



NEW TRIP REPORT EXAMINES MISSOURI INTERSTATE PAVEMENT & BRIDGE CONDITIONS, SAFETY BENEFITS, CONGESTION, FUNDING AND USE AS THE STATE'S INTERSTATE SYSTEM TURNS 65

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Sixty-five years ago this week, the first ground was broken in Missouri on what would become the U.S. Interstate Highway System. On its 65th anniversary, the Interstate Highway System is the most critical transportation network in Missouri, according to a new report from [TRIP](#), a national transportation research nonprofit based in Washington, DC.

A new report released today by [TRIP](#), entitled "[Restoring Missouri's Interstate Highway System: Meeting Missouri's Transportation Needs with a Reliable, Safe & Well-Maintained National Highway Network](#)," examines pavement and bridge conditions, congestion, safety and travel trends on Missouri's interstate system.

At 65 years old, Missouri's 1,380-mile Interstate Highway System remains the workhorse of the state's surface transportation network: heavily traveled and providing the most important link in the supply chain, and the primary connection between and within urban communities. The importance of the Interstate Highway System and the reliable movement of goods it provides has been heightened during the response to the COVID-19 pandemic. But many Interstate highways are wearing out and showing signs of their advanced age, often heavily congested, and in need of significant reconstruction, modernization and expansion.

While Missouri's Interstate Highway System accounts for two percent of all roadway lane miles in the state, it carries 27 percent of the state's vehicle travel – 21.5 million vehicle miles of travel annually. Due to the COVID-19 pandemic, vehicle travel on Missouri's roads dropped by as much as 38 percent in April 2020 (as compared to vehicle travel during the same month the previous year) but rebounded to three percent above May

2019 (the previous pre-COVID-19 May) levels by May 2021.

The TRIP report finds that 47 percent of Missouri's urban Interstate highways are considered congested because they carry traffic levels that result in significant delays during peak travel hours. Travel by combination trucks accounted for 17 percent of all vehicle miles of travel on Missouri's Interstate Highway System in 2019, the ninth highest rate in the nation.

According to TRIP's report, five percent of Missouri's Interstate bridges are rated in poor/structurally deficient condition, the tenth highest rate in the nation. A bridge is rated in poor/structurally deficient condition if there is significant deterioration of the bridge deck, supports or other major components. Seventy-one percent of the state's Interstate bridges are rated in fair condition and the remaining 25 percent are in good condition. Fifty-six percent of Missouri's Interstate bridges are at least 50 years old, and the average age of the state's Interstate bridges is 46 years. One percent of Missouri's Interstates have pavement in poor condition, lower than the national average of three percent. Four percent of Missouri's Interstate pavements are rated in mediocre condition, five percent are in fair condition and the remaining 89 percent are in good condition.

The design of the Interstate Highway System – which includes a separation from other roads and rail lines, a minimum of four lanes, paved shoulders and median barriers – makes Missouri's Interstates nearly twice as safe to travel on as all other roadways in the state. The fatality rate per 100 million vehicle miles of travel on Missouri's Interstate in 2019 was 0.69 compared to 1.27 on the state's non-Interstate routes. TRIP estimates that additional safety features on Missouri's Interstate Highway System saved 137 lives in 2019. While Missouri's Interstate Highway System carried 27 percent of the state's travel in 2019, it accounted for only 17 percent of the state's traffic fatalities as a result of superior safety features.

"The safety of the traveling public, MoDOT employees, and those craftworkers building

and maintaining the system is paramount to AGC of Missouri and its members," said Len Toenjes, president of AGC of Missouri. "Our contractors are proud to be partners with MoDOT in making the Interstate Highway System an effective method for growing the economy of our state through better movement of goods and jobs creation. We must continue to work together to ensure this system performs well into the future."

Restoring and upgrading the Interstate Highway System to meet the nation's 21st Century transportation needs will require a significant boost in funding, strong federal leadership and a robust federal-state partnership to reestablish the Interstate Highway System as the nation's premier transportation network.

