1	231	7,501	32.47
District 2 Total	**4**	**8,616**	**$248,546**	**$28.85**
District 4				
Detroit Lakes	1	5,310	$135,194	$25.46
Morris	1	1,448	38,516	26.60
District 4 Total	**2**	**6,758**	**$173,710**	**$25.70**
Metro West				
Bloomington	3	3,400	$112,591	$33.11
Brooklyn Park	1	3,047	96,157	31.56
Corcoran	1	1,830	48,540	26.52
Crystal	1	499	16,572	33.21
Edina	1	1,379	38,231	27.72
Ham Lake	1	458	17,646	38.53
Minneapolis	4	10,935	351,764	32.17
Metro West Total	**12**	**21,548**	**$681,500**	**$31.63**
District 6				
Red Wing	1	1,925	$60,880	$31.63
District 6 Total	**1**	**1,925**	**$60,880**	**$31.63**
District 7				
Faribault	1	680	$21,100	$31.03
New Ulm	1	401	12,090	30.15
Waseca	2	1,555	47,529	30.57
District 7 Total	**4**	**2,636**	**$80,719**	**$30.62**
District 8				
Montevideo	2	1,515	50,367	33.25
District 8 Total	**2**	**1,515**	**$50,367**	**$33.25**
Metro East				
Apple Valley	1	1,020	$26,709	$26.19
Farmington	1	5,600	128,800	23.00
Inver Grove Heights	2	2,943	84,864	28.84
Oakdale	1	2,300	60,750	26.41
Roseville	1	629	19,158	30.46
Shoreview	1	1,485	43,873	29.54
Stillwater	1	1,595	46,713	29.29
White Bear Lake	2	1,699	46,377	27.30
Woodbury	2	1,984	68,624	34.59
Metro East Total	**12**	**19,255**	**$525,868**	**$27.31**
District Totals				
District 1 Total	3	1,440	$58,034	$40.30
District 2 Total	4	8,616	248,546	28.85
District 4 Total	2	6,758	173,710	25.70
Metro West Total	12	21,548	681,500	31.63
District 6 Total	1	1,925	60,880	31.63
District 7 Total	4	2,636	80,719	30.62
District 8 Total	2	1,515	50,367	33.25
Metro East Total	12	19,255	525,868	27.31
STATE TOTAL	**40**	**63,693**	**$1,879,624**	**$29.51**

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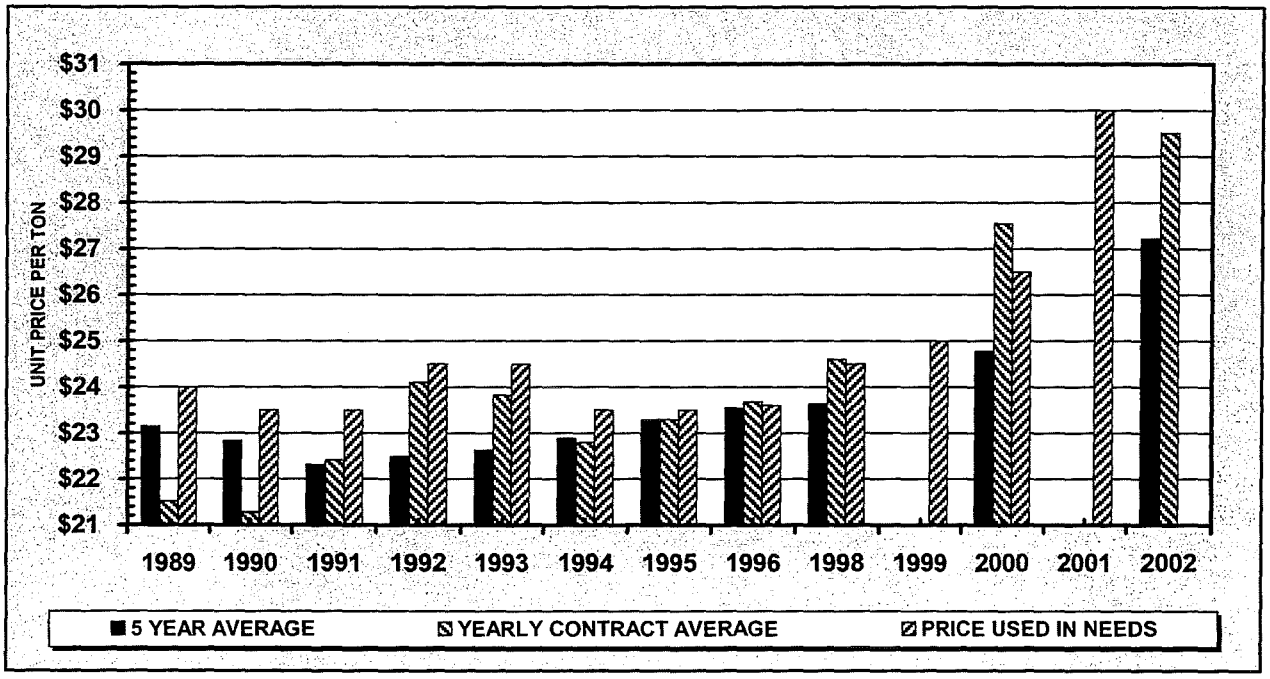
23-Apr-02

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		27.22

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS **$30.00** **PER TON**

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$26.60

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MSAS UNIT PRICE STUDY
BIT. NON-WEAR 2350 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Chisholm	3	167	$7,515	$45.00
Duluth	6	7,882	227,053	28.81
Grand Rapids	1	101	9,090	90.00
District 1 Total	**10**	**8,150**	**$243,658**	**$29.90**
District 3				
Cambridge	3	4,138	$126,061	$30.46
Sartell	1	20,232	502,563	24.84
District 3 Total	**4**	**24,370**	**$628,624**	**$25.79**
District 4				
Alexandria	1	79	$2,911	$36.75
District 4 Total	**1**	**79**	**$2,911**	**$36.75**
Metro West				
Andover	2	4,633	$127,408	$27.50
Anoka	1	535	14,980	28.00
Blaine	5	13,882	410,439	29.57
Bloomington	1	2,077	60,902	29.32
Champlin	1	985	30,396	30.86
Chaska	1	7,000	199,150	28.45
Edina	2	6,871	209,801	30.53
Hopkins	1	2,180	66,490	30.50
Richfield	1	6,625	177,550	26.80
Metro West Total	**15**	**44,788**	**$1,297,116**	**$28.96**
District 6				
Owatonna	1	625	$16,875	$27.00
Rochester	2	998	32,335	32.40
District 6 Total	**3**	**1,623**	**$49,210**	**$30.32**
District 8				
Hutchinson	2	5,446	$160,947	$29.55
Marshall	1	1,240	43,400	35.00
Willmar	2	4,855	136,715	28.16
District 8 Total	**5**	**11,541**	**$341,062**	**$29.55**
Metro East				
Forest Lake	1	3,619	$97,325	$26.89
Lake Elmo	2	4,178	119,172	28.52
Saint Paul	1	117	4,692	40.00
South St Paul	1	200	6,250	31.25
Metro East Total	**5**	**8,114**	**$227,439**	**$28.03**
District Totals				
District 1 Total	10	8,150	$243,658	$29.90
District 3 Total	4	24,370	628,624	25.79
District 4 Total	1	79	2,911	36.75
Metro West Total	15	44,788	1,297,116	28.96
District 6 Total	3	1,623	49,210	30.32
District 8 Total	5	11,541	341,062	29.55
Metro East Total	5	8,114	227,439	28.03
STATE TOTAL	**43**	**98,666**	**$2,790,019**	**$28.28**

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MSAS UNIT PRICE STUDY
BIT. WEAR 2350 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Chisholm	3	250	$12,205	$48.82
Duluth	8	6,010	183,260	30.49
Grand Rapids	1	41	5,535	135.00
District 1 Total	**12**	**6,301**	**$201,000**	**$31.90**
		District 3		
Cambridge	3	2,577	$81,275	$31.54
Sartell	1	9,497	244,681	25.76
District 3 Total	**4**	**12,074**	**$325,956**	**$27.00**
		District 4		
Alexandria	1	79	$2,989	$37.74
District 4 Total	**1**	**79**	**$2,989**	**$37.74**
		Metro West		
Andover	2	2,928	$91,613	$31.29
Anoka	1	380	10,424	27.43
Blaine	5	13,458	406,614	30.21
Bloomington	1	786	28,546	36.32
Champlin	4	5,146	150,223	29.19
Chaska	1	3,500	107,126	30.61
Edina	2	6,447	196,968	30.55
Hopkins	2	2,783	96,400	34.64
Richfield	1	2,835	93,869	33.11
Metro West Total	**19**	**38,263**	**$1,181,782**	**$30.89**
		District 6		
Austin	2	2,031	$75,064	$36.96
Owatonna	1	523	14,723	28.15
Rochester	2	801	25,952	32.40
District 6 Total	**5**	**3,355**	**$115,739**	**$34.50**
		District 8		
Hutchinson	3	3,367	$140,001	$41.58
Marshall	3	8,132	274,322	33.73
Willmar	3	3,950	126,724	32.08
District 8 Total	**9**	**15,449**	**$541,047**	**$35.02**
		Metro East		
Forest Lake	1	1,551	$44,038	$28.39
Lake Elmo	2	2,809	86,790	30.90
Saint Paul	1	47	1,982	42.44
South St Paul	1	150	4,425	29.50
Metro East Total	**5**	**4,557**	**$137,235**	**$30.12**
		District Totals		
District 1 Total	12	6,301	$201,000	$31.90
District 3 Total	4	12,074	325,956	27.00
District 4 Total	1	79	2,989	37.74
Metro West Total	19	38,263	1,181,782	30.89
District 6 Total	5	3,355	115,739	34.50
District 8 Total	9	15,449	541,047	35.02
Metro East Total	5	4,557	137,235	30.12
STATE TOTAL	**55**	**80,078**	**$2,505,749**	**$31.29**

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MSAS UNIT PRICE STUDY
TOTAL 2350 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Chisholm	3	417	$19,720	$47.29
Duluth	8	13,893	410,313	29.53
Grand Rapids	1	142	14,625	102.99
District 1 Total	**12**	**14,452**	**$444,658**	**$30.77**
		District 3		
Cambridge	3	6,715	$207,336	$30.88
Sartell	1	29,729	747,244	25.14
District 3 Total	**4**	**36,444**	**$954,580**	**$26.19**
		District 4		
Alexandria	1	158	$5,900	$37.25
District 4 Total	**1**	**158**	**$5,900**	**$37.25**
		Metro West		
Andover	2	7,561	$219,020	$28.97
Anoka	1	915	25,404	27.76
Blaine	5	27,340	817,053	29.88
Bloomington	1	2,863	89,448	31.24
Champlin	4	6,131	180,619	29.46
Chaska	1	10,500	306,276	29.17
Edina	2	13,318	406,769	30.54
Hopkins	2	4,963	162,890	32.82
Richfield	1	9,460	271,419	28.69
Metro West Total	**19**	**83,051**	**$2,478,898**	**$29.85**
		District 6		
Austin	2	2,031	$75,064	$36.96
Owatonna	1	1,148	31,598	27.52
Rochester	2	1,799	58,288	32.40
District 6 Total	**5**	**4,978**	**$164,950**	**$33.14**
		District 8		
Hutchinson	3	8,813	$300,948	$34.15
Marshall	3	9,372	317,722	33.90
Willmar	3	8,805	263,439	29.92
District 8 Total	**9**	**26,990**	**$882,109**	**$32.68**
		Metro East		
Forest Lake	1	5,170	$141,363	$27.34
Lake Elmo	2	6,987	205,961	29.48
Saint Paul	1	164	6,674	40.70
South St Paul	1	350	10,675	30.50
Metro East Total	**5**	**12,671**	**$364,673**	**$28.78**
		District Totals		
District 1 Total	12	14,452	$444,658	$30.77
District 3 Total	4	36,444	954,580	26.19
District 4 Total	1	158	5,900	37.25
Metro West Total	19	83,051	2,478,898	29.85
District 6 Total	5	4,978	164,950	33.14
District 8 Total	9	26,990	882,109	32.68
Metro East Total	5	12,671	364,673	28.78
STATE TOTAL	**55**	**178,744**	**$5,295,768**	**$29.63**

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MSAS UNIT PRICE STUDY
BIT. COMBINED 2341 & 2350 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Chisholm	3	417	$19,720	$47.29
Cloquet	1	616	24,154	39.21
Duluth	9	13,918	412,513	29.64
Grand Rapids	1	142	14,625	102.99
International Falls	1	799	31,680	39.65
District 1 Total	**15**	**15,892**	**$502,692**	**$31.63**
		District 2		
Bemidji	3	8,385	$241,045	$28.75
Thief River Falls	1	231	7,501	32.47
District 2 Total	**4**	**8,616**	**$248,546**	**$28.85**
		District 3 Total		
Cambridge	3	6,715	$207,336	$30.88
Sartell	1	29,729	747,244	25.14
District 3 Total	**4**	**36,444**	**$954,580**	**$26.19**
		District 4		
Alexandria	1	158	$5,900	$37.25
Detroit Lakes	1	5,310	135,194	25.46
Morris	1	1,448	38,516	26.60
District 4 Total	**3**	**6,916**	**$179,610**	**$25.97**
		Metro West		
Andover	2	7,561	$219,020	$28.97
Anoka	1	915	25,404	27.76
Blaine	5	27,340	817,053	29.88
Bloomington	4	6,263	202,039	32.26
Brooklyn Park	1	3,047	96,157	31.56
Champlin	4	6,131	180,619	29.46
Chaska	1	10,500	306,276	29.17
Corcoran	1	1,830	48,540	26.52
Crystal	1	499	16,572	33.21
Edina	3	14,697	445,000	30.28
Ham Lake	1	458	17,646	38.53
Hopkins	2	4,963	162,890	32.82
Minneapolis	4	10,935	351,764	32.17
Richfield	1	9,460	271,419	28.69
Metro West Total	**31**	**104,599**	**$3,160,399**	**$30.21**
		District 6		
Austin	2	2,031	$75,064	$36.96
Owatonna	1	1,148	31,598	27.52
Red Wing	1	1,925	60,880	31.63
Rochester	2	1,799	58,288	32.40
District 6 Total	**6**	**6,903**	**$225,830**	**$32.71**
		District 7		
Faribault	1	680	$21,100	$31.03
New Ulm	1	401	12,090	30.15
Waseca	2	1,555	47,529	30.57
District 7 Total	**4**	**2,636**	**$80,719**	**$30.62**

MSAS UNIT PRICE STUDY
BIT. COMBINED 2341 & 2350 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 8				
Hutchinson	3	8,813	$300,948	$34.15
Marshall	3	9,372	317,722	33.90
Montevideo	2	1,515	50,367	33.25
Willmar	3	8,805	263,439	29.92
District 8 Total	**11**	**28,505**	**$932,476**	**$32.71**
Metro East				
Apple Valley	1	1,020	$26,709	$26.19
Farmington	1	5,600	128,800	23.00
Forest Lake	1	5,170	141,363	27.34
Inver Grove Heights	2	2,943	84,864	28.84
Lake Elmo	2	6,987	205,961	29.48
Oakdale	1	2,300	60,750	26.41
Roseville	1	629	19,158	30.46
Saint Paul	1	164	6,674	40.70
Shoreview	1	1,485	43,873	29.54
South St Paul	1	350	10,675	30.50
Stillwater	1	1,595	46,713	29.29
White Bear Lake	2	1,699	46,377	27.30
Woodbury	2	1,984	68,624	34.59
Metro East Total	**17**	**31,926**	**$890,541**	**$27.89**
District Totals				
District 1 Total	15	15,892	$502,692	$31.63
District 2 Total	4	8,616	248,546	28.85
District 3 Total	4	36,444	954,580	26.19
District 4 Total	3	6,916	179,610	25.97
Metro West Total	31	104,599	3,160,399	30.21
District 6 Total	6	6,903	225,830	32.71
District 7 Total	4	2,636	80,719	30.62
District 8 Total	11	28,505	932,476	32.71
Metro East Total	17	31,926	890,541	27.89
STATE TOTAL	**95**	**242,437**	**$7,175,392**	**$29.60**

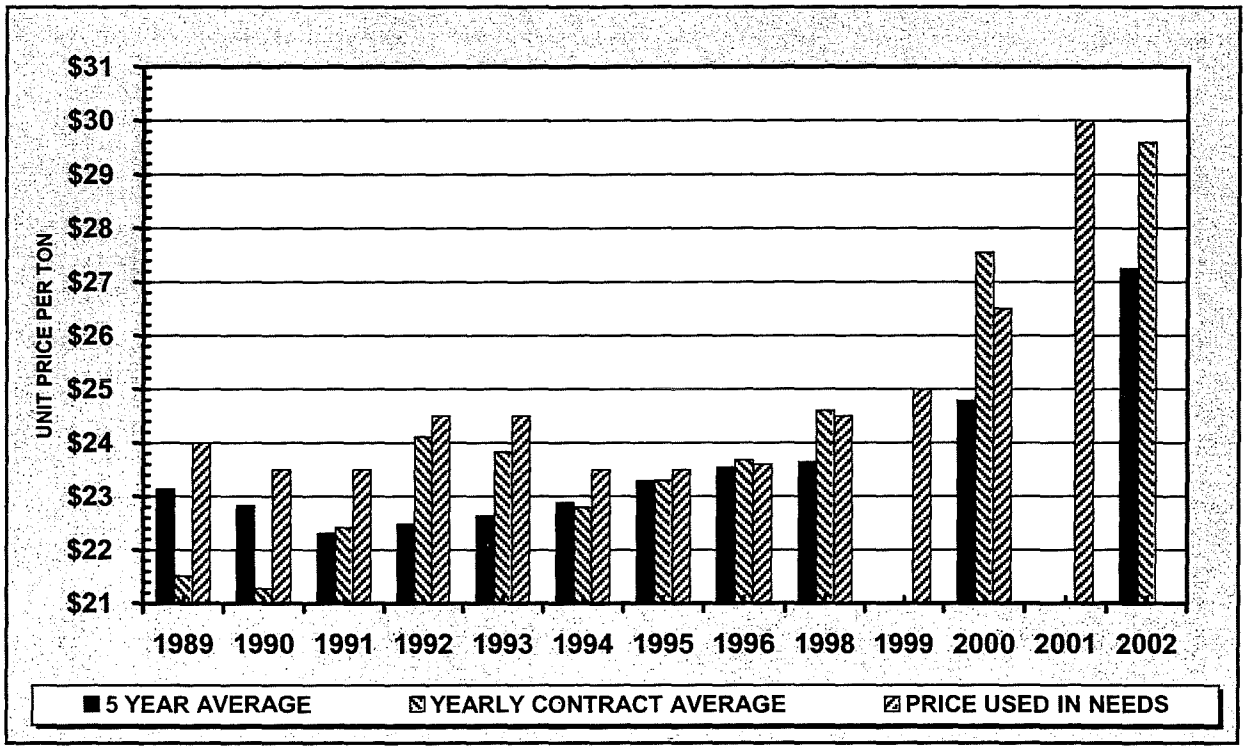
The minutes from the June 8, 2000 Screening Board meeting say in part:

Moved by Koehler seconded by Mr. Gustafson to include 2350 in the unit price for 2341. Motion carried with Mr. Nelson, Mr. Metso and Mr. Kannankutty voting no.

