## GUIDEPロST

1．－VERALL Freeway mability has IMPRQVED IN BロTH THE AM AND PM FROM MAY Tロ JUNE
－Average incident lane clearance CONTINUED Tロ IMPRQVE FRGM MAY Tロ JUNE WITH A RECDRD NUMBER OF INCIDENTS RECGRDED IN MAY
－Recard high Majar and Maderate WIRK ZUNE IMPACTS EXPERIENCED IN JUNE ON EB PロPLAR STREET BRIDGE， I－55 NB／SB AT RロUTE A AND the I－44 At RaUte 1 ロ9 ta RaUte 141 PRロJECTS．
－THE $2 \square 16$ CロMMERCIAL Matar VEHICLES FATAL CRASH DATA REPロRT is Hightighted an page 11
－MAY 2ロ17 WEATHER WASHED QVER THE DISTRICT CAUSING PROBLEMS ON MANY RQUTES ACROSS THE DISTRICT

## ZONING IN

TMS Wark Zanes
MAY 2ロ17：3ロ1
JUNE 2ロ17： 349

WロRK ZロNE BREAKDOWN：
MAJロR：41－9．4\％
－MaDERATE：67－15．5\％
－MINGR：324－75．1\％
WGRK ZGNE CRASHES： 16


## MaBILITY SNAPSHロT

HISTQRIC FLロロDING THE FIRST WEEK ロF THE MUNTH IN MAY FLロロDED MANY RロADWAYS LIKE THE INTERCHANGE AT I－44 AND RロUTE 141 PICTURED ABGVE，NEGATIVELY IMPACTING THE REGIGNS MaBILITY．

Freeway Mobiuty
MAY Tロ JUNE CIMPARISロN：
AM IMPROVEMENT／PM IMPRロVED MロBILITY

MAJIR INCIDENTS
MAY 2ロ17： $6 \rightarrow$ JUNE 2ロ17： 8

AVERAGE INCIDENT DURATILN MAY $\rightarrow$ JUNE
LANE CLEARANCE：24：24 $\rightarrow$ 22：18
INCIDENT CLEARANCE：28：55 $\rightarrow$ 25：43
（MIN：SEC）

MAJIR IMPACT WORK ZONES
MAY $\rightarrow 2$ JUNE $\rightarrow 39$
MqDERATE IMPACT WIRK ZqNES
MAY $\rightarrow 7$ JUNE $\rightarrow$ 6ロ

| TMC Observed Work Zones <br> May - June 2017 |  |  |  |
| :---: | :---: | :---: | :---: |
| May |  | June |  |
| Level of Travel Time <br> Impact | Number of Work <br> Zones | Level of Travel <br> Time Impact | Number of Work <br> Zones |
| Major Impact | 2 | Major Impact | 39 |
| Moderate Impact | 7 | Moderate Impact | 60 |
| Minor Impact | 182 | Minor Impact | 142 |
| Total | 191 | Total | 241 |
|  |  |  |  |


| SL Mobility Rating: | SL Visibility levels: |  |
| :--- | :--- | :--- |
| May 2017: 94\% | May 2017: $99 \%$ |  |
| Jun 2017: 98\% | June 2017: $96 \%$ |  |
| Goal: | $91 \%$ | Goal: |

## Additional Travel Time Impacts through Work Zones

Major Impact (15 Minutes or Above) Moderate Impact (10-14 Minutes)
5/29-6/30 (Monday - Friday) Eastbound I-64 - Poplar Street Bridge 3 right lanes (29 Major 42 Moderate)

- Closed leaving one lane of traffic open eastbound before Poplar Street Bridge daily
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 25 minutes during non-peak hours

4/8-4/09, 5/13-5/14, 6/4, 6/23-6/24 (Weekend) Southbound/Northbound I-55 - Jefferson County right lane ( 5 Major 11 Moderate)

- Traffic reduced to one lane all weekend for bridge work.
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 33 minutes during non-peak hours


## 6/19 (Monday) Eastbound/Westbound I-70 - Route Z right lanes (2 Major 4 Moderate)

- Traffic reduced to one lane during daytime hours for coring
- Hours not determined by traffic data
- RITIS data recorded additional travel times up to 33 minutes

6/19-6/23 (Nightly) Eastbound/Westbound I-44-109 to 141 right lanes (5 Major 10 Moderate)

- Traffic reduced to one lane during overnight hours for coring
- Hours on westbound were adjusted to a 10:00 pm start time while MoDOT is limited on the start and end times on eastbound
- RITIS data recorded additional travel times up to 60 minutes of travel time


## Wark ZaNEs

## Work Zone Related Crashes with Mobility Impact

## 6/23 (Friday) 1:42 pm Northbound I-55 at Route A

- Fatal crash in work zone involving 3 vehicles with 6 injuries
- The incident lasted 3 hours and 44 minutes with a 17 minute queue when it cleared




## INCIDENT MANAGEMENT

May 2017 vs. June 2017 Incidents Summary


- Average Time for Backup to Clear = T6 - T4
- Average Time to Clear Incident from Lanes = T4- T1



## INCIDENT MANAGEMENT



Denotes Location of Major Impact Traffic Incidents
Total Number of Incidents: April: 969 / May: 1010 / June: 941


## Major Impact Incidents

 May 2017 vs. June 2017 (10)(4)

## Fatal Incidents

May 2017 vs. June 2017
(7)
(4)

Tractor Trailer Incidents May 2017 vs. June 2017 (51)
(40)

## INEIDENT MANAGEMENT

Lane Blocking Incidents by Freeway May and Jun 2017

| Interstate | Month | Number of Incidents | Average Time to Clear Incident from Lanes = T4 - T1 | Average Time for Backup to Clear = T6 - T4 | Freeway Miles | Incidents per Mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1-44 | May | 129 | 22:41 | 00:53 | 33 | 3.91 |
| 1-44 | Jun | 144 | 21:27 | 00:49 | 33 | 4.36 |
| 1-55 | May | 118 | 34:53 | 00:44 | 23 | 5.13 |
| 1-55 | Jun | 96 | 21:56 | 01:12 | 23 | 4.17 |
| 1-64 | May | 128 | 18:59 | 01:53 | 40 | 3.20 |
| 1-64 | Jun | 151 | 01:12 | 01:10 | 40 | 3.78 |
| 1-70 | May | 204 | 28:49 | 02:19 | 38 | 5.37 |
| 1-70 | Jun | 178 | 22:57 | 01:58 | 38 | 4.68 |
| 1-170 | May | 46 | 16:00 | 00:47 | 11 | 4.18 |
| I-170 | Jun | 48 | 18:16 | 00:01 | 11 | 4.36 |
| 1-270 | May | 264 | 18:54 | 02:31 | 36 | 7.33 |
| I-270 | Jun | 214 | 22:24 | 02:45 | 36 | 5.94 |
| MO-364 | May | 27 | 15:00 | 00:53 | 11 | 2.45 |
| MO-364 | Jun | 28 | 11:25 | 00:19 | 11 | 2.55 |
| MO-370 | May | 10 | 06:00 | 00:00 | 13 | 0.77 |
| MO-370 | Jun | 17 | 23:53 | 00:38 | 13 | 1.31 |
| Total | May/Jun | 1802 | 19:03 | 01:11 | 410 | 4.40 |

## 2015 Number of Incidents and Time to Clear Lanes



## INCIDENT MANAGEMENT

## 2016 Number of Incidents and Time to Clear Lanes



|  | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TTCI | 28:53 | 31:59 | 25:59 | 31:17 | 22:51 | 23:32 | 27:59 | 22:27 | 25:40 | 25:09 | 25:27 | 29:22 |
| Incidents | 704 | 782 | 847 | 846 | 834 | 863 | 822 | 887 | 843 | 803 | 871 | 799 |

