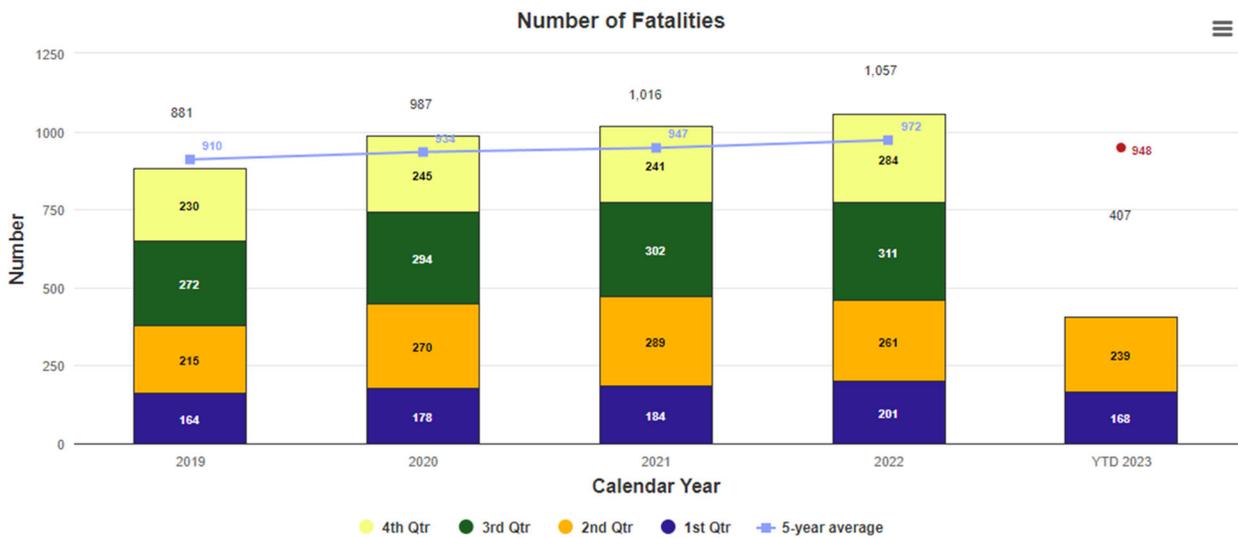
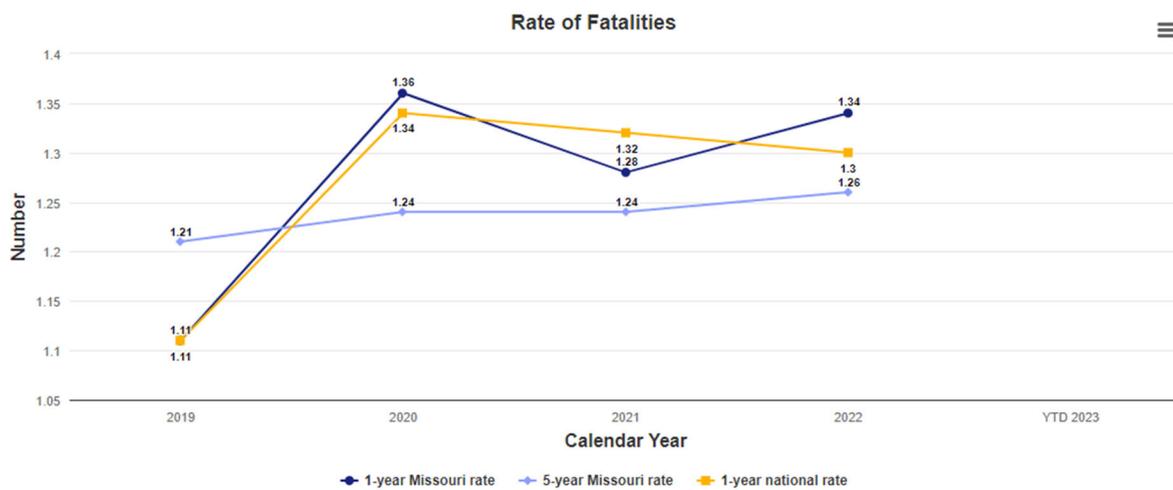


## Number and rate of fatalities – 1a



Target: 948

\*Preliminary numbers are subject to change



### Write up:

Safety is MoDOT’s number one priority. Whether resident, visitor to the state, or highway worker, the ultimate goal is to assure that everyone returns home safely.

MoDOT supports zero fatalities by 2030 as part of the strategic highway safety plan, Show Me Zero, designed to reduce the number and severity of traffic crashes using the four key disciplines of traffic safety: engineering, enforcement, education and emergency response.

In the first quarter of 2023 there were 168 fatalities, down 33 as compared to first quarter of 2022. There were 239 fatalities in the second quarter of 2023, down 22 from

the second quarter of last year. The preliminary total for 2022 after four quarters is 1,057, which is an increase over 2021's total by 41 fatalities. Even though Missouri has only seen a 4% increase, the state has not seen numbers this high since 2006. The target for 2023 is 948 fatalities or fewer.

Focusing on Show Me Zero, there are currently 24 counties where zero fatalities have occurred within the first six months of 2023. There were 28 days with zero fatalities, including three instances when two sequential days occurred without a fatal crash. There was also one instance where three sequential days occurred without a fatal crash.

**Purpose:**

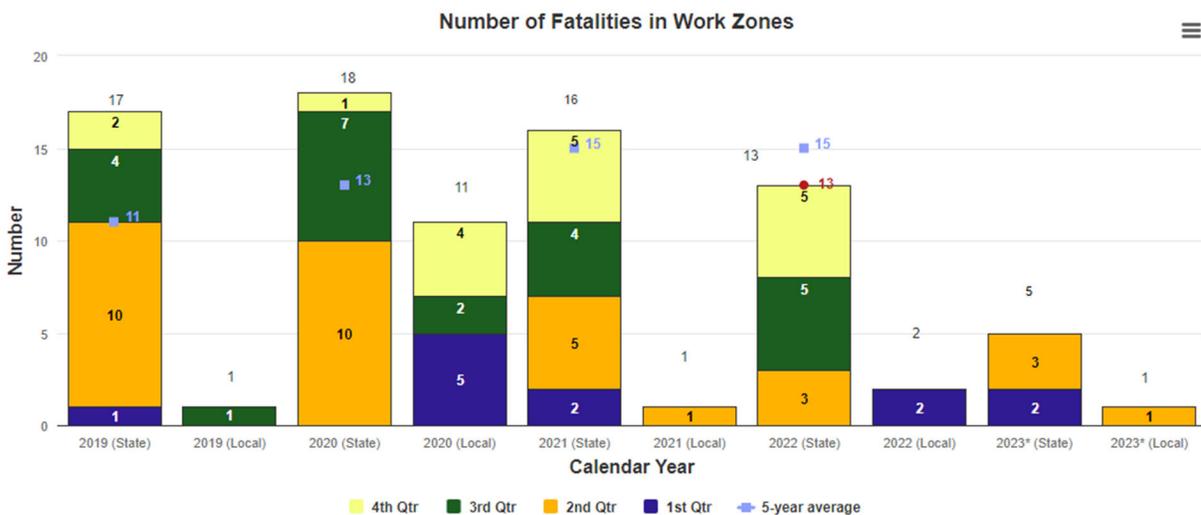
This measure tracks the number of fatalities quarterly, annually and 5-year average trends resulting from traffic crashes on all Missouri roadways.

**Measurement and Data Collection:**

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to be entered into a statewide traffic crash database. The database automatically updates MoDOT's crash database system, which is part of the Transportation Management System. The rate of fatal crashes charts display annual and 5-year average fatality and injury rates per 100 million vehicle miles traveled for these same crashes. In addition, the fatality rate chart includes the national average.

Targets are based on Zero by 2030 fatality reduction, 1% VMT increase and non-motorized reduction based on overall fatality and reductions. An exception is made for instances where the baseline 5-year rolling average is less than the calculated target using the parameters previously described. When this occurs, the baseline will be used as the target.

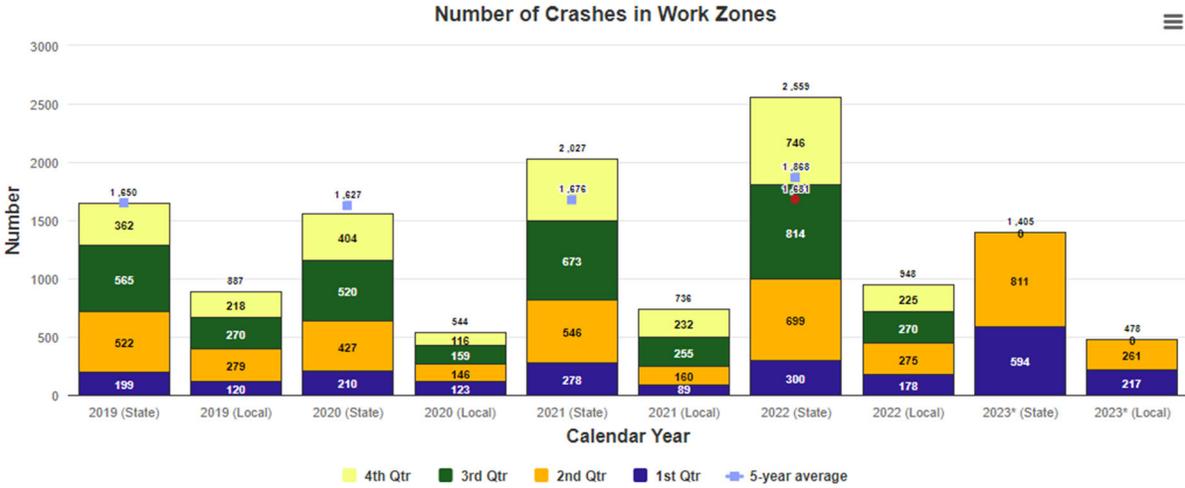
**Number of fatalities in work zones – 1b**



Target: Below 13

Internal Review - 2023	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
State	0	0		
Local	0	0		

**\*Internal Review is MoDOT's examination of each crash to determine if that crash qualifies as a true work zone fatality. These numbers represent fatalities where a work zone was determined to not be a potential factor.**



**Write up:**

Safe and efficient travel for the public through work zones is crucial, which is why crews in work zones are expected to conduct operations safely. MoDOT makes every effort to inform the public to pay attention, slow down, move over, buckle up and drive without distractions. MoDOT’s goal is zero fatalities in work zones, and only through continued efforts from MoDOT, the contracting industry and the driving public can that goal be accomplished.

For the second quarter of 2023, there were three on-system work zone crashes, resulting in three fatalities. In the same reporting period, there was one off-system work zone crash that resulted in one fatality. Contributing factors to these crashes are similar to all crashes statewide, with three involving a vehicle traveling too fast for conditions, one involving a pedestrian, and two involving an impaired driver. All four crashes occurred at night.

To reach the goal of zero fatalities in work zones, an internal review is conducted on each fatal crash to determine if the crash qualifies as a true work zone fatality. These numbers are included in the overall totals for each road classification (state and local). Crash reconstruction documents have been requested for two of the crashes from the second quarter of 2023. After a review of these documents, an internal review will be performed to determine if the work zone was active and played a role in the fatality crash.

Poor driver behavior remains a primary factor in fatal crashes. Community outreach and public awareness campaigns, such as Buckle Up Phone Down, are helpful, but ultimately MoDOT is dependent upon the driving public to make good choices when driving in work zones. Many challenges remain for MoDOT, with changing driver behavior at the top.

**Purpose:**

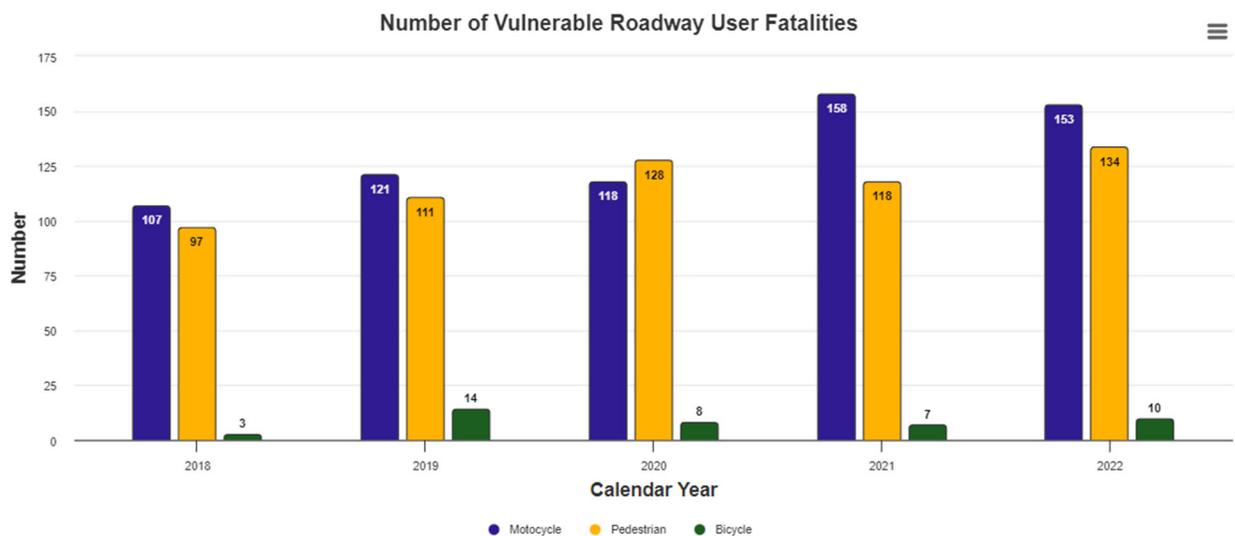
This measure tracks the number of traffic-related and non-traffic-related fatalities, injuries and overall crashes occurring in work zones on state-owned and off-system roadways.

**Measurement and Data Collection:**

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to be entered into a statewide traffic crash database. The database automatically updates MoDOT’s crash database system, which is part of the Transportation Management System. MoDOT staff query and analyze this data to identify work zone related crash statistics. Missouri State Highway Patrol prioritizes entry of the crash reports by fatality, serious injury and property damage only.

The target for this measure is updated quarterly. This target is established by projecting a 10% improvement over a 5-year average.

**Number of vulnerable roadway user fatalities – 1c**



Desired Trend: Decrease

**Write up:**

In 2022, there was an increase in the number of fatalities for vulnerable roadway users. Pedestrian and bicycle fatalities increased by 14% and 43% respectively, however motorcycle fatalities decreased by 3%.

## *Tracker Archive – July 2023*

All age groups were represented evenly, from age 17 to 79. All districts were represented as well, with rural districts having about 60% of the fatalities. Of the 153 motorcycle fatalities, 82 were not wearing a helmet or non-DOT helmet.

Pedestrian fatalities occurred in every month and on every type of roadway. There were 21 fatalities on interstate highways, four of those occurred in January, although the remaining were spread throughout the year. Sixty-five percent of the fatalities on interstates were in the St. Louis and Kansas City district, with the remaining in Northeast, Southeast, Central and Southwest Districts. Pedestrians in their 30s, 40s and 50s represented the highest numbers of fatalities. Of the 134 pedestrian fatalities, 57 were in St. Louis.

Of the 10 cyclists who died on Missouri roadways, four were in the Southwest District and the remaining were in Kansas City, St. Louis, Northeast and the Southeast Districts. Nine of the 10 riders were not wearing helmets and six were male. Four fatalities occurred in the month of July, two occurred in April and August with one fatality each in September and October.

The focus area seems to be targeting pedestrians to walk safely in St. Louis and Kansas City and to stay in their vehicles after crashes or breakdowns on the interstate. An additional focus area is targeting motorcyclists and urging them to wear DOT compliant helmets when riding. The remaining target would be to urge cyclists in Kansas City and Central District to wear helmets and follow road user rules when biking.

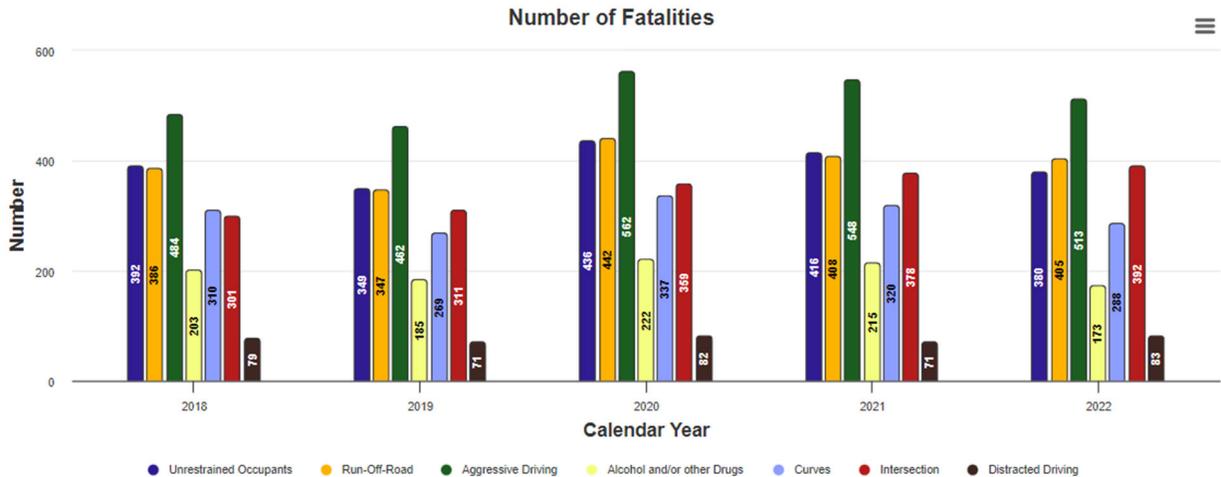
### **Purpose:**

The vulnerable roadway user measure tracks annual trends in fatalities of motorcyclists, pedestrians and bicyclists. These roadway users are at risk for death when involved in a motor-vehicle-related crash.

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

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to be entered into a statewide traffic crash database. The database automatically updates MoDOT's crash database system, which is part of the Transportation Management System.

### Most common characteristics of fatal crashes – 1d



#### Write up:

By identifying behaviors and characteristics most associated with severe crashes, MoDOT can make more informed decisions to improve safety. While the most common causes are related to human behavior, MoDOT can help implement solutions through education, enforcement, engineering and emergency response.

In 2022 there were 1,057 traffic fatalities in Missouri, a 4% increase from 2021. However, nearly every category reported in this measure experienced a decrease. On the surface, this is counterintuitive. However, several factors could cause this, including the reporting practices of individual officers, the fact all 2022 crash reports are not yet considered final and the possibility of increases in other categories. It should also be noted distracted driving is significantly underreported. Therefore, this could be an indication distracted driving is a primary causation of the overall increase.

The greatest decrease was in impaired driving. Coincidentally, DWI arrests conducted as part of the highway safety grant program were up significantly in 2022. Likewise, the number of unbelted fatalities experienced a noticeable reduction. This coincides with an increase in statewide seat belt use as well as a lower percentage of unbelted fatalities. Aggressive driving continues to be the leading cause of fatal crashes and remains higher than pre-pandemic numbers. The number of reported distracted driving fatalities experienced the largest increase (17%). Intersection fatalities increased for the fourth year in a row while fatalities in curves decreased for the second year in a row.

Missouri's strategic highway safety plan, Show-Me Zero, has four emphasis areas: occupant protection, distracted driving, speed and aggressive driving, and impaired driving. MoDOT aims to improve safety with every project by utilizing a new tool called SAFER, a Safety Assessment For Every Roadway. The goal of SAFER is to increase the number of projects that include safety improvements. For the draft 2024-2028 STIP, the department has programmed 423 projects with specific safety improvements. In addition, MoDOT administers approximately \$25 million federal funds for educational, enforcement, and outreach programs to reduce poor driving behaviors.

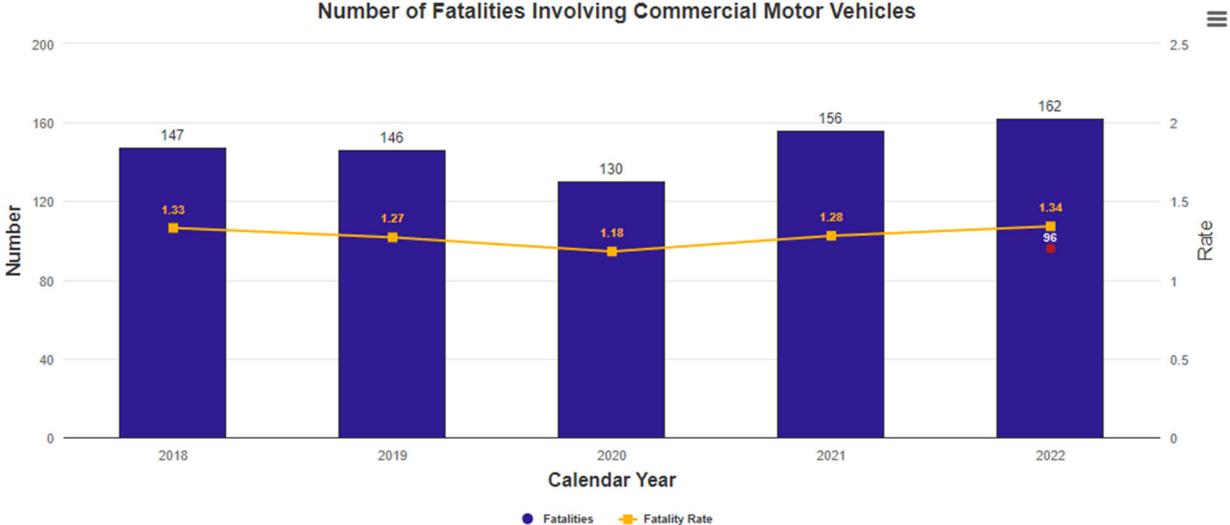
**Purpose:**

The measure tracks annual trends in motor-vehicle-related fatalities resulting from the most common contributing factors or highway features. This data represents the four focus areas presented in Missouri’s strategic highway safety plan, Show-Me Zero.

**Measurement and Data Collection:**

Missouri law enforcement agencies submit a vehicle crash report form to the Missouri State Highway Patrol to be entered into a statewide traffic crash database, which feeds into MoDOT’s Transportation Management System. MoDOT staff query and analyze this data to determine the number of unrestrained occupants in crashes, how often aggressive driving, distracted driving, alcohol and other drugs contribute to crashes, and whether the vehicles ran off the road, the crash occurred in a curve or the crash occurred at an intersection.

**Number and rate of fatalities involving commercial motor vehicles – 1e**



Target: Below 96

**Write up:**

Commercial Motor Vehicles (CMVs) play a vital role in the nation’s economy by transporting the products that are needed. By tracking the number of CMV-involved fatalities, MoDOT can target educational and enforcement efforts, as well as improve safety features along Missouri roadways. MoDOT partners with the Missouri State Highway Patrol, St. Louis Metropolitan Police Department, Kansas City Police Department and St. Louis County Police Department to keep people safe while traveling in and around CMVs.

While efforts from MoDOT and the partner agencies are effective in improving safety on roadways, Missouri experienced an increase in the number and rate of fatalities involving CMVs in 2021 compared to 2020. Between 2018 and 2022, fatalities involving a CMV have increased from 1.33 to 1.34 per 100 million CMV vehicle miles traveled. In

2022, Missouri experienced an increase of six fatalities involving a CMV as compared to 2021. This resulted in a 2022 fatality rate of 1.34 compared to 1.28 for 2021. The target for 2022 was 96 or fewer fatalities and unfortunately this goal was not met.

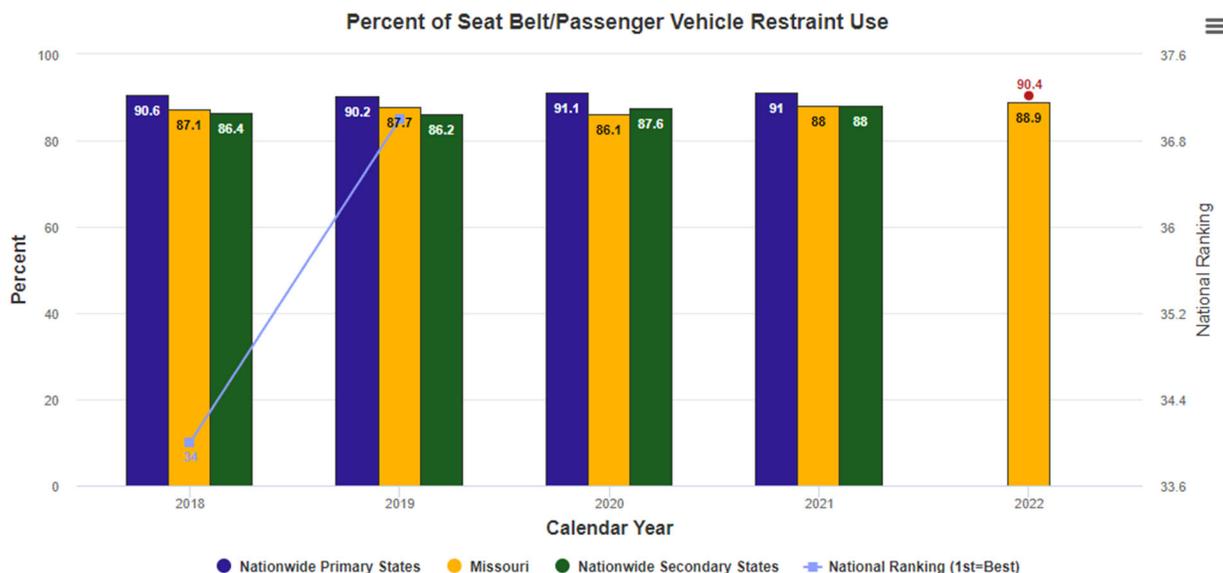
**Purpose:**

This measure tracks annual trends in fatalities involving Commercial Motor Vehicles. This data guides the development and focus of the Commercial Vehicle Safety Plan, which is the plan required to receive Motor Carrier Safety Assistance Program funds.

**Measurement and Data Collection:**

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to be entered into a statewide traffic crash database. The database automatically updates MoDOT’s crash database system, which is a part of the Transportation Management System. The fatal rate on the chart displays the annual fatality rate per 100 million miles traveled for commercial motor vehicles for these same crashes. The targets are based on a 13% improvement rate from the Missouri Commercial Vehicle Safety Plan for 2022.

**Percent of seat belt/passenger vehicle restraint use – 1f**



**Write up:**

Seat belts are one of the easiest things vehicle occupants can do to protect themselves in the event of a crash, but it is a challenge (especially in Missouri) to ensure everyone is buckled up every trip, every time, day or night. Public education and legislation are two ways to keep the issue in front of motorists. MoDOT supports each approach, attacking the problem with focused marketing campaigns and reinforcing it with hard facts to back legislative efforts and media campaigns. Several municipalities across the state have enacted primary ordinances within city or county limits. Missouri currently has one county and 66 municipalities that have adopted primary seat belt ordinances, representing over 27.4% of the state’s population.

Based on 122,607 driver & front seat passenger observations, seat belt use in Missouri for 2022 was 88.9%, a 0.9% increase from 2021. St. Francois County was the lowest at 68.6% and Callaway County was the highest at 97.3% based on weighted data. Nationwide numbers always run about a year behind in state numbers, so the national average for seat belt use in 2021 was 90.4% (2022 data is not yet available). Overall, in 2021, Missouri ranked 40th among the 56 surveyed states and territories (ranging from 72.3% to 97.2%) and 5th among secondary law states (ranging from 75.5% to 93.2%).

MoDOT continues to work with external partners to improve Missouri's safety culture through statewide strategic initiatives such as Buckle Up Phone Down and by coordinating NHTSA -funded Click It or Ticket, Youth Seat Belt and Child Passenger Safety Campaigns, as well as providing educational programs such as TRACTION, B.R.A.K.E.S. and ThinkFirst.

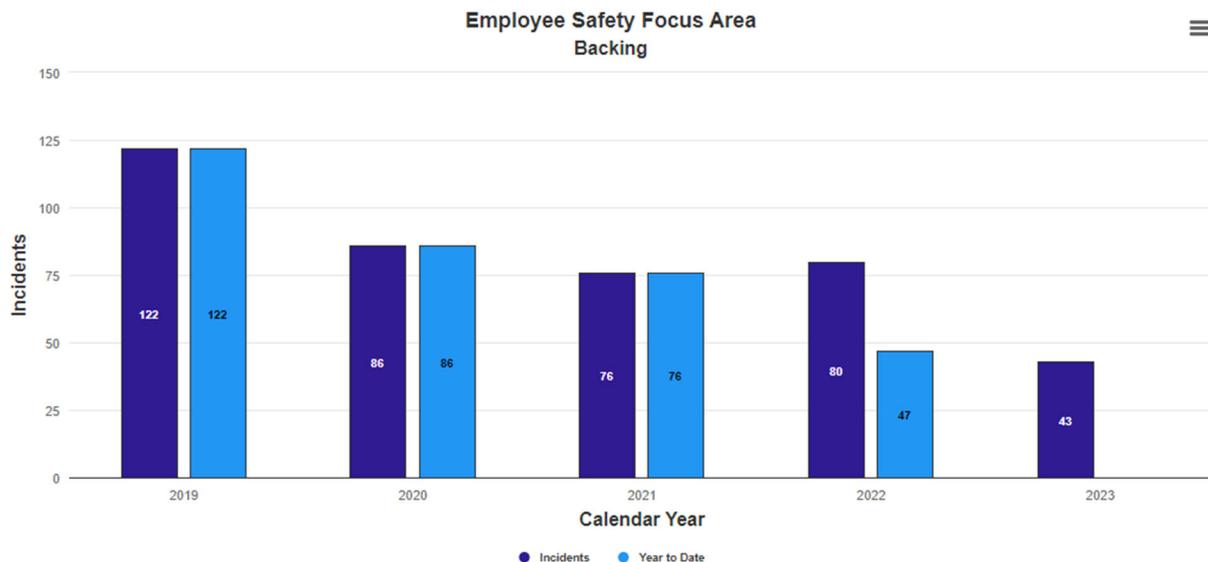
**Purpose:**

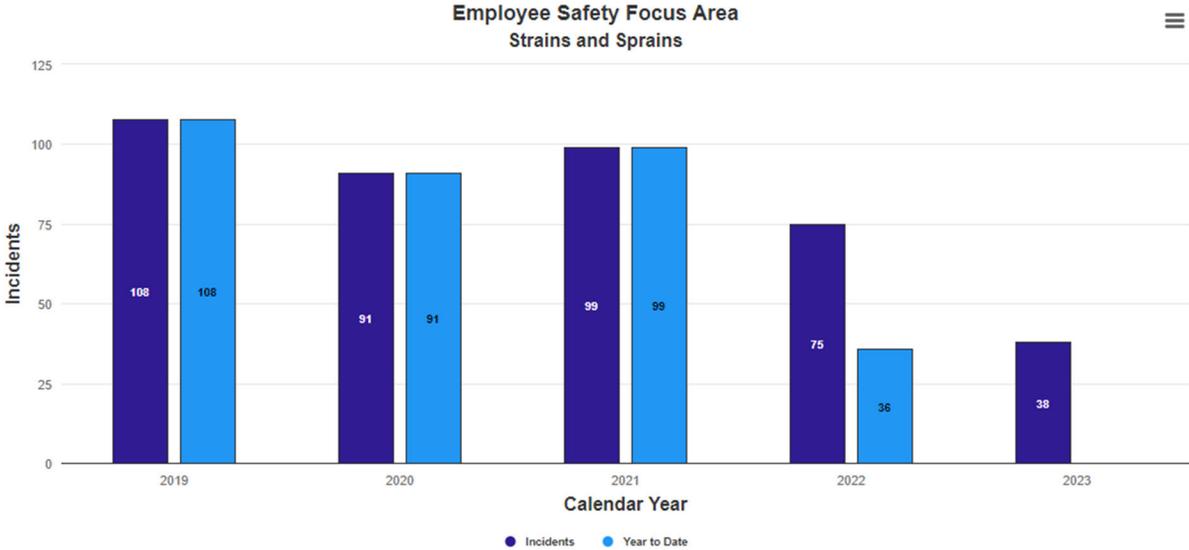
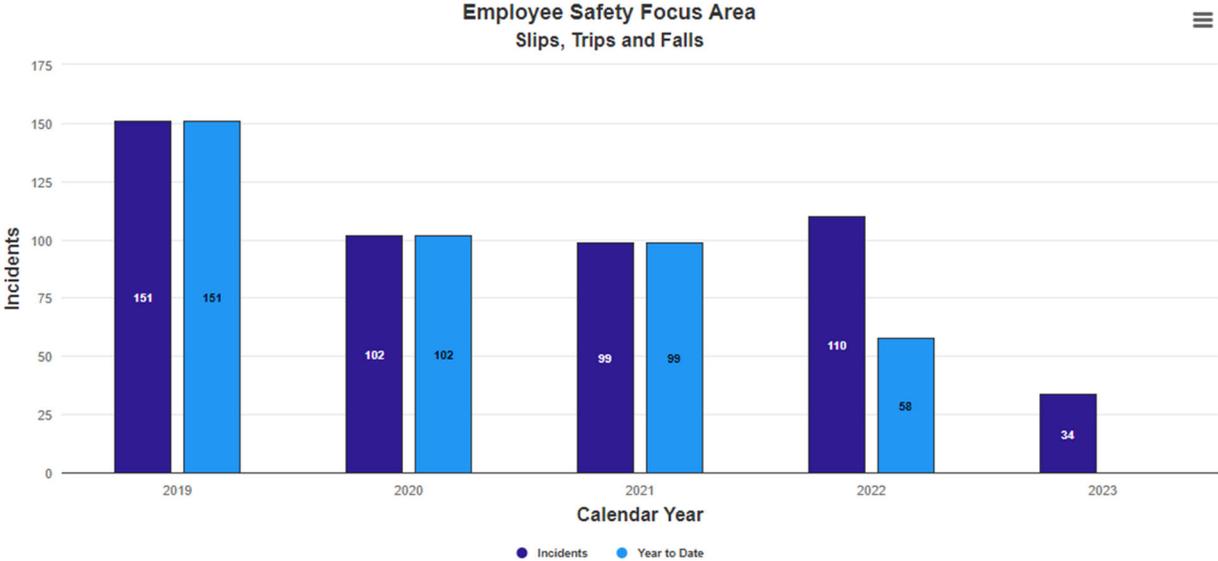
This measure tracks annual trends in seat belt use in passenger vehicles. This data drives the development and focus of the Missouri Highway Safety Plan and supports Missouri's Blueprint to Save More Lives.

**Measurement and Data Collection:**

Each June, a statewide survey is conducted at 560 preselected locations in 28 counties. The data collected is calculated into a seat belt usage rate using a formula approved by the National Highway Traffic Safety Administration. Data collection locations are selected from counties that represent 85% of the state's vehicle occupant fatalities. While the data collection plan is the same each year for consistency, NHTSA guidelines require survey sites to be re-selected every five years based on updated fatality data. The 2018 survey was the first survey using updated survey sites since Missouri's new survey methodology started in 2013. The target for this measure is updated annually in October for the next calendar year. This target is established as the current national average.

**Employee safety focus areas – 1g**





**Write up:**

MoDOT’s number one value is safety. The purpose of this measure is for everyone to arrive at work safely and return home the same way. This includes all the preparation necessary for a safe day including planning the jobs, Risk Based Assessment review, morning safety briefings and stretching. This measure focuses on improving three high-risk areas: backing a motorized vehicle; slips, trips and falls; and sprains and strains.

MoDOT had 43 backing incidents in the second quarter of the 2023 calendar year. This is an 8% decrease from our backing incident rates from the same quarter in calendar year 2022. Backing incidents can cause property damage, injuries and death. Improvement strategies include parking to avoid backing, good planning, always using a spotter, doing a thorough circle check of the area and the implantation of Geotab devices in all snow vehicles to assist with data collection.

## Tracker Archive – July 2023

There were 34 slips, trips, and fall incidents reported in second quarter of calendar year 2023, which is a 41% decrease from the same quarter in calendar year 2022.

Improvement strategies include being aware of surroundings, keeping work areas organized, looking out for each other by pointing out hazards on the job that may be hidden and wearing the proper PPE for conditions.

During second quarter calendar year 2023, MoDOT had 38 reported incidents for sprains and strains. This is a 5% increase from the same quarter in calendar year 2022. Improvement strategies include implementation of a statewide stretch and flex program, asking for help when lifting and using proper lifting techniques like those taught during Gear Up.

It is imperative that employees focus on improvement strategies and put MoDOT's Behavior Based Safety and Actively Caring programs into action. At MoDOT, safety is everyone's responsibility.

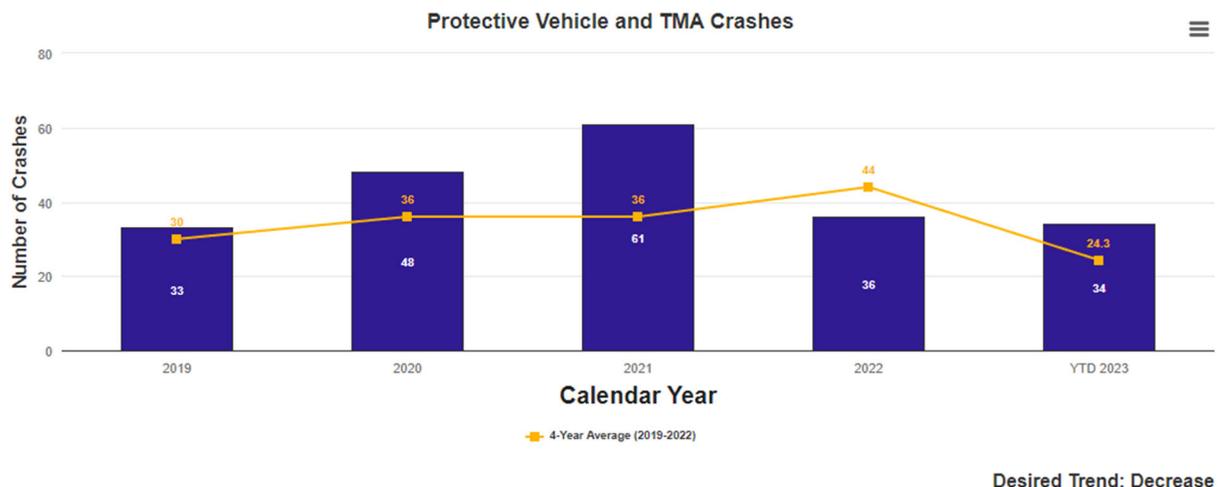
### Purpose:

This measure tracks the department's most frequent incident types and highlights areas to focus on for improvement.

### Measurement and Data Collection:

Data is collected through RiskMaster for each district and Central Office for the prior four years on the number of backing incidents; slips, trips and falls; and strains and pulls. These are the three most common types of injuries at MoDOT.