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS 2341 & 2350 COMBINED

23-Apr-02

BITUMINOUS SURFACE #2341 & 2350



NEEDS	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		27.25

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $30.00 PER TON

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$27.60

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS 2341 & 2350 COMBINED GRAPH

MSAS UNIT PRICE STUDY
BIT. SURF. 2361 - TONS

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Hibbing	1	1,190	$45,820	$38.50
District 1 Total	**1**	**1,190**	**$45,820**	**$38.50**
Metro West				
Minneapolis	4	3,258	$144,993	$44.50
Metro West Total	**4**	**3,258**	**$144,993**	**$44.50**
Metro East				
South St Paul	1	580	$17,110	$29.50
Metro East Total	**1**	**580**	**$17,110**	**$29.50**
District Totals				
District 1 Total	1	1,190	$45,820	$38.50
Metro West Total	4	3,258	144,993	44.50
Metro East Total	1	580	17,110	29.50
STATE TOTAL	**6**	**5,028**	**$207,923**	**$41.35**

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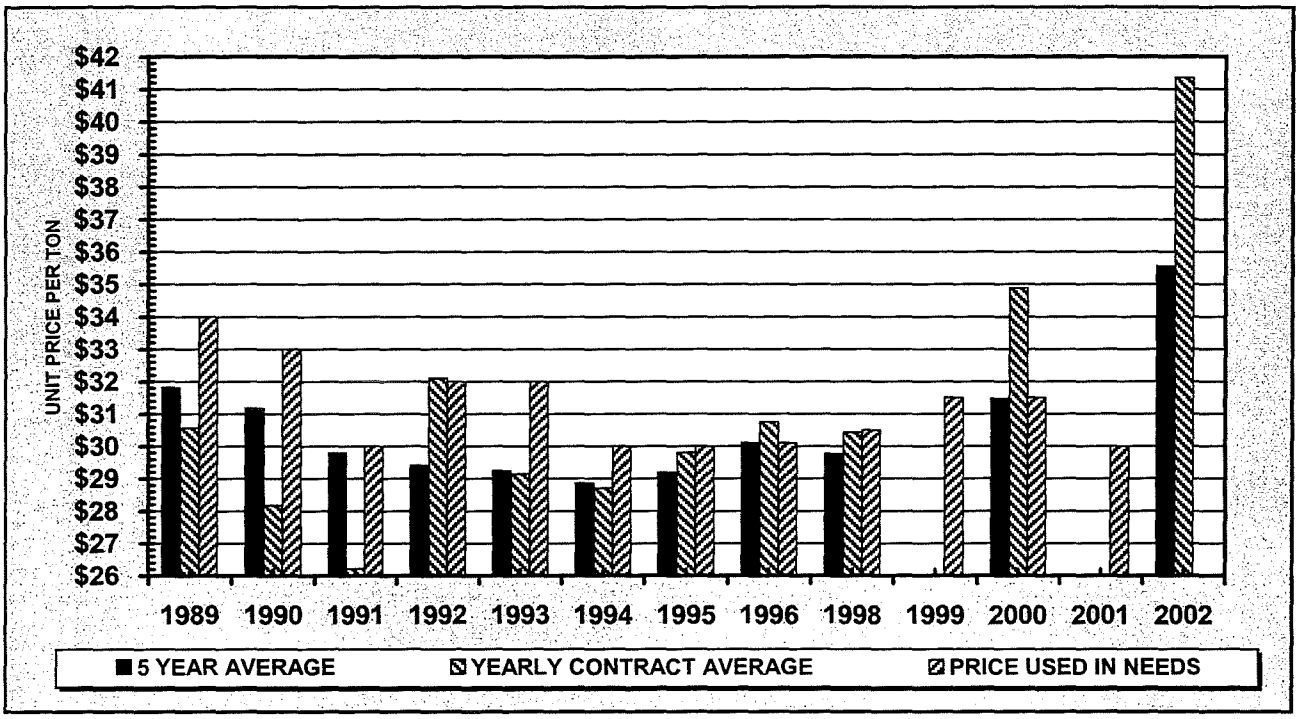
BITUMINOUS SURFACE #2361



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		35.56

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $30.00 PER TON

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$35.61

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS BIT. SURF. - 2361 GRAPH

MSAS UNIT PRICE STUDY
ALL BITUMINOUS - TONS

DISTRICT	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
BIT. BASE & SURF. 2331 - TONS	60,040	$1,726,266	$28.75
BIT. SURF. 2341 - TONS	63,693	$1,879,624	$29.51
BIT. NON-WEAR 2350 - TONS	98,666	$2,790,019	$28.28
BIT. WEAR 2350 - TONS	80,078	$2,505,749	$31.29
TOTAL 2350 - TONS	178,744	$5,295,768	$29.63
BIT. SURF. 2361 - TONS	5,028	$207,923	$41.35
STATE TOTAL	**307,505**	**$9,109,581**	**$29.62**

N:\MSAS\EXCEL\UNIT PRICE\2002\UNIT PRICE 2002.XLS ALL BITUMINOUS

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

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
		District 1		
Chisholm	3	1,441	$14,050	$9.75
Cloquet	1	3,596	33,144	9.22
Duluth	6	11,411	98,734	8.65
Grand Rapids	1	184	4,048	22.00
Hibbing	1	5,880	41,748	7.10
International Falls	1	1,945	24,313	12.50
District 1 Total	**13**	**24,457**	**$216,037**	**$8.83**
		District 2		
Bemidji	3	13,920	$140,568	$10.10
Crookston	1	784	7,017	8.95
Thief River Falls	1	878	6,365	7.25
District 2 Total	**5**	**15,582**	**$153,950**	**$9.88**
		District 3 Total		
Cambridge	3	8,592	55,849	6.50
Sartell	1	35,177	211,062	6.00
District 3 Total	**4**	**43,769**	**$266,911**	**$6.10**
		District 4		
Alexandria	2	270	$3,294	$12.20
Detroit Lakes	1	12,630	97,125	7.69
Morris	1	6,980	48,511	6.95
District 4 Total	**4**	**19,880**	**$148,930**	**$7.49**
		Metro West		
Andover	1	6,967	$50,511	$7.25
Anoka	1	1,950	13,007	6.67
Blaine	4	51,473	371,303	7.21
Bloomington	1	3,360	25,600	7.62
Brooklyn Center	1	2,525	17,675	7.00
Brooklyn Park	2	6,025	65,975	10.95
Champlin	4	4,075	28,060	6.89
Chaska	1	16,000	105,400	6.59
Crystal	1	2,132	15,606	7.32
Edina	3	23,538	179,026	7.61
Ham Lake	1	1,726	14,974	8.68
Hopkins	1	3,901	35,499	9.10
Minneapolis	4	8,537	107,091	12.54
Richfield	1	12,235	101,269	8.28
Metro West Total	**26**	**144,444**	**$1,130,996**	**$7.83**

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	1,504	$16,835	$11.19
Austin	3	3,207	27,563	8.59
Owatonna	1	2,098	17,833	8.50
Rochester	2	2,025	17,213	8.50
District 6 Total	**7**	**8,834**	**$79,444**	**$8.99**
District 7				
Faribault	1	3,660	$30,195	$8.25
New Ulm	1	1,544	15,440	10.00
Waseca	2	1,797	18,374	10.22
District 7 Total	**4**	**7,001**	**$64,009**	**$9.14**
District 8				
Hutchinson	3	8,616	$66,234	$7.69
Montevideo	2	6,125	$46,822	7.64
Willmar	2	2,460	19,854	8.07
District 8 Total	**7**	**17,201**	**$132,910**	**$7.73**
Metro East				
Apple Valley	2	5,750	$65,769	$11.44
Farmington	1	1,665	20,813	12.50
Forest Lake	1	7,483	51,633	6.90
Inver Grove Heights	2	8,743	58,110	6.65
Lake Elmo	2	20,330	139,109	6.84
Oakdale	1	9,620	67,340	7.00
Roseville	2	11,549	81,979	7.10
Shoreview	1	5,500	38,500	7.00
South St Paul	1	50	1,100	22.00
Stillwater	1	2,055	15,495	7.54
White Bear Lake	2	7,040	48,224	6.85
Woodbury	2	2,544	26,087	10.25
Metro East Total	**18**	**82,329**	**$614,159**	**$7.46**
District Totals				
District 1 Total	13	24,457	$216,037	$8.83
District 2 Total	5	15,582	153,950	9.88
District 3 Total	4	43,769	266,911	6.10
District 4 Total	4	19,880	148,930	7.49
Metro West Total	26	144,444	1,130,996	7.83
District 6 Total	7	8,834	79,444	8.99
District 7 Total	4	7,001	64,009	9.14
District 8 Total	7	17,201	132,910	7.73
Metro East Total	18	82,329	614,159	7.46
STATE TOTAL	**88**	**363,497**	**$2,807,345**	**$7.72**

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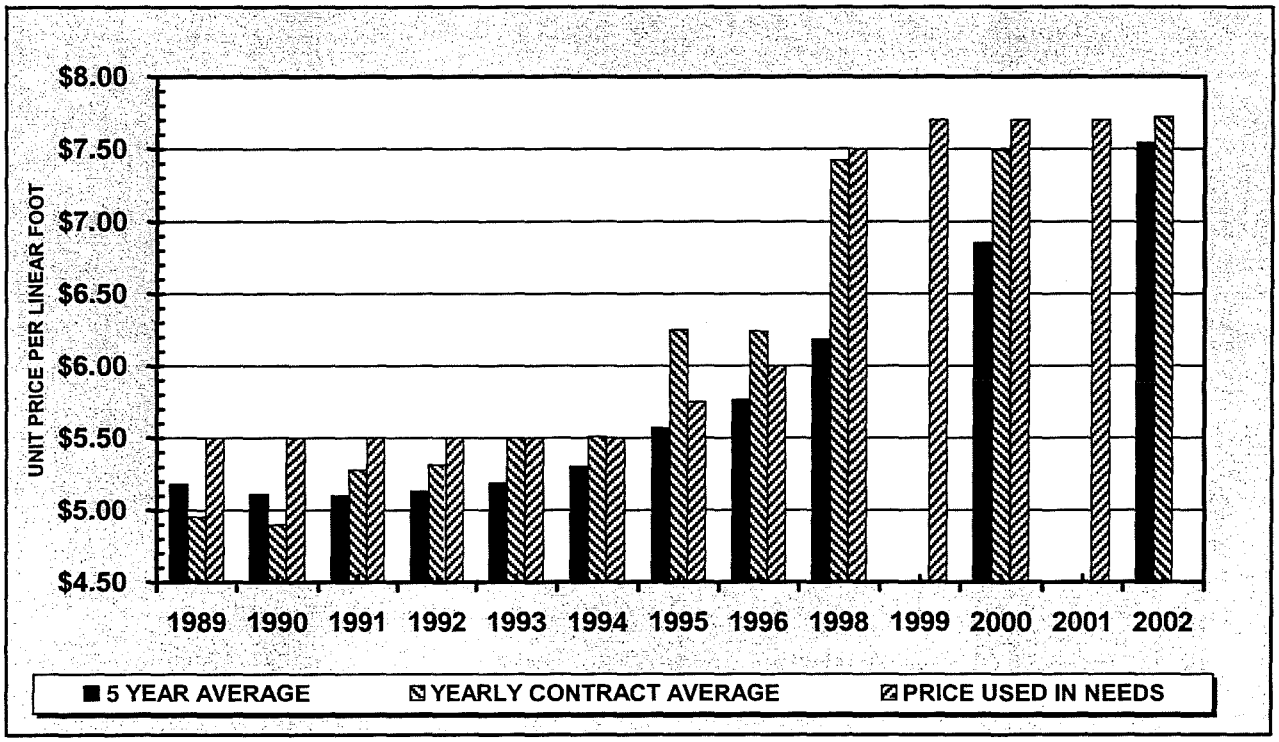
CURB AND GUTTER CONSTRUCTION



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		7.55

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $7.70 PER LIN. FT.

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$7.54

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MSAS UNIT PRICE STUDY
SIDEWALK CONSTRUCTION - SQUARE YARD

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 1				
Chisholm	4	1,495	$32,948	$22.04
Cloquet	1	872	17,663	20.26
Duluth	6	4,165	96,335	23.13
Grand Rapids	1	210	2,856	13.62
International Falls	1	446	18,807	42.17
District 1 Total	**13**	**7,188**	**$168,609**	**$23.46**
District 2				
Bemidji	3	2,588	$67,421	$26.05
Crookston	1	352	9,354	26.57
Thief River Falls	1	17	378	22.21
District 2 Total	**5**	**2,957**	**$77,153**	**$26.09**
District 3 Total				
Cambridge	3	5,044	$104,409	$20.70
District 3 Total	**3**	**5,044**	**$104,409**	**$20.70**
District 4				
Alexandria	3	569	$11,924	$20.97
Detroit Lakes	1	3,873	84,361	21.78
District 4 Total	**4**	**4,442**	**$96,285**	**$21.68**
Metro West				
Andover	1	1,467	$28,380	$19.35
Anoka	1	439	8,029	18.29
Blaine	3	9,441	185,627	19.66
Bloomington	4	1,238	37,564	30.34
Brooklyn Center	1	80	2,160	27.00
Brooklyn Park	2	299	9,969	33.34
Chaska	1	160	3,312	20.70
Crystal	1	73	2,119	29.03
Edina	3	2,920	64,058	21.94
Hopkins	1	267	7,557	28.30
Minneapolis	4	5,835	163,894	28.09
Richfield	1	8,414	180,237	21.42
Metro West Total	**23**	**30,633**	**$692,907**	**$22.62**
District 6				
Austin	4	2,054	$53,040	$25.82
Rochester	2	489	11,440	23.40
District 6 Total	**6**	**2,543**	**$64,480**	**$25.36**
District 7				
Faribault	1	1,227	$32,016	$26.09
New Ulm	1	476	9,807	20.60
District 7 Total	**2**	**1,703**	**$41,823**	**$24.56**

MSAS UNIT PRICE STUDY
SIDEWALK CONSTRUCTION - SQUARE YARD

CITY NAME	No. Of Projects	TOTAL QTY.	TOTAL COST	AVERAGE UNIT PRICE
District 8				
Hutchinson	2	574	$11,302	$19.70
Montevideo	1	290	6,525	22.50
Willmar	1	160	2,952	18.45
District 8 Total	**4**	**1,024**	**$20,779**	**$20.30**
Metro East				
Apple Valley	2	147	$3,379	$22.99
Forest Lake	1	94	2,210	23.51
Inver Grove Heights	2	1,961	41,000	20.91
Oakdale	1	367	11,880	32.37
Roseville	2	1,656	34,633	20.91
Saint Paul	1	1,999	180,161	90.12
White Bear Lake	2	2,609	55,310	21.20
Woodbury	1	24	1,392	58.00
Metro East Total	**12**	**8,857**	**$329,965**	**$37.25**
District Totals				
District 1 Total	13	7,188	$168,609	$23.46
District 2 Total	5	2,957	77,153	26.09
District 3 Total	3	5,044	104,409	20.70
District 4 Total	4	4,442	96,285	21.68
Metro West Total	23	30,633	692,907	22.62
District 6 Total	6	2,543	64,480	25.36
District 7 Total	2	1,703	41,823	24.56
District 8 Total	4	1,024	20,779	20.30
Metro East Total	12	8,857	329,965	37.25
STATE TOTAL	**72**	**64,390**	**$1,596,409**	**$24.79**

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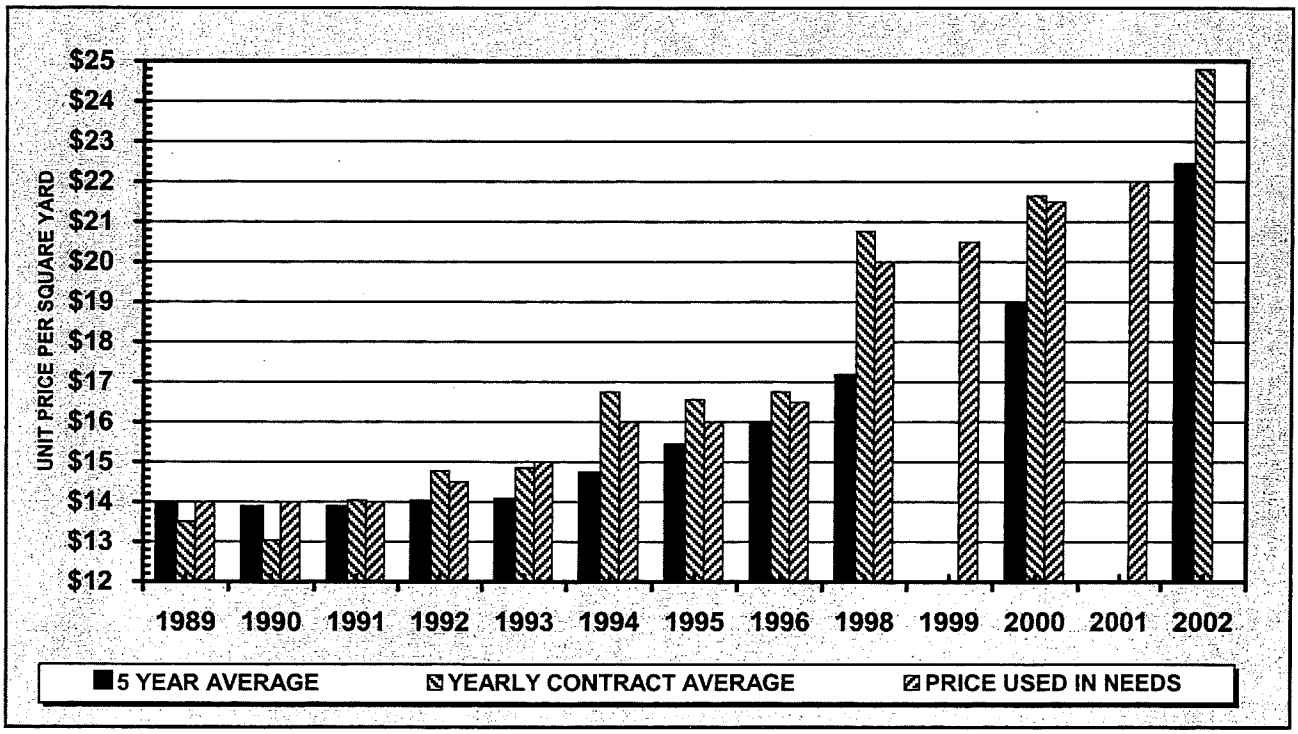
SIDEWALK CONSTRUCTION #2521



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	15.40
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	64,390	1,596,409	24.79		22.40

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $22.50 PER SQ. YD.

