



# 1993 MUNICIPAL SCREENING BOARD DATA



JUNE 1993

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**May 1993**

**(612) 296-1662**

**TO : Municipal Engineers**

**SUBJECT : Municipal Screening Board Data**

**Enclosed is a copy of the June 1993 Municipal Screening Board Data Booklet.**

**The data included in this report will be used by the Municipal Screening Board at its June 7 and 8, 1993 meeting near Brainerd to establish unit prices for the 1993 Needs Study and the resulting 1994 apportionment. The Board will also review other recommendations of the Needs Study Subcommittee and Unencumbered Construction Subcommittee outlined in each of their minutes. The Needs Study Subcommittee minutes are found on pages 17-21 and the Unencumbered Subcommittee's minutes are found on pages 77-80.**

**Should you have any suggestions or recommendations regarding the data in this publication, please refer them to your District Representative along with a copy to this office, or call the above number prior to the Screening Board Meeting.**

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

**Sincerely,**

A handwritten signature in cursive script, appearing to read "Ken Straus".

**Kenneth Straus  
Municipal Needs Manager**

**Enclosures:  
1993 Municipal State Aid Screening Board Data Booklet.**

## 1993 MUNICIPAL SCREENING BOARD DATA

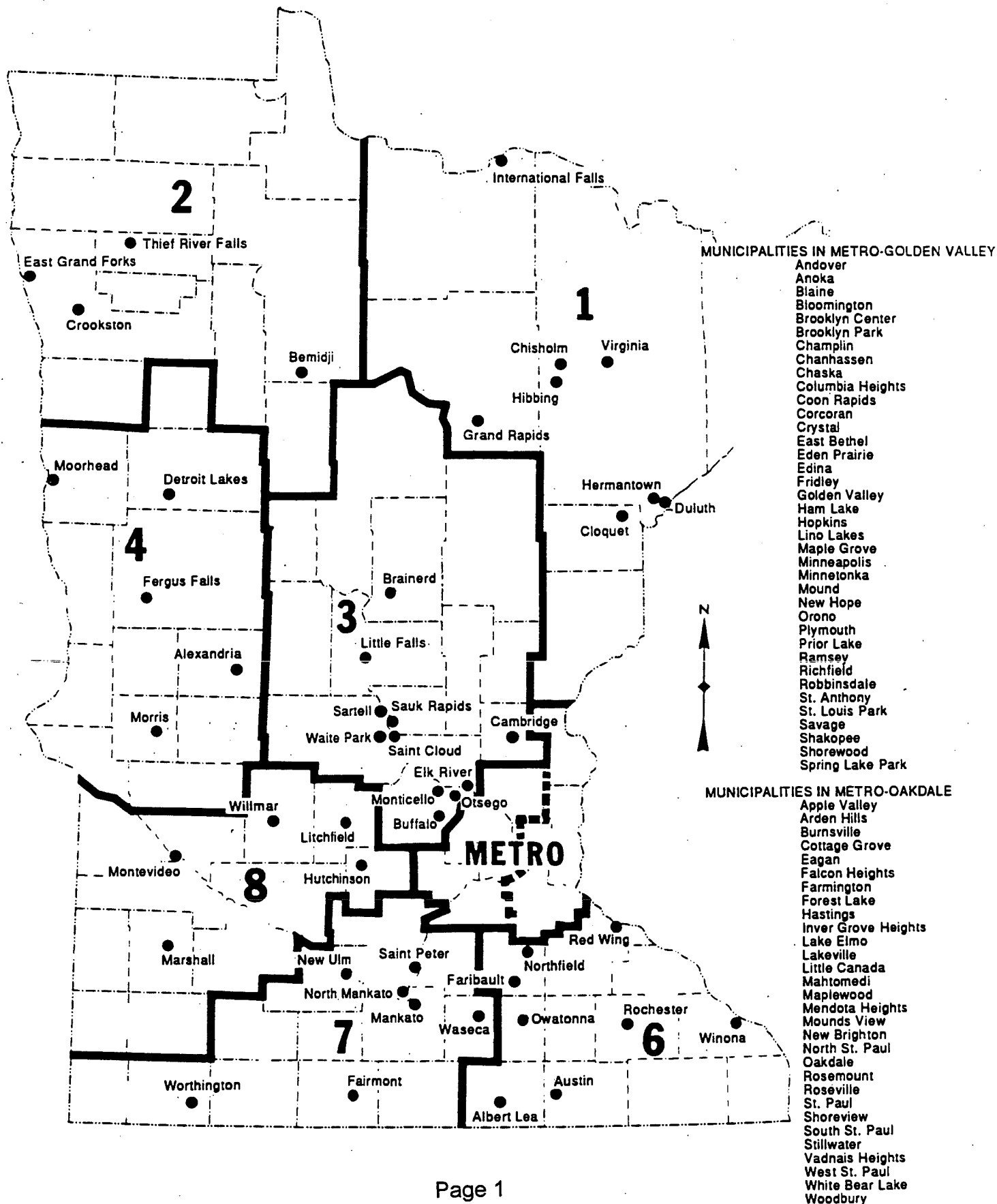
### TABLE OF CONTENTS

Map of Highway Districts and Urban Municipalities.....	1
1993 Municipal Screening Board.....	2
Subcommittees Appointed by the Commissioner.....	3
Minutes of Screening Board Meeting – October 27 – 28, 1992.....	4–14
Unit Price Study.....	15
Unit Price Recommendation to the 1993 Screening Board.....	16
Minutes of Needs Study Subcommittee Meeting – April 23, 1993.....	17–21

#### Municipal State Aid Street Unit Price and Graphs:

A. Excavation .....	22–24
B. Aggregate Shouldering.....	25–26
C. Curb & Gutter Removal # 2104.....	27–29
D. Sidewalk Removal # 2105.....	30–32
E. Concrete Pavement Removal # 2106.....	33–35
F. Tree Removal # 2101.....	36–39
G. Class 4 – Subbase # 2211.....	40–41
H. Class 5 – Gravel Base # 2211.....	42–44
I. Bituminous Base or Surface # 2331.....	45–47
J. Bituminous Surface # 2341.....	48–50
K. Bituminous Surface # 2361.....	51–52
L. Curb & Gutter Construction # 2531.....	53–55
M. Sidewalk Construction # 2521.....	56–58
N. Previous St. Sewer, Lighting, Signals, Railroad Costs.....	59
O. 1992 Storm Sewer Costs Mn/DOT Hydraulics Section.....	60
P. Railroad Crossing Costs Mn/DOT Railroad Operations.....	61
P. 1992 Bridge Construction Costs.....	62–68
Q. Maintenance Needs.....	69
Relationship of the Total 25–Year Needs to Each Individual Construction Items.....	70
Red Wing One–way Request.....	71–72
Resolution Changes.....	73–76
Minutes of the Unencumbered Construction Fund Subcommittee.....	77–80
Balance Adjustment Charts.....	81–86
Traffic Counts.....	87
Current Resolutions of the Municipal Screening Board.....	88–98

**STATE OF MINNESOTA  
HIGHWAY DISTRICTS AND MUNICIPALITIES  
AS ESTABLISHED FOR STATE AID PURPOSES  
1992**



## 1993 MUNICIPAL SCREENING BOARD

### OFFICERS

Chairman	Alan Gray	Eden Prairie	(612) 937-2262
Vice Chairman	Kenneth Larson	Duluth	(218) 723-3278
Secretary	Dave Sonnenberg	Minnetonka	(612) 933-2511

### MEMBERS

<u>District</u>	<u>Served</u>	<u>Representative</u>		
1	2	Jim Prusak	Cloquet	(218) 879-6758
2	3	David Kildahl	Crookston	(218) 281-6522
3	3	Sidney Williamson	Sartell	(612) 251-4553
4	2	Herb Reimer	Moorhead	(218) 299-5390
Metro-West	1	Larry Anderson	Prior Lake	(612) 447-4230
6	2	Arnold Putnam	Owatonna	(507) 451-4541
7	1	Ken Saffert	Mankato	(507) 625-3161
8	3	Dale Swanson	Willmar	(612) 235-4202
Metro-East	1	Brian Bachmeier	Oakdale	(612) 739-5086
(Three Cities		Kenneth Larson	Duluth	(218) 723-3278
of the		Ramankutty Kannankutty	Minneapolis	(612) 673-2476
First Class)		Thomas Kuhfeld	St. Paul	(612) 292-6276

<u>District</u>	<u>Alternates</u>		
1	Bill Bennett	Hermantown	(218) 727-8456
2	Don Boell	Bemidji	(218) 751-5610
3	Curt Kreklau	Buffalo	(612) 253-1000
4	Gary Nanson	Detroit Lakes	(218) 847-5607
Metro-West	Jack Bittle	Champlin	(612) 421-1955
6	William Malin	Winona	(507) 457-8269
7	Larry Read	Fairmont	(507) 238-9461
8	Richard Victor	Marshall	(507) 537-6774
Metro-East	Dave Jessup	Woodbury	(612) 731-5791

## 1993 SUBCOMMITTEES

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

The past Chairman 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
<p>Tom Drake – Chairman Red Wing (612) 227–6220 Expires in 1993</p>	<p>Bruce Bullert – Chairman Savage (612) 890–1045 Expires in 1993</p>
<p>Ken Haider Maplewood (612) 770–4552 Expires in 1994</p>	<p>Jim Grube St. Louis Park (612) 924–2551 Expires in 1994</p>
<p>Pete McClurg New Ulm (507) 359–8245 Expires in 1995</p>	<p>Dan Edwards Fergus Falls (218) 739–2251 Expires in 1995</p>

ALLOCATION STUDY SUBCOMMITTEE (Presently Not Appointed by the Commissioner)	
Jim Grube – St. Louis Park – Chairman	(612) 924–2551
Larry Anderson – Prior Lake	(612) 447–4230
Bruce Bullert – Savage	(612) 890–1045
Gerald Butcher – Maple Grove	(612) 420–4000
Tom Drake – Red Wing	(612) 227–6220
John Flora – Fridley	(612) 571–3450
Ramankutty Kannankutty – Minneapolis	(612) 673–2456
Tom Kuhfeld – St Paul	(612) 292–6276
Ken Larson – Duluth	(218) 723–3278
Bill Ottensmann – Coon Rapids	(612) 755–2880
Herb Reimer – Moorhead	(218) 299–5390

MINUTES  
FALL MUNICIPAL STATE AID SCREENING BOARD  
OCTOBER 27-28, 1992

I. SESSION 1

The 1992 Fall Meeting, held at Arrowhead Resort, Alexandria, Minnesota, was called to order by Chairman Dan Edwards at 1:03 p.m., Tuesday, October 27, 1992. Roll Call was taken by Secretary Ken Larson.

Present were:

Chairman	Dan Edwards	Fergus Falls
Vice Chairman	Alan Gray	Eden Prairie
Secretary & 1st Class City	Kenneth Larson	Duluth
District I	Jim Prusak	Cloquet
District II	David Kildahl	Crookston
District III	Sid Williamson	Sartell
District IV	Herb Reimer	Moorhead
West Metro District	Michael Eastling	Richfield
District VI	Arnold Putnam	Owatonna
District VII	Pete McClurg	New Ulm
District VIII	Dale Swanson	Willmar
East Metro District	Ken Haider	Maplewood
First Class City	Marv Hoshaw	Minneapolis
First Class City	Thomas Kuhfeld	St. Paul
Unencumbered Construction		
Funds Subcommittee Chair	Ron Rudrud	Bloomington

Others:

Dennis Carlson, Director, State Aid Office  
Julie Skallman, Assistant State Aid Engineer  
Ken Straus, Manager, Municipal State Aid  
Ken Hopschen, Manager, County State Aid  
Bill Croke, District I State Aid Engineer  
Lou Tasa, District II State Aid Engineer  
Mike Tardy, District III State Aid Engineer  
Tallack Johnson, District IV State Aid Engineer  
Elmer Morris, Metro District State Aid Engineer  
Mike Pinsonneault, District VI State Aid Engineer  
Douglas Haeder, District VII State Aid Engineer  
Tom Behm, District VIII State Aid Engineer  
Ken Saffert, Alternate, Mankato  
Larry Anderson, Alternate, Prior Lake  
Greg Peterson, St. Paul  
Dave Kreager, Duluth  
Gary Nansen, Detroit Lakes  
R. Kannankutty, Minneapolis  
Bo Spurrier, Minneapolis  
Don Aluni, Minneapolis  
Dan Sabin, Minneapolis  
Paul Kirkwood, Ramsey County  
Steve Gatlin, Roseville

A. Minutes of Spring, 1992, Meeting

Chairman Edwards called for consideration of the minutes of the Spring Municipal Screening Board Meeting, held June 15-16, 1992, as appear on pages 6 through 12 of the 1992 Municipal State Aid Needs Report. Corrections to Item F on page 8 and Item E on page 10 changed the Chair of the Quality Committee from Dennis Carlson to Mark Gieseke.

Motion by: Marv Hoshaw, seconded by Mike Eastling, to adopt the minutes as corrected.

Action: Motion carried.

B. Needs Committee Representation

Chairman Edwards turned control of the meeting over to Manager of Municipal State Aid Needs, Ken Straus. Mr. Straus reviewed the 1992 Municipal State Aid Needs Report of October, 1992, beginning with the upcoming change in Needs Study Subcommittee representation. Chuck Siggerud, Burnsville, will be exchanging his current municipal role for MnDOT employment as Head of the Metro Division. Another member of that subcommittee, Joe Bettendorf, is no longer representing the City of Litchfield. An additional change will be the retirement of Marv Hoshaw, Minneapolis. Marv Hoshaw has been on the Screening Board representing the City of Minneapolis as a First Class City since 1982. Mr. Straus expressed appreciation for the years of effort and contribution by Mr. Hoshaw.

C. Needs Mileage

The current mileage cap statewide is 2,500 miles. Any increase in that cap would require a statute change. Currently there are approximately 2,470 miles available for State Aid designation. Needs mileage in 1992 indicates approximately a 28 mile increase.

D. Needs Study

A change was noted in the needs study update, deleting the per ton unit reference under sidewalk removal and changing it to square yard. Traffic counts were not included since the updates were not received in time for preparation of the report. However, the new allocation will reflect the appropriate traffic counts. Final comment by Mr. Straus indicated that the Cities of Minnetonka and St. Peter were missed in the update. Minnetonka should be increased to 49.78 miles and St. Peter's would go up to 8.93 miles. The total actual mileage therefore is 2,405.44 miles. The final reference was to page 28 where a comparison of last years needs and 1992's needs were shown. The needs ratio went up slightly from 1991 to 18.45. This is interpreted as meaning that our system Statewide can be completed in approximately 18 years.

E. Unencumbered Fund Balance

Ken Straus deferred to the Unencumbered Construction Fund Subcommittee Chair, Ron Rudrud, for review of the issues concerning the current unencumbered construction fund balance. Mr. Rudrud reviewed the controversy in recent years over the high balance, which concerned not only the cities, but legislators as well. Mr. Rudrud referred to past recommendations by the subcommittee to the Screening Board which were not accepted at that time. With the changes that have been implemented by the Board, the balance, instead of going down, has gone up in the last year to \$10.6 million.



Therefore, the subcommittee is looking to the Screening Board to determine its intent and seek its direction in the future. The primary point being expressed by the subcommittee is concern about the high current balance. Marv Hoshaw, Minneapolis, emphasized that all cities are taking allocation reductions as a result of the action taken by the Board in 1992. Dennis Carlson, State Aid Engineer, commented that the expectation with that action was that the balance would go down. However, the balance has risen since that time. Additional discussion focused on the reliability or lack of reliability of information currently before the legislature. The appropriate distribution of funds under the 62/29/9 distribution formula has come up for discussion. A recent MnDOT paper identified a 100 year cycle for rebuilding the Trunk Highway System, while the Municipal State Aid replacement estimate is 18 years. The legislature, if it accepts this information as valid, will make their own conclusions as to where the needs exist. Marv Hoshaw pointed out two issues; i.e., needs versus spending. More realistic estimates indicate that we actually have over 35 years in total needs, not 18 years as indicated by our needs study. Tom Kuhfeld, St. Paul, emphasized that the ability to spend allocated dollars is more complex. Other issues include rules and regulations required for eligibility of funds, as well as only being able to spend those dollars on 20% of the total street network. He also suggested that gas tax revenues should be spent where they are generated.

Dennis Carlson reminded the Board that the Legislature will be dealing with the State system, not the local networks as reflecting "real" needs. The primary criteria should be the volume of traffic, with distribution of funds to maintain the integrity of the system at a state level.

Further discussion on this issue was deferred to the evening session.

F. Unamortized Bond Account Balance

Ken Straus pointed out a problem area in the Bond Account; i.e., many of the cities don't submit a report of city contracts or indicate projects for application of those bonds. If they are not reported and state aid funds are not applied to the bond, the City receives a negative adjustment.

G. Construction Accomplishments; Board Resolution of October, 1988

Ken Straus referred to this resolution (page 59) as needing reconsideration in order to improve equity for all communities. Mr. Straus suggested that a municipality could construct a street in one year to a minimum standard, and in the following year submit it for widening needs for four-way roadway with parking lanes. The constructed width of 32 feet could then be increased to a need for 76 feet if traffic volumes are high. Mr. Straus suggested that there be some limit, say a 10 year period, where the municipality would need to wait to obtain needs after the construction of a roadway.

Marv Hoshaw, Minneapolis, suggested this action would negatively affect growing communities. He urged caution in attempts such as this to "be fair". Marv feels that more education of City Engineers and agreement on more accurately reflecting needs would avoid this type of a problem.

H. Eligible Expenditures

Mike Eastling, Metro West District, brought a proposal from John Flora, Fridley, for expanding the eligibility for use of the current MSA allocation. He suggested that although needs are calculated on 20% of our total system, that expenditures be allowed on a greater percentage of the street network. Discussion of item was deferred to a later session.

## I. Ramsey County Consolidation Proposal

Steve Gatlin, Roseville, introduced this topic, which was presented at the June, 1991, Screening Board Meeting. The presentation at that time was jointly provided by Mr. Gatlin and Paul Kirkwood, Ramsey County. In 1991, the Legislature appointed a commission consisting of 25 members divided between public and private sectors. The public sector included school board members, county commissioners, city councilors, and other appointed representatives. They were charged with investigating the possibility of cooperation in consolidation of government services in the most urbanized county in the State; i.e., Ramsey County. They focused on five functional areas: law enforcement, health, county attorney's office, public works, and library. The only area that generated interest at the legislature was in public works, specifically, the functional consolidation of roadways in the county. The intent of the roadway consolidation approach was that county roads that are generally local in nature would be turned back to the responsibility of the city. This would include about 45 miles of what are currently county roads. In order to accomplish this turnback, the Screening Board would have to allow cities and Ramsey County to increase municipal state aid mileage above the 20% limit currently set by state aid rules. Calculation of the annual apportionment impact would range between \$350,000 to \$710,000.

Resolutions have been adopted by cities within the county, however, if the Municipal State Aid Screening Board is not agreeable to adding these segments to the system, the cities are presumably not agreeable to accepting these roadways as their responsibilities. In summary, representatives within Ramsey County believe that this idea improved the transportation network as a whole and that all roadways within Ramsey County that would not be built under the current jurisdictional approach would be reconstructed and/or developed under a Municipal State Aid system. A major positive benefit would be further opportunities to spend state aid funds and reduce the current balance.

Ken Straus reviewed the consolidation assumption and mileage changes based upon the Ramsey County proposal. Questions and discussion by Screening Board members followed the presentation.

Jim Prusak, Cloquet, requested a way of simplifying or summarizing the spreadsheets provided. Steve Gatlin reviewed the charts and the percentages above the 20% allowable that would need to be transferred to local jurisdiction. Of the total miles of county roads that are proposed for turnback, none have been proposed for reconstruction by Ramsey County within the next five years. Ken Larson, Duluth, asked if municipalities in the county have agreed with the consolidation approach and if Hennepin County would apply the same model to its network. Gatlin indicated that there was agreement throughout the County by the municipalities. Marv Hoshaw indicated that this model is not compatible for Hennepin County in the future since they're not a comparable situation with very few county roads within the City of Minneapolis. Ken Larson said that the City of Duluth and St. Louis County are looking at consolidation of services as well as mileages. Larry Anderson, Prior Lake, indicated that Scott County has proposed similar turnbacks in the City of Prior Lake.

Further discussion was deferred to the evening session.

## J. Quality Improvement Task Force

Dale Swanson, Tom Kuhfeld, and Alan Gray served on a Quality Improvement Task Force with three county engineers and state aid office staff. The primary focus of the task force was to seek changes to the system that would result in reduction of the unencumbered fund balance to cities and counties. A total of 14 recommendations were presented, with the second page of the presentation identifying the results of a questionnaire that went out to all city and county engineers. The highest ranking recommendation was to allow construction funds to be advanced, assuming funds are balanced by cities or counties who are not spending their own funds the same year. This recommendation was discussed by the Western Metro District city engineers, with a mixed review on its effectiveness. The second highest recommendation was to pay 100% of the actual construction engineering cost and to pay the preliminary engineering costs when they are incurred. Some engineering representatives were concerned that this might result in pressure by city councils or city managers to unbalance time sheets in order to balance city general fund budgets. An additional suggestion was that there be allowance for a state aid expenditure off system to include not only state trunk highways and state aid roads but other local municipal streets as well. The fourth recommendation in terms of effectiveness was to limit scope of plan reviews and coordination between offices (District and Central Office). A question was asked on the reason for the increased review time by state aid staff. Both Dennis Carlson and Julie Skallman, State Aid Office, commented, suggesting that the extent of scrutiny of plans was based upon the quality of the plans submitted. If plans are not up to standard, the review time is lengthened. Alan Gray summarized that there may be opportunities as a result of this process for gaining efficiencies in plan review. The bottom line is not to negatively impact the quality of the final product.

Mike Eastling suggested looking at the implementations of these suggestions; which all agreed had already begun by the State Aid staff. The suggestions will be part of a final report to Dennis Carlson, State Aid Engineer. Dennis expressed his appreciation of the effort by the team, with the expectation of success in the areas of the first two suggestions. However, Dennis Carlson believes that advancing funds to municipalities may cause problems that are unanticipated, such as drawing the balance down too far. He believes rather that we need to focus on cities with the highest current balances. Final comments by Board members included consideration of all suggestions, taking a look at storm sewer systems and increasing costs, and bringing comments on the final report to the attention of the Board and MnDOT staff.

Chairman Dan Edwards adjourned the afternoon session at 3 p.m.

## II. EVENING SESSION

Vice Chairman Alan Gray reconvened the evening session at 8:05 p.m. He reviewed the agenda issues to be taken up at the Wednesday business meeting as follows:

1. Needs and Apportionment Data
2. Research Account
3. Ramsey County Consolidation
4. Quality Improvement Task Force Recommendations
5. Unencumbered Fund Subcommittee Issues

There was no subsequent discussion on the first two items listed above.

A. Ramsey County Consolidation Proposal

The evening discussion on this issue was far ranging, including the options proposed by Ramsey County and the implications for other counties statewide. It was emphasized that the approach proposed by Ramsey County is consistent with the intent of the Federal Surface Transportation Act. However, if the Ramsey County proposal were pursued and the 20% cap on MSA designation countywide were to be adhered to, some cities would lose and others would gain within that county boundary. Suggestions put forward by the Board during the discussion include the following:

- Recognize density as a factor in the percent of the street network allowable for designation as MSA, to minimize concern that the system is not responsive to rapid growth areas.
- Suggested using unencumbered fund balance dollars as source of turnback funds for growth and reassignment to Ramsey County.
- Consider excess mileage on State Aid System within the county as off system expenditure, with no increases.
- Suggestion that any resolution adopted should be "revenue neutral" statewide. Revenue neutral would imply that the de-designation of segments of streets would be necessary to balance the total network.
- Schedule joint meetings with Ramsey County and MSA Screening Board to sort out issues, with MnDOT attendance since they represent 62% of the total statewide funding sources.
- Discussion concluded with Mike Eastling and Dave Kildahl proposing to draft a resolution for consideration by the Board at tomorrow's meeting.

B. Quality Improvement Task Force

In development of a final report, it was strongly suggested that support be given for reimbursement of preliminary engineering costs when plans are approved and before project implementation. A rule change would be required in order to accomplish this recommendation. State Aid staff assumed that a Rules Committee meeting will take place within the next year. It was suggested that a resolution from both the city and county engineers at their meeting in January be developed for Rules Committee consideration.

A draft final report on quality improvement will be submitted by the task force to State Aid staff in November, 1992. The report can then be distributed to all city engineering staff, with comments by State Aid Engineer Dennis Carlson. A suggestion was made to place the report on the agenda for the next Screening Board meeting in the Spring of 1993.

The identified mission of the Quality Improvement Task Force is to help cities spend their allocations and lower the unencumbered fund balance. This could be accomplished by first looking at the problem identification and the obstacles to spending available dollars. Changing of focus from punitive or penalty to a coaching and assistance approach would be more beneficial. In taking this approach, it is assumed that most counties and cities would take a responsible approach to the best use of funds. If municipalities are given more design latitude with increased eligibility for funding, it is expected that they may be able to "sell" projects more easily to customers. Opening up eligibility to include walkways and trails would seem to be a more flexible approach to funding and increasing expenditures to the unencumbered balance.

C. Unencumbered Construction Fund Subcommittee

The subcommittee is looking for direction from the Screening Board as to its role and responsibilities in the future in consideration of past resolutions to eliminate the penalties. It was noted that problems are anticipated to continue in terms of excessive unencumbered fund balance, especially with Minneapolis, since it is carrying currently a high fund balance based on the state of the economy and political decisions. Belief was expressed that cities have enough integrity and forethought to follow through on construction of projects in five years after a plan has been completed. An alternative suggestion for consideration was applying an accelerated penalty on an annual basis for increasing balances, similar to the current deduction for needs.

III. SESSION III (FINAL SESSION)

Chairman Dan Edwards called the final session of the Fall Municipal Screening Board back to order at 8:40 a.m., Wednesday, October 28, 1992. Roll call was taken for members in attendance.

Present were:

Chairman Dan Edwards  
Vice Chairman Alan Gray  
Secretary and First Class City, Kenneth Larson  
District I, Jim Prusak  
District II, David Kildahl  
District III, Sid Williamson  
District IV, Herb Reimer  
Metro West District, Mike Eastling  
District VI, Arnold Putnam  
District VII, Pete McClurg  
District VIII, Dale Swanson  
Metro East District, Ken Haider  
First Class City Minneapolis, Marv Hoshaw  
First Class City St. Paul, Tom Kuhfeld

(Others in attendance as listed for Session I.)

A. Needs and Apportionment Data

Motion by: Dale Swanson, Seconded by Herbert Reimer, to approve the Needs and Apportionment Data listed on page 17 of the report.

Action: Motion carried.

B. Research Account

Motion by: Marv Hoshaw, Seconded by Sid Williamson to continue support for a research account.

Action: Motion carried.

C. Ramsey County Consolidation

A draft compromise resolution was prepared by Mike Eastling and Dave Kildahl for consideration by the Screening Board. Proposed alternatives (Alternative A and Alternative B) require a variance to the rules in order to be implemented. The rules state that in order to spend money on local streets all other M.S.A. in municipalities must be up to State Aid standards. It was suggested that bringing higher volume County State Aid routes into the

Municipal State Aid System could result in removing lower volume MSA routes from the State Aid System, resulting in an upgrading of the entire system because of the increase in average traffic volume. Discussion also related to other counties such as Stearns County and St. Louis County looking at a comparable approach to redesignation of portions of their networks. In moving towards a higher integrity in our total system network, it was suggested that a functional classification approach to the entire system be reviewed with the objective of identifying an appropriate jurisdiction for those different segments of the roadways based upon functional classification.

Clarification was made that the input desired from the Screening Board at this time is a recommendation to the Variance Committee relative to support of the consolidation of roadways within the county. There is no request for action by the Screening Board for changing of the system. Ramsey County could go before the Variance Committee at any time without support of the Screening Board. It was felt that while the Screening Board is sympathetic to Ramsey County municipalities in attempting to deal with a very difficult problem, the Screening Board at this point in time does not have sufficient information to make a decision or take definitive action. Clarification has been provided by Paul Kirkwood, Ramsey County, that Minnesota Statutes currently allow county boards to turn county roads back to municipalities without a public hearing and without consent of the municipalities. This can all happen without a negotiated settlement. The only jurisdictional entity protected by State Statute is the Township. There is funding support, however, to municipalities if the roadways are turned over from the county through receipt of a maintenance allocation. This funding source will help alleviate the burden of additional cost to the city.

There was general support of the concept with concern that any action taken by the Screening Board at this time provides a basis of endorsement for continued study and for prompting an overall jurisdictional study statewide.

Motion by: Mike Eastling, seconded by Dave Kildahl that the next scheduled Rules Committee consider Proposal A; however, prior to taking action, the Rules Committee investigate the number of miles affected by the proposal.

Action: Motion carried.

Subsequent discussion focused on the need to bring down the unencumbered construction fund balance by broadening the opportunities for use of State Funds on an expanded system.

Motion by: Ken Haider, seconded by Tom Kuhfeld, that the Screening Board recommend to the Variance Committee approval of variance by cities for reconstruction of county road turnbacks as eligible off-system expenses.

Action: Motion failed.

Motion by: Mike Eastling, seconded by Sid Williamson; recommending that Proposal B be considered by the next Rules Committee; however, prior to taking action, the Committee will investigate the number of miles affected by the proposal.

Action: Motion carried.

B. Unencumbered Funds Balance Subcommittee

Marv Hoshaw, Minneapolis, suggested continuing taking a message to the cities to educate them on reducing their unencumbered fund balance. No further comments were received by subcommittee Chair Ron Rudrud. No official action is required to be taken by the subcommittee.

