

Kansas City
SCOUT MoDOT + KDOT

Annual Report

getting you there



2014



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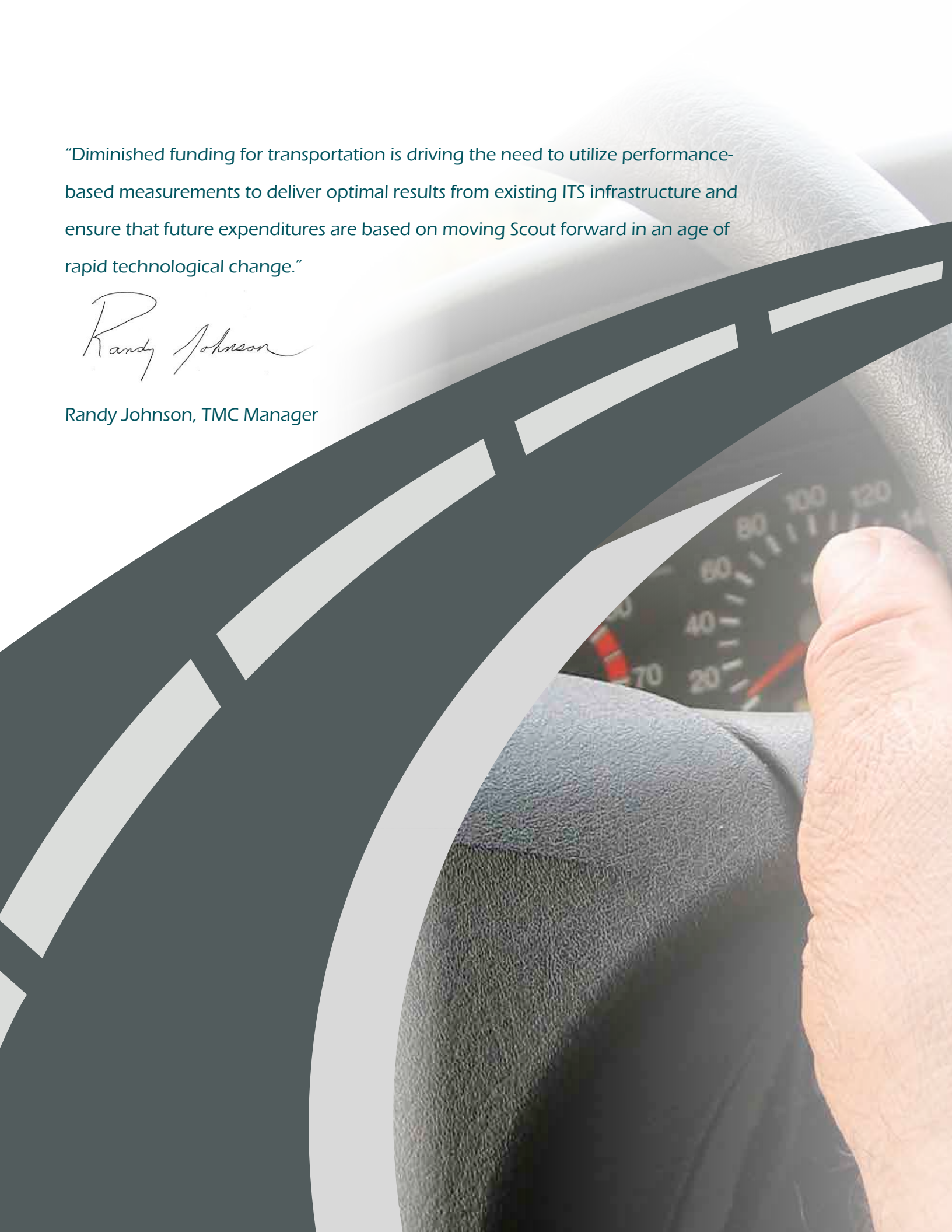
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"Diminished funding for transportation is driving the need to utilize performance-based measurements to deliver optimal results from existing ITS infrastructure and ensure that future expenditures are based on moving Scout forward in an age of rapid technological change."

A handwritten signature in black ink that reads "Randy Johnson". The signature is fluid and cursive, with the first letter of "Randy" being a large capital "R".

Randy Johnson, TMC Manager



When incidents happen in the Metro, motorists can count on Scout to be there.

Serving the Metro

Scout focuses on getting Metro Kansas City drivers where they want to go smoothly and safely.

Launched in 2004, the Missouri and Kansas Departments of Transportation jointly run the program and partner with fire and police departments, local media—and you—to keep our roads safe and drivers on the move.

Scout is responsible for managing over 300 miles of highway in the Kansas City Metro. We do it with sensors and video cameras from our Lee's Summit Traffic Management Center (TMC).

When slowdowns, incidents, and severe weather occurs, our operators send alerts, contact Emergency Response Operators, and call emergency partners if needed. We also use our freeway message signs to describe the trouble on the highway.

Together, we strive to manage traffic in a way that:

- Improves emergency response to traffic situations.
- Lessens traffic jams by improving rush-hour speeds.
- Increases safety by decreasing the number of rush-hour incidents.

Scout Operations “At a Glance” (2014)

Number of benefits received for every dollar spent on Scout (8:1 Benefit/Cost ratio)	8
Number of incidents managed by Scout	28,088
Number of incidents managed by Scout with lane blockage	5,767
Number of minutes on average that it takes to clear all lanes of traffic following incidents	36
Number of incidents cleared in less than 30 minutes	3,425
Number of incidents detected by Scout TMC Operators and Emergency Response	16,484
Number of customers assisted by Emergency Response (Missouri)	17,495
Number of subscribers to “My KC SCOUT” personalized web alerts	6,912
Number of visits to www.kcscout.net from new unique web visitors	389, 245

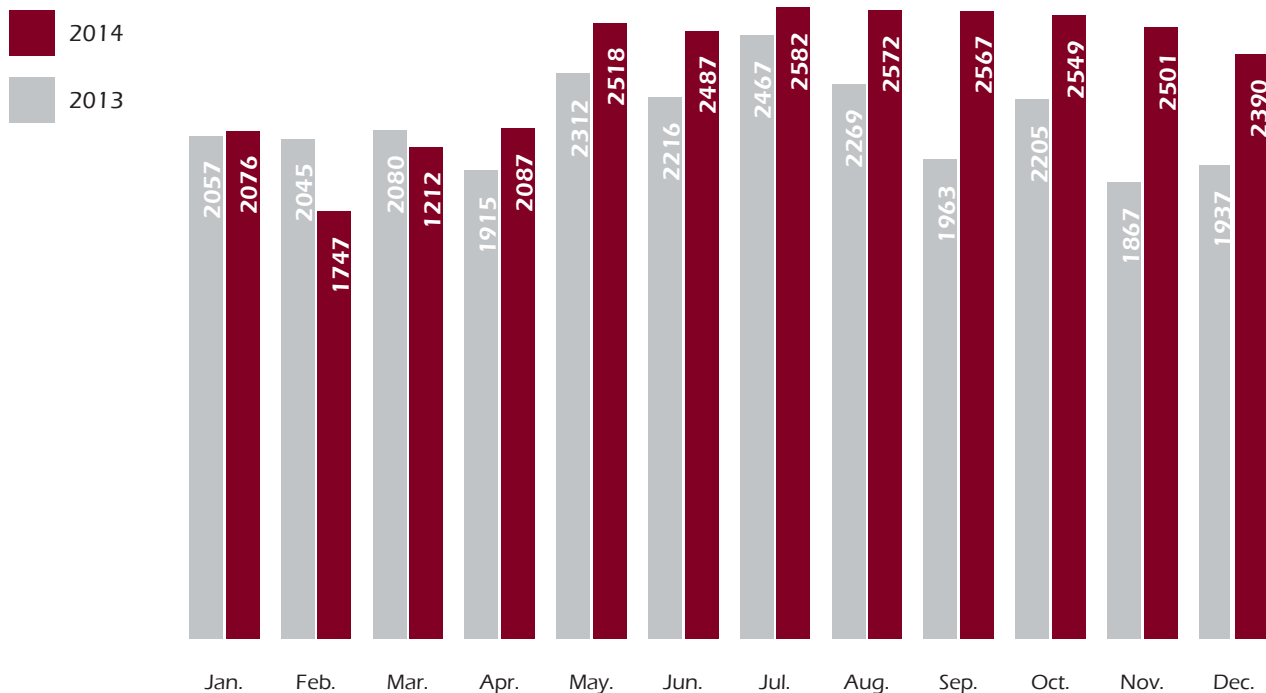
Our **2014 Annual Report** summarizes the congestion and incident information that we have collected over the course of the year, along with data about the type of assistance provided to motorists, how our tools functioned, and the benefits of investing in the Scout program.

Incident Summary

Scout monitors the Metro's freeways for traffic incidents as part of our Traffic Incident Management Program.

We define an incident as any event on the roadway which affects or can affect normal traffic flow. Examples include vehicle collisions, stalled vehicles on shoulders, debris in the roadway, and roadwork projects.

Total Incidents by Month (2014 vs 2013)



Secondary Incidents

The total number of secondary incidents decreased 42.3% in 2014.

Number of Secondary Incidents (2014 vs 2013)

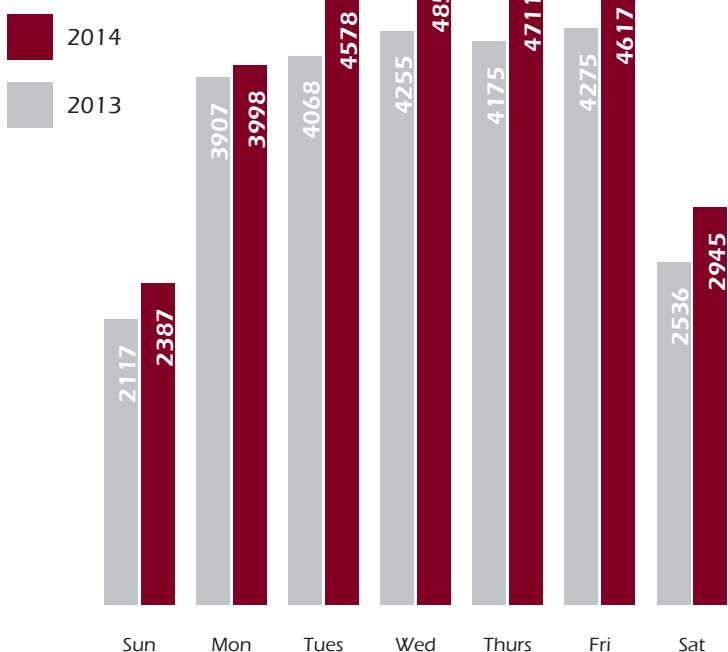
2014	30
2013	52

Secondary incidents occur because of a previous and on-going incident on the roadway. They happen within the initial incident scene or within the back-up of the initial incident, even if it is in the opposite roadway direction. Scout's efficient Traffic Incident Management Program with Emergency Response Operators helps improve safety, provides better traffic control, and reduces the time needed to clear secondary, lane-blocking incidents.

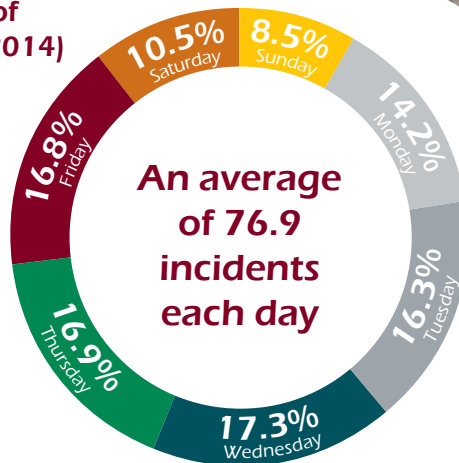
The total number of incidents on our highways increased by 10.9% in 2014 to 28,088.

