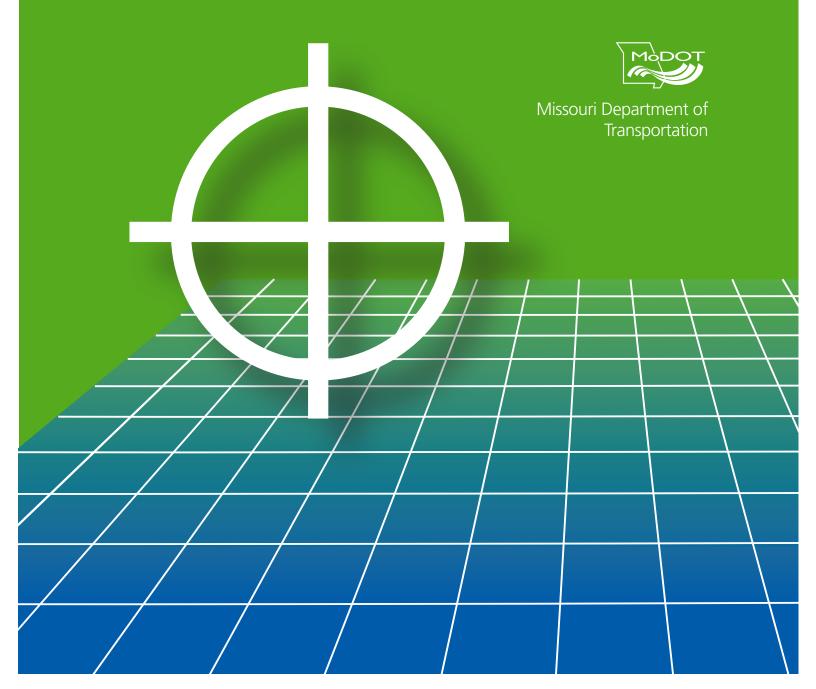
January 2006

# Tracker Measures of Departmental Performance



# **Greetings from MoDOT**

The Missouri Department of Transportation is committed to being open and transparent. We want you to know what we do well, what we don't do so well and what we are doing to get better. That is why we created the Tracker.

This document is your window into MoDOT – warts and all. It invites you to hold us accountable for exceeding your expectations. You expect MoDOT to get the best value out of every dollar spent. You expect us to make highways smoother and safer, soon. You expect us to fix bad bridges, be responsive and to proactively give you the information you need. You expect us to provide a world-class transportation experience.

We share your expectations and have built 18 tangible results around them. These results guide us everyday as we go about the business of delighting our customers. In the Tracker, you will see that we have established measures to gauge our progress and we are comparing ourselves to the best organizations in the country.

You can use the Tracker to see how we are measuring up. We make it available in a printed format and on our website at *www.modot.org*. Missouri's transportation system will not improve unless we all work together. The Tracker is one of the many ways you can help. Please look it over and let us know how we are doing.

Sincerely,

### Mission

Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.



Pete K. Rahn, Director Missouri Department of Transportation

# **Tangible Results**

- Uninterrupted Traffic Flow
- Smooth and Unrestricted Roads and Bridges
- Safe Transportation System
- Roadway Visibility
- Personal, Fast, Courteous and Understandable Response to Customer Requests (Inbound)
- Partner With Others to Deliver Transportation Services
- Leverage Transportation to Advance Economic Development
- Innovative Transportation Solutions
- Fast Projects That Are of Great Value
- Environmentally Responsible
- Efficient Movement of Goods
- Easily Accessible Modal Choices
- Customer Involvement in Transportation Decision-Making
- Convenient, Clean and Safe Roadside Accommodations
- Best Value for Every Dollar Spent
- Attractive Roadsides
- Advocate for Transportation Issues
- Accurate, Timely, Understandable and Proactive Transportation Information (Outbound)

# **Value Statements**

MoDOT will -

- support and develop employees because we believe they are the key to our success.
- be flexible because we believe one size does not fit all.
- honor our commitments because we believe in integrity.
- encourage risk and accept failure because we believe in getting better.
- be responsive and courteous because we believe in delighting our customers.
- empower employees because we trust them to make timely and innovative decisions.
- not compromise safety because we believe in the well-being of employees and customers.
- provide the best value for every dollar spent because we're taxpayers too.
- value diversity because we believe in the power of our differences.
- be one team because we all share the same mission.
- use teamwork because it produces the best results.
- foster an enjoyable workplace because we care about each other and our mission.
- be open and honest because we must be trustworthy.
- listen and seek to understand because we value everyone's opinion.
- treat everyone with respect because we value their dignity.
- seek out and welcome any idea that increases our options because we don't have all the answers.
- always strive to do our job better, faster, and cheaper because we want to meet more of Missouri's needs.

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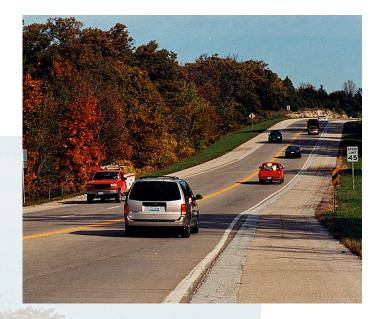
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- Please Note: Tangible Results are listed in reverse alphabetical order, not by importance.

Tangible Result Driver – Don Hillis, Director of System Management

Missouri drivers expect to get to their destinations on time, without delays. Traffic, changes in weather, work zones and highway incidents can all impact their travel. MoDOT works to ensure that motorists travel as efficiently as possible on the state system by better managing work zones, snow removal and highway incidents, and by using the latest technology to inform motorists of possible delays and available options. Better traffic flow means fewer crashes.



### Average speeds on selected roadway sections

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Eileen Rackers, State Traffic Engineer

#### **Purpose of the Measure:**

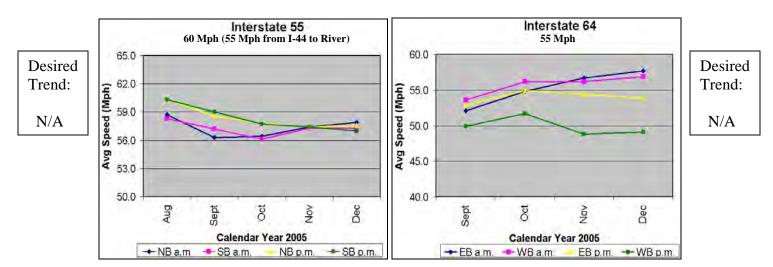
This measure tracks average speeds on various roadway sections. Monitoring speeds is a tool for improving transportation system performance.

#### **Measurement and Data Collection:**

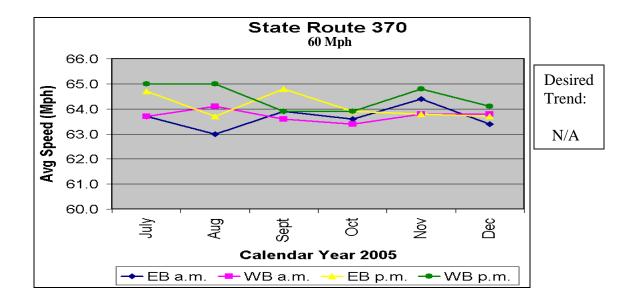
Data from the St. Louis area was provided through our partnership with Traffic.com. They have installed traffic sensors along five routes in the St. Louis metropolitan area to help monitor traffic conditions. Data from the Kansas City area is from sensors installed as part of Kansas City Scout, a bi-state comprehensive traffic and incident management system designed to address regional traffic impacts. Additional sensors maintained by MoDOT Transportation Planning provide traffic information at various locations across the state. In December 2005, MoDOT entered into a contract for statewide traffic data services. These services will provide traffic data, such as speed and travel time, on 5,500 roadway miles using cellular phones as anonymous traffic data probes. This data will allow a statewide approach to proactively managing traffic flow, including improved incident management and traveler information services.

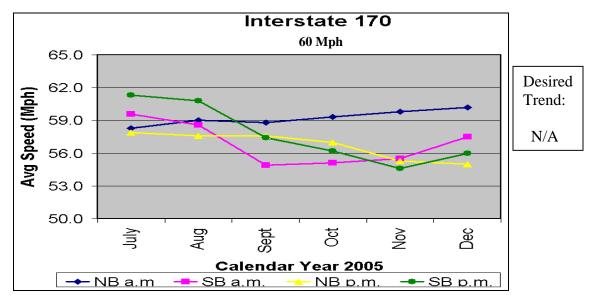
#### **Improvement Status:**

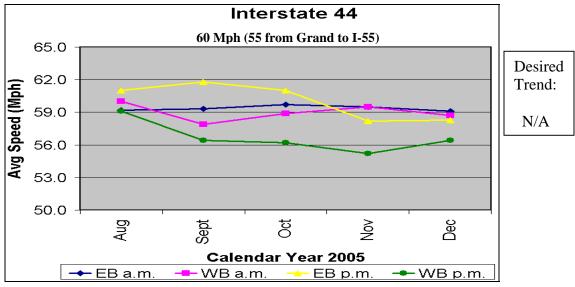
To help improve average speeds, live traffic data for three Missouri metro areas is available on MoDOT's website at <u>www.modot.gov</u> in the Services Section under Traveler Services. Kansas City Scout provides traffic information for Kansas City, Gateway Guide provides traffic information for St. Louis, and Ozarks Traffic provides traffic information for Springfield. Also, MoDOT is placing an increased emphasis on managing incidents to provide uninterrupted traffic flow. In Kansas City, eastbound I-435 at 104th Street has historically been the most congested movement in the evening rush; however, recent improvements including a new eastbound 470 bridge and additional I-435/Hwy 71 lanes dramatically improved travel speeds over the last several months. The desired trend is for the average speed to approach the posted speed limit.



### ST. LOUIS

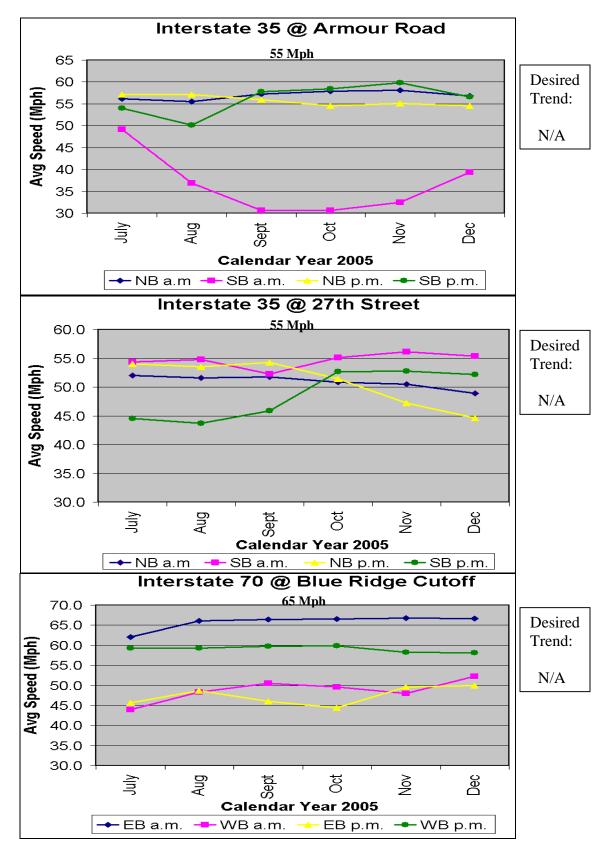




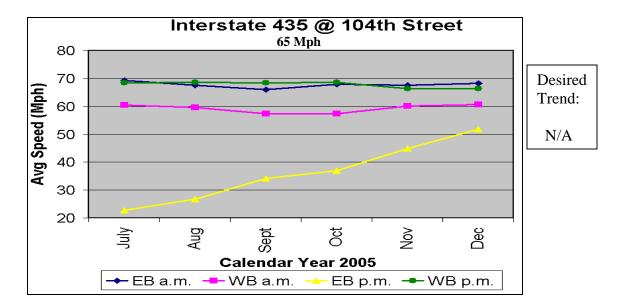


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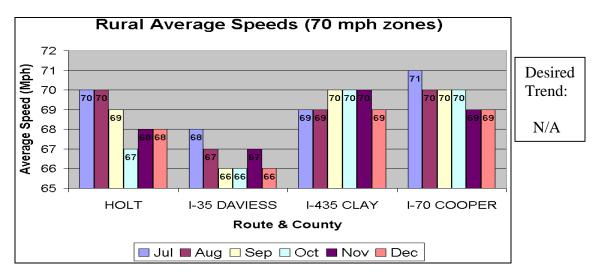
### KANSAS CITY

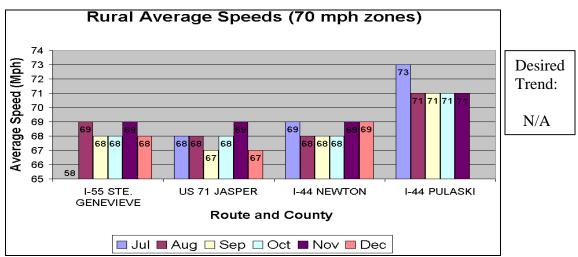


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### **STATEWIDE**





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### Average time to clear traffic incident

**Result Driver**: Don Hillis, Director of System Management **Measurement Driver**: Dan Bruno, Traffic Studies and Corrections Engineer

#### **Purpose of the Measure:**

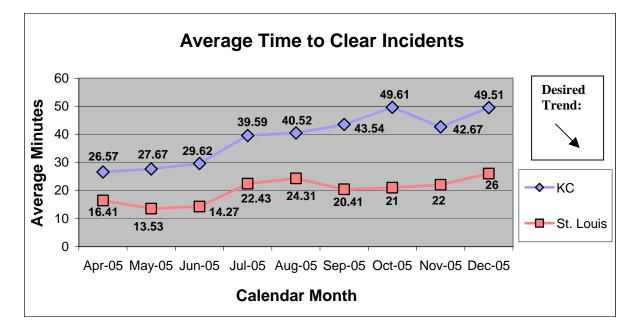
This measure is used to determine what deficiencies or efficiencies exist in the clearance of incidents on the state highway system. A traffic incident is an unplanned event that creates a temporary reduction in the number of vehicles that can travel on the road.

#### **Measurement and Data Collection:**

Collection of data began March 1, 2005. "Time of arrival" and the time for "all lanes cleared" are being recorded by Motorist Assist operators and Traffic Management Center staff. Average time to clear traffic incidents is calculated from these recorded times.

#### **Improvement Status:**

This data shows that overall, the incident clearance times on urban freeways in Missouri is increasing more rapidly in the Kansas City Metro area than in the St. Louis Metro Area. With no historical data, we will have to monitor this trend in the coming months. Having one full year of historical data will help determine the potential influence of other seasonal factors. While the presence or absence of several large incidents can significantly impact the data on any given month, the overall trend should decrease due to deployment of incident management strategies. Regional working groups comprised of emergency responders and partners across I-44 and I-70 corridors are providing venues for discussion, training and expanded cooperative efforts for rapid incident clearance. Working groups are now forming and meeting in Joplin, Springfield, Rolla, St. Louis, Montgomery City, Columbia and Kansas City. Quick clearance workshops were held in late October 2005 in Joplin, Springfield, Columbia and Kansas City.



### Average time to clear traffic backup from incident

### Result Driver: Don Hillis, Director of System Management

Measurement Driver: Dan Bruno, Traffic Studies and Corrections Engineer

### **Purpose of the Measure:**

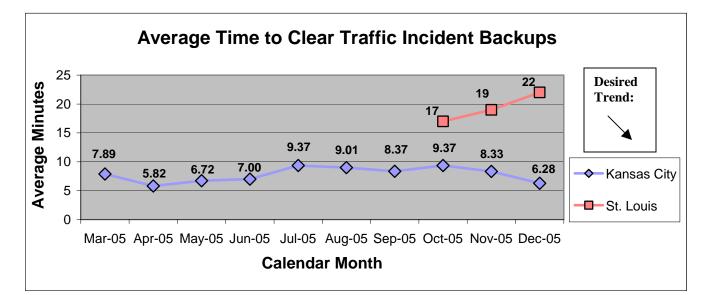
This measure tracks the amount of time it takes to return traffic flow back to normal after a traffic incident. A traffic incident is any unplanned event that creates a temporary reduction in the number of vehicles that can travel on the road.

### **Measurement and Data Collection:**

"Lanes cleared" times and "clear backup" times are being recorded by the Traffic Management Center operators using automated detection systems. District 4 (Kansas City) has devices already deployed with data being gathered along portions of I-435 and I-70. District 6 (St. Louis) began collecting data manually using video and Motorist Assist verification. St. Louis will use advanced transportation management system devices and software as soon as they come online during the next several months. Average times to clear traffic backups are calculated from these recorded times.

### **Improvement Status:**

This data shows that congestion clearance times experienced a moderate increase in the third quarter of 2005, with a downward trend starting in the fourth quarter of 2005 in the Kansas City Metro area. The St. Louis Metro data began in the fourth quarter of 2005 and shows an upward trend. As more data becomes available for the St. Louis area, we will be able to have a better understanding of seasonal influences. The presence or absence of large incidents in any single time period can cause significant fluctuations for a small data set. Additionally, the time of day that incidents are occurring will also directly affect the amount of traffic stuck in the queue, and therefore, the amount of time to clear that congestion. The third and fourth quarters included the majority of the peak travel and construction season. This normal increase in traffic demand may also have contributed to the amount of time required to clear an incident. According to the FHWA, each minute of daytime lane blockage in urban areas can result in 4 minutes of residual congestion on average. Quick clearance activities that are currently being promoted statewide will provide for reduced overall delay to motorists, particularly for incidents during peak travel times and peak construction seasons.



### Number of customers assisted by the Motorist Assist program

### Result Driver: Don Hillis, Director of System Management

Measurement Driver: Dan Bruno, Traffic Studies and Corrections Engineer

### **Purpose of the Measure:**

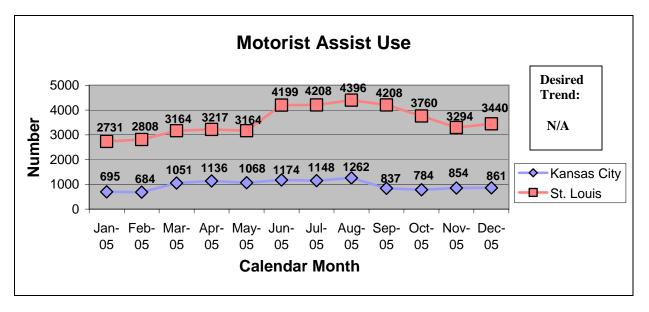
This measure is used to gauge the use of the Motorist Assist programs. Incidents impact Missouri's transportation system capacity. An incident is any unplanned event that creates a temporary reduction in roadway capacity that impedes normal traffic flow. The sooner an incident is removed, the sooner the highway system returns to normal capacity. Therefore, responding to and quickly addressing the incidents (crashes, flat tires, stalled vehicles, etc.) improves system performance.

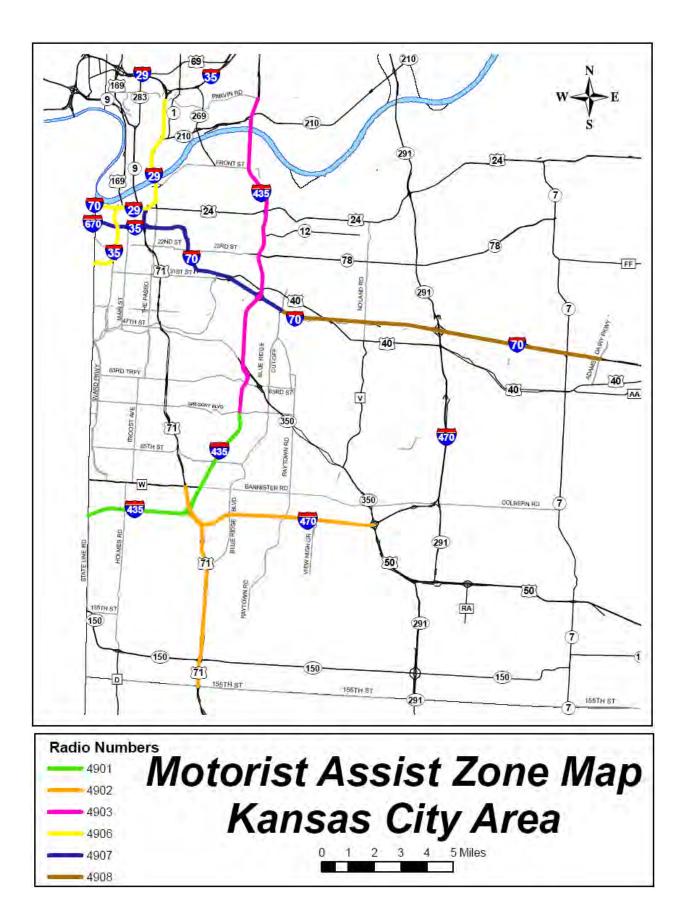
### **Measurement and Data Collection:**

Collection of monthly data began in January 2005. The Motorist Assist operators record each assist and then prepare a monthly summary. St. Louis operators patrol approximately 160 freeway centerline miles, while Kansas City operators patrol approximately 60 freeway centerline miles.

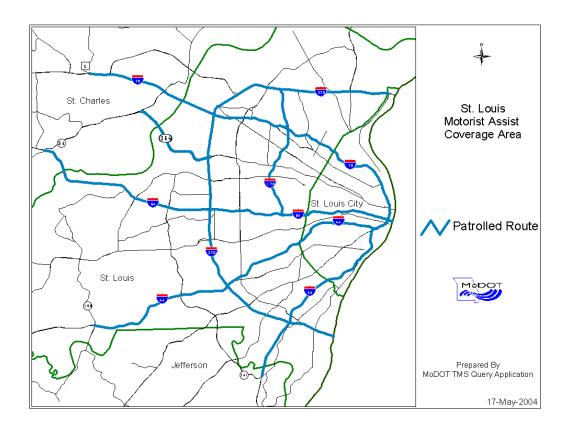
### **Improvement Status:**

This data demonstrates that the Motorist Assist program in both St. Louis and Kansas City experienced a routine increase in assists due to increased weather temperatures and roadway volumes. The sharp increase in assists in the St. Louis area is attributable to a spike in temperature and a period of recurring severe weather resulting in increased breakdowns and collisions. This data also demonstrates a typical pattern of increased assists during peak travel season, followed by a decrease in services in late summer and early fall.





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### Percent of work zones meeting expectations for traffic flow

### Result Driver: Don Hillis, Director of System Management

Measurement Driver: Scott Stotlemeyer, Technical Support Engineer

### **Purpose of the Measure:**

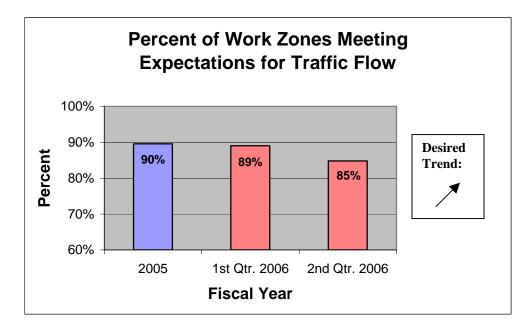
An important factor in evaluating the department's performance in temporary traffic control design, deployment, operation, and maintenance is the measurement of our work zones affect on the mobility of highway users. This measure tracks how well the department meets its customer expectations of work zones on state highways.

### **Measurement and Data Collection:**

Using a formal inspection worksheet, staff from Construction and Materials, Maintenance, Traffic and the districts evaluate mobility in work zones across the state. Each evaluation consists of a subjective assessment of engineered and operational factors affecting traffic flow. The evaluator assigns a pass, fail, or n/a rating to each of these individual factors and a pass or fail rating for their overall perception of traffic flow in, around, and through the work zone. The overall perception ratings are compiled quarterly and reported via this measurement. Note: This inspection program began in June 2005. A total of 625 inspections (144 in June 2005, 310 in first quarter FY 2006, and 171 in second quarter FY 2006) have been completed since its inception.

### **Improvement Status:**

The percent of work zones meeting traffic flow expectations decreased 4.3 percent this past quarter. The lower percentage does not reflect a relaxation in MoDOT's desire to provide exemplary work zones. Rather, it provides the department with a better baseline of where we are now and identifies opportunity for improvement. Department staff continues to enhance work zone mobility guidance and convey those expectations to contractors, employees, and permittees. As this information becomes part of the culture for those who design, build, and maintain the state's highway system, we expect the percentage reported in this measure to increase.



### Percent of retimed signals

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Julie Stotlemeyer, Signal and Lighting Engineer

#### **Purpose of the Measure:**

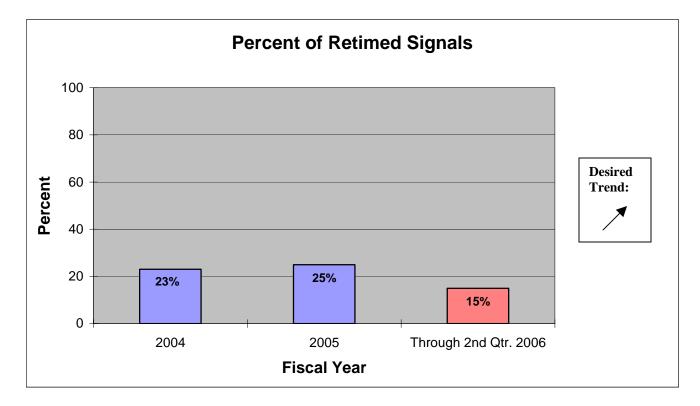
This measure tracks how well the department is adjusting the timing of the signal system to improve traffic flow.

### **Measurement and Data Collection:**

Traffic engineers document retimed signal data on a timing sheet. The date of the retiming is recorded in the Transportation Management System database. Data is collected from the TMS database to generate the report. Signals usually operate under several timing plans. Only one portion of the timing plan may have been changed and captured as a retiming. The retiming could have been completed as a result of a customer complaint or a signal observation. Retiming signals for efficient operation should involve quite an in-depth study and this may not be reflected in this measure.

#### **Improvement Status:**

We have increased our performance significantly. Second quarter of fiscal year 2005 we retimed seven percent of our signals, an increase of eight percent for FY06. Not every signal may need to be retimed, so we would not expect 100 percent of all signals to be retimed every year. But in order to maintain uninterrupted traffic flow, signals should be retimed at a minimum of every three years. Based on this, we could expect about eight percent to be retimed each quarter (16 percent for two quarters). Therefore, we are just about on target. A quality assurance plan for signal timing has been developed and a quality assurance review of three districts has been completed.



### Percent of Motorist Assist customers who are satisfied with the service

### Result Driver: Don Hillis, Director of System Management

Measurement Driver: Dan Bruno, Traffic Studies and Corrections Engineer

### **Purpose of the Measure:**

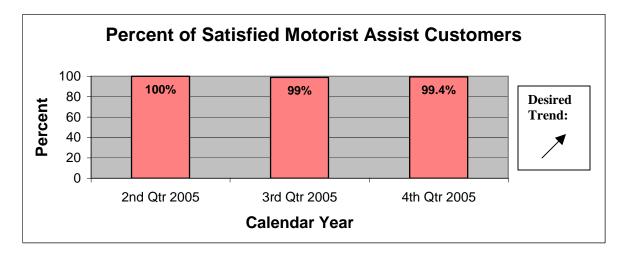
This measure helps evaluate services provided through MoDOT's Motorist Assist Program, specifically whether the customers who use the program are satisfied with the service. Information received provides direction on how to better serve our customers and keep traffic moving safely and efficiently.

### **Measurement and Data Collection:**

Motorist Assist operators began distributing a survey card to customers on June 1 to collect data. Data is compiled and tabulated by the Missouri Transportation Institute. Surveys with selections identifying that the service was "probably" or "definitely" valuable were tabulated as "satisfied" for this measure.

### **Improvement Status:**

The data for this measure included responses from 120 pre-printed survey forms in the second quarter, 204 preprinted forms in the third quarter and 361 pre-printed survey forms in the fourth quarter that were returned to MoDOT by motorists who used the Motorist Assist service in the Kansas City and St. Louis metro areas. This initial data concurs with the comments that have been historically provided by customers on prior comment forms. The change to 99 percent from the second quarter to the third quarter represents a single respondent out of 204 surveys who selected that they were neither satisfied nor dissatisfied with the service. There were 361 respondents in the fourth quarter of 2005. Of those 361 respondents, 2 selected that they were neither satisfied nor dissatisfied with the service. Based on a specific question in these surveys, 99.5 percent of respondents selected that they believed that MoDOT should continue to provide this service.



### Percent of signals observed

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Julie Stotlemeyer, Signal and Lighting Engineer

#### **Purpose of the Measure:**

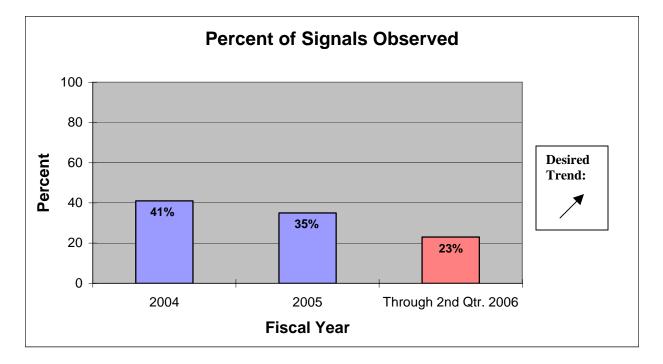
This measure tracks how well the department is monitoring the signal system to improve traffic flow.

### **Measurement and Data Collection:**

Traffic engineers document observed signal data on an observation sheet. The date of the signal observation will be recorded in the Transportation Management System database. Data is collected from the TMS database to generate the report. A complete signal observation requires personnel to monitor the signal during four different times of day: AM peak, Noon peak, PM peak and off peak.

### **Improvement Status:**

For the second quarter of fiscal year 2006 we have made significant progress. Twenty-three percent of our signals, an increase of 13 percent from second quarter fiscal year 2005, have been observed. However, to complete observations on all signals, we should observe approximately 25 percent of signals per quarter (50 percent for two quarters). Therefore we have completed about half of our expected observations through second quarter. All signals should be observed each year with adjustments made to the timing, if necessary, to improve uninterrupted traffic flow. Guidance on how to conduct signal observations has been developed as well as a quality assurance plan for signal observations. A quality assurance review of three districts has been completed.



# *Time to meet winter storm event performance objectives on major and minor highways*

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Tim Jackson, Technical Support Engineer

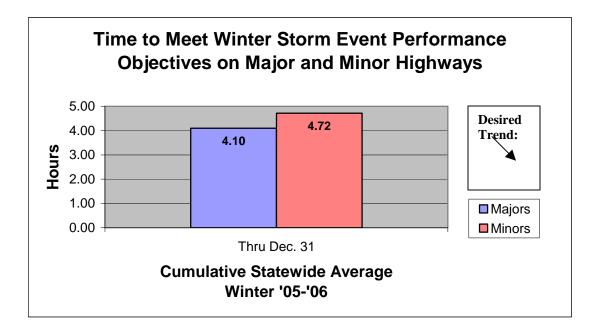
#### **Purpose of the Measure:**

This measure tracks the amount of time needed to meet the performance objectives in MoDOT's snow and ice removal efforts.

#### **Measurement and Data Collection:**

This data is collected in the Lotus Notes Winter Event database. This measurement will track the actual time involved in this process so improvements can be made. After each winter event, such as a snow or ice storm, area maintenance personnel submit a report indicating how much time it took to clear snow from the major and minor highways. Data collection began after the first snowfall this winter for inclusion in the January 2006 Tracker. The objectives are to restore the major highways to a wet or dry condition as soon as possible after a storm's end; to restore the higher volume (greater than 1,000 average daily traffic) minor highways to a wet or dry condition as soon as possible after a storm's end; and to have the lower volume (less than or equal to 1,000 average daily traffic) minor highways open to two-way traffic and treated with salt and/or abrasives at all critical areas such as intersections, hills and curves, as soon as possible after a storm's end.

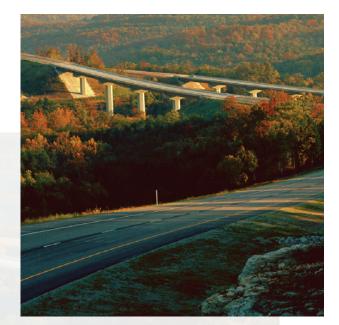
**Improvement Status:** This is the first report for this measure. The two categories for minor highways were averaged into one number for all minor highways. The chart shows that, for the storms we received in December, it took a little over four hours from the end of the storm to return the major highways to a wet or dry condition and approximately four and three quarter hours to meet the performance objectives for the minor highways. We are implementing new equipment such as wider snowplows and training our employees to be more efficient in our snow removal operations.



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Tangible Result Driver – Kevin Keith, Chief Engineer

MoDOT's customers have said they want smooth roads. Smoother roads mean less wear on vehicles, safer travel and greater opportunity for economic development. MoDOT will delight its customers by providing smooth and unrestricted roads and bridges. MoDOT recognizes that road projects built and maintained to a high standard of smoothness will be more efficient. MoDOT must provide customers with smooth roads – because everyone riding on a road can feel whether it is smooth or not!



### Percent of major highways that are in good condition

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

#### **Purpose of the Measure:**

This measure tracks the condition of Missouri's major highway road surfaces. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on improving the condition of highways in the state system.

### **Measurement and Data Collection:**

The major highway system is defined as all routes functionally classified as principal arterials. By definition, the principal arterial system provides for statewide or interstate movement of traffic. Examples include the Interstate system or most US routes such as US 63, US 54 or US 36.