## TMA crashes and associated employee injuries – 1h



**Write up:**

While the ultimate goal is to eliminate work zone crashes, the goal for this measure is to reduce the number of protective vehicle/truck-mounted attenuator crashes to below the previous 4-year average. In the second quarter of 2023, MoDOT had 20 reported protective vehicle crashes. The number of crashes for the second quarter of 2023 is 40% higher than the year-to-date average for the previous four years. These crashes can be less than \$100 in damage to the TMA, but in most cases a new TMA, costing approximately \$40,000, is required. This does not include staff time, truck damage, lost wages or medical bills. This quarter, two employees in a TMA crash sought medical attention. All of the TMA crashes this quarter happened during the day, predominately in urban areas. Operations in which crashes occurred included one pothole patching, two striping, eight sweeping, one mowing, two spraying, one litter pickup, four bridge flushing and one other.

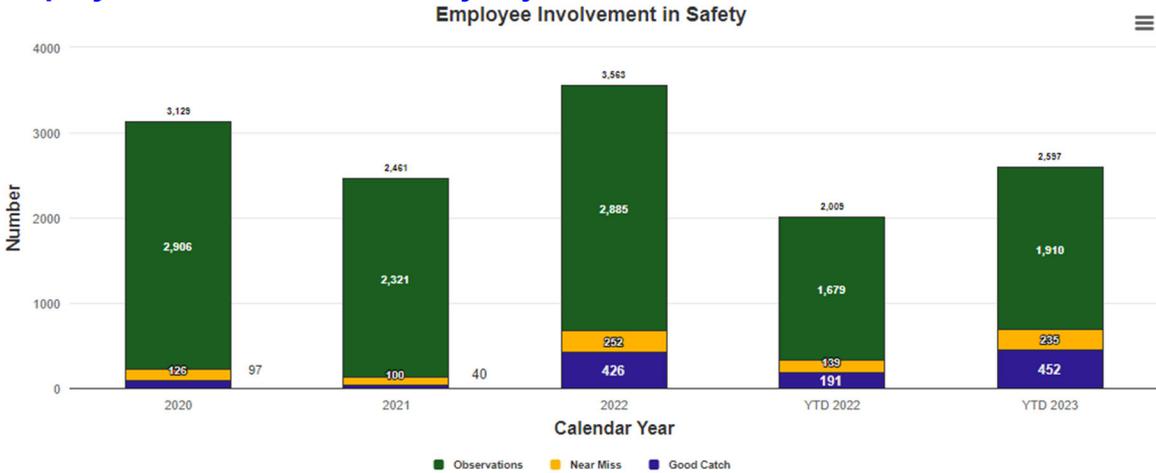
**Purpose:**

MoDOT owns more than 500 truck- or trailer-mounted attenuators that are used to save lives by absorbing the impact of a crash in a work zone. By measuring the number of TMA/Protective vehicle hits, MoDOT is able to identify higher risk activities that could result in a crash and share this information to develop strategies to eliminate work zone crashes.

**Measurement and Data Collection:**

When a TMA incident occurs, a claim report is completed. The claim reports and any associated police reports are collected by Risk Management Technicians for review and interpretation. A statewide work zone incident team reviews TMA incidents and looks for strategies to improve the operations to reduce or eliminate the incidents. Only incidents where the TMA was in an active work zone protecting workers are included in this data. This measure is reported based on quarters of a calendar year.

### Employee involvement in safety - 1j



**Write up:**

To be effective, any safety and health program needs the meaningful participation of its employees. They have much to gain from a successful program and the most to lose if the program fails. Employees often know the most about potential hazards associated with their jobs. Additionally, involvement breeds acceptance because employees support what they help create. Proactive measures such as Behavior Based Safety Observations and Good-Catches are positive things employees can do rather than negative outcomes they should avoid. Safety happens before an incident, and this measure gives employees the goal of elimination before mitigation. Conversely, learning from mistakes is vital to a safety program. Near-miss reporting is another piece of the puzzle that allows the department to continue the vision of zero injuries. The department experienced a 29% increase in employee participation in observations, near-miss and good-catch reporting for the first two quarters of 2023 compared to 2022.

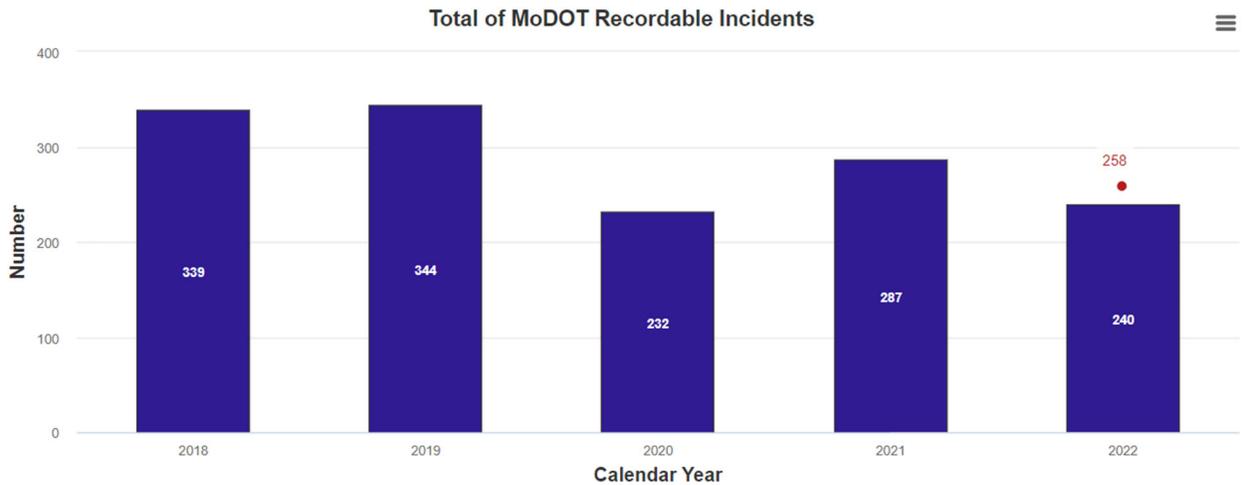
**Purpose:**

This measure shows how involved MoDOT employees are in the department’s safety program by tracking BBS observations, near-misses and Good-Catches. This leading indicator shows trends and recognizes employees practicing good hazard recognition.

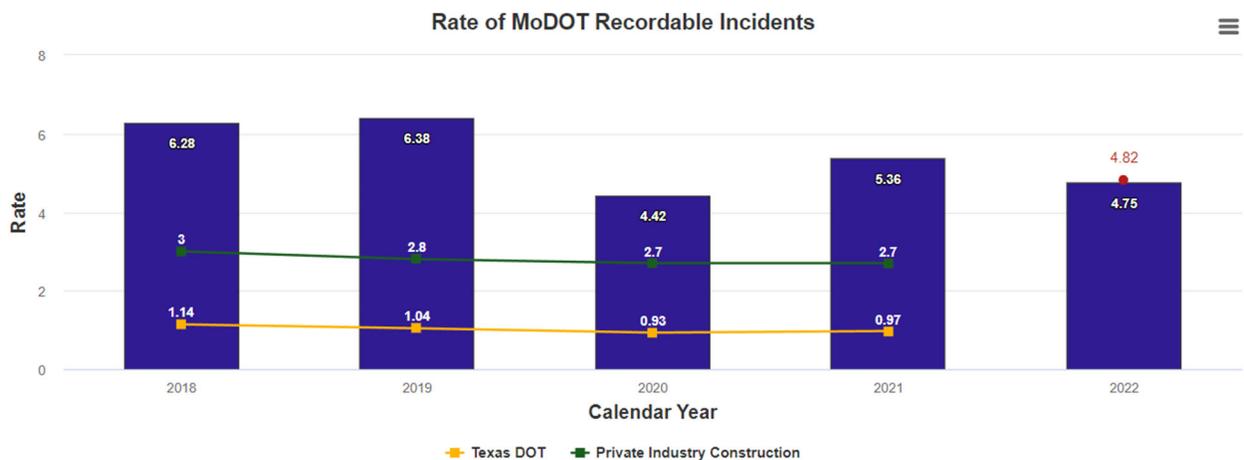
**Measurement and Data Collection:**

Employee involvement measure uses observation, near-miss and good-catch data that is submitted by MoDOT employees.

## Total and rate of MoDOT recordable incidents – 1k



Target: 258



Target: 4.82

\*Texas DOT and OSHA private industry data are not yet available for 2022.

### Write up:

The total and rate of recordable incidents are tracked to measure the department’s goal of fewer injuries. MoDOT’s goal is for every employee to go home every night to their families unharmed. Reporting injuries allows the department to arrange for prompt treatment and to learn from mistakes or remediate hazards. The total number of recordables for 2022 has decreased from 2021. In the year 2020, the number of recordables was unusually low compared to historical rates, as such 2018 and 2019 are included for comparison. There was a significant decrease when compared to 2018 and 2019. The rate of incidents has also decreased compared to last year. There was a 16.4% decrease from 2021 for the number of recordables and an 11.4% decrease for the rate of incidents.

Leading causes of injuries this year were slips, trips and falls at 21%; strains with 15% and employees being struck or injured by an object at 12%.

**Purpose:**

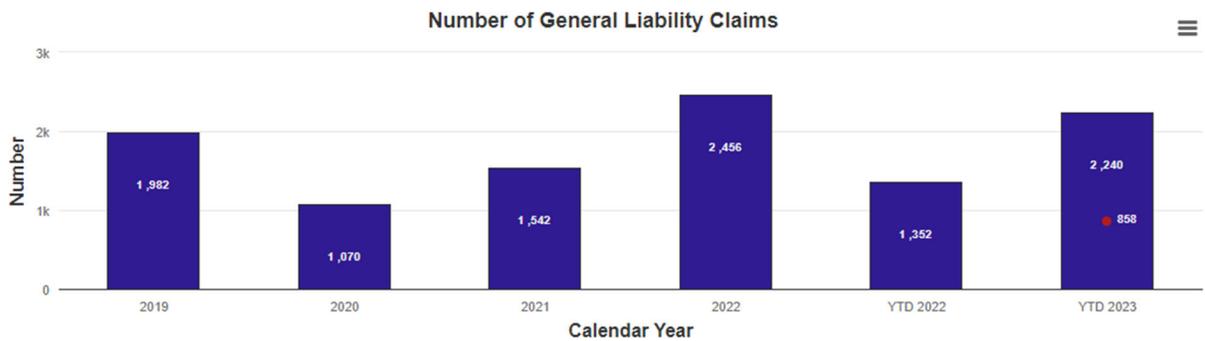
This measure tracks the number of recordable injuries in total and as a rate of injuries per 100 workers.

**Measurement and Data Collection:**

The calculation for incidence rate is the number of recordables times 200,000 divided by the number of hours worked. The 200,000 used in the calculation is the base for 100 full-time workers (working 40 hours per week, 50 weeks per year). MoDOT defines a recordable incident as a work-related injury or illness that results in death, days away from work or medical treatment resulting in cost to the department. The injury data is collected from RiskMaster, the department’s risk management claims administration software. The number of hours worked is taken from MoDOT’s payroll data.

The target for total recordable incidents is updated quarterly. The target for rate of recordable incidents is updated annually. The target is calculated by subtracting 10% from the year-to-date comparison period.

**General liability claims and costs -11**



Target: Below 858



**Write up:**

Keeping employees and the public safe is the department’s highest value. Controlling damage to vehicles and reducing personal injury in work zones, on right-of-way and other areas under department control helps MoDOT accomplish this goal. Compared to the first two quarters of 2022, there was a 66% increase in the number of claims. Most of the claims in 2023 were attributed to pavement defects. Also, compared to the first two quarters of 2022, there was a 48% increase in the amount paid.

This quarter, payments were made on 450 claims against the department, totaling \$2,351,438.68. Five large claims accounted for 49% of this quarter’s payments. The first claim occurred in 2020. The plaintiff had been in a previous accident and got out of her vehicle when she was struck and fatally injured. Poor lighting was alleged. Mediation was held and this claim settled for \$185,000. The second claim was in an intersection in 2016, causing one fatality and multiple severe injuries. It was a known, dangerous intersection with several prior crashes. Mediation was held and the claim was settled for \$295,000. The third claim occurred in 2021 and was initiated from a fatal crash. The claimant attempted to merge in front of a semi-truck and was pinned against a barrier wall. There were alleged design issues, and the suit was settled for \$185,000. The fourth incident occurred in 2019, resulting in one fatality and several severe injuries. The crash was in an "S" curve that was a known, dangerous condition. The personal injury claim was arbitrated and settled for \$245,000. The last claim was initiated from a fatality in 2018. The guardrail was found to be inadequate, and the accident may have been prevented if it had been longer. This suit was settled for \$350,000.

To achieve the general liability number of claims target, the focus needs to be on the department’s most common claims. Historically, the top five most frequent claim types annually are pavement defects, debris on the roadway, chip seal, mowing and striping operations.

**Purpose:**

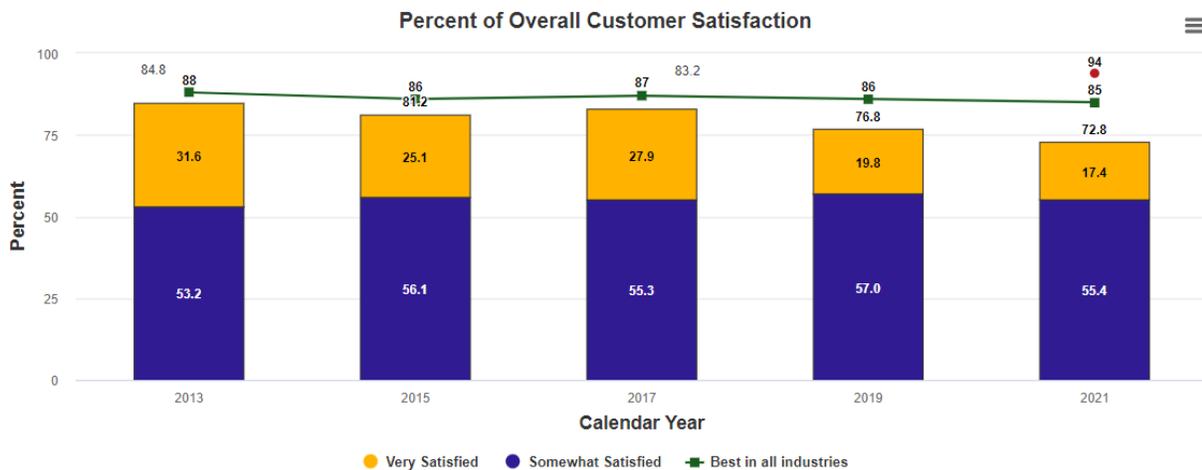
This measure tracks the number of general liability claims and amount paid.

**Measurement and Data Collection:**

General liability claims arise from allegations of injuries/damages caused by dangerous conditions on MoDOT property and the injury/damage that directly resulted from the condition. In addition, an employee must be negligent and create the dangerous condition or MoDOT must have actual or constructive notice of the dangerous condition in sufficient time prior to the injury/damage to have taken measures to protect the public. Claims data is collected from Riskmaster, the department’s risk management claims administration software.

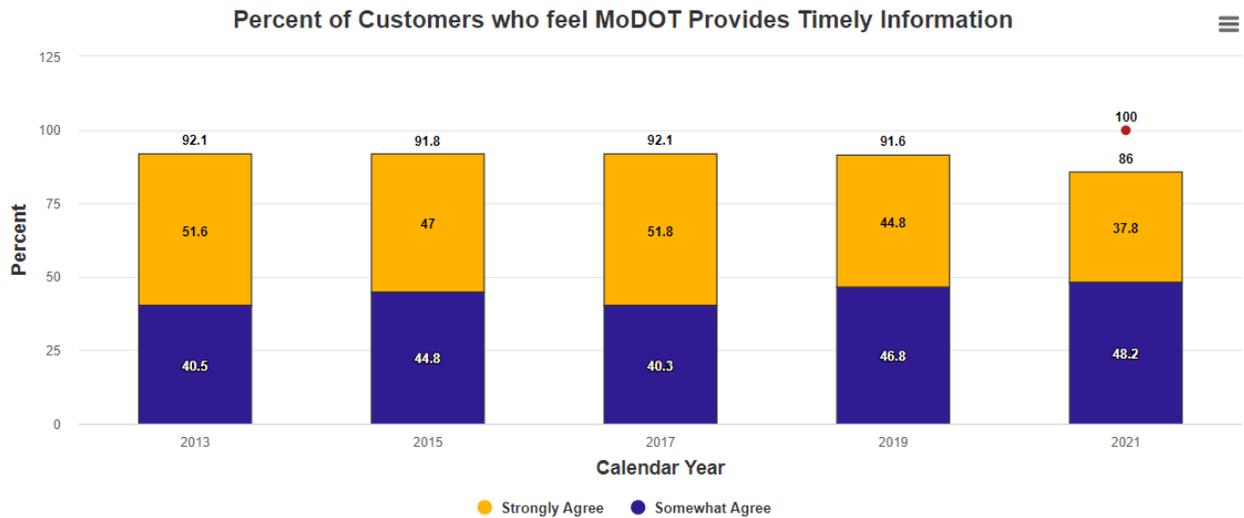
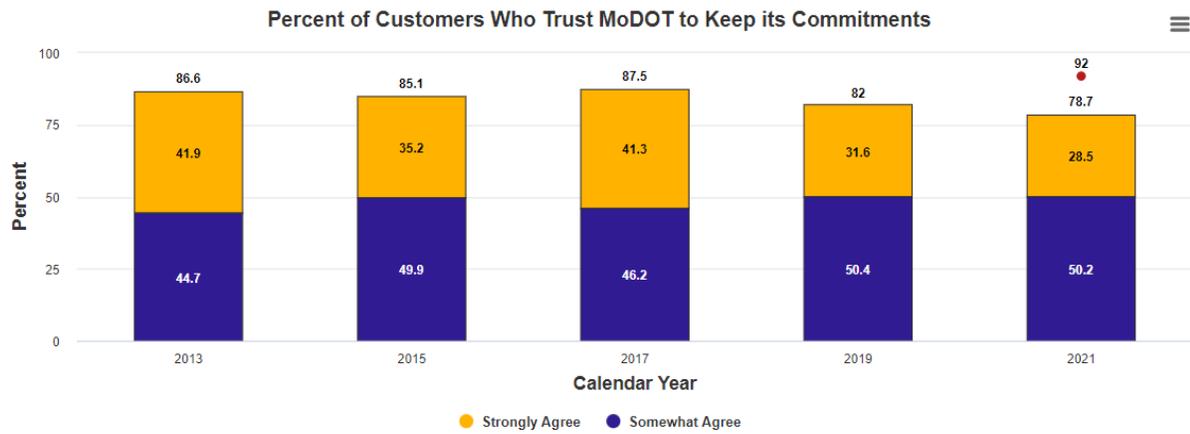
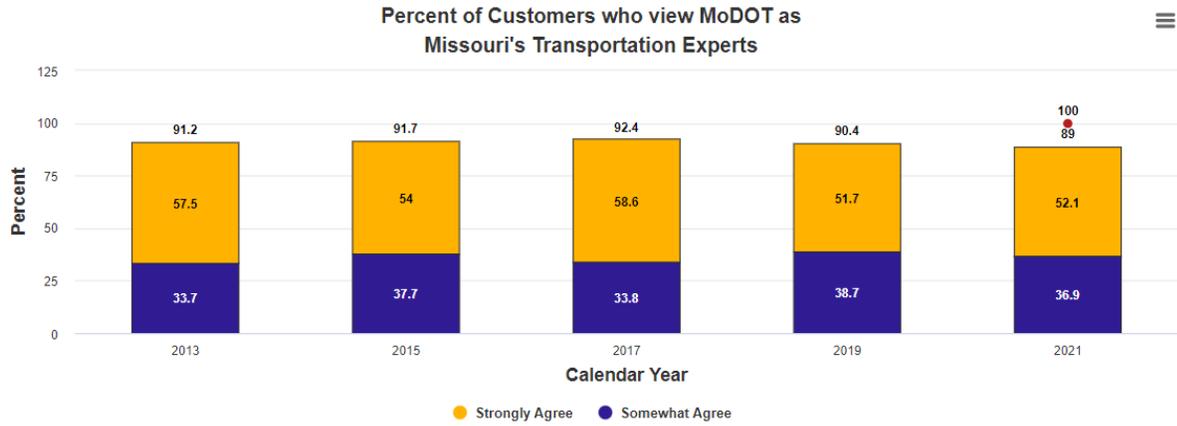
The target for this measure is updated annually. It is calculated by determining a 5-year average and subtracting 10%. (Exceptionally high or low years are excluded from the 5-year average calculation to determine a practical target.)

**Combined Customer Satisfaction Survey – 2a**

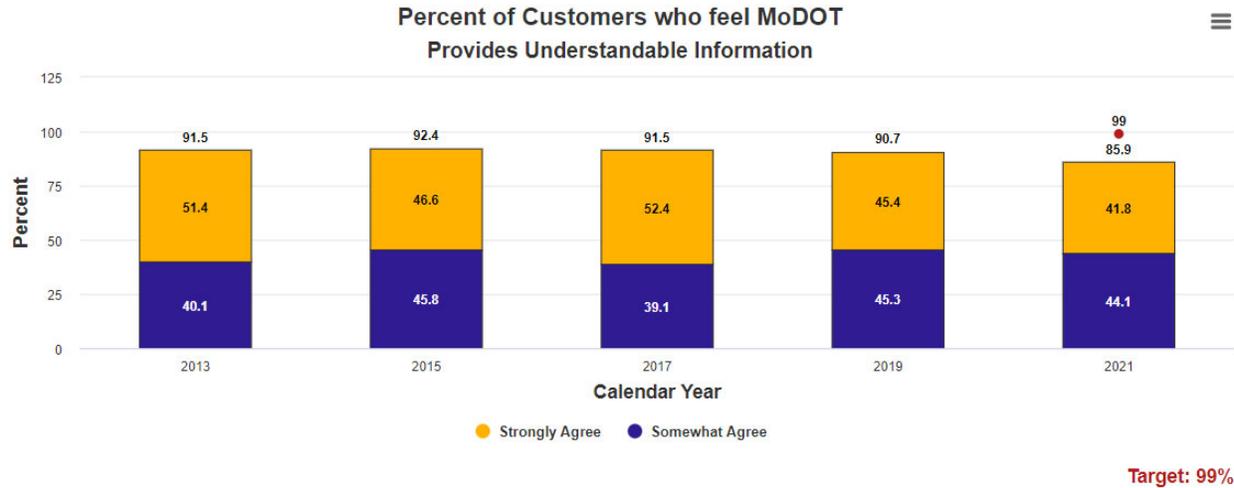
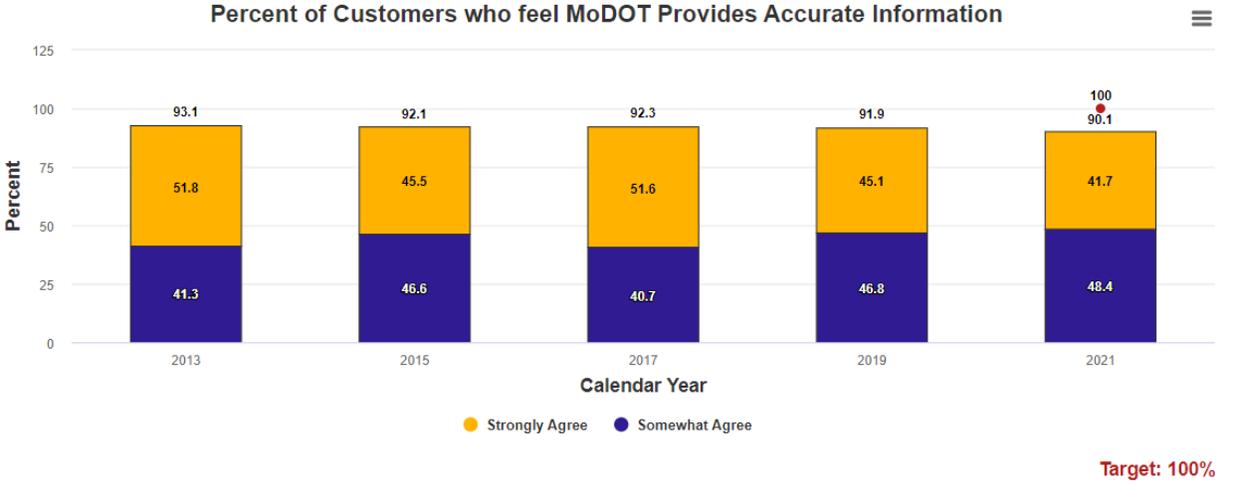


Target: 94%

\*2010-2011 - Lincoln Mercury, 2012 - Apple, Inc., 2013 - Mercedes Benz, 2015 - Chick-fil-A, 2017 - Chick-fil-A



Target: 100%



**Write up:**

Just like well-maintained roads and bridges, the citizens of Missouri expect timely, accurate and understandable information from their department of transportation. Whether it’s a news release, social media post, text alert or a notice of a public meeting, MoDOT makes every effort to get information to the public as quickly and as clearly as possible. The results of this effort are trust and respect. This measure shows just how well the department continues to meet customers’ high expectations.

Results have decreased across the board, a trend seen in customer satisfaction results across all industries. Possible reasons for the decreases seen in these specific measures could be related to increased response times from staffing and equipment shortages, specific project desires, or system conditions. However, the American Customer Satisfaction Index claims that the overall decrease in customer satisfaction is due to the analytics employed to turn the significant amounts of data noise into meaningful and actionable information.

Overall customer satisfaction with MoDOT has decreased, with the percent of Missourians surveyed saying they are satisfied with the job MoDOT is doing dropping

from 76.8% in 2019 to 72.8% in 2021, a 4% decline. In addition, those customers who reported they are very satisfied with MoDOT decreased from 19.8% to 17.4%, a 2.4% decrease.

As the agency responsible for transportation in Missouri, MoDOT must hold its lead as an expert in the field. The department continues to work on improving partnerships with all Missourians, including local government, elected officials and transportation-related groups and organizations to deliver the very best possible transportation system with the resources available. Gaining and keeping the public's trust is critical to MoDOT's overall success. The best way MoDOT can accomplish this is to deliver on the commitments it makes.

**Purpose:**

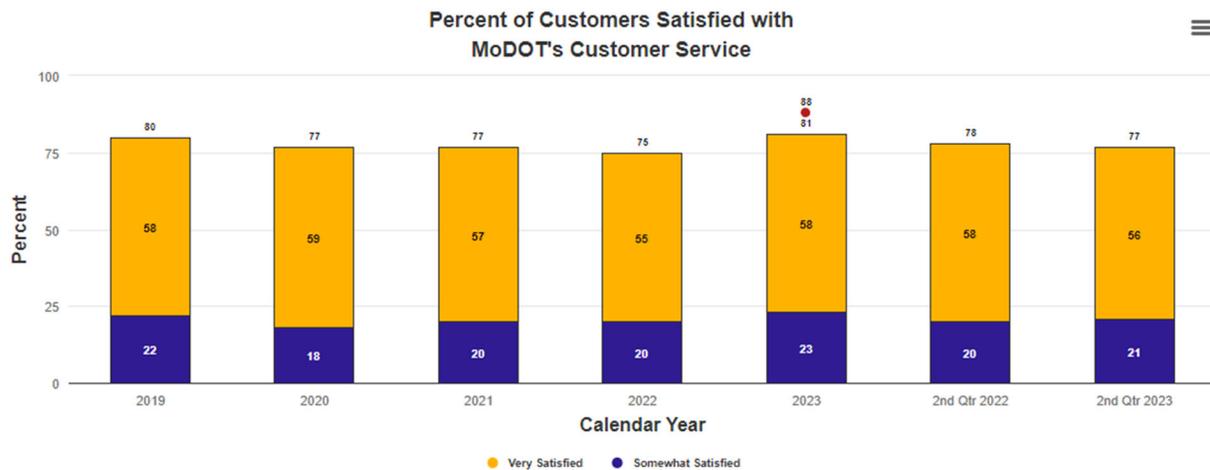
This measure tracks the percent of customers who are satisfied with MoDOT as a leader and expert in transportation issues, how effectively MoDOT conveys its expertise to the traveling public and keeps its commitments, and also tracks whether customers feel MoDOT provides timely, accurate and understandable information about road projects, highway conditions and work zones.

**Measurement and Data Collection:**

Data is collected through a biennial survey, in odd-numbered years. This has historically been done via a telephone survey of approximately 3,500 randomly selected Missourians. However, new for 2021, the survey offered both a phone and text option. A total of 7,451 responses were received, with a minimum of 686 responses per District.

The target for this measure is normally updated bi-annually in October. MoDOT strives to reach and maintain 100% satisfaction across all aspects of customer satisfaction, based on standards in major global industries.

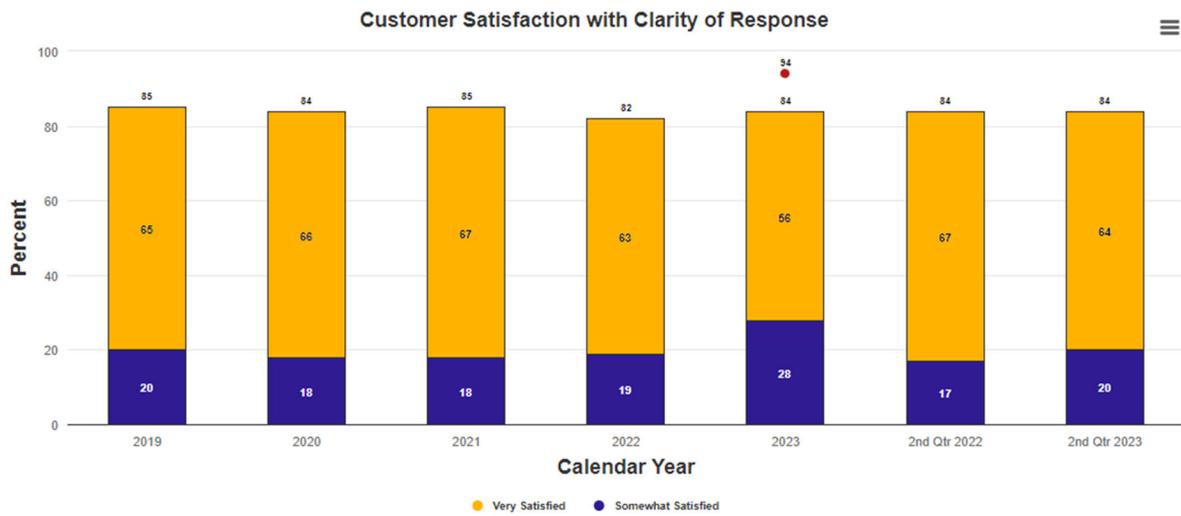
**Percent of customers satisfied with MoDOT's customer service – 2b**



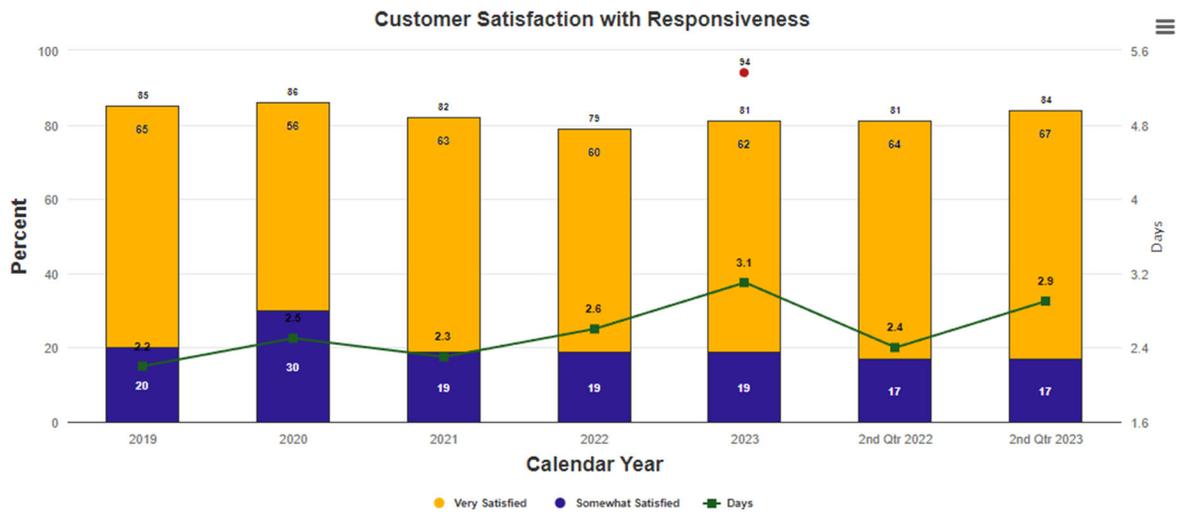
Target: 88%



Target: 100%



Target: 94%



Target: 94%

**Write up:**

Providing outstanding customer service is one of MoDOT's core values and is the responsibility of every employee in the organization. To actively seek feedback from customers, MoDOT uses a statewide call system and an enhanced online call report system that enables customer service representatives to work across seven district boundaries in a one-team approach. The data provided in the graphs reflects how those surveyed customers rated their interaction with MoDOT.

During the second quarter of 2023, compared to the second quarter of 2022, overall customer satisfaction slightly decreased to 77%. Politeness of response increased to 95%. Customers who were satisfied with the clarity of the response stayed the same at 84%. Responsiveness was up to 84% compared to 81% in 2022.

The average time to complete customer requests was 2.9 days.

**Purpose:**

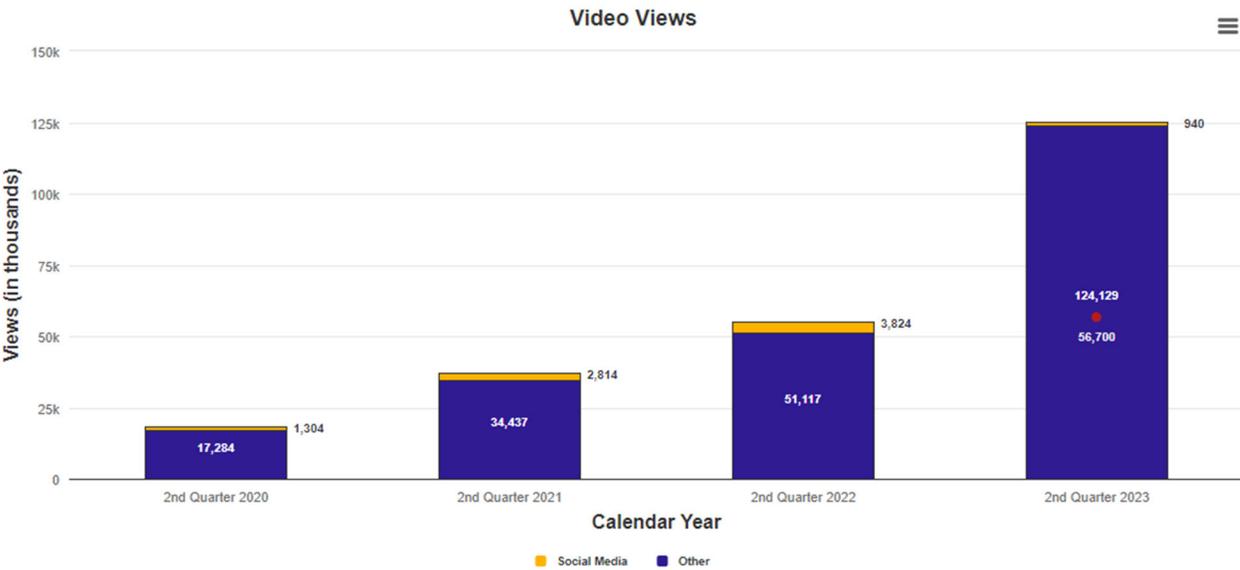
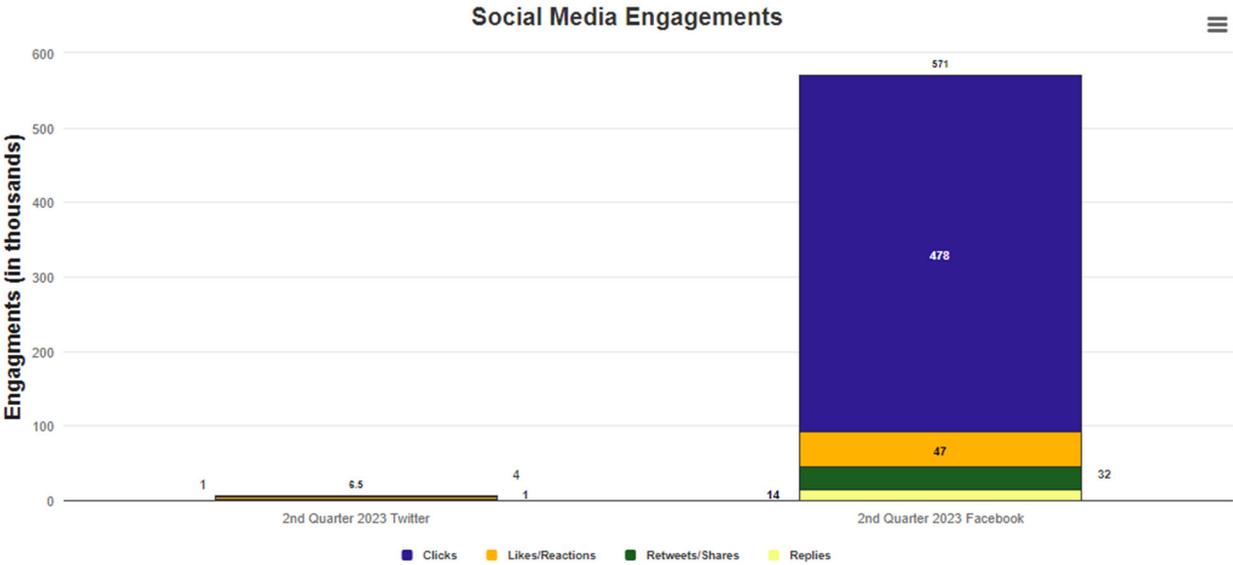
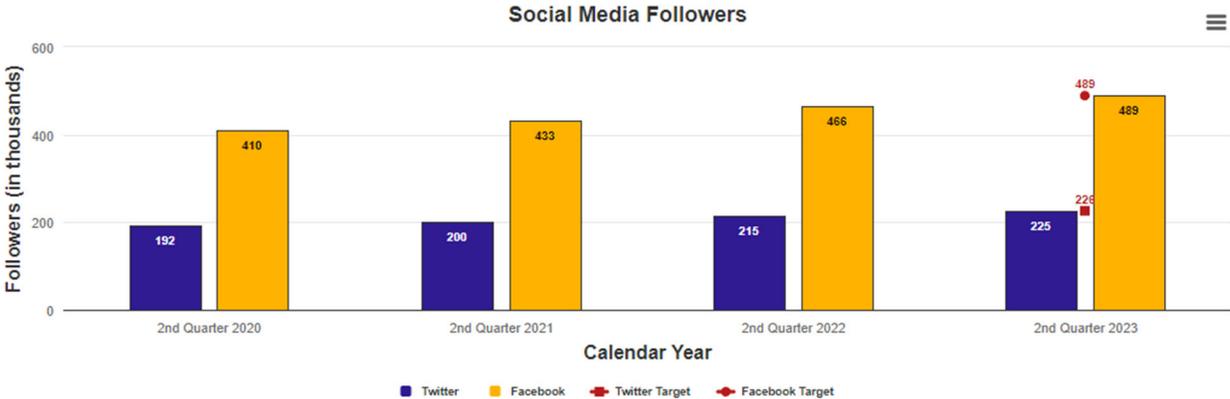
This measure shows how satisfied customers who contacted MoDOT were with the politeness, clarity and responsiveness they received, as well as their overall level of satisfaction.

