



West Michigan Transportation Operations Center



MDOT'S MISSION:
*Providing the highest quality
integrated transportation services
for economic benefit and
improved quality of life.*

2014

July

MONTHLY
PERFORMANCE
MEASURES



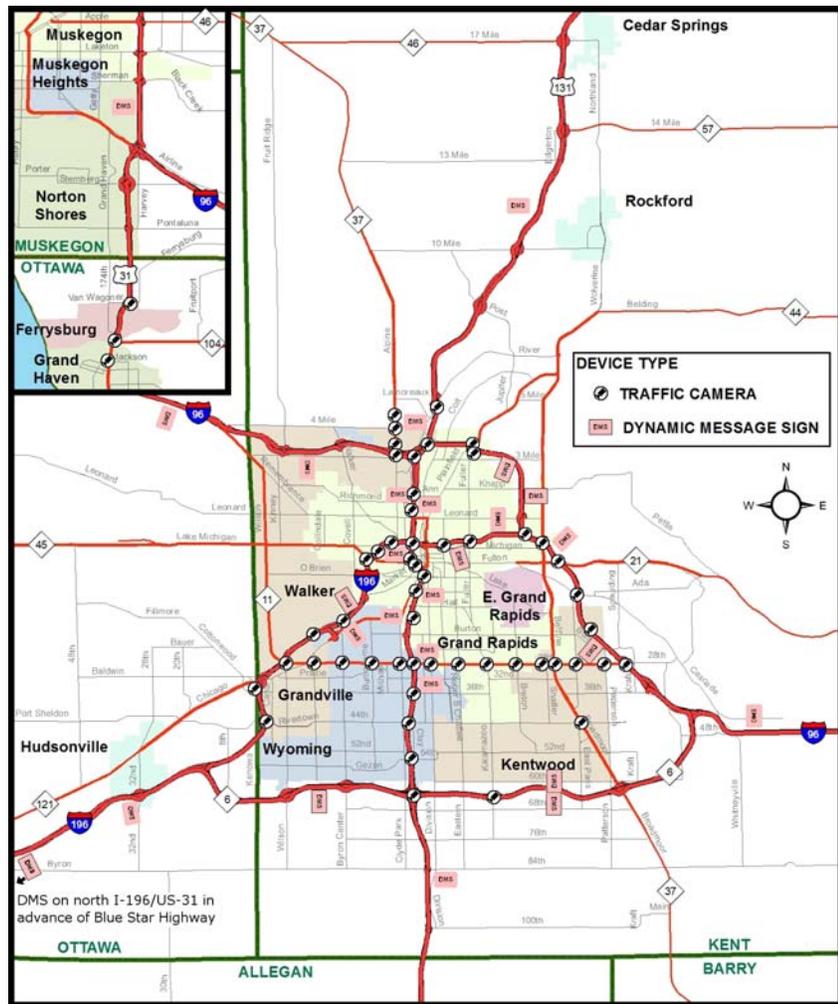
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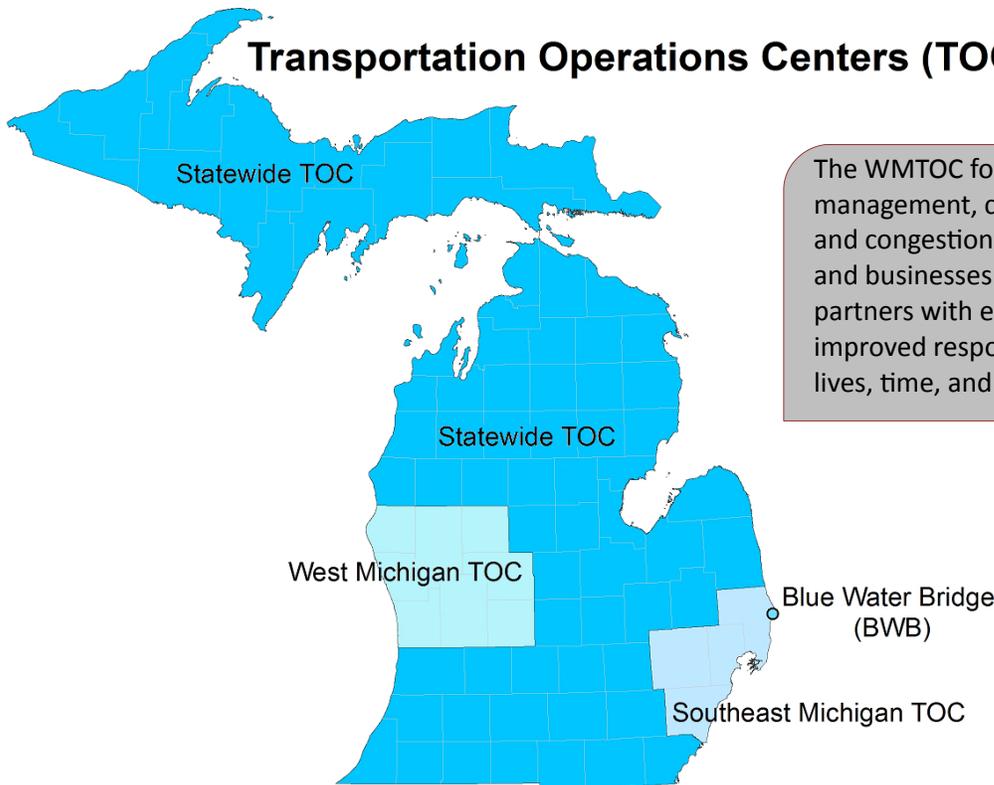
Construction related to the southbound US-131 bridge rehabilitation project in downtown Grand Rapids kicked off in early July. The construction zone spans from Leonard Street to Wealthy Street and includes two major freeway-to-freeway ramp closures. This and multiple other work zones, including a bridge rehabilitation project on I-96 in Portland and a pavement joint replacement project on I-96 from 36th Street to the Kent/Ionia county line, are being continuously monitored by operators at the WMTOC. These construction projects resulted in the expanded utilization and management of portable changeable message signs, or PCMS, from 6 to 21. The PCMS allow MDOT and operators to actively inform approaching motorists about changing conditions within the work zones. As always, the most up to date information on current and future construction projects, as well as speed and incident information, can be found by visiting the MiDrive website at www.michigan.gov/drive.