## 2017 Number of Incidents and Time to Clear Lanes



## INCIDENT MANAGEMENT

2014 Tractor Trailer Incidents / Time to Clear



| 2014 | I-44 | I-55 | I-64 | I-70 | I-170 | I-255 / I-270 | Route 364 | Route 370 | * Other | Total | TTCI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 20 | 7 | 9 | 24 | 3 | 11 | 3 | 1 | 0 | 78 | 69.68 |
| Feb | 5 | 3 | 6 | 13 | 1 | 6 | 0 | 1 | 0 | 35 | 66.20 |
| Mar | 8 | 7 | 5 | 5 | 0 | 4 | 0 | 1 | 0 | 30 | 49.50 |
| Apr | 5 | 3 | 12 | 7 | 0 | 10 | 0 | 0 | 0 | 37 | 40.89 |
| May | 5 | 8 | 4 | 4 | 1 | 6 | 0 | 0 | 0 | 28 | 56.39 |
| Jun | 11 | 8 | 5 | 8 | 0 | 7 | 0 | 0 | 0 | 39 | 85.13 |
| Jul | 4 | 2 | 8 | 4 | 0 | 7 | 0 | 1 | 0 | 26 | 28.48 |
| Aug | 5 | 4 | 7 | 8 | 2 | 10 | 0 | 1 | 0 | 37 | 29.43 |
| Sep | 3 | 3 | 4 | 10 | 0 | 7 | 0 | 1 | 0 | 28 | 54.71 |
| Oct | 5 | 6 | 4 | 4 | 1 | 7 | 0 | 3 | 0 | 30 | 42.58 |
| Nov | 2 | 4 | 5 | 9 | 1 | 7 | 0 | 3 | 0 | 31 | 43.32 |
| Dec | 7 | 7 | 2 | 12 | 1 | 8 | 0 | 1 | 0 | 38 | 55.76 |
| YR Totals | 80 | 62 | 71 | 108 | 10 | 90 | 3 | 13 | 0 | 437 | 51.84 |

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015

## INCIDENT MANAGEMENT

2015 Tractor Trailer Incidents / Time to Clear



| 2015 | I-44 | I-55 | I-64 | I-70 | I-170 | 1-255 / 1-270 | Route 364 | Route 370 | * Other | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 7 | 4 | 4 | 10 | 0 | 9 | 0 | 1 | 0 | 35 | 38.29 |
| Feb | 20 | 2 | 6 | 9 | 1 | 14 | 1 | 0 | 0 | 53 | 55.81 |
| Mar | 9 | 4 | 11 | 14 | 0 | 7 | 0 | 1 | 0 | 46 | 76.85 |
| Apr | 7 | 3 | 7 | 17 | 1 | 2 | 1 | 0 | 0 | 38 | 35.65 |
| May | 5 | 2 | 9 | 10 | 0 | 3 | 1 | 1 | 0 | 31 | 89.66 |
| Jun | 9 | 3 | 6 | 10 | 0 | 12 | 0 | 1 | 0 | 41 | 73.46 |
| Jul | 6 | 6 | 8 | 8 | 1 | 11 | 0 | 0 | 3 | 43 | 64.72 |
| Aug | 10 | 2 | 3 | 11 | 0 | 9 | 0 | 0 | 3 | 38 | 67.89 |
| Sep | 11 | 9 | 5 | 17 | 2 | 9 | 0 | 1 | 2 | 56 | 59.32 |
| Oct | 12 | 12 | 8 | 17 | 1 | 8 | 0 | 0 | 2 | 60 | 50.97 |
| Nov | 8 | 4 | 7 | 14 | 0 | 11 | 0 | 0 | 3 | 47 | 68.15 |
| Dec | 5 | 9 | 8 | 19 | 2 | 8 | 0 | 0 | 5 | 56 | 41.66 |
| YR Totals | 109 | 60 | 82 | 156 | 8 | 103 | 3 | 5 | 18 | 544 | 60.20 |

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015

## INCIDENT MANAGEMENT




| 2016 | I-44 | I-55 | I-64 | 1-70 | I-170 | I-255 / I-270 | Route 364 | Route 370 | * Other | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 7 | 3 | 4 | 5 | 1 | 10 | 0 | 0 | 0 | 30 |
| Feb | 10 | 3 | 10 | 15 | 2 | 5 | 0 | 1 | 2 | 48 |
| Mar | 14 | 6 | 6 | 22 | 2 | 8 | 0 | 0 | 1 | 59 |
| Apr | 14 | 7 | 6 | 16 | 1 | 11 | 0 | 2 | 2 | 59 |
| May | 7 | 4 | 5 | 9 | 0 | 7 | 0 | 2 | 2 | 36 |
| Jun | 14 | 3 | 8 | 12 | 0 | 7 | 0 | 1 | 2 | 47 |
| Jul | 16 | 3 | 5 | 13 | 0 | 6 | 0 | 2 | 3 | 48 |
| Aug | 16 | 3 | 4 | 9 | 2 | 11 | 0 | 0 | 1 | 46 |
| Sep | 12 | 3 | 5 | 18 | 1 | 13 | 0 | 0 | 2 | 54 |
| Oct | 10 | 4 | 5 | 11 | 0 | 10 | 0 | 3 | 2 | 45 |
| Nov | 18 | 6 | 1 | 6 | 0 | 4 | 0 | 2 | 1 | 38 |
| Dec | 5 | 7 | 7 | 14 | 1 | 11 | 0 | 1 | 2 | 48 |
| YR Totals | 143 | 52 | 66 | 150 | 10 | 103 | 0 | 14 | 20 | 558 |

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015

## INCIDENT MANAGEMENT

## 2016 Commercial Motor Vehicle Fatal Crash Data

Carrier Size -

- Large
- Medium
- Small

Contributing Circumstance -

- CMV

40 (33.6\%)

- Non-CMV

79 (66.4\%)
37 (31\%)
24 (20\%)
58 (49\%)

Cause -

- Distracted
- Driver Fatigue
- Failure To Yield
- Following Too Close
- Impaired
- Improper Lane Change
- Improperly Stopped
- Other
- Overcorrected
- Too Fast For Conditions
- Unknown
- Vehicle Defects


## Roadway Type -

- City
- County
- Interstate
- State


## Carrier Operation -

- Interstate

93 (78\%)

- Intrastate


## Carrier Type -

- Concrete1
- Dump 7
- HM Tank Truck 2
- Mobile Home 1
- Passenger 5
- School Bus
- General Freight

12 (10\%)
18 (15\%)
62 (52\%)
27 (23\%)
21 (18\%)
1
2
17 (14\%)
1
19 (16\%)
6
6
33 (28\%)
2
7
4

## 2016 Commercial Motor Vehicle Fatal Crash Data

- $69 \%$ involved medium to small carriers (almost $50 \%$ were small carriers). Our CMV safety investigations tell us that many times small carriers don't have the resources to properly maintain their equipment, don't have the information and education and or simply aren't inclined to do either.
- $66 \%$ of the crashes had Non-CMV (the 4 -wheelers) as a major contributor
- The top 4 causes (regardless of whether or not the CMV was the major cause of the crash) were:
- Improper Lane Change (28\%)
- Too Fast for Conditions (18\%)
- Failure to Yield (16\%)
- Distracted Driving (14\%)
- $52 \%$ occurred on the interstate
- $23 \%$ on state roads
- $78 \%$ involved interstate carriers (a lot of non-Missouri based carriers)



