Traffic Incident Management Self-Assessment

2007 National Report

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EXECUTIVE SUMMARY

Background

The Traffic Incident Management (TIM) Self-Assessment (SA) was designed to provide a tool and a process for state and regional program managers to periodically assess progress in achieving a successful multi-agency program to manage traffic incidents safely and effectively. The intent of the TIM SA is to assist program managers in identifying TIM program components that need special attention. Additionally, the TIM Self-Assessment is intended to provide the Federal Highway Administration (FHWA) with a national picture of broader program areas on which to focus national program initiatives.

The TIM SA was launched in 2003 in the nation's top 75 urban areas. Those 75 census areas were subsequently redefined by FHWA Division Offices into 80 operational areas for the SA. Baseline assessments were completed in 78 of the 80 areas and in 2005 re-assessments were completed in 40 areas. In 2006 the TIM SA process was modified so that all 80 areas were requested to complete the assessment on an annual basis. A total of 67 re-assessments were completed in 2007, down from 70 in 2006. However, of the 80 originally defined assessment areas, only 62 were completed in 2007, down from 68 in 2006, representing an 8.8 percent decrease in the number of assessments completed in 2007 from 2006. Table 12 at the end of this report shows the Baseline and re-assessment status of each of the 80 operational areas.

The initial assessments of 78 areas that were completed in 2003 and 2004 (and one in 2005) form the SA Baseline data against which the 2007 assessments and assessments in subsequent years will be evaluated. It should be noted that there are a total of 86 operational areas being reported on in this report, as additional areas have undertaken the TIM SA since the Baseline in 2003 and 2004.

2007 TIM Self-Assessment Results

A total of 62 re-assessments were completed in 2007 in urban areas that had established Baseline scores in 2003-2004. An additional five areas completed the TIM SA for the first time in 2007. Table ES1 compares the results of the 67 re-assessments to the Baseline data.

Table ES1
Mean Score for Each Section (Baseline and 2007)

Section	# of Questions	Mean Score		% Change in scores from Baseline (n=67)	Section Weights
		Baseline	2007		
Program and Institutional Issues	12	36.3%	48.8%	34.4%	30%
Operational Issues	14	57.6%	66.0%	14.5%	40%
Communication and Technology Issues	8	41.3%	57.5%	39.2%	30%
Overall Total	**34**	**45.9%**	**58.3%**	**26.9%**	**100%**

Program and Institutional Issues (Strategic Level)

The overall increase in Program and Institutional Issues in 2007 from the Baseline was 34.4 percent. As has been the case in previous re-assessments, TIM performance measures, while receiving the lowest mean scores, continue to show the greatest percentage increases from the Baseline. There are four questions on TIM performance measures in the assessment and those four account for four of the bottom five in terms of mean score (Table ES3) while at the same time representing four of the top five in terms of percentage increase from the Baseline (Table ES4).

Operational Issues (Tactical Level)

The increase in Operational Issues in 2007 from the Baseline was 14.5 percent, the lowest percentage change of the three sections. However, Operational Issues continue to have the highest score of the three sections at 66.0 percent. Most new or emerging TIM programs initially concentrate effort at the "tactical level" to clear incidents quickly and safely. Even the most established programs around the country can point to the efforts of a small group of individuals coordinating on operational issues as the genesis of the program.

The single greatest improvement in Operational Issues (44.8%) came from adoption of criteria for classifying "major incidents" using either incident levels or codes, with many areas citing the use of the Manual on Uniform Traffic Control Devices (MUTCD) criteria for defining incidents. However, the mean score (2.40) for incident levels or codes decreased slightly in 2007 from the 2006 score of 2.45. The percent of assessments scoring this question a 3 or higher also decreased this year, from 49 percent in 2006 to 43 percent in 2007. This may be attributable to the number of assessments citing disagreement over the need to classify incident levels or the use of varied criteria for defining incident levels by the various stakeholder groups.

Communication and Technology Issues (Support Level)

Scoring a cumulative 57.5 percent, Communication and Technology Issues experienced a 39.2 percent increase in 2007 from the Baseline, the largest percentage increase of the three assessment areas. As was the case in 2006, the largest increase (81.1%) came from providing motorists with travel time estimates for route segments (4.3.3.3).

Summary

The Traffic Incident Management Self-Assessment scores increased in 67 urban areas by 26.9 percent in 2007 from the 2003-2004 Baseline scores of 78 urban areas. The highest scores were achieved in Operational Issues (66.0%). The greatest increases in scores occurred in Communications and Technology Issues (39.2%). The Program and Institutional Issues, which represent work at the strategic level, had the lowest scores in the Baseline and remained the lowest scoring section in the 2007 re-assessment.

