

Reconstructing the I-70 and I-44 Corridors

By the end of 2006, the driving surface of Interstates 70 and 44 in Missouri will be in good condition as MoDOT completes its "Smooth Roads Initiative." Additionally, both corridors will be safer as a result of new pavement markings and signs and the installation of median guard cable to diminish the incidence of crossover accidents.

But the many projects undertaken in 2005 and 2006 will not add capacity to Missouri's oldest two interstate highways that are becoming more and more congested. And they will not improve the dated designs of the highways, poorly functioning interchanges, and the underlying problems of the original pavement (some of which includes sections of old U.S. Route 40 and U.S. Route 66), base treatments and drainage systems.

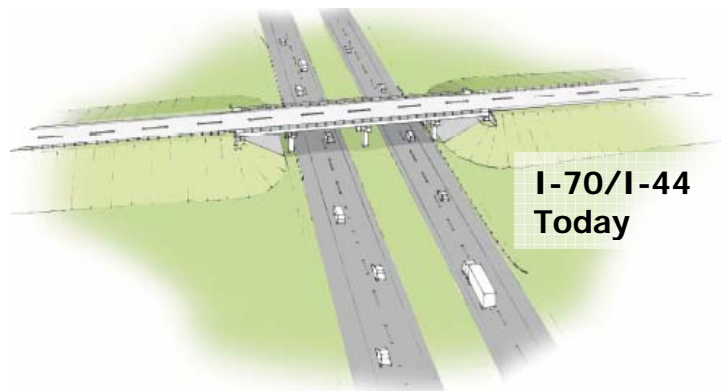
Safer and Smoother

By the end of this year, Missourians will be driving on major highways that are safer and smoother. But it will require a significant annual investment to keep I-70 and I-44 in good or better condition.

Resurfacing the 2,380 lane miles of I-70 and I-44 every eight to 10 years, maintaining median guard cable, maintaining, rehabilitating and replacing bridges (510 between the two corridors) will cost in the magnitude of \$70-90 million per year. Rebuilding these highways would eliminate the need for much of that cost, freeing it for use on other projects.

50 Years Old and Filling Up Fast

Missouri's two cross-state interstates are two of the nation's oldest. Construction on both corridors began in 1956. The final sections of I-70 were completed in 1965, and I-44 was finished a year later, meaning that the oldest portions will be 50 years old in 2006. They were initially designed with a 20-year design life meaning that both highways have served Missourians well for many years past their prime.

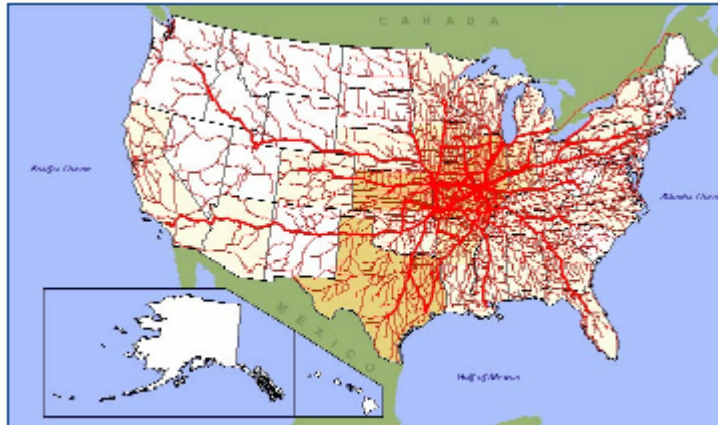


Average daily traffic on the 200 miles of I-70 between Kansas City and St. Louis is 36,000 vehicles per day, although that figure tops 100,000 approaching the two metro areas and as many as 70,000 vehicles use I-70 in Columbia each day. Even in the most rural portion of the corridor, more than 25,000 vehicles per day travel I-70.

MoDOT is in the final stages of an exhaustive environmental process that has examined the conditions, needs and improvement strategies for Interstate 70. A similar effort has not been conducted for I-44, although many of the lessons learned on I-70 could shorten the process if it were to be initiated.

In general, traffic levels on I-44 are about 10 years behind that of I-70, although truck traffic levels are similar on both highways. On I-70 trucks account for nearly 40 percent of all traffic and truck traffic is growing each year at about double the rate of all vehicles. Projections are that traffic on I-70 will double by 2030 and that the entire corridor will be experiencing stop-and-go conditions.

