Traffic Incident Management
Role of Roadway Maintenance Operations Personnel

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Traffic Incident Management
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Definition per Manual of Uniform Traffic Control Devices (MUTCD):

A traffic incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic.

• Causes:
  • accidents
  • breakdowns and vehicle fires
  • medical emergencies
  • debris or animals in roadway
  • severe weather
  • infrastructure damage
  • law enforcement activities
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“A planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible.” FHWA Traffic Incident Management Website
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Effects of Traffic Incidents

• High risk for responders
• Secondary crashes affect public
• Delays cost millions of dollars in lost productivity
• Thousands of personal injuries, fatalities
• Billions of dollars in vehicle, freight and property losses
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Challenges:
• Responders have different command structures, SOPs
• Lack of cooperation among disciplines
• Lack of communication between agencies
• Poor coordination of activities and tasks
• Insufficient training in temporary traffic control
• Inadequate TTC devices
• Media and public not well informed

“Effective TIM reduces the duration and impacts of traffic incidents and improves the safety of motorists, crash victims, and responders”

(FHWA website)
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- Per MUTCD Chapter 6-I, Control of Traffic Through Traffic Incident Management Areas:
  - minor  ---------  up to 30 minutes duration
  - intermediate --- 30 minutes to 2 hours
  - major  ---------  2-24 hours

- Different factors influence these determinations

- Level can change upon a particular discipline’s involvement

![Figure 6I-1. Examples of Traffic Incident Management Area Signs](image)
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- Per MUTCD 6.I: **TTC** (Temporary Traffic Control) at a **Traffic Incident Management Area**... informs road users and provides guidance... through the incident area. .. To protect the incident responders... aid in moving road users expeditiously past or around the traffic incident, reduce secondary traffic crashes, and preclude unnecessary use of surrounding local road system.
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• Per MUTCD 6.1, Guidance:

06 ...highway agencies, public safety agencies... and private sector responders (towing and hazardous materials contractors) should mutually plan for traffic incidents along the major and heavily traveled highway and street system.

• 07 On-scene responder organizations should train their personnel in TTC practice and in requirements for traffic incident management contained in this Manual.

• 08 Emergency vehicles should be safe-positioned ...

• 09 Responders at a traffic incident should estimate the magnitude,... duration, and ...vehicle queue length, and set up the appropriate temporary traffic controls.
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Personnel

TIM focus has mostly been on freeways, interstate highways under state Departments of Transportation (DOT) jurisdiction.

However, most of the public roadway mileage in the U.S. is maintained by local (municipal and county) Departments of Public Works (DPW).

The NHTSA reports that approximately 69 percent of all car accidents occur within a ten-mile radius from home, mostly on surface arterials, collector and local streets.

Therefore, DPW personnel likely to be involved in TIM, particularly for major accidents.
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Role of Roadway Maintenance Operations

Personnel

Total *Lane-miles* in U.S. (U.S. DOT, 2015)

<table>
<thead>
<tr>
<th>Category</th>
<th>Urban total:</th>
<th>Rural total:</th>
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<td>Urban</td>
<td>2,710,533</td>
<td>6,026,054</td>
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<tr>
<td>Interstate</td>
<td>104,738</td>
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<td>Other arterial</td>
<td>589,559</td>
<td>529,015</td>
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<td>Collector</td>
<td>308,028</td>
<td>1,338,243</td>
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<tr>
<td>Local</td>
<td>1,708,209</td>
<td>4,040,544</td>
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</tbody>
</table>

Local governments are responsible for 77.3 percent of the total lane-miles.
State highway agencies are responsible for 19.0 percent.
The federal government is responsible for 3.7 percent.
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Role of Roadway Maintenance Operations

Personnel
Public Works / Transportation agencies needed in many situations:

• Severe weather
• Debris in roadway
• haz-mat spills
• Roadway infrastructure problems
• Fires/ explosions adjacent to roadway
• Civil disturbances, criminal activity, terrorism
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Public Works/DOT Capabilities

• Training required in Work Zone Traffic Control.
• Temporary Traffic Control (TTC) is daily routine.
• Experienced with various emergency situations and incidents on roadways.
• Policies, protocols, procedures and practices for TTC same as for TIM.
• Vehicles, equipment and traffic control devices same for both.
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Role of Roadway Maintenance Operations

Personnel

DPW/DOT personnel exposed to hazardous traffic every day.