Mike Eastling, Metro District West, suggested that our purpose is to establish need, with those cities having a balance of "0" reflecting a greater need. Recommendation to adjust incrementally greater reduction in allotment with increasing the balance, with a multiplier taking effect after reaching a balance of \$500,000, was proposed. An automatic adjustment would be made for whatever balance was on the books on September 1.

Motion by: Mike Eastling, seconded by Marv Hoshaw to continue the Unencumbered Construction Fund Balance Subcommittee with the directive identified above. The subcommittee will report back to the Board on their recommendation.

Action: Motion carried.

Motion by: Ken Haider, seconded by Herb Reimer, to include in the direction of the subcommittee incentives to the cities that maintain a small balance.

Action: Motion carried.

C. State Aid Engineer's Report

Dennis Carlson, State Aid Engineer, reported on the recommendations from the Quality Improvement Task Force. His comments on the individual elements of the Task Force are as follows:

1. Permit Process - State Aid staff willing to work with cities on reviewing Federal plan prior to issuance of permits.
2. Lighting - Recommendation to fully fund ornamental poles for street lighting.
3. Pedestrian Paths and Bikeways - Dennis does not agree on unlimited width for MSA or CSAH recreational trails.
4. Preliminary Engineering - Agreement by Dennis to look at expansion of these elements in relationship to environmental needs and recent ISTEA legislation.
5. Construction Engineering - Doesn't agree with dropping the limit entirely, but agrees to changing the limit.
6. Landscaping - Dennis is in agreement to opening a discussion on this issue. Recommendation from the Task Force is 5%.
7. Sidewalks - Dennis remains open to discussion on this issue.
8. Advance Encumbrances - Dennis doesn't believe that this approach will help. Those with high balance still won't sufficiently spend down their allocation

9. Recommendations for Change Outside Statutory or Rules Changes;

- a) Review Process - MSA staff will continue to reduce time required for plan review. Peak season review has been reduced from 6 to 3 weeks. Dennis' personal policy is to sign all plans on the same day that they are placed on his desk.
- b) Plan Review Scope - A suggestion was made that an internal task force be formed to define the rules and responsibilities of the District State Aid Engineer and State Aid Plans Engineer. Dennis supports the intent, however, he believes that a high quality review process must be maintained and reviewing plans at a certain minimal level shouldn't be jeopardized.
- c) Bridge Plans - Dennis supports the proposal that an issue resolution team be formed.
- d) Cooperative Agreements - Dennis agrees with the recommendations; i.e., that explanation be given as to why a project cannot be forwarded before agreement completion and that a position be dedicated to the State Aid Office to process agreements. Dennis indicated that their internal budget would be a limiting factor for adding additional staff.
- e) Recovering CADD Equipment Cost - Dennis believes that CADD equipment costs are recoverable, stating as an example that if you are using up to date equipment and design practices, actual cost of the project can be reduced.

Dennis summarized his report by challenging all city engineers to seek solutions and share with each other through this and other similar forums. A successful example Dennis referred to was the Rules Committee process. In that process he used a conflict resolution by consent approach. Dennis encourages this method for getting community and public consent to a project. Dennis also discussed Federal requirements and some recent problem in talking to cities about consultants and their responsible charge on projects. Dennis suggested obtaining a copy of Federal Aid Policy Guidelines or Federal Register as a reference. Dennis' final comments were on the State Aid Division and the positive changes that are occurring towards giving his organization a voice with the Commissioner of Transportation. Dennis feels very positive about this relationship with the Commissioner and the implications.

D. Eligible Expenditures

A request from the City of Fridley was conveyed by Mike Eastling, Metro West District, for being able to use 20% State Aid allocation for construction on a greater percentage of the total street network. Discussion focused on the option available through the variance procedure to use dollars on other local roads. After discussion on the issue, it was decided that no action be taken by the Screening Board at this time.

E. Mileage Cap

Concern was expressed by Jim Prusak, Cloquet, for looking at the current mileage cap of 2,500 miles. A suggestion was made also to look at increasing beyond the 20% allowable mileage. It is expected that by the end of this



year, the maximum total mileage will have been exceeded. Marv Hoshaw suggested that the Quality Improvement Task Force needs to explore this issue. The last proposal presented was for a 3,000 mile cap. A suggestion was made for using a percentage rather than a fixed number as a cap. Recommendation was made that the Executive Committee take this issue to the City Engineers Association Meeting in January for inclusion in the transportation bill next year.

Motion by: Tom Kuhfeld, seconded by Arnie Putnam, for Screening Board support for legislation to increase the mileage cap to 3,000 miles.

Action: Motion carried.

F. Adjournment

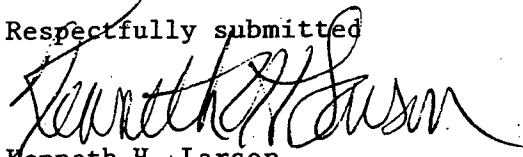
Chairman Dan Edwards thanked Ron Rudrud for serving as Chair of the Unencumbered Construction Fund Balance Subcommittee and expressed appreciation for his efforts; thanked the State Aid staff for contributing to the discussions and for the preparation in their reports and meeting agenda; thanked Mike Eastling, Pete McClurg, and Ken Haider for their efforts during their 3 years on the Board; and finally thanked Marv Hoshaw for the past 10 years he has served representing the City of Minneapolis on the Screening Board. Marv, who will be retiring from the City of Minneapolis at the end of the year, received a standing ovation in recognition of his contribution to the Board.

Marv Hoshaw, City of Minneapolis, made his final comments to the Screening Board, expressing appreciation for the working relationship with Board members, commenting on the high quality of the Screening Board over the past few years, suggesting that the Board continue to be considerate of growing community needs, and finally reminding the Board to give thoughtful, considerate deliberations in making resolutions to avoid hasty decisions that are difficult to change. Marv also thanked Dan Edwards for his role and leadership as Chair during the past year.

Motion by: Marv Hoshaw, seconded by Mike Eastling to adjourn the meeting at 11 a.m.

Action: Motion carried.

Respectfully submitted



Kenneth H. Larson  
Secretary

## **UNIT PRICE STUDY**

The Unit Price Study is done annually by the State Aid Needs Unit by compiling the quantities and unit prices of items from the prior years Abstract of Bids received in the State Aid Office. The results were obtained from the 1992 bids and are found next to the applicable graphs. These averages and past averages are used by the Needs Study Subcommittee and June Screening Board to determine the prices to be used in the 1993 Needs Study. These prices are then applied against the quantity table located in the State Aid Manual Fig. D & F 5-892.810 to compute the needs of each segment. The needs eventually will be used to compute the 1994 money needs allocation.

Both Mn/Dot and State Aid bridges are used so that more bridges determine the unit price. Generally State Aid contracts do not include many bridges 150 feet and over. Arriving at a reasonable bridge widening cost is difficult, due to the variation of work involved. Bridge widening can include removing the superstructure with the replacement of new beams or it can involve leaving the existing deck in place.

Mn/Dot's hydraulic office furnished a recommendation of costs for storm sewer construction and adjustment based on 1992 construction costs.

Mn/Dot Railroad Office furnished a letter detailing railroad cost from 1992 construction projects.

Due to the lack of data, a study is not done for traffic signals, special drainage, maintenance, lighting and engineering. Every segment, except those eligible for Turnback Funding, receive needs for traffic signals, lighting, engineering, and maintenance. All the past year's need prices are found in the Screening Board's resolutions included in this booklet.

# 1993 UNIT PRICE RECOMMENDATIONS

Needs Item		1992 Need Prices	Sub- committee Suggested Prices For 1993	Screening Board Recommended Prices For 1993
Grading (Excavation)	Cu. Yd.	\$3.00	\$3.00	
Aggregate Shoulders #2221	Ton	7.00	7.00	
Curb and Gutter Removal	Lin.Ft.	1.60	1.60	
Sidewalk Removal	Sq. Yd.	4.50	4.50	
Concrete Pavement Removal	Sq. Yd.	4.00	4.00	
Tree Removal	Unit	150.00	175.00	
Class 4 Subbase #2211	Ton	4.50	4.50	
Class 5 Base #2211	Ton	5.75	6.00	
Bituminous Base #2331	Ton	22.00	22.00	
Bituminous Surface #2331	Ton	22.00	22.00	
Bituminous Surface #2341	Ton	24.50	24.50	
Bituminous Surface #2361	Ton	32.00	32.00	
Curb and Gutter Construction	Lin.Ft.	5.50	5.50	
Sidewalk Construction	Sq. Yd.	14.50	15.00	
Storm Sewer Adjustment	Mile	62,000	64,000	
Storm Sewer	Mile	199,500	206,000	
Special Drainage – Rural	Mile	25,000	25,000	
Street Lighting	Mile	20,000	20,000	
Traffic Signals	Per Sig	80,000	80,000	
<b>Signal Needs Based On Projected Traffic</b>				
Projected Traffic	Percentage	X Unit Price =	Needs Per Mile	
0 – 4,999	.25	\$80,000	= \$20,000	
5,000 – 9,999	.50	80,000	= 40,000	
10,000 & Over	1.00	80,000	= 80,000	
Right of Way (Needs Only)	Acre	60,000	60,000	
Engineering	Percent	18	18	
<b>Railroad Grade Crossing</b>				
Signs	Unit	600	600	
Pavement Marking	Unit	750	750	
Signals (Single Track–Low Speed)	Unit	80,000	80,000	
Signals & Gate (Multiple Track – High & Low Speed)	Unit	110,000	110,000	
Rubberized Material(Per Track)	Lin.Ft.	900	900	
<b>Bridges</b>				
0 to 149 Ft.	Sq. Ft.	55.00	55.00	
150 to 499 Ft.	Sq. Ft.	60.00	55.00	
500 Ft. and over	Sq. Ft.	65.00	55.00	
Bridge Widening	Sq. Ft.	150.00	*	
*Recommendation is to use reconditioning cost on the structural need sheet instead of a bridge widening cost.				
<b>Railroad Bridges over Highways</b>				
Number of Tracks – 1	Lin.Ft.	4,000	5,000	
Additional Track (each)	Lin.Ft.	3,000	4,000	

# MUNICIPAL STATE AID NEEDS STUDY SUBCOMMITTEE

## MINUTES

Friday, April 23, 1993

Members: Tom Drake (Red Wing), Pete McClurg (New Ulm), Ken Haider (Maplewood),  
and Ken Straus (Mn/DOT)

### 1993 Unit Price Recommendations

#### Recommended Unit Prices

Grading (Excavation): \$3.00/cu yd  
There was variation between districts but no justification for adjustment.

Aggregate Shoulders #2221: \$7.00/ton  
The small quantity makes it difficult to make adjustment based on last  
year's price—no change warranted.

Curb and Gutter Removal: \$1.60/lin ft  
Current figure agrees with bid averages.

Sidewalk Removal: \$4.50/sq yd  
Current figure agrees with bid averages.

Concrete Pavement Removal: \$4.00/sq yd  
Current figure agrees with bid averages.

Tree Removal: \$175.00/unit  
1992 and 1993 averages indicate an increase in the unit price is  
justified.

Class 4 Subbase #2211: \$4.50/ton  
Current figure agrees with bid averages.

Class 5 Base #2211: \$6.00/ton  
Large quantity reflecting higher bids justifies increase.

Bituminous Base #2331: \$22.00/ton  
Downward adjustment may be justified next year.

Bituminous Surface #2331: \$22.00/ton  
Should be same as above.

Minutes-MSA Needs Study Subcommittee  
Page 2  
April 23, 1993 Meeting

<u>Bituminous Surface #2341:</u> Current figure agrees with bid averages.	\$24.50/ton
<u>Bituminous Surface #2361:</u> Downward adjustment may be justified next year.	\$32.00/ton
<u>Curb and Gutter Construction:</u> Current figure agrees with bid averages.	\$5.50/lin ft
<u>Sidewalk Construction:</u> 1992 and 1993 averages indicate an increase is justified.	\$15.00/sq yd
<u>Storm Sewer Adjustment:</u> Agree with D.V. Halvorson (Mn/DOT hydraulics engineer) recommendation.	\$64,000/mile
<u>Storm Sewer:</u> Agree with D.H. Halvorson (Mn/DOT hydraulics engineer) recommendation.	\$206,000/mile
<u>Special Drainage-Rural:</u> No justification for change.	\$25,000/mile
<u>Street Lighting:</u> No justification for change.	\$20,000/mile
<u>Traffic Signals:</u> No justification for change. Needs based on traffic are unchanged.	\$80,000/signal
<u>Right of Way (Needs Only):</u> No change justified.	\$60,000/acre
<u>Engineering:</u> No change justified.	18 percent
<u>Railroad Grade Crossings:</u> Based on memo from Robert G. Swanson, Director Railroad Administration—all railroad grade crossing items remain unchanged.	
Signs	\$600.00/unit
Pavement markings	\$750.00/unit

Signals (single track-low speed)	\$80,000.00/unit
Signals & gate (multiple track-high & low speed)	\$110,000.00/unit
Rubberized material (per track)	\$900.00/lin ft

Bridges:

The average contract prices do not indicate a significant difference in price due to bridge length. All lengths are treated the same.

0 - 149 feet	\$55.00/sq ft
150 - 499 feet	\$55.00/sq ft
500 feet and over	\$55.00/sq ft

Bridge widening costs vary substantially. It seems inappropriate to attempt to identify a unit price for this item. It is recommended bridge widening be handled as a "reconditioning cost" on the needs data sheet in the future.

Railroad Bridges over Highways:

There is limited data on this item; however, the trend is upward.

Recommend increasing as follows:

Number of tracks—1	\$5,000.00/lin ft
Additional track (each)	\$4,000.00/lin ft

The committee discussed the annual maintenance needs cost. Even though there is little historical data available, an increase of 10% across the board is recommended.

**Resolutions**

- Appointment to "Needs Study Subcommittee"  
The current resolution should be changed so that appointments are made at the "annual winter meeting of the City Engineers Association."
- Construction Cut-off Date  
It was agreed the resolution should not be changed—award date, not the letting, is a more accurate reflection of when and if money is being spent.
- Construction Accomplishments  
There is currently a disparity between the way on/off system expenditures affect the calculation of needs. The committee recommends Mr. Straps draft language to treat on/off system expenditures equally as far as needs are concerned and present it to the screening board for consideration.

- **Greater than Minimum Width**  
Recommend changing resolution to: "If a Municipal State Aid street is constructed to a width wider than required, resurfacing needs will be allowed on the constructed width."
- **Mileage**  
Recommend including language to include frontage roads in local street mileage. Recommend changes to clarify the process designation requests.
- **Turnbacks**  
Under the current system, turnbacks affect growing communities differently than cities with no growth. In a growing community, turnback mileage is absorbed as the community grows—after a few years no excess mileage exists. In a nongrowing community, the excess turnback mileage may remain forever.  
  
It is recommended the issue be discussed at the district meetings this spring. In particular, two options:
  1. Treat turnbacks as special mileage that would be over and above the community's 20 percent..
  2. Provide a sunset for turnback designations.
- **One-Way Street Mileage**  
Currently the "Screening Board Resolution" and the "State Aid Resolution" are in conflict. The resolution is more restrictive due to width and ADT requirements.  
  
It is recommended the resolution be rescinded and the Rules Committee address the issue.

#### **Red Wing One-Way Streets Request**

It is noted that the request satisfies the current resolution rules and thus qualifies for approval. Approval is recommended.

#### **Suburban Design**

The subcommittee discussed the urban/suburban/rural design classifications. It was agreed that the difference between the suburban/rural designs were inconsequential. It is recommended the suburban designation be dropped.

Minutes-MSA Needs Study Subcommittee  
Page 5  
April 23, 1993 Meeting

**Motions**

McClurg moved, Haider second to recommend unit prices, resolutions, and suburban design:  
Passed: 3-Ayes 0-No

Haider moved, McClurg second to recommend approval of the Red Wing one-way streets request:  
Passed: 2-Ayes 0-0 Drake abstained

Respectfully submitted,



Kenneth G. Haider, P.E.  
City of Maplewood  
Secretary, Needs Subcommittee



# **M.S.A.S. UNIT PRICE STUDY EXCAVATION – CUBIC YARD**

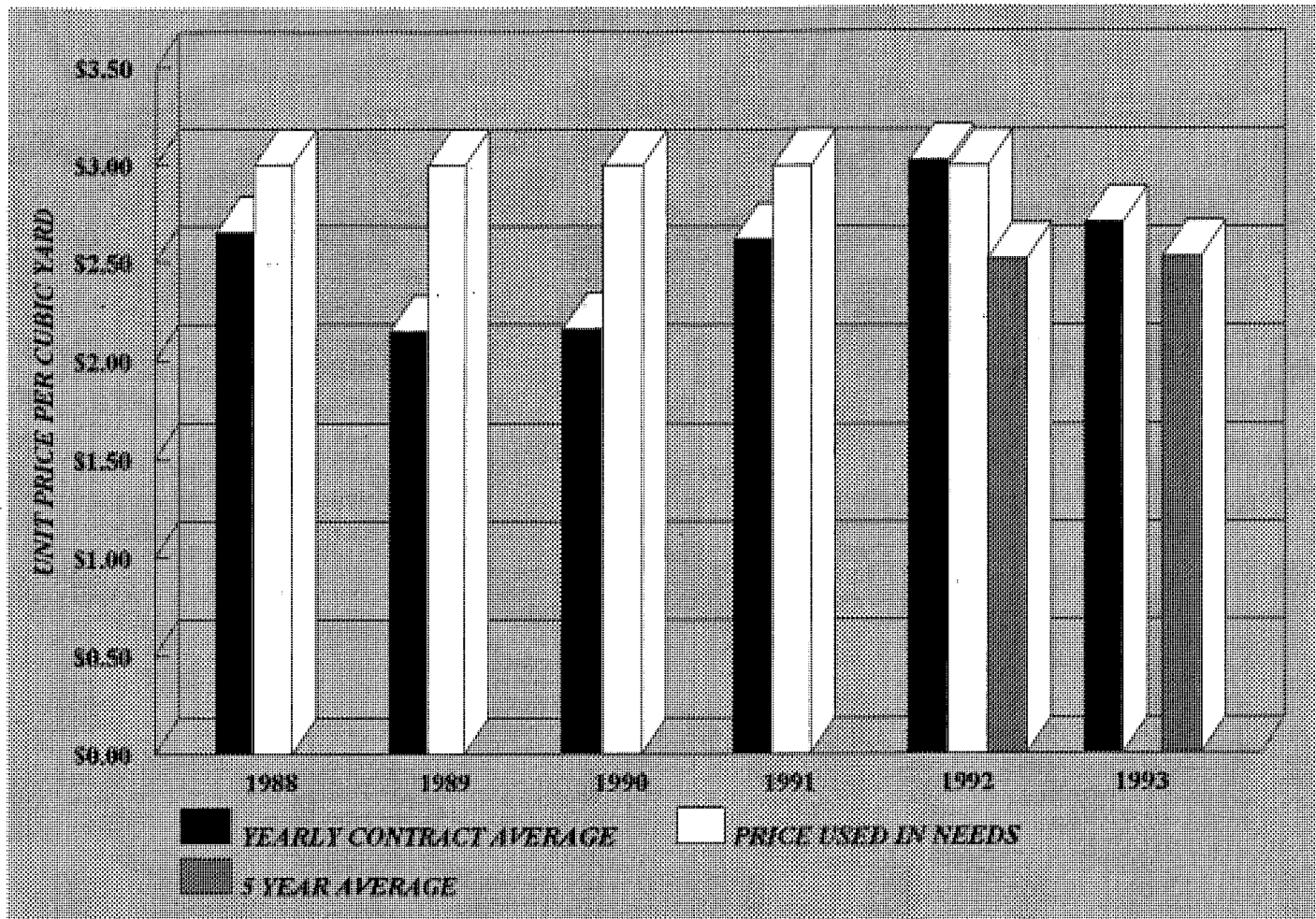
<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CHISHOLM	1,241	\$6,505	\$5.24
CLOQUET	7,704	30,585	3.97
DULUTH	36,970	184,243	4.98
GRAND RAPIDS	1,185	4,740	4.00
HIBBING	17,883	62,543	3.50
INTERNATIONAL FALLS	11,514	51,814	4.50
<b>DISTRICT TOTAL</b>	<b>76,497</b>	<b>\$340,430</b>	<b>\$4.45</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	5,455	\$6,546	\$1.20
CROOKSTON	7,643	36,315	4.75
THIEF RIVER FALLS	45	225	5.00
<b>DISTRICT TOTAL</b>	<b>13,143</b>	<b>\$43,086</b>	<b>\$3.28</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	486	\$2,333	\$4.80
ELK RIVER	21,911	54,239	2.48
LITTLE FALLS	14,765	34,691	2.35
OTSEGO	46,385	47,885	1.03
ST. CLOUD	14,864	61,692	4.15
WAITE PARK	16,725	56,421	3.37
<b>DISTRICT TOTAL</b>	<b>115,136</b>	<b>\$257,261</b>	<b>\$2.23</b>
<b><u>DISTRICT 4</u></b>			
MOORHEAD	2,800	\$9,899	\$3.54
<b>DISTRICT TOTAL</b>	<b>2,800</b>	<b>\$9,899</b>	<b>\$3.54</b>
<b><u>METRO WEST</u></b>			
BLAINE	332	\$1,660	\$5.00
BLOOMINGTON	5,725	26,022	4.55
BROOKLYN CENTER	26,172	59,950	2.29
BROOKLYN PARK	1,720	6,479	3.77
COON RAPIDS	10,485	28,559	2.72
CORCORAN	9,200	25,300	2.75
CRYSTAL	2,573	12,563	4.88
EAST BETHEL	8,480	15,125	1.78
EDEN PRAIRIE	58,233	118,671	2.04
FRIDLEY	6,200	39,060	6.30
HAM LAKE	18,973	39,217	2.07
MAPLE GROVE	38,000	82,975	2.18
MINNEAPOLIS	14,902	107,071	7.19
MINNETONKA	12,000	52,000	4.33
NEW HOPE	150	975	6.50
RAMSEY	2,630	8,548	3.25
ROBBINSDALE	9,916	36,432	3.67
ST. ANTHONY	4,680	27,612	5.90
SAVAGE	10,100	34,340	3.40
SHAKOPEE	9,135	16,170	1.77
<b>DISTRICT TOTAL</b>	<b>249,606</b>	<b>\$738,729</b>	<b>\$2.96</b>

# **M.S.A.S. UNIT PRICE STUDY EXCAVATION – CUBIC YARD**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	1,100	\$6,600	\$6.00
AUSTIN	5,730	21,107	3.68
FARIBAULT	16,043	54,777	3.41
ROCHESTER	5,339	33,903	6.35
WINONA	25,510	109,981	4.31
<b>DISTRICT TOTAL</b>	<b>53,722</b>	<b>\$226,368</b>	<b>\$4.21</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	5,374	\$20,955	\$3.90
NEW ULM	15,279	33,614	2.20
WASECA	8,895	19,881	2.24
<b>DISTRICT TOTAL</b>	<b>29,548</b>	<b>\$74,450</b>	<b>\$2.52</b>
<b><u>DISTRICT 8</u></b>			
HUTCHINSON	8,370	\$29,295	\$3.50
MARSHALL	11,303	20,241	1.79
MONTEVIDEO	6,316	39,475	6.25
<b>DISTRICT TOTAL</b>	<b>25,989</b>	<b>\$89,011</b>	<b>\$3.42</b>
<b><u>METRO EAST</u></b>			
APPLE VALLEY	3,270	\$13,410	\$4.10
BURNSVILLE	45,831	95,489	2.08
COTTAGE GROVE	19,575	76,698	3.92
FARMINGTON	33,451	47,179	1.41
FOREST LAKE	9,713	29,139	3.00
HASTINGS	14,575	38,418	2.64
LAKEVILLE	116,168	163,782	1.41
MAPLEWOOD	12,281	43,045	3.51
MENDOTA HEIGHTS	7,600	22,800	3.00
NEW BRIGHTON	235	1,116	4.75
NORTH ST. PAUL	395	2,370	6.00
SHOREVIEW	27,410	66,901	2.44
SOUTH ST. PAUL	860	4,859	5.65
ST. PAUL	176,975	415,716	2.35
WEST ST. PAUL	9,900	41,732	4.22
WHITE BEAR LAKE	42,930	109,447	2.55
WOODBURY	18,100	42,675	2.36
<b>DISTRICT TOTAL</b>	<b>539,269</b>	<b>\$1,214,776</b>	<b>\$2.25</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	76,497	\$340,430	\$4.45
DISTRICT 2	13,143	43,086	3.28
DISTRICT 3	115,136	257,261	2.23
DISTRICT 4	2,800	9,899	3.54
METRO WEST	249,606	738,729	2.96
DISTRICT 6	53,722	226,368	4.21
DISTRICT 7	29,548	74,450	2.52
DISTRICT 8	25,989	89,011	3.42
METRO EAST	539,269	1,214,776	2.25
<b>STATE TOTAL</b>	<b>1,105,710</b>	<b>\$2,994,010</b>	<b>\$2.71</b>

# EXCAVATION



NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5 YEAR AVERAGE CONTRACT PRICE
1988	62	796,486	\$2,113,700	\$2.65	\$3.00	
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		2.53

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER CU. YD. BASED UPON 1992 CONSTRUCTION COSTS.

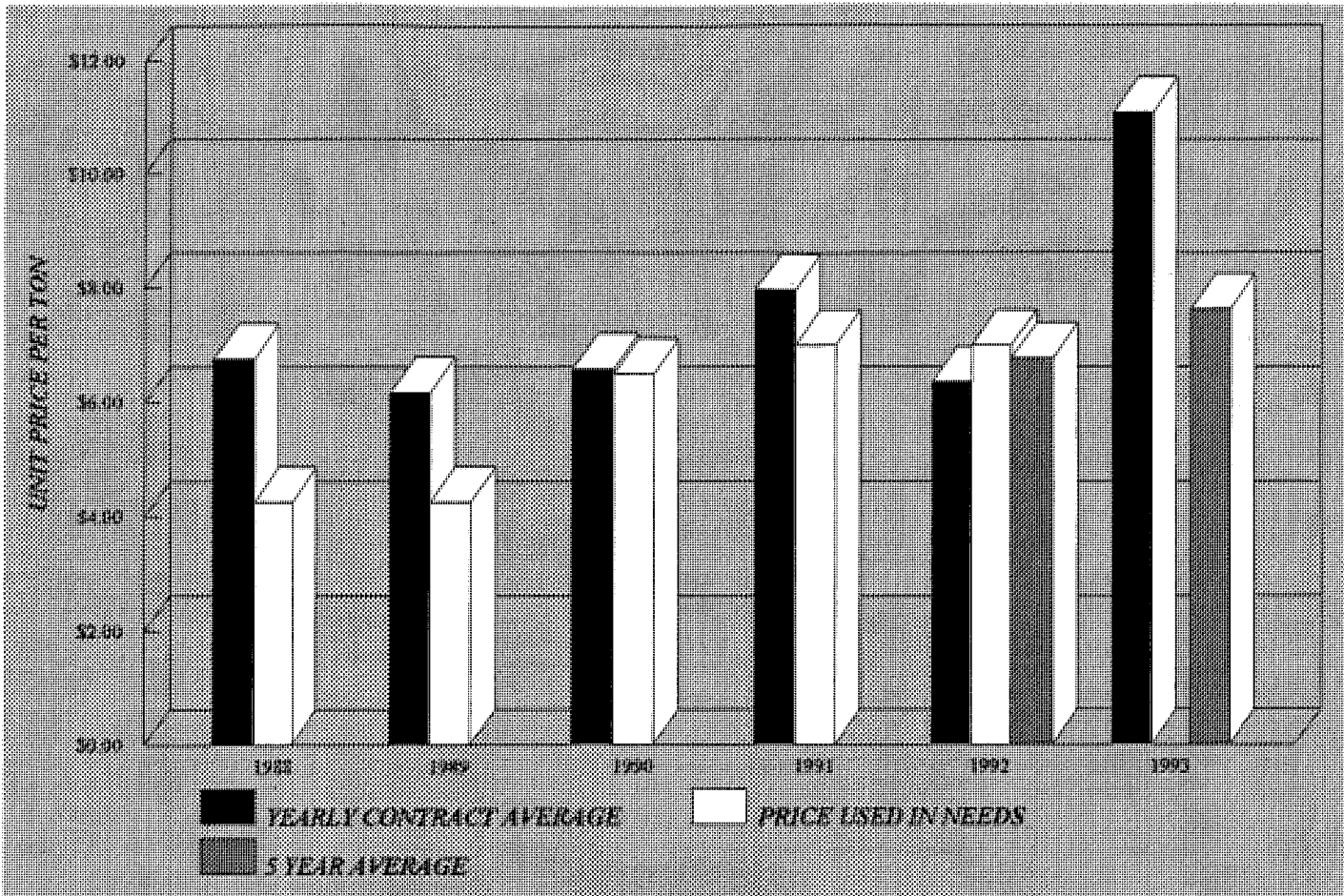
**\$3.00**

# **M.S.A.S. UNIT PRICE STUDY AGGREGATE SHOULDERS – TON**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<u><b>DISTRICT 2</b></u>			
BEMIDJI	180	\$2,375	\$13.19
<b>DISTRICT TOTAL</b>	<b>180</b>	<b>\$2,375</b>	<b>\$13.19</b>
<u><b>DISTRICT 3</b></u>			
ELK RIVER	45	\$1,170	\$26.00
<b>DISTRICT TOTAL</b>	<b>45</b>	<b>\$1,170</b>	<b>\$26.00</b>
<u><b>METRO-WEST</b></u>			
EDEN PRAIRIE	20	\$400	\$20.00
HAM LAKE	215	1864	8.67
EAST BETHEL	215	1864	8.67
<b>DISTRICT TOTAL</b>	<b>450</b>	<b>\$4,128</b>	<b>\$9.17</b>
<u><b>METRO-EAST</b></u>			
LAKEVILLE	84	\$840	\$10.00
FARMINGTON	91	910	10.00
<b>DISTRICT TOTAL</b>	<b>175</b>	<b>\$1,750</b>	<b>\$10.00</b>

<u><b>DISTRICT TOTALS</b></u>			
DISTRICT 2	180	\$2,375	\$13.19
DISTRICT 3	45	1170	26.00
METRO-WEST	450	4128	9.17
METRO-EAST	175	1750	10.00
<b>STATE TOTAL</b>	<b>850</b>	<b>\$9,423</b>	<b>\$11.09</b>

# AGGREGATE SHOULDERING



NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5 YEAR AVERAGE CONTRACT PRICE
1988	4	1,247	\$8,437	\$6.77	\$4.25	
1989	7	3,485	21,554	6.18	4.25	
1990	6	3,714	24,444	6.58	6.50	
1991	3	2,334	18,624	7.98	7.00	
1992	7	6,285	39,992	6.36	7.00	\$6.77
1993	7	803	9,423	11.09		7.64

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER TON BASED UPON 1992 CONSTRUCTION COSTS.

