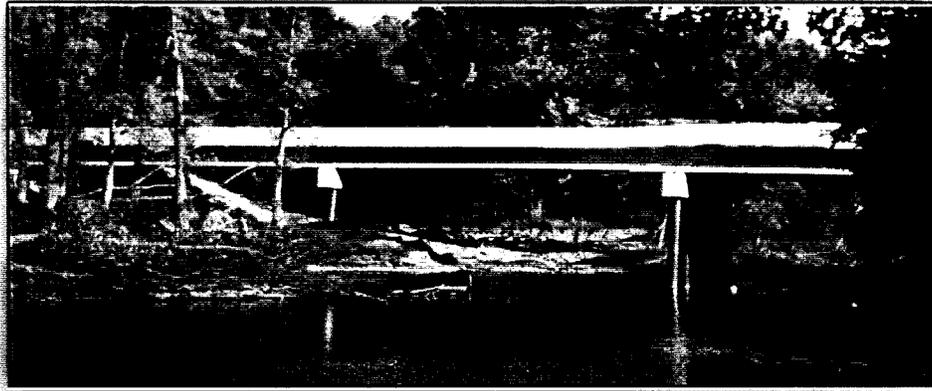


Legislative Study of State Bridge Grant Funding for Local Bridges



January, 2000

Prepared by BRW, Inc. for Mn/DOT
State Aid for Local Transportation Group



Minnesota Laws of 1999, Chapter 238 (House File 2387, Article 1, Section 2, Subdivision 6) requires the Commissioner of the Minnesota Department of Transportation to prepare this study of the State Bridge Grant Funding of Local Bridges. The total cost to prepare this report was \$46,900.

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Executive Summary

Section I: Introduction

The 1999 legislature requested the Commissioner of Transportation to conduct a study of the “State Bridge Grant Program” in order to assess the effect of implementing a proposed expansion of the current eligibility criteria that is applied to all local requests for state bond funds for bridge replacement and rehabilitation. Specifically, the law required a study assessing the impact on the demand for state bridge grants that would likely result from expanding the eligibility criteria of the existing program to include the following:

1. Allowing grants to be used for the costs of flood-related erosion protection;
2. Allowing grants to be used for construction of water-retention projects where such a project is more cost efficient than replacement of an existing bridge;
3. Allowing grants to be made for bridges that are functionally obsolete; and
4. Allowing grants to be used for construction of bridges on new alignments.

The purpose of this study is to estimate the extent to which the demand for state bond funds will increase for each of the distinct eligibility criteria under consideration. This is achieved by first examining the demand for local bridge bond funds under the current eligibility criteria, and then by projecting additional needs that would likely result in the current biennium and the next biennium if the program were expanded to include the criteria listed above.

[**Note:** The language in the law mandating this study suggests there are four (4) new eligibility criteria under consideration to be added to the State Bridge Grant Program. It is important to indicate from the outset that **MnDOT’s current policy concerning eligibility for the bridge grants is that functionally obsolete bridges are “deficient” and therefore are eligible to receive funding through the program.** Therefore, this report focuses on the impact of expanding the program by adding only the remaining three criteria (as numbered in the language requesting the study): #1) flood-related erosion protection projects, #2) water retention projects, and #4) construction of bridges on new alignments.]

A study of the State Bridge Grant Program is appropriate and important because it will provide useful information to the public and policy makers that address the goals of the transportation system articulated in M.S. 174.01, Subd. 2, especially those related to public safety and economic development.

Section II: Local Bridge Bonding - Background

- Minnesota local bridge inventory consists of nearly 15,000 bridges. Of this total, **over 17% are classified as deficient** by Federal Highway Administration and Mn/DOT standards.
- The State Bridge Grant Program was initiated in 1976 to help local governments finance local bridge replacement and rehabilitation. The program has provided roughly \$8.0 million in bond funds annually since 1990, including \$34 million in 1998. In 1999, a \$10 million bond authorization for local bridge projects was vetoed.

- The number of deficient local bridges in the state has been steadily declining since inception of the program. However, a large number of local bridges will become deficient as the inventory of local bridges continues to age. **To continue to make progress at reducing the number of deficient local bridges, the state will need to continue committing additional resources in the future.**

Section III: Assessment of Demand for Local Bridge Funding Needs From Expansion of Eligibility Criteria

This section of the study presents a series of tables that project the extent to which each modification of the expansion criteria under consideration would affect demand on state bond funds. The table below shows: 1) the amount of bridge bond funds necessary to finance programmed bridge replacements, and 2) the amount of bridge bond funds projected to be necessary to finance an expansion of the State Bridge Bond Program to include three new eligibility criteria. The table below also provides a description of the contents of each table, and how the tables relate to each other.

Summary of Tables					
	Figure #	Table	Description	Estimated Bond Funding (x \$1,000)	
				2000-01	2002-03
	Figure 7	Programmed Structurally Deficient Bridge Replacements	Current eligibility criteria provides that SD bridges are eligible for state bond funds	\$42,341	\$34,748
+	Figure 8	Programmed Functionally Obsolete Bridge Replacements	(Listed in study request language as criteria #3) FO bridges are currently eligible for state grant funds, per Mn/DOT policy.	\$3,547	\$1,072
=	Figure 6	Total Programmed Bridge Replacements	Data in this table reflects the current demand on state bonds under the existing eligibility criteria	\$45,888 (1)	\$35,820
	Figure 6	Total Programmed Bridge Replacements	"Programmed", status-quo criteria	\$45,887	\$35,820
+	Figure 10	Scheduled Flood-Related Erosion Protection Projects	Proposed Criteria Expansion (#1)	\$553	\$615
+	Figure 12	Scheduled Water Retention Projects	Proposed Criteria Expansion (#2)	\$0	\$105
+	Figure 14	Scheduled New Alignment Bridge Construction	Proposed Criteria Expansion (#4)	\$5,170 (2)	\$0
=	Figure 15	Summary of Programmed and Scheduled Bridge Projects	Data in this table reflects projected demand from the current eligibility criteria plus the expansion criteria	\$51,611	\$36,540
Notes:					
(1) At the time that this report went to press, approximately \$3.9 million of the 1998 appropriation was unencumbered but set aside to provide matching funds for federal projects and state funded projects that will be approved early in 2000. Therefore, the actual need in 2000-2001 is reduced to about \$42 million.					
(2) If the Legislature chooses to expand the eligibility criteria to construction of new bridge alignments, the amount authorized each biennium could vary and should be based on requests made for that biennium.					

Section IV: Conclusion and Recommendations

An examination of the State Bridge Grant Program is appropriate and important because the Legislature is preparing to enact a major capital investment bill during the 2000 legislative session, which will commit state bond funds to support replacement and repair of Minnesota’s local bridges. This study addresses the potential impacts from expanding the eligibility criteria to provide bond funds for local bridge projects beyond those that are simply “deficient”.

Among the study’s principal conclusions:

1. Expanding the State Grant Bridge Program by extending the eligibility criteria to include a broader range of local bridge projects and related needs directly supports many of the economic development and public safety goals articulated in Minnesota State law.
2. The table below (Figure 16 in the body of the report) presents the projected impact of expanding the eligibility criteria to include bridge projects for flood related erosion protection, water retention projects, and construction of new alignments. The total estimated impact on the demand for additional bond funds due to expansion of the eligibility criteria is projected at \$5.723 million in the 2000-2001 biennium, and \$720,000 in the 2002-2003 biennium.

