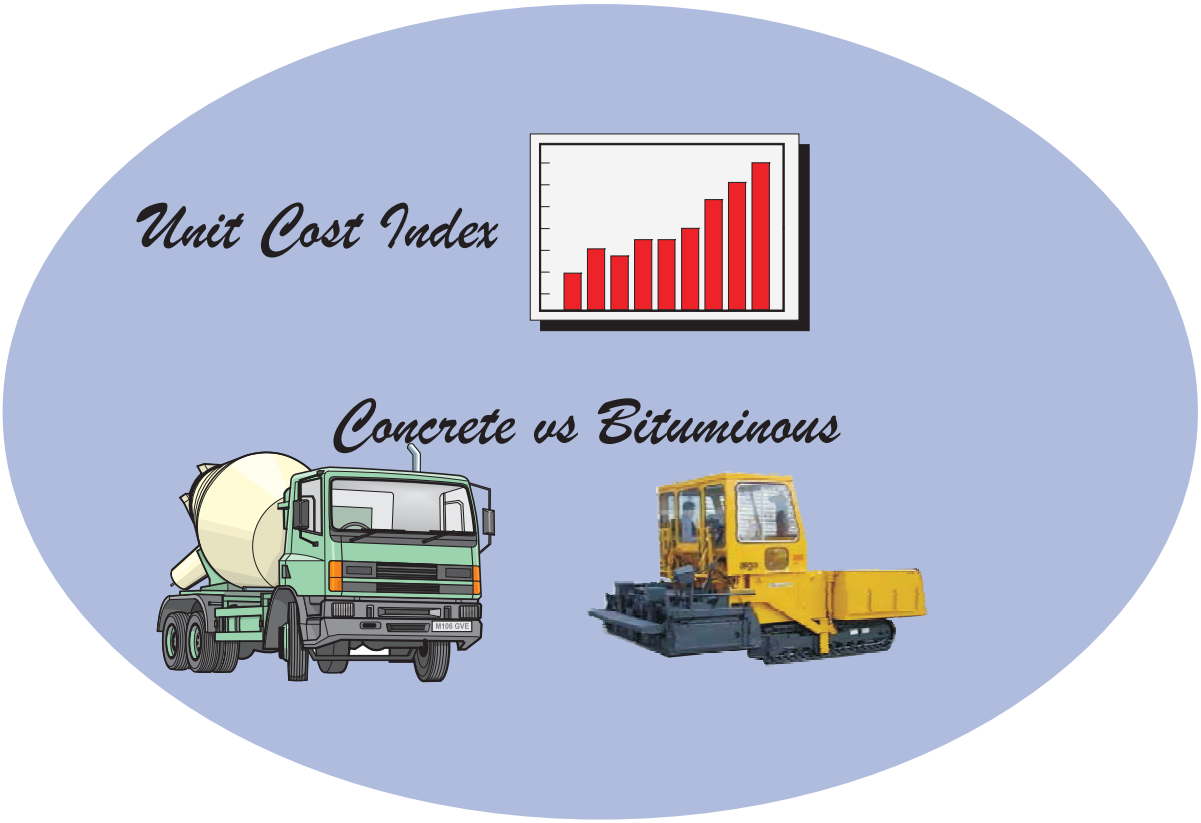
# 2007 MUNICIPAL SCREENING BOARD DATA




## June 2007

Minnesota Department of Transportation

# Memo

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

Office Tel.: 651 366-3815
Fax: 651 366-3801

**Date:** **May 8, 2007**

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

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

**Subject: 2007 Municipal Screening Board Data booklet**

**Enclosed is a copy of the June 2007 "Municipal Screening Board Data" booklet.**

**The data included in this report will be used by the Municipal Board at its May 30 and May 31, 2007 meeting to establish unit prices for the 2007 Needs Study that is used to compute the 2008 apportionment. The Board will also review other recommendations of the Needs Study Subcommittee and the Unencumbered Construction Funds Subcommittee as outlined in their minutes.**

**Should you have any suggestions or recommendations regarding the data in this publication, please refer them to your District Screening Board Representative or call me at (651) 366-3815.**

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

# The State Aid Program Mission Study

## Mission Statement:

**The purpose of the state-aid program is to provide resources, from the Highway Users Tax Distribution Fund, to assist local governments with the construction and maintenance of community-interest highways and streets on the state-aid system.**

## Program Goals:

The goals of the state-aid program are to provide users of secondary highways and streets with:

- Safe highways and streets;
- Adequate mobility and structural capacity on highways and streets; and
- An integrated transportation network.

## Key Program Concepts:

*Highways and streets of community interest* are those highways and streets that function as an integrated network and provide more than only local access. Secondary highways and streets are those routes of community interest that are not on the Trunk Highway system.

A community interest highway or street may be selected for the state-aid system if it:

A. Is projected to carry a relatively heavier traffic volume or is functionally classified as collector or arterial

B. Connects towns, communities, shipping points, and markets within a county or in adjacent counties; provides access to rural churches, schools, community meeting halls, industrial areas, state institutions, and recreational areas; serves as a principal rural mail route and school bus route; or connects the points of major traffic interest, parks, parkways, or recreational areas within an urban municipality.

C. Provides an integrated and coordinated highway and street system affording, within practical limits, a state-aid highway network consistent with projected traffic demands.

The function of a road may change over time requiring periodic revisions to the state-aid highway and street network.

*State-aid funds* are the funds collected by the state according to the constitution and law, distributed from the Highway Users Tax Distribution Fund, apportioned among the counties and cities, and used by the counties and cities for aid in the construction, improvement and maintenance of county state-aid highways and municipal state-aid streets.

The *Needs* component of the distribution formula estimates the relative cost to build county highways or build and maintain city streets designated as state-aid routes.

# 2007 MUNICIPAL SCREENING BOARD DATA

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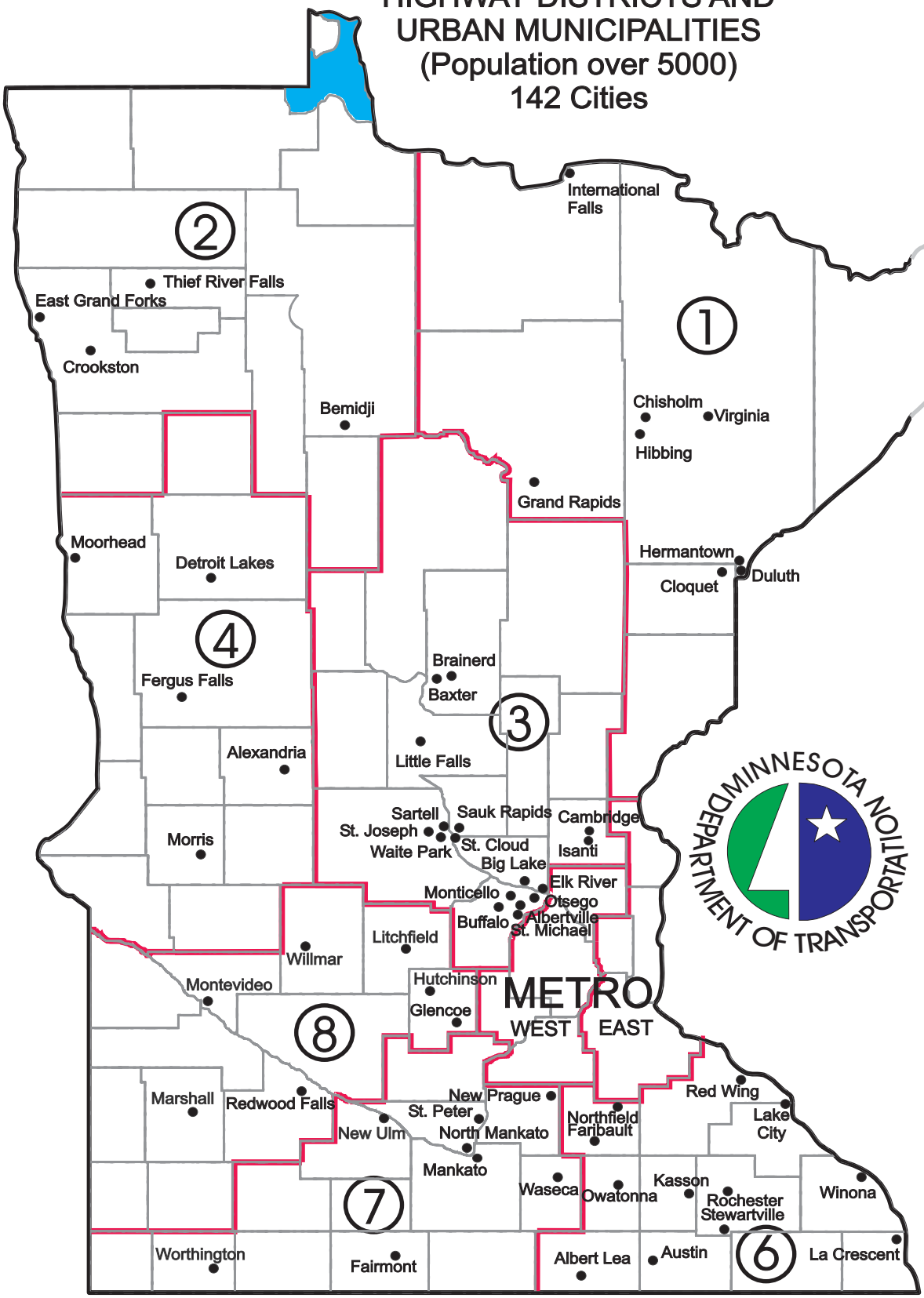
# STATE OF MINNESOTA

## HIGHWAY DISTRICTS AND URBAN MUNICIPALITIES (Population over 5000) 142 Cities

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## METRO MUNICIPALITIES

### 48 Metro West Cities

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

### 33 Metro East Cities

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

June 2007

# 2007 MUNICIPAL SCREENING BOARD

screening board stuff\2007\Screening Board June 2007.xls 07-May-07

| OFFICERS | | | |
|---|---|---|---|
| Chair | Chuck Ahl | Maplewood | (651) 770-4552 |
| Vice Chair | Mel Odens | Willmar | (320) 235-4202 |
| Secretary | Shelly Pederson | Bloomington | (952) 563-4870 |

| MEMBERS | | | | |
|---|---|---|---|---|
| District | Years Served | Representative | City | Phone |
| 1 | 2005-2007 | Tom Pagel | Grand Rapids | (218) 326-7625 |
| 2 | 2006-2008 | Brian Freeburg | Bemidji | (218) 759-3576 |
| 3 | 2006-2008 | Terry Maurer | Elk River | (651) 644-4389 |
| 4 | 2007-2009 | Bob Zimmerman | Moorhead | (218) 299-5390 |
| Metro-West | 2007-2009 | Jon Haukaas | Fridley | (763) 572-3550 |
| 6 | 2007-2009 | Katy Gehler | Northfield | (507) 645-3006 |
| 7 | 2005-2007 | Fred Salsbury | Waseca | (507) 835-9700 |
| 8 | 2006-2008 | Glenn Olson | Marshall | (507) 537-6774 |
| Metro-East | 2005-2007 | Deb Bloom | Roseville | (651) 490-2200 |
| Cities | Permanent | Cindy Voigt | Duluth | (218) 730-5200 |
| of the | Permanent | Rhonda Rae | Minneapolis | (612) 673-2443 |
| First Class | Permanent | Paul Kurtz | Saint Paul | (651) 266-6203 |

| ALTERNATES | | | | |
|---|---|---|---|---|
| District | Year Beginning | | City | Phone |
| 1 | 2008 | Jim Prusak | Cloquet | (218) 879-6758 |
| 2 | 2009 | Greg Boppre | East Grand Forks | (218) 773-1185 |
| 3 | 2009 | Steve Bot | St. Michael | (763) 497-2041 |
| 4 | 2010 | Gary Nansen | Detroit Lakes | (218) 299-5390 |
| Metro-West | 2010 | Jean Keely | Blaine | (763) 784-6700 |
| 6 | 2010 | Don Borcherding | Stewartville | (507) 288-6464 |
| 7 | 2008 | Ken Saffert | Mankato | (507) 387-8631 |
| 8 | 2009 | Kent Exner | Hutchinson | (320) 234-4212 |
| Metro-East | 2008 | Russ Matthys | Eagan | (651) 675-5637 |

07-May-07

# 2007 SUBCOMMITTEES

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

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

| NEEDS STUDY SUBCOMMITTEE | UNENCUMBERED CONSTRUCTION FUNDS SUBCOMMITTEE |
|---|---|
| Tim Loose, Chair<br>St. Peter<br>(507) 625-4171<br>Expires after 2007 | Lee Gustafson, Chair<br>Minnetonka<br>(952) 939-8200<br>Expires after 2007 |
| Dave Kildahl<br>Crookston<br>(218) 281-6522<br>Expires after 2008 | Mike Metso<br>Past Chair<br>(218) 727-3282<br>Expires after 2008 |
| Craig Gray<br>Anoka<br>(763) 576-2700<br>Expires after 2009 | Steve Gaetz<br>St. Cloud<br>(320) 255-7240<br>Expires after 2009 |

miscellaneous/subcommittees 2007.xls

**2006 Municipal SCREENING BOARD**
**Fall Meeting Minutes**
**October 24 & 25, 2006**

## I. Opening by Municipal Screening Board Chair Stephen Gaetz

The 2006 Fall Municipal Screening Board Meeting was called to order at 1:00 p.m. on Tuesday, October 24, 2006 by Chair Gaetz.

A. Chair Gaetz introduced the Head Table and Subcommittee Chairs

Himself – Steve Gaetz, St. Cloud - Chair, Municipal Screening Board
Chuck Ahl, Maplewood - Vice Chair, Municipal Screening Board
Patti Simmons, MnDOT - State Aid Programs Engineer
Marshall Johnston, MnDOT - Manager, Municipal State Aid Needs Unit
Tom Drake – Faribault, Past Chair, Municipal Screening Board and Chair, Unencumbered Construction Funds Committee
Shelly Pederson, Bloomington - Chair, Needs Study Subcommittee
Lee Gustafson, Minnetonka - Past Chair, Municipal Screening Board
Mel Odens, Willmar - Secretary, Municipal Screening Board

B. Secretary Odens conducted the roll call with the following members present:

| | |
|---|---|
| District 1 | Tom Pagel, Grand Rapids |
| District 2 | Rich Clauson, Crookston (alternate) |
| District 3 | Terry Maurer, Elk River |
| District 4 | Jeff Kuhn, Morris |
| Metro West | Craig Gray, Anoka |
| District 6 | Jeff Johnson, Owatonna |
| District 7 | Fred Salsbury, Waseca |
| District 8 | Glen Olson, Marshall |
| Metro East | Deb Bloom-Heiser, Roseville |
| Duluth | Cindy Voigt |
| Minneapolis | Rhonda Rae |
| St. Paul | Paul Kurtz |

C. Chair Gaetz recognized the following Screening Board Alternates:

| | |
|---|---|
| District 6 | Heidi Hamilton, Northfield |
| Metro West | Jon Haukaas, Fridley |

D. Chair Gaetz recognized Minnesota Department of Transportation personnel:

| | |
|---|---|
| Kim DeLaRosa | Manager, County State Aid Needs Unit |
| Dan Simon | Assistant Mgr., MSAS Needs Unit |
| John Minor | Assistant District 1 State Aid Engineer |

| | |
|---|---|
| Lou Tasa | District 2 State Aid Engineer |
| Kelvin Howieson | District 3 State Aid Engineer |
| Merle Earley | District 4 State Aid Engineer |
| Steve Kirsch | District 6 State Aid Engineer (absent) |
| Doug Haeder | District 7 State Aid Engineer |
| Tom Behm | District 8 State Aid Engineer |
| Mark Gieseke | Metro State Aid Engineer (absent) |
| Mike Kowski | Assistant Metro State Aid Engineer |

E. Chair Gaetz recognized others in attendance:

Larry Veek, Minneapolis
Jim Vanderhoof, St. Paul
Patrick Mlaker, Duluth
Dave Sonnenberg, SEH, Chair, CEAM Legislative Committee

## II. Review of the 2006 Municipal State Aid Street Needs Report Booklet

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

A. Spring Screening Board minutes Pages 16-26

Chair Gaetz revised the agenda to move item B, joint subcommittee minutes of the Needs and Unencumbered Construction Funds, to after item L on the agenda. Also a presentation by North Mankato was added under Section III.

The minutes of the May, 2006 Screening Board were presented for approval. Motion by Salsbury, second by Bloom to approve minutes as presented. Motion carried.

Marshall went through the booklet and noted that he wouldn't go through each item in detail as this was done at the District meetings where there was good attendance. We have added four new cities: Circle Pines, Dayton, Isanti, and Jordan.

The Chair now proceeded with Item C as Item B was moved to after Item L.

C. Theoretical Population Apportionment. Pages 34-42.

The population share for 2007 apportionment is $15.62 per person in SA, which is down by $0.33 from last year (2006). This is due to city population increases and new cities. There is a population increase of 72,767.

D. Effect of the 2006 Needs Study Update. Pages 43-45
Marshall overviewed the effects of the 2006 MSAS needs study update, of which, doesn't include the four new cities yet.

E. Mileage, Needs and Apportionment. Pages 46-48
Marshall pointed out that the 2007 apportionment estimate is $14.97 per $1,000 in needs. There were 65.02 miles added plus the mileage of the four new cities.

F. Itemized Tabulation of Needs. Pages 49-53
Marshall reviewed the itemized tabulation of needs. The large insert/spread sheet provides an item by item comparison of construction Needs for each municipality except for "after the fact needs." The cost per mile shown in the report does not include bridges because large bridges in some cities distort the average. It was pointed out that, based on current needs and funding, the reconstruction cycle is 33.7 years on the MSA system.

G. Tentative 2007 Construction Needs Apportionment. Pages 54-60
It was noted that the construction needs apportionment estimate is based on the $14.97 per $1,000 in needs.

H. Adjustments to the Needs. Pages 61-77
Marshall went through the unencumbered construction fund balance adjustment table. The estimate will be finalized as of the December 1st balance. Chair Gaetz asked if there will be dollars available for advancement this year. State Aid noted that the November projection looks like there may be some to advance. Projects submitted for advancement will be ranked by MnDOT to determine who gets advancement dollars.

I. Recommendation to the Commissioner. Pages 78-80
Marshall noted that the Screening Board needs to submit our findings, by this letter, to the Commissioner based on Minnesota Statutes, Chapter 162.13, Subdivision 1.

J. Trunk Highway Turnback Allowance. Page 81
Information only and no discussion.

K. Theoretical 2007 Total Apportionment, Comparisons and Apportionment Rankings. Pages 82-91
Information only and no discussion.

L. Other Topics
a. Certification of MSAS system as Complete. Pages 95-97
There are four cities certified as complete needs: Fridley, Columbia Heights, Falcon Heights, and South St. Paul. This is reviewed every 2 years.

b. Administrative Account. Page 98
No discussion.

c. Research Account Pages 99-100
This is an action item for Wednesday, and discussion was deferred until then.

d. County Highway Turnback policy Pages 101-102
No discussion.

e. Screening Board Resolutions. Pages 103-112
No discussion.

Chair Gaetz now directed the board's discussion back to item "B".

B. Combined Subcommittee Meeting Minutes of the Needs and Unencumbered Construction Funds. Pages 27-32.

The main purpose of the was to review the number of unit price items, the way we are doing the needs to see if there is a way to make them simpler and various other topics. Also, take a look around the region to see if there is a better approach to distribute the construction funds. This evaluation had been referred to both the Needs Subcommittee and the UCFS Subcommittee, of which, both minutes were available. Chair Gaetz asked Marshall to review the minutes and overview what their discussion and recommendations were.

It was noted that Tom Drake, Chair of the UCFS, is available for questions and explanation of their recommendations.

a. Rules Revision Recommendation
The Standards Committee requested that a group of city engineers review a proposed rules revision pertaining to designating Municipal State Aid roads outside the city limits.
The rules revision doesn't require Screening Board approval and the committee voted against proposed rules revision for the following reasons:

i. The existing policy interpretation as administered by the SA Division is adequate.
ii. The proposed language only applies to a few exceptional situations.
iii. At this time these segments out of the city limits are not collection needs and are therefore self restricting.
iv. An Orderly Annexation Agreement doesn't guarantee annexation.

This item doesn't require Screening Board action.

b. Simplifying and Streamlining Unit Price Study

i. Removing Rural Needs

This pertains to about 5% of the overall needs. Even though this is a small percent overall, it could have a large impact on certain communities. The committee voted to not remove Rural Needs.

ii. Urban and Rural Grading Factors

Currently, SA computes a grading cost within their needs formula. The committee looked at applying a grading factor on top of this grading cost. They came up with both an urban grading multiplier as well as a rural grading multiplier. The multiplier would reflect those construction items that are less than 2% of the 25-year Construction Needs. The multipliers discussed were 1.6 for urban, and 1.4 for rural. This would eliminate four to five items within the needs that SA wouldn't have to compute every year. Handouts were then provided to show the effect these multipliers would have on all the cities. Different multipliers were also calculated as the initial multipliers actually reduced the needs by about $20 million, which wasn't the intent of the multipliers. Another grading factor of 1.7 for urban grading was also evaluated which didn't reduce the Needs as dramatic. Tom Drake explained implications of the grading factors versus Needs, for the benefit of the board, emphasizing they didn't want to see an overall reduction in Needs. There was then lengthy discussion on the pros and cons of applying the grading factors.

iii. "After the Fact" Retaining Wall Needs

Because retaining walls are generally used on a limited basis, provide an alternative to additional right of way acquisition, and right of way needs are calculated on an "after the fact" basis the committee recommended to revise the method of computing retaining wall needs to an "after the fact" basis.

iv. Maintenance Needs

The committee recommended no change.

c. Simplifying and Streamlining Needs Study

i. Current Needs Study process

Marshall commented that his staff polled other states, and concluded that there didn't appear to be a simple good uniform process. Tom Drake spoke in favor of the current system as it probably is the best. Others spoke in favor of the current system and Chair Gaetz agreed the current seemed to be OK and to leave it alone.

ii. Future Spring Screening Board meetings

Options were discussed to continue to meet as a stand-alone meeting or conduct with the summer CEAM meeting, or in August with other meetings. It was the consensus to allow the CEAM Executive Board discuss this issue taking in account all the other meetings scheduled with other organizations.

iii. Frequency of the Unit Price Study

Currently we do a unit price study every other year, and there was general support to do it every three years. SA would use the ENR construction cost index for the two "off" years. Currently on the odd years, we use the ENR construction cost index already.

**III. Other Items**

A. Presentation by North Mankato regarding negative Needs adjustment made in 2006.

This is a result of a negative needs adjustment for a segment incorrectly generating needs for seven years. There was a one time negative adjustment, of which, North Mankato has issue with. Brian Malm, of Bolton and Menk, was available to present the information to the Screening Board with action to be taken on Wednesday morning. Mr. Malm presented and explained their case. They had clear intent to follow procedure, had the process taken through the City Council, mileage was available and thought they sent in all the information. They were unaware no commissioner order was issued and were surprised when they heard about this adjustment. After lengthy discussion, members were concerned reversing this action could have a ripple effect to other communities requesting changes. Members also cited examples when this type of loss of needs has happened before, and wasn't caught until the next time needs were submitted. North Mankato was instructed to have available an appropriately worded resolution for action on Wednesday.

B. Presentation by Margaret Donahoe, Transportation Alliance

Margaret spoke regarding the MVST Amendment. If passed, this would be phased in over five years starting in FY2008. She had available spreadsheets on impacts, as well as campaign signs for members use. Opposition seems to be forming, and there also seems to be a sense that most of the money will be going to the metro area. She urged members to inform their city councils and constituents so they would understand the amendment and the help it will have on transportation across the state.

**IV. Motion to Adjourn**

Upon request from Chair Gaetz, a motion was made by Gray, seconded by Bloom, and carried without opposition to adjourn at 3:40 p.m. and resume the meeting at 8:30 a.m. Wednesday, at which time formal action will be taken on items before the Board.

## WEDNESDAY MORNING SESSION

The Municipal Screening Board reconvened at 8:30 a.m. on October 25, 2006.

Chair Gaetz welcomed Julie Skallman, and Rick Kjonaas to the meeting. He also requested to add item I. A. h. North Mankato negative needs discussion.

**I. Formal Actions by the 2006 Municipal Screening Board:**

A. Recommendations from combined Subcommittees (page 33)

Chair Gaetz indicated that draft language is available for the action items for today's meeting.

a. Removing all Rural Needs from the Needs study
No action is needed on this as the committee didn't recommend any changes.

b. Urban and Rural multipliers
There was a motion made by Gray, seconded by Olson to move the draft Grading Multiplier resolution with an urban multiplier of 1.7, with the rural multiplier remaining at 1.4. The resolution read as follows:

*That Needs for tree removal, concrete pavement removal, curb and gutter removal, and sidewalk removal be removed from urban segments and replaced with an urban grading multiplier of 1.7. This multiplier will apply to the Grading Needs of all proposed urban segments. That Needs for tree removal, concrete pavement removal, special drainage, gravel surface, and*

*gravel shoulders be removed from rural segments and replaced with a Rural Grading Multiplier of 1.4. This multiplier will be applied to the Grading Needs of all proposed rural segments.*

Jeff Johnson, District 6 spoke against both multipliers as they are less accurate and not really true for all cities. Deb Bloom indicated they generally did support the idea as it won't affect the accuracy of the system. Others spoke both in favor and against. Generally everyone agreed simpler would be OK, but equity was a great concern. There was also a concern that the total needs remain, or at least not go down.

After roll call vote the motion failed with a yes vote of 4, and no vote of 7.

The above discussion included the issue of the equity of having needs for concrete pavement removal and not for bituminous removal. There was then a motion by Rae, seconded by Pagel to refer this removal issue back to the joint Needs/UCFS Subcommittee. After roll call vote the motion passed with a yes vote of 7 and no vote of 4. There was also a suggestion to include a representative of a City of the 1st class.