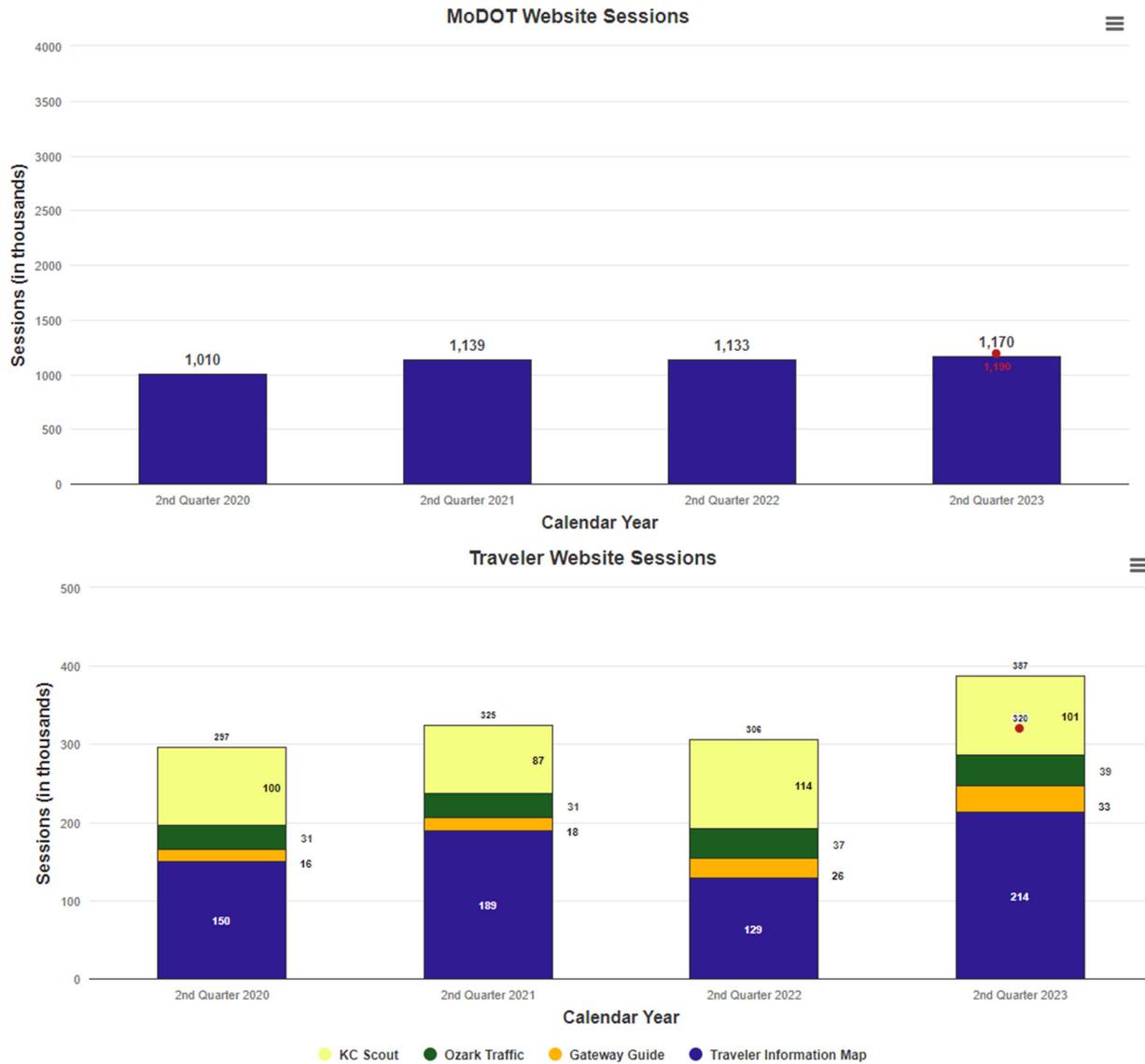
**Measurement and Data Collection:**

Data for this measure comes from a monthly telephone, email and texting survey of 200 customers who contacted a MoDOT customer service center in the previous month. The customer contacts come from call reports logged into the customer service database. Survey participants are asked to respond on an agreement scale regarding three qualities of their experiences. A fourth question is asked regarding their overall satisfaction. This measure also includes the time to complete requests logged into the customer service database. Requests requiring more than 30 days to complete are removed to prevent skewing the overall results.

The target for this measure is updated quarterly. This target is established by projecting a 10% improvement over a 5-year average.

Customer communication engagement – 2c





**Write up:**

**SOCIAL MEDIA**

Good organizations share information with the people they serve. The best, most-trusted organizations engage customers in conversation. MoDOT interacts with its customers through social media networking websites and applications. MoDOT’s social media accounts continue to attract followers. When comparing the second quarters of 2022 and 2023, there was a growth of 23,179 followers on Facebook statewide and 9,903 on Twitter.

During the second quarter of 2023, the most popular Facebook post was an interstate DMS message urging people not to drive distracted. The post reached more than 333,000 people with more than 2,400 engagements on Facebook alone.

To better track how customers are interacting with MoDOT on these social media sites, engagements are being measured as well. Engagements are customer interactions with MoDOT's posted content, including likes, shares, retweets, comments and replies. This

*Tracker Archive – July 2023*

quarter, MoDOT Facebook pages across the state had 571,368 engagements and Twitter pages had 6,516.

MoDOT websites had 1,170,435 sessions during the second quarter of 2023. This is up slightly compared to the same period last year. The traveler website sessions were also up this year compared to last with 387,721.

MoDOT videos on YouTube and social media were viewed 940,000 times in the second quarter of 2023. Additional advertisement video placements were viewed 125 million times this past quarter.

**- Website**

WEBPAGE VIEWS	
MoDOT Homepage	95,331
Projects	53,224
Motor Carrier Express	40,244
Careers	26,456
Summertime Safety Series	23,028

**- YouTube**

YOUTUBE VIDEO VIEWS	
Click It or Ticket 2023	386,135
Summer Safety Series Anthem	352,426
Speeding (captioned)	49,25
BUPD Sounder	41,651
Farm Safety	28,843

**Purpose:**

This measure tracks the number of MoDOT customers hitting the department’s social media and website information.

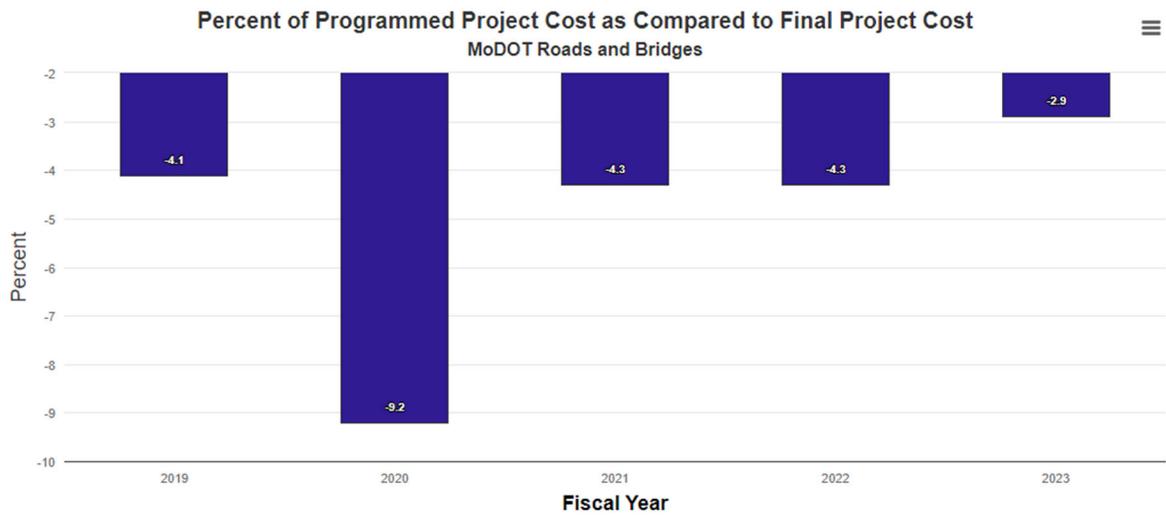
**Measurement and Data Collection:**

MoDOT gathers information for this measure from a variety of sources, including Google Analytics. Website traffic and YouTube information are cumulative totals based on visits. Facebook and Twitter information is based on account followers. The target for this measure is updated quarterly. This target is established by projecting a 7% improvement over the same quarter in the previous year.

This measure is linked to the Improve Communications strategy included in the Sharpening Our Strategic Vision initiative. The Citizen’s Guide to Transportation

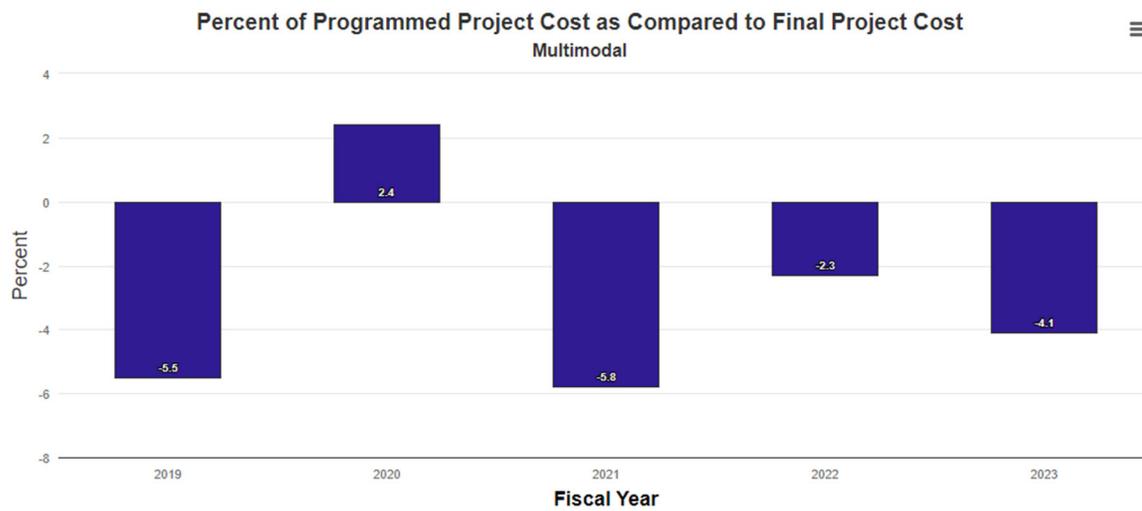
Funding, the new department website and a better Traveler Information Map have been identified as strategies to improve performance.

### Percent of programmed project cost vs award and final – 3a



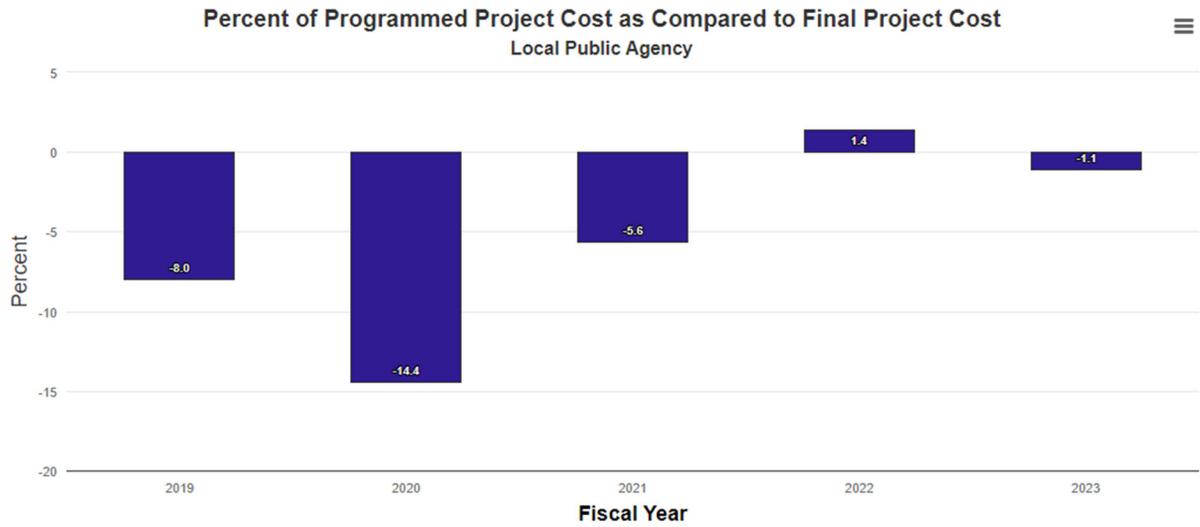
Target: 0%

\*Positive numbers indicate the final (completed) cost was higher than the programmed cost

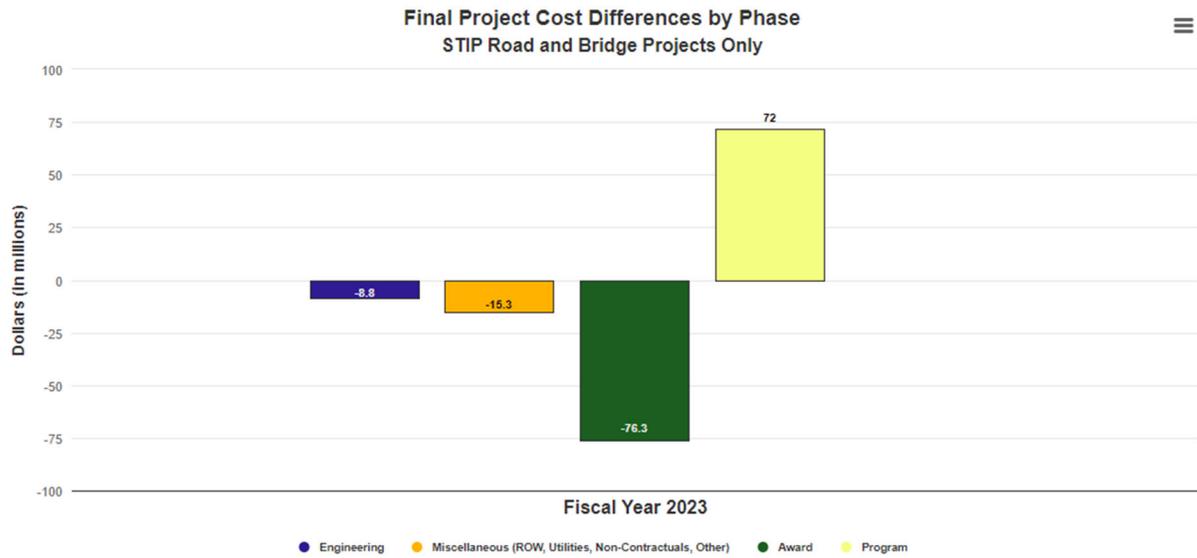


Target: 0%

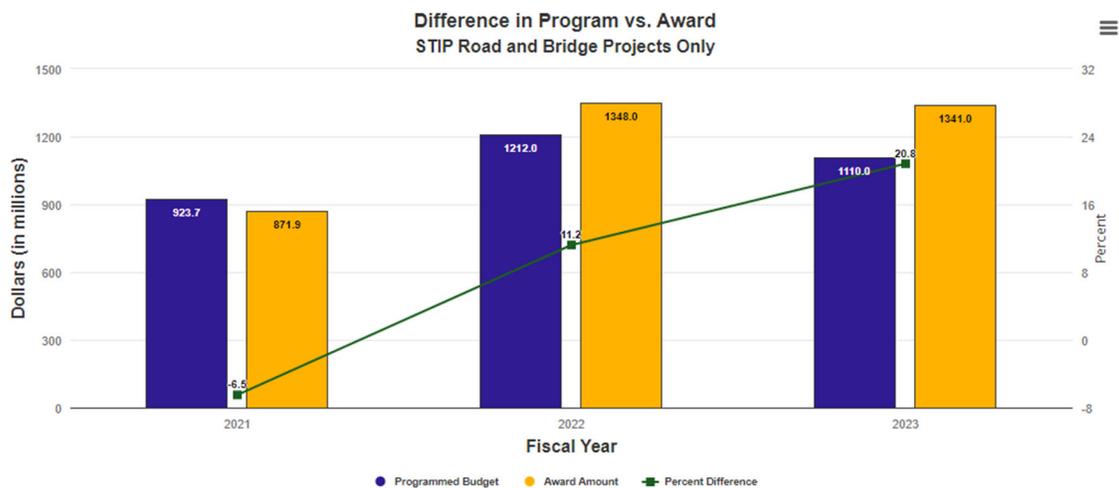
\*Positive numbers indicate the final (completed) cost was higher than the programmed cost



\*Positive numbers indicate the final (completed) cost was higher than the programmed cost



\*Negative numbers indicate savings. Miscellaneous includes right-of-way purchases, utilities and other costs



Target 0%

\*Amounts include STIP road and bridge projects without 2% construction contingency applied

### Write up:

Accurate program cost estimates help MoDOT deliver more timely improvements for taxpayers. As of June 30, 2023, 377 road and bridge projects were completed in fiscal year 2023 at a cost of \$834.4 million. This represents a deviation of -2.9% (\$24.8 million) less than the programmed cost of \$859.3 million. Of the 377 road and bridge projects completed, 57% were completed within or below budget. In comparison, 55% were completed within or below budget as of the same date a year ago. There may be projects that have adjustments pending, which could cause a slight change in the final values.

In addition, 12 Multimodal projects were completed at a cost of \$17.3 million, a deviation of -4.1% (\$743 thousand) difference from the programmed cost of \$18.1 million. A total of 76 local public agency projects were completed at a cost of \$82.8 million, -1.1% (\$912 thousand) less than the programmed cost of \$83.8 million.

The target is a 0% difference, indicating MoDOT is making timely use of available funds. Road and bridge, multimodal and local public agency projects were within -2.8% of the target in FY 2023. Program versus award numbers for FY 2023 reflect an award amount of 20.8 or \$231.1 million above the program estimate. MoDOT continues to monitor this throughout the year.

### Purpose:

The measure determines how closely total project costs are compared to the programmed costs. The programmed cost is considered the project budget.

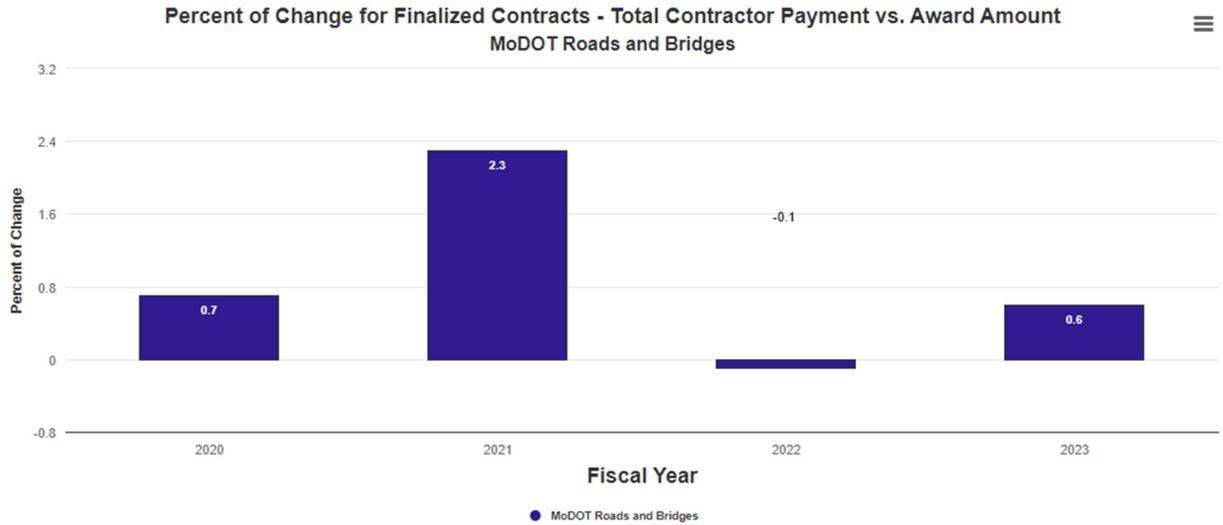
### Measurement and Data Collection:

Completed project costs are reported during the fiscal year in which a project is completed. Road and bridge project costs include design, right-of-way purchases, utilities, construction, inspection and other miscellaneous costs. The programmed cost

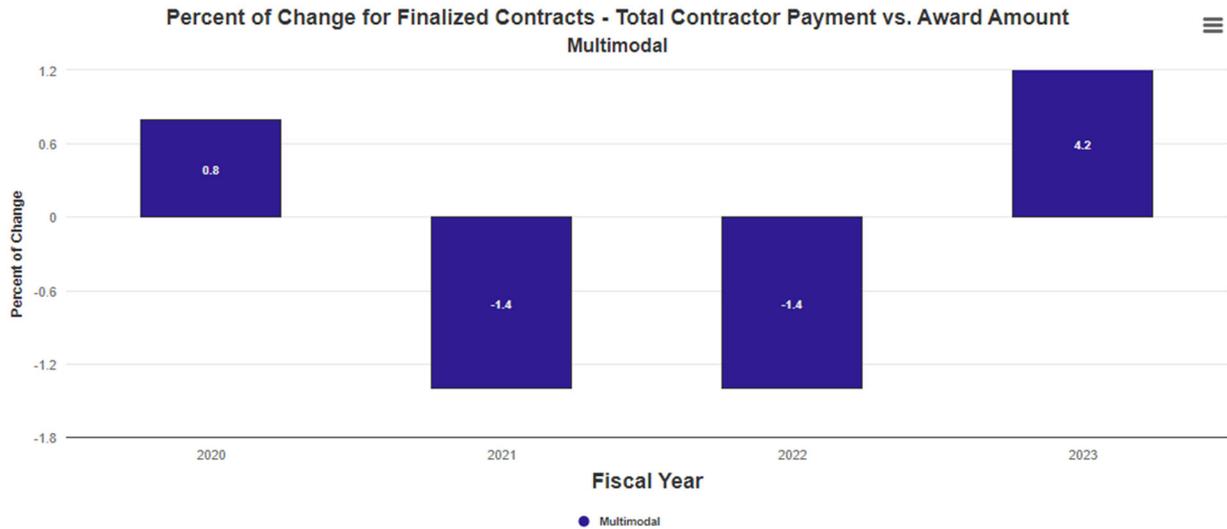
is based on the amount included in the most recently approved Statewide Transportation Improvement Plan. Completed costs include actual expenditures. Multimodal and local public agency project costs typically reflect state and/or federal funds but not local funding contributed toward such projects.

The target for this measure is set by internal policy and will not change unless policy changes.

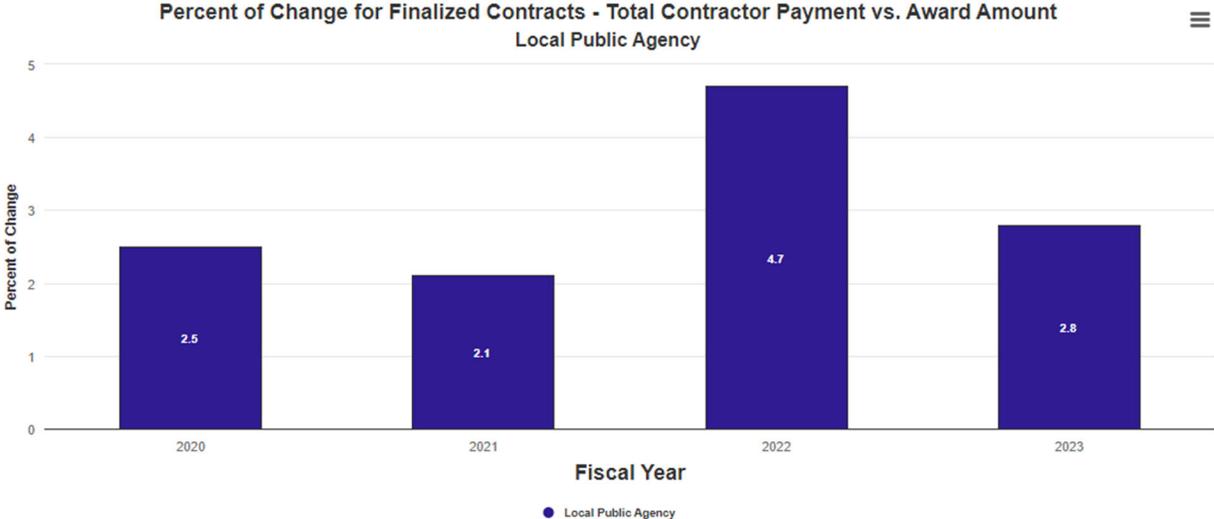
### Change order report – 3b



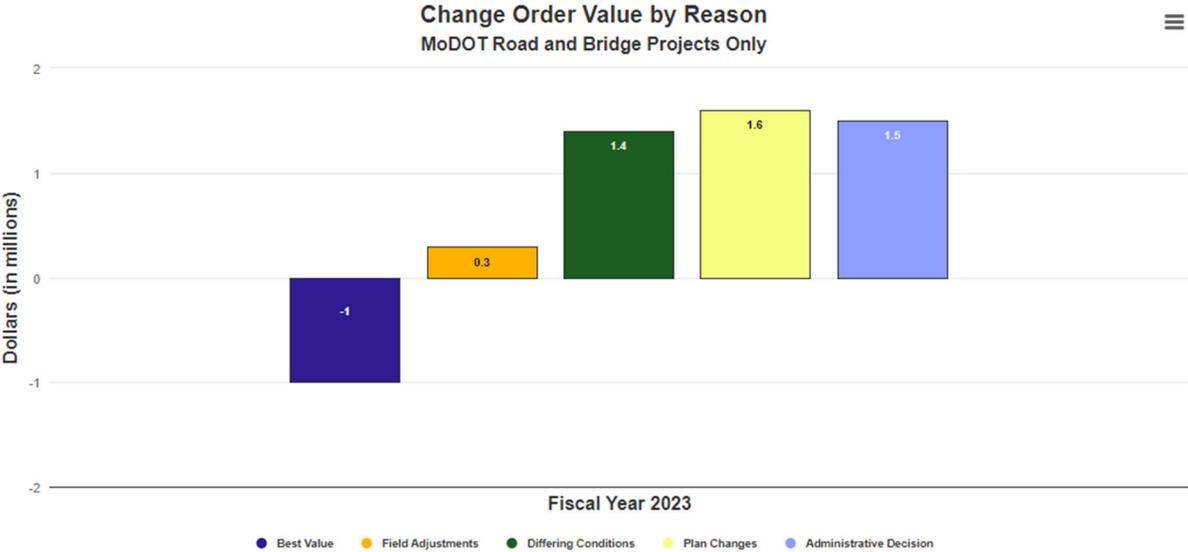
Target: 2% Change



Target: 2% Change



Target: 2% Change



**Write up:**

By limiting overruns on contracts, MoDOT can continue to keep its maintenance and construction commitments. This emphasis, combined with the use of practical design and value engineering, has contributed to limiting overruns on contracts. MoDOT’s performance in fiscal year 2023 is 1.0% over the award amount (\$7.2 million over the award amount of \$711 million worth of projects completed) with 57% of the projects being completed below the original award amount.

Many factors can affect the ability to complete a project within the targeted 2% of the award amount. These factors can include design changes, differing conditions, additional work items and administrative decisions.

For FY 2023, MoDOT road and bridge projects were completed 0.6% over budget, multimodal projects were completed 4.2% over budget and local public agency projects were completed 2.8% over budget.

**Purpose:**

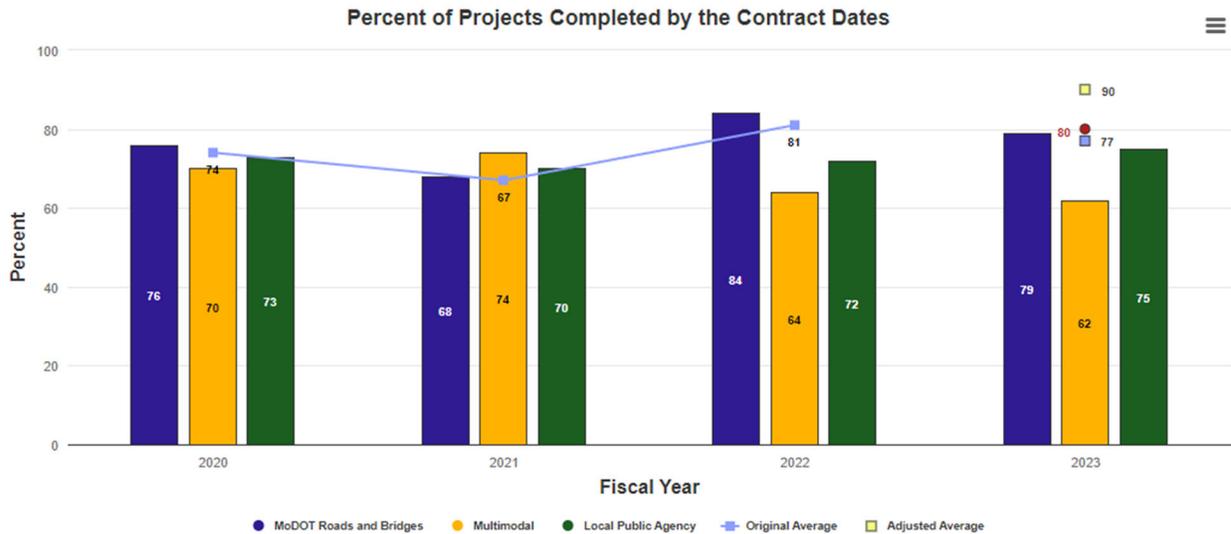
This measure tracks the percentage difference of total construction payouts to the original contract award amounts. This indicates how many changes are made on projects after they are awarded to the contractor for road, bridge, local public agency and multimodal projects – aviation, waterway and transit.

**Measurement and Data Collection:**

For road and bridge projects, contractor payments are generated through MoDOT’s AASHTOWare database and processed in the financial management system for payment. Change orders document the underrun/overrun of the original contract cost. Local public agencies and multimodal agencies use staff or consultant resources to set contract completion dates and track performance.

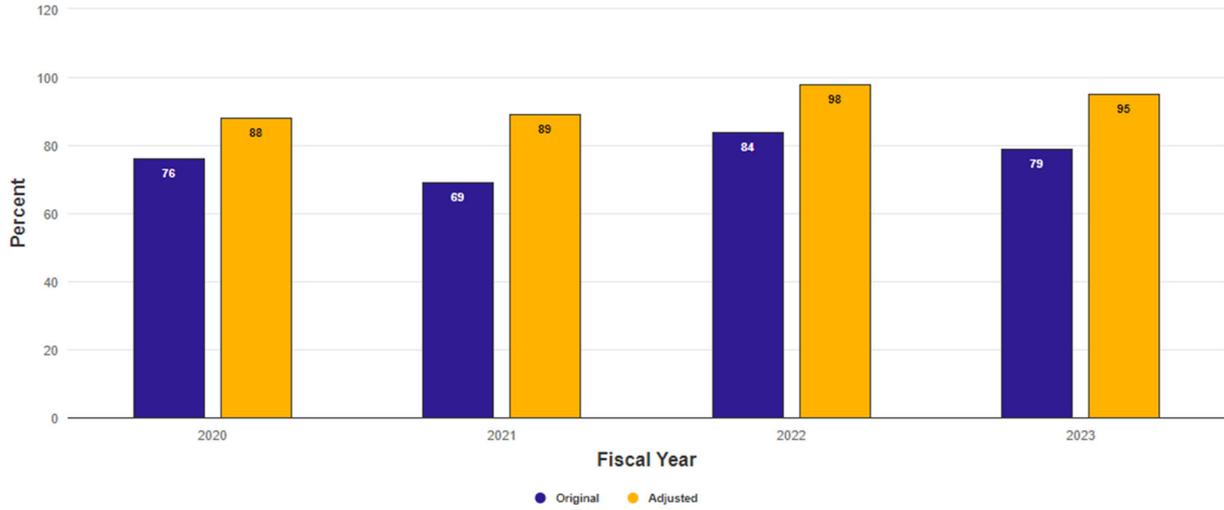
The target for this measure is set by internal policy and will not change unless policy changes.

**Projects schedule report – 3c**

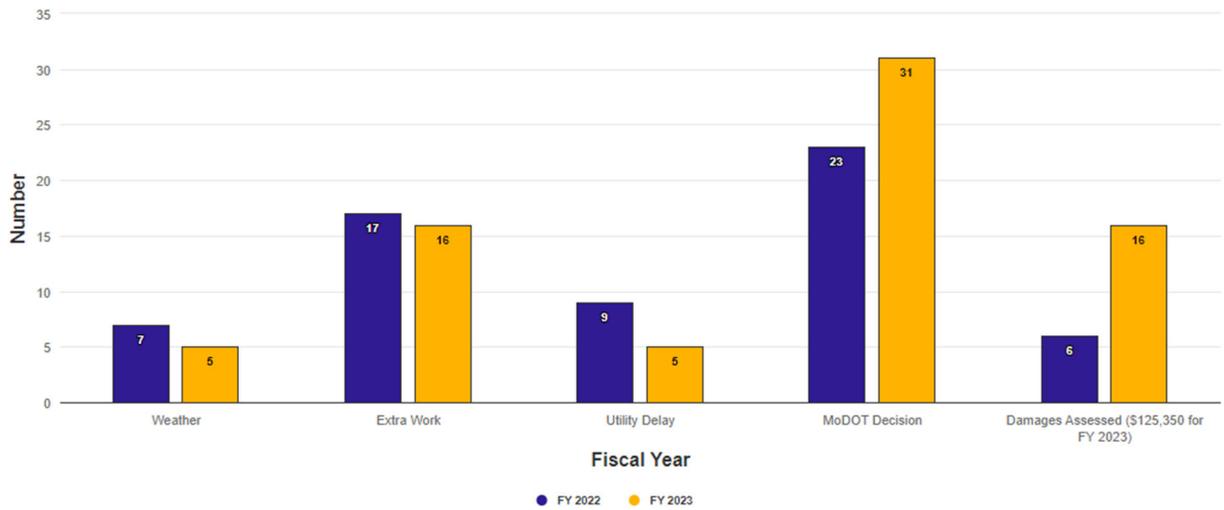


2023 Target: Above 80% Original

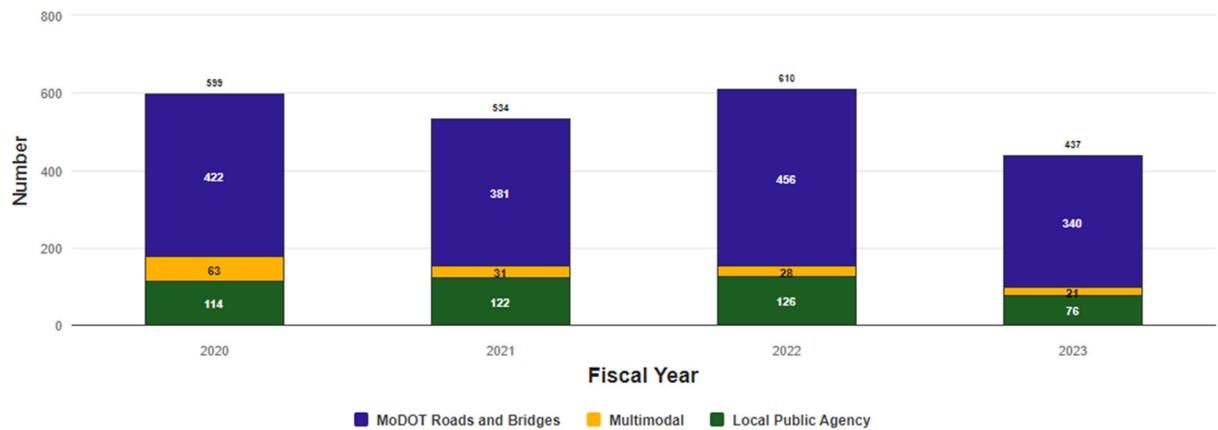
MoDOT Road and Bridge Projects Completed on Time  
Original vs. Adjusted Contract Completion Date

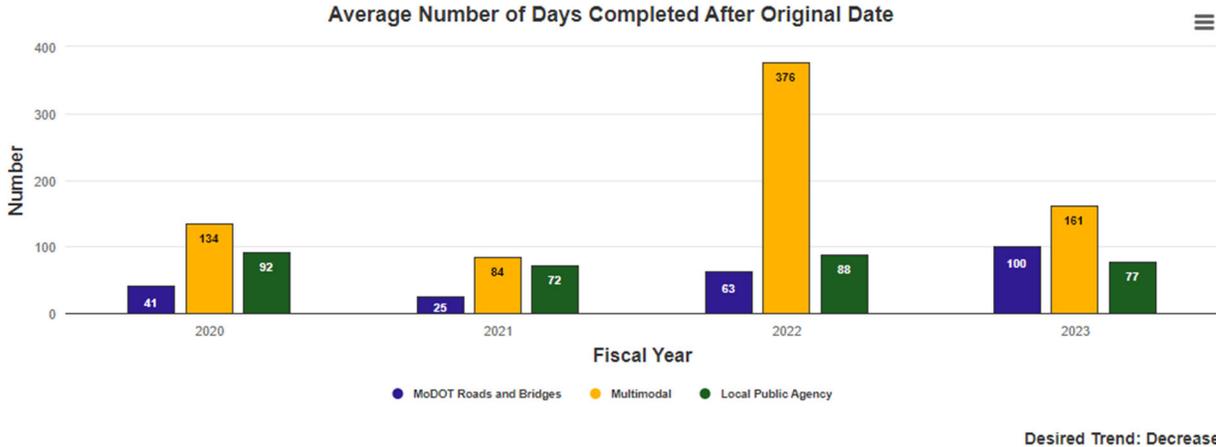
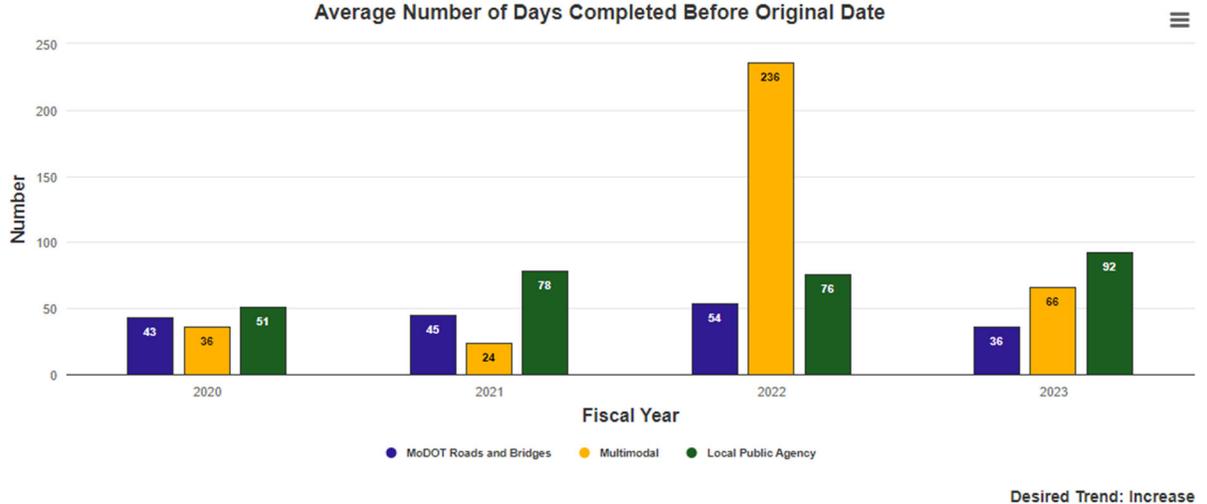


MoDOT Road and Bridge Projects  
Reason for Date Extensions



Total Number of Projects Completed





**Write up:**

MoDOT’s customers expect transportation improvements to be completed and roadways opened quickly with minimal impact to their lives. Delivering projects by the contract completion date is the target for all projects and is considered a commitment to Missourians and drivers. Completing projects on time helps maintain credibility with Missourians, minimizes drivers’ exposure to work zones and provides facilities in good condition that improve safety and reduce vehicle maintenance costs.

