

# West Michigan Transportation Operations Center

Serving Motorists on West Michigan Freeways

[www.michigan.gov/its](http://www.michigan.gov/its)

[www.michigan.gov/drive](http://www.michigan.gov/drive)

August 2011



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**West Michigan TOC Control Room**  
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Fax: 616-774-9101

## In the Spotlight



A major ITS expansion project is in its final construction phase in the Grand Rapids metro area.

The expansion project is adding 31 traffic cameras, six message signs and 75 vehicle detectors to MDOT's system. WMTOC operators were able to begin controlling the new traffic cameras and viewing the images on the WMTOC video wall in August. The additional camera coverage includes area freeways as well as several miles of arterial coverage on M-11 (28th Street) and M-37 (Alpine Avenue). The additional cameras and signs will greatly increase the WMTOC's ability to serve motorists on west Michigan freeways.

Four crashes were documented near the I-196/I-196 Business Spur (Chicago Drive) interchange (see map on page 6) by control room operators in August. Since this location had not been on the hot spot map recently, crash reports were investigated to determine if the crashes were in any way similar. Three crashes occurred on eastbound I-196, one in the morning, one in the afternoon and one in the evening. One of the crashes on eastbound I-196 occurred during a light rain. The crash on westbound I-196 occurred on dry pavement at approximately 5 p.m. After reviewing the circumstances of each crash and two official crash reports that were available, there does not seem to be a distinguishable pattern of any kind.

In early August, a new attenuation vehicle (Utility-2) was activated for the City of Grand Rapids Fire Department for use in downtown freeway crash scenes. An inactive City of Grand Rapids vehicle was painted red and outfitted with an attenuator and arrow board by the Kent County Road Commission, in partnership with MDOT. Utility-2 has been used at crash scenes over 50 times, improving first responder and motorist safety. MDOT continues to work with the fire department and other first responders to refine best practices for on-scene vehicle placement.

Compiled by:  
**URS**

## Control Room Hours of Operation

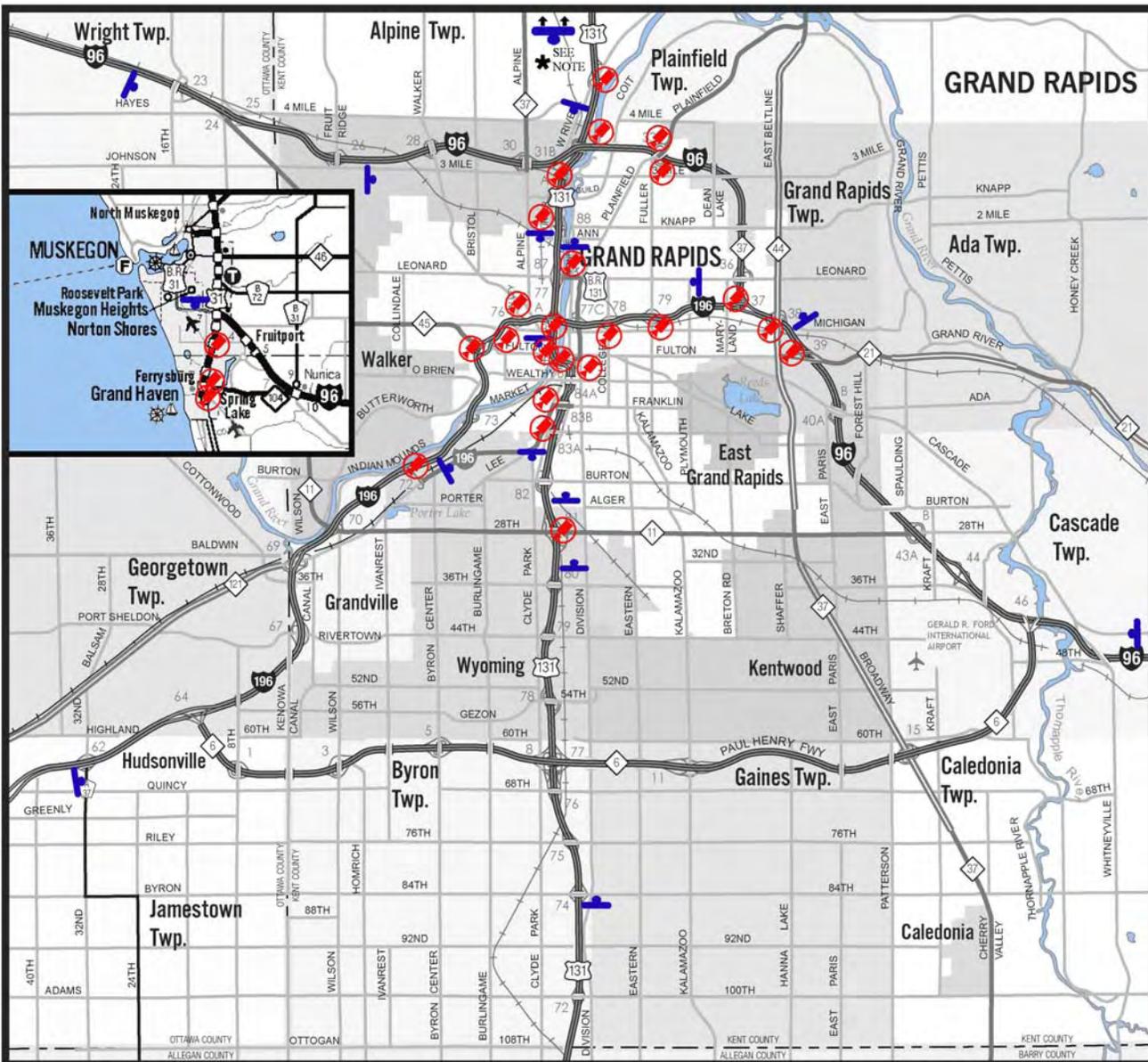
Time Period	Days	Hours
October - April	Monday - Friday	6 a.m. - 8 p.m.
	Saturday - Sunday	Noon - 8 p.m.
May - September	Monday - Thursday	6 a.m. - 8 p.m.
	Friday	6 a.m. - 9 p.m.
	Saturday - Sunday	Noon - 8 p.m.
Special Events	All	As needed
Holidays and Holiday Weekends	New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas	As needed

