

2006 ANNUAL REPORT

OPERATION OF MICHIGAN INTELLIGENT TRANSPORTATION SYSTEMS CENTER



Prepared by:

URS

URS Corporation

Prepared for:

 **MDOT**
Michigan Department of Transportation

PURPOSE

This document presents an annual report of Michigan Intelligent Transportation Systems Center (MITS Center) operations during Fiscal Year 2006. Michigan DOT (MDOT) operates the MITS Center, a 24/7 transportation management center co-located with Michigan State Police Second District Regional Dispatch. The MITS Center collects and disseminates travel information across approximately 200 miles of freeway in the Detroit Metropolitan Area. Data collection resources include 166 closed-circuit television cameras, 2,600 mainline loop sensors, the Freeway Courtesy Patrol (FCP), the Michigan State Police, media partners, and other local and county agencies. MITS Center operators manage incidents, dispatch FCP, and disseminate real-time travel information via 64 permanent changeable messages signs (CMS) and other means.

This report summarizes key MITS Center performance measures and operations highlights for the fiscal year. MDOT Freeway Operations, supported by URS Corporation as consultant for MITS Center control room operations, increased MITS Center operating efficiency, improving the performance and safety of the metro area freeway system, and strengthened interagency cooperation and collaboration in order to enhance regional transportation system operations. The region has gained significant experience in the preparation and response necessary due to the several major planned special events that were in Detroit this previous year, MDOT Freeway Operations has led numerous successful initiatives to better position the MITS Center and other stakeholder resources in proactively supporting the following four operations focus areas: (1) traffic incident management, (2) planned special events traffic management, (3) roadway construction, and (4) Freeway Courtesy Patrol operations. After an overview section on control room operations and general MDOT Freeway Operations activities, the organization of this report follows the identified focus areas, and it is configured to allow for fast access to and easy extraction of important information summarizing program statistics, activities, and products.

OPERATIONS OVERVIEW

This section summarizes highlights of operations performance, activities, and initiatives over the year that affect multiple operations focus areas. Monthly Performance Measure Reports are created to summarize the activity occurring at the MITS Center. The format of the Performance Measure Report and data that it contains is constantly evolving to improve the presentation of operational performance to MDOT and other stakeholders. A sample Monthly Performance Measure Report is shown in **Appendix A**.

Control Room Communications

MITS Center control room operators maintain a call log of all incoming and outgoing telephone calls to the control room. **Table 1** on the next page, lists the total number of control room calls per month for the current and recent years. The number of control room calls is an indicator of control room activity, including incident frequency, dispatch volume, and other factors. Operators handled 77,561 calls in FY 2006. **Table 2** on the next page, lists the total number of incidents sent to the website for the current and recent years. The data presented in Table 2 indicates a decline in data sent to the website, however crash data for the Southeast Michigan

region shows that there has been a steady decline in the total number of crashes occurring annually. Data provided by the Southeast Michigan Council of Governments (SEMCOG) shows that the number of crashes in Southeast Michigan have steadily declined from a number of total crashes of 180,739 in 2001 to 157,284 in 2005, which is a reduction of 13% or 23,455 crashes.

Table 1
Summary of MITS Center Communications and Comparison to Recent Years

MONTH	CONTROL ROOM CALLS				
	FY2004	FY 2005	% CHANGE 04-05	FY 2006	% CHANGE 05-06
October	5,088	4,677	-8%	4,502	-4%
November	3,986	4,894	+23%	5,851	+20%
December	5,519	4,679	-15%	6,435	+38%
January	6,002	3,779	-37%	6,542	+73%
February	3,866	3,473	-10%	6,479	+87%
March	6,017	3,513	-42%	7,067	+101%
April	4,364	5,099	+17%	6,850	+34%
May	5,568	4,734	-15%	7,267	+54%
June	5,522	5,720	+4%	7,405	+30%
July	5,057	6,795	+34%	6,068	-11%
August	5,485	5,896	+7%	6,907	+17%
September	5,281	5,460	+3%	6,188	+13%
Yearly Total	61,775	58,719	-5%	77,561	+37.6%

n/a = data not available

Table 2
Summary of Incidents Sent to the Website and Comparison to Recent Years

MONTH	INCIDENTS				
	FY2004 TOTAL	FY2005 TOTAL	% CHANGE 04-05	FY2006 TOTAL	% CHANGE 05-06
October	494	625	+27%	504	-19%
November	518	610	+18%	670	+10%
December	629	874	+39%	790	-10%
January	708	838	+18%	649	-23%
February	473	705	+49%	479	-32%
March	612	705	+15%	495	-30%
April	537	574	+7%	438	-24%
May	543	530	-2%	460	-13%
June	558	638	+14%	380	-40%
July	612	524	-14%	394	-25%
August	629	491	-22%	420	-14%
September	601	468	-22%	556	+19%
Yearly Total	6,914	7,582	+10%	6,235	-17%

n/a = data not available

Table 3 presents a distribution of control center calls by agency. A staple of day-to-day control room operations involves operators communicating in real-time with FCP operators and State Police as traffic incidents unfold. Operators routinely detect traffic incidents, coordinate response by FCP and State Police, and monitor incident removal operations for the purpose of updating CMS messages and FCP status. The State Police calls include incidents reported through the MSP Computer Aided Dispatch (CAD). Maintenance calls are with the ITS Maintenance technicians. An example of an agency classified as “other” includes public parking facility operators who may communicate with MITS Center operators on parking occupancy levels and “lot full” status during major planned special events.

Table 3
Distribution of MITS Center Control Room Telephone Calls

MONTH	FWY. COURTESY PATROL		MDOT	MEDIA	STATE POLICE	MAINT.	LOCAL POLICE	OTHER	Const.
	FROM	TO							
Oct. 2005	1585	913	67	605	1074	23	5	122	108
Nov. 2005	2595	1189	154	748	779	61	8	177	140
Dec. 2005	2693	1660	102	763	1008	21	11	89	88
Jan. 2006	2977	1578	115	686	916	21	11	191	47
Feb. 2006	3091	1521	111	596	892	24	12	157	75
Mar. 2006	3332	1611	124	791	879	49	16	145	120
Apr. 2006	3139	1596	117	811	748	40	4	127	268
May 2006	3404	1684	112	811	842	32	16	161	205
Jun. 2006	3465	1663	154	782	899	27	20	175	220
Jul. 2006	2700	1564	115	690	766	17	11	112	93
Aug. 2006	3307	1465	147	732	924	31	15	127	159
Sep. 2006	2668	1630	157	736	737	59	20	135	66
Yearly Total	34,956	18,074	1,475	8,751	10,464	405	149	1,718	1,589

MDOT Freeway Operations responded to five out of eight activated AMBER Alerts in the region by displaying CMS messages bearing vehicle description information communicated and verified by State Police. The other three did not have sufficient vehicle information to display a message.

Incident Management and Traffic Information

Table 4 on the next page, lists the total number of incidents entered per month for the past and recent years. Incidents entered are posted to the real time traffic information website hosted by Metrocommute for MDOT, at www.michigan.gov/metrodetroittraffic.

High impact incidents, including freeway closures, interchange closures, and lane closures reducing capacity to one lane, are disseminated via broadcast email. E-mail notifications, or advisories, are sent out during management of major incidents to media subscribers, transportation operators, MDOT staff and others to inform them of high impact incidents. Table 4 summarizes the number of major freeway, lane, and ramp closures per month for this year and the previous year.