Criteria	<u>Current Demand on Bond Funding (x \$1,000)</u>		<u>Projected Demand on Bond Funding (x \$1,000)</u>		<u>Difference (x \$1,000)</u>	
	2000-01	2002-03	2000-01	2002-03	2000-01	2002-03
Structurally Deficient Bridges (Figure 7)	\$42,341	\$34,748	\$42,341	\$34,748	\$0	\$0
Functionally Obsolete Bridges (Figure 8)	\$3,547	\$1,072	\$3,547	\$1,072	\$0	\$0
Flood Related Erosion Protection (Figure 10)	\$0	\$0	\$553	\$615	\$553	\$615
Water Retention Projects (Figure 12)	\$0	\$0	\$0	\$105	\$0	\$105
Construction of Bridges on New Alignments (Figure 14)	\$0	\$0	\$5,170	\$0	\$5,170	\$0
Totals	\$45,888	\$35,820	\$51,611	\$36,540	\$5,723	\$720

Recommendations:

1. Continuation of a substantial and regular replacement program is needed to address the large bridge reconstruction “wave” created by the increased number and larger deck size of bridges built in the post World War II era that are beginning to reach the end of their useful life.

2. Mn/DOT recommends that the State Bridge Grant Program continue to provide grant funds for replacement and repair of functionally obsolete bridges, per current policy.
3. Mn/DOT recommends expanding the eligibility criteria to include water retention projects and flood-related erosion projects. Increased demand on state bond funds that would result by expanding the program to include these projects can be absorbed within the resources currently available.
4. Expanding the eligibility criteria to construction of bridges on new alignments is clearly an expansion of the original purpose of the local deficient bridge replacement and rehabilitation program, which was to provide funds for existing structures. While Mn/DOT recognizes that state support of construction of local bridges on new alignments is consistent with the state's goals of the transportation system, Mn/DOT does not recommend that the bridge replacement program's eligibility criteria be expanded to include the construction of bridges on new alignments.

If the Legislature decides that the eligibility criteria for local bridge bonding should be extended to construction of bridges on new alignments, then additional funding will be required for this purpose. Any new program should include the following elements:

- 4-A. Additional funds for bridges on new alignments should be based on the local government's request that is identified in their 5-year program. Local requests for state bridge bonds to fund bridges on new alignments will be considered when there is demonstrated evidence that the local government's proposal meets cost efficiency criteria, has been subject to adequate public review, and is selected as the optimal alternative.
- 4-B. In addition to the existing application criteria for State Bridge Grant Funds, the local government should demonstrate that the proposal meets the administration's "smart growth" criteria. The application must also describe the proposed project's benefit to the larger region.
- 4-C. The Legislature should enact a sunset provision for the use of grant funds on new alignments. The sunset provision would require the local government to complete the project development and design within a specific time frame (perhaps 3 years), or the appropriation from the sale of the bonds are returned to the state, if in fact the bonds were sold.
5. Historically, the state has not committed substantial bonding resources to local bridge projects for "preservation", for example, deck replacement, painting, and rail repair. The Legislature should consider expanding the use of bond funds for these projects on bridges not classified as structurally deficient.
6. Any modifications that the Legislature makes to the State Bridge Grant Program which expand the program's eligibility criteria should not result in any fundamental changes in the role of the program. Mn/DOT will continue to work with local governments to ensure that the State Bridge Bond Program serves the best interests of the state as a whole and that the use of state bonds continue to support fiscally responsible spending alternatives.

I. Introduction

Legislative Charge

The 1999 legislature requested the Commissioner of Transportation to conduct a study of the “State Bridge Grant Program”. The program provides funding to local governments from the proceeds of state general obligation bonds for construction and rehabilitation of bridges on the local road system.

The specific purpose behind the Legislature’s request for a study of the State Bridge Grant Program is to be able to assess the effect of a proposed expansion of the eligibility criteria applied to all local requests for funding from the state bridge grant program for bridge replacement and rehabilitation. **In short, the principal intent of this study is to assess the extent to which expansion of the eligibility criteria would result in greater demand for state general obligation bond funding provided through the program.**

The statutory language requesting the study was included in the omnibus transportation appropriations bill enacted in 1999. (Minnesota 1999 session laws Chapter 238 / H.F. 2387, Article 1, Section 2, Subdivision 6). It reads as follows:

The commissioner shall study and determine the extent to which local bridge needs that may be addressed by state grants for the construction and reconstruction of local bridges would be affected by making the following changes in eligibility for those grants:

- 1) allowing grants to be used for the costs of flood-related erosion protection;*
- 2) allowing grants to be used for construction of water-retention projects where such a project is more cost efficient than replacement of an existing bridge*
- 3) allowing grants to be made for bridges that are functionally obsolete; and*
- 4) allowing grants to be used for construction of bridges on new alignments.*

The commissioner shall report to the legislature on the results of the study by February 1, 2000.

Of the four proposed changes in eligibility that are required to be reviewed in this study, three (numbers 1,2, and 4 from the statutory language, above) represent additions to the existing eligibility criteria. This study provides projections of the demand for increased bonding authority for the current biennium (FY 2000 and 2001) and for the following biennium that are anticipated to occur if the eligibility criteria are expanded.

The other eligibility criterion required for review in this study (number 3, above) would explicitly allow state bonds from the State Bridge Grant Program to be used for all functionally obsolete bridges in the local roadway system. At present, the program’s bond funds have been used to fund the replacement of functionally obsolete bridges.

To summarize, a logical hypothesis regarding the proposed expansion of the eligibility criteria applied to local government requests for state bonds to construct or reconstruct local bridges is that it will result in increased demand for state bonding funds. The purpose of this study is to estimate the extent to which the demand will increase for each of the distinct eligibility criteria under consideration. This is achieved by first examining the demand for local bridge bond funds under the current eligibility criteria, and then to project additional needs that would likely result in the current biennium and the next biennium if the eligibility criteria were expanded.

Goals of the Study

The Minnesota Department of Transportation supported a study of the State Bridge Grant Program. Mn/DOT recognizes that this study will provide useful information to policy makers that address many of the statutory goals of the transportation system identified in state law, especially those relating to public safety and economic development. Those goals – fourteen in all – are explicitly articulated in state law in Minnesota Statutes, Section 174.01, Subdivision 2.

To be specific, **Mn/DOT believes that the information provided in this study is relevant to at least five of the fourteen goals of the transportation system** identified in Minnesota Statutes, Section 174.1; Subdivision 2, as follows.

Goal: (1) to provide safe transportation for users throughout the state

Over 17 percent of all local bridges in Minnesota are structurally deficient or functionally obsolete. These bridges are classified as deficient if they: 1) have limited load carrying capacity due to deteriorated structural elements, 2) are dangerously narrow, 3) have too low a clearance for some vehicles to safely pass under, 4) do not offer adequate protection from high water, and 5) have dangerous and inadequate approach roadway geometry. Bridge safety is a major concern of Minnesota transportation policy, and by addressing structural deficiencies through the bridge replacement program, Minnesota has avoided structural failures on the secondary road system.