In 2014 there were 28,088 incidents, which is a 10.9% increase when compared to the 25,333 that happened in 2013. The highest number of incidents in 2013 and 2014 took place in July. An average of 76.9 incidents happened each day. Most of them occurred during the work week (Monday through Friday).

Total Incidents by Day of Week (2014 vs 2013)



Percent of Total Incidents by Day of Week (2014)



An average of 76.9 incidents each day

Top 10 Busiest Incident Weeks (2014)

Nov. 9th – 15th	613
Jun 15th – 21st	610
Nov 16th – 22nd	607
Nov. 30th – Dec 6th	598
Nov. 2nd – 8th	595
Aug. 24th – 30th	589
Sep. 28th – Oct 4th	589
Aug 31st – Sep 6th	587
Oct. 26th – Nov 1st	582
Sep. 7th – 13th	581

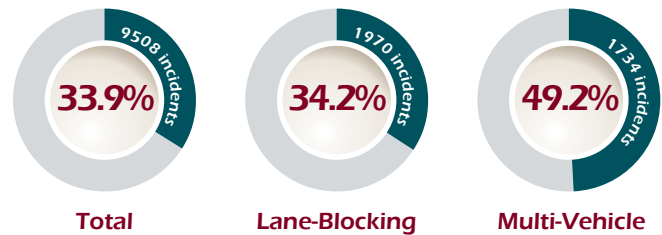
Incidents

Rush-Hour Incidents

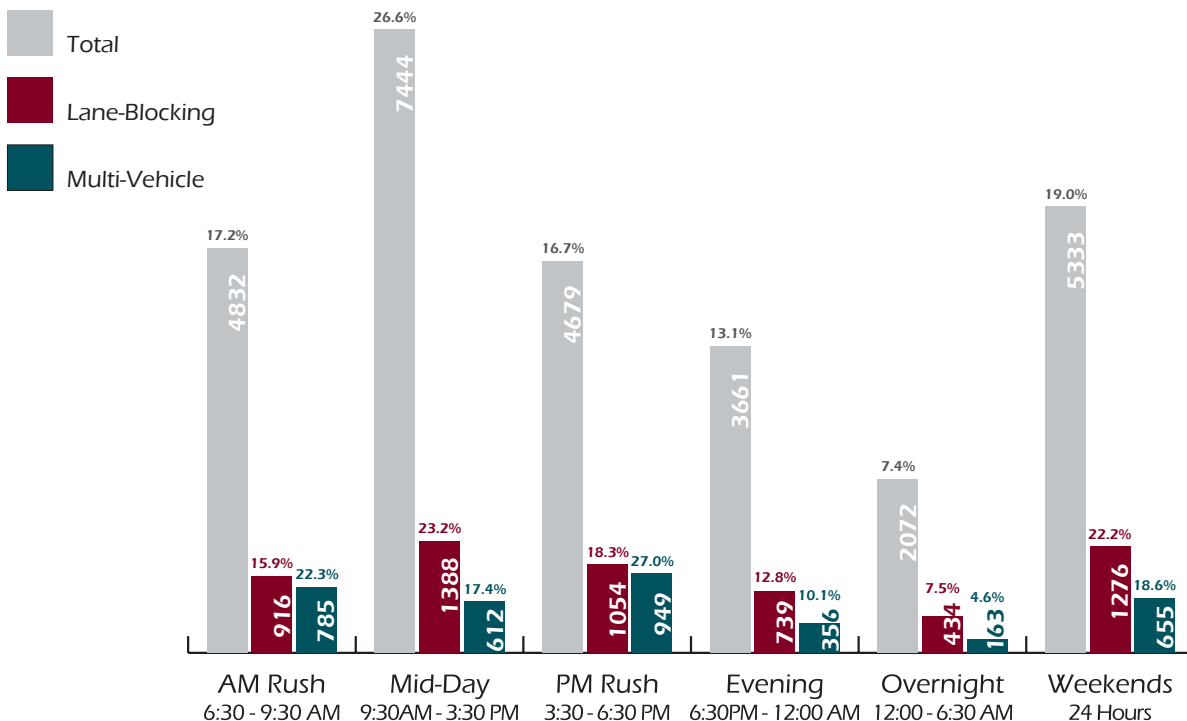
33.9% of all incidents occurred during the morning and afternoon rush hours.

There were a total of 28,021 rush-hour incidents in 2014, which is an increase of 10.7% when compared to the 25,302 that occurred during the previous year. In 2014 lane-blocking incidents accounted for 34.2% of rush-hour incidents; 49.2% involved multiple vehicles.

Percentage of Rush-Hour Incidents by Type (2014)



Rush-Hour Incident Summary (2014)

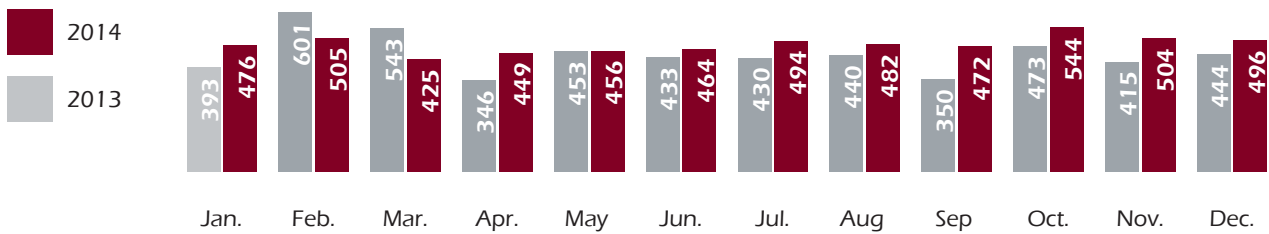


Lane-Blocking Incidents

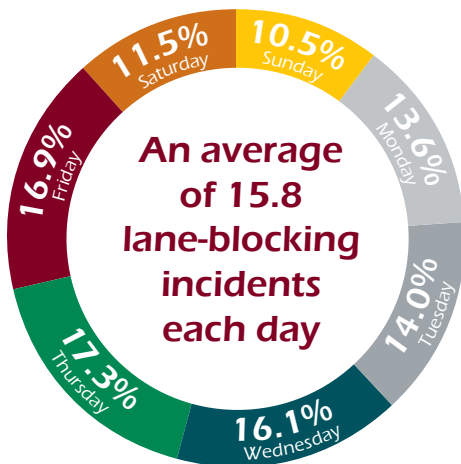
There were a total of **5,767** lane-blocking incidents in 2014.

The total number of lane-blocking incidents in 2014, excluding those of less than 3 minutes, showed an increase of 8.4% over the 5,321 recorded in 2013. The highest number of lane-blocking incidents in 2014 happened in October. An average of 15.8 lane-blocking incidents happened each day. Most occurred during the work week (Monday through Friday).

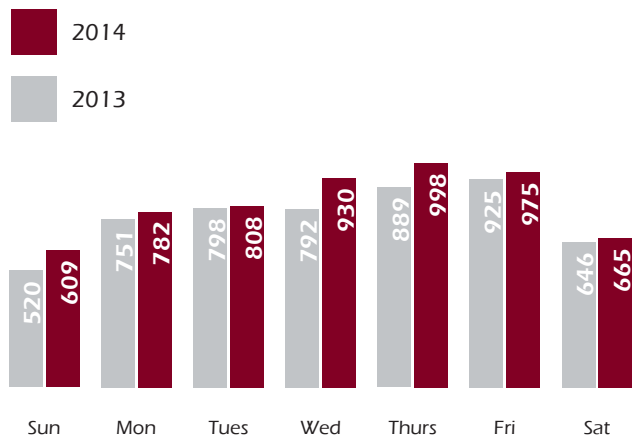
Lane-Blocking Incidents by Month (2014 vs 2013)



Percentage of Lane-Blocking Incidents by Day of Week (2014)



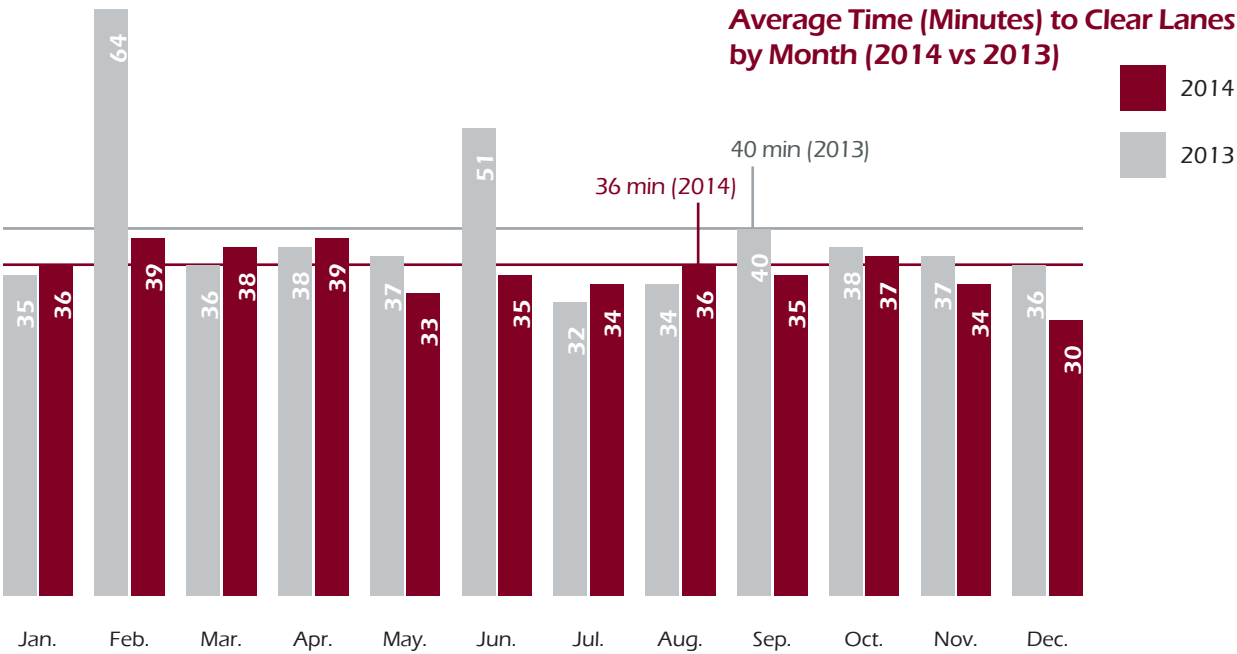
Lane-Blocking Incidents by Day of Week (2014 vs 2013)



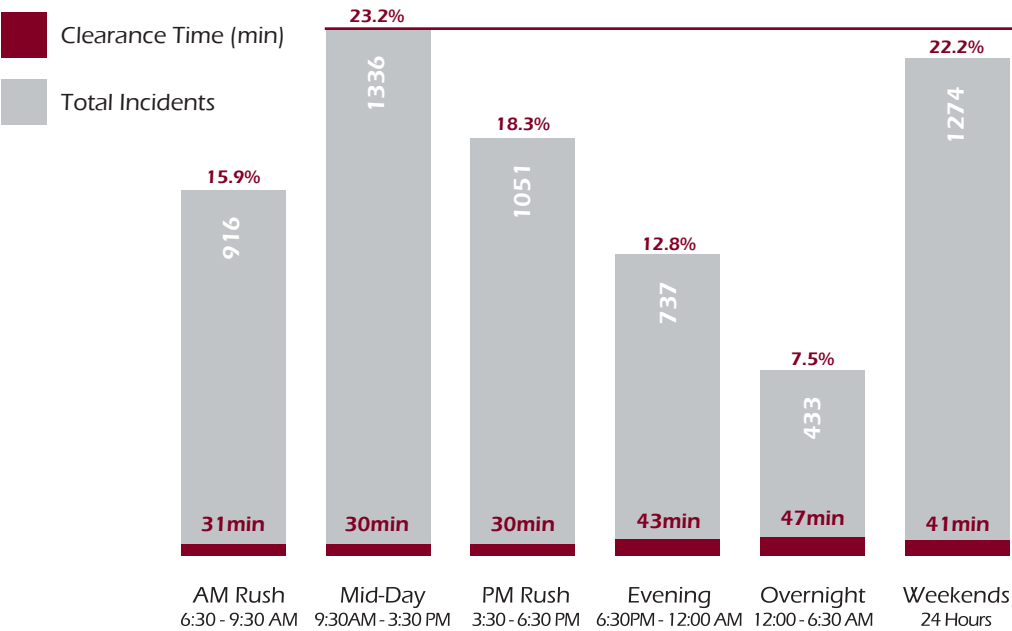
Average Clearance

The average time to clear lanes for all lane-blocking incidents in 2014 was 36 minutes.