**\$7.00**

# **M.S.A.S. UNIT PRICE STUDY** **CURB AND GUTTER REMOVAL – LINEAR FEET**

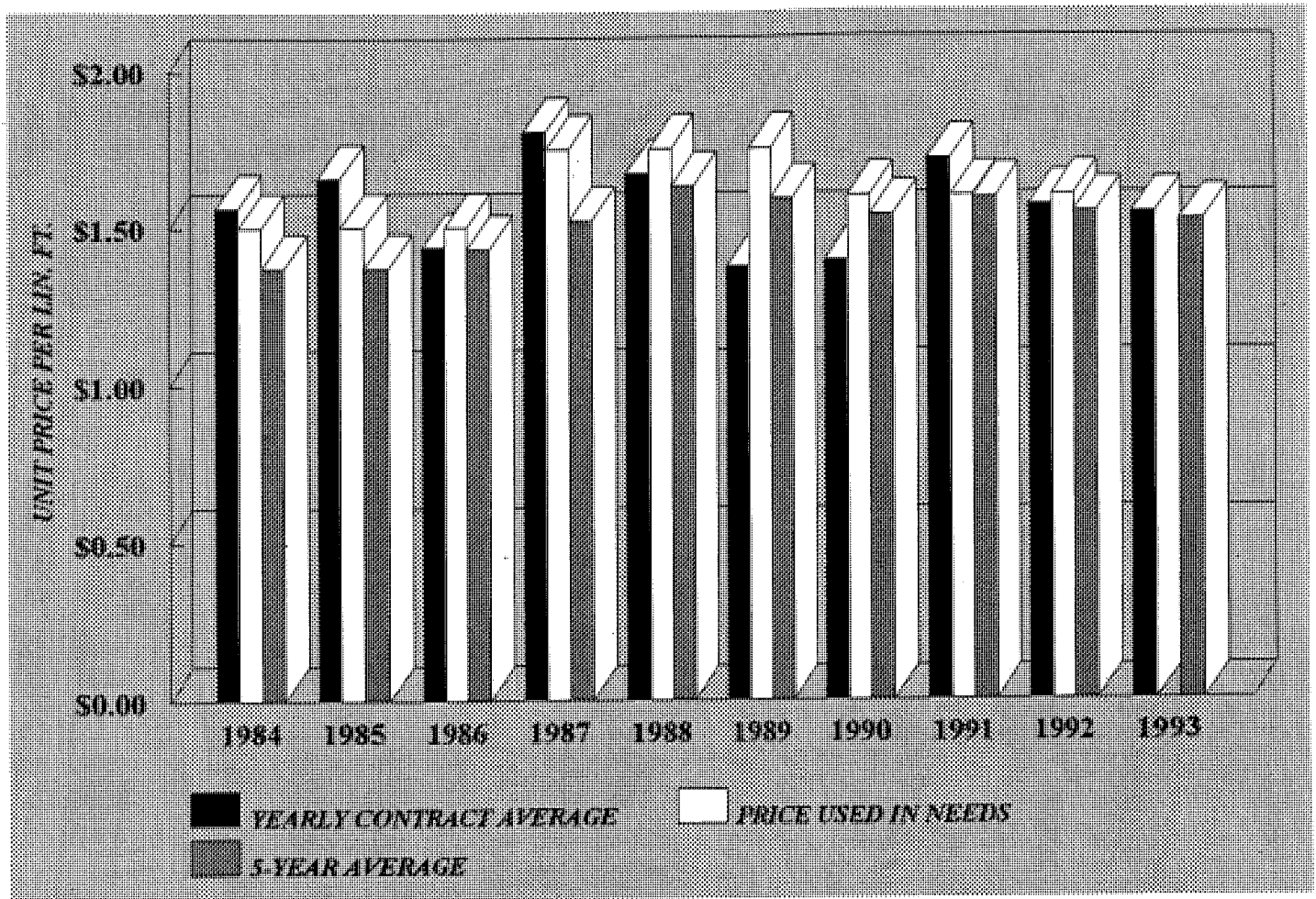
<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b>DISTRICT 1</b>			
CHISHOLM	1,470	\$2,352	\$1.60
CLOQUET	900	1,800	2.00
DULUTH	348	681	1.96
GRAND RAPIDS	616	1,540	2.50
HIBBING	3,340	2,635	0.79
INTERNATIONAL FALLS	724	2,534	3.50
<b>DISTRICT TOTAL</b>	<b>7,398</b>	<b>\$11,542</b>	<b>\$1.56</b>
<b>DISTRICT 2</b>			
BEMIDJI	160	\$320	\$2.00
CROOKSTON	2,275	3,729	1.64
THIEF RIVER FALLS	190	380	2.00
<b>DISTRICT TOTAL</b>	<b>2,625</b>	<b>\$4,429</b>	<b>\$1.69</b>
<b>DISTRICT 3</b>			
BRAINERD	3,715	\$3,826	\$1.03
ELK RIVER	1,893	2,369	1.25
LITTLE FALLS	4,843	4,843	1.00
ST. CLOUD	400	400	1.00
WAITE PARK	354	566	1.60
<b>DISTRICT TOTAL</b>	<b>11,205</b>	<b>\$12,004</b>	<b>\$1.07</b>
<b>DISTRICT 4</b>			
MOORHEAD	184	\$920	\$5.00
<b>DISTRICT TOTAL</b>	<b>184</b>	<b>\$920</b>	<b>\$5.00</b>
<b>METRO WEST</b>			
BLAINE	540	\$2,160	\$4.00
BLOOMINGTON	1,858	3,716	2.00
BROOKLYN PARK	273	954	3.49
COON RAPIDS	827	1,491	1.80
CRYSTAL	1,530	3,060	2.00
EDEN PRAIRIE	131	196	1.50
FRIDLEY	190	1,350	7.11
MINNEAPOLIS	5,849	11,550	1.97
MINNETONKA	200	400	2.00
NEW HOPE	310	620	2.00
RAMSEY	100	150	1.50
ROBBINSDALE	9,024	7,670	0.85
ST. ANTHONY	700	1,400	2.00
SAVAGE	159	318	2.00
SHAKOPEE	95	190	2.00
<b>DISTRICT TOTAL</b>	<b>21,786</b>	<b>\$35,225</b>	<b>\$1.62</b>
<b>DISTRICT 6</b>			
ALBERT LEA	120	\$600	\$5.00
AUSTIN	4,251	3,169	0.75
FARIBAULT	610	920	1.51
ROCHESTER	1,510	1,510	1.00
WINONA	5,893	8,840	1.50
<b>DISTRICT TOTAL</b>	<b>12,384</b>	<b>\$15,039</b>	<b>\$1.21</b>

# **M.S.A.S. UNIT PRICE STUDY** **CURB AND GUTTER REMOVAL – LINEAR FEET**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	3,546	\$4,156	\$1.17
MANKATO	2,199	7,626	3.47
NEW ULM	4,889	5,867	1.20
WASECA	400	980	2.45
WORTHINGTON	11	22	2.00
<b>DISTRICT TOTAL</b>	<b>11,045</b>	<b>\$18,651</b>	<b>\$1.69</b>
<b><u>DISTRICT 8</u></b>			
HUTCHINSON	410	\$1,025	\$2.50
MARSHALL	1,269	2,538	2.00
MONTEVIDEO	5,745	11,490	2.00
<b>DISTRICT TOTAL</b>	<b>7,424</b>	<b>\$15,053</b>	<b>\$2.03</b>
<b><u>METRO EAST</u></b>			
APPLE VALLEY	2,661	\$5,322	\$2.00
BURNSVILLE	4,789	11,367	2.37
COTTAGE GROVE	2,890	4,624	1.60
FOREST LAKE	20	60	3.00
HASTINGS	4,200	8,400	2.00
LAKEVILLE	791	1,448	1.83
MAPLEWOOD	130	338	2.60
NORTH ST. PAUL	500	626	1.25
ST. PAUL	23,919	31,472	1.32
SHOREVIEW	100	220	2.20
SOUTH ST. PAUL	1,542	1,753	1.14
WEST ST. PAUL	550	550	1.00
WOODBURY	2,650	4,335	1.64
<b>DISTRICT TOTAL</b>	<b>44,742</b>	<b>\$70,515</b>	<b>\$1.58</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	7,398	\$11,542	\$1.56
DISTRICT 2	2,625	4,429	1.69
DISTRICT 3	11,205	12,004	1.07
DISTRICT 4	184	920	5.00
METRO WEST	21,786	35,225	1.62
DISTRICT 6	12,384	15,039	1.21
DISTRICT 7	11,045	18,651	1.69
DISTRICT 8	7,424	15,053	2.03
METRO EAST	44,742	70,515	1.58
<b>STATE TOTAL</b>	<b>118,793</b>	<b>\$183,378</b>	<b>\$1.54</b>

# 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
1984	33	42,589	\$66,635	\$1.56	\$1.50	\$1.37
1985	43	106,678	176,974	1.66	1.50	1.37
1986	50	145,294	208,971	1.44	1.50	1.43
1987	46	119,913	216,648	1.81	1.75	1.52
1988	35	83,232	139,029	1.67	1.75	1.63
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		1.52

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER LIN. FT. BASED UPON 1992 CONSTRUCTION COSTS.

**\$1.60**



## M.S.A.S. UNIT PRICE STUDY SIDEWALK REMOVAL – SQUARE YARD

(Two decimal places was used in the quantity column so the conversion  
from Sq. Ft. to Sq. Yds. would be more accurate.)

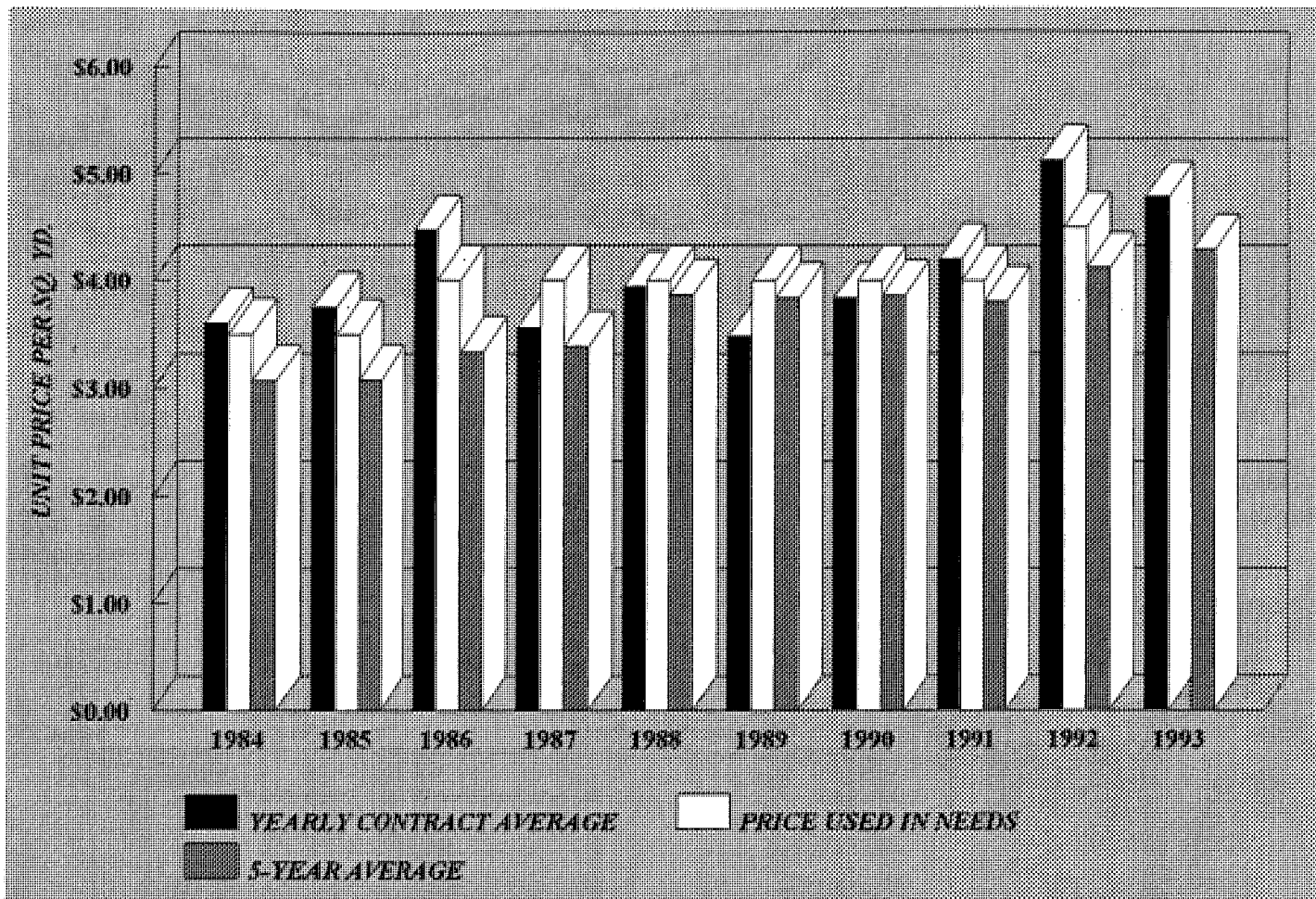
MUNICIPALITY	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
<b><u>DISTRICT 1</u></b>			
CHISHOLM	1,013.67	\$2,737	\$2.70
DULUTH	3,914.33	8,808	2.25
GRAND RAPIDS	419.00	2,095	5.00
HIBBING	2,022.22	13,650	6.75
INTERNATIONAL FALLS	2,469.22	8,869	3.59
<b>DISTRICT TOTAL</b>	<b>9,838.44</b>	<b>\$36,159</b>	<b>\$3.68</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	149.33	\$806	\$5.40
CROOKSTON	1,365.22	13,732	10.06
THIEF RIVER FALLS	1,548.99	5,576	3.60
<b>DISTRICT TOTAL</b>	<b>3,063.54</b>	<b>\$20,114</b>	<b>\$6.57</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	144.44	\$598	\$4.14
ELK RIVER	218.89	985	4.50
LITTLE FALLS	260.67	1,056	4.05
ST. CLOUD	156.00	560	3.59
<b>DISTRICT TOTAL</b>	<b>780.00</b>	<b>\$3,199</b>	<b>\$4.10</b>
<b><u>DISTRICT 4</u></b>			
MOORHEAD	355.56	\$2,080	\$5.85
<b>DISTRICT TOTAL</b>	<b>355.56</b>	<b>\$2,080</b>	<b>\$5.85</b>
<b><u>METRO WEST</u></b>			
BLOOMINGTON	228.00	\$1,026	\$4.50
BROOKLYN PARK	13.78	93	6.75
COON RAPIDS	7.78	70	9.00
CRYSTAL	5.56	25	4.50
EDEN PRAIRIE	21.00	103	4.90
MINNEAPOLIS	16,902.44	89,594	5.30
ROBBINSDALE	1,864.00	5,872	3.15
ST. ANTHONY	80.00	720	9.00
SAVAGE	3.89	35	9.00
SHAKOPEE	41.11	222	5.40
<b>DISTRICT TOTAL</b>	<b>19,167.56</b>	<b>\$97,760</b>	<b>\$5.10</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	170.00	\$1,530	\$9.00
AUSTIN	929.22	4,130	4.44
FARIBAULT	640.00	1,920	3.00
ROCHESTER	1,050.00	3,150	3.00
<b>DISTRICT TOTAL</b>	<b>2,789.22</b>	<b>\$10,730</b>	<b>\$3.85</b>

# **M.S.A.S. UNIT PRICE STUDY** **SIDEWALK REMOVAL - SQUARE YARD**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	939.78	\$5,921	\$6.30
MANKATO	197.33	1,088	5.51
NEW ULM	373.33	1,848	4.95
WASECA	484.00	2,178	4.50
<b>DISTRICT TOTAL</b>	<b>1,994.44</b>	<b>\$11,035</b>	<b>\$5.53</b>
<b><u>DISTRICT 8</u></b>			
HUTCHINSON	611.11	\$2,750	\$4.50
MARSHALL	105.44	557	5.28
MONTEVIDEO	394.44	1,278	3.24
<b>DISTRICT TOTAL</b>	<b>1,110.99</b>	<b>\$4,585</b>	<b>\$4.13</b>
<b><u>METRO EAST</u></b>			
BURNSVILLE	623.78	\$5,614	\$9.00
LAKEVILLE	39.44	355	9.00
NORTH ST. PAUL	8.33	75	9.00
ST. PAUL	3,154.55	14,039	4.45
SOUTH ST. PAUL	57.78	312	5.40
WEST ST. PAUL	33.33	90	2.70
<b>DISTRICT TOTAL</b>	<b>3,917.21</b>	<b>\$20,485</b>	<b>\$5.23</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	9,838.44	\$36,159	\$3.68
DISTRICT 2	3,063.54	20,114	6.57
DISTRICT 3	780.00	3,199	4.10
DISTRICT 4	355.56	2,080	5.85
METRO WEST	19,167.56	97,760	5.10
DISTRICT 6	2,789.22	10,730	3.85
DISTRICT 7	1,994.44	11,035	5.53
DISTRICT 8	1,110.99	4,585	4.13
METRO EAST	3,917.21	20,485	5.23
<b>STATE TOTAL</b>	<b>43,016.97</b>	<b>\$206,147</b>	<b>\$4.79</b>

# SIDEWALK REMOVAL #2105



NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	21	27,288	\$98,276	\$3.60	\$3.50	\$3.07
1985	30	59,315	222,584	3.75	3.50	3.08
1986	38	56,873	254,161	4.47	4.00	3.34
1987	38	44,695	159,347	3.57	4.00	3.39
1988	25	35,889	141,549	3.94	4.00	3.87
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		4.29

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS  
PER SQ. YD. BASED UPON 1992 CONSTRUCTION COSTS:

**\$4.50**

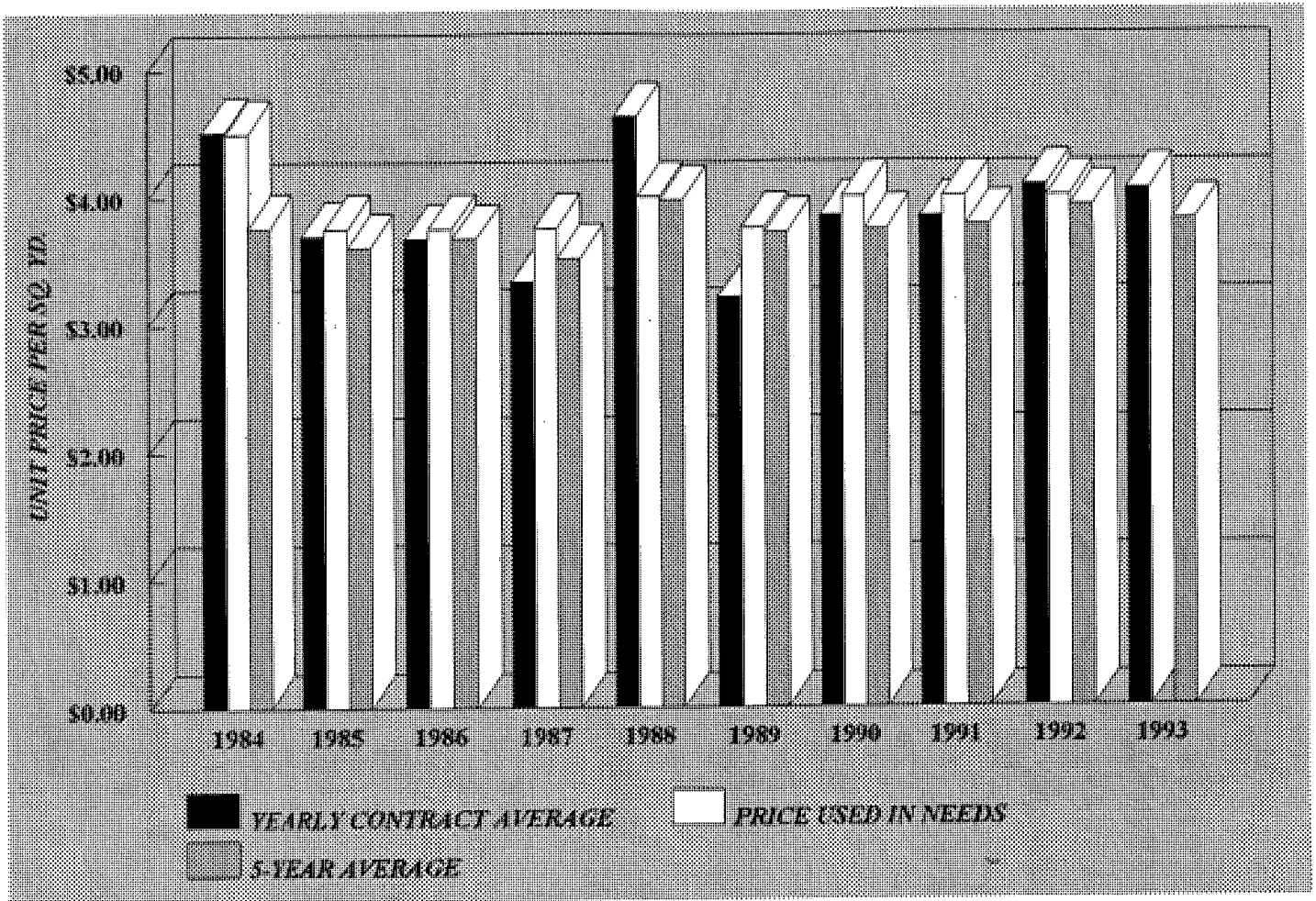
# M.S.A.S. UNIT PRICE STUDY CONCRETE PAVEMENT REMOVAL – SQUARE YARD

MUNICIPALITY	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
<b><u>DISTRICT 1</u></b>			
CHISHOLM	1,742	\$10,452	\$6.00
DULUTH	16,313	38,185	2.34
HIBBING	3,927	27,248	6.94
<b>DISTRICT TOTAL</b>	<b>21,982</b>	<b>\$75,885</b>	<b>\$3.45</b>
<b><u>DISTRICT 2</u></b>			
THIEF RIVER FALLS	4	\$16	\$4.00
<b>DISTRICT TOTAL</b>	<b>4</b>	<b>\$16</b>	<b>\$4.00</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	4,324	\$11,548	\$2.67
ELK RIVER	13,126	37,409	2.85
LITTLE FALLS	50	125	2.50
WAITE PARK	96	364	3.79
<b>DISTRICT TOTAL</b>	<b>17,596</b>	<b>\$49,446</b>	<b>\$2.81</b>
<b><u>DISTRICT 4</u></b>			
MOORHEAD	4,700	\$9,870	\$2.10
<b>DISTRICT TOTAL</b>	<b>4,700</b>	<b>\$9,870</b>	<b>\$2.10</b>
<b><u>METRO WEST</u></b>			
BROOKLN CENTER	176	\$264	\$1.50
COON RAPIDS	1,104	7,728	7.00
MINNEAPOLIS	51,711	360,642	6.97
ST. ANTHONY	6,810	10,215	1.50
SAVAGE	7,137	8,925	1.25
<b>DISTRICT TOTAL</b>	<b>66,938</b>	<b>\$387,774</b>	<b>\$5.79</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	1,950	\$14,625	\$7.50
AUSTIN	18,605	48,335	2.60
FARIBAULT	8,350	20,875	2.50
ROCHESTER	971	4,855	5.00
<b>DISTRICT TOTAL</b>	<b>29,876</b>	<b>\$88,690</b>	<b>\$2.97</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	3,763	\$15,992	\$4.25
MANKATO	3,186	15,576	4.89
<b>DISTRICT TOTAL</b>	<b>6,949</b>	<b>\$31,568</b>	<b>\$4.54</b>
<b><u>DISTRICT 8</u></b>			
MARSHALL	338	\$1,352	\$4.00
MONTEVIDEO	155	620	4.00
<b>DISTRICT TOTAL</b>	<b>493</b>	<b>\$1,972</b>	<b>\$4.00</b>
<b><u>METRO EAST</u></b>			
COTTAGE GROVE	295	\$974	\$3.30
ST. PAUL	40,814	122,037	2.99
SOUTH ST. PAUL	205	820	4.00
WHITE BEAR LAKE	407	1,425	3.50
<b>DISTRICT TOTAL</b>	<b>41,721</b>	<b>\$125,256</b>	<b>\$3.00</b>

**M.S.A.S. UNIT PRICE STUDY  
CONCRETE PAVEMENT REMOVAL – SQUARE YARD**

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	21,982	\$75,885	\$3.45
DISTRICT 2	4	16	4.00
DISTRICT 3	17,596	49,446	2.81
DISTRICT 4	4,700	9,870	2.10
METRO WEST	66,938	387,774	5.79
DISTRICT 6	29,876	88,690	2.97
DISTRICT 7	6,949	31,568	4.54
DISTRICT 8	493	1,972	4.00
METRO EAST	41,721	125,256	3.00
<b>STATE TOTAL</b>	<b>190,259</b>	<b>\$770,477</b>	<b>\$4.05</b>

# 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
1984	18	119,864	\$541,569	\$4.52	\$4.50	\$3.76
1985	16	81,645	301,726	3.70	3.75	3.60
1986	28	134,698	494,572	3.67	3.75	3.67
1987	15	132,405	440,715	3.33	3.75	3.51
1988	25	106,550	493,029	4.63	4.00	3.97
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		3.80

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER SQ. YD. BASED UPON 1992 CONSTRUCTION COSTS.