## INCIDENT MANAGEMENT




| 2017 | I-44 | I-55 | I-64 | I-70 | I-170 | I-255 / I-270 | Route 364 | Route 370 | * Other | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jan | 11 | 4 | 4 | 11 | 0 | 15 | 0 | 0 | 0 | 45 |
| Feb | 10 | 2 | 4 | 6 | 1 | 9 | 0 | 0 | 0 | 32 |
| Mar | 12 | 7 | 7 | 12 | 1 | 7 | 0 | 0 | 2 | 48 |
| Apr | 16 | 3 | 5 | 10 | 1 | 7 | 0 | 1 | 3 | 46 |
| May | 11 | 8 | 2 | 15 | 0 | 12 | 0 | 0 | 3 | 51 |
| Jun | 15 | 3 | 1 | 6 | 1 | 11 | 0 | 1 | 2 | 40 |
| Jul |  |  |  |  |  |  |  |  |  | 0 |
| Aug |  |  |  |  |  |  |  |  |  | 0 |
| Sep |  |  |  |  |  |  |  |  |  | 0 |
| Oct |  |  |  |  |  |  |  |  |  | 0 |
| Nov |  |  |  |  |  |  |  |  |  | 0 |
| Dec |  |  |  |  |  |  |  |  |  | 0 |
| YR Totals | 75 | 27 | 23 | 60 | 4 | 61 | 0 | 2 | 10 | 262 |

*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015


## INCIDENT MANAGEMENT

# Major Impact Traffic Incidents and Mitigation 

## 5/11/2017 (Thursday)

- Time: 7:56 am - 12:06 pm
- Location: St. Louis County - Westbound I-44 at Lindbergh Boulevard
- Event Type: Two-Vehicle Crash
- Estimated Initial Impact: Rush Hour: 2 of 4 travel lanes affected equals (=) 50\%
- Incident Details: A passenger car attempted to pass another vehicle when it lost control and struck the rear of a school bus. The impact forced the school bus across two lanes of traffic where it struck the center median wall before returning to the roadway. The school bus ran off the right side of the road, struck a metal guardrail and continued down an embankment into a ravine. The driver of the school bus was transported with serious injuries, as were 14 children for minor injuries.
- Action Taken: Crestwood Police and MSHP responded and took command of the scene. Due to the number of injured children, multiple agencies responded to assist in transporting them to several area hospitals. The responding departments included, Kirkwood Fire and EMS, Shrewsbury EMS, Fenton EMS, Mehlville Fire and EMS, Abbott EMS, and St. Louis City EMS. The TMC dispatched five MoDOT Emergency Responders to assist with traffic control. Advanced warning signs were placed before Elm and at Big Bend. The TMC messaged for the event to notify the drivers. The District Engineer, Area Engineer, EOC and Communications staffs were all notified. Lanes 1 and 2 were closed for a short time while a tow truck loaded the passenger vehicle. Traffic queued approximately 3 miles, back to Berry Road.
- Event Duration: 4 hours 10 minutes

| Westbound I-44 <br> at Lindbergh Boulevard <br> INTERSTATE | Left <br> Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Right <br> Shoulder |
| :---: | :--- | :---: | :---: | :---: | :---: | :--- |
| MISSOUR1 |  |  |  |  |  |  |$\quad$|  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Closed Hours/Minutes | $1: 25$ | $0: 08$ | $0: 02$ | $3: 59$ | $4: 05$ |



## Major Impact Traffic Incidents and Mitigation

## 5/12/2017 (Friday)

- Time: 11:51 am - 4:41 pm
- Location: St. Louis City - Eastbound I-70 past Tucker Boulevard (entrance to Stan Musial Bridge)
- Event: Debris in Roadway - Adhesive Spill
- Estimated Initial Impact: Non-Rush Hour: 1 of 2 travel lanes affected equals (=) 50\%
- Incident Details: The TMC received a phone call from the St. Louis City Fire Department who requested assistance with a reported spill on the roadway of a fairly large amount of bonding adhesive
- Action: MoDOT Emergency Response arrived on scene to block left lane and shoulder. A crew from Broadway Maintenance responded and attempted to contain the glue by putting down sand. Environmental Restoration, a remediation company, responded. Their attempts at scraping the glue from the roadway were unsuccessful. Emergency Response then added oil dry to the sand that maintenance put on the spill and the glue dried allowing for cleanup and the lane to be reopened. The Communication Staff and management were notified of the spill via SLAdminText. The TMC messaged for the spill along I-70 back to Union/Bircher. Traffic queued less than one mile.
- Event Duration: 4 hours 50 minutes

| Eastbound I-70 past Tucker Boulevard | Left Shoulder | Lane 1 | Lane 2 | Right Shoulder |
| :---: | :---: | :---: | :---: | :---: |
| Closed Hours/Minutes | 4:50 | 4:50 |  |  |



## Major Impact Traffic Incidents and Mitigation

## 5/20/2017 (Saturday)

- Time: 6:02 am - 1:25 pm
- Location: St. Charles County - Westbound I-70 at TR Hughes Boulevard
- Event Type: 2 Vehicle Crash
- Estimated Initial Impact: Non-Rush Hour: 3 of 3 travel lanes affected equals (=) 100\%
- Incident Details: A passenger vehicle traveled into the path of a tractor trailer causing the tractor trailer to travel off the right side of the roadway where it overturned. The driver of the tractor trailer was transported with minor injuries.
- Action Taken: O'Fallon Police and Fire along with St. Charles County EMS responded and closed all lanes of the interstate. MSHP responded and took command of the scene. At the start of the incident there were no MoDOT Emergency Response units on duty, so the TMC notified MoDOT's Incident Management Coordinator. The Incident Management Coordinator and two other ER units responded to assist with traffic control. During the full closure, Police diverted traffic at Route 79 which kept the queue to less than a mile. The extended duration was due to the tractor trailer hauling 18 pallets of food and it was being loaded onto another trailer. MoDOT's Incident Management Coordinator directed the TMC to contact the health department and condemn the load so that the scene could be cleared faster. The St. Charles County Health Department arrived approximately 2 hours later and condemned the load. DNR was contacted and responded to ensure no fuel entered the drainage system since the overturned tractor trailer spilled 20 gallons of diesel fuel near a storm drain. A MoDOT Maintenance crew from St. Charles County responded with a bobcat to assist with offloading the overturned trailer. The TMC activated the appropriate message boards and the closure was also entered into TMS to alert the public. The queue cleared quickly once the two left lanes were reopened. All lanes were reopened at 1:02 pm while work continued on the shoulder.
- Event Duration: 7 hours 22 minutes



## INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation

## 5/25/2017 (Thursday) - 5/26/2017 (Friday)

- Time: 10:15 am - 4:00 am
- Location: St. Louis County - Southbound I-270 Ramp to Northbound I-55/US 67
- Event Type: Hazmat
- Estimated Initial Impact: Rush Hour: 3 of 3 ramp lanes affected equals (=) 100\%
- Incident Details: A tractor trailer hauling 40-thousand pounds of organochlorine in granular form was traveling too fast to safely negotiate the downhill curve, causing the load to shift and the tractor trailer to overturn at the end of the cloverleaf ramp. The tractor trailer came to a rest on its left side blocking the lane from Southbound I-270 to Northbound I-55 as well as the lane from Northbound I-55 to Lindbergh Blvd. (US 67). The pesticide was packaged in bags and some of those bags ruptured releasing the highly toxic substance inside the trailer with some spilling out onto the roadway. The driver of the tractor trailer was transported with serious injuries.
- Action Taken: The Mehlville FPD had command of the scene with the support of the St. Louis County Police and the MSHP. Three MoDOT Emergency Response units were dispatched to assist with traffic control. The TMC activated all appropriate DMS boards and entered the closure into TMS to alert the public. MoDOT's Incident Management Coordinator, Communications staff, the EOC, and Motor Carriers were all notified. The Department of Natural Resources responded and set up a Hazmat tent. The duration was extended due to the difficulty of unloading the pesticide safely without further contaminating the environment or personnel.
- Event Duration: 17 hours 45 minutes