The month of July had three clean air action days for the Western Lakeshore counties. MDOT continues to do their part to increase awareness of clean air action days by posting messages to motorists a day in advance to encourage alternate forms of transportation, carpooling, and reduced engine usage.

Device Locations



Transportation Operations Centers (TOC)



The WMTOC focuses on MDOT's goals of incident management, crash reduction, customer information, and congestion reduction. The TOC provides motorists and businesses with real-time traffic information, and partners with emergency response agencies to provide improved response services to traffic crashes, saving lives, time, and money.

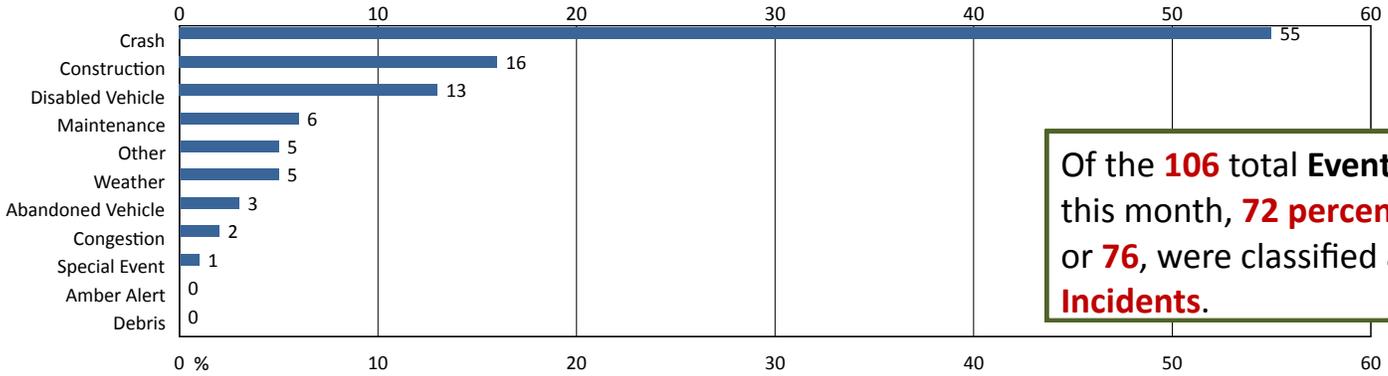
The WMTOC has camera/device coverage on approximately 45 freeway miles and 18 non-freeway trunkline miles in the greater Grand Rapids area and Grand Haven.