Freight Flows To, From & Within Missouri by Truck: 1998

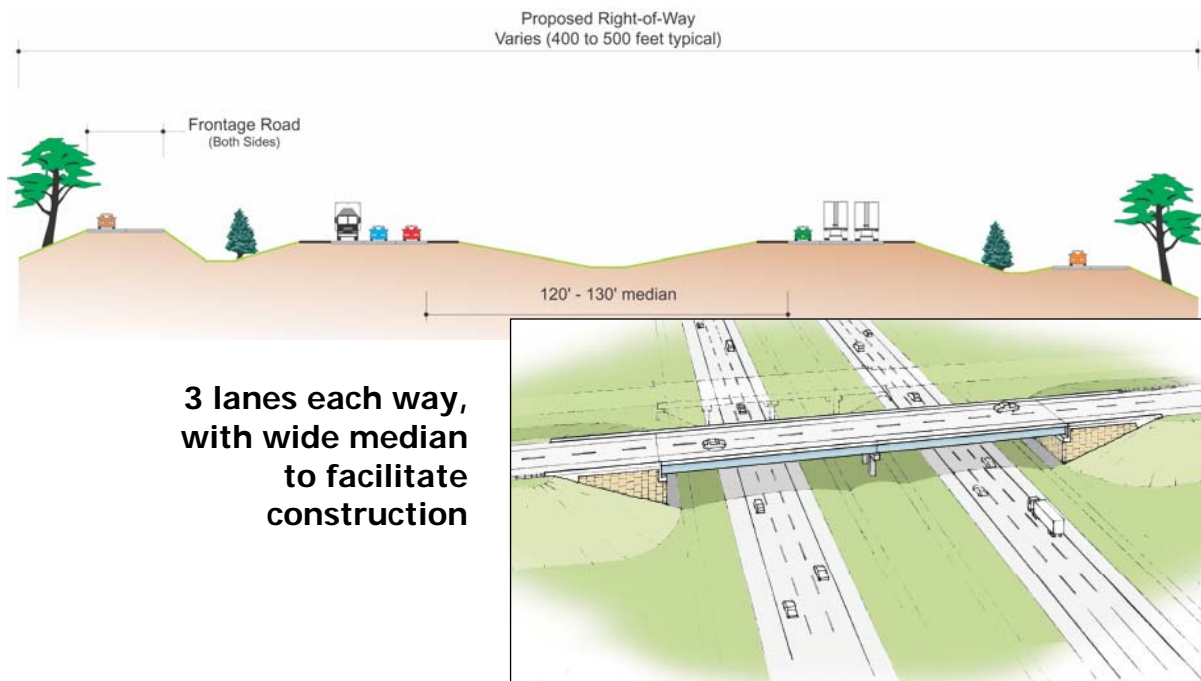


Federal Highway Administration

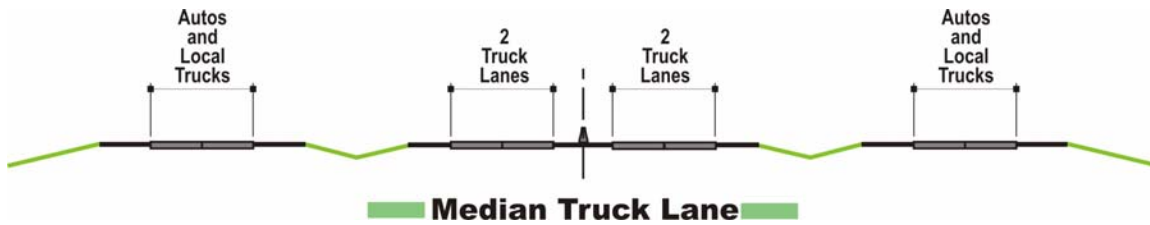
I-70 – What’s Been Done

The environmental process for I-70 has identified a preferred strategy to rebuild the aging facility from the ground up while widening it to three lanes in each direction – all the while maintaining four lanes of traffic during construction. It does so by incorporating a wide median in the design and constructing new lanes outside the current facility on one side of the highway or the other.

It is not, however, an all-or-nothing proposition and could be implemented in a variety of manners within the footprint that has been identified and evaluated for impacts to the natural and man-made environments.