The July 2021 legislative approval of [SB 262](#), which was subsequently signed into law by Governor Parson, provides a critical first step towards addressing the underfunding of Missouri's Interstate Highway System and is expected to provide an additional \$450 million annually once fully implemented. Another critical source of Interstate funding in Missouri is the current federal surface transportation program, [Fixing America's Surface Transportation \(FAST Act\)](#), which expires on September 30, 2021. Reauthorization of a new long-term, adequately and reliably funded long-term federal program will provide another critical step towards ensuring that a strong federal program supports the restoration of the Interstate system.

Based on the findings of a 2019 report by the [Transportation Research Board \(TRB\)](#) that was requested by Congress, TRIP has provided a set of recommendations for the restoration of the Interstate Highway System, which include: the foundational reconstruction of Interstate highways, bridges and interchanges; improvement to roadway safety features; system right-sizing, including upgrading of some roadway corridors to Interstate standards; adding needed additional highway capacity on existing routes; adding additional corridors; and, modifying some urban segments to

maintain connectivity while remediating economic and social disruption.

“The long-term vision that helped establish the current Interstate system 65 years ago is needed again today,” said Dave Kearby, TRIP’s executive director. “Missouri has taken important steps to provide increased investment in its transportation system that will improve conditions, enhance efficiency and improve quality of life. Adequate transportation investment and a sustainable, long-term funding source for the federal surface transportation program must remain a priority in Missouri and the nation.”



EXECUTIVE SUMMARY

At sixty-five years old, Missouri’s 1,380-mile Interstate Highway System remains the workhorse of the state’s surface transportation network: heavily traveled and providing the most important link in the supply chain, and the primary connection between and within urban communities. The importance of the Interstate Highway System and the reliable movement of goods it provides has been heightened during the response to the COVID-19 pandemic. But many Interstate highways are wearing out and showing signs of their advanced age, often heavily congested, and in need of significant reconstruction, modernization and expansion.

In 2015, as part of the Fixing America’s Surface Transportation (FAST) Act, the U.S. Congress asked the [Transportation Research Board](#) (TRB), a division of the National Academy of Sciences, Engineering and Medicine, to conduct a study to determine actions needed to upgrade and restore the Interstate Highway System to fulfill its role of safely and efficiently meeting the nation’s future critical personal, commercial and military travel needs. In 2019, the TRB provided Congress with a [report](#) that found that the nation’s Interstates are heavily congested and aging, with large portions of the system in need of major reconstruction and modernization. The report found that addressing the needs of the Interstate Highway System will require more than a doubling of current investment to adequately improve the system’s condition, reliability and safety, and that the restoration of the nation’s Interstate Highway System should be based

on strong federal leadership of a collaborative effort with the states.

TRIP’s *Restoring Missouri’s Interstate Highway System* report provides the latest information on the state’s Interstate system, including pavement conditions, bridge conditions, travel trends, traffic congestion levels, truck use, and traffic safety. It reviews the findings of the TRB Interstate report and concludes with recommended actions – based on the findings of the TRB report – to ensure that the system is able to meet the nation’s transportation needs.

MISSOURI INTERSTATE HISTORY



The need for a transcontinental highway system in the U.S. was recognized as early as 1919, and an initial Interstate plan was completed in the late 1930s. But, it was not until Congress approved a suitable funding mechanism in 1956 that the Interstate Highway System became a reality.

- In 1919, Lieutenant Dwight D. Eisenhower participated in the U.S. Army’s first transcontinental motor convoy, from Washington, DC, to San Francisco, California. The trip took 62 days, largely due to inadequate roads and highways.
- In 1954, President Eisenhower appointed a committee to draft a proposal to fund a national system of Interstate Highways. The initial proposal, subsequently dismissed by Congress, called for financing a national Interstate system through bond financing.
- Nationwide construction of the Interstate Highway System began in 1956 following the approval of the Federal-Aid Highway Act of 1956. Some segments of urban and regional highways built prior to 1956 were later incorporated into the Interstate Highway System.
- The first construction contracts awarded under the provisions of the 1956 Interstate legislation were in Missouri in August of 1956, for portions of Interstate 44 in Laclede County and a portion of Interstate 70 in St. Charles County.
- The majority of the nation’s Interstate system was completed by 1986, when 92 percent of the Interstate system’s current length and 86 percent of lane miles were complete. By 1996, 98 percent of the

Interstate system’s current length and 96 percent of lane miles were complete.

