

# Rural areas on road to infrastructure crisis

## As heavily trafficked roadways and bridges crumble, states scramble to find funding for much-needed maintenance

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Most rural Midwesterners are well aware that their roads and bridges, designed primarily from the 1930s through the 1960s, are now handling loads and traffic that the original builders could not have imagined.

Heavier grain carts, manure tanks, and trucks hauling commodities, as well as a rising number of non-farm rural residents who work in neighboring metropolitan areas, have increased demands on local roads. Bridges are also being stressed with today's heavy hauling weights.

Rural road safety is a particular concern. Rural roads, which are narrower, have fewer safety features such as guardrails, and carry less traffic (thus encouraging faster driving), account for about 40 percent of the vehicle miles traveled nationwide but almost 57 percent of the fatalities.

But the condition of rural roads and bridges is also important to our food supply.

A 2010 report by the U.S. Department of Agriculture found that rural transportation systems are a key factor in food costs and that market changes in both food and fuel would further increase the reliance on rural roads to move products. Increasing ethanol production and new gas fields have significantly increased loads on the Midwest's rural roads in the last decade. Travel per lane-mile in the region has risen more than 15 percent in the same time frame.

### Detours increase farm transport costs

Focusing specifically on the issue of bringing crops to market, a study by the Soy Transportation Coalition (a group of soybean association boards from 10 Midwestern states) looked at the potential economic impact of closed or weight-restricted bridges on farmers. The study shows farmers could lose 5 cents per bushel for each load of grain that is detoured.

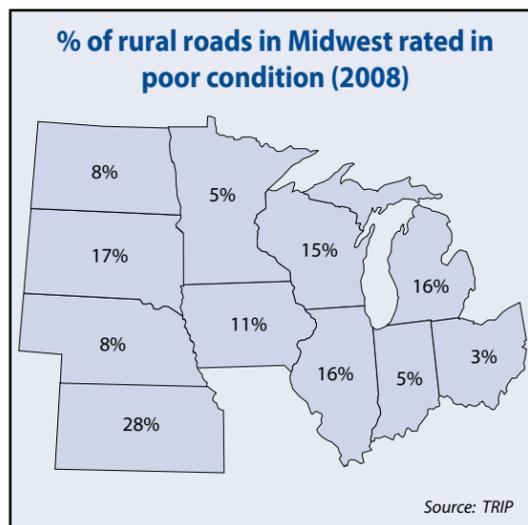
Because of high fuel prices, any detours can be costly, and bridge problems can cause detours of as long as 20 miles. These costs drive down the farm value of crops, with transportation often accounting for 30 percent to 60 percent of the difference between on-farm prices and market prices.

Transportation challenges are critical to getting farm products to the market.

TRIP, a national transportation research group, rates 12 percent of the nation's major rural roads as being in poor condition. Four Midwestern states rank in the bottom 20 in this category: Kansas, with 28 percent, and South Dakota, Michigan and Illinois, each with 17 percent.

TRIP also found that 13 percent of rural bridges are structurally deficient and 10 percent more are functionally obsolete. In the Midwest, Iowa, South Dakota, Nebraska and North Dakota are among the 10 states with the highest percentage of obsolete bridges.

Report after report recommends an increase in local and state transportation projects to preserve rural roads,



highways and bridges and to accommodate the traffic needed to support a rural economy.

"There is little question regarding the work to be done; rather, the difficulty arises over how to finance the projects," notes Republican Rep. Tom Saunders, a member of the local government and transportation committees in the Indiana House.

For example, building a new asphalt road costs between \$200,000 and \$300,000 per mile.

According to the American Society of Civil Engineers, the U.S. faces an \$846 billion funding gap for all surface transportation infrastructure — and rural roads, which make up 80 percent of all roads, represent a major portion of this gap.