Event: An occurrence within the TOC coverage area that results in TOC involvement or tracking. Several different types of events recur, including: Crash, Disabled Vehicle, Abandoned Vehicle, Debris, Congestion, Construction, Maintenance, AMBER Alert, Weather, and Special Event types. Any other occurrence with TOC involvement is classified as "Other."

Incident: An unplanned event that directly affects a state trunkline. These are primarily crashes, disabled and abandoned vehicles, and debris in the roadway but occasionally include police situations and fires.

Communication: Any phone call, e-mail, etc., that comes into or goes out of the control room.

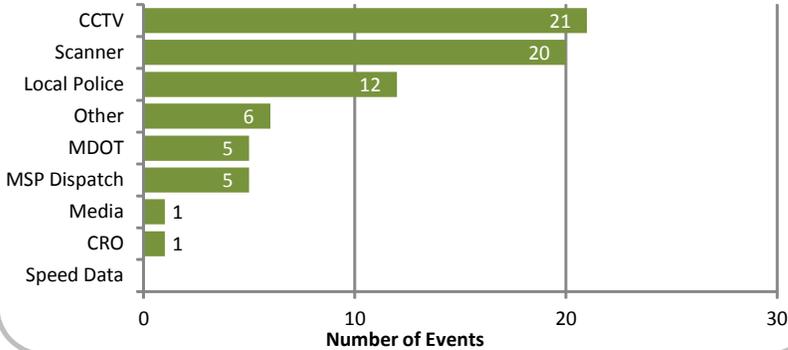
Events by Type



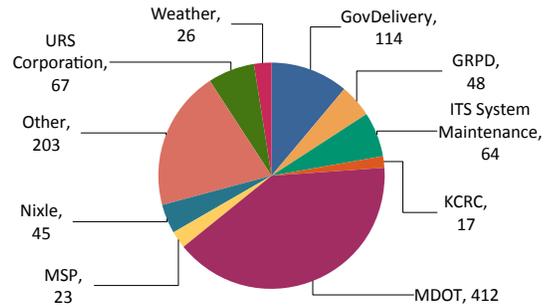
Of the **106** total **Events** this month, **72 percent**, or **76**, were classified as **Incidents**.

Control room operators (CRO) rely on various sources to detect **Incidents** that occur along the freeways. Noting the source not only ensures that the **Incident** was detected by a reliable source, but also provides insight as to which sources are utilized most frequently. "Other" includes any source that is infrequent, such as responders on scene or third party notifications.

Incidents by Detection Source



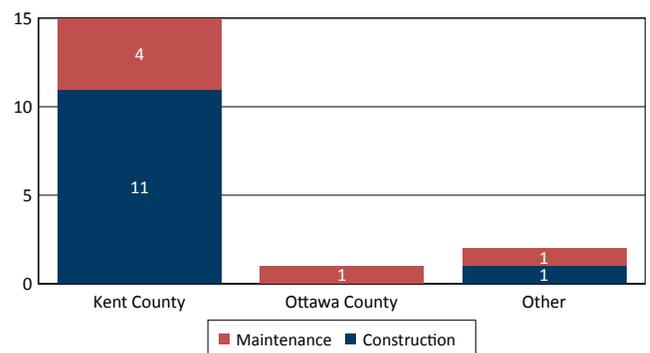
Communication by Agency



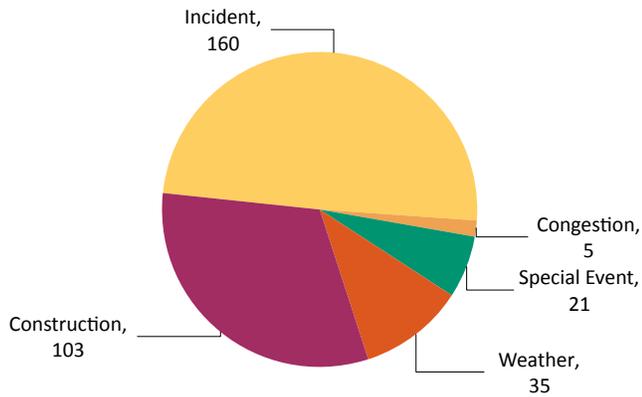
CROs managed **1,019 Communications** this month. This included **379 (37 percent) Calls** and **640 (63 percent) E-mails**. The highest source of **Communication, 40 percent**, was between the control room and **MDOT**. "Other" includes Media, Contractors and Service Providers, as well as the City of Grand Rapids.