**Table 4
Freeway and Ramp Closures Advisories
Comparison to Previous Year**

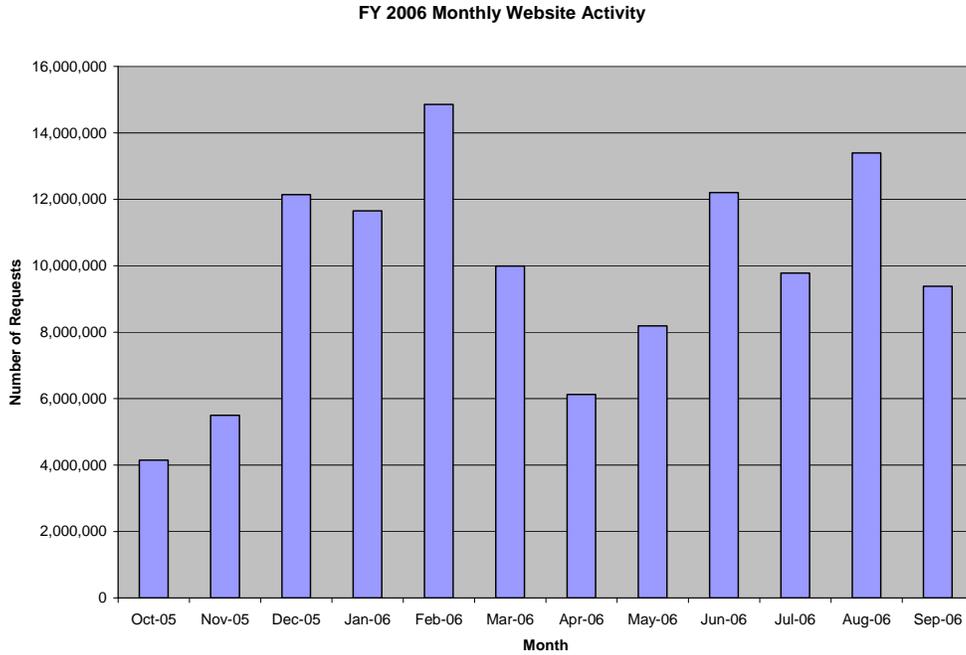
Months	FY05	FY06
	Total	Total
October	20	63
November	26	36
December	55	62
January	62	57
February	59	56
March	58	61
April	70	43
May	51	73
June	71	61
July	43	54
August	50	66
September	46	51
Total	605	683

Each high impact freeway, lane, and ramp closure is checked for accuracy. **Table 5** illustrates the accuracy of the operator’s actions for the closure. The advisory e-mail reviewed for content accuracy. The “wording correct” column identifies if the wording on the CMSs was correct and consistent with the incident details. The quality control process verifies that the message was displayed on the correct signs and if the message expired while the incident was still ongoing. The column labeled “incident correct” indicates if the information sent to the website was consistent with the advisory.

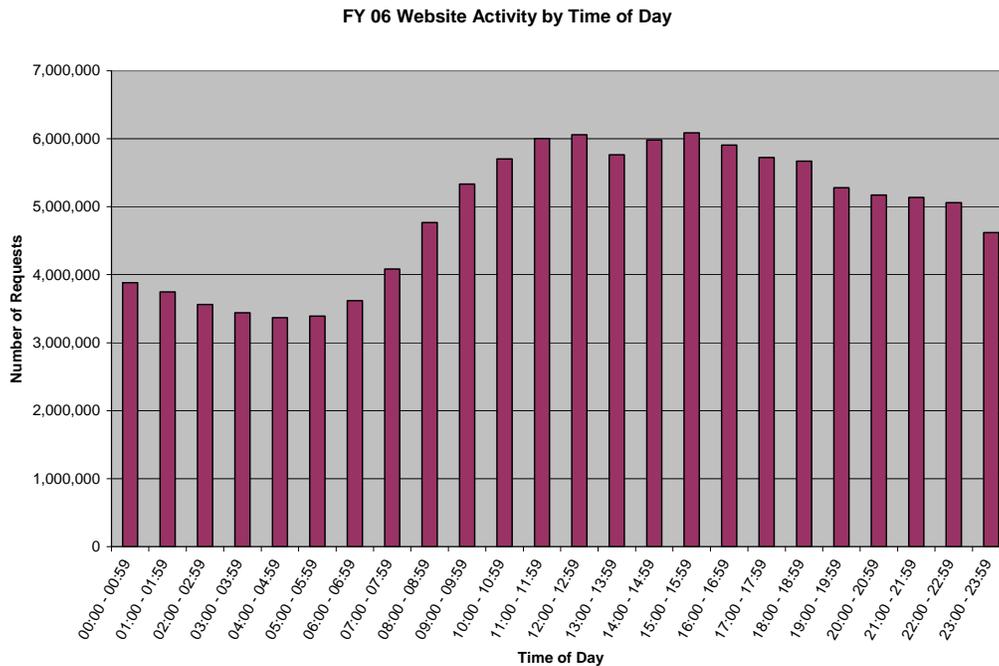
**Table 5
All Closures Accuracy Percentage**

2006 MONTHLY QC CLOSURE SUMMARY						
MONTHLY ACCURACY PERCENTAGE						
MONTH	CLOSURE TOTALS	EMAIL CORRECT	WORDING CORRECT	CORRECT SIGNS	MESSAGE EXPIRE	INCIDENT CORRECT
OCTOBER	63	92%	98%	94%	98%	98%
NOVEMBER	36	92%	100%	92%	97%	97%
DECEMBER	62	98%	100%	94%	100%	97%
JANUARY	57	95%	95%	86%	97%	95%
FEBRUARY	56	91%	96%	93%	100%	100%
MARCH	61	93%	98%	97%	97%	97%
APRIL	43	86%	95%	95%	100%	93%
MAY	73	96%	99%	99%	100%	100%
JUNE	61	98%	98%	97%	100%	100%
JULY	54	91%	96%	98%	100%	98%
AUGUST	66	97%	100%	99%	100%	100%
SEPTEMBER	51	94%	96%	98%	100%	100%
AVERAGES	683	98%	98%	95%	99%	98%

Website usage statistics reporting were implemented during fiscal year 2005. Some key statistics indicating website usage are shown in monthly website statistics are shown in **Figure 1** and website activity by time of day in **Figure 2**.



**Figure 1
Website Hits**



**Figure 2
FY 06 Website Activity by Time of Day**

CCTV Video Operations

MDOT Freeway Operations, supported by TransCore as contractor for ITS Maintenance, realized several improvements in CCTV video operations over the fiscal year. Improvements include field equipment upgrades, MITS Center upgrades, and communications upgrades, as well as some operations procedures enhancements.

ITS infrastructure upgrades were completed at two (2) freeway camera sites in Detroit, the sites are I-94 at Russell and I-375 at Gratiot. Camera shots from two of these cameras are shown in **Figure 3**. Two (2) additional freeway camera upgrades were also completed in Troy at I-75 and Big Beaver. Camera 102 and Camera 103 came online in July and September 2006, respectively. These new cameras lessen the visibility gap along I-75 in Oakland County as shown in **Figure 4**.



Figure 3
Camera Images

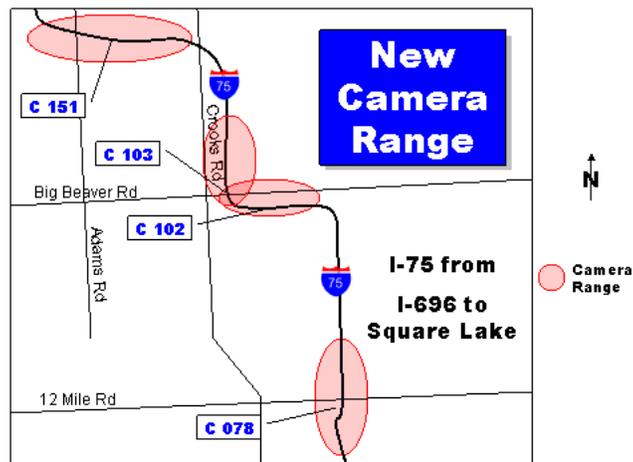
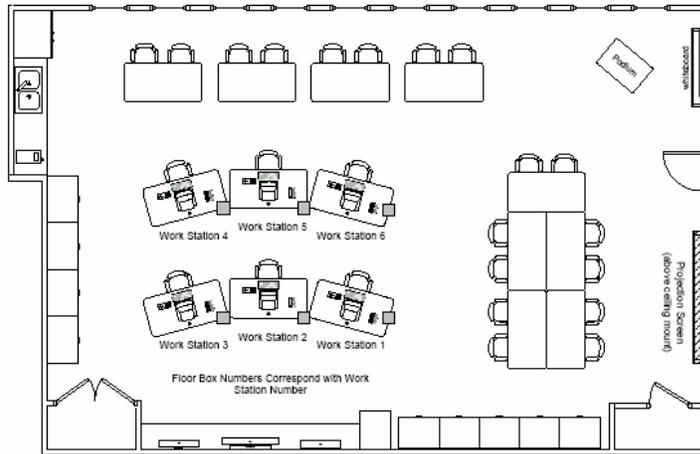


Figure 4
I-75 at Big Beaver

MITS Center equipment upgrades include the addition of a fifth workstation, construction of the auxiliary operations center, which expands the operational capacity of the MITS Center. **Figure 5** shows the layout of the Auxiliary Traffic Operations Center which is used to handle traffic operations for large events and emergency situations.