## Control Room Contact Information

E-mail: MDOT-GR-TRAFFOPS@michigan.gov  
 Phone: 616-451-8329  
 Fax: 616-774-9101

**PLEASE NOTE:**  
 The following report is limited to data collected within the ITS device coverage area during control room operation hours.

## ITS Device Locations and Coverage Area



\* DMS on South US-131 at Rockford Rest Area

**Key:**  Closed-circuit Television Camera  
 Dynamic Message Sign

# Summary

## Data Key

## August 2011

### Communications Activity



Operators log all incoming and outgoing control room communications, engaging various incident responders and stakeholders.

### Total Communication

**Calls: 216**  
**E-mails: 225**

### Quality Assurance/Quality Control



Quality assurance and quality control audit of format and content for incident notification communication and media traffic reporting.

### Incident Notification

**Format Correct 95.7%**  
**Content Correct 95.7%**

### Unplanned Incidents



Operators log information about each unplanned incident including date/time, location, traffic impact, duration, and associated traveler information.

### Total Incidents

**69**

### Construction Activity



Operators maintain a list of ongoing construction projects and contacts for these projects. This activity also includes maintenance operations.

### Incidents Occurring in Work Zones

**7**

### Daily Shift Report



Operators track maintenance issues for all Intelligent Transportation Systems (ITS) equipment, including Closed-circuit Television (CCTV) cameras, Microwave Vehicle Detector Systems (MVDS), Dynamic Message Signs (DMS), and Variable Speed Signs (VSS).

### System Availability

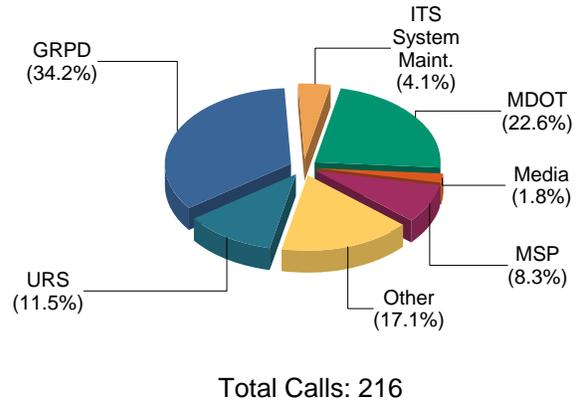
**CCTV: 91%**  
**MVDS: 67%**  
**DMS: 92%**  
**VSS: 100%**