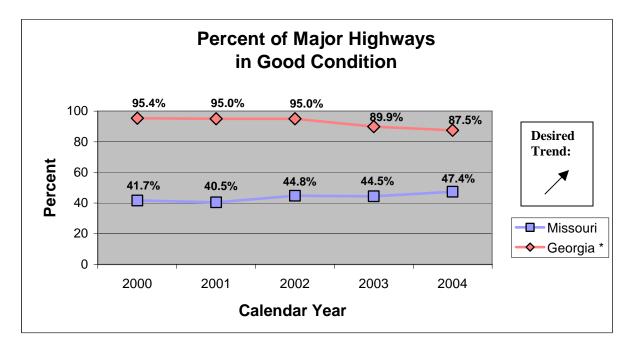
In urban areas, principal arterials carry traffic entering or leaving the urban area and serve movement of vehicles between central business districts and suburban residential areas. Examples include Business 50 (Missouri Blvd.) in Jefferson City, MO 740 (Stadium Blvd.) in Columbia and Route D (Page Ave.) in St. Louis.

The major roads in Missouri total approximately 5,400 centerline miles. Good condition is defined using a combination of criteria. On high-speed routes (speed limits greater than 50 mph) the International Roughness Index (IRI) is used. For lower-speed routes (mostly urban areas) where smoothness is less critical, a Present Serviceability Rating (PSR) is used. While smoothness is a factor in PSR, physical condition is also a factor.

Direct comparison to other states is difficult because of differences in measurement methodologies. However, a general order-of-magnitude comparison is possible given certain assumptions. For example, there are five states that report mileage for major highways within 10 percent of that maintained by MoDOT. Of these five, Georgia, with 5,708 miles, currently has the highest percentage of these highways classified in good condition based on smoothness only. The Missouri definition of good uses smoothness as one factor, but it also includes other condition factors such as physical distress to determine quality. While the comparison is not exact, it does indicate the level of performance possible on a system of Missouri's size.

#### **Improvement Status:**

In the past two years, there has been a slight improvement in pavement condition. Currently, 47.4 percent of the major highways are in good condition. More than \$430 million per year is dedicated to taking care of the existing highway system. An additional \$359 million available from Amendment 3 (approved by Missouri voters in November 2004) will be added to this sum over the next three years as part of MoDOT's *Smooth Road Initiative*. In the next few years, the number of major highway miles of pavement in good condition will substantially increase due to additional funding.



\* Source data for Georgia is "Highway Statistics 2003" published by FHWA. It is based only on pavement smoothness (IRI) submitted as part of the Highway Performance Monitoring System.

### Percent of minor highways that are in good condition

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

### **Purpose of the Measure:**

This measure tracks the condition of Missouri's minor highway road surfaces. The public has indicated the condition of the existing state roadway system should be one of Missouri's highest priorities. MoDOT places a high priority on improving the condition of highways in the state system.

### **Measurement and Data Collection:**

The minor highway system consists of all routes functionally classified as minor arterials or collectors. These routes mainly serve local transportation needs and include highways commonly referred to as lettered routes, such as Route A, Route C and Route DD. The public sometimes refers to these routes as farm-to-market roads. The minor roads in Missouri total approximately 27,000 centerline miles.

Good condition is defined using a combination of criteria. Where available, on high-speed routes (speed limits greater than 50 mph) the International Roughness Index (IRI) is used. For lower speed routes where smoothness is less critical, a Present Serviceability Rating (PRS) is used. While smoothness is a factor in PSR, physical condition is also a factor.

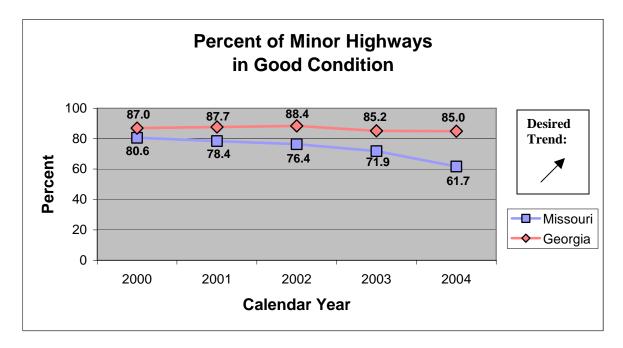
Direct comparison to other states is difficult because of differences in measurement methodologies. However, a general order-of-magnitude comparison is possible given certain assumptions. For example, there are six states that report mileage for minor highways within 10 percent of that maintained by MoDOT. Of these six, Georgia, with 24,315 miles, currently has the highest percentage of these highways classified in good condition. The ratings reported by states as part of the Highway Performance Monitoring System for roads classified as minor more closely relate to Missouri's rating system.

### **Improvement Status:**

Pavement conditions on minor highways have shown a slight decrease in the last five years – currently to 61.7 percent. However, the condition of pavement on minor highways already exceeds that of the major highway system. More attention and extra money from the passage of Amendment 3 (approved by Missouri voters in November 2004) will be focused on improving major highways. Funding for minor highways should result in conditions at or near current levels.

Federal Highway Administration allows conditions on minor highways to be reported on either IRI or PSR. PSR includes an assessment of physical distress similar to Missouri's definition. The Missouri definition of good uses smoothness as one factor, but it also includes other condition factors such as physical distress to determine quality. While the comparison is not exact, it does indicate the level of performance possible on a system of Missouri's size.

The 2004 results are based on approximately 11,000 miles rated using a combination of automated methods and MoDOT district manual ratings. Prior years are based only on manual district ratings. A process to transition to centralized rating is being developed. MoDOT's Transportation Planning staff located at the Central Office in Jefferson City is using methods comparable with those used on major highways and will conduct all ratings during calendar year 2006.



\* Source data for Georgia is "Highway Statistics 2003" published by the Federal Highway Administration. Data is based on a combination of pavement smoothness – IRI or PSR – as submitted as part of the Highway Performance Monitoring System.

### Percent of deficient bridges on major highways

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

#### **Purpose of the Measure:**

This measure tracks progress toward improving the condition of Missouri's bridges on major highways. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

### **Measurement and Data Collection:**

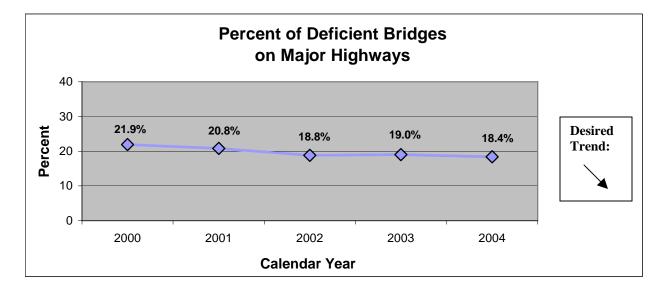
The major highway system is defined as all routes functionally classified as principal arterials. By definition, the principal arterial system provides for statewide or interstate movement of traffic. Examples include the Interstate system or most US routes such as US 63, US 54 or US 36.

In urban areas, principal arterials carry traffic entering or leaving the urban area and serve movement of vehicles between central business districts and suburban residential areas. Examples include Business 50 (Missouri Blvd.) in Jefferson City, MO 740 (Stadium Blvd.) in Columbia and Route D (Page Ave.) in St. Louis.

A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges annually. There are currently 3,282 bridges on major highways.

#### **Improvement Status:**

Bridge conditions on major highways have shown a moderate improvement. The percent of deficient bridges is down by 18.4 percent over the last five years as a result of increasing funds directed to taking care of the existing highway system. A minimum of \$10 million per year has been dedicated to bridge preventive maintenance activities to slow the number of bridges falling into the deficient category.



### Percent of deficient bridges on minor highways

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

### **Purpose of the Measure:**

This measure tracks progress toward improving the condition of Missouri's minor highway bridges. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

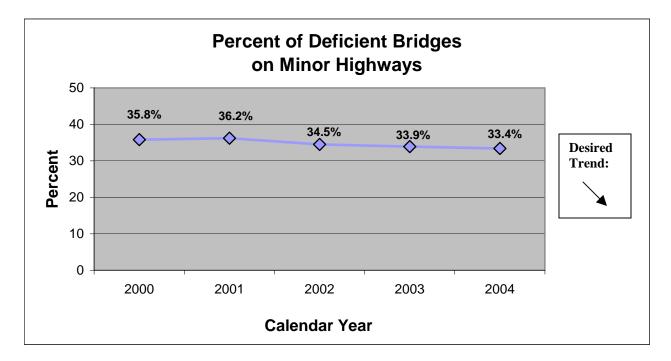
### **Measurement and Data Collection:**

The minor highway system consists of all routes functionally classified as minor arterials or collectors. These routes serve more local transportation needs and include highways commonly referred to as lettered routes, such as Route A, Route C and Route DD. The public sometimes refers to these routes as farm-to-market roads.

A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment, or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges annually. There are currently 6,901 bridges on minor highways.

#### **Improvement Status:**

Bridge conditions on minor highways have shown a moderate improvement. The percent of deficient bridges is down by 33.4 percent over the last five years as a result of increasing funds directed to taking care of the existing highway system. A minimum of \$10 million per year has been dedicated to bridge preventive maintenance activities to slow the number of structures falling into the deficient category.



### Number of deficient bridges on the state system (major & minor highways)

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

### **Purpose of the Measure:**

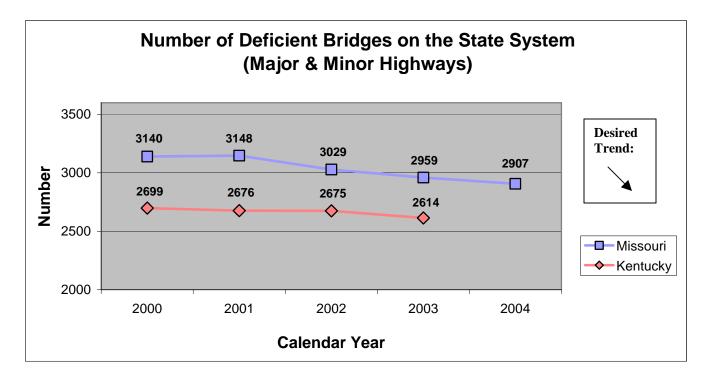
This measure tracks progress toward improving the condition of Missouri's bridges. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

### **Measurement and Data Collection:**

A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment, or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges annually. There are currently a total of 10,183 bridges on the state highway system.

### **Improvement Status:**

Bridge conditions on Missouri highways have shown a moderate improvement in the last five years as a result of increasing funds directed to taking care of the existing highway system. Currently, 2,907 bridges are considered deficient on the state highway system. A minimum of \$10 million per year has recently been dedicated to preventive maintenance activities on bridges to slow the number of bridges falling into the deficient category. The number of deficient bridges has been reduced by about 50 each year since 2000.



\* Source for Kentucky, "Better Bridges" November 2004 for data collected in calendar year 2003. The 2004 data for Kentucky is not available at this time.

### Number of miles completed through the Smooth Roads Initiative

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Machelle Watkins, Transportation Planning Director

### **Purpose of the Measure:**

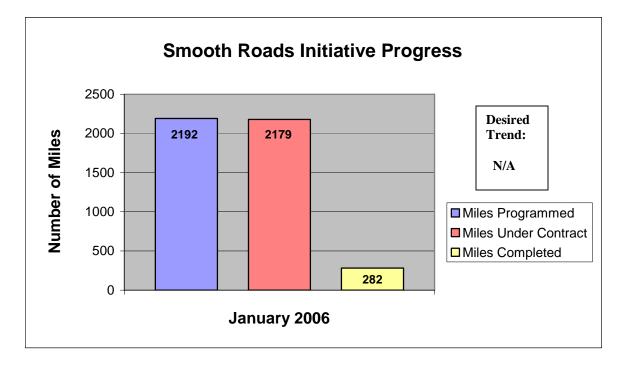
This measure will determine how many centerline miles of roadway have been improved as a result of the Amendment 3 *Smooth Roads Initiative* (SRI). Improvements may consist of pavement, striping or pavement marking projects on Missouri's busiest roadways.

### **Measurement and Data Collection:**

The first set of SRI projects was awarded in February 2005. Data collection on this measure began May 1, 2005, with the first reporting in the July 2005 Tracker. Data will be collected and reported on a statewide basis. All of the SRI projects were to be completed within three years. In January 2006, MoDOT accepted Governor Blunt's challenge to complete the SRI projects by December 2006, one year ahead of schedule.

### **Improvement Status:**

Statewide, as of January 2006, 282 miles of SRI work have been completed. This is up from 17 miles completed in September 2005. Thirteen miles of SRI work remain to be awarded.



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# Safe Transportation System

Tangible Result Driver – Don Hillis, Director of System Management

MoDOT works closely with other safety advocates to make our roads and work zones safer. The department supports educational programs which encourage safe driving practices and enforcement efforts which increase adherence to traffic laws. MoDOT will not compromise safety because it believes in the well-being of its employees and customers.





### Safe Transportation System

### Number of fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

### **Purpose of the Measure:**

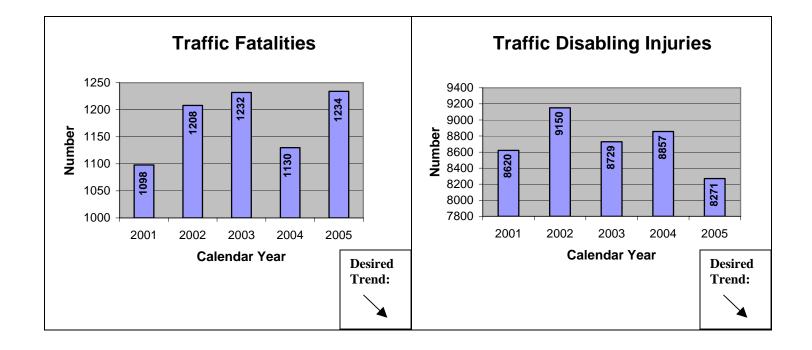
This measure tracks annual trends in fatalities and disabling injuries resulting from Missouri motor vehicle crashes. It will help drive the Missouri Highway Safety Plan, which supports the *Blueprint for Safer Roadways*, toward efforts that reduce fatalities and injuries on all Missouri roads.

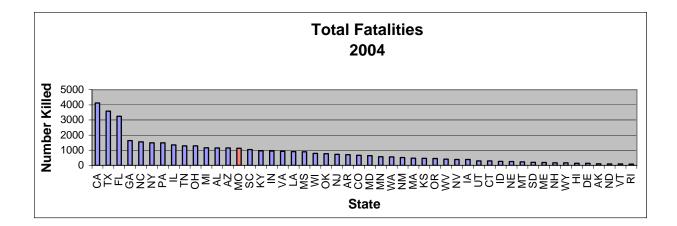
### **Measurement and Data Collection:**

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Reports on crash data are available to law enforcement and traffic safety advocates for crash analysis through both databases. Fatality data is not final until each fatal crash has been validated and the investigation is closed. Some crashes occurring in 2005 are under investigation, therefore, final annual data is not available.

### **Improvement Status:**

Fatalities increased by 10 percent in 2005 after experiencing a significant decrease from 2003 to 2004. Disabling injuries continue to show a decreasing trend. In 2005, Missouri ranked 14<sup>th</sup> in total fatalities as compared to other states. Fatalities and disabling injuries are higher due to non-use of safety belts, speeding, and impaired driving. Exposure rate has increased each year due to the number of registered vehicles and licensed drivers along with the number of miles traveled. Rural crashes on State Numbered Roadways continue to be a concern. Focusing public information, education and sustained enforcement efforts on specific behavior demonstrated by specific age groups is our best practice. Safety advocates, organizations and agencies across Missouri have joined together to implement *Missouri's Blueprint for Safer Roadways*. The Blueprint outlines strategies to reduce fatal and disabling injury crashes on our roadways with a goal of 1,000 or fewer fatalities by 2008.





### Number of impaired driver-related fatalities and disabling injuries

### Result Driver: Don Hillis, Director of System Management

Measurement Driver: Leanna Depue, Highway Safety Director

### **Purpose of the Measure:**

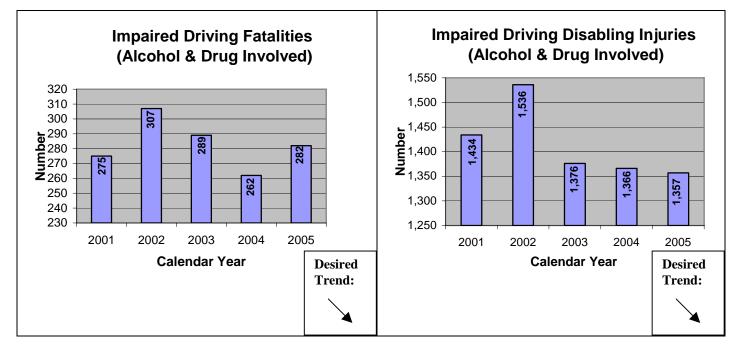
This measure tracks annual trends in fatalities and injuries resulting from motor vehicle crashes involving drivers who are impaired by alcohol and/or drugs. It will help drive the Missouri Highway Safety Plan, which supports the *Blueprint for Safer Roadways*, toward efforts that reduce fatalities and injuries on Missouri's roadways.

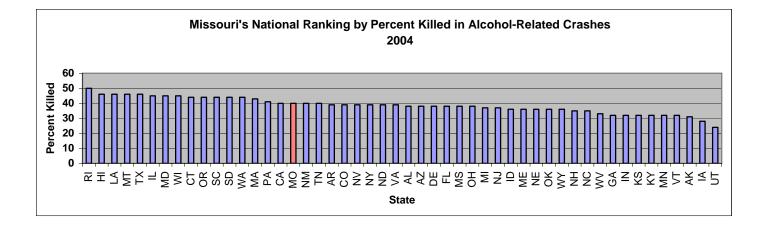
### **Measurement and Data Collection:**

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Reports on crash data are available to law enforcement and traffic safety advocates for crash analysis through both databases. Fatality data is not final until each fatal crash has been validated and the investigation is closed. Some crashes occurring in 2005 are under investigation, therefore, final annual data is not available.

### **Improvement Status:**

Alcohol- and drug-related fatalities and disabling injuries have decreased since 2002. In 2005, Missouri still ranked 17<sup>th</sup> overall in percent of persons killed in alcohol-related crashes as compared to other states. In addition to Missouri participating in the National "You Drink and Drive, You Lose." campaign, Missouri joined 14 other states with high alcohol-related crashes as a Strategic Evaluation State. Missouri agreed to increase law enforcement activity through June 2006 in areas that represent 65 percent of the states' high alcohol-related crashes. Public information and education has been directed at high-risk drivers between the ages of 21 to 35. Law enforcement efforts have been concentrated on high crash corridors. These efforts have assisted in the reduction of impaired driving crashes overall. Although, impaired driving fatalities have increased slightly from 2004 to 2005, Missouri is experiencing a downward trend. Safety advocates, organizations and agencies across Missouri have joined together to implement *Missouri's Blueprint for Safer Roadways*. The Blueprint outlines strategies to reduce fatal and disabling injury crashes on our roadways with a goal of 1,000 or fewer fatalities by 2008.





### Rate of annual fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

### **Purpose of the Measure:**

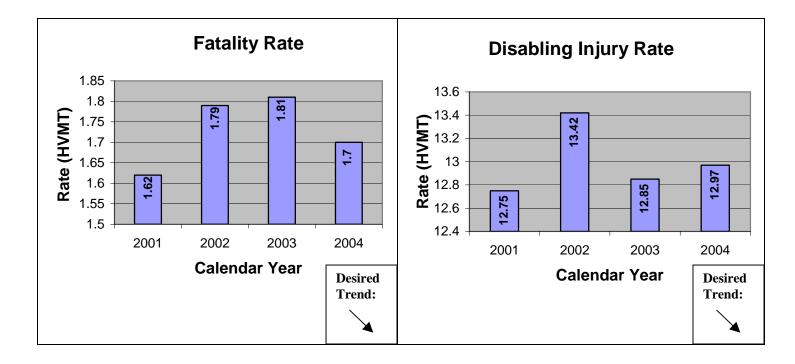
This measure tracks annual trends in fatalities and disabling injury rates per one hundred million vehicle miles traveled (HVMT) in Missouri. It will help drive the Missouri Highway Safety Plan, which supports the *Blueprint for Safer Roadways*, toward efforts that reduce fatalities and injuries on Missouri's roadways.

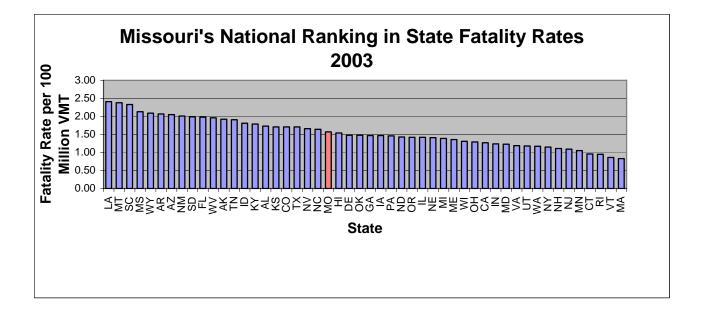
### **Measurement and Data Collection:**

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Reports on crash data is available to law enforcement and traffic safety advocates for crash analysis through both databases. Rates cannot be calculated until the VMT is calculated in July of the following year.

### **Improvement Status:**

The fatality rate decreased to 1.7 in 2004 after reaching 1.81 in 2003. The decrease is significant considering there were more vehicles registered and more miles traveled than in any previous year. Focused law enforcement efforts, engineering safety enhancements and increased public awareness all contribute to the decrease. Safety advocates, organizations and agencies across Missouri have joined together to implement *Missouri's Blueprint for Safer Roadways*. The Blueprint outlines strategies to reduce fatal and disabling injury crashes on our roadways with a goal of 1,000 or fewer fatalities by 2008.





### Percent of safety belt/passenger vehicle restraint use

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

This measure tracks annual trends in safety belt usage by persons in passenger vehicles. This measure will help drive the Missouri Highway Safety Plan, which supports the *Blueprint for Safer Roadways*, toward efforts that reduce the number of fatalities and injuries on all Missouri roads.

### **Measurement and Data Collection:**

An annual statewide survey is conducted each June at 480 pre-selected locations in 20 counties. The data collected at these sites is calculated into a rate by use of a formula approved by the National Highway Traffic Safety Administration. The safety belt usage survey enables data collection from locations representative of 85 percent of the state's population. The data collection plan is the same each year for consistency and compliance with the National Highway Traffic Safety Administration guidelines.

### **Improvement Status:**

Safety belt use has increased eight percent in the past four years. In 2005, Missouri ranked 34<sup>th</sup> in safety belt use rate as compared to other states. Missouri's increase is largely due to increased public awareness and law enforcement participation in the National "Click it or Ticket" campaign. A pilot program conducted in 2005 focused on teen safety belt usage also proved to be successful in increasing use among teenagers. MoDOT continues to promote the need for a primary seat belt law in Missouri.





### Number of bicycle and pedestrian fatalities and disabling injuries

#### **Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

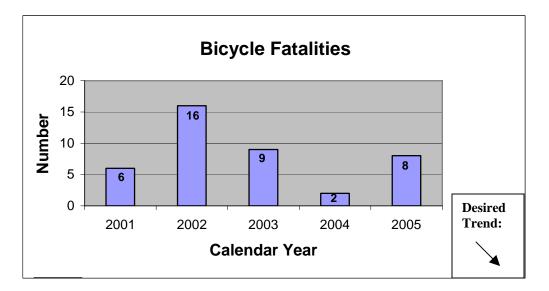
This measure tracks annual trends in fatalities and disabling injuries resulting from motor vehicle crashes with bicycles and pedestrians in Missouri. It will help drive the Missouri Highway Safety Plan, which supports the *Blueprint for Safer Roadways*, toward efforts that reduce fatalities and injuries on all Missouri roads.

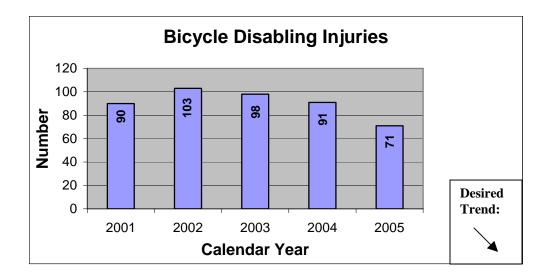
#### **Measurement and Data Collection:**

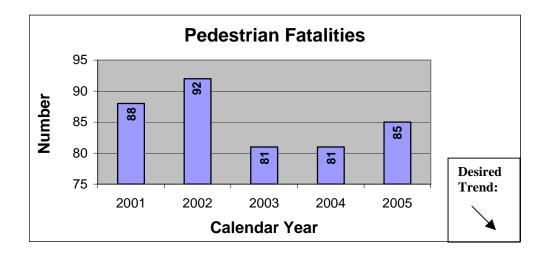
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Reports on crash data are available to law enforcement and traffic safety advocates for crash analysis through both databases. Fatality data is not final until each fatal crash has been validated and the investigation is closed. Some crashes occurring in 2005 are under investigation, therefore, final annual data is not available.

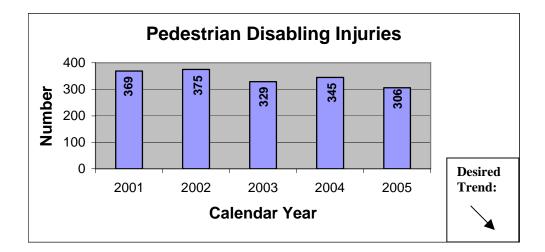
#### **Improvement Status:**

This data reflects the number of fatalities and disabling injuries occurring when a motor vehicle is involved in a crash with a bicycle or pedestrian. There has been a downward trend in bicycle fatalities and disabling injuries over the past four years, due to more dedicated bicycle lanes and riding areas. Pedestrian fatalities and disabling injuries also are on a downward trend, due to improved cross walks and signaling. Safety advocates, organizations and agencies across Missouri have joined together to implement *Missouri's Blueprint for Safer Roadways*. The Blueprint outlines strategies to reduce fatal and disabling injury crashes on our roadways with a goal of 1,000 or fewer fatalities by 2008. Funds have been dedicated to the St. Louis and Kansas City regions in support of pedestrian safety under the Blueprint.









### Number of motorcycle fatalities and disabling injuries

### **Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

### **Purpose of the Measure:**

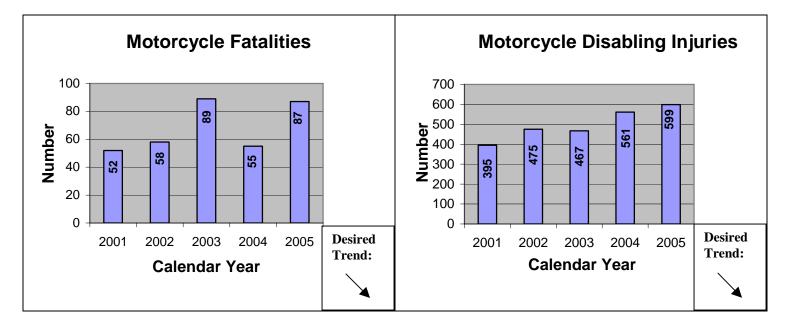
This measure tracks annual trends in fatalities and disabling injuries resulting from motorcycle crashes in Missouri. It will help drive the Missouri Highway Safety Plan, which supports the *Blueprint for Safer Roadways*, toward efforts that reduce fatalities and disabling injuries on Missouri's roadways.

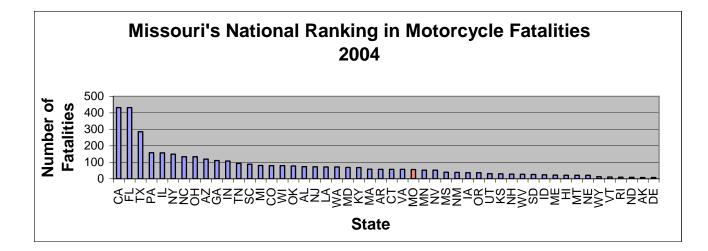
### **Measurement and Data Collection:**

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Reports on crash data are available to law enforcement and traffic safety advocates for crash analysis through both databases. Fatality data is not final until each fatal crash has been validated and the investigation is closed. Some crashes occurring in 2005 are under investigation, therefore, final annual data is not available.

#### **Improvement Status:**

Fatalities and disabling injuries have shown an upward trend over the past four years. In 2005, Missouri ranked 28<sup>th</sup> in total fatalities when compared to other states. Missouri has ranked as high as 12<sup>th</sup> in 2003. A significant increase in the number of licensed motorcycles and riders has increased the exposure rate. Rider education classes are offered throughout Missouri so that no one must drive more than one hour to a site for training. More than 4,000 riders at 28 sites are trained each year. Twenty-four new instructors are also trained each year. Safety advocates, organizations and agencies across Missouri have joined together to implement *Missouri's Blueprint for Safer Roadways*. The Blueprint outlines strategies to reduce fatal and disabling injury crashes on our roadways with a goal of 1,000 or fewer fatalities by 2008. A motorcycle sub-committee has been formed and charged with developing a strategic plan further analyzing and addressing the problem in Missouri.





### Number of commercial motor vehicle crashes resulting in fatalities

### Result Driver: Don Hillis, Director of Systems Management

Measurement Driver: Charles Gohring, Motor Carrier Services Program Manager

#### **Purpose of the Measure:**

This measure tracks the number of commercial motor vehicles involved in fatality accidents each year. MoDOT uses the information to target educational and enforcement efforts.

#### **Measurement and Data Collection:**

The Missouri State Highway Patrol collects and records the crash statistics used in this measure. The data used in this measure reports the number of commercial motor vehicles involved in a crash where one or more people die within 30 days as a result of the crash.

#### **Improvement Status:**

Between 2000 and 2004, the number of Missouri commercial motor vehicle fatal crashes have slowly dropped from 164 in 2000 to 153 in 2004, due to the coordinated efforts of MoDOT, the Missouri State Highway Patrol, the Federal Motor Carrier Safety Administration Missouri Division, and the Kansas City and St. Louis Police Departments. MoDOT efforts include the installation of larger highway signs, highly reflective pavement markings, cable guardrails, roundabout intersections, incident management alert signs, roadside rumble strips, and intelligent transportation systems at scales. MoDOT also conducts training sessions, regulation compliance reviews, safety audits of new motor carrier firms and truck inspections at terminals and destinations. The Missouri State Highway Patrol, St. Louis and Kansas City Police Departments conduct commercial vehicle roadside inspections to remove unsafe drivers and vehicles from the road.

In 2004, Missouri ranked 40<sup>th</sup> nationally in the number of fatality crashes.





### Number of commercial motor vehicle crashes resulting in injuries

### Result Driver: Don Hillis, Director of Systems Management

Measurement Driver: Charles Gohring, Motor Carrier Services Program Manager

#### **Purpose of the Measure:**

This measure tracks number of commercial motor vehicles involved in injury accidents each year. MoDOT uses the information to target educational and enforcement efforts.

#### **Measurement and Data Collection:**

The Missouri State Highway Patrol collects and records crash statistics. The data for this measure reflects the number of commercial motor vehicles involved in crashes where one or more people are injured as a result of the crash.

#### **Improvement Status:**

Between 2000 and 2004, the number of commercial motor vehicle crashes resulting in injuries decreased. The improvement is due to the coordinated safety efforts of MoDOT, the Missouri State Highway Patrol, the Federal Motor Carrier Safety Administration Missouri Division, and the Kansas City and St. Louis Police Departments. MoDOT efforts include the installation of larger highway signs, highly reflective pavement markings, cable guardrails, roundabout intersections, incident management alert signs, rumble stripes, and intelligent transportation systems at scales. MoDOT also conducts training sessions, regulation compliance reviews, safety audits of new motor carrier firms and truck inspections at terminals and destinations. The Missouri State Highway Patrol, St. Louis and Kansas City Police Departments conduct commercial vehicle roadside inspections to remove unsafe drivers and vehicles from the road.



### Number of fatalities and injuries in work zones

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Scott Stotlemeyer, Technical Support Engineer

#### **Purpose of the Measure:**

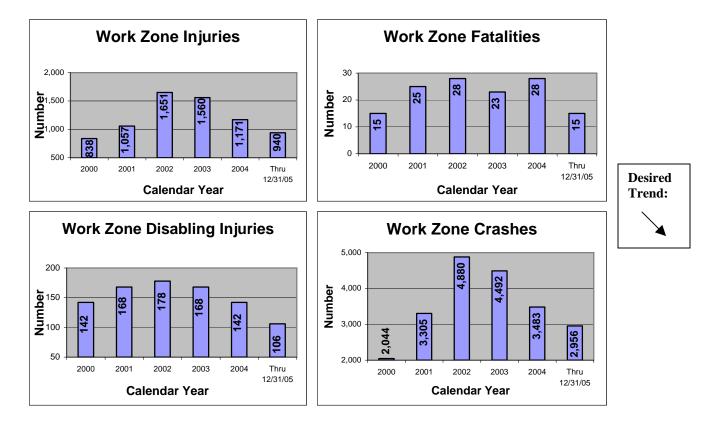
An important factor in evaluating the safety of Missouri's transportation system is determining the safety of work zones located on the state's public roads. This measure tracks the number of injuries and fatalities occurring as a result of a traffic crash in a work zone on any of these facilities.

#### **Measurement and Data Collection:**

Law enforcement agencies in Missouri are required to report vehicular crashes via submittal of a standardized vehicle accident report form to the Missouri State Highway Patrol. MSHP personnel enter these reports into a statewide crash database. MoDOT staff queries this data to identify injuries and fatalities associated with work zones.

#### **Improvement Status:**

Since 2002, the year Missouri traffic safety representatives reformatted the accident report form and MSHP conducted extensive training to emphasize work zones, the number of work zone-related crashes, disabling injuries, injuries, and fatalities on the state's roadways has generally decreased over consecutive years. This reduction, despite increasing traffic demand on the transportation system and a growing state highway construction program, results from the department's proactive approach to raising work zone awareness and minimizing impacts on the traveling public over the same timeframe.