The average time for all lanes to be cleared from an incident, excluding those of less than 3 minutes, is calculated from the incident start time until all lanes are reopened. The calculation is done the same way when sorting incident clearance by time of day.



Number of Incidents and Average Time to Clear Lanes by Time of Day (2014)



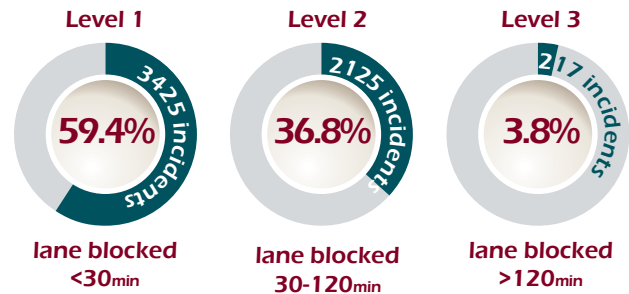
Mid-day (9:30 AM to 3:30 PM) experiences the highest percentage of lane-blocking incidents at 23.2% but also sees one of the quickest clearance times at 30 minutes.

Scout strives to clear incidents in less than 30 minutes.

Incident Severity

Only 3.8% of incidents are categorized as Level 3, which means that the lane was blocked for more than 120 minutes.

Scout sorts lane-blocking incidents by severity level based on lane blockage and duration. Incidents that lasted less than 3 minutes and construction are excluded.



Level 3 Incident Locations (2014)



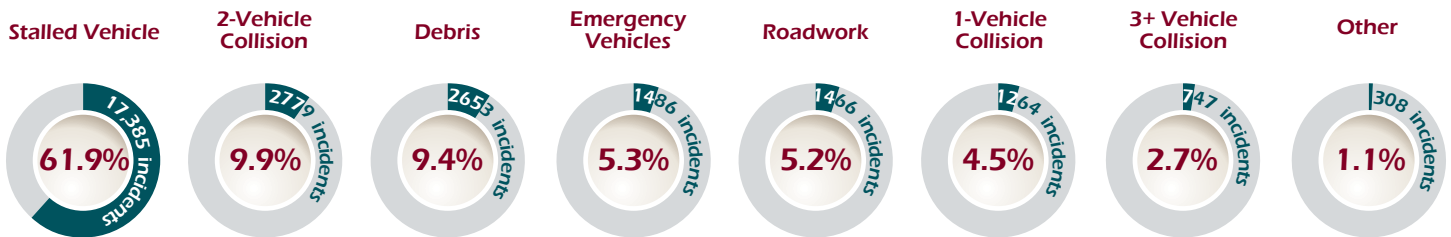
“Partnership among all disciplines of the Emergency Response Community is critical in providing successful Traffic Incident Management.”

Jeffrey J. Gardner,
Incident Management
Coordinator

Types of Incidents

61.9% of the incidents in 2014 were related to stalled vehicles.

There are various types of incidents that involved stalled vehicles, collisions, debris, construction, or something else.

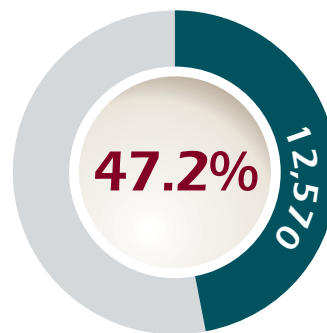


Detection Methods

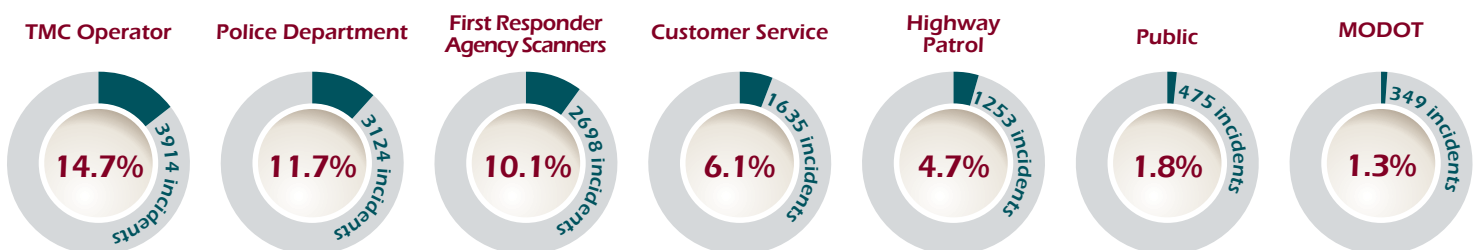
Emergency Response operators detected 47.2% of the Missouri incidents that happened during 2014 and reported them to the Scout TMC.

With the help of a variety of tools, personnel and partnerships, Scout is able to detect incidents happening on the highway.

Emergency Response Operators



Incident Detection is Key

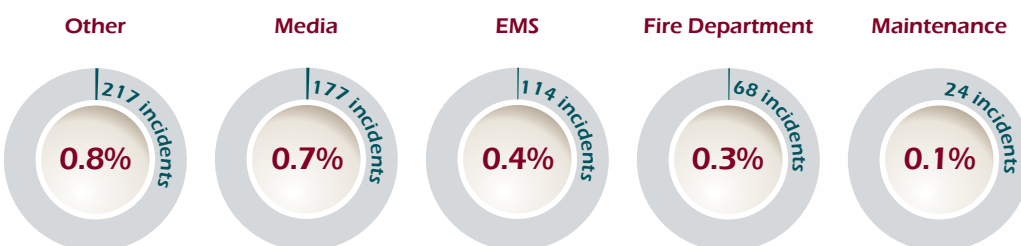


Emergency Response operators work together with other on-scene responders to detect incidents and make clearance happen quickly.

"I can't explain to you how much I appreciate how you and the roadside service tech helped my daughter last night. [At] About 11pm my daughter and my 6 month old grandson blew a tire on east bound 435 just before the Grandview Triangle. She called me to come help assist her. Before I could even get in the car to get to her, she called and said that roadside service was already on the scene. WOW! Unfortunately, I did not get the tech's name, but he did tell me that the Scout cameras saw her and dispatched him. He was very nice and professional and quick to get the tire changed and get her back on the road. Luckily traffic was fairly light, being so late in the evening, but just knowing that he was there with her while I was on the way put me at a great relief. So I wanted to let ALL of you know how much I appreciate your service and the jobs that you do. Thank you so much"

Stephen Kroll

Kansas City

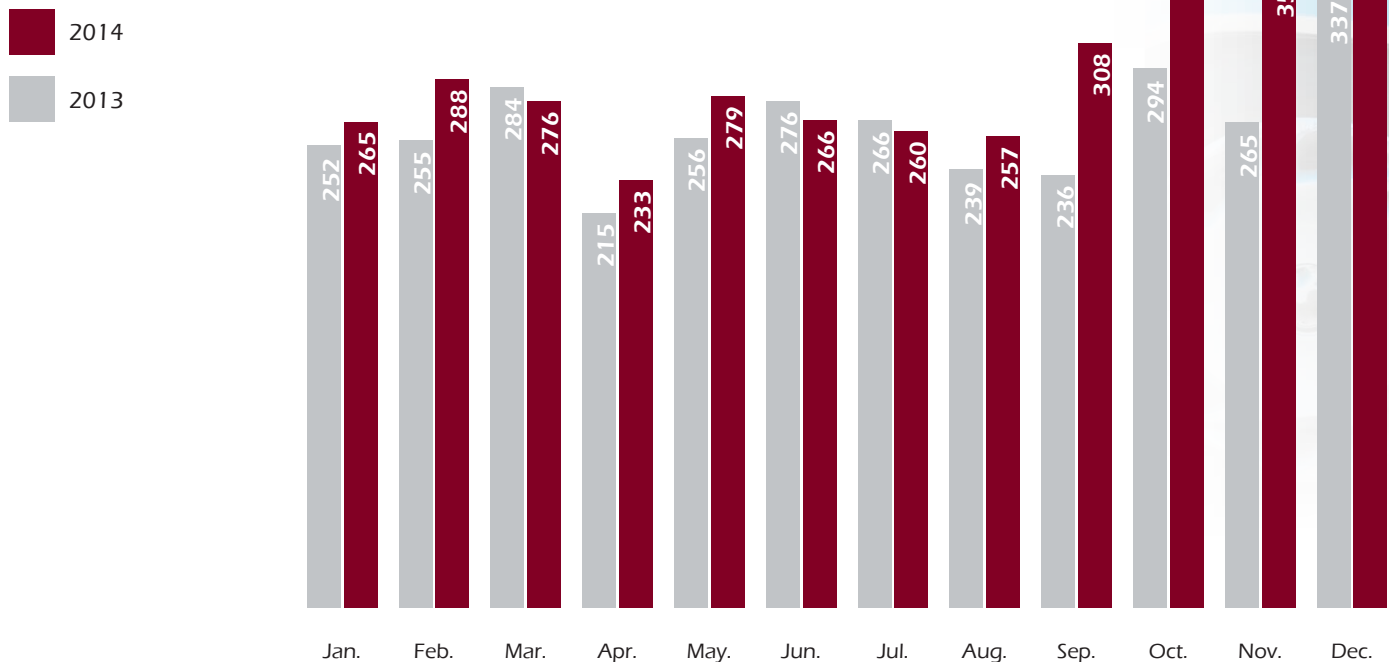


Multi-Vehicle Incidents

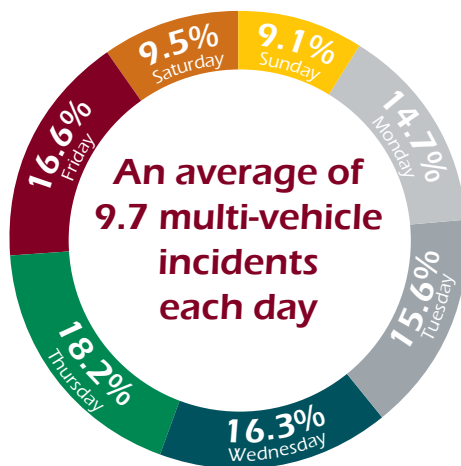
There were a total of **3,525** multi-vehicle incidents recorded in 2014.

The total number of multi-vehicle incidents in 2014 showed an increase of 11.0% when compared to the 3,175 that happened in 2013. Most happened in October.