Since CROs are responsible for monitoring and managing traffic operations along the freeways, it is critical to know where work zone activities are taking place and the impact that they may have on freeway operations. Frequent communication with MDOT staff and contractors allows CROs to stay up-to-date on the locations and impacts of construction and maintenance projects. Work zone activities which are messaged for or are within the camera/device coverage area of the WMTOC are logged. "Other" includes Oceana, Newaygo, Mecosta, Muskegon, Montcalm, and Ionia counties.

Work Zone Activities



DMS and VSS Messages by Type



There were **324** unique messages displayed throughout the ITS network this month on Dynamic Message Signs (DMS). A "unique message" may be an **Incident**, Special Event, Congestion, Weather, Construction, AMBER Alert, or other unique message.

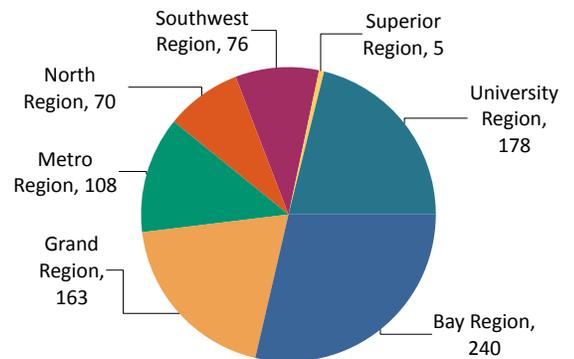
Travel time messages are routinely displayed when unique messages are not active. Travel times are updated every three minutes.

Field Device Availability

Device Type	Number of Devices	Percent of Time Available
CCTV Cameras	40	81%
Dynamic Message Signs (DMS)	27	96%
Microwave Vehicle Detectors	43	79%

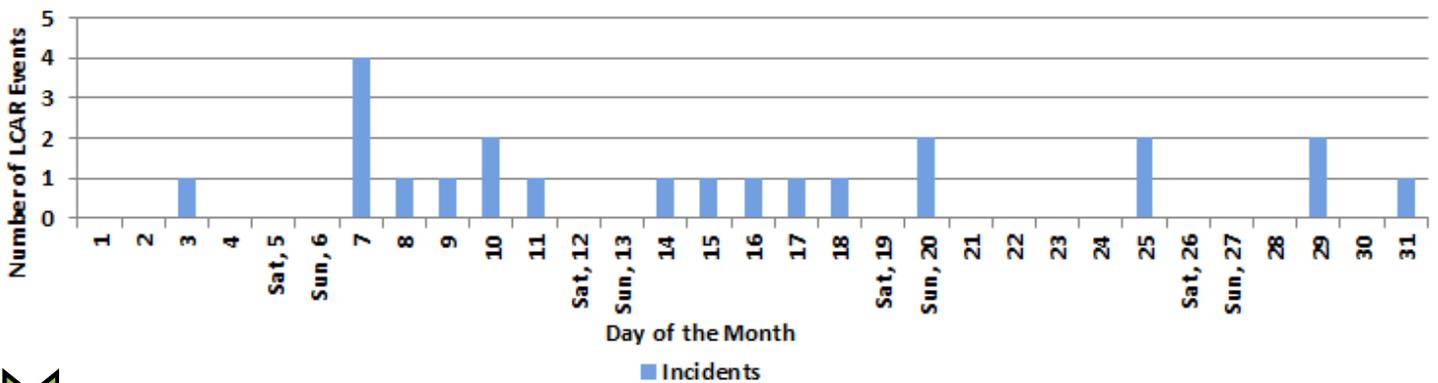
CROs track the availability of all system devices so that timely maintenance can occur. The reliability of the devices in turn ensures that CROs have tools available to accurately provide traffic conditions to the motoring public.

Stuck in Traffic Notifications



Travelers with smartphones or Web-enabled mobile devices can go to the Mi Drive website (www.michigan.gov/drive) and click on the "Stuck in Traffic?" link to report traffic delays or incidents. The graph above shows how many were reported per MDOT region.

