

# SETTING THE STAGE: UPGRADE HIGHWAY 50

The safety and economic effects of upgrading Highway 50 to four lanes across the state of Missouri take on greater significance in the context of the future rebuild of Interstate 70 and Interstate 44. This is a rare opportunity to get ahead of the curve. An upgraded Highway 50 will provide optimal performance of the roadway system during reconstruction phases of Interstate 70 and Interstate 44 as well as long-term benefits to be realized by the adjacent communities and the entire state of Missouri.

**History as a Detour** Due to flooding of Routes 63 and 54 near Jefferson City in 1993, a detour route to Jefferson City included Highway 50. During the repairs on the I-70 Bridge at Rocheport, alternate route signs on I-70 directed traffic around the bridge south on Route 65 to Route 50 to avoid excessive delays at the bridge. No one anticipated the magnitude of the traffic impacts that recent construction along I-44 near Rolla would create. When these situations arose, Highway 50 provided needed relief to those travelling within the I-44 corridor. Successfully reacting to the needs of the motoring public during past construction was the catalyst for proactively creating a comprehensive Incident Management Plan for I-44 (MoDOT, District 9). Highway 50 is included as part of its network of potential detours.

**Be Proactive.** Highway 50 WILL be a necessary detour during multiple phases of I-70 and I-44 reconstruction.



**Traffic Diversion** During I-70 and I-44 construction, it is projected that up to 10% of all traffic will divert to other routes. That is more than 5,000 vehicles per day (vpd).

**Costs Due to Congestion** Reduced speeds in work zones, narrow lanes and construction-related congestion during the I-70 reconstruction will cause an increase in vehicle-hours traveled. The resulting congestion cost to passenger and commercial vehicles will be more than \$174 million over 10 years.

Likewise, the construction scenarios modeled for the I-44 corridor result in \$80 million of congestion costs over 10 years. That's a cost of more than \$263 million from congestion throughout the life of the I-70 and I-44 rebuild efforts.

An upgraded Highway 50 is projected to play a significant role in reducing these congestion costs.

**Economy** On average each year, investment in four lanes on Highway 50 will create 1,550 new jobs paying an average wage of \$29,319 which will generate a net economic benefit of \$7 billion over the next 20 years.

As a result of upgrading Highway 50, an additional \$3.0 million in net general revenues, \$110.3 million in Gross State Product and \$180.2 million in economic activity will be generated annually in Missouri.

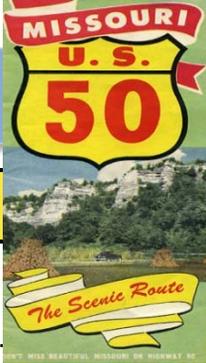
**Corridor Capacity** Today, the two-lane segment between Sedalia and California carries over 6,500 vpd. Traffic volumes will continue to grow through the year 2030 to more than 10,000 vpd. Current volumes already surpass the desired level of service for a two-lane Highway 50. This equates to drivers having little freedom to maneuver with less comfort and convenience of travel; volume increases will cause substantial drops in speeds.

Radiating from Jefferson City, current traffic volumes approach 8,700 vpd and will likely exceed 13,700 vpd in the year 2030. Heading west from Union, the 5,800 vpd will reach nearly 8,600 vpd by the year 2030. Within the next six years, these segments will also surpass the desired levels of service and will begin to experience similar decreases in functionality.

Four-laning Highway 50 will provide the capacity needed for today and the growth of tomorrow.



Questions related to this initiative may be directed to the HIGHWAY 50 PARTNERSHIP via Randy Allen, Jefferson City Chamber President at (573) 634-3616



# BENEFITS & COSTS: UPGRADE HIGHWAY 50

## DETOUR PREPAREDNESS

**Traffic Diversion** Modeling indicates that traffic diversion to Highway 50 will increase if it is proactively upgraded to four lanes. With the additional two travel lanes in place, Highway 50 will be ready to accommodate this increase in traffic. In fact, traffic model runs for I-70 and I-44 construction scenarios show virtually no effect on Highway 50 travel speeds.

Proactive efforts to divert traffic to other routes with sufficient capacity, like an upgraded Highway 50, will decrease the travel delays along I-70 and I-44 during construction. This will effectively reduce the potential for wasted fuel and cut the overall costs to the public that could have otherwise been incurred from congestion.

**Work Zone Safety** In 2006, I-70 and I-44 work zones experienced a combined total of 766 crashes including six fatalities. The upgraded Highway 50 detour will reduce the risk of work-zone exposure to the motoring public by enhancing safety for motorists as well as construction workers during the I-70 and I-44 rebuilding efforts. Diverting 10% of the traffic will lower the number of potential work zone incidents accordingly.

This reduction in incidents could save more than \$53 million throughout the life of the I-70 and I-44 rebuild efforts.

The reconstruction of I-70 and I-44 is looming as a necessary tool to provide economic stability to the State. This construction is expected to increase costs to the public due to congestion, fuel expenditure and potential work zone incidents. Traffic on Highway 50 continues to grow resulting in more congestion costs. Upgraded Highway 50 is projected to increase benefits to the State including annual general revenues and economic activity. This economic benefit as well as Highway 50's role in reducing wasteful spending on congestion makes a compelling case for upgrading Highway 50 now. Beyond facilitating the interstate reconstruction efforts, upgraded Highway 50 will provide a facility benefiting Missouri functionally and economically well into the future.

## POST-DETOUR

**Safety** Severity crash rates are 60% lower on rural four-lane expressways when compared to rural two-lane facilities.

The upgrade will also rectify horizontal and vertical roadway alignments, shoulder widths and sight distances at several locations which do not meet today's standards. These deficiencies currently cause lower operating speeds, inadequate passing opportunities and increased accidents.

**Security** Highway 50 is the only major east-west National Highway System (NHS) Route between St. Louis and Kansas City that does not cross the Missouri River. Such a corridor is advantageous for homeland security, evacuation and emergency response.

The combination of I-44 and Highway 50 provides a continuous four-lane facility connecting three major defense complexes across Missouri – Whiteman AFB, Ike Skelton Training Site and Fort Leonard Wood.

Highway 50 serves I-70 and I-44 which are both part of the Strategic Highway Network (STRAHNET) providing defense access, continuity and emergency capabilities in times of peace and war.

**Economy** Four-laning Highway 50 sparks \$4.29 of new economic activities for every \$1 invested.

## COST PER SEGMENT

- Sedalia Bypass \$128-143 M
- Sedalia to California \$204-224 M
- Rte 50/179 Interchange \$7.5-8.5 M
- Rte 179 Extension \$70-78 M
- Linn Bypass \$60-64 M
- Linn to Union \$239-256 M
- Union to I-44 \$22-24 M



**Total Probable Cost \$731-798 Million\***  
 \*All estimates are in 2008 dollars.