## Calls and E-mails by Type

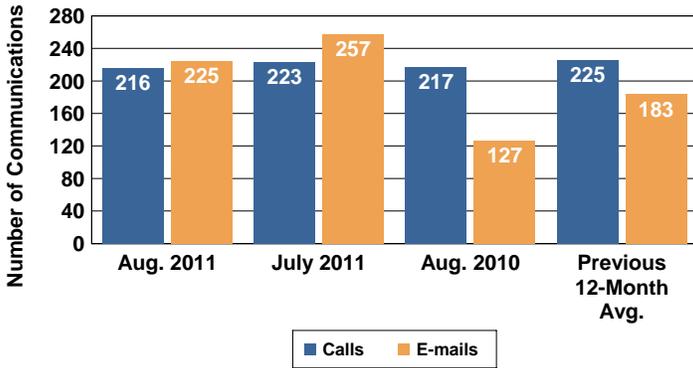


Agency	Calls			E-mails		
	In	Out	Total	In	Out	Total
City of Grand Rapids	0	0	0	27	0	27
Grand Rapids Police Department	8	66	74	0	0	0
ITS System Maintenance	3	6	9	0	0	0
Kent County Road Commission	16	7	23	0	0	0
Kent County Sheriff	0	3	3	0	0	0
Listserv (Traffic Notifications)	0	0	0	69	47	116
MDOT, Construction	8	13	21	32	0	32
MDOT, Maintenance	4	8	12	0	0	0
MDOT, Other	7	5	12	5	1	6
MDOT, Traffic/ITS	3	1	4	13	0	13
Media	4	0	4	1	1	2
Michigan State Police	4	14	18	0	0	0
Other	9	2	11	4	0	4
URS Corporation	10	15	25	6	1	7
Weather	0	0	0	18	0	18
<b>Month Total</b>	<b>76</b>	<b>140</b>	<b>216</b>	<b>175</b>	<b>50</b>	<b>225</b>