WMTOC LCAR Posts



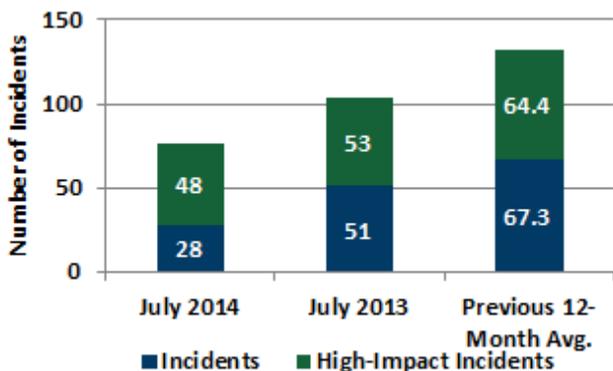
CROs are able to post **Incident** information to the Mi Drive website using the Lane Closure and Restrictions (LCAR) tool. Each post that was sent to the website this month is shown in the chart above.

Incidents in Coverage Area by Roadway

Freeway	Miles	July 2014			July 2013			Previous 12-Month Avg.		
		Total Incidents	Incidents Per Mile	Average Duration (min)	Total Incidents	Incidents Per Mile	Average Duration (min)	Total Incidents	Incidents Per Mile	Average Duration (min)
I-96	10.6	5	0.5	91	7	0.7	50	19.6	1.8	55
I-196	12.1	9	0.7	194	24	2.0	100	30.9	2.6	51
US-131	15.2	41	2.7	51	47	3.1	42	57.2	3.8	48
US-31	1.7	0	0.0	0	3	1.8	94	2.0	1.2	89
M-6	4.0	0	0.0	0	1	0.2	29	2.4	0.6	72
M-11	11.5	0	0.0	0	4	0.3	34	1.3	0.1	60
Total	55.1	55	1.0	78 min	86	1.6	60 min	113.3	2.1	51 min

US-131 experienced the most total **Incidents** this month; additionally, US-131 had the greatest incident-per-mile rate for the month. The longest average incident duration during the current month occurred along **I-196**. Abandoned vehicles are excluded from this table.

Total Incidents



The majority of the high-impact **Incidents** this month, **69 percent**, occurred along **US-131**. For most high-impact incidents, CROs are required to provide e-mail notification to a pre-defined distribution list of individuals and organizations. The notification includes the location of the incident, the degree of closure, the reason for the closure, the source that verified the incident and any other pertinent information related to traffic operations.

There were a total of **76 Incidents** this month, **63 percent** of which were high-impact incidents. A high-impact incident is one that results in a total freeway closure, a ramp closure or a lane closure.

High-Impact Incidents

	July 2014	July 2013	Previous 12-Month Avg.
Freeway Closure	5	4	5.2
Lane Closure	40	43	53.6
Ramp Closure	3	6	5.6
Total	48	53	64.40

Top Duration Incidents

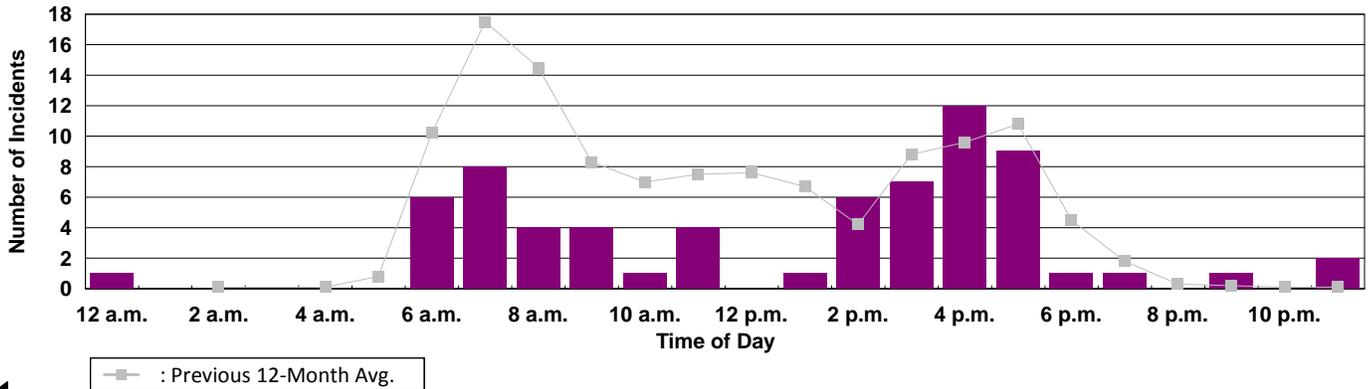
Location	Date	Duration	Details
SB US-131 @ Buchanan St	7/7/2014	4 hrs. 6 min.	Multi-vehicle crash
EB I-96 @ 16th Ave	7/10/2014	3 hr. 50 min.	Multi-vehicle crash
NB & SB US-131 @ Burton St	7/17/2014	3 hr. 12 min.	Ramp closures; single-vehicle crash
M-6 @ M-37/Broadmoor Ave	7/29/2014	2 hr. 24 min.	Tractor-trailer crash
WB I-196 @ 32nd Ave	7/6/2014	2 hr. 11 min.	Multi-vehicle crash