## Major Impact Traffic Incidents and Mitigation

## 5/28/2017 (Sunday)

- Time: 12:57 pm - 3:03 pm
- Location: St. Louis City - Southbound I-55 before Weber Road
- Event Type: Pedestrian Struck
- Estimated Initial Impact: Non-Rush Hour, 4 of 4 travel lanes affected equals (=) 100\%
- Incident Details: TMC operators monitoring police scanner traffic heard units being dispatched to a pedestrian struck. Reports indicate a male subject was struck by a vehicle while he was attempting to retrieve an illicit narcotic that had been thrown out a car window onto the highway during an argument. The vehicle that struck the male then left the scene. Due to the severity of the pedestrian's injuries, St. Louis City Police closed all southbound lanes of I-55 for further investigation.
- Action Taken: MoDOT Emergency Response units were dispatched to provide traffic control. The TMC messaged for the event on the appropriate DMS boards within 2 minutes and then pushed the boards back to the I-44/I-55 split after 10 minutes to keep drivers informed. The incident was also entered it into TMS to notify the public. MoDOT EOC, Motor Carriers, Communications, the Emergency Incident Coordinator, and shift supervisor were all notified. Traffic was originally diverted off at Weber Road, but at the request of St. Louis City PD, it was pushed back to Germania with the entrance ramp from Carondelet also being closed. Maximum traffic queue was estimated at 1 mile, which returned to normal shortly after all lanes opened.
- Event Duration: 2 hours 5 minutes



# Major Impact Traffic Incidents and Mitigation 

## 5/31/2017 (Wednesday)

- Time: 6:50 pm - 9:45 pm
- Location: St. Louis County - Westbound I-70 past St. Charles Rock Road
- Event: 3+Vehicle Collision
- Estimated Initial Impact: Rush Hour: 2 of 3 travel lanes affected equals (=) 66\%
- Incident Details: The Bridgeton Police Department called requesting assistance with traffic control for a multi-vehicle accident involving a tractor trailer. Upon looking for incident on camera, operators found PD on scene blocking the two right lanes. After emergency response units arrived, it was determined the tractor trailer hit an abandoned vehicle on the right shoulder and it went off the road. Debris from the initial accident hit two passing vehicles on the interstate.
- Action: MoDOT Emergency Responders were dispatched to help with traffic control. The Communication Staff and management were notified via SLAdminText email. The TMC messaged for the event on all available DMS boards along I-70, I-170 and US 67 to alert drivers. Duration of the event was extended due to the heavy tow trucks needing additional time to move the tractor trailer. Traffic queue reached 1.5 mile, but cleared within 3 minutes of all lanes being reopened.
- Event Duration: 2 hours 55 minutes

| Westbound I-70 <br> past St. Charles Rock Rd <br> INTERSTATE | Left <br> Shoulder | Lane 1 | Lane 2 | Lane 3 | Right <br> Shoulder |
| :---: | :--- | :---: | :---: | :---: | :--- |
| MISSoURi] |  |  |  |  |  |



## Major Impact Traffic Incidents and Mitigation

## 6/3/2017 (Saturday)

- Time: 3:13 am - 5:38 am *** Fatality ***
- Location: St. Louis City - Westbound I-70 before West Florissant Avenue
- Event: Police Investigation
- Estimated Initial Impact: Non-Rush Hour: 4 of 4 travel lanes affected equals (=) 100\%
- Incident Details: Reports indicate a motorist stopped along the center median wall of the interstate to check on his tires when he was shot by an unknown subject. The motorist was transported to the hospital where he was pronounced deceased. St. Louis City PD closed all westbound lanes of the interstate to investigate the shooting.
- Action: St. Louis City Police, Fire and EMS responded. Given the dangerousness of the situation, MoDOT Emergency Responders were not dispatched to assist. The TMC messaged for the event on DMS boards within 1 minute of confirming the highway was closed via CCTV. The incident was entered into TMS to notify the public. Once the fatality was confirmed, the SLAdminText and I70IM were sent out. Duration of the incident was extended due to the amount of time it took the SLMPD Crime Scene Unit to arrive. Traffic was diverted off at Carrie / I-70 North Outer Road. Given the time of day there was no significant impact to traffic noted, and what initial queue there was quickly cleared once the diversion to Carrie was in place.
- Event Duration: 2 hours 25 minutes



## Major Impact Traffic Incidents and Mitigation

## 6/9/2017 (Friday)

- Time: 2:27 am - 4:47 am *** Fatality ***
- Location: Jefferson County - Northbound I-55 at Church Road
- Event Type: Single Vehicle Crash
- Estimated Initial Impact: Non-Rush Hour: 4 of 5 lanes affected equals (=) 80\%
- Incident Details: For unknown reasons, a motorist drifted off onto the right shoulder while traveling Northbound on I-55. The driver then over-corrected causing the vehicle to spin across all lanes of traffic before striking the concrete center median wall. The force of the impact resulted in the driver suffering a fatal neck/spinal injury. He was pronounced on scene by EMS. At the start of the incident, only the left lane was closed. However, as emergency crews arrived, the situation became more serious and additional lanes were closed until just the right lane remained open.
- Action Taken: TMC operators monitoring police scanner traffic heard units being dispatched to an accident. They confirmed the location via CCTV and activated the only available DMS board within 1 minute. The incident was entered into TMS to alert the public. MoDOT Emergency Response was dispatched to assist Arnold PD, and Rock Community Fire and EMS with traffic control. Due to the fatality, an accident reconstruction had to be completed which extended the duration of the event. The I55IM and SLAdminText were sent out and communications were notified. The traffic queue reach approximately 1 mile at 4:00 am, but quickly cleared once all lanes were reopened.
- Event Duration: 2 hours 20 minutes

| Northbound I- 55 <br> at Church Road <br> INTERSTATE | Left <br> Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Lane 5 | Right <br> Shoulder |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :--- |
| MISSoURI |  |  |  |  |  |  |  |



## Major Impact Traffic Incidents and Mitigation

## 6/10/2017 (Saturday)

- Time: 12:47 am - 2:52 am
- Location: St. Louis City - Eastbound I-270 at Riverview Boulevard
- Event Type: Single-Vehicle Crash
- Estimated Initial Impact: Non-Rush Hour: 2 of 2 travel lanes affected equals (=) $100 \%$
- Incident Details: Crash reportedly resulted from a police pursuit. The suspect struck the guardrail and the vehicle overturned.
- Action Taken: TMC operators monitoring police scanner traffic heard units being dispatched to an accident. When it was first confirmed via CCTV, all lanes were closed, but traffic appeared to be getting through on the right shoulder. St. Louis City Police then closed the right shoulder and allowed traffic through in the right lane. Once St. Louis City Fire and EMS arrived, all lanes were closed. The TMC messaged for the incident and subsequent closure, and entered it into TMS to notify the public. MoDOT Emergency Response was dispatched to assist with traffic control. Traffic was diverted off at Riverview Blvd. around the incident, then back on to I-270. This resulted in no significant impact to traffic noted.
- Event Duration: 2 hours 5 minutes