- The Federal-Aid Highway Act of 1956, signed into law by President Dwight Eisenhower on June 29, 1956, called for the construction of a 41,000-mile system of Interstate highways. The Act called for the Interstates to be paid for by taxes on motorists, such as the federal motor fuel tax, with the federal government paying 90 percent of the initial construction costs.
- The federal motor fuel tax was set at three cents-per-gallon in 1956. Last increased in 1993, the tax is currently 18.4 cents-per-gallon.
- Revenue collected from the 18.4 cents-per-gallon federal motor fuel tax and the 24.4 cents-per-gallon federal diesel fuel tax are the primary sources of funding for the federal Highway Trust Fund, which distributes funds to state and local governments for highway and bridge repairs as well as other surface transportation improvements, including public transit, pedestrian and bicycling facilities.

MISSOURI’S INTERSTATE ROAD AND BRIDGE CONDITIONS

Pavements and bridges on Missouri’s Interstate system are showing deterioration and signs of their advancing age. As the aging Interstate system’s foundations continue to deteriorate, most Interstate highways, bridges and interchanges will need to be rebuilt or replaced.

- Five percent of Missouri’s Interstate bridges are rated in poor/structurally deficient condition, the tenth highest rate in the nation. A bridge is rated in poor/structurally deficient condition if there is significant deterioration of the bridge deck, supports or other major components. Seventy-one percent of the state’s Interstate bridges are rated in fair condition and the remaining 25 percent are in good condition.
- The chart below shows the top 20 states with the greatest share of Interstate bridges in poor/structurally deficient condition.

RANK	STATE	INTERSTATE BRIDGES POOR/STRUCTURALLY DEFICIENT
1	West Virginia	13%
2	Rhode Island	12%
3	Illinois	8%
4	Massachusetts	7%
5	New York	6%
6	Michigan	6%
7	Colorado	5%
8	Maine	5%
9	Washington	5%
10	Missouri	5%
11	Idaho	4%
12	Pennsylvania	4%
13	Wyoming	3%
14	Montana	3%
15	Louisiana	3%
16	California	3%
17	Connecticut	3%
18	New Mexico	3%
19	New Jersey	3%
20	North Carolina	3%

- The intended lifespan of many of the nation’s Interstate bridges at the time of their construction is 50 years, though newer bridges are often built with longer-lasting materials and techniques that allow for a longer intended lifespan. Older bridges often need significant repairs or rehabilitation or may need to be replaced to continue to provide adequate service.
- The average age of Missouri’s Interstate bridges is 46 years. Fifty-six percent of the state’s Interstate bridges are at least 50 years old.
- One percent of Missouri’s Interstates have pavement in poor condition, lower than the national average of three percent. Four percent of Missouri’s Interstate pavements are rated in mediocre condition, five percent are in fair condition and the remaining 89 percent are in good condition.

MISSOURI INTERSTATE USE AND CONGESTION

Missouri’s Interstate Highway System is among the most critical links in the state’s transportation system and a vital part of Missouri’s transportation network. Traffic congestion is increasing on Missouri’s Interstate Highway System as the amount of vehicle travel far outstrips the capacity added to the system. Nearly half of the length of Missouri’s urban Interstates is congested.

While Missouri’s Interstate Highway System accounts for two percent of all roadway lane miles in the state, it carries 27 percent of the state’s vehicle travel – 21.5 million vehicle miles of travel annually.

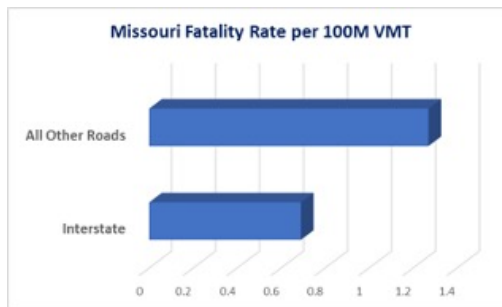
Due to the COVID-19 pandemic, vehicle travel on Missouri’s roads dropped by as much as 38 percent in April 2020 (as compared to vehicle travel during the same month the previous year) but rebounded to three percent above May 2019 (the previous pre-COVID-19 May) levels by May 2021.