**\$4.00**

**M.S.A.S. UNIT PRICE STUDY  
TREE REMOVAL – CLEARING**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CHISHOLM	12	\$1,500	\$125.00
DULUTH	38	2,810	73.95
GRAND RAPIDS	1	250	250.00
INTERNATIONAL FALLS	3	300	100.00
<b>DISTRICT TOTAL</b>	<b>54</b>	<b>\$4,860</b>	<b>\$90.00</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	2	\$150	\$75.00
CROOKSTON	5	1,650	330.00
<b>DISTRICT TOTAL</b>	<b>7</b>	<b>\$1,800</b>	<b>\$257.14</b>
<b><u>DISTRICT 3</u></b>			
ELK RIVER	8	\$800	\$100.00
LITTLE FALLS	43	1,720	40.00
OTSEGO	2	60	30.00
ST. CLOUD	2	200	100.00
WAITE PARK	5	250	50.00
<b>DISTRICT TOTAL</b>	<b>60</b>	<b>\$3,030</b>	<b>\$50.50</b>
<b><u>METRO WEST</u></b>			
BROOKLYN CENTER	68	\$13,600	\$200.00
EDEN PRAIRIE	68	8,500	125.00
MAPLE GROVE	80	6,720	84.00
MINNEAPOLIS	20	6,000	300.00
MINNETONKA	100	7,500	75.00
ROBBINSDALE	5	341	68.20
SAVAGE	77	5,775	75.00
SHAKOPEE	2	1,100	550.00
<b>DISTRICT TOTAL</b>	<b>420</b>	<b>\$49,536</b>	<b>\$117.94</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	2	\$300	\$150.00
AUSTIN	2	400	200.00
WINONA	16	1,600	100.00
<b>DISTRICT TOTAL</b>	<b>20</b>	<b>\$2,300</b>	<b>\$115.00</b>
<b><u>DISTRICT 8</u></b>			
MONTEVIDEO	23	\$5,336	\$232.00
<b>DISTRICT TOTAL</b>	<b>23</b>	<b>\$5,336</b>	<b>\$232.00</b>
<b><u>METRO EAST</u></b>			
BURNSVILLE	25	\$3,750	\$150.00
FARMINGTON	1	100	100.00
FOREST LAKE	28	1,260	45.00
HASTINGS	13	2,275	175.00
LAKEVILLE	51	842	16.51
MENDOTA HEIGHTS	47	2,475	52.66
NEW BRIGHTON	3	60	20.00
SHOREVIEW	17	1,530	90.00
ST. PAUL	22	4,400	200.00
WHITE BEAR LAKE	30	2,850	95.00
<b>DISTRICT TOTAL</b>	<b>237</b>	<b>\$19,542</b>	<b>\$82.46</b>

**M.S.A.S UNIT PRICE STUDY  
TREE REMOVAL – GRUBBING**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CHISHOLM	13	\$1,625	\$125.00
DULUTH	38	2,810	73.95
GRAND RAPIDS	1	250	250.00
HIBBING	10	600	60.00
INTERNATIONAL FALLS	3	300	100.00
<b>DISTRICT TOTAL</b>	<b>65</b>	<b>\$5,585</b>	<b>\$85.92</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	2	\$100	\$50.00
CROOKSTON	5	1,100	220.00
<b>DISTRICT TOTAL</b>	<b>7</b>	<b>\$1,200</b>	<b>\$171.43</b>
<b><u>DISTRICT 3</u></b>			
ELK RIVER	8	\$800	\$100.00
LITTLE FALLS	44	1,760	40.00
OTSEGO	2	60	30.00
ST. CLOUD	2	200	100.00
WAITE PARK	5	250	50.00
<b>DISTRICT TOTAL</b>	<b>61</b>	<b>\$3,070</b>	<b>\$50.33</b>
<b><u>METRO WEST</u></b>			
BROOKLYN CENTER	68	\$6,800	\$100.00
EDEN PRAIRIE	96	7,200	75.00
MAPLE GROVE	80	5,040	63.00
MINNEAPOLIS	20	6,000	300.00
MINNETONKA	100	7,500	75.00
ROBBINSDALE	5	341	68.20
SAVAGE	77	3,850	50.00
SHAKOPEE	2	1,100	550.00
<b>DISTRICT TOTAL</b>	<b>448</b>	<b>\$37,831</b>	<b>\$84.44</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	2	\$300	\$150.00
AUSTIN	3	300	100.00
FARIBAULT	5	250	50.00
WINONA	16	1,600	100.00
<b>DISTRICT TOTAL</b>	<b>26</b>	<b>\$2,450</b>	<b>\$94.23</b>
<b><u>METRO EAST</u></b>			
BURNSVILLE	25	\$2,500	\$100.00
FARMINGTON	1	100	100.00
FOREST LAKE	28	980	35.00
HASTINGS	17	765	45.00
LAKEVILLE	51	842	16.51
MENDOTA HEIGHTS	33	1,155	35.00
NEW BRIGHTON	3	60	20.00
ST. PAUL	22	2,200	100.00
SHOREVIEW	67	3,350	50.00
WHITE BEAR LAKE	30	1,950	65.00
<b>DISTRICT TOTAL</b>	<b>277</b>	<b>\$13,902</b>	<b>\$50.19</b>



**M.S.A.S. UNIT PRICE STUDY  
TREE REMOVAL – CLEARING**

	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	54	\$4,860	\$90.00
DISTRICT 2	7	1,800	257.14
DISTRICT 3	60	3,030	50.50
DISTRICT 4	0	0	0
METRO WEST	420	49,536	117.94
DISTRICT 6	20	2,300	115.00
DISTRICT 7	0	0	0
DISTRICT 8	23	5,336	232.00
METRO EAST	237	19,542	82.46
<b>STATE TOTAL</b>	<b>821</b>	<b>\$86,404</b>	<b>\$105.24</b>

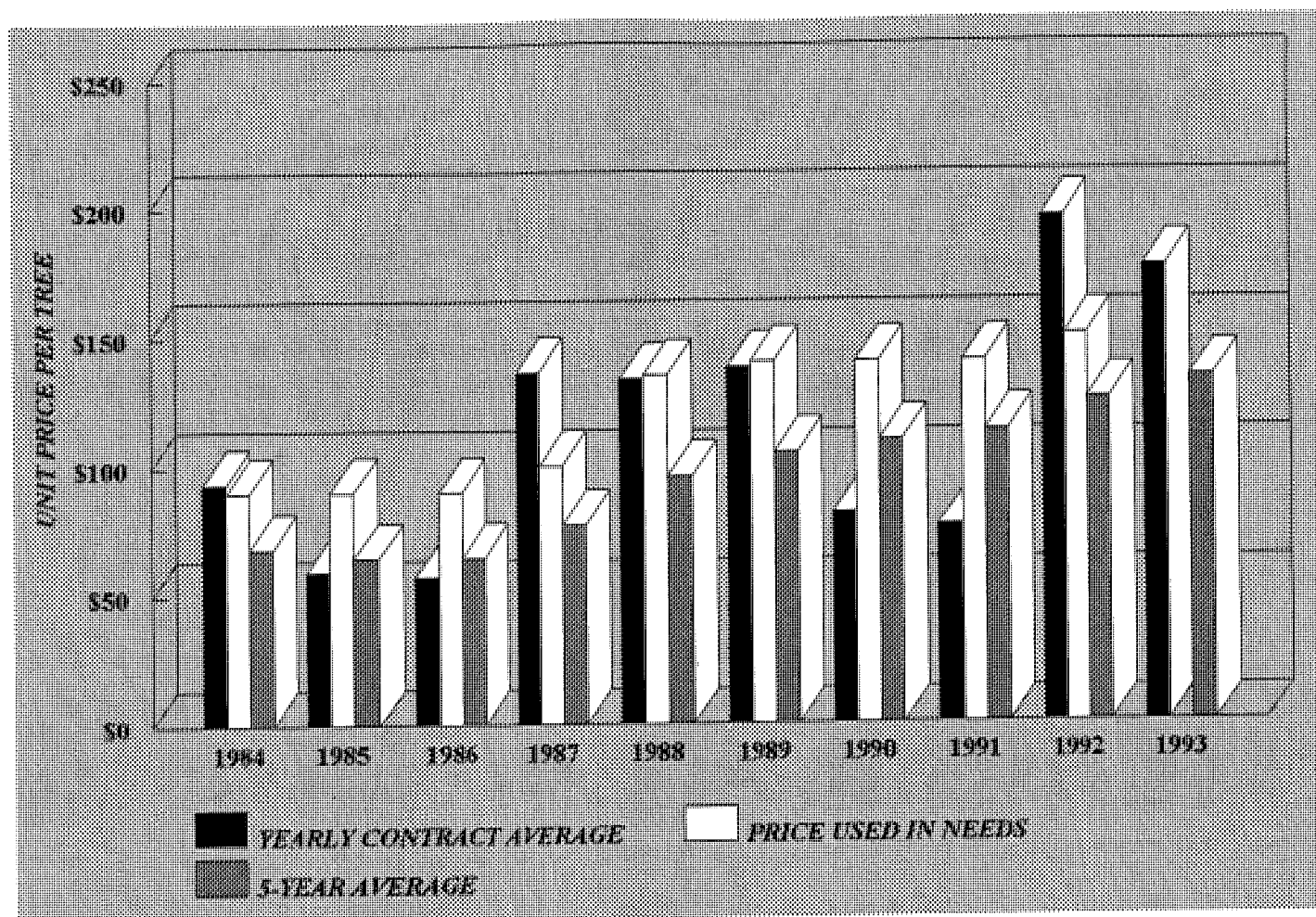
**M.S.A.S UNIT PRICE STUDY  
TREE REMOVAL – GRUBBING**

	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	65	\$5,585	\$85.92
DISTRICT 2	7	1,200	171.43
DISTRICT 3	61	3,070	50.33
DISTRICT 4	0	0	0.00
METRO WEST	448	37,831	84.44
DISTRICT 6	26	2,450	94.23
DISTRICT 7	0	0	0.00
DISTRICT 8	0	0	0.00
METRO EAST	277	13,902	50.19
<b>STATE TOTAL</b>	<b>884</b>	<b>\$64,038</b>	<b>\$72.44</b>

**CLEARING AND GRUBBING ARE COMBINED TO COMPUTE TREE REMOVAL**

	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
TOTAL CLEARING	821	\$86,404	\$105.24
TOTAL GRUBBING	<u>884</u>	<u>64,038</u>	<u>72.44</u>
TOTAL	1,705	\$150,442	\$88.24
<b>1705/2 = 853 TREES</b>			
<b>AVERAGE COST PER TREE = \$150,442/853 = \$176.47</b>			

# **TREE REMOVAL #2101**



NEEDS YEAR	NO.OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	17	841	\$78,574	\$93.43	\$90.00	\$68.31
1985	34	3,743	221,765	59.25	90.00	64.50
1986	30	1,442	82,586	57.27	90.00	64.56
1987	18	311	42,365	136.22	100.00	77.11
1988	19	535	71,490	133.63	135.00	95.96
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	1,705	150,442	176.47		133.68

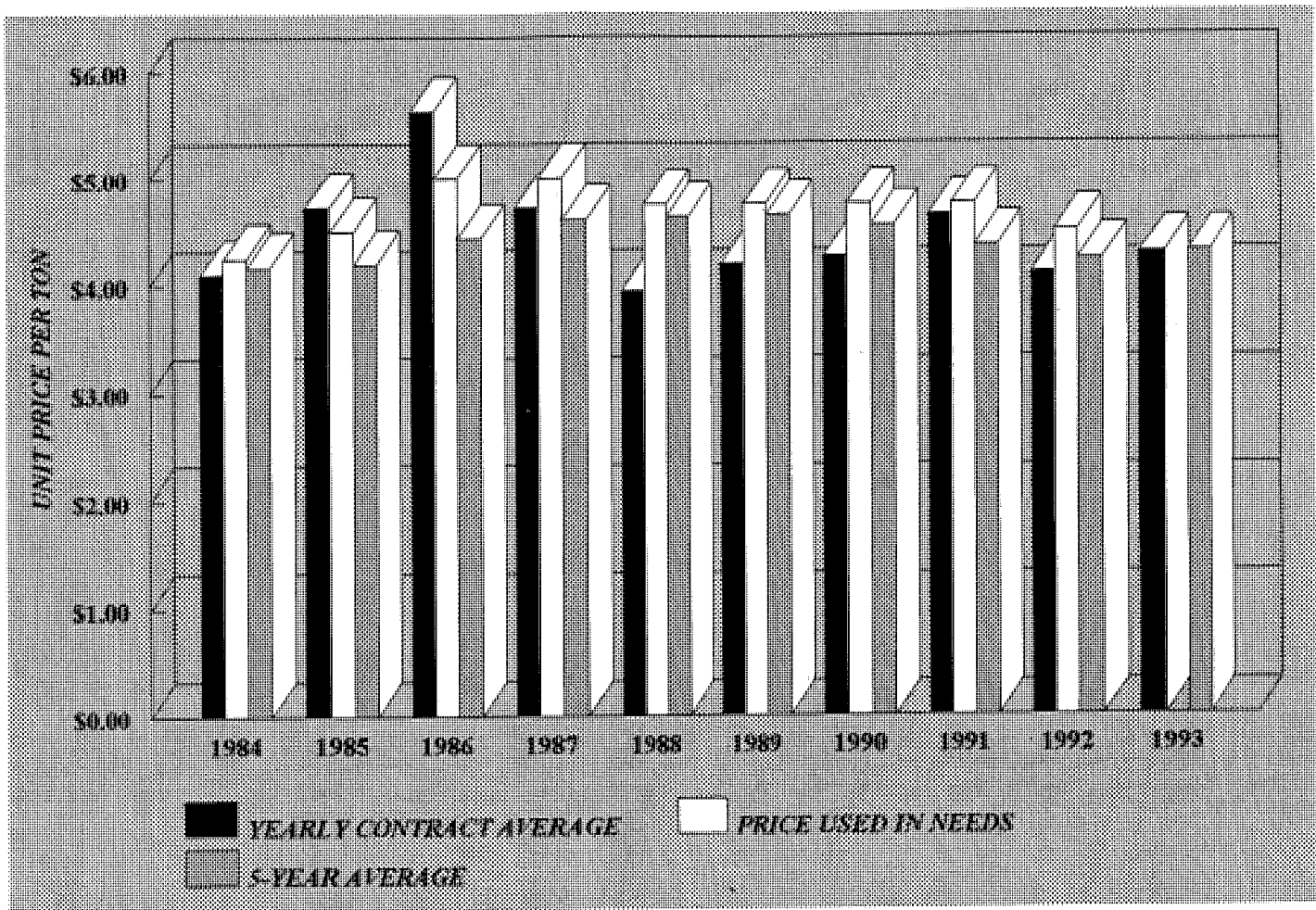
SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS  
PER TREE BASED UPON 1992 CONSTRUCTION COSTS.

**\$175.00**

# **M.S.A.S. UNIT PRICE STUDY** **AGGREGATE SUBBASE 2211 – TONS**

MUNICIPALITY	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
<u>DISTRICT 7</u>			
NEW ULM	8,020	\$28,070	\$3.50
DISTRICT TOTAL	8,020	\$28,070	\$3.50
<u>METRO EAST</u>			
WHITE BEAR LAKE	9,565	\$49,260	\$5.15
BURNSVILLE	8,049	32,598	4.05
DISTRICT TOTAL	17,614	\$81,858	\$4.65
<b>STATE TOTAL</b>	<b>25,634</b>	<b>\$109,928</b>	<b>\$4.29</b>

# CLASS 4 SUBBASE #2211



NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	6	30,625	\$125,717	\$4.11	\$4.25	\$4.17
1985	13	146,141	691,052	4.73	4.50	4.19
1986	4	21,968	123,871	5.64	5.00	4.43
1987	6	52,643	248,938	4.73	5.00	4.61
1988	8	60,793	239,623	3.94	4.75	4.63
1989	10	68,406	286,398	4.19	4.75	4.64
1990	5	56,590	240,949	4.26	4.75	4.55
1991	7	30,594	142,157	4.65	4.75	4.35
1992	7	69,260	284,485	4.11	4.50	4.23
1993	3	25,634	109,928	4.29		4.30

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER TON BASED UPON 1992 CONSTRUCTION COSTS.

**\$4.50**

**M.S.A.S. UNIT PRICE STUDY  
AGGREGATE BASE 2211 – TONS**

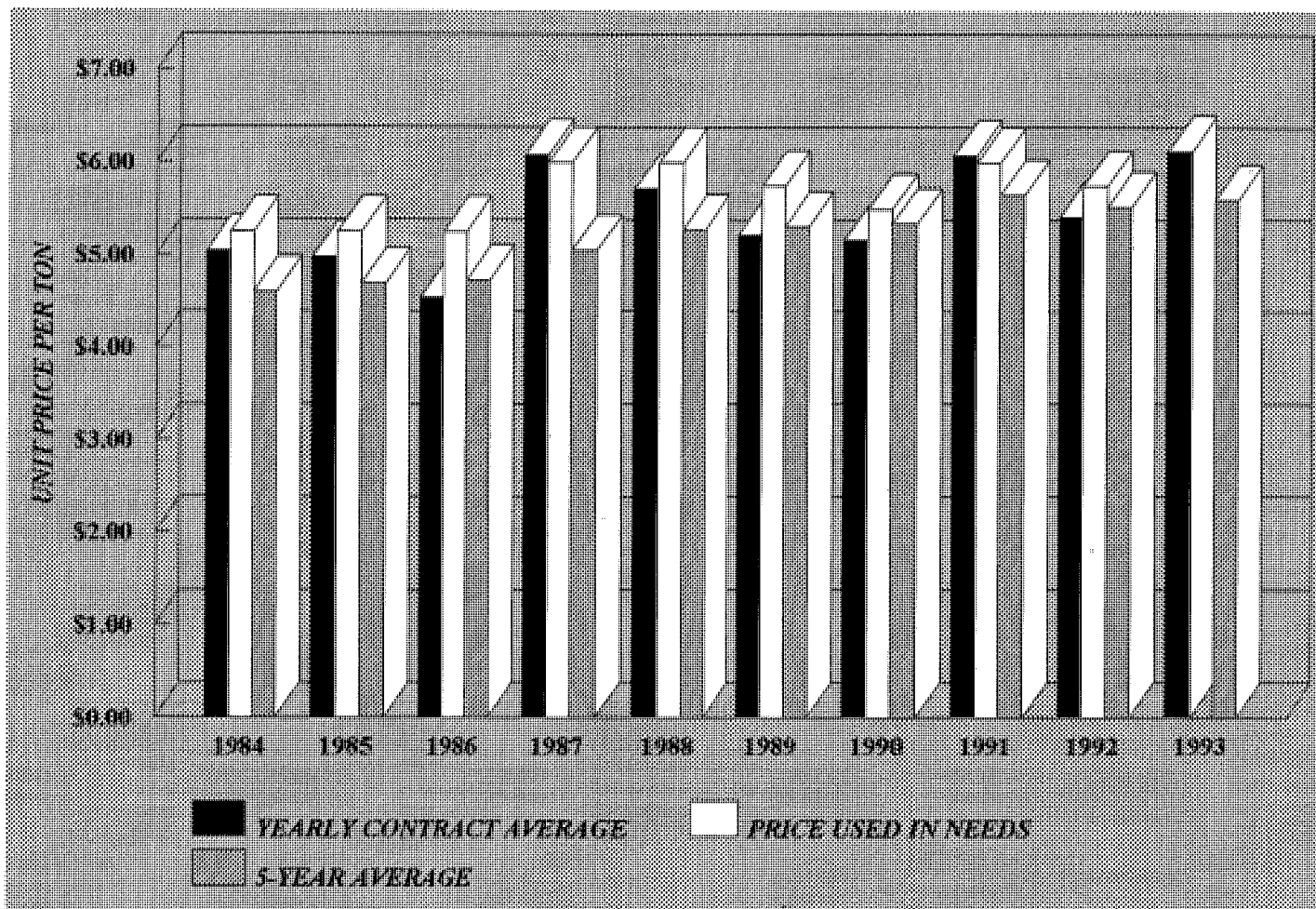
<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CHISHOLM	2,274	\$15,038	\$6.61
CLOQUET	7,371	34,320	4.66
DULUTH	22,119	134,240	6.07
GRAND RAPIDS	1,013	5,360	5.29
HIBBING	12,873	99,690	7.74
INTERNATIONAL FALLS	17,270	147,122	8.52
<b>DISTRICT TOTAL</b>	<b>62,920</b>	<b>\$435,770</b>	<b>\$6.93</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	4,825	\$21,445	\$4.44
CROOKSTON	8,433	59,788	7.09
<b>DISTRICT TOTAL</b>	<b>13,258</b>	<b>\$81,233</b>	<b>\$6.13</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	1,350	\$11,246	\$8.33
ELK RIVER	15,859	72,784	4.59
LITTLE FALLS	6,449	32,072	4.97
OTSEGO	14,550	73,042	5.02
ST. CLOUD	12,072	91,875	7.61
WAITE PARK	5,089	30,955	6.08
<b>DISTRICT TOTAL</b>	<b>55,369</b>	<b>\$311,974</b>	<b>\$5.63</b>
<b><u>METRO WEST</u></b>			
BROOKLYN CENTER	14,990	\$109,427	\$7.30
BROOKLYN PARK	614	5,201	8.47
COON RAPIDS	5,449	36,305	6.66
CORCORAN	4,250	34,850	8.20
CRYSTAL	1,952	13,102	6.71
EAST BETHEL	12,700	76,200	6.00
EDEN PRAIRIE	18,750	126,188	6.73
FRIDLEY	7,615	60,272	7.91
HAM LAKE	10,678	68,120	6.38
MAPLE GROVE	17,955	91,960	5.12
MINNEAPOLIS	13,606	153,929	11.31
MINNETONKA	5,650	39,268	6.95
NEW HOPE	295	1,977	6.70
RAMSEY	15,648	96,394	6.16
ROBBINSDALE	6,023	28,309	4.70
ST. ANTHONY	3,430	24,182	7.05
SAVAGE	7,000	45,308	6.47
SHAKOPEE	22,390	72,558	3.24
<b>DISTRICT TOTAL</b>	<b>168,995</b>	<b>\$1,083,550</b>	<b>\$6.41</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	800	\$7,840	\$9.80
AUSTIN	6,885	72,617	5.75
FARIBAULT	17,574	116,552	6.63
ROCHESTER	3,998	31,726	7.94
WINONA	13,944	119,695	8.58
<b>DISTRICT TOTAL</b>	<b>43,201</b>	<b>\$348,430</b>	<b>\$8.07</b>

**M.S.A.S. UNIT PRICE STUDY  
AGGREGATE BASE 2211-TONS**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	1,245	\$6,774	\$5.44
MANKATO	91	960	10.55
NEW ULM	8,655	45,439	5.25
WASECA	4,393	45,676	10.40
<b>DISTRICT TOTAL</b>	<b>14,384</b>	<b>\$98,849</b>	<b>\$6.87</b>
<b><u>DISTRICT 8</u></b>			
HUTCHINSON	13,627	\$71,740	\$5.26
MARSHALL	9,221	51,260	5.56
<b>DISTRICT TOTAL</b>	<b>22,848</b>	<b>\$123,000</b>	<b>\$5.38</b>
<b><u>METRO WEST</u></b>			
APPLE VALLEY	1,708	\$8,539	\$5.00
BURNSVILLE	14,433	58,912	4.08
COTTAGE GROVE	10,210	62,160	6.09
FARMINGTON	18,702	96,096	5.14
FOREST LAKE	4,477	30,220	6.75
HASTINGS	8,590	39,105	4.55
LAKEVILLE	52,785	224,472	4.25
MAPLEWOOD	4,860	33,872	6.97
MENDOTA HEIGHTS	8,000	66,000	8.25
NEW BRIGHTON	30	225	7.50
NORTH ST. PAUL	205	1,435	7.00
ST. PAUL	65,594	396,062	6.04
SHOREVIEW	9,050	72,400	8.00
SOUTH ST. PAUL	312	1,850	5.93
WEST ST. PAUL	12,629	72,617	5.75
WHITE BEAR LAKE	16,967	106,044	6.25
WOODBURY	11,720	54,277	4.63
<b>DISTRICT TOTAL</b>	<b>240,272</b>	<b>\$1,324,286</b>	<b>\$5.51</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	62,920	\$435,770	\$6.93
DISTRICT 2	13,258	81,233	6.13
DISTRICT 3	55,369	311,974	5.63
DISTRICT 4	0	0	0.00
METRO WEST	168,995	1,083,550	6.41
DISTRICT 6	43,201	348,430	8.07
DISTRICT 7	14,384	98,849	6.87
DISTRICT 8	22,848	123,000	5.38
METRO EAST	240,272	1,324,286	5.51
<b>STATE TOTAL</b>	<b>621,247</b>	<b>\$3,807,092</b>	<b>\$6.13</b>

# 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
1984	46	335,849	\$1,694,167	\$5.04	\$5.25	\$4.60
1985	50	444,073	2,210,475	4.98	5.25	4.69
1986	63	584,097	2,651,362	4.54	5.25	4.72
1987	61	455,259	2,768,438	6.08	6.00	5.05
1988	51	381,898	2,185,112	5.72	6.00	5.27
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		5.60

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER TON BASED UPON 1992 CONSTRUCTION COSTS.

\$6.00



**M.S.A.S. UNIT PRICE STUDY  
BIT. BASE & SURF. 2331 – TONS**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CHISHOLM	1,030	\$25,750	\$25.00
CLOQUET	1,950	41,925	21.50
DULUTH	8,506	163,014	19.16
GRAND RAPIDS	528	19,272	36.50
HIBBING	3,225	70,450	21.84
INTERNATIONAL FALLS	1,845	59,040	32.00
<b>DISTRICT TOTAL</b>	<b>17,084</b>	<b>\$379,451</b>	<b>\$22.21</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	705	\$13,219	\$18.75
CROOKSTON	5,512	143,312	26.00
<b>DISTRICT TOTAL</b>	<b>6,217</b>	<b>\$156,531</b>	<b>\$25.18</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	555	\$10,268	\$18.50
ELK RIVER	5,504	92,832	16.87
LITTLE FALLS	2,180	42,728	19.60
OTSEGO	2,945	51,409	17.46
ST. CLOUD	6,624	113,319	17.11
WAITE PARK	1,921	35,154	18.30
<b>DISTRICT TOTAL</b>	<b>19,729</b>	<b>\$345,710</b>	<b>\$17.52</b>
<b><u>DISTRICT 4</u></b>			
MOORHEAD	7,500	\$163,164	\$21.76
<b>DISTRICT TOTAL</b>	<b>7,500</b>	<b>\$163,164</b>	<b>\$21.76</b>
<b><u>METRO WEST</u></b>			
BLOOMINGTON	1,783	\$36,641	\$20.55
BROOKLYN CENTER	6,003	101,102	16.84
BROOKLYN PARK	369	7,068	19.15
COON RAPIDS	1,852	36,617	19.77
CORCORAN	1,800	39,060	21.70
CRYSTAL	420	8,915	21.23
EAST BETHEL	7,959	154,590	19.42
EDEN PRAIRIE	3,160	7,900	2.50
FRIDLEY	3,635	85,599	23.55
HAM LAKE	2,684	46,015	17.14
MINNEAPOLIS	13,798	364,318	26.40
MINNETONKA	3,975	96,054	24.16
RAMSEY	750	17,730	23.64
ROBBINSDALE	3,387	70,619	20.85
ST. ANTHONY	1,320	23,034	17.45
SAVAGE	2,389	49,239	20.61
SHAKOPEE	3,567	69,761	19.56
<b>DISTRICT TOTAL</b>	<b>58,851</b>	<b>\$1,214,262</b>	<b>\$20.63</b>

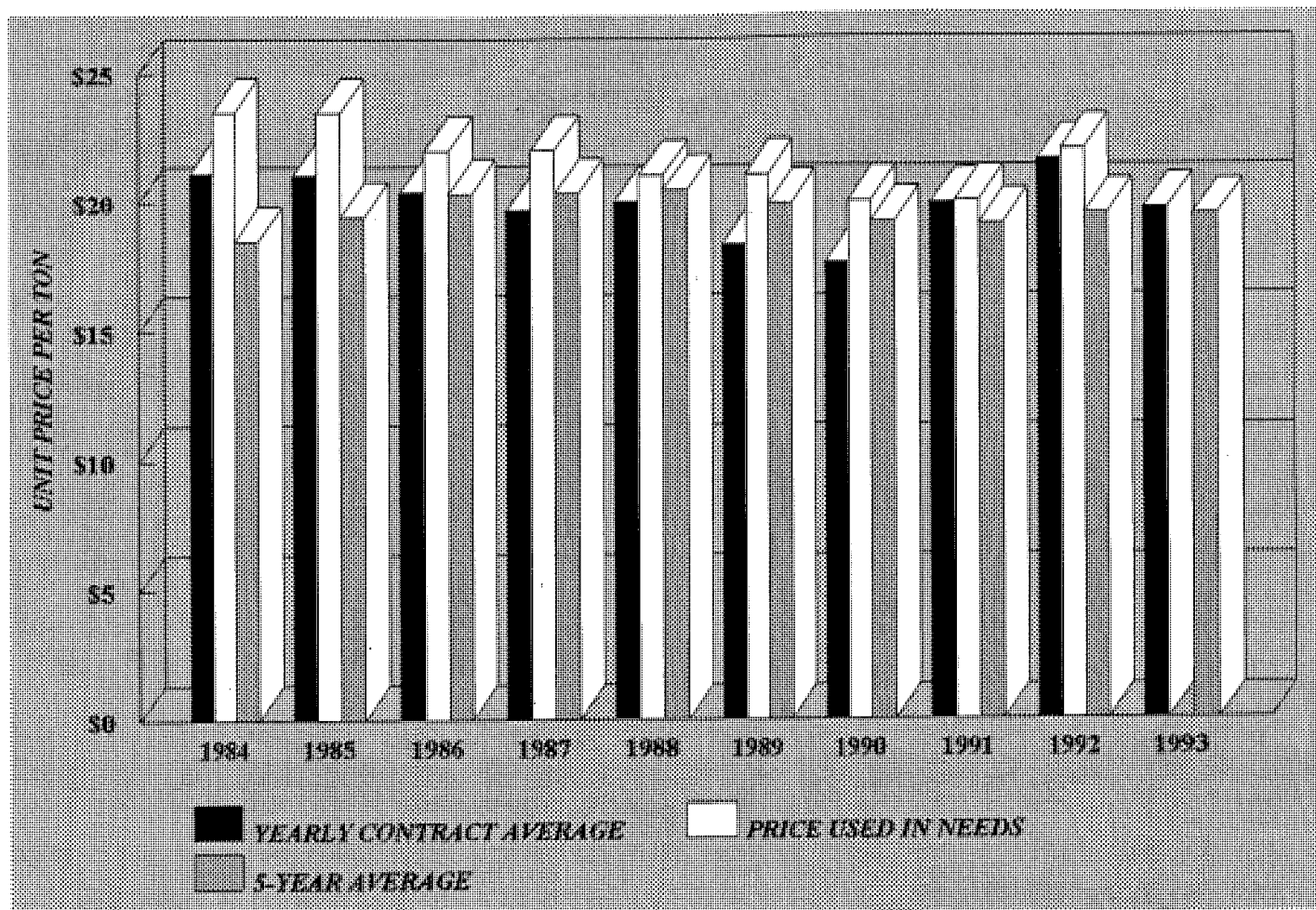


# **M.S.A.S. UNIT PRICE STUDY** **BIT. BASE & SURF. 2331 – TONS**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 6</u></b>			
AUSTIN	3,082	\$61,189	\$19.85
FARIBAULT	5,562	192,139	34.54
ROCHESTER	493	19,227	39.00
WINONA	7,353	211,944	28.82
<b>DISTRICT TOTAL</b>	<b>16,490</b>	<b>\$484,499</b>	<b>\$29.38</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	818	\$31,246	\$38.20
NEW ULM	1,434	35,840	24.99
WASECA	198	6,351	32.08
WORTHINGTON	1,963	48,584	24.75
HUTCHINSON	3,820	85,950	22.50
MARSHALL	5,757	148,749	25.84
<b>DISTRICT TOTAL</b>	<b>13,990</b>	<b>\$356,720</b>	<b>\$25.50</b>
<b><u>DISTRICT 8</u></b>			
MONTEVIDEO	5,530	\$136,151	\$24.62
<b>DISTRICT TOTAL</b>	<b>5,530</b>	<b>\$136,151</b>	<b>\$24.62</b>
<b><u>METRO EAST</u></b>			
APPLE VALLEY	940	\$14,888	\$15.84
BURNSVILLE	10,193	169,591	16.64
COTTAGE GROVE	2,305	40,502	17.57
FARMINGTON	4,438	80,138	18.06
HASTINGS	3,930	71,330	18.15
LAKEVILLE	13,028	130,280	10.00
MAPLEWOOD	3,020	46,048	15.25
MENDOTA HEIGHTS	3,800	46,550	12.25
NORTH ST. PAUL	360	6,840	19.00
ST. PAUL	36,289	639,145	17.61
SHOREVIEW	2,585	46,659	18.05
SOUTH ST. PAUL	665	10,806	16.25
WEST ST. PAUL	5,727	65,574	11.45
WHITE BEAR LAKE	6,535	111,552	17.07
WOODBURY	4,285	74,845	17.47
<b>DISTRICT TOTAL</b>	<b>98,100</b>	<b>\$1,554,748</b>	<b>\$15.85</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	17,084	\$379,451	\$22.21
DISTRICT 2	6,217	156,531	25.18
DISTRICT 3	19,729	345,710	17.52
DISTRICT 4	7,500	163,164	21.76
METRO WEST	58,851	1,214,262	20.63
DISTRICT 6	16,490	484,499	29.38
DISTRICT 7	13,990	356,720	25.50
DISTRICT 8	5,530	136,151	24.62
METRO EAST	98,100	1,554,748	15.85
<b>STATE TOTAL</b>	<b>243,491</b>	<b>\$4,791,236</b>	<b>\$19.68</b>

# BITUMINOUS BASE OR SURFACE #2331



NEEDS YEAR	NO.OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT AMOUNT	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT AMOUNT
1984	44	159,242	\$3,363,455	\$21.12	\$23.50	\$18.46
1985	54	376,525	7,922,674	21.04	23.50	19.42
1986	62	294,318	6,000,326	20.39	22.00	20.30
1987	63	261,043	5,130,552	19.65	22.00	20.29
1988	50	176,177	3,515,861	19.96	21.00	20.43
1989	71	316,333	5,793,245	18.31	21.00	19.87
1990	61	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	67	358,244	7,739,246	21.60	22.00	19.48
1993	58	243,491	4,791,236	19.68		19.43

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS  
PER TON BASED UPON 1992 CONSTRUCTION COSTS.