# Major Impact Traffic Incidents and Mitigation 

## 6/14/2017 (Wednesday)

- Time: 4:57 am - 8:40 am
- Location: St. Charles County - Westbound I-70 at Route K
- Event: 2 Vehicle Crash
- Estimated Initial Impact: Non-Rush Hour: 3 of 3 travel lanes affected equals (=) $100 \%$
- Incident Details: Reports indicate the driver of one tractor trailer ran off of the right side of the road, and when he returned to the road he struck a second tractor trailers. Both tractor trailers overturned blocking all lanes and shoulders of Westbound I-70. One driver was transported with minor injuries.
- Action: O'Fallon Police and Fire, St. Charles County EMS, and the MSHP all responded. At the time of the incident, there were no MoDOT Emergency Response Units on duty. The supervisor was contacted and the first ER units arrived approximately 30 minutes later. The TMC messaged for the event on all available DMS boards back to decision points on I-70 and I-270. It was entered into TMS to notify the public. Advanced warning signs were placed on I-70 at ROUTE 79 and Mid Rivers Mall Drive. Traffic was diverted off at Route K and then right back on to I-70, bypassing the incident. The TMC contacted MoDOT Traffic Engineers to have the traffic signals adjusted on Route K to favor the exiting traffic. Vehicles were being diverted off the highway at the Route K @ I-70 Westbound ramp and entered back on the interstate via the westbound on ramp. Vehicles were also using W Terra, making the westbound left at Route K followed by the southbound right to enter back on the interstate. Scanning of the pre-developed timing plans for both intersections resulted in selecting pattern 36 which provided the most time for the westbound ramp and the most time for the westbound movement at W Terra. A max recall was also programmed on phase 3 in pattern 36 at the westbound ramp due to tractor trailers allowing the signal to gap out. After several cycles, unused green time was observed for the northbound and southbound movements. Twenty seconds was reallocated from phase 2,5, \& 6 and given to Phase 3.
- Result: The extra time for the westbound ramp and westbound movement at W Terra allowed additional vehicles to enter back on the interstate via the on ramp but still was hindered by the capacity of the intersections. Due to the proximity of the intersections, the offsets could have used an adjustment to better utilize the extra time the westbound movement at W Terra received. Northbound through volume was moderate and not impacted by the additional time the westbound ramp received. The southbound volume was light and no issues were observed.
- MoDOT EOC, Motor Carriers, Communications, Area Engineer, and Incident Coordinator were all notified. The traffic queued 2.5 miles at the peak of rush hour, but cleared quickly once the lanes were reopened.
- Event Duration: 3 hours 47 minutes



## INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation



## Major Impact Traffic Incidents and Mitigation

## 6/15/2017 (Thursday)

- Time: 7:09 am - 8:58 am *** Weather Related ***
- Location: St. Louis County - Eastbound I-70 at Lucas \& Hunt Road
- Event: Multi-Vehicle Crash
- Estimated Initial Impact: Rush Hour: 3 of 3 travel lanes affected equals (=) $100 \%$
- Incident Details: Reported as a seven vehicle crash that occurred during rainy conditions, and closed all eastbound lanes during rush hour. No injuries were reported.
- Action: MoDOT Emergency Response units responded to assist St. Louis County Police, MSHP, and Normandy PD with traffic control. Traffic was diverted off onto Lucas \& Hunt Road. The TMC messaged for the event using all appropriate DMS boards, and it was entered into TMS to notify the public. A MoDOT Traffic Engineer was contacted to adjust the traffic signals at Lucas \& Hunt and I-70 to favor the exiting traffic. The EOC and Motor Carriers were advised, and I70IM was sent out. Duration was extended due to the number of vehicles involved, of which, five had to be towed from the scene. Traffic queued 4.5 miles, back to Airflight.
- Event Duration: 1 hour 49 minutes



# Major Impact Traffic Incidents and Mitigation 

## 6/21/2017 (Wednesday)

- Time: 2:20 pm - 4:55 pm
- Location: St. Louis County - Eastbound I-70 at St. Charles Rock Road
- Event: Traffic Hazard
- Estimated Initial Impact: Rush Hour: 1 of 4 travel lanes affected equals (=) $25 \%$
- Incident Details: The TMC was contacted by the Bridgeton Police Department who requested assistance after a motorist reported to them an unknown object fell off the St. Charles Rock Road overpass and struck their vehicle on the interstate below.
- Action: A MoDOT Emergency Response unit was dispatched and upon their arrival they blocked the right lane. The TMC activated the appropriate DMS boards to notify drivers of the lane closure. Hampton Bridge was contacted and they responded to inspect the overpass. Due to the lane being closed into rush hour, traffic queued for 3 miles, and took approximately 15 minutes to return to normal after the lane was reopened.
- Event Duration: 2 hours 35 minutes

| Eastbound I-70 <br> at St. Charles Rock Road <br> INTERSTATE | Left <br> Shoulder | Lane 1 | Lane 2 | Lane 3 | Lane 4 | Right <br> Shoulder |
| :---: | :--- | :---: | :---: | :---: | :---: | :--- |
| MISSoURI |  |  |  |  |  |  |

# Major Impact Traffic Incidents and Mitigation 

## 6/23/2017 (Friday)

- Time: 1:42 pm-5:26 pm *** Fatality ***
- Location: Jefferson County - Northbound I-55 at Route A
- Event Type: Multi-Vehicle Crash in a Work Zone
- Estimated Initial Impact: Non-Rush Hour: 2 of 2 lanes affected equals (=) $100 \%$
- Incident Details: According to the police report, an SUV was stopped for traffic ahead and a small passenger car was coming to a stop behind it. A third vehicle, reported as a large Ford F450 pickup truck, failed to stop and struck the rear of the car. The force of the impact pushed the car into the rear of the SUV. The driver of the passenger car was pronounced deceased at the hospital, and four others were transported with injuries ranging from minor to serious.
- Action Taken: TMC operators monitoring police scanner traffic heard units being dispatched to an accident. They confirmed the location via CCTV and activated the appropriate DMS board within 1 minute. The incident was entered into TMS to alert the public. Three MoDOT Emergency Response units were dispatched to assist Festus Police and Fire, MSHP and Joachim-Plattin EMS with traffic control. Due to the fatality, the MSHP completed an accident reconstruction which extended the duration of the event. The I55IM and SLAdminText were sent out, and the EOC, Motor Carriers, Communications, Area Engineer, and Incident Coordinator were all notified. Jim Connell was also notified as the crash occurred in a work zone. Traffic was diverted onto Route A, and the Traffic Engineers were contacted to look into adjusting traffic signals to assist with the diversion. Northbound traffic was being diverted off the interstate at US 67 immediately impacting the intersections of US 61 @ US 67-American Legion, St. Pius, and Route A. Vehicles were observed to be attempting to take the northbound LT at ROUTE A to access the interstate and continue northbound. This surge of left turning vehicles impacted ROUTE A @ South Mill and Route A @ West Gannon. After reviewing the pre developed plans, it was decided to manually run plan 84 due to its high cycle length and a high northbound LT split at US 67 @ Route A. Shortly after pattern 84 was downloaded, law enforcement took control of US 67 @ Route A. After law enforcement released control of US 67 @ Route A, the volume began to pick up at US 67 @ Beffa and US 67 @ Bailey. At this time, pattern 84 was also downloaded at these intersections. Pattern 84 was left operating as part of the detour for the construction on Northbound I-55 north of Route A. Monitoring continued until 6:00 pm at these intersections as well as the intersections to the north on US 67. The I-55 Construction signal consultant will continue monitoring throughout the weekend or duration of the closure.
- Result: The higher cycle length pattern gives priority to the northbound traffic and the northbound LT at US 67 @ Route A, however, due to the intersection being controlled by law enforcement, the intersection became a choke point until law enforcement left at approximately $5: 20 \mathrm{pm}$. Residual queuing eventually began flowing. The traffic queue reached an estimated 5 miles at its peak, and took approximately 16 minutes to clear once all lanes were opened.
- Event Duration: 3 hours 44 minutes


## INCIDENT MANAGEMENT

Major Impact Traffic Incidents and Mitigation

| Northbound I-55 <br> at Route A | Left <br> Shoulder | Lane 1 | Lane 2 | Right <br> Shoulder |
| :--- | :--- | :--- | :--- | :--- |
| INTERSTATE <br> MISSOUFI |  |  |  |  |
| Closed Hours/Minutes | $3: 44$ | $3: 44$ | $3: 39$ | $3: 35$ |



