

# Michigan Intelligent Transportation Systems Center

Serving Motorists on Southeast Michigan Freeways

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

September 2011



Maria Silver, P.E., PTOE  
18101 W. Nine Mile Road  
Southfield, MI 48075  
[SilverM1@michigan.gov](mailto:SilverM1@michigan.gov)

Sarah Gill  
1050 6th Street  
Detroit, MI 48226  
[SarahG@michigan.gov](mailto:SarahG@michigan.gov)

## In the Spotlight



According to the National Climactic Data Center, rainfall totals in Southeast Michigan were listed as “much above normal,” for September 2011. This classification is in contrast to much of the rest of the State. The area found itself on the periphery of several national weather systems that began as tropical storms and moved so as to blanket the Northeast. The wet weather in Michigan contributes to construction scheduling changes and can mean delays for motorists. The MITSC mitigates these situations using messaging and coordination with various agencies. It presents media outlets with construction announcements and scheduling changes that can impact commuting times and roadway congestion. The MITSC also assists various county resources to identify areas which require storm drain cleanout and pump maintenance by video surveillance of road conditions and areas of accumulating water.

Compiled by:  
**URS**

# Summary

## Data Key

## Sept. 2011

### Call Card



#### Total Assists

Freeway Courtesy Patrol (FCP) drivers fill out information on data cards for each stop (abandoned vehicles), assist (occupied vehicles, debris, accidents, etc.), and tow.

4,446

### Call Tracking



#### Total Calls

Operators manually enter all incoming and outgoing control room calls, including two-way communications, select Michigan State Police (MSP) Computer-Aided Dispatch entries, and high-impact incident notifications.

6,295

### Mi Drive Web Site



#### Total Page Views

Operators inform media and general public about current incident information such as lane closures and road construction. Real-time camera images are also available.

\*312

\* In the month of September we experienced system outages.

### Advanced Traffic Management System



#### Total Incidents

Data is entered into the Advanced Traffic Management System in order to send messages to Dynamic Message Signs (DMS) and to post incidents on the Web site.

615

### Quality Assurance/Quality Control



#### All High-Impact Incidents

Comprehensive and systematic quality assurance/quality control audit of freeway operations including messaging and high-impact notifications (freeway closures, lane closures where only one lane is open, and freeway-to-freeway ramp closures).

100% Accurate

### MaintStar



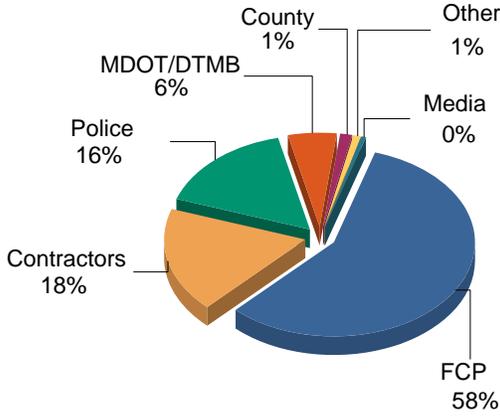
#### System Availability

MaintStar manages maintenance issues for all Intelligent Transportation System (ITS) equipment, including Dynamic Message Signs (DMS) and Closed-Circuit Television (CCTV) cameras, and tracks work orders and overall ITS performance.

DMS: 93%

CCTV: 91%

# Calls by Type



**Total Calls: 6,295**

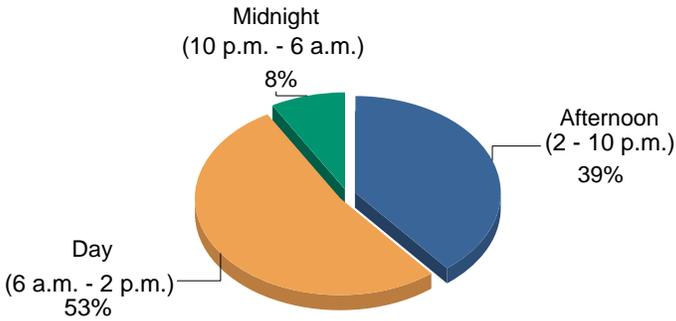
Agency	No. of Calls
FCP	3,612
Contractors	1,135
City	4
County	82
Federal	0
Fire	1
Police	1,005
Border	4
<b>MDOT/DTMB</b>	<b>363</b>
Media	29
Special Events	4
Transit	1
State	0
Parking	0
Airport	0
Animals	0
OTHER	55
<b>Total</b>	<b>6,295</b>