MoDOT works to meet the initial contract completion date by preparing accurate plans and quantities, setting aggressive but reasonable completion dates, and setting liquidated damages to reinforce completion dates without undue bid risks. In fiscal year 2023, 77% of all closed-out projects were completed by their planned completion dates.

Weather, additional work, or a MoDOT directive sometimes necessitates an authorized extension of the completion date without any financial assessment to the contractor. In FY 2023, 90% of the closed-out projects were completed by the adjusted dates.

There are times when a contractor misses the contract completion date, and the contractor is assessed damages. Of the road and bridge contracts completed in FY

## Tracker Archive – July 2023

2023 that did not meet the original contract date, 16 were extended due to extra work, five were extended due to utility delays, 31 were extended by MoDOT, five were extended due to weather and 16 missed the completion date with damages assessed totaling \$125,350.

The target for this measure is to have at least 80% of projects completed by the original completion date. At the end of FY 2023, the average number of all contracts completed by the original completion date was 77%.

### Purpose:

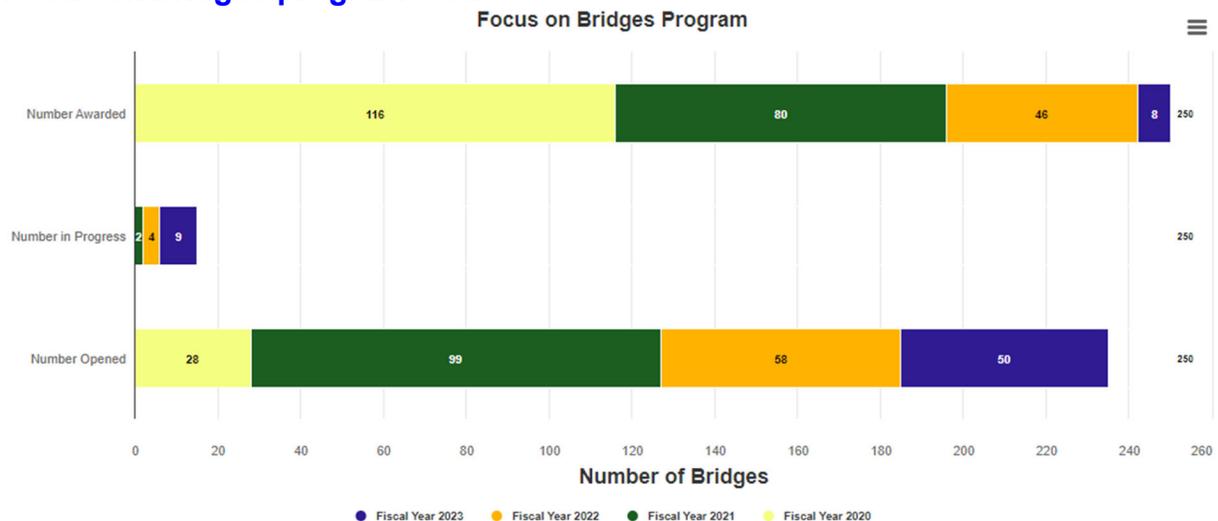
This measure tracks the percentage of road and bridge projects opened by the commitment date established in the contract. This commitment also includes local public agency projects and multimodal projects (rail, aviation, waterway and transit).

### Measurement and Data Collection:

For road and bridge projects, the project manager collaborates with the project team to establish the project completion day which is specific to when the road or bridge project will be opened to the public so to eliminate a financial penalty. The resident engineer uses the SiteManager system to track and document the work. Local public agencies and multimodal agencies use staff or consultant resources to set contract completion dates and track performance.

The target for this measure was set by management directive.

### Focus on bridges program – 3d



**Target: 100% Awarded by FY23**

### Write up:

This measure tracks the progress made on the Governor's Focus on Bridges Program. This program was initiated by Gov. Mike Parson to address 250 bridges in the state. The overall program will repair or replace 250 bridges across the state.

The Focus on Bridges Program began in fiscal year 2020. After the 15th reporting period of the program, all 250 structures have been awarded and all 250 structures given notice to proceed for construction and 235 structures have been opened to traffic. The program will be complete when all 250 bridges have been awarded and opened. The number in progress for the early quarters is decreasing as early projects are completed. The remaining structures have completion dates by the end of May 2024.

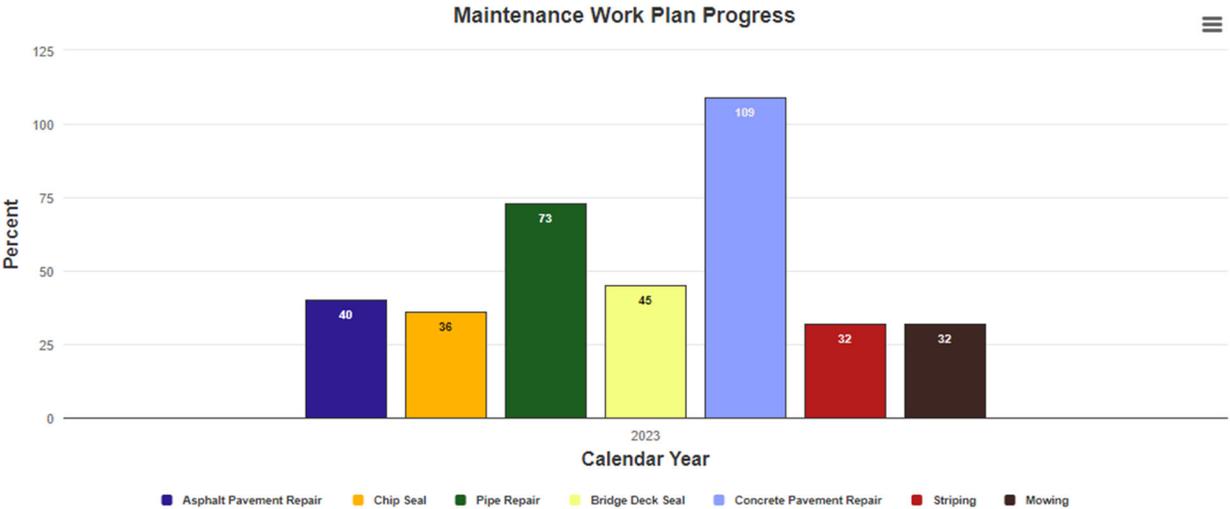
**Purpose:**

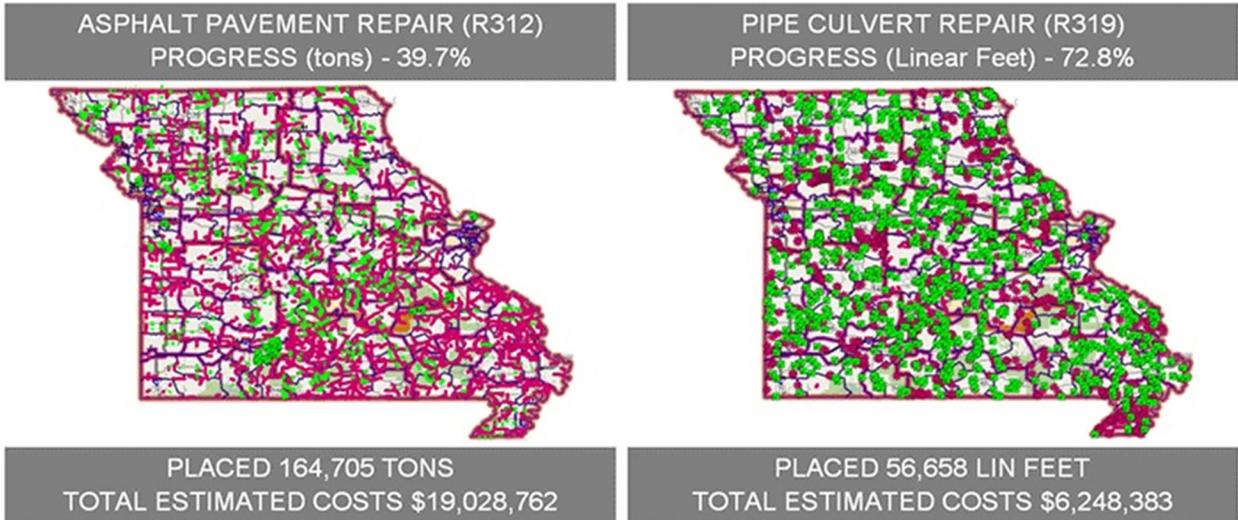
The purpose of this measure is to track the progress made on the Governor’s Focus on Bridges Program. Two hundred fifty bridges will be awarded to be repaired or replaced by the end of fiscal year 2023. The measure will track quarterly progress on the number of bridges awarded, bridges in progress and opened bridges.

**Measurement and Data Collection:**

The data for this Tracker measure is collected after each Missouri Highway and Transportation Commission meeting where Statewide Transportation Improvement Program projects are awarded. Award dates and notice to proceed dates are entered in a list that includes all 250 Focus on Bridges structures. The Construction and Materials Division, as well as the Communications Division, provides the date when each structure is opened to traffic.

**Maintenance work plan progress–3e**





**Write up:**

This measure tracks how much of the planned maintenance operation work in the Statewide Transportation Improvement Program, and additional activities, is accomplished each year. The measure includes location-specific work such as bridge deck seals and comprehensive statewide work, such as striping. Location-specific work is tracked in the MoDOT Management System and reports updates in year-to-date status.

The MoDOT Management System continues to improve the accuracy of planning and documenting accomplishments at MoDOT. In the spring of this year, planned work was impacted by numerous unplanned and visual work activities such as litter pick up, sign replacement and roadsides. Several MoDOT districts initially shifted roadway work to align with fiscal year 2024 funding. The majority of roadway activities began in late May to early June 2023.

The example visual above from MMS demonstrates work plan progress for Asphalt Pavement Repair and Pipe Culvert Repair for calendar year 2023.

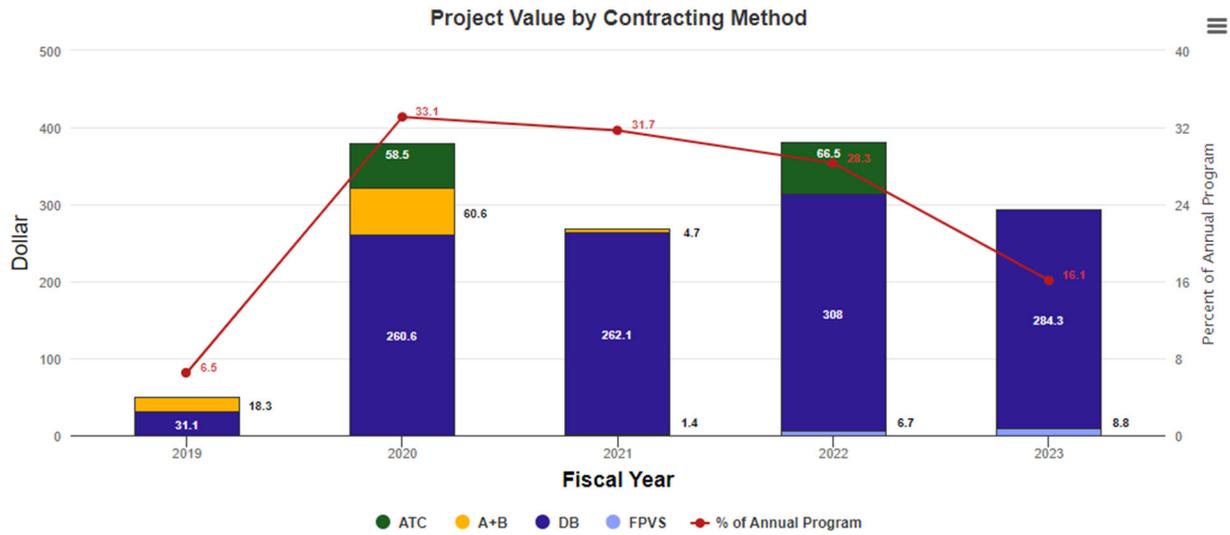
**Purpose:**

MoDOT publishes the maintenance and operations work plans every year in the STIP for the first three years. This measure is done to determine how each district performs compared to the planned levels in the STIP and the assumed 90% of lane miles as the target for mowing shoulder miles.

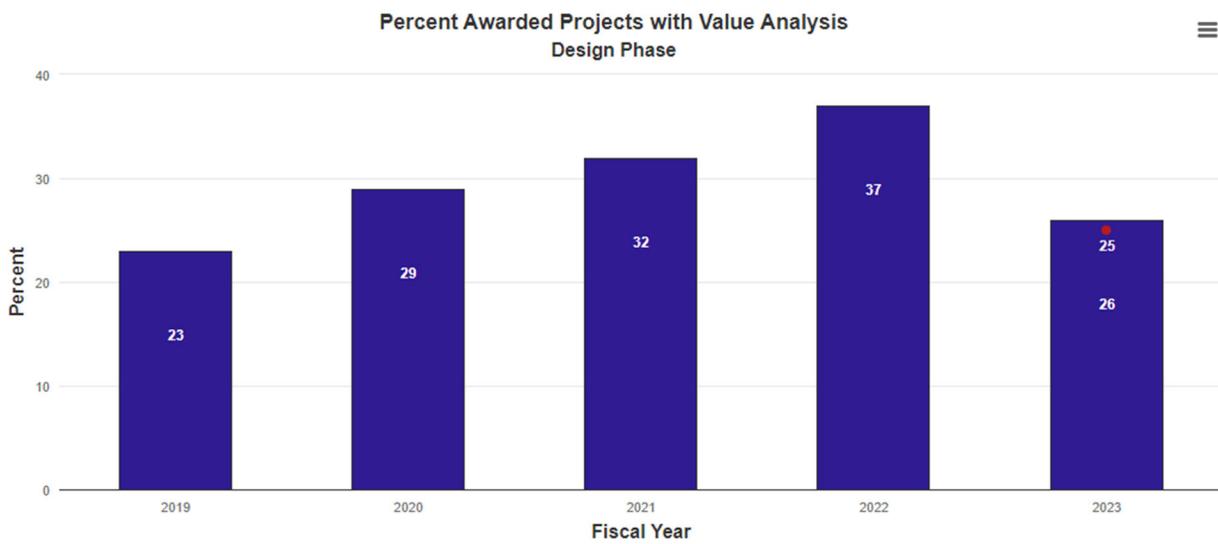
**Measurement and Data Collection:**

Activities planned in the STIP and other activities such as striping and mowing are tracked in MMS. Planned amounts are also developed in MMS and are used for determining the percent of work plan progress. One exception is the mowing, total shoulder miles are estimated at 90% of the lane miles for this measure.

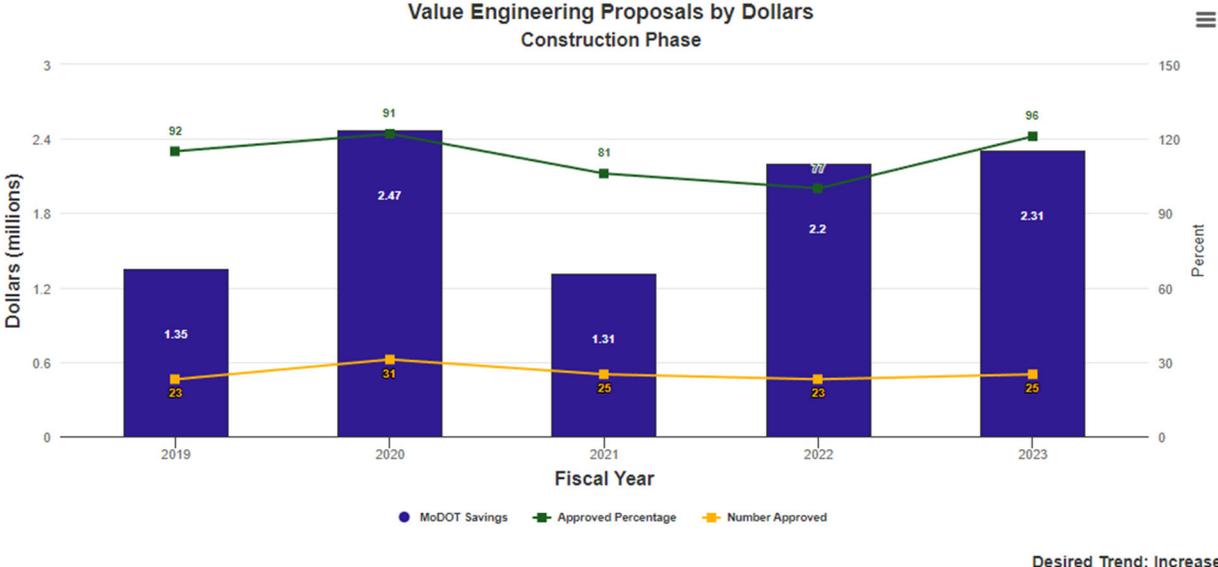
## Innovative contracting and value engineering – 3f



2023 Target: Above 10%



Target: 25%



**Write up:**

MoDOT has delivered more than \$3 billion in Design-Build contracts that saved taxpayers over \$359 million and were completed more than 111.5 months ahead of schedule. MoDOT leads the nation in partnering with the public and private sectors to deliver projects that maximize available resources into collaborative solutions that achieve goals. MoDOT’s Innovative Contracting Program includes Design-Build, A + B Contracting, Fixed Price Variable Scope and Design-Bid-Build using Alternate Technical Concepts (ATC).

In fiscal year 2023, one Design-Build project was awarded in the Southeast District. The Chester Bridge Design-Build Project includes replacement of the existing 1930’s bridge which spans the Mississippi River, connecting the cities of Perryville, Missouri and Chester, Illinois via Missouri Route 51/Illinois Route 150. This major river bridge is vital to agricultural traffic, area industries and travelers. The new Chester Bridge will upgrade this vital connection between Missouri and Illinois, reducing the number of flood-related closures to better serve today’s traffic. MoDOT used innovative contracting to deliver six of 457 projects in fiscal year 2023, accounting for approximately 16.1% of the \$1.8 billion program. The target of 10% of the annual program for use of innovative contracting was achieved.

MoDOT pursues value throughout the life of a project utilizing the Value Engineering Program and uses design-phase value analysis to identify opportunities for innovation, reduce project costs and improve project flexibility. MoDOT analyzed 26% of projects during design phase in FY 23. MoDOT also partners with industry to find more cost-effective solutions during the construction phase. MoDOT approved 25 Value Engineering Change Proposals at a 96% approval rate, resulting in a savings of \$2.31 million. The target to review 25% of projects in the design-phase, and the target for increasing VECP savings from the previous year were both met this reporting period.

**Purpose:**

This measure tracks the use of innovative contracting methods on MoDOT projects including: Design-Build contracts, A+B contracts, Fixed Price Variable Scope contracts, and Alternate Technical Concept contracts. This measure also tracks the use of value engineering during design and construction on traditional MoDOT projects including: value analysis during the design phase and construction value engineering proposals.

**Measurement and Data Collection:**

MoDOT projects utilizing innovative contracting methods are reported during the fiscal year in which they are awarded. Contract award values are collected through MoDOT's bid opening summaries and project records.

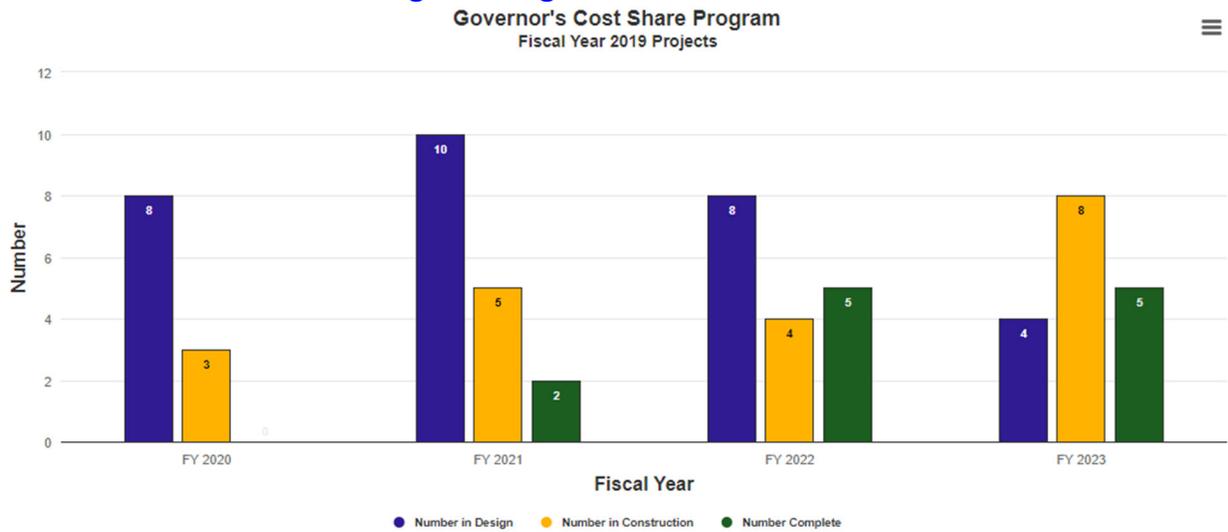
A target of 10% of the programmed Statewide Transportation Improvement Program, or two projects per year, is an appropriate target for utilizing innovative contracting methods in Missouri.

Information on value analysis during design is gathered from MoDOT's Statewide Transportation Improvement Program information management system.

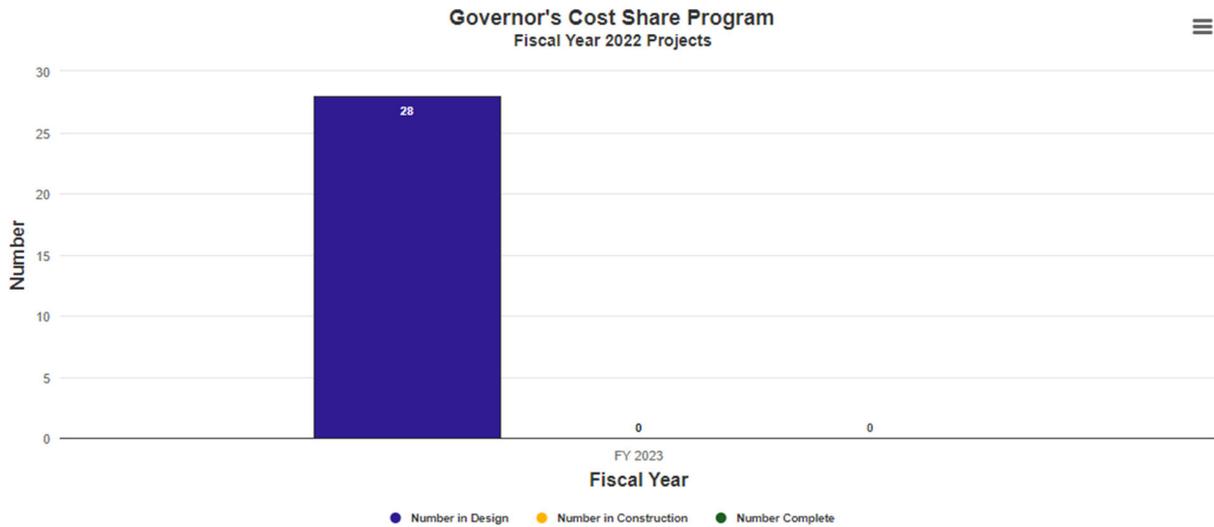
Construction value engineering change proposal information is gathered from Value Engineering data is collected through MoDOT's Value Engineering Proposal database.

<https://www.modot.org/design-build-information>

## Governor’s Cost Share Program – 3g



Target: 100% Completed



Target: 100% Completed

### Write up:

This measure tracks the progress made on the Governor's Transportation Cost Share program. This program was initiated by Gov. Mike Parson to build partnerships with local communities to pool efforts and resources to deliver road and bridge projects. The fiscal year 2019 program will deliver 17 projects and FY22 program will deliver 28 projects.

The Governor's Transportation Cost Share Program started in FY19. The program will be complete when all projects have been constructed. The number in progress will vary as new projects are started and others are completed. For the FY19 program during this reporting period, five projects have been completed, eight projects are in construction and four have started design work. For the FY22 program during this reporting period, 28 project have started design.

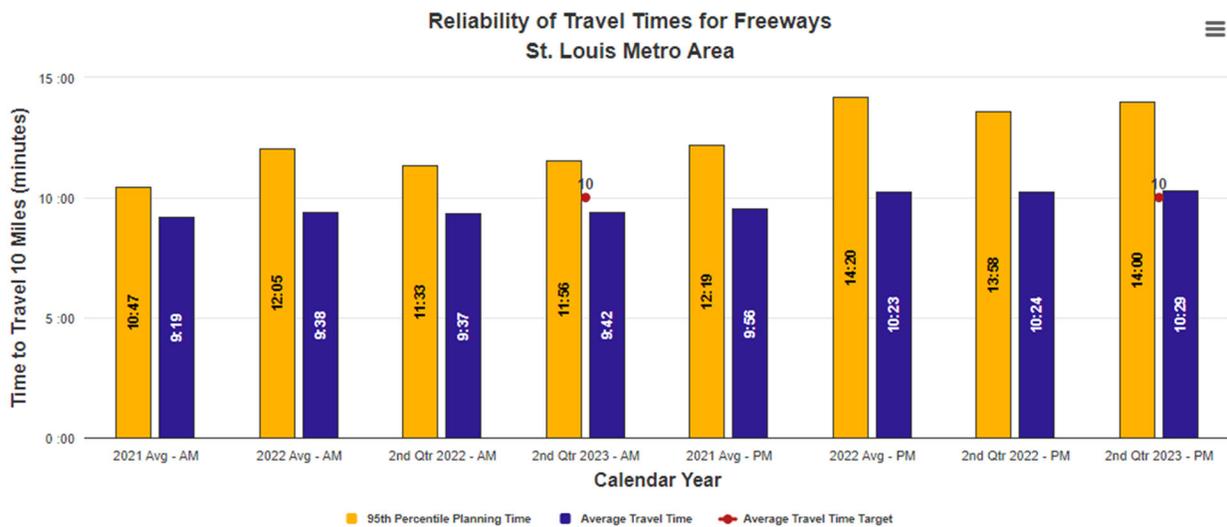
**Purpose:**

The purpose of this measure is to track the progress made on the Governor’s Transportation Cost Share Program. The measure will track the quarterly progress of projects based on their state of project delivery: design, construction and completion.

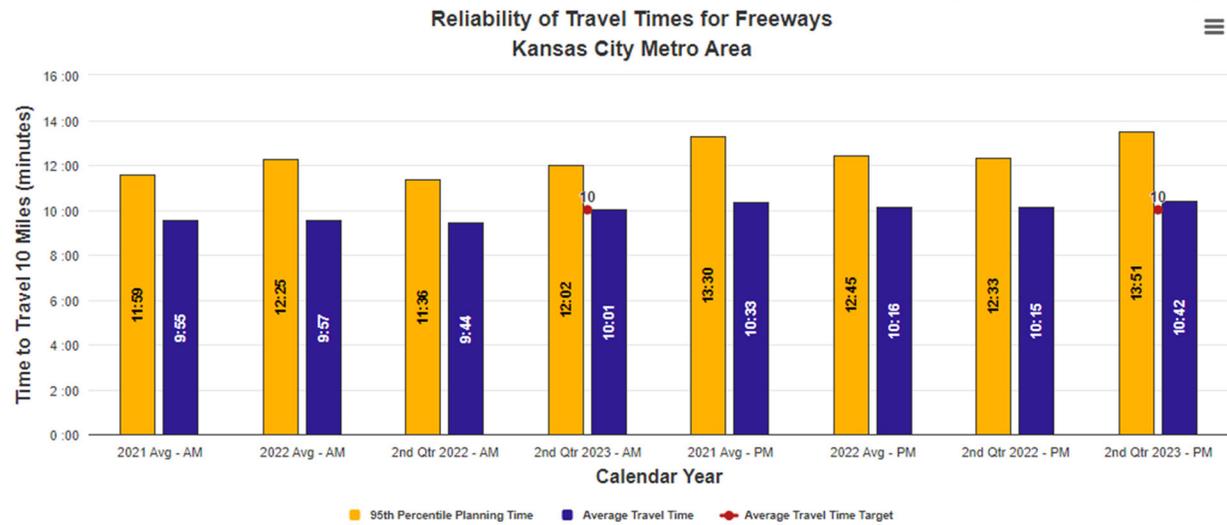
**Measurement and Data Collection:**

The data for this Tracker measure is collected from district staff that are responsible for oversight of the projects. Projects delivery milestones are entered into a database that tracks the status of all Governor’s Transportation Cost Share projects.

**Travel times and reliability on major routes – 4a**

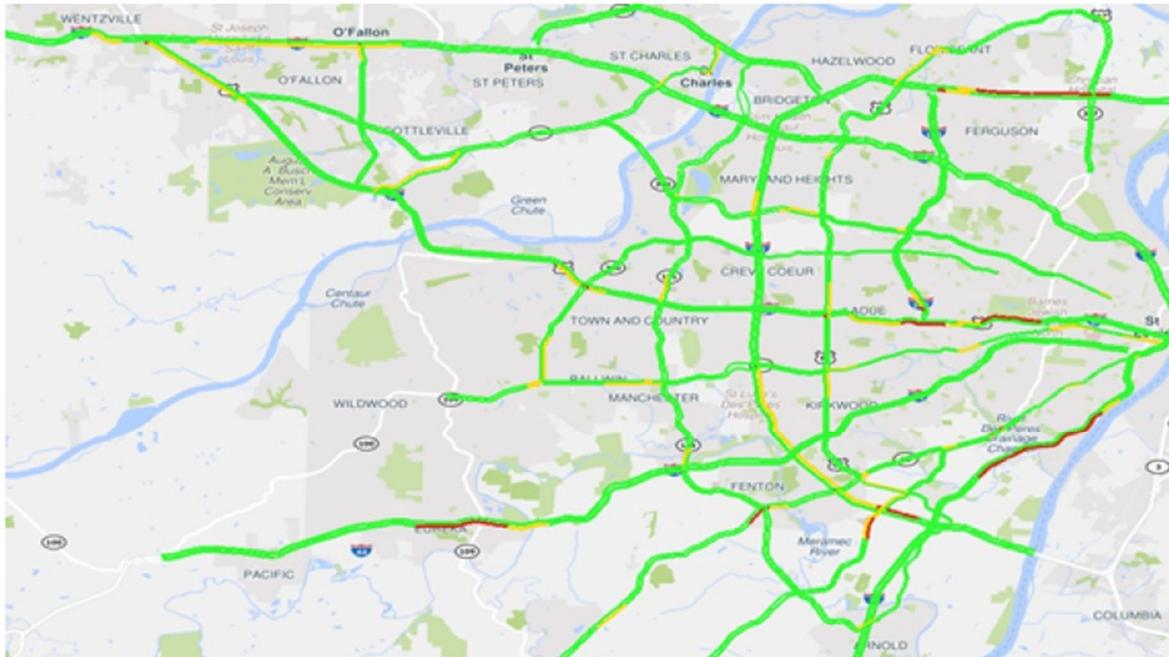


2nd Quarter Target: 10 min. a.m. - 10 min. p.m.

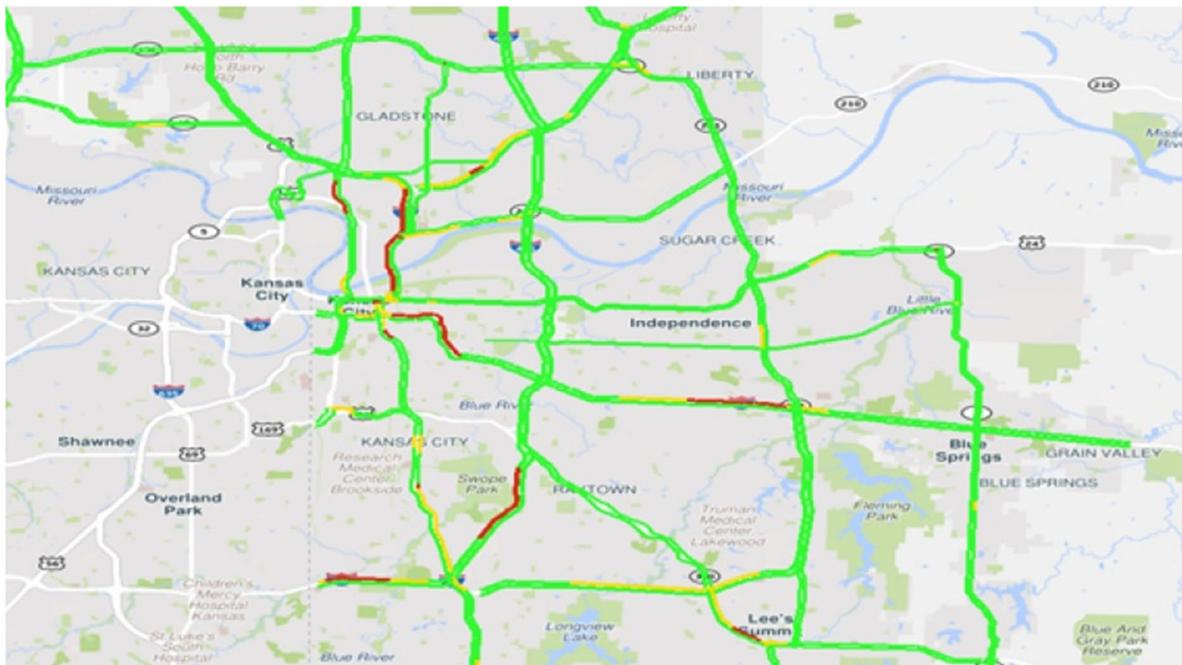


2nd Quarter Target: 10 min. a.m. - 10 min. p.m.