Goal: (4) to provide for the economical, efficient, and safe movement of goods to and from markets by rail, highway, and waterway

In both the metropolitan areas of the state and throughout Greater Minnesota, bridges on local roadway systems are a key element of a region's ability to meet its full economic potential. Roadway systems that require long delays due to congestion, detours, or other restrictions result in substantial costs to Minnesota's economy. Investment in Minnesota's local bridges ensures that this component of the transportation system will allow continued economic expansion in local communities throughout the state.

Goal: (5) to encourage tourism by providing appropriate transportation to Minnesota facilities designed to attract tourists

The tourism industry in Minnesota relies on local roadways and bridges not only to facilitate travel by tourists, but also to transport the goods and supplies necessary to run their businesses. Some areas of the state are reliant on a robust tourism industry, because it supports many other small businesses.

Goal: (8) to maximize the benefits received for each state transportation investment

Local units of government throughout Minnesota have submitted to Mn/DOT requests for over \$40 million in state bridge bonding funds to replace and rehabilitate over 600 bridges in 2000 and 2001. These state bond funds will leverage an additional \$66 million in additional federal, state, and local resources, for a total construction budget of about \$110 million.

Goal: (9) to provide funding for transportation that, at a minimum, preserves the transportation infrastructure;

The bridge replacement program will be instrumental in providing funds necessary to manage the sizeable bridge construction “wave” created by a large number of bridges built after 1950 that are approaching the end of their useful life (see Figure 4). Addressing the aging local bridge inventory in Minnesota is essential to preserving the existing transportation infrastructure.

While this study is in response to a direct request from the 1999 Legislature and is intended to provide state policy makers with timely and useful information on the State Bridge Grant Program, it also was prepared with another audience in mind. **It is the intent of Mn/DOT that this study will also serve as an informative resource for citizens interested in local bridge funding in Minnesota.**

II. Local Bridge Bonding: Background

Bridges are a critical component of the state’s transportation infrastructure. A single deficient bridge can restrict access, create unsafe situations, and result in costly detours.

Several factors are contributing to increasing demands on Minnesota’s bridges. As roadways are reconstructed to carry heavier loads, bridges become less capable of maintaining the overall level of traffic on the transportation system. The aging of the local bridge infrastructure exacerbates the rapid rate of deterioration of the bridges on local roadways (which include county state aid highways, county roads, city streets, municipal state aid systems, and township roads). **Finding adequate resources to fund local bridge repair and replacement is a growing challenge for state and local governments striving to meet the needs and expectations of Minnesota roadway users.**

Prior to the establishment of the State Bridge Grant Program in 1975, (also known as the “Minnesota State Transportation Fund”) a principle source of funding of Minnesota’s secondary roadway system was the local property tax. Since that time, Minnesota counties, cities, and towns have had to rely on state and federal assistance in addition to the property tax to finance local road and bridge projects in order to meet the increasing demands on the transportation system.

In 1975, the Legislature created a new source of revenue to fund local bridges called the State Bridge Grant Program. This program provides state funds from the sale of general obligation bonds to finance local bridge replacement and repair. The Legislature may authorize bridge bonds and appropriate proceeds biennially to provide matching or supplemental funds to the existing resources provided by the federal government, local governments, or the state. Historically, state bond funds have represented roughly 30% of the total cost of local bridge projects excluding engineering costs. The remaining 70% is a combination of federal, state aid (including Town Bridge Account funds) and local funds.

Minnesota’s Local Bridge Inventory

The table below shows that there are 14,693 local bridges at least 10 feet in length in the state’s local bridge inventory, and that **2,558 of those bridges (17.4%) are structurally deficient or functionally obsolete.**

Figure 1 Summary of Condition of Local Bridge Structures Over 10 Feet: November 1999					
All Bridges	Total Deficient	Percent	Structurally Deficient	Functionally Obsolete	Railroad / Highway
14,693	2,558	17.4%	1,625	774	159
Source: Minnesota Department of Transportation, Office of Bridges and Structures					

Bridge Safety: Functionally Obsolete Bridges on the Local Road System

Obviously, deficient bridge structures can pose serious safety concerns throughout the state. While gathering information for this report, the matter of safety regarding narrow or otherwise functionally obsolete bridges was discussed with County Engineers. To try and learn more about safety hazards of functionally obsolete bridges, county and city engineers were asked to submit letters relating experiences with accidents involving functionally obsolete bridges within their jurisdiction.

Nine engineers from counties and cities around the state responded to the request. The responses provided accounts of nine different accidents or incidents. Among those that were reported was one account of an accident where the bridge collapsed and another where the bridge had to be permanently closed due to structural damage. The accounts included accidents that involved three fatalities, seven serious injuries, and substantial property damage. One engineer reported the total loss of a farmer's combine. Another accident resulted in litigation against the county. One engineer reported evidence of earlier accidents on several bridges with scraped, chipped, and broken concrete railings. Several engineers reported bridges too narrow for farm equipment, and one reported a case where vehicles collided on a narrow bridge, resulting in one of the cars going over the railing, killing an occupant of the car.

Historical Funding of Local Bridges

In the mid-1970's, the state Legislature recognized that Minnesota's counties, cities, and townships would be hard pressed to generate adequate funding to maintain both local roads and bridges. The 1975 Legislature responded by passing the first Minnesota Bridge Bonding bill, which allocated \$25 million for county, city, and township bridge projects in Fiscal Year 1976. The initial purpose of the program was to assist local governments in meeting the increasing demands (more traffic and heavier loads) on the secondary road system.

The local bridge bonding program has remained in place since its inception in 1976 with various amounts of legislative funding, provided over the years. In 1998, the Legislature passed a local bridge bonding program with \$34 million, the largest annual allotment since 1979 (when \$52 million in local bridge bonding authority was approved.) In the ten-year period from 1990 through 1999, the local bridge bonding program provided an average of \$8 million each year to finance local bridge replacement and rehabilitation.

It is important to emphasize that state bridge bonds generally match or supplement other bridge repair and replacement resources, such as federal aid, County State Aid and Municipal State Aid allotments, resources from the state Town Bridge Account (funded by the Highway User Tax Distribution Fund) and the local property tax. Bond funds are often the catalyst that allows the bridge to be replaced or rehabilitated. Historically, bridge bonds typically provide 20% to 40% of a project's cost, and never pay 100% of the total project cost.