MDOT/DTMB	Total
Taylor TSC	150
Oakland TSC	58
MITS Center	46
Auburn Hills Garage	38
Macomb TSC	22
Detroit TSC	21
Answering Service	7
Metro Region Office	7
Detroit Maintenance Garage	5
DTMB	5
Port Huron TSC	3
Jackson TSC	1
<b>Total</b>	<b>363</b>

# Calls by Weekday Shift

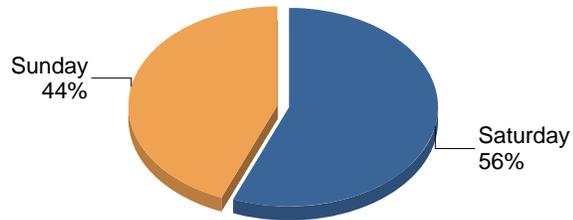


Monday - Friday



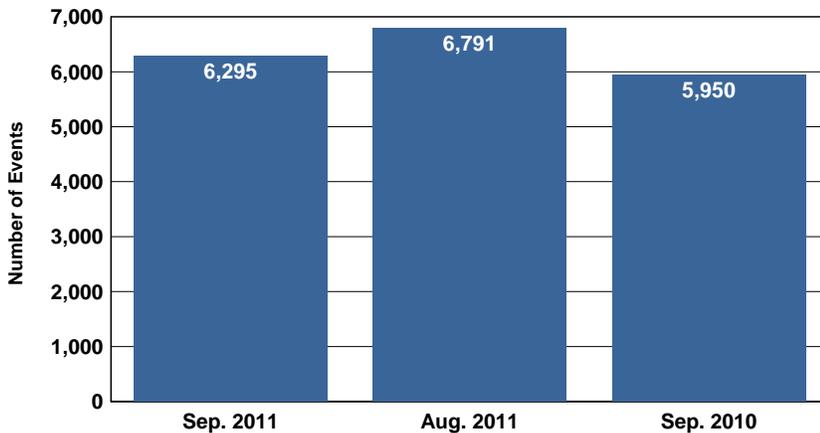
**Average Number of Calls per Weekday: 240**

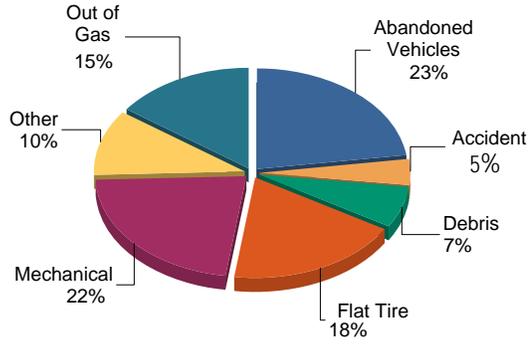
# Calls by Weekend Day



**Average Number of Calls per Weekend: 262**

# Monthly Event History





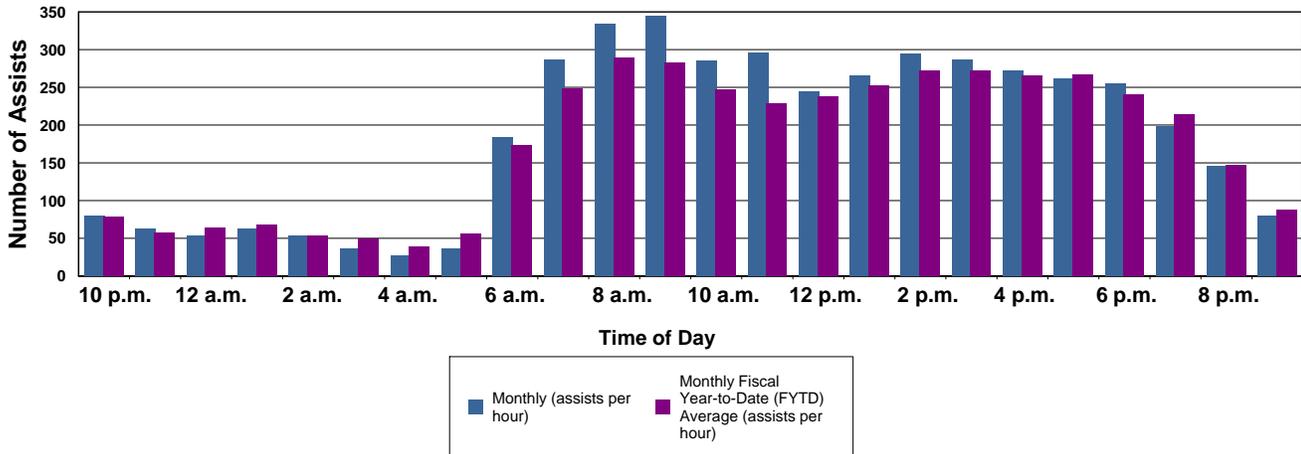
The Freeway Courtesy Patrol currently has 24 vehicles patrolling 12 Metro Detroit freeways