### Number of highway-rail crossing fatalities and collisions

**Results Driver:** Don Hillis, Director of System Management **Measurement Driver:** Rod Massman, Administrator of Railroads

### **Purpose of the Measure:**

This measure tracks annual trends in fatalities and collisions resulting from train-vehicle crashes at railroad crossings in Missouri. It supports *Missouri's Blueprint for Safer Roads* in efforts to reduce the number of fatalities, collisions and injuries at Missouri's public highway-rail crossings.

### **Measurement and Data Collection:**

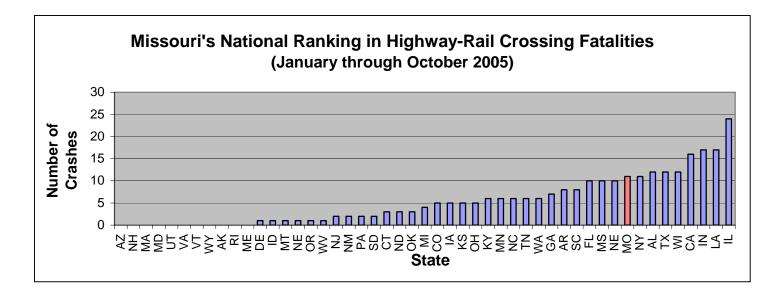
Crash data is collected at the Multimodal Operations Division, Railroad Section and is entered into a railroad safety information system (RSIS). The record system is used to update MoDOT's traffic management system. This figure does not include fatalities from those trespassing on railroad property at areas other than at railroad crossings, which are tabulated separately. Missouri is then ranked in a chart with all other states using data the Federal Railroad Administration (FRA) supplies regarding collisions and fatalities in each state. Missouri ranks ahead for its population in fatalities and somewhat behind in collisions.

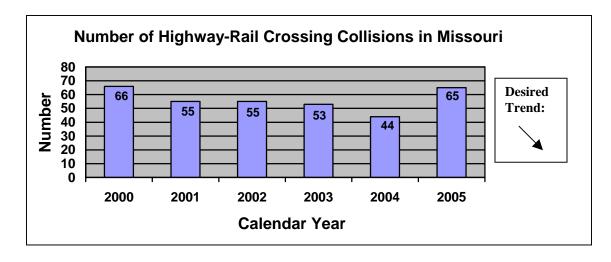
#### **Improvement Status:**

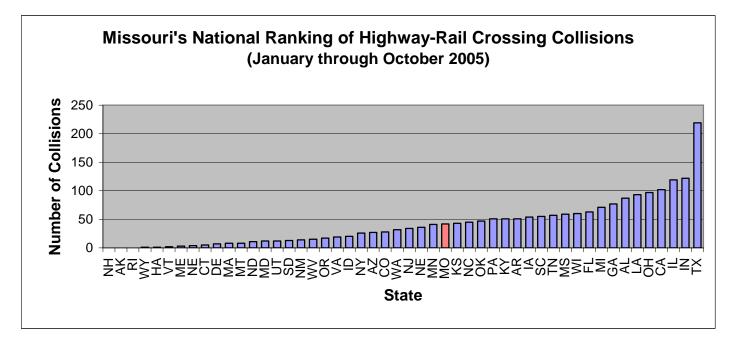
The Railroad Section continues to coordinate its railroad crossing projects in the areas of greatest need, using a safety exposure index, in addition to focusing on crossings with a history of accidents or limited sight distance. In addition, the use of railroad corridors allows limited funds to be used over a wider area and allows for financial participation by the railroads, thereby increasing the number of overall projects completed in specific areas of the state.

Other improvements include an increased emphasis on and MoDOT employee participation in public outreach presentations on rail safety in conjunction with Operation Lifesaver, Inc., and further exploration of public-private partnerships. For example, through these partnerships, county or city governments could contribute to the costs of installing gates and lights at crossings or installing grade separations at former crossing where state and federal funds would not be sufficient to complete the project. There is also a renewed emphasis on closing unnecessary crossings. The increase in fatalities and collisions in calendar year 2005 resulted in the planning of the first minisummit (February 2006) on rail safety hosted by MoDOT to identify new strategies and ideas for addressing rail-crossing safety.









# **Roadway Visibility** Tangible Result Driver – Don Hillis,

Director of System Management

Good roadway visibility in all weather and light conditions is critical to safe and efficient travel. MoDOT will delight its customers by using top-quality and highly visible stripes and signs.



### Rate of nighttime crashes

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Michael Curtit, Assistant State Traffic Engineer

#### **Purpose of the Measure:**

This measure tracks the types of crashes where visibility of stripes and signs may be a contributing factor.

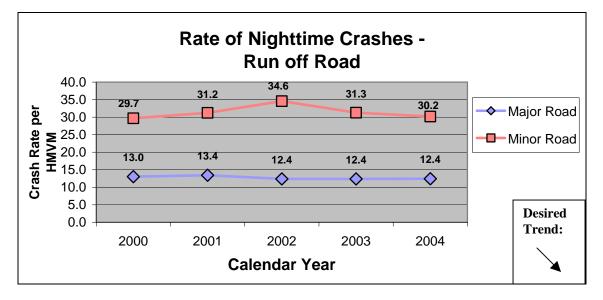
#### **Measurement and Data Collection:**

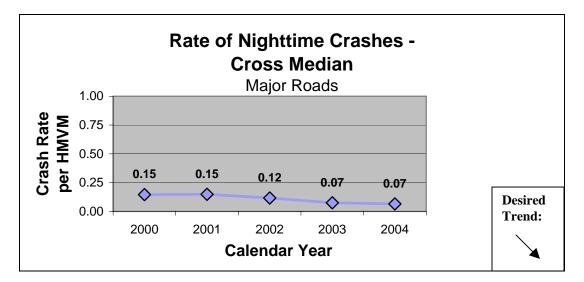
Data is collected from the statewide crash database. This data is filtered to identify crashes that occur during night conditions. Further filtering of the data divides these night crashes by major and minor roadways. Major roadways are those that are used generally for statewide or interstate travel. Minor roadways are those used typically for local traffic needs. Crash rates are calculated using the Average Annual Daily Traffic counts and are expressed in the unit, per 100 million vehicle miles (HMVM), which is the national standard for expressing crash rates.

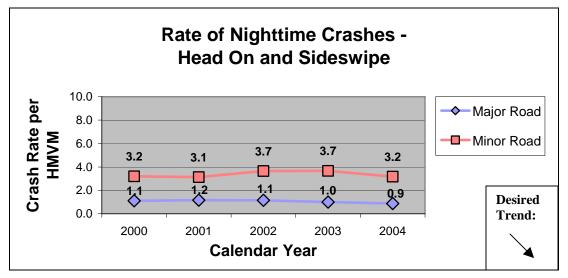
### **Improvement Status:**

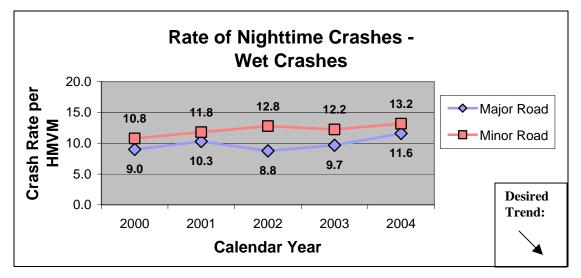
Three crash types (run off road, cross median, and head on/sideswipe) had a slight decrease from the previous year's rate. Major roads had a slightly decreasing trend over the previous five years. Minor roads had virtually a flat trend. There has been a decline in night – run off road crashes since 2002, which corresponds to the time frame where edgeline striping was installed on additional lower-volume roads.

The fourth crash type, nighttime wet crashes, has increased for both major and minor roads. In 2005, MoDOT implemented a new pavement marking system to improve the visibility during nighttime, wet conditions. On major roads this new system includes highly reflective pavement marking tape, edgeline rumble stripes, and delineation of guardcable and guardrail.









### Percent of signs that meet customers' expectations

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Brocksmith, Technical Support Engineer

#### **Purpose of the Measure:**

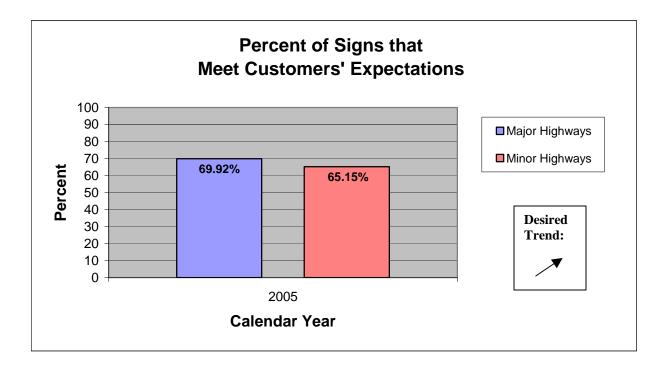
This measure will track whether the department's sign policy and the design standards, and sign replacement policy is resulting in visible signs that meet customers' expectations.

#### **Measurement and Data Collection:**

Sign-quality attributes that define user expectations have been developed based on an industry-wide literature review. The attributes selected for this measure are those that can be captured during a night sign log. A night sign log is conducted by MoDOT employees driving a road at night, recording the location and condition of the signs, particularly how visible the signs are with normal headlights. Data for this measure is collected by doing night sign logs on randomly generated road segments. The data collection is done annually in the fall by MoDOT employees.

#### **Improvement Status:**

The data shows that almost 70 percent of the signs on the major highways and 65 percent on the minor highways are meeting customer expectations. The majority of sign problems indicate that they need to be replaced with new signs that are visible at night. The Smooth Roads Initiative is replacing many of the signs on the major roads. This effort is continuing and should lead to an improvement in the results on the major highways. On the minor roads, MoDOT will need to make greater efforts to maintain signs. With the 10-year replacement program that MoDOT has proposed, this will improve the results on both the major and minor roads.



### Percent of stripes that meet customers' expectations

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Brocksmith, Technical Support Engineer

#### **Purpose of the Measure:**

This measure tracks whether MoDOT's striping policy, processes and materials used are resulting in visible stripes that meet customers' expectations.

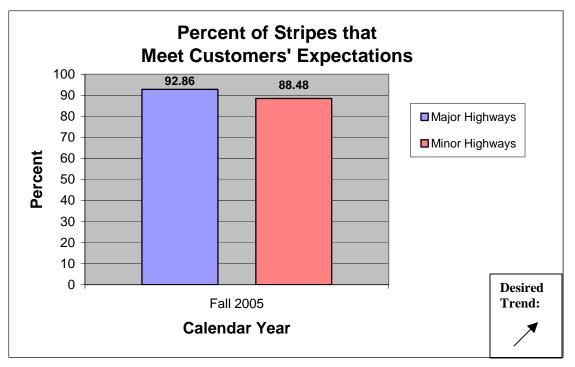
### **Measurement and Data Collection:**

Striping quality attributes that define user expectations have been developed based on an industry-wide literature review. The attribute selected for this measure is the retroreflectivity of the striping that measures the functionality of the striping at night. Retroreflectivity is a measurement of the amount of the vehicle headlights that is being returned to the driver, making the striping visible at night. Data for this measure is collected by taking retroreflectivity readings on randomly generated road segments. MoDOT has a contractor collecting this data. The data will be collected in the fall and spring of each year. This will tell us how our striping is performing going in to the winter and how it is performing after the winter.

#### **Improvement Status:**

The data collected from the contractor was analyzed in respect to the benchmarks MoDOT set as the minimum acceptable level of retroreflectivity, which measures the night visibility of the striping. These readings were taken before all striping for the 2005 striping season was completed, therefore the final results going in to the winter should be slightly higher than what is indicated. For the majority of our roads, the striping is in good shape heading into winter, which is the hardest time for wear on striping.

MoDOT has implemented a new plan for striping to improve visibility. This plan increases the width of striping on major roads to six inches wide, the use of highly retroreflective tape on the skips of major divided highways and the use of longer-lasting materials, which will improve the life and appearance of the striping. When the plan is fully implemented, the results indicated in the chart will improve.



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### Percent of work zones meeting expectations for visibility

#### **Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Scott Stotlemeyer, Technical Support Engineer

### **Purpose of the Measure:**

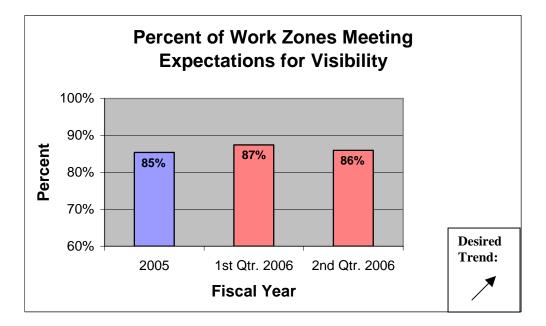
An important factor in evaluating the department's performance in temporary traffic control design, deployment, operation, and maintenance is the measurement of the effectiveness of the visual guidance provided to the highway user traveling through our work zones. This measure tracks how well the department meets its customer expectations of visibility in work zones on state highways.

### **Measurement and Data Collection:**

Using a formal inspection worksheet, staff from Construction and Materials, Maintenance, Traffic and the districts evaluate visibility of construction, MoDOT, and permit work zones across the state. Each evaluation consists of a subjective assessment of engineered and operational factors affecting visibility. The evaluator assigns a pass, fail, or n/a rating to each of these individual factors and a pass or fail rating for their overall perception of the work zone visibility. The overall perception ratings are compiled quarterly and reported via this measurement. Note: The inspection program began June 2005. A total of 625 inspections (144 in June 2005, 310 in first quarter FY 2006, and 171 in second quarter FY 2006) have been completed since its inception.

#### **Improvement Status:**

The percent of work zones meeting visibility expectations decreased slightly (-1.5 percent) this past quarter. The lower percentage does not reflect a relaxation in MoDOT's desire to provide exemplary work zones. Rather, it provides the department with a better baseline of where we are now and identifies opportunity for improvement. Department staff continue to enhance work zone visibility guidance and convey those expectations to contractors, employees, and permittees. As this information becomes part of the culture for those who design, build, and maintain the state's highway system, we expect the percentage reported in this measure to increase.



Tangible Result Driver – Shane Peck, Community Relations Director

Responding to customers in a courteous, personal and understandable way is important. MoDOT listens and seeks to understand, because it values everyone's opinion. MoDOT's goal is to delight them with its customer service.



### Percent of overall customer satisfaction

### Result Driver: Shane Peck, Community Relations Director

Measurement Driver: DeAnne Bonnot, Community Relations Coordinator

### **Purpose of the Measure:**

This measure tracks MoDOT's progress toward the mission of delighting its customers.

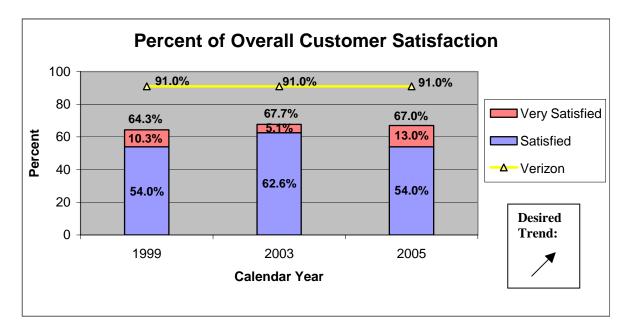
### **Measurement and Data Collection:**

Information for this performance measure was collected from Missouri citizens and MoDOT customers in three surveys conducted separately in 1999, 2003 and 2005. Each survey was conducted by telephone interview with randomly selected Missourians. The most recent information comes from a study conducted as part of MoDOT's Missouri Advance Planning initiative. New data will be collected in May 2006.

Verizon Communications, Inc., is the benchmark for this measure. Their composite score on overall customer satisfaction averaged 91 percent for each of the past three years.

### **Improvement Status:**

Overall customer satisfaction results remained within four percentage points of the current 67 percent in the last three MoDOT survey periods, however, the percentage of those who are "very satisfied" has increased. Impressions shared by legislators, other customers and positive media coverage indicate customer satisfaction is improving.



## Percent of customers who contacted MoDOT that felt they were responded to quickly and courteously with an understandable response

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Coordinator

### **Purpose of the Measure:**

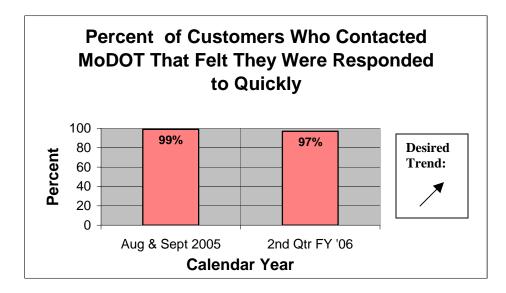
This measure indicates whether customers are comfortable with MoDOT customer service's speed, courteousness and the clarity of our response to their inquires.

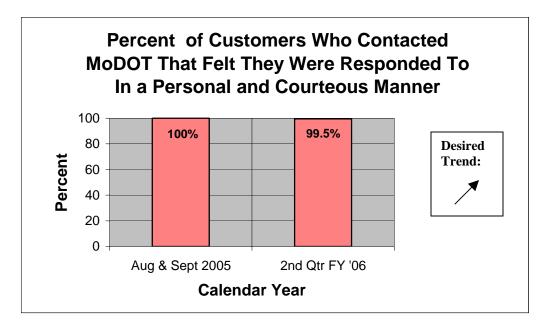
### **Measurement and Data Collection:**

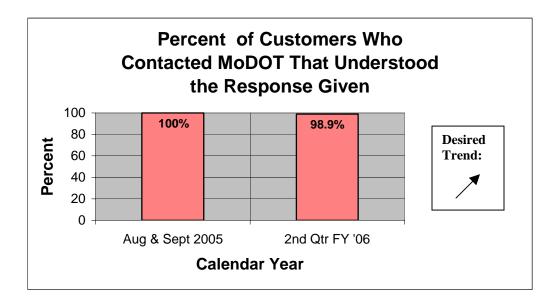
Customers who contact MoDOT Customer Service Centers are asked to complete a short telephone survey when their business with the customer service representative is complete. Data collection started August 1, 2005. In the two months, 195 surveys were completed. In the second quarter of FY06, customers completed 1,370 surveys. The survey results are limited because they measure the performance of only one segment of MoDOT's employee base. A "secret customer" program, like those used by retail and other businesses, gathers other qualitative information and encourages employees to offer the survey opportunity to customers.

#### **Improvement Status:**

Nearly all customers surveyed, 97 percent overall, felt Customer Service responded to their calls promptly; 99.5 percent approved of customer service's courtesy and 98.9 percent were satisfied the clarity of the response. It is important to note that while the number of completed surveys rose six-fold, satisfaction scores remained exceptionally high.







### Number of customer contacts

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Coordinator

#### **Purpose of the Measure:**

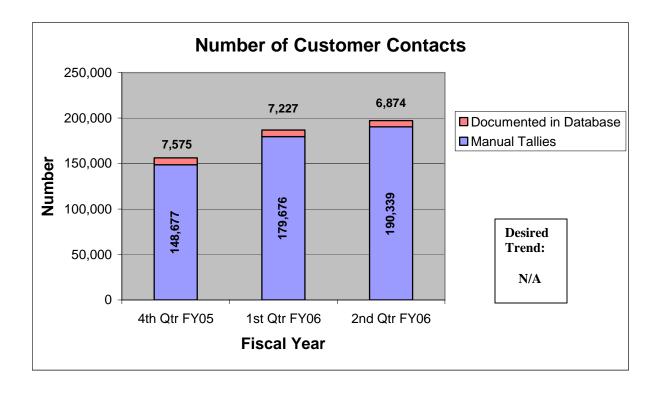
This measure tracks the number of customers who contact MoDOT. A customer contact is defined as any customer who contacts MoDOT via email, telephone, or letter through the customer service centers, highway safety, human resources, and motor carriers.

### **Measurement and Data Collection:**

MoDOT has 70 employees whose primary responsibility is to interact with customers through the telephone, email, letter, or in person. Each quarter the district offices, Highway Safety, Motor Carriers and Human Resources submit the number of customers who contacted their respective offices. Highway Safety and Human Resources is based only from their toll-free number.

### **Improvement Status:**

This quarter's increase comes from the Motor Carriers Services unit. They fielded more than 108,000 contacts this quarter, including nearly 50,000 in December to handle end-of-the-year registration requirements.



### Percent of documented customer requests completed within 24 hours

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Coordinator

### **Purpose of the Measure:**

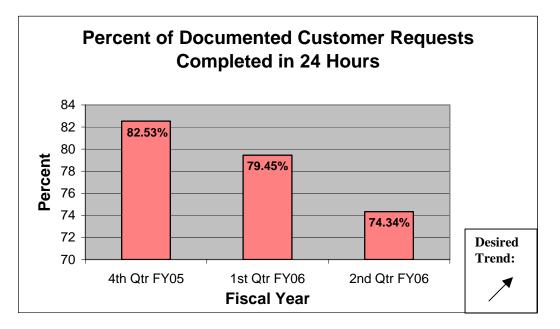
This measure tracks how quickly MoDOT completes tasks requested by its customers through the customer service centers. This gauges if MoDOT's customer service delights its customers.

### **Measurement and Data Collection:**

This information is reported from the customer service database where customer requests are documented from the time the call comes in until the time the request is completed. This may include requests for signs, traffic signal review, pothole patching, work zone congestion, etc. The purpose of documenting these is to allow MoDOT to report on the types of calls it is receiving from its customers, use this data for support in decision making, and share this data with its planning partners so they can use it for support in decision making.

### **Improvement Status:**

About 90 percent of our total customer contacts are completed within 24 hours. These are simple phone call transfers, questions, or requests for general information. The other 10 percent of our customer contacts are documented in a database that tracks the request. That 10 percent is what's tracked here. We're concerned that this number is dropping, so we're working with customer service reps to make sure completed tasks are documented quickly, and with maintenance and traffic staffs to complete customer requests as soon as practical.



### Average completion time on requests requiring follow up

### Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Jeff Briggs, Community Relations Coordinator

### **Purpose of the Measure:**

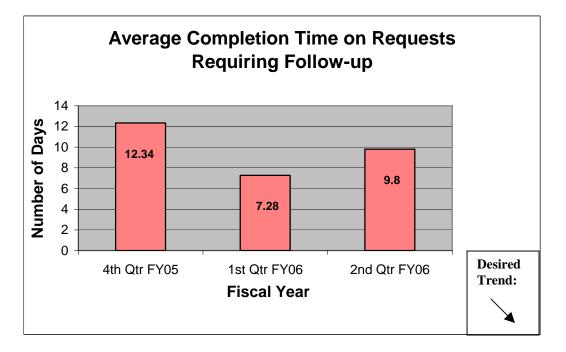
This measure tracks MoDOT's responsiveness and follow up on customers' inquiries that are received through the customer service centers and documented in the database. This measure tracks all contacts that are not responded to within 24 hours and that require further follow up.

### **Measurement and Data Collection:**

This information is generated through the customer service center database that has been revised to provide additional measurement information. Customers who contact MoDOT through the customer service center with an issue that is documented in the database as a call report and requires a response time of more than 24 hours is tracked for average response time. Longer-term requests that require more than 30 days to complete are removed from the results, because a few of these longer-term requests would skew the overall results.

### **Improvement Status:**

We're concerned that response time has gone up this quarter. We're working with districts, reminding maintenance and traffic staff to complete these requests as soon as practical. We're also reviewing guidelines for entering completion times with statewide customer service reps, to make sure the definition of "completed" is consistent.

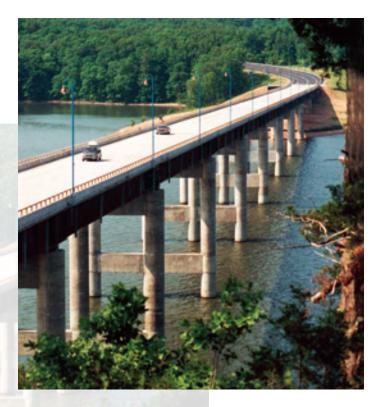


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## Partner with Others to Deliver Transportation Services

Tangible Result Driver – Kevin Keith, Chief Engineer

To be an effective leader in transportation, MoDOT must work with agencies and branches of government, including state, county, private industry and municipalities to deliver a quality transportation system that meets the needs of everyone. A coordinated transportation system requires partnerships to ensure compatible decisions are made. Partnering builds trust and ensures quality results.



### **Partner With Others to Deliver Transportation Services**

### Number of dollars of discretionary funds allocated to Missouri

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Todd Grosvenor, Finance Manager

#### **Purpose of the Measure:**

This measure shows the number of dollars of discretionary funds allocated to Missouri.

#### **Measurement and Data Collection:**

The federal government allocates discretionary funds to states for specific highway and multimodal projects. Multimodal projects include waterway, aviation and transit activities. These funds are distributed administratively for programs that do not have statutory distribution formulas. States compete for these funds, which are above the formula apportionments. Resource Management collects this information from the Federal Highway Administration, Federal Transit Administration and Federal Aviation Administration.

#### **Improvement Status:**

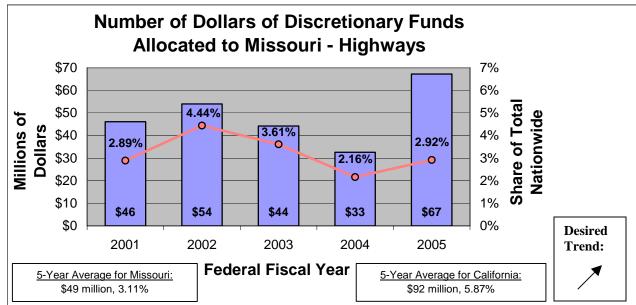
### Highways:

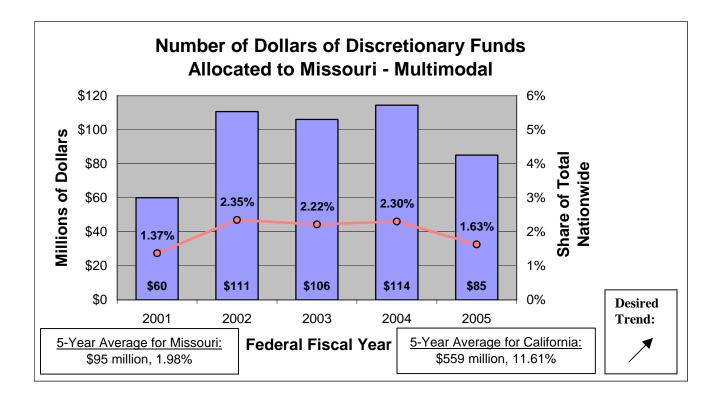
The number of dollars of discretionary funds allocated to Missouri for highway projects increased in 2005 due to the passage of the multi-year federal highway act, SAFETEA-LU. The funds allocated nationwide increased 53% from 2004 to 2005. The funds allocated to Missouri increased 106% from 2004 to 2005. Missouri's Congressional delegates were very successful in securing discretionary funds in SAFETEA-LU for highway projects in Missouri. Missouri's share of the total funds allocated nationwide over the last five years is 3.11 percent, which ranks 11<sup>th</sup>. The state of California received the largest share with 5.87 percent.

#### Multimodal:

The number of dollars of discretionary funds allocated to Missouri for multimodal projects declined in 2005 due to a reduction in our share of aviation funds. Missouri's share of the total funds allocated nationwide over the last five years is 1.98 percent, which ranks 15<sup>th</sup>. The state of California received the largest share with 11.61 percent.

Governmental Relations along with senior management continue to work very closely with Missouri's Congressional delegates to identify specific transportation projects that are good candidates for discretionary funds.





### **Partner With Others to Deliver Transportation Services**

## Percent of earmarked dollars that represent MoDOT's high priority highway projects

**Result Driver:** Kevin Keith, Chief Engineer **Measurement Driver:** Todd Grosvenor, Finance Manager

#### **Purpose of the Measure:**

This measure shows the percent of earmarked dollars that represent MoDOT's high priority highway projects.

#### **Measurement and Data Collection:**

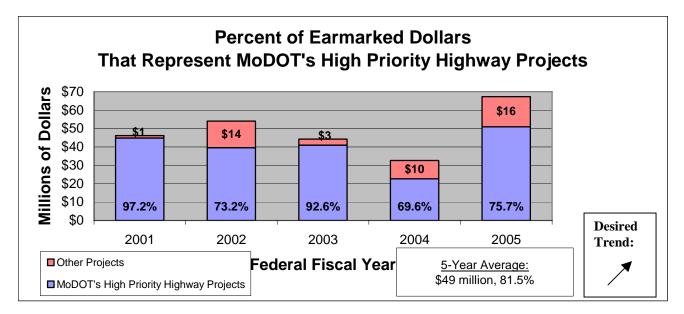
Earmarked dollars are federal funds allocated to states for specific highway projects. These funds are distributed administratively for programs that do not have statutory distribution formulas. States compete for these funds, which are above the formula apportionments. Resource Management collects this information from the Federal Highway Administration.

MoDOT's high priority highway projects are identified in the Federal Priorities list that is prepared by Governmental Relations. This list is provided to Missouri's Congressional delegates.

#### **Improvement Status:**

Missouri's earmarked dollars for specific highway projects increased in 2005 due to the passage of the multi-year federal highway act, SAFETEA-LU. Missouri's Congressional delegates were very successful in securing earmarked dollars in SAFETEA-LU for highway projects in Missouri. Also increasing was the percent of earmarked dollars that represent MoDOT's high priority highway projects. Over the last five years, 82 percent of the earmarked dollars was allocated for MoDOT's high priority highway projects.

Governmental Relations along with senior management continue to work very closely with Missouri's Congressional delegates to identify MoDOT's high priority highway projects that are good candidates for earmarked dollars.



### **Partner With Others to Deliver Transportation Services**

## Number of dollars generated through cost-sharing and other partnering agreements

### Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Kirk Boyer, Resource Management Director

#### **Purpose of the Measure:**

This measure monitors the effectiveness of MoDOT's cost sharing and partnering programs. It shows the funds invested in highway construction by cities, counties, transportation corporations, and transportation development districts as a result of funds being made available for local construction by MoDOT.

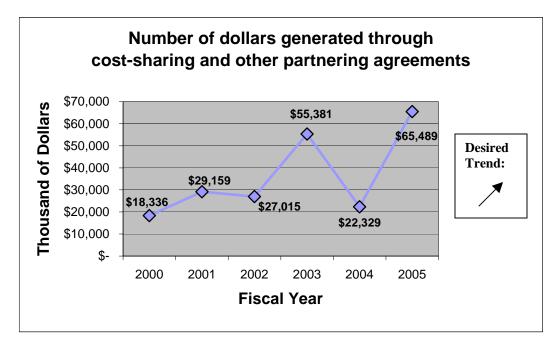
#### **Measurement and Data Collection:**

The data comes from various sources, both inside and outside of MoDOT. The sources include transportation corporations, transportation development districts, MoDOT districts and programs with responsibility for monitoring partnering agreements and permits.

The data is counted in the fiscal year in which the agreement was entered into or during which the permit was issued. The decrease in FY 2004 is due to projects that were added to the STIP in FY 2004 while the agreements were signed in FY 2005, which also explains the increase in FY 2005.

#### **Improvement Status:**

Six cost share and economic development agreements have been signed to date in FY 2006. These agreements represent approximately \$18.2 million in additional transportation investment by our partners. In January 2006 the Commission approved cooperative agreements with local entities for Highways 36 and 67. Pursuant to these agreements, an additional \$103 million will be contributed to these projects from local funding sources.



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## Leverage Transportation to Advance Economic Development

*Tangible Result Driver – Roberta Broeker, Chief Financial and Administrative Officer* 

Transportation is essential to Missouri's economic well-being. It plays a critical role in creating jobs and stimulating lasting growth for Missouri. In addition, focusing on ways to advance economic development helps MoDOT achieve its mission of promoting a prosperous Missouri.



## Leverage Transportation to Advance Economic Development

## Miles of new 4-lane corridors completed

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Jay Bledsoe, Transportation System Analysis Engineer

#### **Purpose of the Measure:**

This measure tracks the miles of additional divided highways available to the public. Access to a divided highway system supports economic development in Missouri. One of MoDOT's recent priorities has been completion of four-lane corridors in order to connect segments of highway where gaps exist.

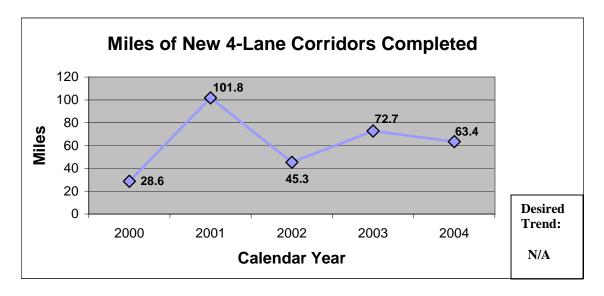
#### **Measurement and Data Collection:**

Projects that create or complete sections of dual-divided highways will be identified and tracked. Completion will be defined as the date the project is opened to traffic.

#### **Improvement Status:**

The increase of 101.8 miles in 2001 is primarily due to bond-financed projects approved in 2000 by the Missouri Legislature. Without these additional funds, progress for 2005 and 2006 is expected to be much lower, probably less than 20 miles. However, the number of miles of new four-lane corridors constructed will increase in 2007 and beyond from Amendment 3 bond funds approved by Missouri voters in November 2004.

As part of a partnership with the Missouri Department of Economic Development, MoDOT is initiating a study to track the creation and location of businesses along newly established four-lane corridors. This information, along with data on business size and employment, will help determine the economic value of this transportation improvement.



## Leverage Transportation to Advance Economic Development

## Percent utilization of SIB & STAR loan programs

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Raye Ann Lecure, Economic/Operations Analysis Manager

#### **Purpose of Measure:**

This measure shows the percent utilization of MoDOT's revolving loan programs, the Missouri's State Infrastructure Bank (SIB) and the State Transportation Assistance Revolving (STAR) program. It demonstrates how well utilized these funds are by showing a ratio of how much of the funds are currently on loan versus the amount available to be loaned.