Figure 2 shows historical bonding for local bridge repair and replacement from the State Bridge Grant Program since its inception in 1976:

Figure 2
Historical Local Bridge Bonding Authority
(State Transportation Fund – Bridge Bonds) 1976 - 1999

1976 ⁽¹⁾	\$21,900,000	1984	\$0	1992	\$5,000,000
1977	\$50,000,000	1985	\$0	1993	\$3,000,000
1978	\$0	1986	\$0	1994	\$12,445,000
1979	\$52,000,000	1987	\$5,000,000	1995	\$4,500,000
1980	\$0	1988	\$0	1996	\$10,000,000
1981	\$0	1989	\$8,000,000	1997	\$5,500,000
1982	\$0	1990	\$5,600,000	1998	\$34,000,000
1983	\$0	1991	\$0	1999 ⁽²⁾	\$0

Notes:

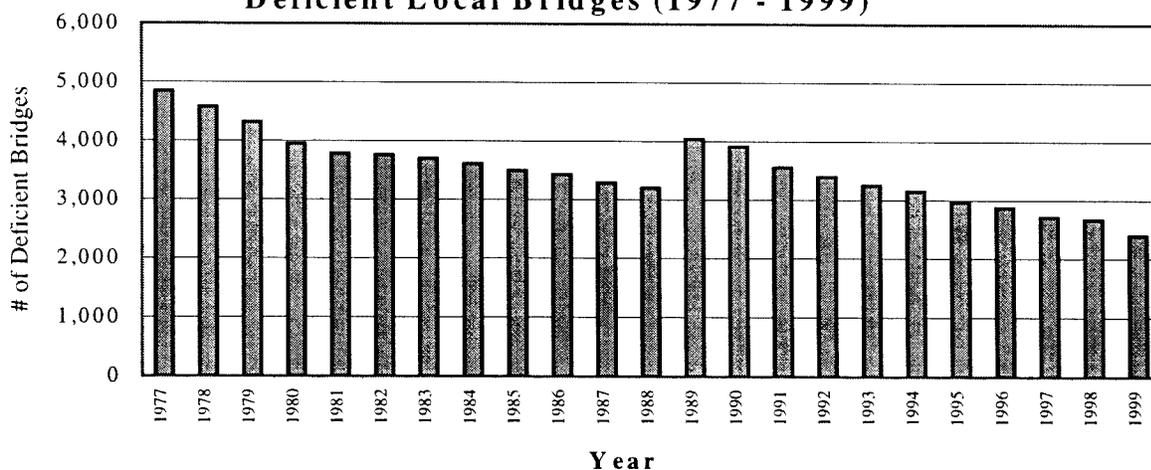
(1) The initial authorization of bonds in 1976 totaled \$25 million, but the fiscal crisis of the early 1980s led the Legislature to act in 1983 to reduce the balance in the State Transportation Fund that had been initially provided by the appropriation from the general fund. Laws of 1983, Chapter 343, Section 1, Subdivision 3 reduced the balance by \$3.1 million. Mn/DOT and the Department of Finance account for the reduction as a reduction in the year that the bonds were authorized (1976) rather than the year the reduction was enacted (1983).

(2) The 1999 Legislature enacted \$10 million for local bridge bonding, which was line-item vetoed.

The Condition of Local Bridges Since 1977

Slow but steady progress has been made in reducing the number of deficient bridges on the local roads system. **In recent years, for every existing bridge that has been added to the list of deficient structures, roughly two deficient bridges have been replaced and thereby removed from the list.** Figure 3 below shows the state's progress at reducing the number of deficient city, county, and township bridges in the state's local bridge inventory since 1977.

Figure 3
Deficient Local Bridges (1977 - 1999)



Note: The cause of the upward shift in the number of local deficient bridges in the state beginning in 1989 is the result of changes in the federal criteria used to determine whether or not a bridge is deficient.

The Township Bridge Account and Local Bridge Funding

Generally, Mn/DOT policy concerning township bridge financing is to rely first on the Township Bridge Account (funded from the Highway User Tax Distribution Fund) to support replacement and repair of Minnesota's township bridges. The Township Bridge Account provides about \$9 million per year to finance town bridge projects. For the current biennium, the Account has a balance, so funding for township bridges appropriated in the 2000 legislative session is expected to come from the Township Bridge Account.

The policy decision regarding whether to use state bonds or the Town Bridge Account funds for township bridge projects is based on the availability of funds in the Account and amounts contributed by local sources. If Township Bridge Account funds are depleted in the next biennium, state bond funds may be used to fund replacement and rehabilitation of township bridges.

Until the 1998 legislative session, state law imposed a match requirement for townships to gain access to Township Bridge Account funds. The law required that a 10% minimum match was necessary in order to leverage state Town Bridge Account funds, and that bond funding from the state bridge grant program were eligible to provide the matching funds. Historically, approximately \$2 million per year of state bonds from the State Bridge Grant Program have been used to leverage Township Bridge Account funds for town bridge projects. The 1998 Legislature eliminated the requirement for the match, so township bridge projects can now be funded solely with Township Bridge Account funds, if available.

The Use of State Bridge Bonding: Current Policy

For a bridge project to be considered for eligibility under the State Bridge Grant Program to receive bond funds, the bridge must be listed as deficient or included on a local priority list of unsafe bridges. Counties, cities, and townships (through county requests) submit their request through a formal resolution, which indicates their need and commitment to replace or rehabilitate these deficiencies. Elected county commissioners and city council members make these decisions in collaboration with the local engineer along with considerable public input. The county or city engineer in charge of the program actively seeks input from affected community members in formulating options and choices prior to and during project development.

For the current 2000-2001 biennium, local units of government throughout Minnesota have submitted requests for over \$40 million in state bridge funds to rehabilitate and replace over 600 bridges. These funds are expected to leverage an additional \$66 million in local, federal, and other state dollars for a total construction program of \$110 million.

Mn/DOT currently prioritizes the requests for state transportation bond funds submitted by local governments using the following general prioritization criteria:

1. **Roadway in Lieu of Bridge** – Funds will be used on projects when an existing deficient bridge is removed and replaced with a roadway/culvert. This option eliminates a deficient structure from the state inventory and eliminates any future need for state funding.

2. **Federal Funded Bridges** – Bond funds will also be used to match federally funded bridge projects. Matching funds will be set aside for projects listed in the State Transportation Improvement Program (STIP).
3. **County Road, City Streets, County and Municipal State Aid, and Township Bridges** – Local bridge replacement and rehabilitation projects that are eligible for state transportation bond funding will receive the remaining balance of the State Transportation Bond Funds in the form of matching funds or full participation for eligible construction items. Matching percentages vary depending on road systems and level of activity in the local government’s construction account.

Other important factors used to evaluate and prioritize local bridge projects include their sufficiency rating, the local government’s previous commitment to bridge replacement, and the regional distribution of State Transportation Bond funds.

Figure 4 shows the historical local road bridge replacements over the last four years that have occurred within the State Bridge Grant Program’s existing eligibility criteria for local bridge bonding funds.

Figure 4				
Historical Local Road Bridge Replacements (1995-1998)				
Year	County	City	Township	Total
1995	104	17	87	208
1996	111	25	139	275
1997	60	9	91	160
1998	130	10	112	252
Total	405	61	429	895
Source: Minnesota Department of Transportation Office of Bridges and Structures				

The table shows that State Bridge Grant funds were used during the years 1995 through 1998 to replace a total of 895 local bridges.

Future Outlook

While the level of investment in bridge repair and replacement in recent years has resulted in a steady net reduction of the total number of deficient local bridges, one cannot infer that the same level of commitment will result in similar progress in the future. **In the next ten to twenty years, the demand for resources to replace and repair deficient local bridges will increase significantly due to the aging of the local bridge inventory combined with the larger deck sizes of newer bridges.**

A bridge generally has a useful life of 60-70 years before deterioration or obsolescence requires that the bridge be replaced. As discussed earlier, a deficient bridge is defined as one that is structurally deficient or functionally obsolete, with at least one of the following characteristics: 1) limited load carrying capacity due to deteriorated structural elements, 2) dangerously narrow, 3) too low a clearance for some vehicles to safely pass under, and 4) inadequate protection from high water, and 5) inadequate approach roadway geometry.