Figure 5
Auxiliary Traffic Operations Center

AuxTOC Table Layout



Operations enhancements include the final implementation of the web based video access and expansion of web based cameras.

Operator Preparedness

In maintaining the state-of-the-art in transportation management center operations, the MITS Center has implemented various technology applications and operational functions to enhance control room operator monitoring of freeway conditions. The continuously evolving technologies, resources, and functions demand frequent review of operating procedures and special details (e.g., roadway construction support, planned special event operations, etc.) by control room operators and supervisors. Training of control room staff took place during November 2005, December 2005, January 2006, June 2006, and August 2006 to update and train all operators on new camera presets, inclement weather, special events, upcoming construction and new procedures.

Key Activities

Key activities performed by MDOT Freeway Operations during FY 2006 to expand MITS Center functions and improve day-to-day operations that collectively work to achieve better freeway system safety and performance and increased public reliance on disseminated traveler information are as follows:

- Public agency outreach with CCTV video sharing tool.
- Enhanced messaging text standards for more readily understood messaging.
- Performance measure based contracts with Freeway Courtesy Patrol contractor.

TRAFFIC INCIDENT MANAGEMENT



MDOT Freeway Operations actively participates in incident management activities both in the control room and with multi-agency committees to enhance incident management and improve communications, cooperation and coordination throughout the region. The Incident Management committee meets regularly to discuss subcommittee activities and discuss incident management topics to facilitate safer and more efficient operations in the field.

Subcommittees under the Incident Management committee include Freeway Operations, Freeway Courtesy Patrol Operations, Arterial Incident Management, and the Incident Management Planning subcommittees. The focus of the Freeway Operations subcommittee has been to improve incident management practices through incident and outreach efforts.

Several strategies were developed to improve the traffic incident management function of MITSC. For high impact construction projects, such as the I-96 project, incident response strategies were developed to established pre-determined ways to handle incidents when they occur. This strategy was successful at reducing motorist delay by minimizing the time from incident detection to clearing of the incident from the roadway by utilizing the response strategy.

Several routes around the metro Detroit freeway system were considered for additional signing as emergency routes for the freeway system. These emergency routes would be utilized when there is a need to close a segment of the freeway. Motorist delay and costs are reduced by using a preplanned and signed emergency route.

Outreach efforts continue to be a focus area for improved incident management, in order to expand awareness of MDOT Freeway Operations infrastructure and services and to enhance coordination across agencies responding to incidents throughout the region. Outreach efforts in the past year include MITS Center tours, incident specific follow up with local agencies, expanded dispatch to dispatch communications, leveraging relationships developed with planned special events activities. Awareness of MITS Center and benefits of enhanced incident

management has also been raised through Freeway Operations subcommittee meetings targeted to specific local needs.

Video sharing further extends the benefit of the MDOT freeway cameras by enabling access from any internet website. Communications between dispatch centers and MITS Center control room operators is enhanced with use of this system as well. Over FY 2006, approximately 40 users were given access to the video sharing tool, with additional agencies coming on line throughout the coming year. **Figure 6** shows the amount of requests from the top users of the website based camera tool and **Figure 7** on the next page, shows the user interface for the website.