Work Zone Traffic Control is a vital function for stationary and mobile operations.

I-83 York County PN, April 23, 2012
Ohio Turnpike, January 24, 2012
Lane Striper Hit by Semi-truck
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Traffic Management Centers

• Important component of TIM.
• Monitors, detects, verifies, reports traffic activity, disruptions.
• Ability to remotely warn approaching traffic; can re-route in some situations.
• Often co-located with other emergency dispatch operations.
• Coordinates with other jurisdictions.
• Communication with media venues.
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As of April 3, 2018

Train-the-Trainer Sessions
- 360 sessions with 10,834 participants
- 23% of participants have provided training

In-Person Responder Training
- 12,165 sessions with 282,440 participants

Web-Based Training (WBT)
- 33,051 total | 25,082 NHI | 1,610 Other
- 6,359 ERSI Responder Safety Learning Network

Total Trained: 326,325

Lifesavers 2018 v.2  C. MVA, LLC
### National Traffic Incident Management Responder Training Program
Training Status Report - As of April 3, 2018

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Train-the-Trainer</th>
<th>Responder Training</th>
<th>Web-Based Training*</th>
<th>Total</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Law Enforcement</td>
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<td>83,537</td>
<td>2,882</td>
<td>89,704</td>
<td>27.5%</td>
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<td>Fire/Rescue</td>
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<td>12,787</td>
<td>133,032</td>
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<td>Towing and Recovery</td>
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<td>EMS</td>
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<td>Transportation/Public Works</td>
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<td>470</td>
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<td>23,696</td>
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<td>Total Trained</td>
<td>10,834</td>
<td>282,440</td>
<td>33,051</td>
<td>326,325</td>
<td>100.0%</td>
</tr>
<tr>
<td>Number of Sessions</td>
<td>360</td>
<td>12,165</td>
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</tbody>
</table>
Challenges and Obstacles of TIM training for DPW/ DOTs:

- Little understanding of role of public works/ transportation in TIM.
- Many DOTs emphasize/require TIM training but few local agencies require it.
- Lack of awareness of available TIM training:
  - Difficulties in scheduling classes off-site.
  - Web-based training hindered by limited computer access.
  - Smaller agencies less interested in TIM training.
  - Competition for other needed training.
  - Institutional resistance from other disciplines.
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Promoting TIM training:

• Support from agency executives/directors.
• Buy-in from supervisors, mid-managers.
• Collaborate with police and fire in planning, drills, exercises.
• DPW/DOT Trainers to be used more often as instructors.
• Incorporate into regular WZTC courses.
• FHWA needs to emphasize DPWs/DOTs are an essential component.
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TIM training for Public Works/Transportation personnel:

• International Municipal Signal Association (IMSA)
• American Public Works Association (APWA)
• Local Technical Assistance Programs (LTAPs)
• DOTs and State Universities
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TIM is based on the Incident Command System, used for All-Hazards Emergencies.

Key FEMA Courses for Roadway Maintenance Operations Personnel:
- IS-100  Introduction to Incident Command System
- IS-200  ICS for Single Resources/ Initial Action
- IS-700  Intro to National Incident Management System

Classes for Senior Operators, Supervisors, Managers:
- ICS-300  Intermediate Incident Command
- ICS-400  Advanced Incident Command
Traffic Incident Management Helps Everyone

- Traffic Incident Management
  Responders work together as a team to respond safely and quickly.
  - Firefighters
  - Law enforcement officers
  - EMS responders
  - Transportation / Safety Service Patrols
  - Maintenance crews
  - Towing and recovery
  - 911/Dispatch
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