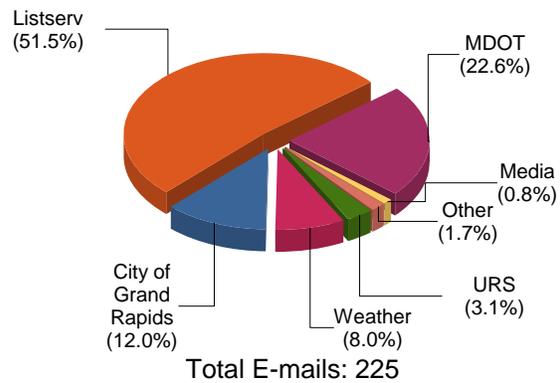
## Calls by Type



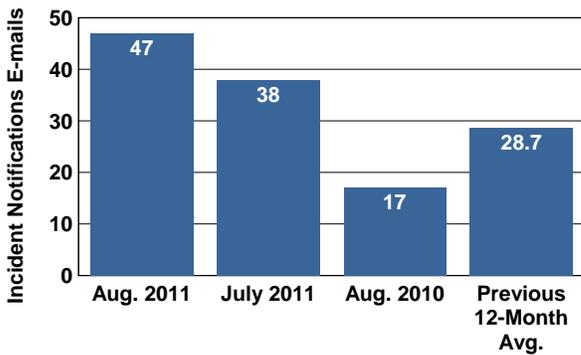
## Communication History



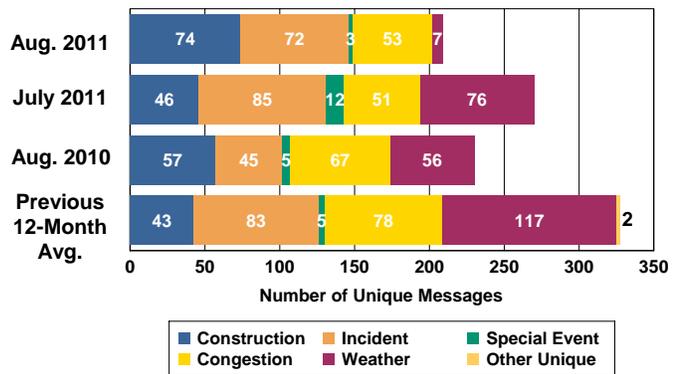
## E-mails by Type



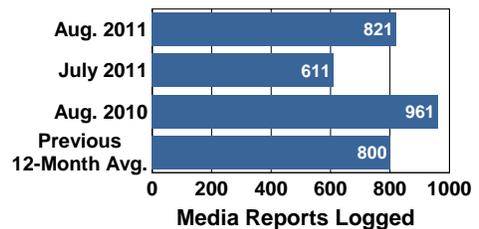
## Incident Notification\* History



## DMS and VSS Messages by Type



## Media Audits



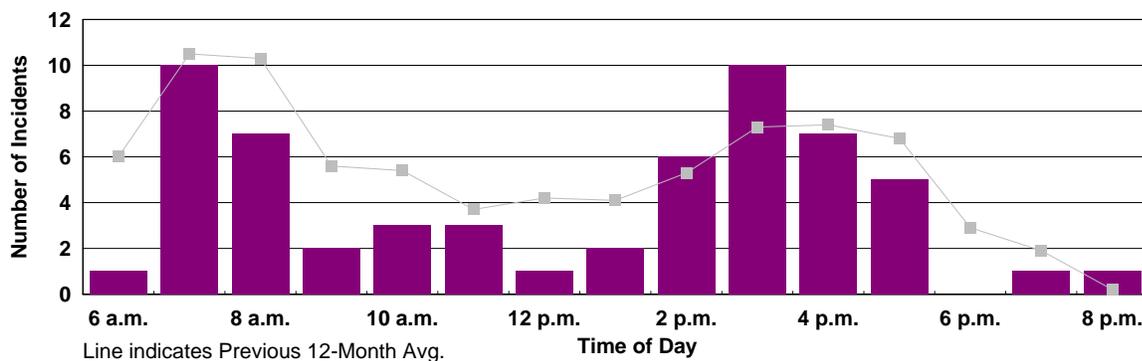
## Incident Notification\* Communication Accuracy



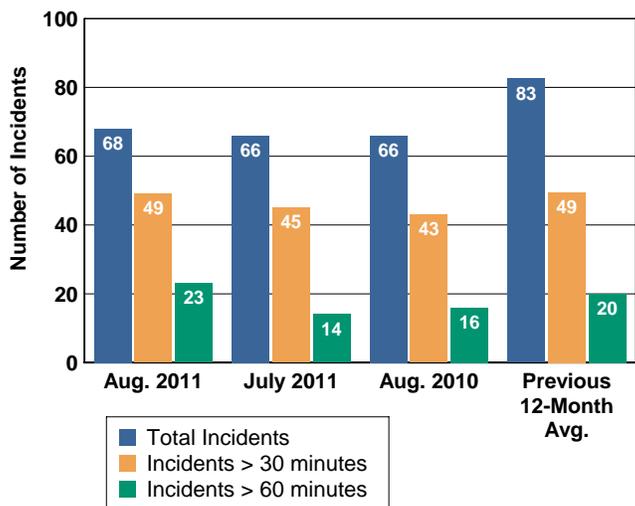
	Aug. 2011	July 2011	Aug. 2010	Previous 12 Months
Format Correct	95.7%	97.4%	100.0%	98.5%
Content Correct	95.7%	97.4%	94.1%	95.9%

\* Incident Notification e-mails are issued for high-impact incidents with an expected duration of 15 minutes or greater. To subscribe to this list, please visit the MDOT listserv by following this link.