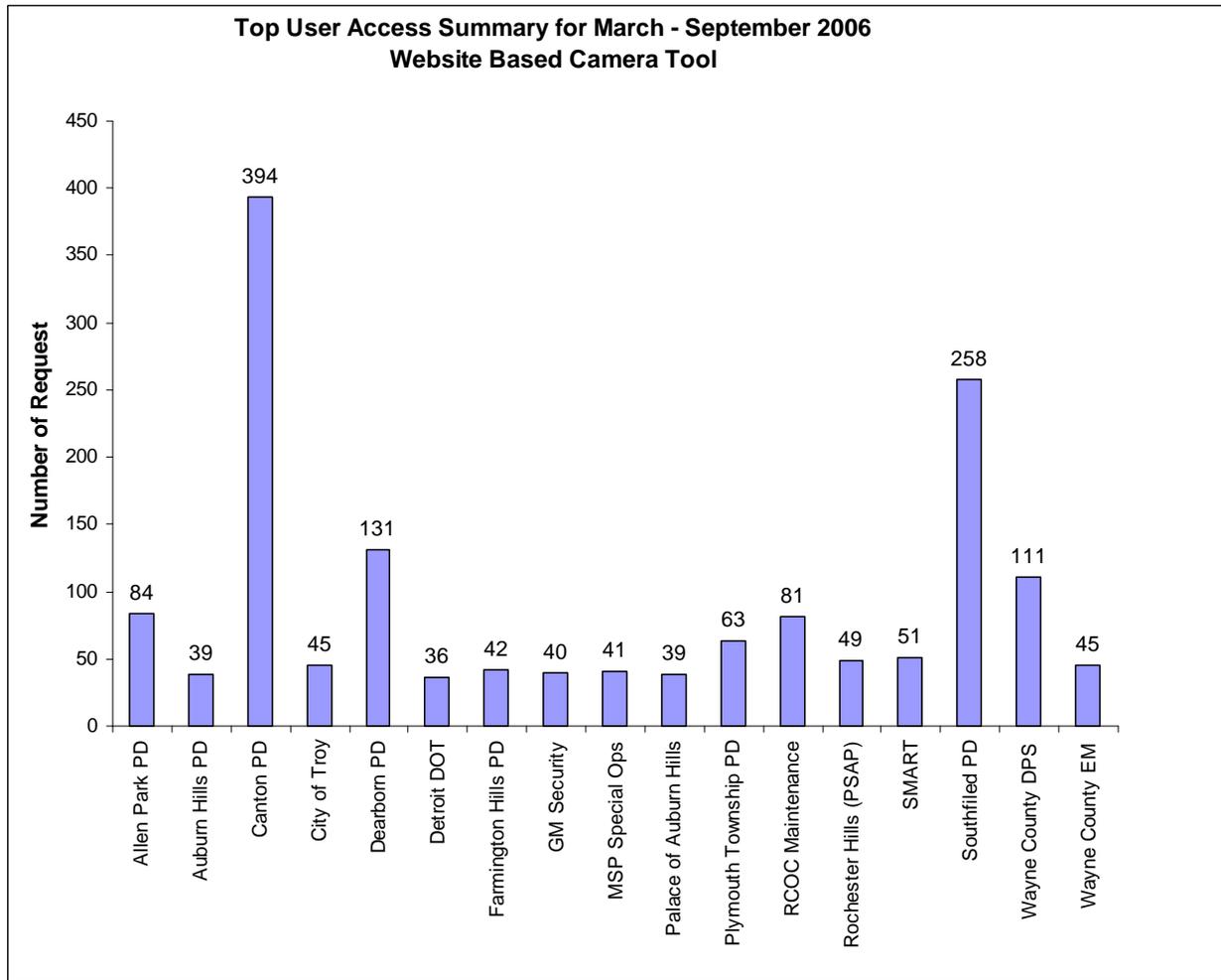


Figure 6
Top User Access Summary for Website Camera Tool

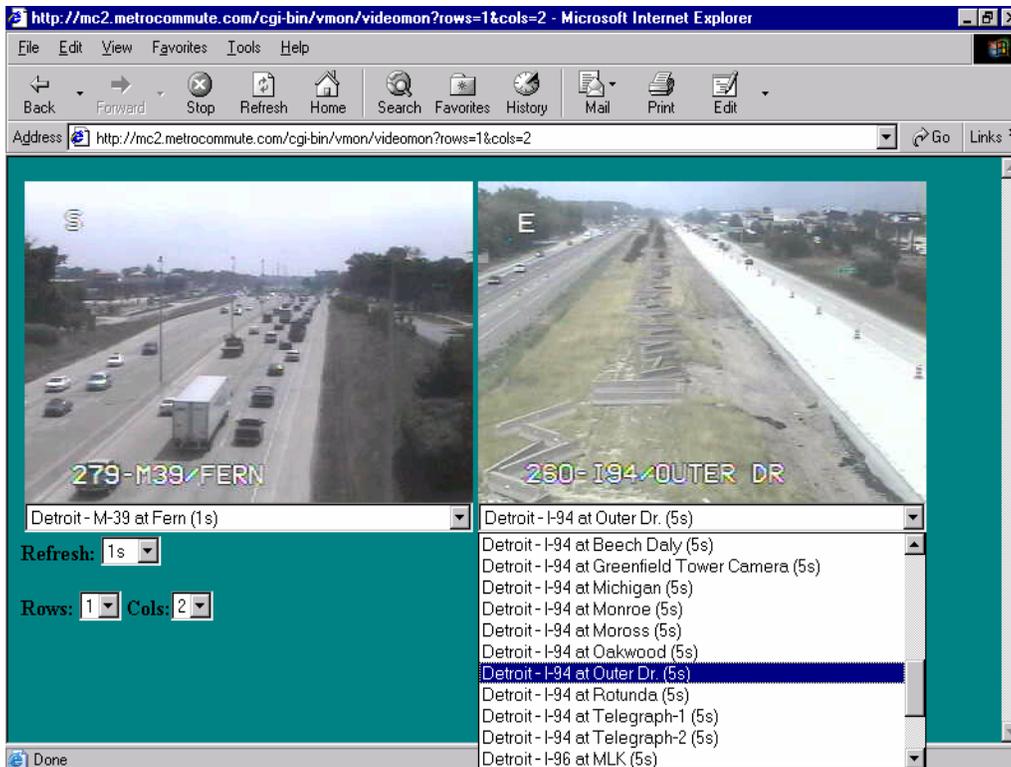


Figure 7
User Interface for the Website

PLANNED SPECIAL EVENTS TRAFFIC MANAGEMENT

This section highlights various MDOT Freeway Operations led initiatives, yielding planned activities and new products, directed at enhancing the role of the MITS Center in managing travel for major planned special events in the Detroit Metropolitan Area. MDOT Freeway Operation has coordinated with stakeholders to share information and coordinate between agencies to accomplish a common goal of a smoothly flowing event. The MITS Center has many functional capabilities that support a coordinated and collaborative stakeholder effort in managing travel for all planned special events in the metro area, including: (1) dissemination of traveler information through CMS messages, (2) performance of freeway traffic conditions monitoring through CCTV and system detector monitoring in addition to two-way communication with FCP operators, and (3) coordination of Freeway Courtesy Patrol for enhanced traffic incident management.



With Detroit being the host for Superbowl XL in February of 2006, special emphasis had been placed on streamlining resources through coordinated planning, as well as capturing and leveraging lessons learned for improved traffic operations during events.

The stakeholder base for special event planning has expanded to include active participation from public and private sectors operators around the region, including local police and fire, local road agencies, state police, event coordinators, transit, and border operators and agencies. MDOT Freeway Operations teamed with Detroit Police Department Special Operations to host nearly bi-weekly meetings for the months leading up to Super Bowl XL. Information was disseminated to stakeholders at meetings and via email and a reference CD with maps, event timelines, stakeholder contact information, as well as relevant after action reports.

Table 8 summarizes key MDOT Freeway Operations activities that support planned special events traffic management.

- Super Bowl
- Ops Partnering workshop
- Auxiliary Traffic Operations Center
- IKEA Grand Opening
- Detroit Freedom Festival
- North American International Auto Show
- Professional Athletic Game Playoffs

The main objective of freeway operations management during planned special events involves minimizing freeway mainline congestion. The MITS Center has the following functional capabilities that support a coordinated and collaborative stakeholder effort in managing travel for all planned special events in the metro area: (1) disseminate traveler information, (2) perform freeway traffic conditions monitoring, and (3) coordinate Freeway Courtesy Patrol.

The new operations manual section on planned special events represents groundbreaking work by MDOT Freeway Operations in recognizing the benefits of proactively managing travel for planned special events and documenting associated guidelines and procedures in an operations manual. The section addresses the following major topics: (1) purpose and characteristics of planned special events, (2) freeway operations management issues and approach, (3) CMS message plan, (4) day-of-event operations detail for MITS Center operators, (5) day-of-event operations detail for Freeway Courtesy Patrol, and (6) planning process summary.

2005 NAIAS and Motown Winterblast After-Action Report

MDOT Freeway Operations prepared this comprehensive after-action report for the purpose of using it as a working document to assist in planning for future events. The integration of post-event evaluation results (e.g., stakeholder debriefings) to advance planning for the next (year's) event occurrence creates a seamless process allowing for continuous improvement of freeway system performance from one planned special event to the next. The results and recommendations presented in the MDOT Freeway Operations' report may also warrant application to other planned special events occurring in downtown Detroit.

The after-action report was organized into five major sections. The event background section summarizes key event statistics in addition to various tools and resources, not necessarily managed or operated by the MITS Center, which had either a direct or indirect impact on freeway operations during the event. The next section describes the role of MDOT Freeway Operations in the context of managing transportation system operations during the NAIAS. Sections on event operations planning and day-of-event operations document advance planning and day-of-event operations activities, respectively, performed at the MITS Center by MDOT Freeway Operations staff and control room personnel. These sections also present key successes and lessons learned as observed by MDOT Freeway Operations. The report concludes with a recommended planning process for the 2006 NAIAS and any other special event in the downtown area that present steps to overcome identified lessons learned and to improve advance planning activities and day-of-event operations.

Fireworks Traffic Management Plan

The Freedom Festival Fireworks is an annual event that draws nearly one million attendees to the Detroit riverfront. In FY2006 the Fireworks Traffic Management Plan was developed to provide a source to facilitate planning across agencies for this recurring event. This plan was implemented for this year's event along with the utilization of the Auxiliary Traffic Operations Center.

ROADWAY CONSTRUCTION

During the 2006 construction program MDOT Freeway Operations assisted in maintaining traffic through these projects by mitigating traffic incidents and project scheduling changes throughout the season. With the volume of roadwork, as well as the Superbowl and other planned special events in FY 2006, MITS Center roadway construction operations were more critical than ever. Roadway construction operations focus on Messaging, Monitoring & Communications.

Messaging

Messaging includes messages displayed on the CMS, as well as other information outlets. CMS construction messages involve careful prioritizing for time scheduled work that is location specific. In a given weekend, over 30 unique messages report road work activity relevant to traffic passing a particular CMS; a single closure can have 6 or more messages to provide motorists the best possible information throughout the network. In fact, during July the average number of unique messages displayed on the DMS was 51. Building on operations improvements from earlier years, new processes, tools, and quality control reviews were implemented in FY 2006 to ensure optimal messaging for road work closures.

The role of a construction coordinator was defined and a staff person was hired to further enhance the accuracy and efficiency of MITSC messaging for construction projects. This member of the MITSC staff plays a key role in the advanced preparation of the messaging plans

for construction activities. Several worksheets were also created to facilitate this role and to reduce possible errors in the applied messaging plans. **Appendix B** presents the worksheet that guides the construction coordinator in preparation of construction activities and one worksheet operators utilize to follow and track activities regarding active construction projects.