## Major Impact Traffic Incidents and Mitigation



## INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation



## INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation



## Major Impact Traffic Incidents and Mitigation

## 6/30/2017 (Friday)

- Time: 11:59 am - 1:26 pm
- Location: St. Charles County - Westbound I-70 past Bryan Road
- Event Type: Multi-Vehicle Crash
- Estimated Initial Impact: Non-Rush Hour: 3 of 3 lanes affected equals (=) $100 \%$
- Incident Details: According to the police report, the driver of a pickup truck failed to secure his load and a large metal container fell into the roadway. This resulted in a chain reaction accident involving eight other vehicles. Five ambulances responded and transported a total of eight people to various local hospitals with reported minor injuries.
- Action Taken: TMC operators monitoring police scanner traffic heard units being dispatched to an accident. They confirmed the location via CCTV and activated the appropriate DMS board within one minute. The incident was entered into TMS to alert the public. Two MoDOT Emergency Response units were dispatched to assist the Lake St. Louis Police and MSHP with traffic control. Traffic was diverted onto TR Hughes and along the I-70 South Outer Road. The EOC and Motor Carriers were notified. The Traffic Engineers were able to adjust traffic signals to improve flow through the detour. Once the interstate was shut down, traffic began to exit the interstate at Bryan Rd going north to the North Outer Road and south down to MO 364. Diversion plans or Free operation were identified and downloaded at the intersections of W Terra @ Bryan Rd through Bryan Rd @ Feise Rd to allow traffic to access the North Outer Road and Westbound MO 364. A diversion plan was implemented at I-70 North Outer Road @ Lake St. Louis Blvd giving priority to the westbound approach allowing vehicles to enter Westbound I-70 on the other side of the closure. Once it was decided to divert traffic off at I-70 @ TR Hughes, focus was turned to the intersection of I-70 North Outer Road @ TR Hughes where a diversion plan was downloaded giving priority to the northbound approach to open up access I-70 North Outer Road. When observing Route K @ I-70 North Outer Road (W Terra), it was determined to operate the signal in Free and increase the max value on phases 4 \& 8 to accommodate the westbound surge.
- Result: The diversion plans and Free operation helped relieve the surges at the typically lower volume approaches. Implementation of these diversion plans was timely, allowing observations to continue at multiple congested areas and fine tune the signals where possible. Vehicles were taking the path of least resistance causing multiple congested intersections during the closure. As lanes on the interstate began to open up, the signals were returned to their normal operating programs. Event duration attributed to the number of vehicles involved and the number of emergency responders required. The traffic queue reached an estimated 6 miles at its peak.
- Event Duration: 1 hours 26 minutes



## INCIDENT MANAGEMENT

## Major Impact Traffic Incidents and Mitigation



A=COM

## Major Impact Traffic Incidents and Mitigation



## Major Impact Traffic Incidents and Mitigation



## Major Impact Traffic Incidents and Mitigation



A=COM

## AM PEAK PERIOD MOBILITY MAY 2017

## LEGEND (Speed Index)

High Mobility (.90+)
Medium Mobility (.80-.90)
—Low Mobility (<.80)

Highlighted Heat Map Locations
A. NB I-55 from Lindbergh to I-64/I-70/US-40
B. NB I-270 from I-55 to I-64/US-40/US-61
C. EB I-44 from Route 141 to Elm Ave.
D. EB I-64 from I-270 to McCausland


## AM PEAK PERIOD MOBILITY JUNE 2017

LEGEND (Speed Index)
High Mobility (.90+)
Medium Mobility (.80-.90)
—Low Mobility (<.80)

Highlighted Heat Map Locations
A. NB I-55 from Lindbergh to I-64/I-70/US-40
B. NB I-270 from I-55 to I-64/US-40/US-61
C. EB I-44 from Route 141 to Elm Ave.
D. EB I-64 from I-270 to McCausland


## Freeway MANAGEMENT

## How to read the Congestion Scan Heat Maps

- The heat maps depict congestion along a corridor over a set time period.
- The map below shows Northbound I-270 from I-55 to l-64 during the hours of 6am - 9am for the month of February 2017.
- Following a horizontal line across the heat map at a given intersection will show traffic conditions at that location over time. Using the intersection of Big Bend Road as an example the heat map depicts conditions worsening around 6:30am, starting to improve around 8:45am and near free flow speeds by 9:15am.
- Alternatively, tracing the heat map vertically depicts traffic conditions along the corridor at that moment in time.



Congestion on I-55 Northbound between Lindbergh Blvd (US-50/US-61/67) and I-64/I-70/US-40 June 2017 (every weekday)

Freeway Management
Congestion on I-270 Northbound between I-55 and I-64/US-40/61 for May 2017 (every weekday)


Congestion on I-270 Northbound between I-55 and I-64/US-40/61 for June 2017 (every weekday)



Congestion on I-44 Eastbound between Route 141 and Elm Ave. for June 2017 (every weekday)


Congestion on I-64 Eastbound between I-270 and McCausland for May 2017 (every weekday)
AM May 2017
Eastbound


6 AM


JAM June 2017
Eastbound
6 AM
(This page intentionally left blank)

## PM PEAK PERIOD MOBILITY MAY 2017

$4 \mathrm{pm}-5 \mathrm{pm}$

LEGEND (Speed Index)
High Mobility (.90+)
Medium Mobility (.80-.90)
—Low Mobility (<.80)
Highlighted Heat Map Locations
A. SB I-270/EB I-255 from Dorsett to Mississippi River
B. WB I-44 from I-55 to Route 141
C. WB I-64 from I-55/I-70/US-40 (Downtown) to I-70
D. NB/EB I-270 from Dorsett to Riverview


## PM PEAK PERIOD MOBILITY JUNE 2017

## LEGEND (Speed Index)

 High Mobility (.90+)Medium Mobility (.80-.90)
-Low Mobility (<.80)
Highlighted Heat Map Locations
A. SB I-270/EB I-255 from Dorsett to Mississippi River
B. WB I-44 from I-55 to Route 141
C. WB I-64 from I-55/I-70/US-40 (Downtown) to I-70
D. NB/EB I-270 from Dorsett to Riverview

$5 \mathrm{pm}-6 \mathrm{pm}$
$6 \mathrm{pm}-7 \mathrm{pm}$



Congestion on I-270 Southbound/I-255 Eastbound between Dorsett Rd and Mississippi River for June 2017 (every weekday)


## FREEWAY MANAGEMENT

Congestion on I-44 Westbound between I-55 and Route 141 for May 2017 (every weekday)


Congestion on I-44 Westbound between I-55 and Route 141 for June 2017 (every weekday)
PM June 2017 Westbound

Congestion on I-64 Westbound between I-55/I-70/US-40 and I-70 for May 2017 (every weekday)
4 PM 2017 Westbound

Congestion on I-64 Westbound between I-55/I-70/US-40 and I-70 for June 2017 (every weekday)



Congestion on I-270 Northbound/Eastbound between Dorsett and Riverview for June 2017 (every weekday)


Measured speed as a percentage of the free flow speed.

## FREEWAY MANAGEMENT



NEW for 2017! The focus area for calculating the average 24 hour volumes was revisited to include all SL District Urban Freeways including Route 364 from I-64 to I-270, Route 367 from I-270 to Route 67, and Route 370 from I-70 to I-270. These freeways are now included in this calculation while the loss of probe data sensors will cause some routes to be excluded. 2017 volumes will be reported for trending purpose only as actual volumes are not comparable to previous years.

May 2017 EB MO River Crossings
Total $=178,116$


## June 2017 EB MO River Crossings

 Total $=183,015$

May 2017 WB MO River Crossings Total $=170,568$


June 2017 WB MO River Crossings Total $=176,782$


May 2017 EB MS River Crossings Total $=74,310$


## June 2017 EB MS River Crossings <br> Total $=\mathbf{8 0 , 2 3 9}$



May 2017 WB MS River Crossings
Total $=85,334$


June 2017 WB MS River Crossings
Total $=\mathbf{9 1 , 5 1 0}$


## Work Zones

Whenever additional travel time is reported, this additional time shall be evaluated using this chart and adequate mitigation measures should begin within the parameters of this chart. TMC and field personnel are partners in the mitigation of traffic and notification of additional travel times should trigger the appropriate response from both parties.

Chart is designed to be an additional travel time reference to establish parameters for gauging the travel impact through work zones and to provide guidance for taking mitigation actions. Travel times can be collected or reported via Blue Toad technology, field personnel, call reports, ITS, TMC cameras, etc.