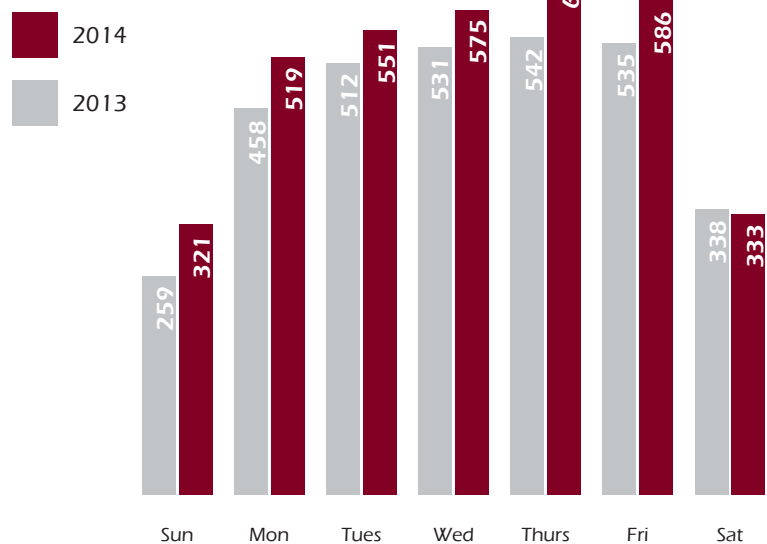
Multi-Vehicle Incidents by Month (2014 vs 2013)



Percent of Multi-Vehicle Incidents by Day of Week (2014)



Total Multi-Vehicle Incidents by Day of Week (2014 vs 2013)

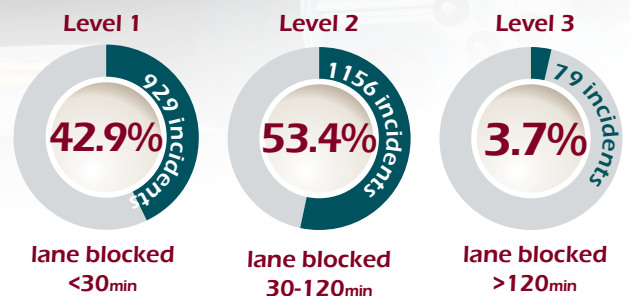




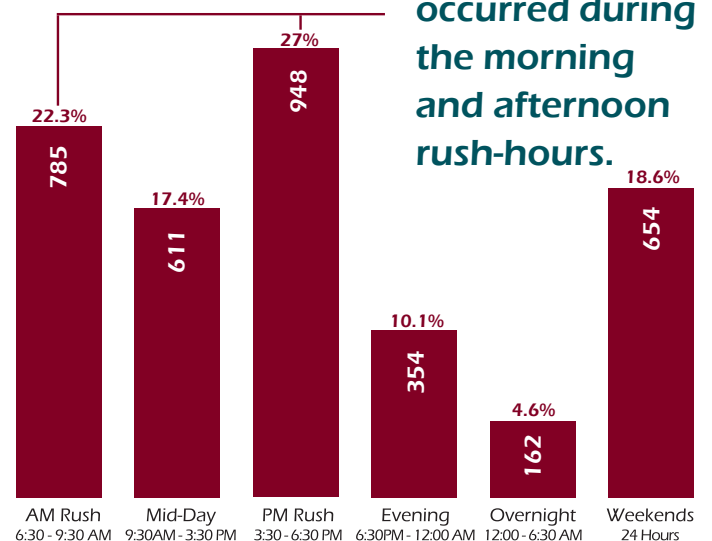
Multi-Vehicle Incident Severity

42.9% of multi-vehicle incidents can be categorized as Level 1, which means that the lane was blocked for less than 30 minutes.

Scout also sorts multi-vehicle incidents by severity level based on lane blockage and duration. Incidents that last less than 3 minutes and construction are excluded. On average, 61.5% of multi-vehicle incidents result in lane blockages while 2.7% of incidents involve 3 or more vehicles.



Rush-Hour Incident Summary (2014)



49.3% of multi-vehicle incidents occurred during the morning and afternoon rush-hours.

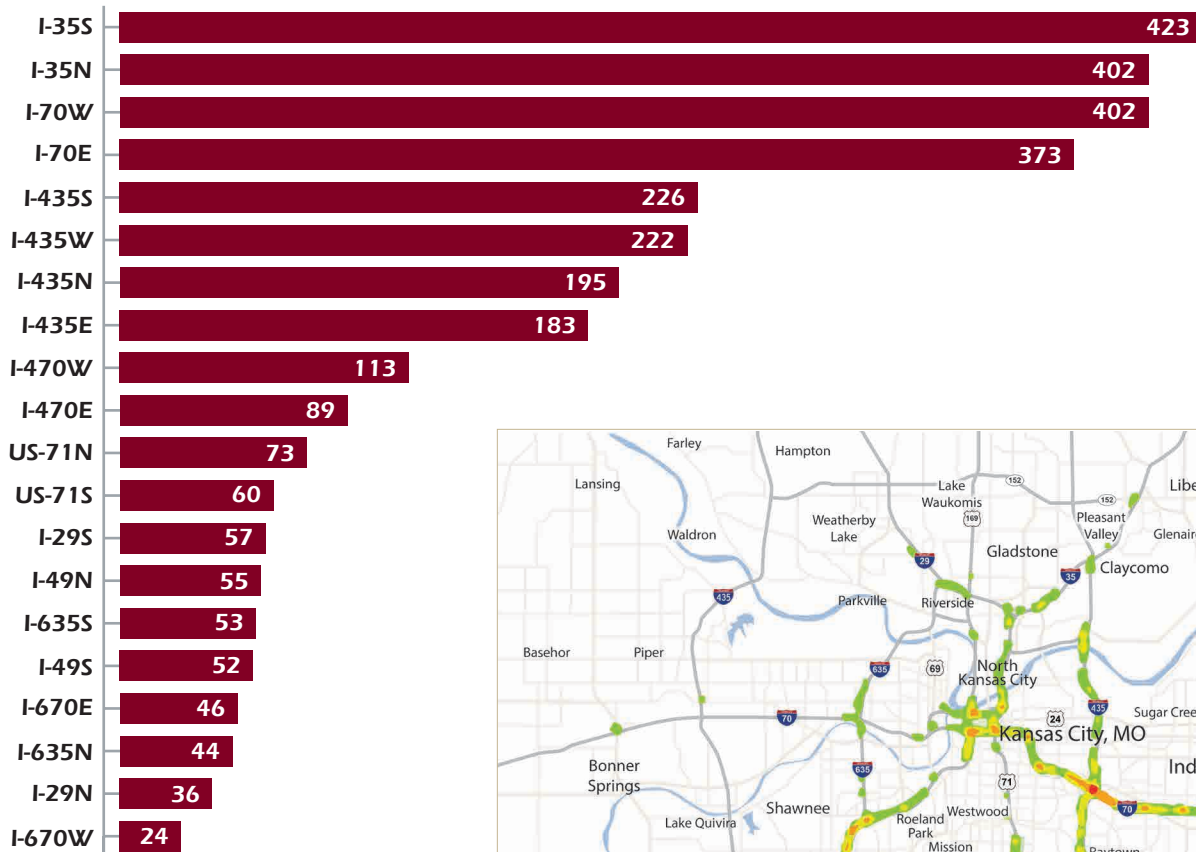
Multi-Vehicle Incident Locations

Incidents can happen along routes and at cross-streets.

To improve safety, Scout and partners manage multi-vehicle incidents on eight routes: I-435, I-35, I-49, I-70, I-470, I-635, I-29, and I-670. Information about the incidents that happened along these routes during 2014 is organized by number of incidents and direction.

The heat map shows the locations of multi-vehicle incidents in 2014 through a color progression that depicts the variances in the number of incidents per location. The color progression goes from green to red with green depicting the lowest number of incidents and red showing the highest rate of incidents for a given location.

Top Multi-Vehicle Incident Locations by Route (2014)



Rate of Incidents (2014)

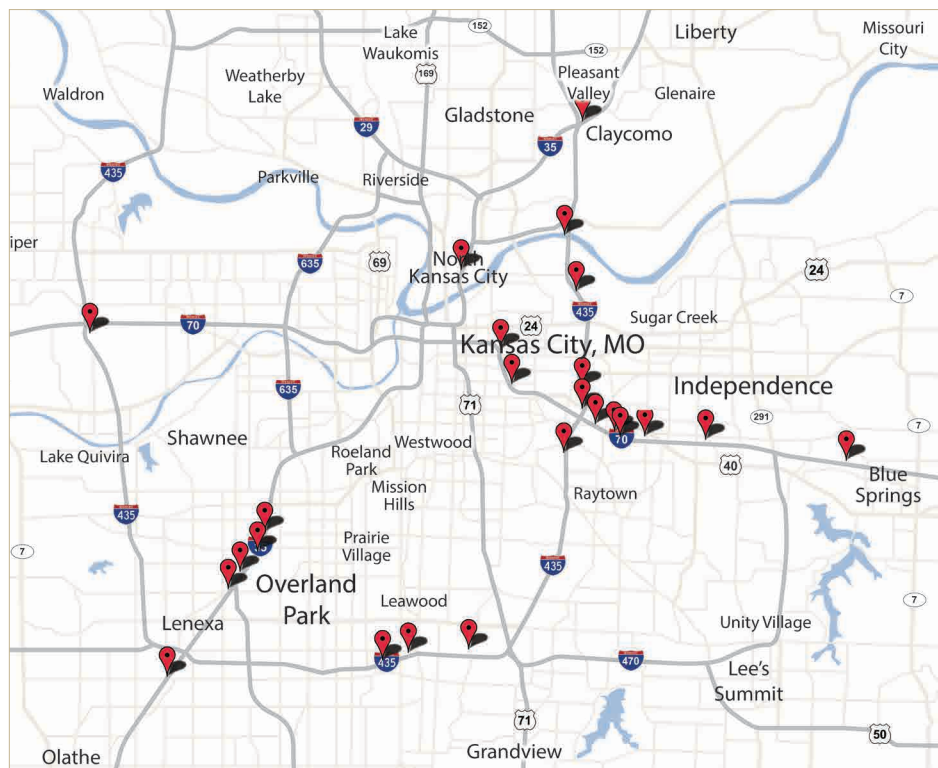


Top 25 Cross-Street Locations for Multi-Vehicle Incidents (2014)

I-35 N	Past 87th St.	41
I-35 N	Past 119th St	30
I-35 S	Past 67th St.	27
I-35 N	At 87th St.	24
I-435 W	Before 103rd St.	24
I-435 S	Past I-70	21
I-435 W	Past State Line Rd	21
I-70 E	Past Blue Ridge Cutoff	21
I-70 W	Before Blue Ridge Cutoff	17
I-435 E	Before I-49/I-470	16
I-70 E	Past 31st St	16
I-435 N	Past Front St	15
I-70 W	Past 40/Blue Ridge Cutoff	15
I-35 N	Past I-435	14
I-35 N	At 75th St	14
I-70 W	Past 18th St.	14
I-70 W	Past Blue Ridge Cutoff	14
I-70 W	Past Lee's Summit Rd	14
I-35 S	Past Armour/210	13
I-435 E	Past State Line Rd	13
I-435 N	Before Stadium Dr	13
I-435 N	Before Front St	13
I-435 S	Past 23rd St	13
I-435 S	Before I-70	13
I-70 W	Before Little Blue Pkwy	13

"I was on 470 at 8:30 this morning and [a] Scout guy helped change my tire. I just wanted to pass on [to you that] he was very professional and helpful. I didn't get his name, but tell him thanks again for me."