Stretch goals identified towards the end of the 2006 construction season included alternate route messages where practical, detour traffic messages (where appropriate), warning messages for upcoming high impact (in addition to full freeway) closures, road open messages when freeway closures opened early, shoulder closure messages, and site specific traffic information where needed. All identified CMS messaging stretch goals were achieved during the 2005 season, and construction messages had higher quality due to new tools and processes for planning, implementation and reviews. In addition, MDOT Freeway Operations took a more active role in coordination of Portable Changeable Message Signs (PCMS) and static roadwork signing.

In addition to the CMS messages, MITS Center operators called traffic reporting meetings to prepare for future construction, report changes, early openings, and clarifications, as well as using the advisory notifications for early project openings (via broadcast email).

Monitoring & Communications

Outreach to contractors, consultants and MDOT staff involved in construction significantly benefited MDOT Freeway Operations by increasing the amount of communication with the construction projects.

Outreach strategies included

- continued distribution of the “Freeway Ops Contact Card”
- periodic emails with specific tips and general reminders
- feedback on specific events, both good and bad
- development of comprehensive construction contact list
- coordination and look ahead meetings with high impact projects
- distribution of “MITSC water bottles”
- distribution of “MITSC binders”
- Work zone training utilizing real time work zone images from the CCTV’s

Feedback to the MDOT Lane Closure (web) report increased, and MITS Center operators have begun to add and update the information in the report when real time corrections are required and construction project personnel concur, leading to quicker updating of strategic messaging on CMS’s.

Monitoring and communications were enhanced with additional monitors on the video wall, as well as procedures for weekend operations summarizing planned changes in closures. Summary closure information was shared with MSP State Police and other public safety agencies for weekend construction activity. MITSC staff was able to detect work zone delays and recommend improvements to the standard work zone traffic control which resulted in decreased user delay cost by improving traffic flow.

FREEWAY COURTESY PATROL OPERATIONS



The MDOT Freeway Courtesy Patrol (FCP) is an integral part of the overall metro Detroit freeway operations. The FCP provides assistance to stranded motorists and supplements emergency response crews on crash scenes by providing interim traffic control.

The Southeast Michigan Council of Governments (SEMCOG) has conducted a year end report for the 2005 operations of the Freeway Courtesy Patrol operations. To access the full document visit the SEMCOG website at www.semco.org.

Freeway Courtesy Patrol Call Card Updates

During FY 06, the contract for the Freeway Courtesy Patrol was changed to a performance based contract. To ensure that the contract was executed accurately and efficiently, extensive changes were developed for the Freeway Courtesy Patrol Call Cards and the associated database, the difference between the previous call card and the improved call card is shown in **Appendix C**. Improvements aim to minimize the time spent collecting and entering the data and to build in automatic error checking to capture erroneous data before it is submitted to the database. The changes to the call card process was developed by MDOT and subsequently reviewed by the Freeway Courtesy Patrol Operations Committee where it was approved for use. The call cards provide a consistent way to collect the data used in the daily operations of the FCP. Analysis of the call card data provides MDOT with the ability to measure the performance of the FCP contract and analyze the benefit provided to the motoring public.

CONCLUSION

The following four MDOT Freeway Operations focus areas were discussed in this report: (1) traffic incident management, (2) planned special events traffic management, (3) roadway construction, and (4) Freeway Courtesy Patrol operations, as well as an overview of control room operations performance and highlights. MDOT Freeway Operations continues enhancement of operations to increase MITS Center operating efficiency, improve the performance and safety of the metro area freeway system, and strengthen interagency cooperation and collaboration in order to enhance regional transportation system operations. The successful execution of the special event plans for the Superbowl XL event has shown the significant benefits that a cooperative multi-agency plan will provide. Through these cooperative and proactive planning efforts, MITS Center and its partners are able to improve day to day operations and the overall image of the Detroit area.

APPENDICES

Appendix A

SAMPLE MONTHLY PERFORMANCE MEASURE REPORT

Michigan ITS Center

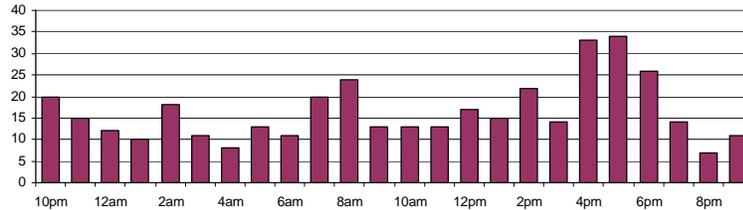
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www.michigan.gov/its

MDOT
Mia Silver, PE PTOE
Michigan Department of Transportation
1060 6th Street
Detroit, MI 48226
SilverMa@michigan.gov

July 2006

CONTROL ROOM SUPPORT ACTIVITY

Total Incidents per Hour



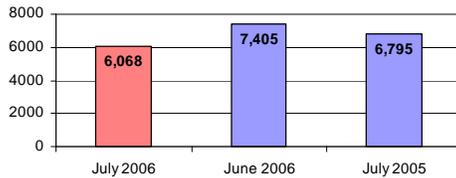
Total Incidents by Roadway

Freeway	Jul 2006	Jun 2006	Jul 2005
I-75	86	80	133
I-94	87	84	109
I-96	52	50	55
I-275	33	34	57
I-375	2	0	0
I-696 (Reuther)	51	57	98
M-5 (Grand River)	0	0	0
M-8 (Davison)	0	0	0
M-10 (Lodge)	36	39	34
M-14	0	0	0
M-39 (Southfield)	47	36	39
Total	394	380	524

Monthly Incident Activity

	Jul 2006	Jun 2006	Jul 2005
Freeway Closures	14	13	N/A
Lane Closures	33	39	N/A
Ramp Closures	7	9	N/A

Monthly Call History



Calls by Type

Agency	No. of Calls
Freeway Courtesy Patrol	4264
Michigan State Police	766
Media	690
MDOT Construction (Incoming)	68
MDOT Construction (Outgoing)	25
Other MDOT	115
ITS Maintenance	17
Other	123
Total	6068

MITS Center News

MITS operations supported construction activities through messaging, monitoring and communications. The average number of *unique* messages displayed on the DMS in July was 51 – that's 51 different messages to get the best possible information to motorists for road work in their path.

A key stakeholder meeting was held with agencies involved in traffic operations impacted by the upcoming I-75 reconstruct in southern Wayne County. Strategies discussed were incorporated in the construction bid documents where possible, and several communications paths were opened to help minimize the impact of the road work on incident management.

The Traffic Management Software project kicked off in July, identifying the scope and timeline of this project which benefits the MITS Center through replacement software, as well as other TMCs in the State. The new software will serve to streamline operator functions and facilitate broader sharing of traffic information with stakeholders.



Michigan ITS Center

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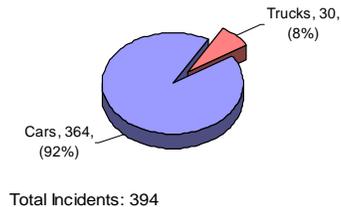
Mia Silver, PE PTOE
Michigan Department of Transportation
1060 6th Street
Detroit, MI 48226
SilverMa@michigan.gov

July 2006

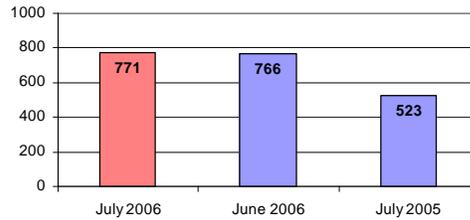
CONTROL ROOM DISPATCH ACTIVITY

- Of the 4,080 assists that the Freeway Courtesy Patrol (FCP) provided during the month of July, 771 assists (19%) were dispatched by the FCP dispatchers located at the MITS Center.