Many changes have occurred over the last few years in the system used to finance local transportation infrastructure. The types of revenues that counties and towns use to finance roads and bridges differ by state, but in the Midwest, they primarily rely on general funds (45 percent), state highway user funds (22 percent), property tax and special assessments (15 percent), bonds (8 percent) and motor fuel taxes (4 percent).

The portion of local road funding borne by the federal government has fallen sharply over the last two decades, to less than 2 percent. Federal funding to counties has declined an average of 49 percent in inflation-adjusted dollars.

This is the result of a number of funding changes, such as the elimination of federal general revenue sharing in 1987 and passage of the Intermodal Surface Transportation Efficiency Act of 1991, which placed rural highway needs in direct competition with those in urban areas and with other transportation modes.

These changes have created uncertainty for local road administrators who were accustomed to a dedicated source of available revenues.

States have historically viewed fuel taxes as an attractive revenue source for highway construction and maintenance. However, improvements in vehicle fuel

economy and the introduction of alternative-fuel vehicles that use no diesel or gas are reducing fuel tax revenues for each vehicle mile traveled.

Midwestern states are responding in various ways to the need for increased funding. Local vehicle registration taxes of various types are already used in nine Midwestern states. For instance, Kansas' local vehicle levies are based on countywide tax rates, Illinois allows flat registration fees that vary with vehicle type, and South Dakota county fees start at \$4 per wheel and rise with vehicle weight.

### Looking beyond usual funding sources

But now some states recognize the need for more local road funding and are looking beyond traditional sources.

In Kansas, where 12 percent of the sales tax had already been allocated toward transportation, a 2011 sales tax rate hike from 5.3 to 6.3 percent will add \$21 million to the state highway fund over the next three years.

In Nebraska, LB 84 committed a quarter-cent of the state's 5.5 cent sales tax to roads, beginning in July 2013. It is estimated that the tax could divert approximately \$65 million annually to transportation repairs, with local governments eligible for a portion of that.

Nebraska also levies a road property tax and uses transportation improvement districts. These TIDs, also used in Ohio in the Midwest, provide a local structure that coordinates federal, state and local resources in planning, financing, building and operating transportation projects.

In Indiana, the legislature is one year into a three-year review of the state's roads, bridges and rails. The first year's hearings focused on the condition of the roads, while hearings in 2012 are expected to focus on funding. Some states, too, allow local government to impose a local tax.

"Many Indiana communities have added a wheel tax [charged on the number of wheels a vehicle has], but the amount of money raised in rural communities from this tax is insufficient to address the needs," notes Rep. Saunders. Indiana counties can also levy a separate bridge tax.

In some states, local officials have resorted to grinding up paved roads and converting them to gravel to save money. To do so costs about \$5,000 a mile, compared with upwards of \$200,000 per mile to repave a road. Michigan and South Dakota have each downgraded more than 100 miles of paved roads in this way.

Some counties have consolidated bridges or reduced traffic to one way at a time over a bridge. In Iowa, Allamakee County decided to build just one new span to replace three bridges across the Upper Iowa River, and the gravel roads leading to the closed bridges were reverted to cropland.

Because of the ongoing funding and revenue challenges, some states have been field-testing a mileage-based user fee. But this type of tax requires testing and evaluation in the rural Midwest, funding for installation of vehicle and service-station technology, and development of new state and federal legislation.

However states choose to fund the gap in rural road maintenance, it appears that more revenue will be required in order to get the crops and products produced in rural America to consumers across the country. ★

Annual traffic fatalities on Midwest's rural roads		
State	# of fatalities on two-lane roads	U.S. rank by rate*
Illinois	109	29
Indiana	151	11
Iowa	59	15
Kansas	64	14
Michigan	110	9
Minnesota	65	33
Nebraska	35	18
North Dakota	28	23
Ohio	174	26
South Dakota	32	4
Wisconsin	98	28

\*Rate is determined by dividing total fatalities by millions of vehicle miles traveled.  
Source: National Highway Traffic Safety Administration