



# 1987

## County Screening Board Data



*"Let's go fishing"*

MNDOT  
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356  
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M54a  
1987

*June 1987*



Minnesota Department of Transportation

Transportation Building, St. Paul, MN 55155

Phone 612-296-1660

May 19, 1987

TO : County Engineers  
District State Aid Engineers

SUBJECT : County Engineers' Screening Board Data

Enclosed herewith is a copy of the 1987 Spring County Engineers' Screening Board Data. This report has been prepared by the State Aid Needs Unit, Office of State Aid, Minnesota Department of Transportation.

The unit price data included in this booklet has been reviewed by the County State Aid Highway General Subcommittee and will be recommended to the Screening Board to be used in the 1987 C.S.A.H. Needs Study.

If you have any comments, questions, or recommendations regarding this report, please forward them to your District Representative with a copy to this office prior to the meeting which is scheduled for June 17-18, 1987.

Sincerely,

*Diane M. Gould*

*for* Kenneth M. Hoeschen  
Manager  
County State Aid Needs Unit

Enclosure: County Screening Board Data

# 1987

## County Screening Board Data



*"Let's go fishing"*

*June 1987*

MINNESOTA DEPARTMENT OF TRANSPORTATION

(AS OF 5/1/87)

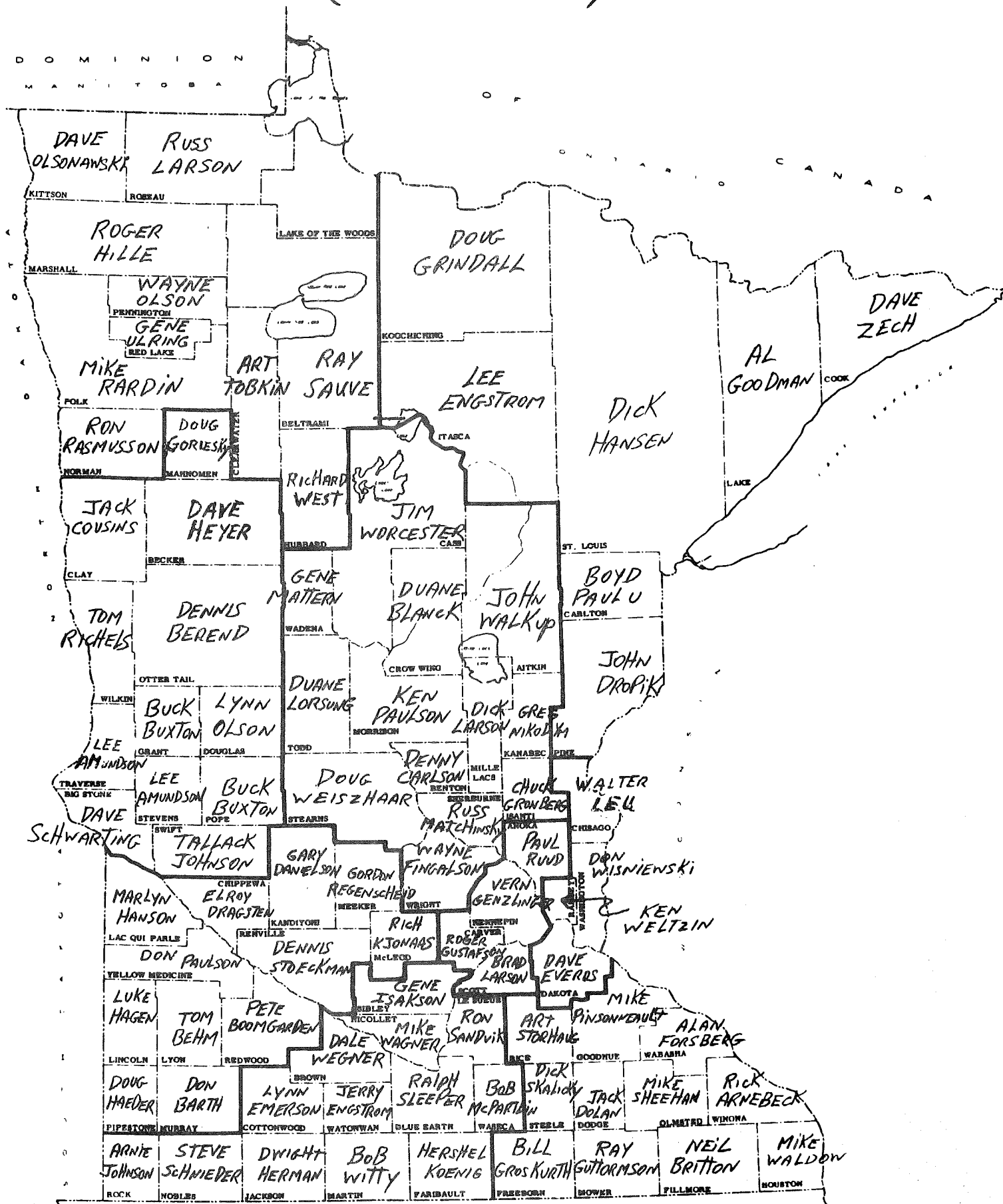


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TO BE PRESENTED AT THE JUNE 17-18, 1987 MEETING

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#### 1987 COUNTY SCREENING BOARD

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Dick Hansen	-	St. Louis County	-	District 1
Dave Olsonawski	-	Kittson County	-	District 2
Duane Lorsung	-	Todd County	-	District 3
Lee Amundson (Chairman)	-	Mahnomen County	-	District 4
Roger Gustafson	-	Carver County	-	District 5
Mike Pinsonneault	-	Goodhue County	-	District 6
Bob McPartlin	-	Waseca County	-	District 7
Don Paulson	-	Yellow Medicine County	-	District 8
Ken Weltzin	-	Ramsey County	-	District 9
Duane Blanck (Secretary)	-	Crow Wing County		

#### 1987 CSAH GENERAL SUBCOMMITTEE

-----

Don Wisniewski (Chairman)	-	Washington County
Art Tobkin	-	Clearwater County
Dave Everds	-	Dakota County

#### CSAH VARIANCE SUBCOMMITTEE

-----

Ron Sandvik	-	Le Sueur County
Pete Boomgarden	-	Redwood County
Don Wisniewski	-	Washington County

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

Introduction

The primary tasks of the Screening Board at this meeting are to establish unit prices to be used for the 1987 County State Aid Highway Needs Study, to review and give approval or denial to the additional mileage request included in this booklet, and to review the results of studies previously requested by the Screening Board.

As in other years, in order to keep the five-year average unit price study current, we have removed the 1981 construction projects and added the 1986 construction projects. The abstracts of bids on all State Aid and Federal Aid projects, let from 1982 through 1986, are the basic source of information for compiling the data used for computing the recommended 1987 unit prices. As was directed by the 1986 Screening Board, urban design projects have been included in the five year average unit price study. The gravel base unit price data obtained from the 1986 projects was transmitted to each county engineer for his approval. Any necessary corrections or changes received from the county engineers were made prior to the Subcommittee's review and recommendation.

Minutes of the Subcommittee meetings held October 29 and December 11, 1986; February 20, April 10, and May 14, 1987 are included in the "Reference Material" section of this report. The General Subcommittee will attend the Screening Board meeting to review and explain their recommendations.

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

Trend of C.S.A.H. Unit Prices  
-----  
(Base on State Averages from 1977-1986)

The following graphs and tabulations indicate the unit price trends of each of the various construction items. As mentioned earlier, all unit price data was retrieved from the abstracts of bids on State Aid and Federal Aid Projects. Three trends are shown for each construction item: annual average, five-year average, and needs study average.

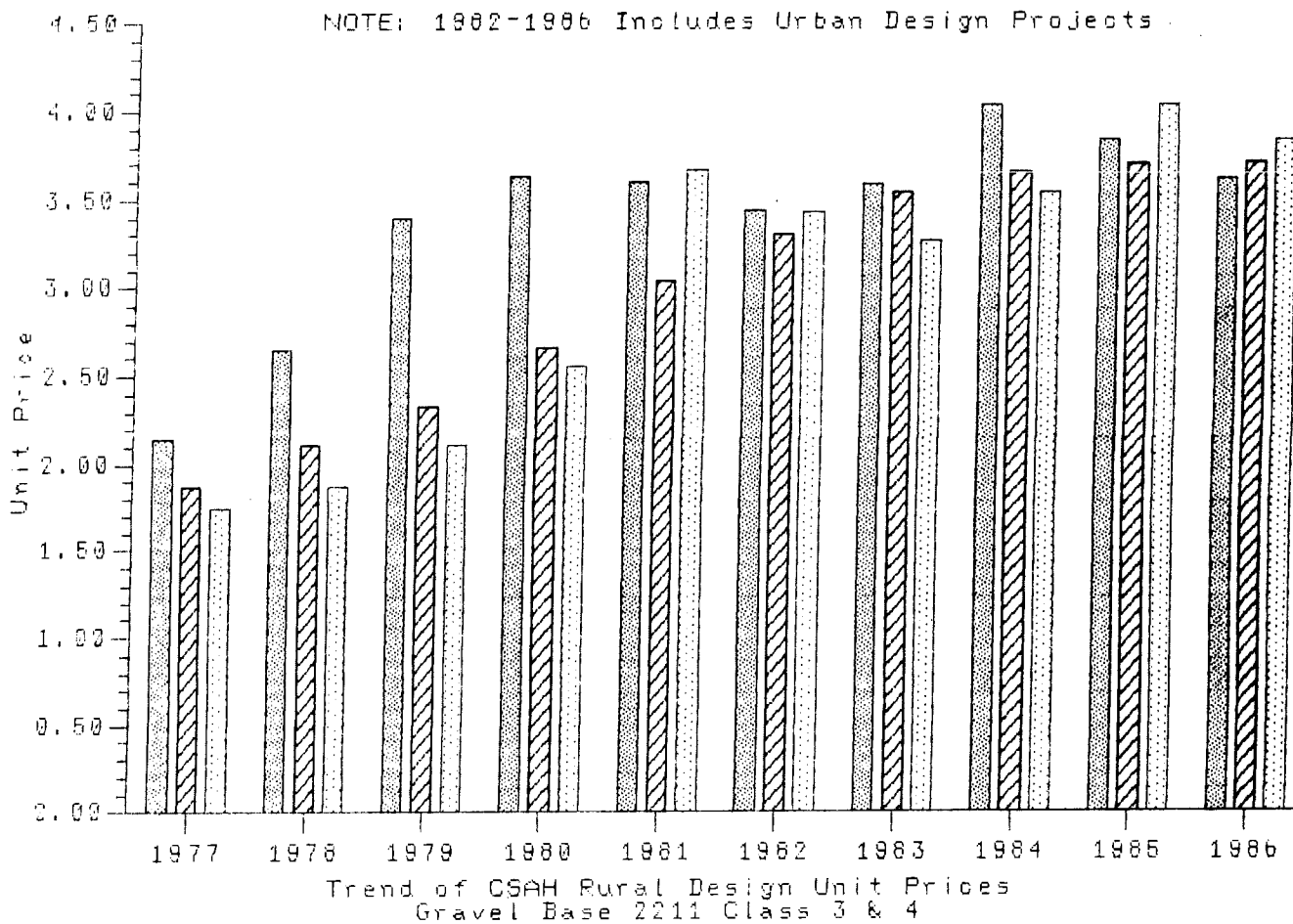
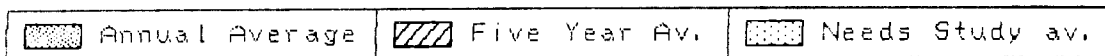
Please note that urban design projects were included in the study beginning with the 1982 projects.

# 1987 COUNTY SCREENING BOARD DATA

JUNE, 1987

## TREND OF C.S.A.H. RURAL DESIGN UNIT PRICES FOR SUBBASE - CLASS 3 & 4

YEAR	QUANTITIES	COST	ANNUAL AVERAGE	5-YEAR AVERAGE	NEEDS STUDY AVERAGE
1977	1,307,398	\$ 2,805,472	\$ 2.15	\$ 1.87	\$ 1.74
1978	1,408,202	3,725,724	2.65	2.11	1.87
1979	1,148,672	3,891,149	3.39	2.33	2.11
1980	1,006,473	3,665,775	3.64	2.66	2.56
1981	1,274,775	4,589,136	3.60	3.04	3.67
1982	472,257	1,623,628	3.44	3.30	3.43
1983	802,909	2,884,687	3.59	3.54	3.27
1984	634,976	2,564,735	4.04	3.66	3.54
1985	729,577	2,804,858	3.84	3.70	4.04
1986	801,779	2,904,511	3.62	3.72	3.84

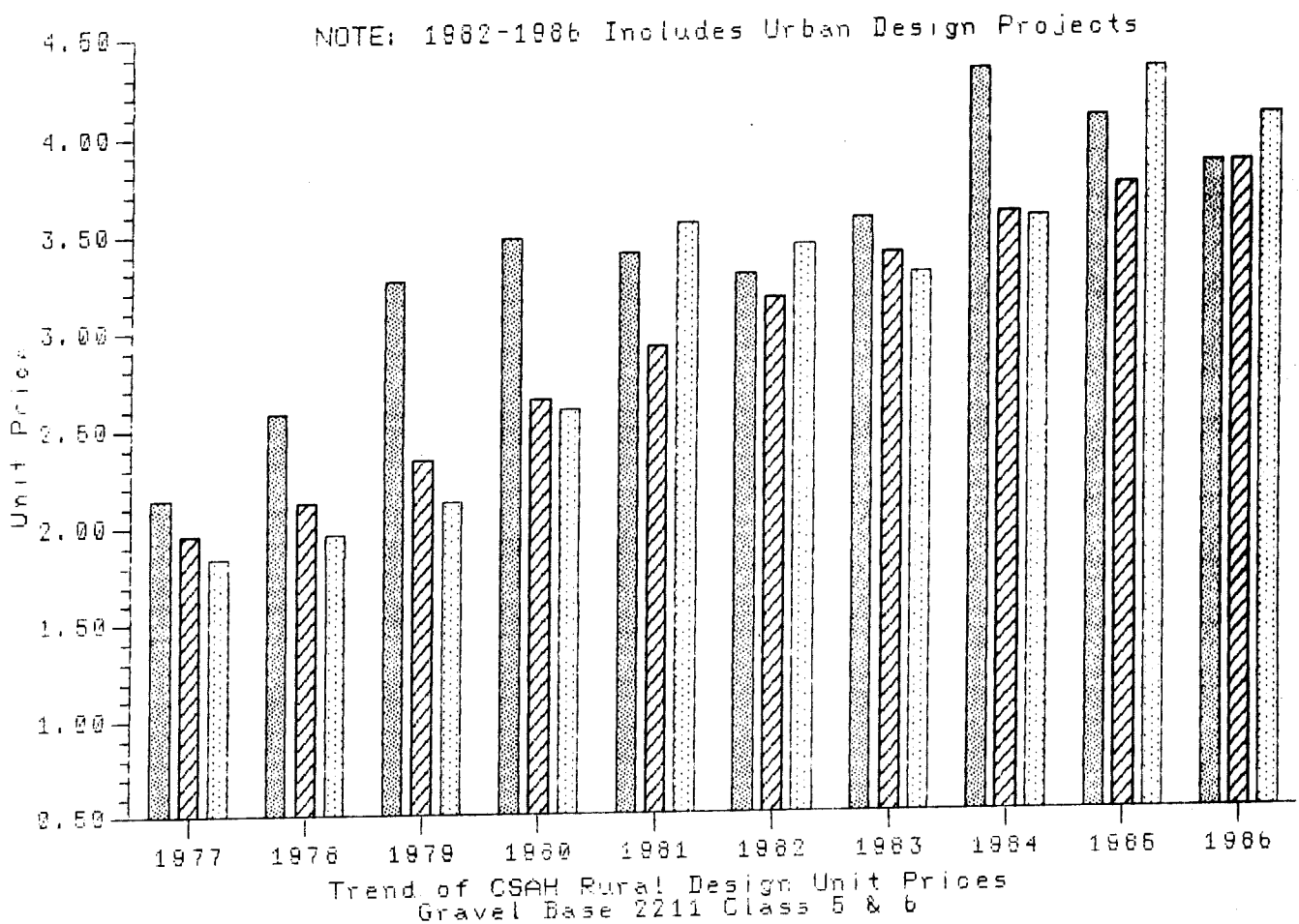
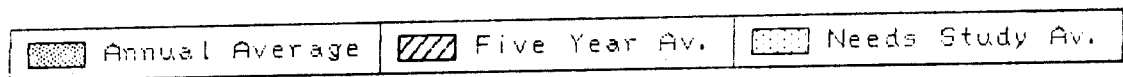


# 1987 COUNTY SCREENING BOARD DATA

JUNE, 1987

## TREND OF C.S.A.H. RURAL DESIGN UNIT PRICES FOR GRAVEL BASE - 2211 CLASS 5 & 6

YEAR	QUANTITIES	COST	ANNUAL AVERAGE	5-YEAR AVERAGE	NEEDS STUDY AVERAGE
1977	2,160,267	\$ 4,633,760	\$ 2.14	\$ 1.96	\$ 1.84
1978	2,383,648	6,150,942	2.58	2.12	1.96
1979	2,115,430	6,885,598	3.25	2.34	2.12
1980	1,468,830	5,099,343	3.47	2.64	2.59
1981	1,840,881	6,218,533	3.38	2.91	3.54
1982	2,236,590	7,325,058	3.27	3.15	3.43
1983	1,763,446	6,273,769	3.56	3.38	3.27
1984	1,713,625	7,385,785	4.31	3.58	3.56
1985	2,574,482	10,479,018	4.07	3.72	4.31
1986	2,298,971	8,783,496	3.82	3.82	4.07

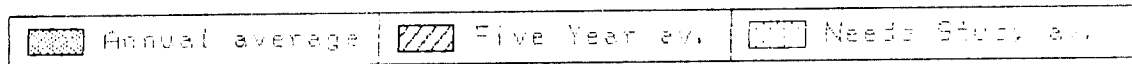


# 1987 COUNTY SCREENING BOARD DATA

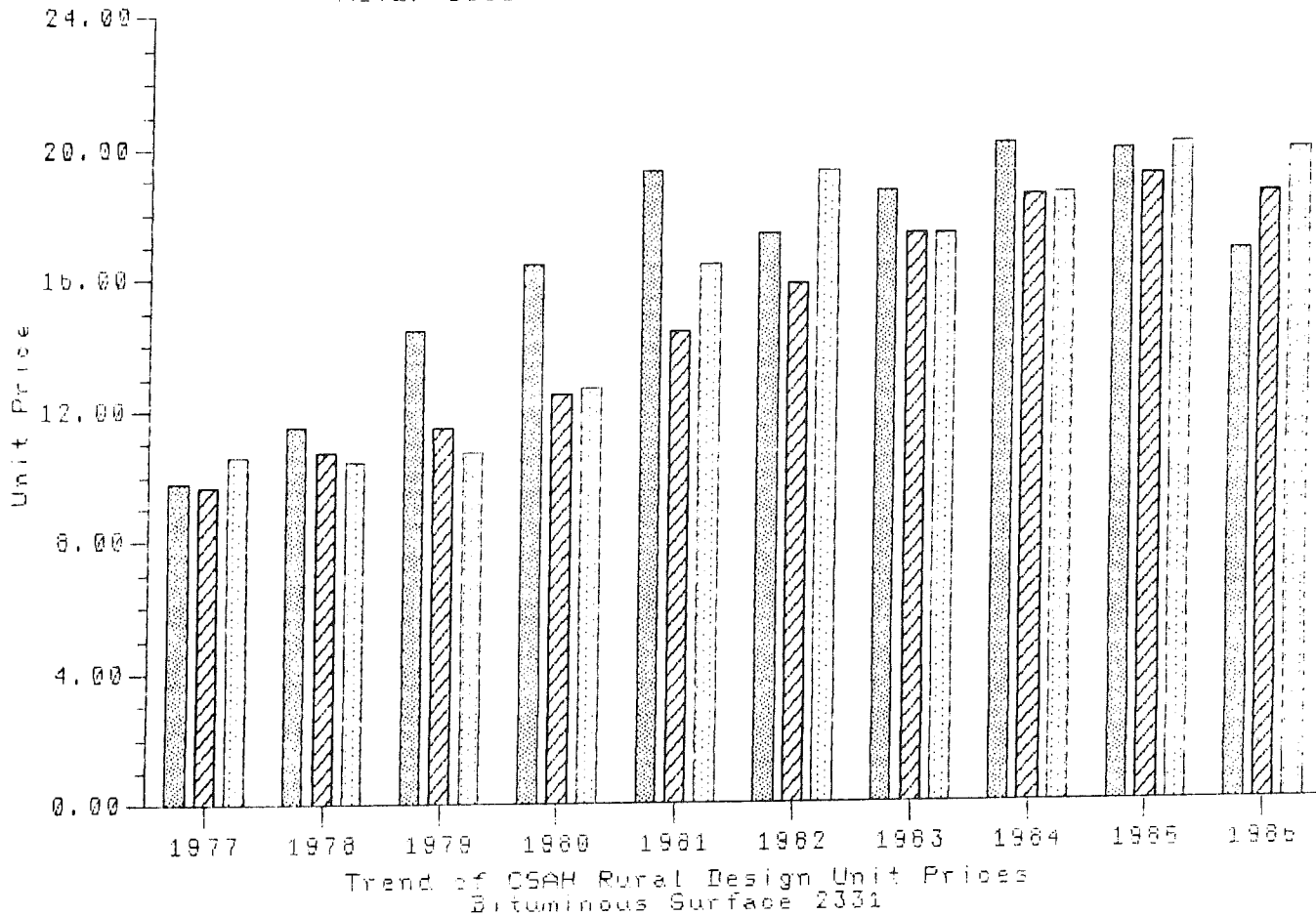
JUNE, 1987

## TREND OF C.S.A.H. RURAL DESIGN UNIT PRICES FOR BITUMINOUS - 2331

YEAR	QUANTITIES	COST	ANNUAL AVERAGE	5-YEAR AVERAGE	NEEDS STUDY AVERAGE
1977	1,421,330	\$ 13,887,156	\$ 9.77	\$ 9.69	\$ 10.62
1978	1,738,385	20,006,836	11.51	10.70	10.38
1979	1,640,936	23,711,868	14.45	11.43	10.70
1980	1,218,694	20,084,084	16.48	12.47	12.64
1981	1,825,702	35,165,185	19.26	14.39	16.48
1982	1,835,435	31,923,387	17.39	15.85	19.27
1983	2,056,356	38,327,447	18.64	17.40	17.39
1984	2,038,778	40,975,814	20.10	18.55	18.61
1985	2,491,261	49,596,140	19.91	19.13	20.10
1986	2,556,567	43,039,573	16.83	18.60	19.91



NOTE: 1982-1986 Includes Urban Design Projects

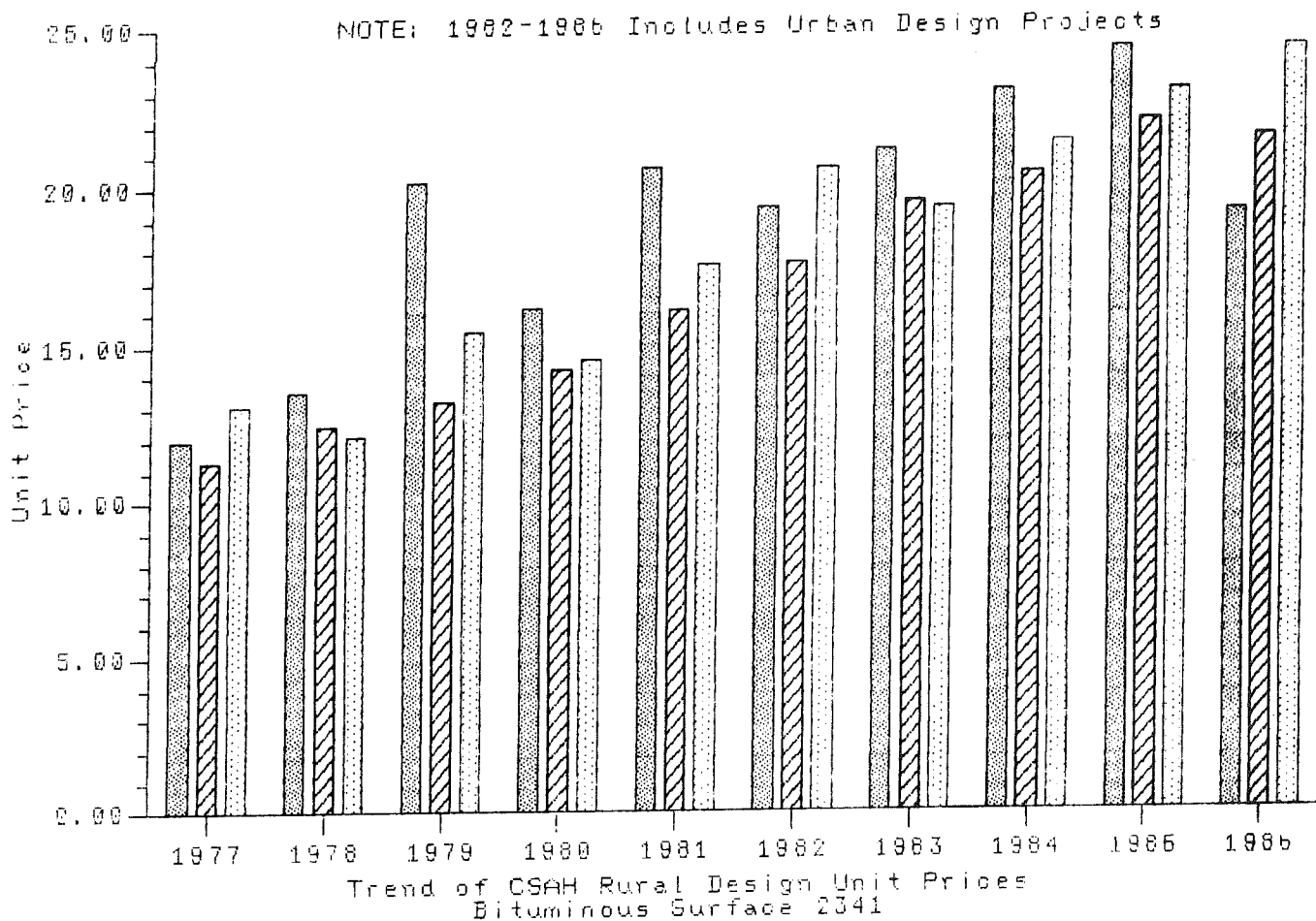
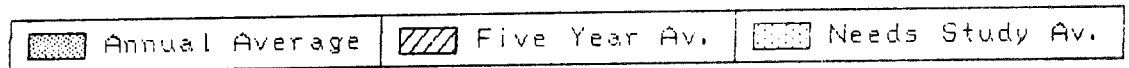


1987 COUNTY SCREENING BOARD DATA

JUNE, 1987

TREND OF C.S.A.H. RURAL DESIGN UNIT PRICES FOR BITUMINOUS - 2341

<u>YEAR</u>	<u>QUANTITIES</u>	<u>COST</u>	<u>ANNUAL AVERAGE</u>	<u>5-YEAR AVERAGE</u>	<u>NEEDS STUDY AVERAGE</u>
1977	55,764	\$ 667,058	\$ 11.96	\$ 11.29	\$ 13.08
1978	122,544	1,656,383	13.52	12.41	12.11
1979	64,840	1,308,883	20.18	13.20	15.41
1980	87,488	1,413,751	16.16	14.24	14.52
1981	63,541	1,310,395	20.63	16.13	17.58
1982	165,085	3,194,360	19.35	17.66	20.63
1983	128,625	2,729,746	21.22	19.54	19.39
1984	162,488	3,747,298	23.06	20.42	21.44
1985	223,479	5,450,872	24.39	22.10	23.06
1986	258,737	4,976,856	19.24	21.58	24.39