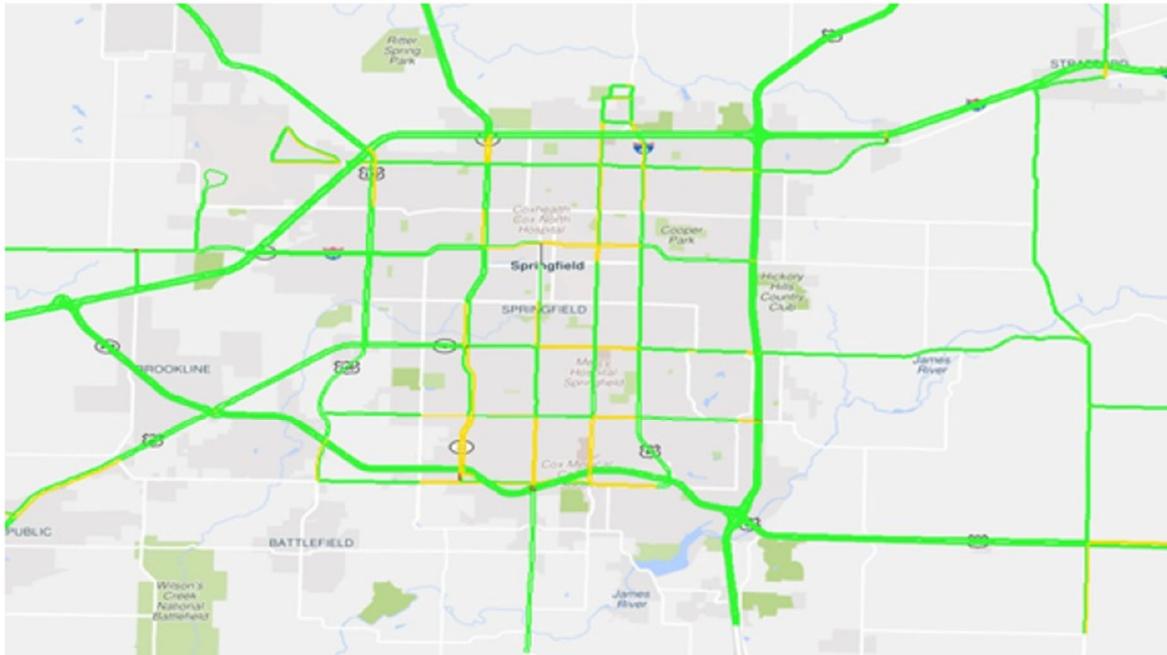
AM St. Louis



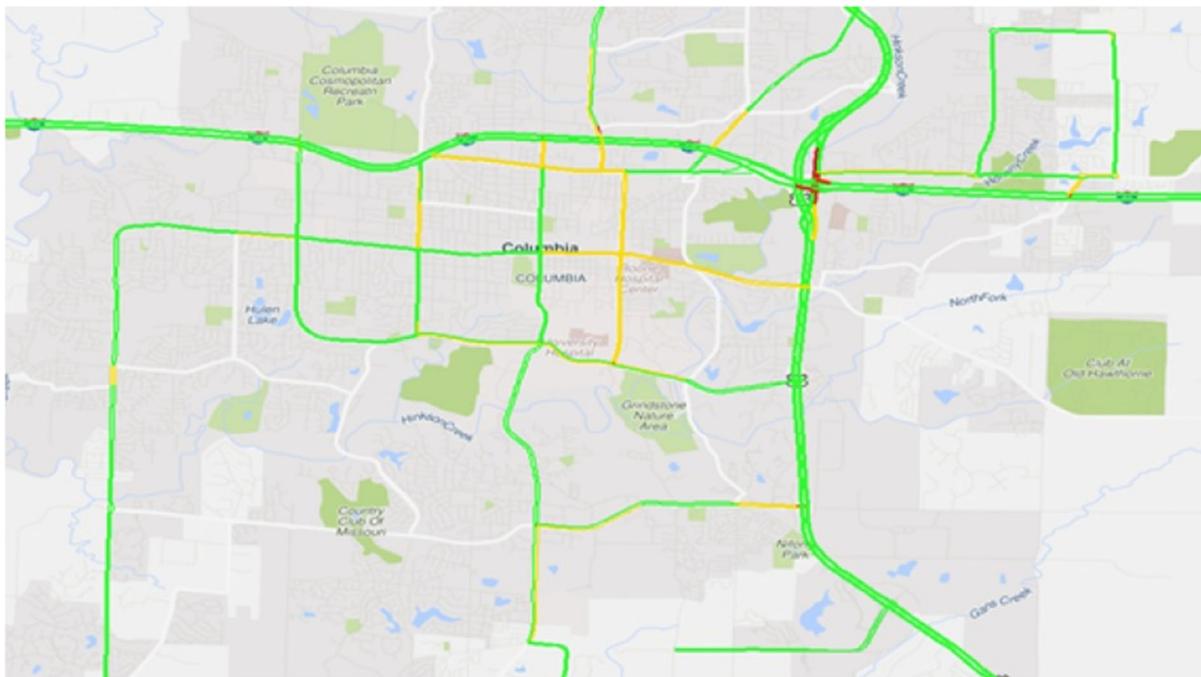
AM Kansas City



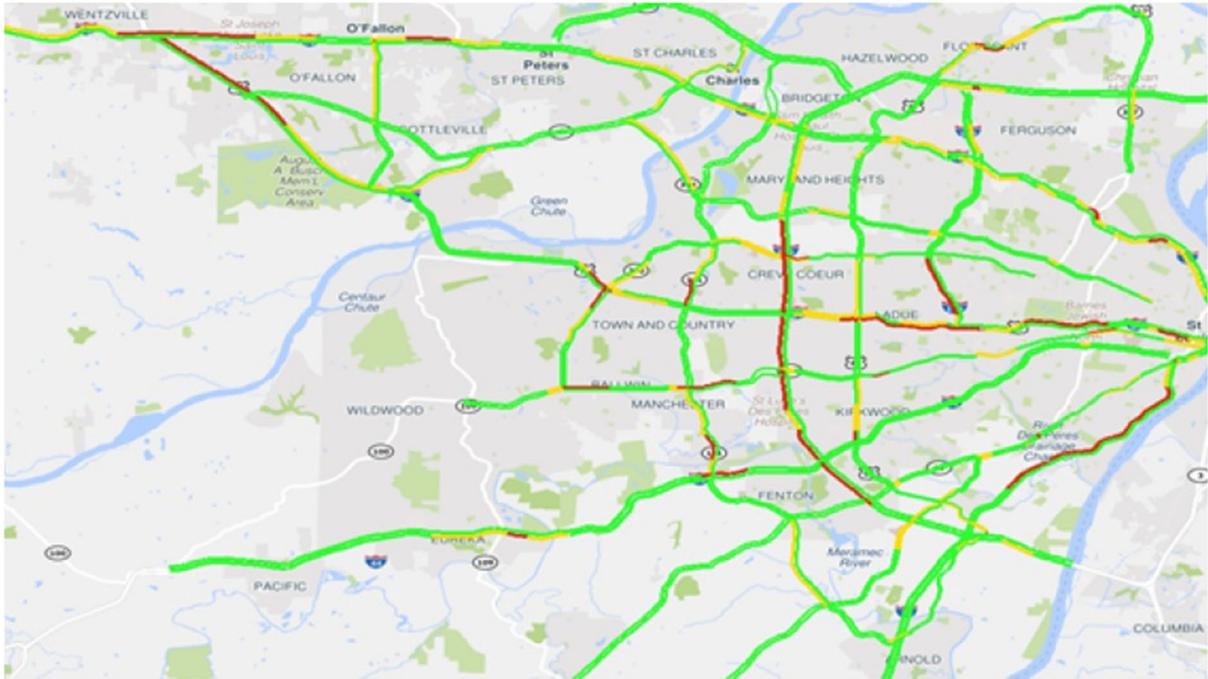
AM Springfield



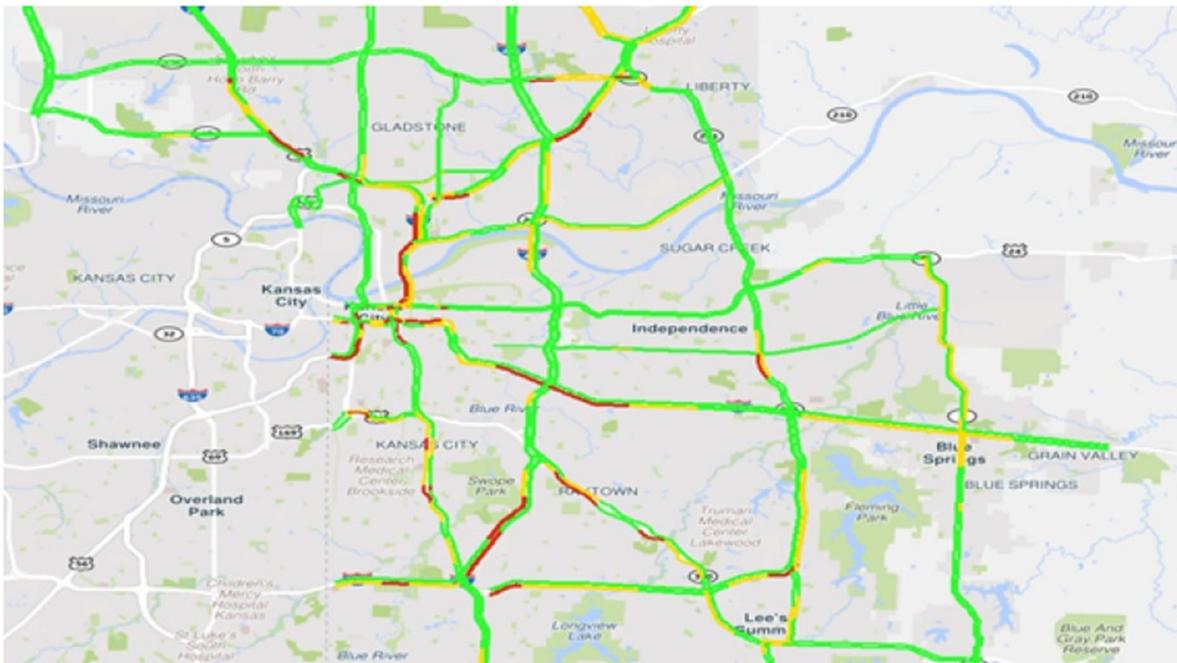
AM Columbia



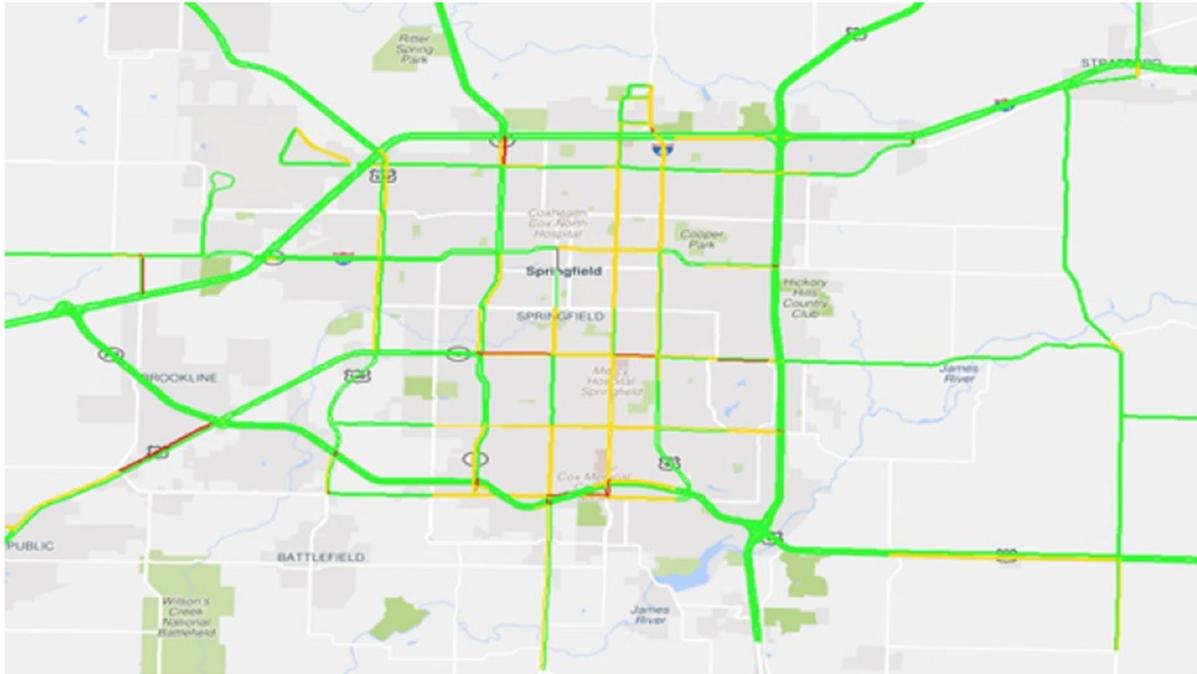
PM St. Louis



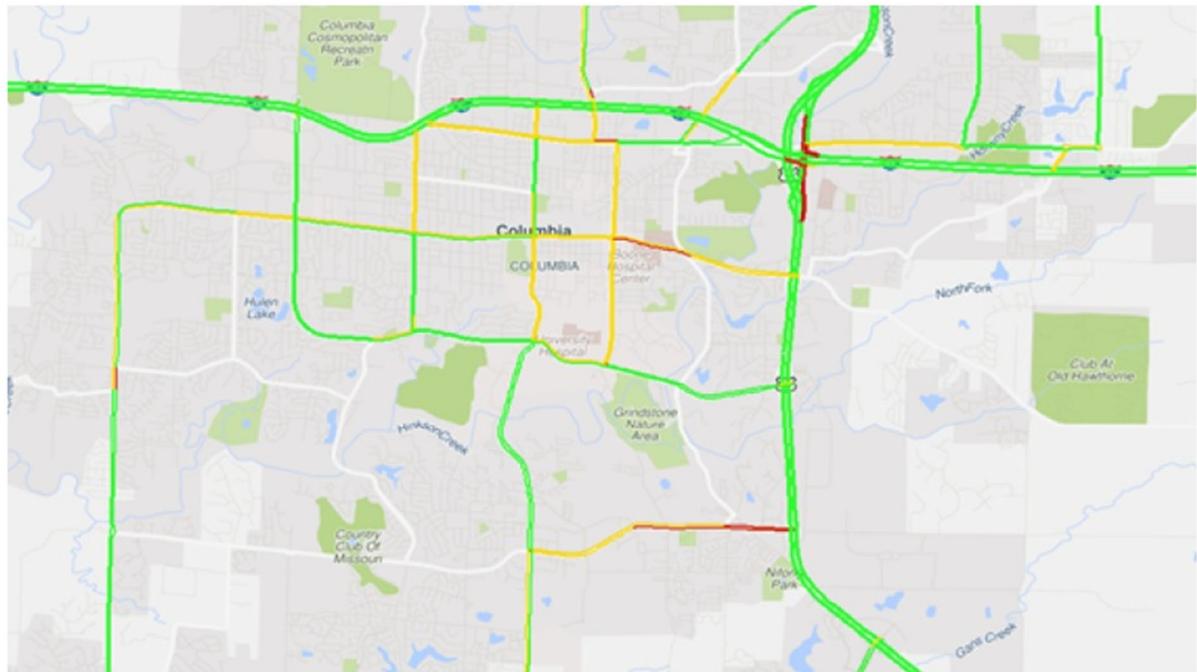
PM Kansas City



PM Springfield



PM Columbia



**Write up:**

In the second quarter of 2023, the average travel times were all higher than the second quarter of 2022. In the St. Louis region, average travel times increased by 5 seconds during the morning and evening peak periods. In the Kansas City region, the average travel time increased by 17 seconds during the morning peak and 27 seconds in the evening peak. Average speeds across both regions during both rush periods ranged from 56 to 62 mph. The morning average travel time was below the target in the St. Louis region and slightly above the target in the Kansas City region. Average travel times in the evening rush were above the target time in both regions.

Planning time accounts for unexpected delays and indicates how much time customers need to plan for their trip to arrive on time 95% of the time. In St. Louis, motorists traveling during morning rush needed to plan 1 minute, 56 seconds more for a 10-mile trip than they would otherwise need in free-flow conditions. During the evening rush period, customers needed to plan for an additional 4 minutes for a 10-mile trip. Customers traveling during the Kansas City morning rush needed to plan on an additional 2 minutes, 2 seconds for a 10-mile trip than they would need in free-flow conditions. During the evening rush, customers needed to plan for an additional 3 minutes, 51 seconds of travel. The planning times in both regions were higher than the second quarter of 2022. The planning times for both regions represent average rush-hour speeds between 43 and 50 mph.

**Purpose:**

This measure tracks the mobility of significant state routes in St. Louis, Kansas City, Springfield, and Columbia.

**Measurement and Data Collection:**

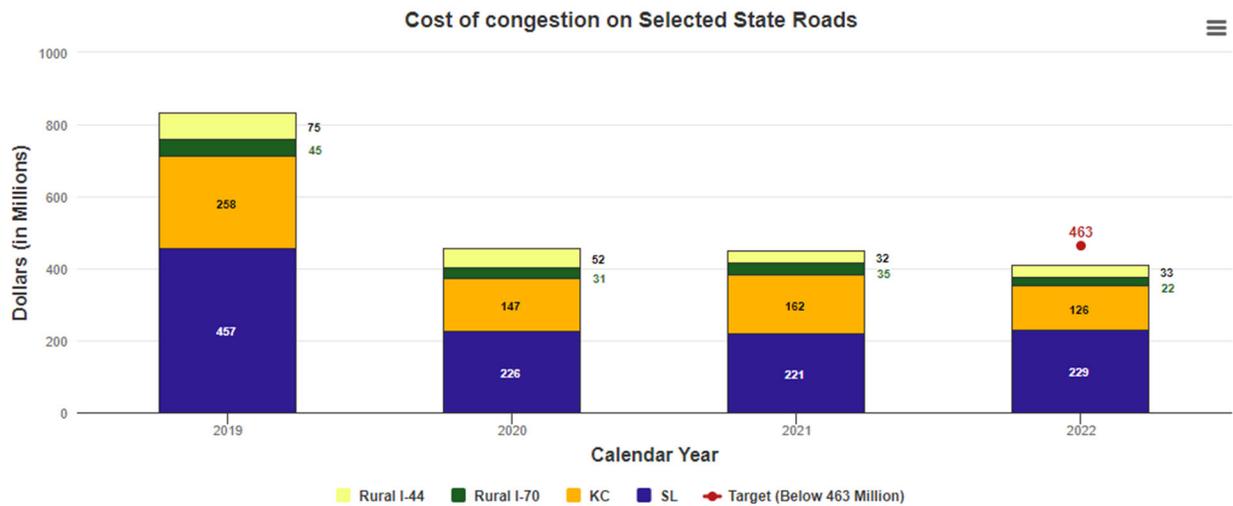
Travel time data is collected continuously via wireless technology. To assess mobility, MoDOT compares travel times during rush hour to free-flow conditions where vehicles can travel at the posted speed limit. This measure also assesses reliability, an indicator of how variable those travel times are on a daily basis.

The charts in this measure show the average travel time and the 95th percentile travel time, which is the time motorists should plan in order to reach their destinations timely 95% of the time.

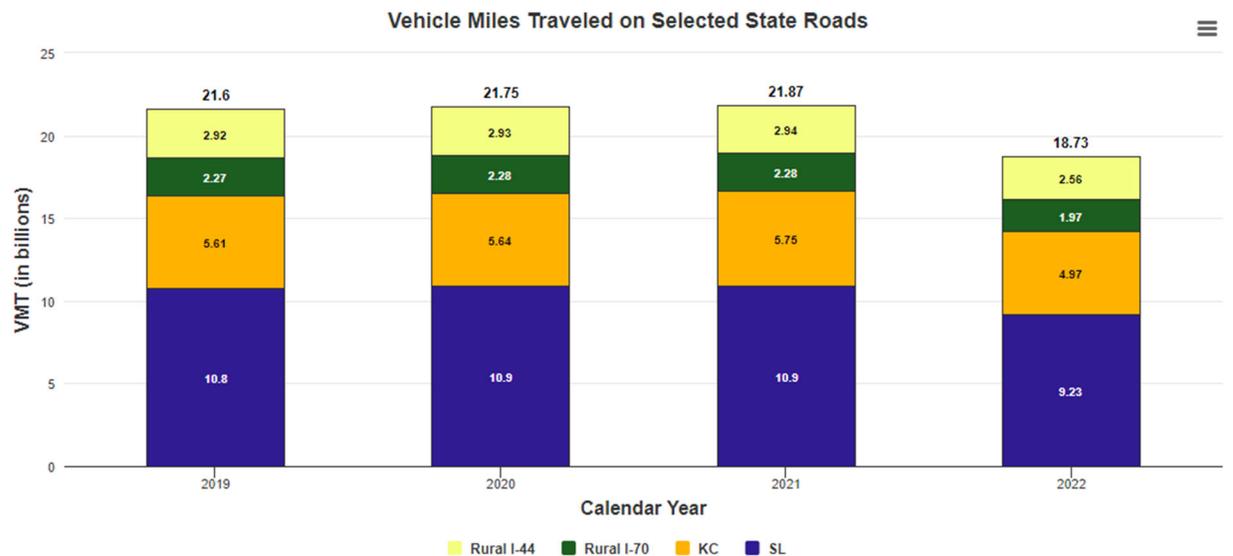
The maps display the reliability of specific sections of roadways during rush hour.

The targets for average travel time are updated quarterly. The targets are established by projecting a 10% improvement over the average of the same quarter over the previous two years. The minimum value for the target time is 10 minutes. This corresponds to the time it takes to travel 10 miles at the posted speed limit of 60 miles per hour.

## Cost & impact of traffic congestion – 4b



Target: Below 463 Million



### Write up:

Recurring congestion comes at regular times, although the traffic jams are not necessarily consistent day-to-day. Nonrecurring congestion is an unexpected traffic crash or natural disaster that effects traffic flow. When either form of congestion occurs, the time required for a given trip becomes unpredictable. This unreliability is costly for commuters and truck drivers moving goods which results in higher prices to consumers.

While the desired trend for both costs is downward, challenges exist in Missouri’s metropolitan regions and major truck freight corridors that continue to threaten this positive outcome. A comprehensive look at congestion that goes beyond typical solutions of adding capacity is needed. Using smarter technology to help guide motorists is a must. Still, the desired outcome is to lower congestion costs and demonstrate that traffic is moving more efficiently.

This report looks at the 2019 to 2022 cost of congestion in the urban areas of Kansas City and St. Louis, as well as rural I-44 and I-70 across the state. The 2022 target for statewide congestion cost was \$463 million. The actual calculation from the Regional Integrated Transportation Information System data for 2022 was \$410 million. A significant reduction in travel occurred in 2022 due to record fuel costs. This led to a 14% reduction in vehicle miles traveled and \$40 million less in congestion costs when compared to 2021.

Total congestion costs decreased \$40 million when all measured areas are considered. Motorists continue to utilize hybrid and remote work arrangements; congestion patterns have not stabilized in the urban centers.

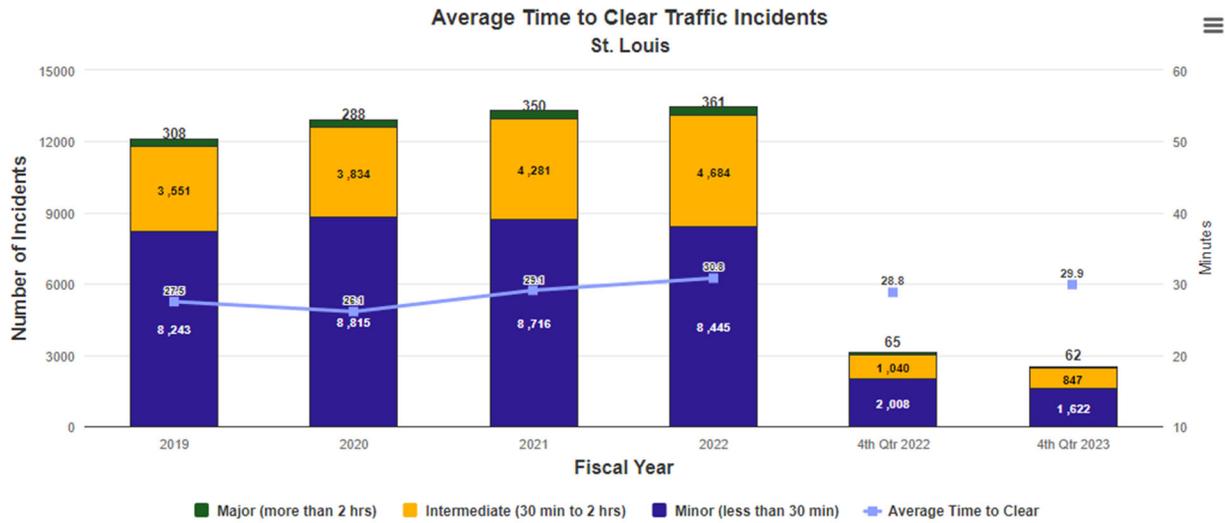
**Purpose:**

This measure tracks the annual cost and impact of traffic congestion to motorists for user delays and vehicle miles traveled on select routes in the St. Louis and Kansas City regions as well as rural sections of Interstates 44 & 70.

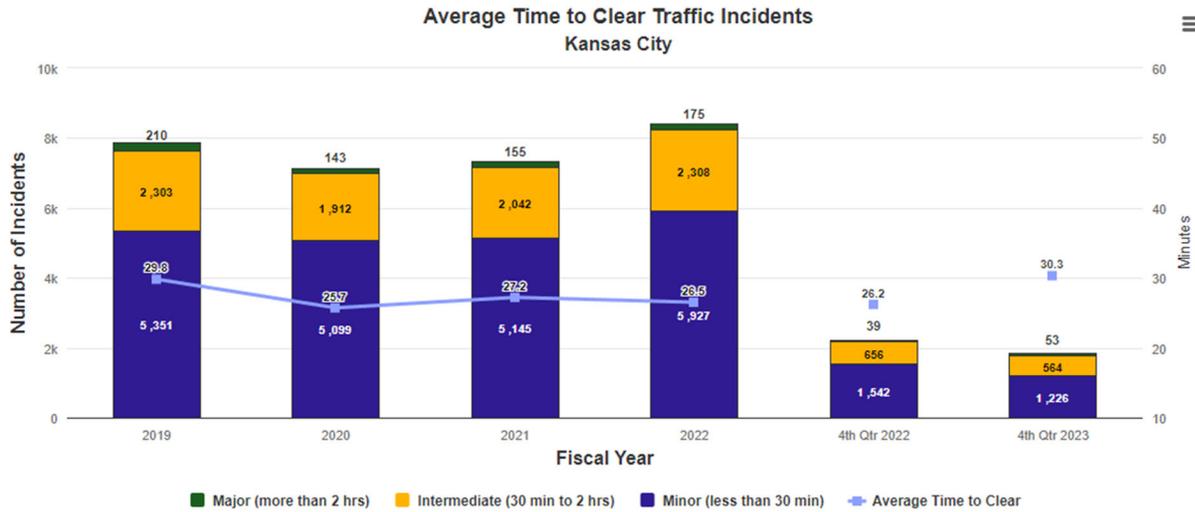
**Measurement and Data Collection:**

A reporting tool available in the Regional Integrated Transportation Information System looks at user delay costs. This data, in combination with industry standard costs for passenger cars and trucks, reflects the overall costs of congestion. RITIS also includes historic data so trend lines can be tracked and evaluated. The unit cost per passenger car is \$19.64 per hour and is obtained from the US Bureau of Labor Statistics. The unit cost per truck is \$66.87 obtained from the American Transportation Research Institute, which specializes in tracking freight mobility and provides the best source of data related to freight costs. For previous reporting, the department used data provided by the TTI, which annually produces the Urban Mobility Report. The target for this measure is updated annually in April and is established by projecting a 10% improvement over a 4-year average.

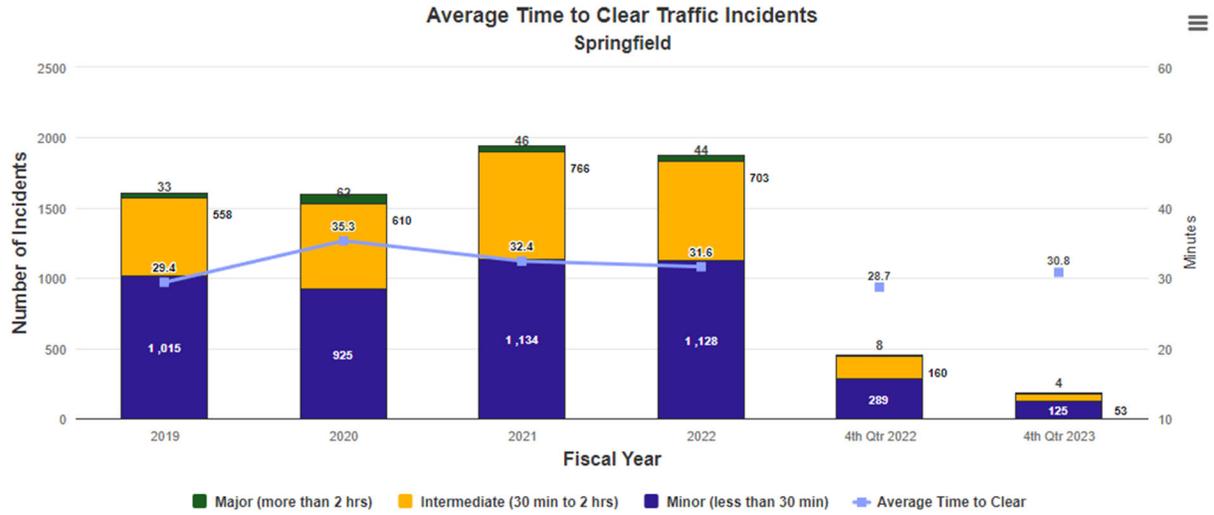
## Average time to clear traffic incident – 4c



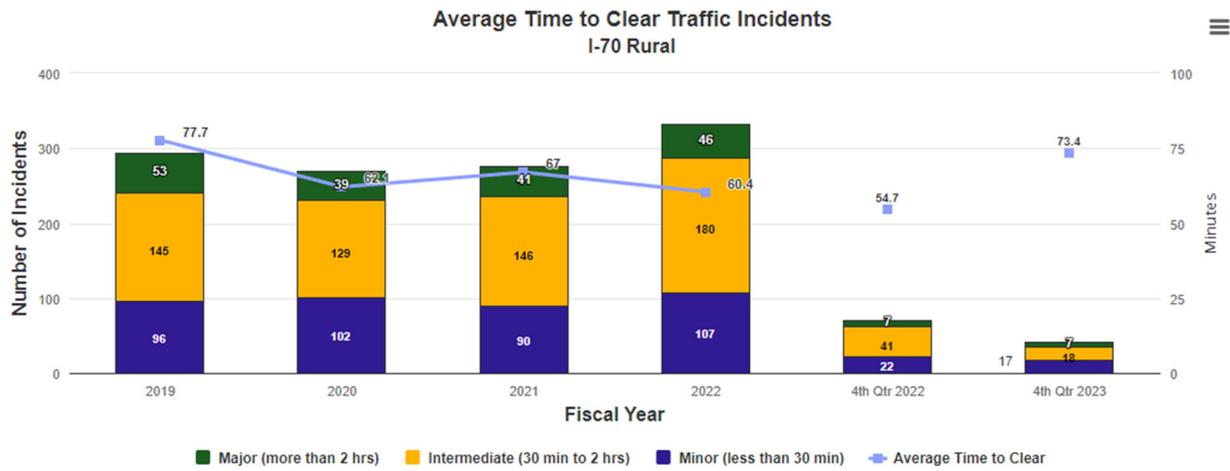
2023 Target: Below 25.1 Minutes to clear



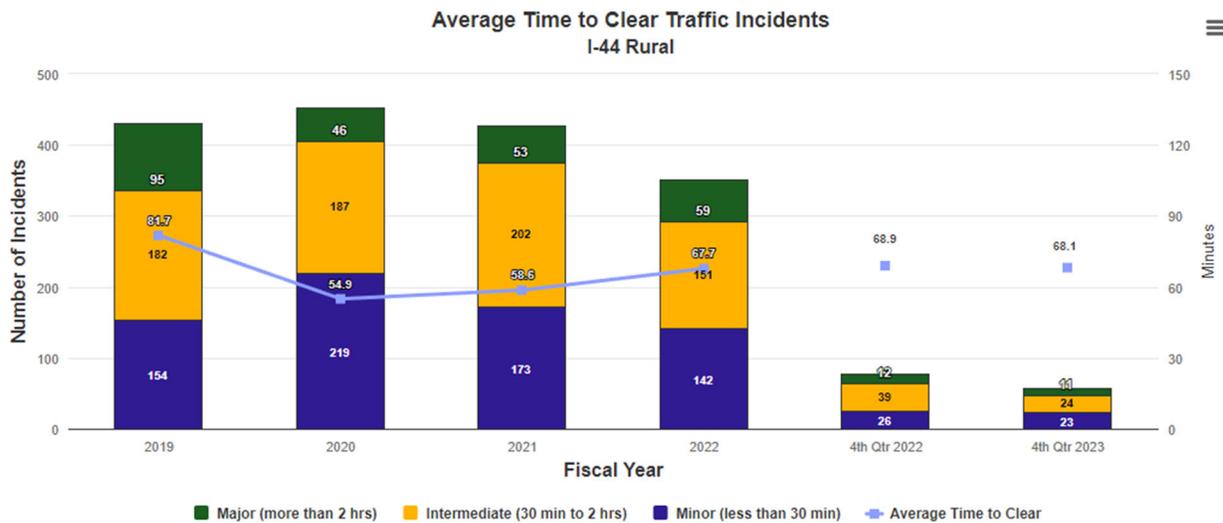
2023 Target: Below 24.9 Minutes to clear



2023 Target: Below 29.2 Minutes to clear



2023 Target: Below 60.9 Minutes to clear



2023 Target: Below 62.5 Minutes to clear

**Write up:**

A traffic incident is an unplanned event that blocks travel lanes and temporarily reduces the number of vehicles that can travel on the road. The speed of incident clearance is essential to the highway system returning to normal conditions. Responding to and quickly addressing the incident (crashes, debris and stalled vehicles) improves system performance.

There were issues with the data that was captured in the Advanced Traffic Management System software in Springfield and St Louis areas, so it's believed there are some inaccuracies with the number of incidents that are reported for those areas. Additionally, the data that is being presented has been changed from Calendar Year to Fiscal Year (FY).

St. Louis recorded 2,531 traffic incidents with an average time of 29.9 minutes to clear those incidents in the fourth quarter of FY 2023. Compared to the same period in 2022, there was a decrease of 18.7% in the number of incidents and an increase of 3.8% in clearance times.

Kansas City recorded 1,843 traffic incidents with an average time of 30.3 minutes to clear those incidents in the fourth quarter of FY 2023. Compared to the same period in 2022, there was a decrease of 17.6% in the number of incidents and an increase of 15.6% in clearance times.

Springfield recorded 182 traffic incidents with an average time of 30.8 minutes to clear those incidents in the fourth quarter of FY 2023. Compared to the same period in 2022, there was a decrease of 60.2% in the number of incidents and an increase of 7.3% in clearance times.

Rural counties of I-70 between MM 28 (Oak Grove) to MM 203 (Foristell) recorded 42 incidents and an average clearance time of 73.4 minutes in the fourth quarter of FY 2023. Compared to the same period in 2022, there was a decrease of 40.0% in the number of incidents and an increase of 34.2% in clearance times.

Rural counties of I-44 between MM 0 (Oklahoma) to MM 69 (Springfield) and MM 91 (Strafford) to MM 224 (Sullivan) recorded 58 incidents and an average clearance time of 68.1 minutes in the fourth quarter of FY 2023. Compared to the same period in 2022, there was a decrease of 24.7% in the number of incidents and a decrease of 1.2% in clearance times.

This reporting period saw a decrease of 21.8% in traffic related incidents captured in MoDOT's Advanced Traffic Management System in the combined measured areas and an overall increase of 12.2% in clearance times.

There has been a trend recently where the number of crashes has decreased in the urban areas while the clearance times have increased. Reduced staffing levels has been referenced before as a contributing factor in the increase in clearance times, but one that hasn't been referenced yet is the increase in safety precautions for the Motorist Assist Operators. These include providing adequate protective vehicles and TMAs to protect workers clearing items from the roadway and working in pairs, whereby reducing the number of incidents that they can respond to. Additionally, new Typical Applications

are being developed to provide further traffic control guidance and safety to them when providing assistance to motorists and clearing traffic crashes. A trend that has caused closures and delays to the traveling public is an increase in over dimension and overweight loads that have hit or damaged bridges and traffic signal infrastructure. A research project has just kicked off that will be looking at effective methods to safely communicate with Commercial Motor Vehicles that could potentially reduce these types of incidents.

**Purpose:**

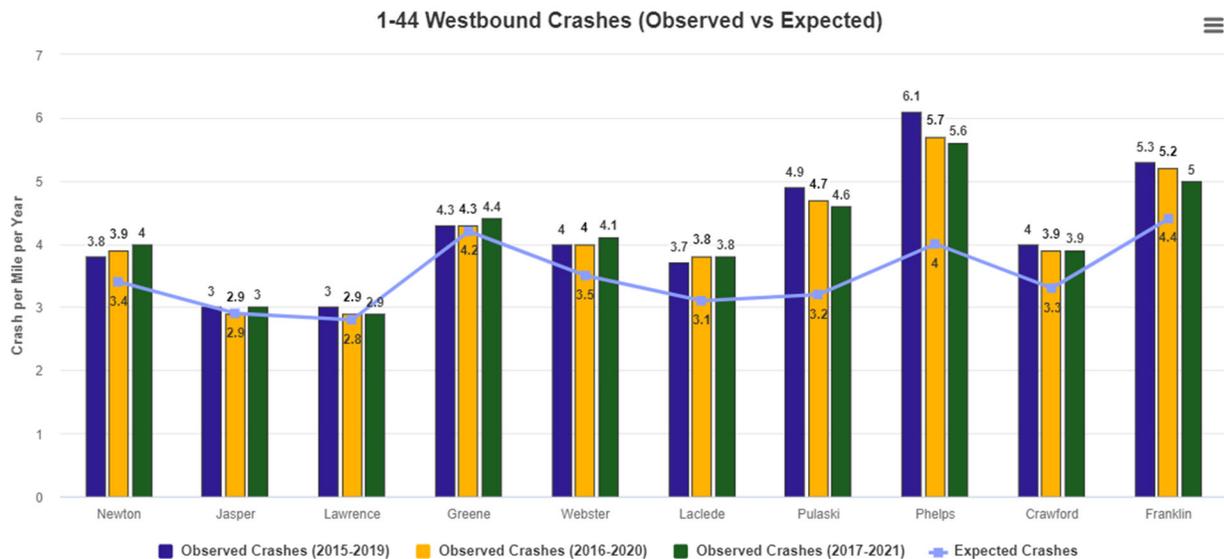
This measure is used to determine the trends in incident clearance on the state highway system.

**Measurement and Data Collection:**

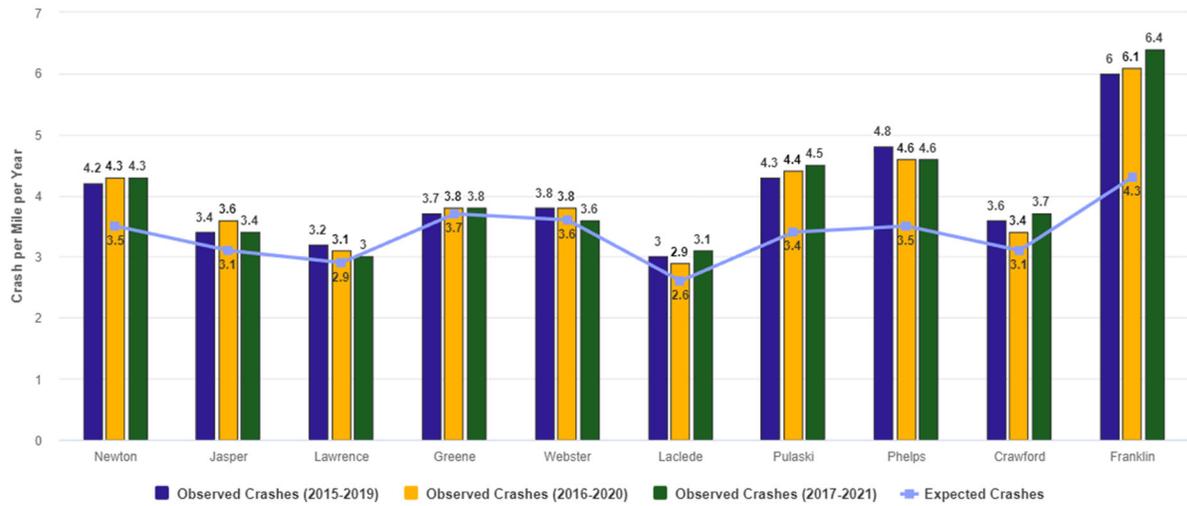
Advanced transportation management systems are used by the St. Louis, Kansas City and Springfield traffic management centers to record incident start time and the time when all lanes are declared cleared. Traffic incidents can be divided into three general classes of duration set forth by the Manual on Uniform Traffic Control Devices that include minor, intermediate and major incidents. Each class has unique traffic control characteristics and needs.

This target is established by projecting a 10% improvement over a 5-year average.

