



**PENNSYLVANIA STATE
TRANSPORTATION ADVISORY COMMITTEE**

TRAFFIC INCIDENT MANAGEMENT



F I N A L R E P O R T

FEBRUARY 2014

The Pennsylvania State Transportation Advisory Committee

The Pennsylvania State Transportation Advisory Committee (TAC) was established in 1970 by Act 120 of the State Legislature, which also created the Pennsylvania Department of Transportation (PennDOT). The TAC has two primary duties. First, it "consults with and advises the State Transportation Commission and the Secretary of Transportation on behalf of all transportation modes in the Commonwealth." In fulfilling this task, the TAC assists the Commission and the Secretary "in the determination of goals and the allocation of available resources among and between the alternate modes in the planning, development, and maintenance of programs and technologies for transportation systems." The second duty of the TAC is "to advise the several modes (about) the planning, programs, and goals of the Department and the State Transportation Commission." The TAC undertakes in-depth studies on important issues and serves as a liaison between PennDOT and the general public.

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Acronyms

AASHTO	American Association of State Highway and Transportation Officials
DHS	Department of Homeland Security
DVRPC	Delaware Valley Regional Planning Commission
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986 (also known as SARA Title III)
ERSI	Emergency Responder Safety Institute
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
ICS	Incident Command System
ITS	Intelligent Transportation Systems
JOPS	Joint Operational Policy Statement
LEPC	Local Emergency Planning Committee
MPO	Metropolitan Planning Organization
MVM	Million Vehicle-Miles
NIMS	National Incident Management System
NTIMC	National Traffic Incident Management Coalition
NUG	National Unified Goal
PEMA	Pennsylvania Emergency Management Agency
PEMC	Pennsylvania Emergency Management Council
PennDOT	Pennsylvania Department of Transportation
PennTIME	Pennsylvania Traffic Incident Management Enhancement
PSP	Pennsylvania State Police
PTC	Pennsylvania Turnpike Commission
RCW	Revised Code of Washington
RPO	Rural Planning Organization
RTSMO	Regional Transportation Systems Management and Operations Committee
SAFR	Southern Area First Responders Group
SHSP	Strategic Highway Safety Plan

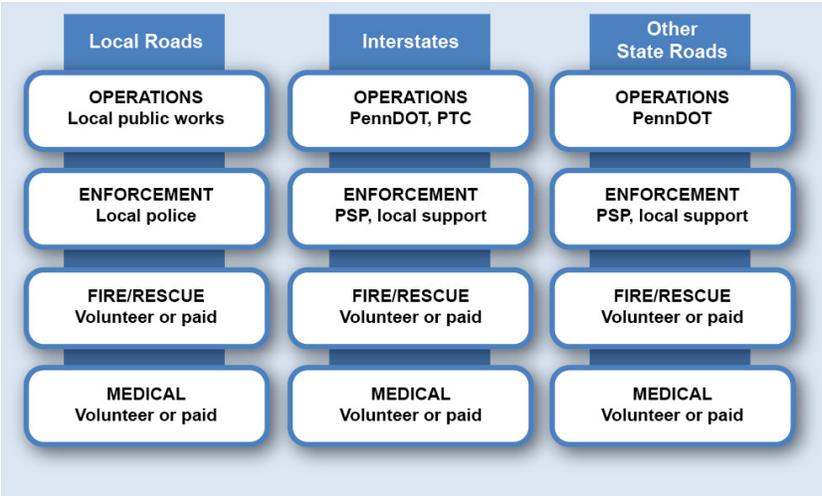
SPC	Southwestern Pennsylvania Commission
TAC	Transportation Advisory Committee
TIM	Traffic Incident Management
TIME	Traffic Incident Management Enhancement
TRB	Transportation Research Board
TRIP	Towing & Recovery Incentive Programming

Executive Summary

As defined by the Federal Highway Administration (FHWA), TIM is a planned and coordinated multidisciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM reduces the duration and impact of traffic incidents and improves the safety of motorists, crash victims, and emergency responders. It also significantly reduces traffic congestion—25 percent of all congestion is attributed to traffic incidents.