**September Total: 4,446**

**3,380 Assists**

**1,066 Abandoned Vehicle Stops**

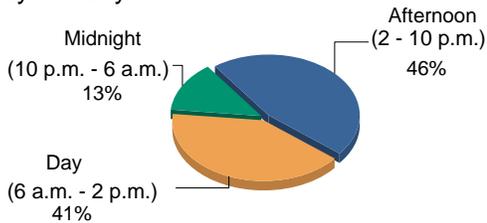
FCP Assists by Time of Day



FCP Dispatches by Weekday Shift

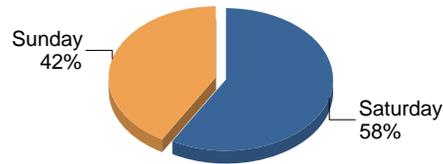


Monday - Friday



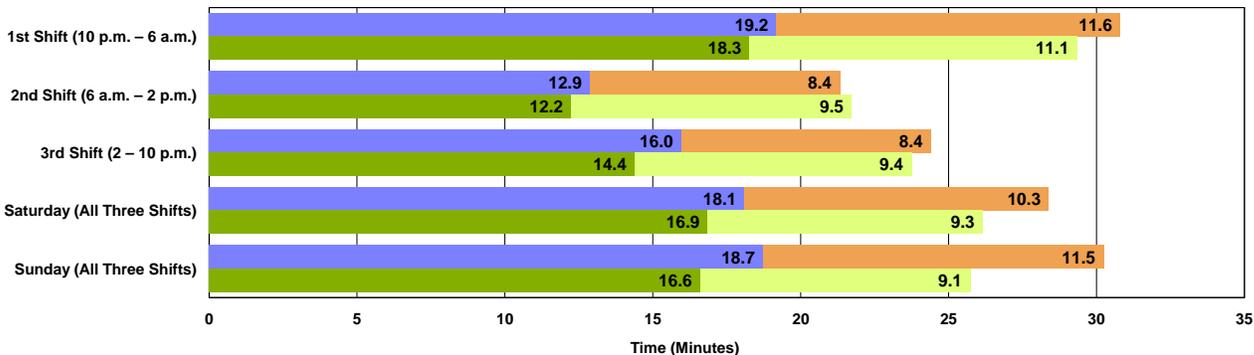
**Average Number of Dispatches per Weekday: 35**

FCP Dispatches by Weekend Day



**Average Number of Dispatches per Weekend: 48**

FCP Average Service Times



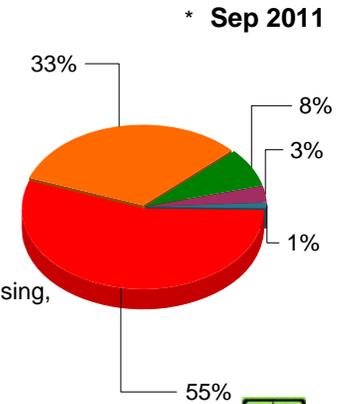
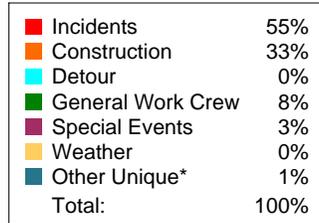
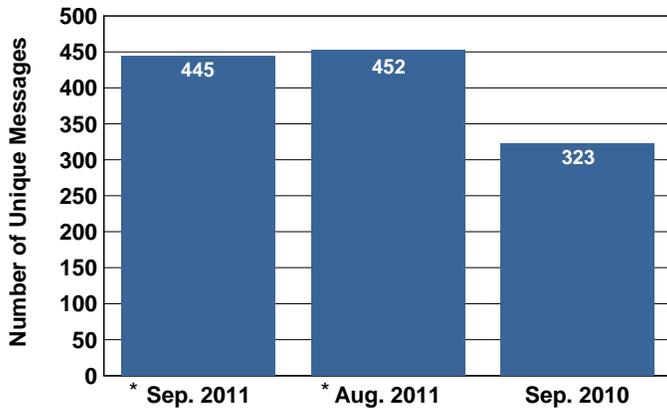