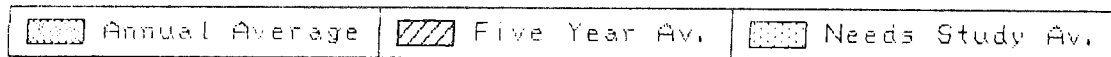


# 1987 COUNTY SCREENING BOARD DATA

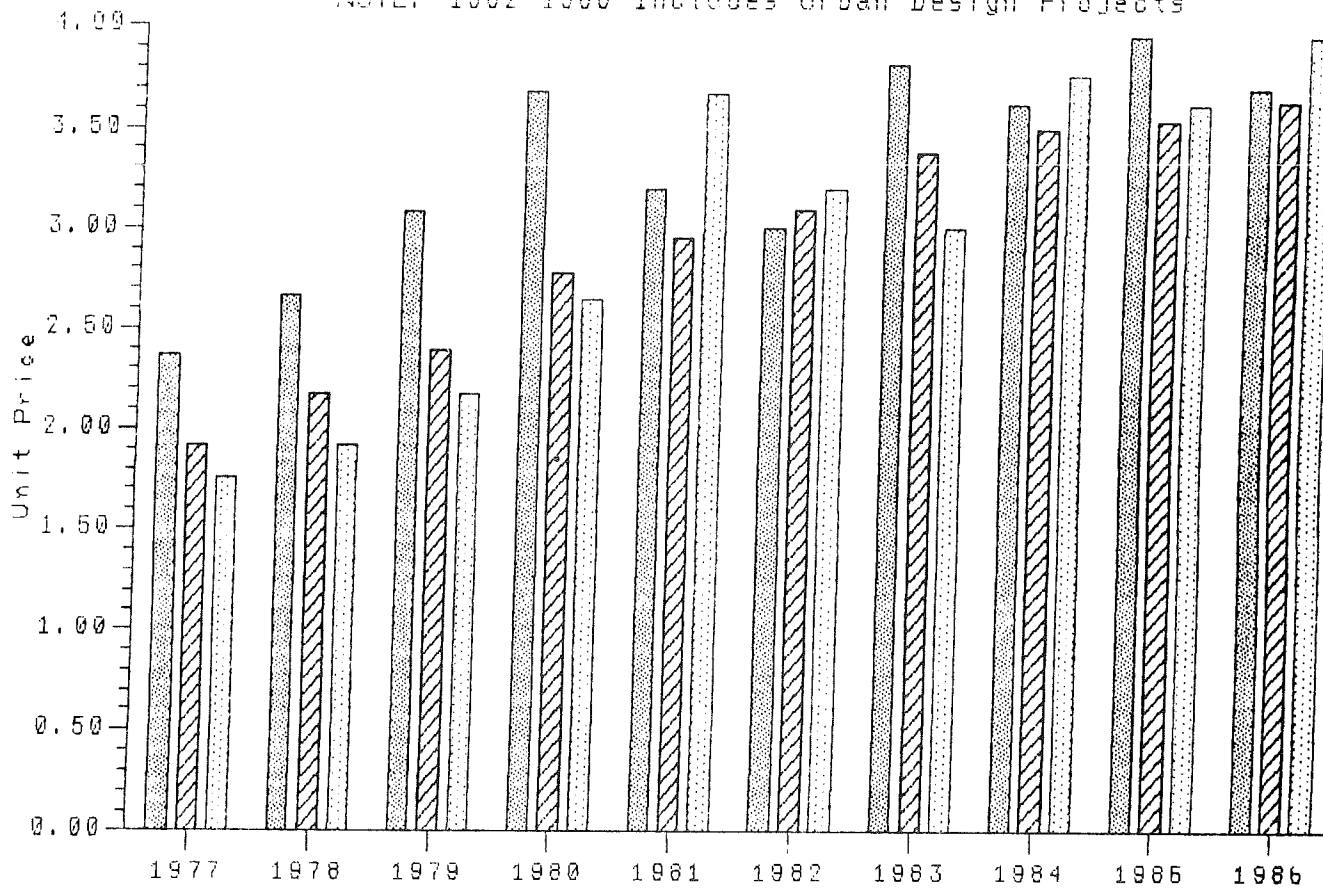
JUNE, 1987

## TREND OF C.S.A.H. RURAL DESIGN UNIT PRICES FOR GRAVEL SURFACE - 2118

YEAR	QUANTITIES	COST	ANNUAL AVERAGE	5-YEAR AVERAGE	NEEDS STUDY AVERAGE
1977	301,424	\$ 714,046	\$ 2.37	\$ 1.92	\$ 1.76
1978	388,427	1,032,379	2.66	2.17	1.92
1979	261,637	806,744	3.08	2.39	2.17
1980	291,915	1,072,984	3.68	2.77	2.64
1981	177,479	565,415	3.19	2.95	3.67
1982	167,785	503,312	3.00	3.09	3.19
1983	176,024	669,773	3.81	3.37	3.00
1984	283,698	1,027,910	3.62	3.50	3.76
1985	194,555	769,340	3.95	3.54	3.62
1986	257,323	951,855	3.70	3.64	3.95



NOTE: 1982-1986 Includes Urban Design Projects



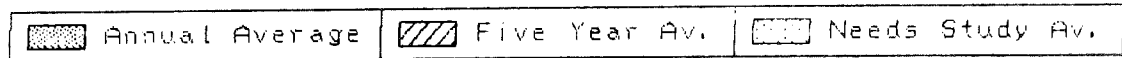
Trend of CSAH Rural Design Unit Prices  
Gravel Surface 2118

1987 COUNTY SCREENING BOARD DATA

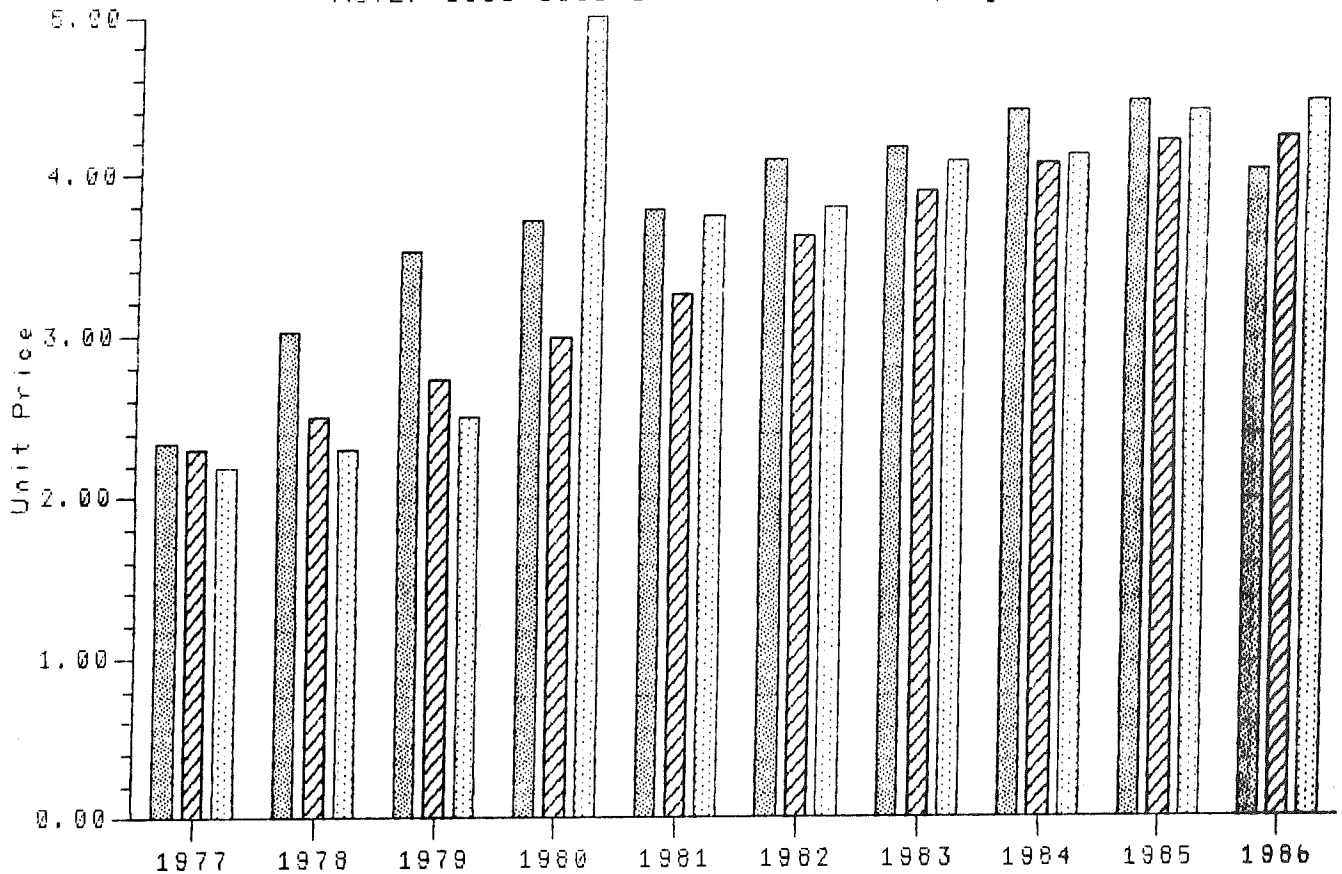
JUNE, 1987

TREND OF C.S.A.H. RURAL DESIGN UNIT PRICES FOR GRAVEL SHOULDERS - 2221

<u>YEAR</u>	<u>QUANTITIES</u>	<u>COST</u>	<u>ANNUAL AVERAGE</u>	<u>5-YEAR AVERAGE</u>	<u>NEEDS STUDY AVERAGE</u>
1977	617,397	\$ 1,436,097	\$ 2.33	\$ 2.29	\$ 2.18
1978	748,028	2,259,804	3.02	2.50	2.29
1979	641,380	2,255,009	3.52	2.73	2.50
1980	528,325	1,963,507	3.71	2.98	5.00
1981	606,762	2,287,661	3.77	3.25	3.73
1982	757,995	3,097,043	4.09	3.61	3.78
1983	830,487	3,460,292	4.17	3.88	4.08
1984	806,440	3,541,782	4.39	4.06	4.12
1985	988,140	4,411,013	4.46	4.21	4.39
1986	1,097,504	4,415,374	4.02	4.23	4.46



NOTE: 1982-1986 Includes Urban Design Projects



Trend of CSAH Rural Design Unit Prices  
Gravel Shoulders 2221

NOTES & COMMENTS

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

1987 C.S.A.H. Gravel Base Unit Price Data

The map (figure A) indicates each county's 1986 CSAH needs study gravel base unit price, the gravel base data in the 1982-1986 five-year average unit price study for each county, and an inflated gravel base unit price which is the Subcommittee's recommendation for 1987. As directed by the 1986 Screening Board, all urban design projects were also included in the five year average unit price study for all counties.

The following procedure, initially adopted at the 1981 Spring Screening Board meeting, was implemented by the Subcommittee at their May 14, 1987 meeting to determine the 1987 gravel base unit prices:

If a county has at least 50,000 tons of gravel base in its current five-year average unit price study, that five-year average unit price, inflated by the factors shown in the inflation factor report, is used.

If a county has less than 50,000 tons of gravel base material in its five-year average unit price study, then enough subbase material from that county's five-year average unit price study is added to the gravel base material to equal 50,000 tons, and a weighted average unit price inflated by the proper factors is determined.

If a county has less than 50,000 tons of combined gravel base and subbase material in its five-year average unit price study, then enough gravel base material from the surrounding counties which do have 50,000 tons in their five-year averages is added to the combined gravel base and subbase material to equal 50,000 tons, and a weighted average unit price inflated by the proper factors is determined.

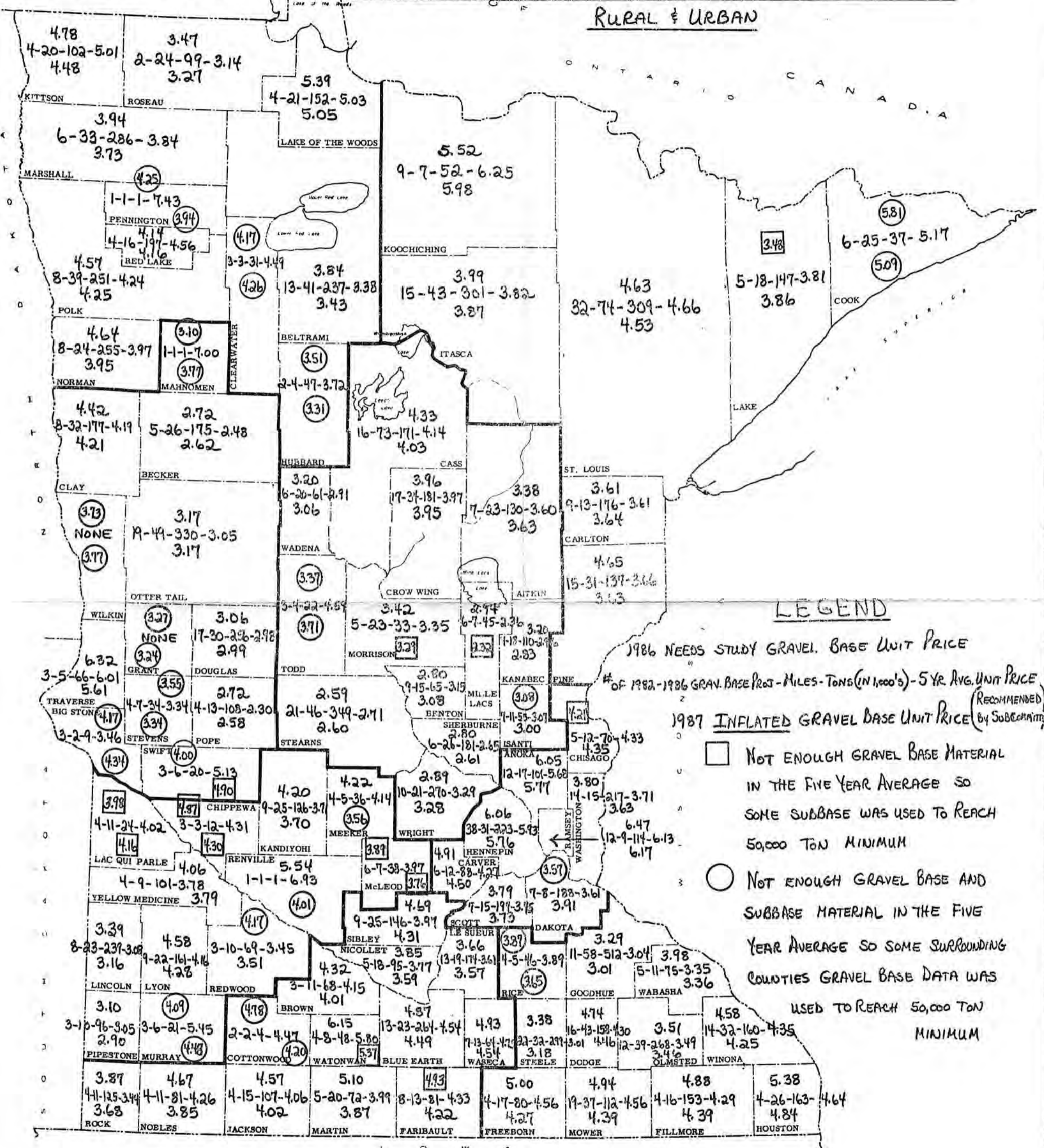
As you can see, the counties whose recommended unit prices have either a square or a circle around them have less than 50,000 tons of gravel base material in their current five-year average unit price study. Therefore, these prices were determined using either the second or third part of the procedure above. Don Wisniewski, Art Tobkin, and Dave Everds from the Subcommittee will attend the Screening Board meeting to discuss their recommendations.

JUNE, 1987

D O M I N I O N  
M A N I T O B A

1987 C.S.A.H. GRAVEL BASE UNIT PRICE DATA

## RURAL & URBAN



1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

Unit Price Inflation Factor Study

Because of the drastic fluctuations in unit prices in recent years, the Subcommittee is recommending continuing the inflation of the costs in the five-year average unit price study for the determination of needs study prices.

Since the gravel base and subbase prices are the basis for the other needs study construction item unit prices, the needs unit concentrated on these two items to generate inflation factors.

The inflation factors arrived at were computed by dividing the average unit price of the latest year in the five-year average by the average unit price of the year involved. These calculations are shown in the charts below.

Gravel Base - #2211 Class 5-6

<u>Year</u>	<u>Quantity</u>	<u>Cost</u>	<u>Annual Average</u>	<u>Inflation Factor</u>
1982	2,467,051	\$ 8,167,357	\$3.31	$\frac{\$3.82}{\$3.31} = 1.15$
1983	1,938,168	\$ 7,113,486	\$3.67	$\frac{\$3.82}{\$3.67} = 1.04$
1984	1,862,681	\$ 8,042,583	\$4.32	$\frac{\$3.82}{\$4.32} = .88$
1985	2,574,482	\$10,479,018	\$4.07	$\frac{\$3.82}{\$4.07} = .94$
1986	2,298,971	\$ 8,783,496	\$3.82	

Subbase - #2211 Class 3-4

<u>Year</u>	<u>Quantity</u>	<u>Cost</u>	<u>Annual Average</u>	<u>Inflation Factor</u>
1982	474,716	\$ 1,633,375	\$3.44	$\frac{\$3.62}{\$3.44} = 1.05$
1983	838,004	\$ 3,015,160	\$3.60	$\frac{\$3.62}{\$3.60} = 1.01$
1984	645,084	\$ 2,605,291	\$4.04	$\frac{\$3.62}{\$4.04} = 0.90$
1985	729,577	\$ 2,804,858	\$3.84	$\frac{\$3.62}{\$3.84} = 0.94$
1986	801,779	\$ 2,904,511	\$3.62	

In order to reflect current prices in the 1982-1986 five-year average unit price study, each project's gravel base and subbase costs were multiplied by the appropriate inflation factor.

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

C.S.A.H. Roadway Unit Price Report  
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The following tabulation of roadway construction prices shows the average unit prices in the 1986 C.S.A.H. needs study, the 1982-1986 C.S.A.H. five-year average unit prices, the 1986 average and the Subcommittee's recommended unit prices for use in the 1987 needs study.

The Subcommittee's recommended prices were determined at their meetings on April 10 and May 14, 1987. Minutes documenting these proceedings are included in the "Reference Material" portion of this booklet.

# 1987 COUNTY SCREENING BOARD DATA

JUNE, 1987

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

Construction Item	1986 CSAH Needs Study Average	1982-1986 CSAH 5-Year Average	1986 CSAH Average	1987 CSAH Unit Price Recommended by CSAH Subcommittee
<b>Rural &amp; Urban Design</b>				
Grav. Base C1 5 & 6/Ton	\$4.07(R) 5.25(U)	3.82(C)	3.82(C)	*
<b>Rural Design</b>				
Subbase C1 3 & 4/Ton	\$3.84	\$3.60	\$3.54	G.B. - \$ 0.28
Bit.Base & Surf. 2331/Ton	19.91	18.46	16.71	G.B. + 12.89
Bit.Surf. 2341/Ton	24.39	20.47	17.95	G.B. + 14.13
Con.Surf. 2301/Sq.Yd.	15.34	---	11.77(Mn/DOT)	11.77
Gravel Surf. 2118/Ton	3.95	3.63	3.68	G.B. - 0.14
Gravel Shldr. 2221/Ton	4.46	4.22	4.02	G.B. + 0.20
<b>Urban Design</b>				
Grading/Cu.Yd.	\$3.00	---	---	\$3.25
Subbase C1 3 & 4/Ton	5.00	4.97	4.47	G.B. + 0.65
Bit.Base & Surf. 2331/Ton	22.00	20.84	18.48	G.B. + 14.66
Bit.Surf. 2341/Ton	25.00	26.46	25.41	G.B. + 21.59
Con.Surf. 2301/Sq.Yd.	19.60	---	14.84(Mn/DOT)	14.84

(R) Rural  
(U) Urban  
(C) Combined

\*The Recommended Rural Design Gravel Base Unit Price for each individual county is shown on the state map foldout (Fig. A).

G.B. - The gravel base price as shown on the state map.

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

C.S.A.H. Miscellaneous Unit Price Report  
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The following report lists the miscellaneous unit prices used in the 1986 C.S.A.H. needs study, those recommended by the M.S.A.S. Subcommittee or Mn/DOT and the unit prices recommended by the C.S.A.H. Subcommittee.

Documentation of the Subcommittee's recommendations can be found in the minutes of their meetings on April 10 and May 14, 1987 which are reprinted in the "Reference Material" section of this booklet.

# 1987 COUNTY SCREENING BOARD DATA

JUNE, 1987

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

Construction Item	1986 CSAH Needs Study Average	Prices Recommended For 1987 By MSAS Subcommittee or Mn/Dot	1987 CSAH Unit Price Recommended by CSAH Subcommittee
-----			
Other Urban Design			
-----			
Storm Sewer - Complete/Mi.	\$196,000	\$196,000	\$196,000
Storm Sewer - Partial/Mi.	62,000	62,000	62,000
Curb & Gutter Const./Lin.Ft.	6.00	M.S.A.S. - 6.00	6.00
Tree Removal/Tree	90.00	M.S.A.S. - 100.00	100.00
Sidewalk Removal/Sq.Yd.	4.00	M.S.A.S. - 4.00	4.00
Curb & Gutter Removal/Lin.Ft.	1.50	M.S.A.S. - 1.75	1.75
Conc.Pave.Removal/Sq.Yd.	3.75	M.S.A.S. - 4.00	4.00
Bridges			
-----			
0-149 Ft.Long/Sq.Ft.	\$45.00	\$37.00	\$37.00
150-499 Ft.Long/Sq.Ft.	51.00	40.00	40.00
500 Ft. & Longer/Sq.Ft.	56.00	54.00	54.00
Widening/Sq.Ft.	75.00	116.00	100.00
RR over Hwy - 1 Track/Lin.ft.	2,250	2,250	2,250
Each Add.Track/Lin.ft.	1,750	1,750	1,750
Railroad Protection			
-----			
Signs	\$300	\$300	\$300
Signals	65,000	65,000	65,000
Signals & Gates	95,000	95,000	95,000

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M I L E A G E

R E Q U E S T S

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1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

Criteria Necessary for County State Aid Highway Designation

In the past, there has been considerable speculation as to which requirements a road must meet in order to qualify for designation as a County State Aid Highway. The following section of the Minnesota Department of Transportation Rules which was updated in March, 1984, definitely sets forth what criteria are necessary.

Portion of Minnesota Rules For State Aid Operations

State Aid routes shall be selected on the basis of the following criteria:

a. A County state-aid highway which:

- (1) is projected to carry a relatively heavier traffic volume or is functionally classified as collector or arterial as identified on the county's functional plans as approved by the county board;
- (2) connects towns, communities, shipping points, and markets within a county or in adjacent counties;
  - (a) or provides access to rural churches, schools, community meeting halls, industrial areas, state institutions, and recreational areas;
  - (b) or serves as a principal rural mail route and school bus route;
- (3) occurs at reasonable intervals consistent with the density of population; and
- (4) provides an integrated and coordinated highway system affording, within practical limits, a State-Aid highway network consistent with projected traffic demands.

## 1987 COUNTY SCREENING BOARD DATA

JUNE, 1987

History of C.S.A.H. Additional Mileage Requests  
Approved by the County Engineer's Screening Board

County	1958- 1964	1965- 1970	1971- 1976	1977- 1982	1983	1984	1985	1986	1987	1988	Tot. Miles Requested & Approved To Date
01 Aitkin	6.10			0.60							6.70
02 Anoka	1.33	0.71									2.04
03 Becker		10.07									10.07
04 Beltrami	6.84*	0.69	0.16								7.69
05 Benton	3.18*										3.18
06 Big Stone	1.40		0.16								1.56
07 Blue Earth	15.29*			0.25							15.54
08 Brown	3.81	3.63	0.13								7.57
09 Carlton	3.62										3.62
10 Carver	1.55	0.94	0.48								2.97
11 Cass		7.90									7.90
12 Chippewa	14.00	1.00									15.00
13 Chisago	3.24										3.24
14 Clay	1.18	0.82	0.10								2.10
15 Clearwater	0.30*		1.00								1.30
16 Cook	3.60										3.60
17 Cottonwood	3.37	1.80	1.30								6.47
18 Crow Wing	13.00*										13.00
19 Dakota	1.65*		2.47				2.26				6.38
20 Dodge							0.11				0.11
21 Douglas	7.40*	3.25									10.65
22 Faribault		0.37	1.20	0.09							1.66
23 Fillmore	1.12			1.10							2.22
24 Freeborn	0.05	0.90	0.65								1.60

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987  
History of C.S.A.H. Additional Mileage Requests  
Approved by the County Engineer's Screening Board

County	1958- 1964	1965- 1970	1971- 1976	1977- 1982	1983	1984	1985	1986	1987	1988	Tot. Miles Requested & Approved To Date
25 Goodhue			0.08								0.08
26 Grant	5.30	0.12									5.42
27 Hennepin	4.50		0.24	0.85							5.59
28 Houston			0.12								0.12
29 Hubbard	0.60	1.25	0.26	0.06							2.17
30 Isanti	1.06	0.74									1.80
31 Itasca											--
32 Jackson		0.10									0.10
33 Kanabec											--
34 Kandiyohi		0.44									0.44
35 Kittson	6.60*										6.60
36 Koochiching	9.27*							0.12			9.39
37 Lac Qui Parle	1.70	0.23									1.93
38 Lake	3.24*	1.58	0.56								5.38
39 Lake of Woods	0.56	0.33									0.89
40 Le Sueur	2.70		0.83				0.02				3.55
41 Lincoln	5.65*	0.90									6.55
42 Lyon	2.00										2.00
43 McLeod	0.09		0.50								0.59
44 Mahnomen	1.00	0.42									1.42
45 Marshall	15.00*		1.00								16.00
46 Martin		1.52									1.52
47 Meeker	0.80		0.50								1.30
48 Mille Lacs			0.74								0.74

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987  
History of C.S.A.H. Additional Mileage Requests  
Approved by the County Engineer's Screening Board

County	1958- 1964	1965- 1970	1971- 1976	1977- 1982	1983	1984	1985	1986	1987	1988	Tot. Miles Requested & Approved To Date
49 Morrison											--
50 Mower	9.28*	3.83		0.09							13.20
51 Murray	3.52		1.10								4.62
52 Nicollet					0.60						0.60
53 Nobles		13.71	0.23								13.94
54 Norman	1.31										1.31
55 Olmsted	10.77*	4.55									15.32
56 Otter Tail				0.36							0.36
57 Pennington	0.84										0.84
58 Pine	9.25										9.25
59 Pipestone		0.50									0.50
60 Polk	4.00		1.55	0.67							6.22
61 Pope	1.63	2.00	1.20								4.83
62 Ramsey	9.45*	0.67	0.61		0.21		0.92				11.86
63 Red Lake			0.50								0.50
64 Redwood	2.30	1.11		0.13							3.54
65 Renville											--
66 Rice	1.70										1.70
67 Rock	0.50			0.54							1.04
68 Roseau	5.20	1.60									6.80
69 St. Louis	7.71*	11.43									19.14
70 Scott	8.65*	3.44	5.15	0.12							17.36
71 Sherburne		5.42									5.42
72 Sibley	1.50										1.50

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987  
History of C.S.A.H. Additional Mileage Requests  
Approved by the County Engineer's Screening Board

County	1958- 1964	1965- 1970	1971- 1976	1977- 1982	1983	1984	1985	1986	1987	1988	Tot. Miles Requested & Approved To Date
73 Stearns	0.08	0.70		3.90							4.68
74 Steele		1.55									1.55
75 Stevens		1.00									1.00
76 Swift		0.78		0.24							1.02
77 Todd	1.90*										1.90
78 Traverse	0.20		0.56			1.60					2.36
79 Wabasha	0.43*		0.30								0.73
80 Wadena											--
81 Waseca	4.10	0.43	0.14				0.05				4.72
82 Washington	2.33*		0.40	0.33		1.33					4.39
83 Watonwan			0.04	0.68			0.19				0.91
84 Wilkin											--
85 Winona	7.40*										7.40
86 Wright	0.45			1.38							1.83
87 Yellow Medicine				1.39							1.39
TOTALS	246.60	92.43	25.65	11.39	0.81	2.93	3.55	0.12			383.48

\*Some Trunk Highway Turnback Mileage

(10-80) Rev. 2-84

DATE : 3/30/87

TO : Manager, State Aid Needs Unit

FROM : C. E. Weichselbaum District State Aid Engineer

SUBJECT: Request for Approval of a System Revision

~~(Municipality)~~ (County) of Carver

Attached is a request and supporting data for the revision to the State Aid System.

The proposed route meets the following criteria (indicated by an "X") necessary for designation:

## C.S.A.H. CRITERIA

<input checked="" type="checkbox"/>	Projected to carry a relatively heavier traffic volume, ----- or is functionally classified as collector or arterial.
<input type="checkbox"/>	Connects towns, communities, shipping points, and markets within a county or in adjacent counties, ----- or provides access to rural churches, schools, community meeting halls, industrial areas, state institutions and recreational areas, ----- or serves as a principal rural mail route and school bus route.
<input checked="" type="checkbox"/>	Occurs at reasonable intervals consistent with the density of population.
<input checked="" type="checkbox"/>	Provides an integrated and coordinated highway system affording, within practical limits, a State-Aid highway network consistent with projected traffic demands.

## M.S.A.S. CRITERIA

<input type="checkbox"/>	Projected to carry a relatively heavier traffic volume, ----- or is functionally classified as collector or arterial.
<input type="checkbox"/>	Connects the points of major traffic interest within an urban municipality.
<input type="checkbox"/>	Provides an integrated street system affording, within practical limits, a State-Aid street network consistent with projected traffic demands.

Miles M.S.A.S.	Comments: <u>This is the revision and designation that we have previously discussed.</u>
Available	
- Revoked	
+ Requested	
Balance	

C. E. Weichselbaum  
District State Aid Engineer

3/30/87  
Date

RECOMMEND APPROVAL OR DENIAL:

\_\_\_\_\_  
Manager, State Aid Needs Unit

\_\_\_\_\_  
Date

APPROVED OR DENIED:

\_\_\_\_\_  
State Aid Engineer

\_\_\_\_\_  
Date



April 28, 1987

## COUNTY OF CARVER

Mr. C. E. Weichselbaum  
District 5 State Aid Engineer  
2055 North Lilac Drive  
Golden Valley, MN 55422

Re: CSAH System Revision Request

Dear Mr. Weichselbaum:

Thank you for your preliminary review of transferring CSAH designation from CSAH 16 to that portion of CR 117 between CSAH 18 and TH 5. Your conclusion of there being 0.89 mile of CSAH 16 available for this transfer is accepted.

Carver County hereby requests the following changes be made in its CSAH system:

### CSAH 16 Revocation

Revoke County State Aid Highway 16 located between CSAH 17 and TH 5 within the City of Chanhassen. The total length of this revocation being 0.89 mile.