There was then a motion by Salsbury, seconded by Bloom to give guidance to the subcommittee to look at items more commonly used or items unique or not necessarily basic to the system. Motion failed.

c. "After the Fact" retaining wall Needs

This item was brought forward from Tuesday's meeting with a draft resolution available that read as follows:

*That Retaining Wall Needs shall not be included in the needs study until such time that the retaining wall has been constructed and the actual cost established. At that time a 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. Documentation of the construction of the retaining wall, including eligible costs, must be submitted to your District State Aid Engineer by July 1st to be included in that years Needs Study.*

The effective date for these needs would be for projects let after January 1, 2007. It was also noted that retaining walls already in the system would be removed. There was a motion by Pagel, seconded by Kuhn to approve the motion as presented. Motion carried.

d. Annual Maintenance Needs
No action required.

e. Current Needs process
No action required.

f. Spring Screening Board meeting

It was noted that the Spring, 2007 meeting is set already and action would start with the Spring, 2008 meeting. It was the consensus of the delegates to continue with a standalone meeting and leave alone for now.

g. Frequency of the Unit Price Study

This item was brought forward from Tuesday's meeting with a draft resolution that read as follows:

*That the Unit Price Study go to a three-year (or triennial) cycle with the Unit Prices for the two "off years" to be set using the Construction Cost Index (ENR). The Screening Board may request a Unit Price Study on individual items in the "off years" if it is deemed necessary.*

After brief discussion, there was a motion by Bloom, seconded by Maurer to approve the motion as presented. Motion carried.

h. North Mankato Negative Needs Adjustment

There was a motion by Salsbury to remove the negative needs, except the 1998 adjustment, for Sherman Street Route 106. The motion died for a lack of a second.

B. Needs and Apportionment Data. Pages 43-80

Marshall presented the letter to the Commissioner for adjusted construction needs. There was a motion by Salsbury, seconded by Olson to approve. Motion carried.

C. Research Account
The following resolution was discussed as follows:

*Be it resolved that an amount of $557,436 (not to exceed ½ of 1% of the 2006 MSAS Apportionment Sum of $111,487,130) shall be set aside from the 2007 Apportionment Fund and credited to the Research Account.*

There was a motion by Gray, seconded by Maurer to approve the resolution as presented. Motion carried.

II. **Presentation by CEAM Legislative Committee – Dave Sonnenberg**
Dave overviewed the 2007 Legislative proposals they intend to present this session.

III. **State Aid Report – Julie Skallman/Rick Kjonaas**
Rick started the SA update by talking about advancement update, partnership agreements, and rules making meeting.

SA staff thinks there may be money available to advance this year. Appears it may be up to $10 million. There will be a November mailing to request to see if there is advancement wanted. They will then evaluate the requests internally.

Partnership agreements need to be renewed. Examples are using state labs. They are good for five years and it is time they be renewed.

The Rules making process is starting again and the next meeting is scheduled for November 29.

Julie announced that they are hosting the Mississippi Valley AASHTO conference in Minneapolis July 9, 10, 11, 2007. They are starting planning meetings and Secretary Mel Odens is representing CEAM and is to keep the membership informed.

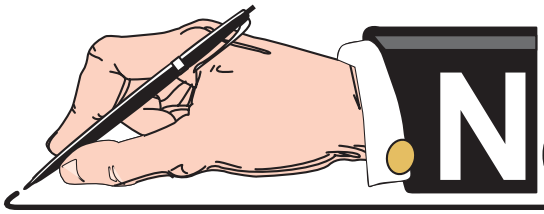
IV. **Other items**
There were no other items brought forward.

V. **Thanks**
Chair Gaetz thanked the following individuals:
Shelly Pederson – Chair of the Needs Study Subcommittee
Tom Drake – Chair of the UCFS and Past Chair of the Municipal Screening Board
Lee Gustafson – Past Chair of the Municipal Screening Board
Mike Metso – Past Chair of the Municipal Screening Board
Last meeting of Screening Board members: Jeff Kuhn, Craig Gray, and Jeff Johnson
Julie Skallman – State Aid Engineer
Rick Kjonaas – Assistant State Aid Engineer
Marshall Johnston – Manager, MSAS Needs Unit
All the District Aid Engineers and all other MnDOT staff in attendance.

VI. **Adjourn**
Upon request from Chair Gaetz, a motion was made by Gray, seconded by Maurer, and carried without opposition to adjourn at 10:05 a.m..

Respectfully submitted,

Melvin Odens
MSA Screening Board Secretary
Public Works Director – Willmar



# NOTES and COMMENTS

# UNIT PRICES

EXCAVATION

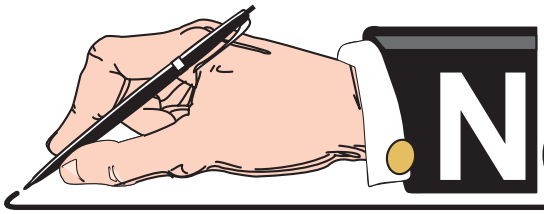


| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1989 | 70 | 1,406,108 | $3,024,233 | $2.15 | $3.00 | - |
| 1990 | 65 | 1,263,652 | 2,733,063 | 2.16 | 3.00 | - |
| 1991 | 67 | 1,260,768 | 3,303,493 | 2.62 | 3.00 | - |
| 1992 | 70 | 1,243,656 | 3,764,622 | 3.03 | 3.00 | - |
| 1993 | 64 | 1,105,710 | 2,994,010 | 2.71 | 3.00 | - |
| 1994 | 65 | 1,484,328 | 4,965,339 | 3.35 | 3.00 | - |
| 1995 | 59 | 1,317,807 | 3,419,869 | 2.60 | 3.00 | $2.52 |
| 1996 | 68 | 1,691,036 | 4,272,539 | 2.53 | 3.00 | 2.53 |
| 1998 | 60 | 919,379 | 3,273,588 | 3.56 | 3.00 | 2.77 |
| 1999 | | | | | 3.00 | 2.86 |
| 2000 | 56 | 1,157,353 | 3,490,120 | 3.02 | 3.20 | 2.84 |
| 2001 | | | | | 3.30 | 2.95 |
| 2002 | 50 | 893,338 | 3,275,650 | 3.67 | 3.30 | |
| 2003 | | | | | 3.40 | 2.99 |
| 2004 | 56 | 1,018,912 | 4,523,089 | 4.44 | 3.67 | |
| 2005 | | | | | 3.80 | 3.41 |
| | | | | | 4.00 | 3.34 |
| | | | | | | 3.68 |
| | | | | | | 4.08 |

SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2005 NEEDS STUDY IS $4.25 PER CU. YD.

**Note:** There was no Unit Price Study in years 1997,1999, 2001, 2003 and 2005. Therefore, we used the total of the past five year's costs divided by the total of the past five year's quantities for the 5-Year Average.

# AND GRAPHS



# NOTES and COMMENTS

# UNIT PRICE STUDY

**The unit price study was done annually until 1997. In 1996, the Municipal Screening Board made a motion to conduct the Unit Price study every two years, with the ability to adjust significant unit price changes on a yearly basis. There were no changes in the unit prices in 1997. In 1999 and 2001, a construction cost index was applied to the 1998 and 2000 contract prices. In 2003, the Screening Board directed the Needs Study Subcommittee to use the percent of increase in the annual National Engineering News Record Construction Cost Index to recommend Unit Costs to the Screening Board.**

**Needs Study Subcommittee minutes April 10, 2003**

> **After discussing at length the impacts, Chairman Schoonhoven suggested the Engineering News-Record (ENR) Construction Cost Index (CCI) be reviewed against these options as well. The CCI was 3.22% for the last year. The CCI is a recognized method of making price adjustments, and is consistent with past Cost Index price adjustments. There was a motion by Koehler seconded by Odens to use the CCI method of unit price adjustment for this year. This years Unit Price recommendations are based on the 3.22% ENR Construction Cost Index and rounded unless there was a recommendation from Mn/DOT on the cost.**

**Screening Board minutes from June 3 & 4, 2003**

> **Discussion took place regarding the use of the Minneapolis cost index versus the regional one. Motion by Kildahl / seconded by Ahl to accept the Needs Study Subcommittee's recommendations as presented, using a CCI of 3.22%. Motion carried without opposition.**

**Method of Computing Construction Cost Index Prices in the Future**

> **Motion by Ahl / seconded by Weiss to use the Engineering News Record CCI, National Average, for the Needs Unit Price adjustments in odd years. Motion carried without opposition.**

**These prices will be applied against the quantity tables located in the State Aid Manual Figs. C & D 5-892.820 to compute the 2007 construction (money) needs apportionment.**

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

**MN/DOT's hydraulic office furnished a recommendation of costs for storm sewer construction and adjustment based on 2006 construction costs. Special drainage costs are computed for rural roadways by the MN/DOT estimating unit based on the length and number of culverts per mile detailed by the Screening Board.**

**MN/DOT railroad office furnished a letter detailing railroad costs from 2006 construction projects.**

**Due to lack of data, a study is not done for traffic signals, maintenance, and engineering. Every segment, except those eligible for THTB funding, receives needs for traffic signals, engineering, and maintenance. All deficient segments receive street lighting needs. The unit prices used in the 2006 needs study are found in the Screening Board resolutions included in this booklet.**

## *ENR Construction Cost Index*

***for 2006***
***Used in the 2007 Needs Study***
***for the January 2008 allocation***

***In 2005, the annual average CCI increased 7446% from the base year of 1913.***
***In 2006, the annual average CCI increased 7751% from the base year of 1913.***
***The annual CCI increased 4.10% in 2006. This is computed by:***

***(7751 – 7446) / 7446 *100 = 4.10%***

## *ENR Construction Cost Index*

***for 2004***
***Used in the 2005 Needs Study***
***for the January 2006 allocation***

***In 2003, the annual average CCI increased 6694% from the base year of 1913.***
***In 2004, the annual average CCI increased 7115% from the base year of 1913.***
***The annual CCI increased 6.29% in 2004. This is computed by:***

***(7115 – 6694) / 6694 *100 = 6.29%***

## *ENR Construction Cost Index Percent of Increase*

| Year | Year end Percent of Increase from Base Year | Annual Percent of Increase | Five Year Average Percent of Increase | Ten Year Average Percent of Increase |
|---|---|---|---|---|
| 1990 | 4732 | | | |
| 1991 | 4835 | 2.18 | | |
| 1992 | 4985 | 3.10 | | |
| 1993 | 5210 | 4.51 | | |
| 1994 | 5408 | 3.80 | | |
| 1995 | 5471 | 1.16 | 2.95 | |
| 1996 | 5620 | 2.72 | 3.06 | |
| 1997 | 5826 | 3.67 | 3.17 | |
| 1998 | 5920 | 1.61 | 2.59 | |
| 1999 | 6059 | 2.35 | 2.30 | |
| 2000 | 6221 | 2.67 | 2.60 | 2.78 |
| 2001 | 6343 | 1.96 | 2.45 | 2.76 |
| 2002 | 6538 | 3.07 | 2.33 | 2.75 |
| **2003** | 6694 | 2.39 | 2.49 | 2.54 |
| 2004 | 7115 | 6.29 | 3.28 | 2.79 |
| **2005** | 7446 | 4.65 | 3.67 | 3.14 |
| 2006 | 7751 | 4.10 | 4.10 | 3.28 |
| **2007** | | | | |

**The ENR CCI percent of increase from the previous year is used to calculate the Unit Prices in the bolded years.**

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## 2007 UNIT PRICE RECOMMENDATIONS

| Needs Item | | 2006 Need Prices | Subcommittee Recommended Prices for 2007 | Screening Board Approved Prices For 2007 |
|---|---|---|---|---|
| Grading (Excavation) | Cu. Yd. | $4.75 | **$4.95** * | |
| Aggregate Shoulders #2221 | Ton | 14.25 | **14.25** * | |
| Curb and Gutter Removal | Lin.Ft. | 2.75 | **2.90** * | |
| Sidewalk Removal | Sq. Yd. | 5.50 | **5.50** * | |
| Concrete Pavement Removal | Sq. Yd. | 5.40 | **5.40** * | |
| Tree Removal | Unit | 300.00 | **310.00** * | |
| Class 5 Base #2211 | Ton | 8.40 | **8.75** * | |
| All Bituminous | Ton | 38.00 | **42.00** * | |
| Gravel Surface #2118 | Ton | 7.10 | **7.10** | |
| Curb and Gutter Construction | Lin.Ft. | 9.75 | **10.15** * | |
| Sidewalk Construction | Sq. Yd. | 26.00 | **28.00** * | |
| Storm Sewer Adjustment | Mile | 86,100 | **88,100** | |
| Storm Sewer | Mile | 268,035 | **271,200** | |
| Special Drainage - Rural | Mile | 40,000 | **36,000** | |
| Street Lighting | Mile | 100,000 | **100,000** * | |
| Traffic Signals | Per Sig | 130,000 | **130,000** * | |
| **Signal Needs Based On Projected Traffic** | | | | |
| Projected Traffic Percentage X | Unit Price = | Needs Per Mile | | |
| 0 - 4,999 .25 | $130,000 = | $32,500 | **$32,500** * | |
| 5,000 - 9,999 .50 | 130,000 = | 65,000 | **65,000** * | |
| 10,000 & Over 1.00 | 130,000 = | 130,000 | **130,000** * | |
| **Right of Way (Needs Only)** | Acre | 98,850 | **98,850** * | |
| **Engineering** | Percent | 22 | **22** | |
| **Railroad Grade Crossing** | | | | |
| Signs | Unit | 1,000 | **1,000** | |
| Pavement Marking | Unit | 750 | **750** | |
| Signals (Single Track-Low Speed) | Unit | 150,000 | **175,000** | |
| Signals & Gate (Multiple Track - High & Low Speed) | Unit | 200,000 | **200,000** | |
| Concrete Xing Material(Per Track) | Lin.Ft. | 1,000 | **1,000** | |
| **Bridges** | | | | |
| 0 to 149 Ft. | Sq. Ft. | 95.00 | **105.00** | |
| 150 to 499 Ft. | Sq. Ft. | 95.00 | **105.00** | |
| 500 Ft. and over | Sq. Ft. | 95.00 | **105.00** | |
| **Railroad Bridges over Highways** | | | | |
| Number of Tracks - 1 | Lin.Ft. | 10,200 | **102,000** * | |
| Additional Track (each) | Lin.Ft. | 8,500 | **8,500** * | |

*** 4.10% Construction Cost Index from the Engineering News Record**

# ANNUAL MAINTENANCE NEEDS COST

The prices below are used to compute the maintenance needs on each segment. Each street, based on its existing data, receives a maintenance need. This amount is added to the segment's street needs. The total statewide maintenance needs based on these costs in 2006 was $28,863,893 or 0.79% of the total Needs. For example, an urban road segment with 2 traffic lanes, 2 parking lanes, over 1,000 traffic, storm sewer and one traffic signal would receive $10,300 in maintenance needs per mile.

**EXISTING FACILITIES ONLY**

| | 2006 NEEDS PRICES | | SUBCOMMITTEE SUGGESTED PRICES | | SCREENING BOARD RECOMMENDED PRICES | |
|---|---|---|---|---|---|---|
| | Under 1000 ADT | Over 1000 ADT | **Under 1000 ADT** | **Over 1000 ADT** | Under 1000 ADT | Over 1000 ADT |
| 4.10% CCI | | | $1,796 | $2,967 | | |
| **Traffic Lane Per Mile** | $1,725 | $2,850 | **$1,800** | **$2,970** | | |
| 4.10% CCI | | | 1,796 | 1,796 | | |
| **Parking Lane Per Mile** | 1,725 | 1,725 | **1,800** | **1,800** | | |
| 4.10% CCI | | | 599 | 1,171 | | |
| **Median Strip Per Mile** | 575 | 1,125 | **600** | **1,180** | | |
| 4.10% CCI | | | 599 | 599 | | |
| **Storm Sewer Per MIle** | 575 | 575 | **600** | **600** | | |
| 4.10% CCI | | | 599 | 599 | | |
| **Per Traffic Signal** | 575 | 575 | **600** | **600** | | |
| **Normal M.S.A.S. Streets** | | | 5,955 | 5,955 | | |
| **Minimum Allowance Per Mile** | 5,720 | 5,720 | **5,960** | **5,960** | | |

"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 |

**This item was 0.79% of the total needs last year**

# A HISTORY OF THE ANNUAL MAINTENANCE NEEDS COSTS

(COMPUTED ON EXISTING MILEAGE ONLY)

7-May-07

| Year | Traffic Lane Per Mile | | Parking Lane Per Mile | | Median Strip Per Mile | | Storm Sewer Per Mile | | Per Traffic Signal | | Minimum Maintenance Allowance Per Mile | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT | Under 1000 ADT | Over 1000 ADT |
| **1986** | $300 | $500 | $100 | $100 | $100 | $200 | $100 | $100 | $100 | $100 | $1,000 | $1,000 |
| **1987** | 300 | 500 | 100 | 100 | 100 | 200 | 100 | 100 | 100 | 100 | 1,000 | 1,000 |
| **1988** | 600 | 1,000 | 200 | 200 | 200 | 400 | 200 | 200 | 400 | 400 | 2,000 | 2,000 |
| **1989** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1990** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1991** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1992** | 1,200 | 2,000 | 1,200 | 1,200 | 400 | 800 | 400 | 400 | 400 | 400 | 4,000 | 4,000 |
| **1993** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1994** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1995** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1996** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1998** | 1,320 | 2,200 | 1,320 | 1,320 | 440 | 880 | 440 | 440 | 440 | 440 | 4,400 | 4,400 |
| **1999** | 1,360 | 2,260 | 1,360 | 1,360 | 450 | 900 | 450 | 450 | 450 | 450 | 4,500 | 4,500 |
| **2000** | 1,400 | 2,300 | 1,400 | 1,400 | 460 | 910 | 460 | 460 | 460 | 460 | 4,600 | 4,600 |
| **2001** | 1,450 | 2,400 | 1,450 | 1,450 | 480 | 950 | 480 | 480 | 480 | 480 | 4,800 | 4,800 |
| **2002** | 1,450 | 2,400 | 1,450 | 1,450 | 480 | 950 | 480 | 480 | 480 | 480 | 4,800 | 4,800 |
| **2003** | 1,500 | 2,500 | 1,500 | 1,500 | 500 | 980 | 500 | 500 | 500 | 500 | 5,000 | 5,000 |
| **2004** | 1,550 | 2,575 | 1,550 | 1,550 | 515 | 1,000 | 515 | 515 | 515 | 515 | 5,150 | 5,150 |
| **2005** | 1,650 | 2,735 | 1,650 | 1,650 | 550 | 1,065 | 550 | 550 | 550 | 550 | 5,475 | 5,475 |
| **2006** | 1,725 | 2,850 | 1,725 | 1,725 | 575 | 1,125 | 575 | 575 | 575 | 575 | 5,720 | 5,720 |
| **2007** | | | | | | | | | | | | |

THESE MAINTENANCE COSTS ARE USED IN COMPUTING NEEDS .

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

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# 25 YEAR CONSTRUCTION NEEDS
# FOR EACH INDIVIDUAL CONSTRUCTION ITEM

07-May-07

| ITEM | 2005 APPORTIONMENT NEEDS COST | 2006 APPORTIONMENT NEEDS COST | DIFFERENCE | 2006 % OF THE TOTAL |
|---|---|---|---|---|
| Grading | $220,554,292 | $254,418,202 | $33,863,910 | 6.95% |
| Special Drainage | 4,529,296 | 4,360,172 | (169,124) | 0.12% |
| Storm Sewer Adjustment | 71,559,739 | 75,419,295 | 3,859,556 | 2.06% |
| Storm Sewer Construction | 255,568,746 | 267,418,612 | 11,849,866 | 7.30% |
| Curb & Gutter Removal | 34,992,307 | 36,181,169 | 1,188,862 | 0.99% |
| Sidewalk Removal | 23,140,994 | 23,987,970 | 846,976 | 0.65% |
| Pavement Removal | 58,090,966 | 58,439,424 | 348,458 | 1.60% |
| Tree removal | 17,619,250 | 23,109,900 | 5,490,650 | 0.63% |
| **SUBTOTAL GRADING** | **$686,055,590** | **$743,334,744** | **$57,279,154** | **20.29%** |
| Gravel Base #2211 | $391,729,602 | $418,879,209 | $27,149,607 | 11.43% |
| Bituminous Base #2350 | 318,684,660 | 360,659,216 | 41,974,556 | 9.85% |
| **SUBTOTAL BASE** | **$710,414,262** | **$779,538,425** | **$69,124,163** | **21.28%** |
| Gravel Surface #2118 | $60,039 | $89,674 | $29,635 | 0.00% |
| Bituminous Surface #2350 | 297,917,585 | 333,429,974 | 35,512,389 | 9.10% |
| Surface Widening | 2,152,360 | 2,544,214 | 391,854 | 0.07% |
| **SUBTOTAL SURFACE** | **$300,129,984** | **$336,063,862** | **$35,933,878** | **9.17%** |
| Gravel Shoulders #2221 | $2,799,574 | $2,664,011 | ($135,563) | 0.07% |
| **SUBTOTAL SHOULDERS** | **$2,799,574** | **$2,664,011** | **($135,563)** | **0.07%** |
| Curb and Gutter | $176,732,177 | $206,095,093 | $29,362,916 | 5.63% |
| Sidewalk | 234,834,075 | 254,813,052 | 19,978,977 | 6.96% |
| Traffic Signals | 198,727,750 | 205,261,875 | 6,534,125 | 5.60% |
| Street Lighting | 169,256,175 | 215,307,000 | 46,050,825 | 5.88% |
| Retaining Walls | 20,186,165 | 21,281,972 | 1,095,807 | 0.58% |
| **SUBTOTAL MISCELLANEOUS** | **$799,736,342** | **$902,758,992** | **$103,022,650** | **24.64%** |
| **TOTAL ROADWAY** | **$2,499,135,752** | **$2,764,360,034** | **$265,224,282** | **75.46%** |
| Bridge | $148,313,334 | $155,499,919 | $7,186,585 | 4.24% |
| Railroad Crossings | 57,460,375 | 59,081,725 | 1,621,350 | 1.61% |
| Maintenance | 27,017,647 | 28,863,893 | 1,846,246 | 0.79% |
| Engineering | 540,981,871 | 655,367,238 | 114,385,367 | 17.89% |
| **SUBTOTAL OTHERS** | **$773,773,227** | **$898,812,775** | **$125,039,548** | **24.54%** |
| **TOTAL** | **$3,272,908,979** | **$3,663,172,809** | **$390,263,830** | **100.00%** |

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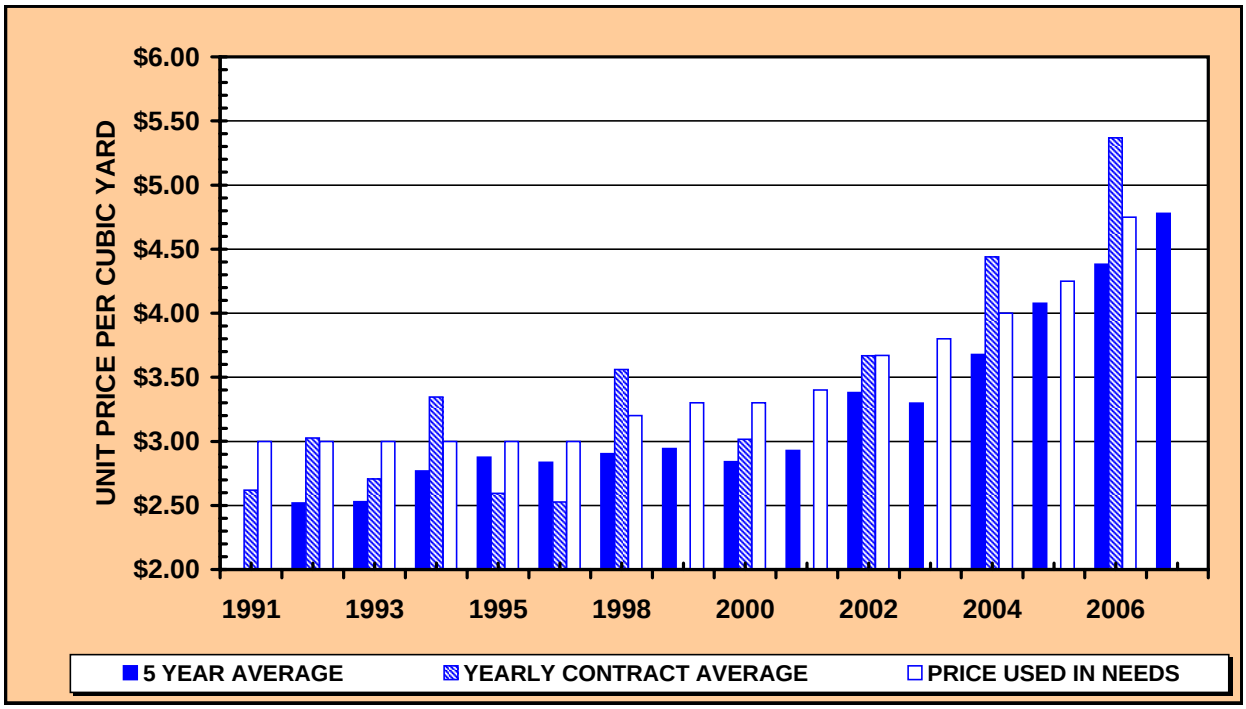
# GRADING




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 67 | 1,260,768 | $3,303,493 | $2.62 | $3.00 | - |
| 1992 | 70 | 1,243,656 | 3,764,822 | 3.03 | 3.00 | $2.52 |
| 1993 | 64 | 1,105,710 | 2,994,010 | 2.71 | 3.00 | 2.53 |
| 1994 | 65 | 1,484,328 | 4,965,339 | 3.35 | 3.00 | 2.77 |
| 1995 | 59 | 1,317,807 | 3,419,869 | 2.60 | 3.00 | 2.88 |
| 1996 | 68 | 1,691,036 | 4,272,539 | 2.53 | 3.00 | 2.84 |
| 1998 | 60 | 919,379 | 3,273,588 | 3.56 | 3.20 | 2.90 |
| 1999 | | | | | 3.30 | 2.94 |
| 2000 | 56 | 1,157,353 | 3,490,120 | 3.02 | 3.30 | 2.84 |
| 2001 | | | | | 3.40 | 2.93 |
| 2002 | 50 | 893,338 | 3,275,650 | 3.67 | 3.67 | 3.38 |
| 2003 | | | | | 3.80 | 3.30 |
| 2004 | 56 | 1,018,912 | 4,523,089 | 4.44 | 4.00 | 3.68 |
| 2005 | | | | | 4.25 | 4.08 |
| 2006 | 48 | 587,442 | 3,152,838 | 5.37 | 4.75 | 4.38 |
| 2007 | | | | | | 4.78 |