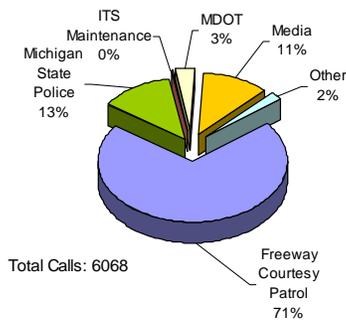
Vehicle Composition of Incidents



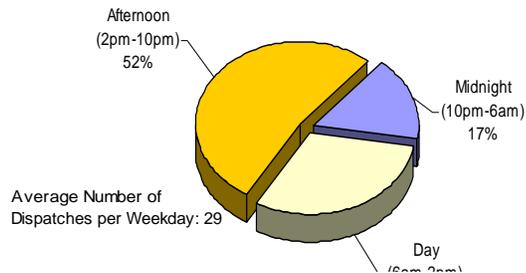
Freeway Courtesy Patrol Monthly Dispatch Activity



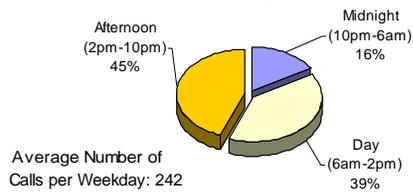
Calls by Type



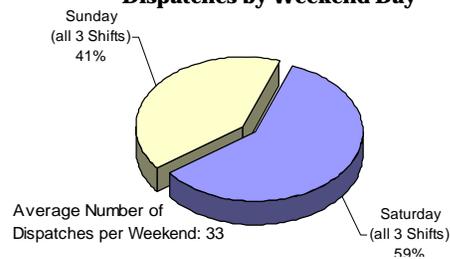
Freeway Courtesy Patrol Dispatches by Weekday Shift



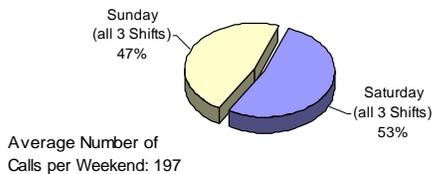
Calls by Weekday Shift



Freeway Courtesy Patrol Dispatches by Weekend Day



Calls by Weekend Day



Note: Additional FCP information may be found beginning on page 4.

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Mia Silver, PE PTOE
Michigan Department of Transportation
1060 6th Street
Detroit, MI 48226
SilverMa@michigan.gov

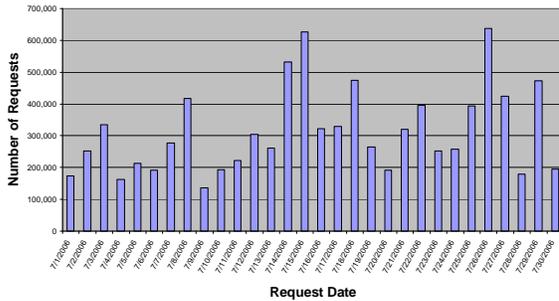
July 2006

TRAVELER INFORMATION ACTIVITY

- The MITS Center provides traffic information to users and motorists via the dynamic message signs (DMS) and the MDOT website (see www.michigan.gov/mdot, click on "Detroit Traffic")

Website Activity

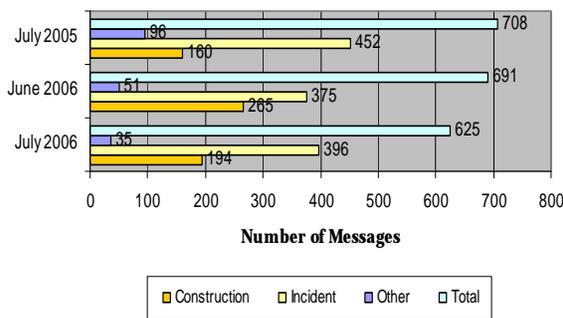
July Daily Website Activity



Top 5 DMS with Unique Messages

- I-94 EB at Second
- M-10 NB at M. L. King
- M-10 NB at Porter
- M-10 SB at Euclid
- I-94 WB at Burns

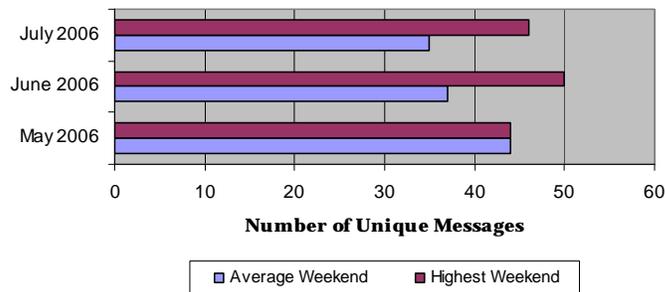
Unique DMS Messages by Type



Incident Communication Accuracy

Weekend DMS Snapshot Review	Jul 2006	Jun 2006	Jul 2005
All Incident Messages	99.8%	99.2%	100.0%
High Impact DMS Messages	Jul 2006	Jun 2006	Jul 2005
All High Impact Messages	96.3%	98.4%	93.0%
Freeway Closure Messages	92.9%	92.3%	N/A
Lane Closure Messages	97.0%	100.0%	N/A
Ramp Closure Messages	100.0%	100.0%	N/A
Other Communication	Jul 2006	Jun 2006	Jul 2005
Advisory Text-Messages	90.7%	98.4%	98.0%
Website Incident Postings	98.1%	100.0%	93.0%

Weekend Construction DMS Message Activity



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MDOT
Michigan Department of Transportation
1060 6th Street
Detroit, MI 48226
SilverMa@michigan.gov

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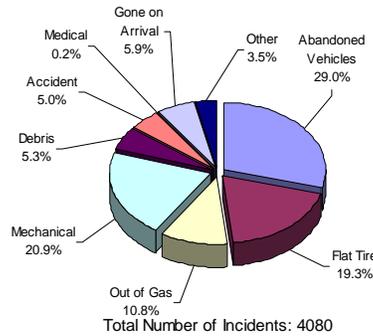
FREEWAY COURTESY PATROL ACTIVITY

- Established in 1994, the Freeway Courtesy Patrol provides assistance to motorists by reducing potential crash situations, relieving traffic congestion and helping to create safer driving environments. Services are funded by MDOT through a grant from the Federal Highway Administration.

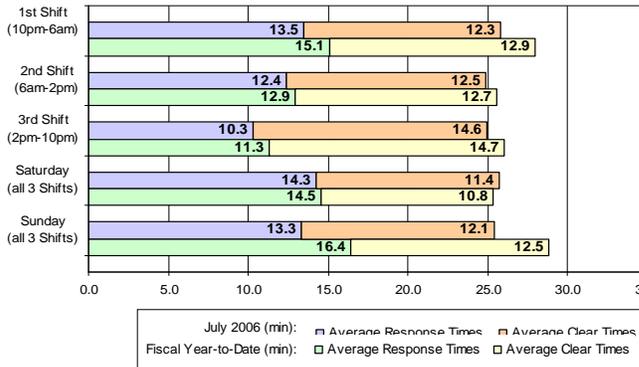
Motorist Quote of the Month

"Just wanted to inform you about one of your most friendly patrolmen, Det. My brother and I were lost on I696 and Beck Rd when we spotted one of your courtesy patrolmen. He was kind and friendly and hand wrote out directions for us to get to our destination. We were very happy with the service we received. We just wanted to take the time to thank you for this wonderful service."