The longest-duration **Incident** this month occurred on **US-131** and lasted **4 hours 6 minutes**, compared to the average incident duration of **78 minutes** for July incidents and **51 minutes** for incidents in the past year.

Incidents in Work Zones

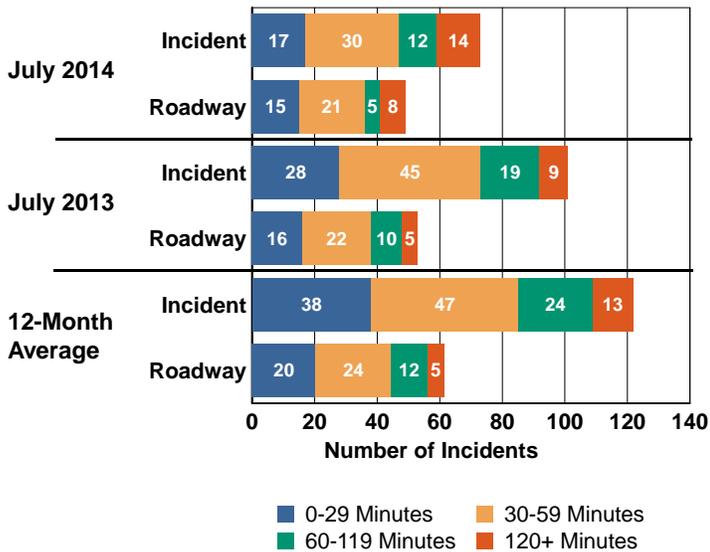
During the month of July, 11 incidents were identified by operators as being within work zones. All 11 crashes occurred within the southbound US-131 bridge repair work zone from Wealthy St to I-196.

Total of Unplanned Incidents per Weekday Hour



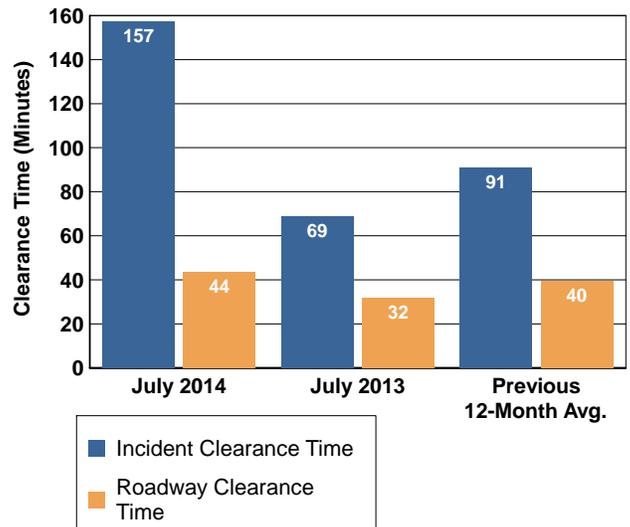
The largest hourly number of Incidents this month occurred during the hour starting at **4 p.m.**; historically the largest hourly number of incidents occur during the hour starting at 7 a.m.

Incident Clearance Details



First responders and MDOT share a goal of clearing **Incidents** from the roadway and reducing incident clearance times to limit the risk to the incident site and responders, and safely restore normal traffic flow. Effective response and clearance improves safety for motorists as well as first responders.