**\$22.00**

# **M.S.A.S. UNIT PRICE STUDY** **BIT. SURF. 2341 – TONS**

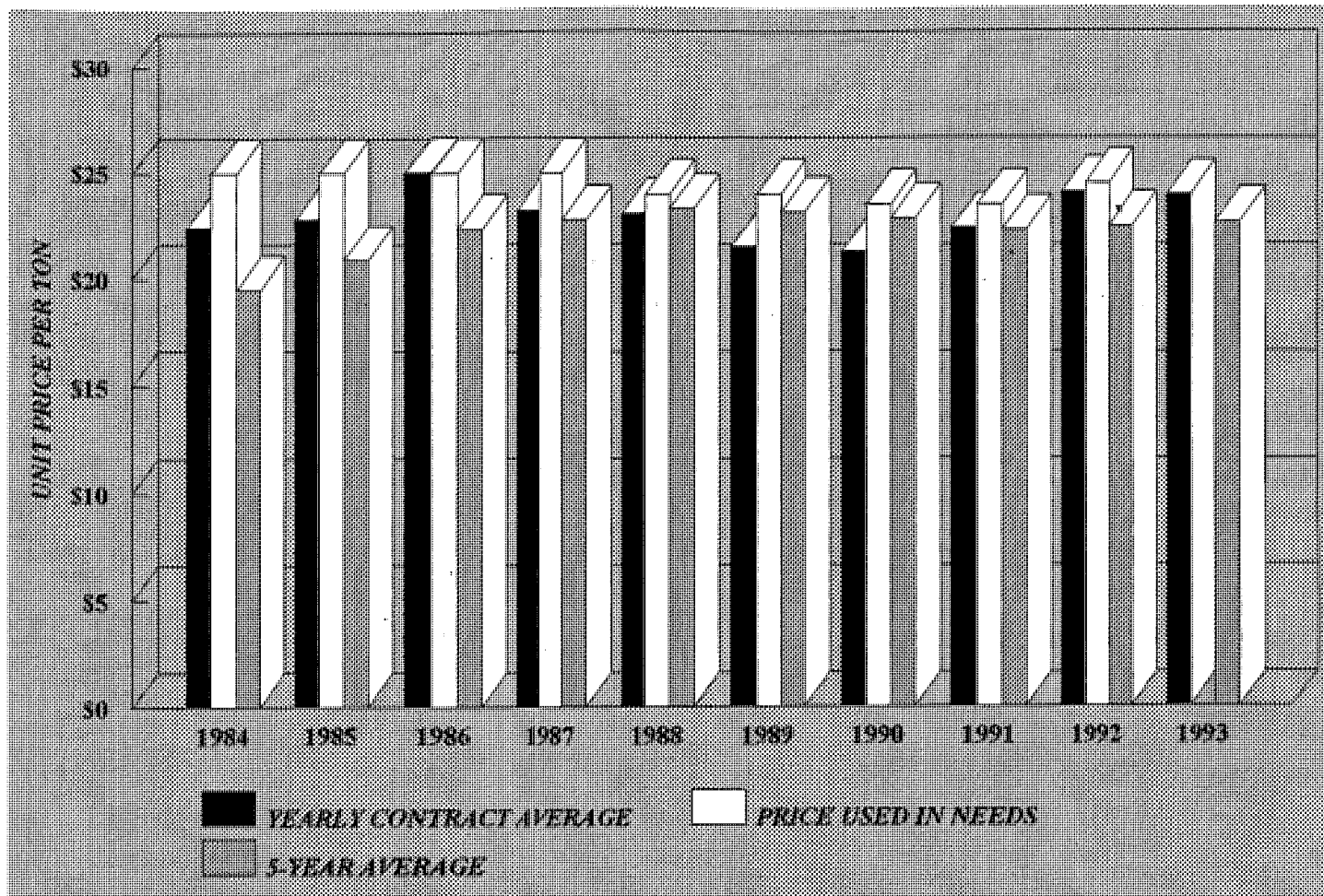
<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CLOQUET	2,580	\$64,890	\$25.15
DULUTH	3,152	54,812	17.39
INTERNATIONAL FALLS	1,385	47,700	34.44
<b>DISTRICT TOTAL</b>	<b>7,117</b>	<b>\$167,402</b>	<b>\$23.52</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	1,049	\$32,273	\$30.77
CROOKSTON	2,873	80,226	27.92
<b>DISTRICT TOTAL</b>	<b>3,922</b>	<b>\$112,499</b>	<b>\$28.68</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	555	\$11,517	\$20.75
ELK RIVER	2,975	54,891	18.45
LITTLE FALLS	1,640	39,022	23.79
OTSEGO	2,655	53,190	20.03
ST. CLOUD	3,326	60,575	18.21
WAITE PARK	1,534	31,203	20.34
<b>DISTRICT TOTAL</b>	<b>12,685</b>	<b>\$250,398</b>	<b>\$19.74</b>
<b><u>DISTRICT 4</u></b>			
MOORHEAD	660	\$18,948	\$28.71
<b>DISTRICT TOTAL</b>	<b>660</b>	<b>\$18,948</b>	<b>\$28.71</b>
<b><u>METRO WEST</u></b>			
BLAINE	4,122	\$88,389	\$21.44
BLOOMINGTON	11,850	253,947	21.43
BROOKLYN CENTER	2,540	57,065	22.47
BROOKLYN PARK	92	1,736	18.87
COON RAPIDS	1,389	32,448	23.36
CORCORAN	1,800	42,740	23.74
CRYSTAL	1,050	23,313	22.20
EAST BETHEL	588	11,826	20.11
EDEN PRAIRIE	2,120	43,600	20.57
FRIDLEY	12,180	279,664	22.96
HAM LAKE	2,513	49,364	19.64
MINNEAPOLIS	36,898	989,230	26.81
NEW HOPE	440	11,173	25.39
RICHFIELD	3,150	70,293	22.32
ROBBINSDALE	1,752	44,646	25.48
ST. ANTHONY	1,060	21,740	20.51
SHAKOPEE	2,807	60,827	21.67
<b>DISTRICT TOTAL</b>	<b>86,351</b>	<b>\$2,082,001</b>	<b>\$24.11</b>
<b><u>DISTRICT 6</u></b>			
AUSTIN	782	\$17,089	\$21.85
WINONA	2,825	83,014	29.39
<b>DISTRICT TOTAL</b>	<b>3,607</b>	<b>\$100,103</b>	<b>\$27.75</b>

# **M.S.A.S. UNIT PRICE STUDY** **BIT. SURF. 2341 - TONS**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 7</u></b>			
MANKATO	4,000	\$88,621	\$22.16
NEW ULM	1,650	50,938	30.87
WASECA	25	762	30.48
<b>DISTRICT TOTAL</b>	<b>5,675</b>	<b>\$140,321</b>	<b>\$24.73</b>
<b><u>DISTRICT 8</u></b>			
HUTCHINSON	830	\$24,786	\$29.86
MARSHALL	1,849	53,957	29.18
<b>DISTRICT TOTAL</b>	<b>2,679</b>	<b>\$78,743</b>	<b>\$29.39</b>
<b><u>METRO EAST</u></b>			
APPLE VALLEY	877	\$18,422	\$21.01
BURNSVILLE	2,805	63,584	22.67
COTTAGE GROVE	5,645	115,727	20.50
FARMINGTON	1,461	30,617	20.96
FOREST LAKE	862	17,165	19.91
HASTINGS	1,970	42,289	21.47
LAKEVILLE	4,996	149,863	30.00
MAPLEWOOD	1,100	28,149	25.59
MENDOTA HEIGHTS	2,700	60,075	22.25
NORTH ST. PAUL	1,850	38,930	21.04
ST. PAUL	5,243	108,752	20.74
SHOREVIEW	2,585	54,351	21.03
SOUTH ST. PAUL	305	5,871	19.25
WEST ST. PAUL	2,291	75,519	32.96
WHITE BEAR LAKE	1,274	28,110	22.06
WOODBURY	1,927	38,128	19.79
<b>DISTRICT TOTAL</b>	<b>37,891</b>	<b>\$875,552</b>	<b>\$23.11</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	7,117	\$167,402	\$23.52
DISTRICT 2	3,922	112,499	28.68
DISTRICT 3	12,685	250,398	19.74
DISTRICT 4	660	18,948	28.71
METRO WEST	86,351	2,082,001	24.11
DISTRICT 6	3,607	100,103	27.75
DISTRICT 7	5,675	140,321	24.73
DISTRICT 8	2,679	78,743	29.39
METRO EAST	1,927	38,128	19.79
<b>STATE TOTAL</b>	<b>124,623</b>	<b>\$2,988,543</b>	<b>\$23.98</b>

# BITUMINOUS SURFACE #2341



NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	42	113,894	\$2,551,729	\$22.40	\$25.00	\$19.4
1985	47	144,567	3,295,718	22.80	25.00	20.8
1986	50	154,773	3,876,447	25.05	25.00	22.3
1987	55	122,701	2,851,035	23.24	25.00	22.7
1988	47	101,894	2,352,539	23.09	24.00	23.3
1989	58	144,986	3,119,592	21.52	24.00	23.1
1990	44	127,267	2,707,906	21.28	23.50	22.8
1991	48	125,102	2,804,228	22.42	23.50	22.3
1992	31	77,735	1,873,836	24.11	24.50	22.4
1993	52	124,623	2,988,543	23.98		22.6

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER TON BASED UPON 1992 CONSTRUCTION COSTS.

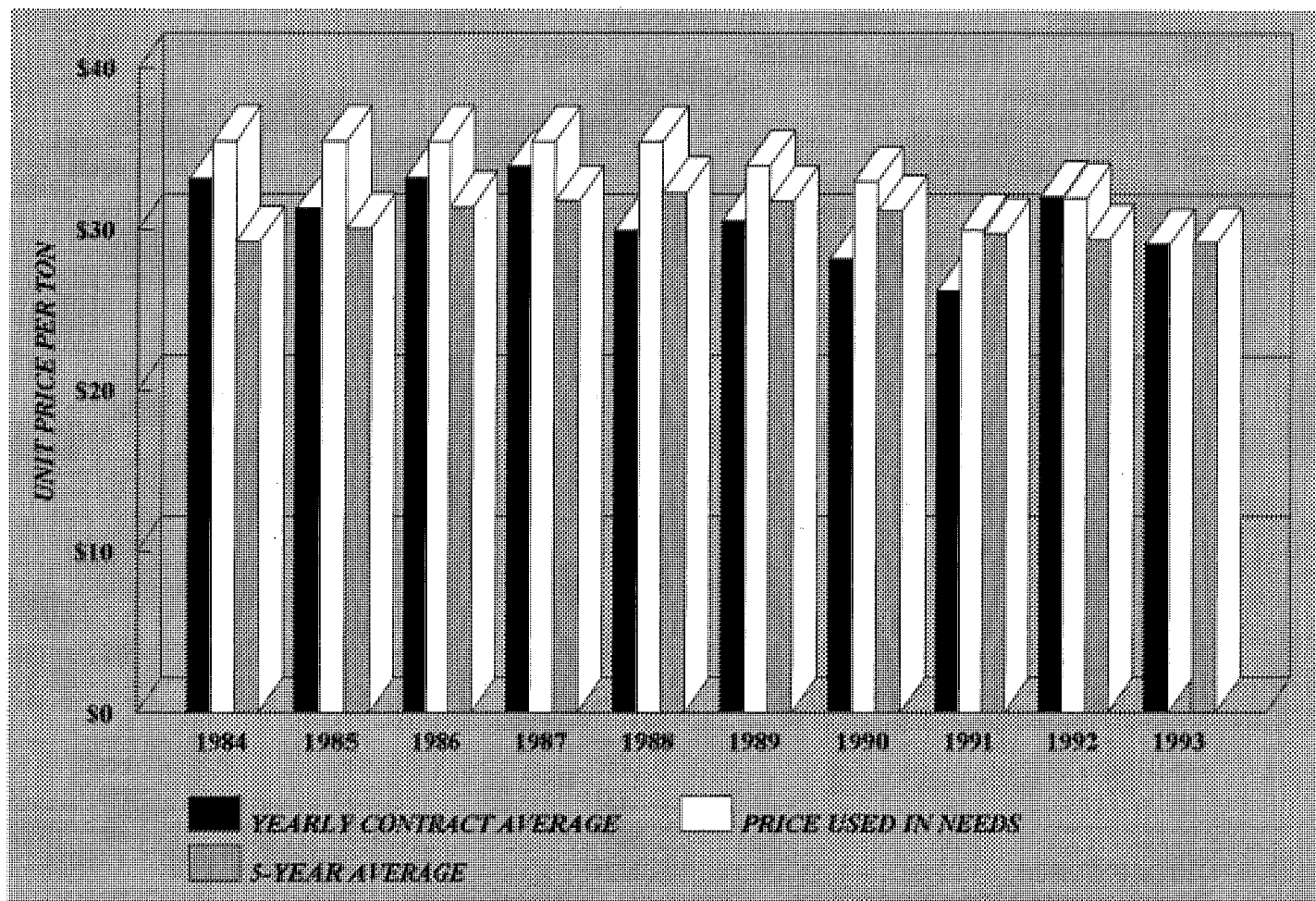
**\$24.5**

**M.S.A.S. UNIT PRICE STUDY  
BIT. SURF. 2361 – TONS**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 1</u></b>			
CLOQUET	220	\$6,920	\$31.45
DULUTH	2,602	62,738	24.11
GRAND RAPIDS	160	8,140	50.88
HIBBING	1,825	49,885	27.33
<b>DISTRICT TOTAL</b>	<b>4,807</b>	<b>\$127,683</b>	<b>\$26.56</b>
<b><u>DISTRICT 3</u></b>			
ELK RIVER	755	\$21,544	\$28.54
ST. CLOUD	7,755	187,628	24.19
<b>DISTRICT TOTAL</b>	<b>8,510</b>	<b>\$209,172</b>	<b>\$24.58</b>
<b><u>METRO WEST</u></b>			
MINNEAPOLIS	8,456	\$302,936	\$35.82
<b>DISTRICT TOTAL</b>	<b>8,456</b>	<b>\$302,936</b>	<b>\$35.82</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	11	612	55.64
WORTHINGTON	923	31,454	34.08
<b>DISTRICT TOTAL</b>	<b>934</b>	<b>\$32,066</b>	<b>\$34.33</b>
<b><u>METRO EAST</u></b>			
BURNSVILLE	3,304	84,390	25.54
ST. PAUL	4,662	138,851	29.78
WHITE BEAR LAKE	1,960	57,036	29.10
WOODBURY	1,115	31,198	27.98
<b>DISTRICT TOTAL</b>	<b>11,041</b>	<b>\$311,475</b>	<b>\$28.21</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	4,807	\$127,683	\$26.56
DISTRICT 3	8,510	209,172	24.58
METRO WEST	8,456	302,936	35.82
DISTRICT 7	934	32,066	34.33
METRO EAST	11,041	311,475	28.21
<b>STATE TOTAL</b>	<b>33,748</b>	<b>\$983,332</b>	<b>\$29.14</b>

# BITUMINOUS SURFACE #2361



NEEDS YEAR	NO.OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	17	21,339	\$707,320	\$33.15	\$35.50	\$29.24
1985	16	38,723	1,212,779	31.32	35.50	30.07
1986	18	36,507	1,213,006	33.23	35.50	31.40
1987	14	25,213	855,500	33.93	35.50	31.78
1988	11	23,776	713,311	30.00	35.50	32.33
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	29.78
1992	3	6,186	198,585	32.10	32.00	29.41
1993	13	33,901	991,209	29.14		29.24

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER TON BASED UPON 1992 CONSTRUCTION COSTS.

**\$32.00**



# **M.S.A.S. UNIT PRICE STUDY** **CURB AND GUTTER CONSTRUCTION**

MUNICIPALITY	TOTAL QUANTITY	TOTAL AMOUNT	AVERAGE UNIT PRICE
<u>DISTRICT 1</u>			
CHISHOLM	1,425	\$15,675	\$11.00
CLOQUET	2,260	16,385	7.25
DULUTH	16,753	123,407	7.37
GRAND RAPIDS	715	7,508	10.50
HIBBING	11,836	62,092	5.25
INTERNATIONAL FALLS	7,173	58,818	8.20
<b>DISTRICT TOTAL</b>	<b>40,162</b>	<b>\$283,885</b>	<b>\$7.07</b>
<u>DISTRICT 2</u>			
BEMIDJI	3,906	\$23,436	\$6.00
CROOKSTON	6,868	47,763	6.95
THIEF RIVER FALLS	190	1,235	6.50
<b>DISTRICT TOTAL</b>	<b>10,964</b>	<b>\$72,434</b>	<b>\$6.61</b>
<u>DISTRICT 3</u>			
BRAINERD	3,713	\$20,730	\$5.58
LITTLE FALLS	4,459	19,620	4.40
ST. CLOUD	13,788	63,284	4.59
ELK RIVER	14,543	67,588	4.65
OTSEGO	1,510	6,720	4.45
WAITE PARK	6,575	35,976	5.47
<b>DISTRICT TOTAL</b>	<b>44,588</b>	<b>\$213,918</b>	<b>\$4.80</b>
<u>DISTRICT 4</u>			
MOORHEAD	6,740	\$45,865	\$6.80
<b>DISTRICT TOTAL</b>	<b>6,740</b>	<b>\$45,865</b>	<b>\$6.80</b>
<u>METRO WEST</u>			
BLAINE	540	\$8,540	\$11.00
BLOOMINGTON	1,658	11,026	6.65
BROOKLYN CENTER	11,776	51,691	4.39
BROOKLYN PARK	498	4,702	9.44
COON RAPIDS	7,115	34,768	4.89
CRYSTAL	1,870	11,532	6.17
EAST BETHEL	350	2,205	6.30
EDEN PRAIRIE	12,830	55,780	4.35
FRIDLEY	28,110	137,308	4.88
HAM LAKE	620	3,906	6.30
MAPLE GROVE	10,500	47,145	4.49
MINNEAPOLIS	28,035	209,461	7.47
MINNETONKA	6,650	33,583	5.05
NEW HOPE	390	2,431	6.23
RAMSEY	1,430	8,151	5.70
RICHFIELD	4	64	16.00
ROBBINSDALE	9,363	59,740	6.38
ST. ANTHONY	4,400	19,140	4.35
SAVAGE	4,969	24,597	4.95
SHAKOPEE	10,084	48,352	4.79
<b>DISTRICT TOTAL</b>	<b>141,192</b>	<b>774,122</b>	<b>\$5.48</b>

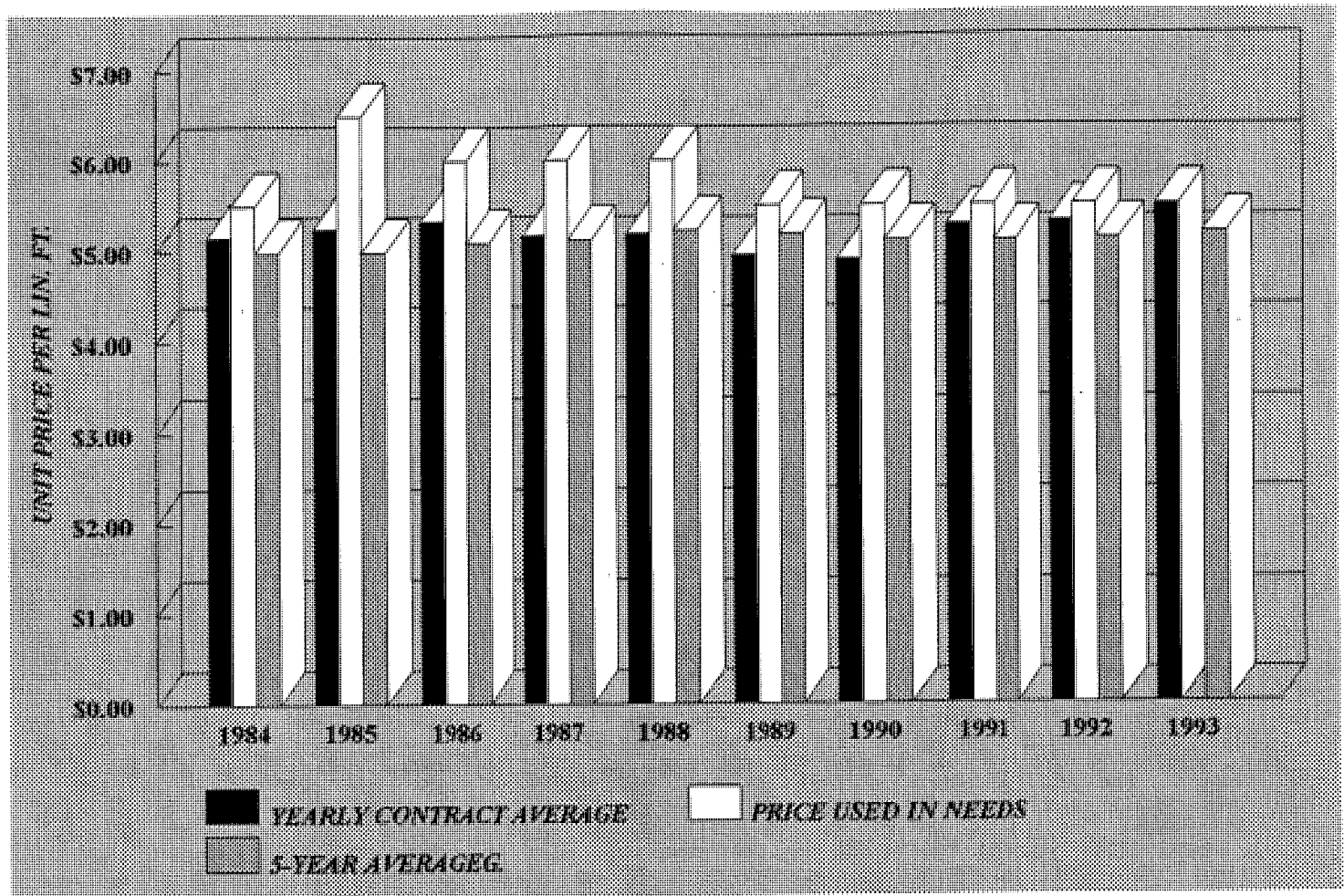


# M.S.A.S. UNIT PRICE STUDY CURB AND GUTTER CONSTRUCTION

MUNICIPALITY	TOTAL QUANTITY	TOTAL AMOUNT	AVERAGE UNIT PRICE
<b>DISTRICT 6</b>			
ALBERT LEA	950	\$6,080	\$6.40
AUSTIN	7,605	25,260	3.32
FARIBAULT	1,571	13,065	8.32
ROCHESTER	2,613	30,545	11.69
WINONA	9,180	56,898	6.20
<b>DISTRICT TOTAL</b>	<b>21,919</b>	<b>\$131,848</b>	<b>\$6.02</b>
<b>DISTRICT 7</b>			
FAIRMONT	2,445	\$11,089	\$4.54
MANKATO	4,693	44,330	9.45
NEW ULM	4,664	23,087	4.95
WASECA	2,740	18,710	6.83
WORTHINGTON	11	165	15.00
<b>DISTRICT TOTAL</b>	<b>14,553</b>	<b>\$97,381</b>	<b>\$6.69</b>
<b>DISTRICT 8</b>			
HUTCHINSON	740	\$4,181	\$5.65
MARSHALL	4,700	35,478	7.55
MONTEVIDEO	5,950	38,675	6.50
<b>DISTRICT TOTAL</b>	<b>11,390</b>	<b>\$78,334</b>	<b>\$6.88</b>
<b>METRO EAST</b>			
HASTINGS	10,740	\$47,550	\$4.43
MAPLEWOOD	3,595	20,495	5.70
MENDOTA HEIGHTS	6,100	32,250	5.29
NEW BRIGHTON	75	1,200	16.00
NORTH ST. PAUL	500	4,390	8.78
ST. PAUL	83,496	472,998	5.66
SHOREVIEW	13,995	62,899	4.49
SOUTH ST. PAUL	1,524	6,782	4.45
WEST ST. PAUL	8,700	39,759	4.57
WHITE BEAR LAKE	17,054	75,719	4.44
BURNSVILLE	14,715	81,520	5.54
COTTAGE GROVE	11,615	52,682	4.54
APPLE VALLEY	2,455	12,398	5.05
LAKEVILLE	32,990	152,766	4.63
WOODBURY	7,100	32,240	4.54
FARMINGTON	5,100	23,650	4.64
FOREST LAKE	4,425	19,559	4.42
<b>DISTRICT TOTAL</b>	<b>224,179</b>	<b>\$1,138,857</b>	<b>\$5.08</b>

<b>DISTRICT TOTALS</b>			
DISTRICT 1	40,162	\$283,885	\$7.07
DISTRICT 2	10,964	72,434	6.61
DISTRICT 3	44,588	213,918	4.80
DISTRICT 4	6,740	45,865	6.80
METRO-WEST	141,192	774,122	5.48
DISTRICT 6	21,919	131,848	6.02
DISTRICT 7	14,553	97,381	6.69
DISTRICT 8	11,390	78,334	6.88
METRO-EAST	224,179	1,138,857	5.08
<b>TOTAL</b>	<b>515,687</b>	<b>\$2,836,644</b>	<b>\$5.50</b>

# CURB & GUTTER CONSTRUCTION #2531



NEEDS YEAR	NO.OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	47	354,529	\$1,826,990	\$5.15	\$5.50	\$4.98
1985	58	554,327	2,907,985	5.25	6.50	4.98
1986	61	469,258	2,498,655	5.32	6.00	5.08
1987	67	434,124	2,243,498	5.17	6.00	5.12
1988	51	359,952	1,868,721	5.19	6.00	5.22
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		5.19

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER LIN. FT. BASED UPON 1992 CONSTRUCTION COSTS.

\$5.50

**M.S.A.S. UNIT PRICE STUDY**  
**SIDEWALK CONSTRUCTION – SQUARE YARD**  
 (Two decimal places was used in the quantity column so the conversion  
 from square feet to square yards would be more accurate.)