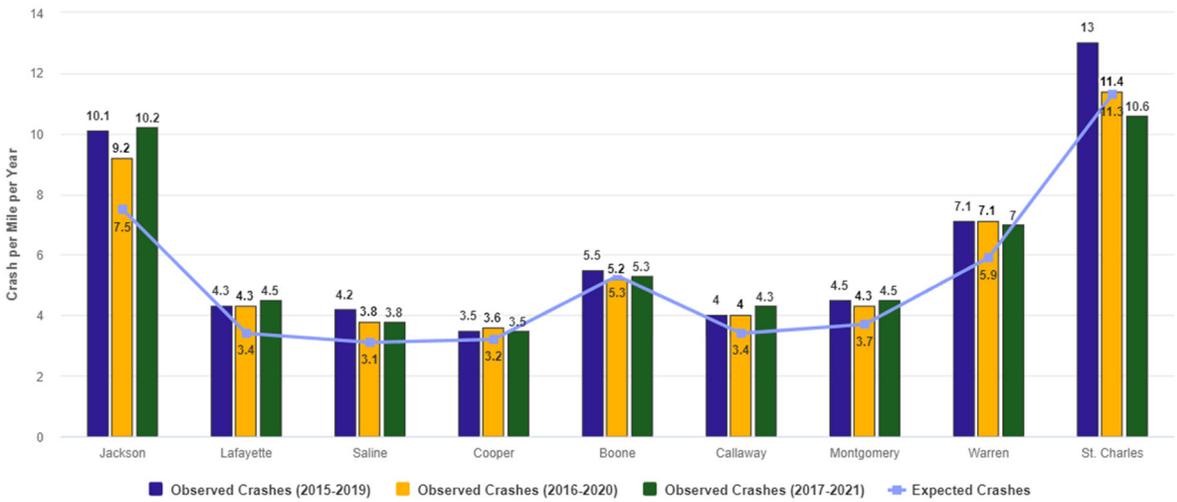
**Unplanned incident impacts on major interstate routes - 4d**



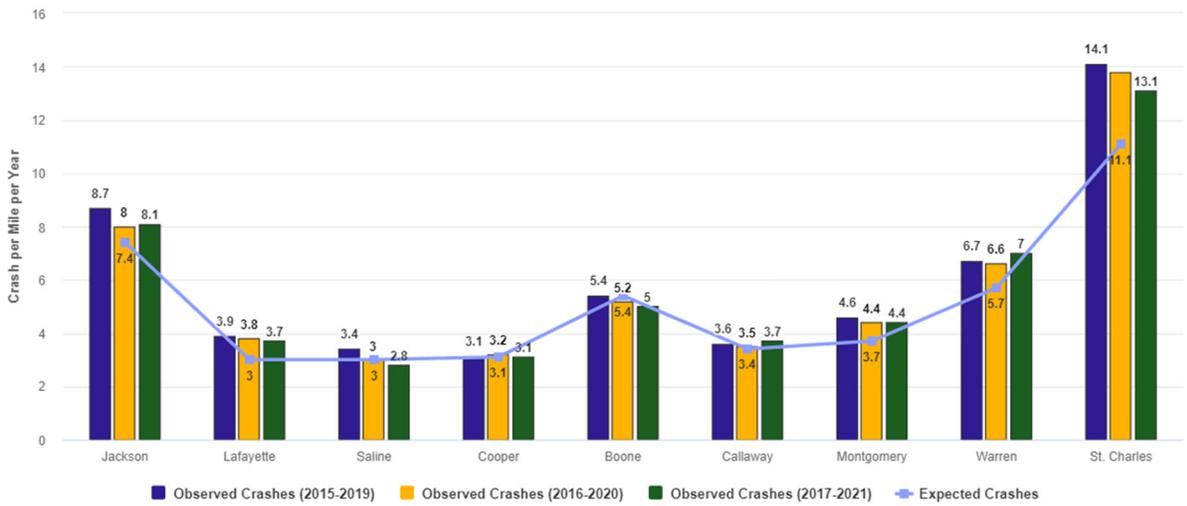
1-44 Eastbound Crashes (Observed vs Expected)



1-70 Westbound Crashes (Observed vs Expected)



1-70 Eastbound Crashes (Observed vs Expected)



**Write up:**

Interstates connect the nation and keep people and commerce flowing. When interstates shut down in Missouri, the country is cut in half. Keeping interstates flowing is a top priority for MoDOT, but sometimes unplanned incidents affect the department's ability to keep the interstates moving. An unplanned incident can be weather related, emergency road repairs, traffic crashes or other incidents.

Of the types of unplanned incidents that can occur, traffic crashes create most of the impacts. Using the nationally adopted Highway Safety Manual, an expected crash number is established for each direction of I-70 and I-44 per county. The expected crash number is determined by the traffic volume, roadway characteristics (e.g. number of lanes, lane width, shoulder width, roadway alignment, etc.), calibration factors to local conditions and reported crash data over a 5-year period. The expected crash number provides a glimpse into the number of crashes one could expect to occur and help identify opportunities for improvement. When the number of observed, real world crashes is higher than the expected crash number, this could indicate an opportunity for enhancements to reduce the frequency of crashes. Identifying these locations can help the department prioritize locations for improvements.

In most counties, the interstates have a safety performance similar to what is expected. However, there are some counties where there may be opportunity to reduce the frequency of crash incidents, such as along I-44 in Pulaski and Phelps County. There have also been instances of success in reducing crash incidents, such as I-70 westbound in St. Charles County.

It should be noted that crashes overall in Missouri were lower in 2020 compared to previous years due to reduced travel associated with the pandemic. However, for this measure, the observed crash data is reported in 5-year averages, minimizing the influence of this unique event.

**Purpose:**

Measure the crash performance of I-44 and I-70 utilizing national analytical standards in order to identify locations which have an opportunity for positive change.

**Measurement and Data Collection:**

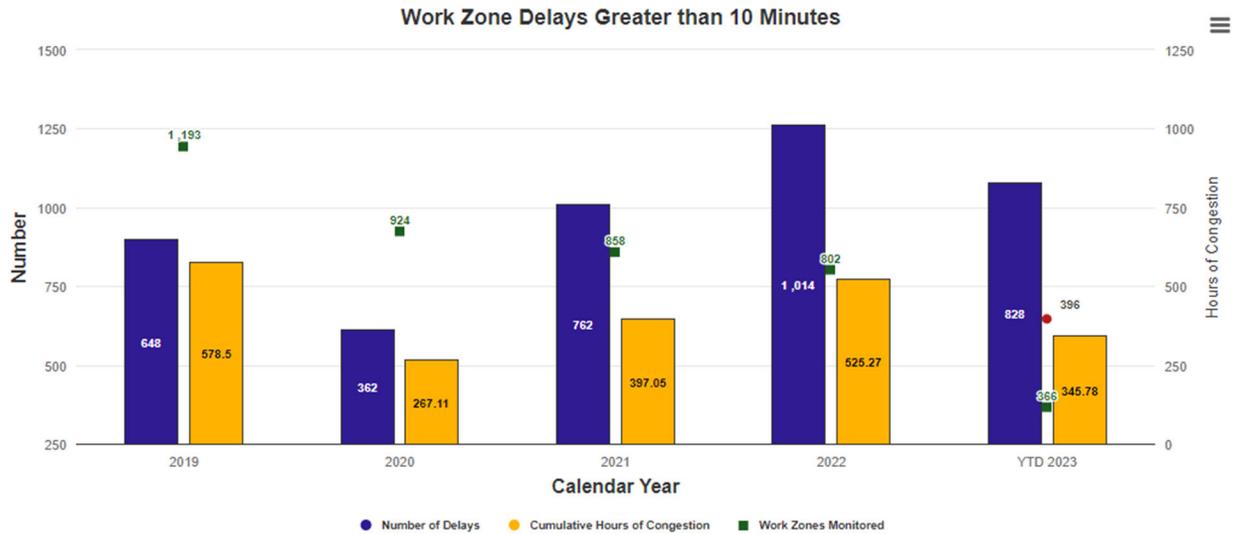
The limits of the interstates analyzed are as follows:

I-44: Oklahoma State Line to Route 100 in Gray Summit

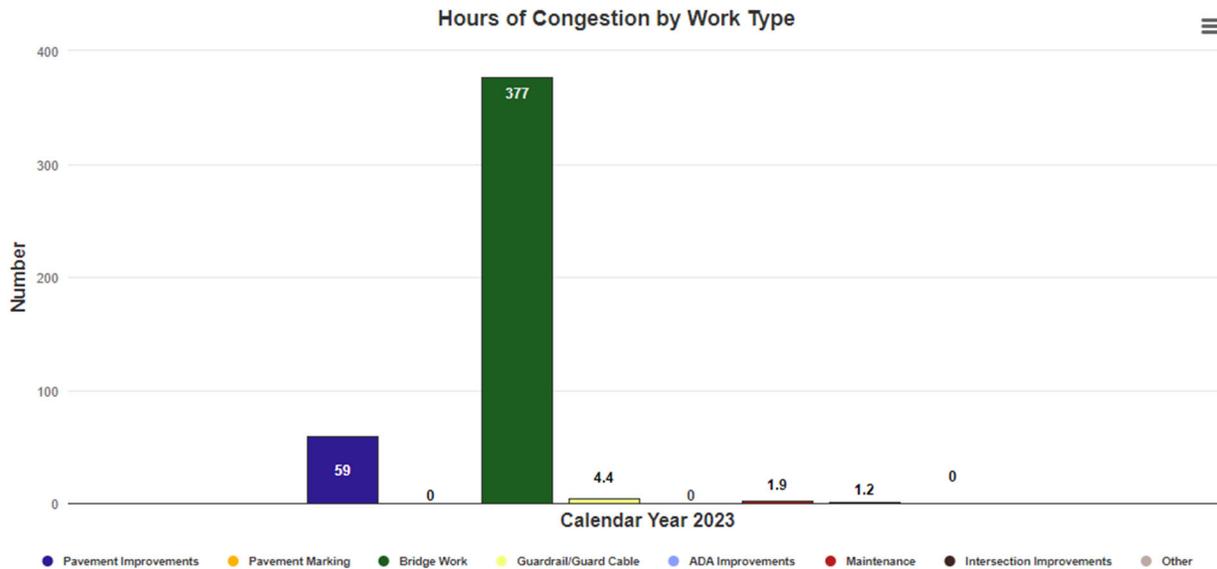
I-70: Route 7 in Blue Springs to Route Z in Wentzville

Observed crashes are pulled from MoDOT's Transportation Management System and represent all reported crashes which occurred between the limits on each interstate. The miles used to determine the crash per mile are also pulled from MoDOT's Transportation Management System. Expected crash per year per mile numbers were calculated using the ISATE spreadsheets developed with the American Association of State Highway Transportation Officials Highway Safety Manual.

## Work zone delays to the traveling public – 4e



Target: Below 396 Hours of Congestion per Year



### Write up:

Motorists want to travel through work zones with as little inconvenience as possible. MoDOT tries to minimize travel impacts by shifting work to times when there are fewer impacts to the traveling public. Other strategies include using technology in work zones, providing valuable information to customers and innovative uses of traffic control devices to promote efficient traffic flow. To measure the effectiveness of these strategies, MoDOT monitors the performance of work zones with the greatest potential to impact traffic each quarter. The goal is to minimize the number of times a work zone creates a traffic delay of 10 minutes or more.

Through the second quarter of 2023, MoDOT has monitored 366 work zones consisting of 828 work zone delays of at least 10 minutes and total congestion of 346 hours. Increased traffic volumes continue to cause higher delay and congestion trends since 2020. When comparing 2023 YTD with 2022 YTD, there is 41% increase in the number of delays and 18% overall congestion increase.

This quarter, a bridge hit in Jasper County on I-44, I-270 design build project, and SL Bridge construction on I-55 are the biggest contributing projects causing 34 hours, 37 hours, and 83 hours of congestion respectively. These projects have contributed a total of 154 hours of the 256 hours (60%) of congestion this quarter. For the year, bridge improvement projects continue to be the largest contributor of delays at 86%.

The target for the cumulative work zone congestion statewide was set at 396, but is being reevaluated next quarter. The 396 is an average of the congestion from 2022-2023.

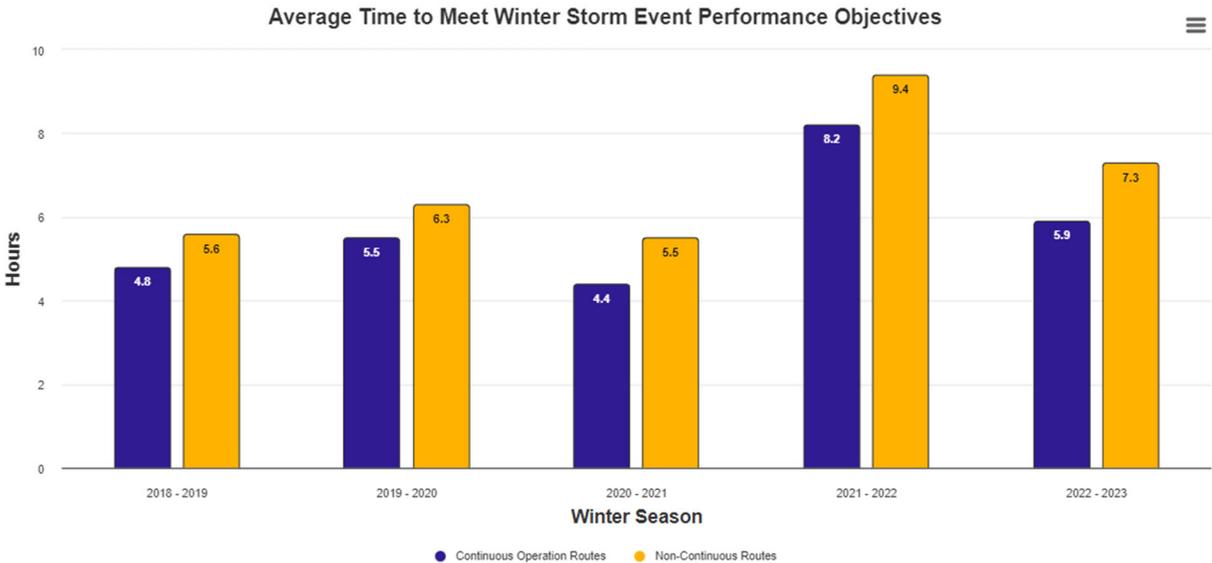
**Purpose:**

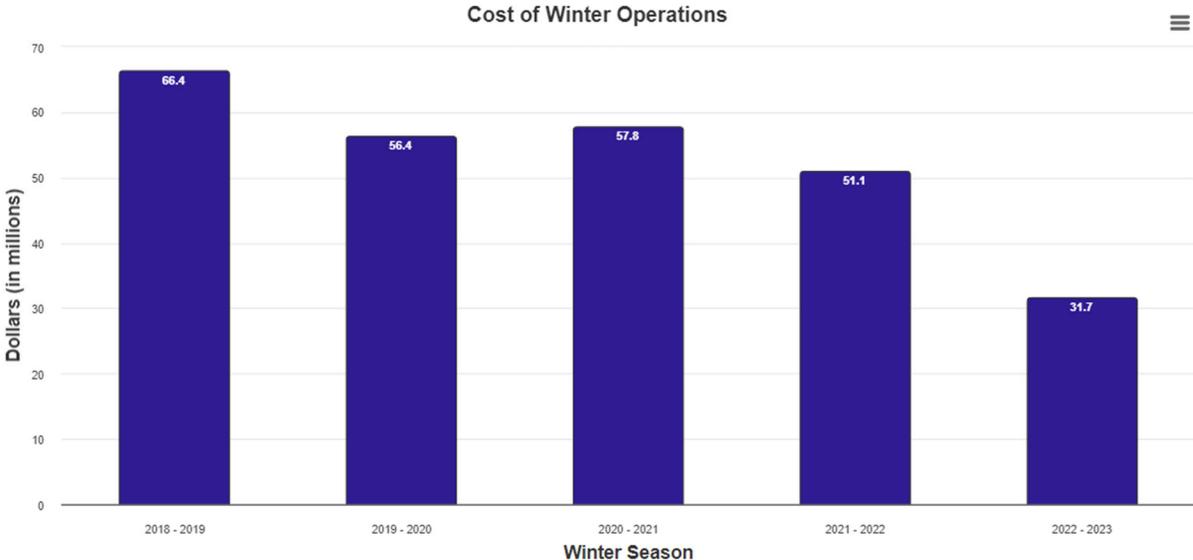
Work zones are designed to allow the public to travel through them safely and with minimal disruptions. This measure tracks the performance of significant work zones.

**Measurement and Data Collection:**

Work zone impacts are identified using automated data collection and visual observations. An impact is defined as the additional time a work zone adds to normal travel. Impacts resulting in a delay of at least 10 minutes are included in this report. The targeted hours of work zone congestion are based on previous years' data and an acceptable tolerance of 30 total minutes for work zone congestion statewide. The target for this measure is updated quarterly.

**Winter storm operations – 4f**





**Write up:**

Knowing the time it takes to clear roads after a winter storm can help the department better analyze the costs associated with that work. MoDOT’s response to winter events provides good customer service for the traveling public while keeping costs as low as possible. These efforts result in reduced traffic delays due to winter events and, more importantly, safer travel during these events. In recent years, MoDOT has been more aggressive in messaging the public urging them to travel only if necessary, during winter events. This messaging is in the form of social media posts and media releases. The last two seasons have been especially challenging due to MoDOT’s maintenance function being understaffed by several hundred employees. For the 2022-2023 season MoDOT’s maintenance function was understaffed by nearly 1,000 employees, several hundred more than the previous season. This information was communicated to the public along with the anticipation that it will take longer to clear the roads following a winter event. Overall, the 2022-2023 winter season was fairly mild in terms of total winter precipitation, however, there were a few significant events involving frozen precipitation or extremely low temperatures that extended the time to clear the roads after these storms. Even though these individual events were challenging and required shifting and sharing of resources statewide, MoDOT's overall time to meet winter objectives decreased from the previous season. For the 2022-2023 winter season MoDOT’s time for meeting objectives for continuous operations routes was 5.9 hours and 7.3 hours for non-continuous routes, representing a 29% and 23% improvement from the previous season, respectively.

On average, MoDOT'S winter operations have cost about \$51 million per year, over the last five years. MoDOT's cost for the 2022-2023 winter season was \$31.7 million, as of April 31, 2023.

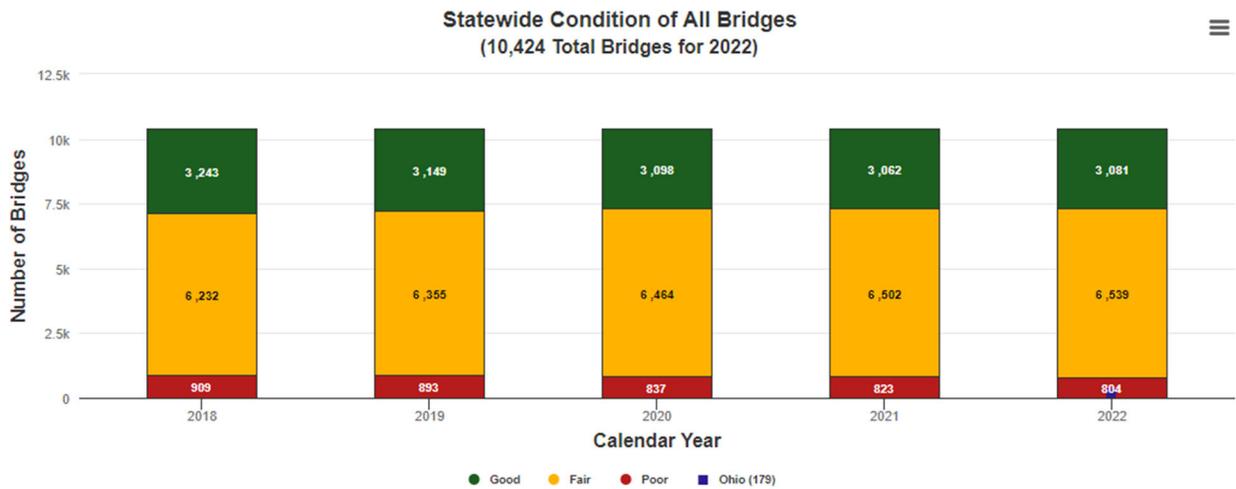
**Purpose:**

This measure tracks the amount of time needed to perform MoDOT’s snow and ice removal efforts. It also reviews the impacts of significant events and the measures taken to minimize these impacts.

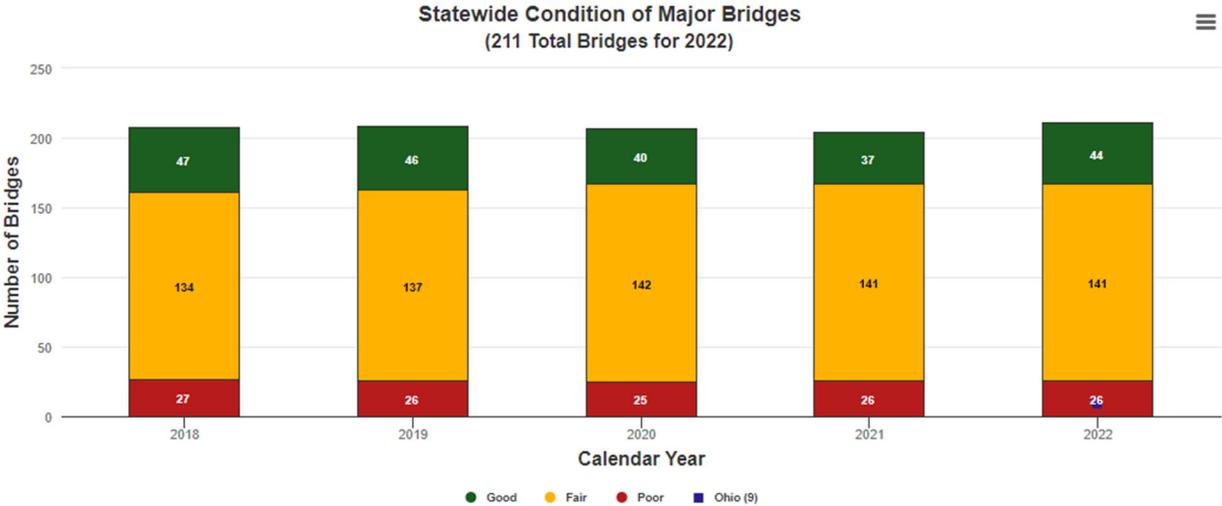
**Measurement and Data Collection:**

For major highways and regionally significant routes, the objective is to restore them to a mostly clear condition as soon as possible after the storm has ended. MoDOT calls these “continuous operations” routes. State routes with lower traffic volumes should be opened to two-way traffic and treated with salt or abrasives at critical areas such as intersections, hills and curves. These are called “non-continuous operations” routes. After each winter event, maintenance personnel submit reports indicating how much time it took to meet the objectives for both route classifications. For significant events, the Regional Integrated Transportation Information System is used to determine traveler delays and the associated costs in order to determine the magnitude of the impacts of these significant winter events.

**Condition of state bridges (all and major) – 5a**



Target: Below 900 Poor



Target: Below 20 Poor

**Write up:**

The public has indicated that the condition of Missouri’s existing roadway system should be one of the state’s highest priorities. Currently, 804 (26 major) structures are in poor condition, 6,539 (141 major) structures are in fair condition and 3,081 (44 major) structures are in good condition.

The number of structures in poor condition peaked at 922 in 2017 and is trending downward. The number of good condition structures has a declining trend but did increase in 2022. The number of fair condition structures has been increasing. The decrease in poor condition bridges is reflective of MoDOT’s Asset Management Program focus on poor structures through the Governor’s Focus on Bridges program as well as design-build projects and other Statewide Transportation Improvement Program (STIP) programming in various districts. The declining trend in good structures, as well as the increase in fair condition structures, is reflective of MoDOT’s aging bridge inventory with many structures needing minor maintenance or rehabilitation.

For major bridges, the number of structures in poor condition peaked in 2018 at 27 and is currently 26. The number of fair structures has remained the same for the last two years at 141. The number of good structures increased, which is reflective of three major STIP project investments that are currently under construction. Work on major bridges is expensive, with rehabilitations costing \$15 million to \$30 million and replacements ranging from \$40 million to \$300 million. Ohio has been selected for comparison, as its total of 10,436 (161 major) state highway bridges is only 12 more than Missouri. The two states also have similar demographics, geography and weather conditions.

MoDOT’s asset management goal for bridges is to keep the statewide total number of poor bridges at 900 or less and the number of poor major bridges at 20 or less.

**Purpose:**

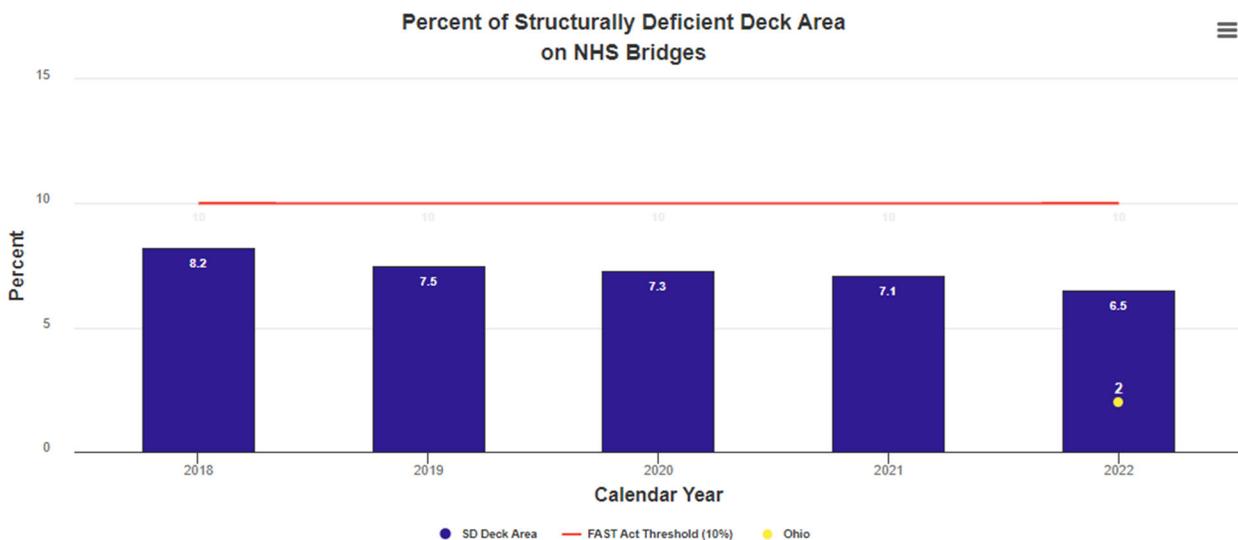
This measure tracks progress toward improving the condition of Missouri’s bridges.

### Measurement and Data Collection:

This measure is updated in July based on MoDOT inspections conducted the prior year. Data is presented for all state bridges and major bridges. Major bridges are those that are 1,000 feet long or longer. Of the 10,387 bridges on state highways, 204 are considered major bridges. Bridges are categorized as being in good, fair or poor condition in accordance with criteria established by FHWA. Good means no significant condition-related problems exist. Fair indicates that moderate problems exist that may require minor rehabilitation or maintenance to return the structure to good condition. Poor indicates that more significant problems exist which will require either a major rehabilitation or replacement of the structure.

The target for this measure is set internally and reflects the department’s goal of “holding its own” in terms of bridge condition.

### Percent of structurally deficient deck area on National Highway System – 5b



Target: Below 10%

### Write up:

The public has indicated that keeping Missouri’s existing roads and bridges in good condition should be one of the state’s highest priorities. The Fixing America’s Surface Transportation Act established a 10% penalty threshold for states that, when exceeded, requires a state to focus money on bridges until they are back under 10%. The local system has 91 National Highway System (NHS) structures (five structurally deficient), and the MoDOT system has 3,582 NHS structures (145 structurally deficient). Missouri currently falls below the penalty threshold with the statewide structurally deficient deck area at 6.5%. This is due to the continued focus on major bridges when funding is available, as well as the increasing focus on poor condition bridges in the Statewide Transportation Improvement Program.

Statewide, this measure is also heavily influenced by major bridges with one structure having the ability to impact this measure +/- 0.5%. From 2021 to 2022, there was a decrease in the statewide percentage of structurally deficient deck area on the NHS. This change was heavily influenced by the Rocheport and Buck O’Neil design-build projects, which added six major-length bridges to the inventory and by a new bridge being built in the Southwest District. In the St. Louis District, the Illinois Department of Transportation completed repairs on the Martin Luther King River Bridge, bringing it out of the poor status and MoDOT completed repairs on one of the double decker bridges in St. Louis, also bringing it out of poor status. The number of bridges on the NHS has stabilized with very small changes from year to year. Ohio has been selected for comparison because it has similar demographics, geography and weather conditions. There are 10,436 total state highway bridges in Ohio with 4,996 structures on the NHS.

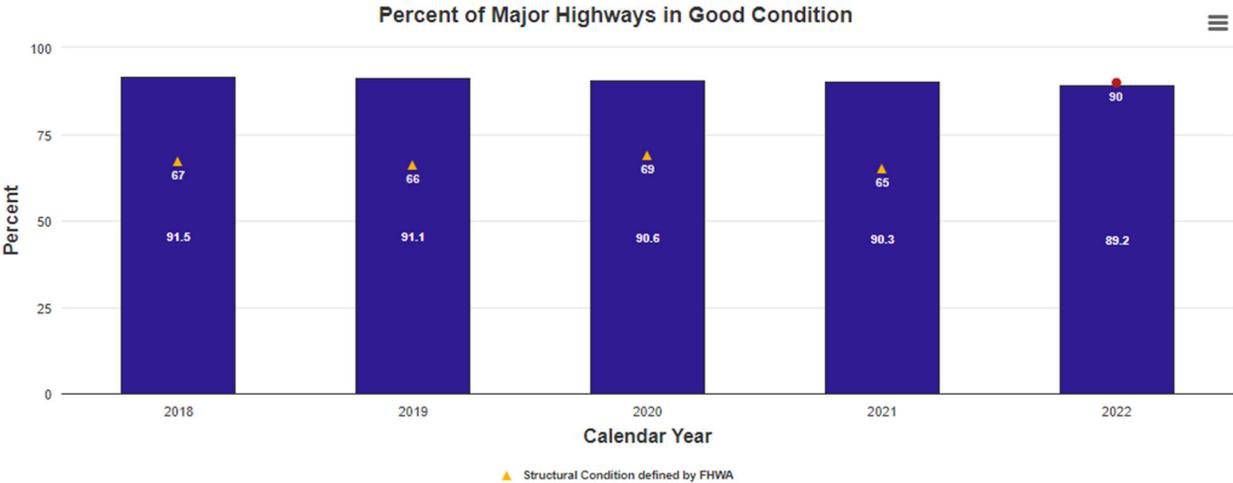
**Purpose:**

This measure tracks the percent of structurally deficient deck area for bridges on the NHS.

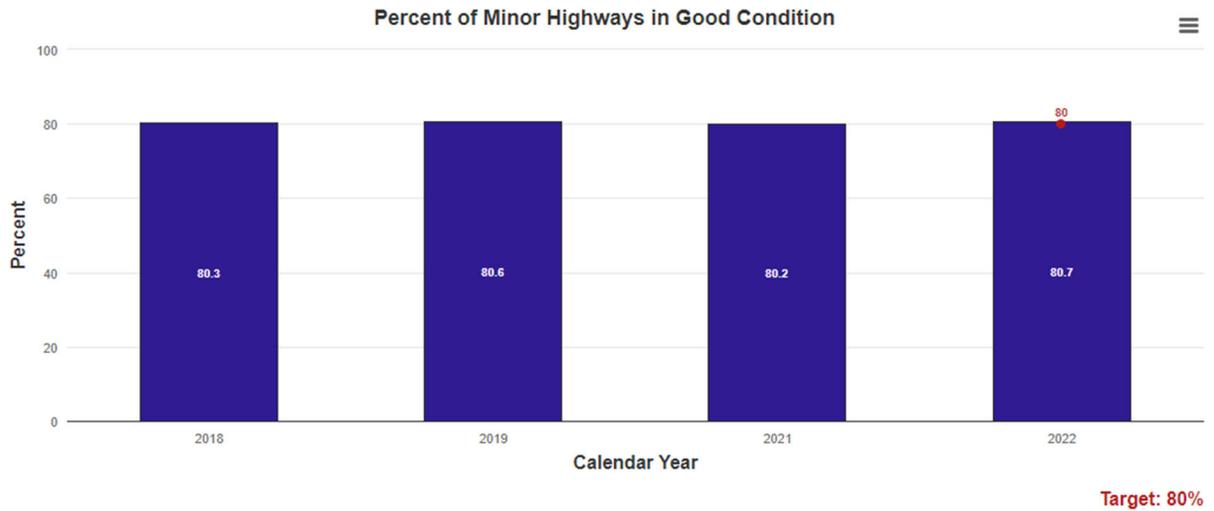
**Measurement and Data Collection:**

The NHS is defined by federal law and consists of all roadways functionally classified as principal arterials as well as some routes that serve as major connections to multimodal freight-type facilities and some locally owned roadways. The FAST Act requires states to track the structurally deficient deck area on the NHS. Historically, the term structurally deficient defined a group of bridges that were in bad condition or had insufficient load capacity when compared to modern design standards. With the implementation of the FAST Act, this definition was changed and this measure reflects that change. The FAST Act has a penalty threshold that requires a state to take certain actions whenever the percentage of structurally deficient deck area within a state exceeds 10%. The chart reflects keeping the percentage below 10% as the target.

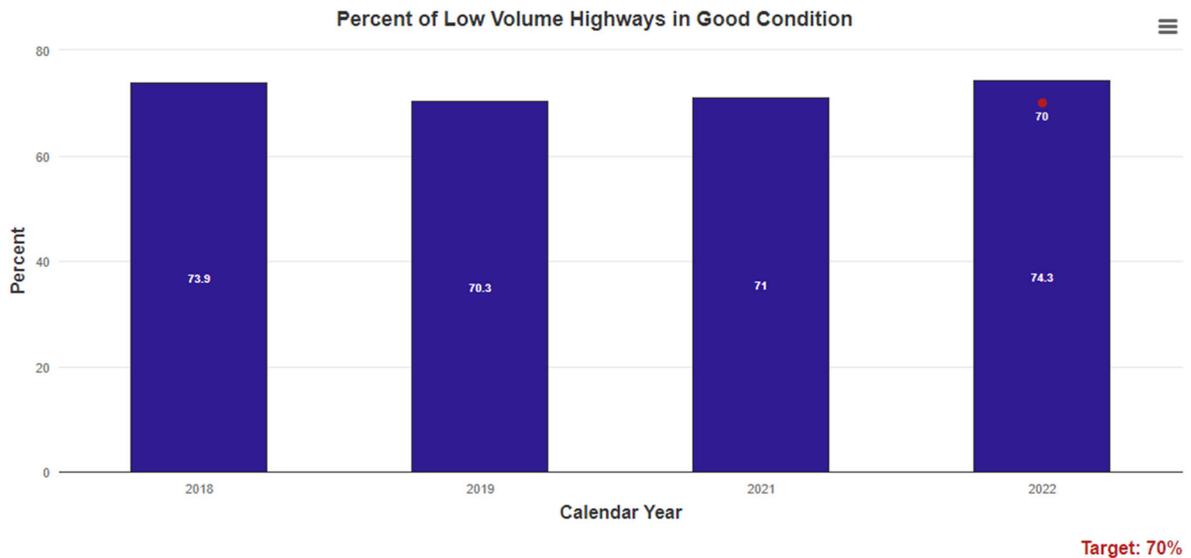
**Condition of state highways – 5c**



Target: 90%



\*2020 data for Minor Highways is not available



\*2020 data for Low Volume Highways is not available

#### Write up:

Missourians have repeatedly told MoDOT that keeping roads smooth is a top priority. Over the years, MoDOT has been able to fund pavement improvement projects on thousands of miles of state highways.

MoDOT maintains 33,832 miles of highway. For yearend 2022, the percentage of major highways in good condition is 89.2%, falling just below the target of 90%. The condition of minor and low-volume highways has improved to 80.7% and 74.3% respectively, both

meeting the targets of 80% for minor-volume highways and 70% for low-volume highways.

As defined by Federal Highway Administration (FHWA), the target is based on the statewide asset management plan and represents MoDOT's goal of maintaining the current conditions of Missouri's highways.

Beginning in 2018, FHWA requires all departments of transportation to report pavement data related to the structural integrity of the pavement, which may not impact current pavement smoothness but may cause future pavement issues. The Federal Highway Administration then provides a report card back to the departments. However, there is no structural condition to report for 2022 as the FHWA software is down.

MoDOT has implemented asset management practices statewide to invest in transportation projects that will keep good roads in good condition. Inflation continues to require MoDOT to push back improvements to major highways, resulting in a downward trend for the past few years. To help reverse this trend, MoDOT has increased the minimum lift thickness of asphalt to four times the nominal aggregate size, improving joint density, a common failure on major highways. MoDOT is also working to implement Balanced Mixed Design with the goal of improving the quality of asphalt on roadways.

**Purpose:**

This measure tracks the condition of Missouri's highways.

**Measurement and Data Collection:**

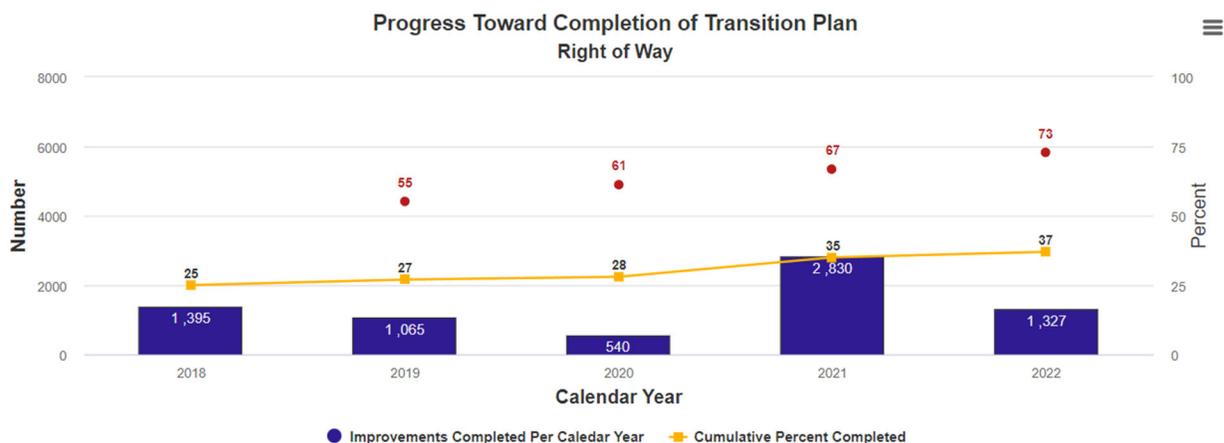
Missouri's major highway system contains the state's busiest highways, including interstates and most U.S. routes. There are 5,542 total miles on the major highway system.

Missouri's minor highway system consists of its less-traveled state highways, including most lettered routes and routes that mainly serve local transportation needs. There are 17,334 miles of minor highways in Missouri.

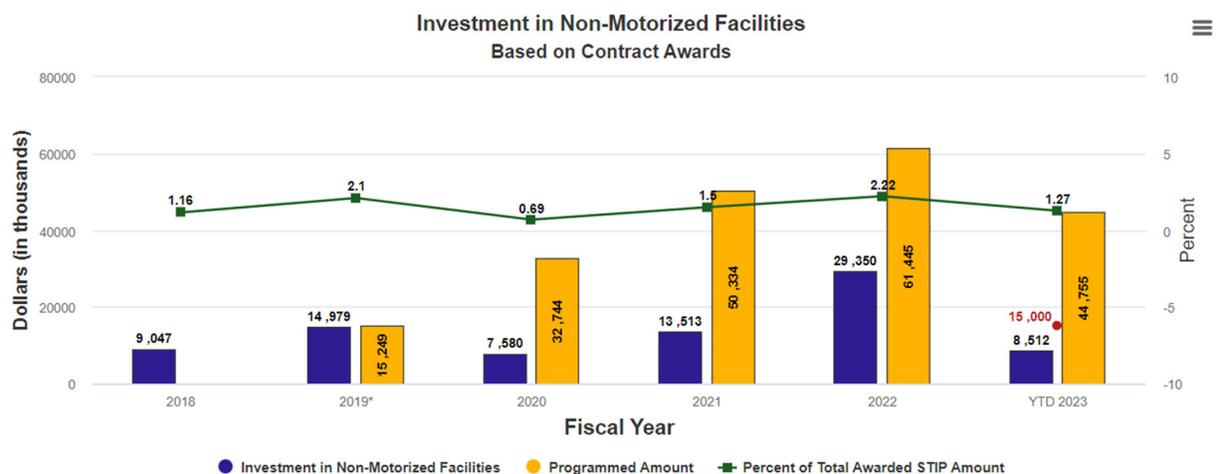
Missouri's low volume highways are those state-owned roads with less than 400 cars traveling on them per day. There are 10,957 miles of low volume roads in Missouri.