The Missouri Transportation Finance Corporation (MTFC), a not for profit corporation, is Missouri's SIB. The SIB program was created by federal law in 1995 to finance both highway and non-highway projects. The STAR program finances non-highway projects such as air, water, rail, or mass transit facility construction, mass transit vehicles, and vehicles for elderly or handicapped persons. STAR funding is determined by the General Assembly.

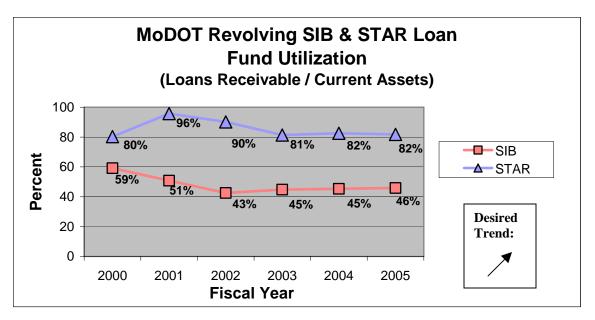
#### **Measurement and Data Collection:**

The data used to calculate the amounts of funds currently on loan is collected through a database used to track the SIB and STAR loans. Amounts available to be loaned are obtained from financial reports.

#### **Improvement Status:**

A SIB loan for \$100,000 was disbursed during the quarter. The SIB currently has one formal loan application pending and three other loans being discussed at this time. On December 31, 2005, the SIB funds available for loan were approximately \$42.8 million.

To advance this measure and improve SIB utilization a partnership development manager has recently been hired to actively market the loan programs and coordinate utilization with other MoDOT partnership programs. Our research indicates that while our SIB utilization rate is comparable to that of other states with similar-sized programs, it could be improved. Several states we contacted had SIB utilization rates of approximately 70%. The states with higher SIB utilization typically had an intensive marketing effort and used more creative financing tools such as SIB bonding programs.



## Leverage Transportation to Advance Economic Development

### Rate of economic return from transportation investment

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Ernie Perry, Organizational Performance Administrator

#### **Purpose of the Measure:**

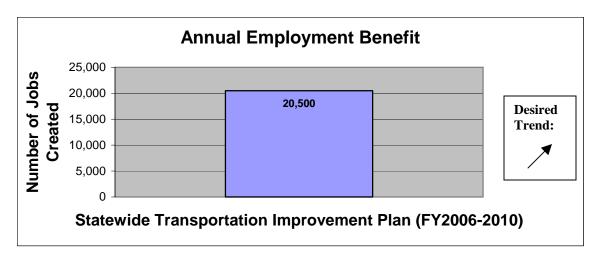
This measure monitors the economic return from the State's roadway transportation investment through the number of jobs created, changes in personal income, and value-added GSP (Gross State Product).

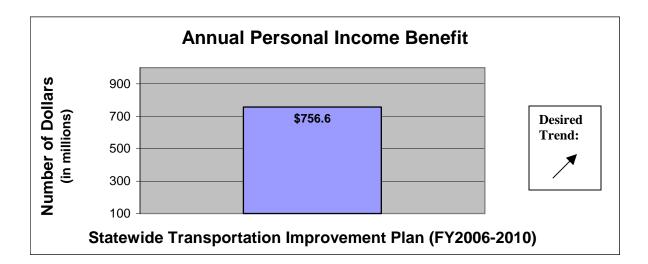
#### **Measurement and Data Collection:**

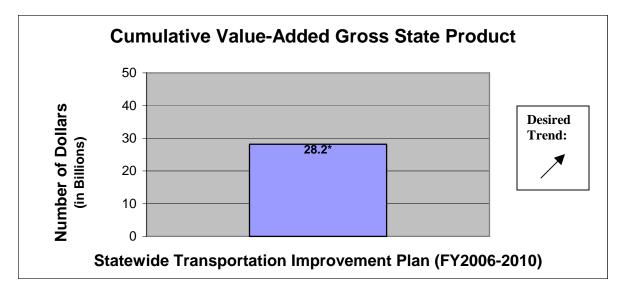
MoDOT partners with the Department of Economic Development to complete economic modeling of the state's transportation investments. The REMI Inc economic model is used for this analysis. Through these efforts, the department is able to provide state and regional level estimates to demonstrate employment, income and state benefits related to specific projects, corridors and program expenditures.

#### **Improvement Status:**

The information generated through the use of the REMI model demonstrates that there is a strong link between transportation investments and economic development. A year by year analysis of the Statewide Transportation Improvement Program is used to provide a summary of economic benefits related to transportation investments on a program basis. As a summary measure of transportation's contributions, the 2006 through 2010 Statewide Transportation Improvement Plan (STIP) will invest over \$5.7 billion dollars in 800 transportation projects across the state. In the average year, the STIP investments create approximately 20,500 new jobs paying an average wage of \$29,000 per job. There is an expected increase in annual average personal income of over \$756.6 million as a result of the STIP projects, and an expected increase in economic activity of \$2.4 billion. In terms of Gross State Product – value added, the 2006 through 2010 STIP jobs contribute over \$1.4 billion per year. We will continue to work with the Department of Economic Development to understand, and then maximize the benefits to the state and it's citizens from transportation investments.







\*Value –Added Gross State-Product equates to a 4.89:1 return on the transportation investment. Thus for every \$1 invested through the STIP, the state can expect a return of approximately \$4.89.

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# Innovative Transportation Solutions Tangible Result Driver – Mara Campbell,

**Organizational Results Director** 

MoDOT values innovation. The department empowers employees and seeks input from stakeholders to generate innovative ideas. Collaboration with staff, academia and industry make unique concepts come to life so MoDOT can serve its customers better, faster and at less expense to the taxpayer.



## Percent of innovative transportation solutions implemented

#### Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Patty Lemongelli, Organizational Performance Administrator

#### **Purpose of the Measure:**

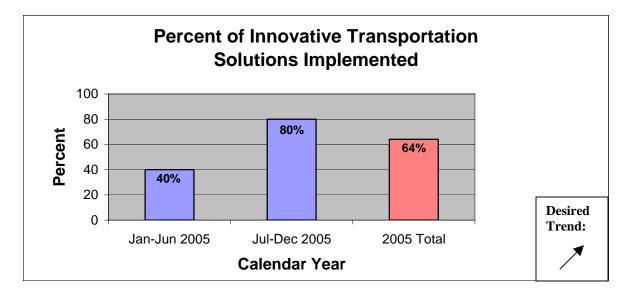
This measure tracks the percentage of new and innovative ideas, methods, or tools MoDOT accepts into practice as a result of its research program. MoDOT realizes the importance of supporting an aggressive research program driven to provide the department with the latest ideas, technologies, and solutions needed to deliver the most efficient, safe, and economical transportation system.

#### **Measurement and Data Collection:**

Innovative transportation solutions are any new ideas, methods, policies, processes, standards, equipment, tools, etc. introduced for the purpose of improving the department's operation, services, or products. Such solutions are likely introduced as a result of a research project, study, or initiative managed through MoDOT's research program. "Solutions implemented" refers to the decision by MoDOT to use or apply into practice a new idea, method, policy, process, standard, equipment, tool, etc. for the purpose of improvement. Percent of solutions implemented is determined by dividing the number of research projects having results implemented by the total number of research projects completed during the 12-month calendar year. While many ideas and technologies are pursued through research and related efforts, not all produce solutions, which can be implemented by MoDOT. However, MoDOT's elevated emphasis on implementing new ideas and technologies should result in better and more economical transportation products and services delivered.

#### **Improvement Status:**

During 2005, MoDOT's research program completed 25 projects. Of those projects completed, 16 produced implemented results making a total of 64 percent innovative transportation solutions implemented for calendar year 2005. MoDOT Organizational Results continues to aggressively pursue research and innovations focused on addressing pertinent department needs and that are more closely tied to the 18 Tangible Results. This focus will lead to more usable solutions and better value in the end. While it's known that all research does not produce results or solutions that can be implemented, MoDOT recognizes the importance and value of getting great innovative transportation solutions "off the shelf and on the street" and is working to ensure that it happens.



## Annual dollar amount saved by implementing value engineering

**Result Driver:** Mara Campbell, Organizational Results Director **Measurement Driver:** Kathy Harvey, State Design Engineer

#### **Purpose of the Measure:**

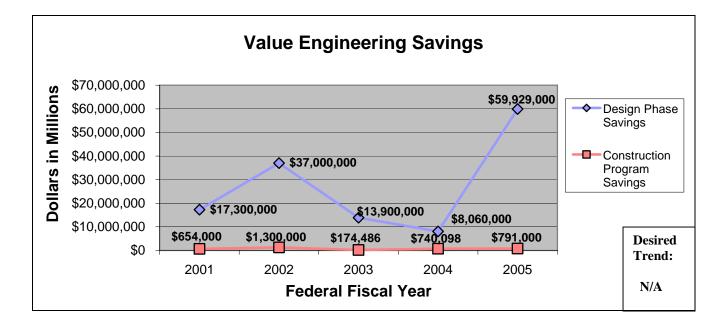
This measure tracks the amount of money MoDOT saves by implementing innovative engineering methods.

#### **Measurement and Data Collection:**

Value engineering (VE), which has saved MoDOT over \$230 million since 1988, is a valuable tool to use in the implementation of Practical Design. VE can achieve savings at the design phase and can also identify construction program savings. VE is the systematic application of known recognized techniques by multi-disciplined teams that identify the function of a product or service and identify cost effective alternatives using creative approaches to improve a project's quality and efficiency. VE savings are reported annually, based on the Federal Fiscal Year, due to reporting requirements to the Federal Highway Administration.

#### **Improvement Status:**

A recent emphasis on "Concept Stage" VE studies (CSVE) has proven to be successful at defining project scope and identifying basic functions of what the project must achieve. The focus has been to look at many concepts early in the project development process so that when a preferred concept is selected the design may continue with fewer challenges. By covering all the options early in the process, the design team gets answers sooner which saves on design time. Including external stakeholders on VE teams will continue to prove valuable at building consent.



## Annual dollar amount saved by implementing practical design

#### **Result Driver:** Mara Campbell, Organizational Results Director **Measurement Driver:** Kathy Harvey, State Design Engineer

#### **Purpose of the Measure:**

This measure tracks the amount of money MoDOT saves by implementing innovative engineering methods.

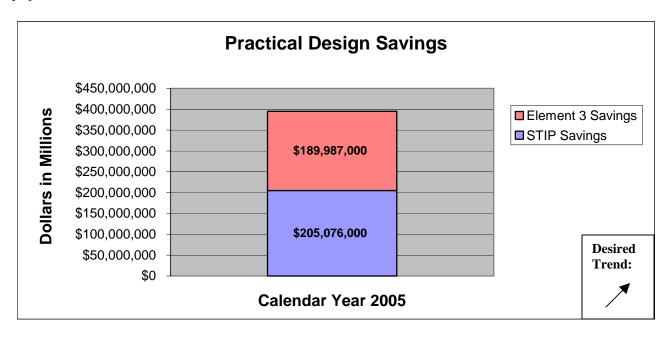
#### **Measurement and Data Collection:**

At the project level, significant innovations that should result in cost savings can be realized through design modifications. These are variations from standards to fit the individual characteristics of a specific project. In MoDOT's new design environment, "Practical Design" is the umbrella for a more widespread application of this process.

#### **Improvement Status:**

With the advent of Practical Design in late 2004/early 2005, nearly \$400 million in savings has been realized (as reported to the Missouri Highways and Transportation Commission in June). MoDOT's 10 districts examined projects that were already included in the 2005-09 STIP to see if they could reach an aggregate goal of 10 percent savings. The eventual total of \$205,076,000 represented a savings of 13.8 percent. Practical Design was also applied to the major projects that were considered within Element 3 of the Smoother, Safer Sooner program, which utilized funds made available by last year's passage of Amendment 3. The cost of 21 projects was reduced by 11.7 percent – or \$189,987,000 – that enabled the reprogramming of an additional five projects.

Additional Practical Design savings for projects that were already included in the 2005-09 STIP will be captured in June 2006, during the next programming cycle. For projects beyond 2009, it is expected that they will be designed and delivered with an application of Practical Design from the very beginning of the project development process. The new Engineering Policy Group, formed this summer, is working toward an early '06 rollout of formal practical design guidance that will affect change in MoDOT's design culture and create an environment for significant future project economies.



## Number of external awards received

**Result Driver:** Mara Campbell, Organizational Results Director **Measurement Driver:** Rebecca Geyer, Senior Organizational Performance Analyst

#### **Purpose of the Measure:**

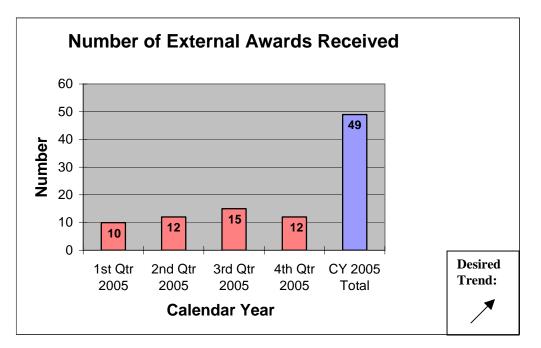
This measure tracks the number of external awards received by the department. Many of these awards relate to quality and therefore display the department's dedication to efficiency, innovation and quality throughout the organization.

#### **Measurement and Data Collection:**

Each district and division office tracks the awards presented to the department by external organizations, to include all awards presented to individuals, teams, districts, divisions and MoDOT as a whole. This data enables the department to measure progress and encourage further participation in award programs. It also provides opportunities for the department to increase public awareness of department activities. Data collection began for this measure on January 1, 2005.

#### **Improvement Status:**

Awards received in the second quarter of FY06 display a decrease by three awards from the previous quarter. Significant awards won in this timeframe were: "Bridge Award of Excellence" from the American Segmental Bridge Institute (ASBI) for the Rte 364 Creve Coeur Lake Memorial Park Bridge; Federal Highway Administration's "National Roadway Safety Award" for the Blueprint for Safer Highways; and Kansas City Institute of Transportation Engineers' "Excellence in Transportation Award" to the Kansas City Scout team for their positive impact on the metro area.



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Tangible Result Driver – Dave Nichols, Director of Program Delivery

MoDOT customers expect that transportation projects be completed quickly and provide major improvements for travelers. MoDOT will honor project commitments because it believes in integrity.



## Percent of estimated project cost as compared to final project cost

#### Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Renate Wilkinson, Planning & Programming Engineer

#### **Purpose of the Measure:**

This measure determines how close MoDOT's total program completion costs are to the estimated costs.

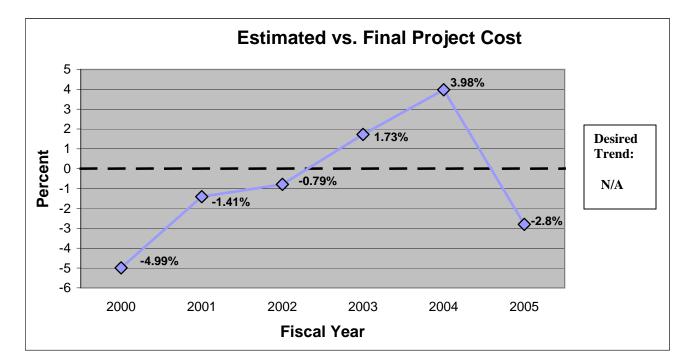
#### **Measurement and Data Collection:**

MoDOT determines the completed project costs and compares them to the estimated costs. The completed project costs are reported during the state fiscal year in which the project is completed.

Project costs include design, right of way purchases, utilities, construction, inspection and other miscellaneous costs. The estimated cost is based on the amount included in the most recently approved Statewide Transportation Improvement Program. Completed costs include actual expenditures. The costs do not include those that might result from any legal claims, which are rare occurrences, regarding the projects after they are completed. Positive numbers indicate the final (completed) cost was higher than the estimated cost.

#### **Improvement Status:**

The increased cost trend through state fiscal year 2004 reflects the increased number of projects in state fiscal years 2001, 2002 and 2003. The increased work volume resulted in higher awards and overall costs. The decrease in 2005 can be attributed to the lower work volume and increased competition among contractors.



The ideal status is no deviation in the estimated vs. final project cost, or 0 percent.

Positive numbers indicate the final (completed) cost was higher than the estimated cost.

## Number of years it takes to go from the programmed commitment in the Statewide Transportation Improvement Program to construction completion

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Machelle Watkins, Transportation Planning Director

#### **Purpose of the Measure:**

This measure determines how quickly projects go from the programmed commitment to construction completion. Customers perceive this time as project wait-time.

#### **Measurement and Data Collection:**

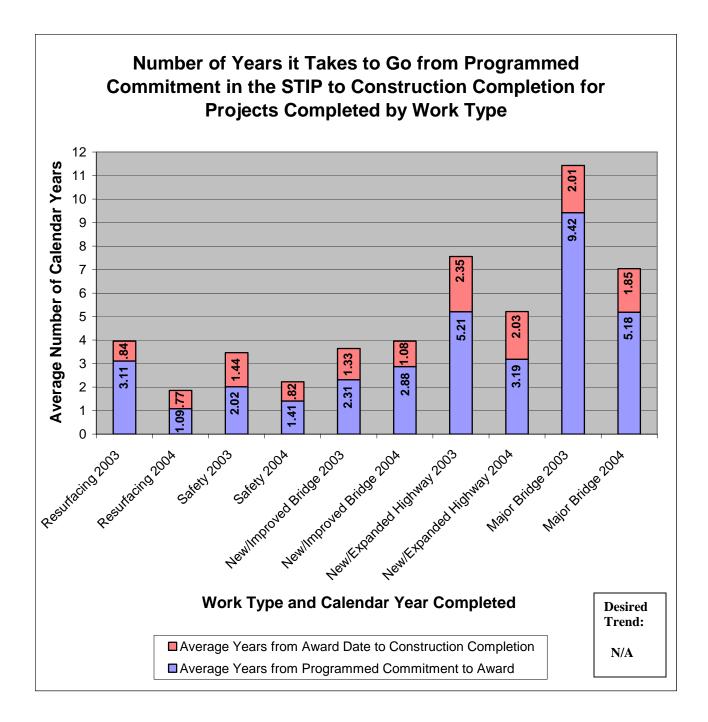
MoDOT compares how long it takes from when the project is added to the Statewide Transportation Improvement Program to when the project is completed. Data is categorized by the type of work, and distinguishes between design and construction stages.

#### **Improvement Status:**

Of the projects completed in 2004, the quickest projects were resurfacing projects, which were completed in less than two years. The projects that took the longest time to complete were major bridge projects, which took about seven years. The construction phase (in blue) ranged from under one year for resurfacing projects to two years for new or expanded highways and major bridges. The design phase (in pink) generally took more time than construction, ranging from just over one year for resurfacing projects to just over five years for major bridges. Major bridges required much more time because of the complexity of the design work, the increased amount of public and other governmental agency involvement, the amount of environmental and cultural work required, the purchasing of right of way, and sometimes, the coordination with neighboring states.

Of the projects completed in 2003, the quickest projects were safety projects, which were completed in less than four years. The projects that took the longest to complete were major bridge replacements, which took almost 12 years. Overall, projects completed in 2004 were designed and completed quicker than projects completed in 2003.

Data for projects completed in 2005 will be available in the July 2006 Tracker.



## Percent of projects completed within budget

**Results Driver:** Dave Nichols, Director of Project Delivery **Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of Measure:**

The measure tracks the percentage of projects completed within the programmed amount. The cost includes such items as engineering, right of way and contract payments.

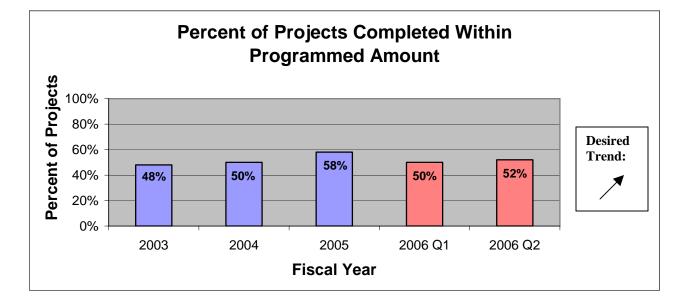
#### **Measurement and Data Collection:**

The completed project cost is compared to the estimated cost for each project. The percentage of projects completed within the estimated cost is gathered from across the state.

Project costs include design, right of way purchases, utilities, construction payments, inspection and other miscellaneous cost.

#### **Improvement Status:**

MoDOT would like to see all projects completed within the programmed amount. The goal is to deliver projects at the programmed amount allowing the greatest number of projects to be built with the funding available. Our data indicates that there is a great deal of deviation among individual projects with half over and half under budget. Continued emphasis is being placed on scoping projects and developing estimates that represent the true cost of delivering the projects. We are striving to deliver quality projects cheaper by using practical design.



## Percent of projects completed on time

**Results Driver:** Dave Nichols, Director of Project Delivery **Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

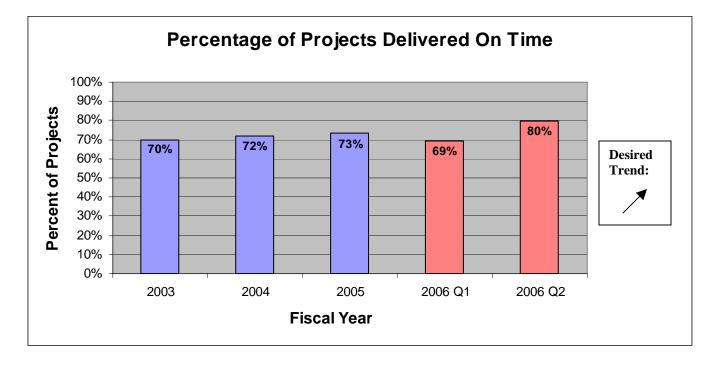
This measure tracks the percentage of projects completed by the commitment date established in the contract. It will indicate MoDOT's ability to complete projects by the agreed upon date.

#### **Measurement and Data Collection:**

The project manager will establish project completion dates for each project. This will be documented in MoDOT's SiteManager and STIP databases. It will be part of the Plans, Specifications & Estimates submittal. The actual completion date will be documented by the Resident Engineer and placed in MoDOT's Management System.

#### **Improvement Status:**

The results indicate a small increase from previous years in the percent of projects completed on time. MoDOT has focused on reducing the number of days available for construction in order to reduce congestion and inconvenience to the traveling public, while stressing the importance of completing projects on time. An emphasis has been placed on reviewing construction schedules and assessment of liquidated damages, which will lead to improvements in timely completion.



## Percent of change for finalized contracts

**Results Driver:** Dave Nichols, Director of Project Delivery **Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

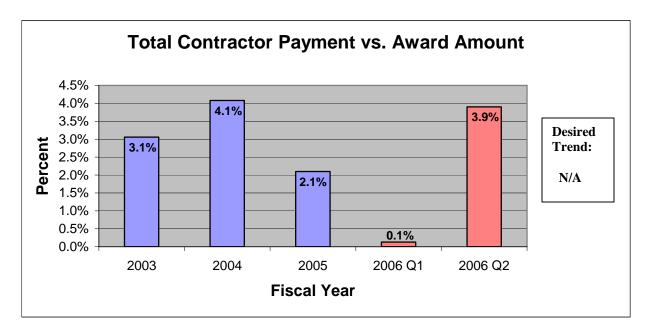
The measure tracks the percentage difference of total construction payouts to the original contract award amounts. This indicates how many changes are made on projects after they are awarded to the contractor.

#### **Measurement and Data Collection:**

Contractor payments are generated through MoDOT's SiteManager database and processed in the financial management system for payment. Change orders document the underrun/overrun of the original contract.

#### **Improvements Status:**

MoDOT's performance on this item has improved significantly since 2004. In fiscal year 2005 there was savings of \$15 million. We continue to perform at the two-percent level through the first two quarters of fiscal 2006. The improvement is a result of a strong emphasis placed on constructing projects within budget, the use of practical design and value engineering. By limiting overruns on contracts the department can deliver more projects, which will lead to an overall improvement in the entire highway system.



#### Average construction cost per day by contract type

**Results Driver:** Dave Nichols, Director of Project Development **Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

This measure tracks the cost per day for project completion to determine the impact to the traveling public, enabling MoDOT to better manage project completion needs.

#### **Measurement and Data Collection:**

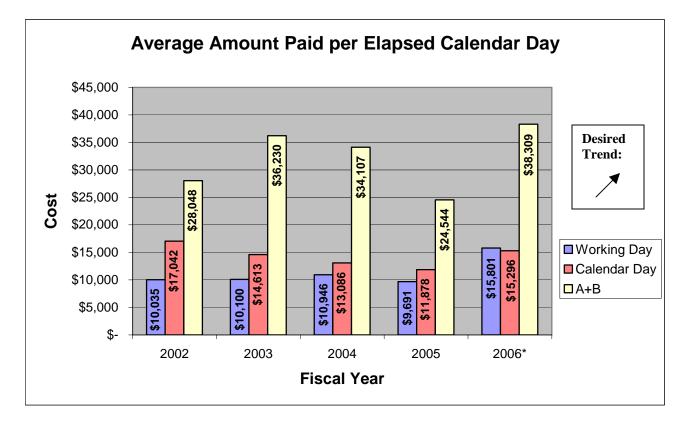
This information is gathered by extracting the actual time used for construction from the summary of working days in the SiteManager database and dividing it by the total costs of the project.

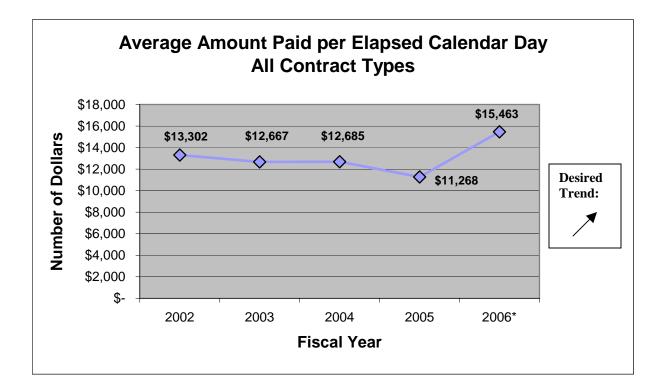
The measurement groups construction contracts into three categories:

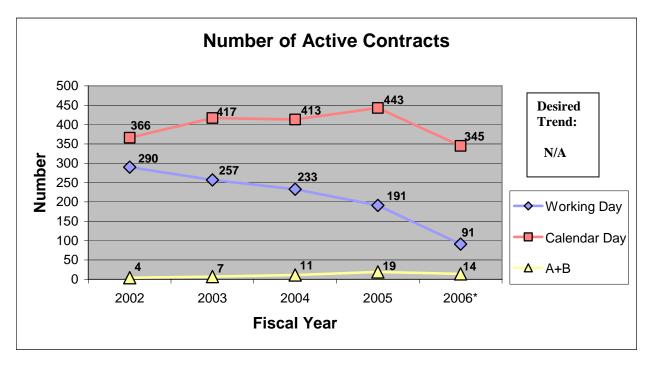
- > WD working day contracts
- CD calendar day contracts and;
- $\rightarrow$  **A** + **B** or innovative contracts that provide incentive/disincentives to the contractor for early completion.

#### **Improvement Status:**

The greater use of A+B and calendar day contracts resulted in a larger amount paid per calendar day. MoDOT's strategy of utilizing innovative contracting techniques has resulted in faster contract completion and fewer delays to the traveling public. We are reviewing the contract type selected to make a determination if we are using our resources most effectively for timely completion of projects.







## Percent of project timeliness as compared to other state DOTs

#### **Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

This measure tracks how MoDOT compares to other state Departments of Transportation with regards to project timeliness. As MoDOT develops projects working with the public, we give them schedules for construction that include an estimate of when the road will be open to traffic. In addition, our construction contracts have completion times included that are often shown on construction signing. Comparing the percentage of times that MoDOT completes construction when promised with other states will help demonstrate its level of performance to the public and could point out a need for an educational effort with the public or the need for partnering efforts.

#### Measurement and Data Collection:

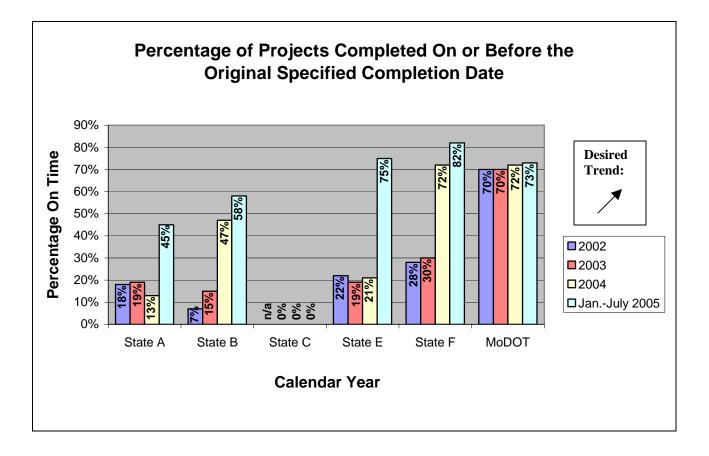
The AASHTO Standing Committee on Quality has launched a pilot project (through its Subcommittee on Performance Measures) for comparative performance measures with regards to the topic of project delivery. MoDOT is participating in this prototype venture along with five other states – Delaware, New Mexico, Ohio, Florida and Virginia. The committee developed a survey that was completed this summer. It requested very specific information related to how each DOT defines its universe of contracts or projects for measuring performance, how it defines its performance measures, and the business rules, data fields and time horizons utilized to track performance.

MoDOT customers have an expectation that our roadway construction be completed when promised, despite factors – including unfavorable and unpredictable weather – that can cause significant delays. For this measure, the definition of 'on time' selected is as follows: *"The contract must be completed on or before the original specified completion date."* 

#### **Improvement Status:**

MoDOT compares quite favorably, with indicators between 70-73 percent for the four data points. The other states, listed anonymously here because that was a condition of participation in the pilot project, have posted on-time percentages between 0-82 percent.

None of the definitions that have been developed to date for the purpose of this survey have gone far enough to enable the tracking of project timeliness from a "needs identification to ribbon cutting" perspective. MoDOT is advocating this scope as the subcommittee continues its work.



## Percent of customers that feels completed projects are the right transportation solutions

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Ernie Perry, Organizational Performance Administrator

#### **Purpose of the Measure:**

This measure provides information regarding the public's perception of MoDOT's performance in providing the right transportation solutions.

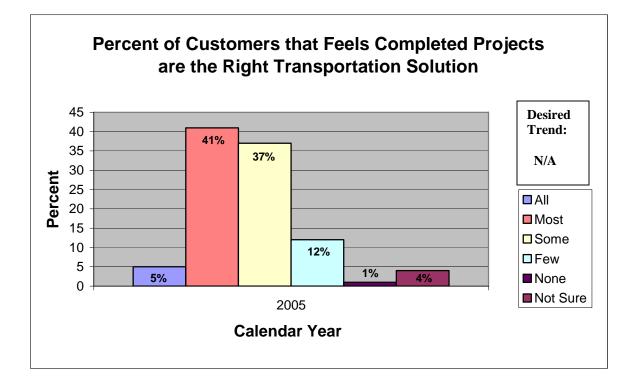
#### **Measurement and Data Collection:**

Data was collected through a statewide telephone survey conducted for MoDOT's long-range planning initiative called *Missouri Advance Planning*. The survey effort included interviews with 3,100 Missourians with an overall margin of error of +/- 2.9 percent. This measure will be collected on an annual basis through a stratified, statewide telephone survey.

#### **Improvement Status:**

Forty-six percent of the sample feels most or all of MoDOT's transportation solutions were the right solutions. Thirty-seven percent feels some of the projects were the right solutions, and 13 percent feels that few or none of the projects were the right solutions to transportation needs.

While this is a positive starting point, MoDOT continues to utilize community outreach and communication efforts to gain greater public support, so all projects are viewed as the right solution. Additional analysis of the respondents' stating that few or none of the projects were the right solutions did not reveal any substantive, actionable trends in the data. MoDOT will continue to investigate this measure and reassess prior to the next annual customer survey effort.



## Percent of projects that represent great value

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Travis Koestner, TSE – Contract Services Engineer

#### **Purpose of the Measure:**

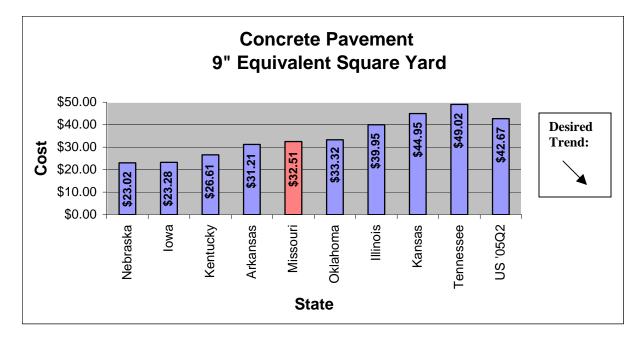
This measure tracks how MoDOT projects provide great value by comparing the cost of major items of work for MoDOT projects to other state DOTs.

#### **Measurement and Data Collection:**

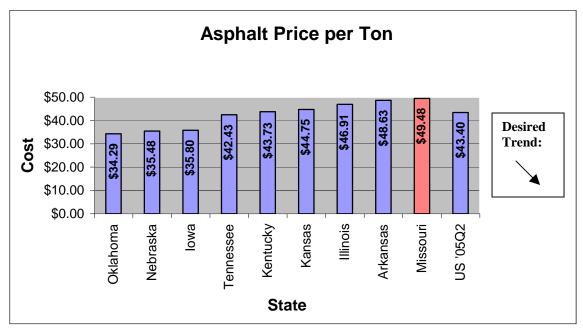
Value in this measure has simply been related back to \$'s/unit of measure. Completed in January 2006, the raw data, provided by an outside vendor, was categorized by MoDOT staff. This information should be the most current representation of what DOTs pay for these major work items.