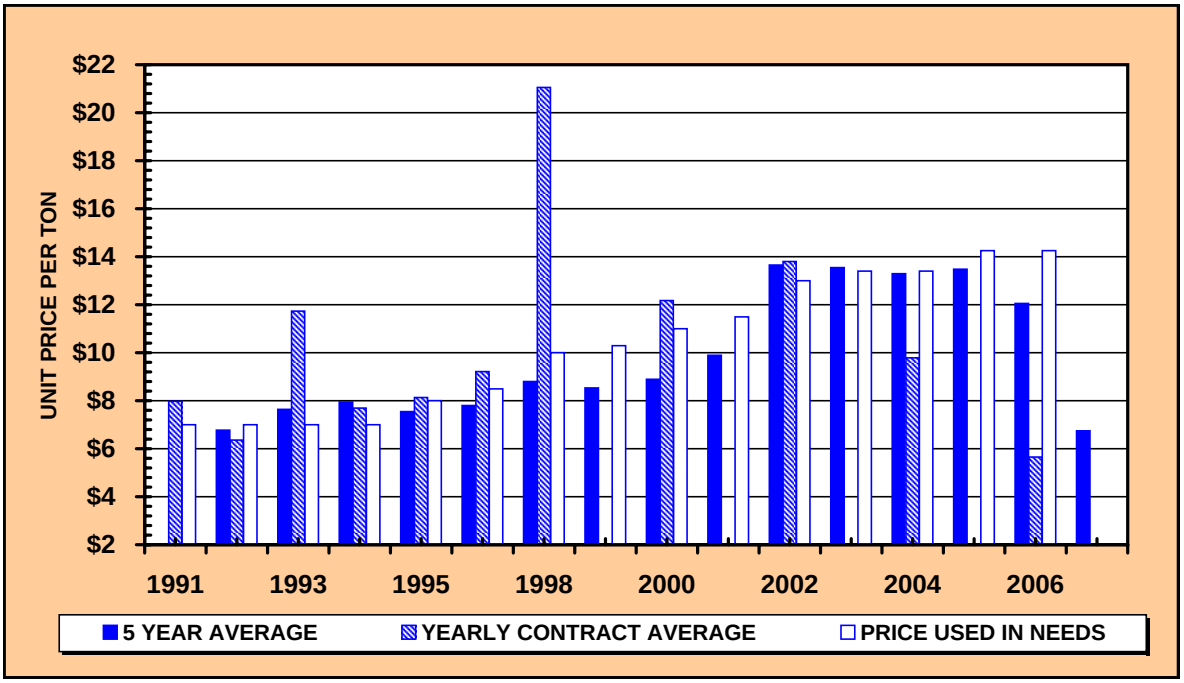
**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $4.95 PER CU. YD.**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.19 for a 2007 Unit Price of $4.94**

**This item was 6.95% of the total needs last year**

# AGGREGATE SHOULDERING




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 3 | 2334 | $18,624 | $7.98 | $7.00 | - |
| 1992 | 7 | 6285 | 39,992 | 6.36 | 7.00 | $6.77 |
| 1993 | 7 | 803 | 9,423 | 11.73 | 7.00 | 7.64 |
| 1994 | 4 | 999 | 7,691 | 7.70 | 7.00 | 7.94 |
| 1995 | 8 | 4923 | 40,009 | 8.13 | 8.00 | 7.54 |
| 1996 | 6 | 3067 | 28,277 | 9.22 | 8.50 | 7.80 |
| 1998 | 2 | 60 | 1,263 | 21.05 | 10.00 | 8.80 |
| 1999 | | | | | 10.30 | 8.54 |
| 2000 | 4 | 621 | 7,557 | 12.17 | 11.00 | 8.89 |
| 2001 | | | | | 11.50 | 9.90 |
| 2002 | 7 | 3365 | 46,422 | 13.80 | 13.00 | 13.65 |
| 2003 | | | | | 13.40 | 13.54 |
| 2004 | 2 | 290 | 2,840 | 9.79 | 13.40 | 13.29 |
| 2005 | | | | | 14.25 | 13.48 |
| 2006 | 1 | 813 | 4,600 | 5.66 | 14.25 | 12.06 |
| 2007 | | | | | | 6.75 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $14.25 PER TON**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.58 for a 2007 Unit Price of $14.83**

**This item was 0.07% of the total needs last year**

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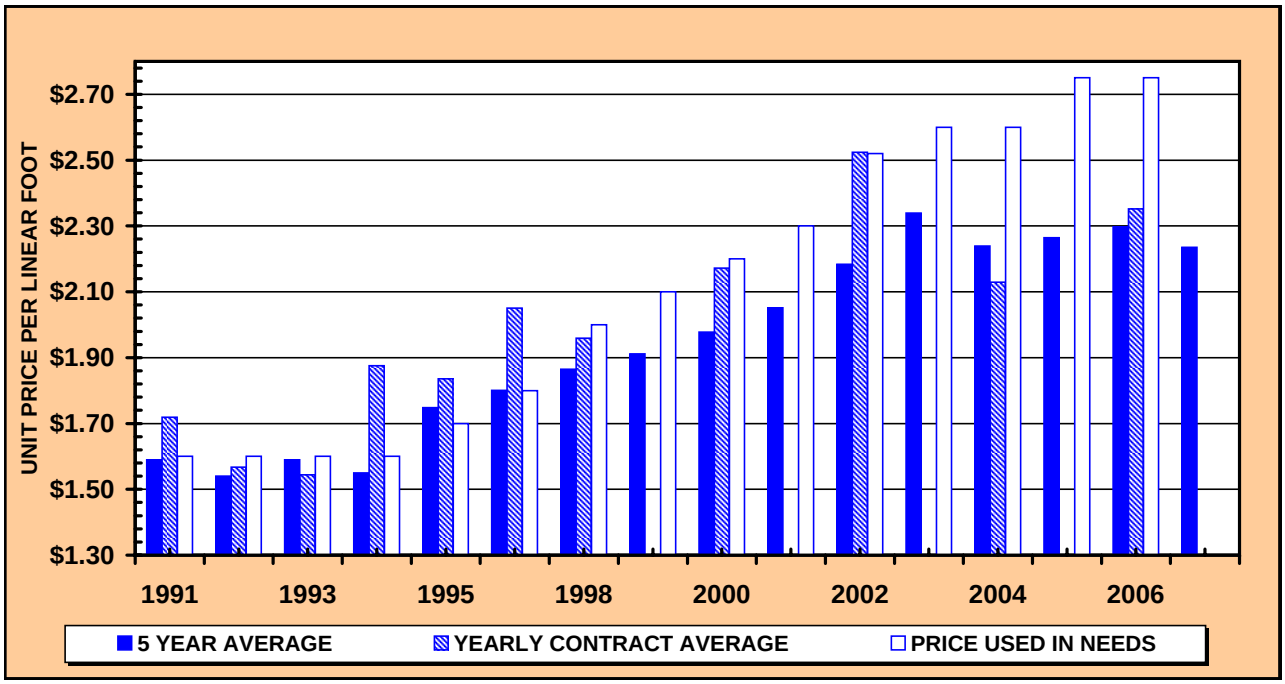
# CURB & GUTTER REMOVAL #2104




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 59 | 207,105 | $355,996 | $1.72 | $1.60 | $1.59 |
| 1992 | 58 | 152,992 | 239,845 | 1.57 | 1.60 | 1.54 |
| 1993 | 56 | 118,793 | 183,378 | 1.54 | 1.60 | 1.59 |
| 1994 | 59 | 309,891 | 581,256 | 1.88 | 1.60 | 1.55 |
| 1995 | 51 | 209,177 | 384,029 | 1.84 | 1.70 | 1.75 |
| 1996 | 62 | 142,362 | 291,935 | 2.05 | 1.80 | 1.80 |
| 1998 | 63 | 150,083 | 294,046 | 1.96 | 2.00 | 1.86 |
| 1999 | | | | | 2.10 | 1.91 |
| 2000 | 53 | 114,421 | 248,505 | 2.17 | 2.20 | 1.98 |
| 2001 | | | | | 2.30 | 2.05 |
| 2002 | 42 | 103,074 | 260,173 | 2.52 | 2.52 | 2.18 |
| 2003 | | | | | 2.60 | 2.34 |
| 2004 | 54 | 198,097 | 421,810 | 2.13 | 2.60 | 2.24 |
| 2005 | | | | | 2.75 | 2.26 |
| 2006 | 48 | 179,628 | 422,431 | 2.35 | 2.75 | 2.30 |
| 2007 | | | | | | 2.24 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $2.90 PER LIN. FT.**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.11 for a 2007 Unit Price of $2.86**

**This item was 0.99% of the total needs last year**

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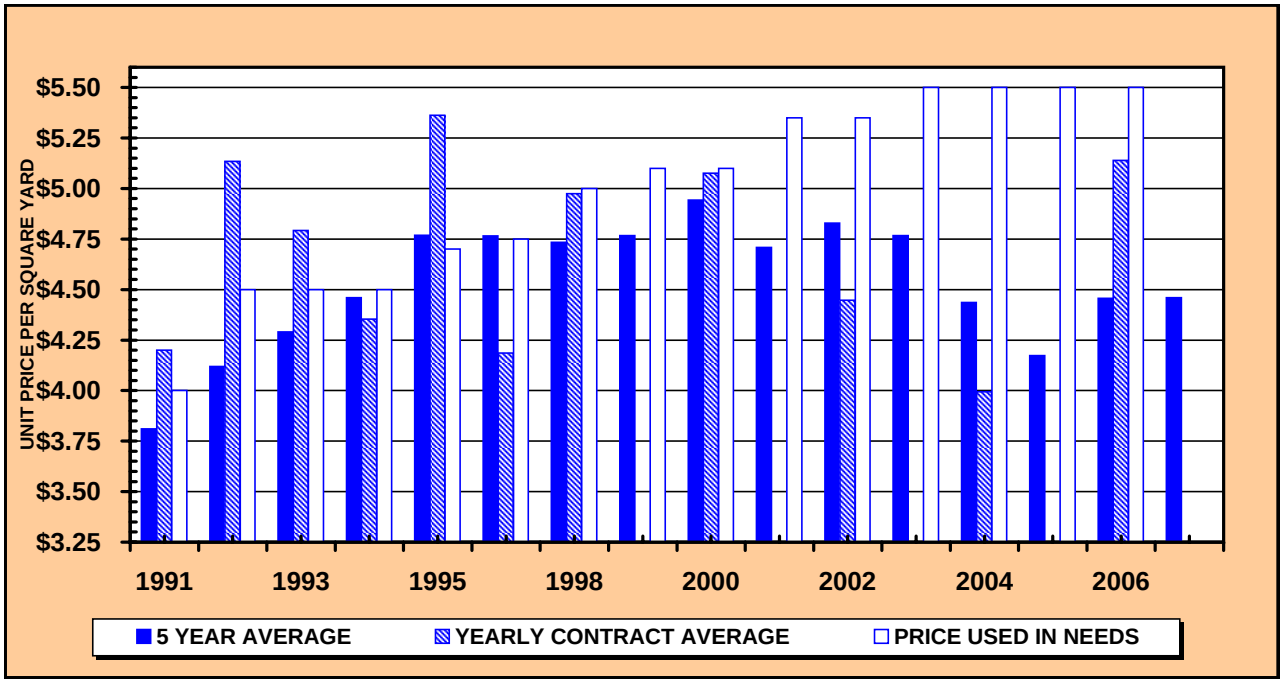
# SIDEWALK REMOVAL #2105




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 43 | 71,868 | $301,912 | $4.20 | $4.00 | $3.81 |
| 1992 | 45 | 57,606 | 295,735 | 5.13 | 4.50 | 4.12 |
| 1993 | 40 | 43,017 | 206,147 | 4.79 | 4.50 | 4.29 |
| 1994 | 39 | 54,206 | 235,995 | 4.35 | 4.50 | 4.46 |
| 1995 | 34 | 73,172 | 392,401 | 5.36 | 4.70 | 4.77 |
| 1996 | 46 | 49,759 | 208,305 | 4.19 | 4.75 | 4.77 |
| 1998 | 41 | 36,967 | 183,894 | 4.97 | 5.00 | 4.73 |
| 1999 | | | | | 5.10 | 4.77 |
| 2000 | 37 | 44,143 | 224,067 | 5.08 | 5.10 | 4.94 |
| 2001 | | | | | 5.35 | 4.71 |
| 2002 | 28 | 42,436 | 188,701 | 4.45 | 5.35 | 4.83 |
| 2003 | | | | | 5.50 | 4.77 |
| 2004 | 35 | 65,062 | 259,880 | 3.99 | 5.50 | 4.44 |
| 2005 | | | | | 5.50 | 4.17 |
| 2006 | 32 | 44,661 | 229,517 | 5.14 | 5.50 | 4.46 |
| 2007 | | | | | | 4.46 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $5.50 PER SQ.YD.**

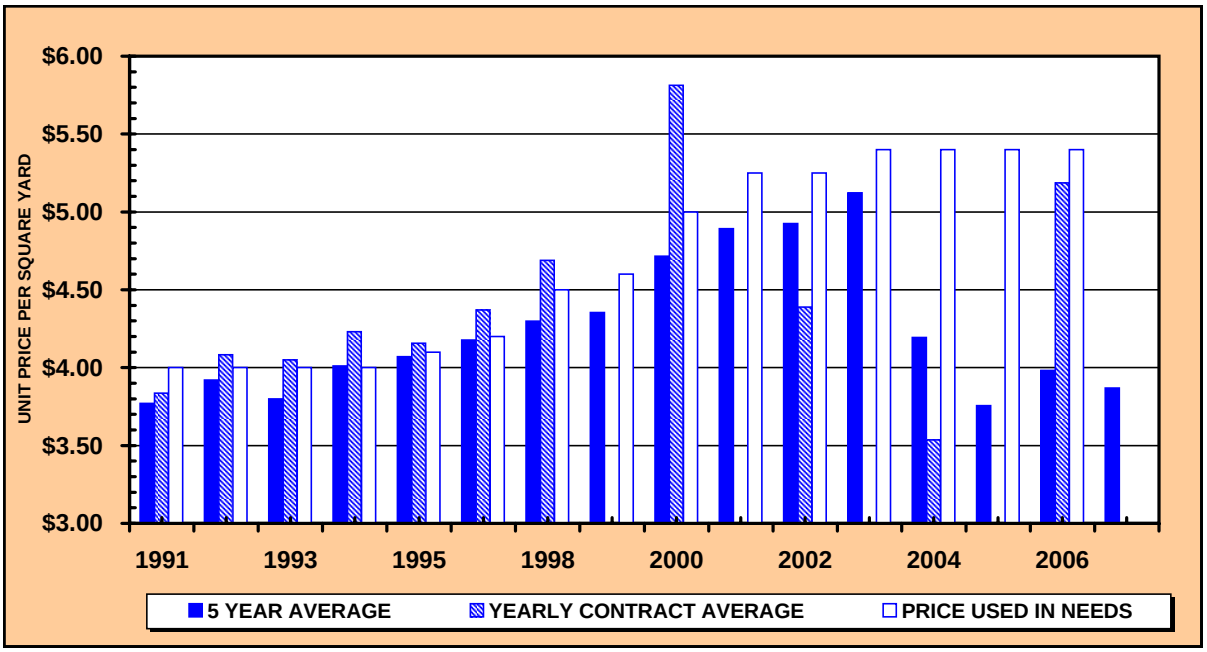
**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.23 for a 2007 Unit Price of $5.73**

**This item was 0.65% of the total needs last year**

N:\MSAS\EXCEL\2007\JUNE 2007 BOOK\UNIT PRICES 2007.XLS SIDEWALK REM. GRAPH

# 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 |
|---|---|---|---|---|---|---|
| 1991 | 27 | 108,995 | $418,053 | $3.84 | $4.00 | $3.77 |
| 1992 | 23 | 98,752 | 403,278 | 4.08 | 4.00 | 3.92 |
| 1993 | 26 | 190,259 | 770,477 | 4.05 | 4.00 | 3.80 |
| 1994 | 26 | 185,066 | 782,965 | 4.23 | 4.00 | 4.01 |
| 1995 | 27 | 81,258 | 337,753 | 4.16 | 4.10 | 4.07 |
| 1996 | 28 | 78,122 | 341,385 | 4.37 | 4.20 | 4.18 |
| 1998 | 24 | 110,941 | 520,259 | 4.69 | 4.50 | 4.30 |
| 1999 | | | | | 4.60 | 4.35 |
| 2000 | 15 | 68,760 | 399,759 | 5.81 | 5.00 | 4.72 |
| 2001 | | | | | 5.25 | 4.89 |
| 2002 | 17 | 64,918 | 284,994 | 4.39 | 5.25 | 4.93 |
| 2003 | | | | | 5.40 | 5.12 |
| 2004 | 23 | 188,676 | 667,342 | 3.54 | 5.40 | 4.19 |
| 2005 | | | | | 5.40 | 3.76 |
| 2006 | 20 | 47,703 | 247,439 | 5.19 | 5.40 | 3.98 |
| 2007 | | | | | | 3.87 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $5.40 PER SQ. YD.**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.22 for a 2007 Unit Price of $5.62**

**This item was 1.60% of the total needs last year**

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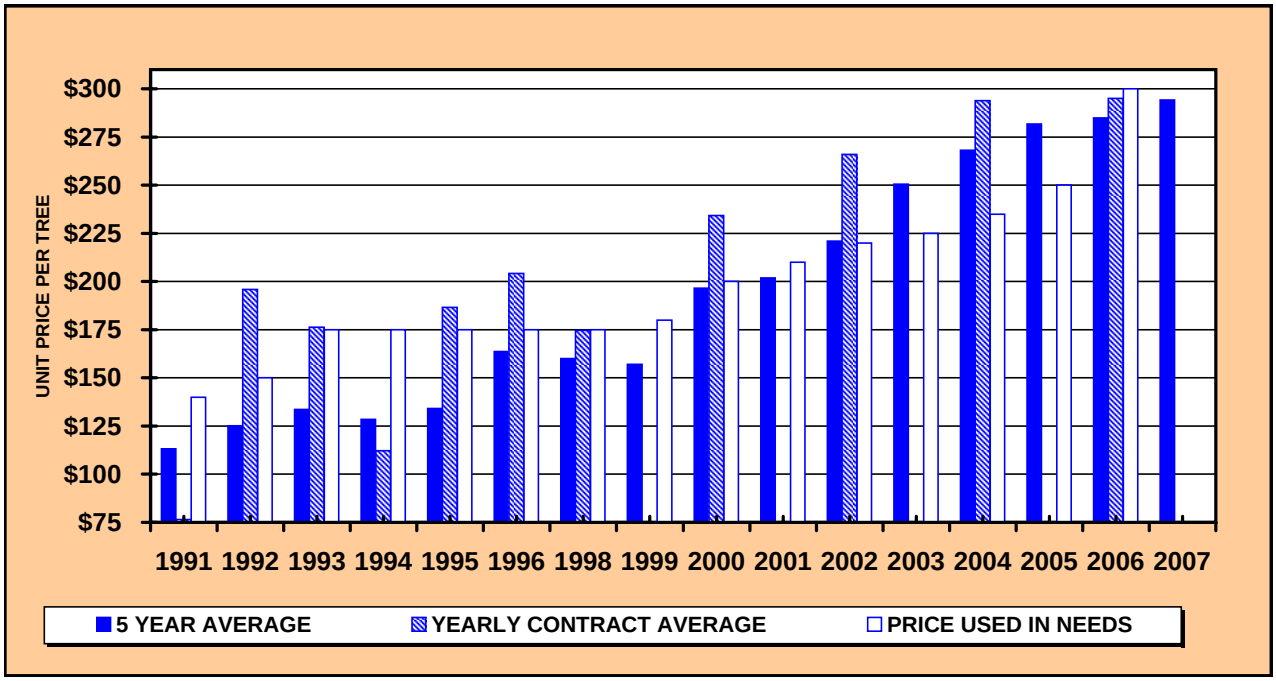
# TREE REMOVAL #2101




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 35 | 1,869 | $142,888 | $76.45 | $140.00 | $113.19 |
| 1992 | 39 | 867 | 169,797 | 195.84 | 150.00 | 125.11 |
| 1993 | 34 | 853 | 150,442 | 176.37 | 175.00 | 133.66 |
| 1994 | 35 | 1,876 | 210,444 | 112.18 | 175.00 | 128.49 |
| 1995 | 41 | 1,136 | 211,912 | 186.54 | 175.00 | 134.14 |
| 1996 | 33 | 783 | 159,884 | 204.19 | 175.00 | 163.64 |
| 1998 | 28 | 779 | 136,044 | 174.64 | 175.00 | 160.07 |
| 1999 | | | | | 180.00 | 157.04 |
| 2000 | 24 | 593 | 138,966 | 234.34 | 200.00 | 196.54 |
| 2001 | | | | | 210.00 | 201.81 |
| 2002 | 21 | 625 | 166,204 | 265.93 | 220.00 | 220.94 |
| 2003 | | | | | 225.00 | 250.55 |
| 2004 | 31 | 830 | 243,734 | 293.83 | 235.00 | 268.08 |
| 2005 | | | | | 250.00 | 281.84 |
| 2006 | 22 | 453 | 133,684 | 295.11 | 300.00 | 284.99 |
| 2007 | | | | | | 294.28 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $310.00 PER TREE**

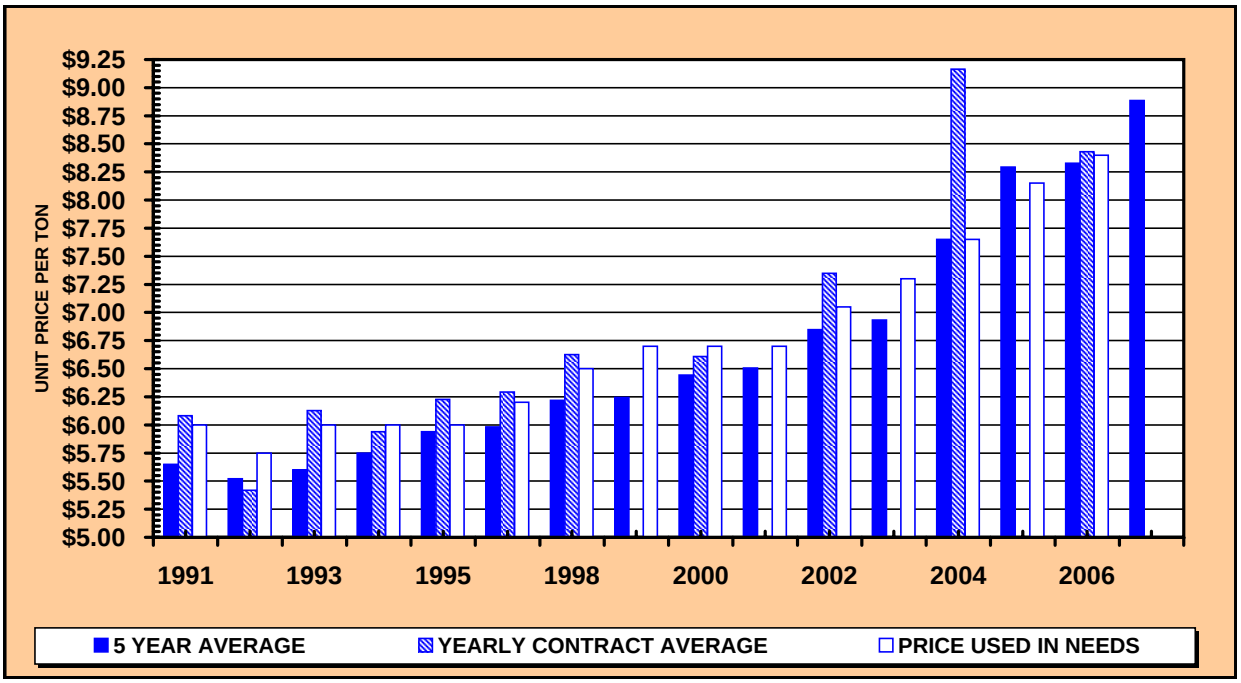
**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $12 for a 2007 Unit Price of $312**

**This item was 0.63% of the total needs last year**

07-May-07

# 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 |
|---|---|---|---|---|---|---|
| 1991 | 70 | 553,874 | $3,368,664 | $6.08 | $6.00 | $5.65 |
| 1992 | 69 | 650,835 | 3,525,629 | 5.42 | 5.75 | 5.52 |
| 1993 | 60 | 621,247 | 3,807,092 | 6.13 | 6.00 | 5.60 |
| 1994 | 70 | 660,174 | 3,921,230 | 5.94 | 6.00 | 5.75 |
| 1995 | 61 | 491,608 | 3,060,585 | 6.23 | 6.00 | 5.94 |
| 1996 | 68 | 593,314 | 3,733,431 | 6.29 | 6.20 | 5.98 |
| 1998 | 67 | 470,633 | 3,118,365 | 6.63 | 6.50 | 6.22 |
| 1999 | | | | | 6.70 | 6.24 |
| 2000 | 58 | 680,735 | 4,498,220 | 6.61 | 6.70 | 6.44 |
| 2001 | | | | | 6.70 | 6.51 |
| 2002 | 52 | 527,592 | 3,877,688 | 7.35 | 7.05 | 6.85 |
| 2003 | | | | | 7.30 | 6.93 |
| 2004 | 58 | 573,153 | 5,252,804 | 9.16 | 7.65 | 7.65 |
| 2005 | | | | | 8.15 | 8.29 |
| 2006 | 46 | 355,866 | 3,000,906 | 8.43 | 8.40 | 8.33 |
| 2007 | | | | | | 8.88 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $8.75 PER TON**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.34 for a 2007 Unit Price of $8.74**

**This item was 11.43% of the total needs last year**

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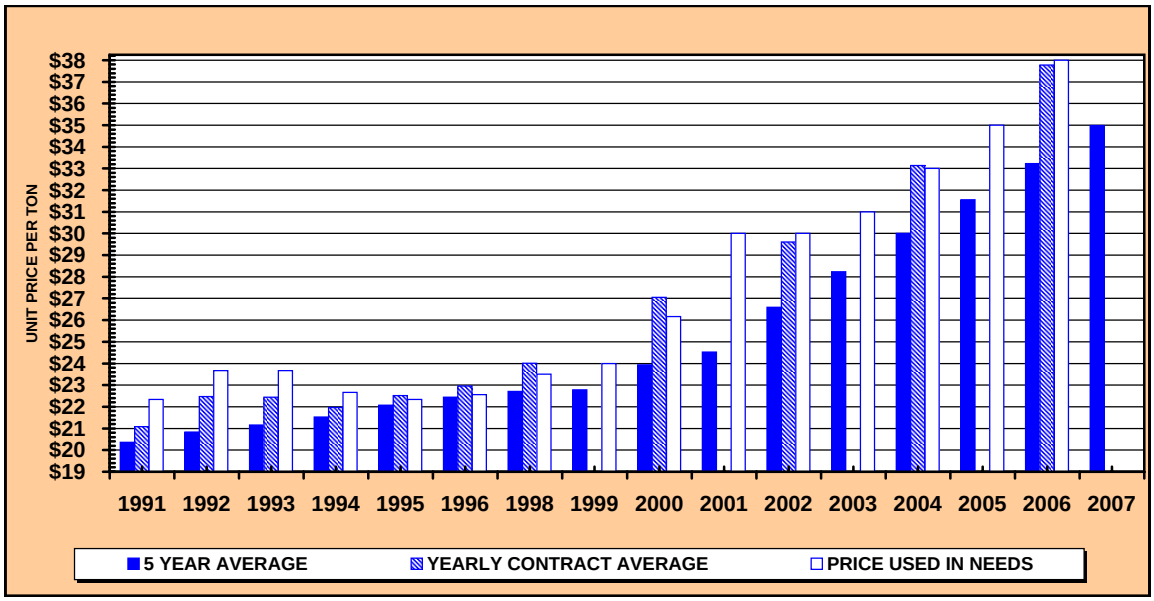
07-May-07