*"Thank goodness for this program. I got a flat tire on the freeway and could not do anything but sit and wait. Then this gentleman from your team saw me and helped me. He was courteous, pleasant, and professional."*



Freeway	Segment	TOTAL ASSISTS		ASSIST DENSITY		AVERAGE RESPONSE TIME (min)		AVERAGE CLEAR TIME (min)		
		(miles)	Sep. 2011	FYTD Avg.	Sep. 2011	FYTD Avg.	Sep. 2011	FYTD Avg.	Sep. 2011	FYTD Avg.
I-75	Oakland County Line to I-696	37.0	428	396.1	11.6	10.7	19.6	19.8	8.5	9.3
	I-696 to I-94	8.0	259	241.4	32.4	30.2	13.0	11.7	8.8	10.9
	I-94 to I-96	5.6	86	78.0	15.4	13.9	14.6	11.6	11.1	10.9
	I-96 to I-275	37.0	413	319.8	11.2	8.6	14.0	14.9	8.5	9.3
		87.6	1,186	1,035.3	13.5	141.8	15.6	15.2	8.7	9.8
I-94	Washtenaw County Line to M-39	20.7	374	325.3	18.1	15.7	18.4	16.1	7.7	9.0
	M-39 to I-75	9.0	295	285.1	32.8	31.7	15.0	12.4	9.3	9.7
	I-75 to I-696	10.0	288	277.7	28.8	27.8	15.4	14.4	10.5	10.1
	I-696 to St. Clair County Line	21.0	167	156.0	8.0	7.4	22.5	17.4	7.4	8.1
		60.7	1,124	1,044.0	18.5	206.4	16.7	14.4	8.8	9.4
I-96	Livingston County Line to I-275/I-696	11.0	114	133.4	10.4	12.1	20.3	19.2	8.0	8.5
	I-275/M-14 to M-39	12.0	223	210.8	18.6	17.6	15.3	15.1	8.7	9.0
	M-39 to I-75	11.0	306	301.2	27.8	27.4	13.1	13.0	9.2	9.6
		34.0	643	645.3	18.9	227.8	15.4	15.0	8.8	9.2
I-275	I-96/I-696 to M-14/I-96	8.0	122	112.3	15.3	14.0	18.7	16.9	6.7	8.1
	M-14/I-96 to I-94	12.0	138	140.0	11.5	11.7	17.0	15.7	10.6	8.9
	I-94 to I-75	17.5	106	78.3	6.1	4.5	19.5	18.0	11.8	8.2
		37.5	366	330.6	9.8	105.8	18.0	16.4	9.6	8.5
I-696	I-96/I-275 to M-10	9.3	179	151.3	19.2	16.3	15.7	16.9	10.8	9.0
	M-10 to I-75	9.0	132	134.4	14.7	14.9	14.8	13.9	7.9	9.9
	I-75 to I-94	10.4	198	183.4	19.0	17.6	16.8	14.0	7.9	9.7
		28.7	509	469.2	17.7	196.2	15.9	14.8	8.9	9.5
M-59 (Veterans)		24.0	30	31.4	1.3	1.3		25.7	7.9	8.3
I-375		1.2	7	4.8	5.8	4.0	17.0	13.7	5.4	7.4
M-10 (Lodge)		17.9	377	331.2	21.1	18.5	12.2	12.0	10.3	10.4
M-14		6.4	78	59.7	12.2	9.3	20.9	18.1	8.3	9.1
M-39 (Southfield)		14.2	56	177.1	3.9	12.5	22.8	13.3	8.8	10.7
M-5 (Grand River)		10.3	23	32.6	2.2	3.2	18.8	19.9	3.4	6.8
M-8 (Davison)		2.2	47	32.3	21.4	14.7	9.4	10.0	5.5	10.8
<b>Total</b>		<b>324.7</b>	<b>4,446</b>	<b>4,193.3</b>						