Note: There was no Unit Price Study in years 1997, 1999 and 2001, therefore the 2002 5-Year Average will only use the past 3 Yearly Average Contract Price.

$22.27

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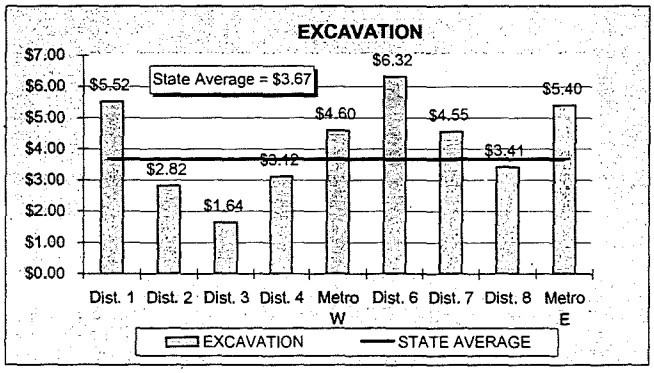
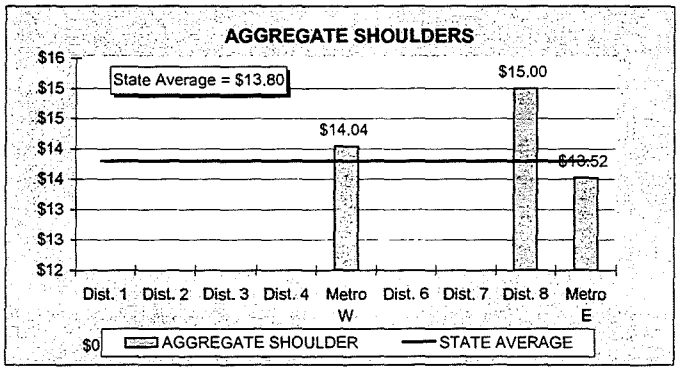
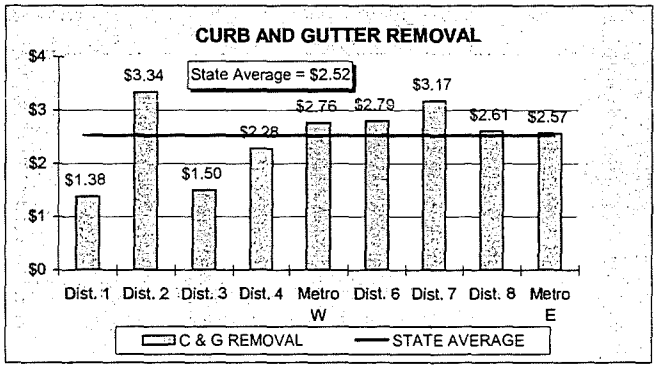
2002 UNIT PRICES BY DISTRICT

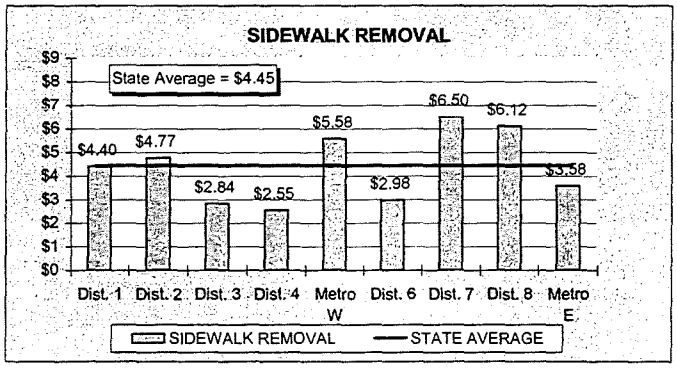
	Dist. 1	Dist. 2	Dist. 3	Dist. 4	Metro West	Dist. 6	Dist. 7	Dist. 8	Metro East	State Average
Excavation	**$5.52**	$2.82	*$1.64*	$3.12	$4.60	$6.32	$4.55	$3.41	$5.40	$3.67
Aggregate Shoulders	--	--	--	--	14.04	--	--	**15.00**	*13.52*	13.80
C & G Removal	*1.38*	**3.34**	1.50	2.28	2.76	2.79	3.17	2.61	2.57	2.52
Sidewalk Removal	4.40	4.77	2.84	*2.55*	5.58	2.98	**6.50**	6.12	3.58	4.45
Conc. Pave. Removal	*2.99*	4.01	--	5.00	**7.33**	6.47	8.00	--	5.93	4.39
Tree Removal (Clear)	154.55	100.00	150.00	*10.00*	167.88	**425.00**	--	300.00	99.47	141.23
Tree Removal (Grub)	100.00	100.00	150.00	140.00	129.37	**200.00**	--	--	*98.01*	123.66
Agg. Base - 2211	7.18	6.47	6.35	*6.09*	7.97	**9.23**	6.79	6.66	7.54	7.35
Bit Base & Surf - 2331	**33.29**	26.63	--	*24.94*	28.28	--	27.61	30.60	28.64	28.75
Bit Surface 2341	**40.30**	28.85	--	*25.70*	31.63	31.63	30.62	33.25	27.31	29.51
Bit Base 2350	29.90	--	*25.79*	**36.75**	28.96	30.32	--	29.55	28.03	28.28
Bit Surface 2350	31.90	--	*27.00*	**37.74**	30.89	34.50	--	35.02	30.12	31.29
Bit 2350	30.77	--	*26.19*	**37.25**	29.85	33.14	--	32.68	28.78	29.63
Bit Surface 2341 & 2350	31.63	28.85	26.19	*25.97*	30.21	**32.71**	30.62	**32.71**	27.89	29.60
Bit Surface 2361	38.50	--	--	--	**44.50**	--	--	--	*29.50*	41.35
C & G Const.	8.83	**9.88**	*6.10*	7.49	7.83	8.99	9.14	7.73	7.46	7.72
Sidewalk Const.	23.46	26.09	20.70	21.68	22.62	25.36	24.56	*20.30*	**37.25**	24.79

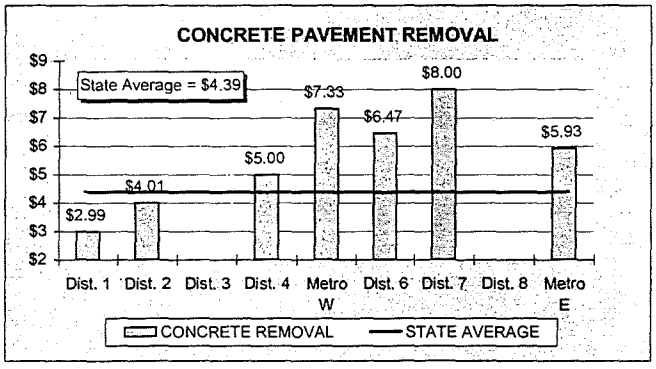
BOLD = Highest District Cost in That Category *ITALIC = Lowest District Cost in That Category*





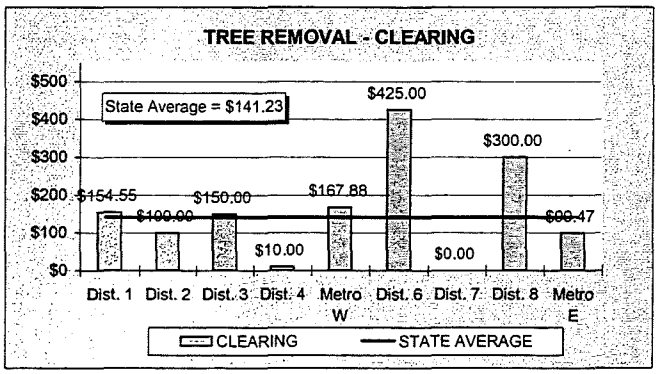


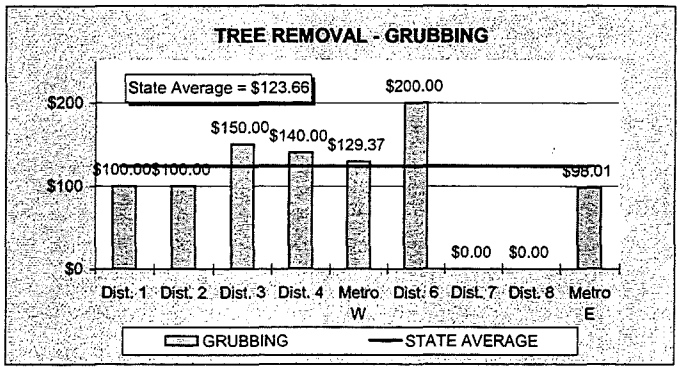


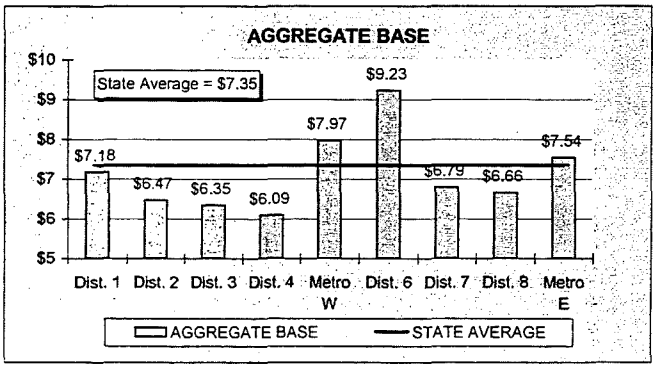


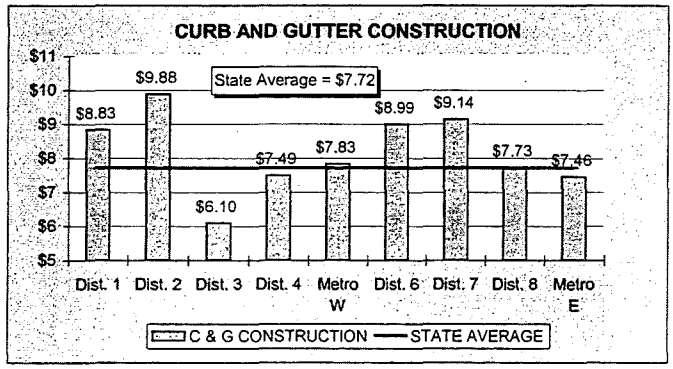
2002 UNIT PRICES BY DISTRICT

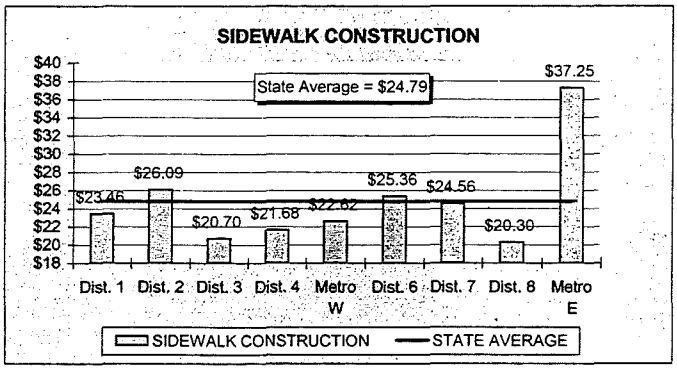
Graphs (Continued)





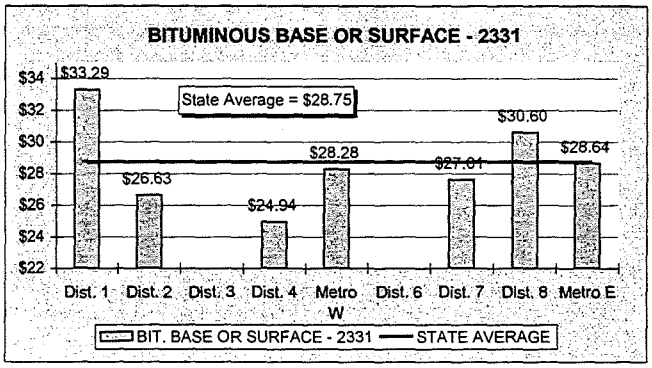


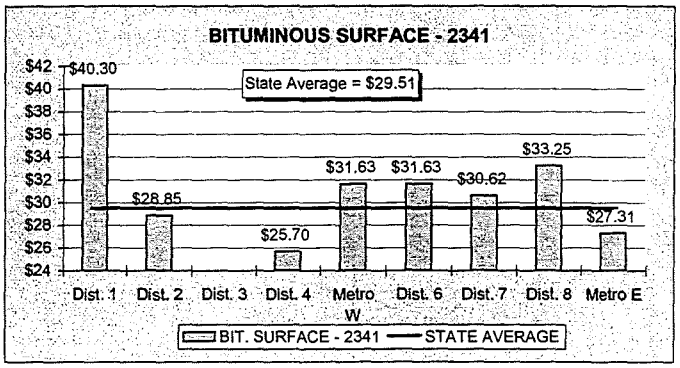


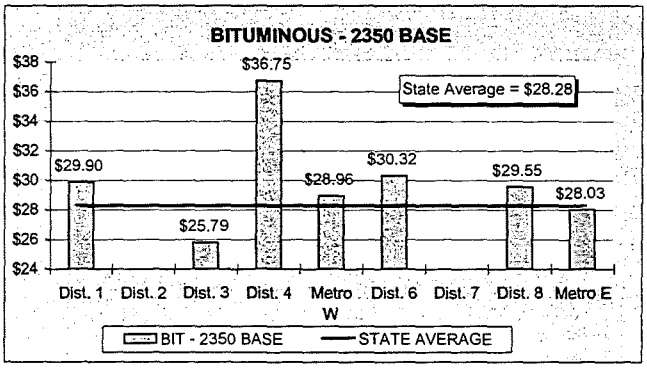


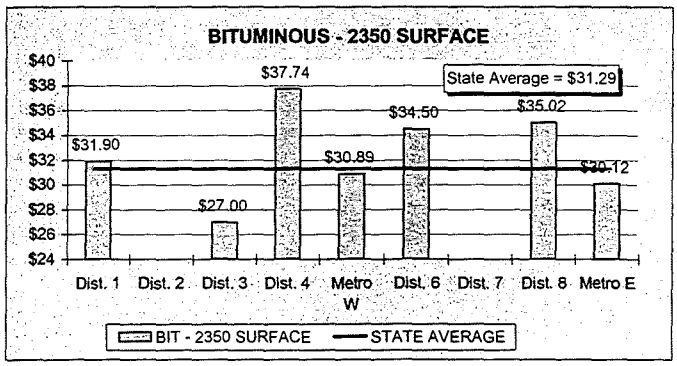
2002 UNIT PRICES BY DISTRICT

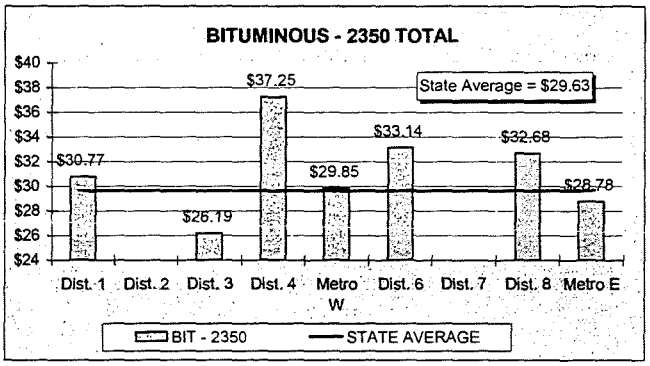
BITUMINOUS

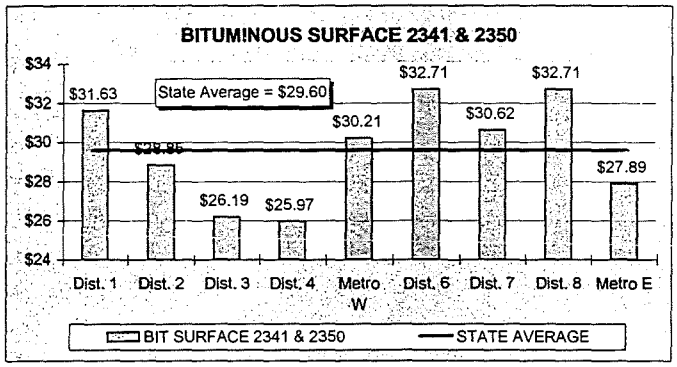


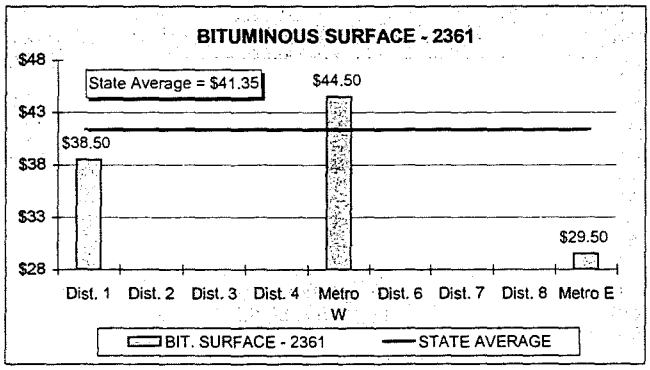












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STORM SEWER, LIGHTING AND SIGNAL NEEDS COSTS

NEEDS YEAR	STORM SEWER ADJUSTMENT (Per Mile)	STORM SEWER CONSTRUCTION (Per Mile)	LIGHTING (Per Mile)	SIGNALS (Per Mile)
1986	$62,000	$196,000 *	$2,000	$10,000
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	20,000-80,000
1995	69,100	223,000	20,000	20,000-80,000
1996	71,200	229,700	20,000	20,000-80,000
1998	76,000	245,000	20,000	24,990-99,990
1999	79,000	246,000	35,000	24,990-99,990
2000	80,200	248,500	50,000	24,990-99,990
2001	80,400	248,000	78,000 **	30,000-120,000
2002				

* 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 2002:

	Storm Sewer. Adjustment	Storm Sewer Construction
2002	$81,600	$254,200

SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2002:

	Storm Sewer. Adjustment	Storm Sewer Construction	Lighting	Signals
2002	$81,600	$254,200	$78,000	$120,000

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)
1986	$300		$65,000	$95,000	
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					

MN\DOT'S RAILROAD OFFICE RECOMMENDED PRICES FOR 2002:

	Signs	Pavement Marking	Signals	Sig. & Gates	Concrete X-ing Surf.
2002	$1,000	$750	$120,000	$135-185,000	$1,000

SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2002:

2002	$1,000	$750	$120,000	$160,000	$1,000

Minnesota Department of Transportation

Memo

Office of Bridges and Structures
3485 Hadley Avenue North
Oakdale, MN 55128-3307

Date: April 3, 2002

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

From: Mike Leuer
State Aid Hydraulic Technician

Phone: (651) 747-2167

Subject: State Aid Storm Sewer
Construction Costs for 2001

We have completed our analysis of storm sewer construction costs incurred for 2001 and the following assumptions can be utilized for planning purposes per roadway mile:

- approximately $254,200 for new construction, and
- approximately $81,600 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 115 plans for 2001. As you can see, there were 38 fewer jobs to base the estimate for last year.