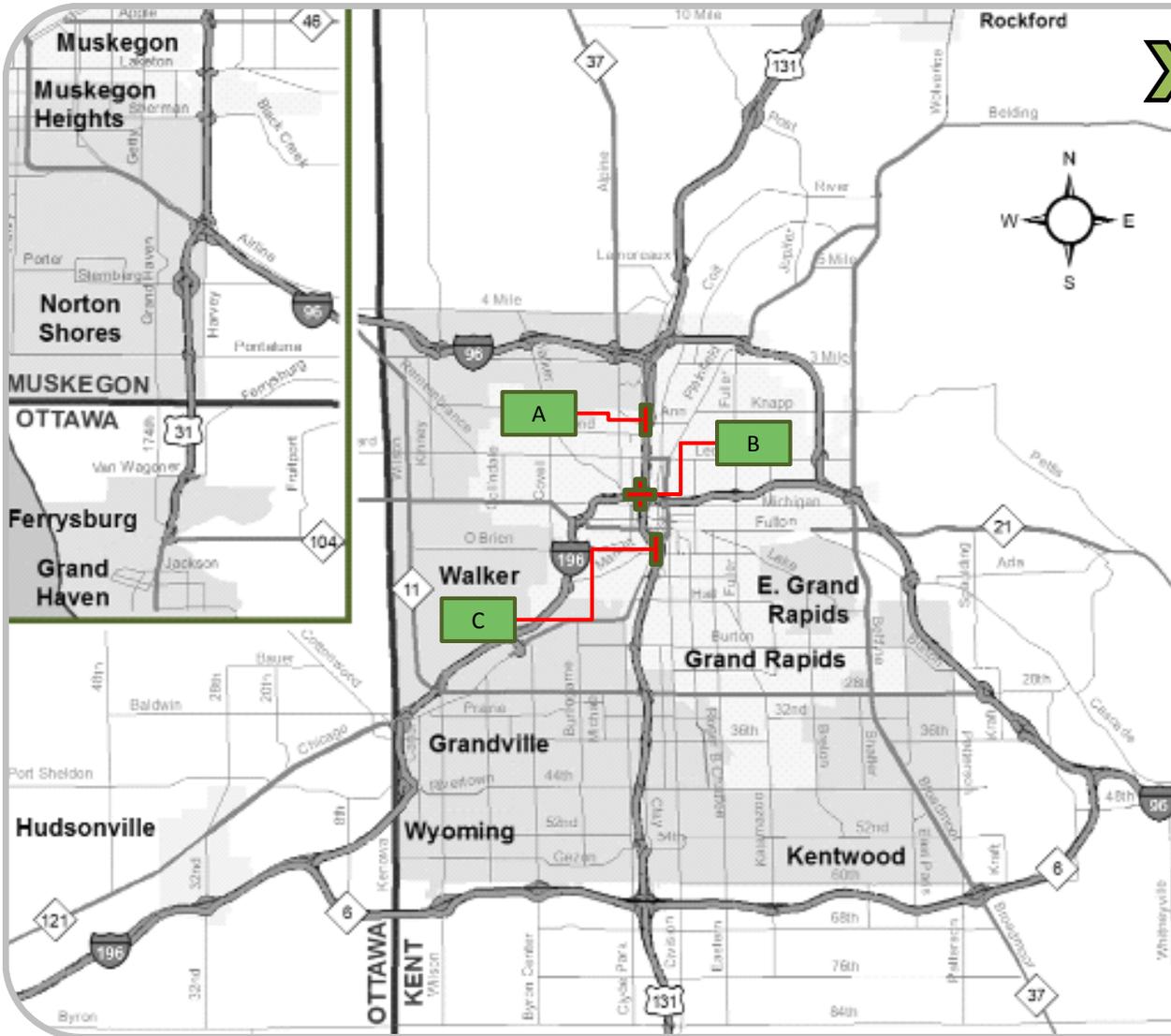
Incident/Roadway Average Clearance Times



"Incident clearance time" is defined as the time between the awareness of an **Incident** and the time when all vehicles are removed from the scene. "Roadway clearance time" is defined as the time between the awareness of an incident and confirmation that all lanes are open to traffic. MDOT's goal is to minimize delays caused by incidents as well as the occurrences of secondary incidents.

Secondary Crashes

Out of the **55** total crashes this month, **none** were **Secondary Crashes**.



The top Crash locations for the month are identified on the map. Each month the locations may change. Details for each location depicted on the map can be found in the "Hot Spot Activity" table below.

The hot spots depicted on the map are described in this table. The number of hot spot **crash** locations may vary each month depending on incident activity. The minimum threshold used for categorizing a location as a "top" hot spot is **four Crashes**. This threshold is set based on historical data for the WMTOC coverage area.

Crash Hot Spot Activity

Hot Spot	Freeway and Cross Street	Count	% of Total Crashes	Appearances in Previous 12 Months
A	US-131 at Ann St	7	13%	3
B	US-131 at I-196	7	13%	5
C	US-131 at Wealthy St	5	9%	7