Missouri measures the condition of its roadways using smoothness as one factor but also considers physical distresses, such as cracking. The targets for this measure are set by internal policy and will not change unless policy changes, regardless of performance.

## Bike/pedestrian and ADA transition plan improvements – 5d



2022 Target: Above 73%



2023 Target: \$15 Million

\*Starting with FY19, ADA program data will be included in the measure

### Write up:

MoDOT has identified 45,346 barriers within its right of way needing repaired or constructed to meet the requirements of the Americans with Disabilities Act. A transition plan was established to correct these barriers by August 2027. To meet the August 2027 transition plan deadline, a target of 73% was established for calendar year 2022. To date, MoDOT has completed 16,809 or 37% of the identified barriers.

Since 2008, MoDOT has invested nearly \$135.9 million towards the completion of the transition plan. The districts have projected to invest over \$154 million towards the remainder of the ADA Transition Plan improvements in the Statewide Transportation Improvement Program. That amount is expected to cover transition plan improvements and other ADA needs across the state.

**Purpose:**

This measure tracks MoDOT’s investment in non-motorized facilities and progress toward removing barriers. Accessibility needs occur within the right of way, such as sidewalks and traffic signals. Removal of the barriers listed in MoDOT’s 2010 ADA Transition Plan is required as part of the department’s compliance with the ADA.

**Measurement and Data Collection:**

MoDOT’s investment in non-motorized facilities is determined from the awarded contract amounts for the 20 most common construction elements used on projects each year.

ADA Transition Plan progress is based upon completed work to correct deficient barriers identified in the ADA Transition Plan inventory.

A progress target line is included indicating MoDOT’s progress towards completing the transition plan by 2027. Annual funding levels necessary to complete the transition plan by 2027 determine the target, which is set in April of each year.

**ADA compliance of facilities – 5e**



**Write up:**

MoDOT owns and maintains 45 truck parking, rest area and welcome center facilities. Of those 45 facilities, 22 are rest areas and welcome centers. MoDOT has identified 14 rest areas in need of improvements to be in compliance with the Americans with Disabilities Act. Sidewalk improvements are required for these 14 rest areas to be ADA compliant.

MoDOT's maintenance and office facilities are compliant with ADA. All new facilities are designed and constructed to be compliant with ADA.

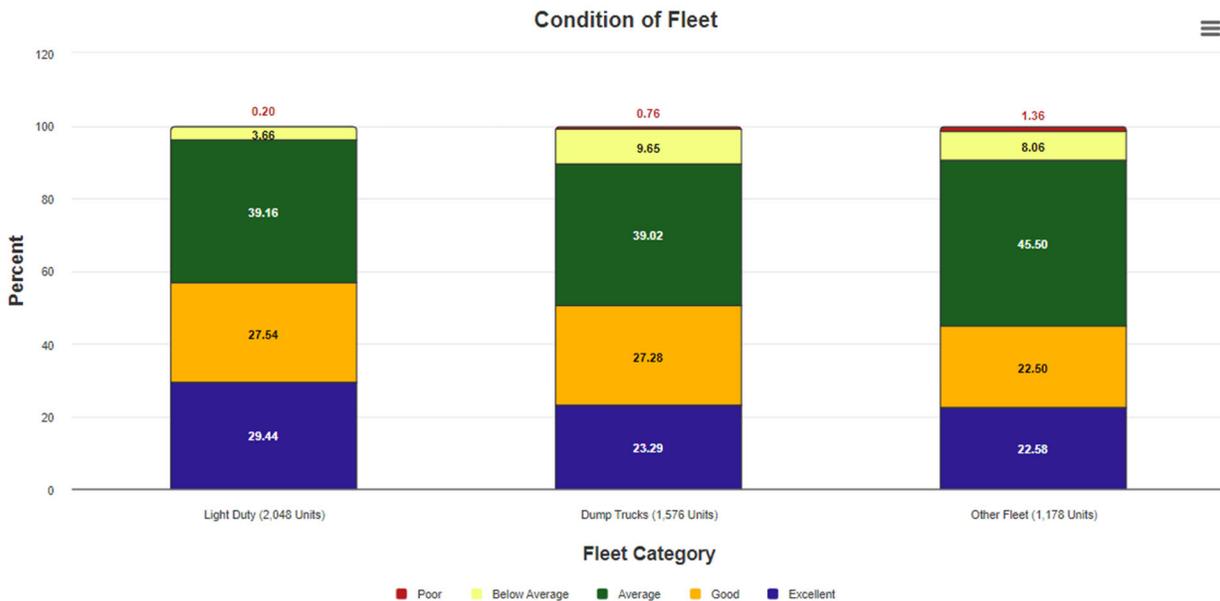
**Purpose:**

This measure tracks and identifies how many MoDOT facilities need improvements to be in compliance with the Americans with Disabilities Act.

**Measurement and Data Collection:**

Truck parking, rest area and welcome center inspections are performed by MoDOT staff on a quarterly basis at a minimum. Inspections of these facilities provide the compliance data. The target for this measure is for all facilities to be in compliance with ADA.

**Condition of fleet – 5f**



**Write up:**

MoDOT’s fleet equipment, with a replacement value of \$578 million, is necessary to maintain roads and bridges to meet customers' needs. As the department’s fleet ages due to limited funds for fleet investment, monitoring the condition helps assess resources and guide the department in making good purchasing decisions. Per recommendation of the statewide Comprehensive Fleet and Equipment Team, MoDOT began compiling this information in 2018 and statewide data was first available in 2019. The majority of the fleet is rated at or above average. Around 10.41% of MoDOT dump trucks are rated below average or poor which equates to 164 trucks.

**Purpose:**

This measure tracks the condition of MoDOT's diverse fleet. This includes all classes of fleet broken down by Light Duty, Dump Trucks and Other Fleet. Light Duty fleet contains cars, pickups, utility trucks, vans and 1-ton trucks. Other Fleet contains heavy equipment such as tractors, loaders, distributors and aerial trucks.

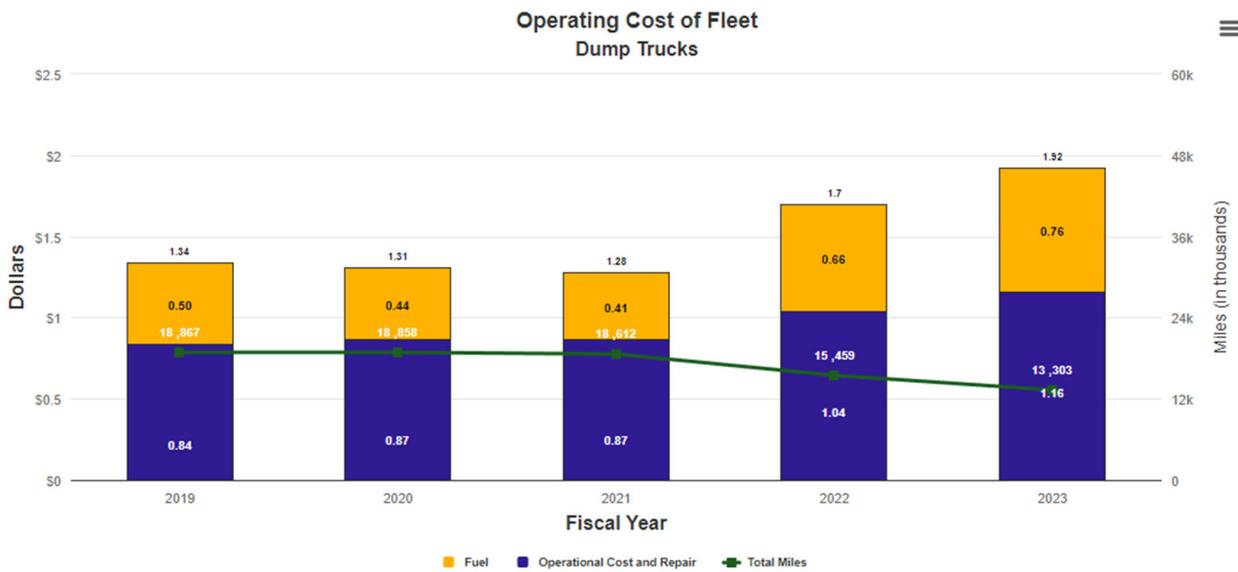
**Measurement and Data Collection:**

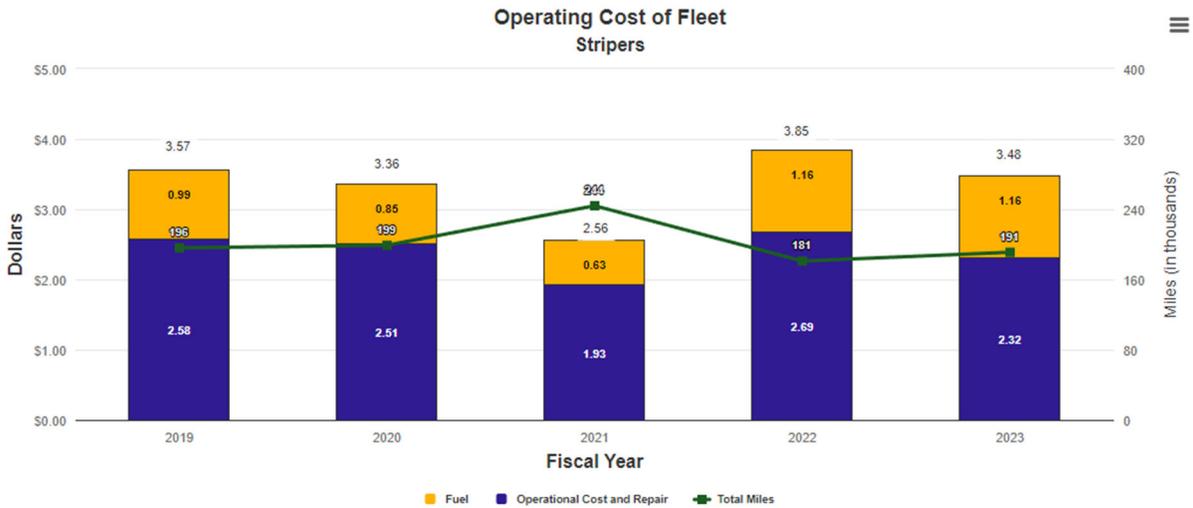
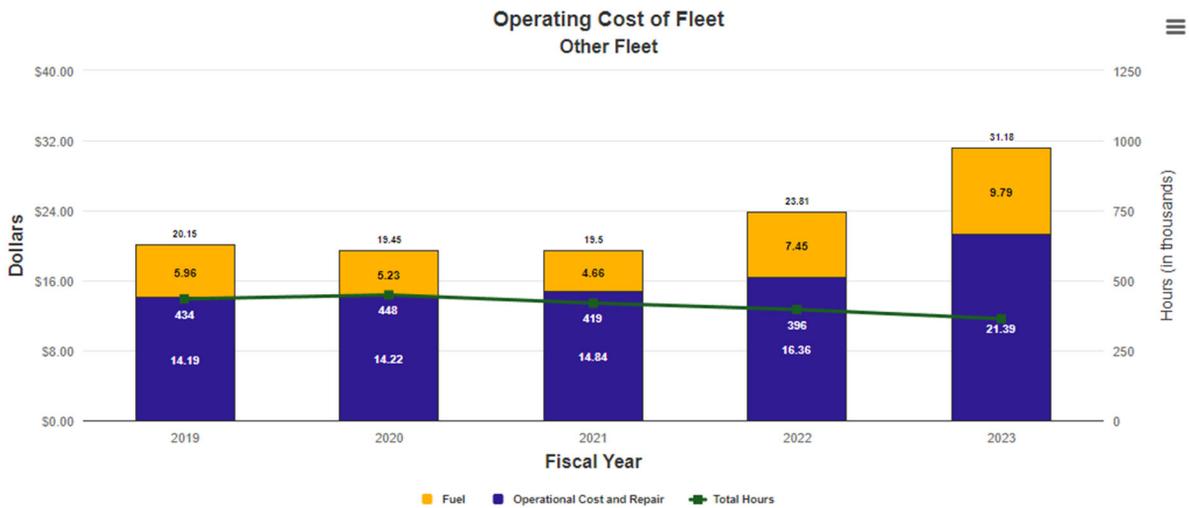
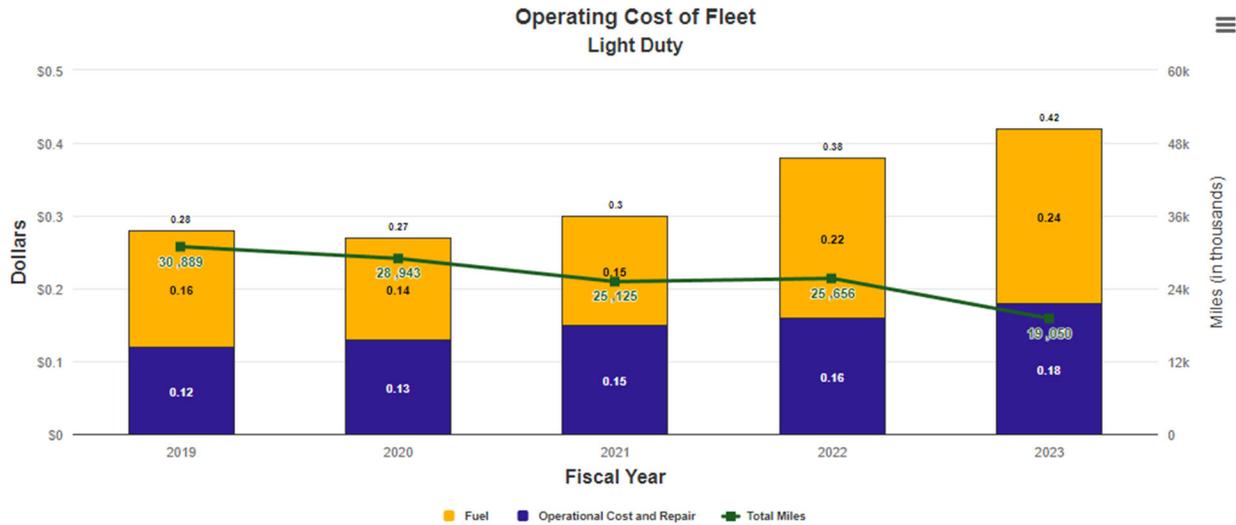
Data is obtained from MoDOT's fleet management system, FASTER, and is updated by fleet personnel involved in the inspection process. Central Office Equipment Technician Support Specialists perform onsite quality assurance reviews on fleet ratings throughout the year. The general guidelines for establishing overall condition are based on the criteria of safety, functionality, reparability and appearance.

In summary, the ratings are: Excellent – unit is fully operable and capable of full performance functionality; Good – unit is operable and safe with signs of normal use; Average – unit is generally operable but may have minor component failure or damage needing repair; Below average – unit has major component failure or damage preventing performing all functions; Poor – unit is not safe or inoperable with component failure or damage beyond repair.

Data is as of Oct. 31st, 2022 and what has been incorporated in the fleet asset management model.

**Operating cost of fleet – 5g**





**Write up:**

MoDOT's fleet equipment, with a replacement value of over \$578 million, is necessary to maintain roads and bridges in order to meet customers' needs. The total miles/hours decreased from 41.6 million in fiscal year 2022 to 32.9 million in FY 2023. As the department's fleet ages due to limited funds for fleet investment, monitoring the operational costs ensures the department is making good repair decisions.

Through the end of FY 2023, fuel costs are up for all categories as prices remain high and operating costs have increased for all classes except stripers. From FY 2018 to FY 2022, both operational and fuel costs have increased. When looking at combined costs, dump trucks increased 36%, light duty increased 36% and other equipment increased 19%. During this period, the consumer price index inflation factor increased by 18% according to the Bureau of Labor Statistics.

MoDOT continues to focus on fleet replacements using an asset management approach based on equipment age and miles/hours which began in 2019.

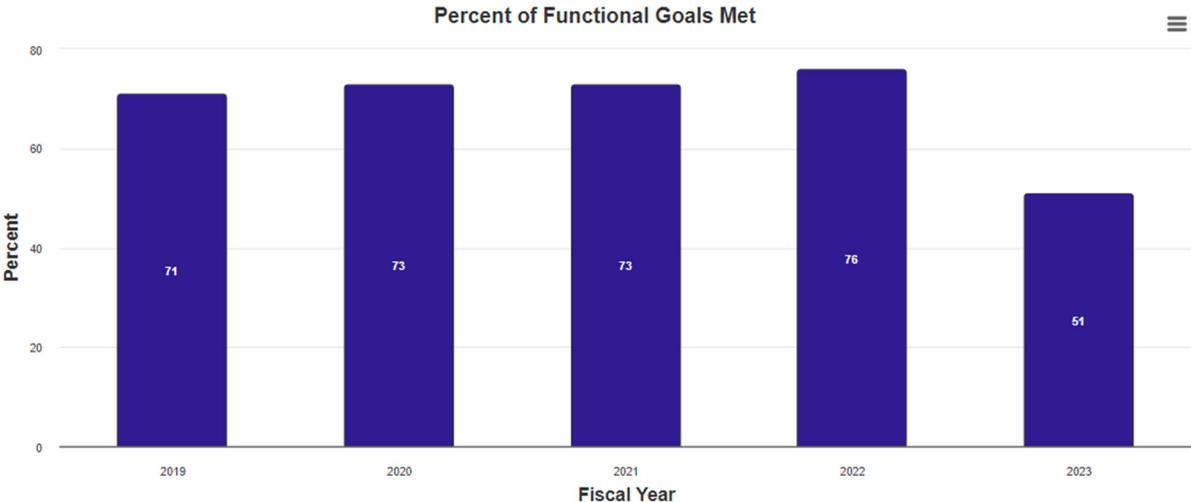
**Purpose:**

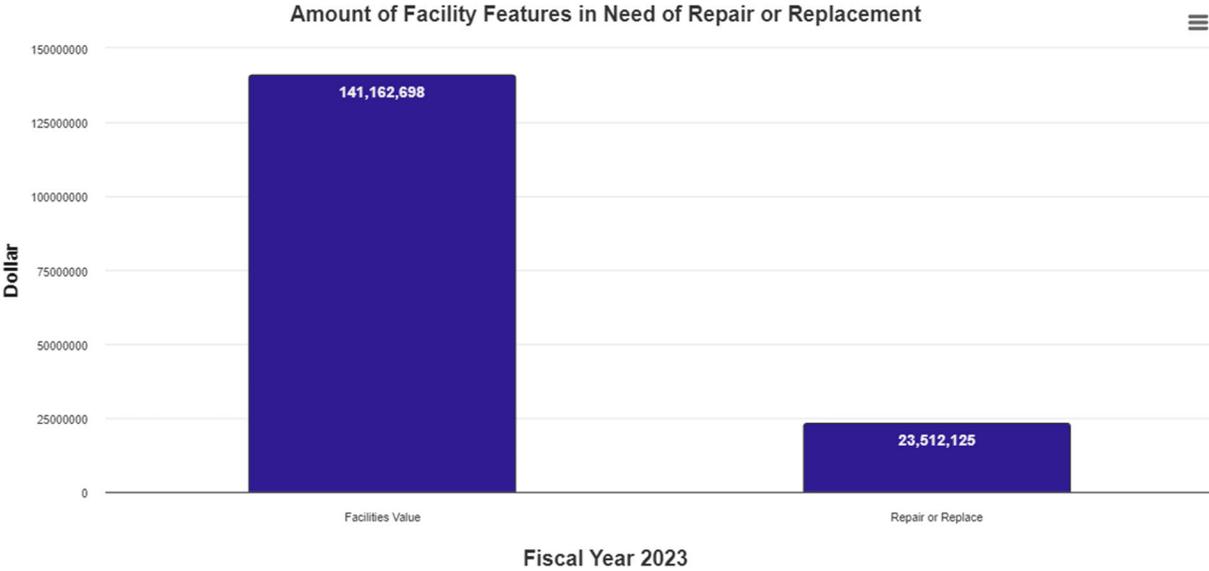
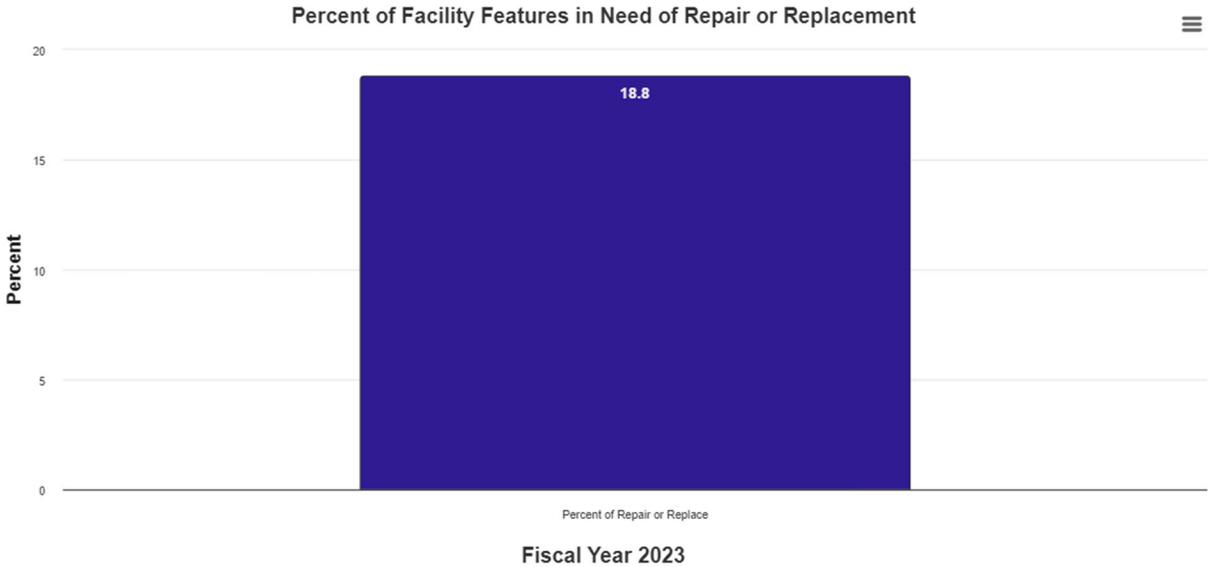
This measure tracks the operating cost of MoDOT's diverse fleet. This includes all classes of fleet broken down by Dump Trucks, Light Duty, Other Fleet and Stripers. Light Duty fleet contains cars, pickups, utility trucks, vans and 1-ton trucks. Other Fleet contains heavy equipment such as tractors, loaders, distributors and excavators.

**Measurement and Data Collection:**

Data reflects the operating cost of MoDOT units in fuel, repairs, labor, benefits and miscellaneous costs. The cost data is collected in the statewide financial system. Fleet data is collected from MoDOT's fleet management system, FASTER.

**Condition of facilities – 5h**





**Write up:**

To carry out its duty to the citizens of Missouri, MoDOT utilizes facilities systems valued at over \$134 million. These facility systems are comprised of office buildings, maintenance buildings, cold storage, gasoline/petroleum storage, chemical storage and wash bays. With respect to their functional use, many of these buildings do not have enough storage space, breakrooms, bathrooms or work bays. Inspections are made annually of over 9,100 building features to evaluate their physical condition. Hundreds of these systems are due for renewal each year. To note, the total value of the facilities' systems does not necessarily equate to the total replacement cost of all the facilities.

For financial provision of addressing the functional and physical needs of the facilities, the department has a budget of \$6.5 million for fiscal year 2024. The unfunded needs are estimated to reach \$48.7 million by FY 2028.

Capital Improvement and Capital Asset Preservation are MoDOT’s strategies of seeking to address the functional and physical needs of its facilities. They are utilized to seek proper balance of the principles of asset management and functionality in systematically evaluating planning and dedicating resources to maximize the use and life of its facilities.

Efforts are taken to try to bring all facilities to complete functional suitability. Evaluation of current and projected physical conditions coupled with budget planning is sought to extend the life of facilities fully.

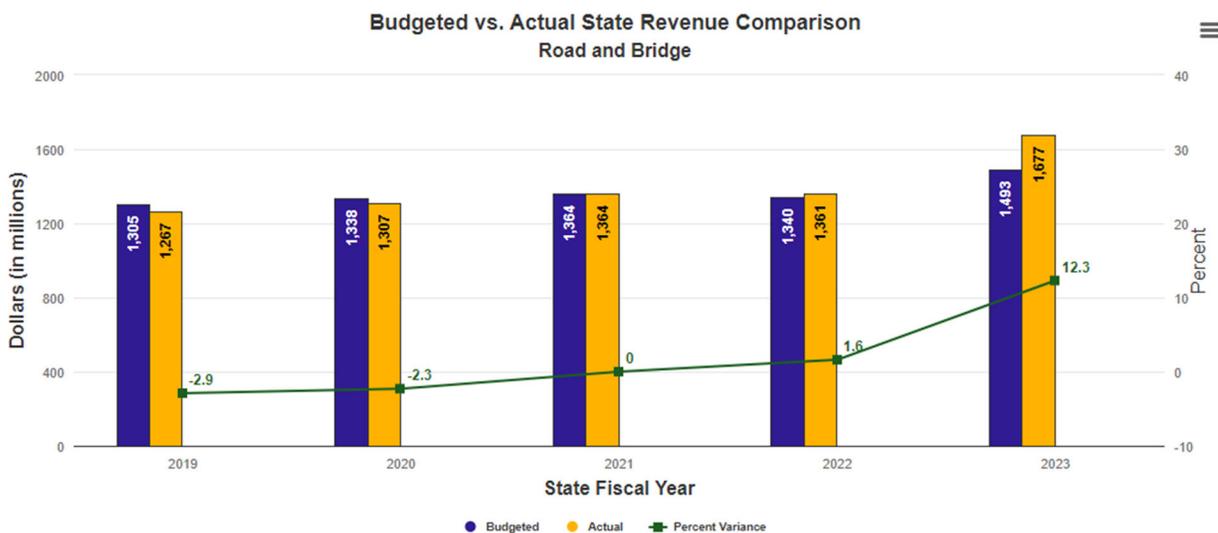
**Purpose:**

This measure tracks the functional and physical condition status and trend of MoDOT’s facilities. Functional Condition measures the percent of maintenance facilities meeting functional goals including sufficiency of breakrooms, bathrooms, garage bays and cold storage. Physical Condition measures the number and costs of facilities systems due for renewal based on annual facilities inspections.

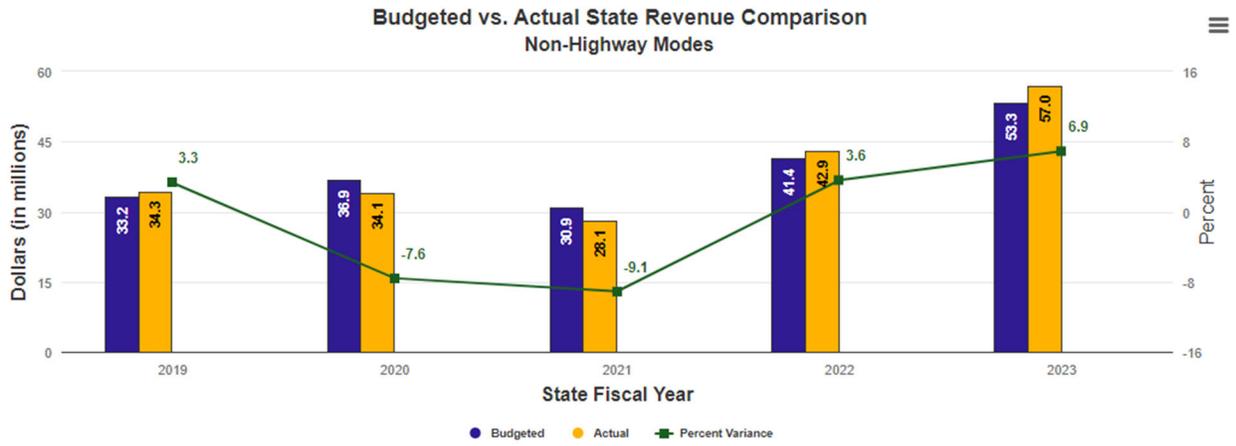
**Measurement and Data Collection:**

Data is collected through annual review of the Department’s long-term Capital Improvements Program and through annual facilities inspections. Functional needs are tracked and reported annually to legislative oversight committees. The goal for Functional Needs is to bring all facilities to sufficiency. Physical needs are tracked through VFA software. The initial 2020 Tracker measure will be used as a base reference and further evaluated to set future targets. Functional Requirement pertains to sufficient space for breakrooms, bathrooms, open bays and cold storage. Facilities Value is the total estimated cost to replace MoDOT facility features. Repair or Replace is the number of facility features that are listed due in FY 2022 or earlier. Repair or Replace Costs are the estimated costs that are due for renewal in FY 2022 or earlier.

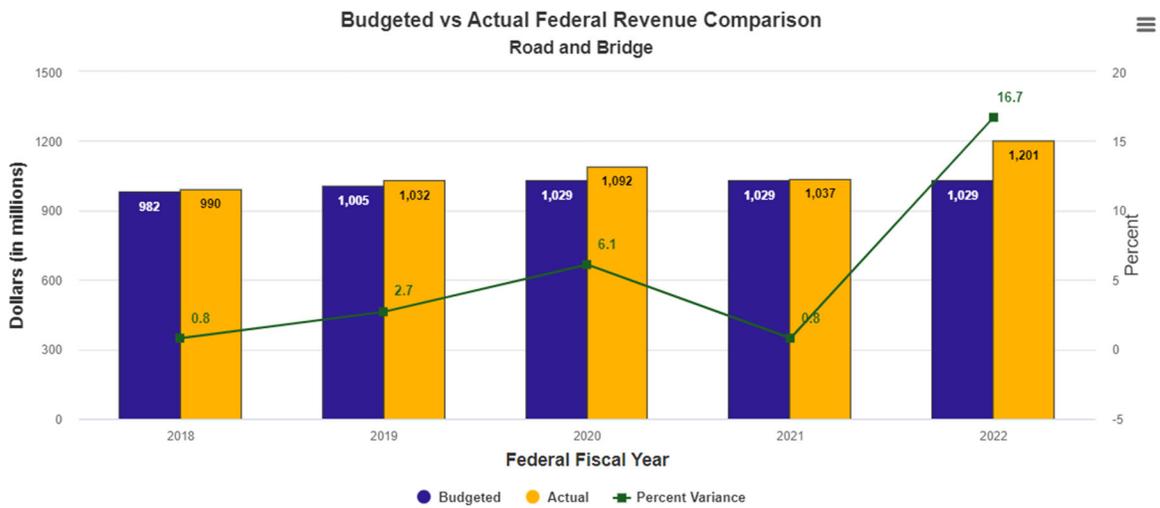
**State and federal revenue budgets – 6a**



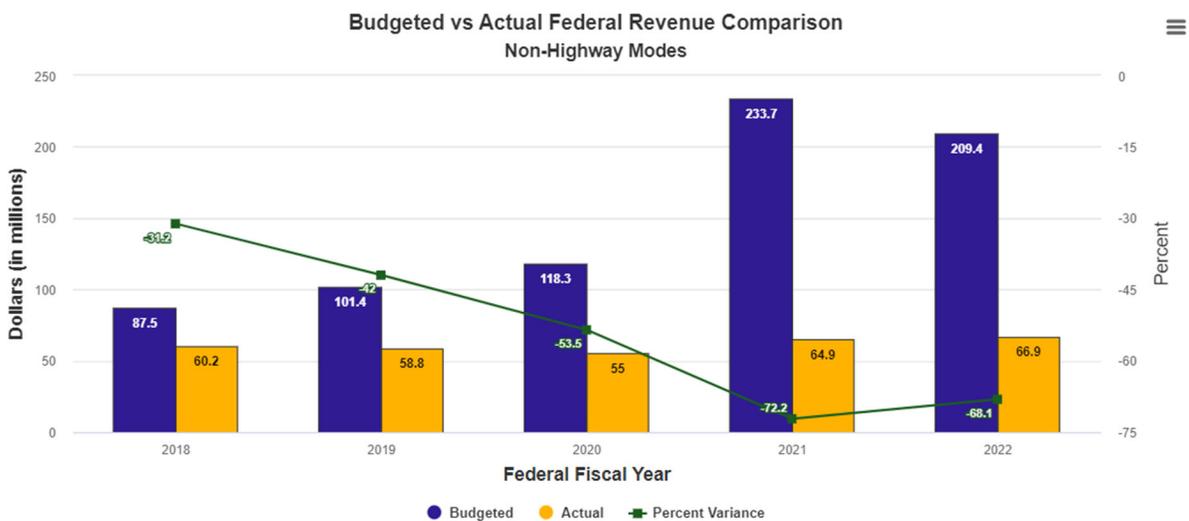
Target: 0%



Target: 0%



Target: 0%



Target: 0%

**Write up:**

State and federal revenue budgets help MoDOT staff do a better job of budgeting limited funds for the department's operations and capital program. The target is for actual revenue to match budgets with no variance.

The actual state revenue for roads and bridges from motor fuel taxes, motor vehicle sales taxes, motor vehicle driver's licensing fees and miscellaneous fees was 12.3% more than budgeted for fiscal year 2023. A portion of the motor fuel tax revenue for June 2022 was not included in total collections for last fiscal year. Revenues are not recognized until they are transferred into the State Highways and Transportation Department Fund. The transfer is appropriated; however, for June, there was not enough appropriation authority to transfer all the motor fuel tax revenue. Therefore, motor fuel tax revenue collected in June of \$41.9 million is included in July. The positive variance of 6.9% for non-highway modes is attributed to higher-than-projected revenue from jet fuel sales tax.

The actual federal revenue for roads and bridges was 16.7% more than budgeted for federal fiscal year 2022. The negative variance of 68.1% for non-highway modes is attributable to the timing of project expenditures.

The largest source of transportation revenue is from the federal government. Funding is received through various federal transportation agencies, including Federal Highway, Transit, Aviation and Railroad Administrations. The previous transportation funding act, Fixing America's Surface Transportation (FAST) Act, authorized federal programs for the 5-year period from 2016-2020. It expired Sept. 30, 2020 but was extended for another year by continuing resolution. In November 2021, the federal transportation bill, called the Infrastructure Investment and Jobs Act (IIJA), was reauthorized. The new bill is estimated to increase federal funding to Missouri approximately 25% for the 5-year period from 2022-2026. Federal revenue for other modes is reliant on the timing of project expenditures.

The primary source of federal and state revenue is motor fuel tax. Prior to the passage of Senate Bill 262, the motor fuel tax rates had not changed in more than 20 years. During the same time frame, the cost for materials and labor doubled or even tripled. The passage of Senate Bill 262 will increase the state's previous 17 cents per gallon by 2.5 cents per gallon per year over the next five years starting Oct. 1, 2021.

**Purpose:**

This measure shows the precision of state and federal revenue budgets.

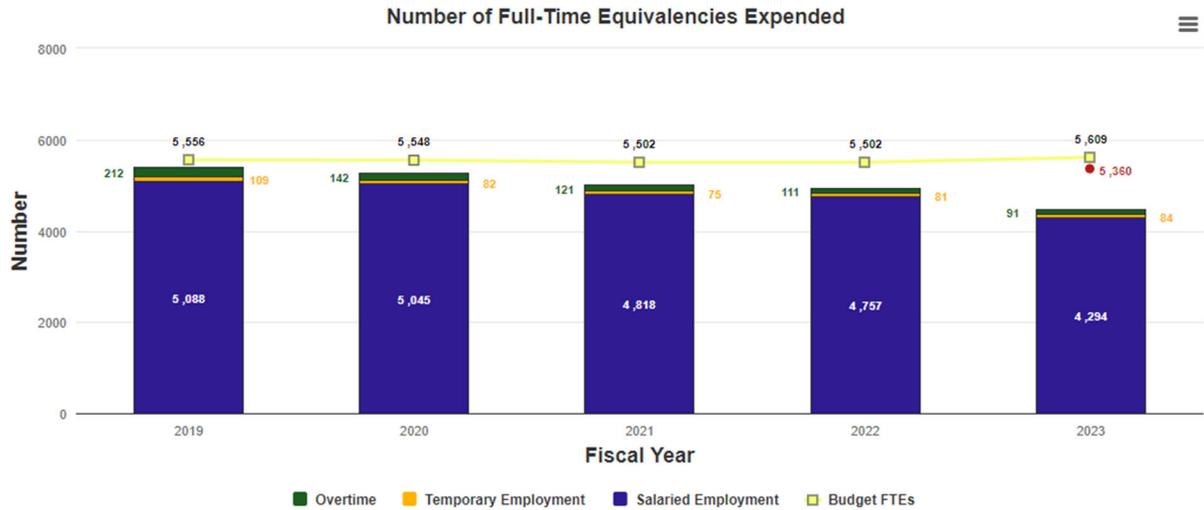
**Measurement and Data Collection:**

State revenue for roads and bridges include motor fuel taxes, motor vehicle and driver licensing fees, motor vehicle sales taxes paid by highway users, interest earnings and miscellaneous revenues. State revenue for other modes includes motor vehicle sales taxes, aviation fuel taxes, jet fuel sales taxes, motor vehicle licensing fees, railroad assessments and appropriations from General Revenue and interest earnings. The measure provides the cumulative, year-to-date percent variance of actual state revenue versus budgeted state revenue by state fiscal year. Federal revenue for roads and

bridges is the amount of federal funds available to commit in a federal fiscal year. Federal funds are distributed to states in accordance with federal law. Federal revenue for other modes is the amount reimbursed to MoDOT for expenses incurred in a state fiscal year.

The targets set for this measure are set by internal policy and will not change unless policy changes, regardless of performance.

### Number of full-time equivalencies expended – 6b



2023 Target: 5,360

#### Write up:

Having the right number of employees to provide outstanding customer service and respond to the state’s transportation needs, especially during emergency situations, is an important part of MoDOT’s effort to use resources wisely.

For the fourth quarter of fiscal year 2023, the total number of full-time equivalencies expended decreased by 479, compared to the fourth quarter of FY 2022. Temporary Employment increased slightly, while Salaried Employment and Overtime decreased when compared to the same time last fiscal year.

A target of 5,360 FTEs was set for FY 2023 to reflect the average number of hours required to provide outstanding customer service, perform work safely and to fully respond to the state’s transportation needs.