CC: J. L. Boynton

STATE OF MINNESOTA
OFFICE MEMORANDUM

Minnesota Department of Transportation
Office of Freight, Railroads and Waterways
Mailstop 470
395 John Ireland Blvd.
St. Paul, MN 55155-1899

March 25, 2002

TO: Marshall Johnson
Needs Unit – State Aid

FROM: Susan H. Aylesworth
Director, Rail Administration Section

PHONE: 6-2472

SUBJECT: Projected Railroad Grade Crossing Improvements – Cost for 2002

We have projected 2002 costs for railroad/highway improvements at grade crossings. For planning purposes, we recommend using the following figures:

Signals (single track, low speed, average price)*	$120,000.00
Signals & gates (multiple track, high/low speed, average price)*	$135,000 – 185,000.00
Signs (advance warning signs & 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 and 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 OFRW procedures.

Cc: Tim Spencer
Rashmi Brewer
Gene Dahlke
Paul Delarosa
Josh Collins

Special Drainage Costs for Rural Segments
2002

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 $20.00 per foot as a cost for 18" GSP and $120.00 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 $860.00.

Using the 1990 Needs Study Subcommittee recommended number of 25 entrances per mile, the cost of Side Culverts per mile would be $21,500.

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 $52.00 per foot as a cost for 30" RCP) and $625 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 $3,954.

Using the 1990 Needs Study Subcommittee recommended number of four ℄ culverts per mile, the cost of centerline culverts per mile would be $15,816.

By adding the cost of the 25 Side Culverts and the 4 ℄ culverts, the 2002 estimated construction needs cost per mile for Special Drainage would be **$37,316** per mile.

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $37,400 PER MILE.

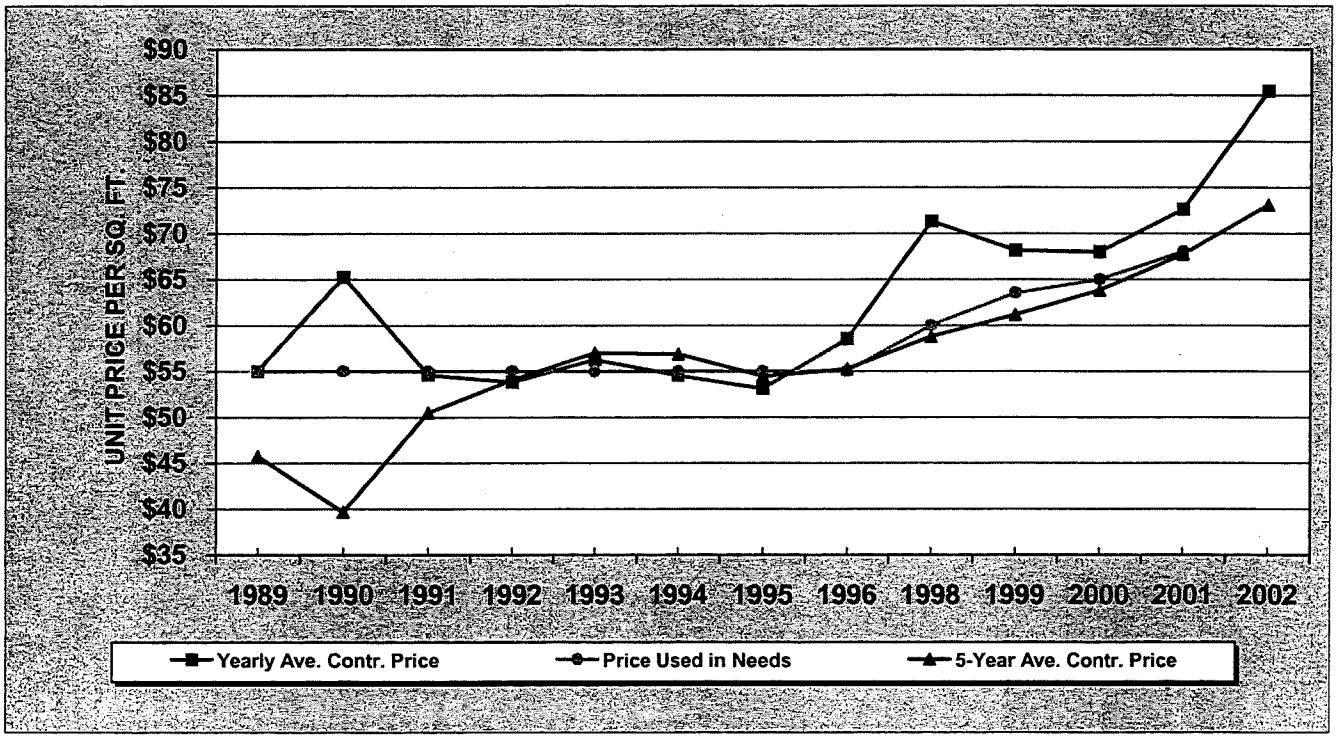
BRIDGES LET IN CALENDAR YEAR 2001

BRIDGE LENGTH 0-149 FEET

NEW BRIDGE NUMBER	PROJECT NUMBER		LENGTH	DECK AREA	BRIDGE COST	COST PER SQ. FT.
04521	SAP	04-611-011	115.00	4,965	$419,283	$84
07564	SAP	07-598-021	123.27	4,335	302,496	70
07560	SAP	07-599-016	98.50	3,038	208,315	69
13517	SAP	13-614-004	107.60	4,573	291,321	64
18523	SAP	18-621-016	71.30	2,791	211,041	76
22596	SP	22-597-002	149.78	7,314	601,218	82
23561	SP	23-618-007	86.00	3,369	256,715	76
24535	SAP	24-630-015	96.50	7,758	454,283	59
25595	SAP	25-599-069	89.25	2,782	238,912	86
33533	SAP	33-598-012	109.60	3,850	218,541	57
36525	SP	36-598-019	129.81	4,154	333,389	80
36506	SAP	36-598-023	39.50	1,812	94,781	52
37546	SAP	37-602-016	134.88	5,265	346,286	66
45564	SAP	45-599-148	149.50	4,650	358,986	77
45563	SP	45-634-006	103.50	4,056	258,755	64
46570	SP	46-599-056	76.10	2,432	173,737	71
46573	SAP	46-632-006	85.50	3,354	221,373	66
51527	SAP	51-607-010	35.20	4,433	229,837	52
51528	SAP	51-642-011	132.89	5,205	296,907	57
52520	SAP	52-599-021	82.67	2,573	185,243	72
54J13	SAP	54-599-054	43.92	1,596	224,426	141
55563	SP	55-598-043	105.75	3,725	283,146	76
60539	SAP	60-599-132	97.00	3,104	291,404	94
64567	SAP	64-599-067	86.77	2,697	181,648	67
64568	SAP	64-599-068	72.25	2,232	162,491	73
64566	SAP	64-599-071	117.70	4,130	225,766	55
65549	SAP	65-599-040	129.67	4,550	285,648	63
66534	SAP	66-598-007	51.44	1,731	128,751	74
66538	SP	66-598-008	44.00	1,481	125,983	85
66539	SAP	66-629-003	52.36	2,024	165,037	82
67542	SP	67-599-081	79.75	2,486	174,094	70
67545	SAP	67-599-117	87.50	2,727	179,701	66
67546	SAP	67-599-118	66.50	2,073	159,657	77
72536	SAP	72-597-003	76.50	2,996	222,084	74
80534	SAP	80-599-018	92.67	3,259	205,820	63
80535	SAP	80-599-021	83.90	2,604	191,542	74
83542	SP	83-599-056	82.58	2,574	169,648	66
84526	SAP	84-598-036	100.00	3,517	282,203	80
85542	SAP	85-599-045	90.50	3,183	259,638	82
69636	SAP	118-113-012	60.00	886	329,922	372
46572	SP	123-111-008	92.17	5,060	614,252	121
27A68	SAP	155-164-009	121.67	6,610	595,589	90
25545	SAP	156-080-005	57.00	2,119	1,010,184	477
25592	SP	156-090-002	113.00	1,356	138,101	102
02049	TH		52.52	2,276	214,895	94
79018	TH		60.82	2,639	225,641	86
54008	TH		76.59	3,653	332,972	91
27288	TH		77.31	10,311	1,159,148	112
27253	TH		77.43	2,228	624,851	280
79019	TH		94.11	4,141	359,196	87
37009	TH		94.83	4,473	291,767	65
73033	TH		98.06	4,445	498,360	112
73034	TH		98.06	4,435	470,914	106
29001	TH		101.01	3,973	444,240	112
08004	TH		107.07	5,393	389,815	72
27V39	TH		115.00	8,302	627,012	76
27V40	TH		115.00	7,719	585,689	76
39012	TH		118.50	5,115	374,872	73
39013	TH		118.50	5,115	380,354	74
14009	TH		124.67	6,130	844,632	138
14010	TH		124.67	5,652	814,272	144
52013	TH		128.06	7,470	552,472	74
79027	TH		131.08	5,658	308,516	55
32009	TH		143.22	6,372	494,809	78
68007	TH		147.25	6,356	590,739	93
59007	TH		149.32	6,340	322,997	51
59008	TH		149.32	4,607	218,877	48
State Aid Projects				**151,429**	**$12,308,154**	**$81**
Trunk Hwy Projects				**122,803**	**$11,127,040**	**$91**
TOTALS				**274,232**	**$23,435,194**	**$85**

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		73.11

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $68.00 PER SQ. FT.

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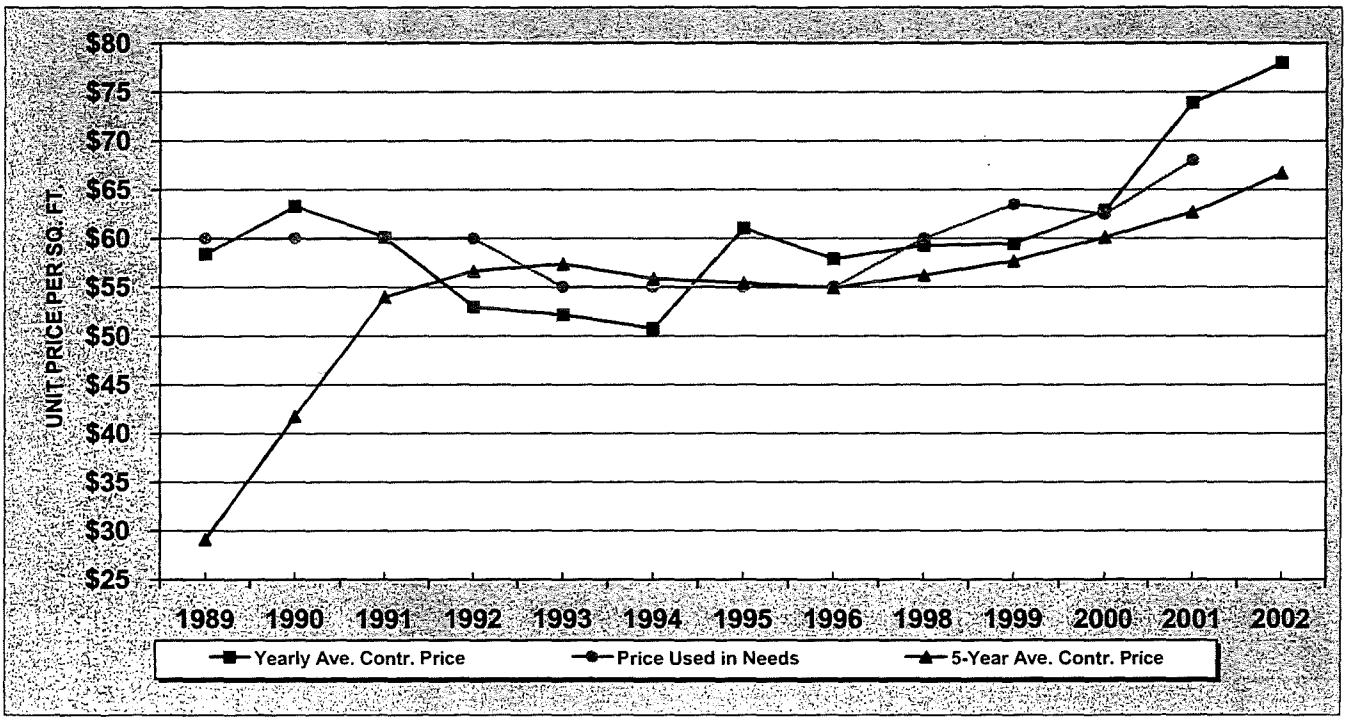
23-Apr-02

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		66.69

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $68.00 PER SQ. FT.

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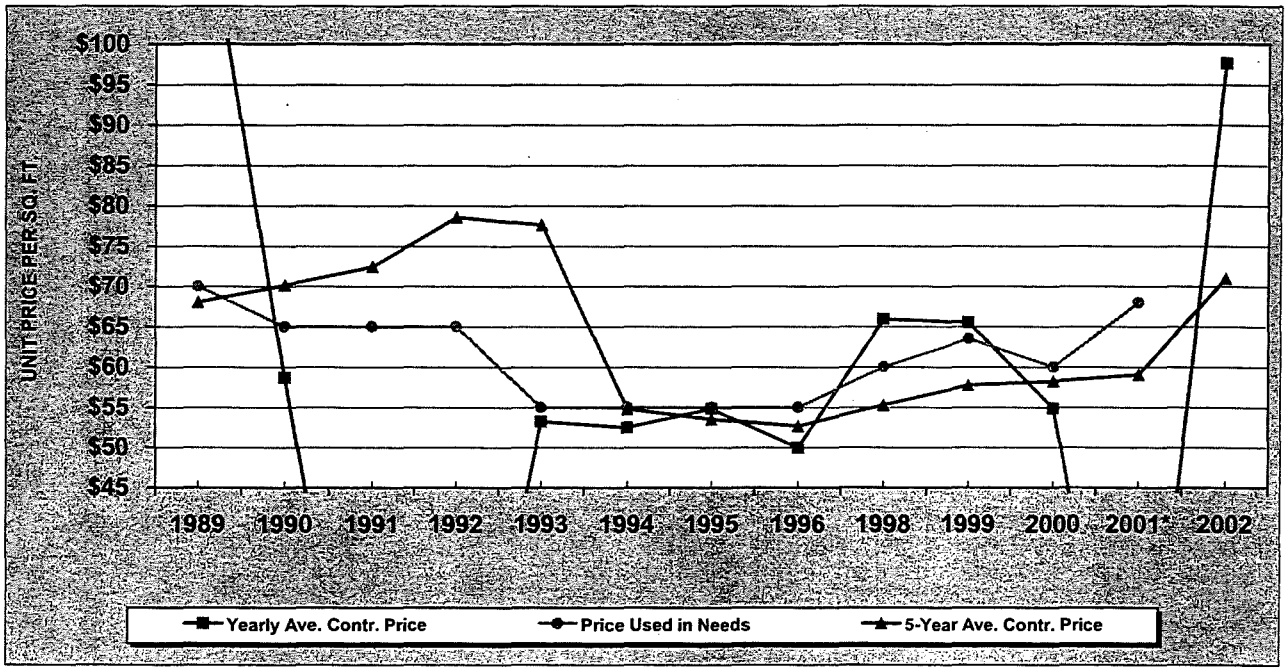
BRIDGE COST

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		70.99

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2002 NEEDS STUDY IS $68.00 Per Sq. Ft.

*There were no bridges over 500 feet built in 2000 so a 4-year average was used instead.

