THE FIX WE'RE IN FOR:
The State of Minnesota's Bridges 2015

Transportation for America

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About the data. The data in this report comes from the U.S. Federal Highway Administration's (FHWA) National Bridge Inventory. The NBI consists of federally-required data, collected by each state throughout the year and then reported to the FHWA each year. It is released early in the following year. This data is from 2014, released in early 2015 by FHWA. All data is publicly-available from FHWA sets: http://www.fhwa.dot.gov/bridge/deficient.cfm

Transportation for America is an alliance of elected, business and civic leaders from communities across the country, united to ensure that states and the federal government step up to invest in smart, homegrown, locally-driven transportation solutions — because these are the investments that hold the key to our future economic prosperity. Transportation for America is a project of Smart Growth America. t4america.org

Minnesota's deficient bridges: How will we pay to repair them?

Every day, millions of people from all walks of life in Minnesota cities, towns and rural areas travel over one of the state's 12,961 bridges — essentially any structure longer than 20 feet that carries vehicle traffic. These bridges carry commuters through and within our cities, move people from town to town, help farmers bring their goods to market, and get freight from A to B each and every day.

But today, far too many of these bridges are rated structurally deficient — bridges in urgent need of repair or replacement. Minnesota today has **830 structurally deficient bridges**, representing 6.4 percent of the state's 12,961 bridges. Those 830 bridges represent a looming crisis for the state.

The **average age of these sub-par bridges is 66 years** — well over the typical design life of 50 years and nearly double the average age of all Minnesota bridges (35 years old). **More than one in ten Minnesota bridges were built before 1948** — which means more than 1,300 bridges are older than the Korean War and creation of Medicare.

Minnesota drivers collectively took close to 628 million trips over deficient bridges in 2014. That's more than 1.7 million trips per day or almost 1,200 trips every minute taken over deficient Minnesota bridges in 2014.

830
structurally deficient bridges

628
million
trips over deficient bridges in 2014

1200
trips every minute

Minnesota bridges aren't getting any younger

Average bridge age: 35 years

Average designed lifespan: 50 years

Average age of structurally deficient bridges: 66 years

A bridge on I-35 southbound in Duluth was closed for nearly a month for emergency repairs in 2013 after a corroded support piling was discovered in an inspection.

1,300+ MN bridges are older than the Korean War and creation of Medicare.

What does "structurally deficient" mean?

Highway bridges have three primary components: 1) the deck, which is the surface of the bridge that cars, trucks and people contact — the pavement, typically; 2) the superstructure, which consists of the components that support the deck; and 3) the substructure, which is where the bridge contacts the ground. Each of these bridge features is given a rating between 0 and 9 when inspected, with 9 signifying the best condition. Federal guidelines classify bridges as "structurally deficient" if one of these three key components is rated at 4 or less (poor or worse), meaning engineers have identified a major defect in its support structure or its deck. (There are a handful of other criteria that can result in a deficient grade, but for the majority of deficient bridges, one of these three primary components rates a 4 or below.) Federal law requires states to inspect all bridges 20 feet or longer at least every two years, though states typically inspect structurally deficient bridges far more often.

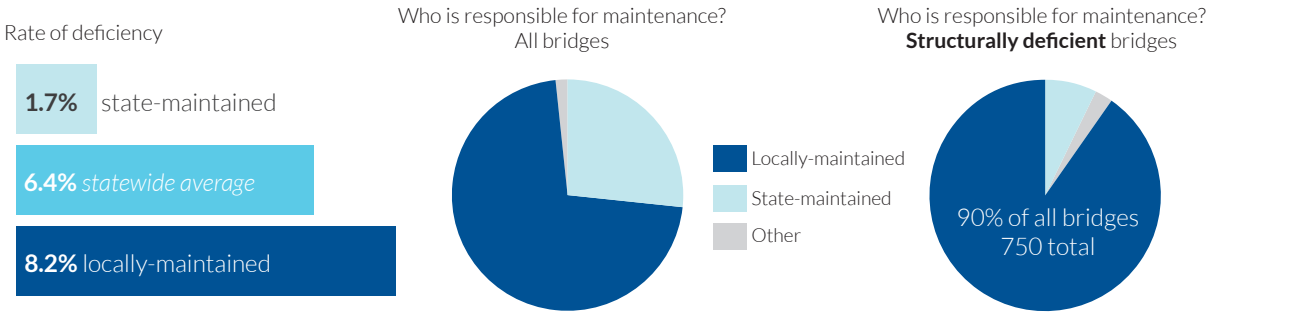
Minnesotans and Minnesota businesses rely on bridges each day that are subject to closure or weight restriction if increased maintenance and reconstruction are not undertaken — a potentially crippling impact on personal travel and freight movement. And as the location of the most deadly bridge collapse in recent American history, Minnesotans know the impacts better than most.