# ALL BITUMINOUS BASE & SURFACE




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 70 | 613,163 | $12,925,191 | $21.08 | $22.33 | $20.37 |
| 1992 | 69 | 519,900 | 11,685,503 | 22.48 | 23.67 | 20.83 |
| 1993 | 66 | 598,566 | 13,434,379 | 22.44 | 23.67 | 21.16 |
| 1994 | 70 | 692,066 | 15,208,681 | 21.98 | 22.67 | 21.53 |
| 1995 | 61 | 601,173 | 13,535,386 | 22.51 | 22.33 | 22.08 |
| 1996 | 68 | 540,860 | 12,419,802 | 22.96 | 22.57 | 22.45 |
| 1998 | 67 | 505,372 | 12,132,901 | 24.01 | 23.50 | 22.71 |
| 1999 | | | | | 24.00 | 22.78 |
| 2000 | 51 | 434,005 | 11,739,821 | 27.05 | 26.17 | 23.94 |
| 2001 | | | | | 30.00 | 24.52 |
| 2002 | 50 | 371,198 | 10,989,206 | 29.60 | 30.00 | 26.60 |
| 2003 | | | | | 31.00 | 28.23 |
| 2004 | 60 | 459,606 | 15,229,960 | 33.14 | 33.00 | 30.01 |
| 2005 | | | | | 35.00 | 31.56 |
| 2006 | 51 | 305,073 | 11,524,574 | 37.78 | 38.00 | 33.23 |
| 2007 | | | | | | 34.99 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $42.00 PER TON**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $1.56 for a 2007 Unit Price of $39.56**

**This item was 18.95% of the total needs last year**

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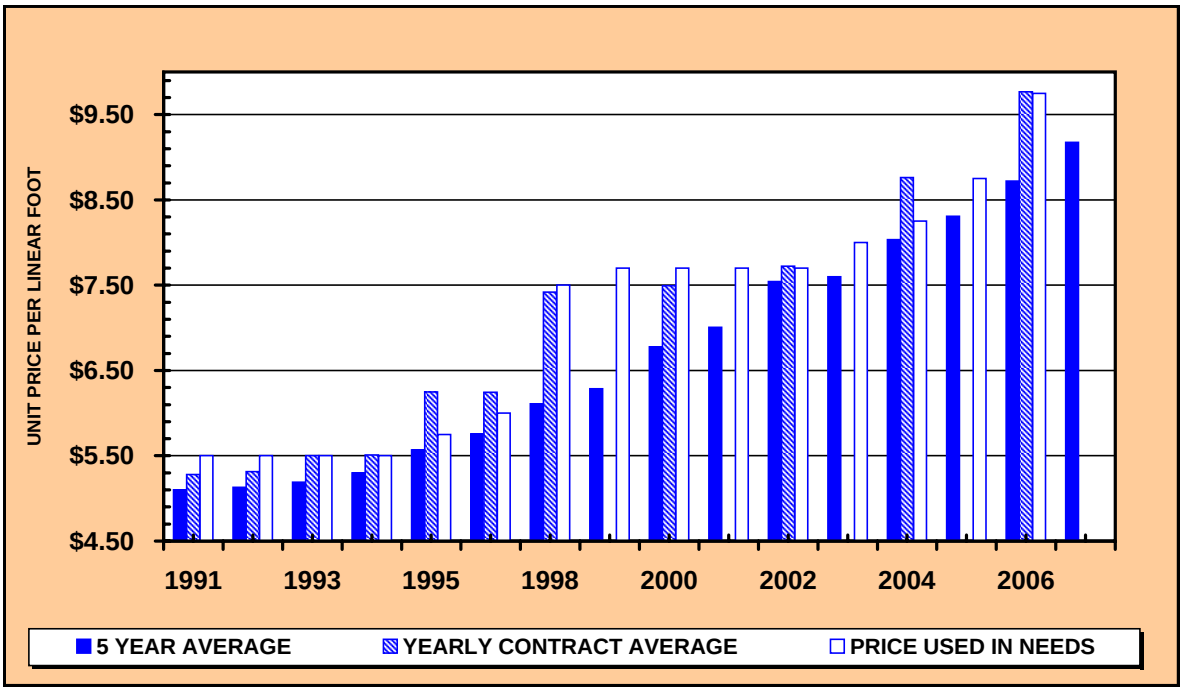
# CURB AND GUTTER CONSTRUCTION




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 67 | 559,342 | $2,952,849 | $5.28 | $5.50 | $5.10 |
| 1992 | 68 | 523,717 | 2,783,163 | 5.31 | 5.50 | 5.13 |
| 1993 | 69 | 515,687 | 2,836,644 | 5.50 | 5.50 | 5.19 |
| 1994 | 70 | 460,898 | 2,538,790 | 5.51 | 5.50 | 5.30 |
| 1995 | 64 | 528,679 | 3,303,027 | 6.25 | 5.75 | 5.57 |
| 1996 | 72 | 453,022 | 2,828,565 | 6.24 | 6.00 | 5.76 |
| 1998 | 64 | 347,973 | 2,581,523 | 7.42 | 7.50 | 6.11 |
| 1999 | | | | | 7.70 | 6.28 |
| 2000 | 55 | 418,211 | 3,133,900 | 7.49 | 7.70 | 6.78 |
| 2001 | | | | | 7.70 | 7.01 |
| 2002 | 50 | 363,497 | 2,807,345 | 7.72 | 7.70 | 7.54 |
| 2003 | | | | | 8.00 | 7.60 |
| 2004 | 59 | 469,131 | 4,110,211 | 8.76 | 8.25 | 8.04 |
| 2005 | | | | | 8.75 | 8.31 |
| 2006 | 52 | 327,171 | 3,195,201 | 9.77 | 9.75 | 8.72 |
| 2007 | | | | | | 9.17 |

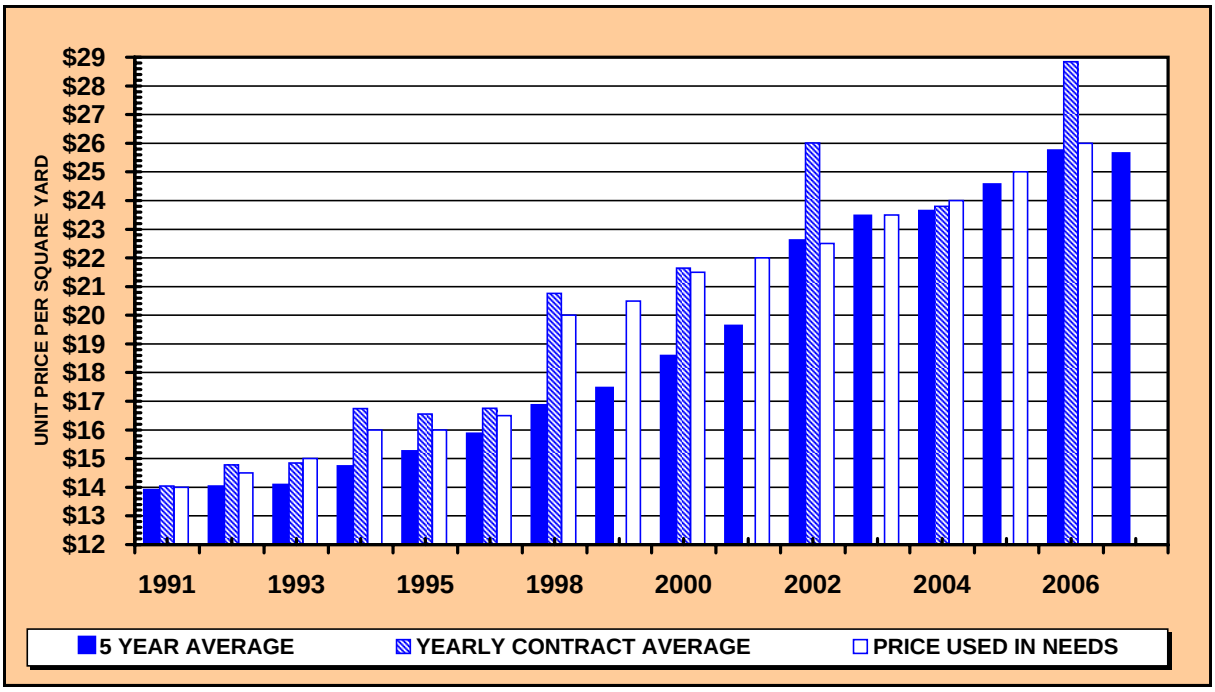
**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $10.15 PER LIN. FT.**

**The 5 year average includes the costs from 2003 thru 2007**

**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $0.40 for a 2007 Unit Price of $10.15**

**This item was 5.63% of the total needs last year**

# SIDEWALK CONSTRUCTION #2521




| NEEDS YEAR | NO. OF CITIES | QUANTITY | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1991 | 60 | 179,115 | $2,514,996 | $14.04 | $14.00 | $13.86 |
| 1992 | 62 | 141,946 | 2,097,863 | 14.78 | 14.50 | 13.99 |
| 1993 | 55 | 119,082 | 1,767,834 | 14.85 | 15.00 | 14.04 |
| 1994 | 56 | 89,662 | 1,501,608 | 16.75 | 16.00 | 14.69 |
| 1995 | 49 | 134,724 | 2,230,974 | 16.56 | 16.00 | 15.22 |
| 1996 | 60 | 94,140 | 1,577,035 | 16.75 | 16.50 | 15.83 |
| 1998 | 54 | 71,578 | 1,486,101 | 20.76 | 20.00 | 16.82 |
| 1999 | | | | | 20.50 | 17.42 |
| 2000 | 45 | 88,562 | 1,917,075 | 21.65 | 21.50 | 18.54 |
| 2001 | | | | | 22.00 | 19.59 |
| 2002 | 38 | 61,390 | 1,596,409 | 26.00 | 22.50 | 22.57 |
| 2003 | | | | | 23.50 | 23.43 |
| 2004 | 47 | 123,460 | 2,937,553 | 23.79 | 24.00 | 23.59 |
| 2005 | | | | | 25.00 | 24.53 |
| 2006 | 43 | 69,500 | 2,004,367 | 28.84 | 26.00 | 25.71 |
| 2007 | | | | | | 25.61 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS $28.00 PER SQ. YD.**

**The 5 year average includes the costs from 2003 thru 2007**
**Applying the ENR Construction Cost Index of 4.10% will result in an increase of $1.07 for a 2007 Unit Price of $27.07**

**This item was 6.96% of the total needs last year**

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# STORM SEWER, LIGHTING AND SIGNAL NEEDS COSTS

| NEEDS YEAR | STORM SEWER ADJUSTMENT (Per Mile) | STORM SEWER CONSTRUCTION (Per Mile) | LIGHTING (Per Mile) | SIGNALS (Per Mile) |
|---|---|---|---|---|
| 1987 | $62,000 | $196,000 * | $2,000 | $12,000 |
| 1988 | 62,000 | 196,000 * | 16,000 | 15,000 |
| 1989 | 62,000 | 196,000 * | 16,000 | 15,000-45,000 |
| 1990 | 62,000 | 196,000 | 16,000 | 15,000-45,000 |
| 1991 | 62,000 | 196,000 | 16,000 | 18,750-75,000 |
| 1992 | 62,000 | 199,500 | 20,000 | 20,000-80,000 |
| 1993 | 64,000 | 206,000 | 20,000 | 20,000-80,000 |
| 1994 | 67,100 | 216,500 | 20,000 | 20,000-80,001 |
| 1995 | 69,100 | 223,000 | 20,000 | 20,000-80,002 |
| 1996 | 71,200 | 229,700 | 20,000 | 20,000-80,003 |
| 1998 | 76,000 | 245,000 | 20,000 | 24,990-99,990 |
| 1999 | 79,000 | 246,000 | 35,000 | 24,990-99,991 |
| 2000 | 80,200 | 248,500 | 50,000 | 24,990-99,992 |
| 2001 | 80,400 | 248,000 | 78,000 ** | 30,000-120,000 |
| 2002 | 81,600 | 254,200 | 78,000 | 30,000-120,001 |
| 2003 | 82,700 | 257,375 | 80,000 | 31,000-124,000 |
| 2004 | 83,775 | 262,780 | 80,000 | 31,000-124,000 |
| 2005 | 85,100 | 265,780 | 82,500 | 32,500-130,000 |
| 2006 | 86,100 | 268,035 | 100,000 | 32,500-130,000 |
| 2007 | | | | |

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

**MN\DOT'S HYDRAULIC OFFICE RECOMMENDED PRICES FOR 2007:**

| | Storm Sewer Adjustment | Storm Sewer Construction |
|---|---|---|
| **2007** | **$88,102** | **$271,117** |

**SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2007:**

| | Storm Sewer Adjustment | Storm Sewer Construction | Lighting | Signals |
|---|---|---|---|---|
| **2007** | **$88,100** | **$271,200** | **$100,000** | **$130,000** |

## RAILROAD CROSSINGS NEEDS COSTS

| NEEDS YEAR | SIGNS (Per Unit) | PAVEMENT MARKING | SIGNALS (Low Speed) (Per Unit) | SIGNALS & GATES (High Speed) (Per Unit) | CONCRETE CROSSING MATERIAL (Per foot) |
|---|---|---|---|---|---|
| 1987 | $300 | | $65,000 | $95,000 | |
| 1988 | 300 | | 65,000 | 95,000 | $700 |
| 1989 | 300 | | 70,000 | 99,000 | 700 |
| 1990 | 400 | | 75,000 | 110,000 | 750 |
| 1991 | 500 | | 80,000 | 110,000 | 850 |
| 1992 | 600 | $750 | 80,000 | 110,000 | 900 |
| 1993 | 600 | 750 | 80,000 | 110,000 | 900 |
| 1994 | 800 | 750 | 80,000 | 110,000 | 750 |
| 1995 | 800 | 750 | 80,000 | 110,000 | 750 |
| 1996 | 800 | 750 | 80,000 | 110,000 | 750 |
| 1998 | 1,000 | 750 | 80,000 | 130,000 | 750 |
| 1999 | 1,000 | 750 | 85,000 | 135,000 | 850 |
| 2000 | 1,000 | 750 | 110,000 | 150,000 | 900 |
| 2001 | 1,000 | 750 | 120,000 | 160,000 | 900 |
| 2002 | 1,000 | 750 | 120,000 | 160,000 | 1,000 |
| 2003 | 1,000 | 750 | 120,000 | 160,000 | 1,000 |
| 2004 | 1,000 | 750 | 150,000 | 187,500 | 1,000 |
| 2005 | 1,000 | 750 | 150,000 | 187,000 | 1,000 |
| 2006 | 1,000 | 750 | 150,000 | 200,000 | 1,000 |
| 2007 | | | | | |

**MN\DOT'S RAILROAD OFFICE RECOMMENDED PRICES FOR 2007:**

| | Signs | Pavement Marking | Signals | Sig. & Gates | Concrete X-ing Surf. |
|---|---|---|---|---|---|
| **2007** | **$1,000** | **$750** | **$175,000** | **$175,000-$250,000** | **$1,000** |

**SUBCOMMITTEE'S RECOMMENDED PRICES FOR 2007:**

| | | | | | |
|---|---|---|---|---|---|
| **2007** | **$1,000** | **$750** | **$175,000** | **$200,000** | **$1,000** |

**Minnesota Department of Transportation**

# Memo

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

Date: April 23, 2007

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

From: Mike Leuer
State Aid Hydraulic Specialist

Phone: (651) 747-2167

Subject: State Aid Storm Sewer
Construction Costs for 2006

We have completed our analysis of storm sewer construction costs incurred for 2006 and the following assumptions can be utilized for planning purposes per roadway mile:

- Approximately $271,117 for new construction, and
- Approximately $88,102 for adjustment of existing systems

The preceding amounts are based on the average cost per mile of State Aid storm sewer using unit prices from approximately 95 plans for 2006.

CC: Andrea Hendrickson (file)

# Memo

**Office of Freight and Commercial Vehicle Operations**
Railroad Administration Section
Mail Stop 470
395 John Ireland Blvd.
St. Paul, Minnesota 55155-1899

Office Tel: 651/366-3659
Fax: 651/366-3720

May 7, 2007

To: Marshall Johnson
Needs Unit – State Aid

From: Susan H. Aylesworth
Director, Rail Administration Section

Subject: Projected Railroad Grade Crossing Improvements – Cost for 2006

We have projected 2006 costs for railroad/highway improvements at grade crossings. For planning purposes, we recommend using the following figures:

| | |
|---|---|
| Signals (single track, low speed, average price)* | $175,000.00 |
| Signals & Gates (multiple track, high/low speed, average price)* | $175,000 - $250,000.00 |
| Signs (advance warning signs and crossbucks) | $1,000 per crossing |
| Pavement Markings (tape) | $5,500 per crossing |
| Pavement Markings (paint) | $ 750 per crossing |
| Crossing Surface (concrete, complete reconstruction) | $1,000 per track ft. |

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

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



An equal opportunity employer

## ***Special Drainage Costs for Rural Segments***
## ***2007***

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

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

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

After consulting with the MN/DOT estimating unit and the MN/DOT hydraulics unit, the following determinations have been made:

***For Entrance Culverts:***

1) The recommended residential driveway width onto a state aid roadway is 16 feet. (State Aid Manual Fig. D(2) 5-892.210).
2) The minimum pipe diameter of Side Culverts shall be 15 inches. The minimum cover shall be 1.25 feet to the top of rigid pavement and 1.75 feet to the top of flexible pavement. (Drainage Manual 5.2.4).
3) The MN/DOT hydraulics unit recommends using a 15 -inch Corrugated Steel Pipe and two GS aprons as the standard for an entrance culvert to a rural segment on the Municipal State Aid Street system.
4) For construction needs purposes the MN/DOT estimating unit recommends using $22.00 per foot as a cost for 15” CSP and $150.00 per apron.
5) Using a 3:1 inslope for the driveway with a 4' deep ditch (the culvert would have 2.5 feet of cover), the length of the pipe would be 31 feet plus two aprons.
6) Therefore, the estimated construction needs cost per entrance would be $982.00.

Using the 1990 Needs Study Subcommittee recommended number of 25 entrances per mile, the cost of Side Culverts per mile would be $24,550.

***For Centerline Culverts:***

1) The minimum pipe diameter of centerline culverts shall be 18 inches. The minimum cover shall be 1.25 feet to the top of rigid pavement and 1.75 feet to the top of flexible pavement. (Drainage Manual 5.2.4).
2) The MN/DOT hydraulics unit recommends using an 18 -inch Reinforced Concrete Pipe and two aprons as the standard for a centerline culvert on a rural segment of the Municipal State Aid Street system.
3) For construction needs purposes the MN/DOT estimating unit recommends using $34.00 per foot as a cost for 18" RCP and $540 per apron.
4) Using a 40' roadbed width, a 4:1 inslope and a 4' ditch depth (the culvert would have 1.5 feet of cover), the length of the culvert would be 52' plus two aprons.
5) Therefore, the estimated construction needs cost per centerline culvert would be $2,848.

Using the 1990 Needs Study Subcommittee recommended number of four centerline culverts per mile, the cost of centerline culverts per mile would be $11,392.

By adding the cost of the 25 Side Culverts and the 4 centerline culverts, the estimated construction needs cost per mile for Special Drainage would be **$35,942** per mile.

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS _$36,000_ PER MILE.**

The 2006 Cost per Mile was $40,000
The 2005 Cost per Mile was $40,000
The 2004 Cost per Mile was $40,000
The 2003 Cost per Mile was $37,400
The 2002 Cost per Mile was $37,400

This item was 0.12 % of the total needs last year.

# CSAH Roadway Unit Price Report

**JUNE, 2007**

| Construction Item | 2006 CSAH Needs Study Average | 2002-2006 CSAH 5-Year Const. Average | 2006 CSAH Const. Average | 2007 MSAS Needs Study Unit Price Recommended by NSS |
|---|---|---|---|---|
| **Rural & Urban Design** | | | | |
| Gravel Base Cl 5 & 6/Ton | $7.03 | $6.45 | $7.89 | |
| Outstate(Gravel Base Cl 5 & 6/Ton) | 6.69 | 6.14 | 7.34 | |
| Metro (Gravel Base Cl 5 & 6/Ton) | 10.02 | 8.45 | 9.76 | |
| **Rural Design** | | | | |
| Outstate (Bituminous/Ton) | 27.62 | 25.89 | 36.90 | |
| Gravel Surf. 2118/Ton | 7.09 | 6.34 | 7.21 | 7.10 |
| Gravel Shldr. 2221/Ton | 8.36 | 7.16 | 9.05 | |
| **Urban Design** | | | | |
| Outstate (Bituminous/Ton) | 37.39 | 32.64 | 36.27 | |
| **Rural & Urban Design** | | | | |
| Metro (Bituminous/Ton) | 37.41 | 38.93 | 49.68 | |

**Gravel Surface cost used in the Needs last year was $7.10**
**This item was 0.00% of the Needs last year**

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# RURAL SEGMENTS WITH PROJECTED TRAFFIC LESS THAN 150

*from 2006 Needs for the 2007 Needs Study*

| CITY NAME | SEGMENT | PROPOSED DESIGN CODE | PROJECTED TRAFFIC | SEGMENT LENGTH |
|---|---|---|---|---|
| DAYTON | 229 - 102 - 20 | 2 - RURAL/EXISTING RURAL | 143 | 0.54 |
| HIBBING | 131 - 209 - 010 | 2 - RURAL/EXISTING RURAL | 70 | 0.93 |
| HIBBING | 131 - 214 - 010 | 2 - RURAL/EXISTING RURAL | 80 | 0.71 |
| NORTH BRANCH | 225 - 114 - 010 | 2 - RURAL/EXISTING RURAL | 108 | 0.50 |
| SHAKOPEE | 166 - 128 - 20 | 2 - RURAL/EXISTING RURAL | 75 | 0.26 |
| **TOTAL** | | | | **2.94** |

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# 2007 MSAS SCREENING BOARD DATA

# JUNE, 2007

## 2006 Bridge Construction Projects

After compiling the information received from the Mn/DOT Bridge Office and the State Aid Bridge Office at Oakdale, these are the average costs arrived at for 2006. In addition to the normal bridge materials and construction costs, prorated mobilization, bridge removal and riprap costs are included if these items are included in the contract. Traffic control, field office and field lab costs are not included.

From minutes of June 6, 2001 Screening Board Meeting:
Motion by David Sonnenberg and seconded by Mike Metso to combine the three bridge unit costs into one. Motion carried without oppostion.