## Total of Unplanned Incidents per Weekday Hour

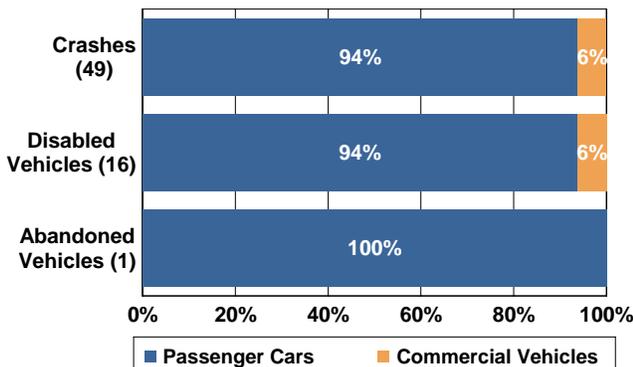


## Incident Duration History\*



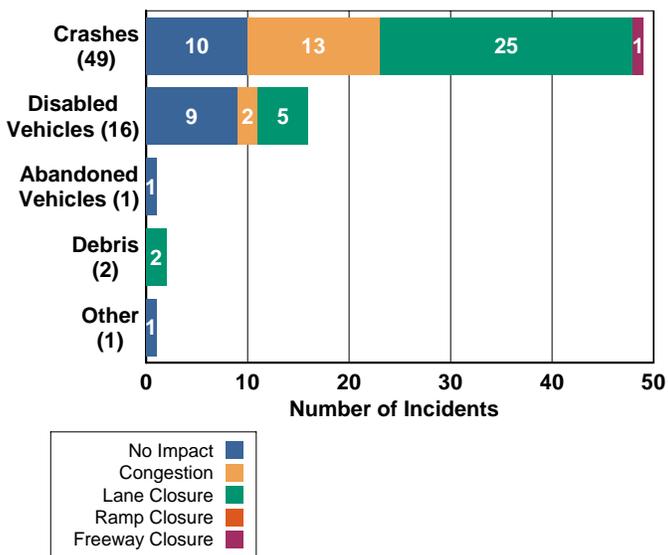
\*Incident Duration History excludes abandoned vehicles.

## Vehicle Composition of Incidents\*



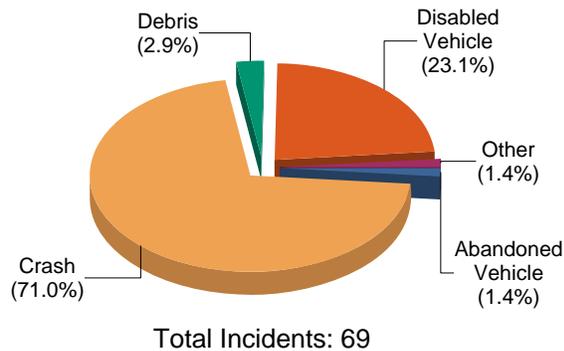
\*Vehicle Composition of Incidents excludes incidents where vehicle types were not identified.

## Traffic Impacts by Type\*



\* Traffic Impacts by Type may include incidents outside of the current WMTOC camera coverage area.

## Incident Managed by Type\*



\* Incidents Managed by Type may include incidents outside of the current WMTOC camera coverage area.