Who will pay the tab?

The funds to repair bridges come mostly from gas taxes at the federal and state levels, from property, sales or other taxes at the local level, and state and local bonding. Federal dollars are flat or falling; the federal tax has lost about a third of its value to inflation since it was last raised in 1993. Legislation passed by the Minnesota legislature in 2008 following the I-35W collapse raised the gas tax by 8.5 cents per gallon over several years, but the value of state revenues is expected to decline against rising construction costs and debt service payments over the coming decades.

The situation is worse at the local level. No federal money is dedicated to repairing local bridges — and the federal contributions that once helped address the backlog are shrinking. A portion of state gas tax revenues and bond proceeds flow to local governments, but only a small share of state funds is dedicated to repairing local bridges.

Over 90 percent (750 total) of the state's 830 deficient bridges are locally-maintained



Ownership of a bridge usually determines who is responsible for funding repairs, regular maintenance or replacement. Of the 12,961 bridges in Minnesota, only 3,618 (27.9 percent) are maintained by the state. 9,137 (70.5 percent) are maintained by localities or counties.

8.2 percent of those 8,233 locally-maintained bridges are structurally deficient, significantly higher than the state's average rate of 6.4 percent. And a staggering **90 percent (750 total) of Minnesota's 830 deficient bridges** are maintained by local entities.

Why are locally owned bridges faring worse?

In MAP-21, the current federal transportation law, Congress reduced access to dedicated funding for the repair of most locally-owned bridges. Although these bridges account for nearly 90 percent of all deficient bridges nationally, all dedicated federal bridge repair money now goes toward the ten percent of deficient bridges on the National Highway System (which do, admittedly, carry far more traffic each day.)

These locally-owned bridges provide essential links, and those who use them also deserve to be safe. Given the budget woes of so many local governments, there is little prospect of reducing the repair backlog absent federal or state assistance. As it stands now, however, these bridges are forced to compete with all other local priorities such as health care and public safety. At the state level, these bridges are often at the mercy of the budgeting process, and unless the state's overall transportation budget grows through an increase in the gas tax or other funding sources, the condition of these bridges is unlikely to markedly improve in the coming years.

Have things gotten better in Minnesota?

Minnesota made solid progress in reducing the share of deficient bridges in the years following the 2007 collapse of the I-35W bridge collapse, aided by temporary infusions from state-funded bonds and the federal stimulus. As those funding sources wane, the state is facing a growing gap in its capacity to repair or replace the thousands of bridges nearing the end of their designed lifespans. This is coming as federal support becomes less and less certain.

The absence of adequate funding could return us to the early 1990s, when more than one in five U.S. highway bridges was structurally deficient. That situation prompted creation of a federal bridge program that was eliminated in 2012, despite its success in significantly reducing deficient bridges. Now, with federal funding flat or falling, the state and, in particular, local governments are faced with a growing share of the burden.

County data: see the table at the end of the report for a summary of data broken up by county.

RECOMMENDATIONS

1) Increase federal and state funding for transportation investments

Current spending levels are precarious and inadequate in the face of declining gas tax revenues, inflation and improved vehicle fuel efficiency. In order to bring our rapidly aging infrastructure up to a state of good repair, we need an increase in the dedicated revenues for surface transportation programs at the state and federal levels, including funding bridge repair. The state should raise new revenues for transportation.

Congress also needs to do its part. At least 19 states have raised their own transportation revenues since 2012, and Congress needs to reward their efforts by fulfilling the historic federal role as a trusted partner in transportation investment. The nation's highway trust fund is teetering on the edge of insolvency, and Congress should mirror the decisive courage of the leaders in these 19 states and raise new stable revenues to end the uncertainty surrounding the federal transportation program that's limped from one short term extension to another and staved off insolvency only through creative accounting gimmicks. Doing so would allow the State of Minnesota and local officials to better address their needs, including the repair of a backlog of structurally deficient bridges.