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# Bridges Let In Calendar Year 2006

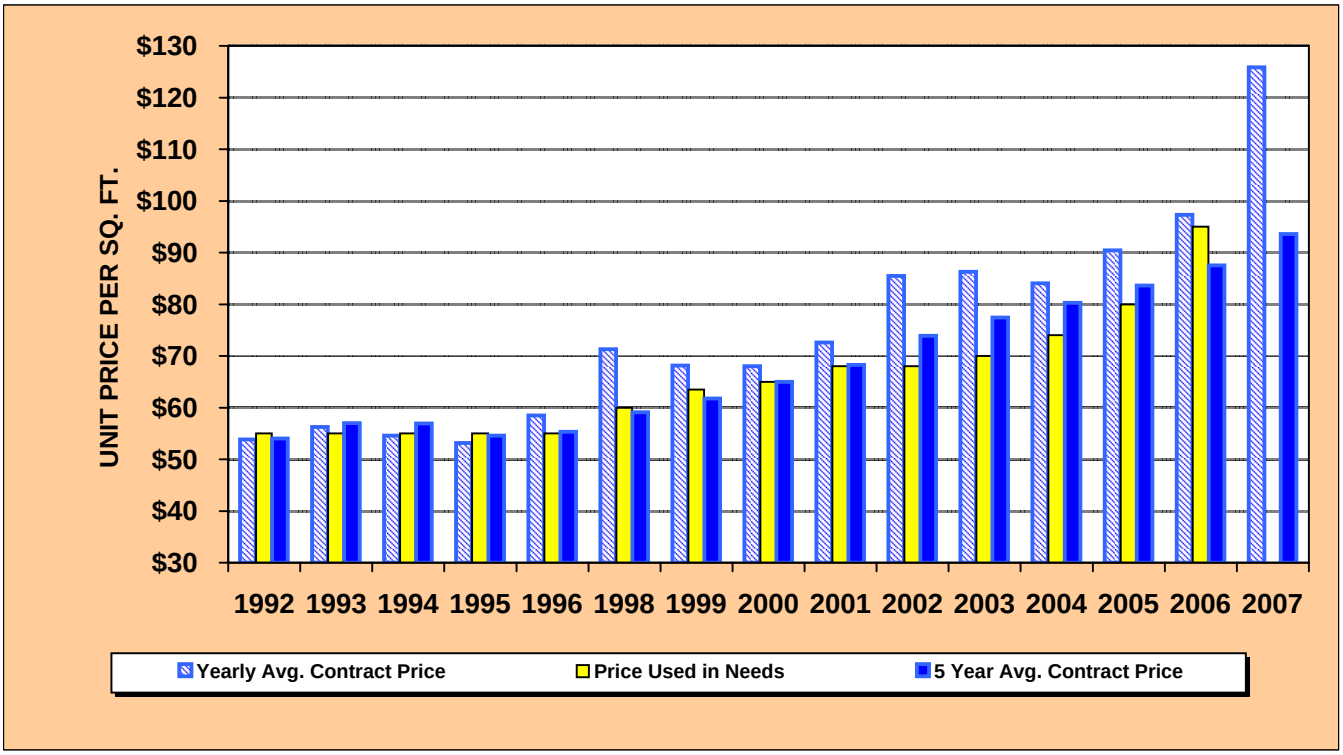
**JUNE, 2007**

**BRIDGE LENGTH 0-149 FEET**

| NEW BRIDGE NUMBER | PROJECT NUMBER | | LENGTH | DECK AREA | BRIDGE COST | COST PER SQ. FT. |
|---|---|---|---|---|---|---|
| 1525 | SAP | 01-599-029 | 68.00 | 2,584 | $328,222 | $127 |
| 2563 | SAP | 02-649-001 | 71.42 | 6,493 | 778,174 | 120 |
| 4525 | SAP | 04-619-006 | 55.00 | 2,187 | 807,443 | 369 |
| 4524 | SAP | 04-619-006 | 102.00 | 3,863 | 421,291 | 109 |
| 8549 | SAP | 08-608-036 | 118.00 | 5,114 | 380,263 | 74 |
| 9528 | SAP | 09-598-006 | 80.00 | 2,912 | 263,178 | 90 |
| 9527 | SAP | 09-608-013 | 140.25 | 6,020 | 599,480 | 100 |
| 12550 | SAP | 12-599-061 | 113.00 | 3,555 | 297,710 | 84 |
| 12549 | SAP | 12-599-072 | 111.70 | 3,946 | 492,479 | 125 |
| 20556 | SAP | 20-634-009 | 86.67 | 4,377 | 497,788 | 114 |
| 22601 | SAP | 22-599-088 | 55.42 | 1,958 | 189,926 | 97 |
| 22604 | SAP | 22-599-095 | 73.50 | 2,300 | 220,782 | 96 |
| 25602 | SP | 25-662-002 | 132.16 | 10,133 | 1,262,492 | 125 |
| 27B19 | SAP | 27-633-001 | 88.00 | 6,175 | 1,178,502 | 191 |
| 27B34 | SAP | 27-635-025 | 39.67 | 3,438 | 547,249 | 159 |
| 29525 | SP | 29-599-005 | 138.50 | 4,894 | 392,615 | 80 |
| 36530 | SAP | 36-608-014 | 133.92 | 4,732 | 664,101 | 140 |
| 44512 | SP | 44-598-007 | 128.04 | 4,012 | 386,934 | 96 |
| 56536 | SP | 56-683-009 | 96.67 | 4,671 | 507,256 | 109 |
| 59517 | SAP | 59-599-051 | 110.00 | 3,541 | 280,750 | 79 |
| 59527 | SAP | 59-599-063 | 105.17 | 3,296 | 279,278 | 85 |
| 60557 | SP | 60-602-017 | 88.50 | 3,481 | 440,285 | 126 |
| 60556 | SP | 60-602-017 | 111.92 | 4,402 | 466,686 | 106 |
| 64576 | SAP | 64-599-086 | 75.42 | 2,363 | 210,911 | 89 |
| 64577 | SAP | 64-599-087 | 82.42 | 2,582 | 217,046 | 84 |
| 67554 | SP | 67-599-133 | 102.46 | 3,210 | 268,548 | 84 |
| 67556 | SAP | 67-599-145 | 77.50 | 2,428 | 214,874 | 89 |
| 68537 | SAP | 68-602-032 | 80.75 | 3,557 | 489,925 | 138 |
| 68538 | SAP | 68-602-033 | 88.00 | 3,813 | 407,173 | 107 |
| 69670 | SP | 69-616-043 | 68.92 | 2,504 | 262,357 | 105 |
| 70540 | SAP | 70-598-003 | 35.00 | 637 | 271,268 | 426 |
| 72541 | SAP | 72-599-050 | 126.50 | 3,963 | 308,561 | 78 |
| 73568 | SP | 73-617-032 | 132.58 | 6,673 | 573,544 | 86 |
| 74543 | SAP | 74-635-007 | 78.67 | 3,061 | 256,904 | 84 |
| 85554 | SAP | 85-599-053 | 117.40 | 3,678 | 346,015 | 94 |
| 85557 | SAP | 85-599-055 | 83.50 | 2,950 | 309,595 | 105 |
| 86529 | SAP | 86-602-011 | 133.00 | 6,295 | 451,331 | 72 |
| 69671 | SAP | 118-080-031 | 40.25 | 564 | 534,851 | 948 |
| 69672 | SAP | 118-176-002 | 32.25 | 779 | 518,859 | 666 |
| 27B30 | SAP | 128-411-005 | 56.00 | 1,217 | 714,586 | 587 |
| 70541 | SP | 211-010-005 | 134.76 | 1,954 | 873,666 | 447 |
| **TOTAL** | | | | **150,312** | **$18,912,898** | **$126** |

# 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 |
|---|---|---|---|---|---|---|
| 1992 | 39 | 147,313 | $7,929,250 | $53.83 | $55.00 | $54.05 |
| 1993 | 38 | 190,400 | 10,709,785 | 56.25 | 55.00 | 57.00 |
| 1994 | 49 | 208,289 | 11,362,703 | 54.55 | 55.00 | 56.91 |
| 1995 | 32 | 124,726 | 6,627,018 | 53.13 | 55.00 | 54.61 |
| 1996 | 35 | 152,105 | 8,900,177 | 58.51 | 55.00 | 55.33 |
| 1998 | 52 | 191,385 | 13,651,209 | 71.33 | 60.00 | 59.12 |
| 1999 | 53 | 193,950 | 13,219,596 | 68.16 | 63.50 | 61.76 |
| 2000 | 54 | 210,895 | 14,341,592 | 68.00 | 65.00 | 64.99 |
| 2001 | 62 | 221,590 | 16,085,383 | 72.59 | 68.00 | 68.25 |
| 2002 | 62 | 274,232 | 23,435,194 | 85.46 | 68.00 | 73.93 |
| 2003 | 64 | 299,132 | 25,806,454 | 86.27 | 70.00 | 77.42 |
| 2004 | 85 | 293,925 | 24,704,150 | 84.05 | 74.00 | 80.30 |
| 2005 | 35 | 145,663 | 13,168,890 | 90.41 | 80.00 | 83.59 |
| 2006 | 42 | 156,176 | 15,198,545 | 97.32 | 95.00 | 87.51 |
| 2007 | 41 | 150,312 | 18,912,898 | 125.82 | | 93.56 |

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# BRIDGES LET IN CALENDAR YEAR 2006

**JUNE 2007**

**BRIDGE LENGTH 150 FEET & OVER**

| NEW BRIDGE NUMBER | | PROJECT NUMBER | LENGTH | DECK AREA | BRIDGE COST | COST PER SQ. FT. |
|---|---|---|---|---|---|---|
| 1526 | SAP | 01-622-007 | 243.25 | 9,506 | $935,627 | $98 |
| 27B32 | SP | 27-673-008 | 158.60 | 11,472 | 1,060,455 | 92 |
| 35534 | SP | 35-598-008 | 195.98 | 6,141 | 535,108 | 87 |
| 48526 | SAP | 48-609-006 | 171.40 | 8,113 | 1,119,625 | 138 |
| 66544 | SP | 66-599-013 | 219.50 | 8,666 | 938,731 | 108 |
| 66548 | SAP | 66-629-010 | 156.42 | 7,404 | 650,494 | 88 |
| 7001 | SP | 126-020-005 | 151.00 | 9,490 | $759,149 | 80 |
| 27B45 | SAP | 193-020-008 | 319.67 | 24,401 | 1,886,096 | 77 |
| **TOTAL** | | | | **85,193** | **$7,885,285** | **$93** |

# BRIDGES LET IN CALENDAR YEAR 2006

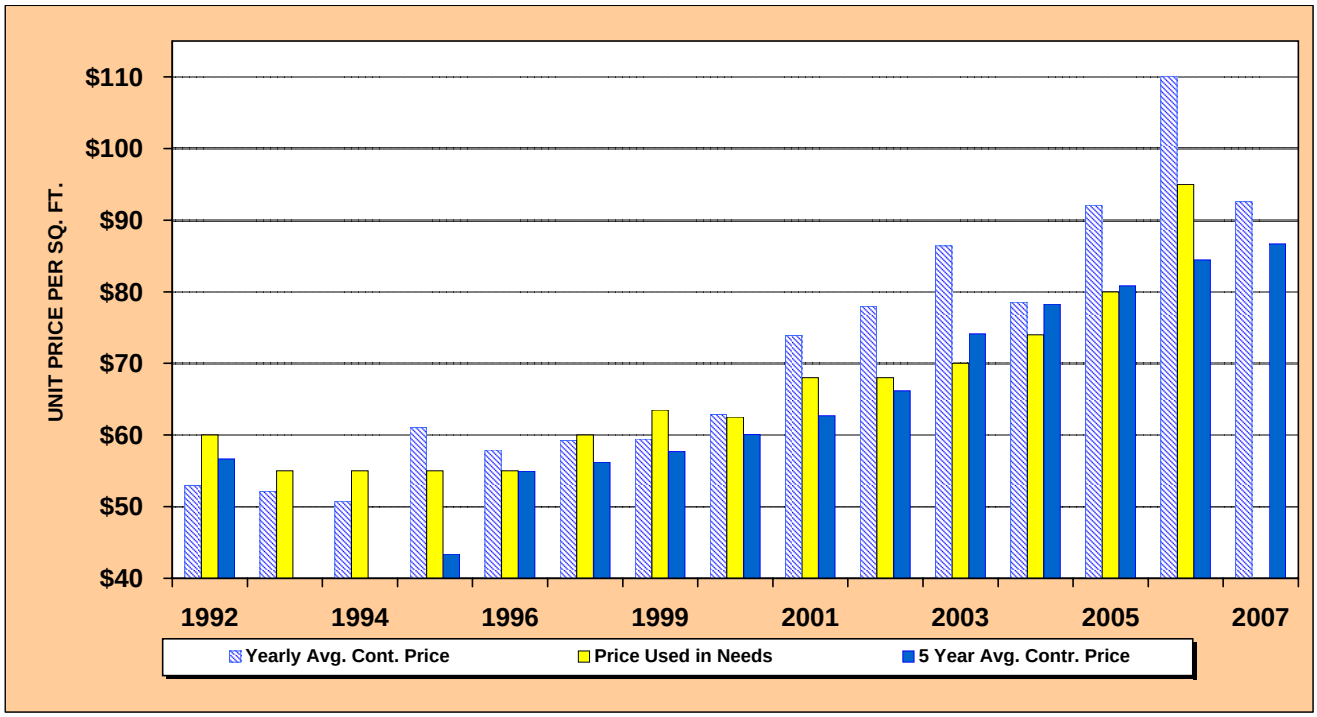
**JUNE 2007**

**RAILROAD BRIDGES**

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

# BRIDGE COST

## 150 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 |
|---|---|---|---|---|---|---|
| 1992 | 24 | 331,976 | 17,582,542 | $52.96 | $60.00 | $56.66 |
| 1993 | 31 | 421,583 | 21,987,208 | 52.15 | 55.00 | 21.02 |
| 1994 | 29 | 307,611 | 15,619,506 | 50.78 | 55.00 | 31.18 |
| 1995 | 28 | 381,968 | 23,310,410 | 61.03 | 55.00 | 43.38 |
| 1996 | 27 | 385,230 | 22,302,967 | 57.90 | 55.00 | 54.96 |
| 1998 | 30 | 483,315 | 28,642,031 | 59.26 | 60.00 | 56.22 |
| 1999 | 29 | 455,964 | 27,104,753 | 59.44 | 63.50 | 57.68 |
| 2000 | 22 | 275,074 | 17,296,406 | 62.88 | 62.50 | 60.10 |
| 2001 | 21 | 272,162 | 20,110,670 | 73.89 | 68.00 | 62.67 |
| 2002 | 37 | 443,458 | 34,577,147 | 77.97 | 68.00 | 66.18 |
| 2003 | 40 | 667,548 | 57,671,538 | 86.39 | 70.00 | 74.15 |
| 2004 | 38 | 601,026 | 47,213,777 | 78.56 | 74.00 | 78.29 |
| 2005 | 8 | 68,194 | 6,278,305 | 92.07 | 80.00 | 80.81 |
| 2006 | 9 | 179,285 | 19,734,941 | 110.08 | 95.00 | 84.45 |
| 2007 | 8 | 85,193 | 7,885,285 | 92.56 | | 86.67 |

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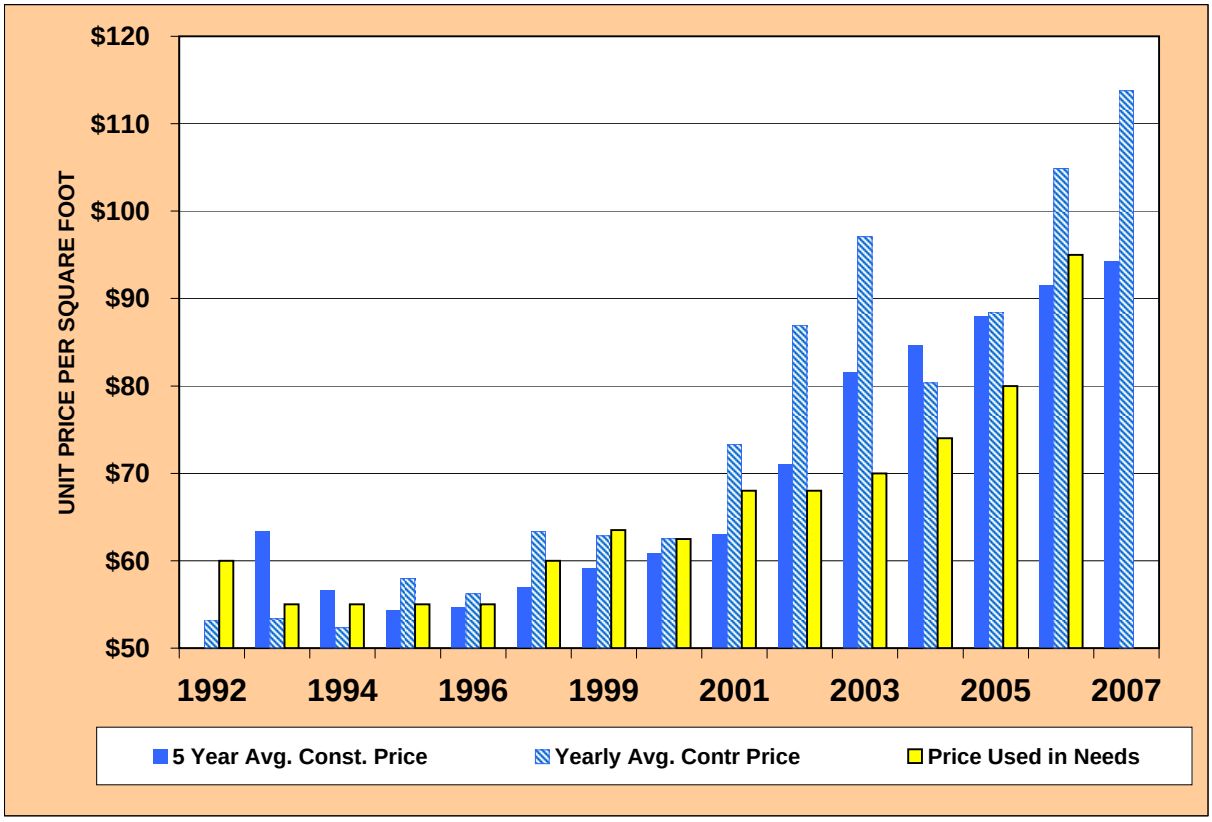
# ALL BRIDGES COMBINED




| NEEDS YEAR | NO. OF PROJECTS | DECK AREA | TOTAL COST | YEARLY AVERAGE CONTRACT PRICE | PRICE USED IN NEEDS | 5 YEAR AVERAGE CONTRACT PRICE |
|---|---|---|---|---|---|---|
| 1992 | 63 | 479,289 | $25,511,792 | $53.23 | $60.00 | |
| 1993 | 75 | 857,555 | 45,765,099 | 53.37 | 55.00 | $63.31 |
| 1994 | 81 | 591,325 | 30,941,713 | 52.33 | 55.00 | 56.65 |
| 1995 | 62 | 681,685 | 39,532,769 | 57.99 | 55.00 | 54.31 |
| 1996 | 66 | 695,086 | 39,079,076 | 56.22 | 55.00 | 54.72 |
| 1998 | 85 | 856,829 | 54,296,022 | 63.37 | 60.00 | 56.92 |
| 1999 | 88 | 851,845 | 53,553,089 | 62.87 | 63.50 | 59.13 |
| 2000 | 78 | 648,621 | 40,560,540 | 62.53 | 62.50 | 60.80 |
| 2001 | 83 | 493,752 | 36,196,053 | 73.31 | 68.00 | 63.08 |
| 2002 | 105 | 1,127,085 | 97,998,501 | 86.95 | 68.00 | 71.04 |
| 2003 | 114 | 1,708,572 | 165,859,117 | 97.07 | 70.00 | 81.61 |
| 2004 | 126 | 977,400 | 78,528,140 | 80.34 | 74.00 | 84.58 |
| 2005 | 44 | 252,713 | 22,351,485 | 88.45 | 80.00 | 87.93 |
| 2006 | 53 | 533,871 | 55,999,602 | 104.89 | 95.00 | 91.47 |
| 2007 | 49 | 235,505 | 26,798,183 | 113.79 | | 94.26 |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2007 NEEDS STUDY IS** **$105.00 PER SQ. FT.**

**This item was 4.24% of the total Needs last year**

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# RAILROAD BRIDGES OVER HIGHWAYS

07-May-07

| Needs Year | Number Of Projects | Number of Tracks | Bridge Length | Bridge Cost per Lin. Ft. (Actual) | Cost per Lin. Ft. of 1st Track (Unit Price Study) | Cost per Lin. Ft. of Additional Tracks (Unit Price Study) |
|---|---|---|---|---|---|---|
| 1986 | 0 | 0 | | | $2,250 | $1,750 |
| 1987 | 0 | 0 | | | 2,250 | 1,750 |
| 1988 | 1 | 3 | 103.71 | $13,988 | 2,250 | 1,750 |
| 1989 | 2 | 1 | 161.51 | 8,499 | 2,250 | 1,750 |
| | | 1 | 317.19 | 5,423 | 2,250 | 1,750 |
| 1990 | 1 | 2 | 433.38 | 8,536 | 4,000 | 3,000 |
| 1991 | 0 | 0 | | | 4,000 | 3,000 |
| 1992 | 1 | 1 | 114.19 | 7,619 | 4,000 | 3,000 |
| 1993 | 1 | 1 | 181.83 | 7,307 | 5,000 | 4,000 |
| 1994 | 0 | 0 | | | 5,000 | 4,000 |
| 1995 | 0 | 0 | | | 5,000 | 4,000 |
| 1996 | 1 | 1 | 80.83 | 12,966 | 5,000 | 4,000 |
| 1998 | 1 | 1 | 261.02 | 8,698 | 8,000 | 6,500 |
| 1999 | 1 | 1 | 150.3 | 8,139 | 8,200 | 6,700 |
| 2000 | 2 | 1 | 108.58 | 12,112 | | |
| | | 1 | 130.08 | 10,569 | 9,000 | 7,500 |
| 2001 | 1 | 1 | 163.00 | 14,182 | 9,000 | 7,500 |
| 2002 | 0 | 0 | | | 9,000 | 7,500 |
| 2003 | 0 | 0 | | | 9,300 | 7,750 |
| 2004 | 0 | 0 | | | 9,600 | 8,000 |
| 2005 | 0 | 0 | | | 10,200 | 8,500 |
| 2006 | 0 | 0 | | | 10,200 | 8,500 |
| 2007 | 0 | 0 | | | | |

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2005 NEEDS STUDY IS** **$10,200**
**PER LINEAL FOOT FOR THE FIRST TRACK**

**SUBCOMMITTEE'S RECOMMENDED PRICE FOR THE 2005 NEEDS STUDY IS** **$8,500**
**PER LIN. FT. FOR ADDITIONAL TRACKS**

**There are 67 Existing Underpasses on the MSAS system**
**There are 49 proposed Underpasses on the MSAS system**
**Applying the 4.10% CCI to these costs would be $10,618 and $8,849**

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## All Structures on the MSAS System

| No. of Existing Structures | No. of Proposed Structures | Structure Type |
|---|---|---|
| 398 | 127 | 1 - Bridge |
| 23 | 11 | 3 - Structural Plate Arch |
| 28 | 0 | 4 - Other |
| 58 | 23 | 5 - Box Culvert Single |
| 22 | 9 | 6 - Box Culvert Double |
| 6 | 0 | 7 - Box Culvert Triple |
| 1 | 0 | 8 - Box Culvert Quad |
| 29 | 395 | Adequate, or not eligible |
| **565** | **565** | **TOTAL** |

There are a total of 253 adequate structures on the MSAS system.
There are a total of 312 deficient structures on the MSAS system
There are 142 structures on the MSAS system that don't qualify for Needs

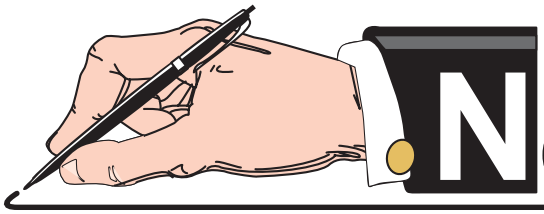
## Structures on the MSAS System That Qualify for Needs

| No. of Existing Structures | No. of Proposed Structures | Structure Type |
|---|---|---|
| 299 | 127 | 1 - Bridge |
| 22 | 11 | 3 - Structural Plate Arch |
| 20 | 0 | 4 - Other |
| 54 | 23 | 5 - Box Culvert Single |
| 21 | 9 | 6 - Box Culvert Double |
| 6 | 0 | 7 - Box Culvert Triple |
| 1 | 0 | 8 - Box Culvert Quad |
| 0 | 253 | Blank - None Indicated (Not Eligible for Needs) |
| **423** | **423** | **TOTAL** |

There are a total of 253 adequate structures on the MSAS system that qualify for Needs
There are a total of 170 deficient structures on the MSAS system that qualify for Needs

# Subcommittee

# Issues



# NOTES and COMMENTS

# Minutes
of the
# Municipal State Aid Screening Board
# Needs Study Subcommittee
May 1, 2007

The Needs Study Subcommittee met at 8:00 a.m. on May 1, 2007 at the MnDOT District 3 Headquarters in St. Cloud. Members present were Craig Gray – Anoka. Members absent were Tim Loose, Chair – St. Peter and Dave Kildahl – Crookston. Also present were Rick Kjonaas, Marshall Johnston and Dan Simon of Mn/DOT State Aid, Chuck Ahl, Chair Municipal Screening Board and Rhonda Rae - Minneapolis.

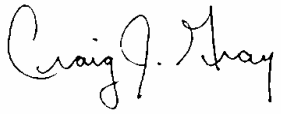
1. Marshall reviewed the Annual Maintenance Needs Cost. For 2007 the ENR Construction Cost Index (CCI) was used to help the committee set the needs cost per mile. The CCI was 4.10% in 2006. The Committee decided that the CCI should be added to the maintenance needs costs. Therefore, the NSS recommends the following Maintenance Needs Costs:

| | < 1000ADT | >1000 ADT |
|---|---|---|
| Traffic Lane per Mile: | $1,800 | $2,970 |
| Parking Lane per Mile | $1,800 | $1,800 |
| Median Strip per Mile | $ 600 | $1,180 |
| Storm Sewer per Mile | $ 600 | $ 600 |
| Per Traffic Signal | $ 600 | $ 600 |
| Minimum per Mile | $5,960 | $5,960 |

2. Unit Price Study:
   a. Excavation: NSS noted that a significant increase in the needs occurred in 2006, due to higher bid prices. The NSS recommends that the CCI of 4.1% be added to the 2006 unit price and recommends $4.95 per cubic yard.
   b. Aggregate Shouldering: NSS recommends $14.25 per ton again for 2007, no increase. The reported $5.66 represents only two projects last year. The NSS discussed whether or not to simply use the CSAH unit price for 2007. The NSS believes that the higher MSAS unit price is more accurate for MSA projects with smaller quantities than a rural CSAH project. However, the NSS noted that this item was only 0.07% of the total needs last year and this could be one item that be looked at as part of needs simplification/combination effort.
   c. Curb and Gutter Removal: Increase unit price by CCI. Recommend $2.90 per LF.
   d. Sidewalk Removal: No increase. $5.50 per SY
   e. Concrete Pavement Removal: No increase. $5.40 per SY. There was discussion about the concrete vs. bituminous removal issue. This is addressed further in the combined NSS and UCFS meeting minutes. However, the NSS feels that it is a large inequity to have needs for concrete pavement removal and not for bituminous pavement removal. The NSS recommended that the Screening Board should combine all types of pavement removal into one category.

f. Tree removal: NSS recommends increase to $310 per tree.
g. Aggregate Base 2211: Recommend $8.75 per ton based on CCI increase of 4.1%.
h. Bituminous: Recommend $42.00 per ton, which is an 11% increase over the 2006 unit price of $38.00 based on anticipation of higher prices this year due to oil increases.
i. Curb and Gutter Construction: Recommend $10.15 per LF.
j. Sidewalk Construction: Recommend $28.00 per SY.
k. Storm Sewer: Follow Hydraulics Unit recommendation and recommend $88,100 per mile for adjustments and $271,200 per mile for new construction. Lighting: Recommend $100,000 per mile. The NSS recognized that street lighting costs can be significantly higher than $100,000 per mile however it is recommended that the needs remain at $100,000 to avoid this single item from becoming an even larger part of our total needs. Signals: No change from 2006.
l. Railroad Crossing Needs: Recommend we use the recommendation from the MnDOT RR Office and use $175,000 for low speed signals and gates and $200,000 for high-speed signals and gates.
m. Special Drainage Costs for Rural Segments: Mn/DOT Hydraulics has recommended $35,942 per mile. The NSS recommends $36,000 per mile for the 2007 needs study.
n. Gravel Surface: The NSS recommends $7.10/ton. However the NSS noted that this item was 0.00% of the needs last year and after discussion with those present at the NSS meeting the NSS is recommending that the Screening Board consider removal of this item from future needs studies or that it be combined with other items as part of a grading factor.
o. Bridges: The NSS recommends $105.00 per square foot for all bridges.
p. Railroad Bridges over Highways: No basis for changing the unit price, so NSS recommends staying with the same prices as in 2006.

**4.** Adjournment: Craig Gray adjourned the meeting at 9:50 a.m.



Craig Gray, Secretary
Needs Study Subcommittee

**Municipal State Aid Screening Board**
**Joint Needs Study / Unencumbered Construction Funds Subcommittee**
**Meeting Minutes**
**May 1, 2007**

A joint meeting of the Needs Study Subcommittee (NSS) and the Unencumbered Construction Funds Subcommittee (UCFS) was held on Tuesday, May 1, 2007 at the Mn/DOT 3B District Headquarters Building in St. Cloud.

***Attendance***: Members in attendance included Lee Gustafson (Minnetonka) Chair of UCFS; Mike Metso (Krech Ojard & Associates) of the UCFS; Stephen Gaetz (St. Cloud) of the UCFS, and Craig Gray (Anoka ) of the NSS. Also in attendance were Chuck Ahl (Maplewood) Chair of the MSB, Rhonda Rae (Minneapolis) representing Cities of the First Class; and Marshall Johnston, Rick Kjonaas, and Dan Simon of Mn/DOT State Aid.

***Purpose***: The primary purpose of the meeting was to review the equity/inequity of including concrete pavement removal but not bituminous pavement removal in the Needs Study. This item was referred to the NSS and UCFS by action of the 2006 Fall Screening Board.