#### Purpose:

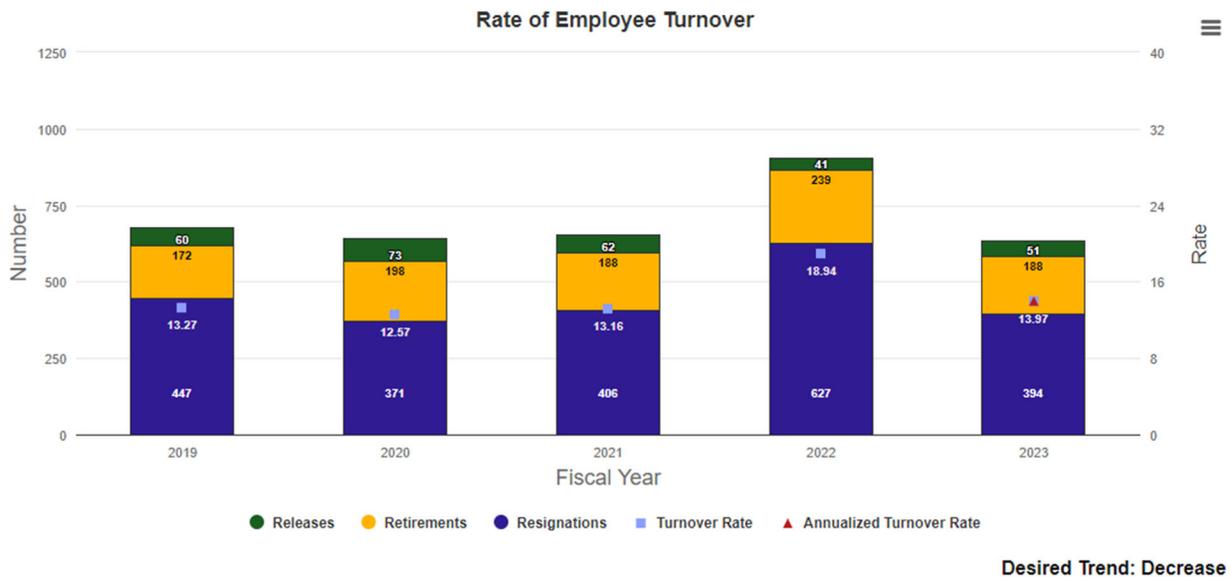
This measure tracks the change in the number of full-time equivalencies (a calculation of hours) expended within the department and compares it to the number of FTEs in the legislative budget.

**Measurement and Data Collection:**

This measure converts the regular hours worked or on paid leave of temporary and salaried employees, as well as overtime worked (minus any hours that are flexed during the workweek), to full-time equivalencies. In order to calculate FTEs, the total number of hours worked or on paid leave is divided by 2,080. For comparison purposes, data for salaried employment is annualized, whereas temporary employment and overtime data represent actual year-to-date calculations. This measure does not represent salaried headcount.

The target for this measure was set by management directive.

**Rate of employee turnover – 6c**



**Write up:**

When employees leave MoDOT, the department loses a significant investment in recruiting, hiring and training its workforce. Turnover is costly, and it impacts the performance of work groups and the organization. While some turnover is natural, MoDOT's goal is to retain an engaged workforce that has the knowledge and specialized skills to deliver the department's commitments and provide outstanding customer service.

MoDOT ended fiscal year 2023 with a turnover rate of 13.97%, compared to a turnover rate of 18.94% for fiscal year 2022, a reduction of 4.97%. For FY 2023, there were a total of 633 separations from the department, compared to 907 separations during fiscal year 2022, resulting in 274 less separations.

As part of MoDOT's strategic initiatives and pay strategy, the department will continue to look for opportunities to reduce the rate of employee turnover.

**Purpose:**

This measure tracks the percent of employees who leave MoDOT. Turnover rates as shown in this measure include voluntary and involuntary separations.

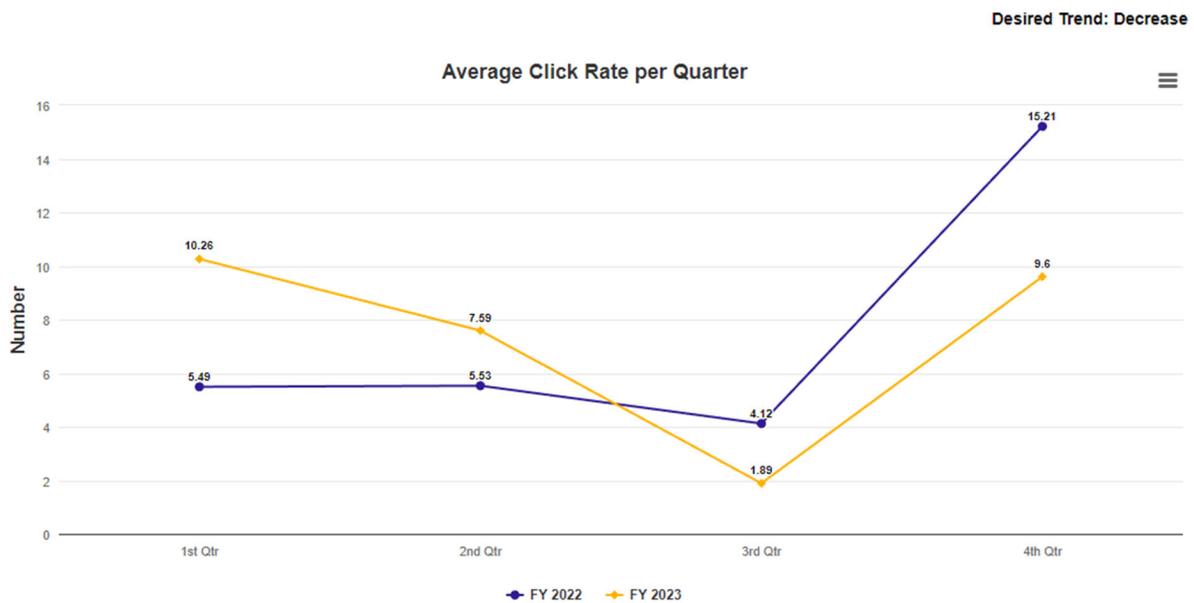
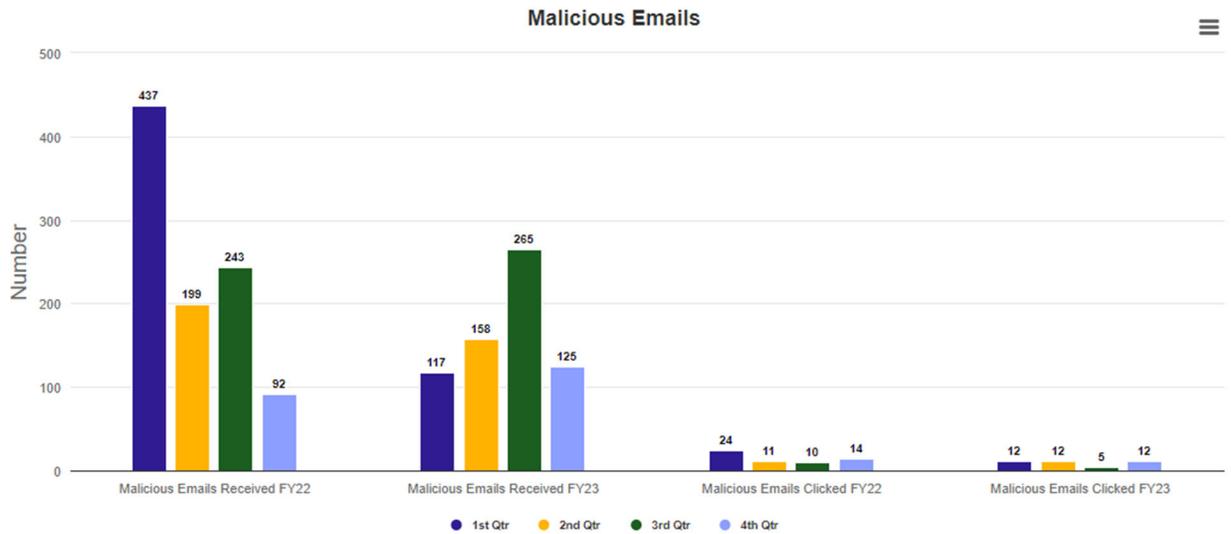
**Measurement and Data Collection:**

The data is collected statewide from the SAM II Advantage HR system and includes only salaried employees. Voluntary turnover includes resignations and retirements. Involuntary turnover reflects dismissals. Data is reported quarterly, with current year-to-date data included. Stretch goal is derived from Price Waterhouse Cooper's Saratoga Institute benchmark data.

The target for this measure was set by management directive.

**Level of job satisfaction (UNDER CONSTRUCTION) – 6d**

## Malicious Email Click Rate – 6e



### Write up:

Statewide, MoDOT maintains thousands of computer devices. Keeping those computers safe from outside threats is a 24-hour responsibility using the latest security measures.

For the fourth quarter of fiscal year 2023, MoDOT received a total of 125 emails containing malicious content (links and/or attachments) that were delivered to user inboxes. Of those 125 delivered emails, there were 12 total clicks on contained links or attachments by the recipient. Four of the 12 clicks were blocked at the time of click by MoDOT's security vendor. The remaining eight clicks permitted by the system were determined to be a phishing email sent by a trusted contact whose account had been compromised. Following standard security procedures Information Systems contacted all involved users, verified that credentials were not entered, and scanned machines for any possible signs of malware infection. All endpoint scans came back clean, and all

email clickers were enrolled in follow up security awareness training which all but two have completed. The average click rate for the quarter was 9.6%, an increase of 7.7% from the third quarter click rate.

Compared to the previous quarter, we saw a significant rise in the total number of phishing email clicks when weighted against the total number of malicious emails delivered to our end users. The increase is attributed to a new attack method that malicious actors are utilizing that involves compromising the accounts of smaller organizations with limited security capabilities and using those compromised accounts to send malicious email to larger affiliated organizations.

MoDOT continues to emphasize cybersecurity and provide training for all department computer users. The cybersecurity oversight team works to define areas of vulnerability and deploy solutions to address risk. In addition, MoDOT utilizes the Office of Administration’s network firewall services, endpoint cybersecurity detection and remediation services to provide increased cyber protection.

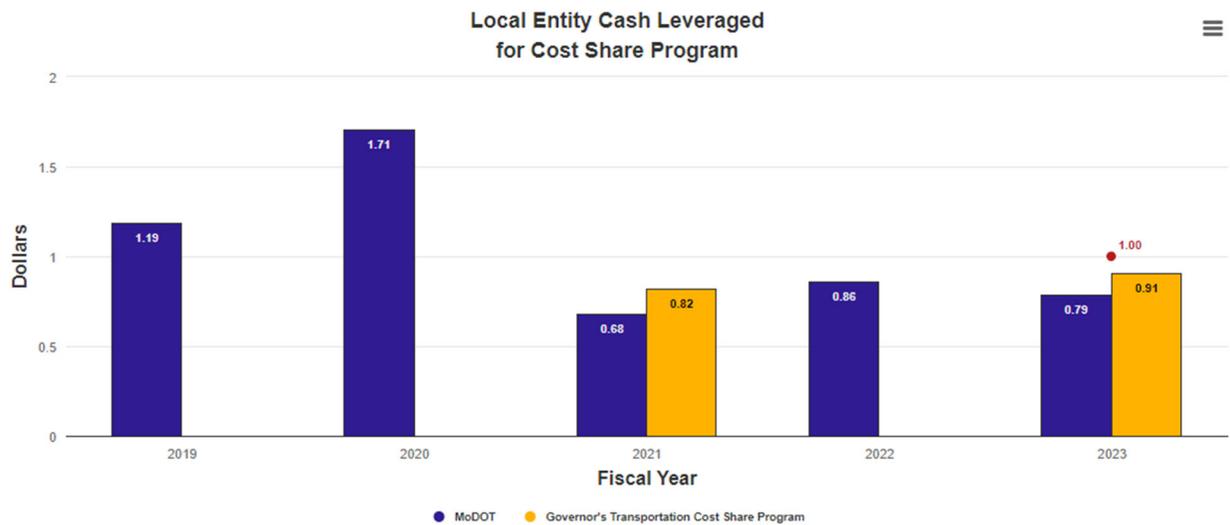
**Purpose:**

This measure reports MoDOT's average click rate on malicious email links and attachments. Using this measure MoDOT can compare performance to previous quarters and make adjustments in security training program to reflect the observed trend.

**Measurement and Data Collection:**

The incident data for this measure is captured from MoDOT's e-mail security platform. The target for this measure is zero clicks.

**Local entity cash leveraged for cost share program – 6f**



2023 Target: \$1.00

**Write up:**

The Cost Share Program builds partnerships with local entities to pool efforts and resources to deliver state highway and bridge projects. When local entities are willing to

partner with MoDOT, the department matches their investment up to 50% of the project cost. MoDOT works in cooperation with the Missouri Department of Economic Development and local entities to determine when targeted investments can be made to generate economic development and may provide up to 100% of the project cost.

In fiscal year 2023, Cost Share Program funds of \$13.2 million have been committed for eight projects. For every \$1 of Cost Share Program funds awarded, 79 cents of local cash were leveraged. This includes the Warren County's Interstate-70 Outer Road and the City of Washington's Route 100 Turn Lanes projects that demonstrated economic development and allowed for funding greater than 50% of the total project costs from the Cost Share Program. In addition, the City of Lake Saint Louis' Lake Saint Louis Boulevard widening project and the City of Harrisonville's Route 2 Bridge Replacement project are funded with sub-allocated federal funding, reducing the actual cash the cities are contributing. These projects result in local cash leveraged below the target of \$1.

The Missouri General Assembly appropriated \$50 million for MoDOT to work cooperatively with the Missouri Department of Economic Development to create the Governor's Transportation Cost Share Program and build partnerships with local entities to deliver road and bridge projects. In FY 2021, 20 projects were awarded funds. For every \$1 of Governor's Transportation Cost Share Program funds awarded, 82 cents of local cash were leveraged.

The Missouri General Assembly appropriated an additional \$75 million for the Governor's Transportation Cost Share Program. In FY 2023, 28 projects were awarded funds. For every \$1 of Governor's Transportation Cost Share Program funds, 91 cents of local cash were leveraged.

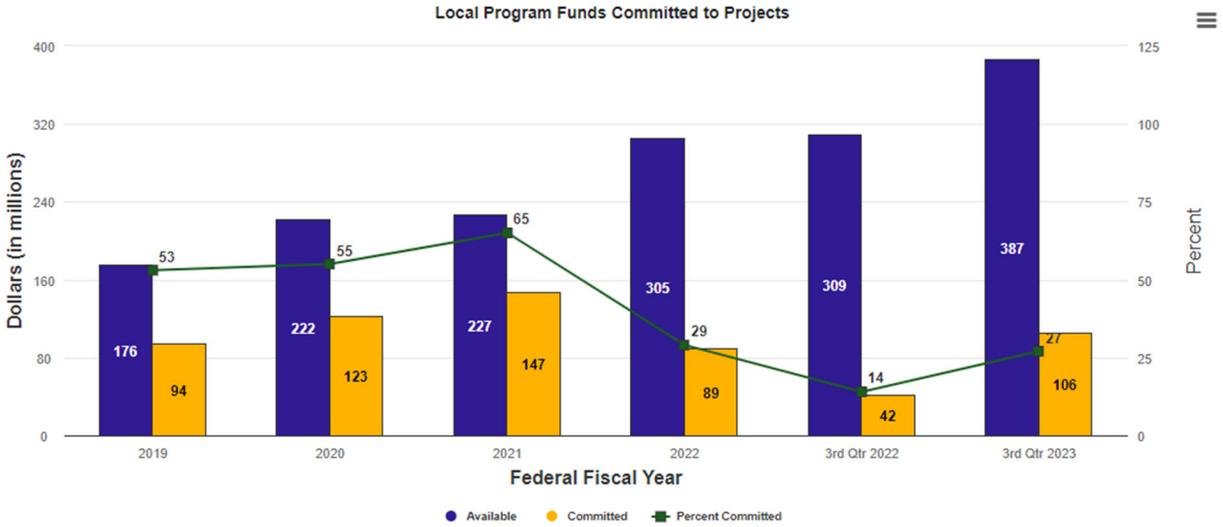
**Purpose:**

This measure tracks local entity cash leveraged from the Cost Share Program.

**Measurement and Data Collection:**

Data for this measure is collected from a partnership database. The target for this measure was set by management directive.

### Percent of local program funds committed to projects – 6g



Target: 100% Committed

**Write up:**

Local agencies receive federal funds to invest in projects that improve local infrastructure, and they share the cost of those projects by providing a 20% local match for most programs. To keep federal funds coming to Missouri, all federal funds received each year must be committed to projects by the end of the federal fiscal year. If the available funds are not fully committed, the funds are at risk of being rescinded, which jeopardizes the ability to receive additional federal funds to deliver more projects.

For federal fiscal year 2023, local agencies have \$387 million to invest in local transportation projects. For third quarter federal fiscal year 2023, 27% (\$106 million) of available funds have been committed to local projects, as compared to 14% (\$42 million) in third quarter federal fiscal year 2022. In federal fiscal year 2022, allocations for existing programs increased and several new program allocations were added to the amount available for projects.

**Purpose:**

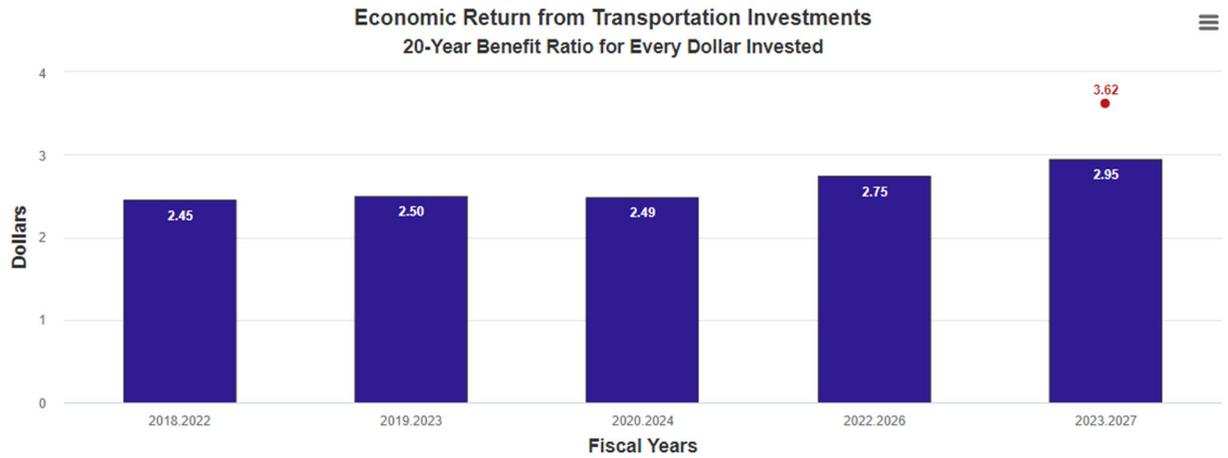
MoDOT is required to share federal funds with local agencies for transportation projects. This measure tracks the percent of available local program funds committed to projects.

**Measurement and Data Collection:**

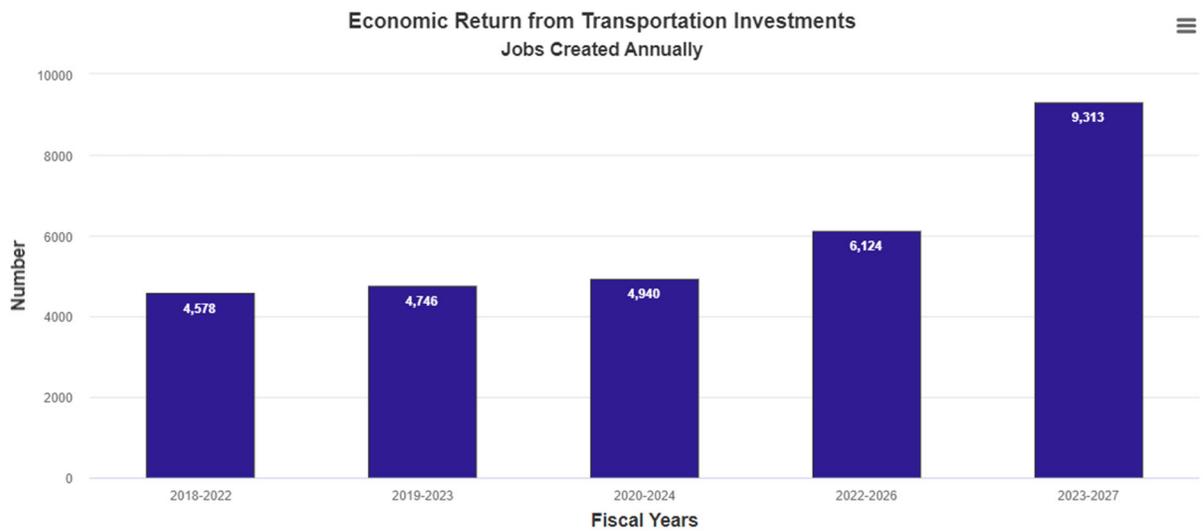
The data is obtained from the Federal Highway Administration’s Fiscal Management Information System and based on the federal fiscal year from October 1 through September 30. The committed amounts represent federal funds obligated for projects. The available amounts represent the federal program funds distributed to local sponsors plus any previous year balance. The desire is to invest all federal funds available to local public projects each year.

The target for this measure is set by internal policy and will not change unless policy changes, regardless of performance.

### Economic return from transportation investment – 7a



2023 Target: Above \$3.62



Desired Trend: Increase

**Write up:**

Investment in transportation improvements has long been held as a major economic engine that drives growth in job creation, personal income and new value added to Missouri's economy.

Based on MoDOT's 2023-2027 Statewide Transportation Improvement Program investment of \$9.738 billion, the program is estimated to create 9,313 jobs annually. This represents a 38% and 52% increase respectively when compared to the 2022-2026 STIP. The average number of jobs created increased in line with the increase in expenditures.

Transportation investments are expected to contribute approximately \$28 billion of economic output during the next 20 years, resulting in a \$2.95 return on every \$1 invested in transportation. This increase is credited to increased transportation funding in the 2021 Bi-Partisan Infrastructure Law. Missourians have consistently said they want MoDOT to take care of the existing system first, a \$58 billion value that carries a \$145 billion replacement cost.

**Purpose:**

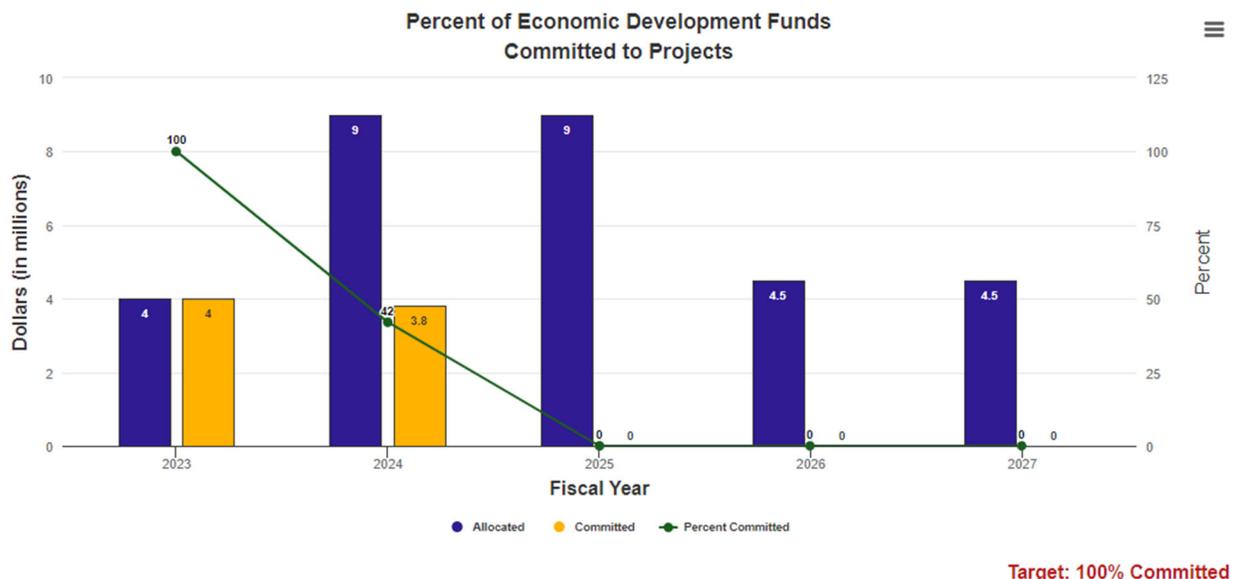
This measure tracks the economic impact resulting from the state's transportation investments.

**Measurement and Data Collection:**

MoDOT works with the HDR, Inc. to perform economic impact analyses for the state's transportation investments. The analyses are performed using a model called the Impact Analysis for Planning. The IMPLAN model results demonstrate a strong link between transportation investment and economic development.

This target was set by analyzing historical performance. MoDOT would like to reach the performance level of \$3.62 which is consistent with what was achieved in the 2014-2018 Statewide Transportation Improvement Program cycle.

## Percent of economic development funds committed to projects – 7b



### Write up:

The Cost Share Program builds partnerships with local entities to pool efforts and resources to deliver state highway and bridge projects. Funds are set aside for projects that demonstrate economic development. MoDOT works in cooperation with the Department of Economic Development and local entities to determine when targeted investments can be made on projects that produce the most economic impact for Missouri. Projects selected for the set-aside funds may be funded up to 100% of the project cost. The set-aside funds increase from 10% to 20% starting in 2024. Tracking this data ensures economic development funds are being utilized.

At the end of the fourth quarter of fiscal year 2023, \$23,195,748 of economic development funds are available for eligible projects. For FY 2026 and FY 2027, only 50% of funding allocations are available. During the fourth quarter of FY 2023, \$1,610,000 of funds were committed to the City of Washington for the construction of turn lanes on Route 100 into the Oldenburg Industrial Park. MoDOT continues to work with DED to identify projects that demonstrate economic development.

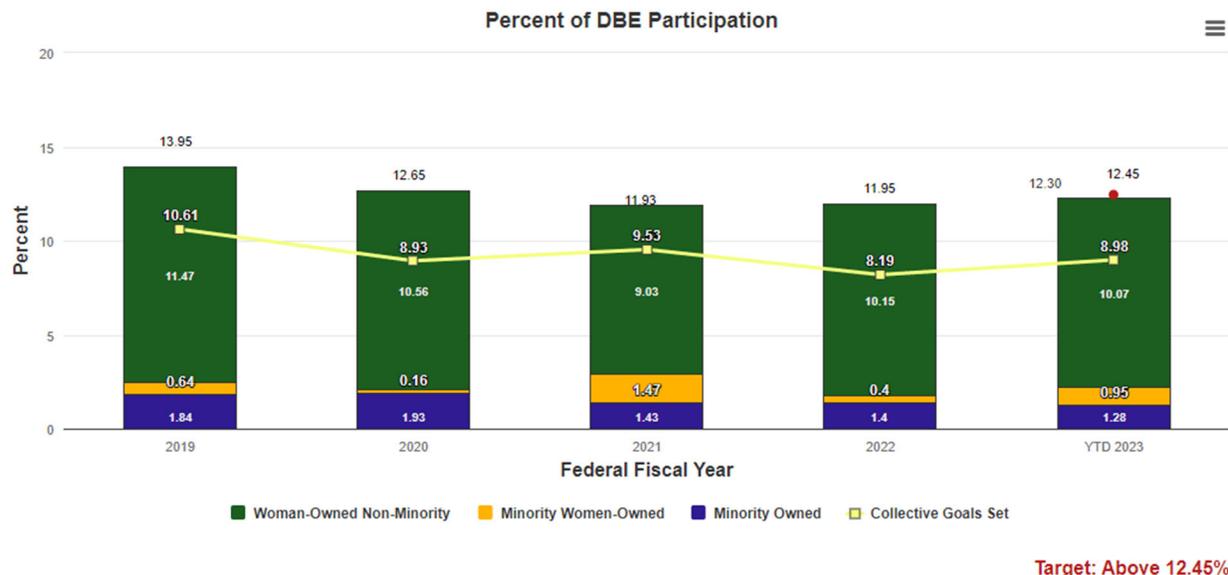
### Purpose:

This measure tracks the percent of economic development funds committed to projects.

### Measurement and Data Collection:

Data for this measure is collected from a partnership database.

## Percent of disadvantaged business enterprise participation on construction and engineering projects – 7c



### Write up:

MoDOT supports diversity among its contractors, subcontractors and suppliers. Construction projects that receive federal aid or federal financial participation are required to take reasonable steps to ensure that disadvantaged business enterprises have an opportunity to compete and participate in project contracts and subcontracts.

The overall Disadvantaged Business Enterprise (DBE) target goal is 12.45%. The DBE participation for federal fiscal year 2023 is 12.30%. This is a 0.35% increase from FFY 2022. Of the 12.30% utilization, 10.07% was participation from women-owned, non-minority DBE firms, 0.95% was participation from minority women-owned DBE firms and 1.28% was participation from minority-owned DBE firms. The collective goals set for projects closed during this period amounted to 8.98%. The DBE goals set for projects awarded during this period had committed DBE participation of 9.59%. To narrow the gap between the target and the performance, MoDOT is conducting outreach meetings to encourage new firms to apply for DBE certification and using DBE supportive services funding to expand the capacity of certified DBE firms.

### Purpose:

This measure tracks the percent of DBE used on construction and engineering projects.

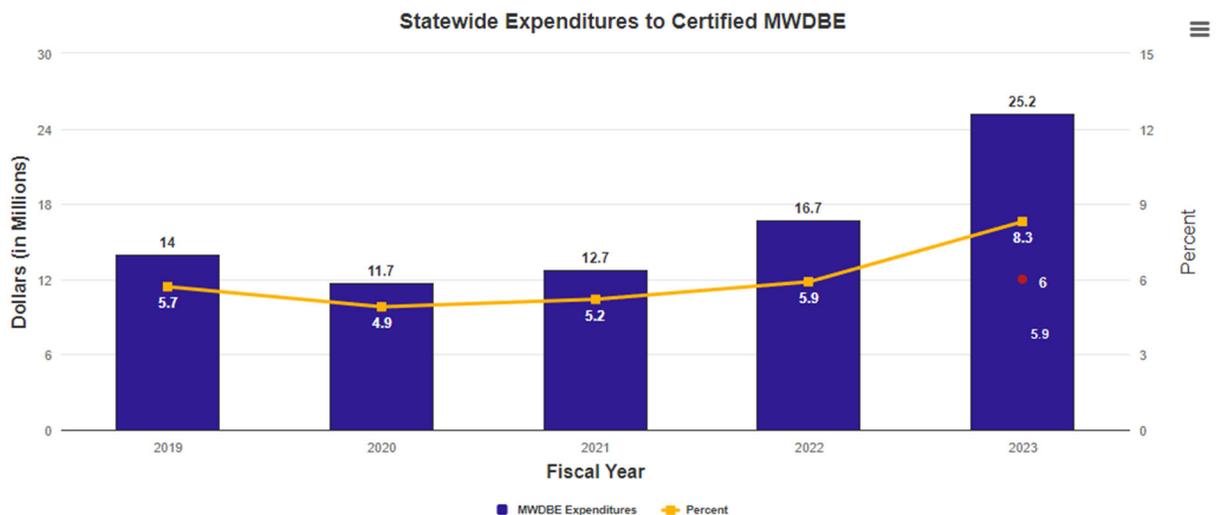
### Measurement and Data Collection:

Data is collected through AASHTOWare Projects for each construction and consultant project. The overall DBE goal is a yearly target established by MoDOT and the Federal Highway Administration regarding the expected total DBE participation on all federally-funded construction and consultant projects. Individual DBE project goals are determined by subcontract opportunity, project location and available DBE firms that

can perform the scope of work. DBE utilization is tracked for each project identifying the prime contractor, contract amount, the established goal and how the prime contractor fulfilled the goal. This measure is based on the federal fiscal year. Collection of all data in this system began in April 2014.

The target for this measure is set by FHWA policy and is updated every three years.

### Expenditures made to certified minority, women and disadvantaged business enterprises – 7d



Target: 6.0%

#### Write up:

Ensuring MoDOT spending is reflected in all Missouri communities helps advance economic development for all business enterprises. By reviewing historical data, opportunities for improvement are identified. These improvement efforts include training staff who have procurement authority and reaching out to minority, women and disadvantaged business enterprises to encourage them to become certified as well as focusing on inclusion efforts.

Results from fiscal year 2023 show an increase of \$8.5 million in minority, women and disadvantaged business enterprise disbursements compared to FY 2022. The percentage of MWDBE expenditures to total expenditures increased 2.4% from 5.9% to 8.3%.

This measure will continue to track the department's efforts to ensure the vendor pool is representative of the business community, including MWDBE firms.

#### Purpose:

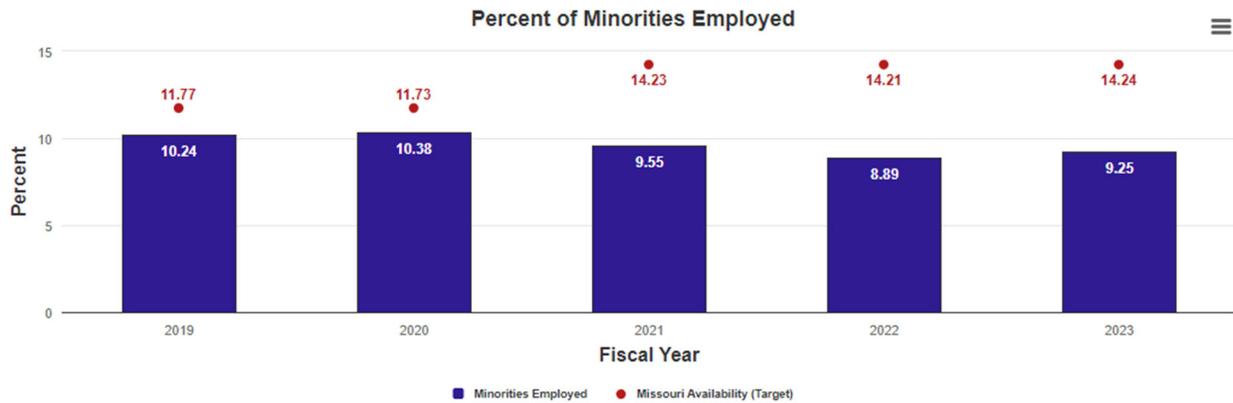
This measure tracks the department's non-program spending with certified minority, women and disadvantaged business enterprises.

**Measurement and Data Collection:**

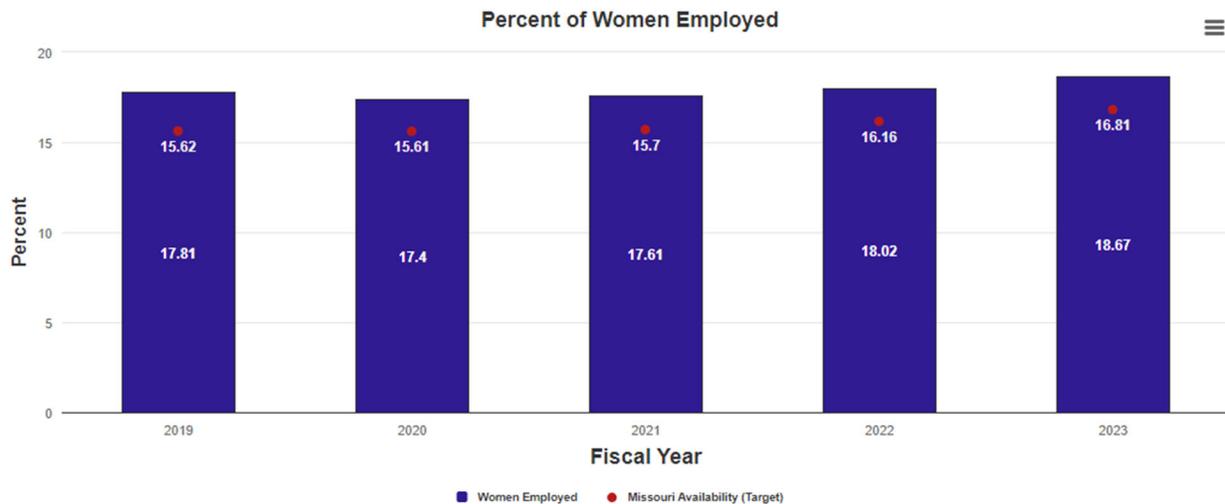
Data is obtained from the statewide financial accounting system expenditure reports and United Missouri Bank purchasing card reports. Certified vendors are maintained in a statewide procurement vendor database. Vendors may be certified through the Office of Administration as well as the Missouri Regional Certification Committee. Included in these expenditures are items such as materials, equipment, tools and supplies. Program spending, including construction, design consultants, local agencies, highway safety and multimodal programs and exempted activities such as utilities, postage, organizational memberships, conferences and travel are excluded from total dollars spent.

The target for this measure is an average of the availability percentage of minority-owned and women-owned businesses and MoDOT’s most recent 5-year average utilization. This target will be updated annually in October.

**Percent of minorities and women employed – 7e**



2023 Target: Increase



2023 Target: No Change

\*Data for Missouri Availability is not available for fiscal year 2018

**Write up:**

By placing the right people in the right positions, MoDOT can better serve its customers and help fulfill its responsibilities to taxpayers.

The number of minority employees decreased by 0.48%, from 413 employees in the fourth quarter of fiscal year 2022 to 411 in the fourth quarter of FY 2023. The number of women employed decreased by 0.8%, from 837 employees in the fourth quarter of FY 2022 to 830 in the fourth quarter of FY 2023. The total full-time employment between the fourth quarter of FY 2022 and the fourth quarter of FY 2023 decreased from 4,644 to 4,445 employees, which is a decrease of 4.29%.

New retention efforts have been put into place including new employee resource groups, virtual diversity webinars and new mentoring training initiatives. These good-faith efforts aid in increasing an applicant pool of qualified minorities and women from internal candidates which may ultimately help narrow the gap between actual employment and target employment of minorities and women.

The target for this measure is the Missouri availability, determined by the 2020 census, for both demographics tracked. While the Department has surpassed the target for women employed, MoDOT continues to struggle to meet the target for minorities.

**Purpose:**

This measure tracks minority and women employment in MoDOT's workforce and compares it with availability data from the Missouri 2020 Census report.

**Measurement and Data Collection:**

The SAM II database is used to collect data. The Missouri 2020 Census data is used as the benchmark for this measurement. The availability number is derived from two different sets of data; the 2020 census and the current pool of MoDOT employees who are trainable, transferable or promotable. The two statistics are factored together and weighted based on the hiring practices from the previous three years. The weighted number allows for a more accurate reflection of the hiring process. This number ultimately conveys the number of minorities and women who currently possess the skills necessary to work for the department.

The target for this measure is based on Missouri's availability and is set each October.