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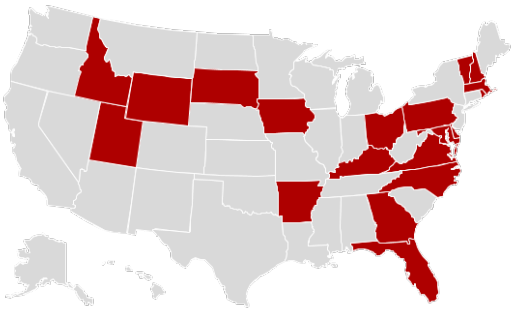
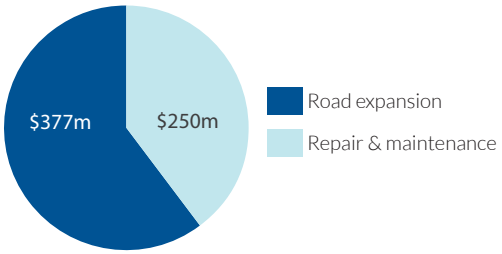


2) Prioritize repair and maintenance

Each new road, bridge or lane-mile also incurs a financial liability that will require resources for decades to come. We must adequately account for the full life-cycle cost of our transportation investments and prioritize the repair and basic maintenance of the system to ensure future generations are granted safe and efficient mobility options.

Between 2009 and 2011, the latest year with available data, all U.S states collectively spent $20.4 billion annually to build new roadways and add lanes to existing roads, and just $16.5 billion annually repairing and preserving existing roads and bridges. In Minnesota, out of the $627 million on average spent annually on road expansion and repair from 2009-2011, only 40 percent ($250 million) went toward repair and maintenance. As the state raises new revenue for transportation, they should also ensure the system is adequately maintained by prioritizing repair with any new funding.

Minnesota road maintenance vs repair spending, annual average 2009-2011



From Repair Priorities 2014, Smart Growth America.

3) Improve transparency and accountability by measuring performance

Transportation dollars must be tied to tangible performance and accountability measures to give citizens concrete assurances of progress; that the investments made led to the positive outcomes promised. Demonstrating that money is well spent is key to restoring taxpayer confidence and building their support for any potential increase in revenues. Moving to a performance-based system for evaluating projects — a process already begun by the state — with clear, measurable metrics should be part and parcel of any new revenues raised for transportation.

4) Give local communities more access to transportation dollars

Regardless of who "owns" the transportation asset, mayors and other local elected leaders are the ones who face the music from citizens when bridges need repair, when mounting congestion makes commutes unpredictable, and when families can't safely walk their kids to school — yet those same leaders are too often left out of the discussions over what gets built and where. That needs to change.

A bill currently before Congress, **the Innovation in Surface Transportation Act**, would create a small competitive grant program in each state where local communities could apply and win federal funding directly on the merits of their project, decided by a panel made up of state and local officials — giving them a voice in the process.[1]

The state should improve project selection criteria for the Corridors of Commerce and Transportation Economic Development programs and expand these programs to ensure local transportation priorities are addressed in a timely manner.

1 Read more on the Innovation in Surface Transportation Act here. http://t4america.org/2015/03/18/senators-and-reps-respond-to-locals-pleas-introduce-bill-to-steer-more-money-to-local-transportation-needs/

Summary county-level data

Ranked by percentage structurally deficient

County	Percent structurally deficient	Total bridges	Number deficient	Avg. age of deficient bridges	Percent of deficient bridges locally-owned	Total built before 1948
Lincoln County	23.0%	100	23	66	100.0%	31
Pipestone County	19.0%	168	32	58	100.0%	35
Redwood County	16.0%	188	30	62	96.7%	25
Mower County	15.9%	328	52	78	96.2%	66
Carver County	15.8%	114	18	65	100.0%	14
St. Louis County	15.7%	648	102	67	94.1%	112
Renville County	15.4%	130	20	61	100.0%	8
Mahnomen County	14.6%	41	6	62	100.0%	2
Chippewa County	13.6%	118	16	57	81.3%	9
Cook County	11.3%	53	6	47	50.0%	7
Fillmore County	11.2%	329	37	72	100.0%	74
Sherburne County	11.1%	45	5	68	80.0%	5
Sibley County	10.0%	100	10	52	100.0%	5
Martin County	9.3%	162	15	85	100.0%	24
Carlton County	8.5%	129	11	68	72.7%	17
Waseca County	8.3%	84	7	71	100.0%	10
Rock County	8.0%	249	20	68	95.0%	22
Houston County	7.9%	164	13	82	100.0%	21
Swift County	7.9%	89	7	66	71.4%	3
Douglas County	7.7%	39	3	49	0.0%	0
Wilkin County	7.6%	197	15	68	86.7%	17
Jackson County	7.4%	189	14	67	100.0%	18
Chisago County	7.3%	55	4	50	100.0%	5
Aitkin County	7.1%	99	7	53	57.1%	9
Lake County	7.0%	86	6	61	33.3%	6
Hubbard County	6.8%	44	3	50	100.0%	4
Otter Tail County	6.8%	147	10	54	100.0%	9
Itasca County	6.7%	163	11	63	63.6%	16
Faribault County	6.6%	213	14	55	100.0%	11
Cass County	6.4%	78	5	60	100.0%	7
Nicollet County	6.3%	48	3	61	0.0%	3
Todd County	6.1%	131	8	72	100.0%	14
Norman County	6.0%	149	9	64	100.0%	13
Clay County	6.0%	217	13	73	84.6%	17
Becker County	5.9%	51	3	55	100.0%	4