## Most Utilized DMS\*

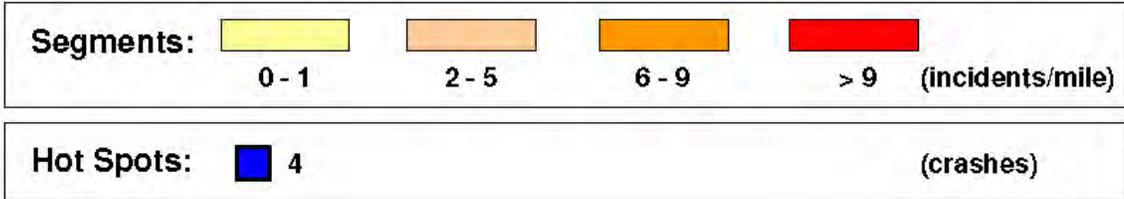
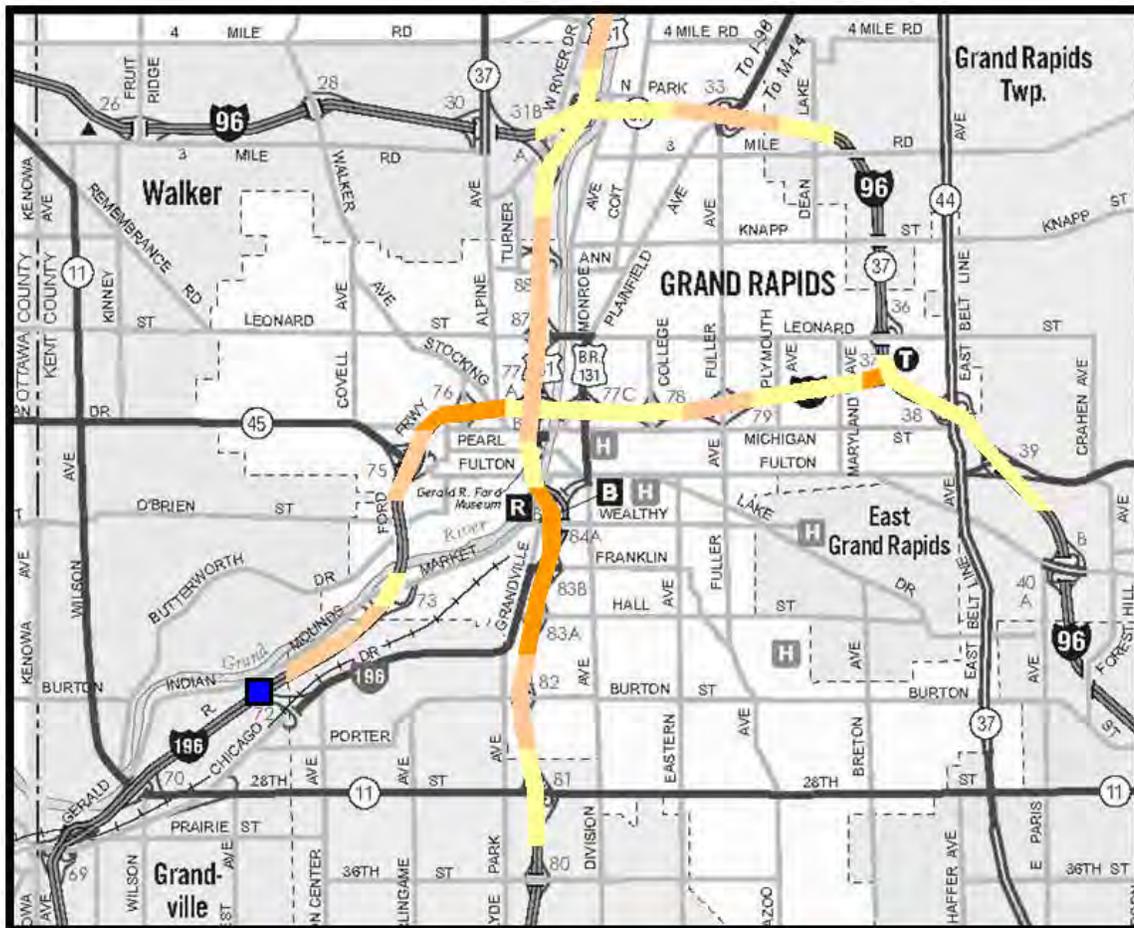


1. US-131 NB @ 28th St. (29)
2. US-131 SB @ Ann St. (23)
3. I-196 EB @ Chicago Dr. (22)

\*Number of unique event messages.



# Incident Density and Hot Spots Map



Incident Management



## High-impact Unplanned Incident Activity\*



Incident Impact	Aug. 2011	July 2011	Aug. 2010	Previous 12-Month Avg.
Lane Closure	32	36	18	33.7
Ramp Closure	-	3	2	3.8
Freeway Closure	1	3	3	1.9

\*High-impact Unplanned Incident Activity includes unplanned incidents resulting in closures.

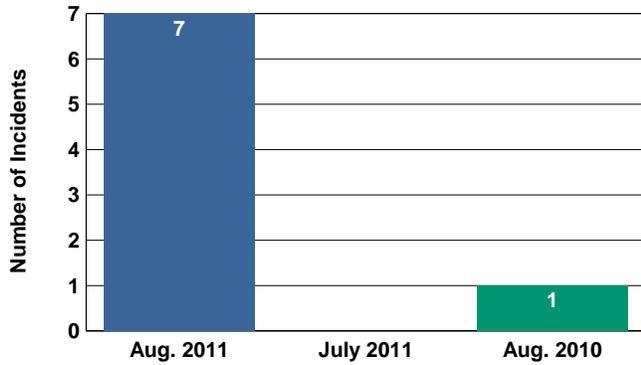
## Unplanned Incidents by Roadway



Freeway	Aug. 2011		July 2011		Aug. 2010		Previous 12-Month Avg.	
	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.
I-96 (4.5 mi.)*	5	1.1	7	1.6	9	2.0	10.8	2.4
I-196 (8.5 mi.)*	19	2.2	20	2.4	10	1.2	20.4	2.4
US-131 (11 mi.)*	33	3.0	42	3.8	64	5.8	57.6	5.2
<b>Month Total</b>	<b>57</b>	<b>2.4</b>	<b>69</b>	<b>2.9</b>	<b>83</b>	<b>3.5</b>	<b>88.8</b>	<b>3.7</b>

\* Reflects roadway mileage within the current WMTOC camera coverage area.