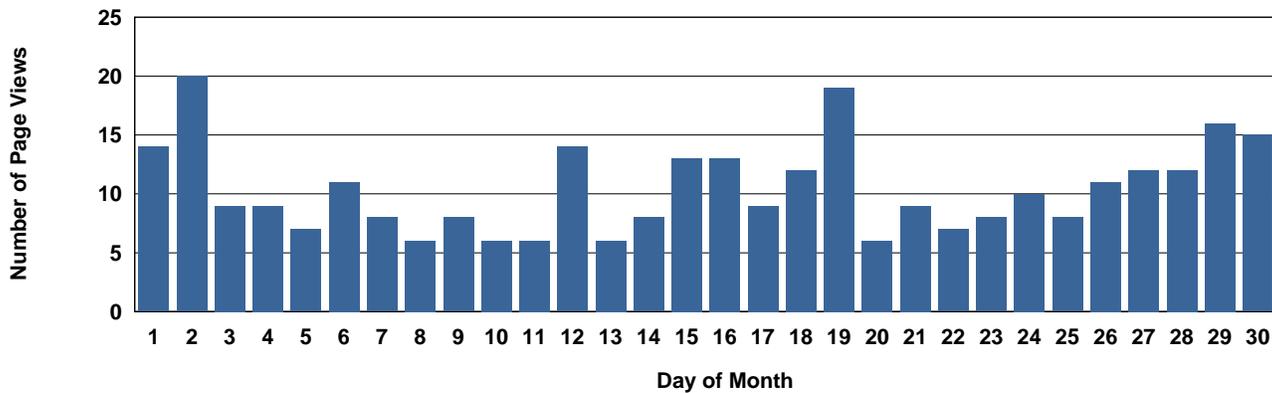
## Unique DMS Messages by Type



\* Airport, Amber Alert, Border Crossing, Location Specific, Safety, and Travel Time Unique Messages

\* Aug. 2011 data averaged from past years due to system outage

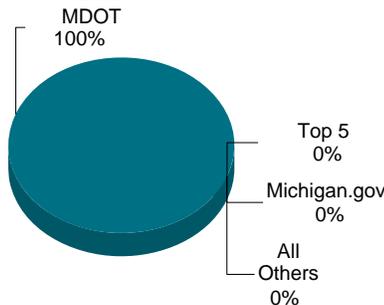
## Mi Drive Web Site September Daily Page Views



## Referring Site Requests to Mi Drive Web Site in September



In **September**, the Mi Drive Web site experienced the most activity on **Fridays**.



### Top 5 Non-Michigan.gov Sites



\* In the month of September we had a few system outages.

On an average day in **September**, the Mi Drive Web site received the most activity between **9 and 10 a.m.**

## Incident Communication Accuracy



Weekend DMS Snapshot Review	Sep. 2011	Aug. 2011	Sep. 2010
All Incident Messages	100%	100%	100%
High-Impact DMS Messages	Sep. 2011	Aug. 2011	Sep. 2010
All High-Impact Messages	100%	100%	100%
Freeway Closure Messages	100%	100%	100%
Lane Closure Messages	100%	100%	100%
Ramp Closure Messages	100%	100%	100%
Other Communication	Sep. 2011	Aug. 2011	Sep. 2010
Advisory Text Messages	98%	91%	94%
Web Site Incident Postings	100%	100%	95%

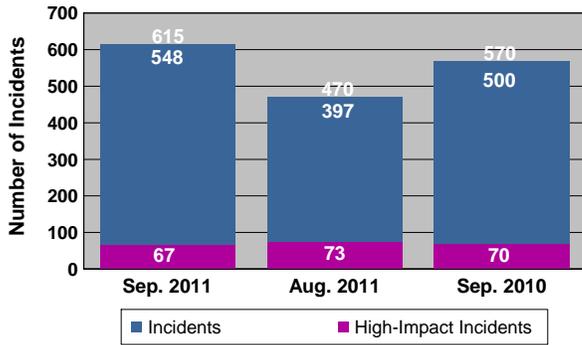
## Most Utilized DMS



1. I-696 EB at Couzens
2. I-75 SB at Woodward Hgts.
3. I-75 NB at Clay
4. I-94 WB at 10 Mile
5. I-96 EB at Beech Daly



## Total Number of Incidents



## High-Impact Incident Activity



	Sep. 2011	Aug. 2011	Sep. 2010
Freeway Closures All Lanes Closed	12	14	17
Lane Closures Only One Lane Open	50	47	47
Ramp Closures	5	12	6
Freeway-to-Freeway			
<b>Total</b>	<b>67</b>	<b>73</b>	<b>70</b>