This study examines the current state of TIM in Pennsylvania and the U.S. It identifies the issues involved in TIM, based on current research to identify programs and delivery systems that can be effective in reducing the disruption time that motorists, pedestrians, and communities experience on local, state, and private roads.

TIM in Pennsylvania is a blend of rural and urban needs, of volunteer and paid professionals, of state and local agencies, and of county government and state directives. Coordinating TIM in Pennsylvania has been challenging because state and local roadways fall under different jurisdictions and thus (by law) involve different responding entities and different protocols.



On September 17, 2013, TAC, in conjunction with the FHWA Peer Review Process, invited a panel of U.S. TIM experts to speak to and interact with representatives from throughout Pennsylvania who have a stake in successful TIM. During their formal remarks and through their interaction with the attendees, the panel reinforced the need for TAC to focus on four central high-level areas of TIM: legislation, leadership, institutional, and sustainability opportunities. Additionally, the TAC Incident Management Task Force has researched the current state of traffic incident management policy and practice in Pennsylvania, reviewed national research and



studies done on the TIM practice, and compiled practices that appear to have positive potential. Key findings are:

- **Legislation and Leadership**
 - Pennsylvania “Move Over” (75 Pa.C.S. § 3327) and “Driver Removal” laws are clear, though perhaps not familiar to the public.
 - Pennsylvania’s “Authority Removal” law exempts persons removing vehicles from liability, but does not extend that exemption to the agencies or organizations those persons represent.
 - Pennsylvania laws covering coroners allow the removal of a body from the roadway “*so much as is necessary for precaution against traffic accidents or other serious consequences which might reasonably be anticipated if [the scene was] left intact.*”¹
 - Pennsylvania’s Emergency Services Code (P.L. 35) does not specifically reference traffic incidents or approaches that are to be used to coordinate crash detection, validation, dispatch, response, recovery, or performance measurement.
 - There is no meaningful towing/recovery certification program and there are no standards.
- **Institutional and Sustainability**
 - There is no statewide coordination body tasked with TIM responsibility. The effort is left to individuals whose passion for and interest in building a sustainable program is the driving force.
- **Professional Capacity-Building**
 - There is no unified or coordinated state training program associated with TIM.
- **Public Information and Outreach**
 - There is limited evidence of an effort to educate responders, experienced motorists, or new drivers on the importance of all parties’ understanding of and commitment to the shared responsibility for TIM.

Based on the research completed and its understanding of the issues, the task force recommends eight actions be undertaken in Pennsylvania. The following matrix summarizes the recommendations, which are described in more detail in the Recommendations section.

No.	Recommendation	Time-frame	Lead Champion	Return on Investment Considerations
Legislative and Leadership				
1	Establish Hold Harmless legislation, protecting: <ul style="list-style-type: none"> • Response agencies and organizations • Private towing and recovery companies • Hazmat response units 	Near-term	Legislature	Less time lost by commercial vehicles waiting in queues created by minor crashes.

¹ (As amended 1990, Nov. 29, P.L. 602, No. 152, Sec. 3)