#### **Improvement Status:**

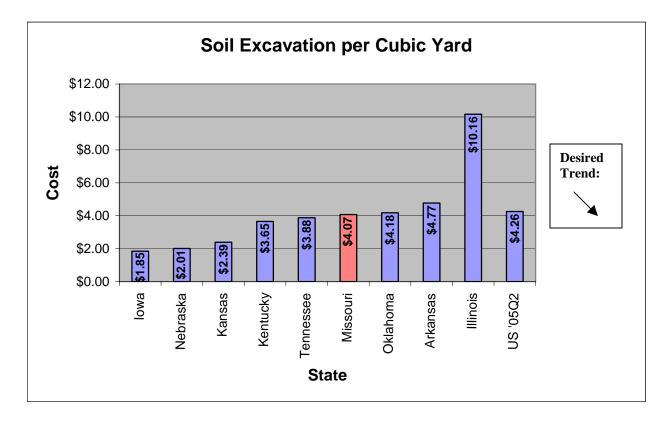
MoDOT customers should be able to gain an understanding of what it costs for a DOT to install an item of work. While value should not be defined as MoDOT prices per unit be the lowest as compared to other DOTs, the prices can be compared keeping in mind that the labor rates, material availability and general project conditions such as urban vs. rural will vary from state to state. MoDOT can use this information to gain an understanding of how prices in Missouri relate to the rest of the surrounding states and eventually the rest of the country. DOTs that have similar market conditions may result in information regarding specifications or bidding practices that result in lower cost.



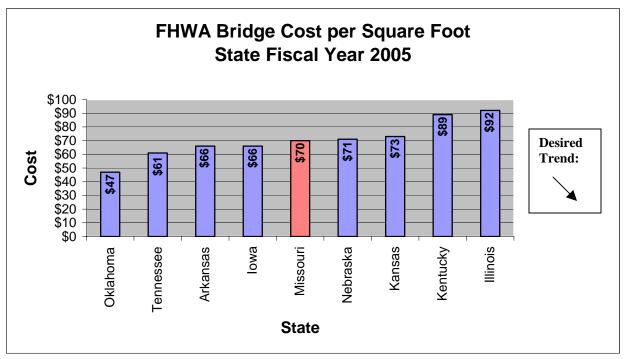
Source Data for states other than Missouri from <u>Oman Systems Bid Tabs Professional</u> latest data available as of January 1, 2006. Items included; concrete pavement items paid for by the square yard converted to a 9 in equivalent. US Data from FHWA "Price Trends for Federal-Aid Highway Construction" Second Quarter 2005. Missouri Data from MoDOT bid history.



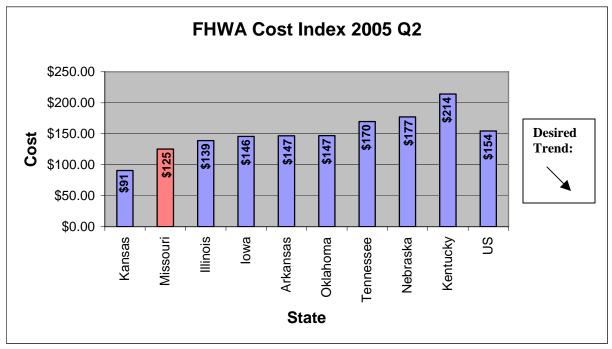
Source Data for states other than Missouri from <u>Oman Systems Bid Tabs Professional</u> latest data available as of January 1, 2006. Items included asphalt items paid for by the ton. US Data from FHWA "Price Trends for Federal-Aid Highway Construction" Second Quarter 2005. Missouri Data from MoDOT bid history.



Source Data for states other than Missouri from <u>Oman Systems Bid Tabs Professional</u> latest data available as of January 1, 2006. Items include; common excavation items paid for by the cubic yard. US Data from FHWA "Price Trends for Federal-Aid Highway Construction" Second Quarter 2005. Missouri Data from MoDOT bid history.



Source data from FHWA memo "Bridge Construction Unit Cost" dated December 7, 2005. FHWA does not publish an average US cost per square foot for bridges.



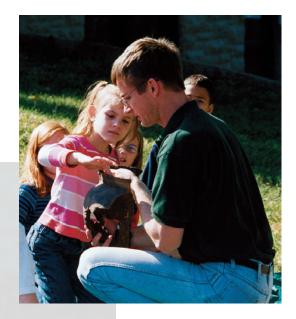
Source "Price Trends for Federal-Aid Highway Construction" Second Quarter 2005.

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# **Environmentally Responsible** *Tangible Result Driver – Dave Nichols,*

Director of Program Delivery

MoDOT takes great pride in being a good steward of the environment, both in the construction and operation of Missouri's transportation system and in the manner in which its employees complete their daily work. The department strives to protect, conserve, restore and enhance the environment while it plans, designs, builds, maintains and operates a complex transportation infrastructure.



## Percent of projects completed without environmental violation

#### **Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Kathy Harvey, State Design Engineer

#### **Purpose of the Measure:**

This measure tracks environmental violations. MoDOT projects must comply with several environmental laws and regulations. In order to be in compliance, MoDOT makes commitments throughout the project development process that must be carried forward during construction and maintenance. In addition, the various permits obtained for projects also contain specific requirements for compliance. If a violation is noted, it can result in either a Letter of Warning or a Notice of Violation to MoDOT.

#### **Measurement and Data Collection:**

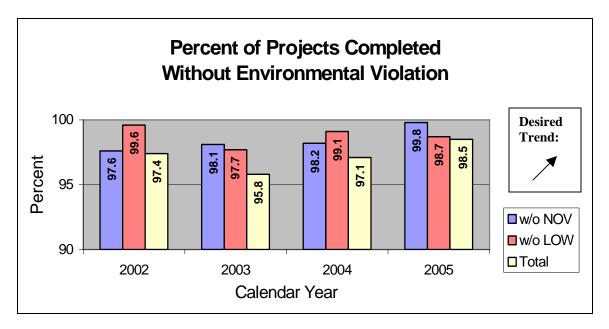
Both LOWs and NOVs are written correspondence to MoDOT from regulatory agencies, which are tracked in a MoDOT database by location or project number, as appropriate. Where tracked by project, the violations received may span several years. The first chart below is based on a calendar year of construction projects reported to be completed during that year and the number of violations received on those projects over the life of the project. The second chart is a report by calendar year of the LOWs and NOVs received by the department for any activity.

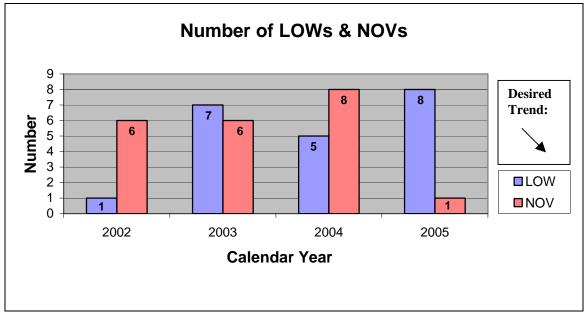
#### **Improvement Status:**

The first graph shows a relatively level trend line for the past four years, while the second graph shows a significant decline in the total number of NOVs received in 2005. Based on a few serious violations received in 2004, the department implemented several strategies to achieve a possible decrease in violations in 2005. An Environmental Quality Circle was formed in September 2004 that has completed the first phase of an environmental action plan for the department, which is being implemented. In addition, all department environmental staff has been consolidated into one unit that is resulting in improved efficiencies in the environmental area by providing the department with "one-stop shopping."

Staff conducted national research to determine if an appropriate benchmark state exists. An appropriate benchmark state was not found. MoDOT believes that the benchmark to use is 0 percent NOVs. A small number of LOWs can be tolerated since they are by reference only warnings, but it is unacceptable to the department to have a violation. Regardless of what other states are doing, MoDOT has a zero-tolerance policy.

In 2005, MoDOT received one Notice of Violation and eight Letters of Warning. The LOWs were for three construction projects, two rest areas and three maintenance lots. The NOV was for a construction project. Based on the number of warnings received for the maintenance lots, the department is conducting an inspection of each maintenance lot which will be completed in the next few months. This survey will determine what actions, if any, are needed to avoid similar LOWs in the future that could lead to a NOV.





## Number of projects on which MoDOT protects or restores sensitive species or habitat

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Gayle Unruh, Environmental & Historic Preservation Manager

#### **Purpose of the Measure:**

Missouri is home to many rare species of plants and animals, some of which are on the federal endangered species list. The Endangered Species Act of 1973 (as amended) prohibits harm or harassment of these species. Avoiding or minimizing harm to these species and protecting or restoring their habitat is a fundamental obligation of this organization. Avoidance and/or protection is the first goal of our efforts, but restoration is the minimum acceptable result.

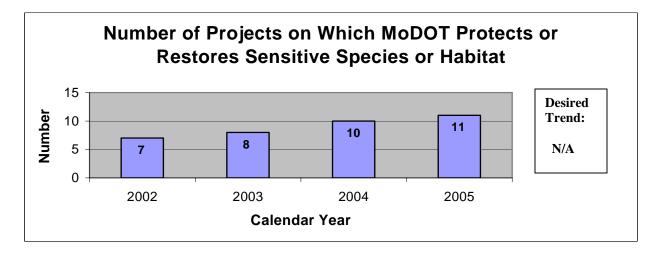
#### **Measurement and Data Collection:**

This measure is tracked annually by calendar year. On all MoDOT projects, the department investigates and informs the US Fish and Wildlife Service of any activity in the vicinity of a known threatened or endangered species or critical habitat. Through this consultation with them, primarily through letters, MoDOT has the data to report on this measure. Because this measure focuses on projects that protect or restore sensitive habitats that could not initially be avoided, many MoDOT projects are not included in this data.

#### **Improvement Status:**

There is no desired trend with this measure; the number reported will fluctuate depending on our program each year, type of projects being constructed, location and just the ability to make adjustments to avoid impact on sensitive species or habitat. It can be assumed that as MoDOT's program increases the number will go up.

During 2005, there were 11 projects where MoDOT protected or restored sensitive species or habitat. This included the following species: Ozark cavefish (three times), Missouri bladderpod, Indiana bat, gray bat (twice), pallid sturgeon, Ozark hellbender (twice), bald eagle, Hine's emerald dragonfly, *Boltonia decurrens*, and the Topeka shiner.



## Ratio of acres of wetlands created compared to the number of acres of wetlands impacted

#### **Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Gayle Unruh, Environmental & Historic Preservation Manager

#### **Purpose of the Measure:**

Wetlands are a valuable resource in Missouri, having beneficial functions such as wildlife habitat, flood storage and water quality improvement. In addition to these benefits, it is required in the Clean Water Act that impacts to wetlands be avoided, minimized or that wetlands are recreated when a wetland is destroyed during a transportation project. The national goal set by the FHWA for recreating wetland is to construct 1.5 acres of wetland for every 1.0 acre of wetland impacted. Recreating wetlands at this ratio helps to offset the lost beneficial functions during the time it takes for a wetland to develop. This measure helps ensure that MoDOT is doing its part to maintain wetlands in Missouri.

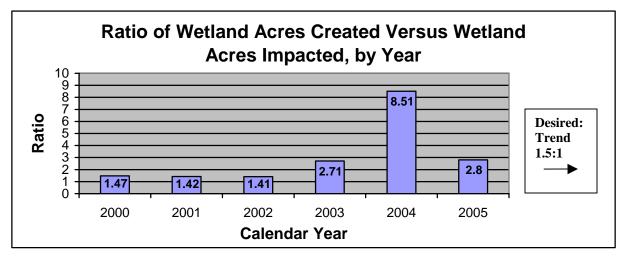
#### **Measurement and Data Collection:**

Acres of impact will be taken from Clean Water Act permits by project and compared to acres of wetland constructed, taken from roadway design plans or mapped wetland areas recreated by MoDOT or wetland mitigation purchased from a commercial wetland bank. Impacts may occur in a different year from the mitigation, so for the purposes of this measure, the timeframe for the reporting is when the mitigation construction is complete based on a calendar year.

Since this measure is also tracked by other states through FHWA, MoDOT contacted FHWA to find out which states are successful at meeting the 1.5 to 1 ratio. Most of the states queried said that the biggest factor in successfully meeting the ratio is in the use of wetland mitigation banks. They had greater control over achieving their target ratios and had better wetland success when they had mitigation banks in place. MoDOT has a final statewide wetland mitigation banking agreement. Two wetland banks are in the planning stages for proposal to the regulating agencies.

#### **Improvement Status:**

MoDOT improved in 2005 by replacing wetlands at a rate of 2.8 to 1. Statewide training targeting the interpretation and attention paid to wetland development plans was conducted with construction inspectors and resident engineers to help achieve this improvement. However, additional wetland was created to mitigate for a business allowed to place a driveway in MoDOT wetland mitigation. This mitigation for an encroachment in previously established mitigation accounts for 0.8 to 10f the ratio total. MoDOT is placing all mitigation on as-built plans and incorporating the locations of mitigation in the Realty Asset Inventory to keep this type of violation from happening in the future.



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## Percent of air quality days that meet Environmental Protection Agency standards by metropolitan area

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Machelle Watkins, Transportation Planning Director

#### **Purpose of the Measure:**

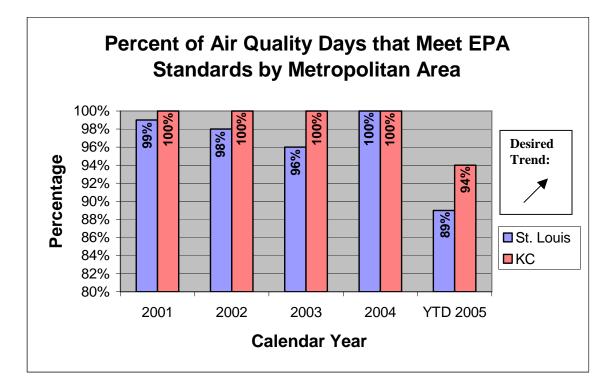
This measure tracks MoDOT's role in improving the air quality of Missouri's metro areas. The Environmental Protection Agency (EPA) approves state plans to improve air quality. MoDOT makes every effort to design and build roads that meet air quality standards and do not violate the EPA-approved plans.

#### **Measurement and Data Collection:**

EPA establishes several air quality standards for the United States. The ground level ozone standard affects Missouri. Ozone readings are collected in Kansas City and St. Louis during the ozone season – April through October. The data contained in the table below reflects the available percentage of days, by metro area, that met the EPA's ground level ozone standard. The data for the 2005 ozone season is now included.

#### **Improvement Status:**

MoDOT's efforts coupled with milder than normal weather in 2004 contributed to 100 percent positive air quality days as measured by EPA standards. Changes to more strict EPA standards and warmer than normal weather during the 2005 ozone season have contributed to a reduction in the percentage of positive air quality days. MoDOT continues to serve on the Air Quality Forum Committee in Kansas City and the Air Quality Advisory Committee in St. Louis. Staff attends monthly meetings to review these committees' programs and ensure that both regions continually work to improve the air quality of Missouri citizens. Both Kansas City and St. Louis have implemented programs that help with traffic congestion, enhance Missouri's bicycle/pedestrian programs and ensure transit agencies can provide the services their cities need.



## Percent of alternative fuel consumed

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Dave DeWitt, Deputy Administrative Officer

#### **Purpose of the Measure:**

This measure tracks the use of alternative fuels. It shows MoDOT's contribution toward environmental responsibility and conservation of resources.

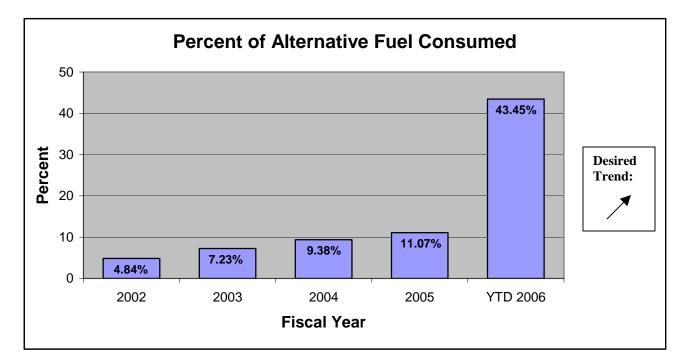
#### **Measurement and Data Collection:**

Alternative fuel is E-85 and biodiesel. When a user pumps fuel into a MoDOT vehicle or piece of equipment, that usage by gallon and by fuel type is captured in the SAM II system. Reports are generated to extract the number of gallons used from that system.

#### **Improvement Status:**

There was a significant increase in the usage of biodiesel during the first two quarters. This is a result of MoDOT partnering with the Missouri Soybean Association to educate our employees and our fuel vendors. Vendors were trained on MoDOT's requirements and our employees gained knowledge about using the product. This effort eliminated some of the myths regarding biodiesel and resulted in our employees building strong relationships with our vendors. Availability of biodiesel continues to be a problem in the south central and southeast districts of the state. Public meetings were held with fuel vendors in these districts and will improve availability. Until we are guaranteed that the use of biodiesel will not cause interruptions to winter operations, we will pilot usage in two districts.

Currently the department operates two E-85 bulk fuel stations and is planning to install others in District 4 and District 7 in FY 07.



## Number of historic resources avoided or protected as compared to those mitigated

#### **Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Bob Reeder, Historic Preservation Coordinator

#### **Purpose of the Measure:**

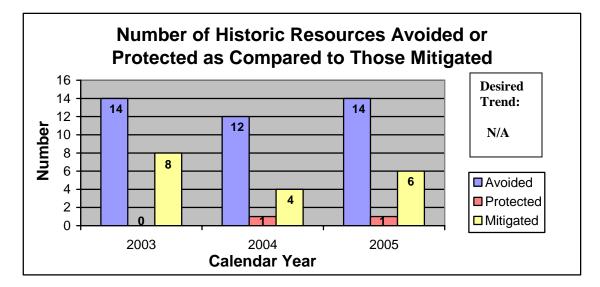
Federal historic preservation laws relating to federally-funded projects, gaining public and agency support for particular projects, and general environmental stewardship require MoDOT to avoid, minimize, or mitigate project impacts to historic buildings and bridges whenever feasible. Compiling information about projects impacts to important cultural resources provides a measure of MoDOT's success at avoiding, protecting, or mitigating project impacts to important cultural resources.

#### **Measurement and Data Collection:**

Data collection begins at the approved Conceptual Plans stage. As project design plans and right of way plans are prepared by the district, department staff track the number of historic resources in project footprints and the number of resources that can be avoided or protected by MoDOT revising the design of a project versus the number of resources MoDOT can not avoid and must be mitigated. The data include only historic resources identified as potentially affected by projects after the conceptual plan stage. The data do not include historic resources avoided during early project planning or those avoided during consideration of different alignments during NEPA studies.

#### **Improvement Status:**

MoDOT's overall success at minimizing and avoiding project impacts to historic resources is illustrated by only six historic resources being impacted by any MoDOT project during 2005 and ultimately requiring mitigation. Very early project design efforts to lessen project impacts to significant historic resources were successful, resulting in only 21resources remaining in project footprints at the conceptual plans stage. MoDOT continued efforts to reduce project impacts to historic resources during final design of the projects and 14 of the 21 resources were subsequently avoided. One resource could not be avoided but is protected or preserved in the project footprint. Only six historic resources could not be avoided and required mitigation. Four of the resources were older bridges requiring replacement and two were historic buildings. MoDOT's goal is to maximize the number of historic resources avoided and to minimize the number of resources impacted and mitigated. This measure has no overall desired trend. For any year, data for the measure will vary due the number of projects in the MoDOT program and the specific nature of those projects; however, the overall effectiveness of MoDOT's historic preservation efforts is reflected by all of MoDOT's activities requiring the mitigation of only six historic resources during 2005.



## Number of trees planted compared to number of acres cleared

#### Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Jerry Hirtz, Technical Support Engineer, Construction & Materials

#### **Purpose of the Measure:**

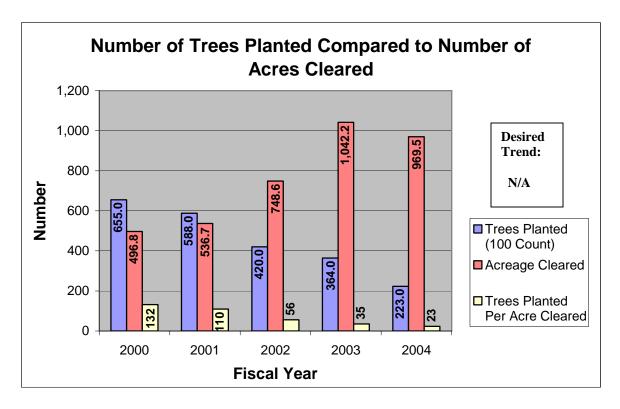
This measure tracks MoDOT's effort to replace trees removed as a result of clearing operations on its construction projects.

#### **Measurement and Data Collection:**

MoDOT has committed to plant two trees for each six-inch-or-larger tree removed by construction operations. This measure is an annual measure. YTD counts cannot project a yearly total as tree removal numbers vary with the letting of grading contracts. MoDOT documents acreage cleared through its contract administration processes and a record is maintained of trees ordered each year for spring planting. In the future, this measure will be amended to compare trees planted to trees removed as the data becomes available.

#### **Improvement Status:**

Over the past several years, areas cleared for construction have steadily increased and the number of trees planted has decreased. Close monitoring has allowed staff to better assess how MoDOT is meeting its tree replacement obligations and should improve the previous deficiency.



# **Environmentally Responsible**

### Number of tons of recycled/waste materials used in construction projects

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Joe Schroer, Field Materials Engineer

### **Purpose of the Measure:**

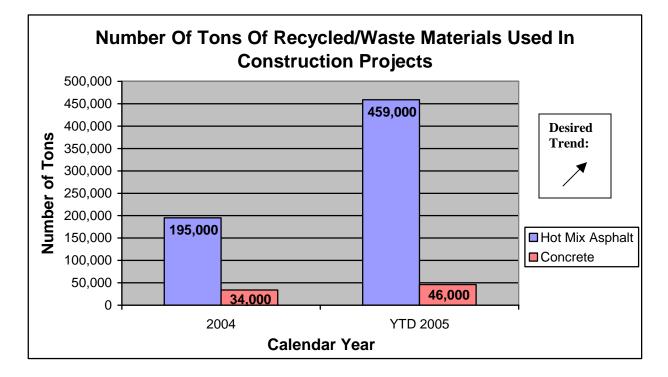
This measure tracks MoDOT's efforts to be environmentally conscious while being fiscally responsible through the use of recycled/waste material when applicable.

### **Measurement and Data Collection:**

The number of tons of recycled/waste material used in construction projects is measured through MoDOT's construction management database which tracks material incorporated into projects. Data is collected on an annual basis.

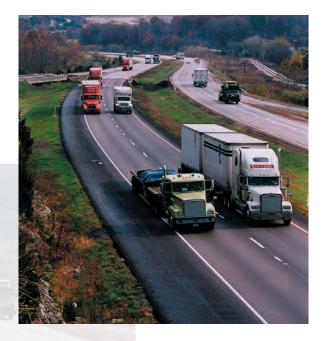
### **Improvement Status:**

Available data from 2004 and 2005 has been included. The data for 2005 shows that the amount of recycled/waste material incorporated into projects during 2005 surpassed the amount used in 2004. Project specifications were revised to allow a greater amount of recycled materials in asphalt and concrete mixtures. An increase due to the Smooth Roads Initiative program accounts for such a large increase in hot mix asphalt as contractors have used these materials to augment virgin aggregate shortages. We continue to evaluate materials provided by contractors and modify specifications to allow acceptable materials. Contractor successes are being passed on to encourage use.



*Tangible Result Driver – Dave DeWitt, Deputy Administrative Officer* 

Missouri's location in the nation's center makes it a major crossroads in the movement of goods. Transportation infrastructure must be up to the task so that as the flow of freight becomes more efficient, businesses and communities share the economic benefits.



### Freight tonnage by mode

**Result Driver:** Dave DeWitt, Deputy Administrative Officer **Measurement Driver:** Brian Weiler, Multimodal Operations Director

### **Purpose of the Measure:**

This measure tracks trends and indicates diversification of freight movement on Missouri's transportation system.

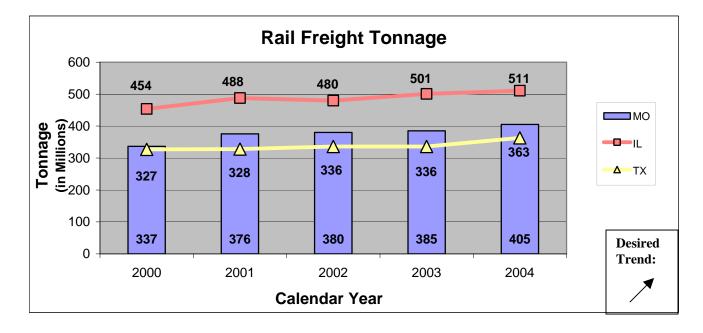
### **Measurement and Data Collection:**

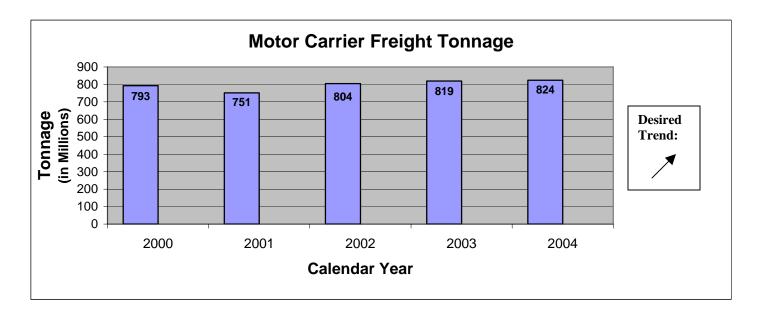
Port tonnage is reported to MoDOT from public ports. Air cargo data is collected via mail survey to commercial airports with known cargo activity. Rail tonnage is obtained from the Association of American Railroads. MoDOT calculates motor carrier freight movement using commercial vehicle miles traveled, trip length per shipment and average truck cargo weight.

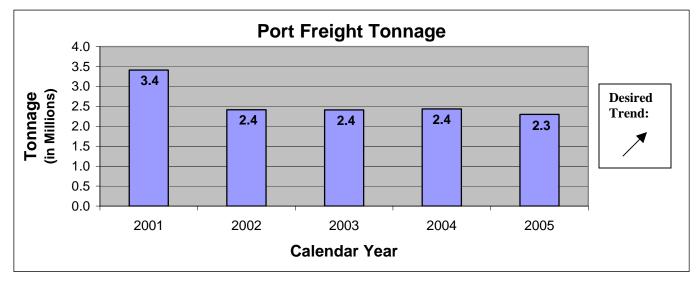
### **Improvement Status:**

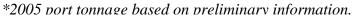
Total freight tonnage for all modes exceeds 1.2 billion tons, which reflects positive economic growth and development for Missouri. Rail freight tonnage grew 5 percent from 2003 to 2004 and demand remains strong despite system capacity issues. Missouri does not currently invest public funding in private rail infrastructure; however, MoDOT has supported efforts to remove rail system bottlenecks, such as the Kansas City Flyover Project and adding a second bridge on the Union Pacific mainline over the Osage River. Motor carrier freight tonnage has experienced steady growth since 2001. The 2005 data is not yet available to determine if higher diesel fuel costs will negatively impact motor carriers' tonnage amounts. MoDOT has implemented several process improvements and outreach efforts to streamline motor carrier registration and inspection services.

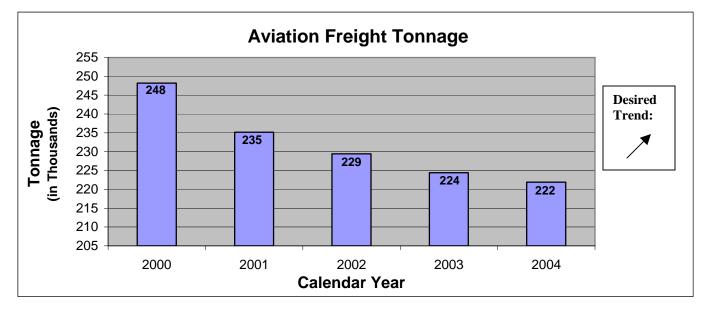
Port tonnage has remained relatively steady since 2001 despite low flows on the Missouri River. Preliminary 2005 amounts show a slight decrease due primarily to navigation impacts on the Mississippi River from Hurricane Katrina. Long-term growth of river transportation is hampered by an inadequate lock and dam system on the Upper-Mississippi River above St. Louis. MoDOT continues to support a federal proposal from the Corps of Engineers to update and expand this system, which is currently being considered by the U.S. Congress. Aviation tonnage continues to be impacted by a down-turn in the aviation industry from 9-11 and the resulting financial impacts to airlines, which carry a significant portion of air cargo. Commercial airports fall under the jurisdiction of the Federal Aviation Administration; however, MoDOT's Aviation Advisory Committee helps identify ways to better support the commercial aviation industry.











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### Average travel speeds for trucks on selected roadway sections

### **Result Driver:** Dave DeWitt, Deputy Administrative Officer **Measurement Driver:** Michelle Teel, Technical Support Engineer

### **Purpose of the Measure:**

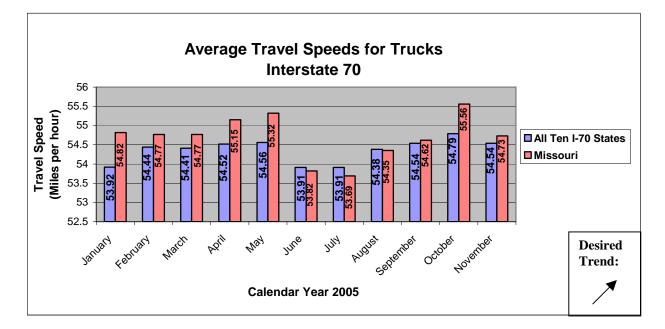
This measure tracks average truck travel speeds on selected roadway sections. Monitoring travel speeds is a tool for improving transportation system performance. MoDOT recognizes that the efficient movement of trucks is critical to the economy. Timely, reliable goods movement allows businesses to reduce manufacturing and inventory costs and to improve responsiveness to rapidly changing markets and consumer desires.

#### **Measurement and Data Collection:**

The Federal Highway Administration (FHWA) launched the Freight Performance Measure initiative to monitor travel speeds in freight-significant corridors, including Interstate 70. In 2002, FHWA established a partnership with the American Transportation Research Institute (ATRI) to determine whether and how information from communications technologies used by the freight industry could provide data to support freight performance measures. ATRI worked with technology vendors and commercial carriers to demonstrate that location data from communications technologies can be used to derive measures of travel speeds. After removing all information except time and location from the satellite data stream, ATRI measured average travel speeds. The data provided is preliminary research data from FHWA. Additional Missouri routes may be added in the future, including Interstates 55, 57, and 35.

#### **Improvement Status:**

To help improve truck travel time, live traffic data for three Missouri metro areas is available on MoDOT's website at <u>www.modot.gov</u> in the Services Section under Traveler Services. Kansas City Scout provides traffic information for Kansas City, Gateway Guide provides traffic information for St. Louis, and Ozarks Traffic provides traffic information for Springfield. Preliminary research data including truck travel speeds is available from FHWA on Interstate 70 across the nation. This data allows us to measure Missouri's truck performance on Interstate 70 as compared to the entire Interstate 70 corridor. Due in part to an increase in the number of Missouri work zones this summer, travel speeds decreased slightly in June through August. The desired trend is an increase in average travel speeds, as long as it they do not exceed the posted speed limit.



### Percent of trucks using advanced technology at Missouri weigh stations

**Result Driver:** Dave DeWitt, Deputy Administrative Officer **Measurement Driver:** Barbara Hague, Special Project Coordinator

### **Purpose of the Measure:**

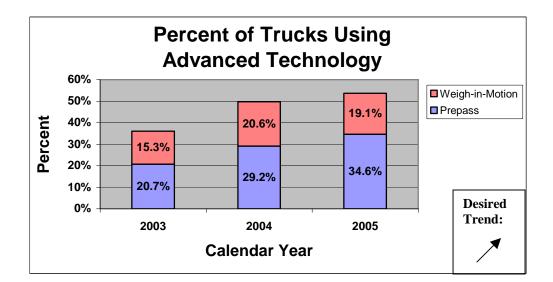
This measure indicates motor carriers' acceptance of tools designed to improve the flow of freight traffic on Missouri highways.

### **Measurement and Data Collection:**

Data is collected by HELP, Inc.'s PrePass system computers which scan transponder-equipped vehicles as they approach 19 Missouri weigh stations. Pavement sensors check the vehicle's weight while computers review MoDOT's records to determine the carrier's compliance with safety, insurance and other state and federal regulations. Drivers are notified to stop or are allowed to continue without delay. Carriers that comply with state and federal regulations save time and money. The Missouri State Highway Patrol provides a quarterly measure of the number of trucks that use Missouri's weigh-in-motion scales located at Mayview and Foristell. These scales measure weight as trucks pass over them at 40 m.p.h. Using ramp scales rather than verifying weight on fixed scales that require a full stop saves both time and money.

#### **Improvement Status:**

For the first time in Missouri, participation in the PrePass system exceeded 200,000 vehicles in each month of the last quarter of 2005. The trucks were allowed to proceed without the need to enter fixed weigh facilities. The number of vehicles weighed on the slower weigh-in-motion ramp scales shows a decrease from 2004 because of equipment failure during the first two quarters in 2005. MoDOT asked Help, Inc. to consider accepting carriers' compliance data more frequently than the current quarterly reports. More up-to-date information would allow carriers who have recently come into compliance to be able to by-pass weigh facilities and avoid the corresponding travel delay.