## I. CALL TO ORDER

The meeting of the Joint Subcommittee was called to order at 10:00 a.m. by Lee Gustafson, Chair of the UCFS.

Marshall Johnston welcomed those in attendance and reviewed the proposed agenda which included the following items:

a. Review and make recommendations to the MSB on the equity/inequity of having Needs for concrete pavement removal and not for bituminous pavement removal.
b. Other equity/inequity issues pertaining to concrete vs. bituminous.
c. Dilution of Municipal State Aid funding (discussion item to be led by Rick Kjonaas)
d. Other related issues

## II. PROCEDURAL MATTERS

Marshall noted that the meeting minutes would be included in the Spring MSA booklet, and that any forthcoming recommendations from the Joint Subcommittee would be discussed at the upcoming pre-screening board meetings and at the 2007 Spring MSB meeting.

Stephen Gaetz was appointed Secretary for the purpose of recording the meeting minutes.

## III. PAVEMENT REMOVAL NEEDS

**A. Background Information:** Marshall provided the following background information for the first two agenda items:

*Combined NSS/UCFS Meeting of 09/14/06* - The Combined Subcommittees met on September 14, 2006. One of the issues discussed was a proposal to simplify and streamline the Unit Cost Study process. At that time the Combined Subcommittee recommended that the following items, which each reflect less than 2 percent of the 25-Year Construction Needs, should be combined and consolidated as part of the "Grading" construction needs category:

| Urban Segments: | | Rural Segments: | |
|---|---|---|---|
| Tree Removal | 0.5% | Tree Removal | 0.5% |
| Pavement Removal | 1.8% | Pavement Removal | 1.8% |
| C & G Removal | 1.1% | Special Drainage | 0.1% |
| Sidewalk Removal | 0.7% | Gravel Surf/Shldrs | 0.1% |
| TOTAL | 4.1% | TOTAL | 2.5% |

It was further recommended at the September 14, 2006 Combined Subcommittee meeting that the Needs for these consolidated items should be applied as a simple "multiplier factor" against the calculated "Grading" construction item needs category. As "Grading" construction items needs reflect approximately 6.7 % of total construction item needs, the following multipliers were recommended:

Urban Multiplier: 4.1 / 6.7 = 0.61 (or a multiplier of 1.6)
Rural Multiplier: 2.5 / 6.7 = 0.37 (or a multiplier of 1.4)

*2006 Fall MSB Meeting* – After a spirited discussion at the 2006 Fall MSB Meeting a motion was made to adopt the (foregoing) recommendations of the Combined NSS/UCFS to simply and streamline the Unit Cost Study process. While general support was expressed for simplification of the process, the motion failed on a split vote. Equity issues were cited by those who opposed the motion, especially the inequity that results from including concrete pavement removal in the Needs Study and not bituminous pavement removal. It was mentioned that any streamlining process needs to preserve/achieve equity. Concern was also expressed that the total Needs should not be reduced. The following motion came from this discussion:

… A motion was made by Rae, seconded by Pagel to refer the pavement removal issue to the Combined Needs/UCFS Subcommittee. The motion passed on a vote of 7 to 4. A suggestion was also made to include a representative of Cities of the First Class on the committee.

*Related Issues* – While preparing the information on the equity of concrete vs. bituminous pavement removal, staff came across some other equity issues between concrete and bituminous, including:

- Bituminous pavement construction is included while concrete pavement construction is not included.

- Concrete curb and gutter is included while bituminous curb is not included.

- Concrete sidewalk construction and removal are included, while bituminous pathway construction and removal are not included.

(As these issues were not referred to the Combined Subcommittee by the MSB, the Subcommittee had the discretion to review or not to review them)

**B. Subcommittee Recommendations:**

1. After considerable discussion, a motion was made by Gray, seconded by Metso and carried unanimously to recommend the following actions to the 2007 Spring MSB:

   a. Eliminate *Concrete Pavement Removal* Needs
   b. Add a new general *Pavement Removal* Needs category that includes both concrete and bituminous pavement removals (to include all type F, G, H, I, J, K, L and M pavement types)
   c. The Unit Price for the general Pavement Removal category is to be based on the cost of bituminous pavement removal, and to be initially set at $2.50/s.y.

Committee members provided the following rationale for the recommended actions:

- Equity would be achieved in the Pavement Removal category by including all pavement types.
- The recommended action would not add a field to the Needs spread sheet which is already deemed too large
- Although the unit cost to remove concrete pavement is higher than the unit cost to remove bituminous pavement, basing the needs for the new general Pavement Removal category on bituminous removal costs is deemed equitable since concrete pavements have a longer useful life expectancy and draw needs for a longer period of time before replacement as compared to bituminous pavements.

2. After further discussion a motion was made by Metso, seconded by Gray and carried unanimously to recommend the following additional action to the 2007 Spring MSB:

If the MSB eliminates the concrete pavement removal category in favor of a general pavement removal category (as recommended above) then, for the following reasons, the Joint Subcommittee recommends that MSB revisit the Grading Factor issue (as outlined in the background notes):

- The inequity in concrete vs. bituminous pavement removal needs was the primary reason cited at the 2006 Fall MSB meeting for voting down the Grading Factor

proposal. Thus, it would be appropriate to revisit the Grading Factor issue once this inequity is resolved.

- Adoption of the Grading Factor proposal would simply and streamline the Needs process.
- Adoption of the Grading Factor proposal would resolve other existing inequities in the Needs reporting process relating to pavement construction, curb and gutter and sidewalk construction (see Related Issues notes under Background Information above).

It is recommended that the MSB discuss this issue at the 2007 Spring meeting and provide direction for (possible) formal reconsideration of the Grading Factor issue at the 2007 Fall meeting.

## IV. DILUTION OF STATE AID FUNDING:

The Subcommittee engaged in a brainstorm discussion lead by Rick Kjonaas concerning the effects that the dilution of State Aid funding has had on Cities, and possible ways that State Aid might change its operations to better benefit Cities. Formal minutes were not kept for this portion of the meeting.

The meeting of the Joint NSS/UCFS Subcommittee was adjourned at 12:30 p.m.

Respectfully submitted,

Stephen Gaetz – Secretary
Combined Needs Study / Unencumbered Construction Funds Subcommittee

Errors discovered in the map and the computer printout should be indicated for correction by showing the correct data in red color.
Errors in road location should be indicated by showing the correct location in red and x-ing out the incorrect location. Errors in surface type should be identified by red pencil note.
Errors in incorporation boundaries should be identified by x-ing out the improper boundary and roughly sketching in the correct boundary.

## VIII. DEFINITIONS OF GENERAL HIGHWAY CONSTRUCTION TYPES FOR ANNUAL STATUS MAPS

### A. PRIMITIVE ROAD

An unimproved route (on which there is no public maintenance) useable by 4-wheel vehicles and publicly traveled by small numbers of vehicles.

### B. UNIMPROVED ROAD

A road using the natural surface and maintained to permit bare passability for motor vehicles, but not conforming to the requirements for a graded and drained earth road. The road may have been bladed and minor improvements may have been made locally.

### C. GRADED AND DRAINED EARTH ROAD

A road of natural earth aligned and graded to permit reasonably convenient use by motor vehicles and drained by longitudinal and transverse drainage systems (natural or artificial) sufficiently to prevent serious impairment of the road by normal surface water with or without dust palliative treatment or a continuous course of special borrow material to protect the new roadbed temporarily and to facilitate immediate traffic service.

### D. SOIL-SURFACED ROAD

A road of natural soil, the surface of which has been improved to provide more adequate traffic service by the addition of: (1) a course of mixed soil having A-1 or A-2 characteristics, such as sand-clay, soft shale or topsoil, or (2) an admixture such as bituminous material, portland cement, calcium chloride, sodium chloride or fine granular material (sand or similar material).

### E. GRAVEL OR STONE ROAD

A road, the surface of which consists of gravel, broken stone, slag, chert, caliche, iron ore, shale, chat, disintegrated rock or granite, or other similar fragmental material (coarser than sand) with or without sand-clay, bituminous, chemical or portland cement stabilizing admixture or light penetrations of oil or chemical to serve as a dust palliative.

Minnesota Specification 2118, Aggregate Surfacing, falls in this classification.

### F. BITUMINOUS SURFACE-TREATED ROAD

An earth road, a soil-surfaced road, or a gravel or stone road to which has been added, by any process, a bituminous surface course with or without a seal coat, the total compacted thickness of which is less than one inch. Seal coats include those known as chip seals, drag seals, plant-mix seals and rock asphalt seals.
Minnesota Specification 2321, Road-Mixed Bituminous Surface, falls into this classification.

### G. MIXED-BITUMINOUS ROAD

A road, the surface course of which is one inch or more in compacted thickness composed of gravel, stone, sand, or similar material, mixed with bituminous material under partial control as to grading and proportions.

Both Minnesota Specifications 2331, 2340 and 2341, Plant Mixed Bituminous Surface, fall into this classification.

### H. BITUMINOUS PENETRATION ROAD

A road, the surface course of which is one inch or more in compacted thickness composed of gravel, stone, sand, or similar material bound with bituminous material introduced by downward or upward penetration.

### I. BITUMINOUS CONCRETE, SHEET ASPHALT OR ROCK ASPHALT ROAD

A road on which has been constructed a surface course one inch or more in compacted thickness consisting of bituminous concrete or sheet asphalt, prepared in accordance with precise specifications controlling gradation, proportions and consistency of composition, or of rock asphalt. The surface course may consist of combinations of two or more layers such as bottom and top course, or a binder and a wearing course. Minnesota Specification 2351, Asphaltic Concrete Surface which is not mentioned in the above description is included in this classification.

### J. PORTLAND CEMENT CONCRETE ROAD

A road consisting of portland cement concrete with or without a bituminous wearing surface less than one inch in compacted thickness.

### K. BRICK ROAD

A road consisting of paving brick with or without a bituminous wearing surface less than one inch in compacted thickness.

**L. BLOCK ROAD**

A road consisting of stone block, wood block, asphalt block or other form of block, except paving brick, with or without bituminous wearing surface less than one inch in compacted thickness.

**M. COMBINATION TYPE ROAD**

A road, the wearing course of which consists of two or more individual types each being of such depth as to be classed logically as a part of the traffic bearing road surface rather than as surfaced shoulders.

**N. DIVIDED HIGHWAYS**

Adjacent roadways carrying traffic in opposite directions and separated by a dividing or non-traffic bearing strip shall be classed as a divided highway and coded as type "N" as per sample.

**EXAMPLES OF INPUT FOR ANNUAL STATUS MAPS**

The letter designation indicated for the surface type of a road section should be shown as the numerator of a fraction; the widths of the roadway and surface to be shown as the denominator, separated by a hyphen.

The first figure to be shown is for: Roadway Width - the width in feet between shoulders or curb lines.

The second figure to be shown is for: Surface Width - that portion of a road which is surfaced to carry traveling vehicles.

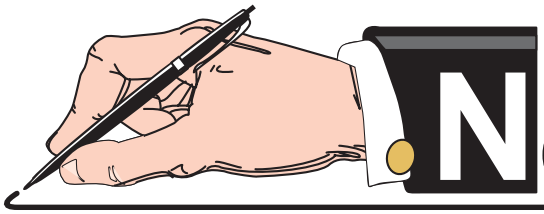
Undivided Roadways

3.5 $\frac{C}{24 \cdot 0}$ means 3.5 miles of $\frac{\textit{Graded \& Drained Earth}}{\textit{24' Roadway Width – No Surface Course}}$

1.2 $\frac{G}{32-24}$ means 1.2 miles of $\frac{\textit{Mixed Bituminous}}{\textit{32' Roadway Width – 24' Surface Width}}$

Divided Roadways

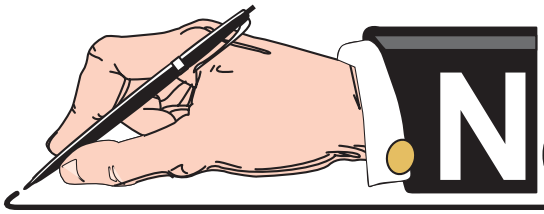
0.07 $\frac{N}{\frac{G-G}{36-24-26-20}}$ means 0.07 miles of $\frac{\textit{Mixed Bituminous}}{\textit{36' Roadway Width – 24' Surface Width}}$



# NOTES and COMMENTS

# OTHER

# TOPICS



# NOTES and COMMENTS

**MUNICIPAL STATE AID CONSTRUCTION ACCOUNT**
**ADVANCE GUIDELINES**

## State Aid Advances

M.S. 162.14 provides for municipalities to make advances from future years allocations for the purpose of expediting construction. This process not only helps reduce the construction fund balance, but also allows municipalities to fund projects that may have been delayed due to funding shortages.

The formula used to determine if advances will be available is based on the current fund balance, expenditures trends, repayments and the $20,000,000 recommended threshold.

## State Aid Advance Code Levels

Guidelines for advances are determined by the following codes.

| | |
|---|---|
| **SEVERE** | Code RED - SEVERE- Fund Balances too low. NO ADVANCES - NO EXCEPTIONS |
| **HIGH** | Code ORANGE - HIGH - Fund Balance expected to drop below acceptable balance. Pain-O-Meter process in place. Advances approved by State Aid Engineer only. Resolution required. Reserve form not used. |
| **GUARDED** | Code BLUE- GUARDED - Fund balance low. Pain-O-Meter process in place. Advances approved on a case-by-case basis. Resolution required. Reserve option available only prior to bid advertisement by email or phone. |
| **LOW** | Code GREEN - LOW - Plush Fund Balance. Advances approved on first-come-first-serve basis while funds are available. Resolution required. Request to Reserve optional. |

## General Guidelines for State Aid Advances & Federal Aid Advance Construction

1. City Council Resolution
    - Must be received by State Aid Finance before funds can be advanced.
    - Required at all code levels.
    - Is not project specific.
    - Should be for the amount actually needed, not maximum allowable.
    - Resolution will be in effect when account balance reaches zero.
    - Must include a mutually acceptable repayment schedule (see limitations on pg 2).
        - Federal Aid Advances must include when project is programmed in the STIP and repayment will be made at time of conversion.
        - Federal Aid Advances must authorize repayments from a state aid account or local funds should the project fail to receive federal funds for any reason.
    - Does not reserve funds but gives State Aid Finance the authority to make project payments to the city that will result in a negative account balance.

- Good for year of submission only. If advance amount is not maximized, the resolution amount is reduced to actual advance amount and repayments are adjusted accordingly. If more funds are required, a new resolution must be submitted in the following year.
- Form can be obtained from SALT website.
    - #SALT 512(4/04) for State Aid projects.
    - #SALT 515(4/04) for Federal Aid projects.
- Mail completed form to Sandra Martinez in State Aid Finance.
    - E-mail will be sent to Municipal Engineer acknowledging receipt of resolution.

2. "Request to Reserve Advanced Funding" form
    - Not required.
    - Will allow the funds to be reserved for up to twelve weeks from date form is signed by Municipal Engineer.
    - Not used for Federal Aid Advance Construction projects.
    - Used in Code Green only.
    - Form #SALT 513(4/04), obtain from SALT website.
    - Mail completed form to Sandra Martinez in State Aid Finance.
        - Form will be signed and returned to Municipal Engineer

3. Pain-O-Meter
    - Resolution required.
        - Mail completed form to Sandra Martinez in State Aid Finance.
            - E-mail will be sent to Municipal Engineer acknowledging receipt of resolution.
    - Projects include, but are not limited, to projects where agreements with other agencies have mandated the municipality's participation or projects using Advance Federal Aid.
    - Requests are submitted to DSAE for prioritization within each district.
    - Requests should include negative impact if project had to be delayed or advance funding was not available; include significance of the project.
    - DSAE's submit prioritized lists to SALT for final prioritization.
    - Funds may be reserved (if available) prior to bid advertisement by phone call to Joan Peters. Do not use Request to Reserve Form.
    - Small over-runs and funding shortfalls may be funded, but require State Aid approval.

**Advance Limitations**

No statutory limitations. State Aid Rules limit advances as follows:

- Advance is limited to municipality's last construction allotment. SALT may approve advances that require more than 1 year's allotment or multiple year paybacks on a case-by-case basis. 5 times the annual construction allotment or $4,000,000 whichever is less is the maximum allowable
- Limitation may be exceeded by federal aid advance construction projects programmed by the ATP in the STIP where Sate Aid funds are used in lieu of federal funds. Repayment will be made at the time federal funds are converted.
- Any similar outstanding obligations and/or Bond Principle payments due reduce advance limit.
- The Municipal Screening Board shall recommend to the commissioner guidance for advance funding.

# RELATIONSHIP OF CONSTRUCTION BALANCE TO CONSTRUCTION ALLOTMENT

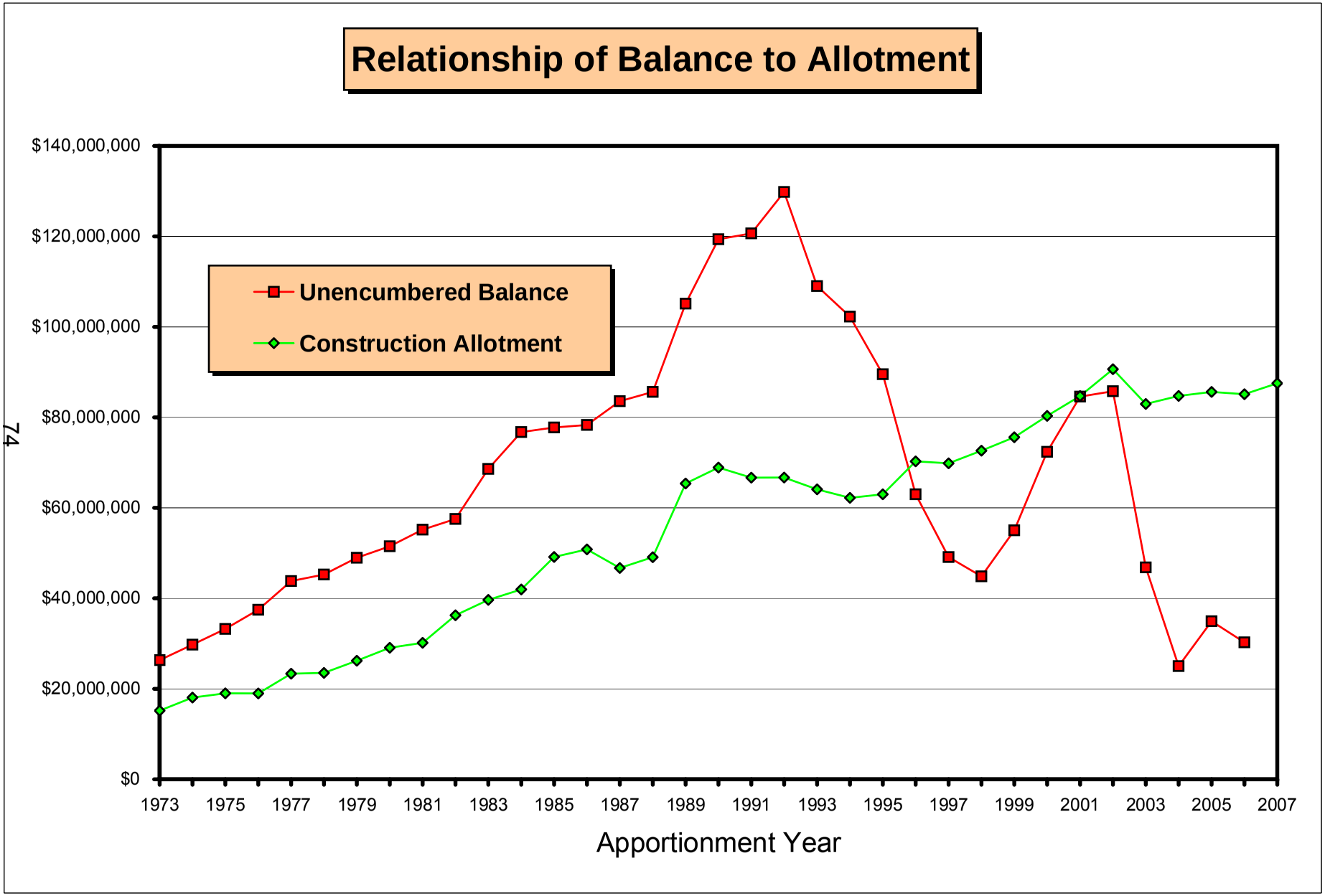
The amount spent on construction projects is computed by the difference between the previous year's and current years unencumbered construction balances plus the current years construction apportionment.

JUNE 2007 BOOK/RELATIONSHIP OF CONSTRUCTION BALANCE TO ALLOTMENT.XLS 07-May-07

| App. Year | | No. of Cities | Needs Mileage | January Construction Allotment | 31-Dec Unencumbered Construction Balance | Amount Spent on Construction Projects | Ratio of Construction Balance to Construction Allotment | Ratio of Amount spent to Amount Received |
|---|---|---|---|---|---|---|---|---|
| **1973** | | 94 | 1,580.45 | $15,164,273 | $26,333,918 | $12,855,250 | 1.7366 | 0.8477 |
| **1974** | | 95 | 1608.06 | 18,052,386 | 29,760,552 | 14,625,752 | 1.6486 | 0.8102 |
| **1975** | | 99 | 1629.30 | 19,014,171 | 33,239,840 | 15,534,883 | 1.7482 | 0.8170 |
| **1976** | | 101 | 1718.92 | 18,971,282 | 37,478,614 | 14,732,508 | 1.9755 | 0.7766 |
| **1977** | | 101 | 1748.55 | 23,350,429 | 43,817,240 | 17,011,803 | 1.8765 | 0.7285 |
| **1978** | | 104 | 1807.94 | 23,517,393 | 45,254,560 | 22,080,073 | 1.9243 | 0.9389 |
| **1979** | | 106 | 1853.71 | 26,196,935 | 48,960,135 | 22,491,360 | 1.8689 | 0.8585 |
| **1980** | | 106 | 1889.03 | 29,082,865 | 51,499,922 | 26,543,078 | 1.7708 | 0.9127 |
| **1981** | | 106 | 1933.64 | 30,160,696 | 55,191,785 | 26,468,833 | 1.8299 | 0.8776 |
| **1982** | | 105 | 1976.17 | 36,255,443 | 57,550,334 | 33,896,894 | 1.5874 | 0.9349 |
| **1983** | | 106 | 2022.37 | 39,660,963 | 68,596,586 | 28,614,711 | 1.7296 | 0.7215 |
| **1984** | | 106 | 2047.23 | 41,962,145 | 76,739,685 | 33,819,046 | 1.8288 | 0.8059 |
| **1985** | | 107 | 2110.52 | 49,151,218 | 77,761,378 | 48,129,525 | 1.5821 | 0.9792 |
| **1986** | | 107 | 2139.42 | 50,809,002 | 78,311,767 | 50,258,613 | 1.5413 | 0.9892 |
| **1987** | * | 107 | 2148.07 | 46,716,190 | 83,574,312 | 41,453,645 | 1.7890 | 0.8874 |
| **1988** | | 108 | 2171.89 | 49,093,724 | 85,635,991 | 47,032,045 | 1.7443 | 0.9580 |
| **1989** | | 109 | 2205.05 | 65,374,509 | 105,147,959 | 45,862,541 | 1.6084 | 0.7015 |
| **1990** | | 112 | 2265.64 | 68,906,409 | 119,384,013 | 54,670,355 | 1.7326 | 0.7934 |
| **1991** | | 113 | 2330.30 | 66,677,426 | 120,663,647 | 65,397,792 | 1.8097 | 0.9808 |
| **1992** | | 116 | 2376.79 | 66,694,378 | 129,836,670 | 57,521,355 | 1.9467 | 0.8625 |
| **1993** | | 116 | 2410.53 | 64,077,980 | 109,010,201 | 84,904,449 | 1.7012 | 1.3250 |
| **1994** | | 117 | 2471.04 | 62,220,930 | 102,263,355 | 68,967,776 | 1.6436 | 1.1084 |
| **1995** | | 118 | 2526.39 | 62,994,481 | 89,545,533 | 75,712,303 | 1.4215 | 1.2019 |
| **1996** | | 119 | 2614.71 | 70,289,831 | 62,993,508 | 96,841,856 | 0.8962 | 1.3778 |
| **1997** | ** | 122 | 2740.46 | 69,856,915 | 49,110,546 | 83,739,877 | 0.7030 | 1.1987 |
| **1998** | | 125 | 2815.99 | 72,626,164 | 44,845,521 | 76,891,189 | 0.6175 | 1.0587 |
| **1999** | | 126 | 2859.05 | 75,595,243 | 55,028,453 | 65,412,311 | 0.7279 | 0.8653 |
| **2000** | | 127 | 2910.87 | 80,334,284 | 72,385,813 | 62,976,924 | 0.9011 | 0.7839 |
| **2001** | | 129 | 2972.16 | 84,711,549 | 84,583,631 | 72,513,731 | 0.9985 | 0.8560 |
| **2002** | | 130 | 3020.39 | 90,646,885 | 85,771,900 | 89,458,616 | 0.9462 | 0.9869 |
| **2003** | | 131 | 3080.67 | 82,974,496 | 46,835,689 | 121,910,707 | 0.5645 | 1.4693 |
| **2004** | | 133 | 3116.44 | 84,740,941 | 25,009,033 | 106,567,597 | 0.2951 | 1.2576 |
| **2005** | | 136 | 3190.82 | 85,619,350 | 34,947,345 | 75,681,038 | 0.4082 | 0.8839 |
| **2006** | | 138 | 3291.64 | 85,116,889 | 30,263,685 | 89,800,549 | 0.3556 | 1.0550 |
| **2007** | | 142 | 3382.28 | 87,542,451 | | | | |

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

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


Relationship of Balance to Allotment
Unencumbered Balance
Construction Allotment
$140,000,000
$120,000,000
$100,000,000
$80,000,000
$60,000,000
$40,000,000
$20,000,000
$0
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
Apportionment Year