Figure 5 shows the number and deck area of the state’s local bridge inventory by the decade in which a bridge was constructed. As the figure indicates, there is an impending “wave” of aging and larger bridges that are coming to the end of their anticipated life cycle. Moreover, in addition to the aging of the bridge infrastructure, demands on the system continue to increase. Bridges are supporting heavier loads and higher traffic volumes than they have in the past.

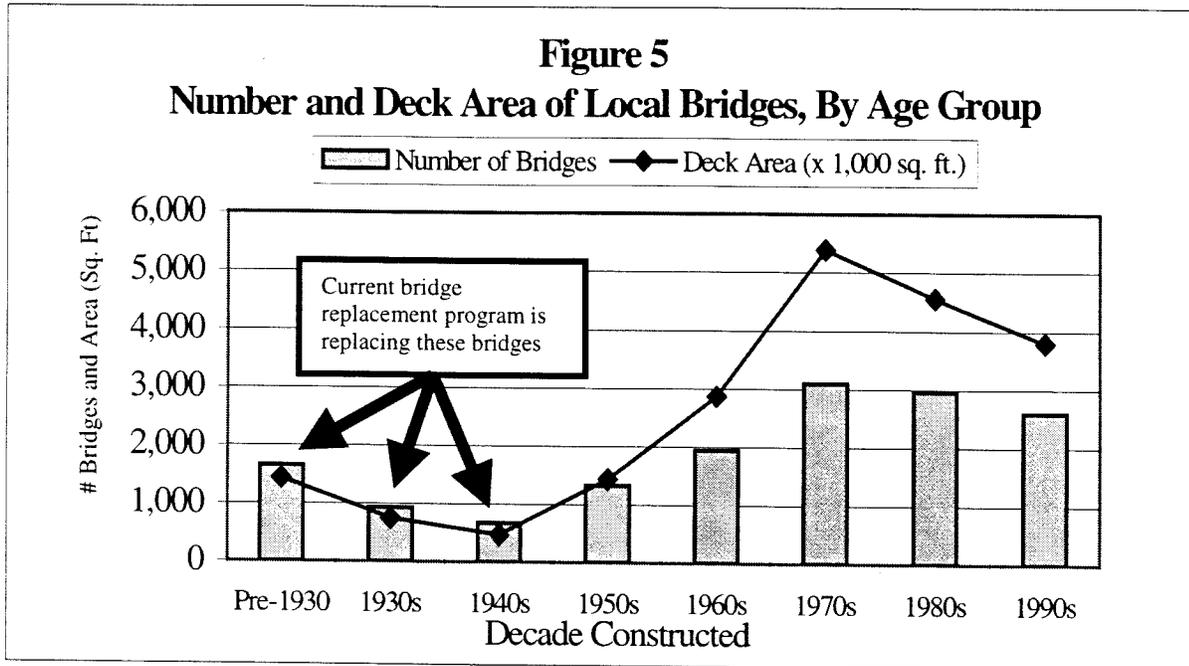


Figure 5 illustrates the principle reason that the state has had success in recent years at reducing the total number of deficient local bridges. Quite simply, the state has had a manageable amount of bridges to replace or repair. As Figure 5 indicates, **the impending “wave” means that the state will need to implement a regular, continuous, local bridge funding program that increases the present commitment if it hopes to maintain the same rate of progress toward further reduction of the number of deficient local bridges.**

These sentiments are echoed in a report by the Minnesota Legislative Auditor called “Highway Spending”¹, published in April, 1997. The report characterized the present and future demands on Minnesota’s bridge replacement program in years to come:

“If additional funding were available, it might be a good time to address the backlog of bridges needing repair or replacement due to deficient structural conditions. In at least 15 to 20 years, Mn/DOT will be facing even more significant bridge replacement needs, since a significant percentage of bridges will begin to meet or exceed their expected life of 60 years.”

¹ Office of the Legislative Auditor, Program Evaluation Division. “Highway Spending”. Report Number: 97-06, page xviii (April 3, 1997)

III. Assessment of Demand for Local Bridge Funding Needs Due to Expansion of Eligibility Criteria

This section of the report includes a series of tables that are intended to respond to the specific question requested of the study: **How would expansion of the eligibility criteria alter the demand for state bridge bonding to finance local bridge replacement and repair?**

The first step in assessing the demand on the State Bridge Grant Program resulting from an expansion of the eligibility criteria is to identify the “baseline”. In the following sub-section called “The Baseline: Total Programmed Bridge Replacements, 2000-2003”, three figures are presented that show the current demand for local bridge bonding needs that are programmed for the next two biennia on the basis of the existing, status quo criteria. Figure 6 shows the total programmed bridge replacements, and Figures 7 and 8 show the two components of the total programmed bridge replacements: structurally deficient bridge replacements and functionally obsolete bridge replacements.

The Baseline: Total Programmed Bridge Replacements, 2000-2003

As indicated above, the “programmed” bridge replacements scheduled and funded from 2000-2003 reflect the current demand on the State Bridge Grant Program, and offer a sound “baseline” for analyzing the impact on modifications to the program’s eligibility criteria.

Figure 6 below shows the programmed city and county bridge replacements programmed for the next four years under the program’s current eligibility criteria. A “programmed” bridge replacement means that funding has been requested by a county board, city council, or township board, and that the bridge has been designated for replacement or rehabilitation funding by the State Aid for Local Transportation Group in Mn/DOT.

Figure 6 includes scheduled funding for bridges that are classified by MnDOT as either structurally deficient or functionally obsolete – the two eligibility criteria that exist under the current program. The dollar figures listed under the column heading “Programmed Costs” represent, in effect, the capital budget request for local bridge replacement and repair for the next two biennia. The data listed in Figure 6 is derived by adding the totals listed for Programmed Structurally Deficient Bridge Replacements (identified in Figure 7) and the Programmed Functionally Obsolete Bridge Replacements (identified in Figure 8).

Primary Data Sources of the Study

I. Survey of County and City Engineers

As a consultant to this project, BRW, Inc. utilized a survey to gather historical information and to poll Minnesota local governments concerning their use and planned use of the State Bridge Grant Program for the next two biennia. Of the 87 counties, 50 returned a completed survey. Of the 127 cities with populations over 5,000, 14 returned a completed survey.

In reviewing the responses to the survey, BRW, Inc. interpreted the low response rate among cities as indicative of the actual demand for State Bridge Grant Program funds in the coming two biennia. The analysis and findings presented in this study assume that those local units of government that chose not to respond to the survey did so because they are not planning to submit any requests for State Bridge Grant Program bonding authority in the next four years.

The survey was open-ended, and asked the following six questions:

1. List historical data for bridge scour damage and repair (if any) in your jurisdiction from July 1, 1995 to July 1, 1999.
2. List data for bridge scour/erosion protection, countermeasure or repairs that are needed in your jurisdiction.
3. List historical data for bridges that have been eliminated (if any) by replacement with a water retention project in your jurisdiction from July 1, 1995 to July 1, 1999.
4. List data for deficient bridges in your jurisdiction that you are planning to eliminate with a water retention project.
5. List historical data for construction of new bridges built in your jurisdiction from July 1, 1995 to July 1, 1999.
6. List data for construction of new bridges anticipated to be built in your jurisdiction.

II. Mn/DOT Records

Mn/DOT provided much of the background information covering historical data included in the report as well as background information on the State Bridge Grant Program.