N:\MSAS\EXCEL\2002\JUNE 2002 BOOK\BRIDGE PROJECTS 2002.XLS GRAPH 500 & OVER

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						

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2001 NEEDS STUDY IS PER LINEAL FOOT FOR THE FIRST TRACK **$9,000**

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2001 NEEDS STUDY IS PER LIN. FT. FOR ADDITIONAL TRACKS **$7,500**

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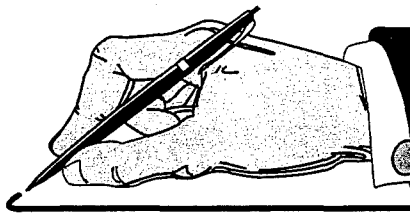
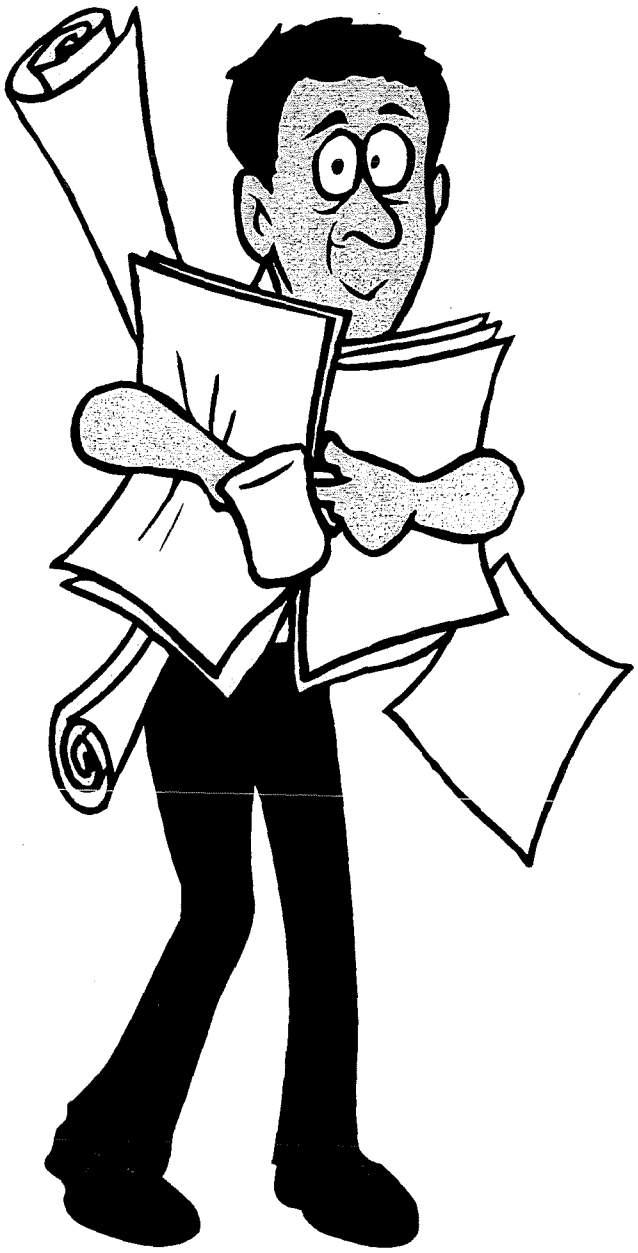
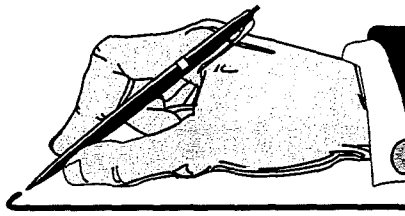


NOTES and COMMENTS

OTHER



TOPICS



NOTES and COMMENTS

March 18, 2002

DRAINAGE STRUCTURE ISSUES

For the Needs Study Subcommittee
Spring, 2002

The minutes from the Spring 2001 Municipal Screening Board meeting say in part:

> Item 7 pertained to whether urban segments should get extra drainage needs for detention or retention ponds.

And

> The Screening Board members had several comments with regards to this matter, including should right-of-way for ponds be considered for after the fact needs.

And

> Item 7 was the last item needing action. It referred to urban segments receiving extra drainage needs for detention or retention ponds. Dan Edwards made a motion, seconded by David Sonnenberg, that the Needs Study Subcommittee be directed to study this item and to report back at the fall or spring Screening Board meeting with the results of their study. The motion was clarified to make certain that it was clear that their motion was to study the item only, and that it didn't refer to any needs changes. Also, that both urban and rural areas were to be studied. Dan Edwards and David Sonnenberg amended their motion to include all items related to storm water, i.e. wetlands, erosion control, etc. Motion carried without opposition.

CURRENT NEEDS FOR DRAINAGE:

Deficient urban segments generate storm sewer needs at $248,000 per mile for new construction ands $80,400 per mile for adjustment of existing systems. This is for urban segments only.

Deficient rural segments generate Special Drainage needs at a minimum of $37,400 per mile. This is based on 25 driveways and 4 centerline pipes per mile.

Right of way for ponds are currently eligible for after the fact right of way needs.

Common and subgrade excavation are included in the current needs study. Other types of excavation like rock, muck or miscellaneous excavation are not included. Common and Subgrade excavation probably include some excavation for ponding.

ESTIMATING PONDING COSTS

Detention and retention ponds

Discussion Items:

Cost per mile or acre for Detention and Retention ponds?
How many ponds in a city? Where are they located? What percent drains MSAS routes
Which segment would the pond be included with?
Pipe size?
Pond size?
Can't get a good estimation of costs without designing the project.
Is it a new pond or an inplace pond?
Maintenance- dredging, etc.
Outlet structure?
Landscaping
Riprap
Mitigation

If a city is already receiving needs for storm sewer or culverts and ditches, how would we know which costs are the extra costs related to the ponding?

POSSIBLE OPTIONS:

Because the ponds have not been designed when the city would be generating needs on the ponds it would be difficult to determine the needs on a pond. One way to receive needs would be to have 3 sizes of ponds- Small, medium and large. When the segment becomes deficient, a city could generate needs on the ponding like the other needs, based on the pond size. These costs could be included in the Unit Price study and the prices revised annually if needed and input in the Special Drainage field of the data collector. How would the costs of the ponds be calculated? Which size pond would be required?

The city could estimate the ponding costs for a deficient segment (if any) and put that cost in the Special Drainage field on the data collector.

The city could receive after the fact needs on ponds based upon the actual local and/or state aid funds used to construct the ponds. City would need to submit abstract of bids with costs of pond.

The city could design a pond for future construction. There is currently no bid item for pond construction. Only state aid eligible items should be included in the needs request. This should probably be approved by the DSAE.

Add an extra percentage to the excavation costs for all deficient segment.

Could input a cost in Grading Cost per Mile or Special Drainage. But what cost to enter?

Continue the current method- do not include ponds in the needs.

BRIDGE ISSUES

For the Needs Study Subcommittee
Spring, 2002

The minutes from the Fall 2001 Municipal Screening Board meeting say, in part:

> Motion by Ed Warn and seconded by Mark Burch to have the Needs Study Subcommittee examine local participation, and the possibility of a needs adjustment, for bridge reconstruction of MSAS routes over trunk highways in view of Maple Grove's situation, including pedestrian bridge construction. Motion carried with 10 in support and 2 against (Larry Koshak and Steve Koehler voted no).

TH BRIDGES

All bridges receive roadway needs for the length of the bridge. The length of the bridge is not subtracted out of the segment length when the needs are computed.

Non existing bridges receive after the fact needs for the amount of MSAS or local dollars spent on the construction.

Needs are reinstated on bridges not over TH's 35 years after construction. These needs are generated at the current unit cost per square foot until the bridge is reconstructed. This needs cost is based upon actual construction costs of all bridges in the state the previous year, no matter what the source of funding.

There are currently 72 existing bridges over TH's reported on the MSAS system in the needs. There are 152 existing bridges over TH's as reported by the bridge office. There are 10 non existing bridges over TH's as reported in the needs.

There are 39 non existing bridges on the MSAS system. There are probably more, but they are not included in the needs. Some cities do not include them in the needs until they are built.

CSAH has a 35 year after the fact bridge adjustment for bridges over TH's. Adjustment is for local or state aid funds.

PEDESTRIAN BRIDGES

According to the Bridge Management Unit, there are 53 pedestrian bridges crossing over or under MSAS routes.

According to the Bridge Management Unit, there are 9 structures running parallel to MSAS routes within the right of way.

A bridge on the MSAS system receives needs for the total proposed width of the structure- whether it has sidewalks or not.

A detached pedestrian bridge does not receive needs.

Bituminous walkways or pathways do not receive needs.

Concrete sidewalks receive construction and removal needs per square yard on a maximum of 10 feet wide.

SUGGESTED OPTIONS

TH Bridges

To keep a level playing field, TH bridges could generate needs the same as bridges not over TH's or Interstates. They receive needs 35 years after the year built at the current unit cost per square foot.

TH bridges could receive after the fact needs. TH bridges on the CSAH system receive after the fact needs for the local or state aid portion of the reconstruction project for 35 years. On the MSAS system, non existing bridges receive after the fact needs for the local or MSAS portion of the contract for 15 years after they are built.

Continue the current method- do not include TH bridges in the needs.

Pedestrian Bridges

Ped bridges could generate needs the same as sidewalks currently do.

They could generate needs at the same unit cost as bridges currently do.

A unit price could be computed for ped bridges in the unit price study, and this price could be used to generate needs where a ped bridge is over 35 years old.

They could receive after the fact needs.

Continue the current method- do not include ped bridges in the needs.

City of
Maple Grove
12800 Arbor Lakes Parkway, P.O. Box 1180, Maple Grove, MN 55311-6180 763-494-6000

October 5, 2001

Mr. Marshall Johnston
Manager, MSAS Needs Unit
395 John Ireland Blvd. MS 500
St. Paul, MN 55155

Subject: Non Existing Bridge Adjustments

Dear Marshall:

This is to thank you and Rick Kjonaas for your time yesterday and to request that State-Aid, by direction of the Screening Board, review resolutions relating to non-existing bridge adjustments and/or interpretations thereof.

As a result of our discussion, two issues immerge that I believe should be addressed and clarified. The first issue involves pedestrian bridges constructed within MSA routes. Currently, these bridges and associated costs are not considered for after-the-fact bridge adjustments.

The second issue that I would like to address is the local costs associated with the reconstruction of bridges within MSA routes over trunk highways. Typically, these bridges are considered to be owned by Mn/DOT and do not generate needs. However, the cost sharing policies normally identify local costs associated with pedestrian facilities, etc.

Our MSA routes should be considered to provide multi-modal transportation consisting of motorized vehicles, bicycles and pedestrians. In the true spirit of defining needs within a MSA route, local costs within those routes generated by various uses of the route should generate needs. Having said that, it is recognized that there are numerous grade separated pedestrian facilities that are not within MSA routes and I would not be in favor of indiscriminately assigning needs for every grade separated pedestrian facility.

Thanks again Marshall and if I can be of any assistance do not hesitate to contact me at 763/494-6351.

Sincerely,

Ken Ashfeld, P.E.
City Engineer

"Serving Today, Shaping Tomorrow"

AN EQUAL OPPORTUNITY EMPLOYER

CURRENT AND PROPOSED TRAFFIC SIGNAL COSTS

N:\MSAS\EXCEL\TRAFFIC GROUPSAND SIGNAL COSTS

CITY NAME	PROJECTED TRAFFIC LT 5,000 In miles	NEEDS AT $30,000 PER MILE CURRENT	NEEDS AT $60,000 PER MILE PROPOSED	DIFFERENCE	PROJECTED TRAFFIC 5,000 TO 9,999	NEEDS AT $60,000 PER MILE CURRENT	NEEDS AT $90,000 PER MILE PROPOSED	DIFFERENCE	PROJECTED TRAFFIC GT 10,000	NEEDS AT $120,000 PER MILE	TOTAL NEEDS AT CURRENT UNIT COST	TOTAL NEEDS AT PROPOSED UNIT COST	DIFFERENCE	PERCENT OF INCREASE
ALBERT LEA	12.08	$362,400	$724,800	$362,400	5.65	$339,000	$508,500	$169,500	1.01	$121,200	$822,600	$1,354,500	$531,900	64.66
ALEXANDRIA	7.49	224,700	449,400	224,700	3.88	232,800	349,200	116,400	3.02	362,400	819,900	1,161,000	341,100	41.60
ANDOVER	33.66	1,009,800	2,019,600	1,009,800	1.74	104,400	156,600	52,200	1.32	158,400	1,272,600	2,334,600	1,062,000	83.45
ANOKA	9.93	297,900	595,800	297,900	0.96	57,600	86,400	28,800	1.75	210,000	565,500	892,200	326,700	57.77
APPLE VALLEY	11.75	352,500	705,000	352,500	11.11	666,600	999,900	333,300	12.07	1,448,400	2,467,500	3,153,300	685,800	27.79
ARDEN HILLS	5.31	159,300	318,600	159,300	1.61	96,600	144,900	48,300	0.49	58,800	314,700	522,300	207,600	65.97
AUSTIN	17.22	516,600	1,033,200	516,600	6.33	379,800	569,700	189,900	4.15	498,000	1,394,400	2,100,900	706,500	50.67
BAXTER	8.52	255,600	511,200	255,600	2.04	122,400	183,600	61,200	2.14	256,800	634,800	951,600	316,800	49.91
BEMIDJI	9.09	272,700	545,400	272,700	4.30	258,000	387,000	129,000	2.65	318,000	848,700	1,250,400	401,700	47.33
BIG LAKE	5.96	178,800	357,600	178,800	0.00	0	0	0	0.00	0	178,800	357,600	178,800	100.00
BLAINE	17.36	520,800	1,041,600	520,800	11.61	696,600	1,044,900	348,300	6.63	795,600	2,013,000	2,882,100	869,100	43.17
BLOOMINGTON	17.11	513,300	1,026,600	513,300	25.47	1,528,200	2,292,300	764,100	32.48	3,897,600	5,939,100	7,216,500	1,277,400	21.51
BRAINERD	10.42	312,600	625,200	312,600	1.67	100,200	150,300	50,100	2.21	265,200	678,000	1,040,700	362,700	53.50
BROOKLYN CENTER	7.78	233,400	466,800	233,400	4.55	273,000	409,500	136,500	9.23	1,107,600	1,614,000	1,983,900	369,900	22.92
BROOKLYN PARK	18.04	541,200	1,082,400	541,200	12.50	750,000	1,125,000	375,000	17.54	2,104,800	3,396,000	4,312,200	916,200	26.98
BUFFALO	8.62	258,600	517,200	258,600	3.12	187,200	280,800	93,600	0.36	43,200	489,000	841,200	352,200	72.02
BURNSVILLE	13.87	416,100	832,200	416,100	16.49	989,400	1,484,100	494,700	13.69	1,642,800	3,048,300	3,959,100	910,800	29.88
CAMBRIDGE	6.57	197,100	394,200	197,100	2.90	174,000	261,000	87,000	1.27	152,400	523,500	807,600	284,100	54.27
CHAMPLIN	9.39	281,700	563,400	281,700	6.34	380,400	570,600	190,200	1.28	153,600	815,700	1,287,600	471,900	57.85
CHANHASSEN	12.11	363,300	726,600	363,300	7.59	455,400	683,100	227,700	2.57	308,400	1,127,100	1,718,100	591,000	52.44
CHASKA	10.82	324,600	649,200	324,600	2.53	151,800	227,700	75,900	1.78	213,600	690,000	1,090,500	400,500	58.04
CHISHOLM	7.93	237,900	475,800	237,900	0.06	3,600	5,400	1,800	0.00	0	241,500	481,200	239,700	99.25
CLOQUET	16.79	503,700	1,007,400	503,700	2.51	150,600	225,900	75,300	0.84	100,800	755,100	1,334,100	579,000	76.68
COLUMBIA HEIGHTS	8.86	265,800	531,600	265,800	2.11	126,600	189,900	63,300	1.56	187,200	579,600	908,700	329,100	56.78
COON RAPIDS	18.19	545,700	1,091,400	545,700	10.07	604,200	906,300	302,100	13.48	1,617,600	2,767,500	3,615,300	847,800	30.63
CORCORAN	14.80	444,000	888,000	444,000	0.00	0	0	0	0.00	0	444,000	888,000	444,000	100.00
COTTAGE GROVE	14.85	445,500	891,000	445,500	8.93	535,800	803,700	267,900	6.46	775,200	1,756,500	2,469,900	713,400	40.61
CROOKSTON	10.63	318,900	637,800	318,900	0.76	45,600	68,400	22,800	0.14	16,800	381,300	723,000	341,700	89.61
CRYSTAL	15.26	457,800	915,600	457,800	1.05	63,000	94,500	31,500	1.57	188,400	709,200	1,198,500	489,300	68.99
DAYTON	8.46	253,800	507,600	253,800	0.82	49,200	73,800	24,600	0.00	0	303,000	581,400	278,400	91.88
DETROIT LAKES	10.09	302,700	605,400	302,700	1.47	88,200	132,300	44,100	0.85	102,000	492,900	839,700	346,800	70.36
DULUTH	58.31	1,749,300	3,498,600	1,749,300	28.34	1,700,400	2,550,600	850,200	24.73	2,967,600	6,417,300	9,016,800	2,599,500	40.51
EAGAN	10.88	326,400	652,800	326,400	17.12	1,027,200	1,540,800	513,600	8.91	1,069,200	2,422,800	3,262,800	840,000	34.67
EAST BETHEL	26.34	790,200	1,580,400	790,200	0.71	42,600	63,900	21,300	0.00	0	832,800	1,644,300	811,500	97.44
EAST GRAND FORKS	9.14	274,200	548,400	274,200	2.34	140,400	210,600	70,200	1.00	120,000	534,600	879,000	344,400	64.42
EDEN PRAIRIE	11.70	351,000	702,000	351,000	15.32	919,200	1,378,800	459,600	15.64	1,876,800	3,147,000	3,957,600	810,600	25.76
EDINA	12.28	368,400	736,800	368,400	15.05	903,000	1,354,500	451,500	12.94	1,552,800	2,824,200	3,644,100	819,900	29.03
ELK RIVER	15.66	469,800	939,600	469,800	6.98	418,800	628,200	209,400	5.14	616,800	1,505,400	2,184,600	679,200	45.12
FAIRMONT	9.69	290,700	581,400	290,700	8.99	539,400	809,100	269,700	0.81	97,200	927,300	1,487,700	560,400	60.43
FALCON HEIGHTS	2.41	72,300	144,600	72,300	0.00	0	0	0	0.13	15,600	87,900	160,200	72,300	82.25
FARIBAULT	12.78	383,400	766,800	383,400	6.42	385,200	577,800	192,600	3.25	390,000	1,158,600	1,734,600	576,000	49.72
FARMINGTON	9.67	290,100	580,200	290,100	0.74	44,400	66,600	22,200	2.64	316,800	651,300	963,600	312,300	47.95
FERGUS FALLS	10.23	306,900	613,800	306,900	10.50	630,000	945,000	315,000	3.59	430,800	1,367,700	1,989,600	621,900	45.47
FOREST LAKE	17.59	527,700	1,055,400	527,700	2.75	165,000	247,500	82,500	0.25	30,000	722,700	1,332,900	610,200	84.43
FRIDLEY	18.62	558,600	1,117,200	558,600	4.21	252,600	378,900	126,300	1.98	237,600	1,048,800	1,733,700	684,900	65.30
GLENCOE	5.95	178,500	357,000	178,500	0.85	51,000	76,500	25,500	0.18	21,600	251,100	455,100	204,000	81.24
GOLDEN VALLEY	13.73	411,900	823,800	411,900	8.85	531,000	796,500	265,500	0.96	115,200	1,058,100	1,735,500	677,400	64.02
GRAND RAPIDS	8.06	241,800	483,600	241,800	1.55	93,000	139,500	46,500	1.79	214,800	549,600	837,900	288,300	52.46
HAM LAKE	25.55	766,500	1,533,000	766,500	0.51	30,600	45,900	15,300	0.00	0	797,100	1,578,900	781,800	98.08
HASTINGS	7.34	220,200	440,400	220,200	7.97	478,200	717,300	239,100	0.79	94,800	793,200	1,252,500	459,300	57.90
HERMANTOWN	8.13	243,900	487,800	243,900	5.94	356,400	534,600	178,200	0.00	0	600,300	1,022,400	422,100	70.31
HIBBING	44.38	1,331,400	2,662,800	1,331,400	4.49	269,400	404,100	134,700	2.44	292,800	1,893,600	3,359,700	1,466,100	77.42
HOPKINS	0.68	20,400	40,800	20,400	4.96	297,600	446,400	148,800	3.68	441,600	759,600	928,800	169,200	22.27
HUGO	16.79	503,700	1,007,400	503,700	0.00	0	0	0	0.00	0	503,700	1,007,400	503,700	100.00
HUTCHINSON	11.47	344,100	688,200	344,100	4.04	242,400	363,600	121,200	0.98	117,600	704,100	1,169,400	465,300	66.08
INTERNATIONAL FALLS	6.91	207,300	414,600	207,300	1.15	69,000	103,500	34,500	0.00	0	276,300	518,100	241,800	87.51
INVER GROVE HEIGHTS	12.20	366,000	732,000	366,000	4.35	261,000	391,500	130,500	8.32	998,400	1,625,400	2,121,900	496,500	30.55
LAKE CITY	0.00	0	0	0	0.00	0	0	0	0.00	0	0	0	0	
LAKE ELMO	10.77	323,100	646,200	323,100	0.75	45,000	67,500	22,500	0.00	0	368,100	713,700	345,600	93.89
LAKEVILLE	22.48	674,400	1,348,800	674,400	24.32	1,459,200	2,188,800	729,600	1.84	220,800	2,354,400	3,758,400	1,404,000	59.63
LINO LAKES	19.81	594,300	1,188,600	594,300	0.22	13,200	19,800	6,600	0.00	0	607,500	1,208,400	600,900	98.91
LITCHFIELD	8.58	257,400	514,800	257,400	0.00	0	0	0	0.00	0	257,400	514,800	257,400	100.00
LITTLE CANADA	6.87	206,100	412,200	206,100	3.15	189,000	283,500	94,500	0.47	56,400	451,500	752,100	300,600	66.58
LITTLE FALLS	12.38	371,400	742,800	371,400	1.86	111,600	167,400	55,800	1.74	208,800	691,800	1,119,000	427,200	61.75
MAHTOMEDI	7.60	228,000	456,000	228,000	1.02	61,200	91,800	30,600	0.00	0	289,200	547,800	258,600	89.42