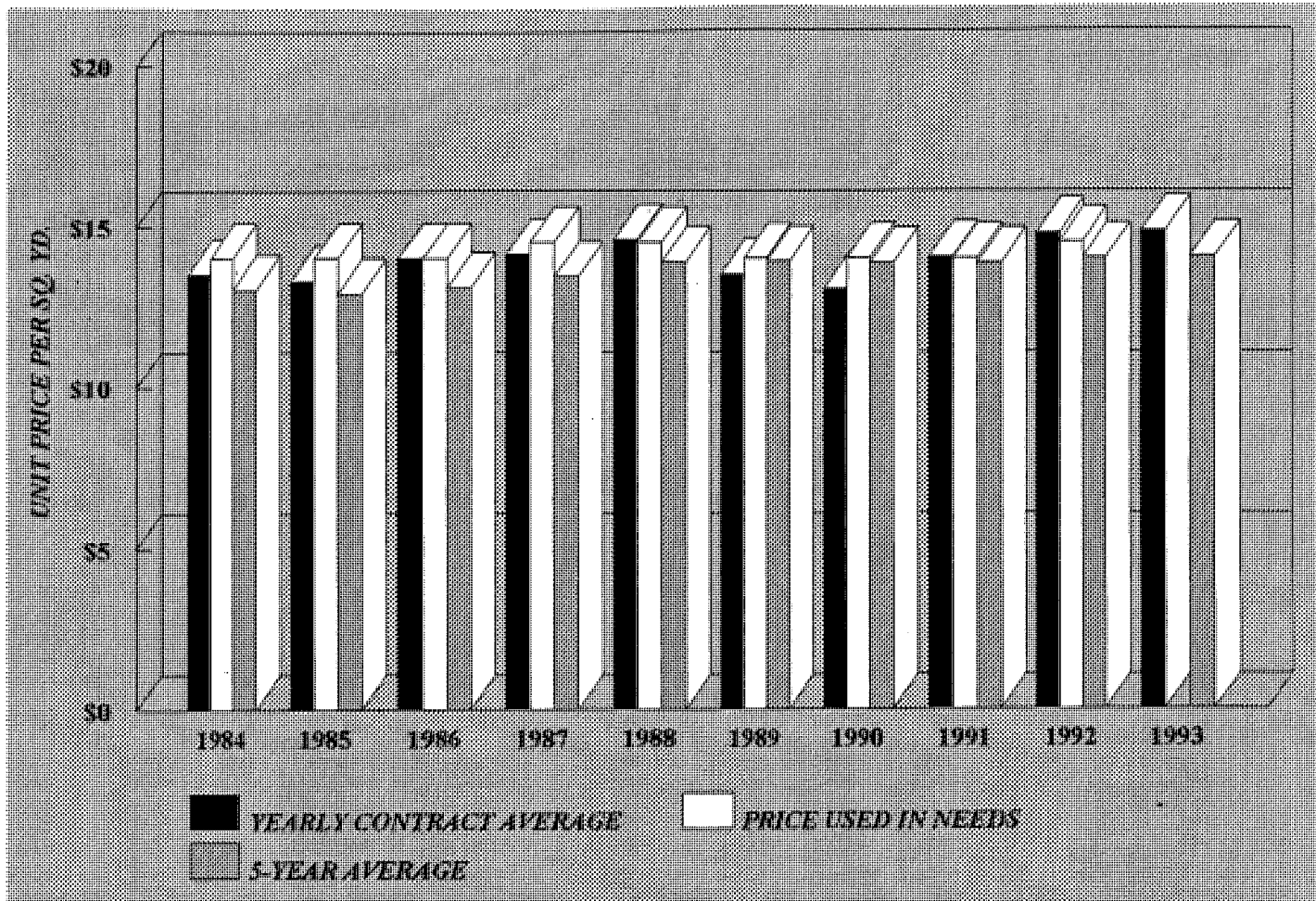
MUNICIPALITY	TOTAL QUANTITY	TOTAL COST	AVERAGE UNIT PRICE
<b><u>DISTRICT 1</u></b>			
CHISHOLM	795.11	\$15,743	\$19.80
CLOQUET	585.78	10,017	17.10
DULUTH	4897.78	79,344	16.20
GRAND RAPIDS	479.56	10,790	22.50
HIBBING	2979.33	46,925	15.75
INTERNATIONAL FALLS	2215.67	43,870	19.80
<b>DISTRICT TOTAL</b>	<b>11,953.23</b>	<b>\$206,689</b>	<b>\$17.29</b>
<b><u>DISTRICT 2</u></b>			
BEMIDJI	605.56	\$12,753	\$21.06
CROOKSTON	2649.00	47,682	18.00
THIEF RIVER FALLS	1610.78	25,100	15.58
<b>DISTRICT TOTAL</b>	<b>4,865.34</b>	<b>\$85,535</b>	<b>\$17.58</b>
<b><u>DISTRICT 3</u></b>			
BRAINERD	144.44	\$2,080	\$14.40
ELK RIVER	4293.33	54,614	12.72
LITTLE FALLS	1446.11	18,221	12.60
ST. CLOUD	2270.00	29,505	13.00
WAITE PARK	3377.78	37,088	10.98
<b>DISTRICT TOTAL</b>	<b>11,531.66</b>	<b>\$141,508</b>	<b>\$12.27</b>
<b><u>DISTRICT 4</u></b>			
MOORHEAD	371.33	\$7,326	\$19.73
<b>DISTRICT TOTAL</b>	<b>371.33</b>	<b>\$7,326</b>	<b>\$19.73</b>
<b><u>METRO WEST</u></b>			
BLAINE	3717.78	\$48,517	\$13.05
BLOOMINGTON	41.33	766	18.53
BROOKLYN CENTER	174.00	4,036	23.20
BROOKLYN PARK	1821.11	24,627	13.52
COLUMBIA HEIGHTS	25.89	116	4.48
COON RAPIDS	2975.44	43,181	14.51
CRYSTAL	5.56	138	24.84
FRIDLEY	22.22	436	19.62
MINNEAPOLIS	19492.22	290,740	14.92
RICHFIELD	16.89	395	23.39
ROBBINSDALE	2368.67	31,977	13.50
SAVAGE	1294.33	16,891	13.05
SHAKOPEE	1948.89	25,626	13.15
<b>DISTRICT TOTAL</b>	<b>33,904.33</b>	<b>\$487,446</b>	<b>\$14.38</b>
<b><u>DISTRICT 6</u></b>			
ALBERT LEA	211.11	\$3,135	\$14.85
AUSTIN	1163.67	21,472	18.45
FARIBAULT	890.00	15,497	17.41
ROCHESTER	1407.33	25,332	18.00
WINONA	1972.78	33,920	17.19
<b>DISTRICT TOTAL</b>	<b>5,644.89</b>	<b>\$99,356</b>	<b>\$17.60</b>

# **M.S.A.S. UNIT PRICE STUDY** **SIDEWALK CONSTRUCTION – SQUARE YARD**

<b>MUNICIPALITY</b>	<b>TOTAL QUANTITY</b>	<b>TOTAL COST</b>	<b>AVERAGE UNIT PRICE</b>
<b><u>DISTRICT 7</u></b>			
FAIRMONT	1,004.00	\$15,044	\$14.98
MANKATO	140.44	3,192	22.73
NEW ULM	420.00	9,348	22.26
WASECA	1,296.56	18,593	14.34
<b>DISTRICT TOTAL</b>	<b>2,861.00</b>	<b>\$46,177</b>	<b>\$16.14</b>
<b><u>DISTRICT 8</u></b>			
HUTCHINSON	738.89	\$13,300	\$18.00
MARSHALL	3,528.67	54,657	15.49
MONTEVIDEO	400.00	8,100	20.25
<b>DISTRICT TOTAL</b>	<b>4,667.56</b>	<b>\$76,057</b>	<b>\$16.29</b>
<b><u>METRO EAST</u></b>			
APPLE VALLEY	1,001.67	\$17,396	\$17.37
BURNSVILLE	1,051.56	15,567	14.80
COTTAGE GROVE	7,142.22	92,563	12.96
FARMINGTON	3,266.67	36,162	11.07
FOREST LAKE	1,100.00	14,850	13.50
HASTINGS	2,606.67	36,036	13.82
LAKEVILLE	4,049.56	42,666	10.54
MAPLEWOOD	662.78	9,246	13.95
NEW BRIGHTON	785.56	12,019	15.30
NORTH ST. PAUL	623.00	8,980	14.41
ST. PAUL	6,550.44	169,179	25.83
SHOREVIEW	6,038.00	46,737	7.74
SOUTH ST. PAUL	57.78	962	16.65
WEST ST. PAUL	2,644.44	34,990	13.23
WHITE BEAR LAKE	5,702.78	80,387	14.10
<b>DISTRICT TOTAL</b>	<b>43,283.13</b>	<b>\$617,740</b>	<b>\$14.27</b>

<b><u>DISTRICT TOTALS</u></b>			
DISTRICT 1	11,953.22	\$206,689	\$17.29
DISTRICT 2	4,865.33	85,535	17.58
DISTRICT 3	11,531.67	141,508	12.27
DISTRICT 4	371.33	7,326	19.73
METRO – WEST	33,904.33	487,446	14.38
DISTRICT 6	5,644.89	99,356	17.60
DISTRICT 7	2,861.00	46,177	16.14
DISTRICT 8	4,667.56	76,057	16.29
METRO – EAST	43,283.11	617,740	14.27
<b>STATE TOTALS</b>	<b>119,082.44</b>	<b>\$1,767,834</b>	<b>\$14.85</b>

# SIDEWALK CONSTRUCTION #2521



NEEDS YEAR	NO. OF CITIES	QUANTITY	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	35	69,630	\$940,122	\$13.50	\$14.00	\$13.01
1985	44	96,059	1,277,135	13.30	14.00	12.90
1986	48	103,377	1,446,980	14.00	14.00	13.09
1987	51	79,756	1,126,616	14.13	14.50	13.42
1988	40	94,423	1,376,749	14.58	14.50	13.90
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		14.04

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER SQ. YD. BASED UPON 1992 CONSTRUCTION COSTS.

\$15.00

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)
1980	\$54,000	\$172,000	\$2,000	\$10,000
1981	54,000	172,000	2,000	10,000
1982	62,000	196,000	2,000	10,000
1983	62,000	196,000	2,000	10,000
1984	62,000	98,000 *	2,000	10,000
1985	62,000	0 *	2,000	10,000
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

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

**MNDOT'S HYDRAULIC OFFICE RECOMMENDED PRICES FOR 1993:**

	Storm Sewer. Adjustment	Storm Sewer Construction
1993	\$64,000	\$206,000

**SUBCOMMITTEE'S RECOMMENDED PRICES FOR 1993:**

	Storm Sewer. Adjustment	Storm Sewer Construction	Lighting	Signals
1993	\$64,000	\$206,000	\$20,000	\$80,000

RAILROAD CROSSINGS NEEDS COSTS					
NEEDS YEAR	SIGNS (Per Unit)	PAVEMENT MARKING	SIGNALS (Low Speed) (Per Unit)	SIGNALS & GATES (High Speed) (Per Unit)	RUBBERIZED MATERIAL (Per Ft.)
1980	\$300		\$50,000	\$90,000	
1981	300		55,000	90,000	
1982	300		60,000	95,000	
1983	300		65,000	95,000	
1984	300		65,000	95,000	
1985	300		65,000	95,000	
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

**MNDOT'S RAILROAD OFFICE RECOMMENDED PRICES FOR 1993:**

	Signs	Pavement Marking	Signals	Sig. & Gates	Rub. Mat.
1993	\$600	\$750	\$80,000	\$110,000	\$900

**SUBCOMMITTEE'S RECOMMENDED PRICES FOR 1993:**

1993	\$600	\$750	\$80,000	\$110,000	\$900
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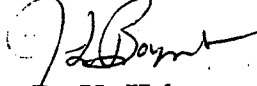
DEPARTMENT : TRANSPORTATION  
Office of Bridges and  
Structures - Room 618

STATE OF MINNESOTA  
Office Memorandum



DATE : February 18, 1993

TO : K. E. Straus  
State Aid Needs Unit

  
FROM : D. V. Halvorson  
Hydraulics Engineer

PHONE : 296-0824

SUBJECT : State Aid Storm Sewer Construction Costs for 1992

We have analyzed the State Aid storm sewer construction costs for 1992 and find that for planning and needs purposes, a figure of \$206,000 per mile can be used. For Storm sewer adjustments, we suggest \$64,000 per mile.

The above amounts are based on the average cost per mile of State Aid storm sewer using highway unit prices on approximately 150 plans for 1992.

cc : T. M. Beaudry

TO: Kenneth Straus  
Highway Needs Unit

Date: March 22, 1993

FROM: Robert G. Swanson, Director  
Railroad Administration

PHONE: 296-2472

SUBJECT: Projected Railroad Grade Crossing  
Improvements - Cost for 1993

We have projected 1992 costs for railroad-highway work at grade crossing improvements. For planning purposes, we recommend using the following figures:

Railroad Grade Crossings:

Signals (Single Track - Low Speed)\* Unit \$60-80,000.00  
(Average Price)

Signals and Gates:  
(Multiple Track - High & Low Speed)\*\* Unit \$90-110,000.00  
(Average Price)

Signs Only	Unit	\$ 600.00
Pavement Markings (Tape)		4500.00
(Paint)		750.00

Crossing Surfaces:  
(Rubber Crossing Surface) per Track Ft \$900.00  
Complete reconstruction of the  
crossing. Labor and Materials

\* Modern signals with motion sensors - signals are activated when train enters electrical circuit - deactivated if train stops before reaching crossing.

\*\* Modern signals with grade crossing predictors - has capabilities in (\*) above, plus ability to gauge speed and distance of train from crossing to give constant 20-25 second warning of approaching trains traveling from 5 to 80 MPH.

As part of any project in the vicinity of railroad crossings, a review of advance warning signs should be conducted. In addition, pavement markings (RxR, STOP BAR, and NO PASSING STRIPE), if required, should be installed.

We also recommend that projects are not designed so that they start or end at railroad crossings. A project should be carried through the crossing area so that the crossing does not become the transition zone between two different roadway sections or widths.



# 1992 BRIDGE CONSTRUCTION COSTS

## Bridges 0-149 Feet

BRIDGE NUMBER	PROJECT NUMBER	DECK AREA	BRIDGE COST	COST SQ. FT.	LENGTH
03508	03-599-05	1,983	\$96,463	\$48.64	61.33
04516	04-620-03	3,402	161,161	47.37	95.83
08002	0803-08002	* 3,821	180,148	47.15	76.16
11007	1119-11007	* 4,857	278,064	57.25	96.17
11112	1116-11112	* 6,973	292,698	41.98	139.00
23018	2312-23018	* 5,190	222,923	42.95	112.42
27116	2757-27116	* 6,324	248,706	39.33	123.19
27118	2725-27118	* 5,720	394,183	68.91	110.74
27675	141-080-12	4,658	360,248	77.34	93.17
27681	27-610-15	23,224	1,165,184	50.17	102.33
30003	3003-30003	* 5,690	420,711	73.94	132.05
30004	3003-30004	* 5,690	429,604	75.50	132.05
30011	3003-30011	* 4,826	379,963	78.73	109.27
30012	3003-30012	* 4,826	379,963	78.73	109.27
31529	31-598-03	3,306	149,091	45.10	87.00
32538	32-599-29	2,520	115,905	45.99	84.00
32546	32-609-24	2,746	118,844	43.28	65.38
33004	3306-33004	* 5,295	283,473	53.54	138.74
37538	37-599-31	3,685	171,932	46.66	113.97
37539	37-615-05	4,960	190,130	38.33	124.00
39515	39-598-22	2,538	134,227	52.89	81.00
42015	4206-42015	* 7,376	387,393	52.52	147.02
42548	42-611-19	4,644	205,412	44.23	107.17
43526	43-599-13	4,464	163,357	36.59	124.00
46010	4609-46010	* 5,158	262,205	50.83	122.32
46553	46-599-25	4,071	168,968	41.51	127.21
47505	47-620-06	3,700	200,291	54.13	92.50
50008	5005-50008	* 4,817	211,355	43.88	104.33
52008	5212-52008	* 2,906	304,740	104.87	73.00
52011	5212-52011	* 2,640	245,890	93.14	100.86
52012	5212-52012	* 10,835	774,396	71.47	95.45
58530	58-598-10	4,352	203,375	46.73	136.00
59005	5903-59005	* 5,636	220,291	39.09	122.08
62552	97-100-04	# 3,408	413,922	121.46	84.33
69040	6920-69040	* 4,155	213,619	51.41	90.00
72531	72-599-21	2,520	106,593	42.30	84.00
83525	83-601-01	3,016	132,979	44.09	86.17
85005	8504-85005	* 4,468	321,378	71.93	101.17
<b>TOTAL</b>	<b>38</b>	<b>190,400</b>	<b>\$10,709,785</b>	<b>\$56.25 AVERAGE</b>	

STATE AID PROJECTS	79,789	\$3,844,160.00	\$48.18	Average
* MN/DOT PROJECTS	107,203	\$6,451,703.00	\$60.18	Average

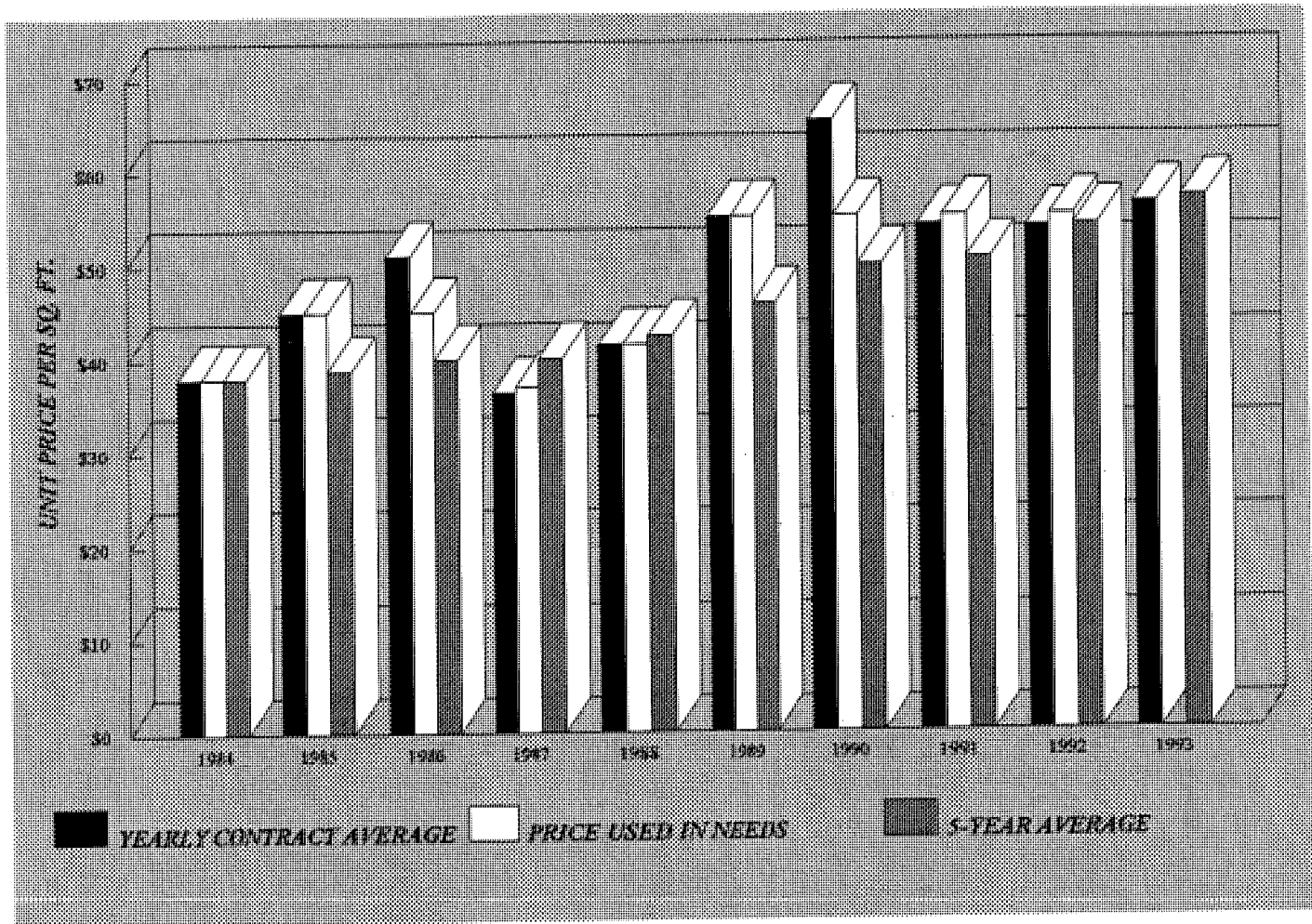
# This bridge is part of the transitway connecting the Mpls. and St. Paul campuses of the U of M.

The average cost per square foot without including Bridge # 62552 is: **\$55.06**

The average cost per square foot without including Bridge # 62552, 52008, 52011 **\$53.71**

# 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
1984	27	*	*	\$38.00	\$38.00	\$38.00
1985	31	*	*	45.00	45.00	38.80
1986	29	*	*	51.00	45.00	40.00
1987	41	145,094	\$5,281,503	36.40	37.00	40.08
1988	22	73,683	3,057,881	41.50	41.50	42.38
1989	11	35,733	1,966,077	55.02	55.00	45.78
1990	42	214,557	14,003,285	65.27	55.00	49.84
1991	37	136,770	7,472,265	54.09	55.00	50.46
1992	39	147,313	7,929,250	53.83	55.00	53.94
1993	38	190,400	10,709,785	56.25		56.89

\* Information unavailable

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER SQ. FT. BASED UPON 1992 CONSTRUCTION COSTS.

\$55.00

# 1992 BRIDGE CONSTRUCTION COSTS

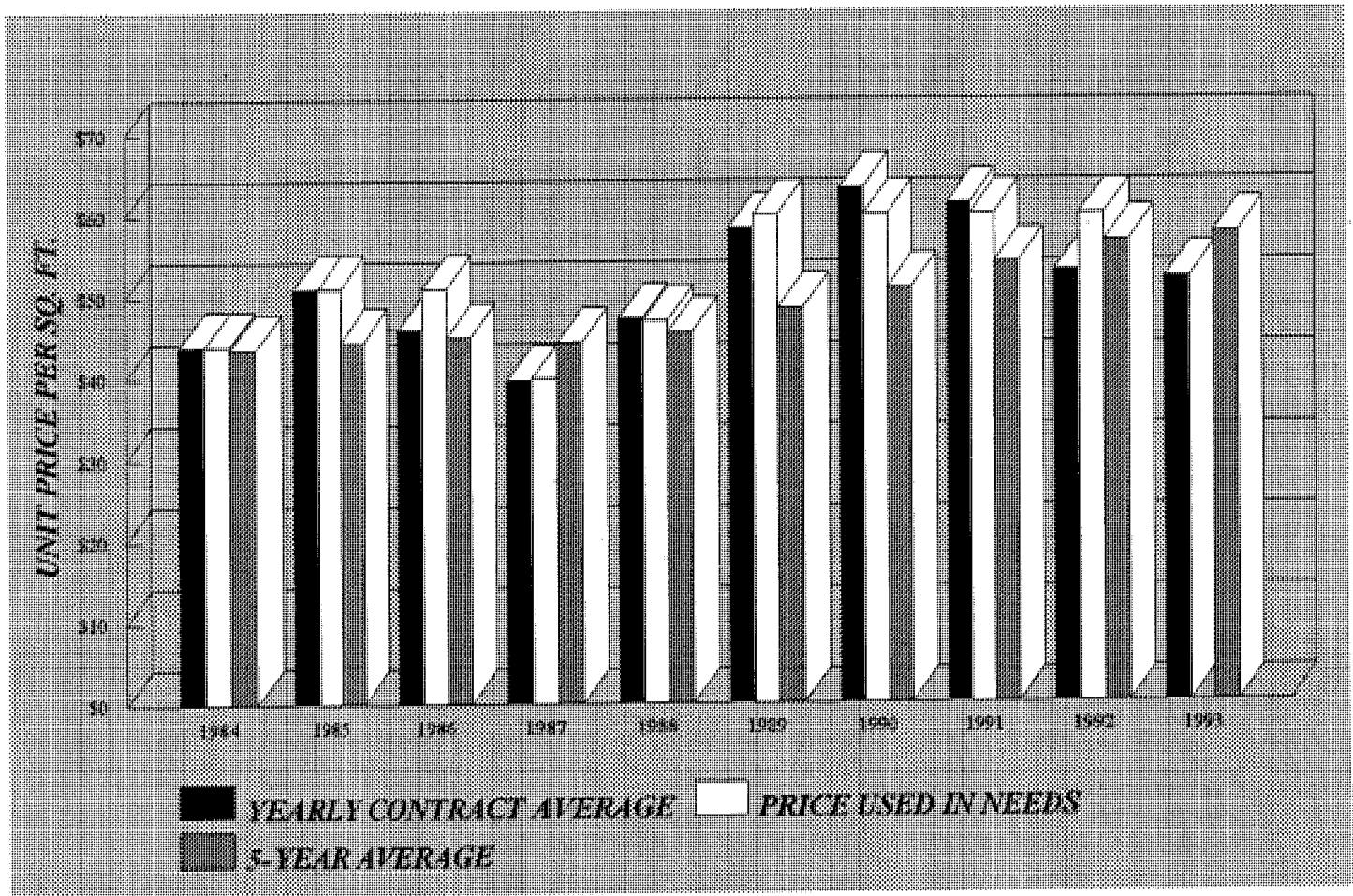
## Bridges 150-499 Feet

BRIDGE NUMBER	PROJECT NUMBER	DECK AREA	BRIDGE COST	COST SQ. FT.	LENGTH
02045	0214-02045 *	15,830	\$769,404	\$48.60	255.32
02046	0214-02046 *	19,680	951,968	48.37	255.33
02047	02014-02047 *	25,040	1,454,365	58.08	313.00
03004	0301-03004 *	9,027	564,564	62.54	204.38
06001	0607-06001 *	7,514	361,596	48.12	162.75
07029	0716-07029 *	19,926	1,118,798	56.15	217.44
07030	07016-07030 *	16,082	672,219	41.80	161.58
15005	1501-15005 *	9,104	450,918	49.53	238.52
19023	1928-19023 *	19,436	1,134,810	58.39	440.84
19024	1928-19024 *	20,341	1,155,727	56.82	274.26
19803	1980-19803 *	10,385	671,593	64.67	173.10
19820	1980-19820 *	15,980	803,196	50.26	219.92
27107	2725-27107 *	13,410	900,204	67.13	304.57
27108	2725-27108 *	7,615	383,683	50.39	170.16
27112	1909-4190 *	16,060	775,505	48.29	167.00
30005	3004-30005 *	15,762	676,006	42.89	356.86
30006	3004-30006 *	15,762	677,431	42.98	356.86
33006	3010-33006 *	7,888	356,522	45.20	206.67
35529	35-599-54	5,383	256,701	47.69	171.81
36519	36-630-07	7,113	340,655	47.89	197.57
38009	3803-38009 *	6,606	312,727	47.34	156.67
47005	4706-47005 *	7,866	375,793	47.77	171.02
50009	5005-50009 *	14,163	585,411	41.33	306.77
55024	5508-55024 *	16,618	875,978	52.71	179.98
55550	55-598-35	5,923	232,308	39.22	150.58
62881	6283-62881 *	23,400	1,361,593	58.19	219.05
64006	6401-64006 *	11,127	469,576	42.20	241.00
67804	6780-67804 *	16,148	1,045,840	64.77	194.17
69112	6901-69112 *	18,716	1,137,709	60.79	490.38
71517	204-113-03	12,475	600,823	48.16	240.67
87011	8707-87011 *	11,203	513,585	45.84	242.63
<b>Total</b>	<b>31</b>	<b>421,583</b>	<b>\$21,987,208</b>	<b>\$52.15</b>	<b>AVERAGE</b>

STATE AID PROJECTS	30,894	\$1,430,487	\$46.30	AVERAGE
* MN/DOT PROJECTS	390,689	\$20,556,721	\$52.62	AVERAGE

# 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
1984	10	*	*	\$44.00	\$44.00	\$43.60
1985	9	*	*	51.00	51.00	44.40
1986	19	*	*	46.00	51.00	45.00
1987	6	49,899	\$1,979,192	39.66	40.00	44.33
1988	10	83,149	3,932,729	47.30	47.00	45.59
1989	11	116,378	6,796,566	58.40	60.00	48.47
1990	25	418,376	26,483,631	63.30	60.00	50.93
1991	27	368,709	22,167,571	61.33	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		57.63

\* Information unavailable

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER SQ. FT. BASED UPON 1992 CONSTRUCTION COSTS.

\$55.00

## 1992 BRIDGE CONSTRUCTION COSTS

### Bridges 500 Feet and Over

BRIDGE NUMBER	PROJECT NUMBER		DECK AREA	BRIDGE COST	COST SQ. FT.	LENGTH
02048	0214-02048	*	38,630	\$2,686,746	\$69.55	602.81
23012	2304-23012	*	26,278	946,631	36.02	524.67
34524	175-153-01		53,594	2,417,239	45.10	810.00
36021	3604-36021	*	25,852	1,588,813	61.46	613.08
# 62553	97-100-04		35,090	1,904,043	54.26	885.00
70002	7009-70002	*	66,128	3,524,634	53.30	815.17
<b>Total</b>	<b>6</b>		<b>245,572</b>	<b>\$13,068,106</b>	<b>\$53.21</b>	<b>AVERAGE</b>

STATE AID PROJECTS	88,684	\$4,321,282	\$48.73	AVERAGE
* MN/DOT PROJECTS	156,888	\$8,746,824	\$55.75	AVERAGE

# This bridge is part of the transitway connecting the Mpls. and St. Paul campuses of the U of M.

### Bridge Widening

BRIDGE NUMBER		WIDENED DECK AREA	WIDENED WIDTH	BRIDGE COST	COST SQ. FT.	LENGTH
9800 (3) *		41,404	Varies	\$2,450,151	\$59.18	3,366.00
9478 (3) *		6,816	22.83	952,143	139.69	298.56
9462 (2) *		1,004	8.67	229,057	228.25	115.75
9264 (1) *		2,515	12.83	408,371	162.39	196.00
9263 (1) *		2,515	12.83	408,371	162.39	196.00
6866 (3) *		1,733	14.00	430,054	248.21	123.76
64001 (3) *		784	11.33	157,497	200.89	69.20
27863 (2) *		1,489	Varies	470,894	316.25	170.17
27859 (2) *		7,450	31.83	909,584	122.09	304.13
27855 (2) *		18,843	Varies	2,208,793	117.22	602.21
27848 (2) *		9,944	24.42	810,045	81.46	407.19
19805 (2) *		2,783	16.08	484,591	174.10	173.10
13806 (2) *		2,800	14.50	378,347	135.14	193.08
13808 (2) *		2,796	14.50	369,931	132.31	192.83
<b>TOTAL</b>		<b>102,874</b>	<b>183.82</b>	<b>\$10,667,829</b>	<b>\$103.70</b>	<b>AVERAGE</b>

\* MN/DOT Projects

- (1) Bridge Widening + Substructure Work
- (2) Bridge Widening + Substructure Work + Replace Deck
- (3) Bridge Widening + Substructure Work + Replace Superstructure

### Railroad Bridges

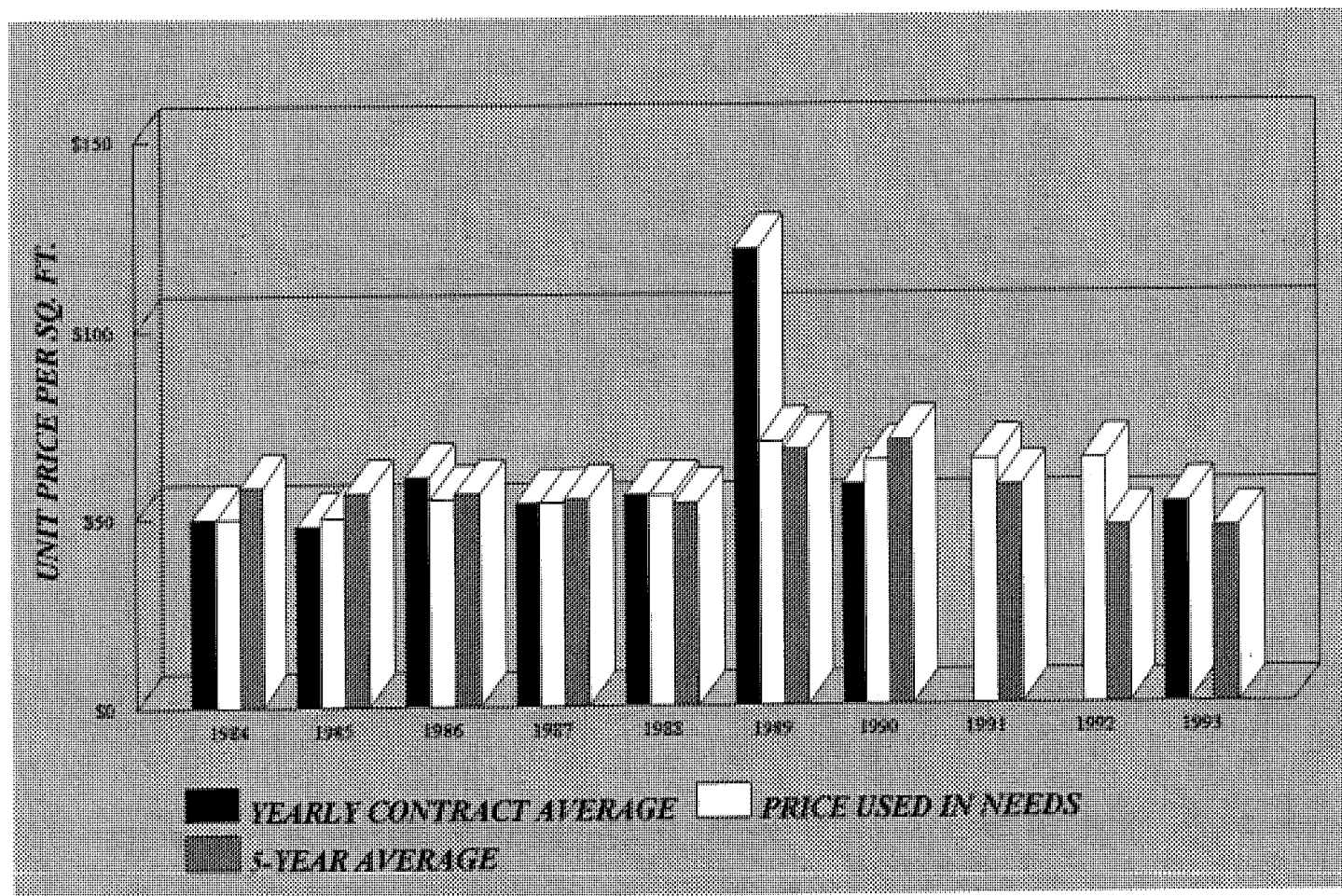
BRIDGE NUMBER	PROJECT NUMBER	DECK AREA	BRIDGE COST	COST LIN. FT.	LENGTH
● 19086	*1921-19086	4,000	\$1,328,620	\$7,306.94	181.83

- This bridge has one set of tracks.