# 2007 APPORTIONMENT RANKINGS

5/7/2007

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

MSAS\Excel\2007\June 2007 Book\2007 Apportionment Rankings.xls

## POPULATION APPORTIONMENT

| Rank | Municipality | 2006 Total Needs Mileage | 2007 Population Apportionment Per Need Mile |
|---|---|---|---|
| 1 | MINNEAPOLIS | 207.97 | $29,885 |
| 2 | HOPKINS | 9.85 | 28,095 |
| 3 | ST PAUL | 164.75 | 27,963 |
| 4 | FALCON HEIGHTS | 3.29 | 27,671 |
| 5 | NEW HOPE | 12.70 | 26,346 |
| 6 | VADNAIS HEIGHTS | 8.45 | 25,119 |
| 7 | CIRCLE PINES | 3.26 | 24,940 |
| 8 | COON RAPIDS | 41.83 | 24,327 |
| 9 | ROBBINSDALE | 9.37 | 24,162 |
| 10 | NEW BRIGHTON | 14.92 | 23,859 |
| 11 | COLUMBIA HEIGHTS | 12.50 | 23,750 |
| 12 | WASECA | 6.71 | 23,266 |
| 13 | WEST ST PAUL | 13.54 | 22,974 |
| 14 | ANOKA | 12.64 | 22,924 |
| 15 | ST LOUIS PARK | 31.13 | 22,853 |
| 16 | OAKDALE | 19.30 | 22,834 |
| 17 | ST ANTHONY | 5.95 | 22,566 |
| 18 | EAGAN | 47.71 | 22,414 |
| 19 | CHASKA | 16.22 | 22,212 |
| 20 | NORTHFIELD | 13.74 | 22,122 |
| 21 | ARDEN HILLS | 7.12 | 22,035 |
| 22 | RICHFIELD | 25.11 | 21,986 |
| 23 | BURNSVILLE | 44.73 | 21,955 |
| 24 | BROOKLYN CENTER | 21.40 | 21,852 |
| 25 | EDEN PRAIRIE | 45.46 | 21,494 |
| 26 | SHOREVIEW | 19.52 | 21,322 |
| 27 | APPLE VALLEY | 36.93 | 21,264 |
| 28 | CRYSTAL | 17.88 | 20,350 |
| 29 | BROOKLYN PARK | 56.67 | 20,097 |
| 30 | STEWARTVILLE | 4.57 | 20,071 |
| 31 | PLYMOUTH | 56.85 | 19,867 |
| 32 | ROCHESTER | 78.64 | 19,813 |
| 33 | WHITE BEAR LAKE | 20.35 | 19,636 |
| 34 | WINONA | 22.29 | 19,632 |
| 35 | CHAMPLIN | 19.81 | 19,478 |
| 36 | FARMINGTON | 14.88 | 19,427 |
| 37 | MOUND | 8.17 | 19,303 |
| 38 | FRIDLEY | 22.87 | 19,240 |
| 39 | SOUTH ST PAUL | 16.82 | 19,220 |
| 40 | WACONIA | 7.82 | 18,962 |
| 41 | EDINA | 40.27 | 18,888 |
| 42 | BLAINE | 46.32 | 18,695 |

## MONEY NEEDS APPORTIONMENT

| Rank | Municipality | 2006 Total Needs Mileage | 2007 Money Needs Apportionment Per Need Mile |
|---|---|---|---|
| 1 | CROOKSTON | 11.65 | $27,190 |
| 2 | BLOOMINGTON | 75.25 | 25,148 |
| 3 | ST PAUL | 164.75 | 25,141 |
| 4 | MINNEAPOLIS | 207.97 | 24,707 |
| 5 | MOUND | 8.17 | 23,268 |
| 6 | MAPLE GROVE | 52.24 | 22,676 |
| 7 | LA CRESCENT | 5.64 | 21,723 |
| 8 | FAIRMONT | 19.70 | 21,578 |
| 9 | INVER GROVE HEIGHTS | 31.26 | 21,423 |
| 10 | NEW ULM | 16.11 | 21,150 |
| 11 | JORDAN | 5.89 | 20,841 |
| 12 | THIEF RIVER FALLS | 15.23 | 20,672 |
| 13 | FERGUS FALLS | 24.67 | 20,559 |
| 14 | RED WING | 24.54 | 20,126 |
| 15 | FARMINGTON | 14.88 | 20,048 |
| 16 | FARIBAULT | 23.60 | 19,965 |
| 17 | AUSTIN | 28.62 | 19,947 |
| 18 | LITTLE FALLS | 16.83 | 19,859 |
| 19 | ST FRANCIS | 11.55 | 19,808 |
| 20 | RICHFIELD | 25.11 | 19,802 |
| 21 | DULUTH | 114.38 | 19,545 |
| 22 | ALBERTVILLE | 7.26 | 19,521 |
| 23 | STEWARTVILLE | 4.57 | 19,174 |
| 24 | COLUMBIA HEIGHTS | 12.50 | 19,075 |
| 25 | SAUK RAPIDS | 11.87 | 19,068 |
| 26 | ST PETER | 15.26 | 18,874 |
| 27 | BURNSVILLE | 44.73 | 18,867 |
| 28 | NEW HOPE | 12.70 | 18,757 |
| 29 | KASSON | 5.06 | 18,639 |
| 30 | ALBERT LEA | 23.40 | 18,614 |
| 31 | OWATONNA | 25.24 | 18,434 |
| 32 | MINNETRISTA | 11.41 | 18,284 |
| 33 | GRAND RAPIDS | 15.86 | 18,269 |
| 34 | COTTAGE GROVE | 33.41 | 18,243 |
| 35 | MAPLEWOOD | 33.60 | 18,210 |
| 36 | ST LOUIS PARK | 31.13 | 18,131 |
| 37 | ST ANTHONY | 5.95 | 18,018 |
| 38 | ALEXANDRIA | 18.14 | 17,992 |
| 39 | MOORHEAD | 38.04 | 17,801 |
| 40 | WOODBURY | 52.88 | 17,771 |
| 41 | NORTH ST PAUL | 11.40 | 17,579 |
| 42 | HERMANTOWN | 14.08 | 17,478 |

## TOTAL APPORTIONMENT

| Rank | Municipality | 2007 Total Needs Mileage | 2006 Total Apportionment Per Need Mile |
|---|---|---|---|
| 1 | MINNEAPOLIS | 207.97 | $54,591 |
| 2 | ST PAUL | 164.75 | 53,104 |
| 3 | HOPKINS | 9.85 | 45,330 |
| 4 | NEW HOPE | 12.70 | 45,103 |
| 5 | BLOOMINGTON | 75.25 | 43,292 |
| 6 | COLUMBIA HEIGHTS | 12.50 | 42,825 |
| 7 | MOUND | 8.17 | 42,571 |
| 8 | RICHFIELD | 25.11 | 41,788 |
| 9 | CIRCLE PINES | 3.26 | 41,499 |
| 10 | ST LOUIS PARK | 31.13 | 40,984 |
| 11 | BURNSVILLE | 44.73 | 40,822 |
| 12 | MAPLE GROVE | 52.24 | 40,603 |
| 13 | ST ANTHONY | 5.95 | 40,585 |
| 14 | FALCON HEIGHTS | 3.29 | 40,353 |
| 15 | WASECA | 6.71 | 40,120 |
| 16 | ROBBINSDALE | 9.37 | 39,856 |
| 17 | FARMINGTON | 14.88 | 39,475 |
| 18 | COON RAPIDS | 41.83 | 39,406 |
| 19 | STEWARTVILLE | 4.57 | 39,245 |
| 20 | SHOREVIEW | 19.52 | 38,496 |
| 21 | CROOKSTON | 11.65 | 38,462 |
| 22 | INVER GROVE HEIGHTS | 31.26 | 38,445 |
| 23 | ANOKA | 12.64 | 38,364 |
| 24 | VADNAIS HEIGHTS | 8.45 | 38,315 |
| 25 | EDEN PRAIRIE | 45.46 | 37,450 |
| 26 | APPLE VALLEY | 36.93 | 36,757 |
| 27 | ROCHESTER | 78.64 | 36,481 |
| 28 | WINONA | 22.29 | 36,456 |
| 29 | LA CRESCENT | 5.64 | 36,354 |
| 30 | ARDEN HILLS | 7.12 | 36,048 |
| 31 | SAUK RAPIDS | 11.87 | 35,964 |
| 32 | PLYMOUTH | 56.85 | 35,923 |
| 33 | NEW BRIGHTON | 14.92 | 35,828 |
| 34 | CRYSTAL | 17.88 | 35,753 |
| 35 | MAPLEWOOD | 33.60 | 35,519 |
| 36 | KASSON | 5.06 | 35,468 |
| 37 | FARIBAULT | 23.60 | 35,320 |
| 38 | BROOKLYN CENTER | 21.40 | 34,991 |
| 39 | FRIDLEY | 22.87 | 34,879 |
| 40 | NEW ULM | 16.11 | 34,797 |
| 41 | WACONIA | 7.82 | 34,589 |
| 42 | JORDAN | 5.89 | 34,580 |

## POPULATION APPORTIONMENT

| Rank | Municipality | 2006 Total Needs Mileage | 2007 Population Apportionment Per Need Mile |
|---|---|---|---|
| 93 | ALBERT LEA | 23.40 | $12,582 |
| 94 | WILLMAR | 23.91 | 12,543 |
| 95 | LITCHFIELD | 8.77 | 12,528 |
| 96 | ALBERTVILLE | 7.26 | 12,398 |
| 97 | SARTELL | 17.14 | 12,377 |
| 98 | LAKE CITY | 6.91 | 12,328 |
| 99 | BEMIDJI | 16.99 | 12,321 |
| 100 | ANDOVER | 39.31 | 12,266 |
| 101 | HUTCHINSON | 18.11 | 12,230 |
| 102 | BELLE PLAINE | 7.95 | 12,173 |
| 103 | DULUTH | 114.38 | 12,098 |
| 104 | FOREST LAKE | 23.05 | 12,091 |
| 105 | GLENCOE | 7.88 | 11,583 |
| 106 | CROOKSTON | 11.65 | 11,272 |
| 107 | ST PETER | 15.26 | 11,221 |
| 108 | ST MICHAEL | 20.63 | 10,995 |
| 109 | RED WING | 24.54 | 10,686 |
| 110 | REDWOOD FALLS | 8.20 | 10,672 |
| 111 | ELK RIVER | 32.80 | 10,531 |
| 112 | ROSEMOUNT | 29.96 | 10,390 |
| 113 | MONTEVIDEO | 8.55 | 10,263 |
| 114 | MORRIS | 8.11 | 10,225 |
| 115 | HERMANTOWN | 14.08 | 10,181 |
| 116 | CHISHOLM | 7.99 | 10,031 |
| 117 | RAMSEY | 34.86 | 10,001 |
| 118 | ST FRANCIS | 11.55 | 9,942 |
| 119 | ORONO | 12.43 | 9,870 |
| 120 | ALEXANDRIA | 18.14 | 9,760 |
| 121 | VIRGINIA | 15.93 | 9,215 |
| 122 | FERGUS FALLS | 24.67 | 9,034 |
| 123 | THIEF RIVER FALLS | 15.23 | 8,921 |
| 124 | GRAND RAPIDS | 15.86 | 8,907 |
| 125 | LAKE ELMO | 14.39 | 8,874 |
| 126 | FAIRMONT | 19.70 | 8,861 |
| 127 | CAMBRIDGE | 13.08 | 8,649 |
| 128 | CLOQUET | 21.67 | 8,582 |
| 129 | DAYTON | 9.72 | 8,343 |
| 130 | DETROIT LAKES | 15.44 | 8,313 |
| 131 | EAST GRAND FORKS | 15.51 | 8,078 |
| 132 | OTSEGO | 21.11 | 8,037 |
| 133 | HAM LAKE | 30.49 | 7,958 |
| 134 | LITTLE FALLS | 16.83 | 7,948 |
| 135 | HUGO | 19.15 | 7,902 |
| 136 | MINNETRISTA | 11.41 | 7,786 |
| 137 | NORTH BRANCH | 22.53 | 7,261 |
| 138 | BAXTER | 16.04 | 7,215 |
| 139 | EAST BETHEL | 28.37 | 6,734 |
| 140 | CORCORAN | 14.80 | 6,373 |
| 141 | HIBBING | 51.35 | 5,329 |
| 142 | OAK GROVE | 24.14 | 5,310 |
| | **AVERAGE** | | **$15,472** |

## MONEY NEEDS APPORTIONMENT

| Rank | Municipality | 2006 Total Needs Mileage | 2007 Money Needs Apportionment Per Need Mile |
|---|---|---|---|
| 93 | HIBBING | 51.35 | $14,399 |
| 94 | ROSEVILLE | 29.12 | 14,367 |
| 95 | OTSEGO | 21.11 | 14,090 |
| 96 | ARDEN HILLS | 7.12 | 14,013 |
| 97 | LAKE CITY | 6.91 | 13,955 |
| 98 | MONTICELLO | 10.37 | 13,824 |
| 99 | MOUNDS VIEW | 12.43 | 13,803 |
| 100 | MENDOTA HEIGHTS | 14.67 | 13,747 |
| 101 | BRAINERD | 16.78 | 13,518 |
| 102 | SHAKOPEE | 35.00 | 13,357 |
| 103 | SOUTH ST PAUL | 16.82 | 13,335 |
| 104 | VADNAIS HEIGHTS | 8.45 | 13,196 |
| 105 | BROOKLYN CENTER | 21.40 | 13,139 |
| 106 | SHOREWOOD | 8.61 | 12,959 |
| 107 | HAM LAKE | 30.49 | 12,878 |
| 108 | EAST BETHEL | 28.37 | 12,857 |
| 109 | DETROIT LAKES | 15.44 | 12,788 |
| 110 | FALCON HEIGHTS | 3.29 | 12,682 |
| 111 | GOLDEN VALLEY | 23.57 | 12,419 |
| 112 | HUGO | 19.15 | 12,251 |
| 113 | CHASKA | 16.22 | 12,238 |
| 114 | EAGAN | 47.71 | 12,143 |
| 115 | MONTEVIDEO | 8.55 | 12,102 |
| 116 | BAXTER | 16.04 | 12,082 |
| 117 | ST JOSEPH | 4.81 | 11,993 |
| 118 | NEW BRIGHTON | 14.92 | 11,970 |
| 119 | CHANHASSEN | 21.22 | 11,876 |
| 120 | NORTHFIELD | 13.74 | 11,580 |
| 121 | WEST ST PAUL | 13.54 | 11,476 |
| 122 | BEMIDJI | 16.99 | 11,378 |
| 123 | WHITE BEAR LAKE | 20.35 | 11,246 |
| 124 | WAITE PARK | 6.12 | 11,074 |
| 125 | BIG LAKE | 10.16 | 10,929 |
| 126 | DAYTON | 9.72 | 10,831 |
| 127 | BLAINE | 46.32 | 10,768 |
| 128 | LAKE ELMO | 14.39 | 10,705 |
| 129 | MORRIS | 8.11 | 10,506 |
| 130 | NEW PRAGUE | 6.45 | 10,422 |
| 131 | SAVAGE | 26.04 | 10,403 |
| 132 | CHAMPLIN | 19.81 | 10,373 |
| 133 | HASTINGS | 21.43 | 10,098 |
| 134 | CAMBRIDGE | 13.08 | 9,812 |
| 135 | NORTH BRANCH | 22.53 | 9,713 |
| 136 | ISANTI | 6.42 | 9,593 |
| 137 | BROOKLYN PARK | 56.67 | 9,583 |
| 138 | MAHTOMEDI | 8.62 | 9,182 |
| 139 | CORCORAN | 14.80 | 9,131 |
| 140 | OAKDALE | 19.30 | 8,947 |
| 141 | SPRING LAKE PARK | 5.82 | 7,628 |
| 142 | ROGERS | 7.66 | 6,649 |
| | **AVERAGE** | | **$15,628** |

## TOTAL APPORTIONMENT

| Rank | Municipality | 2007 Total Needs Mileage | 2006 Total Apportionment Per Need Mile |
|---|---|---|---|
| 93 | BELLE PLAINE | 7.95 | $28,607 |
| 94 | LITTLE FALLS | 16.83 | 27,807 |
| 95 | ALEXANDRIA | 18.14 | 27,752 |
| 96 | HERMANTOWN | 14.08 | 27,659 |
| 97 | WILLMAR | 23.91 | 27,638 |
| 98 | GLENCOE | 7.88 | 27,485 |
| 99 | ANDOVER | 39.31 | 27,476 |
| 100 | GRAND RAPIDS | 15.86 | 27,175 |
| 101 | REDWOOD FALLS | 8.20 | 27,136 |
| 102 | HUTCHINSON | 18.11 | 27,103 |
| 103 | SHOREWOOD | 8.61 | 27,017 |
| 104 | SHAKOPEE | 35.00 | 26,794 |
| 105 | BRAINERD | 16.78 | 26,752 |
| 106 | MENDOTA HEIGHTS | 14.67 | 26,403 |
| 107 | GOLDEN VALLEY | 23.57 | 26,368 |
| 108 | NEW PRAGUE | 6.45 | 26,305 |
| 109 | LAKE CITY | 6.91 | 26,283 |
| 110 | SPRING LAKE PARK | 5.82 | 26,280 |
| 111 | ROSEMOUNT | 29.96 | 26,215 |
| 112 | HASTINGS | 21.43 | 26,172 |
| 113 | VIRGINIA | 15.93 | 26,144 |
| 114 | CHISHOLM | 7.99 | 26,079 |
| 115 | MINNETRISTA | 11.41 | 26,070 |
| 116 | ST MICHAEL | 20.63 | 25,952 |
| 117 | SAVAGE | 26.04 | 25,585 |
| 118 | ELK RIVER | 32.80 | 25,246 |
| 119 | ORONO | 12.43 | 25,190 |
| 120 | RAMSEY | 34.86 | 24,654 |
| 121 | BIG LAKE | 10.16 | 24,610 |
| 122 | EAST GRAND FORKS | 15.51 | 24,261 |
| 123 | CLOQUET | 21.67 | 24,252 |
| 124 | MAHTOMEDI | 8.62 | 23,950 |
| 125 | BEMIDJI | 16.99 | 23,699 |
| 126 | ISANTI | 6.42 | 22,529 |
| 127 | MONTEVIDEO | 8.55 | 22,365 |
| 128 | OTSEGO | 21.11 | 22,127 |
| 129 | DETROIT LAKES | 15.44 | 21,101 |
| 130 | HAM LAKE | 30.49 | 20,835 |
| 131 | MORRIS | 8.11 | 20,731 |
| 132 | ROGERS | 7.66 | 20,704 |
| 133 | OAK GROVE | 24.14 | 20,652 |
| 134 | HUGO | 19.15 | 20,154 |
| 135 | HIBBING | 51.35 | 19,728 |
| 136 | EAST BETHEL | 28.37 | 19,590 |
| 137 | LAKE ELMO | 14.39 | 19,579 |
| 138 | BAXTER | 16.04 | 19,297 |
| 139 | DAYTON | 9.72 | 19,174 |
| 140 | CAMBRIDGE | 13.08 | 18,461 |
| 141 | NORTH BRANCH | 22.53 | 16,974 |
| 142 | CORCORAN | 14.80 | 15,504 |
| | **AVERAGE** | | **$31,099** |

| POPULATION APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2006 Total Needs Mileage | 2007 Population Apportionment Per Need Mile |
| 43 | ST JOSEPH | 4.81 | $18,683 |
| 44 | SPRING LAKE PARK | 5.82 | 18,652 |
| 45 | ROSEVILLE | 29.12 | 18,652 |
| 46 | BLOOMINGTON | 75.25 | 18,144 |
| 47 | MAPLE GROVE | 52.24 | 17,927 |
| 48 | WAITE PARK | 6.12 | 17,746 |
| 49 | PRIOR LAKE | 19.62 | 17,481 |
| 50 | MAPLEWOOD | 33.60 | 17,308 |
| 51 | STILLWATER | 16.23 | 17,217 |
| 52 | INVER GROVE HEIGHTS | 31.26 | 17,023 |
| 53 | CHANHASSEN | 21.22 | 17,011 |
| 54 | SAUK RAPIDS | 11.87 | 16,896 |
| 55 | MANKATO | 33.30 | 16,864 |
| 56 | KASSON | 5.06 | 16,829 |
| 57 | NORTH ST PAUL | 11.40 | 16,774 |
| 58 | MONTICELLO | 10.37 | 16,482 |
| 59 | MOUNDS VIEW | 12.43 | 16,428 |
| 60 | WOODBURY | 52.88 | 16,397 |
| 61 | ST CLOUD | 63.22 | 16,287 |
| 62 | MINNETONKA | 50.86 | 16,281 |
| 63 | HASTINGS | 21.43 | 16,074 |
| 64 | WORTHINGTON | 11.39 | 15,961 |
| 65 | COTTAGE GROVE | 33.41 | 15,919 |
| 66 | NEW PRAGUE | 6.45 | 15,884 |
| 67 | ST PAUL PARK | 5.37 | 15,660 |
| 68 | OWATONNA | 25.24 | 15,405 |
| 69 | FARIBAULT | 23.60 | 15,354 |
| 70 | SAVAGE | 26.04 | 15,182 |
| 71 | MAHTOMEDI | 8.62 | 14,768 |
| 72 | LA CRESCENT | 5.64 | 14,632 |
| 73 | VICTORIA | 6.44 | 14,529 |
| 74 | MOORHEAD | 38.04 | 14,497 |
| 75 | LITTLE CANADA | 11.16 | 14,358 |
| 76 | NORTH MANKATO | 14.33 | 14,069 |
| 77 | SHOREWOOD | 8.61 | 14,059 |
| 78 | ROGERS | 7.66 | 14,055 |
| 79 | GOLDEN VALLEY | 23.57 | 13,949 |
| 80 | LAKEVILLE | 60.02 | 13,814 |
| 81 | LINO LAKES | 22.90 | 13,789 |
| 82 | JORDAN | 5.89 | 13,739 |
| 83 | BIG LAKE | 10.16 | 13,681 |
| 84 | NEW ULM | 16.11 | 13,646 |
| 85 | SHAKOPEE | 35.00 | 13,437 |
| 86 | INTERNATIONAL FALLS | 8.06 | 13,339 |
| 87 | AUSTIN | 28.62 | 13,309 |
| 88 | MARSHALL | 15.64 | 13,255 |
| 89 | BRAINERD | 16.78 | 13,234 |
| 90 | ISANTI | 6.42 | 12,937 |
| 91 | MENDOTA HEIGHTS | 14.67 | 12,656 |
| 92 | BUFFALO | 16.79 | 12,651 |

| MONEY NEEDS APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2006 Total Needs Mileage | 2007 Money Needs Apportionment Per Need Mile |
| 43 | ST PAUL PARK | 5.37 | $17,476 |
| 44 | HOPKINS | 9.85 | 17,236 |
| 45 | SHOREVIEW | 19.52 | 17,174 |
| 46 | VIRGINIA | 15.93 | 16,930 |
| 47 | WASECA | 6.71 | 16,854 |
| 48 | WINONA | 22.29 | 16,824 |
| 49 | FOREST LAKE | 23.05 | 16,821 |
| 50 | ROCHESTER | 78.64 | 16,668 |
| 51 | LITCHFIELD | 8.77 | 16,664 |
| 52 | NORTH MANKATO | 14.33 | 16,560 |
| 53 | CIRCLE PINES | 3.26 | 16,559 |
| 54 | REDWOOD FALLS | 8.20 | 16,465 |
| 55 | BELLE PLAINE | 7.95 | 16,434 |
| 56 | SARTELL | 17.14 | 16,405 |
| 57 | BUFFALO | 16.79 | 16,401 |
| 58 | LAKEVILLE | 60.02 | 16,313 |
| 59 | INTERNATIONAL FALLS | 8.06 | 16,284 |
| 60 | EAST GRAND FORKS | 15.51 | 16,183 |
| 61 | WORTHINGTON | 11.39 | 16,166 |
| 62 | PLYMOUTH | 56.85 | 16,057 |
| 63 | CHISHOLM | 7.99 | 16,048 |
| 64 | LITTLE CANADA | 11.16 | 16,040 |
| 65 | EDEN PRAIRIE | 45.46 | 15,956 |
| 66 | MINNETONKA | 50.86 | 15,952 |
| 67 | GLENCOE | 7.88 | 15,901 |
| 68 | ROSEMOUNT | 29.96 | 15,825 |
| 69 | MARSHALL | 15.64 | 15,793 |
| 70 | ROBBINSDALE | 9.37 | 15,694 |
| 71 | CLOQUET | 21.67 | 15,670 |
| 72 | FRIDLEY | 22.87 | 15,639 |
| 73 | WACONIA | 7.82 | 15,627 |
| 74 | EDINA | 40.27 | 15,602 |
| 75 | MANKATO | 33.30 | 15,552 |
| 76 | APPLE VALLEY | 36.93 | 15,493 |
| 77 | ANOKA | 12.64 | 15,440 |
| 78 | CRYSTAL | 17.88 | 15,403 |
| 79 | OAK GROVE | 24.14 | 15,341 |
| 80 | ORONO | 12.43 | 15,320 |
| 81 | ANDOVER | 39.31 | 15,210 |
| 82 | LINO LAKES | 22.90 | 15,150 |
| 83 | WILLMAR | 23.91 | 15,095 |
| 84 | COON RAPIDS | 41.83 | 15,079 |
| 85 | ST MICHAEL | 20.63 | 14,957 |
| 86 | HUTCHINSON | 18.11 | 14,872 |
| 87 | ST CLOUD | 63.22 | 14,824 |
| 88 | VICTORIA | 6.44 | 14,719 |
| 89 | ELK RIVER | 32.80 | 14,715 |
| 90 | RAMSEY | 34.86 | 14,653 |
| 91 | STILLWATER | 16.23 | 14,560 |
| 92 | PRIOR LAKE | 19.62 | 14,546 |

| TOTAL APPORTIONMENT | | | |
|---|---|---|---|
| Rank | Municipality | 2007 Total Needs Mileage | 2006 Total Apportionment Per Need Mile |
| 43 | EAGAN | 47.71 | $34,557 |
| 44 | EDINA | 40.27 | 34,490 |
| 45 | CHASKA | 16.22 | 34,451 |
| 46 | WEST ST PAUL | 13.54 | 34,450 |
| 47 | NORTH ST PAUL | 11.40 | 34,353 |
| 48 | WOODBURY | 52.88 | 34,169 |
| 49 | COTTAGE GROVE | 33.41 | 34,162 |
| 50 | OWATONNA | 25.24 | 33,838 |
| 51 | NORTHFIELD | 13.74 | 33,702 |
| 52 | AUSTIN | 28.62 | 33,256 |
| 53 | ST PAUL PARK | 5.37 | 33,136 |
| 54 | ROSEVILLE | 29.12 | 33,019 |
| 55 | SOUTH ST PAUL | 16.82 | 32,555 |
| 56 | MANKATO | 33.30 | 32,416 |
| 57 | MOORHEAD | 38.04 | 32,298 |
| 58 | MINNETONKA | 50.86 | 32,233 |
| 59 | WORTHINGTON | 11.39 | 32,128 |
| 60 | PRIOR LAKE | 19.62 | 32,027 |
| 61 | ALBERTVILLE | 7.26 | 31,919 |
| 62 | OAKDALE | 19.30 | 31,781 |
| 63 | STILLWATER | 16.23 | 31,776 |
| 64 | DULUTH | 114.38 | 31,643 |
| 65 | ALBERT LEA | 23.40 | 31,195 |
| 66 | ST CLOUD | 63.22 | 31,111 |
| 67 | WHITE BEAR LAKE | 20.35 | 30,882 |
| 68 | RED WING | 24.54 | 30,812 |
| 69 | ST JOSEPH | 4.81 | 30,676 |
| 70 | NORTH MANKATO | 14.33 | 30,629 |
| 71 | FAIRMONT | 19.70 | 30,438 |
| 72 | LITTLE CANADA | 11.16 | 30,398 |
| 73 | MONTICELLO | 10.37 | 30,306 |
| 74 | MOUNDS VIEW | 12.43 | 30,230 |
| 75 | LAKEVILLE | 60.02 | 30,127 |
| 76 | ST PETER | 15.26 | 30,095 |
| 77 | CHAMPLIN | 19.81 | 29,851 |
| 78 | ST FRANCIS | 11.55 | 29,749 |
| 79 | BROOKLYN PARK | 56.67 | 29,680 |
| 80 | INTERNATIONAL FALLS | 8.06 | 29,624 |
| 81 | THIEF RIVER FALLS | 15.23 | 29,593 |
| 82 | FERGUS FALLS | 24.67 | 29,593 |
| 83 | BLAINE | 46.32 | 29,463 |
| 84 | VICTORIA | 6.44 | 29,249 |
| 85 | LITCHFIELD | 8.77 | 29,192 |
| 86 | BUFFALO | 16.79 | 29,052 |
| 87 | MARSHALL | 15.64 | 29,048 |
| 88 | LINO LAKES | 22.90 | 28,938 |
| 89 | FOREST LAKE | 23.05 | 28,912 |
| 90 | CHANHASSEN | 21.22 | 28,887 |
| 91 | WAITE PARK | 6.12 | 28,820 |
| 92 | SARTELL | 17.14 | 28,782 |