**3 lanes each way,
with wide median
to facilitate
construction**



Truck-Only Lanes

One possible improvement strategy that could be built within the footprint identified by the “Improve I-70” environmental study would be to construct “truck-only” lanes within the extra wide median, flanked by two lanes in each direction that would be reserved for cars and local-service trucks.



Dedicated truck lanes offer several benefits starting with the obvious separation of trucks and cars that is often cited as desirable by the public. Heavy-duty pavement could be utilized in the truck lanes that could enable the trucking industry to run larger rigs in the future and at higher speeds.

Trucks would transition into the facility just outside of St. Louis and Kansas City and would access communities and crossroads by way of a limited number of its own interchanges.



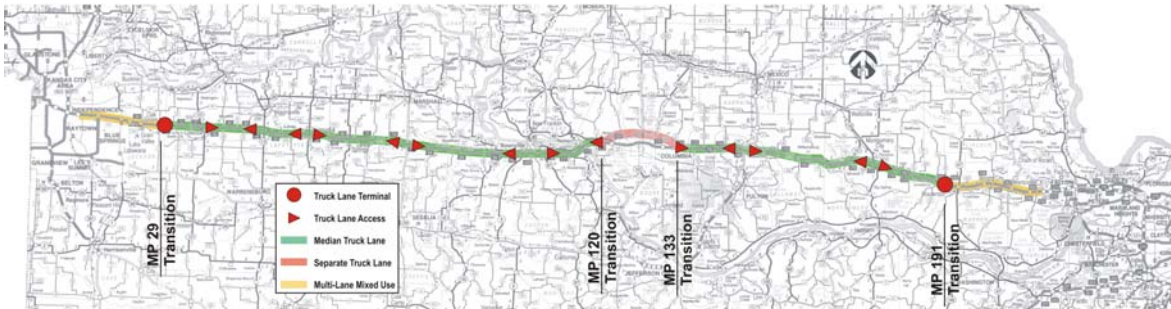
Rural Areas

Urban Areas





Truckway access (left) and possible access points (below).



What Would It Cost

In today’s dollars, it is estimated that a total reconstruction and widening of I-70 would cost \$3.1 billion. Although a detailed study has not been done on I-44, its longer length suggests that a similarly built project there would cost in the neighborhood of \$4 billion.

More detailed estimates would need to be developed but it is thought that incorporating the truckway idea into the improvement strategy would add approximately 15 percent to the cost.

Sales Tax As A Revenue Source?

If MoDOT was to rely solely on its existing revenue streams to rebuild I-70 and I-44 while attending to the state’s other transportation needs, it could take 30-or-more years *per corridor* to accomplish by allocating \$100 million per year to each project.

Although Missouri has not traditionally augmented its transportation spending pot with sales tax revenue, it has been and is being done by other states and is one funding source that has the ability to generate enough money to aggressively tackle major overhauls of I-70 and I-44.

Sales Tax Revenue Projection

- ❑ 0.50% increase would generate \$346,648,683 annually times 10 years = **\$3,466,486,830**
To generate the same amount of money would require a 11.8-cent increase in motor fuel tax
- ❑ 0.50% increase would generate \$346,648,683 annually times 10 years with a 3% growth factor = **\$3,973,938,665**
To generate the same amount of money would require a 13.5-cent increase in motor fuel tax
- ❑ 1% increase would generate \$692,697,366 annually times 10 years = **\$6,926,973,660**
To generate the same amount of money would require a 23.6-cent increase in motor fuel tax
- ❑ 1% increase would generate \$692,697,366 annually times 10 years with a 3% growth factor = **\$7,940,999,003**
To generate the same amount of money would require a 27-cent increase in motor fuel tax

Summary

It should be noted that MoDOT has only conducted a full environmental study on the Interstate 70 corridor. More analysis would be required on I-44. But in both cases, the design that has been done has only been completed to such a degree that would give MoDOT an order-of-magnitude cost of improvements.

Any additional work that would be done on these corridors in the future would be focused on a practical approach, and one that keeps many options open for developing and delivering long-term improvements “better, faster and cheaper.” Already MoDOT has identified aspects of the Improve I-70 preferred alternative that could be reexamined with resulting savings of up to \$600 million. A project delivery tool like Design-Build could also be employed to bring innovation and speed to such high-profile projects.

[Please contact Kathy Harvey, MoDOT State Design Engineer, at 573-526-5678, if you have questions.]