James Davey
Kansas City



Top Multi-Vehicle Incident Routes



I-435 had the highest number of multi-vehicle incidents with a total of **826 in 2014**

Westbound Incidents
222

Eastbound Incidents
183

Southbound Incidents
226

Northbound Incidents
195

Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-435 West

Before 103rd St	24
Past State Line Rd	21
Past Quivira	12
At 69 Hwy	11
Before Holmes Rd	9
At Antioch	9
At Holmes Rd	8

I-435 East

Before I-49/I-470	16
Past State Line Rd	13
Before State Line	12
At State Line	10
At Metcalf Ave	10
At Wornall	9
Past K-10	8

I-435 South

Past I-70	21
Past 23rd St	13
Before I-70	13
To I-70 EB	8
Past 210 Hwy	8
Before Front St	8
At I-70	8

I-435 North

Past Front St	15
Before Stadium Dr	13
Before Front St	13
Before 23rd St	10
Past 24 Hwy	9
Past Stadium Dr	8
At Eastwood Tfwy	8



Rate of Incidents





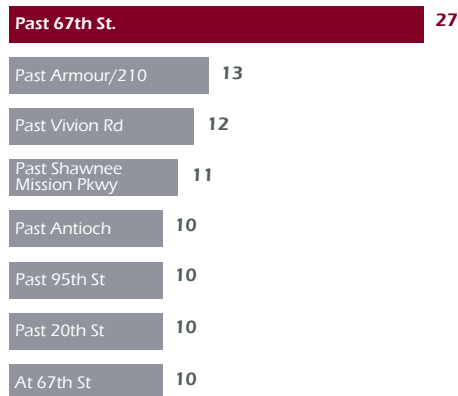
I-35 had the second highest number of multi-vehicle incidents with a total of **824 in 2014**

Southbound Incidents
423

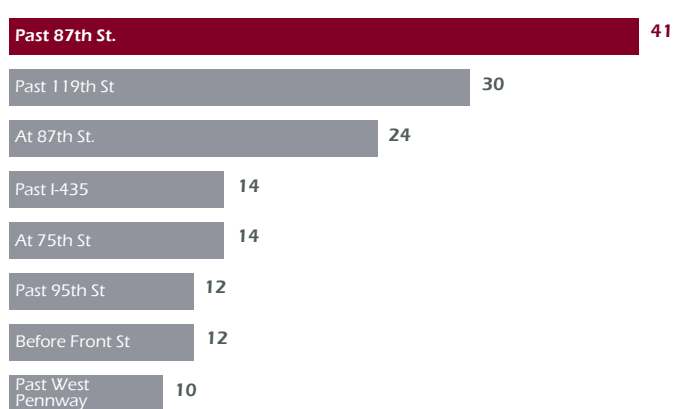
Northbound Incidents
401

Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-35 South



I-35 North



Rate of Incidents

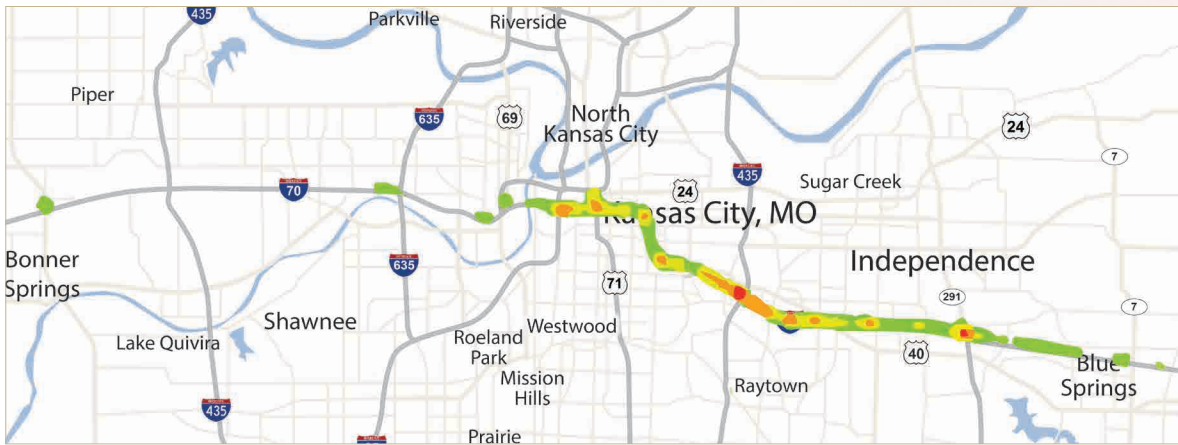




I-70 had a total of 635 multi-vehicle incidents in 2014.

Westbound Incidents
308

Eastbound Incidents
327



Rate of Incidents



Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-70 West

Before Blue Ridge Cutoff	17
Past 40/Blue Ridge Cutoff	15
Past 18 th St.	14
Past Blue Ridge Cutoff	14
Past Lee's Summit Rd	14
Before Little Blue Pkwy	13
Before 40 Hwy/Blue Ridge	12
Before Fairfax Tfwy	11
Past Manchester Tfwy	10
At I-470	9

I-70 East

Past Blue Ridge Cutoff	21
Past 31 st St	16
Past 40 Hwy	13
Past I-435	13
Before Noland Rd	10
Past Lee's Summit Rd	9
At 40 Hwy/Blue Ridge	8
At Noland Rd	8



I-470 had a total of 202 multi-vehicle incidents in 2014.

Westbound Incidents
113

Eastbound Incidents
89

Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-470 West

At 50 Hwy	10
7	At I-49
7	Past Blue Ridge
6	Past Lakewood Blvd
6	Past Douglas
6	Past 50 Hwy
6	Past 40 Hwy
6	Before Raytown Rd

I-470 East

At View High	9
7	Past Strother Rd
6	At I-70
6	Past Lakewood Blvd
5	Past I-49
5	Past Woods Chapel

Rate of Incidents



I-49 had a total of 107 multi-vehicle incidents in 2014.

Southbound Incidents
52

Northbound Incidents
55

Rate of Incidents



Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-49 North

At Main St.	7
3	To I-435 WB
3	Before Red Bridge
3	Before Front St
3	At I-70

I-470 South

Past 155th St.	5
4	Past 140th St.
4	At 155th St.





I-635 had a total of 97 multi-vehicle incidents in 2014.

Southbound Incidents
53

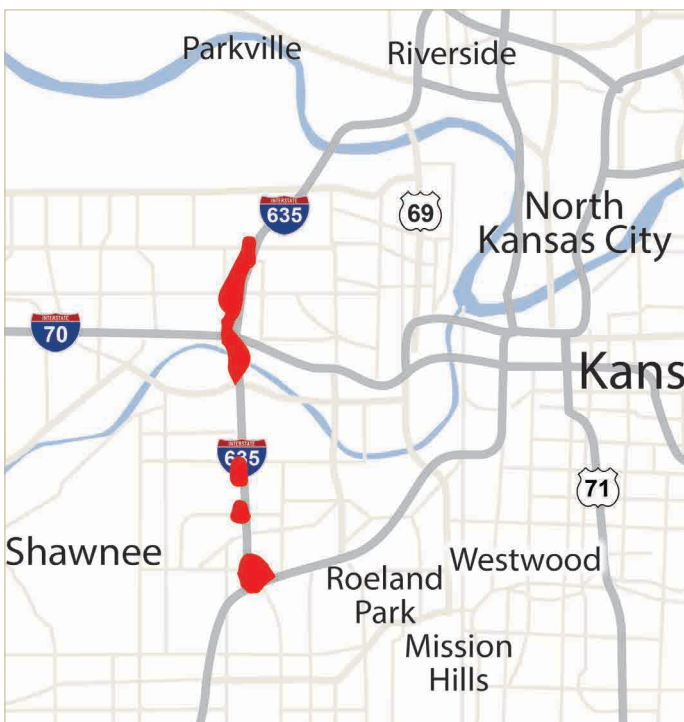
Northbound Incidents
44



I-29 had a total of 93 multi-vehicle incidents in 2014.

Southbound Incidents
36

Northbound Incidents
57



Rate of Incidents



Rate of Incidents



Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-635 South

Past Parallel	6
4	To I-35
4	Past State Ave

I-635 North

Before I-70	6
5	Past Shawnee Dr.
4	Before Metropolitan

I-29 South

Past Gateway Ave	11
6	Past NW 64th St
4	To I-35 NB
4	At I69 Hwy.

I-29 North

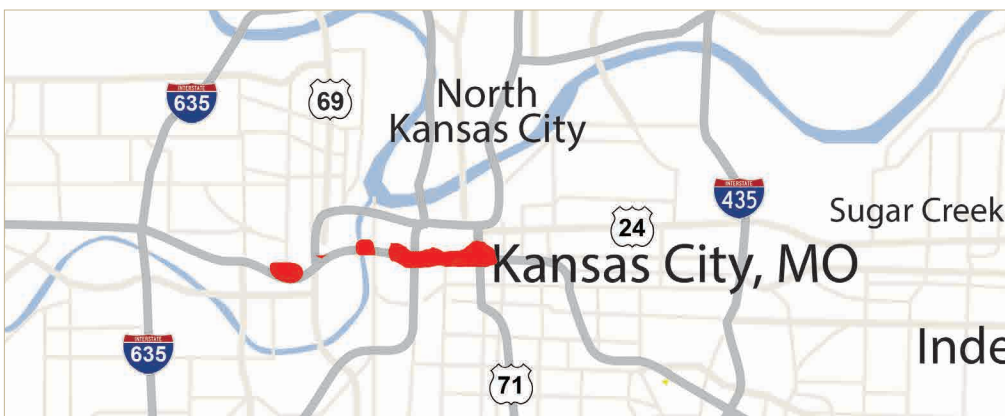
3	Past Waukomis
3	At Barry Rd.



I-670 had a total of **70 multi-vehicle incidents in 2014.**

Westbound Incidents
22

Eastbound Incidents
48



Rate of Incidents



Cross-Street Locations with the Top Number of Multi-Vehicle Incidents

I-670 West

Past 71 Hwy	5
4	Past Broadway

I-670 East

Past Broadway	10
7	At Genessee St
4	Past 7 th St.

"I just wanted to say thank you to Tim Hall who helped me out when I was stuck on the side of the road today. He was so polite and kind and went out of his way to make sure I could get back on the road. Thank you SO much, Sir! You are truly a blessing in disguise!"

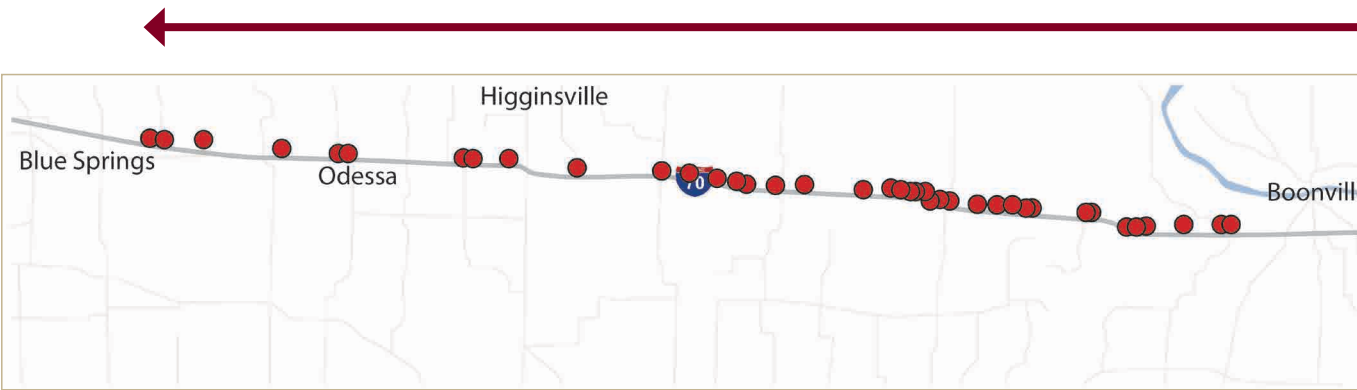
Kirby Hurst
Kansas City

Scout is Both Rural and

Along with the KC Metro Area, Scout manages incidents that happen on Missouri’s I-70, I-29 and I-35 rural corridors, as well as the Kansas I-70 corridor to the Colorado border. The map and data is shown for Missouri’s I-70 Rural Corridor.