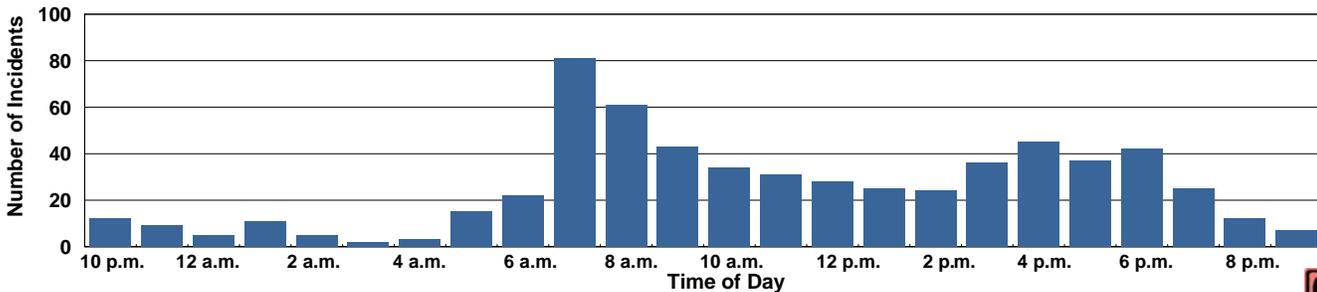
High-impact incidents account for 11% of the total incidents in September.



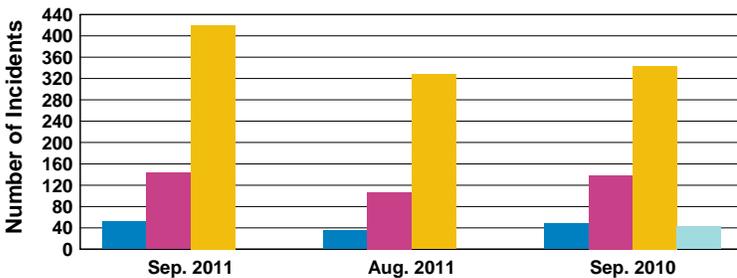
## Total Incidents by Roadway

Freeway	Sep. 2011	Aug. 2011	Sep. 2010
I-75 (CHRYSLER/FISHER)	197	118	155
I-94 (FORD)	148	110	122
I-696 (REUTHER)	96	82	89
I-96 (JEFFRIES)	87	72	64
M-10 (LODGE)	31	27	42
M-39 (SOUTHFIELD)	3	4	54
I-275	49	48	40
I-375	2	2	4
M-14	0	4	0
M-59	2	3	0
<b>Total</b>	<b>615</b>	<b>470</b>	<b>570</b>

## Total Incidents per Hour

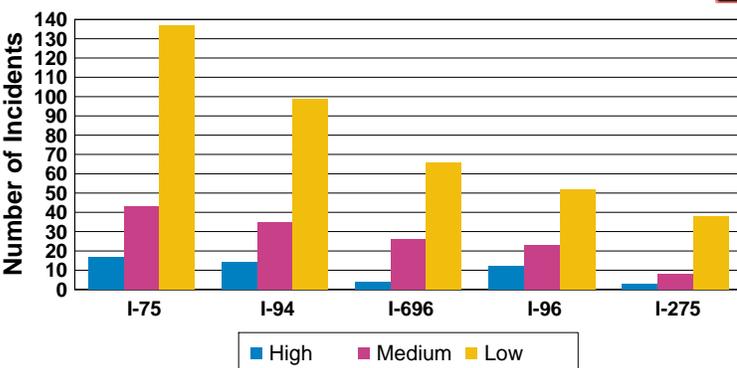


## Total Incident Severity/Duration by Month



- Single-lane closures equal to 90+ minutes, partial closures (more than one lane, but not all) equal to 45+ minutes, or total closures (all lanes) 20+ minutes
- Shoulder closures equal to 90+ minutes, single-lane closures between 20 and 89 minutes, partial closures (more than one lane but not all) between 20 and 44 minutes, and total closures (all lanes) less than 20 minutes
- Shoulder closures less than 90 minutes, single-lane closures or partial closures (more than one lane, but not all) less than 20 minutes
- The duration and/or severity is unknown