CITY NAME	PROJECTED TRAFFIC LT 5,000 In miles	NEEDS AT $30,000 PER MILE CURRENT	NEEDS AT $60,000 PER MILE PROPOSED	DIFFERENCE	TRAFFIC 5,000 TO 9,999	$60,000 PER MILE CURRENT	$90,000 PER MILE PROPOSED	DIFFERENCE	PROJECTED TRAFFIC GT 10,000	NEEDS AT $120,000 PER MILE	NEEDS AT CURRENT UNIT COST	NEEDS AT PROPOSED UNIT COST	DIFFERENCE	PERCENT OF INCREASE
MANKATO	9.87	296,100	592,200	296,100	7.70	462,000	693,000	231,000	13.00	1,560,000	2,318,100	2,845,200	527,100	22.74
MAPLE GROVE	16.12	483,600	967,200	483,600	17.19	1,031,400	1,547,100	515,700	14.04	1,684,800	3,199,800	4,199,100	999,300	31.23
MAPLEWOOD	18.18	545,400	1,090,800	545,400	9.81	588,600	882,900	294,300	2.41	289,200	1,423,200	2,262,900	839,700	59.00
MARSHALL	8.76	262,800	525,600	262,800	6.12	367,200	550,800	183,600	0.00	0	630,000	1,076,400	446,400	70.86
MENDOTA HEIGHTS	12.73	381,900	763,800	381,900	0.93	55,800	83,700	27,900	0.50	60,000	497,700	907,500	409,800	82.34
MINNEAPOLIS	59.00	1,770,000	3,540,000	1,770,000	63.88	3,832,800	5,749,200	1,916,400	81.17	9,740,400	15,343,200	19,029,600	3,686,400	24.03
MINNETONKA	28.60	858,000	1,716,000	858,000	12.06	723,600	1,085,400	361,800	9.23	1,107,600	2,689,200	3,909,000	1,219,800	45.36
MONTEVIDEO	7.12	213,600	427,200	213,600	1.46	87,600	131,400	43,800	0.00	0	301,200	558,600	257,400	85.46
MONTICELLO	6.11	183,300	366,600	183,300	1.54	92,400	138,600	46,200	0.15	18,000	293,700	523,200	229,500	78.14
MOORHEAD	12.48	374,400	748,800	374,400	10.32	619,200	928,800	309,600	6.91	829,200	1,822,800	2,506,800	684,000	37.52
MORRIS	8.07	242,100	484,200	242,100	0.00	0	0	0	0.00	0	242,100	484,200	242,100	100.00
MOUND	6.53	195,900	391,800	195,900	1.52	91,200	136,800	45,600	0.00	0	287,100	528,600	241,500	84.12
MOUNDS VIEW	9.13	273,900	547,800	273,900	2.02	121,200	181,800	60,600	0.11	13,200	408,300	742,800	334,500	81.93
NEW BRIGHTON	10.79	323,700	647,400	323,700	4.05	243,000	364,500	121,500	0.11	13,200	579,900	1,025,100	445,200	76.77
NEW HOPE	3.91	117,300	234,600	117,300	5.35	321,000	481,500	160,500	3.44	412,800	851,100	1,128,900	277,800	32.64
NEW ULM	10.63	318,900	637,800	318,900	4.70	282,000	423,000	141,000	0.00	0	600,900	1,060,800	459,900	76.54
NORTH BRANCH	21.45	643,500	1,287,000	643,500	0.48	28,800	43,200	14,400	0.00	0	672,300	1,330,200	657,900	97.86
NORTH MANKATO	6.79	203,700	407,400	203,700	2.41	144,600	216,900	72,300	4.18	501,600	849,900	1,125,900	276,000	32.47
NORTH ST PAUL	7.32	219,600	439,200	219,600	2.86	171,600	257,400	85,800	0.50	60,000	451,200	756,600	305,400	67.69
NORTHFIELD	8.34	250,200	500,400	250,200	3.47	208,200	312,300	104,100	0.25	30,000	488,400	842,700	354,300	72.54
OAK GROVE	19.50	585,000	1,170,000	585,000	0.00	0	0	0	0.00	0	585,000	1,170,000	585,000	100.00
OAKDALE	9.05	271,500	543,000	271,500	6.96	417,600	626,400	208,800	2.38	285,600	974,700	1,455,000	480,300	49.28
ORONO	9.70	291,000	582,000	291,000	2.88	172,800	259,200	86,400	0.00	0	463,800	841,200	377,400	81.37
OTSEGO	14.28	428,400	856,800	428,400	0.73	43,800	65,700	21,900	0.00	0	472,200	922,500	450,300	95.36
OWATONNA	12.70	381,000	762,000	381,000	3.93	235,800	353,700	117,900	0.93	111,600	728,400	1,227,300	498,900	68.49
PLYMOUTH	13.79	413,700	827,400	413,700	20.77	1,246,200	1,869,300	623,100	19.56	2,347,200	4,007,100	5,043,900	1,036,800	25.87
PRIOR LAKE	15.25	457,500	915,000	457,500	0.90	54,000	81,000	27,000	0.00	0	511,500	996,000	484,500	94.72
RAMSEY	24.09	722,700	1,445,400	722,700	4.59	275,400	413,100	137,700	0.50	60,000	1,058,100	1,918,500	860,400	81.32
RED WING	10.20	306,000	612,000	306,000	9.76	585,600	878,400	292,800	2.81	337,200	1,228,800	1,827,600	598,800	48.73
REDWOOD FALLS	7.87	236,100	472,200	236,100	0.00	0	0	0	0.00	0	236,100	472,200	236,100	100.00
RICHFIELD	12.85	385,500	771,000	385,500	6.61	396,600	594,900	198,300	5.62	674,400	1,456,500	2,040,300	583,800	40.08
ROBBINSDALE	5.35	160,500	321,000	160,500	3.38	202,800	304,200	101,400	1.37	164,400	527,700	789,600	261,900	49.63
ROCHESTER	20.95	628,500	1,257,000	628,500	16.75	1,005,000	1,507,500	502,500	26.48	3,177,600	4,811,100	5,942,100	1,131,000	23.51
ROSEMOUNT	14.06	421,800	843,600	421,800	6.33	379,800	569,700	189,900	4.28	513,600	1,315,200	1,926,900	611,700	46.51
ROSEVILLE	23.05	691,500	1,383,000	691,500	4.84	290,400	435,600	145,200	0.81	97,200	1,079,100	1,915,800	836,700	77.54
SAINT PAUL	62.62	1,878,600	3,757,200	1,878,600	49.43	2,965,800	4,448,700	1,482,900	52.93	6,351,600	11,196,000	14,557,500	3,361,500	30.02
SARTELL	7.65	229,500	459,000	229,500	0.47	28,200	42,300	14,100	2.06	247,200	504,900	748,500	243,600	48.25
SAUK RAPIDS	8.69	260,700	521,400	260,700	0.91	54,600	81,900	27,300	1.83	219,600	534,900	822,900	288,000	53.84
SAVAGE	9.65	289,500	579,000	289,500	11.47	688,200	1,032,300	344,100	3.29	394,800	1,372,500	2,006,100	633,600	46.16
SHAKOPEE	11.90	357,000	714,000	357,000	8.95	537,000	805,500	268,500	2.44	292,800	1,186,800	1,812,300	625,500	52.70
SHOREVIEW	10.79	323,700	647,400	323,700	5.37	322,200	483,300	161,100	2.33	279,600	925,500	1,410,300	484,800	52.38
SHOREWOOD	6.08	182,400	364,800	182,400	2.16	129,600	194,400	64,800	0.00	0	312,000	559,200	247,200	79.23
SOUTH ST PAUL	11.52	345,600	691,200	345,600	2.90	174,000	261,000	87,000	2.40	288,000	807,600	1,240,200	432,600	53.57
SPRING LAKE PARK	3.99	119,700	239,400	119,700	1.34	80,400	120,600	40,200	0.49	58,800	258,900	418,800	159,900	61.76
ST ANTHONY	2.76	82,800	165,600	82,800	1.80	108,000	162,000	54,000	1.07	128,400	319,200	456,000	136,800	42.86
ST CLOUD	12.62	378,600	757,200	378,600	23.24	1,394,400	2,091,600	697,200	22.24	2,668,800	4,441,800	5,517,600	1,075,800	24.22
ST JOSEPH	3.37	101,100	202,200	101,100	0.10	6,000	9,000	3,000	0.00	0	107,100	211,200	104,100	97.20
ST LOUIS PARK	9.32	279,600	559,200	279,600	8.69	521,400	782,100	260,700	10.67	1,280,400	2,081,400	2,621,700	540,300	25.96
ST MICHAEL	16.31	489,300	978,600	489,300	0.57	34,200	51,300	17,100	0.00	0	523,500	1,029,900	506,400	96.73
ST PAUL PARK	4.52	135,600	271,200	135,600	0.78	46,800	70,200	23,400	0.00	0	182,400	341,400	159,000	87.17
ST PETER	11.32	339,600	679,200	339,600	1.72	103,200	154,800	51,600	0.52	62,400	505,200	896,400	391,200	77.43
STEWARTVILLE	3.99	119,700	239,400	119,700	0.00	0	0	0	0.00	0	119,700	239,400	119,700	100.00
STILLWATER	8.27	248,100	496,200	248,100	3.64	218,400	327,600	109,200	2.16	259,200	725,700	1,083,000	357,300	49.24
THIEF RIVER FALLS	9.99	299,700	599,400	299,700	3.86	231,600	347,400	115,800	1.55	186,000	717,300	1,132,800	415,500	57.93
VADNAIS HEIGHTS	6.89	206,700	413,400	206,700	1.43	85,800	128,700	42,900	0.00	0	292,500	542,100	249,600	85.33
VIRGINIA	8.89	266,700	533,400	266,700	4.37	262,200	393,300	131,100	2.67	320,400	849,300	1,247,100	397,800	46.84
WACONIA	4.61	138,300	276,600	138,300	0.92	55,200	82,800	27,600	0.00	0	193,500	359,400	165,900	85.74
WAITE PARK	1.19	35,700	71,400	35,700	3.35	201,000	301,500	100,500	1.94	232,800	469,500	605,700	136,200	29.01
WASECA	5.07	152,100	304,200	152,100	1.35	81,000	121,500	40,500	0.00	0	233,100	425,700	192,600	82.63
WEST ST PAUL	8.25	247,500	495,000	247,500	5.06	303,600	455,400	151,800	0.00	0	551,100	950,400	399,300	72.46
WHITE BEAR LAKE	13.70	411,000	822,000	411,000	5.61	336,600	504,900	168,300	1.04	124,800	872,400	1,451,700	579,300	66.40
WILLMAR	14.85	445,500	891,000	445,500	4.59	275,400	413,100	137,700	4.47	536,400	1,257,300	1,840,500	583,200	46.39
WINONA	8.97	269,100	538,200	269,100	3.06	183,600	275,400	91,800	9.72	1,166,400	1,619,100	1,980,000	360,900	22.29
WOODBURY	13.72	411,600	823,200	411,600	15.47	928,200	1,392,300	464,100	14.61	1,753,200	3,093,000	3,968,700	875,700	28.31
WORTHINGTON	8.10	243,000	486,000	243,000	2.72	163,200	244,800	81,600	0.57	68,400	474,600	799,200	324,600	68.39
TOTAL	1648.16	$49,444,800	$98,889,600	$49,444,800	777.25	$46,635,000	$69,952,500	$23,317,500	588.48	$70,617,600	$166,697,400	$239,459,700	$72,762,300	43.65

At the current Unit Price, traffic signals generate 6.77% of the total needs

At the proposed Unit Price, traffic signals would generate 9.85% of the total needs

April 5, 2002

GENERAL FUND ADVANCES

Revised June, 1999 November 2000

Guidelines

The October, 2000 Screening Board discussed the possibility of revising the limits that a smaller city may advance. 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 that a smaller city can advance be raised to $750,000.
After discussing it with State Aid Finance, the following revisions will go into effect for advances from the 2002 allocation:

Cities with a construction allotment of $750,000 or less can now advance up to three times its previous years construction allotment or $750,000, whichever is less.

Cities with a construction allotment of more than $750,000 can now advance up to its previous years construction allotment up to a maximum of $3,000,000.

Clarification of Guidelines

The maximum Municipal State Aid construction dollars that can be advanced 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.

A City Council Resolution is required to advance funds. 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 in that year. 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 submitted by the city, the amount required to process the payment (up to the

resolution/allowable amount) will be added to the city's account. The payment request is verified by the form 'Report of State Aid Contract'.

To "reserve" the funds, the City Engineer may submit a "Request to Reserve Advanced Funding" form (Fig. G 5-892.563) up to 8 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 Diane McCabe in State Aid. This form is not required, but will allow the funds to be set aside up to eight weeks in advance of the payment request.

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

If the General Fund runs out of funds to advance, a city has to submit a new city council resolution if more funds don't come available until the following year.

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

CITY GENERAL FUND ADVANCES

Fund 250

2001 MSAS year end construction balance available	$ 75,278,512.16
2002 Allotment	$ 90,646,885.00
Total available	$165,925,397.16
Less: Estimated CY 2002 expenditures (updated quarterly)	$ 70,000,000.00
Balance	$ 95,925,397.16
Less: amount required in account	$ (20,000,000.00)
Maximum amount for advance in CY 2002	$ 75,925,397.16
Amount advanced to date (listed below)	$ 5,579,303.00
Balance availabe to advance	$ 70,346,094.16

CITY NAME	RESOLUTION AMOUNT	YEAR	REQUEST TO RESERVE ADV FUNDING	ADVANCE AMOUNT	REPAID AMOUNT	BALANCE	COMMENTS
Blaine	$970,000.00	2002					
Coon Rapids	$ 1,500,000.00	2002	1,500,000.00	1,500,000.00		1,500,000.00	
Corcoran	$ 160,000.00	2001		196,560.00	174,482.00	22,078.00	
Forest Lake	$ 500,000.00	2001	500,000.00	500,000.00	488,046.00	11,954.00	
International Falls	$ 400,000.00	2001	400,000.00	400,000.00	248,098.00	151,902.00	
Mahtomedi	$ 500,000.00	2000	500,000.00	500,000.00	440,504.00	59,496.00	
Maple Grove	$ 718,671.00	2002		718,671.00		718,671.00	for DCP 189-020-06 to cover adv const
Minnetonka	$ 1,115,000.00	2002	1,115,000.00	1,115,000.00		1,115,000.00	
Morris	$ 300,000.00	2001	300,000.00	300,000.00	142,399.00	157,601.00	
Sartell	$ 750,000.00	2001	625,599.00	625,599.00	188,346.00	437,253.00	
St. Anthony	$ 500,000.00	2000	500,000.00	500,000.00	222,110.00	277,890.00	
White Bear Lake	$ 500,000.00	2002	500,000.00	500,000.00		500,000.00	
Woodbury	$ 1,724,161.00	2001		1,724,263.00	1,096,805.00	627,458.00	
Woodbury	$ 1,700,000.00	2002					
TOTAL	$10,367,832.00		$5,940,599.00	$ 8,580,093.00	$ 3,000,790.00	$ 5,579,303.00	

cc: Paul Stine, Diane McCabe Marshall Johnston (5)

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. Does not include State Aid Advances.