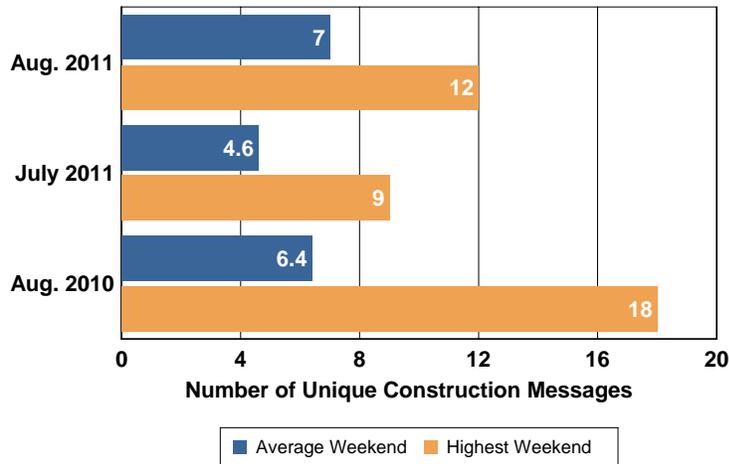
## Incidents Occurring in Work Zones



### Work Zone Incident Details:

During the month of August, seven incidents were identified by operators as being within work zones. One crash occurred on westbound I-196 within the Fuller Avenue bridge replacement work zone. Three crashes occurred on southbound US-131 within the Burton Street and Hall Street Bridges work zone. Two crashes occurred on southbound US-131 within the US-131 at 36th Street bridge replacement work zone. One crash occurred on northbound US-131 within the US-131 at 36th Street bridge replacement work zone.

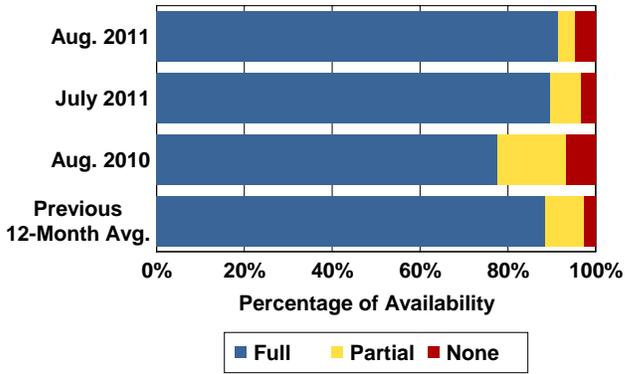
## Weekend\* Construction DMS Message Activity



\* Friday, Saturday and Sunday.



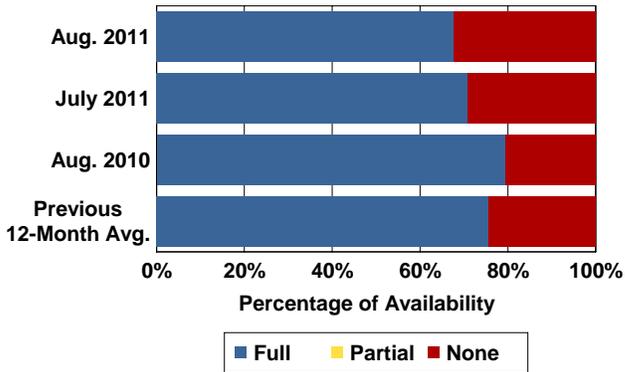
## Overall CCTV Camera Availability



## Individual CCTV Camera Availability

CCTV Cameras Below 95% Availability			
Location	Full	Partial	None
1. I-96 Conn. to US-131	18%	79%	3%
2. I-96 @ E. Beltline Ave.	47%	-	53%
3. US-131 @ Wealthy St.	73%	-	27%
4. US-131 @ I-96	77%	16%	7%
5. I-196 @ Fuller Ave.	91%	-	9%
6. I-96 @ I-196	94%	-	6%
7. I-96 @ M-21 (Fulton St.)	94%	-	6%
8. I-196 @ College Ave.	94%	-	6%