The greatest increases in scores for individual questions in the Self-Assessment occurred in TIM Program performance measurement and traveler information.

As shown in Table ES2, the top five highest scoring questions all received a mean score greater than 2.8. Four of the five top scoring questions were in Operational Issues with the fifth being in Program and Institutional Issues.

Table ES2
Top 5 Mean Score (2007)

Mean Score Rank in 2007/ Baseline	Question Number	Question	2007 Mean Score (n=67)	% Scoring 3 or Higher (2007)	% Change in 2007/ Baseline Mean Scores
1/4	4.2.1.3 Operational Issues	Have a pre-identified (approved) contact list of resources (including special equipment) for incident clearance and hazardous materials response?	**3.19**	87%	11.5%
2/1	4.2.1.2 Operational Issues	Identify high-ranking agency members available on 24/7 basis to respond to a major incident (Major Incident Response Team)?	**3.18**	79%	9.7%
3/1	4.2.3.5 Operational Issues	Have a pre-qualified list of available and contracted towing and recovery operators (to include operators' capabilities)?	**3.08**	84%	6.2%

| 4/6 | 4.2.3.1 Operational Issues | Utilize the Incident Command System? | **2.97** | 78% | 16.6% |
| 5/8 | 4.1.2.5 Program and Institutional Issues | Conduct planning for "special events?" | **2.85** | 55% | 15.5% |

Table ES3 lists the five questions that received the lowest scores.

Table ES3
Bottom 5 Mean Score (2007)

Mean Score Rank in 2007/ Baseline	Question Number	Question	2007 Mean Score (n=67)	% Scoring 3 or Higher (2007)	% Change in 2007/ Baseline Mean Scores
34/32	4.1.3.4 Program and Institutional Issues	Conduct periodic review of whether or not progress is being made to achieve targets?	**1.23**	15%	65.6%
33/33	4.1.3.2 Program and Institutional Issues	Have agreed upon methods to collect and analyze/track performance measures?	**1.34**	9%	108.7%
32/34	4.1.3.1 Program and Institutional Issues	Have multi-agency agreements on what measures will be tracked and used to measure program performance?	**1.42**	16%	122.1%
31/30	4.1.3.3 Program and Institutional Issues	Have established targets for performance (Response, Clearance)?	**1.43**	10%	23.0%
30/27	4.2.2.4 Operational Issues	Have mutually understood equipment staging and emergency lighting procedures on-site to maximize traffic flow past an incident while providing responder safety?	**1.79**	18%	29.4%

Table ES4 shows the five questions that had the largest gains in mean score in 2007 from the Baseline.

Table ES4
Largest Changes in Mean Score (2007 from Baseline)

Mean Score Rank in 2007/ Baseline	Question Number	Question	2007 Mean Score (n=67)	% Scoring 3 or Higher (2007)	% Change in 2007 Mean Scores from Baseline
32/34	4.1.3.1 Program and Institutional Issues	Have multi-agency agreements on what measures will be tracked and used to measure program performance?	1.42	16%	122.1%
33/33	4.1.3.2 Program and Institutional Issues	Have agreed upon methods to collect and analyze/track performance measures?	1.34	9%	108.7%
28/31	4.3.3.3 Communication and Technology Issues	Provide motorists with travel time estimates for route segments?	1.79	28%	81.1%
34/32	4.1.3.4 Program and Institutional Issues	Conduct periodic review of whether or not progress is being made to achieve targets?	1.23	15%	65.6%
12/23	4.3.1.2 Communication and Technology Issues	Provide data and video information transfer between agencies and applications (TMC-CAD integration)?	2.18	46%	52.1%

There are a number of challenges inherent in interpreting the results of the TIM SA, primarily as a result of the variances in how the assessments are completed. Absent detailed notes on the assessment conduct, it is impossible to determine whether the assessment was conducted as a consensus building exercise done by a group of stakeholders (as originally intended) or if the scores were assessed by just one or two individuals. While a few assessments provide detailed notes on the participants and discussion, most provide just the score and very limited discussion information. If a list of participating agencies for each assessment was provided it would give some indication of the consistency (or variability) in participating agencies and individuals for each assessment year to year.

Furthermore, absent a detailed description of the assessment conduct, there is no record kept from year to year of the consensus position (or dissenting opinions) on the score assessed for each question. This makes it difficult for participants in subsequent assessments to determine if progress has been made (and therefore a higher score is

merited) or if perhaps progress in that particular program component has been stalled while attention was paid elsewhere.