- Since 1956 when funding of the Interstate system was approved, the number of vehicles in Missouri increased more than three and a half times, from approximately 1.5 million vehicles to 5.5 million vehicles. Missouri’s population increased by 47 percent, from approximately 4.2 million to 6.1 million during this time.
- Forty-seven percent of Missouri’s urban Interstate highways are considered congested because they carry traffic levels that result in significant delays during peak travel hours. Missouri’s urban Interstates carry 12,607 vehicles per urban lane mile daily.

INTERSTATE FATALITY RATES AND SAFETY

Missouri’s Interstate Highway System provides a network of highways with a variety of safety designs that greatly reduce the likelihood of serious crashes. Travel on the state’s Interstate highways is nearly twice as safe as travel on all other roadways in the state.

- The features that make Interstates safer than other roads include a separation from other roads and rail lines, a minimum of four-lanes, gentler curves, paved shoulders, median barriers, and rumble strips to warn drivers when they are leaving the roadway.
- Missouri’s Interstate Highway System, which carried 27 percent of the state’s travel in 2019, accounted for only 17 percent of the state’s traffic fatalities as a result of superior safety features.
- Travel on Missouri’s Interstate highways is nearly twice as safe as travel on all other roadways in the state. The fatality rate per 100 million vehicle miles of travel on Missouri’s Interstate system in 2019 was 0.69 compared to 1.27 on Missouri’s non-Interstate routes.



TRIP estimates that Missouri’s Interstate Highway System saved 137 lives in 2019, based on an estimate of the number of additional fatalities that would have occurred had Interstate traffic been carried by other major roadways, which often have higher traffic fatality rates and may lack the safety features common to Interstate routes.

INTERSTATE TRAVEL AND ECONOMIC GROWTH

Missouri’s Interstate Highway System is the backbone of the state’s economy and

has played a critical role in improving business productivity.

Travel by combination trucks, which are the large trucks that carry the majority of freight shipped in the U.S., accounted for 17 percent of all vehicle miles of travel on Missouri’s Interstate Highway System in 2019, the ninth highest rate in the nation. The chart below shows the top 20 states with the highest rate of vehicle travel by large trucks on their Interstate system.

RANK	STATE	Percent Interstate Vehicle Travel by Combination Trucks
1	Wyoming	30%
2	Arkansas	28%
3	Indiana	23%
4	Nebraska	22%
5	Iowa	19%
6	South Dakota	18%
7	North Dakota	18%
8	Montana	17%
9	Missouri	17%
10	West Virginia	17%
11	Illinois	17%
12	Mississippi	17%
13	Kentucky	17%
14	Maine	16%
15	Kansas	16%
16	Tennessee	16%
17	Oregon	16%
18	Idaho	15%
19	Oklahoma	15%
20	Alabama	14%

- Every year, \$481 billion in goods are shipped to and from sites in Missouri, primarily by truck. Sixty-seven percent of the goods shipped annually from sites in Missouri are carried by trucks and another five percent are carried by courier services, which use trucks for part of the deliveries.

• The completion of the vast majority of the Interstate system by the 1980s, and the deregulation of the U.S. trucking industry, resulted in a significant improvement in the competitiveness of U.S. business. The cost of moving freight, as measured by U.S. business logistics costs, dropped from 16 percent of U.S. Gross Domestic Product (GDP) in 1980 to eight percent in 2018.

- The TRB report found that U.S. counties either on an Interstate highway or within 20 miles of an Interstate are anticipated to grow in population through 2060 at a rate approximately seven times greater than counties that are at least 20 miles from an Interstate highway (36 percent versus five percent).
- The Interstate Highway System has reduced travel times between destinations throughout the U.S. The improved mobility provided by the Interstate Highway System has given Americans greater

choices about where they live, work, shop and spend their leisure time.

- Missouri is home to the eighth worst truck bottleneck in the US, as identified by the American Transportation Research Institute (ATRI) in its 2021 [annual list](#) of the nation's top 100 truck bottlenecks. The 54th worst bottleneck identified by the report is also in Kansas City: I-70 at I-670 and US 71.
- The top 20 truck bottlenecks in the U.S. are listed below.