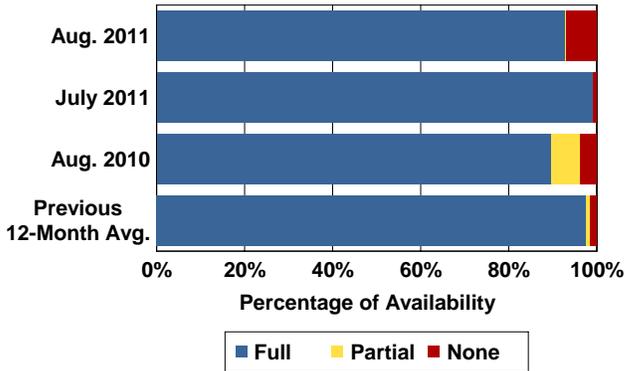
## Overall Detector Availability



## Individual Detector Availability

Vehicle Detectors Below 95% Availability			
Location	Full	Partial	None
1. 113 - I-196 @ US-131	-	-	100%
2. 114N - I-196 @ Monroe	-	-	100%
3. 114S - I-196 @ Ottawa	-	-	100%
4. 119 -	-	-	100%
5. 120 - I-196 E of Fuller	-	-	100%
6. 124 - I-196 @ I-96 Merge	-	-	100%
7. 125 - I-96 @ E. Beltline	-	-	100%
8. 201 - US-131 S of 36th	-	-	100%
9. 204 - US-131 S of 28th	-	-	100%
10. 205 - US-131 N of 28th	-	-	100%
11. 220 - I-196 W to US-131 N	-	-	100%

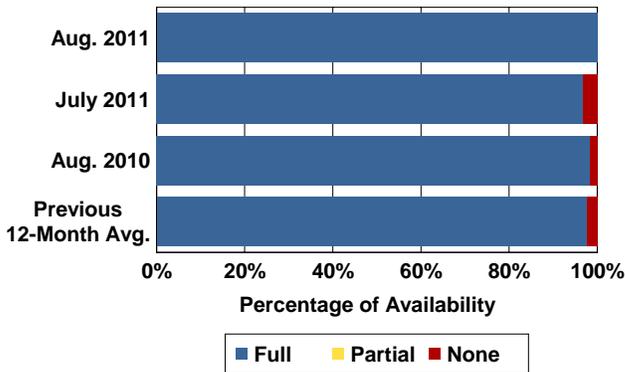
## Overall DMS Availability



## Individual DMS Availability

DMS Below 95% Availability			
Location	Full	Partial	None
1. I-96 WB @ Quiggle Ave.	3%	3%	95%
2. I-96 WB @ M-21 (Fulton St.)	94%	-	6%
3. I-196 WB @ Plymouth Ave.	94%	-	6%

## Overall VSS Availability



## Individual VSS Availability

VSS Below 95% Availability			
Location	Full	Partial	None
None.			



# Grand Rapids Area Construction Map - September 2011



\*Includes construction projects on or near freeways and state trunklines.

**MDOT**  
 -NB US-131, S-Curve modular joint replacement  
 -Nightly and weekend lane closures  
 -DMS used: NB US-131 @ 36th St, NB US-131 @ 28th St, NB US-131 @ Franklin St

**MDOT**  
 -Fuller Ave over I-196 bridge replacement  
 -Closures on Fuller Ave and ramp closures  
 -DMS used: EB I-196 @ Chicago Dr, WB I-96 @ Fulton St, SB US-131 @ Ann St

**MDOT**  
 -I-196, Market Ave to Lane Ave concrete pavement repair  
 -Nightly and weekend lane closures  
 -DMS used: EB I-196 @ Chicago Dr, WB I-96 @ Plymouth Ave, SB US-131 @ Ann St

**MDOT**  
 -Cascade Rd to WB I-96 ramp reconstruction  
 -Ramp closure and WB I-96 traffic shift  
 -DMS used: WB I-96 @ Quiggle Ave

**City of Kentwood**  
 -Forest Hill Ave, Burton St to Cascade Rd reconstruction  
 -Total closure  
 -DMS used: None

**MDOT**  
 -M-37, I-96 to Lake Eastbrook Blvd concrete joint repairs  
 -Lane closures  
 -DMS used: None

**MDOT**  
 -Burton St over US-131 deck replacement  
 -Lane closures on US-131  
 -DMS used: NB US-131 @ 28th St, NB US-131 @ 36th St, SB US-131 @ Pearl St, SB US-131 @ Ann St

**MDOT**  
 -36th St over US-131 bridge replacement and weave/merge lane construction  
 -Lane closures on US-131 and ramp closures  
 -DMS used: NB US-131 @ 84th St, SB US-131 @ Hall St