Figure 6
Total Programmed Bridge Replacements – 2000 to 2003
-BASELINE: Reflects Current Program on Eligibility-
 (Note: Figure 6 = Figure 7 + Figure 8)

Year	Local Government	Number of Programmed Bridges	Programmed Cost (x \$1,000)	Estimated Bond Funding (x \$1,000)
2000	County	191	\$61,430	\$23,601
	City	26	\$14,760	\$4,804
	Township	232	\$27,182	\$238
	Subtotal	449	\$103,372	\$28,643
2001	County	106	\$32,940	\$14,080
	City	14	\$8,230	\$3,014
	Township	118	\$15,041	\$151
	Subtotal	238	\$56,211	\$17,244
2000-2001 Biennium Total		687	\$159,583	\$45,888 (1)
2002	County	90	\$45,062	\$22,134
	City	14	\$12,187	\$4,839
	Township	116	\$14,300	\$278
	Subtotal	220	\$71,549	\$27,250
2003	County	72	\$16,959	\$8,212
	City	1	\$130	\$123
	Township	87	\$9,855	\$235
	Subtotal	160	\$26,944	\$8,570
2002-2003 Biennium Total		380	\$98,493	\$35,820
2000 – 2003 Total		1,067	\$258,076	\$81,708

Note:

(1) At the time that this report went to press, approximately \$3.9 million of the 1998 appropriation was unencumbered but set aside to provide matching funds for federal projects and state funded projects that will be approved early in 2000. Therefore, the actual need in 2000-2001 is reduced to about \$42 million.

Figure 6 shows that 687 structurally deficient and functionally obsolete bridges have been programmed for rehabilitation or replacement during the years 2000 and 2001, (including bridges programmed but not funded in 1999.) The total number of bridges programmed for replacement through 2003 is 1,067, but it is important to note that the projections for 2002-2003 will likely change significantly once more is known regarding the condition of the local bridge inventory at the beginning of the next biennium.

Structurally Deficient Bridges

Figure 7 shows the programmed structurally deficient bridge replacements scheduled for the years 2000 through 2003. Again, these bridges (along with the functionally obsolete bridges) represent the current capital budget request for local bridge replacement and repair for the next two biennia under the existing State Bridge Grant Program eligibility criteria.

Figure 7				
Programmed Structurally Deficient Bridge Replacements – 2000 to 2003				
Year	Local Government	Number of Programmed Bridges	Programmed Cost (x \$1,000)	Estimated Bond Funding (x \$1,000)
2000	County	179	\$59,270	\$22,541
	City	20	\$13,812	\$4,297
	Township	215	\$25,129	\$238
	Subtotal	414	\$98,211	\$27,076
2001	County	96	\$29,181	\$12,240
	City	13	\$7,340	\$2,874
	Township	94	\$11,916	\$151
	Subtotal	203	\$48,437	\$15,265
2000-2001 Biennium Total		617	\$146,648	\$42,341
2002	County	87	\$44,712	\$21,926
	City	13	\$11,297	\$4,699
	Township	94	\$11,587	\$278
	Subtotal	194	\$67,596	\$26,903
2003	County	67	\$15,639	\$7,487
	City	1	\$130	\$123
	Township	74	\$7,999	\$235
	Subtotal	142	\$23,768	\$7,845
2002-2003 Biennium Total		336	\$91,364	\$34,748
2000 – 2003 Total		953	\$238,012	\$77,089

Figure 7 shows that 617 structurally deficient bridges are programmed for replacement during the 2000 – 2001 biennium, at an estimated cost of \$146.6 million. The impact on the grant program for the 617 bridges will be \$42.3 million in state bond funds.

The impact on the grant program for the 336 bridges programmed for the 2002 – 2003 biennium is \$34.7 million, which is the current estimate of the total requests for state grant bond funding for structurally deficient bridge projects anticipated to be submitted by local governments for the next biennium. (This list does not include functionally obsolete bridge replacements.)

Functionally Obsolete Bridges – Expansion Criteria #3

Figure 8 shows the extent to which the State Bridge Grant Program will provide funds to finance replacement and repair of functionally obsolete local bridges in the next two biennia. It is important to re-emphasize the fact that the language mandating this study suggested that functionally obsolete bridges are not currently eligible for funds from the State Bridge Grant Program. In fact, Mn/DOT's current policy is to consider functionally obsolete bridges as "deficient" and as such, the Department considers them to be eligible for bond funding through the program.

Figure 8				
Programmed Functionally Obsolete Bridge Replacements – 2000 to 2003				
Year	Local Government	Number of Projects	Cost of Projects (x \$1,000)	Est. Bond Funds F.O. Projects (x \$1,000)
2000	County	12	\$2,161	\$1,060
	City	6	\$948	\$507
	Township	17	\$2,053	\$0
	Subtotal	35	\$5,162	\$1,567
2001	County	10	\$3,759	\$1,840
	City	1	\$890	\$140
	Township	24	\$3,124	\$0
	Subtotal	35	\$7,773	\$1,980
2000-2001 Biennium Total		70	\$12,935	\$3,547
2002	County	3	\$350	\$207
	City	1	\$890	\$140
	Township	22	\$2,713	\$0
	Subtotal	26	\$3,953	\$347
2003	County	5	\$1,320	\$725
	City	0	\$0	\$0
	Township	13	\$1,856	\$0
	Subtotal	18	\$3,176	\$725
2002-2003 Biennium Total		44	\$7,129	\$1,072
2000 – 2003 Total		114	\$20,064	\$4,619

Seventy functionally obsolete bridges are programmed for replacement in the 2000 – 2001 biennium at an estimated cost of \$12.9 million. An estimated \$3.5 million in bond funds will be used to construct these 70 bridges. A total of 114 functionally obsolete bridges are programmed for replacement during the four year period from 2000 to 2003. As stated earlier, these bridges – along with the structurally deficient bridges shown in Figure 7 – comprise all of the local bridges that meet the state's existing eligibility criteria for bond funding through the State Bridge Grant Program.

Analysis of Proposed Expansion Criteria

This section of the report focuses on an assessment of the demand for bond funding that would result by an expansion of the State Bridge Grant Program to include three additional criteria. Each proposed expansion is addressed in isolation, and includes two tables. The first provides historical information concerning the number and construction costs of projects undertaken by local governments during the four-year period from 1995 through 1998. The second table included for each of the proposed additional expansion criteria provides information on the number and construction costs (including bond funding) for projects scheduled for construction by local governments in the next four year from 2000 through 2003.

Flood-Related Erosion Protection Projects – Expansion Criteria #1

This section of the study provides information on the first of the three proposed eligibility criteria under consideration for expansion in the State Bridge Grant Program: “allowing grants to be used for the costs of flood related erosion protection”.

Figure 9 shows the cost of flood-related erosion protection projects expended by local governments over the last the last four years. This information is included to provide some perspective on the recent construction of flood-related erosion protection projects in order to assess the future demand for state bond funds if program eligibility is expanded to include such projects.

Year	Number of Flood-Related Erosion Protection Projects	Cost of Erosion Protection Projects (x \$1,000)
1995	4	\$19
1996	21	\$194
1997	9	\$83
1998	4	\$31
Total	38	\$327

During the period from 1995 through 1998, local units of government have used local funds to construct 38 erosion control protection projects at a cost of \$327,265.