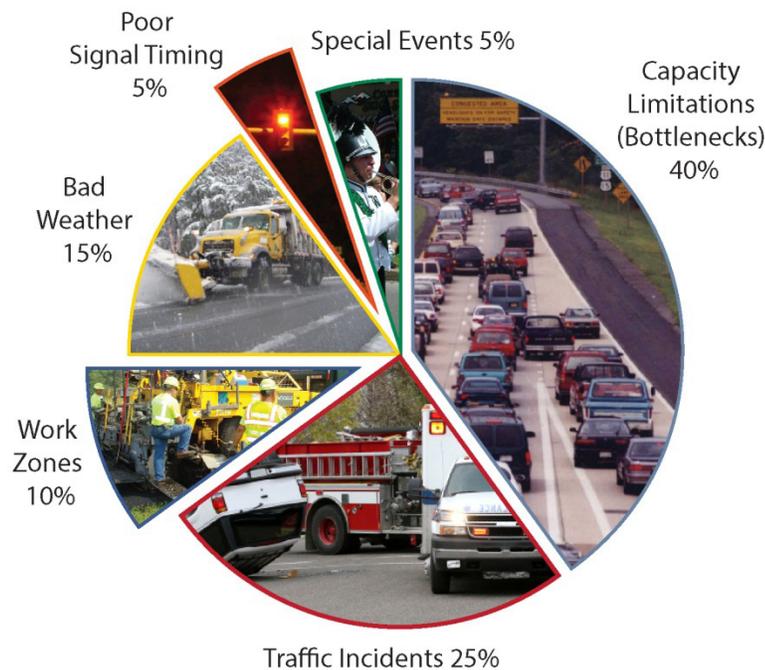
No.	Recommendation	Time-frame	Lead Champion	Return on Investment Considerations
2	Amend Title 35 to address TIM: <ul style="list-style-type: none"> • Collaborative effort of volunteer and paid responders • PEMA Operations Deputy as responsible state officer • Address multidisciplinary training and after-action reviews • Designate TIM strategic planning leadership 	Near-term	Legislature	Improved preparedness for significant regional events.
3	Establish an Executive Statewide Incident Management Panel: <ul style="list-style-type: none"> • Guide policy development • Represent all disciplines and government levels represented 	Near-term	Agency Leads	Streamlined initiative implementation, reducing duplicative efforts by individual agencies.
4	Establish Joint Operational Policy: <ul style="list-style-type: none"> • Guides statewide TIM program • Sets expectations for communications, training, review activities, standards, etc. 	Near-term	Agency Leads	Improved standardization that will improve response efficiency.
Institutional and Sustainability				
5	Establish PennTIME program: <ul style="list-style-type: none"> • Statewide institutional responsibility • Bidirectional communication structure, state–regional–local • Expand use of FHWA TIM self-assessments • Invest in performance measurement data and resources • Establish scene safety and scene management guidelines • Create towing certification, incentive, and cost recovery program • Implement multi-agency, multidisciplinary after-action review policies and procedures • Institutionalize TIM at municipal/county levels • Develop model guidelines for coroner procedures • Address signal operations responsibilities for detour routes of NHS roadways • Advance operations-related projects that address NUG • Work to advance dedicated TIM funding line items in state budget 	Mid-term	Agency Leads/Reps	Will improve integration of effort with large-scale preparedness and provide additional training resources.



No.	Recommendation	Time-frame	Lead Champion	Return on Investment Considerations
Professional Capacity-Building				
6	<p>Expand LEPC connections</p> <ul style="list-style-type: none"> Amend legislation to require involvement in LEPC committees by PennDOT, PSP, PADEP, and all other state and local response agencies and companies. Charge LEPC committees with considering TIM as part of SARA-related evacuation planning. 	Mid-term	PennTIME	Will merge transportation and emergency planning at the local level, leading to a more complete understanding of resource needs.
7	<p>Enhance and coordinate joint training activities:</p> <ul style="list-style-type: none"> Includes training opportunities through PennTIME and other organizations Office of State Fire Commissioner to: <ul style="list-style-type: none"> Implement national emergency responder training statewide (coordinate with other disciplines to achieve broad acceptance) Receive funding to maintain multi-agency TIM training calendar and implement training through PA fire academies Determine need for and value of other training curricula 	Mid-term	PennTIME	Greater standardization will be achieved, leading to safer and faster incident clearance and the ability to measure benefits quantitatively.
Public Education				
8	<p>Improve driver education and outreach:</p> <ul style="list-style-type: none"> Promote awareness of TIM-related laws PennDOT, PSP, and PTC to provide updated outreach and educational materials using various mediums to PennTIME organizations Establish Responder Safety Week and track related safety improvements Conduct annual surveys (through PennDOT driver licensing centers) tracking awareness of TIM-related laws 	Mid-term	PennDOT	An improved traveling experience in Pennsylvania that includes enhanced motorist and responder safety, and improved economic performance.

1. Introduction and Background

According to the U.S. Department of Transportation, two-thirds of the congestion on U.S. roadways is non-recurring congestion. That includes traffic crashes, maintenance and construction work zone lane restrictions, weather events, and other unpredictable conditions. In 2009 alone, non-recurring congestion cost Pennsylvania an estimated \$216 million. Nearly 25 percent of all congestion is attributed to traffic incidents alone.