Metrics similar to those presented here are not calculated for the other rural corridors due to a smaller set of data.

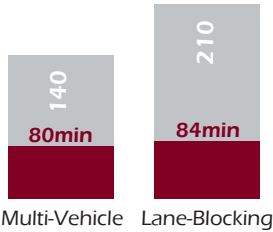
Lane-Blocking Incident Locations Along the I-70 Missouri Rural Corridor (2014)



There were a total of **210** lane-blocking incidents in the Missouri I-70 rural corridor during 2014 and the average clearance time was **84 minutes**.

There were **140** multi-vehicle incidents in the Missouri I-70 rural corridor during 2014 and the average clearance time was **80 minutes**.

Incidents along the I-70 Missouri Rural Corridor and Average Clearance Time (2014)



	Number of Lane Blocking Incidents	Average Time to Clear Lanes
Jan	27	101 min
Feb	24	111 min
Mar	20	99 min
Apr	16	71 min
May	13	60 min
Jun	16	77 min
Jul	14	46 min
Aug	11	109 min
Sept	21	146 min
Oct	18	106 min
Nov	23	30 min
Dec	7	53 min
	210	84 min

Urban

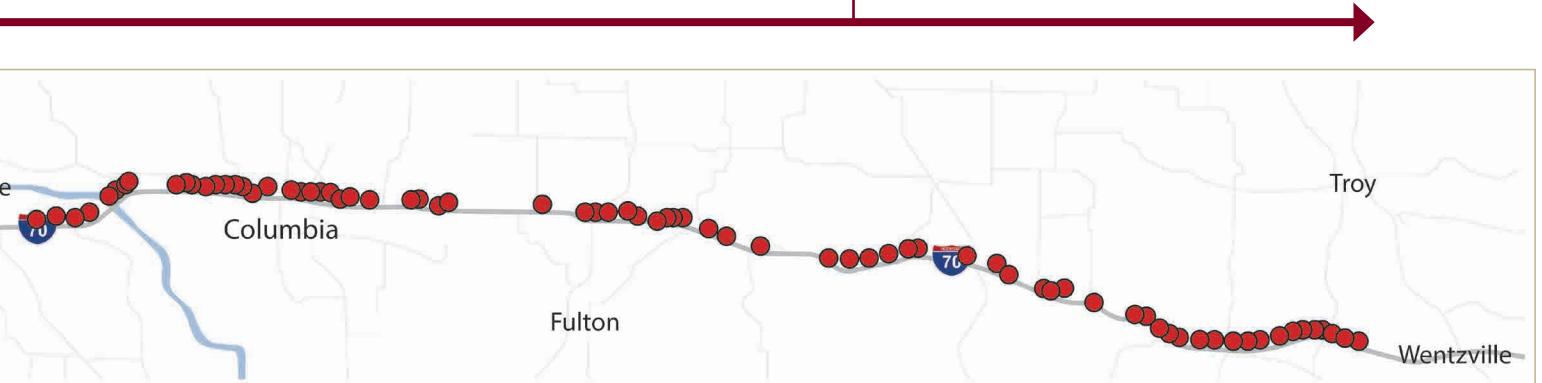


I-70 Missouri Rural Corridor

There were a total of **513 incidents** in the corridor during 2014.

The Missouri I-70 rural corridor consists of a 186-mile stretch of I-70, spanning from Grain Valley (MM 24) to Wentzville (MM 210).

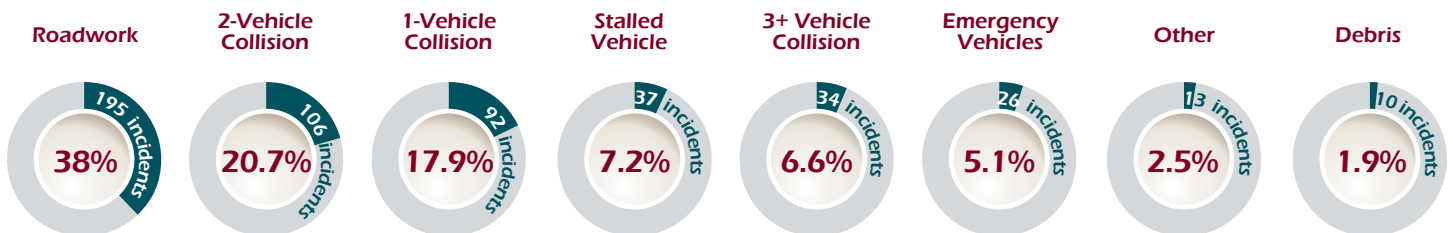
186 miles



Types of Incidents

38% of the incidents along the Missouri I-70 rural corridor in 2014 were related to roadwork.

There are various types of incidents that involved stalled vehicles, collisions, debris, construction, or something else.

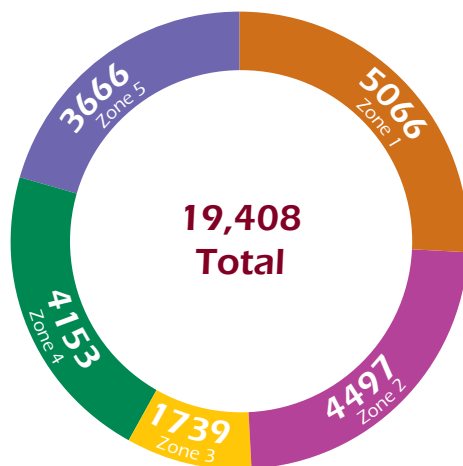


Emergency Response

The total number of motorist assists increased by 9.2% from 17,495 assists in 2013 to **19,408** in 2014.

Emergency Response operators patrol the Metro in search of vehicles that appear to be in trouble. They also support law enforcement, emergency responders and other emergency agencies by providing traffic control and back-up for incidents.

Total Number of Assists by Zone (2014)



Their goals are to:

- Minimize major disruptions of traffic flow.
- Focus on the factors that create disruptions in the flow and remove them.
- Relieve congestion and maintain consistent traffic flow during an incident.
- Reduce clearance times for incidents.

Number of Assists by Zone and Month (2014)

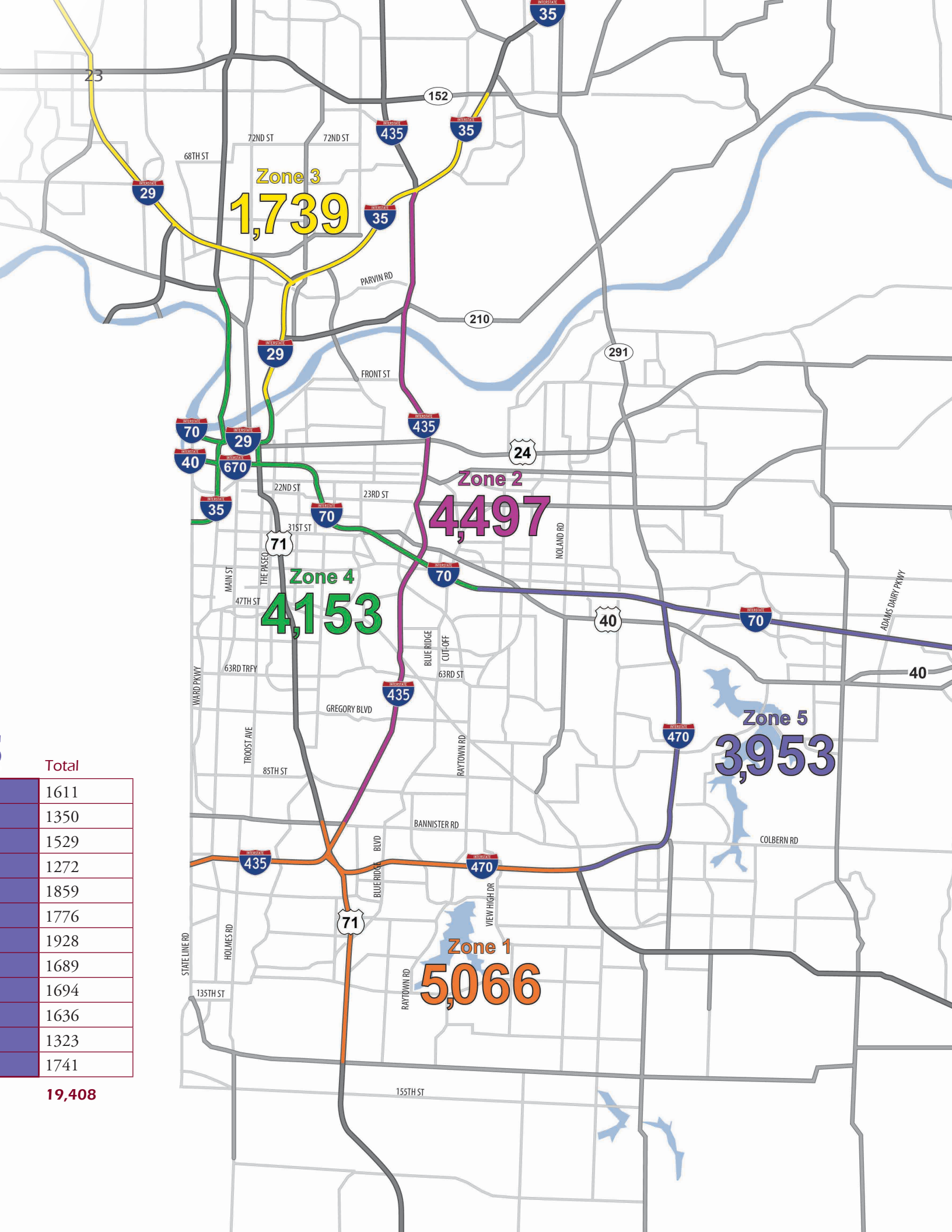
1 2 3 4 5

"[My car was broken down] on 435 around state line and one of your Emergency Response guys helped me. He went above and beyond, let me tell you, to make sure I was safe and waited for my tow to arrive. These guys rock."

Angela Simmons

Kansas City

	1	2	3	4	5
Jan	452	321	138	349	351
Feb	368	290	113	317	262
Mar	412	349	150	318	300
Apr	357	277	115	266	257
May	476	441	153	371	418
Jun	473	444	160	353	346
Jul	488	479	165	405	391
Aug	424	398	156	370	341
Sep	435	372	146	387	354
Oct	412	376	129	371	348
Nov	316	337	139	277	254
Dec	453	413	175	369	331
Total	5,066	4,497	1,739	4,153	3,953



Total

- 1611
- 1350
- 1529
- 1272
- 1859
- 1776
- 1928
- 1689
- 1694
- 1636
- 1323
- 1741

19,408

How Missouri Emergency Response Helps

Types of Services

Operators provided traffic control for 39% of the assists in 2014. The average response time was 6.4 minutes.

In addition to the total number of motorist assists, we have collected data on the type and duration of assists that Missouri Emergency Response operators have performed. We also have information on the severity and duration of lane-blocking incidents for which operators provided traffic control. The information is shown in the graphs and tables that follow.