### CSAH 19 Designation

Designate County Road 117 located between CSAH 18 and TH 5 within the City of Chanhassen to be County State Aid Highway 19. The total length of this designation being 0.97 mile.

This request was officially authorized by a motion made and unanimously carried by the Carver County Board of Commissioners on April 28, 1987.

In 1984, the AADT on County Road 117 was 940 vehicles. In 1986, the City of Chanhassen retained a consultant traffic engineer to develop a "Year 2005 Transportation Plan" for a portion of Chanhassen including CR 117. The engineer's year 2005 average daily traffic for CR 117 was 3,000 to 4,000 vehicles. This projection supports the Carver County Year 2000 Thoroughfare Plan which includes the development of a north-south minor arterial corridor in the area of CR 117. This corridor is projected to be part of a major cross county transportation facility.

Three Chaska industrial parks are located adjacent to and south-westerly of the CR 117 and CSAH 18 intersection. Sixty-five companies employing roughly 3,500 people are located within these parks which total approximately 470 acres. Fluoroware Inc., FSI, Minnetonka Inc., and Lake Region Manufacturing Inc. are four of the companies within the Chaska Industrial Park marketing their products throughout the state, the nation, and the world. Forty acres of land are presently being considered for annexation to the industrial park area. Twelve new industries have been added to the parks during the past three years.

Letter to Chuck Weichselbaum  
April 28, 1987  
Page 2

The Hazeltine National Golf Club is located immediately to the south of the Chaska Industrial Park and Hazeltine Lake. The 1991 U. S. Open Golf Tournament will be played on this course. Development of the residential property adjacent to the course continues at a brisk pace. CR 117 serves as one of the north-south links from TH 5 to this developing area.

CR 117 was most recently graded in 1951. Initial bituminous surfacing occurred in 1960 with the most recent overlay being placed in 1985. The shoulder to shoulder dimension of the road is approximately 28 feet with a mat width of 24 feet. Inslopes are generally steeper than 4:1. Vertical and horizontal alignments of the roadway do not meet state aid minimum standards. Reconstruction of CR 117 is not in the 1985 through 1989 Highway Capital Improvement Program.

The City of Chanhassen has requested Carver County to pursue conversion of CSAH 16 to local jurisdiction. This request is supported by Chanhassen's "Year 2005 Transportation Plan". The consultant recommends CSAH 16 become a city roadway for the following reasons:

- . CSAH 16 is an extremely short segment of county jurisdiction.
- . This segment lacks significant continuity with other county roadways.
- . The essential function of this roadway is to provide access to area businesses.
- . The city will have greater flexibility over the design, modifications, and usage (parking, access, lane configuration) if the roadway is under local jurisdiction.

CSAH 16 is presently a combination of urban and rural roadway sections. The most recent expenditure of county state aid construction funds on CSAH 16 was for the grading and paving of the roadway in 1968. Currently CSAH 16 is drawing "needs" for only "additional surfacing". The 1984 AADT on the segments of CSAH 16 ranges from 3,900 to 6,600 vehicles.

The City of Chanhassen has embarked on an ambitious downtown redevelopment program. This program includes significant changes within the present CSAH 16 corridor. These changes include turn lanes, center islands, walkways, lighting and landscaping. In addition, major realignments of roadways in the area of CSAH 16, TH 101 and TH 5 are proposed. These realignments will compliment the nationally renowned "Chanhassen Dinner Theater" along with the other businesses and attractions within the downtown area. Construction on significant portions of the proposed roadway realignments is scheduled for 1987.

Letter to Chuck Weichselbaum  
April 28, 1987  
Page 3


To accomplish the requested change in the Carver County State Aid Highway System, an additional 0.08 mile of state aid highway is needed. The approval of this additional mileage will result in 0.97 mile of county state aid highway being available for use on CR 117. This mileage will permit state aid designation of CR 117 along its present alignment from CSAH 18 to TH 5. The definition of the CR 117 centerline proposed to be designated as county state aid highway has been reviewed and accepted by the office of state aid.

An extensive examination of the existing CSAH system has been made by Carver County in conjunction with this request. No CSAH segment in the more rural area of Carver County was identified as a possible candidate for revocation because of the resulting loss in system continuity and service spacing. As part of examining the eastern portion of the county, discussions with city staff from Victoria, Chanhassen, and Chaska regarding community development, comprehensive plans, transportation needs, and the county state aid highway system were held. These meetings resulted in a better understanding of the planned transportation systems in each community. These systems include a number of "minor arterial" corridors not on the state highway, the county state aid highway, or the municipal state aid street systems. The general opinion at these meetings was that "minor arterial" roadways most appropriately belong under the jurisdiction of the state or the county. The general conclusion was that there are insufficient miles of county state aid highway available for transfer to the "minor arterials" identified in the "Carver County 2000 Thoroughfare Plan" and in more recent community transportation studies. Therefore, the request for 0.08 mile of additional county state aid highway system to permit the designation change seemed reasonable and with basis. Also, the conceptual state aid highway realignments developed to best reflect current thoughts on transportation corridors in eastern Carver County resulted in greater CSAH system needs than the 0.08 mile being requested.

Please review this request and forward it to the Mn/DOT Office of State Aid as an update of my initial letter on this subject dated March 17, 1987. It is understood this mileage request will be on the agenda of the County Engineers' Spring Screening Board meeting.

Please contact me at your convenience if you have any questions regarding this proposed change in the Carver CSAH system.

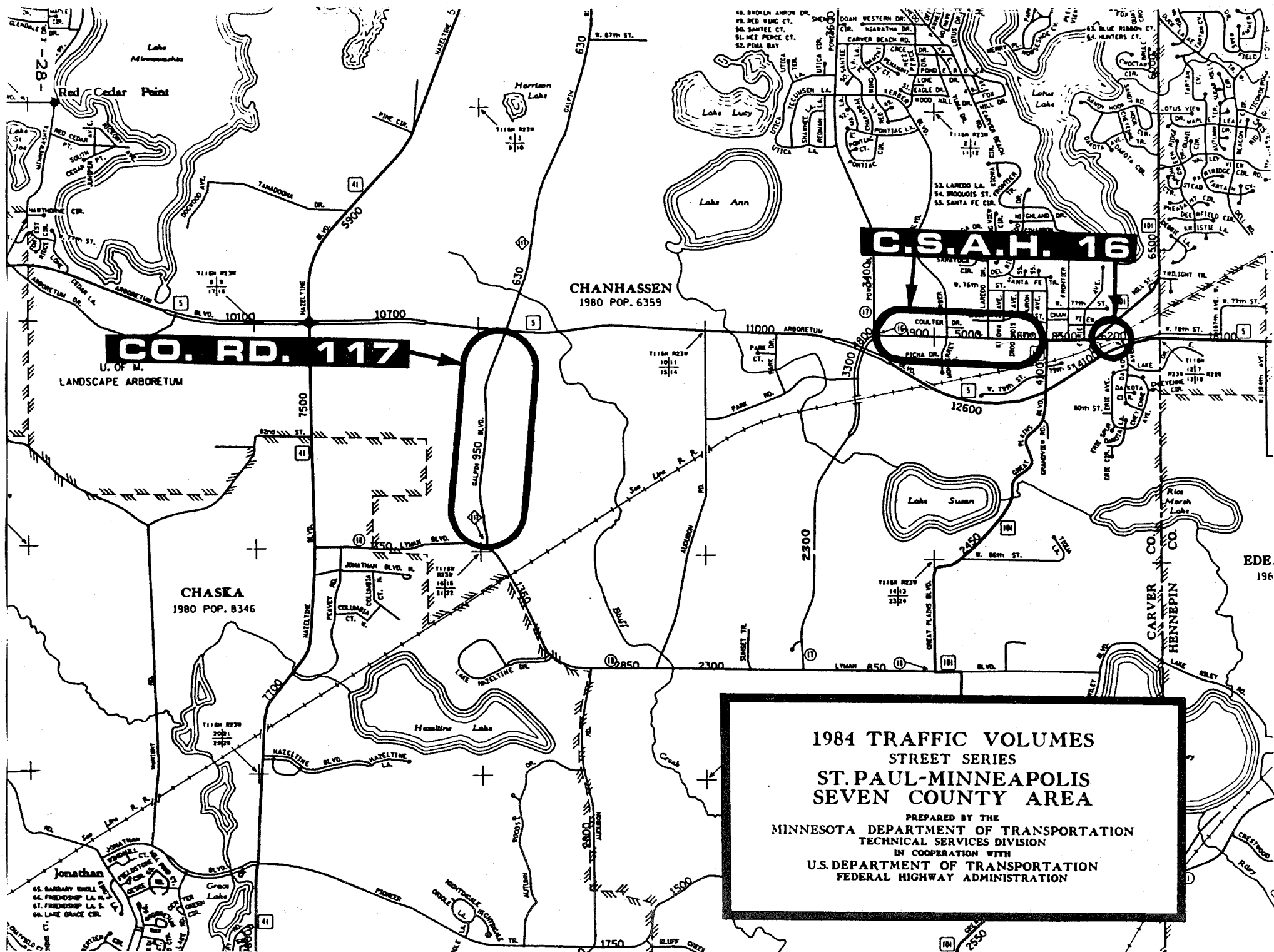
Sincerely,



Roger M. Gustafson, P.E.  
County Engineer

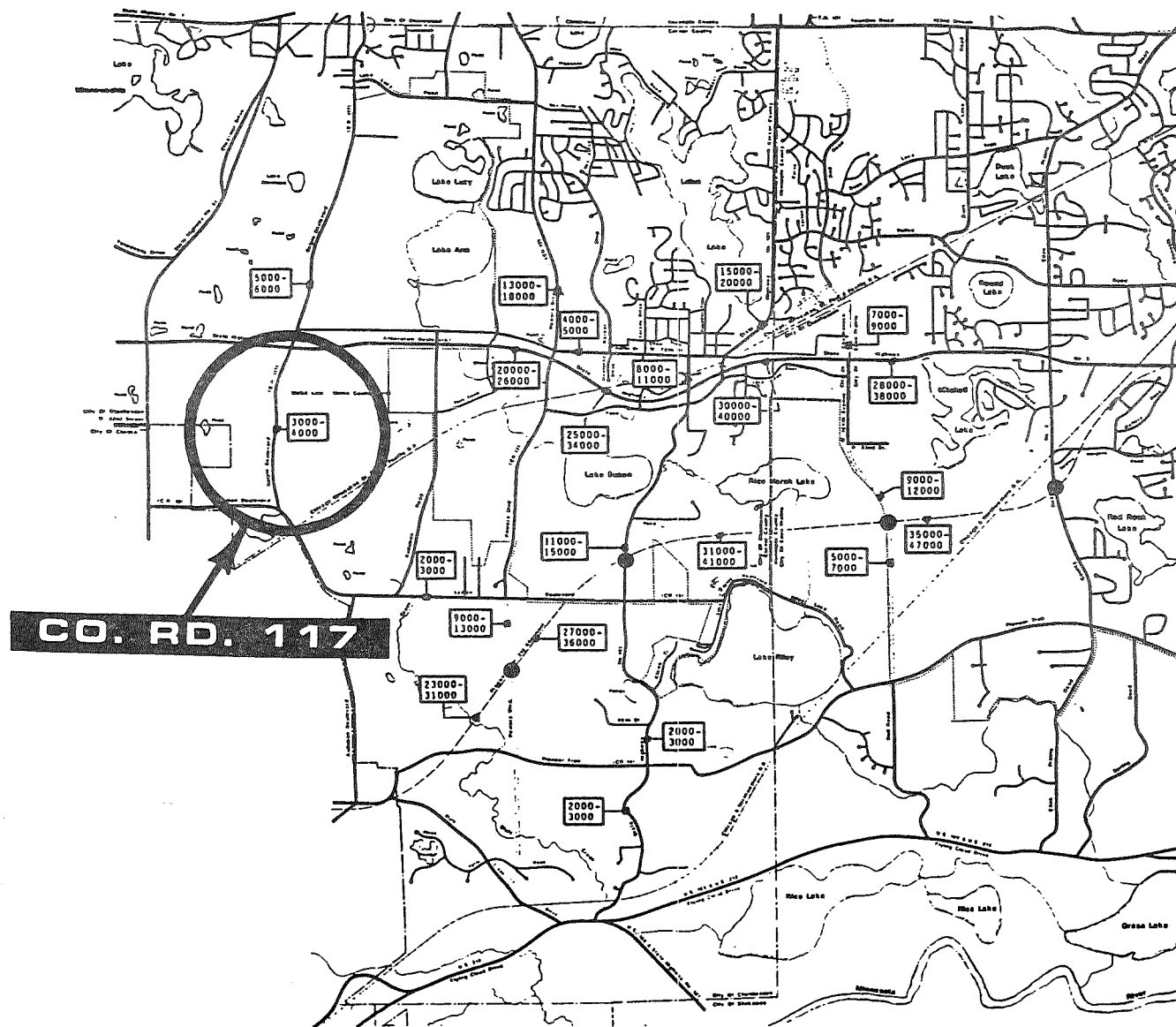
RMG/cjr

[illegible]



**1984 TRAFFIC VOLUMES  
STREET SERIES  
ST. PAUL-MINNEAPOLIS  
SEVEN COUNTY AREA**

PREPARED BY THE  
MINNESOTA DEPARTMENT OF TRANSPORTATION  
TECHNICAL SERVICES DIVISION  
IN COOPERATION WITH  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION



0 3400'  
Approx. Scale

FIGURE 19

YEAR 2005 AVERAGE DAILY  
TRAFFIC ON PREFERRED  
ROADWAY SYSTEM

CHANHASSEN YEAR 2005  
LAND USE AND  
TRANSPORTATION STUDY

CITY OF CHANHASSEN

BRAUER & ASSOCIATES LTD.  
HOISINGTON GROUP, INC.  
BENSHOOF & ASSOCIATES, INC.



# Chaska

April 28, 1987

Mr. Roger Gustafson  
County Engineer  
Carver County Courthouse  
600 East Fourth Street  
Chaska, MN 55318

Dear Roger:

The purpose of my letter is to express the City of Chaska's strong support for inclusion of County Road 117 on Carver County's State Aid System.

County Road 117 serves as a main access into Chaska's three industrial park areas. Presently, Jonathan Industrial Park and Crosby Industrial Park are substantially filled serving 65 companies presently have in excess of 3,500 employees.

In the summer of 1987 we are anticipating completion of public improvements within the new 120 acre Arbor Industrial Park. Two industrial projects are now under construction and we anticipate that the park will be filled within a three year period.

In addition to serving as a prime access to the Chaska's industrial area, County Road 117 also serves as a secondary access to the northern residential portion of the community. Based on these factors the City of Chaska wholeheartedly supports the County's efforts to include County Road 117 on the County State Aid System. If we can provide you any additional information or comments regarding the proposal, please feel free to contact me at your convenience.

Sincerely,

Dave Pokorney  
City Administrator

DP:jai



# CITY OF CHANHASSEN

690 COULTER DRIVE • P.O. BOX 147 • CHANHASSEN, MINNESOTA 55317  
(612) 937-1900

April 27, 1987

Carver County Board of Commissioners  
600 East 4th Street  
Chaska, MN 55318

Dear County Commissioners:

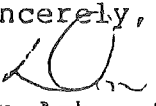
The City of Chanhassen initiated the request to have the County consider removing the current 78th Street County State Aid designation and to move such to County Road 117. By this letter, we wish to reconfirm our earlier position. Specifically, we believe it to be in the interest of both the city and county to remove the current 78th Street designation and replace such with County 117 for the following reasons:

- Transportation - County 117 acts a primary feeder from the south Lake Minnetonka cities to Jonathon/Chaska. For Highways 41 and 5 to continue functioning as state highways, good county roads are necessary. The importance of County 117 will continue to increase. By contrast, West 78th Street, in downtown Chanhassen, serves primarily the interest of Chanhassen and does not function in its intended capacity;
- Local Planning - West 78th Street has varying right-of-way throughout its length. As Chanhassen continues to grow and, in light of our downtown redevelopment project, the city's ability to control development along 78th Street is highly critical. With the current state aid designation, both the county and city's interest would be served by deleting this segment of roadway as state aid. These conflicts would not exist on County 117 where the county's function to insure controlled access could more reasonably be achieved.

We are hopeful that the County Board similarly agrees with Chanhassen that the change in county state aid designation from West 78th Street to County 117 will best serve our city and the county's interest in circulation, planning, and economics.

Thank you for your consideration.

Sincerely,

  
Don Ashworth  
City Manager





MINNESOTA DEPARTMENT OF TRANSPORTATION  
TECHNICAL SERVICES DIVISION  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

1985  
BASIC DATA 197

Polyconic Projection  
North American Datum  
of 1927


### LEGEND

ROAD AND ROADWAY FEATURES		NAVIGATION	
TRAIL (ROAD)		BARGE LINES ON NATURAL STREAMS	
PROJECTED ROAD		SHIP LINES ON INLAND LAKES	
FEINTHIE ROAD		(SEASONAL)	
RAVINE/CREEK ROAD		DOCK, PIER OR LANDING	
GRAVEL AND DRAINAGE ROAD		ROCK (IFY FOR TOLLS)	
SILT SURFACED ROAD		NAVIGABLE STREAM (SEASONAL)	
TRAVEL DIRT STONE ROAD		HEAD OF NAVIGATION	
BITUMINOUS ROAD		DAM WITH LOCK	
PAVED ROAD		WATER LOCK	
DIVIDED HIGHWAYS		LIGHT HOUSE	
TURNING OF DESIGNATED ROAD			
TRUNK HIGHWAY UNDER CONTRACT			
TRUNK HIGHWAY TRAIL BRIDGE ROUTED			

**CONSERVATION**

FOREST RANGER STATION .....  
GUARD OR STATION STATION .....  
(NOT PERMANENTLY OCCUPIED) .....  
FISH HATCHERY .....  
GAME PRESERVE .....  
OBSERVATION AND LOOKOUT TOWER .....  
FIRMAMENT ELEVATION .....  
SMALL PARK 3P = STATE, CP = COUNTY, .....  
MP = MUNICIPAL, WP = CITY-STATE .....  
PUBLIC ACCESS POINT .....  
.....

INDICATING TRAFFIC MOVEMENT.....			<b>RECREATION</b>
<b>ROAD SYSTEM DESIGNATIONS</b>			
INTERSTATE TRUNK HIGHWAY.....		GOLF COURSE OR COUNTY CLUB	
U.S. NUMBERED TRUNK HIGHWAY.....		GUN CLUB	
STATE NUMBERED TRUNK HIGHWAY.....		ATHLETIC FIELD OR AMUSEMENT PARK	
COUNTY STATE ADJ. HIGHWAY.....		PICNIC GROUNDS	
COUNTY ROAD.....		PLAYGROUND, BALLFIELD, ETC.	
COUNTY STATE ADJ. HIGHWAY IN		BATHING BEACH OR SWIMMING POOL	
ADJOINING COUNTY.....		SCENIC SITE	
GREAT RIVER ROAD.....		CAMP SITE	
		CAMP OR LODGE	
		<b>FARM AND DWELLING UNITS.....</b>	

FEDERAL AID INTERSTATE SYSTEM.....	F.A.I.	F.A.T.	FARM UNIT
FEDERAL AID PRIMARY HIGHWAY SYSTEM.....	F.A.P.		DWELLING OTHER THAN FARM
FEDERAL AID SECONDARY HIGHWAY SYSTEM.....	F.A.S.		BARRIQUES OR BOMPROTES FOR STUDENTS,
END OF FEDERAL AID ROUTE.....			WORKERS, MIGRANTS, ETC.
			SEASONAL DWELLING
NATIONAL FOREST HIGHWAY.....	N.F.H.		ROWS OR GROUPS OF DWELLINGS CLOSELY SPACED.....
NATIONAL FOREST DEVELOPMENT.....	N.F.D.		NUMBER PLACED ADJACENT TO SYMBOL
INSURANCE ROUTE.....	I.R.		NUMBER OF UNITS WHEN CLOSELY SPACED INDICATES
STATE FOSTER ROAD.....	S.F.R.		NUMBER OF EACH UNIT
STATE PARK ROAD.....	S.P.R.		DOT TO INDICATE LOCATION OF ANY
			CULTURAL FEATURE SHOWN OUT OF POSITION.....
			

<b>RAILROADS</b>		<b>INDUSTRIAL.....</b>	
RAILROAD (ANY NUMBER OF TRACKS USED BY A SINGLE			

OPERATING COMPANY OR BY TRAINS OF ANOTHER		FACILITY OR INDUSTRIAL PLANT
CARRIER UNDER TRACKAGE RIGHTS	—	SAWMILL
RAILROADS IN JUNCTURE POSITION (TWO OR MORE TRACKS	—	GROUP OF STORAGE TANKS, OIL OR GAS
OF SEPARATELY OPERATED COMPANIES ON	—	SEASONAL INDUSTRY (CANNERY OR SHAL)
ADJACENT RIGHTS OF WAY)	—	GRAIN MILL
RAILROAD STATION	—	GRAIN ELEVATOR
GRADE CROSSING	—	BEET DUMP
	—	STOCKYARD—LOADING PEN
UNDERPASS (HIGHWAY BELOW)	—	QUARRY
	—	MILK DEPOT, CREAMERY OR CHEESE FACTORY
OVERPASS (HIGHWAY ABOVE)	—	WAREHOUSE—GENERAL
	—	
<b>AIRWAYS</b>		<b>COMMERCIAL</b>

RUNWAY .....		STORE OR SMALL BUSINESS ESTABLISHMENT
MILITARY FIELD .....		HOTEL
COMMERCIAL OR MUNICIPAL FIELD .....		TOURIST COURT, MOTEL
COMPLETE FACILITIES .....		COMBINED DWELLING AND STORE OR
LIMITED FACILITIES .....		SMALL BUSINESS
LANDING AREA OF STEP .....		DWELLING IN THEATRE
AIRWAY LIGHT BEACON, GENERAL .....		NURSERY
SEAPLANE BASE, MILITARY .....		GREENHOUSE
SEAPLANE BASE, CIVIL .....		
RADIO RANGE STATION .....		PUBLIC SERVICE FACILITIES .....

### STRUCTURES


POST OFFICE .....	
DWELLING AND POST OFFICE .....	


General Symbols (over 20' span)		DWELLING, BUSINESS AND POST OFFICE
HIGHWAY BRIDGE.....		BUSINESS AND POST OFFICE
SMALL BRIDGES CLOSELY SPACED.....		FIRE ENGINE HOUSE
DRAWBRIDGE.....		MUSEUM
General Symbols (300' span and over)		PUBLIC LIBRARY
GENERAL.....		CHURCH AND SCHOOL
DRAWBRIDGE.....		U.S. BORDER POST OF ENTRY
RAILROAD.....		CRAZED STATION (WITH CALL LETTERS)
ARK.....		SEWAGE DISPOSAL PLANT
TRUSS (W = WOOD, S = STEEL).....		FRESH AIR OR REST HOME
THE WORD TOLL IS ADDED WHERE APPLICABLE		HOSPITAL
Other Structures		TOWN HALL OR COMMUNITY HALL
		COUNTY FARM


DAN WITH ROAD (BARGE SCALE).....		SCHOOL AND QUONSETTOD OR LARGE SCHOOLS	
DAN WITH ROAD (SMALL SCALE).....		CORRECTIONAL INSTITUTION	
<b>CITY AND VILLAGE CENTERS</b>			
DAN WITHOUT ROAD (BARGE SCALE).....		STATE CAPITOL.....	
DAN WITHOUT ROAD (SMALL SCALE).....		COUNTY SEAT.....	
LEVEE OR DIKE.....		CITY OR VILLAGE CENTER.....	
LEVEE OR DIKE (WITH ROAD).....		INCORPORATED CITY OR VILLAGE	
MINOR STRUCTURES 15' TO 20" SPAN.....		(GENERALIZED)	
CONCRETE FORD OR DIP.....		UNINCORPORATED COMMUNITY.....	
FORD—ROAD ESTABLISHED.....			


BOUNDARIES		MISCELLANEOUS MAP FEATURES	
NATIONAL OR STATE.....		CHURCH, OTHER RELIGIOUS INSTITUTIONS.....	
COUNTY.....		CEMETERY.....	
CIVIL TOWNSHIP.....		CHURCH WITH CEMETERY ADJACENT.....	
CONGRESSIONAL TOWNSHIP.....		FAIR GROUND, RACE COURSE, SPEEDWAY.....	
FEDERAL AIR-URBAN BOUNDARY.....	<u>U</u> <u>U</u> <u>U</u>	HIGHWAY (GRADE).....	
CORPORATE LINE.....		PORT, ARMY CAMP, BARABARS OR MILITARY POST.....	
SECTION LINE.....		GRAVEL PIT.....	
CONGESTED AREA.....		SANITARY LANDFILL.....	
NATIONAL OR STATE PARK.....		AUTO JUNKYARD.....	
NATIONAL OR STATE FOREST.....		AUTO JUNKFOLD.....	


GAME REFUGE.....	DEPARTMENT OF TRANSPORTATION GARAGE.....
MATCH LINE BETWEEN ADJOINING SHEETS.....	MINNESOTA STATE PATROL SUBSTATION.....
OF THE SAME COUNTY.....	DEPARTMENT OF TRANSPORTATION DISTRICT.....
AIRPORT.....	CHIEF WITH PATROL STATION.....
WILDLIFE MANAGEMENT AREA STATE.....	MAN/DOT GENERAL OFFICE.....
	TOLL HOUSE, STATE PORT OF ENTRY, OR.....
	WEIGH STATION.....
INTERMITTENT STREAM.....	VALVE HOUSE, GAS, OR OTHER WATER.....
NARROW STREAM.....	GAUGING OR FLOWING STATION.....
	GAS, OIL OR WATER.....
WIDE STREAM.....	PIPE LINE, WATER.....
MARGIN OF A PLANNED ROAD.....	PIPE LINE, OIL.....
DRAINAGE DITCH.....	PIPE LINE, GAS.....


FOOND OR LAKE.....


RESERVOIR, FLOWAGE LIMITS.....


TRANSMISSION LINE (33KV OR OVER).....


POWER PLANT.....

TRANSFORMER STATION.....

LATITUDE AND LONGITUDE INTERSECTION.....

TRIANGULATION STATION.....

LOOKOUT TOWER AND TRIANGULATION STATION.....

HISTORIC SITE, STATE OR NATIONAL.....

Outline Map of Minnesota showing location of this County within the State.

Outline Map of this County. Shaded portion being area delineated on this sheet

Area of this County. 274.8 Sq. Miles

Land Area 399.2 Sq. Miles  
TOTAL COUNTY POPULATION 37,046

T 117 N

SHEET 1

# CARVER COUNTY MINN.

\* NOTE: ALL FEATURES, EXCEPT TOWNSHIP ROADS

NOTE: FOR DETAIL OF COUNTY STATE-AID HIGHWAYS AND COUNTY ROADS IN INCORPORATED PLACES, SEE MAPS OF MUNICIPALITIES.

Outline Map of Minnesota showing location of this County within the State

Outline Map of this County. Shaded portion being area delineated on this sheet.

Area of this County	374	Sq. Miles
Land Area	359.2	Sq. Miles

TOTAL COUNTY POPULATION	37,046
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COUNTY MINNEAPOLIS

R E F E R E N C E

M A T E R I A L

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1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

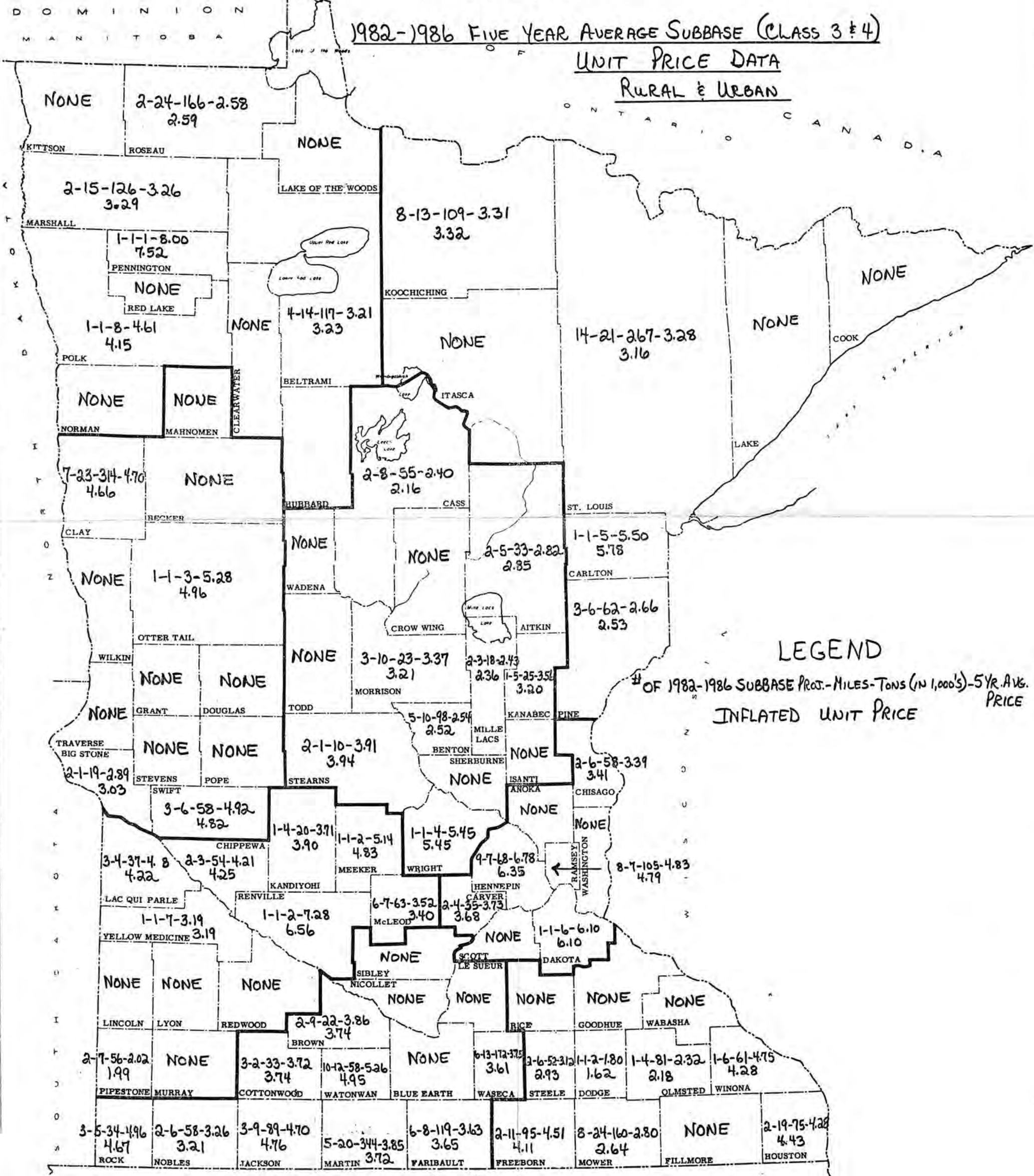
1982-1986 Five-Year Average Subbase (Class 3 & 4) Unit Price Data  
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The following map indicates the subbase (Class 3 & 4) unit price information that is in the 1982-1986 five-year average unit price study and the inflated subbase unit price, the determination of which is explained in another write-up in this section. This data is being included in the report because in some cases the gravel base unit prices recommended by the Subcommittee, as shown on Fig. A, were determined using this subbase information.