County	Percent structurally deficient	Total bridges	Number deficient	Avg. age of deficient bridges	Percent of deficient bridges locally-owned	Total built before 1948
Ramsey County	5.8%	311	18	60	55.6%	23
Roseau County	5.7%	141	8	65	100.0%	8
Hennepin County	5.5%	858	47	72	80.9%	93
Winona County	5.4%	223	12	65	83.3%	23
Dodge County	5.3%	169	9	70	100.0%	26
Murray County	4.7%	129	6	54	100.0%	14
Steele County	4.5%	132	6	48	66.7%	7
Kandiyohi County	4.5%	88	4	56	100.0%	10
Le Sueur County	4.5%	67	3	65	100.0%	15
Kittson County	4.5%	157	7	56	71.4%	11
Traverse County	4.3%	116	5	55	100.0%	7
Freeborn County	4.3%	140	6	60	83.3%	10
Lyon County	4.3%	234	10	60	100.0%	25
Morrison County	4.3%	164	7	63	100.0%	17
Lac qui Parle County	4.2%	167	7	62	100.0%	13
Yellow Medicine County	4.1%	222	9	78	100.0%	25
Washington County	4.0%	101	4	80	50.0%	6
Marshall County	3.8%	213	8	65	100.0%	16
Blue Earth County	3.6%	192	7	65	85.7%	20
Goodhue County	3.5%	314	11	86	90.9%	70
Wabasha County	3.5%	144	5	72	80.0%	24
Red Lake County	3.4%	59	2	61	50.0%	5
Grant County	3.3%	30	1	62	100.0%	3
Meeker County	3.3%	61	2	88	100.0%	3
Beltrami County	3.3%	92	3	61	33.3%	3
Koochiching County	3.3%	92	3	43	100.0%	4
Pine County	3.1%	163	5	61	60.0%	11
Mille Lacs County	2.9%	105	3	45	100.0%	0
Wadena County	2.7%	73	2	52	100.0%	0
Brown County	2.7%	110	3	71	66.7%	10
Cottonwood County	2.7%	147	4	74	100.0%	25
Polk County	2.7%	258	7	73	71.4%	12
McLeod County	2.7%	75	2	48	100.0%	1
Benton County	2.6%	115	3	57	100.0%	11
Olmsted County	2.6%	346	9	61	100.0%	37
Stearns County	2.2%	223	5	57	100.0%	26
Stevens County	2.2%	45	1	61	100.0%	6
Rice County	2.2%	135	3	55	100.0%	8
Pope County	2.2%	45	1	15	100.0%	3

County	Percent structurally deficient	Total bridges	Number deficient	Avg. age of deficient bridges	Percent of deficient bridges locally-owned	Total built before 1948
Anoka County	2.1%	140	3	53	100.0%	3
Clearwater County	2.1%	48	1	86	100.0%	6
Pennington County	2.1%	48	1	88	100.0%	3
Watonwan County	1.8%	163	3	49	100.0%	25
Crow Wing County	1.5%	67	1	105	100.0%	6
Kanabec County	1.3%	79	1	47	100.0%	4
Scott County	1.0%	102	1	38	100.0%	4
Nobles County	0.7%	296	2	94	100.0%	31
Dakota County	0.4%	235	1	104	100.0%	16
Isanti County	0.0%	36	0	N/A	N/A	0
Wright County	0.0%	70	0	N/A	N/A	5
Big Stone County	0.0%	15	0	N/A	N/A	5
Lake of the Woods County	0.0%	61	0	N/A	N/A	3