Number of Missouri Emergency Responses by Type and Month (2014)

	Transport Motorist	Lost Motorist	Check Motorist	Tire Assist	Fuel Dispensed	Jump-Start	Mechanical	Push Procedure	Traffic Control	Total
Jan	35	5	197	154	233	73	112	37	444	1,290
Feb	12	5	119	90	153	49	89	37	544	1,098
Mar	16	6	187	137	181	34	96	32	463	1,152
Apr	10	2	163	139	141	30	90	13	356	944
May	17	10	204	213	176	45	152	37	537	1,391
Jun	25	5	214	202	191	52	164	33	501	1,387
Jul	18	6	226	242	195	55	164	39	544	1,489
Aug	24	7	176	206	145	45	178	40	485	1,306
Sept	13	7	179	196	199	0	176	31	467	1,268
Oct	20	2	153	190	162	60	182	37	534	1,340
Nov	17	5	123	118	126	64	127	17	410	1,007
Dec	16	5	145	178	161	88	159	23	578	1,353
	223	65	2,086	2,065	2,063	595	1,689	376	5,863	15,025

Gas Dispensed in Gallons by Month (2014)

302	212	252	240	242	261	257	201	279	214	173	216
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec



Incident Duration by Month (2014)

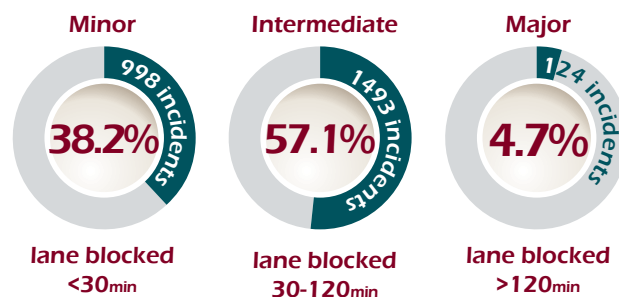
	Minor (< 30min)	Intermediate (30-120min)	Major (> 120min)
Jan	98	135	14
Feb	128	163	10
Mar	74	118	4
Apr	40	97	5
May	86	105	11
Jun	74	121	15
Jul	67	141	16
Aug	65	127	8
Sept	68	17	8
Oct	87	164	14
Nov	89	127	7
Dec	122	178	12
	998	1,493	124

"My husband and I were driving north on I-35 about 40 miles south of Kansas City and got a flat tire while in the construction zone. My husband started to change the tire and two highway workers walked over to see if they could help. We thanked them and told them we were able to change the tire. They picked up two road cones and placed them in the left lane next to our car so traffic would merge to the left after they passed us. They provided safety for us to complete the task of changing the tire. Highway workers face such danger every day, working so close to rapidly moving traffic. We got a taste of it standing by our car and seeing it from their viewpoint. Many, many thanks to them and to all highway workers."

Ron and Cindy Pierson

Minnesota

Severity of Incident by Duration (2014)



Mobility in the Metro

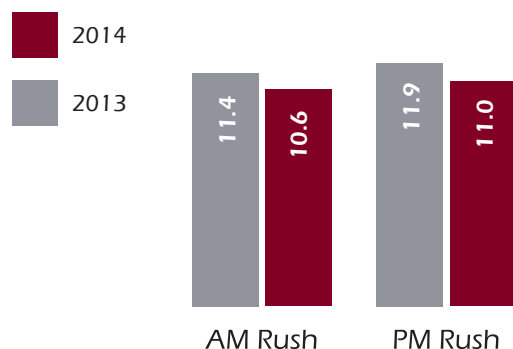
As the Metro grows, more and more vehicles use the freeway. Mobility, or the average time to travel a 10-mile segment of our freeway system, is an increasingly important factor.

Scout collects data on mobility for rush-hour peaks (7 A.M. and 5 P.M.). The measure uses the average travel time index values (Travel Index = Average Speed/Free Flow Speed) to calculate the 10-mile travel times during the peaks on various freeway sections.

The travel time index is directly related to the average speed and represents the level of congestion by taking into consideration, not only the average speed, but also traffic volumes. The desired trend is to travel 10 miles per 10 minutes on a 60 mph freeway.

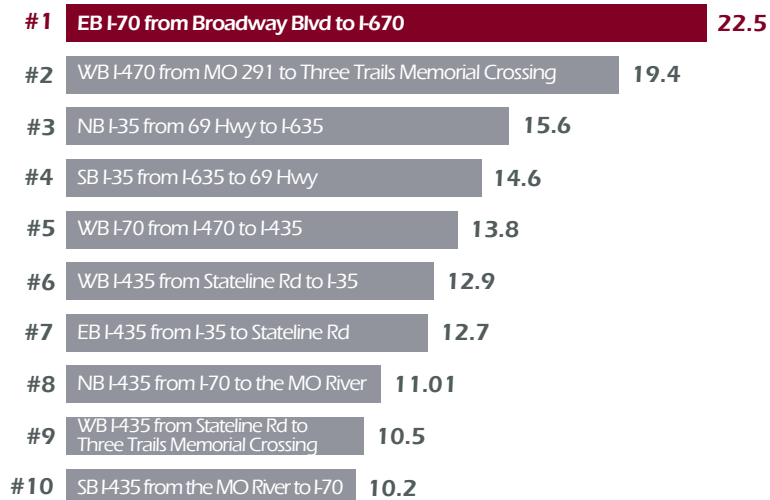
The **maps** to the right show traffic mobility on selected freeway segments at both the morning and afternoon peak travel times. The green areas have the highest mobility; red have the lowest.

**Average 10-Mile Travel Time (Minutes)
During Rush-Hours on Selected Freeway Sections**

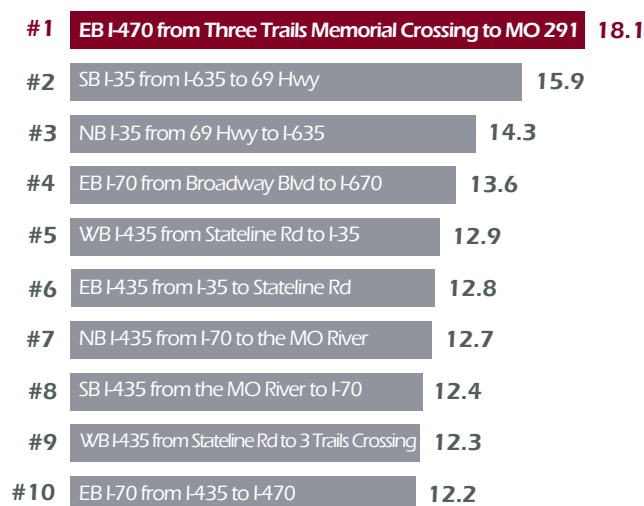


Kansas City's Top Ten Most Traveled Segments (2014)

Morning Rush Hour (AM) volume in millions



Evening Rush Hour (PM) volume in millions



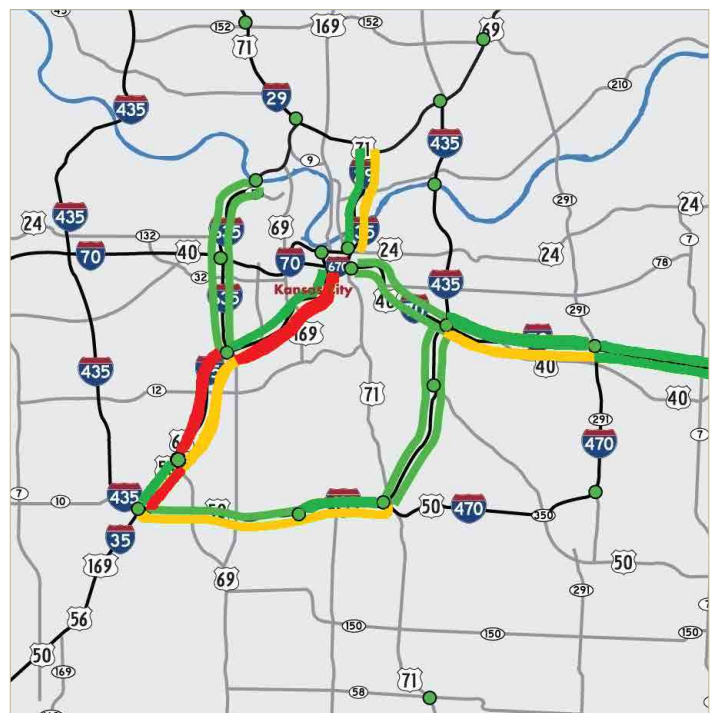
Thomas Stanley
Overland Park

Overland Park

AM Rush-Hour Travel Times



PM Rush-Hour Travel Times



Congestion Management

Compared to 2013, the Metro's highways experienced an overall volume increase of 11% in 2014.

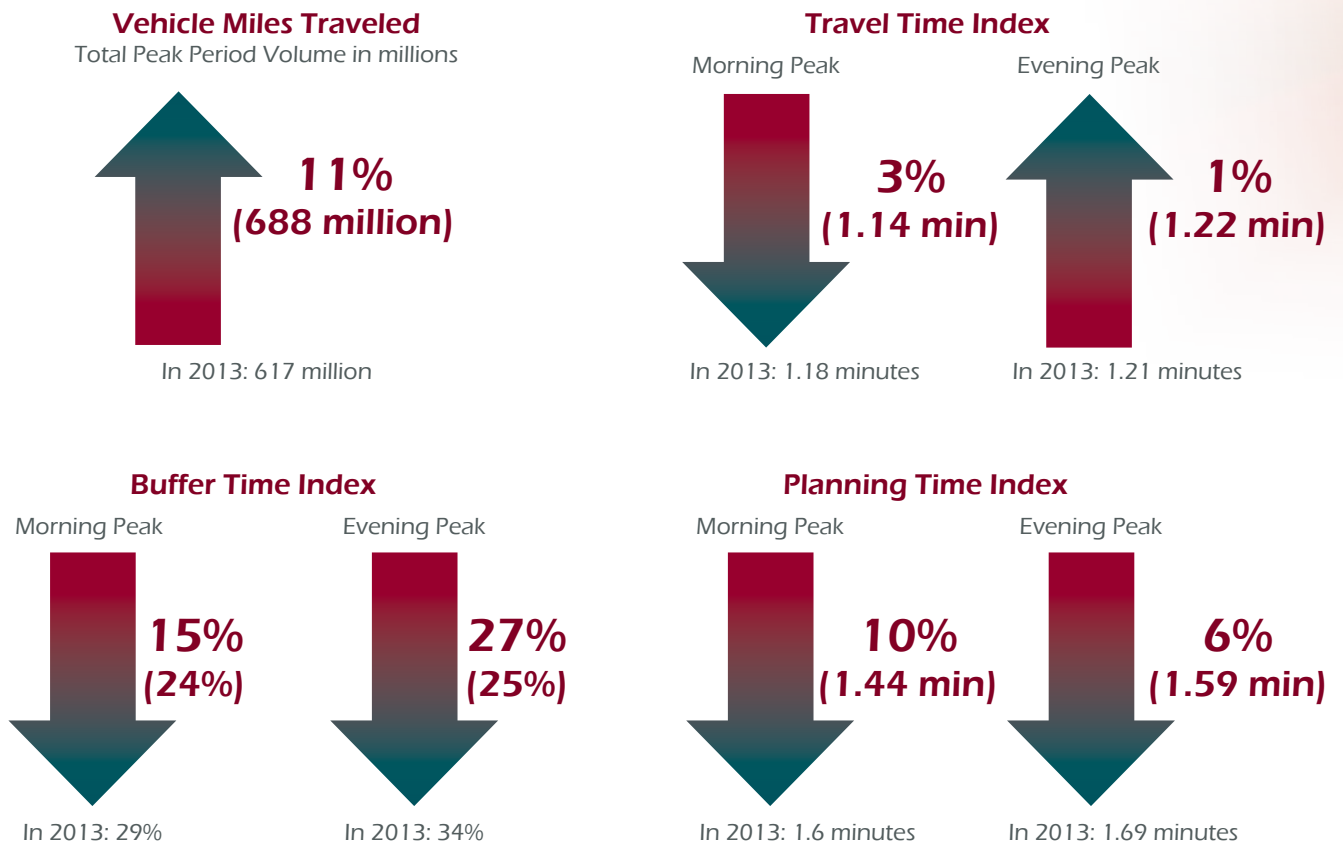
Given this increase, all three congestion indices continue to improve with the exception of the travel time index during the evening peak which increased by only 1%. In addition, only 9% of Kansas City highways experienced heavy congestion during the course of 2014 compared to 11% in 2013.