1982-1986 FIVE YEAR AVERAGE SUBBASE (CLASS 3 & 4)

## RURAL E URBAN



1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

FAS Fund Balance Deductions  
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The following resolution was adopted by the County Screening Board in 1973, revised in June, 1980, again in October, 1982.

That in the event any county's FAS fund balance exceeds either an amount which equals a total of the last five years of their FAS allotments or \$350,000, whichever is greater, the excess over the aforementioned amount shall be deducted from the 25-year County State Aid Highway construction needs in their regular account. This deduction will be based on the FAS fund balance as of June 30th of each year.

The following data is presented for the Screening Board's information and to forewarn the counties involved of a possible "needs deduction". Please note that these figures are current only through April 29, 1987 and do not represent the final data to be used for the 1988 Apportionment.

County	FAS Fund Balance as of April 29, 1987	Maximum Balance	Tentative Deduction From the 1987 25-Year C.S.A.H. Construction Needs
-----			
Anoka	\$846,764	\$504,513	\$342,251
Becker	759,212	584,273	174,939
Crow Wing	890,419	853,284	37,135
Dakota	753,669	574,155	179,514
Houston	605,987	442,251	163,736
Kanabec	422,364	350,000	72,364
McLeod	575,721	481,641	94,080
Ramsey	417,432	350,000	67,432
Roseau	606,780	602,684	4,096
St. Louis	2,908,922	2,787,174	121,748
Scott	624,404	433,679	190,725

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

County State Aid Maintenance Transfers

<u>County</u>	<u>Transfers</u>	<u>29-Year Total 1958-1986</u>	<u>County</u>	<u>Transfers</u>	<u>29-Year Total 1958-1986</u>
Carlton	1	\$ 20,839	Carver	1	\$ 20,000
Cook	4	128,598	Hennepin	5	575,219
Lake	4	115,000	Scott	3	75,000
Pine	6	311,194			
St. Louis	3	853,000	Dist. 5 Totals	9	\$ 670,219
Dist. 1 Totals	18	\$1,428,631	Dodge	2	37,610
			Fillmore	2	46,000
Beltrami	2	26,330	Goodhue	1	30,000
Clearwater	1	20,000	Houston	2	69,700
Hubbard	2	93,630	Mower	1	44,100
Norman	1	32,000	Rice	4	34,135
			Steele	4	101,188
Dist. 2 Totals	6	\$ 171,960	Wabasha	2	33,714
Aitkin	9	245,000	Dist. 6 Totals	18	\$ 396,447
Benton	1	60,000			
Isanti	2	27,000	Cottonwood	1	25,000
Kanabec	2	33,000	Jackson	2	85,000
Mille Lacs	8	220,000	Le Sueur	3	175,000
Sherburne	4	113,000	Rock	2	53,000
Todd	1	45,000	Sibley	3	45,235
Wright	1	25,000	Waseca	2	45,000
			Watonwan	3	124,000
Dist. 3 Totals	28	\$ 768,000			
			Dist. 7 Totals	16	\$ 552,235
Big Stone	2	46,007			
Douglas	3	110,000	Lac Qui Parle	3	220,264
Pope	3	72,700	Lyon	1	48,110
Stevens	4	259,501	Meeker	4	58,236
Swift	1	40,000	Murray	3	104,000
Traverse	4	430,000	Renville	1	10,800
Dist. 4 Totals	17	\$ 958,208	Dist. 8 Totals	12	\$ 441,410
			STATE TOTALS		\$5,387,110
			# of Transfers	124	

The last year for a Maintenance Transfer was in 1980 for Traverse County for \$120,000.

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

County State Aid Hardship Transfers

<u>County</u>	<u>Transfers</u>	<u>29-Year Total 1958-1986</u>	<u>County</u>	<u>Transfers</u>	<u>29-Year Total 1958-1986</u>
Cook	17	\$ 619,625	Big Stone	1	\$ 35,000
Koochiching	4	155,000	Grant	1	30,000
Lake	1	65,000	Mahnomen	15	223,000
Pine	11	534,600	Traverse	1	75,000
Dist. 1 Totals	33	\$1,374,225	Dist. 4 Totals	18	\$ 363,000
Beltrami	1	30,000	Fillmore	1	40,000
Clearwater	1	12,000	Dist. 6 Totals	1	\$ 40,000
Hubbard	5	292,500	Watsonwan	1	40,000
Lake of Woods	18	1,228,000	Dist. 7 Totals	1	\$ 40,000
Norman	1	100,000	Lac Qui Parle	1	100,000
Pennington	1	20,000	Pipestone	1	75,000
Red Lake	1	44,000	Dist. 8 Totals	2	\$ 175,000
Roseau	6	155,000	Chisago	1	30,000
Dist. 2 Totals	34	\$1,881,500	Ramsey	1	75,000
Aitkin	18	1,025,000	Dist. 8 Totals	2	\$ 105,000
Benton	5	100,000	STATE TOTALS		\$5,523,725
Cass	6	220,000			
Crow Wing	1	20,000			
Kanabec	5	150,000			
Wright	2	30,000			
Dist. 3 Totals	37	\$1,545,000			
			# of Transfers	128	

The last year of a Hardship Transfer was in 1982 for Aitkin County for \$250,000.

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

C.S.A.H. URBAN DESIGN COMPLETE GRADING COST STUDY

The 1986 County Screening Board directed that each county engineer estimate his complete grading costs on proposed urban design C.S.A.H.'s. The District State Aid Engineers along with the Office of State Aid developed a procedure and forms to use and transmitted the information to the individual counties.

After the county engineers submitted their estimates and they were reviewed by the District State Aid Engineer, the costs were summarized by county and district. The District State Aid Engineers reviewed the summaries in January at the County Engineers Institute. After considerable discussion the group agreed to take the costs back to some of the counties for a more realistic reporting. The District State Aid Engineers met again in April and the concensus was to recommend the complete urban design grading costs as summarized on the following three pages. They also are recommending that an annual adjustment mechanism be adopted similar to the rural design grading cost comparison.



1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

CSAH URBAN DESIGN COMPLETE GRADING COST STUDY

COUNTY	CSAH MILES WITH URBAN DESIGN COMPLETE GRADING NEEDS	PRESENT COMPLETE URBAN DESIGN GRADING NEEDS	COMPLETE URBAN DESIGN GRADING NEEDS ( USING NEW ESTIMATES )	TOTAL NEEDS CHANGE
CARLTON	4.26	\$ 282,959	\$ 582,164	+ \$ 299,205
COOK	2.78	237,829	260,203	+ 22,374
ITASCA	3.03	212,108	443,098	+ 230,990
KOOCHICHING	5.95	429,012	1,005,516	+ 576,504
LAKE	0.55	53,984	83,439	+ 29,455
PINE	4.90	365,262	762,925	+ 397,663
ST. LOUIS	23.60	1,839,929	6,378,726	+ 4,538,797
DISTRICT 1 TOTALS	45.07	3,421,083	9,516,071	+ 6,094,988
BELTRAMI	8.04	526,950	1,256,371	+ 729,421
CLEARWATER	2.84	197,316	312,578	+ 115,262
HUBBARD	2.25	124,737	266,546	+ 141,809
KITTSO	2.65	195,636	488,530	+ 292,894
LAKE OF THE WOODS	0.42	34,077	78,019	+ 43,942
MARSHALL	0.21	12,006	25,680	+ 13,674
NORMAN	2.01	138,791	275,558	+ 136,767
PENNINGTON	1.03	89,271	200,305	+ 111,034
POLK	8.27	618,655	1,205,014	+ 586,359
RED LAKE	1.97	149,219	327,901	+ 178,682
ROSEAU	2.94	227,196	331,818	+ 104,622
DISTRICT 2 TOTALS	32.63	2,313,854	4,768,320	+ 2,454,466
AITKIN	3.41	292,166	431,453	+ 139,287
BENTON	1.84	132,114	291,559	+ 159,445
CASS	7.76	502,056	1,286,451	+ 784,395
CROW WING	8.23	493,878	1,114,073	+ 620,195
ISANTI	1.00	58,575	335,269	+ 276,694
KANABEC	1.15	79,284	117,055	+ 37,771
MILLE LACS	11.62	703,947	1,581,134	+ 877,187
MORRISON	7.79	440,979	818,247	+ 377,268
SHERBURNE	2.97	161,337	267,123	+ 105,786
STEARNS	16.81	1,187,193	2,455,040	+ 1,267,847
TODD	5.74	379,824	783,557	+ 403,733
WADENA	2.77	180,387	391,259	+ 210,872
WRIGHT	14.99	1,107,698	3,475,639	+ 2,367,941
DISTRICT 3 TOTALS	86.08	5,719,438	13,347,859	+ 7,628,421
BECKER	2.72	145,293	228,843	+ 83,550
BIG STONE	0.72	62,121	140,450	+ 78,329
CLAY	6.03	512,553	1,327,002	+ 814,449
DOUGLAS	9.61	662,320	1,791,450	+ 1,129,130
GRANT	2.54	184,418	327,098	+ 142,680
MAHNOMEN	1.28	72,638	286,552	+ 213,914
OTTER TAIL	28.11	1,634,048	5,963,545	+ 4,329,497
POPE	6.15	367,992	847,518	+ 479,526
STEVENS	3.40	343,776	519,932	+ 176,156
SWIFT	4.18	295,847	888,092	+ 592,245
TRAVERSE	2.02	141,780	321,578	+ 179,798
WILKIN	1.57	138,936	339,747	+ 200,811
DISTRICT 4 TOTALS	68.33	\$ 4,561,722	\$ 12,981,807	+ \$ 8,420,085

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

CSAH URBAN DESIGN COMPLETE GRADING COST STUDY

COUNTY	CSAH MILES WITH URBAN DESIGN COMPLETE GRADING NEEDS	PRESENT COMPLETE URBAN DESIGN GRADING NEEDS	COMPLETE URBAN DESIGN GRADING NEEDS ( USING NEW ESTIMATES )	TOTAL NEEDS CHANGE
ANOKA	12.13	\$ 787,401	\$ 2,789,750	+ \$ 2,002,349
CARVER	8.58	575,932	1,165,876	+ 589,944
HENNEPIN	223.55	18,078,802	90,059,773	+ 71,980,971
SCOTT	10.68	912,197	2,186,108	+ 1,273,911
DISTRICT 5 TOTALS	254.94	20,354,332	96,201,507	+ 75,847,175
DODGE	2.35	196,836	559,865	+ 363,029
FILLMORE	5.39	486,852	460,801	- 26,051
FREEBORN	4.54	323,988	704,048	+ 380,060
GOODHUE	7.82	662,191	1,515,570	+ 853,379
HOUSTON	2.43	202,059	346,035	+ 143,976
MOWER	4.92	356,243	1,005,567	+ 649,324
OLMSTED	1.44	95,153	326,515	+ 231,362
RICE	10.37	757,308	3,185,733	+ 2,428,425
STEELE	10.02	780,296	1,815,834	+ 1,035,538
WABASHA	8.43	553,890	2,327,047	+ 1,773,157
WINONA	2.74	220,244	784,344	+ 564,100
DISTRICT 6 TOTALS	60.45	4,635,060	13,031,359	+ 8,396,299
BLUE EARTH	14.38	1,133,206	2,440,758	+ 1,307,552
BROWN	5.81	375,421	530,904	+ 155,483
COTTONWOOD	4.38	320,215	633,705	+ 313,490
FARIBAULT	8.69	860,060	1,774,949	+ 914,889
JACKSON	6.88	529,110	1,151,410	+ 622,300
LE SUEUR	9.13	861,331	1,447,946	+ 586,615
MARTIN	3.44	282,122	593,839	+ 311,717
NICOLLET	2.13	199,553	380,127	+ 180,574
NOBLES	7.62	632,472	1,472,219	+ 839,747
ROCK	6.35	482,163	712,558	+ 230,395
SIBLEY	1.32	86,585	193,764	+ 107,179
WASECA	7.71	633,902	1,569,133	+ 935,231
WATONWAN	3.94	374,503	796,605	+ 422,102
DISTRICT 7 TOTALS	81.78	6,770,643	13,697,917	+ 6,927,274
CHIPPEWA	3.62	255,735	904,956	+ 649,221
KANDIYOHI	13.04	977,937	2,743,398	+ 1,765,461
LAC QUI PARLE	2.90	246,574	722,565	+ 475,991
LINCOLN	3.98	299,610	534,716	+ 235,106
LYON	10.00	751,964	2,381,630	+ 1,629,666
MC LEOD	5.19	356,834	657,879	+ 301,045
NEEKER	3.51	257,316	647,641	+ 390,325
MURRAY	1.39	92,202	124,420	+ 32,218
PIPESTONE	7.20	652,945	1,281,471	+ 628,526
REDWOOD	4.89	379,318	846,762	+ 467,444
RENVILLE	4.44	391,361	861,118	+ 469,757
YELLOW MEDICINE	4.08	268,324	765,682	+ 497,358
DISTRICT 8 TOTALS	64.24	4,930,120	12,472,238	+ 7,542,118
CHISAGO	9.99	666,066	1,696,408	+ 1,030,342
DAKOTA	50.05	4,058,038	11,577,963	+ 7,519,925
RAMSEY	167.87	13,694,512	66,356,760	+ 52,662,248
WASHINGTON	31.90	2,020,180	6,799,215	+ 4,779,035
DISTRICT 9 TOTALS	259.81	20,438,796	86,430,346	+ 65,991,550
STATE TOTALS	953.33	\$ 73,145,048	\$ 262,447,424	+ \$ 189,302,376

1987 COUNTY SCREENING BOARD DATA  
JUNE, 1987

Needs Adjustments for Variances Granted on CSAH's  
-----

The adjustments shown below are for those variances granted for which projects have been awarded prior to May 1, 1987 and for which no adjustments have been previously made. These adjustments were computed using guidelines established by the Variance Subcommittee.

County -----	Project -----	Recommended 1987 Needs Adjustments -----
Chisago	13-609-15	\$111,579
Otter Tail	56-635-10	\$295,236
Washington	82-621-15	\$614,200

If the counties involved have any questions regarding these adjustments, the State Aid Office can be contacted directly. Also, the calculation of the adjustments will be available at the various district meetings and the Screening Board meeting.

Minutes of the County Engineers Screening Board Meeting

October 29 & 30, 1986

Call to order at 1:05 P.M. by Chairman Doug Weiszhaar. He introduced the secretary and asked him to call the roll.

Roll call of members:

Boyd Paulu.....	Carlton County.....	District 1.....	Present
Dave Olsonawski.....	Kittson County.....	District 2.....	Present
Dick Larson.....	Mille Lacs County.....	District 3.....	Absent
Duane Lorsung.....	Todd County.....	District 3 Alternate..	Present
Lee Amundson.....	Mahnomen County.....	District 4.....	Present
Paul Ruud.....	Anoka County.....	District 5.....	Present
Mike Pinsonneault.....	Goodhue County.....	District 6.....	Present
Gerald Engstrom.....	Watsonwan County.....	District 7.....	Present
Don Paulson.....	Yellow Medicine County....	District 8.....	Absent
Tom Behm.....	Lyon County.....	District 8 Alternate..	Present
Doug Weiszhaar.....	Chisago County.....	District 9.....	Present
Dennis Carlson.....	Benton County.....	Secretary.....	Present

Chairman Weiszhaar called for approval of the June 25 & 26, 1986 Screening Board minutes. Gerald Engstrom moved and Mike Pinsonneault second a motion to approve the minutes as distributed. Motion carried unanimously.

Chairman Weiszhaar introduced the Mn/DOT Personnel from State Aid in attendance:

Gordon Fay.....	Director of State Aid
Roy Hanson.....	Office of State Aid
Ken Hoeschen.....	Office of State Aid

Bill Croke.....	District 1 State Aid Engineer
Jack Isaacson.....	District 2 State Aid Engineer
Dave Reed.....	District 3 State Aid Engineer
Vern Korzendorfer.....	District 4 State Aid Engineer
Chuck Weichselbaum.....	District 5 State Aid Engineer
Earl Welshons.....	District 6 State Aid Engineer
Harvey Suedbeck.....	District 7 State Aid Engineer
John Hoeke.....	District 8 State Aid Engineer
Elmer Morris.....	District 9 State Aid Engineer

Chairman Weiszhaar then introduced Don Wisniewski - Washington County as General Sub-Committee Chairman, and Art Tobkin and Dave Everds who also serves on the Sub-Committee.

Chairman Weiszhaar asked others present to introduce **themselves**:

Roger Gustafson.....	Carver County	Ken Straus.....	Office of State Aid
Neil Britton.....	Fillmore County	Vern Genzlinger....	Hennepin County
Tom Richels.....	Wilkin County	Roger Hille.....	Marshall County
John Walkup.....	Aitkin County	Russ Larson.....	Roseau County
Mike Rardin.....	Polk County	Walter Leu.....	Lake of Woods County
Ken Weltzin.....	Ramsey County	Doug Grindall.....	Koochiching County
Dick Hansen.....	St. Louis County	Larry Chezick.....	Koochiching County
Bob McPartlin.....	Waseca County	Duane Blanck.....	Crow Wing County
John Strohkirch.....	DNR		

Chairman Weiszhaar then asked Ken Hoeschen to lead the discussion of items in the booklet.

Page 3 & Figure A - Comparison of 1985 to 1986 Basic Construction Needs

Ken went thru each of the effects of Needs changes on Figure A and referred to the map on Page 72 for changes in Traffic Counts. He also noted that 16 counties that were counted will not be included until 1987.

Page 5 & Figure B - Restriction of 25 Year Construction Needs Changes

There are 2 counties that have restrictions which are Lake and Traverse Counties.

Page 6 - FAS Fund Balance Deductions

Ken noted that the actual loss in apportionment will be about \$20 per thousand dollars shown.

Page 7 & Figure C - CSAH Fund Balance "Needs" Deductions

Ken noted that there was an error on Figure C for Washington County in the 1986 Construction Fund Balance "Needs" Deduction column (should read \$202,272). Corrected copies were distributed to those present.

Page 8-10 - Special Resurfacing Projects

Ken reviewed the current Screening Board resolution, and the totals being deducted. There were no comments.

Pages 11-21 - Comparison of 1984-85 Rural Design Grading to Needs Study Costs

Ken briefly reviewed the resolution dealing with grading cost adjustments. If you estimated low your adjustment will be positive and if you estimated high your adjustment is negative.

Page 22 - Variance Adjustments

Having been approved at the June meeting, there was no need to discuss this adjustment.

Pages 23-24 - Bond Account Adjustments

No comments.

Pages 25-28 - After the Fact Needs

Ken noted that you don't draw any needs on these items until after the expenditure has been made. The reporting must be in the State Aid Office by July 1 each year that you want an update. If you fail to meet the deadline you will only receive 24 years of needs instead of 25.

Pages 29-31 - Mill Levy Deductions

Based on a county's total tax evaluation.

Pages 33 & Figure D - Tentative 1987 Money Needs Apportionment

Ken reviewed the columns on Figure D and noted the estimated \$157,000,000 that compares with the last years \$176,000,000. The fund is considerably down, primarily because of loss of MVET Transfer.

Pages 34-36 - Recommendation to Commissioner of Transportation

Must be sent to the Commissioner by November 1 each year.

Pages 37-40 - Tentative CSAH Apportionments

No discussion.

Pages 41-43 - Comparison of 1986 to Tent. 1987 CSAH Apportionments

There are no questions by the delegates.

Pages 45-48 - History of Mileage Requests Granted

No Comments.

Pages 49-52 & Figure E - Mille Lacs County Mileage Request

Ken described the request, noting the maps on Pages 51 & 52. Duane L. pointed out the development of a new industrial park and the airport to the northeast of the city. He also said the traffic volumes were current and anticipated after construction is complete. It was noted that the intersection of new T.H. 169 and proposed CSAH 9 is at-grade. The scheduled completion of new T.H. 169 is 1987.

Pages 54-63 - Figure F - Koochiching County Mileage Request

Boyd P. said that Koochiching County had searched their system for milage to revoke and after considerable shifting come up with a request for 0.12 miles of new State Aid road. Boyd explained the proposed CSAH extension has a shopping mall at one end and South International Falls at the other so it is only natural that the demand for a connection is great. He indicated a projected volume of 3000 VPD and a secondary benefit is relief on a substandard street (15th St. W.) that is currently carrying buses and more traffic than it can handle. Boyd said that construction of the new link would start as soon as possible. The railroad has been abandoned so there will be no railroad crossing needed. He briefly discussed the revocations in Northhome and Littlefork and said that both cities have concurred in the system changes.

Pages 65-68 - State Park Road Account

John Strohkirch of the DNR described the proposed County State Aid Projects for 1987. The list in order of priority is:

Forestville State Park	\$ 295,100
Sibley State Park	140,000
Split Rock Lighthouse State Park	30,600
Gooseberry Falls State Park	36,300
Helmer Myre State Park	98,000
Total:	\$ 600,000

Mr. Strohkirch mentioned that their plans at Forestville are in limbo until they reach a solution that will satisfy the local residents, the DNR and meet State Aid Standards. After considerable discussion, Mr. Strohkirch suggested that maybe the Screening Board should consider the last four projects separately because he is sure that they will all meet State Aid Standards. He said that Forestville may also be approved but if not acceptable it would be resubmitted at the Spring Screening Board Meeting when more information is available. Mike P. suggested they consider an effective dust control program as an alternative to reconstruction and bituminous surfacing. Gordon F. noted that the DNR did not initiate the inclusion of Screening Board approval in the law,

nor did MNDOT initiate that requirement. But it will serve as a communicating tool between DNR and State Aid people as well as county people. It was pointed out that the entire \$600,000 must be designated toward projects or the remainder will go back into the State Aid Fund for redistribution.

#### Pages 71-72 - CSAH 20-Year Traffic Projection Factors

Paul R. said it is hard to argue against statistics but it's difficult to understand what's happening around the state when you look at the new factors on Page 72.

#### Pages 73-86 - June Screening Board Minutes

No comments.

#### Page 87 - Sept. General Sub-Committee Minutes

No comments.

#### Pages 88-99 - History of Screening Board Resolutions

Ken H. said the reference to two bridges should be revised to one bridge on the July 1976 Bridge Cost Limitation Resolution. One of the two bridges has since been removed from the State Aid System.

The resolutions on After the Fact Needs should be revised to submit the new data to the District State Aid Engineer by July 1 rather than the State Aid Office.

Ken H. said the General Subcommittee was created in the early 1970's by a motion in Screening Board minutes. He suggested a resolution would be more appropriate and handed out a draft resolution.

After a short break there was a brief discussion on considering variances on State Park Roads when the DNR doesn't consider variances in their regulations imposed on counties and other agencies.

#### General Sub-Committee Report

Don Wisniewski reported that the Sub-Committee reviewed the methods used in establishing Traffic Projection Factors. They are not recommending a change at this time. However, they do feel that projections have been skewed where only portions of the system were counted. Therefore they recommend the eliminations of System 70 counts in making projections. They will be studying the matter further and make a final recommendation at the Spring Screening Board Meeting.

Don also reported on the use of 40,000 Ton as a minimum for establishing Gravel Base unit prices. There are currently 23 counties that rely on other counties to establish Gravel Base unit prices and if the minimum is reduced there would be 15 counties. The Sub-Committee recommends no change at this time. If in the future a particular county is significantly affected by the 50,000 Ton minimum it should be referred to the General Sub-Committee.

The last item Don reported on was a review of CSAH's in the 0 to 99 present ADT range, which involves 3300 miles, and are drawing pavement needs. The Sub-Committee is requesting more direction from the Screening Board because of their observation that only 430 miles in the 0-99 ADT range have not had any improvements since 1940 as compared to 1341 miles in the other ranges. They are wondering if the surfacing needs

(not being paved) in the lowest range is as big a problem as the long period of time many other roads are not getting improvements. Paul R. suggested that maybe any road that has drawn needs for 25 years should be removed from the study until improvements are made. This would be an incentive for counties to make grading improvements. Art T. asked if improvements made with local funds are reported. Apparently in most cases they are and should be reported.

A long discussion ensued on the philosophy of needs studies and the thinking of the people who created the State Aid Needs Study. No conclusion was reached but the Board may consider a limit on how long a county can draw needs on a segment of road.

#### Other Business

Dave O. presented a resolution regarding combining the Urban and Rural Gravel Base unit prices (Attachment "A") to be implemented in 1987 for 1988 apportionments. It was agreed that the Board would like the study to reflect the actual costs that are being incurred. Ken W. reported that portions of the needs study reflect as high as 97% but the overall study in Ramsey County is about 73% of actual costs. There was also an understanding that the State Aid Office can go back 5 years to establish the combined Gravel Base unit prices. Dave O. said to revise the first paragraph to include the words "for the previous 5 years" after the word county, so as to clarify the intent.

Paul R. presented a resolution (Attachment "B") regarding the proposed jurisdiction exchange between Mn/DOT and Hennepin County which included CSAH's 18 & 62. Legislation included that agreement must be reached between the two agencies. To date they have not been able to reach agreement.

Paul asked that since it appears the exchange will not be concluded this year, would the Screening Board consider the inclusion of additional needs on CSAH's 18 & 62 for the 1987 apportionment. Vern G. agreed that the date is late but that additional needs on portions of CSAH's 18 and 62 are appropriate since construction was done 25 years ago. He also stated it could be as much as \$35,000,000 in needs. It was apparent that the necessary changes could not be made and still meet the November 1 deadline for submitting the recommendation to the Commissioner of Transportation. It was also noted that the MCHEA Executive Committee will be meeting on Monday, November 3 to review the routes being considered for exchange. If the Screening Board approves the inclusion of new data, the Board would have to reconvene to make the recommendation to the Commissioner.

Gordon F. reiterated the importance of understanding the ramifications of the jurisdictional exchange between Hennepin County and Mn/DOT. He felt the review by the Executive Committee is very important and a good decision by the Committee on how to handle the matter.

Chairman Weiszhaar noted that action will be required on the allocation of funds toward the Local Road Research Board. Paul R. mentioned the efforts by the County Engineers to have effective input to the Governor on the selection of a new Commissioner of Transportation. Paul sits on a committee of professional engineers representing various engineering associations that have compiled a list of possible candidates. They are: Gordon Fay, Bernie Lieder, Chuck Swanson, Doug Differt, Larry McNamara, Gene Ofstead, Don Nygaard and Bob McFarland. Since that list was compiled another named has been added and that is Fritz Marshall. Several non-engineers are also being mentioned, Len Levine, Sandra Garderbring, Judith Pinke, Clarence Purfeerst and Joe Begich.

Don W. mentioned the computer committee is active and is open to ideas. You will be hearing a lot from them on hardware recommendations as well as software purchased by government agencies. There also will be a nationwide bulletin board accessible to all counties to disperse new programs at a minimal cost.

Meeting recessed at 5:00 P.M. on October 29, 1986.

Chairman Weiszhaar reconvened the meeting at 9:00 A.M. on October 30, 1986.

Don Paulson replaced Tom Behm as District 8 representative.

#### Pages 3 & Figure "A" - Comparison of 1985 to 1986 Construction Needs

Ken H. explained the phasing out of the 24' Needs restriction and because the total fund is decreasing it will be necessary to reinstate the restriction **for the 1986 Needs Study. It is the State Aid Offices understanding that the restriction can be eliminated entirely in the 1987 Needs Study.**

Ken also noted that the 1984 traffic changes are included and part of the 1985 changes.