RANK	STATE	Top Bottlenecks
1	NJ	Fort Lee, NJ I-95 at SR 4
2	OH	Cincinnati, OH I-71 at I-75
3	GA	Atlanta, GA I-285 at I-85 (North)
4	GA	Atlanta, GA I-20 at I-285 (West)
5	TX	Houston, TX I-45 at I-69/US 59
6	IL	Chicago, IL I-290 at I-90/I-94
7	TN	Chattanooga, TN I-75 at I-24
8	MO	St. Louis, MO I-64/I-55 at I-44
9	NY	Rye, NY I-95 at I-287
10	CA	San Bernardino, CA I-10 at I-15
11	CA	Los Angeles, CA SR 60 at SR 57
12	TX	Dallas, TX I-45 at I-30
13	TN	Nashville, TN I-24/I-40 at I-440 (East)
14	NY	Brooklyn, NY I-278 at Belt Parkway
15	TX	Austin, TX I-35
16	GA	Atlanta, GA I-75 at I-285 (North)
17	TX	Houston, TX I-45 at I-610 (North)
18	LA	Baton Rouge, LA I-10 at I-110
19	IL	Chicago, IL I-90 at I-94 (South)
20	CO	Denver, CO I-70 at I-25

INTERSTATE FUNDING CHALLENGES

The U.S. Department of Transportation (USDOT) has determined that the nation faces a significant backlog in needed Interstate highway repairs and improvements.

- The current backlog of needed improvements on the nation's Interstate Highway System is estimated by the USDOT to be \$123 billion.
- The backlog on the nation's Interstate Highway System includes \$54 billion needed to improve pavement conditions, \$37 billion to improve bridges and \$33 billion for needed system expansion and enhancement.
- The TRB report estimated that approximately \$57 billion should be spent on Interstate Highway System renewal and modernization annually over the next 20 years, a 146 percent increase from the approximately \$23 billion spent on Interstate highways in 2018.
- The July 2021 legislative approval of [SB 262](#), which was subsequently signed into law by Governor Parson, provides a critical first step towards addressing the underfunding of Missouri's Interstate Highway System and is expected to provide an additional \$450 million annually once fully implemented.

The primary source of revenue for the Interstate Highway System is the federal surface transportation program, which was set to expire on September 30, 2020 and extended by one year by Congress to September 30, 2021. The program does not have a long-term and sustainable revenue source.

- [Signed into law in December 2015, the America's Surface Transportation \(FAST Act\)](#), provides modest increases in federal highway and transit spending. The bill also provides states with greater funding certainty and streamlines the federal project approval process. But, the FAST Act does not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.
- Revenue collected from the 18.4 cents-per-gallon federal motor fuel tax and the 24.4 cents-per-gallon federal diesel fuel tax are the primary sources of funding for the federal Highway Trust Fund, which distributes funds to state and local governments for highway and bridge repairs and other surface transportation improvements, including public transit, pedestrian and bicycling facilities.

RECOMMENDATIONS FOR RESTORING THE INTERSTATE HIGHWAY SYSTEM

Restoring and upgrading the Interstate Highway System to meet 21st Century transportation needs will require strong federal leadership and a robust federal-state partnership to reestablish the Interstate Highway System as the nation's premier transportation network. The TRB Interstate report notes that "the scale and scope of the Interstate reinvestment imperative is daunting."

- The following recommendations, based on the findings and recommendations of the TRB Interstate report, provide a roadmap for the restoration of the Interstate Highway System:
- Reconstruct the nation's Interstate Highway System, including pavements, bridges and interchanges
- Improve safety features on Interstate highways
- Right-size the Interstate Highway System by:
 - upgrading some existing roadways to Interstate standard
 - adding needed additional highway capacity on existing routes to maintain and improve mobility
 - adding additional corridors to accommodate demographic and economic growth
- modifying some urban segments to maintain connectivity while remediating economic and social disruption

[Click here](#) for the full report and video interview footage with report author

All data used in this report is the most current available. Sources of information for this report include: The Federal Highway Administration (FHWA), the Missouri Department of Transportation (MoDOT), the National Highway Traffic Safety Administration (NHTSA), the Transportation Research Board (TRB), and the U.S. Census Bureau. Cover photo credit: Bill Burmaster.