Travel Time Index (TTI) is the extra time spent in traffic during peak traffic times as compared to light or free flow traffic times.

Buffer Time Index (BTI) is the extra time a motorist must add to their average travel time to ensure on time arrival during peak periods. It is measured by percent.

Planning Time Index (PTI) is the total time a motorist needs to ensure on time arrival during peak periods.

Congestion Snapshot (2014)

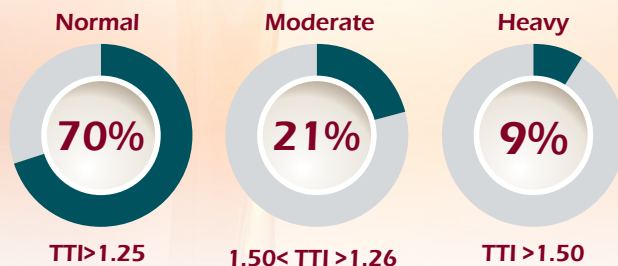


“On the way out of town I passed a work-zone and had a nail blow my tire. It was during rush hour and it was very scary, but I was able to get over to the side of the road. That was when Timothy Hall from MoDOT stopped to help. I was barely off the road and he parked so that I was protected from the traffic. Timothy helped me in so many ways! It was New Years Eve at 5:00 and almost all tire places in town had closed. Timothy called around, helped me work with AAA, and helped me stay calm while trying to get home to Indiana on a very busy night. I would like to thank him and let you know what a wonderful man you have working on your team! I don't know what I would have done without him stopping to help!”

Cari Cawthon

Indiana

Congestion on Kansas City's Highways in Minutes (2014)



Top Three Traveled Segments for Each Index (2014)

Morning Rush Hour (AM)

TTI	#1	WB I-670 from I-70 to I-35	1.81 min
	#2	EB I-670 from I-35 to I-70	1.70 min
	#3	WB I-70 from I-470 to I-435	1.47 min
PTI	#1	SB I-35 from I-635 to 69 Hwy	2.77 min
	#2	NB I-35 from I-435 to 69 Hwy	2.67 min
	#3	WB I-70 from I-470 to I-435	2.49 min
BTI	#1	NB I-35 from I-435 to 69 Hwy	93.57%
	#2	SB I-35 from I-635 to 69 Hwy	90.17%
	#3	WB I-470 from MO 291 to 3 Trails Crossing	75.48%

Evening Rush Hour (PM)

EB I-670 from I-35 to I-70	2.36 min
SB I-35 from I-670 to Cambridge Circle	2.30 min
SB I-35 from I-635 to 69 Hwy	2.05 min
EB I-670 from I-35 to I-70	3.96 min
SB I-35 from I-670 to Cambridge Circle	3.76 min
SB I-35 from I-635 to 69 Hwy	3.25 min
NB I-35 from I-435 to 69 Hwy	102.89%
EB I-435 from I-35 to Stateline Rd	94.55%
NB I-35 NB from Cambridge Circle to I-670	80.71%

ITS Infrastructure

Scout manages the Metro's 300 mile highway system with technical equipment including cameras, message signs, and freeway detectors.

The percentage of equipment that is working properly in the field each month is known as "equipment uptime". Message signs, in particular, are essential to providing real-time travel and incident information. Motorists use them to make informed decisions about their travel routes.

Percent of Properly Working Equipment (2014)

	Cameras	Message Signs	Freeway Detectors
Jan	96%	96%	77%
Feb	N/A	99%	77%
Mar	97%	99%	73%
Apr	99%	100%	76%
May	99%	100%	92%
Jun	99%	99%	84%
Jul	99%	100%	82%
Aug	99%	100%	83%
Sept	99%	100%	84%
Oct	99%	99%	70%
Nov	100%	100%	84%
Dec	100%	100%	82%
Average	99%	99%	80%

"I was traveling through Kansas City up to Omaha and the ITS system is great. Scout has some real good infrastructure and advanced notification. I saw accident information and travel time info, good stuff. I downloaded the app too. PS. I work at TXDOT in IT."

Jamie Connors

Dallas



Traffic Incident Management

provides quicker response and clearance times.



Message Signs

provide travel times, incident, safety and traffic information for drivers.





“Ramp meters really help people get on the highway. I’m from California and they are everywhere. I’m glad they are on 435 and continue to utilize them.”

John

Leawood

Scout’s ITS Tool Bench

The Kansas and Missouri Departments of Transportation jointly operate Scout, using a variety of key tools to accomplish the task. These tools include traffic incident management, ramp meters, cameras, message signs, and freeway detectors.

Detectors

detect vehicles that are moving, slowed, or stopped on the highway.



Closed-Circuit Cameras

monitor traffic, incidents and work zones.

Ramp Meters

located at on-ramps to maximize the flow of traffic on interstates.



1

Message Signs:

Freeway message signs describe trouble ahead, such as blocked lanes, work zones, incidents, and severe weather (floods, ice, snow, or tornadoes).



"I check this website every morning and the cameras are great. I really use the cameras when it's snowing or raining hard outside. Pretty cool stuff."

Corey

Kansas City

Website and My KC Scout:

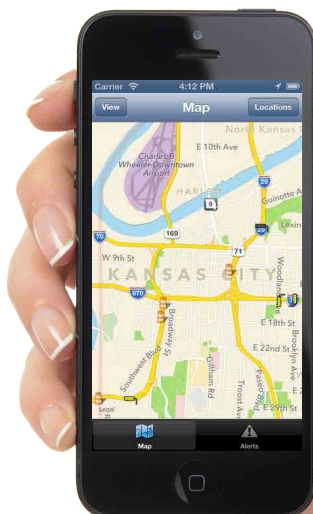
Visit kcscout.net for a real-time traffic map, current travel speeds, and road closures. To receive alerts about traffic, weather, child abductions (AMBER Alerts), poor air quality, and/or homeland security via email, text message, or your company task bar, select "My KC Scout" to set your preferences.

3

Media:

Scout provides live video of the freeway to major news channels and to a local cable company. Media partners also display actual vehicle speeds during slowdowns.

Where to Find Scout Alerts

**Scout App and Social Media:**

Download the free Scout Kansas City Traffic app for both Apple and Android devices and follow Scout on Twitter for up to the minute traffic information 24 hours a day, 7 days a week at twitter.com/kansascityscout.



Scout Benefits

The Scout program offers a very high overall cost to benefit ratio: for every \$1 spent, it provides approximately \$8 in benefits.

Inadequate funding and, in some cases, inadequate room to widen roadways have made new construction and lane additions an increasingly difficult solution.

Providing a safe and efficient system for freeway travel is important, so the Kansas City Metro uses Scout's technology and traffic management system.

Traffic Incident Management is a major focus of the system and has resulted in reduced incident periods and overall increased coordination at the scene of the incident. Emergency Response also helps with achieving quicker clearance. The benefits equate to reduced travel times and congestion, lower crash rates, savings in fuel and other operation costs, and cleaner air from reduced carbon emissions.

Transportation Management Center

Scout provides you with real-time, up-to-the-minute, traffic and roadwork information.

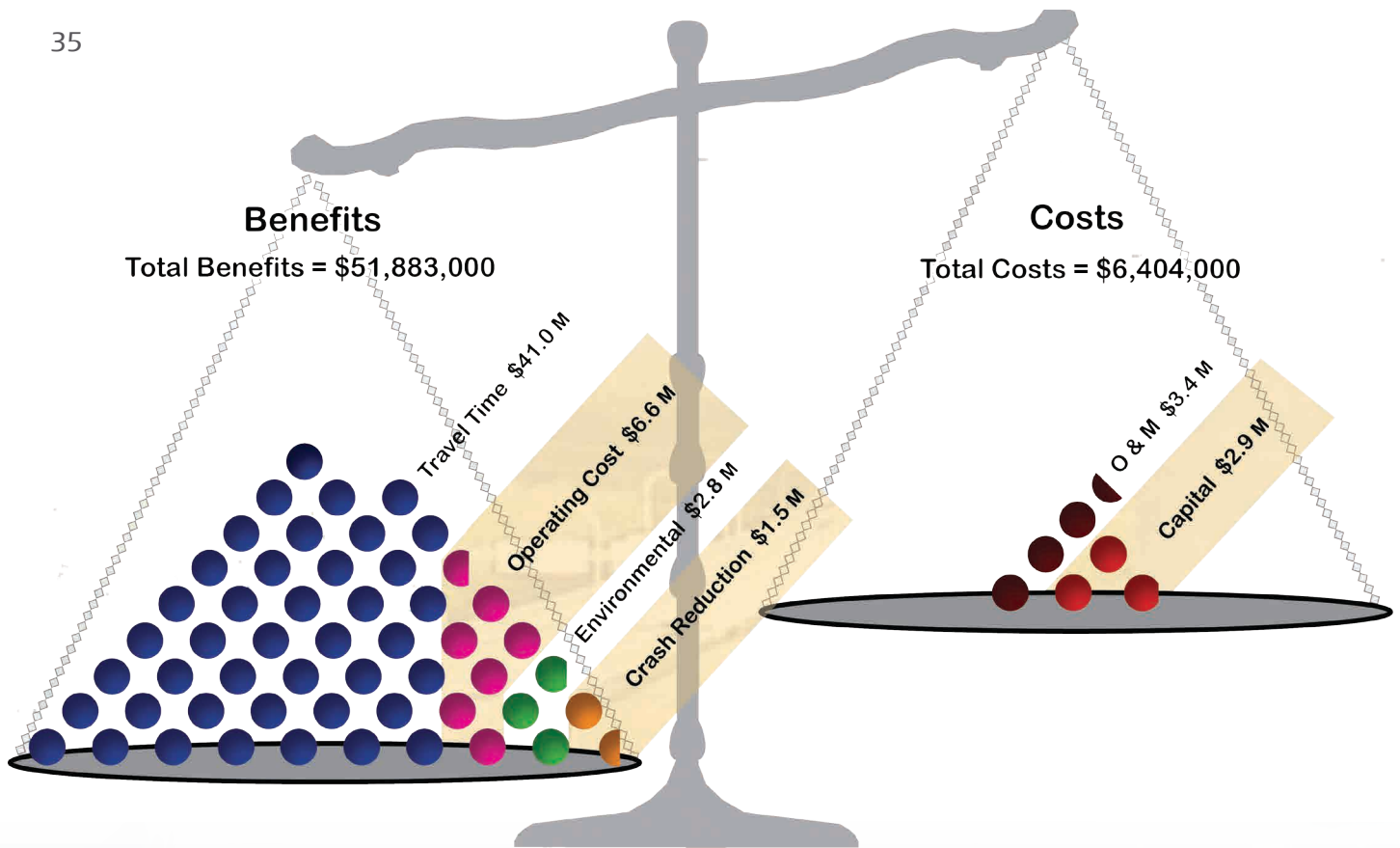
To request a tour of the Scout TMC (Transportation Management Center) go to kcscout.net. Select "Scout Services", then "Schedule a Tour", and fill out the form.



"Thank you so much for the tour you gave the IEEE group a few months ago. You and your staff were awesome...it's so cool to see people who are so enthused and dedicated!"

Rob Stitt

Kansas City



KEY



Each circle represents \$1M in value.

Benefits**Travel Time**

Time saved by drivers due to reduced congestion

**Crash Reduction**

Elevated safety levels reduce secondary crashes

**Operating Cost**

Fuel savings

**Environmental**

Reductions in carbon emissions

Costs**Annual O & M**

Costs to operate and maintain

**Annualized Capital**

Includes initial capital investment and replacement costs

Investment in Scout technology, incident management, and Emergency Response translates to annual benefits that greatly outweigh the annual costs to build and maintain the program.

Kansas City
SCOUT MoDOT + KDOT



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