Figure 10 shows the scheduled flood related erosion protection projects for 2000 through 2003. The information presented in the table represents a projection of the impact on the demand for state bond funds that will occur over the next four years if the program’s eligibility criteria are expanded to include flood-related erosion protection projects.

Figure 10
Scheduled Flood Related Erosion Protection Projects - 2000 to 2003

Year	Local Government	Number of Projects	Cost of Projects (x \$1,000)	Estimated Bond Funding (x \$1,000)
2000	County	29	\$339	\$339
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	29	\$339	\$339
2001	County	7	\$214	\$214
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	7	\$214	\$214
2000-2001 Biennium Total		36	\$553	\$553
2002	County	7	\$99	\$99
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	7	\$99	\$99
2003	County	20	\$516	\$516
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	20	\$516	\$516
2002-2003 Biennium Total		27	\$615	\$615
2000 – 2003 Total		63	\$1,168	\$1,168

Counties have scheduled 36 erosion control projects during the 2000 – 2001 biennium at an estimated cost of \$553,100. (Note: This information was obtained from a survey mailed to all counties and cities.)

Water Retention Projects – Expansion Criteria #2

This section of the study provides information on the second of the three proposed eligibility criteria under consideration for expansion in the State Bridge Grant Program: “allowing grants to be used for construction of water-retention projects where such a project is more cost efficient than replacement of an existing bridge”.

Figure 11 shows the cost of water-retention projects expended by local governments over the last the last four years. This information is included to provide some perspective on the recent construction of water retention projects in order to assess the future demand for state bond funds if program eligibility is expanded to include such projects.

Figure 11		
Historical Water Retention Projects Constructed In-Lieu of Bridge Replacements		
Year	Number of Water Retention Projects	Cost of Erosion Protection Projects (x \$1,000)
1995	5	\$181
1996	1	\$12
1997	1	\$26
1998	0	\$0
Total	7	\$219

Town Bridge Account funds or local funds were used to fund 7 water retention projects for the years 1995 through 1998 at a cost of \$219,273.

Figure 12 shows the scheduled water retention projects for 2000 through 2003. The information presented in the table represents a projection of the impact on the demand for state bond funds that will occur over the next four years if the program's eligibility criteria are expanded to include water retention projects.

Figure 12
Scheduled Water Retention Projects In-Lieu of Bridge Replacements – 2000 to 2003

Year	Local Government	Number of Projects	Cost of Projects (x \$1,000)	Estimated Bond Funding (x \$1,000)
2000	County	0	\$0	\$0
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	0	\$0	\$0
2001	County	0	\$0	\$0
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	0	\$0	\$0
2000-2001 Biennium Total		0	\$0	\$0
2002	County	2	\$105	\$105
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	2	\$105	\$105
2003	County	0	\$0	\$0
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	0	\$0	\$0
2002-2003 Biennium Total		2	\$105	\$105
2000 – 2003 Total		2	\$105	\$105

Counties have scheduled no water retention projects during the 2000 – 2001 biennium and two water retention projects during the 2002-2003 biennium at an estimated cost of \$105,000. (Note: This information was obtained from a survey mailed to all counties and cities.)

Construction of Bridges on New Alignments – Expansion Criteria #4

This section of the study provides information on the last of the three proposed eligibility criteria under consideration for expansion in the State Bridge Grant Program: “allowing grants to be used for construction of bridges on new alignments”.

Figure 13 shows the cost of construction of bridges on new alignments expended by local governments over the last the last four years. This information is included to provide some perspective on the recent construction of bridges on new alignments in order to assess the future demand for state bond funds if program eligibility is expanded to include such projects.

Figure 13			
Historical Construction of Bridges on New Alignments, No Replacement			
Year	Number of Bridges Constructed	Cost of Projects x (\$1,000)	Non-Federal Fund Participation (x \$1,000)
1995	1	\$136	\$136
1996	1	\$2,500	\$500
1997	1	\$85	\$85
1998	1	\$50	\$50
Total	4	\$2,771	\$771

During the years 1995 through 1998, local units of government constructed four (4) bridges at a cost of \$2.7 million. Those local units of government provided \$771,264 in local or non-federal funds.

Figure 14 shows the scheduled construction of bridges on new alignments for 2000 through 2003. The information presented in the table represents a projection of the impact on the demand for state bond funds that will occur over the next four years if the program's eligibility criteria are expanded to include construction of bridges on new alignments.

Figure 14
Scheduled Construction of Bridges on New Alignments, No Replacement – 2000 to 2003

Year	Local Government	Number of Bridges	Estimated Cost of Scheduled Bridges (x \$1,000)	Estimated Bond Funds (x \$1,000)
2000	County	1	\$60	\$60
	City	1	\$1,800	\$360
	Township	0	\$0	\$0
	Subtotal	2	\$1,860	\$420
2001	County	2	\$3,050	\$3,050
	City	2	\$8,500	\$1,700
	Township	0	\$0	\$0
	Subtotal	4	\$11,550	\$4,750
2000-2001 Biennium Total		6	\$13,410	\$5,170
2002	County	0	\$0	\$0
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	0	\$0	\$0
2003	County	0	\$0	\$0
	City	0	\$0	\$0
	Township	0	\$0	\$0
	Subtotal	0	\$0	\$0
2002-2003 Biennium Total		0	\$0	\$0
2000 – 2003 Total		6	\$13,410	\$5,170

For 2000-2001, three counties and three cities have scheduled a total of six (6) new bridges to be constructed in locations where bridges currently don't exist. The total estimated construction cost is \$13.4 million, which would require an estimated \$5.17 million in bond funds in the 2000 - 2001 biennium to build the 6 bridges. The responses to the survey did not indicate any scheduled projects during the 2002 – 2003 biennium.

Summary of Programmed and Scheduled Bridge Projects (Current Program plus Expansion Criteria)

Figure 15 below summarizes the projected effects of expanding the eligibility criteria of the State Bridge Grant Program beyond the current eligibility criteria quantified in Figure 6. The data in this table is derived by adding the totals listed for total programmed bridge replacements (including structurally deficient and functionally obsolete bridge replacements, identified in Figure 6), the local, scheduled (not programmed) work for flood-related erosion control protection projects (identified in Figure 10), water retention projects in-lieu of bridge replacements (identified in Figure 12), and construction of new bridge alignments (identified in Figure 14).

Figure 15				
Summary of Programmed and Scheduled Bridge Projects – 2000 to 2003				
-Reflects Current Program plus Expansion Criteria-				
(Note: Figure 15 = Sum of Figures 6, 10, 12, 14)				
Year	Local Government	Number of Programmed Bridges	Programmed Cost (x \$1,000)	Estimated Bond Funding (x \$1,000)
2000	County	221	\$61,830	\$24,001
	City	27	\$16,560	\$5,164
	Township	232	\$27,182	\$238
	Subtotal	480	\$105,572	\$29,403
2001	County	115	\$36,204	\$17,343
	City	16	\$16,730	\$4,714
	Township	118	\$15,041	\$151
	Subtotal	249	\$67,975	\$22,208
2000-2001 Biennium Total		729	\$173,547	\$51,611
2002	County	99	\$45,266	\$22,338
	City	14	\$12,187	\$4,839
	Township	116	\$14,300	\$278
	Subtotal	229	\$71,753	\$27,455
2003	County	92	\$17,475	\$8,728
	City	1	\$130	\$123
	Township	87	\$9,855	\$235
	Subtotal	180	\$27,460	\$9,086
2002-2003 Biennium Total		409	\$99,213	\$36,541
2000 – 2003 Total		1,138	\$272,760	\$88,152

IV. Conclusion and Recommendations

An examination of the State Bridge Grant Program is appropriate and important because the Legislature is preparing to enact a major capital investment bill during the 2000 legislative session, which will commit state bond funds to support replacement and repair of Minnesota's local bridges. This study addresses the potential impacts from expanding the eligibility criteria to provide bond funds for local bridge projects beyond those that are simply "deficient".