Of all emergency responder fatalities in the past decade, those at traffic crashes were more than 50 percent of the total. Secondary crashes are a problem as well. A secondary crash can occur in the queue of either direction of traffic approaching the incident scene. It is estimated that 20 percent of crashes are secondary crashes, and that one in five secondary crashes is fatal.

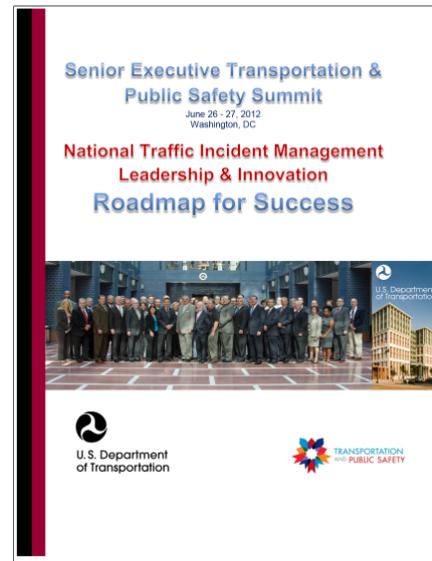
1.1 Traffic Incident Management Overview

Traffic Incident Management (TIM) is the term used by agencies, entities, and organizations involved in preparedness, response, and recovery from incidents and events that affect traffic capacity and/or operations. The practice involves planning, investment, and interagency and interdepartmental support for roadway and roadside activities that result in safe, quick clearance of roadway obstructions and a return to normal operations.



This study examines the current state of TIM in Pennsylvania and the U.S. It identifies the issues involved in TIM, based on current research to identify programs and delivery systems that can be effective in reducing the disruption time that motorists, pedestrians, and communities experience on local, state, and private roads.

The starting point for the study was the 2012 U.S. Department of Transportation report entitled *National Traffic Incident Management Leadership & Innovation: Roadmap for Success*, which outlines results of the Summer 2012 Senior Executive Transportation and Public Safety Summit in Washington, D.C. The federal “roadmap” lays out a set of goals and recommendations. This TAC study is organized according to those goal areas and examines and refines them for application in Pennsylvania. This report’s findings and recommendations align with federal guidance.



Specifically, this study examines, by its stated scope:

- Existing best practices as commonly identified by agencies and entities, as reported to FHWA, and in the context of the “Roadmap;”
- Current Pennsylvania efforts on issues related to quick clearance of roadways; and
- Activities led by metropolitan planning organizations and others in this subject area.

1.2 A History of TIM in the United States

TIM “began” with the first response to the first crash that obstructed safe passage on a roadway. From that earliest unrecorded incident through the evolution of the Automobile Age in the 20th century, TIM was defined, and refined, by responders such as passing motorists, nearby property owners, firefighters, law enforcement officers, emergency medical personnel, ambulance drivers, tow truck operators, and specialized technical experts.