# BRIDGE COST

## 500 FEET AND OVER



NEEDS YEAR	NUMBER OF PROJECTS	DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	2	*	*	\$50.00	\$50.00	\$58.40
1985	1	*	*	48.00	50.00	56.80
1986	3	*	*	61.00	55.00	56.60
1987	1	29,800	\$1,612,847	54.12	54.00	55.02
1988	1	25,942	1,453,694	56.04	56.00	53.83
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	57.95
1992	0	0	0	0	65.00	47.13
1993	6	245,572	13,068,106	53.21		46.56

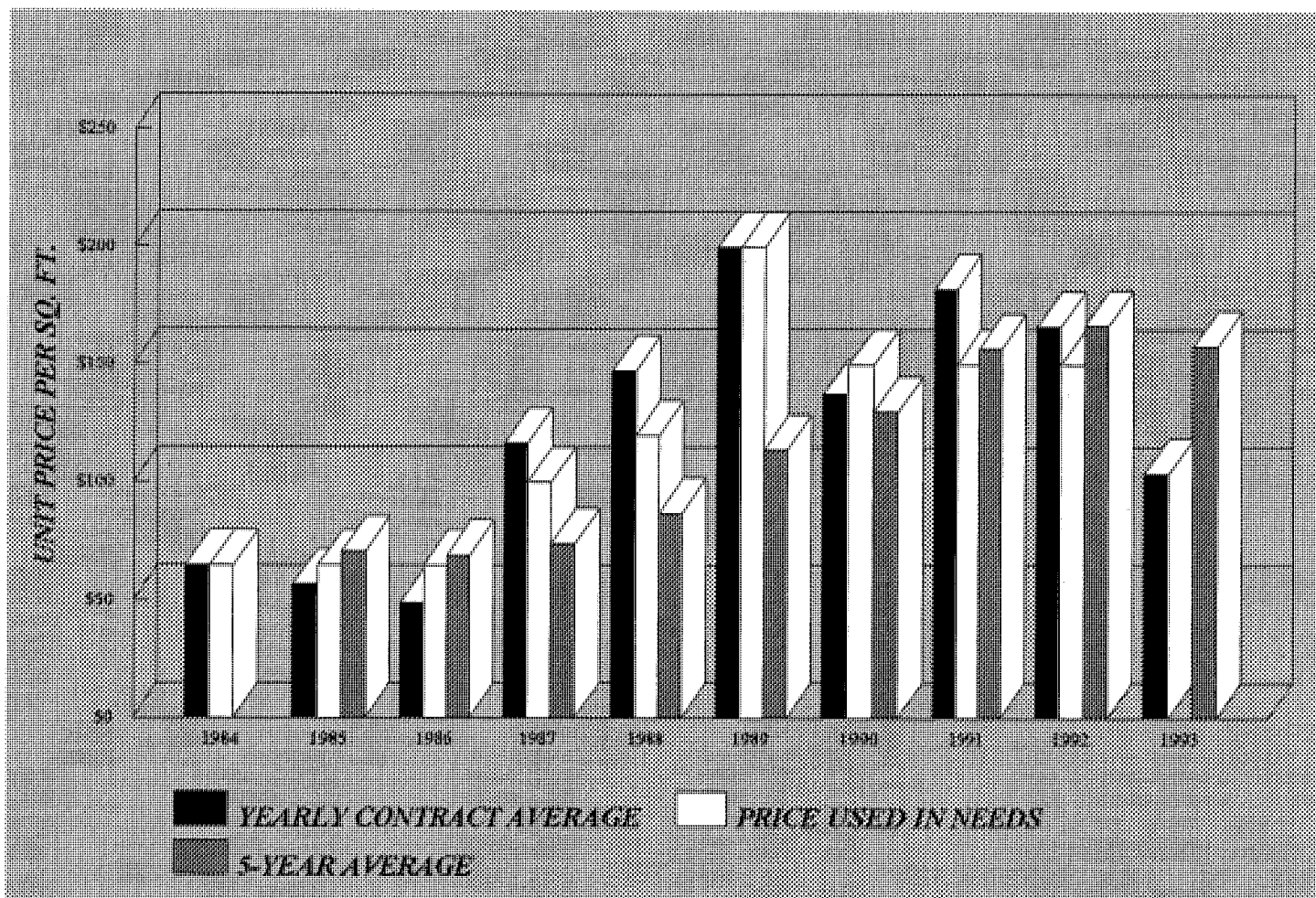
\* Information unavailable

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 1993 NEEDS STUDY IS PER SQ. FT. BASED UPON 1992 CONSTRUCTION COSTS.

\$55.00

# BRIDGE COST

## BRIDGE WIDENING



NEEDS YEAR	NUMBER OF PROJECTS	WIDENED DECK AREA	TOTAL COST	YEARLY AVERAGE CONTRACT PRICE	PRICE USED IN NEEDS	5-YEAR AVERAGE CONTRACT PRICE
1984	*	*	*	\$65.00	\$65.00	*
1985	1	*	*	57.00	65.00	\$71.00
1986	1	*	*	49.00	65.00	69.00
1987	1	1,597	186,329	116.67	100.00	74.00
1988	1	1,353	199,515	147.46	120.00	87.03
1989	16	43,694	8,733,488	199.88	200.00	114.00
1990	11	41,888	5,769,102	137.73	150.00	130.15
1991	12	24,127	4,396,089	182.21	150.00	156.79
1992	5	35,425	5,890,006	166.27	150.00	166.71
1993	14	102,874	10,667,829	103.70		157.96

\* Information unavailable

SUBCOMMITTEE RECOMMENDS BRIDGE WIDENING BE HANDLED AS A "RECONDITIONING NEED" ON THE NEEDS DATA SHEET.

## ANNUAL MAINTENANCE NEEDS COST

Used only for needs purposes.

These are the current maintenance prices used in the M.S.A.S. needs study. The total maintenance needs cost for 1992 is \$13,621,360 and is used only in the money needs allocation. The average cost per mile in needs is \$5,651.

### EXISTING FACILITIES ONLY

	1992 NEEDS PRICES		SUBCOMMITTEE SUGGESTED PRICES		SCREENING BOARD RECOMMENDED PRICES	
	Under 1000 VPD	Over 1000 VPD	Under 1000 VPD	Over 1000 VPD	Under 1000 VPD	Over 1000 VPD
Traffic Lane Per Mile ①	\$1,200	\$2,000	\$1,320	\$2,200		
Parking Lane Per Mile ②	1,200	1,200	\$1,320	\$1,320		
Median Strip Per Mile	400	800	440	880		
Storm Sewer Per Mile	400	400	440	440		
Per Traffic Signal	400	400	440	440		
Normal M.S.A.S. Streets Minimum Allowance Per Mile Unlimited Segments:	4,000	4,000	4,400	4,400		
Combination Routes Minimum Allowance Per Mile Limited Segments:	2,000	2,000	2,200	2,200		

① "Traffic Lane Per Mile" is obtained from needs reporting.

② "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



**25 YEAR CONSTRUCTION NEEDS  
FOR EACH INDIVIDUAL CONSTRUCTION ITEM**

ITEM	1991 APPORTIONMENT NEEDS COST	1992 APPORTIONMENT NEEDS COST	DIFFERENCE	1992 % OF THE TOTAL
Grading	\$97,626,188	\$100,656,502	\$3,030,314	6.90%
Special Drainage	2,939,433	2,833,976	(105,457)	0.19%
Storm Sewer Adjustment	17,164,080	19,557,900	2,393,820	1.34%
Storm Sewer Construction	150,306,520	156,272,340	5,965,820	10.72%
Curb & Gutter Removal	12,499,423	12,805,342	305,919	0.88%
Sidewalk Removal	10,712,236	12,421,190	1,708,954	0.85%
Pavement Removal	30,114,978	32,483,545	2,368,567	2.23%
Tree removal	3,994,760	4,167,600	172,840	0.29%
<b>SUBTOTAL GRADING</b>	<b>\$325,357,618</b>	<b>\$341,198,395</b>	<b>\$15,840,777</b>	<b>23.40%</b>
Gravel Subbase #2211	66,094,732	64,142,973	(1,951,759)	4.40%
Gravel Base #2211	55,088,335	53,841,521	(1,246,814)	3.69%
Bituminous Base #2331	85,435,758	96,765,552	11,329,794	6.64%
<b>SUBTOTAL BASE</b>	<b>\$206,618,825</b>	<b>\$214,750,046</b>	<b>\$8,131,221</b>	<b>14.73%</b>
Bituminous Surface #2331	2,285,080	2,433,134	148,054	0.17%
Bituminous Surface #2341	182,321,048	192,124,363	9,803,315	13.18%
Bituminous Surface #2361	44,959,484	49,668,201	4,708,717	3.41%
Surface Widening	2,906,016	3,187,775	281,759	0.22%
<b>SUBTOTAL SURFACE</b>	<b>\$232,471,628</b>	<b>\$247,413,473</b>	<b>\$14,941,845</b>	<b>16.97%</b>
Gravel Shoulders #2221	934,129	913,241	(20,888)	0.06%
<b>SUBTOTAL SHOULDERS</b>	<b>\$934,129</b>	<b>\$913,241</b>	<b>(\$20,888)</b>	<b>0.06%</b>
Curb and Gutter	76,013,821	77,802,236	1,788,415	5.34%
Sidewalk	80,266,312	86,636,389	6,370,077	5.94%
Traffic Signals	80,830,565	88,909,800	8,079,235	6.10%
Street Lighting	37,912,960	48,036,800	10,123,840	3.29%
Retaining Walls	7,070,385	7,115,135	44,750	0.49%
<b>SUBTOTAL MISCELLANEOUS</b>	<b>\$282,094,043</b>	<b>\$308,500,360</b>	<b>\$26,406,317</b>	<b>21.16%</b>
<b>TOTAL ROADWAY</b>	<b>\$1,047,476,243</b>	<b>\$1,112,775,515</b>	<b>\$65,299,272</b>	<b>76.31%</b>
Bridge	75,494,432	80,288,039	4,793,607	5.51%
Railroad Crossings	30,227,450	31,168,175	940,725	2.14%
Maintenance	13,318,092	13,621,360	303,268	0.93%
Engineering	207,575,813	220,361,760	12,785,947	15.11%
<b>SUBTOTAL OTHERS</b>	<b>\$326,615,787</b>	<b>\$345,439,334</b>	<b>\$18,823,547</b>	<b>23.69%</b>
<b>TOTAL</b>	<b>\$1,374,092,030</b>	<b>\$1,458,214,849</b>	<b>\$84,122,819</b>	<b>100.00%</b>

## RED WING ONE-WAY STREETS

A request from Red Wing for streets to be treated as one half the mileage in the Needs Study.

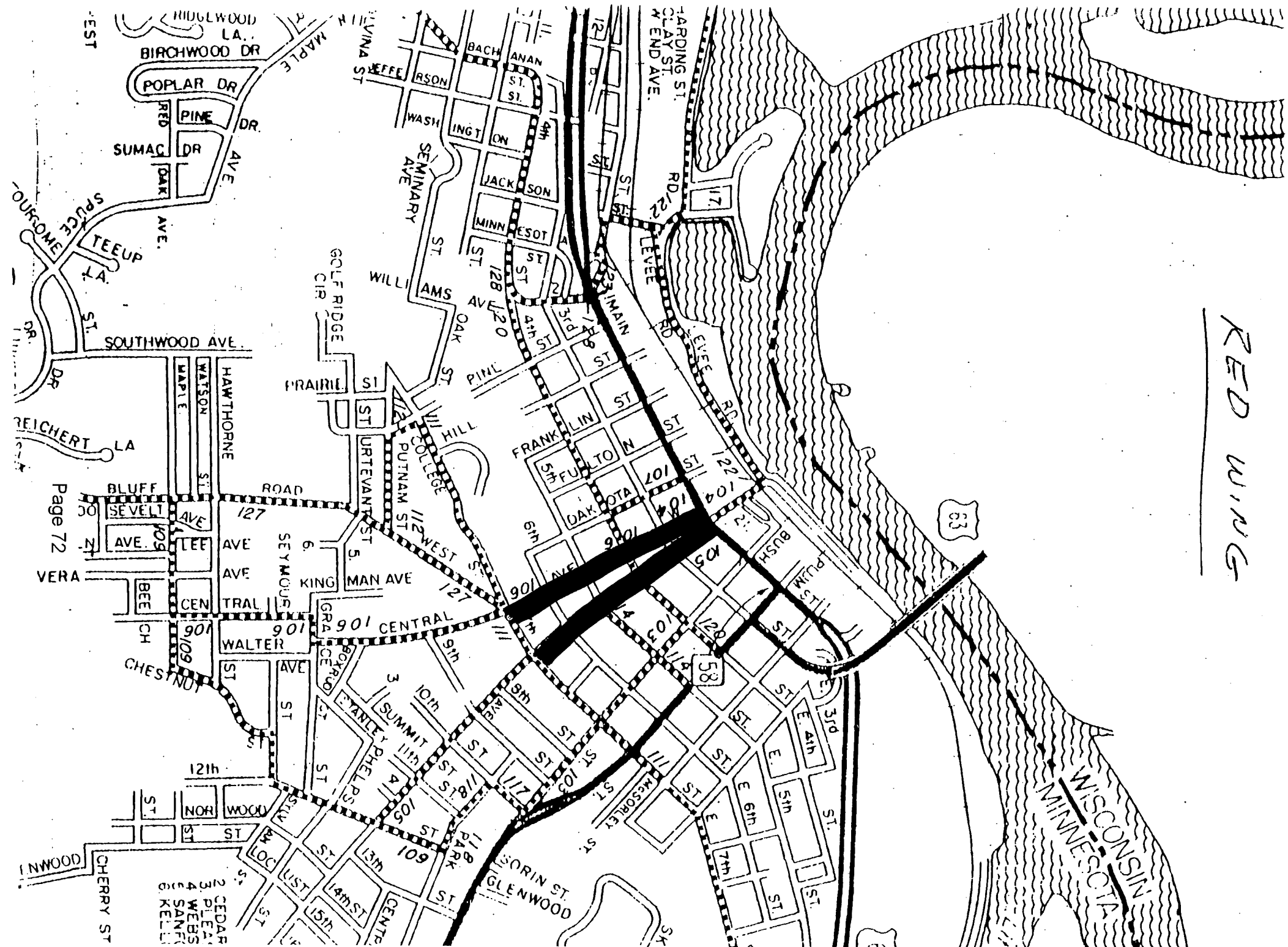
**Resolution:**

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

A one-way street will be treated as one-half of a full four lane width divided street of either 56 feet or 72 feet (72 feet when the projected adt is over 8000) for needs, and that the roadway system must be operating as one-way streets prior to the time of designation.

M.S.A. ROUTE NO.	SEGMENT NO.	PRESENT WIDTH	PROJECTED TRAFFIC	LENGTH	TERMINI
104	010	30	6600	.08	WEST AVE. – MAIN STREET TO THIRD
106	050	30	6825	.29	WEST AVE. – THIRD TO SEVENTH ST.
TOTAL				.37	
105	030	30	7500	.07	EAST AVE. – MAIN STREET TO THIRD
105	020	30	5700	.29	EAST AVE. – THIRD TO SEVENTH ST.
TOTAL				.36	

RED WING



## RESOLUTIONS

THE UNDERLINED WORDING IS A SUGGESTED WORDING.

### Appointment to the Needs Study Subcommittee:

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 ~~after the annual Spring meeting of the Municipal Screening Board.~~ 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.

### Construction Cut off date:

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~~ letting date shall be December 31st of the preceding year.

### Construction Accomplishments:

If, during the period that complete needs are being received the street is improved with a bituminous overlay, ~~or~~ concrete joint repair or is widened the municipality will continue to receive complete needs but shall have the non-local cost of the bituminous resurfacing, concrete joint repair or widened construction project plus any items that are included in the needs deducted from its total needs for a period of ten (10) years. 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.

**Why have a needs deduction for a expenditure on a Municipal State Aid Street and not have a deduction for a expenditure on a County State Aid or Trunk Highway?**

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 a period of 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.

### **Greater Than Minimum Width:**

If a Municipal State Aid Street is constructed to a width wider than required, ~~only the width required by rules will be allowed for future resurfacing needs.~~ resurfacing needs will be allowed on the constructed width.

### **Mileage:**

The maximum mileage for Municipal State 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 that serve the local street system that were constructed by and on the Right-of-way of other political subdivisions for which the municipality has accepted the responsibility of the maintenance and services shall be included in the local street mileage.

However, the maximum mileage for State Aid designation may be exceeded to the extent necessary to designate trunk highway turnbacks, only if sufficient mileage is not is not available as determined by the Annual Certification of Mileage.

Any mileage for designation prior to the trunk highway turnback shall be used for the turnback before exceeding the maximum mileage.

In the event the maximum mileage is exceeded by trunk highway turnback, no additional designation other Trunk Highway Turnback can be considered until allowed by the computations of the Annual Certification of Mileage within which the maximum mileage for State Aid designation is determined.

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. ~~The District State Aid Engineer will forward the request to the State Aid Engineer for review.~~ and a City Council resolution of approved mileage and the Needs Study reporting data ~~must be received by the State Aid Engineer~~ 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.

## **STATUTE: 162.09**

Subdivision 1. Creation. There is created a municipal state aid street system within cities having a population of 5000 or more. The extent of the municipal state aid street system shall not exceed 2500 miles, plus the mileage of all trunk highways reverted or turned back to the jurisdiction of cities pursuant to law on and after July 1, 1965. The system shall be established, located, constructed, reconstructed, improved, and maintained as public highways within such cities under rules, not inconsistent with this section, made and promulgated by the commissioner as hereinafter provided.

(1). RESOLUTION SHOULD ADDRESS MILEAGE GROWTH WHEN A CITY IS OVER DESIGNATED WITH TRUNK HIGHWAY TURNBACKS.

(2). TREAT ALL CITIES WITH EXCESS MILEAGE THE SAME.

Cities that increase their available mileage through growth absorb the excess turnback mileage whereas the cities that don't grow continuously have excess mileage.

### **OPTIONS:**

- (1). TREAT ALL TURNBACK MILEAGE AS ADDITIONAL MILEAGE ABOVE 20%.
- (2). PROVIDE A CAP FOR ADDITIONAL MILEAGE.
- (3). CONTINUE AS IN THE PAST.

## **One Way Street Mileage:**

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

When a one-way street is a collector, it will receive needs for the minimum rules width of 32 feet with one side parking and if it is a arterial it will receive needs for 34 feet with one side parking, ~~be treated as one half of a full four lane width divided street of either 56 feet or 72 feet (72 feet when the projected Adt is over 8,000) for needs, and that the roadway system and must be operating as one way streets prior to the time of designation.~~

The 1991 rules include separate charts for one-way streets.

Collector - projected traffic 200-10,000  
Arterial - projected traffic 5,000 & up

Two traffic lanes and 1 parking lane and 30 M.P.H.  
Allow 32' for a Collector  
Allow 34' for a Arterial

Two traffic lanes and 1 parking lane and 35 M.P.H.  
Allow 36' for a Collector  
Allow 37' for a Arterial

**STATE AID RULE:**

(1991) 8820.0600 SELECTION OF ROUTES.

For an undivided, one-way street with a minimum width of 26 feet and with no parking lane or with a maximum width of 46 feet with parking on both sides, the chargeable mileage allowed for municipal state-aid street mileage purposes is one-half of the length of the one-way street.

(1987) 8820.0600 SELECTION OF ROUTES.

For an undivided, one-way street with a minimum width of 28 feet and with no parking lane or with a maximum width of 36 feet with parking on one side, the chargeable mileage allowed for municipal state-aid street mileage purposes is one-half of the length of the one-way street.

**THE RULES ALLOW ONE-WAY STREETS TO BE COUNTED AS ONE-HALF THE MILEAGE BUT ARE RESTRICTED BY THE RESOLUTION. IS IT NECESSARY TO HAVE THIS RULE?**

**MUNICIPAL STATE AID SYSTEM  
UNENCUMBERED CONSTRUCTION FUND SUBCOMMITTEE  
MINUTES OF THE APRIL 27, 1993 MEETING**

**MEMBERS PRESENT:**

Bruce Bullert, Chairman, City of Savage  
Jim Grube, City of St. Louis Park  
Dan Edwards, City of Fergus Falls  
Kenneth Straus, Municipal State Aid Manager

The Unencumbered Construction Fund Subcommittee met on Tuesday, April 27, 1993 at the St. Louis Park City Hall. The meeting started at 10:00 a.m. with all members present. One of the objectives of the meeting was to make a recommendation to the Screening Committee regarding rewarding cities in a positive way for maintaining low balances in their MSA account.

Ken Straus reviewed with the subcommittee a potential positive needs adjustment method which he had prepared. The adjustment was computed on the basis of the amount available on September 1, 1992, in each communities MSA account and comparing it to their 1992 construction allotment. The difference between these two amounts was then determined and a factor of 2 applied to the difference between the 1992 construction allotment minus the amount available on September 1, 1992. Positive amounts were then considered as the proposed needs adjustment for a apportionment increase proposal.

This proposed needs adjustment provides an additional apportionment for those communities having a ratio of less than 1.0 in their city's construction allotment. A total of 37 cities would receive an increased apportionment under this scenario. The total additional apportionment for these 37 cities would be approximately \$525,000.00. This amount, of course, would come from the overall Municipal State Aid allocation amount.

The subcommittee reviewed this proposal at length. The discussions centered around a number of different aspects of this proposal. These include:

1. The overall goal to provide an incentive program for each city to use each city's Municipal State Aid apportionment.
2. The relationship between the population apportionment amount and the needs apportionment amount.



3. The point at which the ratio between construction allotment and the unencumbered construction fund balance is considered at equilibrium. Is this equilibrium point a 1.0 value or a 1.5 value or a 2.0 value, etc.?
4. The amount of money in relative terms which would be considered for incentive adjustments. This amount may be 2.5%, 5%, 10%, etc. of the apportionment.
5. The relative relationship of the incentive program when considering communities that have zero balance to those that have balances of 1.0 or greater.
6. The potential of increasing the multiplier for the incentive program if a community maintains a low balance for more than one year.
7. The relationship of this incentive program to both the small cities and the large cities based upon the variation of the apportionment amounts.
8. The relationship of this program and discussions being held regarding the allocation of ISTEA dollars now available for allocation for the various communities.
9. The aspect of communities that have programmed various improvements to utilize their MSA account but due to complexities such as right of way acquisition, environmental concerns, federal funding and other requirements/constraints have been delayed and therefore unable to encumber those funds.

The subcommittee discussed the possibility of having a dedicated encumbrance fund and an unencumbered fund within the Municipal State Aid system. A dedicated encumbered project would involve a resolution from the city stating that this project has been committed to and is scheduled for construction. The city would submit this resolution and the monies placed in their dedicated encumbrance fund. At that point, the needs for these particular sections of roadway would be eliminated from the system. This proposal did have some merit based upon the subcommittee's comments but it was felt that additional study and evaluation was necessary to determine its total validity. Discussion and comments from the Screening Committee and all the communities is welcomed on this particular topic.

The discussion also addressed the potential of this program in relation to advance encumbrance projects as well as MSA bond improvements. It was agreed that neither

of these programs should have an adverse effect or be adversely affected by this particular program. During this discussion, however, it was agreed that these particular programs as they now operate are not properly adjusted for in the overall 20 year needs for each community. In fact, an advanced encumbered project is eliminated from the needs at the time of contract award but the money is not actually received by the community for up to three years following the elimination of the needs. Likewise, communities that do proceed with the MSA Bond Program and expend the money on projects are not properly adjusted for this elimination of needs. Again, the projects are eliminated from the needs as soon as the award is made but the adjustment is made on a continuing reducing number based upon the remaining bond amount each year. These matters should be reviewed and determined if some other action is appropriate.

During the analysis of why communities have certain balances in their MSA account, one area that was discussed involved projects which are constructed with local dollars rather than Municipal State Aid dollars. Many communities find it necessary to construct their Municipal State Aid street system prior to their ability to fund it with their MSA account. These streets are placed on the State Aid street system, the community receives one, two or three years of allocation, the project is constructed and the needs are eliminated thereby negating any additional Municipal State Aid allotment. Consideration should be given to addressing this issue through some type of after the fact needs in relation to local dollars spent. This program could include the submittal of a project for MSA approval, determining the MSA funding for the project and thereafter reimbursing the community for local funding from future MSA allocations. The needs for this particular segment would also have to be reviewed in relation to properly addressing appropriate apportionment amounts.

The subcommittee also discussed the difference between concrete pavement and bituminous pavement. The 20 year cycle used in our needs determinations seems appropriate for our bituminous pavement streets but not long enough for the concrete streets. Possibly, the concrete streets should be considered for a longer life cycle when determining overall needs of the Municipal State Aid Street System.

The overall anticipated changes in our Municipal State Aid account with respect to the elimination of adjustment for expenditures off the State Aid System was also reviewed. A better perspective is anticipated in the next few years regarding the impact of this change on our program. It is anticipated this allowance adjustment should reduce the balance due to the increased number of projects available to the communities. It was noted, however, that under our present policy regarding needs adjustment for overlay projects, the two do not seem very appropriate or compatible. It may be desirable to review the overlay project adjustment in relation to the off system expenditure program.

The recommendation of the subcommittee is as follows:

The proposed positive needs adjustment spreadsheets be provided to the district meetings and Screening Committee for their evaluation and comments. Two spreadsheets are to be provided. One based upon those cities having a ratio less than 1.00 receiving the same apportionment increase and the other slightly more refined in which those communities with the ratio of 0.00 to 0.49 receiving twice the apportionment increase as those communities with the ratio of 0.50 to 0.99. The rationale for the 1.00 ratio being that the incentive program is analyzed in the fall of the year and therefore to maintain a reasonable reflection during the legislative process, the equilibrium point of 1.00 was most appropriate. Variations in the multiplier and the range will be finalized following the evaluation and comment period with a final recommendation being made at either the fall, 1993 or spring, 1994 Screening Committee meeting. In addition, the other items discussed previously in these minutes should also be addressed by the Screening Committee and appropriate action taken.

A final comment is also offered regarding the present existing incentive plan, namely the maintenance allotment allowed for each city. The present rules allow a community to receive 25% of their apportionment without substantial documentation. This procedure will automatically reduce the allocation amounts for each city which would be beneficial from an overall standpoint. The cities should be encouraged to utilize this existing method to the greatest extent.

The Subcommittee meeting adjourned at 12:40 p.m.