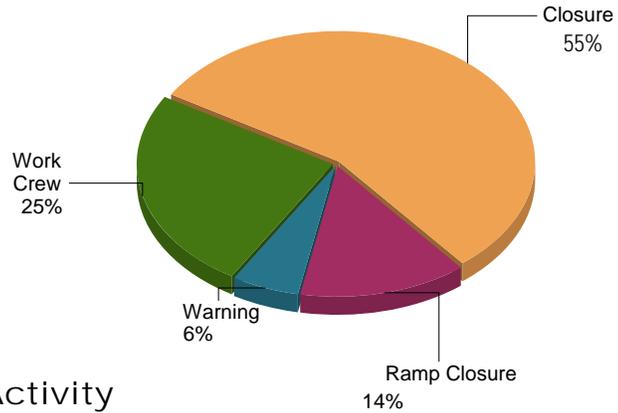
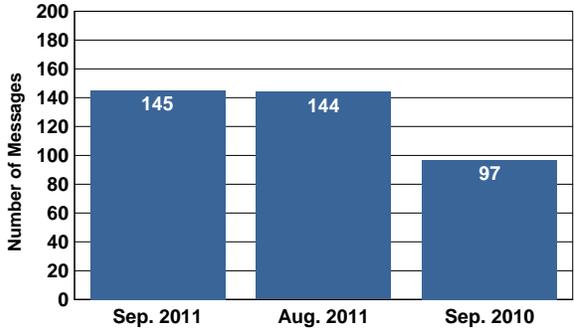
## Severity/Duration by Top 5 Freeways



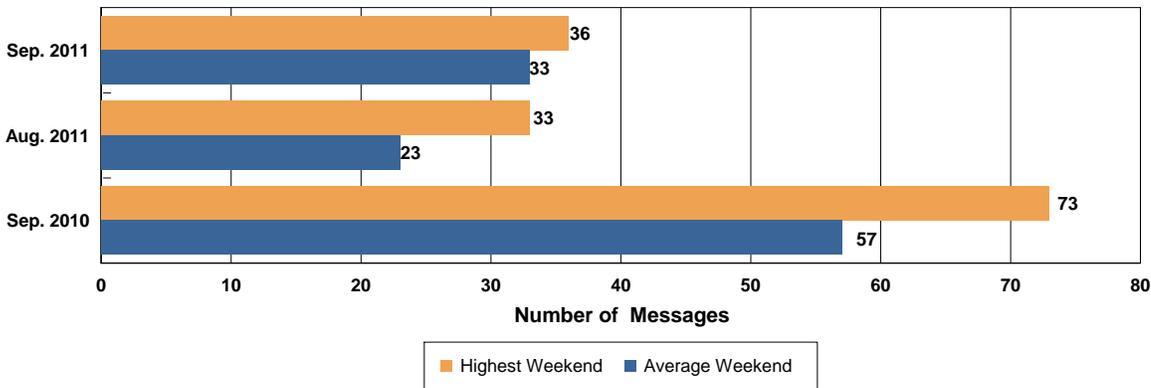
## Unique Construction Messages



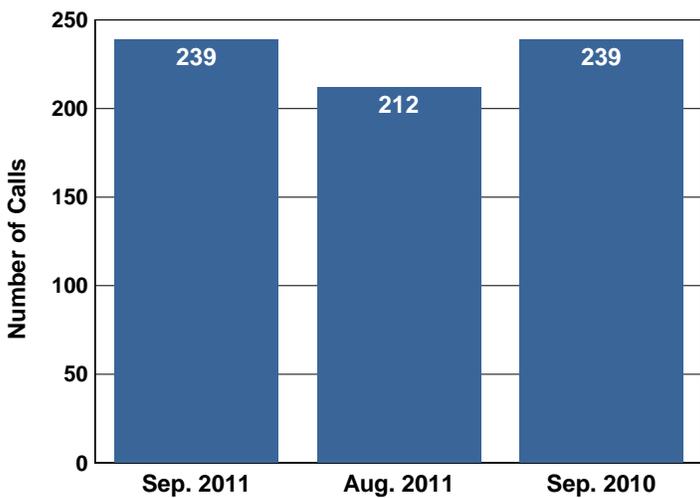
## Highest Weekend Unique Construction Messages