Major and Moderate impacts trigger an IAR (Immediate Action Required) event. IAR means work zone user and TMC partner together to take immediate actions to reduce or eliminate distress. During an IAR event mitigation procedures can range from increased driver notification up to and including removal of work zone. Additional mitigation procedures may require involvement of administration through use of the work zone resolution ladder.

| Level of Impact | Additional Travel <br> Time Expected | Mitigation Actions |
| :---: | :---: | :---: |
| Major (Red) | 15 minutes or above | Immediate Action <br> Required |
| SEVERE DISTRESS <br> PRESENT | TMC and field personnel <br> take all steps possible up <br> to and including removal <br> of lane closure to achieve <br> free flow threshold | Supervisory mitigation <br> assistance is required <br> using the St. Louis <br> District Work Zone <br> Resolution Ladder as a <br> tool to restore free flow <br> traffic threshold |
| tree flow traffic |  |  |
| is Priority \#1 |  |  |$\quad$| Moderate (Yellow) |
| :---: |
| IAR Event |

## Incident Levels

## Major Impact Traffic Incident - Road closure > 2 hours !

Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

## Moderate Impact Traffic Incident - Blocked travel lanes/closure $\mathbf{3 0} \mathbf{~ m i n} \mathbf{- 2}$ hours

Moderate traffic impact incidents typically affect travel lanes for a time period of 30 minutes to 2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

## Minor Impact Traffic Incident - Lane closures < $\mathbf{3 0}$ minutes

Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies, and occasionally highway agency service patrol vehicles.


NEW for 2017! The focus area for calculating the average 24 hour volumes was revisited to include all SL District Urban Freeways including Route 364 from I-64 to I-270, Route 367 from I270 to Route 67, and Route 370 from I-70 to l-270. Starting in 2017, these freeways will be included in this calculation while 2013-2016 will be based on the original urban interstate calculation.

## Definitions

ACTRA - Traffic signal management software program
Alert - Email message sent regarding an incident or event on the roadway
Arterial - Missouri State Highway Numbered Routes, not fully access controlled
Arterial Device - ITS equipment located along MoDOT arterials
Defined Sensor - A single sensor with an individual ID focused on a particular roadway; multiple defined sensors may be located at one physical sensor location
DMS - Dynamic Message Signs along highway displaying incident and travel time information
DNR - Department of Natural Resources
Driver messaging - Messages placed on DMS boards to alert drivers of incidents ahead of their direction of travel

EOC - Emergency Operations Center operated by MoDOT in Jefferson City
EMS - Emergency Medical Services
ER - MoDOT's Emergency Response units that provide emergency assistance, incident management and traffic control to mitigate incidents and restore free flow traffic within the St. Louis region

Freeway Device - ITS device located along a MoDOT freeway, such as interstates and other fully access controlled highways
Gatewayguide.com - Gateway Guide's website for local St. Louis area traffic information
GGL - Gateway Green Light is the St. Charles County regional integrated corridor management for a cooperative multi-jurisdictional effort to better manage and coordinate travel on the interstates (I-70, I64), state routes (MO 94, MO 364, MO 370, US 61) and local arterials through the installation of Intelligent Transportation Systems (ITS) in Cottleville, Dardenne Prairie, Lake St. Louis, O'Fallon, St. Charles, St. Peters, and Wentzville.
GuidePost - Area of report highlighting important mobility topics for the month
IDOT - Illinois Department of Transportation
KC Scout - Gateway Guide's counterpart for the greater Kansas City Metropolitan area, a collaboration involving both MoDOT and the Kansas DOT
Mobility - Ease of movement over roadway, through system, and or work zone
MRB - Mississippi River Bridge under construction north of downtown St. Louis
MSHP - Missouri State Highway Patrol
Observed Work zone - Work zone tracked by traffic cameras at the TMC

Peak Average - Daily speed sensor readings over an entire weekday average commute period averaged for an entire month

PSB - Poplar Street Bridge
Regional Mobility Overview - Map depicting congestion areas based on speed index ratings derived from speed sensor readings
SL - Designation for the St. Louis District
Speed Index - a ratio of the speed at which vehicles travel during a period to the speed at free-flow conditions

Stats to Watch - Area of report highlighting interesting trends for the report month, or data to be closely followed

STLtraffic - Email group consisting of Gateway Guide personnel and Gateway Guide's media partners, messages sent to the group are also posted on Twitter
TMC - Traffic Management Center (also referred to as Gateway Guide)
TMC Alert - Email alert sent to an internal group of Gateway Guide personnel
TMS - Traveler Map System is MoDOT's internal software for entering work zones and road conditions to populate the Traveler Information Map at www.traveler.modot.org/map
Travel Time Index - A ratio of the actual time to travel a corridor compared to travel time at posted speed limit without stops used

User Delay Costs - Puts a dollar amount on how much a road's performance impacts its users. Combines probe speed data with volume data provided by the Texas Transportation Institute to estimate the cost of delay experienced by drivers as a result of congestion. Vehicle costs used are Passenger Vehicle $=\$ 17.67$ and Commercial Vehicle $=\$ 68.09$.
Visibility - Concerning placement of traffic signs, signals, devices, barricades and warning lights for safety within work zone or construction area to help motorist and workers move within a work zone safely; Clearly visible and legible, distinguishable to approaching traffic during day and night, aligned with road user's line of vision, and positioned as to not obstruct other applicable traffic control devices. Must meet MUTCD standards for condition and must be covered, turned or properly stowed when not in use.

Zoning In - section of report highlighting important construction topics for the report month

## DATA KEY

## I-70 Mile Markers



## I-70 St. Charles County Mile Markers

| RTE A (WENTZVILLE) | 212 | O |  | 212 | RTE A (WENTZVILLE) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| LAKE ST. LOUIS BLVD (LAKE ST. LOUIS) | 214 |  |  | 214 | LAKE ST. LOUIS BLVD (LAKE ST. LOUIS) |
| BRYAN RD (O'FALLON) | 216 |  |  | 216 | BRYAN RD (O'FALLON) |
| RTE K/RTE M (O'FALLON) | 217 |  |  | 217 | RTE K/RTE M (O'FALLON) |
| T.R. HUGHES BLVD (O'FALLON) | 218 |  |  | 218 | T.R. HUGHES BLVD (O'FALLON) |
| RTE 79 (ST. PETERS/O'FALLON) | 220 |  |  | 220 | RTE 79 (ST. PETERS/O'FALLON) |
| RTE C/MID RIVERS MALL DR (ST. PETERS) | 222 |  |  | 222 | RTE C/MID RIVERS MALL DR (ST. PETERS) |
| SPENCER RD OVERPASS (ST. PETERS) | 223 |  |  | 223 | SPENCER RD OVERPASS (ST. PETERS) |
| RTE 370 (ST. PETERS) | 224 |  |  | 224 | RTE 370 (ST. PETERS) |
| CAVE SPRINGS (ST. CHARLES) | 225 |  |  | 225 | CAVE SPRINGS (ST. CHARLES) |
| ZUMBEHL RD (ST. CHARLES) | 227 |  |  | 227 | ZUMBEHL RD (ST. CHARLES) |
| HAWK'S NEST OVERPASS (ST. CHARLES) | 227 |  |  | 227 | HAWK'S NEST OVERPASS (ST. CHARLES) |
| RTE 94 (ST. CHARLES) | 228 |  |  | 228 | RTE 94 (ST. CHARLES) |
| 5TH ST SOUTH (ST. CHARLES) | 229A |  |  | 229A | 5TH ST SOUTH (ST. CHARLES) |
| 5TH ST NORTH (ST. CHARLES) | 229B |  |  | 229B | 5 TH ST NORTH (ST. CHARLES) |