App. Year		No. of Municipalities	Needs Mileage	Unencumbered Construction Balance	Construction Allotment	Amount Spent on Construction Projects	Ratio of Construction Balance to Construction Allotment	Ratio of Amount spent to Amount Received
1973		94	1,580.45	$26,333,918	$15,164,273	$12,855,250	1.7366	0.8477
1974		95	1,608.06	29,760,552	18,052,386	14,625,752	1.6486	0.8102
1975		99	1,629.30	33,239,840	19,014,171	15,534,883	1.7482	0.8170
1976		101	1,718.92	37,478,614	18,971,282	14,732,508	1.9755	0.7766
1977		101	1,748.55	43,817,240	23,350,429	17,011,803	1.8765	0.7285
1978		104	1,807.94	45,254,560	23,517,393	22,080,073	1.9243	0.9389
1979		106	1,853.71	48,960,135	26,196,935	22,491,360	1.8689	0.8585
1980		106	1,889.03	51,499,922	29,082,865	26,543,078	1.7708	0.9127
1981		106	1,933.64	55,191,785	30,160,696	26,468,833	1.8299	0.8776
1982		105	1,976.17	57,550,334	36,255,443	33,896,894	1.5874	0.9349
1983		106	2,022.37	68,596,586	39,660,963	28,614,711	1.7296	0.7215
1984		106	2,047.23	76,739,685	41,962,145	33,819,046	1.8288	0.8059
1985		107	2,110.52	77,761,378	49,151,218	48,129,525	1.5821	0.9792
1986		107	2,139.42	78,311,767	50,809,002	50,258,613	1.5413	0.9892
1987	*	107	2,148.07	83,574,312	46,716,190	41,453,645	1.7890	0.8874
1988		108	2,171.89	85,635,991	49,093,724	47,032,045	1.7443	0.9580
1989		109	2,205.05	105,147,959	65,374,509	45,862,541	1.6084	0.7015
1990		112	2,265.64	119,384,013	68,906,409	54,670,355	1.7326	0.7934
1991		113	2,330.30	120,663,647	66,677,426	65,397,792	1.8097	0.9808
1992		116	2,376.79	129,836,670	66,694,378	57,521,355	1.9467	0.8625
1993		116	2,410.53	109,010,201	64,077,980	84,904,449	1.7012	1.3250
1994		117	2,471.04	102,263,355	62,220,930	68,967,776	1.6436	1.1084
1995		118	2,526.39	89,545,533	62,994,481	75,712,303	1.4215	1.2019
1996		119	2,614.71	62,993,508	70,289,831	96,841,856	0.8962	1.3778
1997	**	122	2,740.46	49,110,546	69,856,915	83,739,877	0.7030	1.1987
1998		125	2,815.99	44,845,521	72,626,164	76,891,189	0.6175	1.0587
1999		126	2,859.05	55,028,453	75,595,243	65,412,311	0.7279	0.8653
2000		127	2,910.87	72,385,813	80,189,255	62,831,895	0.9027	0.7835
2001		129	2,972.16	84,583,631	84,711,549	72,513,731	0.9985	0.8560
2002		130	3,020.39		90,646,885			

* 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.

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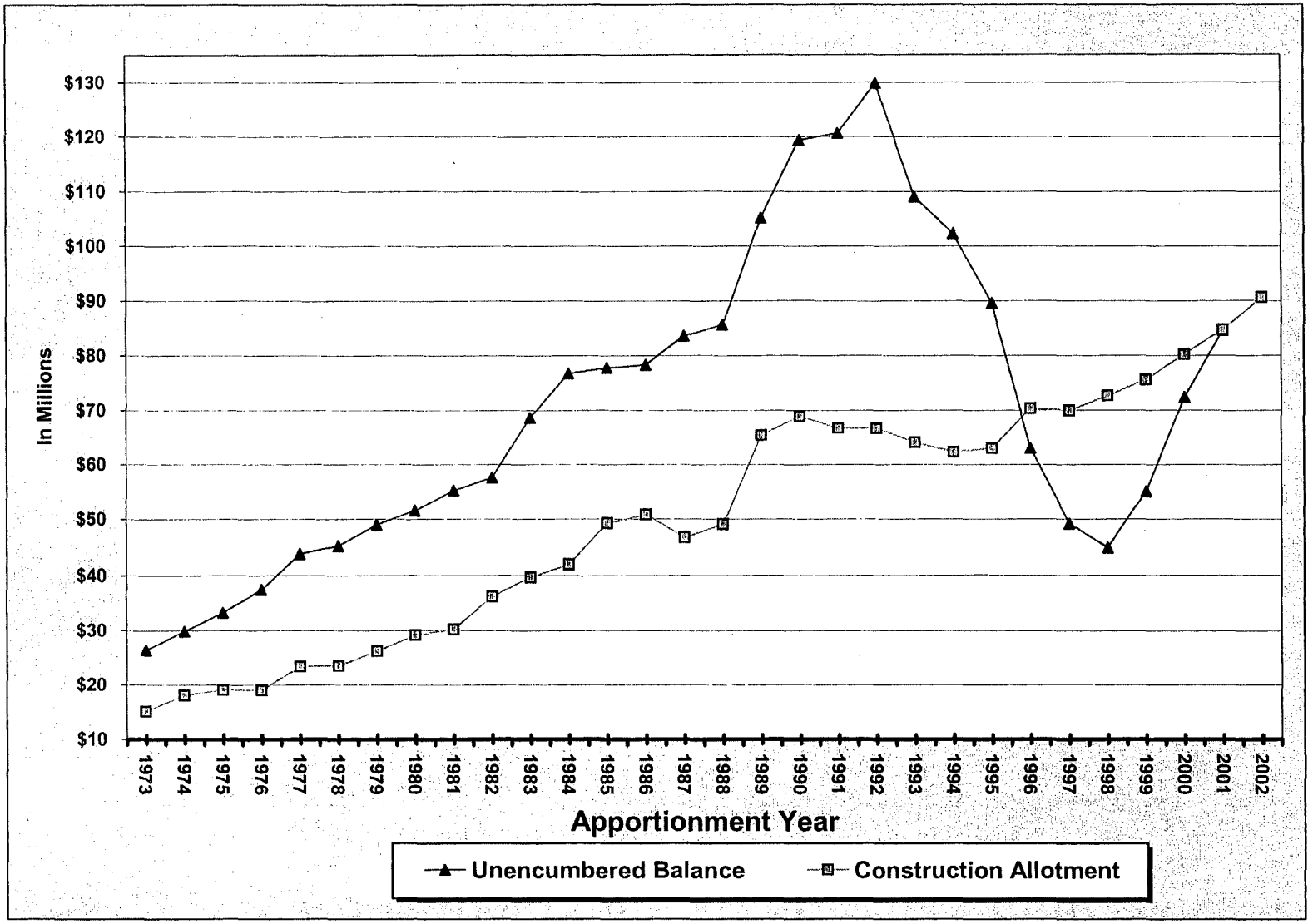
RELATIONSHIP OF CONSTRUCTION BALANCE TO CONSTRUCTION ALLOTMENT



2002 APPORTIONMENT RANKINGS

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

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Municipality	2001 Total Needs Mileage	2002 Population Apportionment Per Need Mile
Falcon Heights	2.54	$34,053
Hopkins	8.54	32,024
Minneapolis	203.36	29,048
New Hope	12.70	27,592
St. Paul	164.41	26,552
Vadnais Heights	8.32	25,986
St. Louis Park	28.68	24,733
New Brighton	14.95	24,568
Oakdale	17.39	24,280
Columbia Heights	12.53	24,200
Stewartville	3.54	24,094
St. Joseph	3.36	24,058
West St. Paul	13.10	24,051
St. Anthony	5.63	24,025
Coon Rapids	41.72	24,012
Waseca	6.42	23,546
Shoreview	18.49	23,021
Anoka	12.64	23,019
Robbinsdale	10.10	22,856
Richfield	25.49	22,465
Northfield	12.06	21,882
Brooklyn Park	47.97	21,771
Burnsville	44.05	21,589
Eagan	45.43	21,571
Brooklyn Center	21.56	21,485
Crystal	17.88	21,334
White Bear Lake	20.35	20,994
Arden Hills	7.41	20,917
Blaine	35.60	20,795
Apple Valley	34.93	20,575
Maplewood	27.98	20,506

Municipality	2001 Total Needs Mileage	2002 Money Needs Apportionment Per Need Mile
Crookston	11.53	$33,483
Minneapolis	203.36	29,362
St. Paul	164.41	26,809
Fairmont	19.41	23,419
Bloomington	75.35	23,364
Thief River Falls	14.66	22,848
Farmington	13.05	22,815
New Hope	12.70	22,807
St. Louis Park	28.68	22,375
North Mankato	13.06	22,185
New Ulm	15.33	22,038
St. Anthony	5.63	21,914
Hopkins	8.54	21,796
Woodbury	43.80	21,473
Moorhead	29.71	21,428
Austin	27.70	20,898
Faribault	22.22	20,828
Buffalo	11.22	20,728
Grand Rapids	11.40	20,146
Glencoe	7.02	20,013
Orono	12.58	19,995
Lakeville	48.28	19,898
Little Canada	10.49	19,547
Owatonna	17.56	19,522
Maple Grove	45.67	19,319
Brooklyn Center	21.56	19,279
Stewartville	3.54	19,188
Duluth	111.31	19,016
St. Peter	12.66	18,195
Crystal	17.88	18,127
Mankato	30.57	17,940

Municipality	2001 Total Needs Mileage	2002 Total Apportionment Per Need Mile
Minneapolis	203.36	$58,410
Hopkins	8.54	53,819
St. Paul	164.41	53,360
New Hope	12.70	50,399
St. Louis Park	28.68	47,108
St. Anthony	5.63	45,939
Crookston	11.53	44,857
Stewartville	3.54	43,282
Falcon Heights	2.54	42,530
Bloomington	75.35	41,979
Brooklyn Center	21.56	40,764
Waseca	6.42	40,680
Moorhead	29.71	39,807
Northfield	12.06	39,463
Crystal	17.88	39,461
Owatonna	17.56	39,246
Coon Rapids	41.72	39,156
Columbia Heights	12.53	39,008
Richfield	25.49	38,326
Vadnais Heights	8.32	38,188
Anoka	12.64	37,999
Forest Lake	5.53	37,982
Burnsville	44.05	37,167
Rochester	64.18	37,058
Woodbury	43.80	36,974
Maplewood	27.98	36,972
Oakdale	17.39	36,903
New Ulm	15.33	36,830
North Mankato	13.06	36,727
Maple Grove	45.67	36,692
Arden Hills	7.41	36,647

Municipality	2001 Total Needs Mileage	2002 Population Apportionment Per Need Mile
Rochester	64.18	$20,492
Inver Grove Heights	23.86	20,378
Forest Lake	5.53	20,153
South St. Paul	16.32	19,845
Champlin	17.01	19,836
Owatonna	17.56	19,724
Spring Lake Park	5.82	19,678
Mound	8.05	19,545
Eden Prairie	42.66	19,514
Winona	21.75	19,430
Roseville	28.60	19,370
North St. Paul	10.68	19,272
Plymouth	53.68	19,212
Mounds View	10.81	19,210
Edina	40.27	18,824
Stillwater	13.80	18,816
Bloomington	75.35	18,616
Moorhead	29.71	18,379
Fridley	25.02	18,345
Hastings	16.10	17,962
St. Cloud	54.60	17,644
Maple Grove	45.67	17,373
Minnetonka	49.89	17,178
Mankato	30.57	16,972
Waconia	5.53	16,871
Chaska	15.13	16,747
International Falls	8.06	16,515
Cottage Grove	30.24	16,511
Waite Park	6.48	16,330
Prior Lake	15.14	15,993
Monticello	7.80	15,945
Savage	18.23	15,896
Sauk Rapids	10.17	15,700
Albert Lea	18.74	15,670
Woodbury	43.80	15,502
Sartell	9.34	15,383
St. Paul Park	5.30	15,200
Little Canada	10.49	14,875

Municipality	2001 Total Needs Mileage	2002 Money Needs Apportionment Per Need Mile
Hermantown	14.07	$17,938
Forest Lake	5.53	17,829
Waite Park	6.48	17,801
Red Wing	22.93	17,722
Worthington	11.35	17,667
Northfield	12.06	17,581
Redwood Falls	7.87	17,511
Hutchinson	16.52	17,167
Waseca	6.42	17,133
Sartell	9.34	17,004
Mound	8.05	16,995
St. Cloud	54.60	16,931
Rochester	64.18	16,565
Plymouth	53.68	16,552
St. Paul Park	5.30	16,510
Maplewood	27.98	16,466
Little Falls	15.67	16,366
Litchfield	8.58	16,336
Chaska	15.13	16,207
Savage	18.23	15,940
Albert Lea	18.74	15,875
Richfield	25.49	15,861
Dayton	9.28	15,833
Eden Prairie	42.66	15,826
Virginia	15.93	15,738
Arden Hills	7.41	15,729
Lino Lakes	18.67	15,706
Burnsville	44.05	15,578
Fergus Falls	24.34	15,557
International Falls	8.06	15,456
Apple Valley	34.93	15,415
Elk River	27.82	15,247
Baxter	12.73	15,151
Coon Rapids	41.72	15,144
Cloquet	20.14	15,099
Anoka	12.64	14,980
Inver Grove Heights	23.86	14,962
Cottage Grove	30.24	14,857

Municipality	2001 Total Needs Mileage	2002 Total Apportionment Per Need Mile
Farmington	13.05	$36,615
Mound	8.05	36,540
New Brighton	14.95	36,410
Apple Valley	34.93	35,989
Plymouth	53.68	35,764
Robbinsdale	10.10	35,676
Inver Grove Heights	23.86	35,340
Eden Prairie	42.66	35,339
West St. Paul	13.10	34,978
Buffalo	11.22	34,948
Mankato	30.57	34,912
Faribault	22.22	34,830
White Bear Lake	20.35	34,748
St. Cloud	54.60	34,575
Brooklyn Park	47.97	34,466
Blaine	35.60	34,446
Little Canada	10.49	34,422
Waite Park	6.48	34,131
Eagan	45.43	33,955
Austin	27.70	33,643
Winona	21.75	33,549
Lakeville	48.28	33,288
St. Joseph	3.36	33,064
South St. Paul	16.32	32,973
Chaska	15.13	32,954
Shoreview	18.49	32,846
Fairmont	19.41	32,728
North St. Paul	10.68	32,528
Mounds View	10.81	32,470
Grand Rapids	11.40	32,425
Sartell	9.34	32,387
Glencoe	7.02	32,275
Roseville	28.60	32,234
Thief River Falls	14.66	32,128
Stillwater	13.80	32,051
International Falls	8.06	31,971
Worthington	11.35	31,842
Savage	18.23	31,836

Municipality	2001 Total Needs Mileage	2002 Population Apportionment Per Need Mile
New Ulm	15.33	$14,793
Brainerd	14.30	14,714
North Mankato	13.06	14,542
Golden Valley	23.67	14,252
Buffalo	11.22	14,220
Worthington	11.35	14,175
Faribault	22.22	14,002
Mahtomedi	8.62	13,924
Marshall	14.88	13,821
Farmington	13.05	13,800
Shorewood	8.24	13,782
Lino Lakes	18.67	13,536
Chanhassen	22.31	13,492
Lakeville	48.28	13,390
Hutchinson	16.52	12,917
Austin	27.70	12,745
St. Peter	12.66	12,714
Willmar	23.91	12,677
Shakopee	21.88	12,643
Big Lake	6.60	12,610
Duluth	111.31	12,316
Bemidji	15.91	12,296
Grand Rapids	11.40	12,278
Glencoe	7.02	12,262
Mendota Heights	13.51	12,225
Litchfield	8.58	11,784
Crookston	11.53	11,374
Morris	8.00	11,327
East Grand Forks	12.48	11,125
Red Wing	22.93	11,107
Andover	35.58	10,978
Redwood Falls	7.87	10,636
Chisholm	7.99	10,617
Ramsey	29.18	10,349
Montevideo	8.58	10,277
Orono	12.58	9,851
Alexandria	14.39	9,591
Detroit Lakes	12.41	9,568

Municipality	2001 Total Needs Mileage	2002 Money Needs Apportionment Per Need Mile
Rosemount	24.14	$14,815
Columbia Heights	12.53	14,808
Golden Valley	23.67	14,626
Cambridge	10.74	14,517
Monticello	7.80	14,507
Waconia	5.53	14,150
Winona	21.75	14,118
Otsego	14.37	13,881
Brainerd	14.30	13,863
Chisholm	7.99	13,775
White Bear Lake	20.35	13,754
East Grand Forks	12.48	13,701
Blaine	35.60	13,652
Hibbing	51.31	13,594
Minnetonka	49.89	13,559
Prior Lake	15.14	13,512
Shakopee	21.88	13,451
Mounds View	10.81	13,260
North St. Paul	10.68	13,255
Stillwater	13.80	13,235
South St. Paul	16.32	13,128
Edina	40.27	12,997
Roseville	28.60	12,863
Robbinsdale	10.10	12,820
Andover	35.58	12,786
Shorewood	8.24	12,717
Brooklyn Park	47.97	12,695
St. Michael	15.35	12,673
Willmar	23.91	12,670
Bemidji	15.91	12,630
Oakdale	17.39	12,623
Montevideo	8.58	12,565
Marshall	14.88	12,548
Alexandria	14.39	12,495
Detroit Lakes	12.41	12,479
Sauk Rapids	10.17	12,419
Eagan	45.43	12,384
North Branch	21.84	12,293

Municipality	2001 Total Needs Mileage	2002 Total Apportionment Per Need Mile
Edina	40.27	$31,822
St. Paul Park	5.30	31,710
Albert Lea	18.74	31,545
Cottage Grove	30.24	31,368
Duluth	111.31	31,333
Waconia	5.53	31,021
St. Peter	12.66	30,909
Minnetonka	49.89	30,736
Champlin	17.01	30,459
Monticello	7.80	30,452
Hutchinson	16.52	30,084
Orono	12.58	29,846
Prior Lake	15.14	29,505
Lino Lakes	18.67	29,242
Spring Lake Park	5.82	28,942
Golden Valley	23.67	28,878
Red Wing	22.93	28,829
Brainerd	14.30	28,577
Redwood Falls	7.87	28,147
Litchfield	8.58	28,120
Sauk Rapids	10.17	28,119
Hastings	16.10	27,300
Fridley	25.02	26,663
Shorewood	8.24	26,499
Marshall	14.88	26,369
Hermantown	14.07	26,276
Shakopee	21.88	26,094
Willmar	23.91	25,347
Chanhassen	22.31	25,336
Mahtomedi	8.62	25,318
Virginia	15.93	25,231
Bemidji	15.91	24,927
East Grand Forks	12.48	24,826
Elk River	27.82	24,782
Dayton	9.28	24,748
Chisholm	7.99	24,392
Fergus Falls	24.34	24,342
Little Falls	15.67	24,212