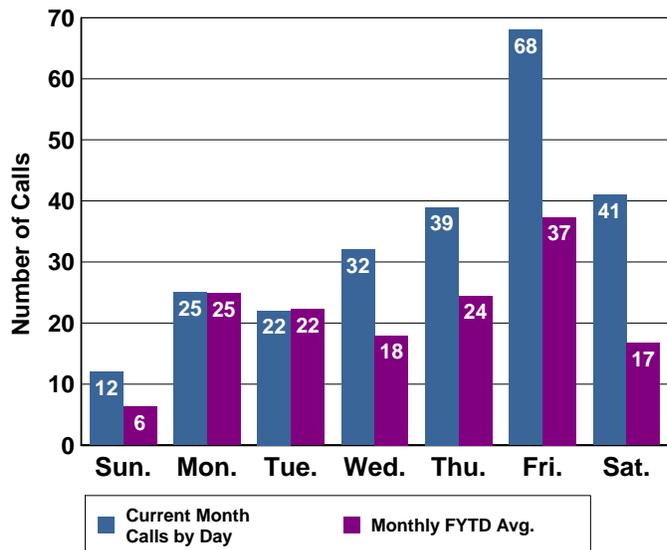
## Weekend Construction DMS Message Activity



## Total Construction Calls per Month



## Construction Calls by Day



Construction Activity



## DMS Availability

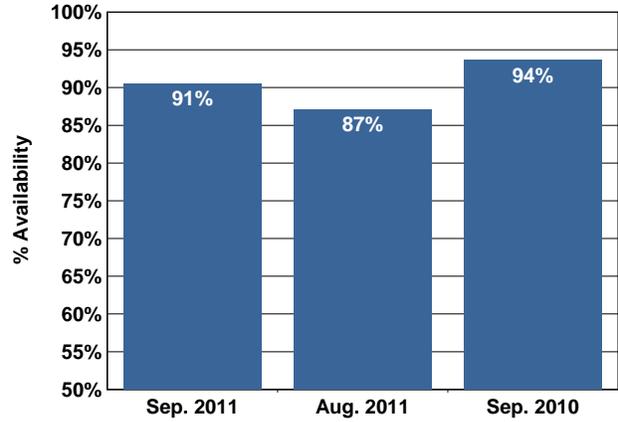
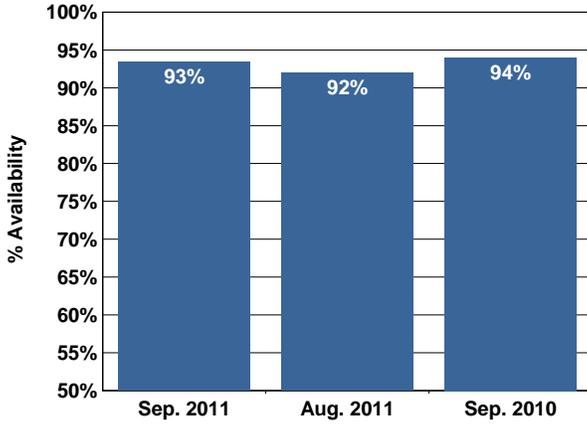


## CCTV Camera Availability



	Sep. 2011	Aug. 2011	Sep. 2010
<b>Available</b>	<b>64</b>	<b>74</b>	<b>65</b>
<b>Not Available</b>	<b>5</b>	<b>7</b>	<b>4</b>
<b>Total</b>	<b>69</b>	<b>81</b>	<b>69</b>

	Sep. 2011	Aug. 2011	Sep. 2010
<b>Available</b>	<b>154</b>	<b>185</b>	<b>173</b>
<b>Not Available</b>	<b>16</b>	<b>27</b>	<b>12</b>
<b>Total</b>	<b>170</b>	<b>212</b>	<b>185</b>



## Equipment Upgrades



Equipment Type	Maintenance Activity
<b>CCTV</b>	
----	-
TOTAL	0
<b>DMS</b>	
----	-
TOTAL	0
<b>Hub-Node Tower/Other</b>	
----	-
TOTAL	0

## Work Order Processing