### Interstate motor carrier mileage

**Result Driver:** Dave DeWitt, Deputy Administrative Officer **Measurement Driver:** Joy Prenger, Accounting Services Supervisor

### **Purpose of the Measure:**

This measure reports the fluctuations of motor carrier freight movement in Missouri. MoDOT uses the information to help facilitate freight movement and to monitor quarterly fuel tax rate(s) and carriers' voluntary compliance with fuel tax requirements.

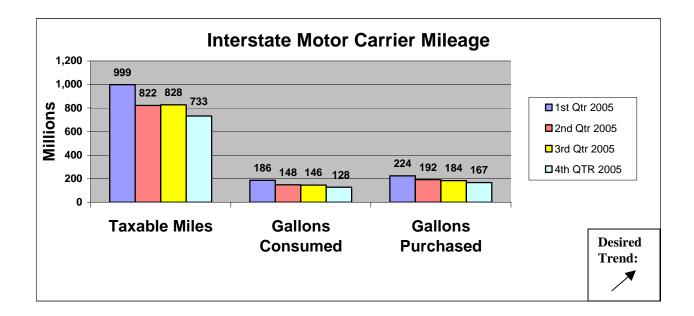
### **Measurement and Data Collection:**

Data is collected quarterly. Total taxable miles traveled in Missouri by Missouri-based carriers and carriers based in IFTA (International Fuel Tax Agreement) member states and provinces are tracked using IFTA tax returns and member state and provinces' monthly transmittals. This information is used to reflect freight movement, support revenues and to track usage from the motor fuel tax refund appropriation.

### **Improvement Status:**

During the fourth quarter of 2005, the reported fuel price average for the Midwest region was \$3.144 per gallon compared to the current average of \$2.408. The fourth quarter indicates a slight decrease in motor carrier travel due to higher fuel costs.

MoDOT Motor Carrier Services is testing a computer program that was designed to allow carriers to file their first quarter IFTA fuel tax returns and to make payment through our Internet-based system. MoDOT signed an agreement to join the IFTA Clearinghouse. The clearinghouse facilitates electronic exchange of registration information and fees, thereby reducing postage, printing and envelope costs. It also provides error-free data exchange and netted accounting settlements. Clearinghouse data allows Missouri to compare its national rank in motor carrier mileage, fuel purchases and fuel consumption with our eight border states. That data will be available by summer 2006.



### Percent of satisfied motor carriers

**Results Driver:** Dave DeWitt, Deputy Administrative Officer **Measurement Driver:** Mary Jo Pointer, Motor Carrier Manager

### **Purpose of the Measure:**

This measure tracks MoDOT's progress toward the goal of expeditiously meeting the needs of the motor carrier industry and facilitating freight movement. MoDOT's Motor Carrier Services team uses the data to identify opportunities to improve customer satisfaction.

### **Measurement and Data Collection:**

MCS personnel, working with the Missouri Transportation Institute, developed a survey to collect customer satisfaction data. A single survey addressed all four MCS program divisions, International Registration Plan/International Fuel Tax Agreement, Over-dimension/Over-weight Permitting, Safety and Compliance and Operating Authority. Survey respondents identified the service(s) they use when doing business with MCS, then indicated their level of satisfaction with 12 customer service factors such as "timely response", "friendly", "respectful", and "outcome". They also gave an "overall satisfaction" score. Customers used a four-point scale ranging from 4=Very Satisfied to 1=Very Dissatisfied.

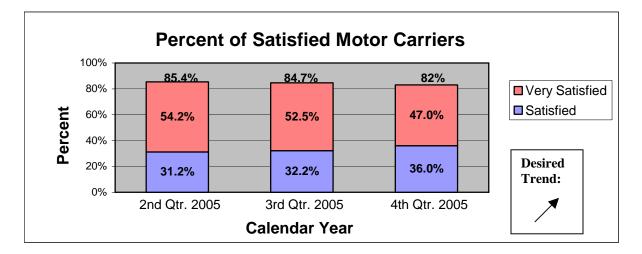
### **Improvement Status:**

MCS customers reported satisfaction levels at 82 percent, with 47 percent "very satisfied". It is expected that the satisfaction level will stay consistent until full external implementation of the new Web-based computer system is complete.

The most important factors related to overall customer satisfaction include "service issue resolved", "satisfactory outcome" and "timely service". OD/OW customers reported significantly lower levels of satisfaction. However, the ratings for "service speed and convenience" increased, mainly because OD/OW customers were able to apply for permits online beginning in the last quarter of 2005.

To improve its service, MCS made improvements including:

- Increased use of e-mail and FAX delivery of credentials and other notifications.
- Acceptance of credit cards
- Adjustments to staff hours to ensure all fully complete OD/OW permit requests received by 4:00 p.m. are processed and returned to the customer the same day.
- Providing Web-based access for customers registered under the International Registration Plan.



# Average wait time spent by customers obtaining over-dimension/over-weight permits

### **Result Driver:** Dave DeWitt, Deputy Administrative Officer **Measurement Driver:** Mary Jo Pointer, Motor Carrier Manager

### **Purpose of the Measure:**

This measure tracks MoDOT Motor Carrier Services' success in minimizing the time it takes motor carriers to obtain permits that allow them to haul loads that are taller, wider, longer or heavier than those regularly permissible on Missouri highways.

### **Measurement and Data Collection:**

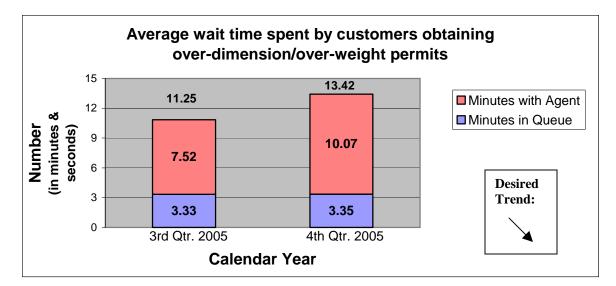
Using the WebView database to gather call center data, MCS calculates the average customer wait time on the phone (called "in queue") plus the average length of time speaking to a MCS agent to obtain a permit. In the future, MCS will also collect wait time data from both telephone requests and the Internet-based permit ordering system. Benchmark data is scarce, as other states do not currently track wait time data.

#### **Improvement Status:**

During the fourth quarter of 2005, MCS received 9,705 calls from OD/OW customers. During October and November, nine agents handled these calls. In December, three agents handled all calls while the others worked on permit requests received through the Internet. There was a slight increase in the average wait time because fewer agents answered calls. The average time the customer waited in queue was 3 minutes, 35 seconds. The average time the caller spent with the agent to complete the transaction was 10 minutes, 7 seconds, resulting in an average of 13 minutes, 42 seconds to obtain an OD/OW permit. MCS staff encouraged customers to apply for permits through the Web site, increasing time spent with customers as they instructed them on entering data and payment information online, while the MCS agent processed the current permit request.

To improve OD/OW permit turnaround time, MCS:

- Provided a new Internet-based system that carriers use to request permits at any time of the day. In December 2005, 73 percent of all single trip permit requests were made through the Web site.
- Adjusted staff hours to ensure all fully complete OD/OW permit requests received by 4:00 p.m. are processed and returned to the customer the same day.



Tangible Result Driver – Brian Weiler, Multimodal Operations Director

MoDOT has an active role in all modes of transportation, including rail, air, water, and transit. Transportation is more than highways and bridges. Every day millions of tons of goods move through the state by rail. Thousands of passengers use Missouri's airport facilities. And hundreds of barges navigate state waterways. All of these modes combine to keep Missouri's economy robust and vital.



### Number of airline passengers

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joe Pestka, Administrator of Aviation

### **Purpose of the Measure:**

This measure tracks the number of passengers boarding airplanes at Missouri's commercial airports. It helps determine the viability of Missouri's commercial airline industry. This number is also used by the Federal Aviation Administration to help determine airports' capital improvement funding levels.

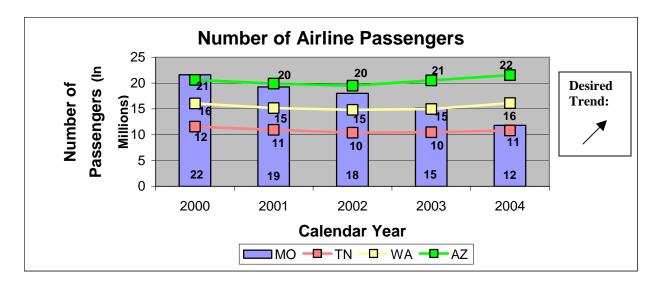
### **Measurement and Data Collection:**

The data is collected annually from the Federal Aviation Administration (FAA). Comparison data has been collected from the same source for the states of Arizona, Tennessee and Washington. These three states were selected based on similar populations in 2004. Tennessee and Washington have slightly higher state population totals with Arizona and Missouri being close with only an approximate 11,000 difference. The annual passenger boardings' data provided by the FAA is normally published in October for the preceding year. Airline passengers are considered passengers boarding airplanes.

### **Improvement Status:**

Data is passengers boarding airplanes and is tracked on an annual basis. The significant decrease in flights by American Airlines at St. Louis Lambert International Airport (approximate reduction of 200 flights per day in November 2003) and the effects of 9/11, in part, have contributed to the decrease in airline passengers over the last four years. In appears, based on the sample data collected below, that the sample states tracked, and within Missouri, airline passenger boardings are beginning to recover from the effects of 9/11. The reduction in flights by American at St. Louis Lambert International Airport continues to negatively impact growth in passenger boardings. Also, increases in airline operational costs and airline bankruptcy filings pose challenges to communities seeking enhanced air carrier service.

MoDOT is participating with the Federal Aviation Administration, Illinois Department of Transportation and East-West Gateway Council of Governments in a St. Louis Area System Plan study. The study will assess the region's aviation assets and develop a regional approach for the future development of those assets. MoDOT is also participating with the St. Louis International Airport and Kansas City International Airport in researching state tax issues that may be an impediment to increased air carrier services or new air carrier markets.



### Number of rail passengers

**Results Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Rod Massman, Administrator of Railroads

### **Purpose of the Measure:**

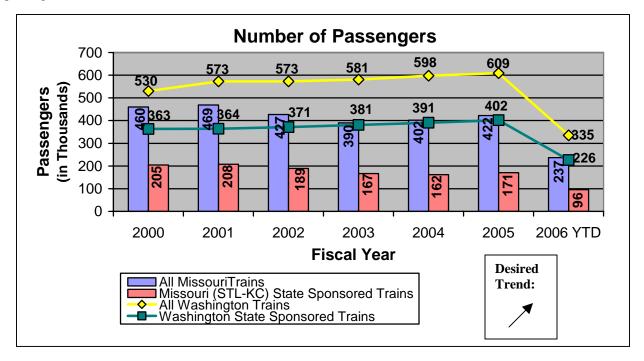
This measure tracks the number of people using the Amtrak train service in Missouri. It includes those taking a train trip in Missouri at any point within the state. This also includes the state-supported passenger rail trains between Kansas City and St. Louis, the national trains that run through the state and the St. Louis to Chicago trains, which are supported in part by Illinois. For comparison purposes, the state of Washington's train data is shown based on the state's similar size, population and the fact that Washington has both national- and state-supported trains. Washington's "Cascades" train service serves as a national model because the state invests millions of dollars in both infrastructure and operations each year.

#### **Measurement and Data Collection:**

Amtrak provides the number of passengers per train in Missouri on a monthly basis. MoDOT's Multimodal Operations Division, Railroad Section, then tabulates these numbers.

#### **Improvement Status:**

State fiscal year 2005 is the first year since 2001 when total ridership numbers on the St. Louis to Kansas City route increased. The first five months of state fiscal year 2006 are showing an increase of about 10 percent over the previous year. The rising price of gas and increased congestion may explain some of the ridership increase. However, stepped-up publicity efforts by MoDOT including new roadside signs, variable message boards, news releases, a wide-ranging distribution of train schedules, a focus on college students and a variety of other new publicity efforts have contributed to the increase. Further cooperation and collaboration between Amtrak, MoDOT and Union Pacific Railroad to improve the service is also helping increase on-time performance, thereby raising passenger numbers.



### Number of transit passengers

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

### **Purpose of the Measure:**

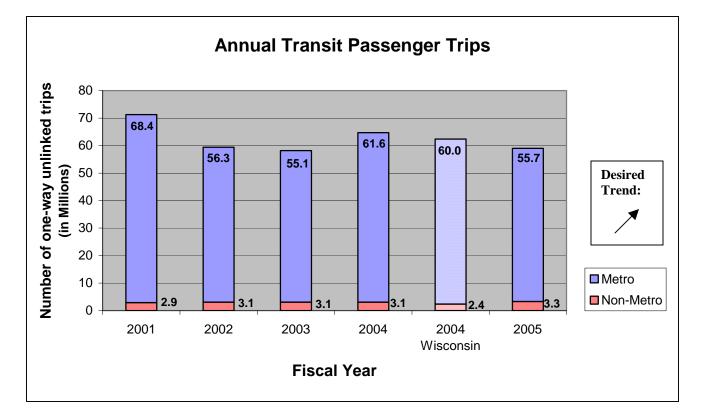
This measure gauges the use of public transit mobility services in Missouri. It also provides a historical perspective and trend of public transit service use in Missouri.

### **Measurement and Data Collection:**

The total number of transit passengers is measured by the annual total of one-way unlinked transit trips taken by passengers on public transit vehicles. Data is obtained from urban and rural providers of general public transit services. The 2004 measure is benchmarked to Wisconsin, which has a comparable total statewide population.

#### **Improvement Status:**

Metro (urban) transit service cutbacks in 2002 – 2003, driven by declining local transit sales tax revenues and reduced state general fund transit appropriations, resulted in lower transit use statewide. Metro ridership in 2005 declined by 4.3 million trips compared to 2004 due to fewer transit trips taken by riders in St. Louis and St. Joseph. Non-metro (rural) ridership has increased by 13 percent during the five-year reporting period from 2.9 million trips in 2001 to 3.3 million trips in 2005. Missouri compared favorably to Wisconsin in 2004. For the 2007 state budget, MoDOT proposes an \$8 million state transit funding increase. MoDOT recently worked with transit providers to develop and implement the Missouri Rural Transit Marketing Campaign that received national recognition.



### Number of passengers and vehicles transported by ferryboat

#### **Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Sherrie Martin, Waterways Program Manager

### **Purpose of the Measure:**

This measure tracks the statistics regarding use of ferryboat services.

### **Measurement and Data Collection:**

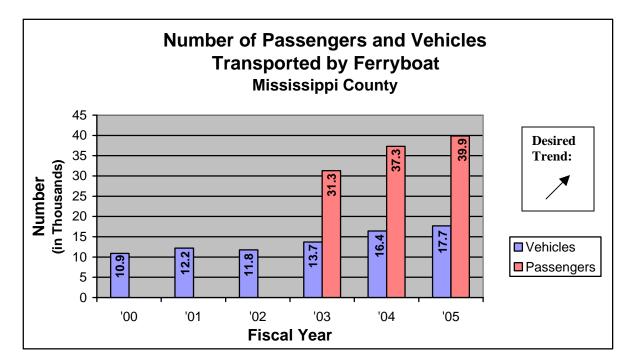
Missouri's two ferry services submit a monthly report that includes the information shown in the graph below, the cost for providing the service and for any service disruption.

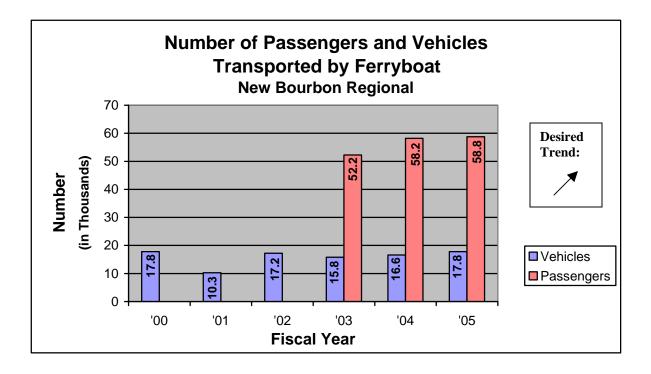
### **Improvement Status:**

During the first half of the state fiscal year 2006, traffic on the Mississippi County ferry has increased since last year by 8 percent. Bridge repairs performed by the Illinois Department of Transportation on both the Interstate 57 bridge and the US 60 bridge in Southeast Missouri caused increased traffic to the ferry.

The New Bourbon Regional ferry service has experienced a 6 percent decrease in vehicles and a 35 percent decrease in passengers during the first half of state fiscal year 2006 compared to state fiscal year 2005. These statistics have improved from a 12 percent decrease in vehicles and a 36 percent decrease in passengers since first quarter of state fiscal year 2006. This ferry serves the Ste. Genevieve area where tourism is a major part of the economy. Tourism has been affected by high fuel prices and extreme heat during peak tourist season.

MoDOT and the ports are reviewing signage and brochures at both ferry services. MoDOT has also added contact information for the each ferry that includes its Web site address on MoDOT's Web site.





### Number of days the river is navigable

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Sherrie Martin, Waterways Program Manager

### **Purpose of the Measure:**

This measure provides historical data regarding the use of the inland waterways navigation system.

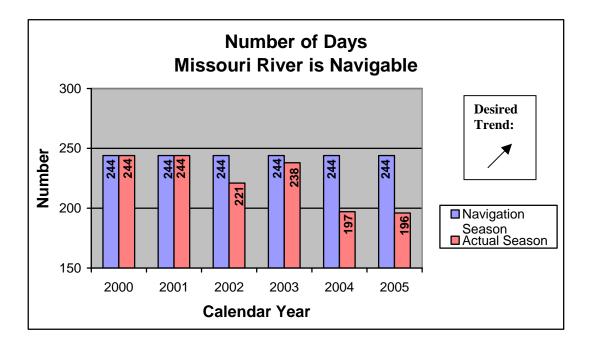
### **Measurement and Data Collection:**

The U.S. Army Corps of Engineers publishes an Annual Operating Plan for the Missouri River and bases the end of navigation season on pool storage levels as of July 1 each year.

### **Improvement Status:**

The U.S. Army Corps of Engineers issued the 2006 navigation season Annual Operating Plan. The plan includes two springtime releases of water to satisfy the Endangered Species Act. The pulses are intended to promote spawning of the pallid sturgeon and will only take place if system storage is above 36.5 million-acre feet on March 1 and May 1.

The 2006 navigation season will maintain the flows and trigger dates as outlined in the Master Water Control Manual. As storage levels now stand, it is anticipated that releases will support minimum navigation through the season, and the season will be shortened from a 244-day full navigation season to a 229- to 186-day season depending on runoff this winter and spring. The final decision on season length will be made based on storage level as of July 1, 2006. Full navigation season would end December 1, 2006.



### Number of business capable airports

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joe Pestka, Administrator of Aviation

### **Purpose of the Measure:**

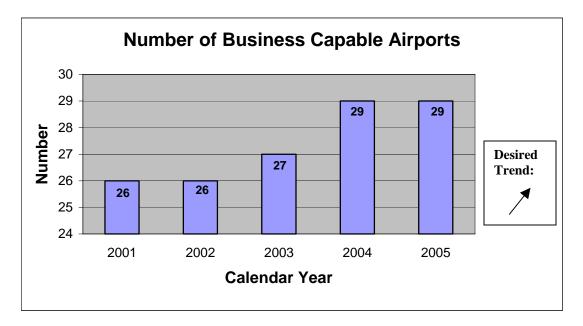
This measure tracks the number of airports capable of handling business aircraft. Local communities and economic development agencies can use airports to assist in increasing a community's economic viability for business retention and development.

### **Measurement and Data Collection:**

The graph shows the number of business-capable airports. A business-capable airport is defined as accommodating business- or corporate-type aircraft with a runway length of 5,000 feet or more. Since 2001, three additional airports have either extended their runway or constructed a new runway of 5,000 feet or greater. This increase allows additional communities and an increased population greater exposure to business-capable airports. Monitoring airports' development is how data is collected on an annual basis.

#### **Improvement Status:**

The State Airport System Plan Update and the annual development of MoDOT's Statewide Transportation Improvement Program identify airports that meet the demand criteria and would support the development of a 5,000-foot runway. The State Aviation Trust Fund, which is used for maintenance and capital improvement projects at airports, increased from approximately \$3 million in calendar year 2004 to \$6 million in calendar year 2005. An airport survey and information campaign conducted by MoDOT and the Missouri Department of Revenue's review of the trust fund led to obtaining these additional funds.



### Number of daily scheduled airline flights

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joe Pestka, Administrator of Aviation

### **Purpose of the Measure:**

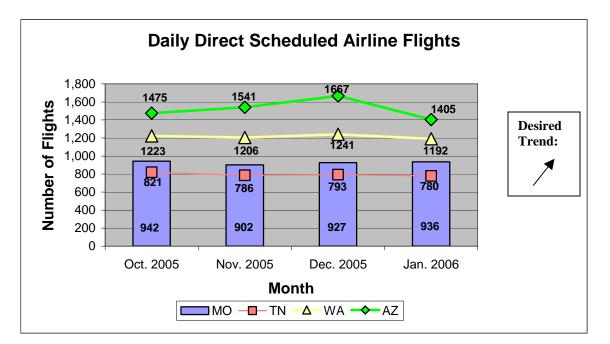
This measure tracks the number of airline flights. This data assists in determining options available to the traveling public. It provides an indication of the airline industry's economic stability in Missouri.

#### **Measurement and Data Collection:**

A direct scheduled airline flight is a take-off by a scheduled commercial air carrier. A direct flight has the same flight number and is flying to one or more destinations. Data is being collected from seven airports in the state that presently accommodate scheduled airline flights. These airports are: St. Louis Lambert International, Kansas City International, Springfield-Branson, Joplin, Columbia, Waynesville and Cape Girardeau. Comparison data has been collected from the same states for the commercial airports in Arizona, Tennessee and Washington. These three states were selected based on similar populations in 2004. The data is collected from the Official Airline Guide.

#### **Improvement Status:**

The flights are measured on a monthly basis with a daily snapshot collected for each month. In Missouri, the number of flights decreased slightly in November and December but overall has been relatively consistent from October 2005 to January 2006. MoDOT is participating with the Federal Aviation Administration, Illinois Department of Transportation and East-West Gateway Council of Governments in a St. Louis Area System Plan study. The study will assess the region's aviation assets and develop a regional approach for the future development of those assets. MoDOT is also participating with the St. Louis International Airport and Kansas City International Airport in researching state tax issues that may be an impediment to increased air carrier services or new air carrier markets.



### Average days per week rural transit service is available

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

### **Purpose of the Measure:**

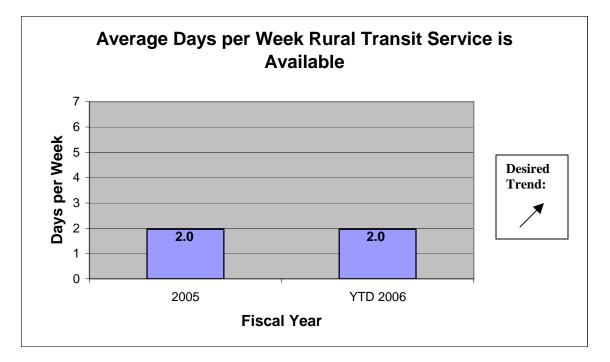
This measure identifies the average existing public transit service in rural Missouri by indicating the availability of rural mobility services for employment, medical appointments and necessary shopping.

### **Measurement and Data Collection:**

Reviewing published transit service schedules in each rural Missouri county and averaging those daily frequencies within a week's schedule for available countywide transit service calculates the statewide average days per week that rural transit service is available. Rural transit agencies operate on an annual budget and customarily make transit service changes with the start of a new budget year.

### **Improvement Status:**

Rural transit service at a statewide average of two days per week is not sufficient for its riders to support full-time employment. The outlook for 2007 suggests an opportunity for growth in rural transit service based on a 67 percent increase of federal rural transit funds authorized to Missouri through SAFETEA-LU, which is the federal transportation funding legislation. For the 2007 state budget, MoDOT is proposing an increase of \$2.5 million in state funding to rural transit systems in order for them to match half of the increased federal transit funds flowing to rural transit systems. MoDOT recently worked with local transit providers to produce a speaker's video to help transit managers make a persuasive case for more local funding in order to enhance rural transit service.



### Number of active transit vehicles

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

### **Purpose of the Measure:**

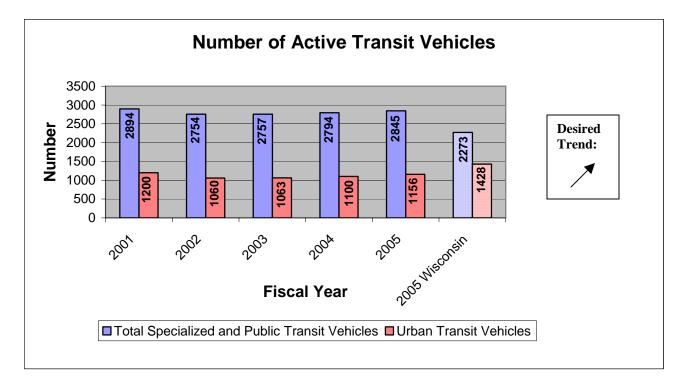
This measure tracks the number of active transit vehicles in passenger service. This data indicates the collective potential capacity for Missouri's transit agencies to deliver mobility services.

### **Measurement and Data Collection:**

The data represents the number of transit vehicles dedicated to urban and rural public transit services and those federally funded vehicles used by specialized transit providers. Data previously reported in earlier Tracker editions was for urban transit vehicles only. The 2005 measure is benchmarked to Wisconsin, which has a comparable total statewide population.

### **Improvement Status:**

Reduced local transit sales tax revenues in St. Louis and Kansas City in 2002 along with reduced state transit funding in 2003 (July 2002) led to reductions of transit services and the number of active transit vehicles. Transit service and fleet size have slowly rebounded since that time. Missouri has more total combined public transit and specialized transit vehicles in service than Wisconsin. Wisconsin has more urban transit vehicles in service than does Missouri; however, Wisconsin has 13 urbanized metro areas each over 50,000 population compared to Missouri's seven urbanized metro areas. MoDOT serves as the lead procurement agency for rural and specialized transit vehicles providing a menu of over 125 combined floor plans, wheelchair lifts and engines from which transit agencies can select. This consolidated procurement lowers costs through volume pricing that helps purchase more vehicles with available funding. Over 150 model year 2006 vehicles have been ordered but not yet delivered.



### Number of inter-city bus stops

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

### **Purpose of the Measure:**

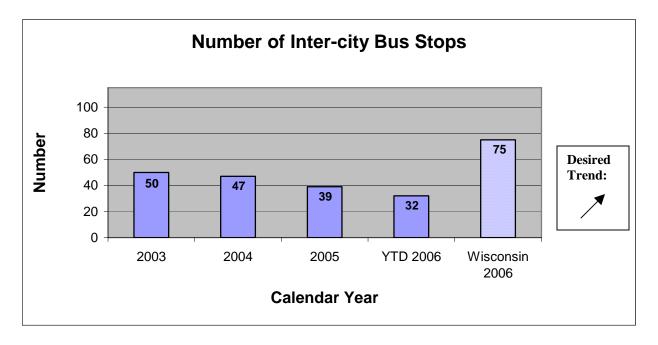
This measure tracks the number of inter-city bus stops. Inter-city bus stops represent access points to inter-city bus services provided by Greyhound, Jefferson Lines and Trailways. More stops among Missouri's 114 counties means greater access. Fewer stops create a barrier by necessitating greater traveling distances in order to board an inter-city bus.

### **Measurement and Data Collection:**

Data on the number and location of inter-city bus stops is obtained annually from the national and regional inter-city bus carriers. The year-to-date 2006 measure is benchmarked to Wisconsin, which has a comparable total statewide population.

### **Improvement Status:**

The number of Missouri's intercity bus stops declined in 2005 with the changes in Greyhound service. Since the last Tracker report, Greyhound has closed additional stops along the US 67 corridor between St. Louis and Little Rock. MoDOT's Organizational Results Division is currently analyzing counts and surveys from coach riders to better determine the needs for inter-city bus service in Missouri. MoDOT's Transit Section is working with Jefferson Lines to procure a bus that would run the abandoned Greyhound route on the U.S. 60 / Missouri 13 corridor to restore inter-city bus service to West Plains, Willow Springs, Bolivar, Humansville, Osceola, and Warrensburg.



### Percent of customers satisfied with transportation options

### Result Driver: Brian Weiler, Multimodal Operations Director

Measurement Driver: Ernie Perry, Organization Performance Administrator

### **Purpose of the Measure:**

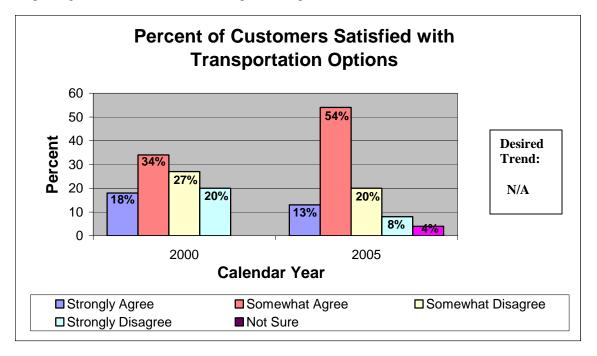
This measure provides information about the public's perception of MoDOT's performance in providing transportation options.

### **Measurement and Data Collection:**

Data was collected through a statewide telephone survey conducted for MoDOT's long-range planning initiative called *Missouri Advance Planning*. The survey effort included interviews with 3,100 Missourians with an overall margin of error of +/-2.9 percent.

#### **Improvement Status:**

For the 2005 survey, over 67 percent of the population sampled is at least somewhat satisfied with transportation options. Conversely, 28 percent of the sample is not satisfied with the transportation options available. When compared to the 2000 data provided from the statewide customer survey, 52 percent of the sample is satisfied with transportation options and 47 percent responds as dissatisfied with the options available to those who do not or cannot drive. This is a positive start and a demonstrated improvement from 2000. MoDOT expects to see increases in the public's satisfaction with transportation options as the Multimodal Operations Division continues to work towards improving service and awareness of transportation options.



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Tangible Result Driver – Dave Nichols, Director of Program Delivery

MoDOT seeks out and welcomes any idea that increases its options, because the department doesn't have all the answers. The department creates and preserves a transportation decision-making process that is collaborative and transparent, involving its customers in the determination of needs right through to the development, design and delivery of projects.



### Number of customers who attend transportation-related meetings

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Bob Brendel, Outreach Coordinator

### **Purpose of the Measure:**

This measure gauges MoDOT's public involvement success – both in terms of public meetings and hearings that are held to make collaborative decisions with the general public, communities, elected officials, stakeholders, etc., and in terms of public informational events scheduled by MoDOT to keep its customers apprised of project status and potential impacts that could be experienced.

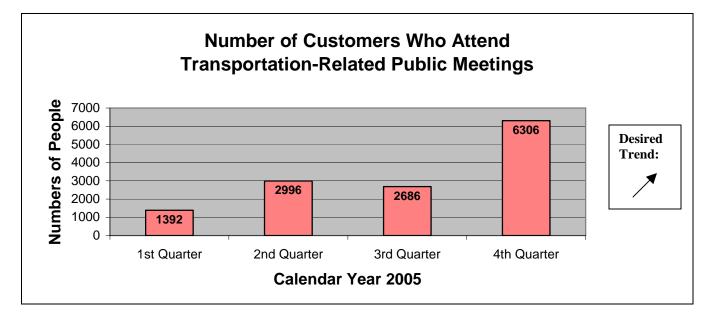
### **Measurement and Data Collection:**

Attendance is determined by analyzing sign-in sheets utilized at public meetings or by head counts conducted by MoDOT staff.

### **Improvement Status:**

Attendance at public meetings held during the fourth quarter of 2005 was more than double that of any previous quarter. More than 6,300 persons attended 167 meetings held between October 1 and December 31, bringing the total for calendar year 2005 to 13,380. Nearly half of the attendees this quarter -3,165 – attended 44 meetings held in District 6. Meetings associated with Element 2 and 3 projects from Amendment 3 continued to dominate the data (47 meetings with attendance of 2,194).

At an August community relations "advance," it was agreed that performance associated with this measure will be improved with development of a MoDOT public involvement guide (including best-practice examples), formulation of comprehensive public involvement plans at the project level, Community Relations involvement early in the project development process and proactive communications with the public and stakeholder groups. Further discussion to enhance performance was held in November. Suggestions to better publicize public meetings included easier and more consistent use of the MoDOT Web site and the use of changeable message boards in the project area or at the site of the public meeting, when appropriate.



# Percent of customers who are satisfied with feedback they receive from MoDOT after offering comments

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Bob Brendel, Outreach Coordinator

### **Purpose of the Measure:**

This measure tracks responses made by MoDOT to its customers. MoDOT routinely asks people who attend public meetings/hearings to submit comments that will be examined by the project team and that will become part of the project's official record. It is important that people who avail themselves of this opportunity know that their comments are taken seriously.

#### **Measurement and Data Collection:**

MoDOT Design, Community Relations and Organizational Results worked with the Missouri Transportation Institute to develop a survey instrument for persons who attend project-specific meetings and hearings. The initial survey was sent to more than 4,500 persons who had attended meetings in the last five years. A continuing survey process is underway, with contact lists developed each time a project reaches the official public hearing milestone.

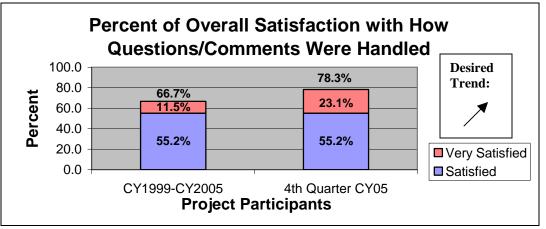
#### **Improvement Status:**

Both survey participation and customer satisfaction improved in the most recent surveys conducted on seven projects across four MoDOT districts. Thanks in large part to the speed in which MoDOT provided the appropriate databases to MTI after public hearing milestones, the net response rate for the "involved public" surveys was an amazing 40.4 percent – double the 20 percent participation rate that was experienced during the initial survey.