Paul R. moved and Boyd P. second a motion to approve the resolution regarding the inclusion of additional needs on Hennepin County 18 & 62 (Attachment "B"). There was discussion about the fact that Districts did not have an opportunity to review the matter prior to this meeting. Chuck W. said it would take him 3 or 4 days to review the data and Ken H. said it would take 2 to 3 weeks to revise the reports in their office. Vern G. said that they were notified on August 22 that the exchange would not be completed as scheduled in 1986. There were 71 segments of road that required review and revision prior to submitting a revised report and with meetings and whatever, it took until now to be prepared for this meeting.

Ballots were passed out and the vote was 2 for and 7 against. Motion failed.

#### Pages 5 & Figure "B" - Restriction of 25 Year Construction Needs Changes

Ken H. noted that two counties are being limited on Needs changes and they are Lake and Traverse Counties.

#### Page 6 - FAS Fund Balance Adjustments

No comment.

#### Page 7 & Figure "C" - State Aid Construction Fund Balance Adjustments

Ken H. mentioned that counties with excessive balances in either the FAS or State Aid Construction Funds will receive an adjustment. Revised Figure "C" was given to all District Representatives.

#### Pages 8-10 - Special Resurfacing Projects

Ken H. said that if State Aid Construction money is used to overlay a substandard road the county loses needs for a period of 10 years. Lists of those projects will be sent to each county prior to the Screening Board meeting each year.

#### Pages 11-21 - Comparison of 1984-85 Rural Design Grading to Needs Study Costs

Ken H. reiterated how the adjustments are arrived at.

Page 22 - Variance Adjustments

Approved at the spring meeting.

Pages 23-24 - Bond Account Adjustments

No Comments.

Pages 25-28 - After the Fact Needs

Ken H. said that certain items are not included in the Needs Study until after they are accomplished.

Pages 29-31 - Mill Levy Deductions

Based on a county's ability to pay.

Page 33 & Figure "D" - Tentative 1987 Money Needs Apportionment

This includes the affect of the adjustments just discussed.

Pages 34-36 - Recommendation to Commissioner of Transportation

Dave O. moved and Don P. second a motion to approve the recommendation to the Commissioner of Transportation. Motion carried.

Pages 41-43 - Comparison of 1986 to Tent. 1987 CSAH Apportionments

Ken H. said the 1987 predictions are based on estiamtes from the Finance Dept.

Pages 49-52 & Figure "E" - Mille Lacs Co. Mileage Request

Chairman Weiszhaar asked if any delegates had questions or additional comments regarding the request. There being none the ballots were passed to the Screeing Committee members and held until both mileage requests were voted on. Request was denied by a 1 for and 8 against vote.

Pages 54-63 & Figure "F" - Koochiching Co. Mileage Request

Boyd P. reiterated several of the previous days comments and there being no questions the ballots were distributed to the representatives. Request was approved by an 8 for and 1 against vote.

Pages 65-68 - State Park Road Account

Gordon F. discussed the merits of the Forestville State Park road and the alternatives available to DNR regarding standards and dust control, etc. Dave O. asked if all the park roads are State Aid routes. Chairman Weiszhaar said that all those on the request list were State Aid routes.

Boyd P. moved to approve the 5 projects requested by DNR if State Aid standards are met and agreement can be reached with Fillmore County on the Forestville State Park road. Mike P. second the motion. After considerable more discussion, which included possible variances, the motion passed unanimously.

Pages 71-72 - CSAH 20 Year Traffic Projection Factors

Ken said that all of the 1984 counts are included and half of the 1985 counts. The remainder of the 1985 counts will be added next year.

Pages 73-86 - Minutes of the June 1986 Screening Board Meeting

No comments.

Page 87 - General Sub-Committee Minutes

Don W. recommended the 50,000 ton minimum on Gravel Base be left as is for now. No action required.

Don W. also recommended the method of computing traffic projection factors remain as is. No action required.

Don W. said they will make a recommendation on the use of System 70 counts at the spring 1987 meeting. No action required.

Don W. asked for more direction on the paving needs for low volume roads. Paul R. moved and Mike P. second a motion to direct the General Sub-Committee to continue to study the matter and consider the following factors; 1. What is the extent of the problems caused by no construction at all levels of ADT. 2. Look at some way to credit a county for aggressively constructing roads to current standards regardless of source of funds. 3. Look for ways to soften the crunch when counties spend local funds to improve State Aid roads. After some discussion the motion carried 8 to 1.

Pages 88-99 - Screening Board Resolutions

Jerry E. moved and Boyd P. second a motion to revise the Bridge Cost Limitation Resolution to refer to only one Minnesota River bridge. Motion carried 9-0.

Duane L. moved and Lee A. second a motion to revise the "After the Fact Needs" resolutions by changing the last sentence (on all 3 resolutions) to read, submit to the "District State Aid Engineer." His approval must be received in the Office of State Aid by July 1.

Also revise the Right of Way resolution by adding "only those costs actually incurred by a county are eligible" at the end of the first sentence. Motion carried 9-0.

Dave O. moved and Don P. second a motion to adopt the resolution creating the General Subcommittee that previously has functioned based on a motion by the Screening Board. Also the north and south areas should be defined by Districts (See Attachment "C"). Motion carried 9-0.

Other Business

Dave O. moved and Jerry E. second a motion to approve the District 2 resolution regarding the 5 year average Rural and Urban unit prices by used for Gravel Base. Ken H. explained the impact of such an action and clarified the process. After some discussion Chairman Weiszhaar suggested the matter be referred to the General Sub-Committee. The Board informally agreed to refer the matter to the General Sub-Committee. Paul R. moved to table the motion until the spring 1987 meeting. Boyd P. second the motion. Motion to table carried 5 to 4.

Jerry E. moved and Duane L. second a motion to approve the Research Account Resolution as stated in the agenda. Motion carried 9-0.

Gordon F. briefly discussed the loss of funds from the MVET transfer and the coalition that was formed to reinstate the transfer to transportation. He also noted the diminishing impact of Gasahol tax exemptions due to decreased gasahol useage and reduction in tax exemption.

Gordon also talked about fund balances in State Aid and FAS funds as well as the FAU fund. FAU funds are administered by MPO's that are carrying balances that are approaching the 4 year limit and are in danger of being returned for redistribution. He noted that some counties put a lot of effort in procuring outside or discretionary funds and still carry excessive balances in their regularly allocated funds.

Gordon F. and the Screening Board thanked Dennis Carlson for his efforts as Secretary to this Board for the last 10 years. Dennis noted he appreciated the opportunity to serve but it was time to step down and give someone else the opportunity to get intimately involved with a Board of this stature.

Chairman Weiszhaar thanked the outgoing members Boyd Paulu, Dick Larson, Paul Ruud, Jerry Engstrom and thanked the Board for electing him chairman.

Doug Weiszhaar, as he leaves the Board, asked that future decisions be made on the basis of what's right and not if it is good or bad for an urban or rural county. As a rural county in an urban District he is particularly aware of struggle that tempts each representative in making the decisions.

Duane moved and Jerry second the motion to adjourn. Motion carried 9-0. Meeting adjourned at 11:50 A.M.

Respectfully submitted,

A handwritten signature in cursive script that reads "Dennis C. Carlson". The signature is written in dark ink and is positioned above the printed name and title.

Dennis C. Carlson  
Screening Board Secretary

Be it resolved: The County State Aid Highway Unit Price for Gravel Base, Class 5 and 6 shall be determined using quantities and other pertinent information from both rural and urban projects within each county for the previous five years, and

Be it further resolved: The County State Aid Average Prices for Gravel Subbase Class 3 and 4; 2331 Bituminous Base; 2331 Bituminous Surfacing; 2341 Bituminous Surfacing and 2301 Concrete Surfacing shall be determined using quantities from both rural and urban statewide projects, and these Average Prices shall be compared to the individual county's Gravel Base Class 5 and 6 Unit Price and increments either added or subtracted thereto, and

Be it further resolved: The Unit Prices for Gravel Subbase, Class 3 and 4; Gravel Base Class 5 and 6; 2331 Bituminous Base; 2331 Bituminous Surfacing; 2341 Bituminous Surfacing and 2301 Concrete Surfacing, as determined, shall be used for both rural and urban needs.

ATTACHMENT B

WHEREAS, Legislation passed in 1986 directed Hennepin County and the Minnesota Department of Transportation to exchange jurisdiction of several roadways including CSAH's 18 and 62; and

WHEREAS, Hennepin County and MnDOT continued negotiating the terms of the jurisdiction exchange throughout the summer months; and

WHEREAS, On August 22, 1986, MnDOT determined that the exchange would not take place without further clarification of the legislative intent by the 1987 legislature; and

WHEREAS, Hennepin County, acting in good faith and in cooperation with MnDOT, did not submit a needs request for CSAH 18 and 62 on the basis that they would become trunk highways.

BE IT RESOLVED, That the Screening Board recommends that the needs report for Hennepin County State Aid Highways 18 and 62 be processed by the State Aid Needs Unit for inclusion in the 1987 State Aid Allocation.

SUGGESTED COUNTY SCREENING BOARD RESOLUTION CHANGES AND ADDITIONS

Bridge Cost Limitations - July 1976

That the total needs of the Minnesota River bridge between Scott and Hennepin Counties be limited to the estimated cost of a single 2-lane structure of approved length until the contract amount is determined. Also, that the total needs of the Mississippi River bridge between Dakota and Washington Counties be limited to the estimated cost of a 2-lane structure of approved length until the contract amount is determined. In the event the allowable apportionment needs portion (determined by Minnesota Chapter 162.07, Subdivision 2) of the contract amount from normal funds (FAU, FAS, State Aid, Local) exceeds the "apportionment needs cost", the difference, shall be added to the 25-year needs of the respective counties for a period of 15 years.

AFTER THE FACT NEEDS

Bridge Deck Rehabilitation - Dec. 1982 (Rev. Oct. 1984)

That needs for bridge deck rehabilitation shall be earned for a period of 15 years after the construction has been completed and shall consist of only those construction costs actually incurred by the county. It shall be the County Engineer's responsibility to justify any costs incurred and to report said costs to the District State Aid Engineer. His approval must be received in the Office of State Aid by July 1.

Right of Way - June 1984 (Rev. Oct. 1984)

That needs for Right-of-Way on County State Aid Highways shall be earned for a period of 25 years after the purchase has been made by the County and shall be comprised of actual monies paid to property owners. Only those R/W costs actually incurred by the county will be eligible. Acceptable justification of R/W purchases will be copies of the warrants paid to the property owners. It shall be the County Engineer's responsibility to submit said justification in the manner prescribed to the District State Aid Engineer. His approval must be received in the Office of State Aid by July 1.

Traffic Signals, Lighting, Retaining Walls, and Sidewalk - June 1984 (Rev. Oct. 1984)

That needs for Traffic Signals, Lighting, Retaining Walls, and Sidewalk (as eligible for State Aid participation) on County State Aid Highways shall be earned for a period of 25 years after the construction has been completed and shall consist of only those construction costs actually incurred by the county. It shall be the County Engineer's responsibility to justify any costs incurred and to report said costs to the District State Aid Engineer. His approval must be received in the Office of State Aid by July 1.

General Subcommittee

The the Screening Board chairman appoint a subcommittee to annually study all unit prices and variations thereof, and to make recommendations to the Screening Board. The subcommittee will consist of three members with initial terms of one, two and three years, and representing the north, (Districts 1,2,3,4), the south (Districts 6,7,8) and the metro area (Districts 5 & 9) of the State. Subsequent terms will be for three years.

MINUTES OF THE CSAH GENERAL SUBCOMMITTEE MEETING

October 29, 1986

Members Present: Don Wisniewski - Chairman - Washington County  
Art Tobkin - Clearwater County  
Dave Everds - Freeborn County

Others in Attendance: Roy Hanson - State Aid, Mn/DOT  
Ken Hoeschen - State Aid, Mn/DOT

The meeting was called to order by Chairman Wisniewski at 10:30 A.M. on Wednesday, October 29, 1986 at Rutgers Bay Lake Resort.

The first item for discussion was the urban, suburban, rural traffic projection factor concept in metropolitan areas. This concept was initially introduced relative to the seven county metropolitan area, but was also being considered for other metropolitan areas (e.g., Rochester, Duluth, St. Cloud, etc.). Since all county engineers presently have the opportunity to request traffic factors other than normal in specific areas, the Subcommittee felt that no change in the current procedure should be recommended.

Inclusion of "System 70" traffic counts in the calculation of the seven metro counties' traffic projection factors was the next topic for reviewal. After considerable discussion, the Subcommittee requested the State Aid Office to compute traffic projection factors for those counties using years of counts which only had consistent mileage included (remove years which had only System 70 counts). This data should be available for the next Subcommittee meeting.

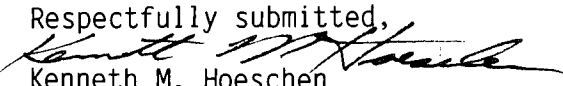
The next issue to be discussed was the use of a 40,000 ton minimum gravel base sample in the determination of a county's gravel base needs study unit price. Presently, the minimum tonnage is 50,000 tons. The State Aid personnel presented what impact this would have had on the 1986 prices. It was the opinion of the Subcommittee that there is no magic figure that would solve all problem areas and that the 50,000 ton minimum be retained. However, it was the feeling of the Subcommittee that individual adjustments to specific county's prices may be warranted in the future.

The subject of urban unit prices versus rural unit prices in the needs study as they were approved at the June, 1986 meeting was introduced. This topic will be brought up at the Screening Board meeting which begins at 1:00 P.M. today (October 29). The Subcommittee didn't arrive at a specific recommendation because they were not directed to do so.

The Subcommittee reviewed the various summaries concerning CSAH mileage with complete needs by projected traffic groups by latest year of grading and/or surfacing. These were provided by the Office of State Aid. Considerable discussion took place regarding those miles which have had no construction or overlay, according to needs study reporting, since 1940. The Subcommittee decided to present some of this data to the Screening Board and to request further direction.

The meeting was adjourned at 12:15 P.M.

Respectfully submitted,

  
Kenneth M. Hoeschen  
Acting Secretary

MINUTES OF THE CSAH GENERAL SUBCOMMITTEE MEETING  
DECEMBER 11, 1986

Members present : Don Wisniewski - Chairman - Washington County  
Art Tobkin - Clearwater County  
Dave Everds - Dakota County

Others in attendance: Gordon Fay - State Aid, Mn/DOT  
Roy Hanson - State Aid, Mn/DOT  
Ken Hoeschen - State Aid, Mn/DOT

The meeting was called to order by Chairman Wisniewski at 9:10 A.M. on Thursday, December 11, 1986.

The first item for discussion was the use of "System 70" traffic counts for computation of traffic projection factors in the 7 county metro area. The State Aid personnel presented data relative to sample projection factors without the "System 70" counts. The Subcommittee's recommendation is that the following statements should be added to the Screening Board resolution dealing with traffic projection factors:

Because of the limited number of CSAH's counted in the metro area under a "System 70" procedure used in the mid 1970's, those "System 70" count years shall not be used in the least squares traffic projection. Count years which show representative traffic figures for the majority of their CSAH system will be used until the "System 70" count years drop off the twelve year minimum period mentioned previously.

The adjustment to traffic projection factors shall be limited to a 0.3 point change per traffic count interval.

Needs study unit prices were the next subject for the Subcommittee. The Office of State Aid presented specific urban and rural unit price averages from the 1985 projects. The Subcommittee was in agreement as far as combining rural and urban design gravel prices to determine a county price for these items. For bituminous prices, they requested the Office of State Aid to compare results using the present procedure with one using a state average unit price. This will be submitted to them when completed.

The Subcommittee then reviewed the following directions from the Screening Board.

- 1) What is the extent of the problems caused by no construction at all levels of ADT?

Page 2

Minutes - December 11, 1986

- 2) Look at some way to credit a county for aggressively constructing roads to current standards regardless of source of funds.
- 3) Look for ways to soften the crunch when counties spend local funds to improve State Aid roads.

The Subcommittee requested the Office of State Aid to summarize the needs on CSAH's which had no improvement in the last 35 and 45 years. This summary will be sent to the Subcommittee when completed.

Direction number 2 and 3 above were discussed but no action was taken.

The Subcommittee decided to meet again at the County Engineers Institute in January. Time and place will be determined at a later date.

The meeting adjourned at 12:40 P.M.

Respectfully submitted,



Kenneth M. Hoeschen  
Acting Secretary

MINUTES OF THE CSAH GENERAL SUBCOMMITTEE MEETING  
FEBRUARY 20, 1987

Members present : Don Wisniewski - Chairman - Washington County  
Art Tobkin - Clearwater County  
Dave Everds - Dakota County

Others in attendance: Roy Hanson - State Aid, Mn/DOT  
Ken Hoeschen - State Aid, Mn/DOT

The meeting was called to order by Chairman Wisniewski at 9:00 A.M. on Friday, February 20, 1987.

The first subject introduced was the revised format for presentation of the five year average unit price information. Also shown was a revised method for determining rural and urban design unit prices for needs study purposes. It was agreed by the Subcommittee members that these revisions should alleviate the problems between rural and urban prices brought up at the June 1986 Screening Board meeting. Updated unit price data will be presented at the next Subcommittee meeting.

The update of urban design complete grading costs was discussed. This update is presently in the hands of the District State Aid Engineers, and they are in the second review of the reporting. The Subcommittee was concerned at the large cost/mile differences between counties.

The final item for discussion was the problem of complete needs being earned on some CSAH's on which no grading has been accomplished in the last 35-45 years. Art Tobkin presented a report on these mileages and needs. He also introduced several possible approaches to address the problem. After considerable discussion it was agreed that the approach to pursue involved adjusting needs on segments not graded in the last 25 years based on the number of years required to construct the total CSAH system using the current years statewide construction allotment.

Art Tobkin will prepare an explanation of this procedure and the State Aid Needs Unit will compute a theoretical needs and apportionment impact of this type of adjustment.

The next meeting of the Subcommittee was scheduled for April 10 at 9:00 A.M. at the Mn/DOT building in St. Paul.

The meeting was adjourned at 11:20 A.M.

Respectfully submitted,



Kenneth M. Hoeschen  
Acting Secretary

MINUTES OF THE CSAH GENERAL SUBCOMMITTEE MEETING  
APRIL 10, 1987

Members present: Don Wisniewski , Chairman - Washington County  
Art Tobkin - Clearwater County  
Dave Everds - Dakota County

Others present: Roy Hanson - State Aid, Mn/DOT  
Ken Hoeschen - State Aid, Mn/DOT

The Subcommittee first reviewed the three items they were directed to study by the Screening Board. They decided to each take a subject and prepare a report for submittal to the Screening Board. The three subjects and report authors will be:

- 1) Traffic Projection Factors (System 70 counts) - Don Wisniewski
- 2) Procedure for determination of rural and urban needs study unit prices - Dave Everds
- 3) CSAH needs on segments not improved in last 25/35/45 years - Art Tobkin

A general discussion on 1) and 3) was held but the reports to be prepared should answer any questions.

The determination of needs study prices was the major project for this meeting.

Maps showing each county's five year average unit price data for both subbase and gravel base projects was distributed to the members. They decided to review this information individually and to discuss these prices at the next Subcommittee meeting.

The new procedure for determining needs study unit prices was discussed. Basically this involves including all urban design projects with the rural design projects to arrive at one gravel base unit price for each county. Rural and urban prices for all other construction items will be determined separately.

The Subcommittee recommends using the increment method to determine each county's subbase, bit. base and surface, gravel surface, and gravel shoulder unit prices. The increment method, briefly explained, involves applying the difference between the 1986 state average unit price of gravel base and the 1986 state average unit price of each of the other items to each county's individually determined gravel base unit price. These recommendations will be shown individually in the Screening Board Report.

For concrete surface, the Subcommittee recommends using the 1986 Mn/DOT average prices in the following manner:

Rural - 90% Reg. 8" ( \$11.50 ) + 10% Irr. 8" ( \$14.18 ) = \$11.77  
Urban - 30% Reg. 9" ( \$11.90 ) + 70% Irr. 9" ( \$16.10 ) = \$14.84

The Subcommittee recommends using \$3.25 as a cubic yard price for urban design grading if the new Urban Design Grading Cost Study is not implemented.

For storm sewer construction, bridges, and railroad crossing protection, the Subcommittee agrees with the prices recommended by Mn/DOT, with the exception of bridge widening for which a compromise price will be recommended. Their recommendations will be shown in the Screening Board Report.

Unit prices for the rest of the items will be reviewed at the next Subcommittee meeting. MSAS unit price data will be available at that time and the Subcommittee will have had ample time to review the CSAH Gravel Base Unit Price Data.

The next meeting was scheduled for May 14, 1987 at 9:00 am at the Mn/DOT building in St Paul.

Respectfully submitted,



Kenneth M Hoeschen  
Acting Secretary

MINUTES OF THE CSAH GENERAL SUBCOMMITTEE MEETING  
MAY 14, 1987

Members present: Don Wisniewski , Chairman - Washington County  
Art Tobkin - Clearwater County  
Dave Everds - Dakota County

Others present: Ken Hoeschen - State Aid, Mn/DOT

The meeting was called to order by Chairman Wisniewski at 9:00 A.M. on Thursday, May 14, 1987.

The first matter to be taken up was the reviewal of the three reports written by members of the Subcommittee (Inactive Needs Adjustments, Traffic Projection Factors, and Determination of Rural and Urban Needs Study Unit Prices). Copies had been submitted to each member prior to the meeting. A few minor corrections were suggested and, after a short discussion the reports were approved to be included in the Screening Board Report.

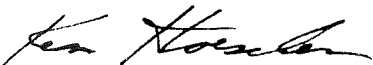
The rural design gravel base unit prices for the 1987 CSAH needs study were the next topic for discussion. The large increases and decreases from the 1986 prices in several counties were reviewed. No changes from the basic procedure for any counties were recommended. The map showing all gravel base unit price data was approved for inclusion in the Screening Board Report.

The Subcommittee then reviewed several miscellaneous prices which were recently addressed by the MSAS Subcommittee. These prices will be recommended to the MSAS Screening Board for use in the 1987 MSAS needs study. The Subcommittee recommended these prices also be used in the CSAH needs study. These recommendations will be included in the County Screening Board Report.

The Subcommittee agreed to informally meet at 10:00 A.M. on June 17 at Madden's, just prior to the County Screening Board meeting.

The meeting was adjourned at 10:35 A.M.

Respectfully submitted,



Ken Hoeschen  
Acting Secretary

CURRENT RESOLUTIONS OF THE  
COUNTY SCREENING BOARD

November, 1986

BE IT RESOLVED:

ADMINISTRATIVE

Improper Needs Report - Oct. 1961 (Rev. Jan. 1969)

That the Office of State Aid and the District State Aid Engineer be requested to recommend an adjustment in the needs reporting whenever there is 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 county engineer involved.

Type of Needs Study - Oct. 1961 (Rev. June 1965)

That the Screening Board shall, from time to time, make recommendations to the Commissioner of Transportation as to the extent and type of needs study to be subsequently made on the County State Aid Highway System consistent with the requirements of law.

Appearance at Screening Board - Oct. 1962

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 Commissioner of Transportation through proper channels. The Commissioner 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 to appear before the Screening Board for discussion purposes.

Construction Cut Off Date - Oct. 1962 (Rev. June 1983)

That for the purpose of measuring the needs of the County State Aid Highway System, the annual cut off date for recording construction accomplishments based upon the project letting date shall be December 31.

Screening Board Vice-chairman - June 1968

That at the first County Screening Board meeting held each year, a Vice-chairman shall be elected and he shall serve in that capacity until the following year when he shall succeed to the chairmanship.

Screening Board Secretary - Oct. 1961

That, annually, the Commissioner of Transportation may be requested to appoint a secretary, upon recommendation of the County Highway

Engineers' Association as a non-voting member of the County Screening Board for the purpose of recording all Screening Board actions.

Research Account - Oct. 1961

That the Screening Board annually consider setting aside a reasonable amount of County State Aid Highway Funds for the Research Account to continue local road research activity.

Annual District Meeting - Oct. 1963 (Rev. June 1985)

That the District State Aid Engineer call a minimum of one district meeting annually at the request of the District Screening Board Representative to review needs for consistency of reporting.

General Subcommittee - Oct. 1986

That the Screening Board Chairman appoint a Subcommittee to annually study all unit prices and variations thereof, and to make recommendations to the Screening Board. The Subcommittee will consist of three members with initial terms of one, two and three years, and representing the north (Districts 1, 2, 3 and 4), the south (Districts 6, 7 and 8) and the metro area (Districts 5 and 9) of the state. Subsequent terms will be for three years.

NEEDS ADJUSTMENTS

Deficiency Adjustment - Oct. 1961 (Rev. June 1965)

That any money needs adjustment made to any county within the deficiency classification pursuant to Minnesota Statutes Chapter 162.07, Subdivision 4, shall be deemed to have such money needs adjustment confined to the rural needs only, and that such adjustment shall be made prior to computing the Municipal Account allocation.

Minimum Apportionment - Oct. 1961 (Latest Rev. Dec. 1966)

That any county whose total apportionment percentage falls below .586782, which is the minimum percentage permitted for Red Lake, Mahnomon and Big Stone Counties, shall have its money needs adjusted so that its total apportionment factor shall at least equal the minimum percentage factor.

Funds to Townships - April 1964 (Rev. June 1965)

That this Screening Board recommend to the Commissioner of Transportation, that he equalize the status of any county allocating County State Aid Highway Funds to the township by deducting the townships' total annual allocation from the gross money needs of the county for a period of twenty-five years.

Bond Adjustment - Oct. 1962 (Latest Rev. Oct. 1985)

That a separate annual adjustment shall be made in total money needs of a county that has sold and issued bonds pursuant to Minnesota Statutes, Section 162.181 for use on State Aid projects except bituminous overlay or concrete joint repair projects. That this adjustment, which covers the amortization period, which annually reflects the net unamortized bonded debt, shall be accomplished by adding said net unamortized bond amount to the computed money needs of the county. For the purpose of this adjustment, the net unamortized bonded debt shall be the total unamortized bonded indebtedness less the unencumbered bond amount as of December 31, of the preceding year.

FAS Fund Balances - Oct. 1973 (Latest Rev. June 1985)

That in the event any county's FAS Fund balance exceeds either an amount which equals a total of the last five years of their FAS allotments or \$350,000, whichever is greater, the excess over the aforementioned amount shall be deducted from the 25-year County State Aid Highway construction needs in their regular account. This deduction will be based on the FAS fund balance as of September 1 of the current year.

County State Aid Construction Fund Balances - May 1975 (Latest Rev. June 1985)

That, for the determination of County State Aid Highway needs, the amount of the unencumbered construction fund balance as of September 1 of the current year; not including the current year's regular account construction apportionment and not including the last three years of municipal account construction apportionment or \$100,000, whichever is greater; shall be deducted from the 25-year construction needs of each individual county. Also, that for the computation of this deduction, the estimated cost of right-of-way acquisition which is being actively engaged in shall be considered encumbered funds.

Rural Grading Cost Adjustment - Oct. 1968 (Latest Rev. Oct. 1985)

That, annually an adjustment to the rural complete grading costs in each county be considered by the Screening Board. Such adjustment shall be made to the regular account and shall be based on the relationship of the actual cost of grading to the estimated cost of grading reported in the needs study. The method of determining and the extent of the adjustment shall be approved by the Screening Board. Any "Final" costs used in the comparison must be received by the Needs Section by July 1 of the Needs Study year involved.

Restriction of 25-Year Construction Needs Increase - Oct. 1975 (Latest Rev. Oct. 1985)

The CSAH Construction needs change in any one county from the previous year's restricted CSAH needs to the current year's basic 25-year CSAH construction needs shall be restricted to 20 percentage

points greater than or lesser than the statewide average percent change from the previous year's restricted CSAH needs to the current year's basic 25-year CSAH construction needs. Any needs restriction determined by this Resolution shall be made to the regular account of the county involved.

Trunk Highway Turnback - June 1965 (Latest Rev. June 1977)

That, any Trunk Highway Turnback which reverts directly to the county and becomes part of the State Aid Highway System shall not have its construction needs considered in the money needs apportionment determination as long as the former Trunk Highway is fully eligible for 100 percent construction payment from the county Turnback account. During this time of eligibility, financial aid for the additional maintenance obligation of the county imposed by the Turnback shall be computed on the basis of the current year's apportionment data and the existing traffic, and shall be accomplished in the following manner:

<u>Existing ADT</u>	<u>Turnback Maintenance/Mile/2 Lanes</u>
0 - 999 VPD	Current mileage apportionment/mile
1,000 - 4,999 VPD	2 X current mileage apportionment/mile
For every additional 5,000 VPD	Add current mileage apportionment/mile

Initial Turnback Maintenance Adjustment - Fractional Year  
Reimbursement:

The initial Turnback adjustment, when for less than 12 full months, shall provide partial maintenance cost reimbursement by adding said initial adjustment to the money needs which will produce approximately 1/12 of the Turnback maintenance per mile in apportionment funds for each month, or part of a month, that the county had maintenance responsibility during the initial year.

Turnback Maintenance Adjustment - Full Year, Initial or Subsequent:

To provide an advance payment for the coming year's additional maintenance obligation, a needs adjustment per mile shall be added to the annual money needs. This needs adjustment per mile shall produce sufficient needs apportionment funds so that when added to the mileage apportionment per mile, the Turnback maintenance per mile prescribed shall be earned for each mile of Trunk Highway Turnback on the County State Aid Highway System. Turnback adjustments shall terminate at the end of the calendar year during which a construction contract has been awarded that fulfills the county Turnback account payment provisions, or at the end of the calendar year during which the period of eligibility for 100 percent construction payment from the county Turnback account expires. The needs for these roadways shall be included in the needs study for the next apportionment.