An examination of local bridge funding is critical because the condition of the Minnesota's local bridges directly affects the economic vitality and potential of communities across Minnesota. The condition of local bridges is also important element to ensuring public safety. Without adequate financial support, local bridges threaten to become "obstacles" on the transportation system, inhibiting the safe and efficient movement of goods and people throughout Minnesota.

Among the study's principal conclusions:

1. Expanding the State Grant Bridge Program by extending the eligibility criteria to include a broader range of local bridge projects and related needs directly supports many of the statutory goals of the transportation system, listed in M.S. 174.01, Subdivision 2; particularly those concerning economic development and public safety.
2. The total estimated impact on the demand for additional bond funds due to expansion of the eligibility criteria is projected at \$5.723 million in the 2000-2001 biennium, and \$720,000 in the 2002-2003 biennium. Figure 16 on the following page presents the projected impact of expanding the eligibility criteria to include bridge projects for flood related erosion protection, water retention projects, and construction of new alignments.
3. Expanding the grant program's eligibility criteria to include bridge projects for flood-related erosion protection will have only a modest impact on demand for additional state bond funds.
4. Expanding the grant program's eligibility criteria to include construction of water retention projects that are more cost efficient than replacing an existing bridge will have only a modest impact on demand for additional state bond funds. A significant benefit from including water retention projects in the program's eligibility criteria is that deficient bridges are removed from the current inventory, eliminating the need for any future financial support.
5. Expanding the grant program's eligibility criteria to include construction of bridges on new alignments will have a more substantial impact on the demand for state bond funds during the next two biennia. The estimated cost for the 2001-2002 biennium is \$5.17 million. The \$5.17 million is projected to leverage \$8 million, so a total of \$13 million in new bridge alignments can be constructed with the \$5.17 million in bond funds.

Figure 16**Comparison of Demand for Bonds Under Existing Criteria vs. Demand with Expanded Program**

Criteria	Current Demand on Bond Funding (x \$1,000)		Projected Demand on Bond Funding (x \$1,000)		Difference (x \$1,000)	
	2000-01	2002-03	2000-01	2002-03	2000-01	2002-03
Structurally Deficient Bridges (Figure 7)	\$42,341	\$34,748	\$42,341	\$34,748	\$0	\$0
Functionally Obsolete Bridges (Figure 8)	\$3,547	\$1,072	\$3,547	\$1,072	\$0	\$0
Flood Related Erosion Protection (Figure 10)	\$0	\$0	\$553	\$615	\$553	\$615
Water Retention Projects (Figure 12)	\$0	\$0	\$0	\$105	\$0	\$105
Construction of Bridges on New Alignments (Figure 14)	\$0	\$0	\$5,170	\$0	\$5,170	\$0
Totals	\$45,888	\$35,820	\$51,611	\$36,540	\$5,723	\$720

Recommendations:

1. Continuation of a substantial and regular replacement program is needed to address the large bridge reconstruction “wave” created by the increased number and larger deck size of bridges built in the post World War II era that are beginning to reach the end of their useful life.
2. Mn/DOT recommends that the State Bridge Grant Program continue to provide grant funds for replacement and repair of functionally obsolete bridges, per current policy.
3. Mn/DOT recommends expanding the eligibility criteria to include water retention projects and flood-related erosion projects. Increased demand on state bond funds that would result by expanding the program to include these projects can be absorbed within the resources currently available.
4. Expanding the eligibility criteria to construction of bridges on new alignments is clearly an expansion of the original purpose of the local deficient bridge replacement and rehabilitation program, which was to provide funds for existing structures. While Mn/DOT recognizes that state support of construction of local bridges on new alignments is consistent with the state’s goals of the transportation system, Mn/DOT does not recommend that the bridge replacement program’s eligibility criteria be expanded to include construction of new alignments.

If the Legislature decides that the eligibility criteria for local bridge bonding should be extended to construction of bridges on new alignments, then additional funding will be required for this purpose. Any new program should include the following elements:

- 4-A. Additional funds for bridges on new alignments should be based on the local government's request that is identified in their 5-year program. Local requests for state bridge bonds to fund bridges on new alignments will be considered when there is demonstrated evidence that the local government's proposal meets cost efficiency criteria, has been subject to adequate public review, and is selected as the optimal alternative.
 - 4-B. In addition to the existing application criteria for State Bridge Grant Funds, the local government should demonstrate that the proposal meets the administration's "smart growth" criteria. The application must also describe the proposed project's benefit to the larger region.
 - 4-C. The Legislature should enact a sunset provision for the use of grant funds on new alignments. The sunset provision would require the local government to complete the project development and design within a specific time frame (perhaps 3 years), or the appropriation from the sale of the bonds are returned to the state, if in fact the bonds were sold.
- 5. Historically, the state has not committed substantial bonding resources to local bridge projects for "preservation", for example, deck replacement, painting, and rail repair. The Legislature should consider expanding the use of bond funds for these projects on bridges not classified as structurally deficient.
 - 6. Any modifications that the Legislature makes to the State Bridge Grant Program which expand the program's eligibility criteria should not result in any fundamental changes in the role of the program. Mn/DOT will continue to work with local governments to ensure that the State Bridge Bond Program serves the best interests of the state as a whole and that the use of state bonds continue to support fiscally responsible spending alternatives.

Glossary of Terms

- **State Bridge Grant Program**

Initiated in 1976, the State Bridge Grant Program provides financial support for the replacement or rehabilitation of local bridge projects through grants provided by state general obligation bond proceeds.

- **Structurally Deficient bridge**

A bridge or culvert which has one or more of its major components in poor structural condition.

- **Functionally Obsolete bridge**

A bridge structure which does not meet the criteria established for width, clearance, roadway alignment, or load carrying capacity.

- **“Scheduled” bridge project**

A scheduled local bridge project is a project that has been included in the county 5-year construction plan. The new projects that would be included in the program if the criteria were expanded are “scheduled” bridge projects.

- **“Programmed” bridge replacement**

A programmed bridge replacement project is one in which funding has been requested by a county board, city council, or township board, and the bridge has been designated for replacement or rehabilitation funding by the State Aid for Local Transportation Group in Mn/DOT.

- **“Sufficiency ratings”**

Ratings on the condition of a bridge assigned by the Federal Highway Administration (FHWA) in consultation with the states on the basis of regular bridge inspections. The sufficiency rating determines the eligibility of deficient local bridges to receive federal and state funds for bridge replacement and/or rehabilitation. A sufficiency rating is an all-purpose indicator that measures structural adequacy, functional obsolescence, and essentiality for public use.