Overall satisfaction also improved, from 67 percent to 78 percent.

The previous survey showed that women were much less satisfied with how MoDOT handled their comments. This time, however, the gender gap virtually disappeared with 78.9 percent of male respondents and 76.1 percent of female respondents supportive of MoDOT responses to their feedback. Performance also improved among those persons who attended at least one planning meeting because of a fear that their property or business would be displaced. In the initial baseline survey, only 51.2 percent of such persons were satisfied with MoDOT's responsiveness to their concerns. In the latest survey, though, approval from persons who could be personally affected increased to 69 percent.

The second round of surveys demonstrated that as the time between the public hearing milestone and receipt of the survey decreases, the response rate and the approval rate increase. Consequently we have made some slight changes to the administration of this measure. District CR managers have been asked to forward project contact lists to MTI each time a project reaches the public hearing milestone. MTI will continually survey participants but will only analyze the data on an annual basis.



# Percent of customers who feel MoDOT includes them in transportation decision-making

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Machelle Watkins, Transportation Planning Director

### **Purpose of the Measure:**

This data will assist in identifying the effectiveness of MoDOT's project planning outreach efforts.

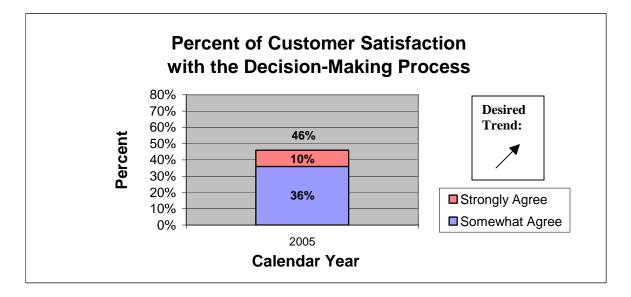
#### **Measurement and Data Collection:**

Data was collected through a statewide telephone survey conducted for MoDOT's long-range planning initiative called *Missouri Advance Planning*, or *MAP*. The survey effort included interviews with 3,100 Missourians with an overall margin of error of +/- 2.9 percent.

#### **Improvement Status:**

Forty-six percent of the sample feels MoDOT takes into consideration their concerns and needs when developing transportation decisions. However, 44 percent feels MoDOT does not take their concerns and needs into consideration when making transportation decisions. While this is a positive starting point, MoDOT anticipates that community outreach and communication efforts will result in greater public support in transportation decision-making.

Part of Transportation Planning's *MAP* effort is to increase and improve the public's involvement in transportation decision-making. To accomplish this, six groups have been created, called Regional Working Groups (RWG). These groups are made up of Missouri citizens that include economic development leaders, educators, farmers, bankers, community leaders and others. RWG members are helping MoDOT analyze transportation policies and strategies in an effort to plan for Missouri's transportation future. When they conclude their work in May 2006, the groups will each have met five times. This form of public outreach provides customer involvement in transportation decision-making.



# Percent of positive feedback responses received from planning partners regarding involvement in transportation decision-making

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Bill Stone, Technical Support Engineer

### **Purpose of the Measure:**

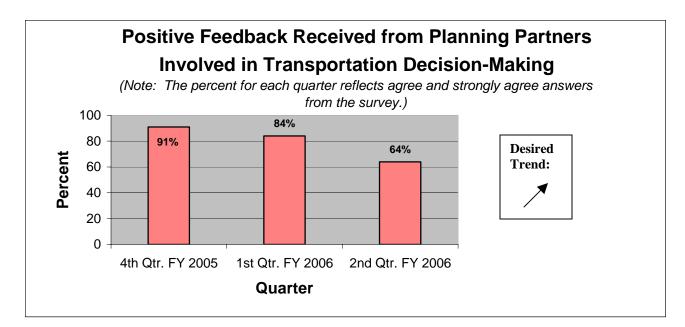
This measures MoDOT's efforts of including planning partners (members of metropolitan planning organizations and regional planning commissions) in transportation-related decision-making. The percent of positive feedback through the surveys will display planning partners' involvement.

#### **Measurement and Data Collection:**

Survey data for this quarter is based on individuals participating in MoDOT outreach efforts from three separate meetings. Two of these meetings were in MoDOT's Kansas City district. One was a Local Public Agency (LPA) manual meeting that had a response rate of 38 percent. Another Kansas City meeting was to discuss urban and rural needs in the Planning Framework Process, which had a response rate of 14 percent. The third meeting surveyed in this quarter's measure was an enhancement team meeting in MoDOT's Jefferson City district with a response rate of 20 percent. Nine surveys out of 14 completed surveys in the second quarter of state fiscal year 2006 indicated positive experiences in the outreach efforts. The survey answers were based on the following scale: strongly disagree, disagree, agree and strongly agree.

#### **Improvement Status:**

Other planning meetings and planning activities are taking place with informational exchanges; however, the survey methodology is based on meetings at which decisions are made. This quarter's measures are based on a limited number of surveys. Since this measure was developed, there are many individuals that have been surveyed multiple times, which may be resulting in a limited response rate. Thus, consideration should be given to changing to a semiannual or an annual survey that may better reflect the overall feedback of individuals involved in decision-making rather than spot surveys after individual meetings. MoDOT's Transportation Planning Division has worked with statewide planning partners to develop a recommendation for the Missouri Highways and Transportation Commission regarding funding distribution changes needed as a result of new federal transportation funding legislation.



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Tangible Result Driver – Don Hillis, Director of System Management

Many Missouri motorists depend on roadside parks and rest areas during their travels for the opportunity to rest and refresh themselves in a safe environment. Providing safe, clean and convenient accommodations allows motorists to travel more safely and comfortably.



# Percent of customers satisfied with rest areas' convenience, cleanliness and safety

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Carney, State Maintenance Engineer

### **Purpose of the Measure:**

This measure helps MoDOT understand customer expectations concerning the convenience, cleanliness and safety of its rest areas. This information will provide insight to rest area location, lighting, and security as well as the overall cleanliness expectations.

#### **Measurement and Data Collection:**

MoDOT measures this attribute with both an internal and external data collection. MoDOT receives information in the form of a survey card offered at all rest areas in the system. The survey cards ask a variety of questions with three of the questions specifically asking if the rest area is convenient, clean and safe. This provides direct input from our customers and is considered our external source.

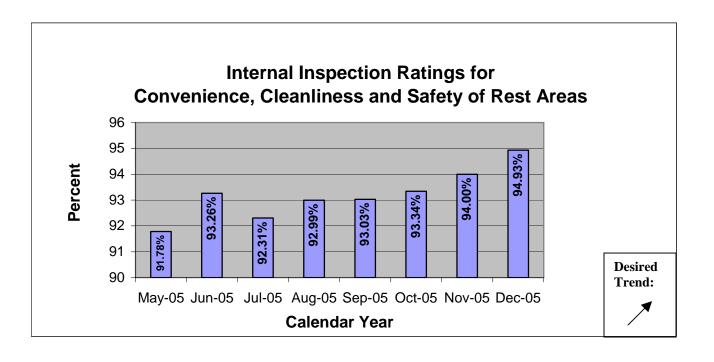
To ensure the customer satisfaction, all rest areas are inspected using an attribute list developed and based on an industry-wide literature review. The attribute list includes characteristics rest-area users identified as what they consider convenient, clean and safe. MoDOT maintenance employees inspect all rest areas at least two times per month using this list and are considered our internal source.

#### **Improvement Status:**

The rest area survey cards were made available in May 2005. For the first quarter of the fiscal year 2006 (July – September) 2,404 cards were returned. For the second quarter of the fiscal year 2006 (October – December) 2,119 cards were returned. The one percent lower rating as shown for the second quarter of fiscal year 2006 is not significant in relationship to the total survey cards received. Based on the cards returned from 46 different states, Canada, Ireland and the United Kingdom, MoDOT is meeting the needs of its customers.

The internal rest area inspections started during May 2005. MoDOT is doing extremely well at meeting the customers' expectations for convenient, clean and safe facilities, largely in part to these inspections conducted a minimum of two times per month. The score average for all rest areas in the fourth quarter of the fiscal year 2005 (May – June) was 92.52 percent, 92.78 percent for the first quarter of the fiscal year 2006 (July – September), and a slight increase to 94.09% for the second quarter of fiscal year 2006. MoDOT takes care of maintenance concerns in a timely manner to keep the rest areas open for use.





# Percent of customers satisfied with commuter lots' convenience, cleanliness and safety

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Carney, State Maintenance Engineer

### **Purpose of the Measure:**

This measure will help the department understand the MoDOT customer expectations concerning the convenience, cleanliness and safety of its commuter lots. This information will provide insight to location of commuter lots, lighting and security at commuter lots as well as their overall cleanliness.

### **Measurement and Data Collection:**

MoDOT receives information in the form of survey cards distributed by MoDOT employees at twenty commuter lots. The survey card asks a variety of questions. Three questions specifically ask if the commuter lot is convenient, clean and safe. This is a baseline measure that provides direct input from our customers and is considered our external source.

#### **Improvement Status:**

Commuter lot survey cards were distributed to 1,176 customers in December 2005 and we received 346 replies. Most of the customers thought the lots were convenient with 67 percent using them five days per week. Seventy-two percent cited saving fuel costs as the most important reason to use the lot. Ninety percent of customers were satisfied with safety at the lots with several customers expressing the need for additional lighting and 5.2 percent reporting theft and property damage concerns. Nearly eighty-three percent of the customers were satisfied with cleanliness. We received many comments about litter and the need for trash cans. Other frequent comments included the need for better surface maintenance on the gravel and asphalt lots and in a few lots expansion to provide more parking spaces. We have established quarterly inspection checklists to be performed at all commuter lots in the future to identify maintenance needs and expect the satisfaction for cleanliness and safety to improve.



### Number of users of rest areas

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Stacy Armstrong, Roadside Management Supervisor

### **Purpose of the Measure:**

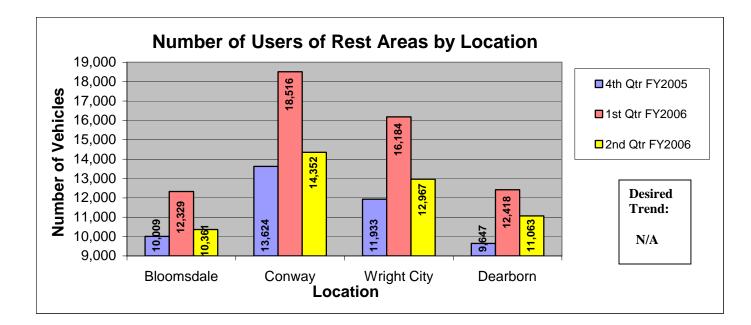
This measure tracks the number of vehicles entering rest areas. This information helps MoDOT better understand the peak days and times visitors use rest areas, impacting staffing decisions.

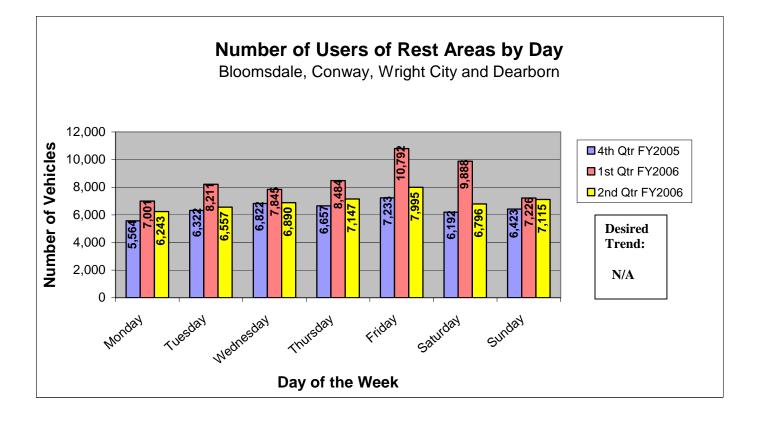
### **Measurement and Data Collection:**

Temporary mechanical traffic counters are placed at four rest areas for seven consecutive days per quarter. All of the four sample locations have counters placed at the exit (more accurate counts than at the entrance) of each rest area to count users traveling in both directions. All four locations have two counters for a total of eight counts. This measurement started in mid-April, 2005, and the first four sample areas are Bloomsdale I-55, Conway I-44, Wright City I-70, and Dearborn I-29

#### **Improvement Status:**

A total of 48,743 vehicles visited the four selected rest areas during the seven-day period of the second quarter of the fiscal year 2006 compared to 45,213 vehicles during the seven-day period of April 2005 and 59,447 during the first quarter of 2006. A decrease was expected for the following reasons. First, the first quarter of the fiscal year 2006 occurs during the summer vacation season. Second, the actual count for the first quarter of the fiscal year occurred during the July 4<sup>th</sup> holiday. Going into the fall season, it was expected the visitors will be lower this quarter and a continued decline the next quarter, during the winter months. A rebound is expected in the spring. Continued tracking of these locations will help determine if these assumptions are correct. Monday remains the day with the least visitors progressing to Friday, the busiest day.





### Number of users of commuter parking lots

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Tim Jackson, Technical Support Engineer

### **Purpose of the Measure:**

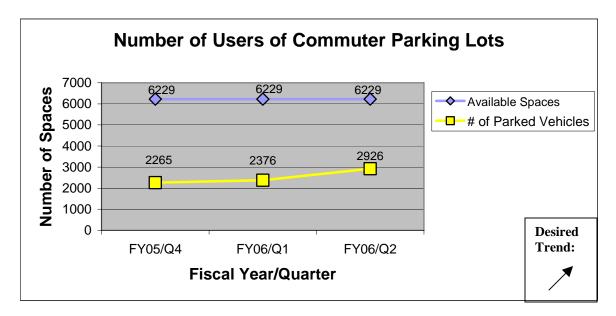
This measure tracks the number of commuter parking lot users. It will help the department determine whether the commuter parking lots provided by the department are adequate at their current locations and whether they are fulfilling the traveling public's needs.

### **Measurement and Data Collection:**

District maintenance personnel count the number of vehicles parked in each commuter lot on a quarterly basis. Data is collected from every district to create a statewide report. Data collection started in May 2005.

#### **Improvement Status:**

There was a substantial increase in the number of vehicles parked in the commuter lots from the previous quarter. The additional users of commuter parking lots can be attributed to the increased price of fuel in the last three months of 2005. MoDOT will continue to encourage motorists to use these lots through news releases.



## **Convenient, Clean and Safe Roadside Accommodations**

### Number of truck customers that utilize rest areas

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Tim Jackson, Technical Support Engineer

#### **Purpose of the Measure:**

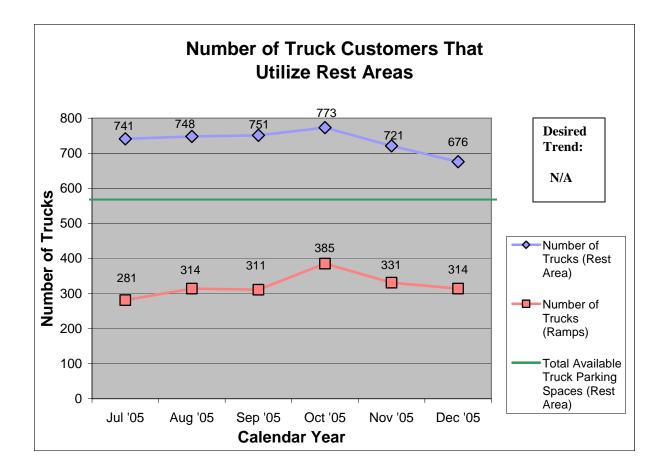
This measure tracks the number of trucks at rest areas. The numbers of trucks using the rest areas and the nearby ramps could be used to help determine how many spaces are needed to provide convenient parking facilities at each rest area.

#### **Measurement and Data Collection:**

On a monthly basis, district maintenance personnel will count the number of trucks parked at rest areas and on nearby ramps within 15 miles of the rest areas. The count is done between 4 and 6 a.m., which is typically the busiest time. Data is collected from every rest area to create a statewide report. Data collection began in May 2005.

#### **Improvement Status:**

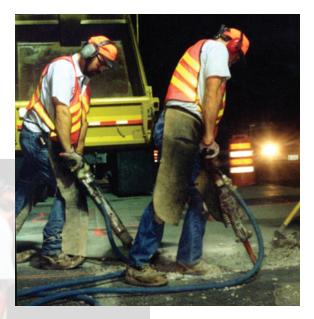
The number of trucks using the rest area parking facilities has decreased the last two months. This may be a seasonal variation, however, the number of trucks parked in the rest areas still outnumber the available designated parking spaces. MoDOT is working with our motor carrier partners to find innovative solutions to provide more truck parking spaces.



# Best Value For Every Dollar Spent Tangible Result Driver – Roberta Broeker,

Chief Financial and Administrative Officer

Providing the best value for every dollar spent means MoDOT is running its business as efficiently and effectively as possible. A tightly managed budget means more roads and bridges can be fixed. That keeps Missouri moving. This is one of MoDOT's values because every employee is a taxpayer too!



## Number of MoDOT employees (converted to Full-Time Equivalency)

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Micki Knudsen, Human Resources Director

#### **Purpose of the Measure:**

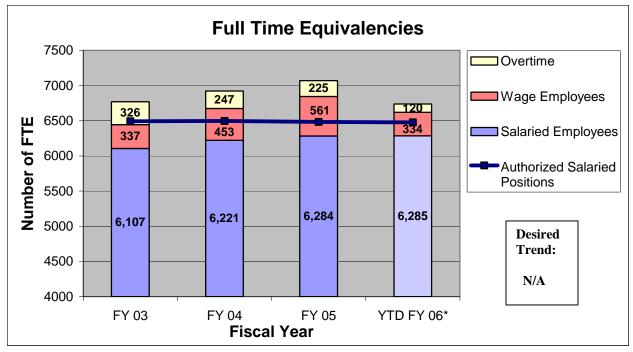
This measure tracks the growth in the number of employees within the department. The measure has been changed to include wage employees and the hours of overtime worked by all employees converted to full-time equivalency (FTE). To convert these numbers to FTEs, we divided the total number of hours worked by 2080. This measure is now a more accurate reflection of the amount of employees working for MoDOT. Data for the current year has the actual FTE for salaried employees to date annualized.

#### **Measurement and Data Collection:**

The data is collected and reported in the first quarter of each fiscal year. The data is a high-level view of overall staffing at MoDOT in relation to authorized positions that could be filled.

#### **Improvement Status:**

For FY 06, MoDOT has 6476 authorized salaried positions. As of December 31, 2005, the actual number of employees is 6350. The number of wage employees has fallen to under 500. MoDOT has additional 530 individuals available for emergency snow removal, if needed. A team has developed recommendations to improve the seasonal program. Recommendations for streamlining processes and improving communication have been distributed to districts for implementation this season. Additional improvements are being considered at the departmental level. Staff members are closely monitoring recent changes to MoDOT's pre-employment screening process (tax-compliance, background checks, CDL requirements and work simulation) to ensure these changes do not hinder the department's ability to bring seasonal employees on board.



\*For FY 06, the Salaried Employees data has had the FTE for salaried employees used to date converted to an annual number for ease in comparison to the authorized positions. This could not reasonably be accomplished for wage employees or for overtime. Overtime includes both salaried and wage employees.

## Percent of work capacity based on average hours worked

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Micki Knudsen, Human Resources Director

#### **Purpose of the Measure:**

This measure shows how many hours the average employee works. It can assist management in determining staffing and productivity levels.

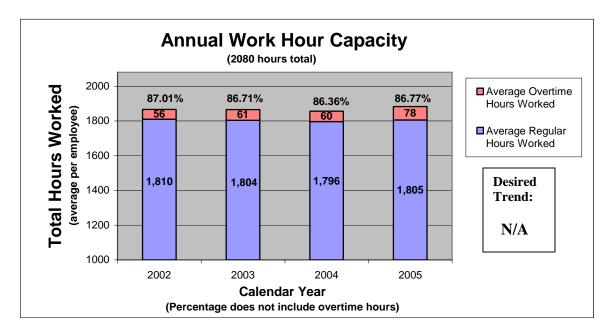
#### **Measurement and Data Collection:**

This measure tracks organizational work capacity based on average regular hours worked and average overtime hours worked by employees. This measure also displays the percentage of regular hours available that are worked.

The average regular hours worked does not include seasonal or wage employees. The average overtime hours worked does not include exempt, seasonal, or wage employees.

#### **Improvement Status:**

Although the number of regular hours worked by MoDOT employees over the past few years has remained relatively constant, the department has seen a 30 percent increase in the amount of overtime worked by its employees. This increase is most likely due to the additional work attributed to the Smooth Roads Initiative (SRI). The coming year will likely see a repeat of the additional overtime worked in 2005, due to the Governor's challenge that MoDOT complete the SRI projects a year ahead of schedule. A committee continues its work to develop an implementation plan for improving the administration of leave usage. As a result of this committee's work, so far, reports are available for local HR staff to use to analyze leave use and identify misuse. In addition, district HR staff are sharing best practices of dealing with employees that abuse leave. Strategies for dealing with leave misuse will be communicated to all supervisors as a part of the Annual Policy Review, which will be available in March.



### Rate of employee turnover

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Micki Knudsen, Human Resources Director

#### **Purpose of the Measure:**

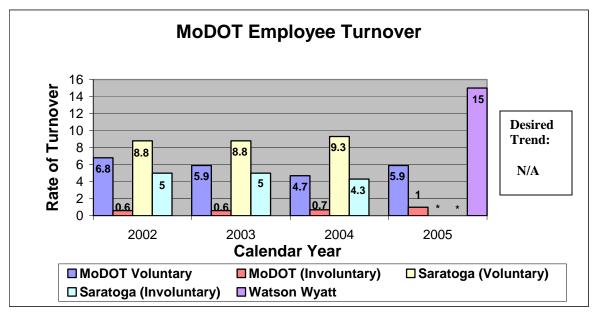
This measure tracks the percentage of employees who leave MoDOT annually and compares the department's turnover rate to benchmarked data. Voluntary turnover includes resignations and retirements. Involuntary turnover includes dismissals only. Turnover rate includes voluntary separations, involuntary separations and deceased employees.

#### **Measurement and Data Collection:**

The data will be collected statewide to assess employee overall turnover. Comparison data will be collected from various sources annually. Previous benchmark data was "dated," therefore, new benchmarks were found. Saratoga Institute surveyed 288 organizations representing a wide variety of industries. The Watson Wyatt study determined the optimum turnover rate versus organizational financial performance.

#### **Improvement Status:**

MoDOT's turnover rate rose to 7.2 percent for calendar year 2005. This represents a 26 percent increase over 2004. MoDOT has seen a steady decline in the number of retirements over the last four years. In 2003, over 51 percent of our turnover was due to employees retiring; in 2005, only 33 percent of total turnover was due to retirement. In 2005, MoDOT had 74 separations in civil engineering (CE) positions. Of those, 42 were in the Kansas City, St. Louis, and Springfield districts. HR increased the salary offer by 4 percent to CE graduates in the metropolitan districts last fall. Although our acceptance rate for civil engineers declined, 68 percent of the acceptances were in the metropolitan areas where turnover is the highest. MoDOT's involuntary rate was 1 percent in calendar year 2005. MoDOT recently implemented an automated system for advertising vacancies internally and externally (on the internet) allowing HR to begin tracking the time to fill positions.



\* Saratoga's data was unavailable at time of print for CY 2005.

## Percent of satisfied employees

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Micki Knudsen, Human Resources Director

#### **Purpose of the Measure:**

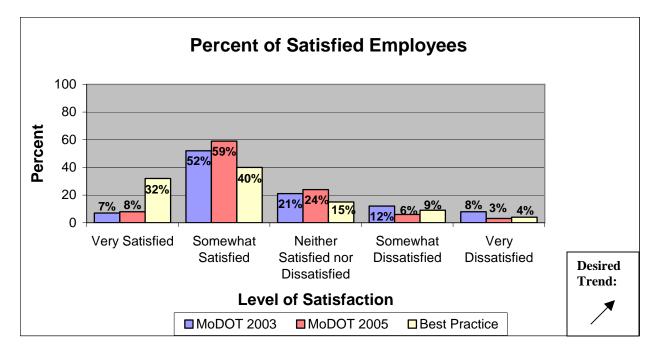
This measures the level of employee satisfaction throughout the department in comparison to the organization that scored the best in employee satisfaction using the same survey instrument.

#### **Measurement and Data Collection:**

Employee satisfaction is measured using 18 items from an annual employee survey, Organizational Performance Survey (OPS). Comparison organization data is collected from the vendor of the OPS.

#### **Improvement Status:**

The 2005 Executive Summary and Behavioral Health Concept's final report with appendices were distributed to employees for review via the intranet. The webpage includes an email address to which employees can submit and review questions and comments. Written comments have been reviewed by the director, chief engineer, chief financial and administrative officer, and human resources director; and a summary of the major themes of the comments was provided to senior management. Senior management assigned a task force to partner with the Employee Advisory Council (EAC) to develop and prioritize a comprehensive action plan to address the issues of greatest concern to employees and concerns that continue to push overall ratings down. The task force is scheduled to meet with the EAC on February 27. To assess deployment of "decision-making at the lowest levels within MoDOT," a survey was sent to over 1100 employees in late January, which will allow them to evaluate their supervisor on trust and empowerment.



### Number of lost work days per year

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Beth Ring, Risk Management Director

#### **Purpose of the Measure:**

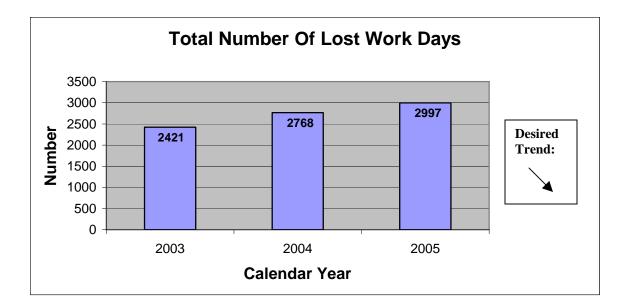
This measure tracks the actual number of days that employees cannot work due to work-related injuries sustained during the reporting period. Note that the results do not include lost workdays for injuries that occurred during previous reporting periods.

#### **Measurement and Data Collection:**

The data is collected from Riskmaster, the risk management software, and reported quarterly.

#### **Improvement Status:**

The number of lost workdays for calendar year 2005 is 8 percent higher than the same period last year while the number of lost time incidents decreased by 13 percent for the same period. The injuries sustained this year are more severe than last year. The largest increase in lost workdays occurred in Districts 5, 7 and 9. In an effort to reduce these injuries and related lost days, we are issuing written warnings for safety violations at an increased pace and implemented a work simulation physical exam program for new applicants. We are developing a post-incident physical program and a statewide return to work program. District and Central Office Risk Management staff reviews all incidents monthly and identifies and adjusts processes and equipment that are causing injuries.



### Building expenditures per square foot

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Chris DeVore, General Service Manager - Facilities

#### **Purpose of the Measure:**

This measure tracks the cost of operating department buildings, building capital improvements and capital asset preservation projects.

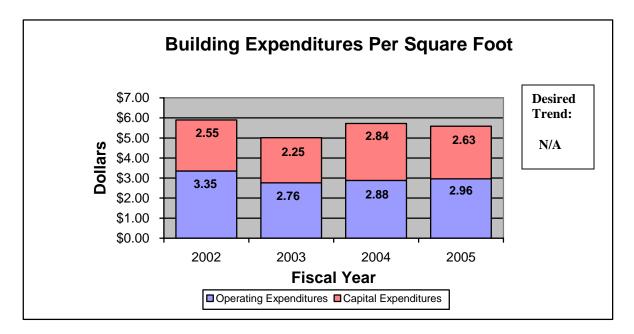
#### **Measurement and Data Collection:**

The data is collected based on expenditures recorded in the statewide financial accounting system. The following expenditures are included in the analysis: the cost of labor, benefits, and materials for central office facilities management and facilities maintenance. It does not include the employer's share of Social Security/ Medicare taxes and the department's match for deferred compensation. Operating expenditures, including repair supplies, custodial supplies, janitorial and other services, maintenance and repair services, building and storage leases, and utilities have been included. Capital expenditures include new construction and asset preservation projects.

#### **Improvement Status:**

As operational needs developed, extra consideration and funding were expended to repair/replace with energy efficient options. These improvements have included, but are not limited to, installing energy efficient windows, overhead doors, and new HVAC system and insulating maintenance bays. We anticipate a decrease in capital expenditures in FY 06 due to a decrease in budget allocation. Energy efficient upgrades made will decrease FY 06 operating expense if not offset by inflationary increases.

Several sources, including other DOT's, trucking companies, federal agencies and reference manuals do not track the specific benchmark data we are using. We are continuing our search for more realistic benchmark data to use in future reports.



# Building, Fleet, and Information System equipment and expense expenditures compared to MoDOT's program expenditures

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Debbie Rickard, Assistant Controller

#### **Purpose of the Measure:**

This measure tracks the Department's building, fleet, and information systems expenditures compared to the total of the Department's right of way and construction program expenditures. The Department's awareness of spending related to transportation support systems such as building, fleet, and information systems will be heightened with continued reporting.

#### **Measurement and Data Collection:**

The data is based on expenditures recorded in the statewide financial accounting system.

Building expenditures include capital improvements where a building job number has been assigned and operating expenditures, including repair supplies, custodial supplies, janitor and other services, repair service, building and storage leases, and utilities.

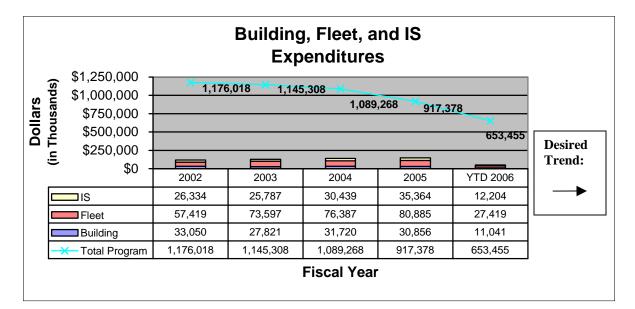
Fleet expenditures include acquisitions, repairs, liability insurance, fuel, and leases for fleet equipment.

IS expenditures include equipment and expense costs associated with District and Central Office divisions. Expenditures classified by divisions and districts included are: information technology supplies, information technology outsourcing, information technology consulting and services, computer hardware and software maintenance services, computer equipment and software.

Total program expenditures include contractor payments, design bridge consultant payments, right of way acquisition costs and federal pass-through expenditures.

#### **Improvement Status:**

The desire is to fund maintaining and replacing buildings, fleet, and information systems activities at a core level regardless of the variance in the right of way and construction program. The Department has maintained this trend.



### Dollars expended on consultants other than program consultants

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Debbie Rickard, Assistant Controller

#### **Purpose of the Measure:**

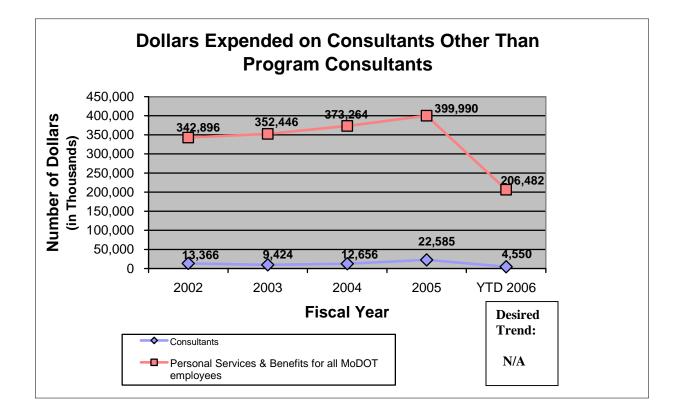
The measure tracks the department's use of consultants for other than right of way and construction. The Department utilizes consultants to complement employee resources and expertise. Reporting heightens awareness and provides a tool to measure the utilization of consultants.

#### **Measurement and Data Collection:**

The data is collected based on expenditures recorded in the statewide financial accounting system. The data includes expenditures for professional services and computer information services.

#### **Improvement Status:**

Expenditures for consultants in a fiscal year are dependent on the Department's needs. Fluctuations between fiscal years are not abnormal. The Department will continue to utilize non-design consultants for specialized services and to supplement available employee resources. FY 06 IS projects utilizing consultants will include the completion of the Motor Carrier Services' integrated software project, the Realty Asset Inventory Management System, and the State Transportation Improvement Program Enhancement. Estimated consultant costs related to these projects totals \$3.6 million. Other consultant costs in FY 06 will include Missouri Statewide Traveler Information system and the completion of MoDOT Emergency Communication Services system.



## Percent of vendor invoices paid on time

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Debbie Rickard, Assistant Controller

#### **Purpose of the Measure:**

This measure tracks the Department's timeliness in processing vendor payments.

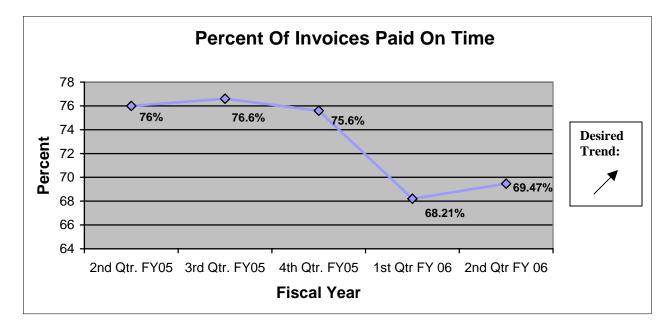
#### **Measurement and Data Collection:**

The data is based on check date and the date of service or receipt of goods. The number of days between the date of service or receipt of goods and check date determines if an invoice is paid timely. Timely is defined as a check issued less than 31 days from the date of service or receipt of goods.