That Trunk Highway Turnback maintenance adjustments shall be made prior to the computation of the minimum apportionment county adjustment.

Those Turnbacks not fully eligible for 100 percent reimbursement for reconstruction with county Turnback account funds are not eligible for maintenance adjustments and shall be included in the needs study in the same manner as normal County State Aid Highways.

#### MILEAGE

##### Mileage Limitation - Oct. 1961 (Latest Rev. June 1986)

That any request, after July 1, 1966, by any county for County State Aid Highway designation, other than Trunk Highway Turnbacks, or minor increases due to construction proposed on new alignment, that results in a net increase over the county's approved apportionment mileage for the preceding year shall be submitted to the Screening Board for consideration. Such request should be accompanied by supporting data and be concurred on by the District State Aid Engineer. All mileage requests submitted to the County State Aid Highway Screening Board will be considered as originally proposed only, and no revisions to such mileage requests will be considered by the Screening Board without being resubmitted through the Office of State Aid. The Screening Board shall review such requests and make its recommendation to the Commissioner of Transportation. If approved, the needs on mileage additions shall be submitted to the Office of State Aid for inclusion in the subsequent year's study of needs.

Revisions in the County State Aid Highway System not resulting in an increase in mileage do not require Screening Board review.

Mileage made available by an internal revision will not be held in abeyance for future designation.

Mileage made available by reason of shortening a route by construction shall not be considered as designatable mileage elsewhere.

That any additions to a county's State Aid System, required by State Highway construction, shall not be approved unless all mileage made available by revocation of State Aid roads which results from the aforesaid construction has been used in reducing the requested additions.

That in the event a County State Highway designation is revoked because of the proposed designation of a Trunk Highway over the County State Aid Highway alignment, the mileage revoked shall not be considered as eligible for a new County State Aid Highway designation.

That whereas Trunk Highway Turnback mileage is allowed in excess of the normal County State Aid Highway mileage limitations; revocation

of said Turnbacks designated after July 1, 1965, shall not create eligible mileage for State Aid designation on other roads in the county.

That whereas, former Municipal State Aid street mileage, located in municipalities which fell below 5,000 population under the 1980 Federal census, is allowed in excess of the normal County State Aid Highway mileage limitations; revocation of said former M.S.A.S.'s shall not create eligible mileage for State Aid designation on other roads in the county.

That whereas the county engineers are sending in many requests for additional mileage to the C.S.A.H. system up to the date of the Screening Board meetings, and whereas this creates a burden on the State Aid Staff to prepare the proper data for the Screening Board, be it resolved that the requests for the spring meeting must be in the State Aid Office by April 1 of each year, and the requests for the fall meeting must be in the State Aid Office by August 1 of each year. Requests received after these dates shall carry over to the next meeting.

#### TRAFFIC

##### Traffic Projection Factors - Oct. 1961 (Latest Rev. June, 1983)

That new Traffic Projection Factors for the needs study be established for each county using a "least squares" projection of the vehicle miles from the last four traffic counts and in the case of the seven county metro area from the number of latest traffic counts which fall in a minimum of a twelve year period. This normal factor can never fall below 1.0. Also, new traffic factors will be computed whenever an approved traffic count is made. These normal factors may, however, be changed by the county engineer for any specific segments where conditions warrant, with the approval of the District State Aid Engineer.

##### Minimum Requirements - Oct. 1963 (Rev. June 1985)

That the minimum requirements for 4 - 12 foot traffic lanes be established as 5,000 projected vehicles per day for rural design and 7,000 for urban design. Traffic projections of over 20,000 vehicles per day for urban design will be the minimum requirements for 6 - 12 foot lanes. The use of these multiple-lane designs in the needs study, however, must be requested by the county engineer and approved by the District State Aid Engineer.

#### ROAD NEEDS

##### Method of Study - Oct. 1961 (Rev. Nov. 1965)

That, except as otherwise specifically provided, the Manual of Instruction for Completion of Data Sheets shall provide the format for estimating needs on the County State Aid Highway System.

Soil - Oct. 1961 (Latest Rev. June 1985)

Soil classifications established using a U.S. Soil Conservation Service Soil Map must have supporting verification using standard testing procedures; such as soil borings or other approved testing methods. A minimum of ten percent of the mileage requested to be changed must be tested at the rate of ten tests per mile. The mileage to be tested and the method to be used shall be approved by the District State Aid Engineer.

Soil classifications established by using standard testing procedures; such as soil borings or other approved testing methods shall have one hundred percent of the mileage requested to be changed tested at the rate of ten tests per mile.

All soil classification determinations must be approved by the District State Aid Engineer.

Unit Costs - Oct. 1961 (Rev. Nov. 1965)

That the unit costs for base, surface and shouldering quantities obtained from the 5-Year Average Construction Cost Study and approved by the Screening Board shall be used for estimating needs.

Design - Oct. 1961 (Latest Rev. June 1982)

That all roads be divided into proper segments and the highest estimated ADT, consistent with adjoining segments, be used in determining the design geometrics for needs study purposes.

Also, that for all roads which qualify for needs in excess of additional surfacing, the proposed needs shall be based solely on projected traffic, regardless of existing surface type or geometrics.

And that for all roads which are considered adequate in the needs study, additional surfacing and shouldering needs shall be based on existing geometrics but not greater than the widths allowed by the State Aid Design Standards currently in force.

Grading - Oct. 1961 (Rev. Nov. 1965)

That all grading costs shall be determined by the county engineer's estimated cost per mile except for urban design where the cost is computed using estimated quantities and unit prices.

Rural Design Grade Widening - June 1980

That rural design grade widening needs be limited to the following widths and costs.

Feet of Widening

Needs Cost/Mile

4 - 8 Feet	50% of Average Complete Grading Cost/Mile
9 - 12 Feet	75% of Average Complete Grading Cost/Mile

Any segments which are less than 4 feet deficient in width shall be considered adequate. Any segments which are more than 12 feet deficient in width shall have needs for complete grading.

Storm Sewer - Oct. 1961 (Rev. Nov. 1965)

That storm sewer mains may be located off the County State Aid Highway if, in so doing, it will satisfactorily accommodate the drainage problem of the County State Aid Highway.

Base and Surface - June 1965 (Rev. June 1985)

That base and surface quantities shall be determined by reference to traffic volumes, soil factors, and State Aid standards. Rigid base is not to be used as the basis for estimating needs on County State Aid Highways. Replacement mats shall be 3" bituminous surface over existing concrete or 2" bituminous surface over existing bituminous. To be eligible for concrete pavement in the needs study, 2,500 VPD or more per lane projected traffic is necessary.

Construction Accomplishments - June 1965 (Latest Rev. Oct. 1983)

That any complete grading accomplishments be considered as complete grading construction of the affected roadway and grading needs shall be excluded for a period of 25 years from the project letting date or date of force account agreement. At the end of the 25-year period, needs for complete reconstruction of the roadway will be reinstated in the needs study at the initiative of the County Engineer with costs established and justified by the County Engineer and approved by the State Aid Engineer.

Needs for resurfacing shall be allowed on all county state aid highways at all times.

That any bridge construction project shall cause the needs on 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 County Engineer and with approval of the State Aid Engineer.

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

Special Resurfacing Projects - May 1967 (Latest Rev. Oct. 1985)

That any county using non-local construction funds for special bituminous resurfacing or concrete joint repair projects shall have the non-local cost of such special resurfacing projects annually deducted from its 25-year County State Aid Highway construction needs for a period of ten (10) years.

Items Not Eligible For Apportionment Needs - Oct. 1961 (Latest Rev. June 1985)

That Adjustment of Utilities, Miscellaneous Construction, or Maintenance Costs shall not be considered a part of the Study of Apportionment Needs of the County State Aid Highway System.

Right of Way - Oct. 1979

That for the determination of total needs, proposed right-of-way widths shall be standardized in the following manner:

	<u>Projected ADT</u>	<u>Proposed R/W Width</u>
Proposed Rural Design -	0 - 749	100 Feet
	750 - 999	110 Feet
	1,000 & Over (2 Lane)	120 Feet
	5,000 & Over (4 Lane)	184 Feet
	<u>Proposed Roadbed Width</u>	<u>Proposed R/W Width</u>
Proposed Urban Design -	0 - 44 Feet	60 Feet
	45 & Over	Proposed Roadbed Width + 20 Feet

Also, that the total needs cost for any additional right of way shall be based on the estimated market value of the land involved, as determined by each county's assessor.

Forest Highways and State Park Access Roads - Oct. 1961 (Latest Rev. June 1985)

That for the determination of needs for those County State Aid Highways which are designated as a part of the Forest Highway System or are state park access roads, the appropriate standards documented in the "Rules for State Aid Operations" shall be used.

#### Loops and Ramps - May 1966

That any county may include the cost of loops and ramps in the needs study with the approval of the District State Aid Engineer.

#### BRIDGE NEEDS

##### Bridge Widening - April 1964 (Latest Rev. June 1985)

That the minimum bridge widening be 4 feet.

##### Bridge Cost Limitations - July 1976 (Rev. Oct. 1986)

That the total needs of the ~~two~~ Minnesota River bridges between Scott and Hennepin Counties be limited to the estimated cost of a single 2-lane structure of approved length until the contract amount is determined. Also, that the total needs of the Mississippi River bridge between Dakota and Washington Counties be limited to the estimated cost of a 2-lane structure of approved length until the contract amount is determined. In the event the allowable apportionment needs portion (determined by Minnesota Chapter 162.07, Subdivision 2) of the contract amount from normal funds (FAU, FAS, State Aid, Local) exceeds the "apportionment needs cost", the difference, shall be added to the 25-year needs of the respective counties for a period of 15 years.

#### AFTER THE FACT NEEDS

##### Bridge Deck Rehabilitation - Dec. 1982 (Latest Rev. Oct. 1986)

That needs for bridge deck rehabilitation shall be earned for a period of 15 years after the construction has been completed and shall consist of only those construction costs actually incurred by the county. It shall be the County Engineer's responsibility to justify any costs incurred and to report said costs to the ~~State-Aid office-by-July-1-~~ District State Aid Engineer. His approval must be received in the Office of State Aid by July 1.

##### Right of Way - June 1984 (Latest Rev. Oct. 1986)

That needs for Right-of-Way on County State Aid Highways shall be earned for a period of 25 years after the purchase has been made by the County and shall be comprised of actual monies paid to property owners. Only those Right of Way costs actually incurred by the county will be eligible. Acceptable justification of R/W purchases will be copies of the warrants paid to the property owners. It shall be the County Engineer's responsibility to submit said justification in the manner prescribed to the ~~State-Aid-Office-by-July-1-~~ District State Aid Engineer. His approval must be received in the Office of State Aid by July 1.

Traffic Signals, Lighting, Retaining Walls, and Sidewalk - June 1984  
(Latest Rev. Oct. 1986)

That needs for Traffic Signals, Lighting, Retaining Walls, and Sidewalk (as eligible for State Aid participation) on County State Aid Highways shall be earned for a period of 25 years after the construction has been completed and shall consist of only those construction costs actually incurred by the county. It shall be the County Engineer's responsibility to justify any costs incurred and to report said costs to the ~~State Aid office by July 1~~ District State Aid Engineer. His approval must be received in the Office of State Aid by July 1.

VARIANCES

Variance Subcommittee - June 1984

That a Variance Subcommittee be appointed to develop guidelines for use in making needs adjustments for variances granted on County State Aid Highways.

Guidelines for Needs Adjustments on Variances Granted - June 1985

That the following guidelines be used to determine needs adjustments due to variances granted on County State Aid Highways:

- 1) There will be no needs adjustments applied in instances where variances have been granted, but because of revised rules, a variance would not be necessary at the present time.
- 2) No needs deduction shall be made for those variances which allow a width less than standard but greater than the width on which apportionment needs are presently being computed.  
  
Examples: a) Segments whose needs are limited to the center 24 feet.  
  
b) Segments which allow wider dimensions to accomodate diagonal parking but the needs study only relates to parallel parking (44 feet).
- 3) Those variances granted for acceptance of design speeds less than standards for grading or resurfacing projects shall have a 10 year needs adjustment applied cumulatively in a one year deduction.
  - A. The needs deduction shall be for the complete grading cost if the segment has been drawing needs for complete grading.
  - B. The needs deduction shall be for the grade widening cost if the segment has been drawing needs for grade widening.
  - C. In the event a variance is granted for resurfacing an existing roadway involving substandard width, horizontal

and vertical curves, etc., but the only needs being earned are for resurfacing, and the roadway is within 5 years of probable reinstatement of full regrading needs based on the 25-year time period from original grading; the previously outlined guidelines shall be applied for needs reductions using the county's average complete grading cost per mile to determine the adjustment.

- 4) Those variances requesting acceptance of widths less than standard for a grading and/or base & bituminous construction project shall have a needs reduction equivalent to the needs difference between the standard width and constructed width for an accumulative period of 10 years applied as a single one year deduction.
- 5) On grading and grade widening projects, the needs deduction for bridge width variances shall be the difference between the actual bridge needs and a theoretical needs calculated using the width of the bridge left in place. This difference shall be computed to cover a 10 year period and will be applied cumulatively in a one year deduction.

Exception: If the county, by resolution, indicates that the structure will be constructed within 5 years, no deduction will be made.

- 6) On resurfacing projects, the needs deduction for bridge width variances shall be the difference between theoretical needs based on the width of the bridge which could be left in place and the width of the bridge actually left in place. This difference shall be computed to cover a ten year period and will be applied cumulatively in a one year deduction.

Exception: If the county, by resolution, indicates that the structure will be constructed within 5 years, no deduction will be made.

- 7) There shall be a needs reduction for variances which result in bridge construction less than standard, which is equivalent to the needs difference between what has been shown in the needs study and the structure which was actually built, for an accumulative period of 10 years applied as a single one year deduction.

NOTES & COMMENTS

S U B C O M M I T T E E

R E P O R T S

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## C.S.A.H. GENERAL SUBCOMMITTEE REPORT

ON

INACTIVE NEEDS ADJUSTMENTS ??

The County State Aid Highway (CSAH) system in Minnesota was originated in 1958.

When the CSAH was originated, it was proposed that the county engineer of each county supplement the Automotive Safety Foundation immediate needs figures with his future 25-year construction needs. These 25-year needs would be screened by the Joint Committee and consultants and be adjusted where need be, within traffic volume groups, to compensate for difference in construction costs caused by ruggedness of terrain, shortage of material, or difference in labor costs. These adjusted 25-year construction needs would then be recorded as the basic money needs for each county. This procedure then became the basis of the money needs apportionment (50% of the total apportionment).

Recently, it was proposed that certain mileage in the CSAH system had not yet been built to CSAH standards and may never be built; yet this mileage continues to draw needs apportionment. It was felt that this practice was not fair to those counties that were diligently constructing their CSAH system. In June 1986, the CSAH Screening Board asked the Screening Board General Sub-Committee to study the "problem." It was originally proposed that the committee study only those mileage segments with less than present 100 Average Daily Traffic (ADT). In the October 1986 Screening Board meeting, the study was expanded to include all traffic categories.

The committee began the study by collecting data from the needs unit of Mn/DOT. The following information is for segments which are receiving complete grading or grade widening needs.

Last Graded 1900 to 1939

0	-	100	ADT	1263	Miles	=	\$	123,185,388	Needs
100	-	400	ADT	2716	Miles	=		609,713,866	Needs
400	-	750	ADT	551	Miles	=		134,609,547	Needs
750	-	1000	ADT	261	Miles	=		67,856,503	Needs
1000	+		ADT	1110	Miles	=		607,008,399	Needs
TOTAL				5901	Miles			\$1,542,373,703	Needs

Last Graded 1940 to 1949

0	-	100	ADT	266	Miles	=	\$	18,262,687	Needs
100	-	400	ADT	828	Miles	=		169,889,119	Needs
400	-	750	ADT	513	Miles	=		104,703,770	Needs
750	-	1000	ADT	270	Miles	=		57,549,792	Needs
1000	+		ADT	611	Miles	=		189,394,570	Needs
TOTAL				2488	Miles			\$539,799,938	Needs

Last Graded 1950 to 1960

0	-	100	ADT	373	Miles	=	\$	27,572,287	Needs
100	-	400	ADT	2561	Miles	=		465,493,578	Needs
400	-	750	ADT	2775	Miles	=		518,105,506	Needs
750	-	1000	ADT	1032	Miles	=		207,579,097	Needs
1000	+		ADT	1426	Miles	=		531,859,891	Needs
TOTAL				8167	Miles			\$1,750,610,359	Needs

Last Graded 1961 to 1985

0	-	100	ADT	53	Miles	=	\$	5,405,088	Needs
100	-	400	ADT	607	Miles	=		93,916,928	Needs
400	-	750	ADT	249	Miles	=		37,230,359	Needs
750	-	1000	ADT	167	Miles	=		24,919,312	Needs
1000	+		ADT	480	Miles	=		199,950,580	Needs
TOTAL				1556	Miles			\$361,422,267	Needs

The 1985 total basic 25 year construction needs were \$4,742,570,129. These needs included road needs, bridge needs, and railroad crossing needs. The breakdown of these segments and the percent of needs they are earning is as follows:

Graded 1900 to 1939	32.5 % (Def. segments)
Graded 1940 to 1949	11.4 % (Def. segments)
Graded 1950 to 1960	36.9 % (Def. segments)
Graded 1960 to 1985	7.6 % (Def. segments)
Adequate segments	11.6 %
	100.0 %

This data indicates that approximately one third of the needs are on segments that have not been graded for at least 47 years and are drawing complete grading or grade widening needs. Over 80 percent of the needs are on deficient segments that have not been graded in the last 25 years. This includes approximately 16,556 miles, or 55% of the CSAH system. This indicates that the premise that certain mileage in the CSAH system has not been recently built or re-built to standards, and is still drawing needs apportionment, is correct.

Why is over 80 percent of the CSAH system 25 or more years old? Why is 32.5 percent 47 or more years old? Will the CSAH system ever be built to standard? If not, will some mileage probably never be built? If it will not be built, should it still draw needs apportionment? These questions can be answered with "funding" and "priorities."

In 1971, the total CSAH needs were \$872,716,257 and the construction apportionment was \$33,783,974. This would indicate that it would take 26 years of apportionments to complete the CSAH system (assuming no inflation costs). The 1974 data indicates 30 years; 1979 = 35 years, 1983 = 42 years, and 1987 = 46 years of apportionments. This data implies that funding increases are not keeping pace with needs increases, therefore, the CSAH system is getting older and more in need of construction. If these trends continue, it can be concluded that the CSAH system will probably never be completely built to standard, unless local funds are used to supplement CSAH funds, and local funds for most counties are limited.

If the whole CSAH system probably will not be built, what portion will be built and what won't be? Each County Engineer, based on "priorities and potential funding" can probably envisage what part of his CSAH system probably will not be built in the foreseeable future. However, for various reasons, these segments of the CSAH system would be difficult to ascertain. Perhaps, the current jurisdictional study will denote some of these segments. It is feasible to believe that there is presently some mileage on the CSAH system that does not fit the criteria of CSAH's as was determined in 1958. The 1958 system mileage was determined from a Automotive Safety Foundations primary study system. This study system did not take into consideration county lines or other governmental delineations, but was selected on the basis of the following criteria:

1. Carried relatively heavier traffic volumes.
2. Connects towns, communities, shipping points, and markets within a county or in adjacent counties.
3. Provide access to rural churches, schools and community meeting halls.
4. Serve as principal arteries of rural mail routes and school bus routes.
5. Act as collectors of traffic from several roads of individuals interest.
6. Occur at reasonable intervals consistent with the density of population.

This CSAH system criteria has remained basically the same since 1958.

Another approach would be to assume that when the CSAH system started, there were already 25 years of needs. These existing needs plus the 25 years of future needs would require 50 years of apportionment monies to complete the system.

A third approach to this "problem" would be to estimate the amount of CSAH system that should be completed after a certain period of time. Assuming that a county is diligently constructing their CSAH system, then after any defined time period; a certain percentage of their CSAH system should be built.

## CONCLUSION, FINDINGS & RECOMMENDATIONS

This report has looked at three alternatives. The first alternative would be to conduct an evaluation of the present CSAH system. Using the CSAH system criteria and priorities; each County Engineer would study and revise his CSAH system, eliminating roads that would not be built due to economic constraints, traffic changes, development, etc., and should not be on the CSAH system. This study of the CSAH system may be accomplished through the pending Highway Jurisdictional Study.

After the completion of the Highway Jurisdictional Study, or similar study, the County Engineer would then study the CSAH system further and establish a two tier CSAH system. The first or primary tier would be a network or grid of CSAH's that occur at reasonable intervals and are intended to provide an all-weather access for the county's citizens. This network may be designed using population densities, traffic counts, geographies, recreation sites, etc. The needs of the primary tier would be considered "future" needs when determining CSAH apportionments. These needs would be the "realistic funding needs," based on current funding capabilities.

The second or secondary tier would be the remaining CSAH's. The needs of the secondary tier would be considered "after-the-fact" needs when determining CSAH apportionments. These needs would be the "if I had enough money needs."

Under this alternative, CSAH needs would be computed using the future needs of the primary tier and the after-the -fact needs of the secondary tier.

The second alternative was to simply restrict needs to 50 years of apportionment monies.

The third alternative was to look at present needs and needs over 25 years and attempt to determine how diligently each county was building their original CSAH system and at the same time reducing their CSAH needs. The 1986 Total Basic 25 Year Construction Needs were \$4,656,668,402. The 1987 CSAH Construction monies available were \$101,401,337. At current funding and construction cost levels, it would take  $(\$4,656,668,402 / \$101,401,337 = 46 \text{ years})$  46 years to complete the system.

If it takes 46 years to complete the system, then  $(46-25)/46$  or 46% of the original CSAH needs should be 25 years or older. If a county has not been diligently building their CSAH system and reducing their original needs, then that county will have a larger percentage of their needs older than 25 years, and should then be adjusted.

TABLE A is an attempt to compute each County's "Original" Needs. Columns 1 - 3 represent the Needs of each county that are 25

years or older. Column 4 is the Actual Needs Over 25 Years old. In order to compensate for the needs less than 25 years, we took the 1987 Total Construction Apportionment (Column 5) times 25 years (Column 6). When adding this figure (Column 6) to the Total Needs (Column 4), the total is the "Original" Needs (Column 7). Based on the premise that only 46% of the "Original" Needs should be over 25 years old; we took 46% of the "Original" Needs. This amount would be each county's Allowable Needs over 25 years old (Column 8). The Allowable Needs are then compared to the Total Needs and the difference is the Needs Adjustment in Column 9. This needs adjustment, if applicable, would be applied to the Basic 25 Year Construction Needs on an annual basis using CSAH Needs Unit data. This alternative would penalize those counties who do not seem to be reducing their needs.

The General Sub-Committee feels that there are some contributing factors that make the CSAH needs seem artificially high. Some of these are:

#### Non-Reporting

Contrary to popular opinion, the sub-committee feels that there is work being done on the CSAH system, with local funds, that is not being reported on the Annual Needs Study. We suggest that closer scrutiny of the needs study, and a possible penalty for non-reporting, be instituted.

#### Automatic 25 Year Re-Instatement

The General Sub-Committee study indicated that it takes 46 years to build the CSAH system. It does not seem practical to re-instate a graded road after 25 years. Over 80% of the CSAH system is over 25 years old and appears to be functioning satisfactorily. We suggest that the automatic grading re-instatement be changed to 35 - 40 years. With the afore-mentioned primary tier of CSAH's, 40 years would appear to be a logical re-grading interval.

#### Standards

The CSAH needs have been based on standards since the introduction of the CSAH system. We believe that "standards based needs" is a good concept; however, we suggest that the MCHEA Standards Committee study the current CSAH standards.

## HISTORICAL INFORMATION

On January 27, 1956, a report was issued entitled "Proposed State-Aid Distribution Formula Recommended By The Joint Committee of County Commissioners and County Highway Engineers". Page 5 of the report, titled MONEY NEED FACTOR has the following paragraph.

### MONEY NEEDS FACTOR

"In order to compensate for the counties' great variation in valuation and ability to pay, a 10-mill levy on the county's total valuation and a 6-mill levy for the urban counties, was computed as a basic levy for road and bridge purposes. Assuming that 80% of the cost of construction would be borne by the future road-user fund, a residual of 20% would remain the county's liability; therefore 20% of the 6 or 10-mill levy for a 25-year period was subtracted from the total money needs as determined for each county, the remainder being the money needs used in the computation of the factor. This adjustment appears to be very logical in assisting the counties that are not financially able to help themselves to the extent necessary without penalizing those counties that have completed substantial road improvements."

It is interesting to note that the local participation was set at 20%. If it takes 46 years to build the CSAH system, maybe State Aid should pick up 80%, or 37 years, and local effort pick up the rest. This 37 year figure, added to the 25 years that a new road must wait before drawing any grading needs, would indicate that a county, using 20% local funds, should be able to construct any particular CSAH segment in at least 62 years. Therefore, no needs should be allowed for CSAH segments that were last graded prior to 1925.