Municipality	2001 Total Needs Mileage	2002 Population Apportionment Per Need Mile
Elk River	27.82	$9,535
Virginia	15.93	9,493
Lake Elmo	11.52	9,436
Fairmont	19.41	9,309
Thief River Falls	14.66	9,280
Rosemount	24.14	8,997
Dayton	9.28	8,915
Cloquet	20.14	8,901
Fergus Falls	24.34	8,785
St. Michael	15.35	8,661
Cambridge	10.74	8,343
Hermantown	14.07	8,338
Ham Lake	24.69	8,138
Little Falls	15.67	7,846
Otsego	14.37	7,465
Baxter	12.73	6,897
East Bethel	26.92	6,200
Corcoran	15.50	5,982
Hugo	15.97	5,960
Hibbing	51.31	5,640
Oak Grove	19.50	5,547
North Branch	21.84	4,972
Average		**$16,396**

Municipality	2001 Total Needs Mileage	2002 Money Needs Apportionment Per Need Mile
Vadnais Heights	8.32	$12,201
Hugo	15.97	12,198
Chanhassen	22.31	11,843
New Brighton	14.95	11,842
Mendota Heights	13.51	11,621
Ramsey	29.18	11,554
Mahtomedi	8.62	11,394
West St. Paul	13.10	10,928
Champlin	17.01	10,623
East Bethel	26.92	10,292
Morris	8.00	9,937
Shoreview	18.49	9,825
Ham Lake	24.69	9,555
Corcoran	15.50	9,537
Oak Grove	19.50	9,493
Hastings	16.10	9,339
Spring Lake Park	5.82	9,264
Big Lake	6.60	9,007
St. Joseph	3.36	9,007
Lake Elmo	11.52	8,864
Falcon Heights	2.54	8,477
Fridley	25.02	8,319
		$16,031

Municipality	2001 Total Needs Mileage	2002 Total Apportionment Per Need Mile
Cloquet	20.14	$24,000
Mendota Heights	13.51	23,846
Rosemount	24.14	23,812
Andover	35.58	23,763
Cambridge	10.74	22,860
Montevideo	8.58	22,842
Alexandria	14.39	22,086
Detroit Lakes	12.41	22,047
Baxter	12.73	22,047
Ramsey	29.18	21,904
Big Lake	6.60	21,616
Otsego	14.37	21,347
St. Michael	15.35	21,335
Morris	8.00	21,264
Hibbing	51.31	19,234
Lake Elmo	11.52	18,300
Hugo	15.97	18,158
Ham Lake	24.69	17,693
North Branch	21.84	17,266
East Bethel	26.92	16,492
Corcoran	15.50	15,519
Oak Grove	19.50	15,040
		$32,427

Local Road Research Board Projects
for Calendar Year 2001

INV	TITLE	PROJECT TOTAL	2000	2001	2002
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 Assistance Program (CTAP)	Ongoing	77,500	70,000	*70,000*
	Minnesota Maintenance Research Expos	Ongoing	14,000	20,000	*20,000*
	Transportation Student Development	Ongoing	4,000	4,000	*4,000*
	Preventive Bridge Maintenance Course Training		25,000	0	0
676	Mn/ROAD	Ongoing	500,000	500,000	*500,000*
700	Field Performance of Integral Abutments	228,000	35,525	33,325	34,150
739	Low Temperature Cracking of Asphalt Concrete Pavements	290,000	74,000	76,000	70,000
745	Library Services for Local Governments	Ongoing	50,000	50,000	*50,000*
749	Surface Treatment Proposal	25,000	15,000	2,500	0
752	Response of Corrugated Polyethylene Pipe with Shallow Cover to Known Truck Loadings	565,000	60,000	30,000	0
755	Pavement Preventative Maintenance Methods: Phase II	50,000	22,500	22,500	0
756	Methods to Reduce Traffic Speeds in High Pedestrian Areas	107,506	61,271	46,235	0
757	Designing Pavement Drainage Systems	75,000	38,000	37,000	0
758	Study of Physical,Geological, Minerological & Chemical Properties of Coarse Taconite Tailings	126,000	63,000	63,000	0
764	Effect of Transverse Cracks on Stresses & Strains in Flexible Pavements	123,957	82,638	41,319	0
766	Evaluation of Cold Inplace Recycling	66,000	25,000	15,000	5,000
767	Flexible Pavement Performance in Relation to Aggregate Base and Asphalt Mixture at Low-Temperature Characteristics	75,500	65,500	10,000	0
768	Geosynthetics in Roadway Design	30,000	0	3,000	3,000
769	**Cost Comparison of Treatments Used to Maintain or Upgrade Aggregate Roads**	**100,000**	0	**50,000**	**50,000**
770	**Repair of Rubberized Crack Filler/Joint Filler**	**90,000**	0	**40,000**	**25,000**
771	**Use of Ground Penetrating Radar to Review Cross Cross Section of Road**	**75,000**	0	**50,000**	**25,000**
772*	**Best Practices for Local Pavement Subgrades in Minnesota**	**117,455**	0	**0**	**0**
773	**Environmental Effect of the Use of Shredded Tires As Use for Light-Weight Fills**	**100,000**	0	**60,000**	**20,000**
774	**Driver Assistive Systems for Rural Applications: A Path to Deployment**	**141,860**	0	**141,860**	**0**
775	**Accident Analysis for Low-Volume Roads**	**41,409**	0	**41,409**	**0**
776	**Improving the Design of Roadside Ditches to Decrease Transportation-Related Surface Water Pollution**	**82,770**	0	**50,000**	**32,770**
777	**Statewide Implications of Transportation Financing Reform: Impacts on Rural and Other Low-Traffic Roads**	**276,000**	0	**138,000**	**100,000**
778	**How to Safely Accommodate Pedestrians Through an Intersection with Free Flow Legs**	**71,356**	0	**35,678**	**35,678**
779	**Evaluation of Asphalt Binders Used for Cold In-Place Recycling**	**40,487**	0	**13,500**	**26,987**
999	Project Administration	Ongoing	280,000	280,000	*280,000*
	TOTALS		N/A	$2,224,326	$1,401,420

Italicized **= Anticipated**

*Revised Workplan of Inv. No. 740, budgeted @ $130,000, (CY '98 - $75,000; CY '99 - $40,000 & C.Y. '00 - $15,000).

Budget Summary CY 2001

Funds allotted for 2001	$2,155,046
Unprogrammed Funds Carried over from 2000	57,211
Funds available from Inv. 740	12,545
Funds available for 2001	$2,224,802
Present 2001Commitment	$2,224,326
CY 2001 Funds not Committed to Date	**$476**

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City	$516,013
County	1,639,033
Total	$2,155,046

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Local Road Research Board Projects

For Calendar Year 2002

INV	TITLE	PROJECT TOTAL	2001	2002	2003
645	Implementation of Research	Ongoing	$ 150,000	$ 150,000	*150,000*
668	Technology Transfer Center, U of M - Base	Ongoing	150,000	140,000	*140,000*
	Technology Transfer Center, U of M - Cont. Projects:				
	Circuit Training and Assist.Program (CTAP), Instructor-$50,000, T^2 Center-$77,500	Ongoing	77,500	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	500,000	560,000	*560,000*
700	Field Performance of Integral Abutments	228,000	33,325	34,150	0
739	Low Temperature Cracking of Asphalt Concrete Pavements	290,000	76,000	70,000	70,000
745	Library Services for Local Governments	Ongoing	50,000	60,000	*60,000*
752	Response of Corrugated Polyethylene Pipe with Shallow Cover to Known Truck Loadings	565,000	30,000	10,000	0
759	Impact of Roughness Elements on Reducing Shear Stress Acting on Soil Particles	34,000	27,000	7,000	0
766	Evaluation of Cold Inplace Recycling	66,000	15,000	5,000	21,000
768	Geosynthetics in Roadway Design	30,000	3,000	3,000	3,000
769	Cost Comparison of Treatments Used to Maintain or Upgrade Aggregate Roads	100,000	50,000	50,000	0
770	Repair of Rubberized Crack Filler/Joint Filler	90,000	40,000	25,000	25,000
771	Use of Ground Penetrating Radar to Review Cross Section of Road	75,000	50,000	25,000	0
772*	Best Practices for Local Pavement Subgrades in Minnesota	117,455	0	0	0
773	Environmental Effect of the Use of Shredded Tires As Use for Light-Weight Fills	100,000	60,000	20,000	20,000
774	Driver Assistive Systems for Rural Applications: A Path to Deployment	141,860	141,860	0	0
775	Accident Analysis for Low-Volume Roads	46,409	41,409	5,000	0
776	Improving the Design of Roadside Ditches to Decrease Transportation-Related Surface Water Pollution	82,770	50,000	32,770	0
777	Statewide Implications of Transportation Financing Reform: Impacts on Rural and Other Low-Traffic Roads	199,996	138,000	100,000	38,000
778	How to Safely Accommodate Pedestrians Through an Intersection with Free Flow Legs	71,356	35,678	35,678	0
779	Evaluation of Asphalt Binders Used for Cold In-Place Recycling	40,487	13,500	26,987	0
780	**Integration of Transportation Regional Growth Studies**	**30,000**	**0**	**30,000**	**0**
781	**In-Lane Rumble Strips - Impaired Drivers**	**25,000**	**0**	**25,000**	**0**
782	**Galvanized Metal Paint Testing**	**7,000**	**0**	**7,000**	**0**
783	**Dev. Of Simple Asphalt Test for Determination of RAP Blending Chart**	**54,000**	**0**	**54,000**	**0**
784	**Guidelines for Using Rumble Strips**	**149,659**	**0**	**59,000**	**90,659**
785	**Cost/Benefit Study of Increased Winter and Spring Load Restrictions**	**200,000**	**0**	**100,000**	**100,000**
786	**Field Evaluation of Driver Interaction with Low-Cost Highway Rail Intersection Warning System**	**40,000**	**0**	**40,000**	**0**
787	**Risk Assessment Tool for Selection of Erosion Control Practices**	**50,000**	**0**	**25,000**	**25,000**
788	**Traffic Calming -Implementation Procedures and Tools**	**40,000**	**0**	**20,000**	**20,000**

INV	TITLE	PROJECT TOTAL	2001	2002	2003
789	**Recycled Asphalt Pavement (RAP) Effects on Binder and Mixture Quality**	**53,172**	**0**	**25,000**	**28,172**
790	**Online Monitoring/Management of Summer/Winter Maintenance Programs**	**25,000**	**0**	**25,000**	**25,000**
999	Project Administration	Ongoing	280,000	245,000	*290,000*
	TOTALS		$2,038,273	$2,166,085	*$1,792,331*

Italicized **= Anticipated**

Bold = Funding Approved or New Project in C.Y. 2002 Program

Funds Allotted for 2002	$2,253,182	City	$542,790
Unprogrammed Funds Carried over from 2001	476	County	1,710,392
Total Funds available for 2002	$2,253,580	Total	$2,253,182
2002 Program Commitment	$2,166,085		
Reserved Funds: Guardrail Abutment	10,000		
Total	$2,176,085		
CY 2002 Funds Available for Programming	**$77,495**		

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 2001 and updated in the needs in 2002

Andover
Anoka
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
North Branch
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 2001 and updated in the needs in 2002

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

Outstate
Two year traffic counting schedule - to be counted in 2001and updated in the needs in 2002

Northfield (begin in 2001)	Sartell
St. Cloud	

Outstate
Two year traffic counting schedule - to be counted in 2002 and updated in the needs in 2003

Rochester

Outstate
Two year traffic counting schedule - to be counted in 2001 and updated in the needs in 2002

Brainerd

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

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

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 2001 and updated in the needs in 2002

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 2002 and be updated in the needs in 2003

Alexandria	Stewartville	Worthington
Cloquet	Willmar	

Duluth counts 1/4 of the city each year.

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.

CURRENT RESOLUTIONS
OF THE
MUNICIPAL SCREENING BOARD

January, 2002

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 Chairman and Vice Chairman - June 1987

That the Chairman and Vice Chairman, 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.

Screening Board Secretary - Oct. 1961

That annually, the Commissioner of the Minnesota Department of Transportation (Mn/DOT) may be requested to appoint a secretary, upon recommendation of the City Engineers' Association of Minnesota, as a non-voting member of the Municipal Screening Board for the purpose of recording all Screening Board actions.

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

The Screening Board Chairman 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 chairman of the subcommittee in the third year of the appointment.

Appointment to Unencumbered Construction Funds Subcommittee - Revised June 1979

The Screening Board past Chairman 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 Chairman 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 Chairman, with the assistance of State Aid personnel, 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.

Be it resolved that an amount of $542,791 (not to exceed 1/2 of 1% of the 2001 MSAS Apportionment sum of $108,558,171) shall be set aside from the 2002 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.

Improper Needs Report - Oct. 1961

That the Office of State Aid and the District State Aid Engineer is 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

Any new city which has determined their eligible mileage, but does not have an approved State Aid System, their money needs will be 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 Highway System, the annual cut off date for recording construction accomplishments based upon the project award date shall be December 31st of the preceding year.

Construction Accomplishments - Oct. 1988 (Revised June 1993)

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.

In the event sidewalk or curb and gutter is constructed for the total length of the segment, then 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.

If the construction of the Municipal State Aid Street is accomplished with local funds, only the construction needs necessary to bring the roadway up to State Aid Standards will be permitted in subsequent needs for 20 years from the date of the letting or encumbrance of force account funds. At the end of the 20 year period, reinstatement for complete construction needs shall be initiated by the Municipality.

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

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 justification to the satisfaction of the State Aid Engineer (e.g., a deficiency due to changing standards, projected traffic, or other verifiable causes).

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

Be it resolved 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 Commissioner.

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

That in the event that a Municipal State Aid Street is constructed with State Aid Funds to a width less than the standard design width as reported in the Needs Study, the total needs shall be taken off such constructed street other than the surface replacement need. Surface replacement and other future needs shall be limited to the constructed width unless exception is justified to the satisfaction of the Commissioner.

Greater Than Minimum Width (Revised June 1993)

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)

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)

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 which are not designated Trunk Highway, Trunk Highway TURNBACK or County State Aid Highway system 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. Mileage which is on the boundary of two adjoining urban municipalities shall be considered as one-half mileage.

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, and June 1993)

All requests for additional mileage or revisions to the Municipal State Aid System must be received by the District State Aid Engineer by March first and a City Council resolution of approved mileage and the Needs Study reporting data must be received by May first, to be included in the current year's Needs Study. Any requests for additional mileage or revisions to the Municipal State Aid Systems received by the District State Aid Engineer after March first will be included in the following year's 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.

Treat all one-way streets 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 provided for in the preceding paragraph.

NEEDS COSTS

Roadway Item Unit Prices (Revised Annually)			
Right of Way (Needs Only)			$90,000 per Acre
Grading (Excavation)			$3.40 per Cu. Yd.
Base:			
	Class 5	Spec. #2211	$6.70 per Ton
	Bituminous	Spec. #2331	$30.00 per Ton
Surface:			
	Bituminous	Spec. #2331	$30.00 per Ton
	Bituminous	Spec. #2341	$30.00 per Ton
	Bituminous	Spec. #2361	$30.00 per Ton
Shoulders:			
	Gravel	Spec. #2221	$11.50 per Ton
Miscellaneous:			
	Storm Sewer Construction		$248,000 per Mile
	Storm Sewer Adjustment		$80,400 per Mile
	Special Drainage (rural segments only)		$37,400 per Mile
	Street Lighting (deficient segments only)		$78,000 per Mile
	Curb & Gutter Construction		$7.70 per Lineal Foot
	Sidewalk Construction		$22.00 per Sq. Yd.
	Engineering		20%
Removal Items:			
	Curb & Gutter		$2.30 per Lineal Foot
	Sidewalk		$5.35 per Sq. Yd.
	Concrete Pavement		$5.25 per Sq. Yd.
	Tree Removal		$210.00 per Unit

Traffic Signal Needs Based On Projected Traffic (every segment)			
Projected Traffic	Percentage X	Unit Price =	Needs Per Mile
0 - 4,999	25%	$120,000	$30,000 per Mile
5,000 - 9,999	50%	$120,000	$60,000 per Mile
10,000 and Over	100%	$120,000	$120,000 per Mile

Bridge Width & Costs - (Revised 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	$68.00 per Sq. Ft.
Bridges 150 to 499 Feet long	$68.00 per Sq. Ft.
Bridges 500 Feet and Over	$68.00 per Sq. Ft.

Railroad Over Highway	
One Track	$9,000 per Linear Foot
Each Additional Track	$7,500 per Linear Foot

"Non-existing" bridge costs - Revised October 1997
The money 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 money 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. The addition of 18% project development costs shall be added to the present list of non-existing bridges.

RAILROAD CROSSINGS

Railroad Crossing Costs - (Revised 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 & low speed)	$160,000 per Unit
Signs Only & (low speed)	$1,000 per Unit
Concrete Crossing Material Railroad Crossings (Per Track)	$900 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 facilities only.

Maintenance Needs Costs	**Cost For Under 1000 Vehicles Per Day**	**Cost For Over 1000 Vehicles Per Day**
Traffic Lanes Segment length times number of Traffic lanes times cost per mile	$1,450 per Mile	$2,400 per Mile
Parking Lanes: Segment length times number of parking lanes times cost per mile	$1,450 per Mile	$1,450 per Mile
Median Strip: Segment length times cost per mile	$480 per Mile	$950 per Mile
Storm Sewer: Segment length times cost per mile	$480 per Mile	$480 per Mile
Traffic Signals: Number of traffic signals times cost per signal	$480 per Unit	$480 per Unit
Normal M.S.A.S. Streets		
Minimum allowance per mile is determined by segment length times cost per mile.	$4,800 per Mile	$4,800 per Mile

NEEDS ADJUSTMENTS

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

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 money needs of the municipality.

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 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 money 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)

That for the determination of Apportionment Needs, the amount of the unencumbered construction fund balance as of December 31st of the current year shall be deducted from the 25-year total Needs of each individual municipality.

Funding Requests that have been 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.

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

The 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 money 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 money needs adjustment. This Directive to exclude all Federal or State grants. Right-of-way projects that are funded with State Aid Funds will be compiled by the State Aid Office.

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 Office.

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 money 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.

Initial Turnback Maintenance Adjustment - Fractional Year Reimbursement:

The initial turnback adjustment when for less than 12 full months shall provide partial maintenance cost reimbursement by adding said initial adjustment to the money 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.

To provide an advance payment for the coming year's additional maintenance obligation, a needs adjustment per mile shall be added to the annual money 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.

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

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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 Manual - M.S.A.S. #5-892.700. 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.