#### **Improvement Status:**

The percent of invoices paid on time indicates a decrease over the four previous quarters. A slight increase occurred in the second quarter of FY 06. The steps to address the decrease are: (1) Identify vendor types to determine time from date of service to date of invoice to determine if a particular vendor type results in delayed payment (contractors, consultants, product suppliers, utilities, purchase cards) (2) Determine if delayed payments are common to a particular division or district (3) Identify processes contributing to the delayed payment.

Process changes have been identified. Implementation will be in the third quarter of FY 06. The payment cycle will be reduced by an estimated 7 days.



## Percent of actual state highway user revenue vs. projections

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Ben Reeser, Finance Coordinator

#### **Purpose of the Measure:**

The measure shows the precision of the state highway user revenue projections.

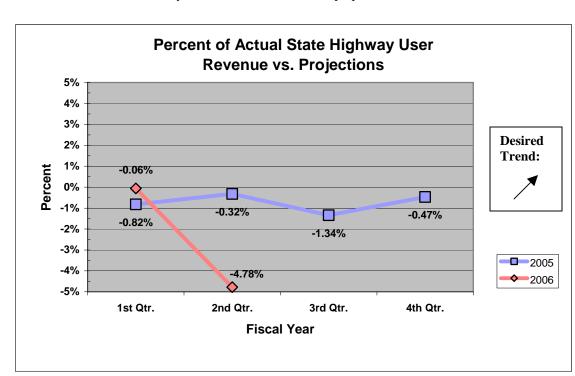
#### **Measurement and Data Collection:**

State highway user revenue includes: Motor Fuel Taxes, which are taxes collected on each gallon of motor fuel purchased; License and Fees, which are driver licenses and taxes and fees collected on motor vehicle licensing and registrations; and Sales and Use Taxes, which are taxes collected on the purchase of motor vehicles.

Projections are based on the current financial forecast. Percent is based on year-to-date revenues. The actual data is provided monthly to Resource Management by the Controller's Office.

#### **Improvement Status:**

The actual state highway user revenue is less than projections through the second quarter of fiscal year 2006. The revenue was projected to be \$493.7 million. However, the actual receipts were \$470.1 million, a difference of \$23.6 million and a negative variance of 4.78%. The desired trend is for the actual revenue to match projections with a variance of 0%.



MoDOT staff continues to analyze current revenue trends in preparation for the next forecast.

## MoDOT national ranking in revenue per mile

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Ben Reeser, Finance Coordinator

#### **Purpose of the Measure:**

This measure shows Missouri's national ranking in the amount of revenue per mile that is available to spend on the state highway system.

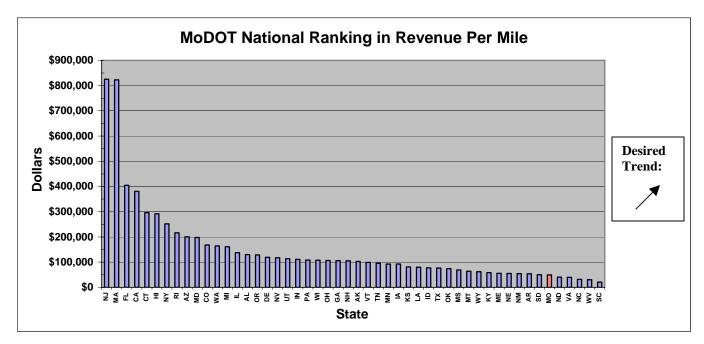
#### **Measurement and Data Collection:**

Revenue is the total receipts less bonds as reported in the Federal Highway Administration's annual highway statistics report entitled, *Revenues Used By States For State-Administered Highways [November 2004]*. The mileage is the state highway agency miles as reported in the Federal Highway Administration's annual highway statistics report entitled, *Public Road Length – Miles By Ownership [October 2004]*. Resource Management collects this information from the Federal Highway Administration.

#### **Improvement Status:**

Missouri's revenue per mile of \$49,372 ranks 45<sup>th</sup> in the nation. Missouri has a very large state highway system. Our state highway system has 32,448 miles, which ranks 7<sup>th</sup>. Most states that have a state highway system of 30,000 to 40,000 miles rank in the 40's for revenue per mile. New Jersey's revenue per mile of \$825,122 ranks 1<sup>st</sup>. However, their state highway system contains only 2,313 miles. South Carolina's revenue per mile of \$20,818 ranks 50<sup>th</sup>. Their state highway system contains 41,575 miles.

MoDOT staff continues to communicate with the public the need for additional transportation funding. Our current funding level leaves us well short of what is required to address all of Missouri's transportation needs. Even if Amendment 3 funds (fully phased-in) were added to this analysis, Missouri's ranking would have only moved up to 44<sup>th</sup>.



# Average cost of outsourced design and bridge engineer vs. full costed full-time employee

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Jim Deresinski, Controller

#### **Purpose of the Measure:**

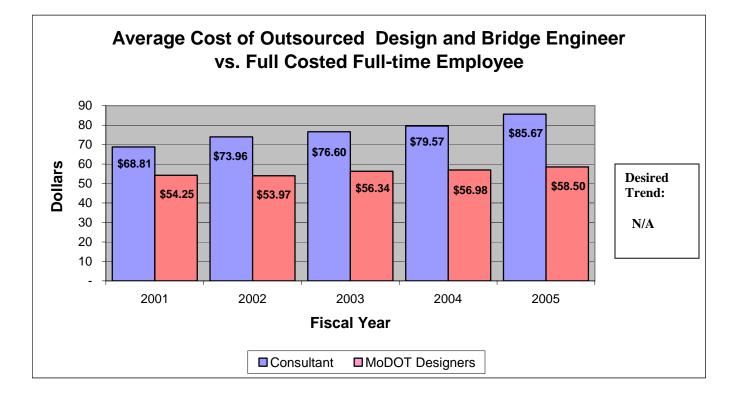
The purpose of the measure is to demonstrate a responsible use of taxpayers' money, with the emphasis of spending for design and bridge engineering efforts.

#### **Measurement and Data Collection:**

The data collection is based on outsourced contracts and employee expenditures.

#### **Improvement Status:**

The process is to measure external design consultant costs and compare to MoDOT staff design engineer costs. Both categories are fully costed and comparable. Consultant rates increased 7.1% from 2004 to 2005 while MoDOT design and bridge engineer costs increased 2.6% for the same period. The desired trend is to narrow the profit factor gap between the two rates.



## Distribution of expenditures

**Result Driver:** Roberta Broeker, Chief Financial & Administrative Officer **Measurement Driver:** Jim Deresinski, Controller

#### **Purpose of the Measure:**

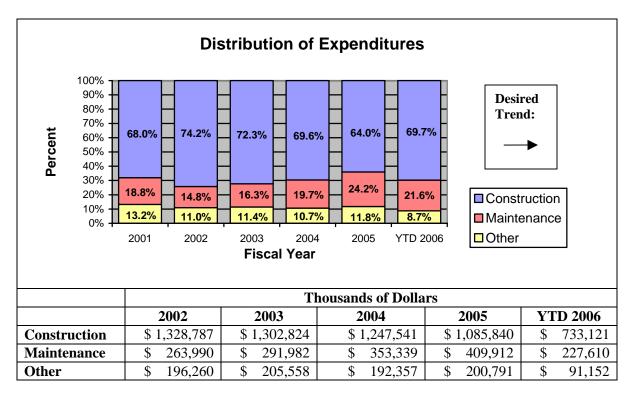
The purpose of the measure is to demonstrate a responsible use of taxpayers' money, with the emphasis of spending on the construction and maintenance of our transportation system.

#### **Measurement and Data Collection:**

The data collection is based on cash expenditures by appropriation. Construction and maintenance expenditures are defined as expenditures from the construction and maintenance appropriations. Other expenditures include: administration, multimodal, and information systems, fleet, facilities, and other services appropriations.

#### **Improvement Status:**

The Department's emphasis is on expenditures for routine maintenance of the system (maintenance appropriation) and renovation and construction of the system (construction appropriation). Although the percent of MoDOT expenditures for maintenance decreased, the dollars will increase assuming spending continues at the current rate for the remainder of the fiscal year. Construction expenditures have increased overall, percentage and dollars, as construction projects have accelerated as a result of bond proceeds. Expenditures from appropriations other than construction and maintenance remain constant, which is consistent with the desired trend.



# **Attractive Roadsides**

Tangible Result Driver – Don Hillis, Director of System Management

An enjoyable transportation experience includes more than a smooth surface – motorists expect to see roadsides free of litter and debris, well-managed and maintained grass and other vegetation and other attractive enhancements. MoDOT works to meet and exceed expectations for roadsides. Beautiful roadsides are visible proof that MoDOT takes pride in everything it does.



# **Attractive Roadsides**

## Percent of roadsides that meet customers' expectations

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Carney, State Maintenance Engineer

#### **Purpose of the Measure:**

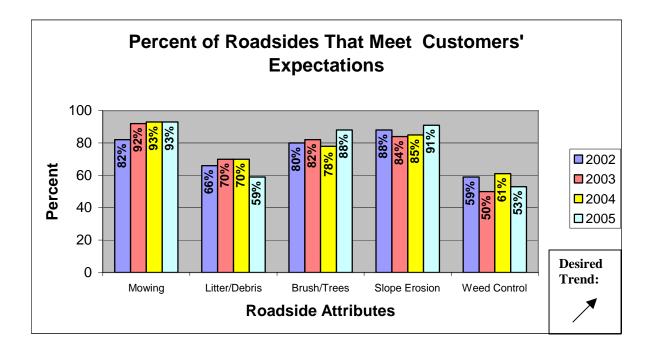
This measure tracks the percent of MoDOT's roadway system that meet customers' expectations for attractiveness.

#### Measurement and Data Collection:

A list of roadside quality attributes were developed and approved based on an industry-wide literature review. The attributes selected for this measure were used to develop a quality assurance checklist for roadside attractiveness. Data collection for this measure is based on a yearly inspection of a number of randomly selected sample sites located throughout the state. The random sites are inspected yearly for each attribute.

#### **Improvement Status:**

Over the past four reporting years, the five roadside attributes referenced below have shown varying trend lines. By sharing these results with district personnel, they are able to shift resources to improve in all categories. A reduction in resources for mowing, brush/tree removal, and slope erosion or other maintenance activities is necessary to allow resources to be shifted to weed control and litter/debris pickup to improve the overall results of those activities which decreased significantly in 2005. MoDOT will need to make greater efforts to control the growth of noxious weeds and expand the effort to pick up litter to improve these results in 2006.



# **Attractive Roadsides**

## Number of miles in Adopt-A-Highway program

#### **Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Stacy Armstrong, Roadside Management Supervisor

#### **Purpose of the Measure:**

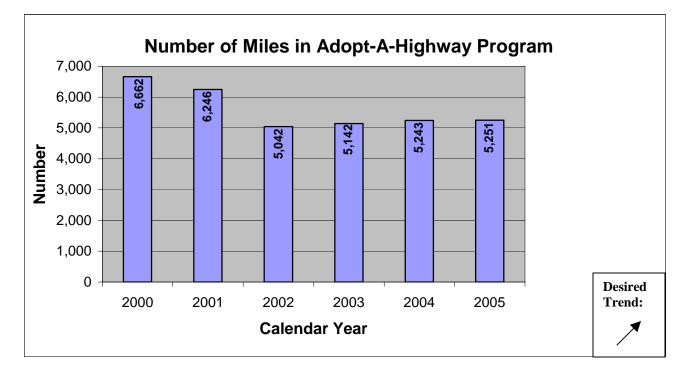
This measure tracks public involvement in taking care of Missouri's roadsides through the Adopt-A-Highway program. Missouri has one of the largest and oldest Adopt-A-Highway programs in the nation. The volunteers learn about litter awareness and some of the challenges MoDOT faces, while allowing maintenance crews to do more critical activities.

#### **Measurement and Data Collection:**

Adopters agree to pick up litter on a designated roadway section for a minimum of four times a year and report their results. Adopters commit to and sign a three-year agreement when they join the program. Urban adoptions are for a minimum of one-half mile and rural adoptions are for at least two miles. Miles are measured by the centerline, however, volunteers are responsible for both sides of the roadway. Adopter-related information is maintained in an Adopt-A-Highway database using the Transportation Management System.

#### **Improvement Status:**

In recent years, the number of miles adopted has been increasing. The number of miles adopted from 2000 to 2002 went down because of MoDOT's initiative to reorganize tracking methods, purging inactive groups and because some groups did not renew their agreements. Growth from 2002 to 2004 may be due to increased public awareness through No MOre Trash!, a litter–prevention campaign coordinated by the departments of Transportation and Conservation. Total miles increased in 2005 with 359 new adoptions. MoDOT is making the Adopt-A-Highway rules and regulations simpler, which may further increase the miles adopted. The program will continue to be promoted at Earth Day, state and county fairs, and other events.



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*Tangible Result Driver – Pete Rahn, Director of MoDOT* 

Transportation issues can be extremely diverse and complex. An efficient transportation system requires leadership and, most importantly, a champion to ensure the resources support projects that will help the department fulfill its responsibilities to the taxpayers. MoDOT will be an advocate for transportation.



## Percent of minorities and females employed

#### Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Brenda Treadwell-Martin, Equal Opportunity Director

#### **Purpose of the Measure:**

This measure tracks minority and female employment in MoDOT's workforce and availability data from the Missouri 2000 Census report. Efficient use of people resources would provide opportunities for the department to leverage transportation resources to available human capital. By placing the right people in the right place, the department can better serve its customers and help fulfill its responsibilities to the taxpayers.

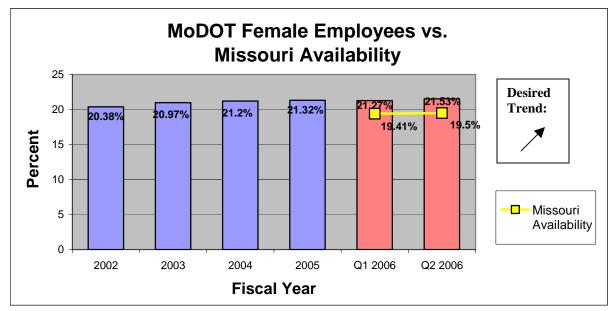
#### **Measurement and Data Collection:**

MoDOT's Affirmative Action software database and Missouri 2000 Census Report is used to collect data. Private sector, Department of Transportation agencies, Missouri State agencies, and Missouri 2000 Census Data were researched to determine a benchmark for this measurement. Due to the significant variations for some of these entities, i.e., pay incentives, number of employees, geographic locations, etc., it was determined Missouri 2000 Census Data, based on jobs used by the department, would be the benchmark for this measurement.

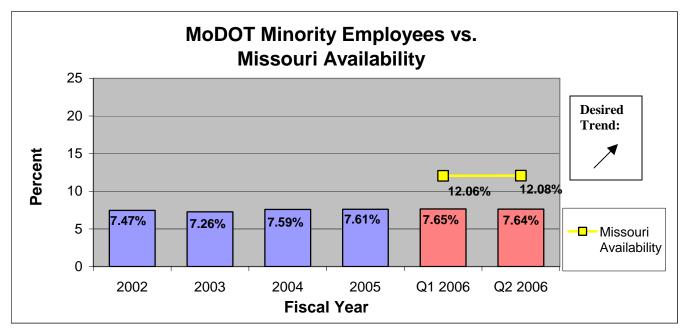
#### **Improvement Status:**

The employment trend charts below compares MoDOT's female and minority workforce data to Missouri 2000 Census Availability data from 2002 through December 2005. During this quarter, female percentage increased by .26 percent and exceeded Missouri current availability percentage by 2.03 percent.

Minority employment slightly decreased by .01 percent and continues to experience a 4.44 percent shortfall against Missouri benchmark data. To improve this measurement we have partnered with Lincoln University of Jefferson City, Missouri. Under this partnership, MoDOT will recruit out-of-state minority civil engineering students to work as summer interns. Lincoln will house the students for a nominal charge for the summer. Upon graduation, students will seek employment with the department and be in a better position to be hired because of their previous work experience with the department.



\*Quarters are displayed in a varying color.



\*Quarters are displayed in a varying color.

# Percent of transportation-related pieces of legislation directly impacted by MoDOT

Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Pam Harlan, Senior Governmental Relations Specialist

#### **Purpose of the Measure:**

This measure tracks the department's impact on the total number of transportation-related bills filed by the General Assembly as well as the department's progress on its own legislative agenda.

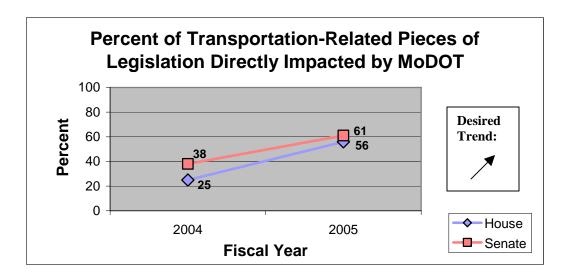
#### **Measurement and Data Collection:**

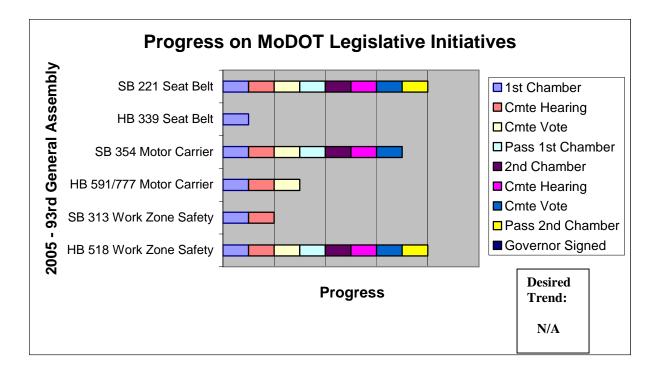
In the summer, data is obtained by reviewing both the Senate and House web sites for legislation in the transportation subject categories. Each bill is reviewed for department impact. A percentage is determined from the total number of bills the department impacted in each category divided by the total number of bills in each category. This percentage of impact is noted on the first chart.

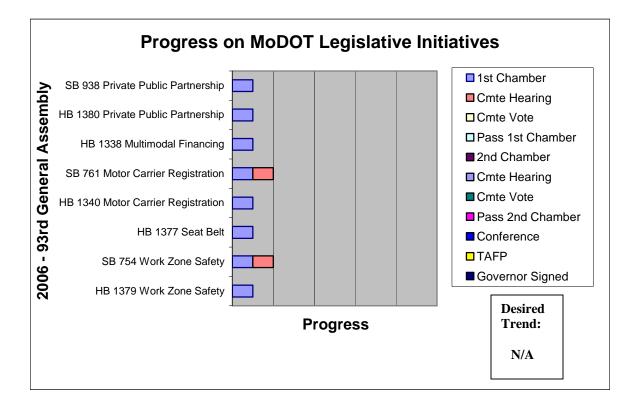
Every fall, potential legislative proposals are submitted to the Missouri Highways and Transportation Commission for their review and approval. The second chart tracks each approved legislative proposal through the legislative process.

#### **Improvement Status:**

MoDOT has filed each legislative proposal approved by the Missouri Highways and Transportation Commission. MoDOT is tracking bills through the legislation process that are currently under the transportation subject categories on the House and Senate web sites.







## Percent of federal roadway earmarked projects on the state highway system

#### Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Kent Van Landuyt, Federal Liaison

#### **Purpose of the Measure:**

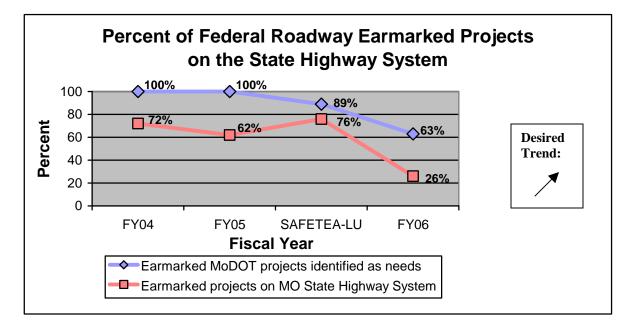
Missouri's support for transportation on the national level is demonstrated by the impact of federal legislation on Missouri's ability to address transportation needs. The percent of state highway system earmarks that are identified Missouri needs is representative of the department's success as an advocate of the state's transportation needs.

#### **Measurement and Data Collection:**

The data represents the percent of earmarked roadway projects that are on the state highway system and the percent that are identified as needs. The percent of individual projects on the state highway system represents the department's success in working with Missouri's Congressional delegation and the percent of state system earmarks that are locations already identified as needs demonstrates that MoDOT has provided adequate information to our Missouri Congressional members that these needs are the same as the needs recognized by their other constituents. The identified needs for this measure are projects on the state highway system that are included in the STIP or projects ready to be added as soon as funding becomes available.

#### **Improvement Status:**

The following chart shows that Missouri was not as successful in receiving earmarks for the state system and was not as successful in receiving earmarks on state system projects that were identified needs. The department has taken steps to improve these results by increasing direct contact with congressional staff members in their Missouri offices and in their Washington D.C. offices. The department has also implemented training activities to inform congressional staff on the federal and state requirement that must be met before a project can be constructed. The department is striving for more than 75 percent of the earmarked project to be on the state system and more that 85 percent of the state system earmarked projects to be identified needs. The department continues to communicate directly with congressional staff members to help increase the number of earmarked projects that are identified needs on the state transportation system.



## Percent of customers who view MoDOT as Missouri's transportation expert

#### Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Jay Wunderlich, Governmental Relations Director

#### **Purpose of the Measure:**

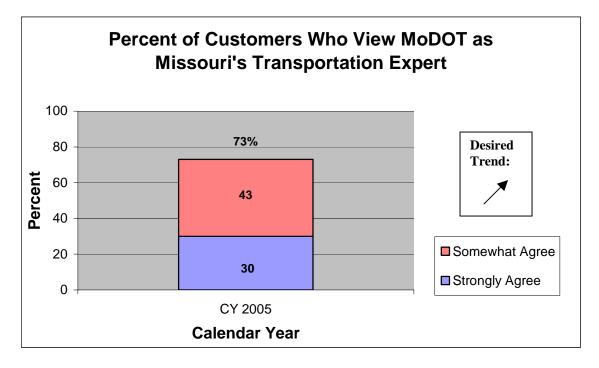
This measure tracks whether our customers feel the department is a leader and expert in transportation issues. The measure will eventually show us how effectively MoDOT conveys its expertise to the traveling public.

#### **Measurement and Data Collection:**

The data has been collected in conjunction with the Missouri Advance Planning initiative from its May 2005 survey. Each spring, MoDOT surveys the traveling public to collect information that will tell us what it will take to make MoDOT *the* state's transportation expert.

#### **Improvement Status:**

The current information shows that 73 percent feel MoDOT is the transportation expert they rely on. The data provides us with a baseline to continue to explore the question of what a "transportation expert" means to our customers and what geographical areas of the state view us as such. Staff surveyed similarly populated states to find what other state DOTs are doing to measure their efforts in this arena. This endeavor has established that MoDOT is the leader in measuring this activity. Through these contacts, staff is learning how other states work to improve partnerships with citizens, legislators and special interest groups.



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Tangible Result Driver – Shane Peck, Community Relations Director

Accurate, consistent and timely information is critical to accomplishing MoDOT's mission. By providing this information to its customers, MoDOT becomes the first and best source for transportation information in Missouri. Openness and honesty build trust with our customers.

### Number of public appearances

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** DeAnne Bonnot, Community Relations Coordinator

#### **Purpose of the Measure:**

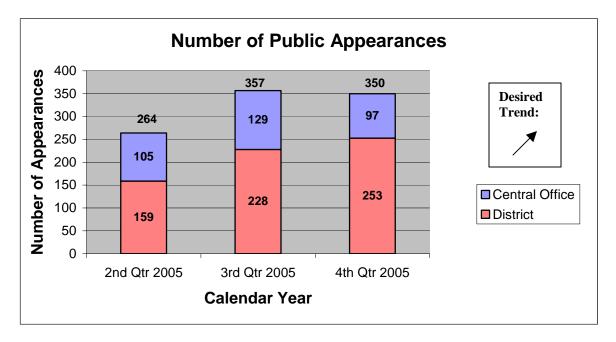
This measure tracks and encourages regular, personal contact with our customers.

#### **Measurement and Data Collection:**

District Community Relations managers collected appearance information from their administrators and sent it to Central Office Community Relations where it was combined with similar CO data from divisions and business offices to create a statewide report. Data collection began April 1, 2005. The numbers are apt to change from quarter to quarter because certain events and other public appearance opportunities are seasonal (i.e. school visits, fairs, etc.).

#### **Improvement Status:**

MoDOT district and central offices reported a total of 350 public appearances during October, November and December 2005. Community Relations continues to provide tools such as the Fast Facts card and Meet MoDOT booklet for those who speak on behalf of the department. An announcement that promotes MoDOT employees as speakers appears periodically in ExpressLane, MoDOT's electronic newsletter.



# Percent of customers who feel MoDOT provides timely, accurate and understandable information

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** DeAnne Bonnot, Community Relations Coordinator

#### **Purpose of the Measure:**

This measure tracks whether customers are comfortable with MoDOT's proactive efforts to provide accurate and understandable information they need and use.

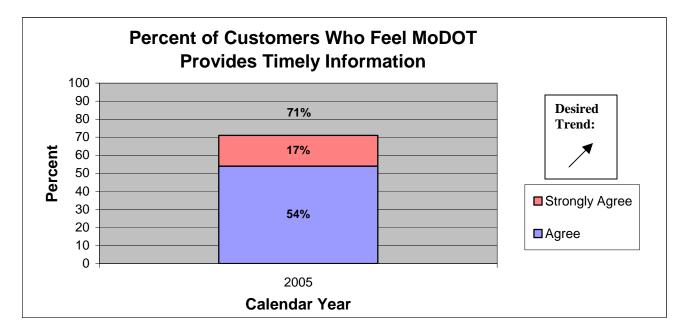
#### **Measurement and Data Collection:**

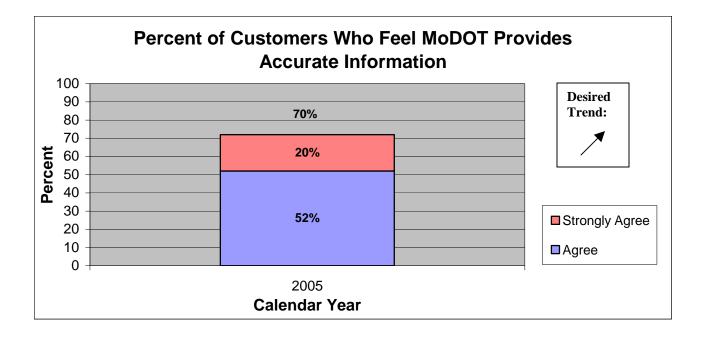
Data was collected as part of the Missouri Advance Planning initiative. A customer survey of 3,100 Missourians was conducted by telephone in May 2005. New data will be collected in Spring 2006.

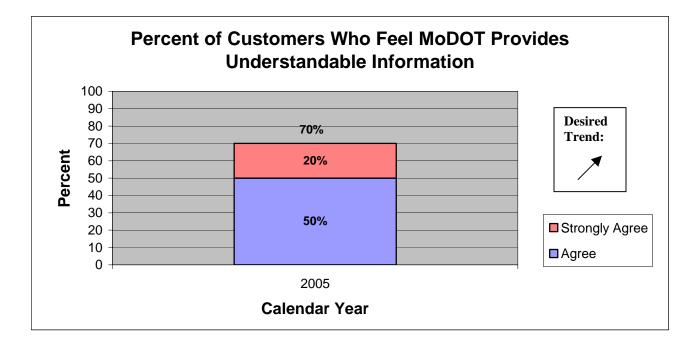
#### **Improvement Status:**

Overall, 71 percent of respondents reported that MoDOT provides timely information, 72 percent said information is accurate and 70 percent find it understandable. Strong agreement was reported by 17 to 20 percent of those surveyed.

MoDOT made greater use of portable message boards to announce directly to travelers the dates when projects start and the estimated length of delays when applicable. Permanent message boards were added to interstates and other major routes to inform drivers of delays and conditions that might affect their safety. Other examples of timely communication include the Amendment 3 point-of-presence signs with completed as promised banners, offers for subscriptions to e-updates and an e-newsletter, the online construction and road conditions maps and the I-44 and I-70 Incident Management team efforts to communicate traffic conditions statewide.







## Number of contacts initiated by MoDOT to media

#### Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Jeff Briggs, Community Relations Coordinator

#### **Purpose of the Measure:**

This measure tracks how well MoDOT staff is "reaching out" to reporters to tell them about the good work MoDOT does.

#### **Measurement and Data Collection:**

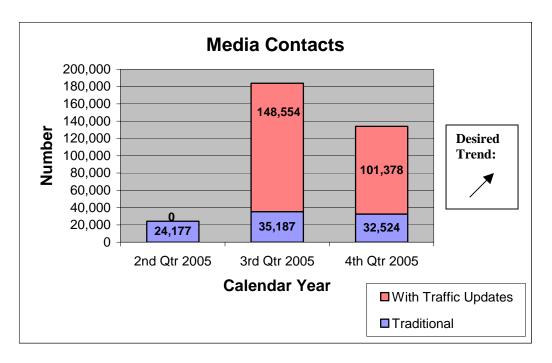
All contacts (news releases, e-mail, phone, correspondence, etc.) initiated by MoDOT staff are included. Central Office Community Relations collects quarterly results, including submissions from districts.

#### **Improvement Status:**

Our traditional outreach methods, mainly news releases, are down slightly but still high, especially since the fourth quarter is usually lower due to the holidays and project slowdowns at the end of the year.

The traffic updates bar is way down because we've updated how these contacts are tracked. Contacts through Metro Networks, the private company that provides our traffic updates to many St. Louis and Kansas City media, were counted in the third quarter. In D6 Metro Networks is based in MoDOT's Traffic Operations Center; in D4 it's outside MoDOT facilities. This quarter we counted only the contacts initiated by MoDOT, so we counted only the D6 Metro Networks distribution. Had we counted the previous way, fourth quarter numbers would have gone up.

Look for continued growth in our traditional contact numbers in the first quarter of 2006 as all statewide media are added to Express Lane, our e-newsletter. Numbers should climb even more in the second quarter as the Smooth Roads Initiative push gets underway for the season.



### Percent of MoDOT information that meets the media's expectations

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Coordinator

#### **Purpose of the Measure:**

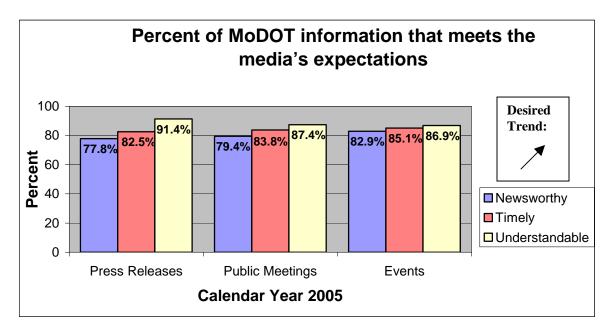
This measure tracks how MoDOT is meeting the media's needs by providing appropriate information.

#### **Measurement and Data Collection:**

Community Relations sends out surveys asking statewide media if our news releases, public meetings and events are meeting their expectations. They are asked to rate their level of satisfaction in the areas of press releases, public meetings and events. Each area is further rated in newsworthiness, timeliness, and how understandable it is.

#### **Improvement Status:**

No new data for this annual measure. Data was collected in June 2005 from statewide media. Although the numbers are good, we're expecting future improvement by offering our website newsroom, which includes sound bites from department spokespeople, story visuals and other background to enhance media reports. All media are also beginning to receive our biweekly Express Lane newsletter, which provides additional story ideas and background.



## Percent of positive newspaper editorials

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Coordinator

#### **Purpose of the Measure:**

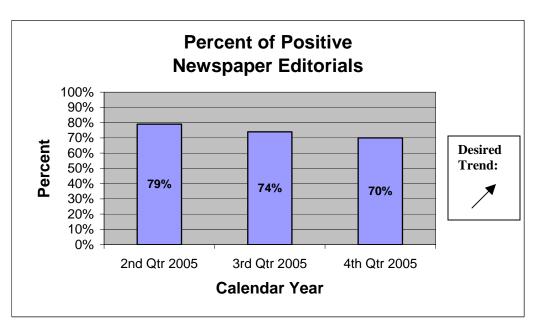
This measure tracks how MoDOT is being perceived by media, and by extension the public.

#### **Measurement and Data Collection:**

Using a newspaper clips database, Community Relations staff reviews statewide newspaper editorials and determines whether they're positive or negative toward MoDOT and/or the issues it advocates. Only editorials written by newspaper staff are included; guest editorials and letters to the editor are not. Results are charted quarterly.

#### **Improvement Status:**

This quarter, 19 of 27 editorials were positive. The percentage remains high, although a little below last quarter's. Editorials praising Director Rahn on his one-year anniversary highlighted the first part of the quarter, and positive editorials on the long-range planning process marked the end of the year. The cell phone monitoring issue generated several negative editorials.



## Number of repeat visitors to MoDOT's web site

Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Matt Hiebert, Community Relations Coordinator

#### **Purpose of the Measure:**

This measure tracks the number of customers who have used MoDOT's web site on a repeat basis. The data helps demonstrate whether the public views the site as a valuable information resource. If they are returning to the site for multiple visits, they probably view it as a worthwhile use of their time online.

#### **Measurement and Data Collection:**

Data is gathered using Web Trends software. Web Trends measures site activity and produces reports in graphic and tabular formats.

#### **Improvement Status:**

We are continuing our marketing and promotion efforts with the site. This quarter we promoted new content by sending out media advisories and press release on our road conditions map, Motor Carriers permits site, Gov Deals program and surplus equipment sales pages. Subscriptions to ExpressLane continue to grow, as does traffic from the E-update system. *Note: Data for October is missing 36 hours of log files, between 3 a.m. on Oct. 13 to 3 p.m. Oct. 14* 