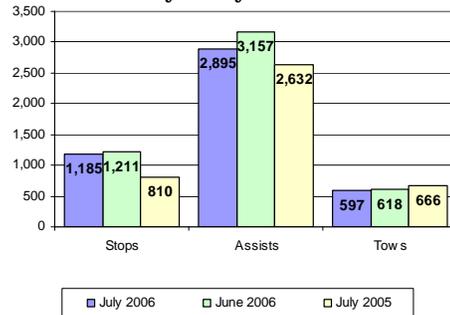
Assist Type



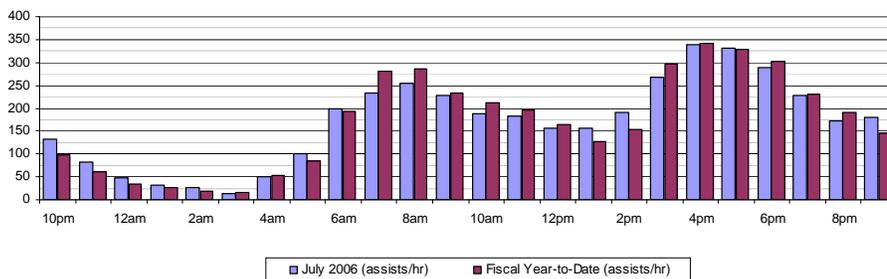
FCP Average Service Times



History of Key FCP Activities



FCP Assists by Time of Day



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Mia Silver, PE PTOE
Michigan Department of Transportation
1060 6th Street
Detroit, MI 48226
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FREEWAY COURTESY PATROL ACTIVITY

Freeway Courtesy Patrol Service Area



Freeway	COVERAGE (miles)	TOTAL ASSISTS*		ASSIST DENSITY (assists/mile)		AVERAGE RESPONSE TIME (min)	
		July 2006	Fiscal YTD Avg.	July 2006	Fiscal YTD Avg.	July 2006	Fiscal YTD Avg.
I-75	87.6	1122	984	12.8	11.2	12.4	13.6
I-94	60.7	932	886	15.4	14.6	11.0	12.8
I-96	34.0	722	598	21.2	17.6	11.8	13.3
I-275	37.5	368	333	9.8	8.9	12.6	13.2
I-375	1.2	4	6	3.3	5.3	25.0	14.3
I-696 (Reuther)	28.7	307	360	10.7	12.5	12.1	12.3
M-5 (Grand River)	10.3	49	37	4.8	3.6	8.5	13.6
M-8 (Davison)	2.2	37	54	16.8	24.4	11.2	9.1
M-10 (Lodge)	17.9	274	311	15.3	17.4	11.2	12.0
M-14	6.4	29	52	4.5	8.1	16.4	16.1
M-39 (Southfield)	14.2	236	210	16.6	14.8	13.6	12.3

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DATA KEY INFORMATION

Table	Description	Data Source
Total Incidents per Hour	Displays the total incidents in the current month by hour of day.	ATMS Incident Log - Manually entered information by the operator.
Total Incidents by Roadway	Displays the total incidents in the current month by roadway.	ATMS Incident Log - Manually entered information by the operator.
Monthly Incident Activity	Displays the number of major incidents for the current month, previous month, and previous year.	Monthly Closure QC - QC of email advisory notifications sent for major incidents.
Monthly Call History	Displays the number of incoming and outgoing Control Room Operator calls, including 2-way and select MSP CAD entries, for the current month, previous month and previous year.	Call Log Database - Manually entered data by the operator of all incoming and outgoing Control Room Operator calls, including 2-way communications and select MSP CAD entries.
Calls by Type (page 1)	Displays the number of incoming and outgoing Control Room operator calls, including 2-way and select MSP CAD entries, by agency for the current month.	Call Log Database - Manually entered data by the operator of all incoming and outgoing Control Room Operator calls, including 2-way communications and select MSP CAD entries.
Vehicle Composition of Incidents	Displays the amount of incidents involving trucks and the amount of incidents not involving trucks for the current month.	ATMS Incident Log - Manually entered information by the operator.
Freeway Courtesy Patrol Monthly Dispatch Activity	Displays the number of incidents dispatched by Control Room operators to FCP for the current month, previous month, and previous year.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident.
Calls by Type	Displays the number of incoming and outgoing Control Room operator calls, including 2-way and select MSP CAD entries, by agency for the current month.	Call Log Database - Manually entered data by the operator of all incoming and outgoing Control Room Operator calls, including 2-way communications and select MSP CAD entries.
Freeway Courtesy Patrol Dispatches by Weekday Shift	Displays the distribution of incidents dispatched by Control Room operators to FCP by weekday shift.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident where How Detected equals Fwy Ops.
Calls by Weekday Shift	Displays the distribution of call activity for the Control Room operators by weekday shift.	Call Log Database - Manually entered data by the operator of all incoming and outgoing Control Room Operator calls, including 2-way communications and select MSP CAD entries.

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DATA KEY INFORMATION

Calls by Weekend Day	Displays the distribution of call activity for the Control Room operators by weekend day.	Call Log Database - Manually entered data by the operator of all incoming and outgoing Control Room Operator calls, including 2-way communications and select MSP CAD entries.
Freeway Courtesy Patrol Dispatches by Weekend Day	Displays the distribution of incidents dispatched by Control Room operators to FCP by weekend day.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident where How Detected equals Fwy Ops.
Website Activity	Displays the total number of server requests for current month, previous month and previous year on the MDOT real time traffic information website.	Pending incorporation of web server statistics.
Top 5 DMS with Unique Messages	Displays the top 5 DMS in terms of the number of unique messages displayed for the month.	Pending completion of database updates.
Unique DMS Messages by Type	Displays the total number of unique DMS messages by type that occurred during the month.	Pending completion of database updates.
Incident Communication Accuracy	Displays the accuracy of DMS, advisory text messages and messages posted on the website. Accuracy measures include DMS signs used, wording, and timing.	Monthly Closure QC - QC of email advisory notifications sent for major incidents. Daily DMS Message QC - QC of DMS message snapshots system wide 7 times per day, 3 days per week High Impact Message QC - QC of incident information for each high impact incident resulting in an email advisory.
Weekend Construction DMS Message Activity	Displays the total number of freeway construction DMS messages displayed in a month.	Pending completion of database updates.
Assist Type	Displays the distribution of incident types for incidents responded to by FCP.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident.
FCP Average Service Times	Displays the average response times and average clear times by shift.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident.
History of Key FCP Activities	Displays the number of Freeway Courtesy Patrol "stops", "assists" and "tows" for the current month, previous month and previous year.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident
FCP Assists by Time of Day	Displays the total assists for 2-hour increments over a 24-hour period.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident.

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Mia Silver, PE PTOE
Michigan Department of Transportation
1060 6th Street
Detroit, MI 48226
SilverMa@michigan.gov

DATA KEY INFORMATION

Freeway Courtesy Patrol Service Area - Map	Displays FCP freeway coverage by roadway measured by assists per mile of freeway.	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident.
Freeway Courtesy Patrol Service Area - Table	Displays the total coverage distance, total assists, assist density and average response time by freeway. Values with no available data are denoted as "-"	FCP Call Card Database - Data cards filled out by the freeway courtesy patrol at each incident.

APPENDIX B

CONSTRUCTION COORDINATOR WORKSHEETS

Major Construction Timeline

This form must be completed for any and all major freeway, ramp closure, or lane closure due to construction.

One sheet per project.

Operator(s): _____ **Shift:** _____ **Freeway/ Cross Street** _____

- Who was your contact for this project? _____
 - Did they call you to advise of the following:
 - ✓ That the freeway/ramp is closed _____
 - What time? _____
 - ✓ That the freeway/ramp was open _____
 - What time? _____
 - ✓ Other _____
 - What time? _____
 - ✓ Can they update the PCMS? _____
- Did you use a camera(s) to verify information. _____
 - If yes, which one(s) _____
 - Any lanes blocked or traffic restrictions currently in work zone?
 - ✓ If so, which lane? _____
- Did you make any changes to the messages in the Event Editor? _____
 - If yes, which one(s)
 - Message number:**
 - ✓ Delete _____
 - ✓ Disable/Enable _____
 - ✓ Sent out new message _____
 - ✓ Open message _____
- Did you run and review SQL? _____
 - Were there any problem overloading/no message on signs? _____
 - If yes, what signs?
 - ✓ _____
 - ✓ _____
 - What did you do to correct the problem?
 - ✓ Change priorities _____
 - ✓ Other _____
- Did you make notifications to the following:
 - Media (2,4,7, AAA, WWJ, and Traffic Pulse) _____