Minutes Recorded by Bruce R. Bullert

BRB/msh

# BALANCE ADJUSTMENT

PROPOSED POSITIVE NEEDS ADJUSTMENT FOR CITIES HAVING BALANCE THAT IS LESS THAN CONSTRUCTION ALLOTMENT. THE ADJUSTMENT IS COMPUTED BY THE DIFFERENCE BETWEEN THE BALANCE AND CONSTRUCTION ALLOTMENT TIMES 2.

\$1.00 IN MONEY NEEDS IS WORTH \$.02952

Municipalities	Ratio of the Amount Available to the Construction Allotment	Amount Available 9-1-92	1992 Construction Allotment	Construction Allotment Minus Amount Available Times 2	Proposed Needs Adjustment for Having Less Than 1 Year In Construction	Apportionment Increase Or Decrease
Albert Lea	2.7226	\$1,415,623	\$519,962	(\$1,791,322)		(\$3,355)
Alexandria	2.3242	693,474	298,366	(790,216)		(2,455)
Andover	0.9410	409,012	434,665	51,306	51,306	(3,541)
Anoka	0.0000	0	351,624	703,248	703,248	18,712
Apple Valley	1.9577	1,158,246	591,645	(1,133,202)		(4,930)
Arden Hills	0.2720	53,187	195,571	284,768	284,768	7,602
Austin	2.1818	1,636,900	750,243	(1,773,314)		(5,613)
Bemidji	3.7000	1,147,677	310,180	(1,674,994)		(3,043)
Blaine	2.5163	1,712,325	680,483	(2,063,684)		(6,233)
Bloomington	2.2791	4,841,250	2,124,224	(5,434,052)		(22,365)
Brainerd	3.7316	928,623	248,854	(1,359,538)		(1,882)
Brooklyn Center	1.6104	848,305	526,753	(643,104)		(5,192)
Brooklyn Park	4.3359	4,033,619	930,283	(6,206,672)		(4,557)
Buffalo	2.6882	470,814	175,141	(591,346)		(1,399)
Burnsville	0.7230	694,889	961,180	532,582	532,582	8,545
Cambridge	1.0000	198,367	198,367	0		(1,581)
Champlin	1.0415	391,287	375,701	(31,172)		(1,731)
Chanhassen	2.2845	756,899	331,316	(851,166)		(2,789)
Chaska	2.8408	807,407	284,220	(1,046,374)		(3,014)
Chisholm	0.1712	31,367	183,175	303,616	303,616	7,573
Cloquet	2.1600	1,008,326	466,818	(1,083,016)		(3,961)
Columbia Heights	3.6556	1,253,258	342,834	(1,820,848)		(2,055)
Coon Rapids	1.4743	1,638,973	1,111,691	(1,054,564)		(6,060)
Corcoran	0.0000	0	157,160	314,320	314,320	7,157
Cottage Grove	2.0980	1,201,371	572,627	(1,257,488)		(4,901)
Crookston	1.8047	566,319	313,803	(505,032)		(2,287)
Crystal	1.7983	967,540	538,033	(859,014)		(4,565)
Detroit Lakes	0.7012	147,852	210,863	126,022	126,022	2,406
Duluth	0.9318	2,156,079	2,313,815	315,472	315,472	(13,663)
Eagan	0.9307	742,069	797,304	110,470	110,470	(3,316)
East Bethel	0.0000	0	185,855	371,710	371,710	9,647
East Grand Forks	1.4100	294,204	208,652	(171,104)		(1,210)
Eden Prairie	0.0000	0	816,889	1,633,778	1,633,778	39,623
Edina	4.2750	3,800,549	889,027	(5,823,044)		(6,442)
Elk River	0.2469	96,831	392,134	590,606	590,606	14,201
Fairmont	0.9518	493,097	518,094	49,994	49,994	(2,830)

Municipalities	Ratio of the Amount Available to the Construction Allotment	Amount Available 9-1-92	1992 Construction Allotment	Construction Allotment Minus Amount Available Times 2	Proposed Needs Adjustment for Having Less Than 1 Year In Construction	Apportionment Increase Or Decrease
Falcon Heights	0.5458	\$51,442	\$94,253	\$85,622	\$85,622	\$2,420
Faribault	1.6503	700,505	424,464	(552,082)		(4,105)
Farmington	0.0000	0	296,387	592,774	592,774	14,646
Fergus Falls	1.4045	557,244	396,765	(320,958)		(2,644)
Forest Lake	0.7959	97,095	121,997	49,804	49,804	465
Fridley	3.0688	1,432,926	466,935	(1,931,982)		(3,171)
Golden Valley	3.3393	1,860,667	557,201	(2,606,932)		(5,232)
Grand Rapids	1.8568	385,669	207,709	(355,920)		(1,939)
Ham Lake	2.1284	420,034	197,347	(445,374)		(1,247)
Hastings	0.0000	0	273,683	547,366	547,366	14,496
Hermantown	3.2561	854,296	262,371	(1,183,850)		(1,817)
Hibbing	0.2612	179,735	688,050	1,016,630	1,016,630	20,754
Hopkins	0.0000	0	385,894	771,788	771,788	20,400
Hutchinson	3.4360	1,036,002	301,514	(1,468,976)		(1,840)
International Falls	1.0458	259,767	248,390	(22,754)		(1,799)
Inver Grove Heigh	1.6159	717,227	443,860	(546,734)		(3,100)
Lake Elmo	4.4845	549,364	122,503	(853,722)		(908)
Lakeville	0.0000	0	896,232	1,792,464	1,792,464	44,961
Lino Lakes	0.2964	72,224	243,696	342,944	342,944	7,438
Litchfield	3.9002	693,382	177,779	(1,031,206)		(1,043)
Little Canada	1.0733	168,209	156,720	(22,978)		(1,141)
Little Falls	0.2125	60,703	285,660	449,914	449,914	10,762
Mahtomedi	1.0000	129,975	129,975	0		(656)
Mankato	0.5750	509,930	886,887	753,914	753,914	15,996
Maple Grove	0.3679	340,994	926,965	1,171,942	1,171,942	26,782
Maplewood	3.7009	1,971,646	532,753	(2,877,786)		(3,214)
Marshall	1.2181	239,117	196,309	(85,616)		(1,148)
Mendota Heights	2.4979	409,469	163,928	(491,082)		(1,493)
Minneapolis	1.6949	16,826,542	9,927,614	(13,797,856)		(61,881)
Minnetonka	3.2666	4,201,588	1,286,246	(5,830,684)		(8,825)
Montevideo	3.9026	577,002	147,852	(858,300)		(1,198)
Monticello	0.7743	122,497	158,199	71,404	71,404	1,006
Moorhead	2.5734	1,896,260	736,869	(2,318,782)		(4,151)
Morris	0.9552	137,342	143,777	12,870	12,870	(461)
Mound	3.3745	559,158	165,703	(786,910)		(1,126)
Mounds View	5.5232	919,707	166,518	(1,506,378)		(498)
New Brighton	3.1407	1,140,119	363,016	(1,554,206)		(2,166)
New Hope	1.0000	412,915	412,915	0		(2,891)
New Ulm	0.0000	0	394,833	789,666	789,666	20,401
Northfield	3.6871	1,117,486	303,082	(1,628,808)		(2,266)
North Mankato	0.2575	56,475	219,338	325,726	325,726	7,318
North St. Paul	1.7916	333,862	186,344	(295,036)		(1,176)

Municipalities	Ratio of the Amount Available to the Construction Allotment	Amount Available 9-1-92	1992 Construction Allotment	Construction Allotment Minus Amount Available Times 2	Proposed Needs Adjustment for Having Less Than 1 Year In Construction	Apportionment Increase Or Decrease
Oakdale	0.8863	\$319,639	\$360,646	\$82,014	\$82,014	(393)
Orono	4.5521	927,233	203,692	(1,447,082)		(2,414)
Otsego	0.8782	211,714	241,069	58,710	58,710	(1,277)
Owatonna	1.1324	658,886	581,840	(154,092)		(3,921)
Plymouth	2.2337	2,931,460	1,312,400	(3,238,120)		(7,078)
Prior Lake	2.8034	894,644	319,131	(1,151,026)		(2,297)
Ramsey	2.2301	697,979	312,981	(769,996)		(3,168)
Red Wing	3.2445	1,332,349	410,649	(1,843,400)		(4,776)
Richfield	3.5735	2,692,790	753,552	(3,878,476)		(6,094)
Robbinsdale	1.7259	553,575	320,752	(465,646)		(1,903)
Rochester	1.7174	2,719,447	1,583,437	(2,272,020)		(12,835)
Rosemount	0.9874	363,462	368,082	9,240	9,240	(3,358)
Roseville	2.1142	1,332,407	630,217	(1,404,380)		(4,210)
St. Anthony	1.6083	208,642	129,726	(157,832)		(501)
St. Cloud	0.4867	417,925	858,735	881,620	881,620	18,469
St. Louis Park	2.2907	1,750,817	764,308	(1,973,018)		(4,823)
St. Paul	3.6926	22,231,686	6,020,575	(32,422,222)		(52,242)
St. Peter	1.3322	292,442	219,521	(145,842)		(1,218)
Sartell	1.0000	132,021	132,021	0		(968)
Sauk Rapids	3.2788	721,175	219,952	(1,002,446)		(1,510)
Savage	0.0000	0	339,909	679,818	679,818	16,025
Shakopee	2.4780	972,297	392,374	(1,159,846)		(2,990)
Shoreview	0.3512	155,763	443,557	575,588	575,588	15,254
Shorewood	1.9984	475,664	238,025	(475,278)		(1,938)
South St. Paul	2.5635	985,321	384,362	(1,201,918)		(2,497)
Spring Lake Park	2.2396	244,355	109,106	(270,498)		(573)
Stillwater	3.5485	1,349,486	380,300	(1,938,372)		(2,270)
Thief River Falls	1.1946	367,263	307,436	(119,654)		(2,640)
Vadnais Heights	0.1724	35,612	206,573	341,922	341,922	9,267
Virginia	1.0558	241,019	228,284	(25,470)		(2,432)
Waite Park	0.0000	0	161,430	322,860	322,860	8,313
Waseca	1.3021	198,320	152,310	(92,020)		(611)
West St. Paul	1.1509	409,048	355,404	(107,288)		(1,732)
White Bear Lake	1.1247	531,948	472,963	(117,970)		(3,530)
Willmar	0.4981	204,166	409,900	411,468	411,468	8,200
Winona	1.2110	614,922	507,778	(214,288)		(3,968)
Woodbury	3.4647	1,988,949	574,054	(2,829,790)		(8,760)
Worthington	3.8327	1,077,930	281,242	(1,593,376)		(1,806)
<b>TOTAL</b>	<b>1.9467</b>	<b>\$129,836,670</b>	<b>\$66,694,378</b>	<b>(\$126,284,584)</b>	<b>\$17,525,960</b>	<b>\$0</b>

TOTAL APPORTIONMENT DOLLARS EXCHANGED IS \$17,525,960 TIMES \$.02952 EQUALING \$517,366.

# BALANCE ADJUSTMENT

PROPOSED POSITIVE NEEDS ADJUSTMENT FOR CITIES HAVING BALANCE THAT IS LESS THAN CONSTRUCTION ALLOTMENT. THE ADJUSTMENT IS COMPUTED BY THE DIFFERENCE BETWEEN THE BALANCE AND CONSTRUCTION ALLOTMENT TIMES 2 IF THE BALANCE IS 0 - .49 OR TIMES 4 IF THE BALANCE IS FROM .50 TO .99 TIMES THE CONSTRUCTION ALLOTMENT.

\$1.00 IN MONEY NEEDS IS WORTH \$.02946

Municipalities	Ratio of the Amount Available to the Construction Allotment	Amount Available 9-1-92	1992 Construction Allotment	Construction Allotment Minus Amount Available Times 4	Construction Allotment Minus Amount Available Times 2	Apportionment Increase or Decrease
Albert Lea	2.7226	\$1,415,623	\$519,962			(\$3,844)
Alexandria	2.3242	693,474	298,366			(2,813)
Andover	0.9410	409,012	434,665	\$102,612		(2,770)
Anoka	0.0000	0	351,624		\$703,248	18,375
Apple Valley	1.9577	1,158,246	591,645			(5,650)
Arden Hills	0.2720	53,187	195,571	569,536		15,859
Austin	2.1818	1,636,900	750,243			(6,432)
Bemidji	3.7000	1,147,677	310,180			(3,486)
Blaine	2.5163	1,712,325	680,483			(7,142)
Bloomington	2.2791	4,841,250	2,124,224			(25,628)
Brainerd	3.7316	928,623	248,854			(2,156)
Brooklyn Center	1.6104	848,305	526,753			(5,950)
Brooklyn Park	4.3359	4,033,619	930,283			(5,222)
Buffalo	2.6882	470,814	175,141			(1,603)
Burnsville	0.7230	694,889	961,180	1,065,164		23,160
Cambridge	1.0000	198,367	198,367			(1,812)
Champlin	1.0415	391,287	375,701			(1,983)
Chanhassen	2.2845	756,899	331,316			(3,196)
Chaska	2.8408	807,407	284,220			(3,453)
Chisholm	0.1712	31,367	183,175		303,616	7,354
Cloquet	2.1600	1,008,326	466,818			(4,539)
Columbia Heights	3.6556	1,253,258	342,834			(2,355)
Coon Rapids	1.4743	1,638,973	1,111,691			(6,944)
Corcoran	0.0000	0	157,160		314,320	6,831
Cottage Grove	2.0980	1,201,371	572,627			(5,616)
Crookston	1.8047	566,319	313,803			(2,621)
Crystal	1.7983	967,540	538,033			(5,231)
Detroit Lakes	0.7012	147,852	210,863	252,044		5,921
Duluth	0.9318	2,156,079	2,313,815	630,944		(7,737)
Eagan	0.9307	742,069	797,304	220,940		(1,027)
East Bethel	0.0000	0	185,855		371,710	9,433
East Grand Forks	1.4100	294,204	208,652			(1,387)
Eden Prairie	0.0000	0	816,889		1,633,778	38,279
Edina	4.2750	3,800,549	889,027			(7,382)
Elk River	0.2469	96,831	392,134		590,606	13,697
Fairmont	0.9518	493,097	518,094	99,988		(1,988)

Municipalities	Ratio of the Amount Available to the Construction Allotment	Amount Available 9-1-92	1992 Construction Allotment	Construction Allotment Minus Amount Available Times 4	Construction Allotment Minus Amount Available Times 2	Approximate Apportionme Increase
Falcon Heights	0.5458	\$51,442	\$94,253	\$171,244		\$4,922
Faribault	1.6503	700,505	424,464			(4,704)
Farmington	0.0000	0	296,387		\$592,774	14,197
Fergus Falls	1.4045	557,244	396,765			(3,030)
Forest Lake	0.7959	97,095	121,997	99,608		1,783
Fridley	3.0688	1,432,926	466,935			(3,634)
Golden Valley	3.3393	1,860,667	557,201			(5,995)
Grand Rapids	1.8568	385,669	207,709			(2,222)
Ham Lake	2.1284	420,034	197,347			(1,429)
Hastings	0.0000	0	273,683		547,366	14,223
Hermantown	3.2561	854,296	262,371			(2,082)
Hibbing	0.2612	179,735	688,050		1,016,630	19,348
Hopkins	0.0000	0	385,894		771,788	20,010
Hutchinson	3.4360	1,036,002	301,514			(2,109)
International Falls	1.0458	259,767	248,390			(2,062)
Inver Grove Heigh	1.6159	717,227	443,860			(3,552)
Lake Elmo	4.4845	549,364	122,503			(1,041)
Lakeville	0.0000	0	896,232		1,792,464	43,703
Lino Lakes	0.2964	72,224	243,696		342,944	7,027
Litchfield	3.9002	693,382	177,779			(1,195)
Little Canada	1.0733	168,209	156,720			(1,308)
Little Falls	0.2125	60,703	285,660		449,914	10,370
Mahtomedi	1.0000	129,975	129,975			(752)
Mankato	0.5750	509,930	886,887	1,507,828		37,255
Maple Grove	0.3679	340,994	926,965		1,171,942	25,579
Maplewood	3.7009	1,971,646	532,753			(3,683)
Marshall	1.2181	239,117	196,309			(1,315)
Mendota Heights	2.4979	409,469	163,928			(1,711)
Minneapolis	1.6949	16,826,542	9,927,614			(70,910)
Minnetonka	3.2666	4,201,588	1,286,246			(10,112)
Montevideo	3.9026	577,002	147,852			(1,373)
Monticello	0.7743	122,497	158,199	142,808		2,945
Moorhead	2.5734	1,896,260	736,869			(4,756)
Morris	0.9552	137,342	143,777	25,740		(205)
Mound	3.3745	559,158	165,703			(1,291)
Mounds View	5.5232	919,707	166,518			(571)
New Brighton	3.1407	1,140,119	363,016			(2,482)
New Hope	1.0000	412,915	412,915			(3,313)
New Ulm	0.0000	0	394,833		789,666	19,933
Northfield	3.6871	1,117,486	303,082			(2,596)
North Mankato	0.2575	56,475	219,338		325,726	6,966
North St. Paul	1.7916	333,862	186,344			(1,348)



Municipalities	Ratio of the Amount Available to the Construction Allotment	Amount Available 9-1-92	1992 Construction Allotment	Construction Allotment Minus Amount Available Times 4	Construction Allotment Minus Amount Available Times 2	Approximate Apportionment Increase
Oakdale	0.8863	\$319,639	\$360,646	\$164,028		\$1,609
Orono	4.5521	927,233	203,692			(2,766)
Otsego	0.8782	211,714	241,069	117,420		10
Owatonna	1.1324	658,886	581,840			(4,493)
Plymouth	2.2337	2,931,460	1,312,400			(8,110)
Prior Lake	2.8034	894,644	319,131			(2,632)
Ramsey	2.2301	697,979	312,981			(3,630)
Red Wing	3.2445	1,332,349	410,649			(5,473)
Richfield	3.5735	2,692,790	753,552			(6,983)
Robbinsdale	1.7259	553,575	320,752			(2,181)
Rochester	1.7174	2,719,447	1,583,437			(14,708)
Rosemount	0.9874	363,462	368,082	18,480		(3,616)
Roseville	2.1142	1,332,407	630,217			(4,824)
St. Anthony	1.6083	208,642	129,726			(574)
St. Cloud	0.4867	417,925	858,735		\$881,620	17,319
St. Louis Park	2.2907	1,750,817	764,308			(5,527)
St. Paul	3.6926	22,231,686	6,020,575			(59,865)
St. Peter	1.3322	292,442	219,521			(1,396)
Sartell	1.0000	132,021	132,021			(1,109)
Sauk Rapids	3.2788	721,175	219,952			(1,730)
Savage	0.0000	0	339,909		679,818	15,398
Shakopee	2.4780	972,297	392,374			(3,426)
Shoreview	0.3512	155,763	443,557		575,588	14,970
Shorewood	1.9984	475,664	238,025			(2,221)
South St. Paul	2.5635	985,321	384,362			(2,861)
Spring Lake Park	2.2396	244,355	109,106			(657)
Stillwater	3.5485	1,349,486	380,300			(2,601)
Thief River Falls	1.1946	367,263	307,436			(3,026)
Vadnais Heights	0.1724	35,612	206,573		341,922	9,128
Virginia	1.0558	241,019	228,284			(2,787)
Waite Park	0.0000	0	161,430		322,860	8,118
Waseca	1.3021	198,320	152,310			(701)
West St. Paul	1.1509	409,048	355,404			(1,985)
White Bear Lake	1.1247	531,948	472,963			(4,043)
Willmar	0.4981	204,166	409,900		411,468	7,603
Winona	1.2110	614,922	507,778			(4,546)
Woodbury	3.4647	1,988,949	574,054			(10,037)
Worthington	3.8327	1,077,930	281,242			(2,069)
<b>TOTAL</b>	<b>1.9467</b>	<b>\$129,836,670</b>	<b>\$66,694,378</b>	<b>\$5,188,384</b>	<b>\$14,931,768</b>	<b>\$0</b>

TOTAL APPORTIONMENT DOLLARS EXCHANGED IS \$20,120,152 TIMES .02946 EQUALING \$592,740.

## STATUS OF MUNICIPAL TRAFFIC COUNTING

(Most out-state traffic counts are done by state forces)

### 1. Seven County Metropolitan Traffic Area

Cities in the seven county metropolitan area count cooperatively with Mn/Dot on a two year cycle and are scheduled to be counted in 1994. Minneapolis and St. Paul count one half each year.

### 2. Out-State Municipalities

The out-state cities will be counted on a four-year cycle.

### 3. Municipalities that have a count annually

Duluth counts 1/4 of the city each year.

TRAFFIC TO BE COUNTED IN 1993		
Albert Lea	Faribault	Moorhead
Brainerd	Grand Rapids	Morris
Crookston	Little Falls	New Ulm
East Grand Forks	Mankato	Northfield
Fairmont	Marshall	

TRAFFIC TO BE COUNTED IN 1994		
Alexandria	Rochester	Worthington
Cloquet	Willmar	

TRAFFIC TO BE COUNTED IN 1995		
Bemidji	Hutchinson	Sartell
Cambridge	Litchfield	Sauk Rapids
Chisholm	North Mankato	Thief River Falls
Elk River	Owatonna	Virginia
Fergus Falls	Red Wing	Waite Park
Hermantown	St. Cloud	Waseca
Hibbing	St. Peter	Winona

TRAFFIC TO BE COUNTED IN 1996		
Austin	International Falls	Otsego
Buffalo	Montevideo	
Detroit Lakes	Monticello	

The State Aid Needs unit updates the needs traffic counts when they are received from the Mn/Dot traffic counting office.

**CURRENT RESOLUTIONS  
OF THE  
MUNICIPAL SCREENING BOARD**

**JUNE 1992**

**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**

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 after the annual Spring meeting of the Municipal Screening Board. 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.

#### Screening Board Alternate Attendance - June 1979

The alternate to a third year member be invited to attend the final meeting. A formal request to the alternates governing body would request that he attend the meetings and the municipality pay for its expenses.

#### 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.

#### 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.

#### 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)**

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.

If, during the period that complete needs are being received the street is improved with a bituminous overlay or concrete joint repair the municipality will continue to receive complete needs but shall have the non-local cost of the bituminous resurfacing or concrete joint repair construction project deducted from its total needs for a period of ten (10) years.

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, lighting, 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. If, during the period that complete bridge needs are being received the bridge is improved with a bituminous overlay, the municipality will continue to receive complete needs but shall have the non-local cost of the overlay deducted from its total needs for a period of ten (10) years.

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 a M.S.A.S route earning "After the Fact" needs is removed from the M.S.A. 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.

## 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

If a Municipal State Aid Street is constructed to a width wider than required, only the width required by rules will be allowed for future resurfacing needs.

### 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)

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 streets less Trunk Highway and County State Aid Highways.

(Nov. 1965 - Revised 1972)

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.

(Nov. 1965 - Revised 1969)

However, the maximum mileage for State Aid designation may be exceeded to the extent necessary to designate trunk highway turnbacks, only if sufficient mileage is not available as determined by the Annual Certification of Mileage.

(Jan. 1969)

Any mileage for designation prior to the trunk highway turnback shall be used for the turnback before exceeding the maximum mileage.

In the event the maximum mileage is exceeded by a trunk highway turnback, no additional designation other than trunk highway turnbacks can be considered until allowed by the computations of the Annual Certification of Mileage within which the maximum mileage for State Aid designation is determined.

Oct. 1961 (Revised May 1980, Oct. 1982 and Oct. 1983)

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. The District State Aid Engineer will forward the request to the State Aid Engineer for review. A City Council resolution of approved mileage and the Needs Study reporting data must be received by the State Aid Engineer 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)

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.

A one-way street will be treated as one-half of a full four-lane width divided street of either 56 feet or 72 feet (72 feet when the projected ADT is over 8,000) for needs, and that the roadway system must be operating as one-way streets prior to the time of designation.

St. Paul

MSA ROUTE NO.		<u>TERMINI</u>	<u>APPROVAL</u> <u>DATE</u>	<u>MILEAGE</u>	<u>NEEDS</u> <u>WIDTH</u>
134	EB Fifth St.	- Fort Rd. (W. 7th St.)	6/89	0.85 Miles	28' & 36'
198	WB Sixth St.	to Broadway St.		0.86 Miles	36'
235	NB Wabasha St.	- Kellogg Blvd.	6/89	0.61 Miles	36'
236	SB St. Peter St.	to Twelfth St.		0.62 Miles	36'
165	NB Minnesota St.	- Kellogg Blvd.	6/89	0.47 Miles	36'
117	SB Cedar St.	to Tenth St.		0.46 Miles	36'
196	NB Sibley St.	- Shepard Road	6/89	0.34 Miles	36'
	SB Jackson St.	to Seventh St.		<u>CSAH</u> 4.21 Miles	

COST

Construction Item Unit Prices - (Revised Annually)

Right of Way (Needs only) \$ 60,000.00 Acre

Grading (Excavation) \$ 3.00 Cu. Yd.

Base:

Class 4	Spec. #2211	\$ 4.50 Ton
Class 5	Spec. #2211	5.75 Ton
Bituminous	Spec. #2331	22.00 Ton

Surface:

Bituminous	Spec. #2331	\$ 22.00 Ton
Bituminous	Spec. #2341	24.50 Ton
Bituminous	Spec. #2361	32.00 Ton

Shoulders:

Gravel	Spec. #2221	\$ 7.00 Ton
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Miscellaneous:

Storm Sewer Construction	\$199,500.00 Mile
Storm Sewer Adjustment	62,000.00 Mile
Special Drainage-Rural	25,000.00 Mile
Traffic Signals	20,000 to 80,000.00 Mile

Signal Needs Based On Projected Traffic

Projected Traffic	Percentage	X Unit Price	=	Needs Per Mile
0 - 4,999	.25	\$80,000	=	\$ 20,000.00 Mile
5,000 - 9,999	.50	80,000	=	40,000.00 Mile
10,000 & Over	1.00	80,000	=	80,000.00 Mile



Street Lighting  
Curb & Gutter  
Sidewalk  
Engineering

20,000.00 Mile  
5.50 Lin. Ft.  
14.50 Sq. Yd.  
18%

**Removal Items:**

Curb & Gutter  
Sidewalk  
Concrete Pavement  
Tree Removal

\$ 1.60 Lin. Ft.  
4.50 Sq. Yd.  
4.00 Sq. Yd.  
150.00 Unit

**STRUCTURES**

**Bridge Costs - Oct. 1961 (Revised Annually)**

That for the study of needs on the Municipal State Aid Street System, bridge costs shall be computed as follows:

Bridges 0 to 149 Ft.	\$ 55.00 Sq. Ft.
Bridges 150 to 499 Ft.	60.00 Sq. Ft.
Bridges 500 & Over	65.00 Sq. Ft.
Bridge Widening	150.00 Sq. Ft.

"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 that is eligible for State Aid reimbursement for a 15-year period." This directive to exclude all Federal or State grants.

**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:

**Railroad Over Highway**

Number of Tracks - 1	\$4,000 Lin. Ft.
Each Additional Track	\$3,000 Lin. Ft.

## 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)	\$ 80,000 Unit
Signals and Gates(Multiple Track - high	\$110,000 Unit
Signs Only & (low speed)	\$ 600 Unit
Rubberized Railroad Crossings (Per Track)	\$ 900 Lin. Ft.
Pavement Marking	\$ 750 Unit

### Maintenance Needs Costs - June 1992

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.

	Cost For Under 1000 Vehicles Per Day	Cost For Over 1000 Vehicles Per Day
<b>Traffic Lanes:</b> Segment length times number of traffic lanes times cost per mile.	\$1,200 (Per Mile)	\$2,000 (Per Mile)
<b>Parking Lanes:</b> Segment length times number of parking lanes times cost per mile.	\$1,200 (Per Mile)	\$1,200 (Per Mile)
<b>Median Strip:</b> Segment length times cost per mile.	\$ 400 (Per Mile)	\$ 800 (Per Mile)
<b>Storm Sewer:</b> Segment length times cost per mile.	\$ 400 (Per Mile)	\$ 400 (Per Mile)
<b>Traffic Signals:</b> Number of traffic signals times cost for each signal.	\$ 400 (Per Each)	\$ 400 (Per Each)
<b>Unlimited Segments: Normal M.S.A.S. Streets.</b>		
Minimum allowance for mile is determined by segment length times cost per mile.	\$4,000 (Per Mile)	\$4,000 (Per Mile)

**Limited Segments: Combination Routes.**

Minimum allowance for mile is determined  
by segment length times cost per mile.

\$2,000  
(Per Mile)

\$2,000  
(Per Mile)

**NEEDS ADJUSTMENTS**

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

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 period, and which annually reflects the net unamortized bonded debt shall be accomplished by adding said net unamortized amount to the computed money needs of the municipality.

For the purpose of this adjustment, the net unamortized bonded debt shall be the total unamortized bonded indebtedness less the unexpended bond amount as of December 31st of the preceding year.

That for the purpose of this separate annual adjustment, the unamortized balance of the St. Paul Bond Account, as authorized in 1953, 2nd United Improvement Program, and as authorized in 1946, Capital Approach Improvement Bonds, shall be considered in the same manner as those bonds sold and issued pursuant to Minnesota Statutes, Section 162.18.

"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."

**Unencumbered Construction Fund Balance Adjustment - Oct. 1961 (Revised October 1991)**

That for the determination of Apportionment Needs, the amount of the unencumbered construction fund balance as of September 1st of the current year shall be deducted from the 25-year total Needs of each individual municipality.

Projects that have been received before September 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)

The Right of Way needs shall be included in the apportionment needs based on the unit price per mile, 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.

### 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)**

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 years.
2. The cities in the outstate area may have their traffic counted for a nominal fee and maps prepared by State forces every four years, or may elect to continue the present procedure of taking their own counts and preparing their own traffic maps at four year intervals.
3. Some deviations from the present four-year counting cycle shall be permitted during the interim period of conversion to counting by State forces in the outstate area.