4/30/2007

# 2007 Local Road Research Board Program

INCLUDES 2007 APPROVED ONGOING PROGRAMS

| INV | TITLE | PROJECT TOTAL | LRRB $ | LRRB Paid to Date | Committed Previous Years | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 645 | 2005-2006 Implementation of Research Findings | **400,000** | **404,083** | $315,393 | | 75,565 | 13,125 | | | | |
| 645 | 2007-2008 Implementation of Research Findings | **400,000** | **400,000** | | | 35,000 | 150,000 | 215,000 | | | |
| 668* | 2006 Technology Transfer Center, U of M - Base | **185,000** | **185,000** | 25,650 | | 129,016 | 30,334 | | | | |
| | Technology Transfer Center, U of M - Cont. Projects: | | | | | | | | | | |
| 883 | Circuit Training & Assist.Program (CTAP), Instructor-$74,500 | **74,500** | **74,500** | 74,500 | | | | | | | |
| | Circuit Training & Assist.Program (CTAP) $T^2$ Center-$84,000 | **84,000** | **84,000** | 84,000 | | | | | | | |
| | Minnesota Maintenance Research Expos | **26,000** | **26,000** | 26,000 | | | | | | | |
| | Transportation Student Development | **5,500** | **5,500** | 5,500 | | | | | | | |
| 668* | 2007 Technology Transfer Center, U of M - Base | **185,000** | **185,000** | | | | | 185,000 | | | |
| | Technology Transfer Center, U of M - Cont. Projects: | | | | | | | | | | |
| 882 | Circuit Training & Assist.Program (CTAP), Instructor-$74,500 | **74,500** | **74,500** | | | | 74,500 | | | | |
| | Circuit Training & Assist.Program (CTAP) $T^2$ Center-$84,000 | **84,000** | **84,000** | | | | 84,000 | | | | |
| | Minnesota Maintenance Research Expos | **26,000** | **26,000** | | | | 26,000 | | | | |
| | Transportation Student Development | **5,500** | **5,500** | | | 5,000 | 500 | | | | |
| 676 | 2007 MN Road Research: Facility Sprt-$500,000, Staff -$60,000 | **560,000** | **560,000** | | | | 560,000 | | | | |
| 745 | 2007 Library Services for Local Governments | **60,000** | **60,000** | | | | 60,000 | | | | |
| 768 | Geosynthetics in Roadway Design thru FY11 | **30,000** | **30,000** | 6,000 | | 9,000 | 2,500 | 2,500 | 2500 | 2500 | 5000 |
| 773* | Shredded Tires Used for Road Bases | **150,000** | **100,000** | 73,856 | | 26,144 | | | | | |
| 792* | Pavement Research Institute funded thru CY2007 | **730,000** | **300,000** | 240,000 | | 60,000 | | | | | |
| 801* | Adaptation of Mechanistic 2003 Guide for Design of MN-Low Volume PCC | **89,900** | **25,000** | 25,000 | | | | | | | |
| 808 | Pavement Rehabilitation Selection (co PI U of M & Lab) | **102,000** | **102,000** | 15,300 | **16,320** | 10,000 | 37,030 | 23,350 | | | |
| 809 | Research Tracking for Local Roads funded thru CY08 | **60,000** | **60,000** | 17,825 | | 25,730 | 16,445 | | | | |
| 810* | Coal Ash Utilization in Gravel Roads | **212,995** | **149,280** | 128,183 | | 21,097 | | | | | |
| 812 | Resilient Modulus & Strength of Base Course with Recycled Asphalt Pavements | **94,000** | **94,000** | 75,200 | | 18,800 | | | | | |
| 813 | Human-Centered Interventions Twrd Zero Deaths in Rural MN | **188,804** | **188,804** | 66,080 | | 122,724 | | | | | |
| 815* | Calibration of the 2002 AASHTO Pavement Design Guide for Minnesota Portland Cement Concrete Pavements and Hot Mix Asphalt Pavements | **292,385** | **126,600** | 8,809 | **19,968** | 87,823 | 10,000 | | | | |
| 817* | Determination of Optimum Time for the Application of Surface Treatments to Asphalt Concrete Pavements | **226,000** | **113,000** | 26,600 | **72,400** | 14,000 | | | | | |
| 822 | Crack Sealing & Filling Performance | **72,802** | **72,802** | | | 5,800 | 33,354 | 33,648 | | | |
| 823 | The Road to a Thoughtful Street Tree Master Plan (increase apprvd.vl $1,000) | **31,450** | **31,450** | 3,958 | | 21,924 | 5,568 | | | | |
| 824 | Dev of Improved Proof Rolling Methods for Roadway Embankment Construction | **110,000** | **110,000** | 45,100 | | 49,500 | 15,400 | | | | |
| 825 | Perf Monitoring of Olmsted CR 177/104 & Aggregate Base Material thru FY11 @ $8K/year | **40,000** | **40,000** | | | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | |
| 826 | Appropriate Use of RAP | **30,789** | **30,789** | 5770 | | 15,019 | 5,000 | 5,000 | | | |
| 827 | Winter Pavement Tenting (expired - 3/07 reinstated) | **25,126** | **25,126** | | | | 12,563 | 12,563 | | | |
| 828 | Local Road Material Properties and Calibration of MnPAVE | **56,000** | **56,000** | | | 48,000 | 8,000 | | | | |
| 830 | Evaluating Roadway Subsurface Drainage Practices | **186,735** | **186,735** | 1,204 | **126,099** | 50,082 | 9,350 | | | | |
| 831* | Stripping in MN Class 7 (Rap) & Full Depth Reclamation Base Material | **101,656** | **50,793** | 1,167 | | 45,798 | 3,453 | 375 | | | |
| 832* | Volume Warrants for Right Turn Lanes | **61,000** | **16,620** | 13,100 | **1,900** | 1,620 | | | | | |
| 833* | Design Tool for Controlling Runoff & Sediment from Highway Construction | **89,000** | **44,500** | 10,000 | | 34,500 | | | | | |
| 834 | Assessment of Storm Water Management Practices on the Water Quality of Runoff | **138,000** | **138,000** | 103,500 | | 34,500 | | | | | |
| 835 | Best Use of Cone Penetration Testing | **55,000** | **55,000** | | **22,000** | 27,500 | 5,500 | | | | |
| 836 | Design Procedures for Bituminous Stabilized Road Surfaces for low Volume Roads | **60,080** | **60,080** | 44,919 | | 15,161 | | | | | |
| 838* | Petroleum Glass Spun Glass Paving Fabric | **30,000** | **20,000** | | **10,000** | 10,000 | | | | | |
| 839 | Warrants for Roundabouts | **39,444** | **39,444** | | | 22,699 | 16,745 | | | | |
| 840 | Performance of PG 52-34 Oil | **76,200** | **76,200** | | | 20,000 | 10,000 | 32,000 | 14,200 | | |
| 841 | Long-Term Maintenace Effect on Hot Mix Asphalts | **43,257** | **43,257** | | | 8,257 | 25,000 | 10,000 | | | |
| 842 | Best Practices for Dust Control on Agg Surfc Road | **75,000** | **75,000** | 19,873 | | 19,294 | 15,833 | 20,000 | | | |
| 843* | Predicting Bumps in Overlays - thru 09- CO PROJECT WITH LAB | **64,540** | **64,540** | | | 11,870 | 26,593 | 26,077 | | | |
| 844 | Update Vehicle Classification for CR Pavement Dsgn | **54,094** | **54,094** | | | 39,550 | 14,544 | | | | |
| 845 | Analysis of Highway Design and Geometric Effects on Crashes - Part I (CH2MHill) | **70,373** | **70,373** | PENDING CONTRACT | | 10,000 | 35,000 | 25,373 | | | |
| 846 | Hydraulic, Mechanical, and Leaching Characteristics of Recylcled Materials | **135,000** | **135,000** | | | 56,654 | 68,346 | 10,000 | | | |
| 847 | Use of Fly Ash for Reconstruction of Bitum Roads | **170,056** | **170,056** | | | 70,692 | 44,364 | 55,000 | | | |
| 848 | Warning Efficacy of Active Passive Warnings for Unsignalized Intersection & Mid-Block Pedestrian Sidewalks | **118,908** | **118,908** | | | 56,481 | 50,536 | 11,891 | | | |
| 849 | Environmental Effects of De-Icing Salt on Water Quality | **93,355** | **93,355** | 18,671 | | 32,673 | 42,011 | | | | |
| 850 | Mechanistic Modeling of DCP Test | **105,000** | **105,000** | | | 63,000 | 36,750 | 5,250 | | | |
| 851 | Allowable Axle Loads on Pavements | **110,000** | **110,000** | | | 36,438 | 24,062 | 49,500 | | | |
| 852 | Subsurface Drainage Manual for Pavements in MN | **71,638** | **71,638** | 14,202 | | 48,793 | 8,643 | | | | |

| INV | TITLE | PROJECT TOTAL | LRRB $ | LRRB Paid to Date | Committed Previous Years | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 853 | Development of Flexural Vibration Equipment PhsII | **52,980** | **52,980** | | | 37,083 | 15,897 | | | | |
| 854* | Pavement Peformance/Failure under Overweight Farm Loads - Pooled Fund Prjct | **475,000** | **105,000** | PENDING CONTRACT | | 35,000 | 70,000 | | | | |
| 855* | A Property-Based Spec for Coarse Aggregate in Pavement Apps | **92,624** | **46,313** | | | | 33,601 | 12,712 | | | |
| 856* | Investigation of In-Place Asphalt Film Thickness and Performance of MN Hot Mix Asphalt Mixtures | **78,000** | **38,905** | | | | 35,010 | 3,895 | | | |
| 857* | Report & Analysis of Effects of Seasonal and Climatic Changes on Ride Quality as Observed in MnROAD Low & High Volume Roads | **79,494** | **39,744** | | | 26,495 | 13,249 | | | | |
| 858* | Crack & Concrete Deck Sealant Performance | **75,000** | **37,500** | | | 18,750 | 18,750 | | | | |
| 860 | Compaction Specifications for Unbound Materials | **105,000** | **105,000** | | | 16,000 | 29,500 | 59,500 | | | |
| 861 | Best Mgmt Practices for Pavement Preservation of Hot mix Asphalt | **71,049** | **71,049** | | | 25,000 | 25,000 | 21,049 | | | |
| 862* | Real Time Arterial Performance - U of M contribute | **140,000** | **70,000** | | | 22,167 | 20,000 | 27,833 | | | |
| 863* | Optimal Timing of Preventive Maintenance for Addressing Environmental Aging in HMA Pavements-Pooled Fund Prjct | **335,000** | **75,000** | PENDING CONTRACT | | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | |
| 864* | Recycled Asphalt Pavements-Pooled Fund Prjct | **350,000** | **75,000** | PENDING CONTRACT | | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | |
| 865* | Low Temp Cracking - Pooled Fund Prjct | **400,000** | **50,000** | PENDING CONTRACT | | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | |
| 867* | Composite Pavements - Pooled Fund Prjct | **450,000** | **50,000** | PENDING CONTRACT | | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | |
| 868* | HMA Surface Characteristics-Pooled Fund Project | **300,000** | **75,000** | PENDING CONTRACT | | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | |
| 870 | Stream Geomorphology & Fish Passage Rqrmnt on Const Costs of Culvert Structure | **50,663** | **50,663** | PENDING CONTRACT | | | 27,807 | 22,856 | | | |
| 871* | Statistical Methods for Material Testing | **95,260** | **47,630** | PENDING CONTRACT | | | 20,925 | 22,890 | 3,815 | | |
| 872* | Mn/ROAD Data Mining, Evaluation and Qualification Phase 1 | **55,000** | **27,500** | PENDING CONTRACT | | | 15,000 | 12,500 | | | |
| 873 | Use of Foamed Asphalt Base Reclamation on Local Roads | **20,000** | **20,000** | PENDING CONTRACT | | | 20,000 | | | | |
| 874* | Assessment of the Underground Stormwater Management Devices | **111,000** | **55,500** | PENDING CONTRACT | | | 25,000 | 25,000 | 5,500 | | |
| 875* | Estimating Size Distribution of Suspended Sediments in MN Stormwater | **155,000** | **55,000** | PENDING CONTRACT | | | 20,000 | 18,000 | 17,000 | | |
| 876 | Best Preventive Maintenance Treatments for Recreational Trails | **53,569** | **53,569** | PENDING CONTRACT | | | 16,785 | 30,784 | 6,000 | | |
| 877 | Development and Field Test of Advance Dynamic LED Warning Signals | **99,940** | **99,940** | PENDING CONTRACT | | | 64,961 | 34,979 | | | |
| 878 | Porous Asphal Pavement Performance in Cold Regions | **82,400** | **82,400** | PENDING CONTRACT | | | 28,300 | 33,425 | 20,675 | | |
| 879 | Pervious Concrete Pavement in Mn/ROAD Low Volume Road | **50,000** | **50,000** | PENDING CONTRACT | | | 25,000 | 25,000 | | | |
| 880 | Snow Plow Optimization - St Louis Co | **45,000** | **45,000** | PENDING CONTRACT | | | 15,000 | 15,000 | 15,000 | | |
| 881* | LRRB Annual Program/Technical Synthesis Reports | **17,912** | **10,000** | | | 10,000 | | | | | |
| 882 | Technical Synthesis Report - Financing | **22,104** | **22,104** | 22,104 | | 22,104 | | | | | |
| 998 | 2006 Operational Research Program | **70,000** | **70,000** | 5,000 | | 5,761 | 6,739 | 52,500 | | | |
| 998 | 2007 Operational Research Program | **70,000** | **70,000** | | | | 20,000 | 20,000 | 30000 | | |
| 998 | Website Enhancements | **16,300** | **16,300** | | | | 16,300 | | | | |
| 999 | 2007 Program Administration (includes web, outreach & publishing) | **266,000** | **266,000** | | | | 133,000 | 133,000 | | | |
| | **TOTALS** | 10,944,882 | 7,560,624 | 1,522,463 | $268,687 | 1,787,064 | 2,369,873 | 1,366,450 | 187,690 | 75,500 | 5,000 |

**Footnotes from Page 1 & 2:**

*Projects co-funded from other sources

Pending Contract

| **SUMMARY:** | | City | County |
|---|---|---|---|
| Funds Allotted for 2007 (Receive FY07 - July 06) | $ 2,339,382 | $ 557,436 | $ 1,781,946 |

**January 3, 2003**

# ***COUNTY HIGHWAY TURNBACK POLICY***

***Definitions:***

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

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

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

## *MILEAGE CONSIDERATIONS*

### *County State Aid Highway Turnbacks*

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

### *County Road Turnbacks*

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

## *Jurisdictional Exchanges*

### *County Road for MSAS*

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

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

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

### *CSAH for MSAS*

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

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

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

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

### *MSAS designation on a County Road*

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

## *MISCELLANEOUS*

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

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

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

# STATUS OF MUNICIPAL TRAFFIC COUNTING

The current Municipal State Aid Traffic Counting resolution reads:

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

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

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

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

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

**Metro District**
**Two year** traffic counting schedule -counted in 2007 and updated in the needs in 2008

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

**Metro District**
**Four year** traffic counting schedule - to be counted in 2009 and updated in the needs in 2010

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

**Outstate**
**Two year** traffic counting schedule - to be counted in 2007 and updated in the needs in 2008

Northfield
St. Cloud
Sartell

**Outstate**
**Two year** traffic counting schedule - to be counted in 2008 and updated in the needs in 2009

Rochester

**Outstate**
**Two year** traffic counting schedule - to be counted in 2007 and updated in the needs in 2008

Brainerd

**Outstate**
**Four year** traffic counting schedule - to be counted in 2007 and updated in the needs in 2008

Bemidji
Big Lake
Cambridge
Chisholm
Duluth
Elk River
Fergus Falls
Glencoe
Hermantown
Hibbing
Hutchinson
Isanti
La Crescent
Lake City
Litchfield
North Mankato
Owatonna
Red Wing
Redwood Falls
Saint Joseph
Saint Peter
Sauk Rapids
Thief River Falls
Virginia
Waite Park
Waseca
Winona

**Outstate**
**Four year** traffic counting schedule - to be counted in 2008 and updated in the needs in 2009

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

**Outstate**
**Four year** traffic counting schedule - to be counted in 2009 and updated in the needs in 2010

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

**Outstate**
**Four year** traffic counting schedule - to be counted in 2010 and be updated in the needs in 2011

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

Duluth counts 1/4 of the city each year.

N:\MSAS\Word Documents\2007\June 2007 Book\Traffic Counting Schedules.doc

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

June 2007

**Bolded wording (except headings) are revisions since the last publication of the Resolutions**

**BE IT RESOLVED:**

## ADMINISTRATION

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

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

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

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

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

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

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

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

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

That any individual or delegation having items of concern regarding the study of State Aid Needs or State Aid Apportionment amounts, and wishing to have consideration given to these items, shall, in

a written report, communicate with the State Aid Engineer. The State Aid Engineer with concurrence of the Chair of the Screening Board shall determine which requests are to be referred to the Screening Board for their consideration. This resolution does not abrogate the right of the Screening Board to call any person or persons before the Board for discussion purposes.

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

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

**Research Account** - Oct. 1961

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

That an amount of **$557,436** (not to exceed 1/2 of 1% of the **2006** MSAS Apportionment sum of **$111,487,130**) shall be set aside from the 2006 Apportionment fund and be credited to the research account.

**Soil Type** - Oct. 1961 (Revised June, 2005)

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 using the following steps:

a) The DSAE shall have the authority to review and approve requests for Soils Factor revisions on independent segments (if less than 10% of the MSAS system). Appropriate written documentation is required with the request and the DSAE should consult with the Mn/DOT Materials Office prior to approval.
b) If greater than 10% of the municipality's MSAS system mileage is proposed for Soil Factor revisions, the following shall occur:
    Step 1. The DSAE (in consultation with the Mn/DOT Materials Office) and Needs Study Subcommittee will review the request with appropriate written documentation and make a recommendation to the Screening Board.
    Step 2. The Screening Board shall review and make the final determination of the request for Soils Factor revisions.

That when a new municipality becomes eligible to participate in the MSAS allocation, the soil type to be used for Needs purposes shall be based upon the Mn/DOT Soils Classification Map for Needs purposes. Any requests for changes must follow the above process.

**Improper Needs Report** - Oct. 1961

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

**New Cities Needs** - Oct. 1983 (Revised June, 2005)

That any new city having determined its eligible mileage, but has not submitted its Needs to the DSAE by December 1, will have its money Needs determined at the cost per mile of the lowest other city.

**Unit Price Study- Oct. 2006**

**That the Unit Price Study go to a 3 year (or triennial) cycle with the Unit Prices for the two 'off years' to be set using the Engineering News Record construction cost index. The Screening Board may request a Unit Price Study on individual items in the 'off years' if it is deemed necessary.**

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

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

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

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

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

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

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

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

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

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

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

**Population Apportionment** - October 1994, 1996

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

## DESIGN

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

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

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

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

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

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

**Miscellaneous Limitations** - Oct. 1961

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

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

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

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

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

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

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

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

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

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

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

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

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

## NEEDS COSTS

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

| **Roadway Item Unit Prices** (Reviewed Annually) | | | |
|---|---|---|---|
| **Right of Way (Needs Only)** | | | $98,850 per Acre |
| **Grading (Excavation)** | | | $4.75 per Cu. Yd. |
| | | | |

| | | | |
|---|---|---|---|
| **Base:** | | | |
| | Class 5 Gravel | Spec. #2211 | $8.40 per Ton |
| | Bituminous | Spec. #2350 | $38.00 per Ton |
| **Surface:** | | | |
| | Gravel | Spec. #2118 | $7.10 per Ton |
| | Bituminous | Spec. #2350 | $38.00 per Ton |
| **Shoulders:** | | | |
| | Gravel | Spec. #2221 | $14.25 per Ton |
| **Miscellaneous:** | | | |
| | Storm Sewer Construction | | $268,035 per Mile |
| | Storm Sewer Adjustment | | $86,100 per Mile |
| | Special Drainage (rural segments only) | | $40,000 per Mile |
| | Street Lighting | | $100,000 per Mile |
| | Curb & Gutter Construction | | $9.75 per Lineal Foot |
| | Sidewalk Construction | | $26.00 per Sq. Yd. |
| | Project Development | | 22% |
| **Removal Items:** | | | |
| | Curb & Gutter | | $2.75 per Lineal Foot |
| | Sidewalk | | $5.50 per Sq. Yd. |
| | Concrete Pavement | | $5.40 per Sq. Yd. |
| | Tree Removal | | $300.00 per Unit |

**Traffic Signal Needs Based On Projected Traffic (every segment)**

| Projected Traffic | Percentage X | Unit Price = | Needs Per Mile |
|---|---|---|---|
| 0 - 4,999 | 25% | $130,000 | $32,500 per Mile |
| 5,000 - 9,999 | 50% | $130,000 | $65,000 per Mile |
| 10,000 and Over | 100% | $130,000 | $130,000 per Mile |

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

All Bridge Unit Costs shall be $95.00 per Sq. Ft.

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** | |
|---|---|
| One Track | $10,200 per Linear Foot |
| Each Additional Track | $8,500 per Linear Foot |

**RAILROAD CROSSINGS**

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

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

| **Railroad Grade Crossings** | |
|---|---|
| Signals - (Single track - low speed) | $150,000 per Unit |
| Signals and Gates (Multiple Track – high speed) | $200,000 per Unit |
| Signs Only (low speed) | $1,000 per Unit |
| Concrete Crossing Material Railroad Crossings (Per Track) | $1,000 per Linear Foot |
| Pavement Marking | $750 per Unit |

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

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

| **Maintenance Needs Costs** | **Cost For Under 1000 Vehicles Per Day** | **Cost For Over 1000 Vehicles Per Day** |
|---|---|---|
| Traffic Lanes<br>Segment length times number of Traffic lanes times cost per mile | $1,725 per Mile | $2,850 per Mile |
| Parking Lanes: | $1,725 per Mile | $1,725 per Mile |

| | | |
|---|---|---|
| Segment length times number of parking lanes times cost per mile | | |
| Median Strip:<br>Segment length times cost per mile | $575 per Mile | $1,125 per Mile |
| Storm Sewer:<br>Segment length times cost per mile | $575 per Mile | $575 per Mile |
| Traffic Signals:<br>Number of traffic signals times cost per signal | $575 per Unit | $575 per Unit |
| Minimum allowance per mile is determined by segment length times cost per mile. | $5,720 per Mile | $5,720 per Mile |

## NEEDS ADJUSTMENTS

**Bond Adjustment** - Oct. 1961 (Revised 1976, 1979, 1995**,** 2003, Oct. 2005)

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 shall be based upon the remaining amount of principal to be paid minus any amount not applied toward Municipal State Aid, County State Aid or Trunk Highway projects.

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

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

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

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

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

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

and takes effect for the 2004 apportionment.

**Low Balance Incentive –** Oct. 2003

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

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

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

**'After the Fact' Non Existing Bridge Adjustment-Revised October 1997**

That the Construction Needs for all 'non existing' bridges and grade separations be removed from the Needs Study until such time that a construction project is awarded. At that time a Construction Needs adjustment shall be made by annually adding the local cost (which is the total cost less county or trunk highway participation) for a period of 15 years. The total cost shall include project development and construction engineering costs based upon the current Project Development percentage used in the Needs Study.

**Excess Maintenance Account – June 2006**

That any city which requests an annual Maintenance Allocation of more than 35% of their Total Allocation, is granted a variance by the Variance Committee, and subsequently receives the increased Maintenance Allocation shall receive a negative Needs adjustment equal to the amount of money over and above the 35% amount transferred from the city's Construction Account to its Maintenance Account. The Needs adjustment will be calculated for an accumulative period of twenty years, and applied as a single one-year (one time) deduction each year the city receives the maintenance allocation.

**'After the Fact' Retaining Wall Adjustment Oct. 2006**

**That retaining wall Needs shall not be included in the Needs study until such time that the retaining wall has been constructed and the actual cost established. At that time a 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. Documentation of the construction of the retaining wall, including eligible costs, must be submitted to your District State Aid Engineer by July 1 to be included in that years Needs study.**

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

That any trunk highway turnback which reverts directly to the municipality and becomes part of the State Aid Street system shall not have its Construction Needs considered in the Construction Needs apportionment determination as long as the former trunk highway is fully eligible for 100 percent construction payment from the Municipal Turnback Account. During this time of eligibility, financial aid for the additional maintenance obligation, of the municipality imposed by the turnback shall be computed on the basis of the current year's apportionment data and shall be accomplished in the following manner.
That the initial turnback adjustment when for less than 12 full months shall provide partial maintenance cost reimbursement by adding said initial adjustment to the Construction Needs which will produce approximately 1/12 of $7,200 per mile in apportionment funds for each month or part of a month that the municipality had maintenance responsibility during the initial year.

That to provide an advance payment for the coming year's additional maintenance obligation, a Needs adjustment per mile shall be added to the annual Construction Needs. This Needs adjustment per mile shall produce sufficient apportionment funds so that at least $7,200 in apportionment shall be earned for each mile of trunk highway turnback on Municipal State Aid Street System.

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

**TRAFFIC** - June 1971

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

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

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

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

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

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

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

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