**INACTIVE NEEDS ADJUSTMENTS ??**  
(TABLE A)

COUNTY	① NEEDS 1900 TO 1939	② NEEDS 1940 TO 1949	③ NEEDS 1950 TO 1960	④ ACTUAL NEEDS OVER 25 YEARS	⑤ TOTAL CONST ADPT	⑥ 25 YEAR CONST ADPT	⑦ "ORIGINAL" NEEDS	⑧ ALLOWABLE NEEDS	⑨ NEEDS ADJUST
CARLTON	\$ 20,965,119	\$ 4,776,307	\$ 11,042,547	\$ 36,783,973	\$ 952,184	\$ 23,804,600	\$ 60,588,573	\$ 27,870,744	\$ -8,913,229
COOK	\$ 26,895,757	\$ 7,672,908	\$ 9,576,589	\$ 44,145,254	\$ 827,679	\$ 20,691,975	\$ 64,837,229	\$ 29,825,125	\$ -14,320,129
ITASCA	\$ 46,881,438	\$ 3,034,043	\$ 17,667,336	\$ 67,582,817	\$ 1,741,991	\$ 43,549,775	\$ 111,132,592	\$ 51,120,992	\$ -16,461,825
MOOCHICHING	\$ 8,654,336	\$ 2,131,863	\$ 16,177,564	\$ 26,963,763	\$ 1,115,431	\$ 27,885,775	\$ 54,849,538	\$ 25,230,787	\$ -1,732,976
LAKE	\$ 27,766,492	\$ 8,140,574	\$ 9,829,933	\$ 45,736,999	\$ 928,275	\$ 23,206,875	\$ 68,943,874	\$ 31,714,182	\$ -14,022,817
PINE	\$ 48,743,152	\$ 3,854,135	\$ 32,398,919	\$ 84,996,206	\$ 1,781,738	\$ 44,543,450	\$ 129,539,656	\$ 59,588,242	\$ -25,407,964
ST. LOUIS	\$ 170,033,373	\$ 46,439,189	\$ 105,458,602	\$ 325,931,164	\$ 5,821,434	\$ 145,535,850	\$ 471,467,014	\$ 216,874,826	\$ -109,056,338
SUBTOTAL DIST 1	\$ 349,939,667	\$ 76,043,019	\$ 206,151,490	\$ 632,140,176	\$ 13,168,732	\$ 329,218,300	\$ 961,358,476	\$ 442,224,899	
BELTRAMI	\$ 26,703,374	\$ 1,612,357	\$ 27,400,291	\$ 55,716,022	\$ 1,388,361	\$ 34,709,025	\$ 90,425,047	\$ 41,595,522	\$ -14,120,500
CLEARWATER	\$ 12,466,956	\$ 4,713,065	\$ 10,438,532	\$ 27,624,553	\$ 887,597	\$ 22,189,925	\$ 49,814,478	\$ 22,914,660	\$ -4,709,893
HUBBARD	\$ 16,092,513	\$ 6,920,803	\$ 9,374,865	\$ 32,388,181	\$ 894,540	\$ 22,363,500	\$ 54,751,681	\$ 25,185,773	\$ -7,202,408
KITTSON	\$ 10,021,640	\$ 8,446,390	\$ 18,808,969	\$ 37,276,999	\$ 1,038,218	\$ 25,955,450	\$ 63,232,449	\$ 29,086,927	\$ -8,190,072
LAKE OF WOODS	\$ 5,221,615	\$ 624,638	\$ 2,887,807	\$ 8,734,060	\$ 760,077	\$ 19,001,925	\$ 27,735,985	\$ 12,758,553	
MARSHALL	\$ 25,068,761	\$ 14,029,917	\$ 16,762,803	\$ 55,861,481	\$ 1,586,364	\$ 39,659,100	\$ 95,520,581	\$ 43,939,467	\$ -11,922,014
NORMAN	\$ 10,769,912	\$ 7,381,734	\$ 14,706,479	\$ 32,858,125	\$ 1,045,814	\$ 26,145,350	\$ 59,003,475	\$ 27,141,599	\$ -5,716,527
PENNINGTON	\$ 9,835,891	\$ 2,498,256	\$ 4,866,105	\$ 17,200,252	\$ 710,642	\$ 17,766,050	\$ 34,966,302	\$ 16,084,499	\$ -1,115,753
POLK	\$ 30,597,909	\$ 2,726,585	\$ 36,003,100	\$ 69,327,594	\$ 2,250,139	\$ 56,253,475	\$ 125,581,069	\$ 57,767,292	\$ -11,560,302
RED LAKE	\$ 4,582,352	\$ 3,542,815	\$ 8,787,533	\$ 16,912,700	\$ 595,122	\$ 14,878,050	\$ 31,790,750	\$ 14,623,745	\$ -2,288,955
ROSEAU	\$ 12,095,640	\$ 4,692,747	\$ 12,949,987	\$ 29,738,374	\$ 1,209,971	\$ 30,249,275	\$ 59,987,649	\$ 27,594,319	\$ -2,144,055
SUBTOTAL DIST 2	\$ 163,456,563	\$ 57,195,307	\$ 162,986,471	\$ 383,638,341	\$ 12,366,845	\$ 309,171,125	\$ 692,809,466	\$ 318,692,354	
WITKIN	\$ 33,845,107	\$ 398,668	\$ 6,658,309	\$ 40,902,064	\$ 1,212,351	\$ 30,308,775	\$ 71,210,859	\$ 32,756,995	\$ -8,145,089
BENTON	\$ 3,458,724	\$ 1,789,820	\$ 11,475,294	\$ 16,723,838	\$ 621,505	\$ 15,537,625	\$ 22,221,463	\$ 14,040,273	\$ -1,883,565
CASS	\$ 37,304,435	\$ 2,036,012	\$ 20,008,201	\$ 59,348,648	\$ 1,480,423	\$ 37,010,575	\$ 96,359,223	\$ 44,325,243	\$ -15,023,405
CROW WING	\$ 18,554,562	\$ 10,240,207	\$ 11,500,758	\$ 40,295,527	\$ 1,146,748	\$ 28,668,700	\$ 68,964,227	\$ 31,723,544	\$ -8,571,983
ESPANCI	\$ 3,368,835	\$ 2,526,124	\$ 19,012,638	\$ 24,907,597	\$ 721,941	\$ 18,048,525	\$ 42,956,122	\$ 19,759,816	\$ -5,147,781

(TABLE A)

COUNTY	① NEEDS 1900 TO 1939	② NEEDS 1940 TO 1949	③ NEEDS 1950 TO 1960	④ ACTUAL NEEDS OVER 25 YEARS	⑤ TOTAL CONST ADPT	⑥ 25 YEAR CONST ADPT	⑦ "ORIGINAL" NEEDS	⑧ ALLOWABLE NEEDS	⑨ NEEDS ADJUST
KANABEC	\$ 2,582,494	\$ 6,917,538	\$ 12,783,826	\$ 22,283,858	\$ 649,275	\$ 16,231,875	\$ 38,515,733	\$ 17,717,237	\$ -4,566,621
MILLE LACS	\$ 12,802,265	\$ 2,571,820	\$ 11,471,725	\$ 26,845,810	\$ 796,267	\$ 19,906,675	\$ 46,752,485	\$ 21,506,143	\$ -5,339,667
MORRISON	\$ 6,577,681	\$ 4,778,501	\$ 26,309,932	\$ 39,666,114	\$ 1,123,548	\$ 28,088,700	\$ 67,754,814	\$ 31,167,214	\$ -8,498,900
SHERBURNE	\$ 1,660,904	\$ 1,874,569	\$ 4,924,120	\$ 8,459,593	\$ 595,122	\$ 14,878,050	\$ 23,337,643	\$ 10,735,316	
STEARNS	\$ 12,813,878	\$ 19,081,103	\$ 36,701,347	\$ 68,596,328	\$ 1,795,690	\$ 44,892,250	\$ 113,468,578	\$ 52,204,746	\$ -16,391,582
TODD	\$ 2,314,315	\$ 8,783,537	\$ 30,865,791	\$ 41,963,643	\$ 1,090,600	\$ 27,265,000	\$ 69,228,643	\$ 31,645,176	\$ -10,118,467
WADENA	\$ 4,137,757	\$ 1,783,255	\$ 9,846,160	\$ 15,767,172	\$ 613,170	\$ 15,329,250	\$ 31,096,422	\$ 14,304,354	\$ -1,462,818
WRIGHT	\$ 17,407,501	\$ 7,655,692	\$ 29,037,474	\$ 54,100,667	\$ 1,360,407	\$ 34,010,175	\$ 88,110,842	\$ 40,530,987	\$ -13,569,680
SUBTOTAL DIST 3	\$ 156,828,458	\$ 70,436,846	\$ 232,595,575	\$ 459,860,879	\$ 13,207,047	\$ 330,176,175	\$ 790,037,054	\$ 363,417,045	
BECKER	\$ 6,355,996	\$ 2,317,287	\$ 17,463,960	\$ 26,137,243	\$ 1,061,488	\$ 26,537,200	\$ 52,674,443	\$ 24,230,244	\$ -1,906,999
BIG STONE	\$ 544,094	\$ 691,664	\$ 4,790,268	\$ 6,026,026	\$ 595,122	\$ 14,878,050	\$ 20,904,076	\$ 9,615,875	
CLAY	\$ 15,219,129	\$ 5,022,824	\$ 29,400,255	\$ 49,642,208	\$ 1,355,891	\$ 33,697,275	\$ 63,539,483	\$ 38,428,162	\$ -11,214,046
DOUGLAS	\$ 7,541,187	\$ 3,736,177	\$ 12,402,082	\$ 23,679,446	\$ 978,039	\$ 24,450,975	\$ 48,130,421	\$ 22,139,994	\$ -1,539,452
GRANT	\$ 7,457,880	\$ 0	\$ 5,326,715	\$ 12,784,595	\$ 595,122	\$ 14,878,050	\$ 27,662,645	\$ 12,724,817	\$ -59,778
MAHONEN	\$ 3,939,414	\$ 1,194,742	\$ 4,526,727	\$ 9,660,883	\$ 595,122	\$ 14,878,050	\$ 24,538,933	\$ 11,287,909	
OTTERTAIL	\$ 7,022,084	\$ 11,687,914	\$ 55,633,155	\$ 74,543,153	\$ 2,216,851	\$ 55,421,275	\$ 129,964,428	\$ 59,783,637	\$ -14,759,516
POPE	\$ 4,300,383	\$ 3,185,712	\$ 13,452,757	\$ 20,938,852	\$ 735,720	\$ 18,393,000	\$ 39,331,852	\$ 18,092,652	\$ -2,846,200
STEVENS	\$ 2,728,381	\$ 7,757,808	\$ 15,163,584	\$ 25,649,773	\$ 696,833	\$ 17,420,825	\$ 43,070,598	\$ 19,812,475	\$ -5,837,298
SWIFT	\$ 3,666,032	\$ 3,425,036	\$ 17,812,235	\$ 24,903,303	\$ 881,907	\$ 22,047,675	\$ 46,950,978	\$ 21,597,450	\$ -3,305,853
TRAVERSE	\$ 5,667,852	\$ 1,284,794	\$ 10,393,499	\$ 17,346,145	\$ 615,441	\$ 15,386,025	\$ 32,732,170	\$ 15,056,798	\$ -2,289,347
WILKIN	\$ 8,625,540	\$ 5,045,642	\$ 6,401,202	\$ 20,072,384	\$ 766,390	\$ 19,159,750	\$ 39,232,134	\$ 18,046,782	\$ -2,025,602
SUBTOTAL DIST 4	\$ 73,067,972	\$ 45,349,600	\$ 192,966,439	\$ 311,384,011	\$ 11,093,926	\$ 277,348,150	\$ 588,732,161	\$ 270,816,794	
ANDAKA	\$ 20,125,173	\$ 0	\$ 24,282,902	\$ 44,408,075	\$ 1,282,702	\$ 32,067,550	\$ 76,475,625	\$ 35,178,788	\$ -9,229,288
CARVER	\$ 11,817,280	\$ 2,366,529	\$ 21,515,487	\$ 35,699,296	\$ 877,352	\$ 21,933,800	\$ 57,633,096	\$ 26,511,224	\$ -9,188,072
HENNEPIN	\$ 173,001,738	\$ 9,158,138	\$ 83,313,313	\$ 265,473,189	\$ 5,301,463	\$ 132,537,075	\$ 398,010,264	\$ 183,084,721	\$ -82,388,468

**INACTIVE NEEDS ADJUSTMENTS ??**  
**(TABLE A)**

COUNTY	① NEEDS 1900 TO 1939	② NEEDS 1940 TO 1949	③ NEEDS 1950 TO 1960	④ ACTUAL NEEDS OVER 25 YEARS	⑤ TOTAL CONST APPT	⑥ 25 YEAR CONST APPT	⑦ "ORIGINAL" NEEDS	⑧ ALLOWABLE NEEDS	⑨ NEEDS ADJUST
SCOTT	\$ 11,678,562	\$ 3,749,939	\$ 14,662,509	\$ 30,091,010	\$ 801,270	\$ 20,031,750	\$ 50,122,760	\$ 23,056,470	\$ -7,034,540
SUBTOTAL DIST 5	\$ 216,622,753	\$ 15,274,606	\$ 143,774,211	\$ 375,671,570	\$ 8,262,807	\$ 206,570,175	\$ 582,241,745	\$ 267,831,203	
DODGE	\$ 10,555,786	\$ 4,658,055	\$ 12,590,058	\$ 27,803,899	\$ 816,046	\$ 20,401,150	\$ 48,205,049	\$ 22,174,323	\$ -5,629,576
FILLMORE	\$ 47,657,987	\$ 22,861,408	\$ 19,499,285	\$ 90,018,680	\$ 1,661,334	\$ 41,533,350	\$ 131,552,030	\$ 60,513,934	\$ -29,504,746
FREEBORN	\$ 12,400,357	\$ 11,843,509	\$ 28,146,855	\$ 52,390,721	\$ 1,339,998	\$ 33,499,950	\$ 85,890,671	\$ 39,509,709	\$ -12,881,012
GOODHUE	\$ 14,125,766	\$ 6,864,879	\$ 29,861,182	\$ 50,851,827	\$ 1,231,339	\$ 30,783,475	\$ 81,635,302	\$ 37,552,239	\$ -13,299,588
HOUSTON	\$ 38,931,325	\$ 3,923,231	\$ 10,896,508	\$ 53,751,064	\$ 1,136,158	\$ 28,403,950	\$ 82,155,014	\$ 37,791,306	\$ -15,959,758
HOWER	\$ 9,789,363	\$ 8,026,043	\$ 18,151,971	\$ 35,967,377	\$ 1,097,721	\$ 27,443,025	\$ 63,410,402	\$ 29,168,785	\$ -6,798,592
OLUSTED	\$ 20,434,549	\$ 14,037,754	\$ 19,938,079	\$ 54,410,382	\$ 1,256,433	\$ 32,410,825	\$ 86,821,207	\$ 39,937,755	\$ -14,472,627
RICE	\$ 8,112,689	\$ 9,401,675	\$ 18,827,829	\$ 36,342,393	\$ 930,503	\$ 23,262,575	\$ 59,604,968	\$ 27,418,285	\$ -8,924,108
STEELE	\$ 4,462,902	\$ 5,314,537	\$ 19,569,856	\$ 29,347,295	\$ 910,632	\$ 22,765,800	\$ 52,113,095	\$ 23,972,024	\$ -5,375,271
WABASHA	\$ 27,313,518	\$ 5,875,732	\$ 16,781,105	\$ 49,970,355	\$ 1,136,154	\$ 28,403,850	\$ 78,374,205	\$ 36,052,134	\$ -13,918,221
WINDONA	\$ 28,457,979	\$ 2,950,095	\$ 19,776,058	\$ 51,184,132	\$ 1,204,663	\$ 30,116,575	\$ 81,300,707	\$ 37,398,325	\$ -13,785,807
SUBTOTAL DIST 6	\$ 222,242,421	\$ 95,756,918	\$ 214,038,786	\$ 532,038,125	\$ 12,760,981	\$ 319,024,525	\$ 851,062,650	\$ 391,488,819	
BLUE EARTH	\$ 14,985,161	\$ 8,278,163	\$ 35,916,090	\$ 59,179,414	\$ 1,449,032	\$ 36,225,800	\$ 95,405,214	\$ 43,886,398	\$ -15,293,016
BROWN	\$ 8,221,783	\$ 3,193,520	\$ 13,065,437	\$ 24,480,740	\$ 919,793	\$ 22,994,825	\$ 47,475,565	\$ 21,838,760	\$ -2,641,980
COTTONWOOD	\$ 5,627,801	\$ 5,073,733	\$ 21,887,131	\$ 32,588,665	\$ 897,989	\$ 22,449,725	\$ 55,038,390	\$ 25,317,659	\$ -7,271,006
FARIBULT	\$ 22,312,717	\$ 7,967,905	\$ 24,878,594	\$ 55,159,216	\$ 1,265,585	\$ 31,639,625	\$ 86,798,841	\$ 39,927,467	\$ -15,231,749
JACKSON	\$ 16,017,134	\$ 12,193,119	\$ 21,478,579	\$ 49,688,832	\$ 1,172,469	\$ 29,311,725	\$ 79,000,557	\$ 36,340,256	\$ -13,348,576
LE SECUR	\$ 16,506,139	\$ 2,543,443	\$ 12,930,601	\$ 31,980,183	\$ 899,334	\$ 22,463,350	\$ 54,463,533	\$ 25,053,225	\$ -6,926,958
MARTIN	\$ 14,200,385	\$ 3,951,133	\$ 26,571,244	\$ 44,722,762	\$ 1,215,247	\$ 30,381,175	\$ 75,103,937	\$ 34,547,811	\$ -10,174,951
NICOLLET	\$ 13,748,278	\$ 5,603,472	\$ 7,453,324	\$ 26,805,674	\$ 764,286	\$ 19,107,150	\$ 45,912,824	\$ 21,119,899	\$ -5,685,775
NOBLES	\$ 11,273,714	\$ 9,256,963	\$ 20,089,242	\$ 40,619,919	\$ 1,152,831	\$ 28,820,775	\$ 69,440,694	\$ 31,942,719	\$ -8,677,200
ROCK	\$ 2,635,965	\$ 4,849,677	\$ 18,371,674	\$ 25,917,516	\$ 766,173	\$ 19,154,325	\$ 45,071,841	\$ 20,733,047	\$ -5,184,469
SIBLEY	\$ 3,857,525	\$ 4,441,590	\$ 25,908,646	\$ 34,207,761	\$ 896,929	\$ 22,423,225	\$ 56,630,986	\$ 26,050,254	\$ -8,157,507

(TABLE A)

COUNTY	(1) NEEDS 1900 TO 1939	(2) NEEDS 1940 TO 1949	(3) NEEDS 1950 TO 1960	(4) ACTUAL NEEDS OVER 25 YEARS	(5) TOTAL CONST ADPT	(6) 25 YEAR CONST ADPT	(7) "ORIGINAL" NEEDS	(8) ALLOWABLE NEEDS	(9) NEEDS ADJUST
WASCO	\$ 6,960,230	\$ 4,152,409	\$ 19,590,795	\$ 30,703,534	\$ 846,836	\$ 21,170,950	\$ 51,874,464	\$ 23,862,263	\$ -6,841,271
WATSON	\$ 7,916,637	\$ 3,940,807	\$ 17,066,663	\$ 28,944,107	\$ 796,690	\$ 13,917,250	\$ 48,641,357	\$ 22,467,024	\$ -6,457,063
SUBTOTAL DIST 7	\$ 144,323,569	\$ 75,446,134	\$ 265,208,620	\$ 484,978,323	\$ 13,043,196	\$ 326,079,900	\$ 811,058,223	\$ 373,086,783	
CHIPPEWA	\$ 8,516,860	\$ 1,996,961	\$ 7,235,356	\$ 17,809,177	\$ 718,044	\$ 17,951,100	\$ 35,760,277	\$ 16,449,727	\$ -1,359,450
KANDIYOH	\$ 10,731,596	\$ 9,497,685	\$ 21,343,613	\$ 41,572,894	\$ 1,250,580	\$ 31,264,500	\$ 72,837,394	\$ 33,505,201	\$ -8,067,693
LAC QUI PARLE	\$ 2,188,255	\$ 1,318,844	\$ 16,634,994	\$ 20,142,093	\$ 904,083	\$ 22,602,075	\$ 42,744,168	\$ 19,662,317	\$ -479,776
LINCOLN	\$ 1,426,383	\$ 3,953,997	\$ 3,860,144	\$ 15,260,524	\$ 630,544	\$ 15,763,600	\$ 31,024,124	\$ 14,271,097	\$ -989,427
LYON	\$ 8,166,753	\$ 9,178,476	\$ 23,466,260	\$ 40,811,489	\$ 1,020,328	\$ 25,508,200	\$ 66,319,689	\$ 30,507,057	\$ -10,304,432
MCLEOD	\$ 483,963	\$ 5,664,786	\$ 27,738,675	\$ 33,887,424	\$ 853,454	\$ 21,336,350	\$ 55,223,774	\$ 25,402,936	\$ -8,484,488
NEEKER	\$ 3,138,035	\$ 502,228	\$ 18,302,533	\$ 21,942,796	\$ 776,453	\$ 19,411,325	\$ 41,354,121	\$ 19,022,896	\$ -2,919,900
MURRAY	\$ 2,212,979	\$ 8,167,524	\$ 13,504,266	\$ 23,884,769	\$ 867,868	\$ 21,696,700	\$ 45,581,469	\$ 20,967,476	\$ -2,917,293
PIPESTONE	\$ 5,415,448	\$ 2,396,820	\$ 16,009,302	\$ 23,821,570	\$ 724,597	\$ 18,114,925	\$ 41,936,495	\$ 19,290,788	\$ -4,530,782
REDWOOD	\$ 7,913,600	\$ 6,617,274	\$ 23,164,723	\$ 37,695,597	\$ 1,091,650	\$ 27,291,250	\$ 64,966,847	\$ 29,893,950	\$ -7,801,647
RENVILLE	\$ 9,787,694	\$ 16,514,848	\$ 40,955,868	\$ 67,258,410	\$ 1,442,406	\$ 36,060,150	\$ 103,318,560	\$ 47,526,538	\$ -19,731,872
YELLOW MEDICINE	\$ 5,289,316	\$ 6,433,758	\$ 21,626,337	\$ 33,349,411	\$ 954,211	\$ 23,855,275	\$ 57,204,686	\$ 26,314,156	\$ -7,035,255
SUBTOTAL DIST 8	\$ 65,270,882	\$ 72,243,201	\$ 239,922,071	\$ 377,436,154	\$ 11,234,218	\$ 280,855,450	\$ 638,291,604	\$ 302,614,138	
CHISAGO	\$ 19,834,691	\$ 5,206,218	\$ 8,048,181	\$ 33,089,090	\$ 909,567	\$ 22,739,675	\$ 55,828,765	\$ 25,681,232	\$ -7,407,858
DAKOTA	\$ 14,184,263	\$ 9,623,590	\$ 40,775,904	\$ 64,563,757	\$ 1,772,660	\$ 44,316,500	\$ 108,900,257	\$ 50,094,118	\$ -14,489,639
HARSEY	\$ 107,479,622	\$ 8,657,373	\$ 30,132,081	\$ 146,269,076	\$ 2,543,412	\$ 63,585,300	\$ 209,854,376	\$ 96,533,013	\$ -49,736,063
WASHINGTON	\$ 9,122,842	\$ 8,561,126	\$ 14,010,530	\$ 31,694,498	\$ 1,037,926	\$ 25,948,150	\$ 57,642,648	\$ 26,515,618	\$ -5,178,880
SUBTOTAL DIST 9	\$ 150,621,418	\$ 32,048,307	\$ 92,966,696	\$ 275,636,421	\$ 6,263,565	\$ 156,589,625	\$ 432,226,046	\$ 198,823,981	
STATEWIDE TOTALS	\$ 1,542,373,703	\$ 539,799,938	\$ 1,750,610,359	\$ 3,832,784,000	\$ 101,401,337	\$ 2,535,033,425	\$ 6,367,817,425	\$ 2,925,196,016	

1987 SUBCOMMITTEE DATA  
Approximate Apportionment Effect of  
Inactive Needs Adjustment

(Based on 1987 Apportionment)

APPROX. APPORTIONMENT INCREASE OR COUNTY (DECREASE)		APPROX. APPORTIONMENT INCREASE OR COUNTY (DECREASE)	
Carlton	(84,562)	Anoka	(832,888)
Cook	(115,105)	Carver	(16,400)
Itasca	(12,402)	Hennepin	(959,829)
Koochiching	0	Scott	(2,585)
Lake	(86,007)	District 5 Totals	
Pine	(104,286)	Dodge	51,916
St. Louis	(930,221)	Fillmore	(226,480)
District 1 Totals		Freeborn	(3,085)
Beltrami	(10,150)	Goodhue	(11,356)
Clearwater	80,318	Houston	(59,339)
Hubbard	13,315	Mower	67,532
Kittson	42,618	Olsted	(77,551)
Lake of the Woods	0	Rice	(23,001)
Marshall	73,375	Steele	68,085
Norman	93,111	Wabasha	(24,165)
Pennington	111,874	Winona	(31,028)
Polk	293,898	District 6 Totals	
Red Lake	21,498	Blue Earth	(11,688)
Roseau	216,613	Brown	126,258
District 2 Totals		Cottonwood	17,502
Aitkin	121,423	Faribault	(31,583)
Benton	57,109	Jackson	(30,634)
Cass	(11,983)	Le Sueur	39,574
Crow Wing	41,665	Martin	49,087
Isanti	21,112	Nicollet	18,442
Kanabec	22,026	Nobles	80,864
Mille Lacs	44,451	Rock	39,677
Morrison	22,267	Sibley	7,433
Sherburne	0	Waseca	31,802
Stearns	(30,147)	Watonwan	32,299
Todd	(18,521)	District 7 Totals	
Wadena	72,169	Chippewa	116,055
Wright	(20,138)	Kandiyohi	87,673
District 3 Totals		Lac Qui Parle	174,942
Becker	143,211	Lincoln	87,712
Big Stone	0	Lyon	(13,305)
Clay	62,466	McLeod	(19,047)
Douglas	150,380	Meeker	83,665
Grant	0	Murray	98,174
Mahnomen	0	Pipestone	48,785
Otter Tail	123,129	Redwood	57,022
Pope	65,150	Renville	(110,919)
Stevens	(1,848)	Yellow Medicine	36,809
Swift	105,691	District 8 Totals	
Traverse	54,465	Chisago	47,713
Wilkin	97,352	Dakota	48,015
District 4 Totals		Ramsey	(717,640)
		Washington	80,173
		District 9 Totals	

C.S.A.H. GENERAL SUBCOMMITTEE REPORT

ON

TRAFFIC PROJECTION FACTORS

(EFFECTS DUE TO "SYSTEM 70" COUNTS IN DISTRICTS 5 & 9)

In June 1986, Districts 5 and 9, through their representatives, Paul Ruud and Douglas Weiszhaar, requested the Screening Board to study the effects of a selected "System 70" counting procedure on the County State Aid Highways in the two districts. This request for study was delegated to the General Subcommittee of the Screening Board. Following are the results of this study and the General Subcommittee recommendations.

PROBLEM:

From 1972 to 1980, the seven metropolitan counties of Region 11 counted traffic according to a "System 70" procedure. The "System 70" was a highway system established by MN/DOT, and it was intended to monitor the trunk highways and the major County and County State Aid Highways important to the region. As a result of this procedure, not all of the CSAH mileage was counted. The metropolitan counties were also requested to take traffic counts every two years.

In the mid-1970's, a full coverage counting procedure was introduced. Use of the mainframe MN/DOT computer enabled identification and calculation of adjusted traffic volumes on all County Roads and CSAH's. From 1974-75 to 1980, all metropolitan counties shifted from "System 70" to full coverage counting.

The two-year traffic counting interval provides more statistical data for calculation of a traffic projection factor; however, large changes in traffic or miles of road also result in rapid and erratic changes in projection factors. Effects of using "System 70" counts in Anoka, Dakota, Carver, Scott and Washington Counties have been graphed and are shown in Appendix A. In 1986, the traffic projection factors for most of the metropolitan counties illustrate a reduced traffic factor when, in fact, greater and increased traffic volumes are being experienced. This situation exists because now all of the CSAH mileage is being counted and the methodology of the least squares technique views the increase in total mileage and the effect on traffic density (average vehicles per mile per mile of CSAH) as an overall reduction which translates to a downward traffic projection factor. The effect of this situation will extend until the "System 70" counts are no longer part of the twelve-year period used in the least squares calculation.

<u>County</u>	<u>"System 70"</u> <u>Mileage</u>	<u>Total</u> <u>CSAH Mileage</u>
Anoka	163.33	243.23
Carver	106.80	201.43
Dakota	212.46	269.22
Hennepin	456.08	491.68
Ramsey	220.73	227.86
Scott	101.49	184.95
Washington	129.47	185.53

#### RECOMMENDATIONS:

It is contradictory to have significantly reduced traffic projection factors in an area of the state experiencing large growth. Traffic volumes are increasing dramatically as a result of development. Benefits received by a reduced system, which equates to a higher projection factor, have been realized but for the most part, the timeframe of these benefits has been short. Two counties, Dakota and Scott, will be affected by a reduced factor until 1992. Some of the metropolitan counties are being affected by downward factors for "System 70" counts taken in 1972.

The General Subcommittee has thoroughly reviewed the effects of "System 70" counting and hereby recommends the following:

Because of the limited number of CSAH's counted in the metro area under a "System 70" procedure used in the mid-1970's, those "System 70" count years shall not be used in the least squares traffic projection. Count years which show representative traffic figures for the majority of their CSAH system will be used until the "System 70" count years drop off the twelve year minimum period mentioned previously.

The adjustment to traffic projection factors shall be limited to a 0.3 point change per traffic count interval.

The following table summarizes the ramifications of the resolution.