## I-270 Mile Markers

| 3 | KOCH RD |  | KOCH RD | 3 |
| :---: | :---: | :---: | :---: | :---: |
| 2 | SR 231 (TELEGRAPH RD) |  | SR 231 (TELEGRAPH RD) | 2 |
| 1C | US61-67 |  | US61-67 | 1B |
| 1B | I-55 NORTH | $\hat{1}$ | I-55 NORTH | 1B |
| 1 | I-55 SOUTH |  | I-55 SOUTH | 1A |
| 2 | SR 21 (TESSON FERRY RD.) |  | SR 21 (TESSON FERRY RD.) | 2 |
| 3 | SR 30 (GRAVOIS RD.) |  | SR 30 (GRAVOIS RD.) | 3 |
| 5 | I-44 EAST/SR 366 (WATSON RD.) |  | I-44 EAST | 5 |
| 5 | I-44 WEST |  | I-44 WEST | 5 |
|  |  |  | BIG BEND RD. | 7 |
| 8 | DOUGHERTY FERRY RD. | $v$ | DOUGHERTY FERRY RD. | 8 |
| 10 | SR 100 (MANCHESTER RD.) |  | SR 100 (MANCHESTER RD.) | 10 |
| 12 | I-64 EAST/WEST/US 40-61 NORTH/SOUTH |  | I-64 EAST/WEST/US 40-61 NORTH/SOUTH | 12 A/B |
| 13 | SR AB (LADUE RD) | ¢ | SR AB (LADUE RD) | 13 |
| 14 | SR 340 (OLIVE BLVD) | 끙 | SR 340 (OLIVE BLVD) | 14 |
| 16 | SR D (PAGE AVE.) EAST |  | SR D (PAGE AVE.) EAST | 16A |
| 16 | SR 364 WEST |  | SR 364 WEST | 16B |
| 17 | DORSETT RD |  | DORSETT RD | 17 |
| 20 | I-70 WEST/EAST |  | I-70 WEST | 20B |
|  |  | ¢ | I-70 EAST | 20A |
| 20C | SR 180 (ST. CHARLES ROCK RD) |  | SR 180 (ST. CHARLES ROCK RD) | 20C |
| 22 | MISSOURI BOTTOM RD/370 WEST |  | SR 370 WEST | 22D |
| 23 | MCDONNELL BLVD | 页 0 | MCDONNELL BLVD | 23 |
| 25A | US 67 SOUTH |  | US 67 NORTH | 25A |
| 25B | US 67 NORTH |  | US 67 SOUTH | 25B |
| 26 | HANLEY/GRAHAM RD. |  | I-170 SOUTH (EXIT LEFT) | 26A |
| 26 | I-170 SOUTH | $\underline{\underline{m}}$ | HANLEY/GRAHAM | 26B |
| 27 | NEW FLORISSANT RD | § | NEW FLORISSANT RD | 27 |
| 28 | WASHINGTON/ELIZABETH RD. |  | ELIZABETH/WASHINGTON | 28 |
| 29 | WEST FLORISSANT RD |  | WEST FLORISSANT RD | 29 |
| 30 | SR AC HALLS FERRY RD | $\checkmark \mathrm{V}$ | SR AC NEW HALLS FERRY RD | 30 |
|  |  |  | NEW HALLS FERRY RD. | 30A |
| 31A | SR 367 SOUTH |  | SR 367 SOUTH | 31A |
| 31B | SR 367 NORTH |  | SR 367 NORTH | 31B |
| 32 | BELLEFONTAINE RD |  | BELLEFONTAINE RD | 32 |
| 33 | LILAC AVE. |  | LILAC AVE. | 33 |
| 34 | RIVERVIEW DR. |  | RIVERVIEW DR. | 34 |

## I-64 Mile Markers



## I-55 Mile Markers



## Data Key

## I-44 Mile Markers



## DATA KEY

## I-170 Mile Markers



## SR 364 Mile Markers

|  |  |  |  | $\begin{array}{\|c\|} \hline 11 \mathrm{~B} \\ \hline 12 \\ \hline \end{array}$ | HARVESTER RD |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | HERITAGE CROSSING/JUNGS STATION RD |  |  |
| SR94 EAST/ST. CHARLES | 13 |  |  |  | 13 | SR 94 EAST/MUEGGE RD |
| ARENA PKWY/UPPER BOTTOM RD | 14 | on | 14 |  | UPPER BOTTOM/ARENA |
| MARYLAND HEIGHTS EXPRESSWAY | 17 |  | 17 |  | MARYLAND HEIGHTS EXPRESSWAY |
| BENNINGTON PL |  |  |  |  |  |
|  |  | 21 |  | BENNINGTON PL |
| I-270 SOUTH | 22A |  |  |  |  |
| I-270 NORTH | 22B |  |  |  |  |

## DATA KEY

## SR 370 Mile Markers

|  |  | 000 <br> 山 $\boldsymbol{y}$ <br> m <br> © ${ }^{\circ}$ <br> 피훟 <br> O <br> 는 름 | 1A | I-70 WESTBOUND |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1B | I-70 EASTBOUND |
|  |  | 1C | SPENCER RD |
| TRUMAN/CAVE SPRINGS RD 2 |  |  | 2 | TRUMAN/CAVE SPRINGS RD |
| ELM/NEW TOWN BLVD | 5 |  | 5 | ELM/NEW TOWN BLVD |
| N 3RD ST/SR 94 | 7 |  | 7 | N 3RD ST/SR 94 |
| DISCOVERY BRIDGE ST. CHAS CO/ ST. LOUIS CO | 8 |  | 8 | DISCOVERY BRIDGE ST. LOUIS CO/ <br> ST. CHAS CO |
| EARTH CITY EXPRESSWAY | 9 |  | 9 | EARTH CITY EXPRESSWAY |
| ST. LOUIS MILLS BLVD | 11 |  | 11 | ST. LOUIS MILLS BLVD |
| MISSOURI BOTTOM RD | 12 |  |  |  |
| I-270 WEST BOUND | 12 |  |  |  |
| I-270 EAST BOUND | 12 |  |  |  |

SR 21 Mile Markers

| RT B | 164.8 |  | 164.8 | RT B |
| :---: | :---: | :---: | :---: | :---: |
| RT BB | 165.4 |  | 165.4 | RT BB |
| STADIUM DR UNDERPASS | 166.4 |  | 166.4 | STADIUM DR UNDERPASS |
| RTE A | 167.8 |  | 167.8 | RTE A |
| SAND CREEK | 169 |  | 169 | SAND CREEK |
| HAYDEN RD | 169.2 |  | 169.2 | HAYDEN RD |
| GLADE CHAPEL RD OVERPASS | 171.4 |  | 171.4 | GLADE CHAPEL RD OVERPASS |
| OLD HWY 21 (GOLDMAN) | 172.6 |  | 172.6 | OLD HWY 21 (GOLDMAN) |
| KLABLE RD OVERPASS | 174.2 |  | 174.2 | KLABLE RD OVERPASS |
| SCHENK RD OVERPASS | 175.2 |  | 175.2 | SCHENK RD OVERPASS |
| HEADS CREEK | 176.4 |  | 176.4 | HEADS CREEK |
| RT MM | 177.7 |  | 177.7 | RT MM |
| W. FOUR RIDGE RD OVERPASS | 179 |  | 179 | W. FOUR RIDGE RD OVERPASS |
| OLD HWY 21 (SHADY VALLEY) | 180.4 |  | 180.4 | OLD HWY 21 (SHADY VALLEY) |
| OLD HWY 21 UNDERPASS | 182 |  | 182 | OLD HWY 21 UNDERPASS |
| WEST ROCK CREEK RD OVERPASS | 182.8 |  | 182.8 | WEST ROCK CREEK RD OVERPASS |
| OLD HWY 21 OVERPASS | 183.2 |  | 183.2 | OLD HWY 21 OVERPASS |
| LONDELL RD | 184.2 |  | 184.2 | LONDELL RD |
| OLD HWY 21 | 184.5 |  | 184.5 | OLD HWY 21 |
| SR 141 | 185.6 |  | 185.6 | SR 141 |