Construction Coordinator to do list

1. ___ Print Lane Closure Report
 - Revise messages for ending projects or changes in projects
 - Add message as needed for new projects
 - Get clarification or additional information to message correctly from the Assistant Resident Engineer (ARE) or Lane Closure Report entry creator, (located in the LCR Editor Form).
2. ___ Run SQL Report for current message
 - Identify overloading
 - Change priorities as needed
 - Identify message wording (i.e. NB or NORTH)
 - Identify if messages are running on correct signs
 - Does the message make sense; should that sign say something else?
3. ___ Check Message vs. Lane Closure Report/Visual (If the operators have not done so)
4. ___ Update Lane Closure Report with added information or correct information
 - Notify the Assistant Resident Engineer of the changes you made
5. ___ Re-Run SQL for current message
6. ___ Run MS Access Report (SQL)
 - Identify overloading or other problems (adjust as needed)
 - Re-run MS Access after adjustments
7. ___ Prep operator worksheet for any changes that need to be made
8. ___ Check cameras & signs in construction zones
 - If failed, find or create work orders as needed and make it a Hi-priority
 - Give Maintenance Supervisor a call to advise him of the need for the equipment
9. ___ High impact closures make sure they have the following (if applicable):
 - Detour message
 - Placed on traffic website
 - Notify Local Police agencies

- Warning message to start running at 2pm on Thursday or as soon as possible if after that day and time.
 - Messaging approve by Supervisor.
 - Worksheets for operators, MSP and others
 - Email information to MDOT group along with MS Access report
10. ___ Pass out copies of closures to Operators and MSP dispatchers

Construction Coordinator to do list
Weekly

1. ___ Go through upcoming construction messages to ensure that all closures have proper messaging available in the library
 - Freeway Opening etc
2. ___ Do video clips of the construction zones
3. ___ Set presets on your construction zones
4. ___ Start worksheet prep
5. ___ Review meeting notes for upcoming project preps

If you have any questions or problems contact Supervisor

APPENDIX C

FREEWAY COURTESY PATROL
CALL CARDS

OLD CARD AND NEW CARD

Old FCP Call Card

FREEWAY COURTESY PATROL CALL CARD				Use Standard Eastern Time (Non-Military Time)					
Date: _____ Sun-Mon-Tue-Wed-Thu-Fri-Sat Operator No: _____ Call No. _____				Time Call Received: _____ A P					
License No. _____ Veh. Year _____ Veh. Make _____ Veh. Model: _____				Arrival Time: _____ A P					
/NB SB EB WB / Freeway: _____ / N S E W / of Cross St. or Ramp # _____				Time Completed: _____ A P					
How Detected:	Vehicle Position VP/ Travel Lanes Blocked TBL:	Notes: (Use Back of Card)	Trouble:	Service Provided:					
1 <input type="checkbox"/> Courtesy Patrol 2 <input type="checkbox"/> Freeway Ops. 3 <input type="checkbox"/> Other:	VP 1 <input type="checkbox"/> Right Shoulder 2 <input type="checkbox"/> Right Lane 3 <input type="checkbox"/> Center (Right) 4 <input type="checkbox"/> Center Lane 5 <input type="checkbox"/> Center (Left) 6 <input type="checkbox"/> Left Lane 7 <input type="checkbox"/> Left Shoulder 8 <input type="checkbox"/> Off Shoulder 9 <input type="checkbox"/> Exit/Entrance Ramp 10 <input type="checkbox"/> Ramp Shoulder	TBL 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>	1 <input type="checkbox"/> Abandoned Vehicle 2 <input type="checkbox"/> Flat Tire 3 <input type="checkbox"/> No Gas 4 <input type="checkbox"/> Mechanical 5 <input type="checkbox"/> Debris on Road 6 <input type="checkbox"/> Accident 7 <input type="checkbox"/> Medical Emergency 8 <input type="checkbox"/> Other:	1 <input type="checkbox"/> Unoccupied Vehicle 2 <input type="checkbox"/> Changed Tire 3 <input type="checkbox"/> Gave Gas 4 <input type="checkbox"/> Mechanical 5 <input type="checkbox"/> Moved Debris 6 <input type="checkbox"/> Assisted Officer 7 <input type="checkbox"/> Called Tow Truck 8 <input type="checkbox"/> Traffic Policing 9 <input type="checkbox"/> Towed Vehicle 10 <input type="checkbox"/> Stand By 11 <input type="checkbox"/> Transported Motorists in FCP Vehicle 12 <input type="checkbox"/> Vehicle Operator Declined Service 13 <input type="checkbox"/> FCP Driver Called for Help 14 <input type="checkbox"/> Other:					
City of Residence:	County of Residence:	No. Vehicle Occupants:	Arrived After 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	On Scene 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	Other Assistor: MSP/Police EMS Fire Private Tow >>>> Other:	Traffic Condition: 1 <input type="checkbox"/> Free Flowing 2 <input type="checkbox"/> Slow 3 <input type="checkbox"/> Stop and Go Tow Co: Plate No:	Weather Condition: 1 <input type="checkbox"/> Clear 2 <input type="checkbox"/> Rain 3 <input type="checkbox"/> Snow 4 <input type="checkbox"/> Ice 5 <input type="checkbox"/> Fog	Are Any Other Incidents In View? 1 <input type="checkbox"/> No 2 <input type="checkbox"/> Ahead 3 <input type="checkbox"/> Behind 4 <input type="checkbox"/> Opposing	File No.
FCP Towing Service Location Towed To: _____ Distance From Incident Location: _____ Miles Tow And Return To Service Time: _____ Minutes				Call Resolution: 1 <input type="checkbox"/> Car Cleared Scene 2 <input type="checkbox"/> Car Left Unoccupied 3 <input type="checkbox"/> Car Was Towed 4 <input type="checkbox"/> Vehicle Gone on Arrival of FCP 5 <input type="checkbox"/> Other:					

New FCP Call Card

Date: ____/____/____			COURTESY PATROL CALL CARD			Trouble		
Operator No: _____			Vehicle Information <input type="radio"/> Private <input type="radio"/> Commercial			<input type="radio"/> Aban Veh		
Call No: _____			License No.: _____ State: _____			<input type="radio"/> Flat Tire		
Use Military Time			Year: _____			<input type="radio"/> No Gas		
Dispatched: _____			Make: _____			<input type="radio"/> Mechanical		
Arrived: _____			Model: _____			<input type="radio"/> Debris		
Cleared: _____			Color: _____			<input type="radio"/> Accident		
			No. Occupants: _____			<input type="radio"/> Other		
			County of Residency: _____					
Dir	<input type="radio"/> NB <input type="radio"/> SB	<input type="radio"/> EB <input type="radio"/> WB	Lane(s) Blocked			Service Provided		
Freeway	<input type="radio"/> I-75	<input type="radio"/> I-94	<input type="radio"/> All Lanes			1 <input type="radio"/> Marked Aban		
	<input type="radio"/> I-275	<input type="radio"/> I-96	<input type="radio"/> Right Shoulder			2 <input type="radio"/> Changed Tire		
	<input type="radio"/> I-375	<input type="radio"/> Exp <input type="radio"/> Loc	<input type="radio"/> Right Lane			3 <input type="radio"/> Gave Gas		
	<input type="radio"/> M-5	<input type="radio"/> I-696	<input type="radio"/> Center Lane (right)			4 <input type="radio"/> Mechanical Assist		
	<input type="radio"/> M-10	<input type="radio"/> M-5	<input type="radio"/> Center Lane			5 <input type="radio"/> Moved Debris		
	<input type="radio"/> M-39	<input type="radio"/> M-8	<input type="radio"/> Center Lane (left)			6 <input type="radio"/> Traffic Policing		
	<input type="radio"/> M-14	<input type="radio"/> Left Lane			7 <input type="radio"/> FCP Towed Vehicle			
	<input type="radio"/> M-59	<input type="radio"/> Left Shoulder			8 <input type="radio"/> Non-FCP Tow			
		<input type="radio"/> Exit/Entrance Ramp			9 <input type="radio"/> Stand By			
		<input type="radio"/> Ramp Shoulder			10 <input type="radio"/> Transported Motorist			
Cross Street / MM: _____						11 <input type="radio"/> Cellular assistance		
Notes:						12 <input type="radio"/> Gone On Arrival (GOA)		
						13 <input type="radio"/> Gave Directions		
						14 <input type="radio"/> Declined Service		
						15 <input type="radio"/> Other		