<u>County</u>	<u>Projection</u> <u>Factor with</u> <u>"System 70"</u>	<u>Projection</u> <u>Factor w/o</u> <u>"System 70"</u>	<u>Recommended</u> <u>Traffic Projection</u> <u>Factor with 0.3</u> <u>Limitations</u>
Anoka	1.3	1.7	1.6
Carver	1.2	1.7	1.6
Dakota	1.8	1.8	1.8

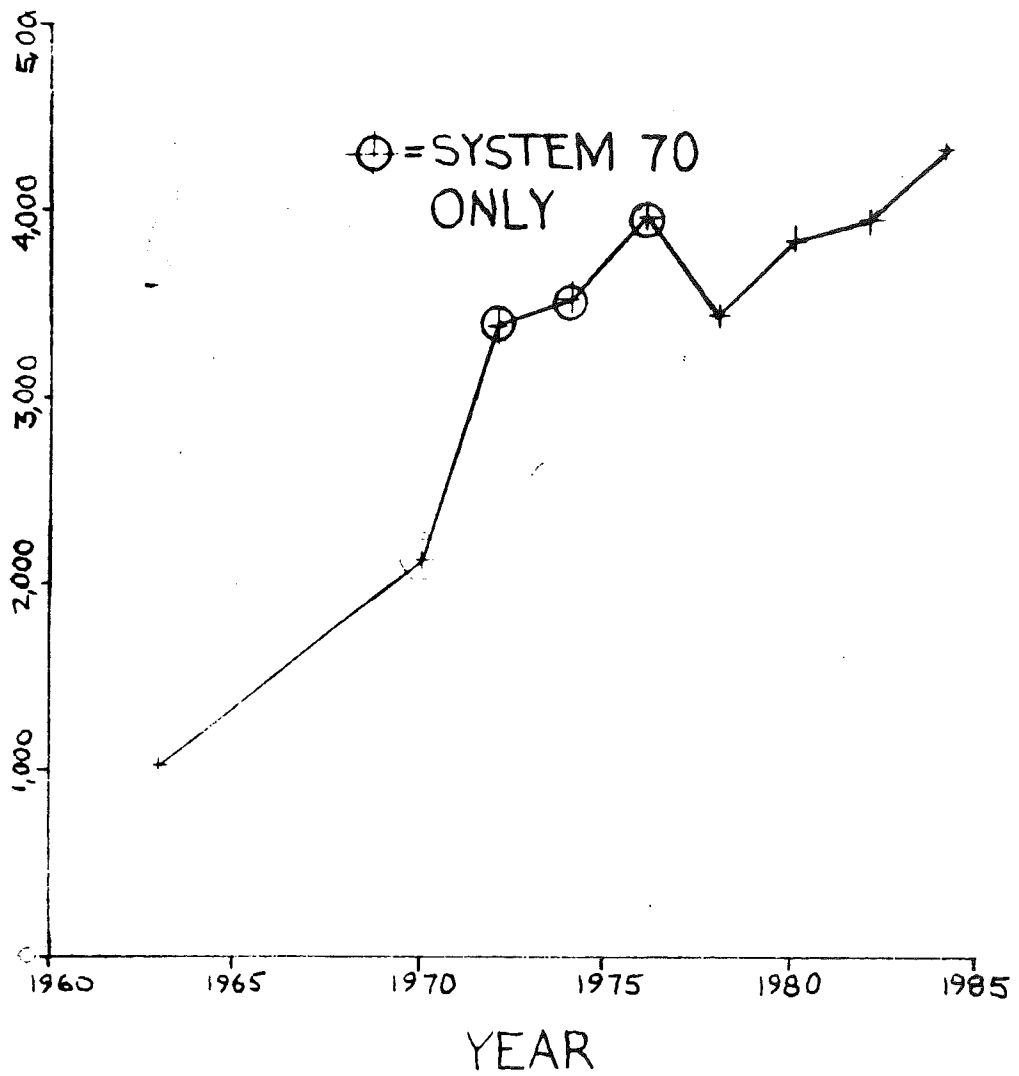
<u>County</u>	<u>Projection Factor with "System 70"</u>	<u>Projection Factor w/o "System 70"</u>	<u>Traffic Projection Factor with 0.3 Limitations</u>
Hennepin	1.4	1.5	1.5
Ramsey	1.2	1.7	1.5
Scott	1.8	1.8	1.8
Washington	1.6	1.7	1.7

The adjustment factor limiting the change to 0.3 point change per traffic count interval is intended to balance some of the benefits received when the introduction of "System 70" counts increased the traffic projection factors for the metropolitan counties. It is further recommended that this adjustment limitation be applied to all counties with either increasing or decreasing projection factors. This adjustment limitation could be used for all future traffic projection changes. In 1986, the only other county that would be affected is as follows:

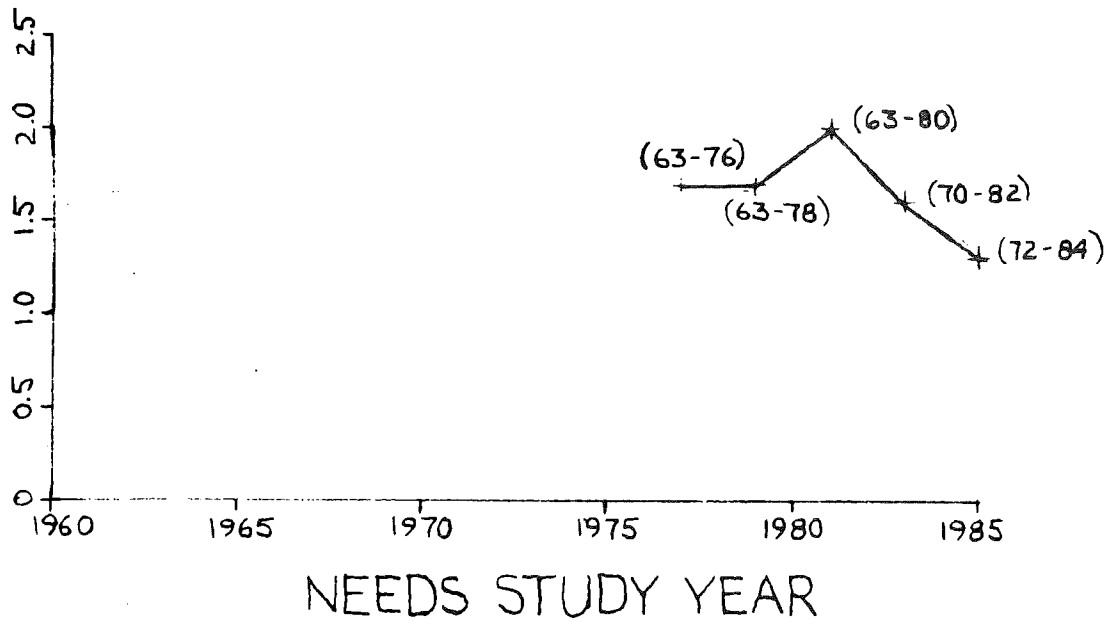
<u>County</u>	<u>Old Factor</u>	<u>New Factor</u>	<u>Limited Factor</u>
Cook	1.9	1.5	1.6

DW/ljd

AVE. VEHICLE MILES PER MILE

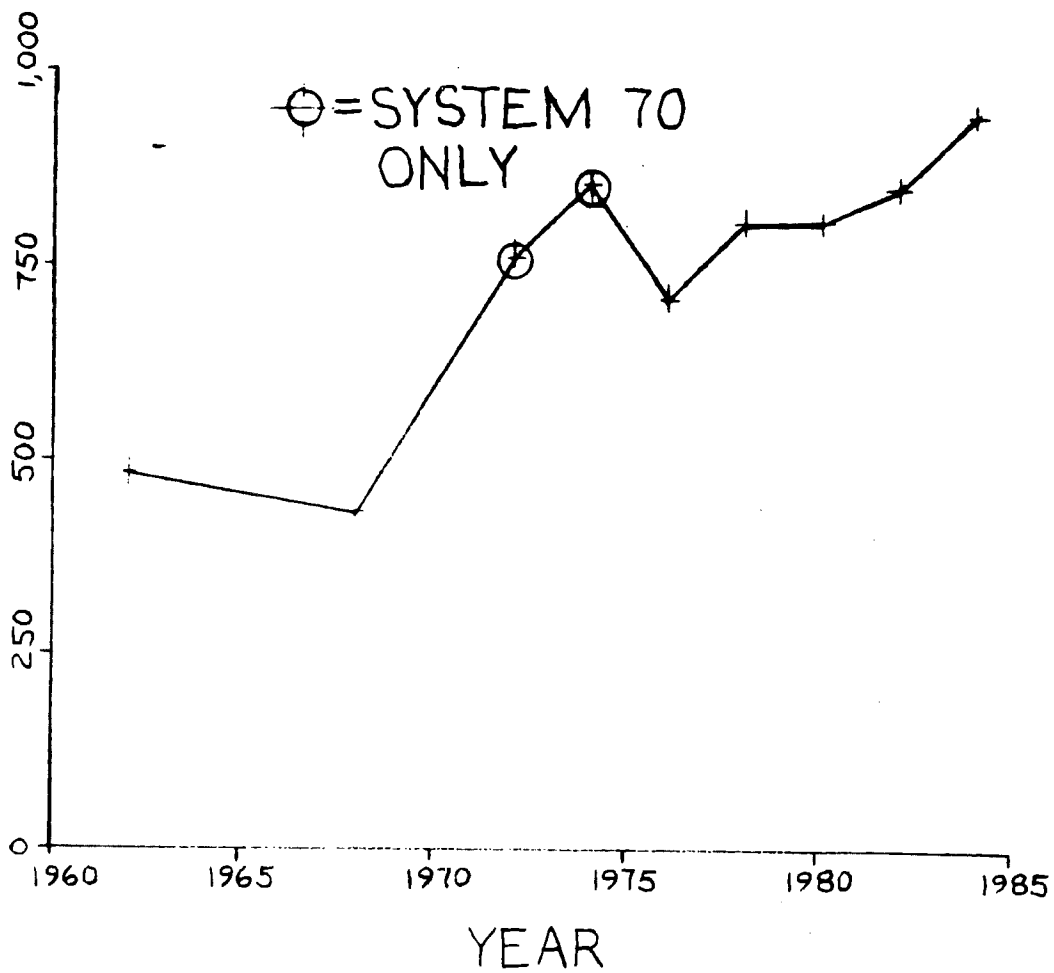


TRAFFIC FACTOR

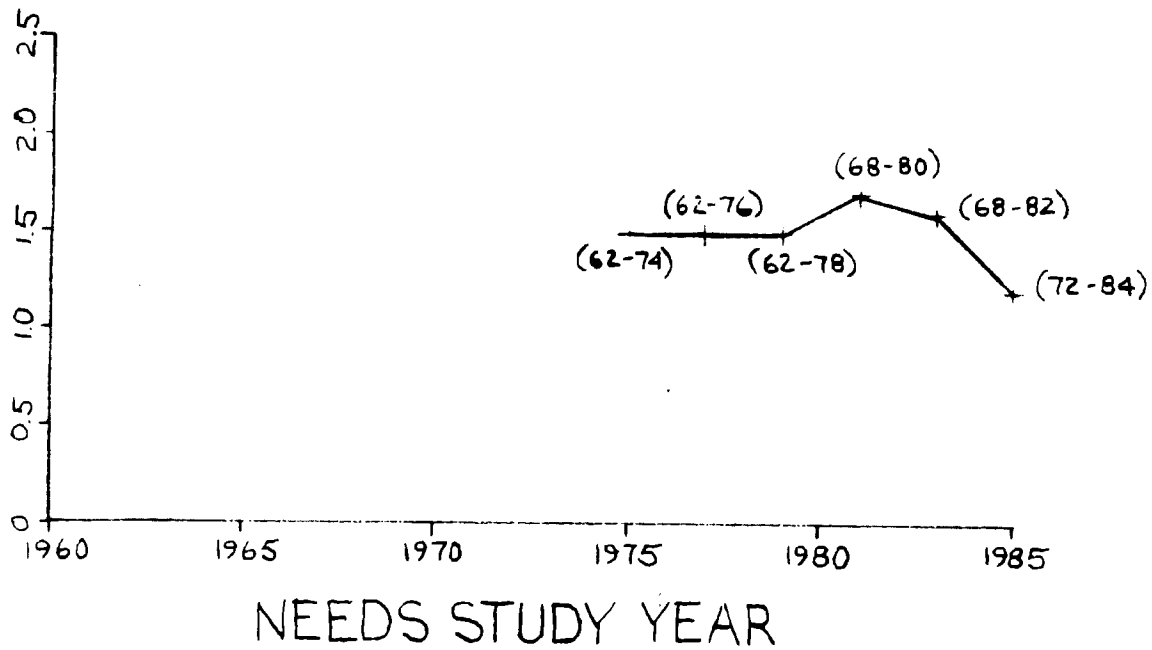


## SPECIAL ANOKA CO. TRAFFIC STUDY

AVE. VEHICLE MILES PER MILE

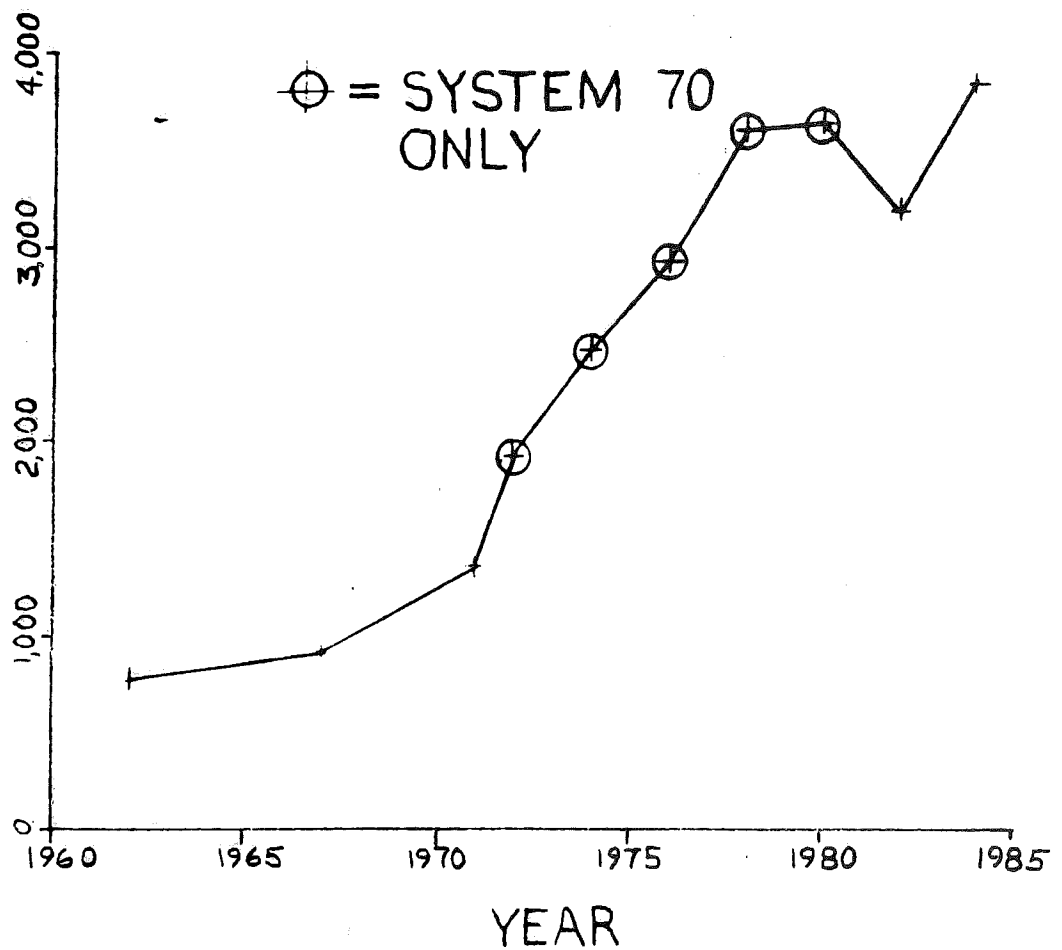


TRAFFIC FACTOR

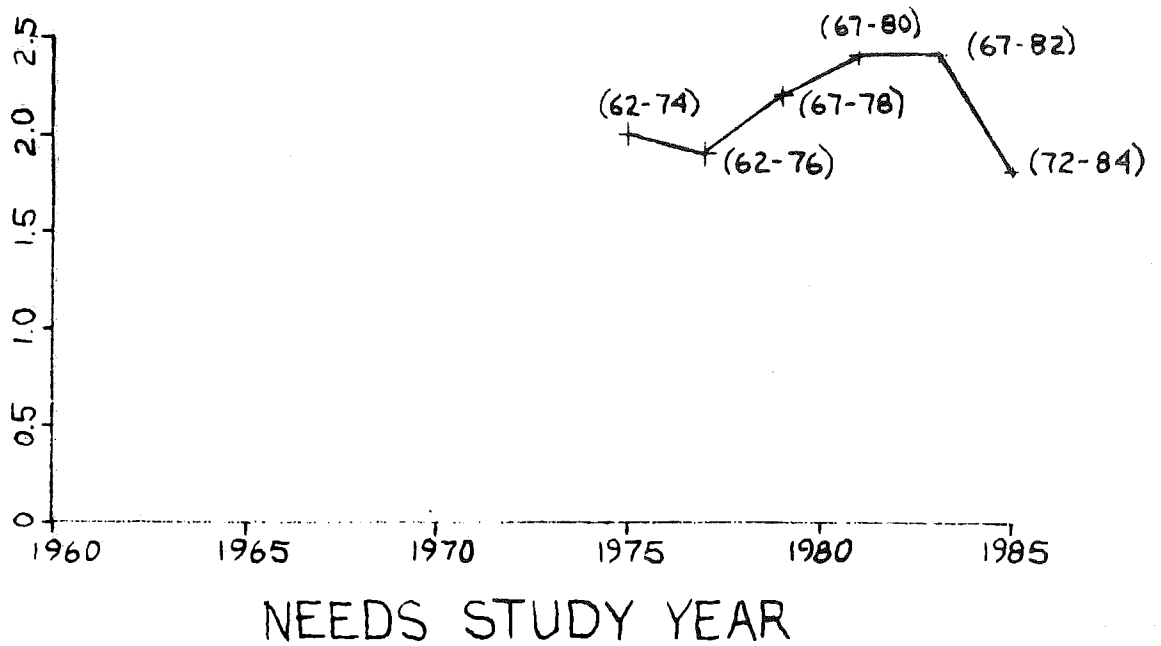


## SPECIAL CARVER CO. TRAFFIC STUDY

AVE. VEHICLE MILES PER MILE

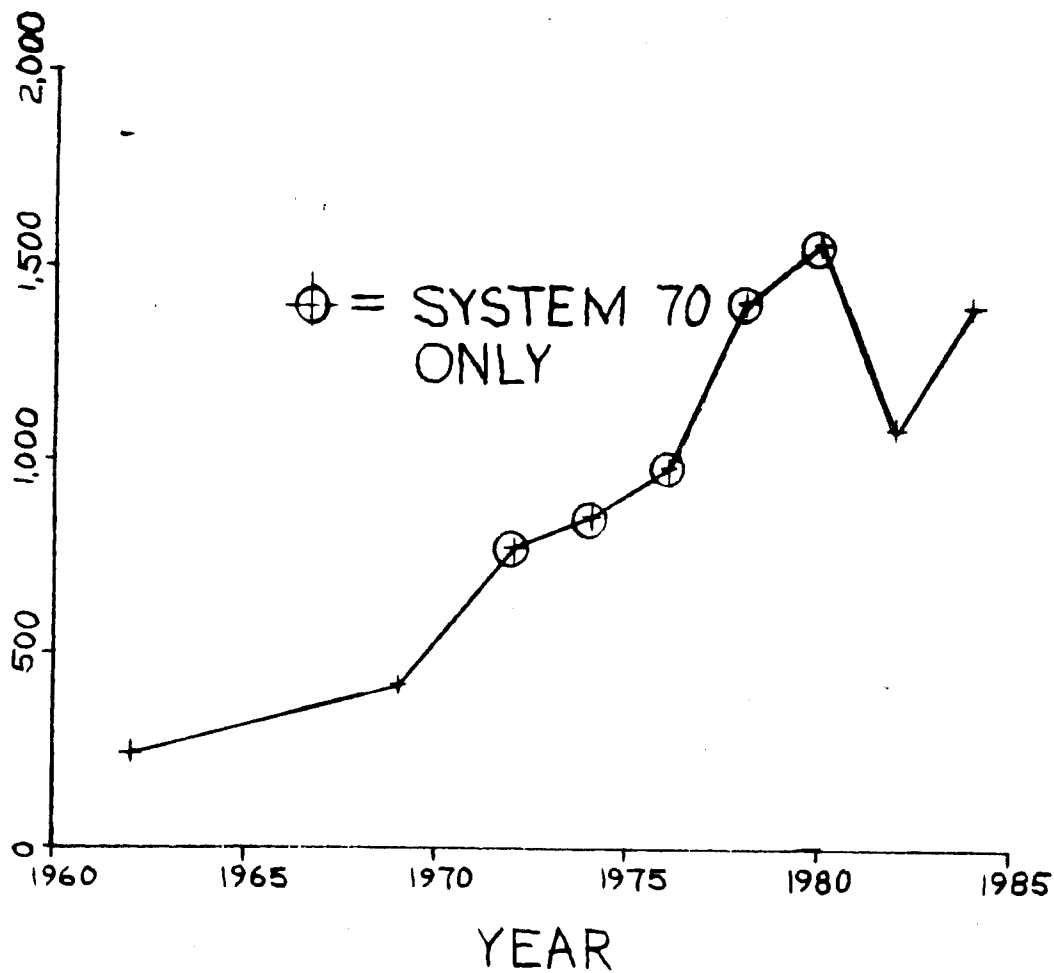


TRAFFIC FACTOR

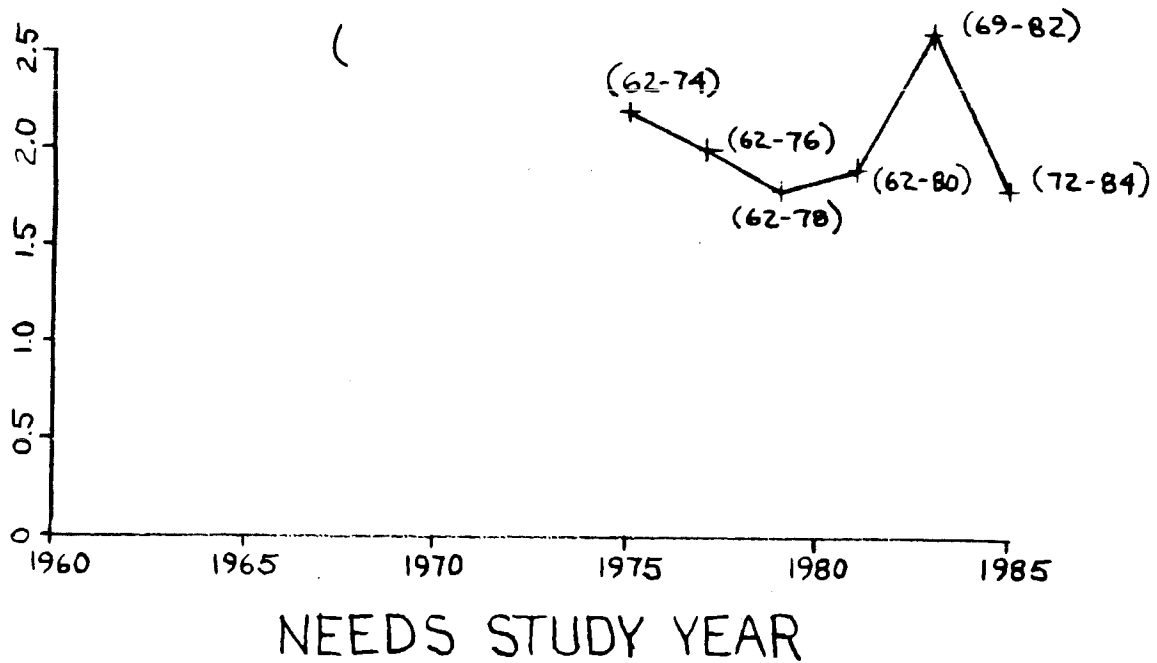


SPECIAL DAKOTA CO. TRAFFIC STUDY

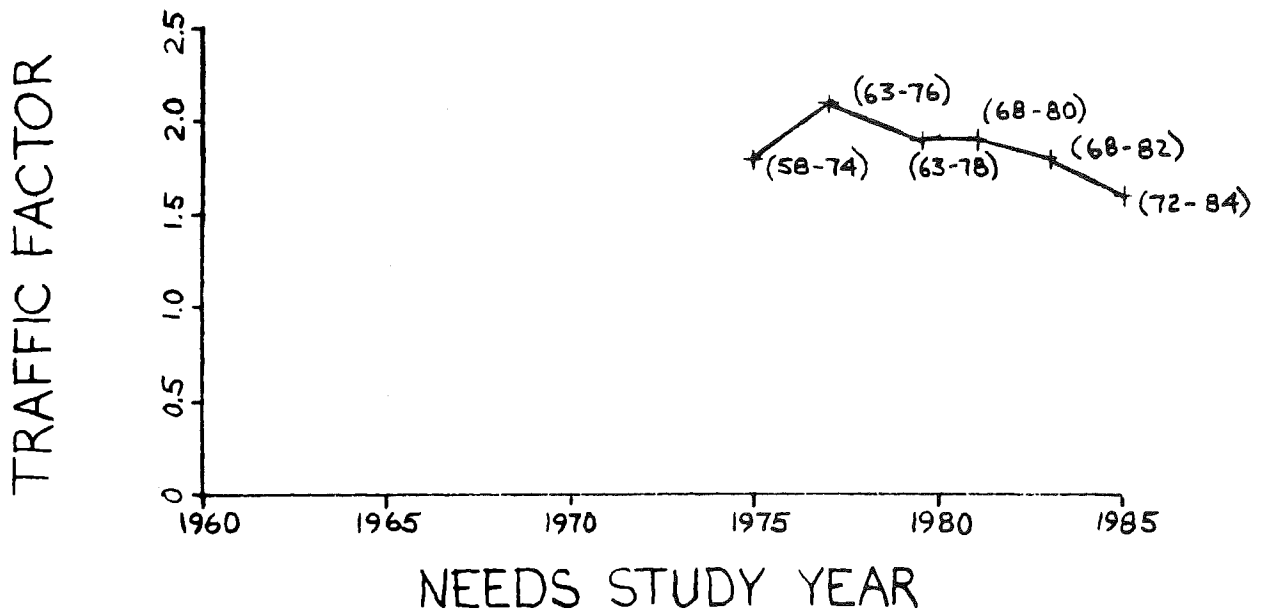
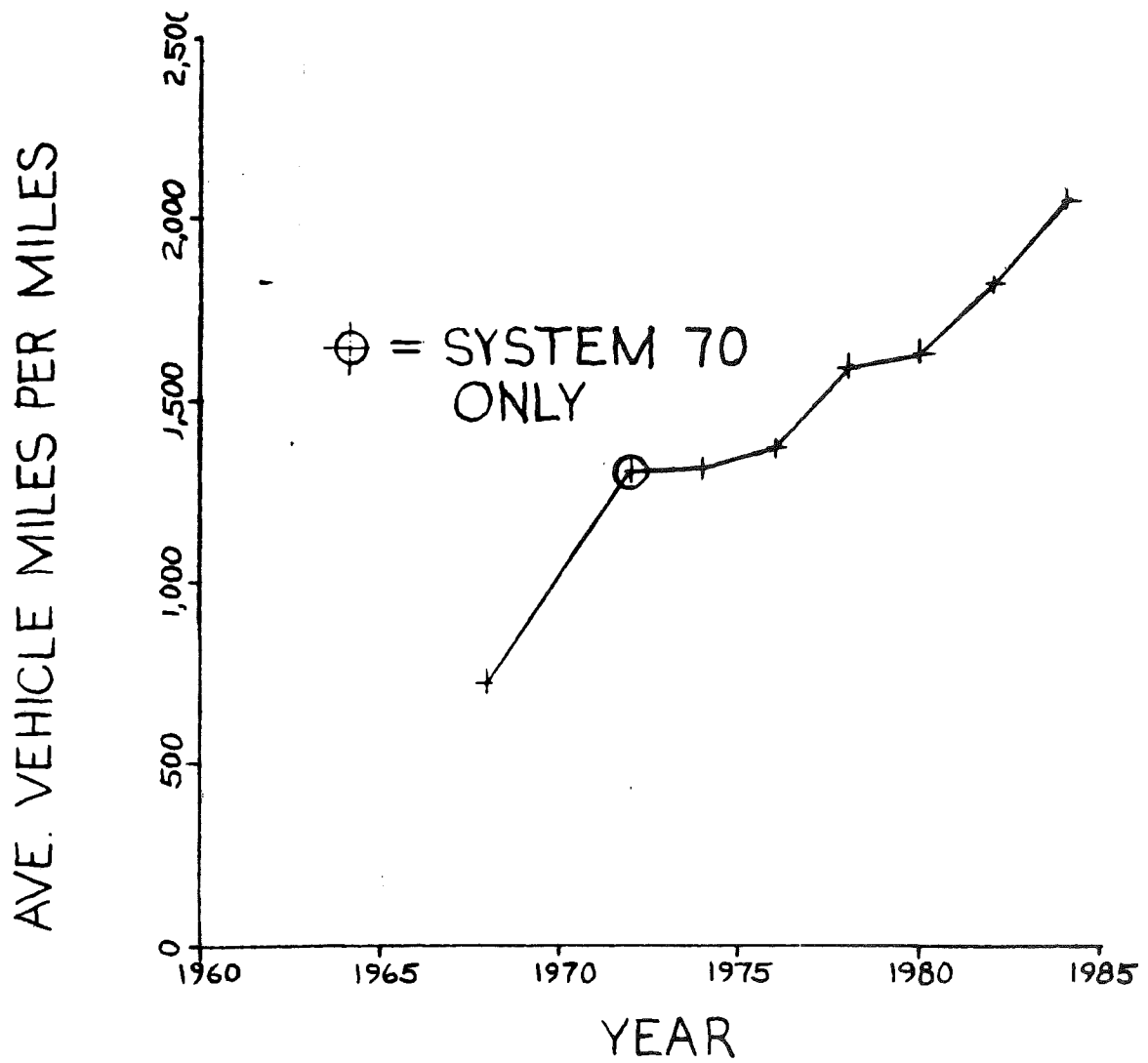
AVE. VEHICLE MILES PER MILE



TRAFFIC FACTOR



SPECIAL SCOTT CO. TRAFFIC STUDY



SPECIAL WASHINGTON CO. TRAFFIC STUDY

## ON

**PROCEDURE FOR DETERMINATION OF RURAL AND  
URBAN NEEDS STUDY UNIT PRICES****PAST HISTORY**

At the October 25, 1985 County Engineer Screening Board Meeting, a motion was passed authorizing the General Sub-Committee to deviate from the rules on an individual review of counties whose five-year average unit price data does not conform to the present requirements of having 50,000 tons of gravel base material.

Also a discussion of the past method of only using rural unit prices in all but Hennepin and Ramsey Counties was held and a motion passed for the General Sub-Committee to review gravel base unit prices with urban unit prices included and to make a recommendation to the Spring 1986 Screening Board meeting.

On May 15, 1986, the CSAH General Sub-Committee decided to include urban projects for the rural 5 year average unit price study for all Counties beginning with the 1985 projects in order to get a larger sample and more representative prices.

For urban needs, the practice continued of adding the differential between MSAS unit prices recommended by the MSAS subcommittee and the CSAH average (additional \$1.18/ton for 1986 Class 5 base material).

The practice also continued using a minimum 50,000 tons of gravel base material for each County for the five year average needs price study. If the minimum of 50,000 tons of gravel base material was not reached then subbase material and finally enough surrounding Counties gravel base material was added to equal 50,000 tons to establish gravel base prices.

Using these methods the CSAH unit prices for the June 1986 Screening Board Data were developed and shown as discussed on pages 10 to 13 and Figure A of that booklet.

The June 25 and 26, 1986 Screening Committee Meeting basically approved the previous decisions and prices but requested the general subcommittee to study the impact of a 40,000 ton minimum with urban prices included.

At the October 29 and 30, 1986 Screening Committee Meeting, it was agreed to leave the 50,000 ton minimum for gravel base price determination. Direction was given to the General Subcommittee to (1) study combining urban and rural gravel base prices, (2) use these combined prices in determining other unit prices, and (3) eliminate the use of MSAS unit prices in determining CSAH unit prices.

## RECOMMENDATION

The CSAH General Subcommittee Meeting on April 10, 1987 approved the following methods for determination of unit prices. Include all urban design projects with all rural design projects to establish one gravel base unit price for each County. Also to use the increment method separately for both rural and urban designs to determine each individual counties subbase, bituminous base and surface, gravel surface, and gravel shoulder unit prices by adding the difference between the 1986 state average unit price of gravel base and the 1986 state average unit price of each of the other items to each County's individually determined gravel base unit price.

This eliminates the so-called "double bump" and also eliminates the reliance on arbitrary MSAS unit prices for the urban unit prices.