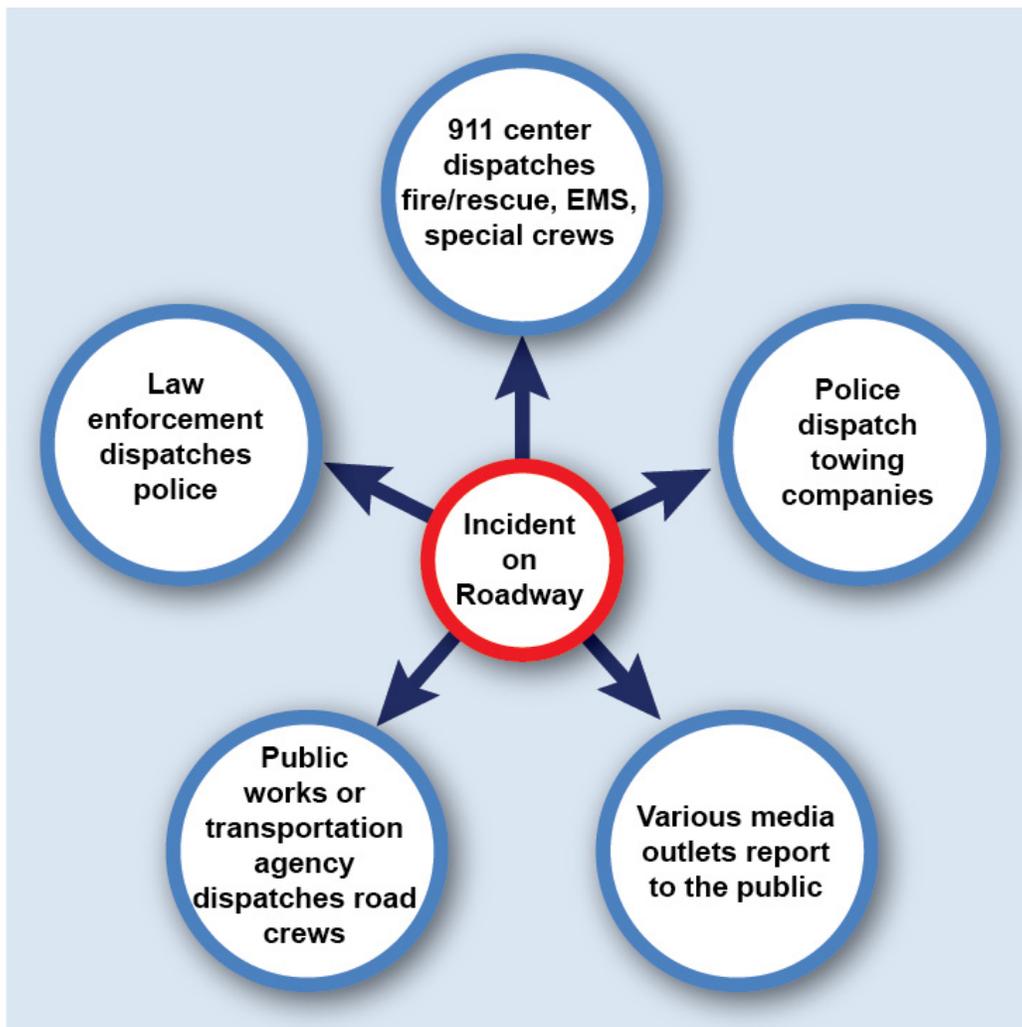
Near the turn of the 21st century, the role of public safety dispatchers became clearer, and centralized dispatch support for first responders began to be defined. Today, technology advances enable information collection and connections from Intelligent Transportation Systems (ITS) components to those support centers, which allows agencies to electronically detect crash consequences, such as backed-up traffic. Systems allow information-sharing in a variety of ways with motorists, responders, and travelers planning their routes.

The process of incident management begins with knowing about the incident (detection), then validating the needs associated with stabilizing the incident, treating the wounded, and restoring traffic capacity. The process may simply involve a passing motorist offering assistance, or it may

require multiple disciplines working together. Figure 1 illustrates that knowledge of the incident can result in separate dispatches of multiple resources from multiple disciplines, as well as separate private sector media reports via television, radio, Internet, or mobile phone applications. Effective and appropriate TIM activities coordinate disciplines and jurisdictions to minimize duplication of effort and maximize resource utilization.

At the federal level, the United States’ implementation of the National Incident Management System (NIMS) and adoption of the Incident Command System (ICS) in 2004 gave responders a common structure and language. This enables first responders to work together at a scene, define common objectives, promote life safety, stabilize incidents, and preserve property. Strategies could include a common procedure for dispatch of resources that would help promote efficient use of resources, safe scene ingress and egress, and quicker clearance of incident obstructions.

Figure 1: Incidents Result in Separate Dispatches of Separate Resources





The National Traffic Incident Management Coalition (NTIMC) was formed in 2004 under the leadership of the American Association of State Highway and Transportation Officials (AASHTO) as a multidisciplinary forum “spanning the public safety and transportation communities to coordinate knowledge, practices, and ideas.”

NTIMC formulated the National Unified Goal (NUG) for TIM in 2007. The goal has three facets, or objectives:

- Responder safety
- Safe, quick clearance
- Prompt, reliable, interoperable communications

Strategies were developed under each of the three objectives, along with “cross-cutting” strategies that will advance overall progress (Table 1).

Table 1: Objectives to Achieve the National Unified Goal (NUG)

Goal Area/ Objective	Strategies
Cross-cutting	<ul style="list-style-type: none"> • Establish partnerships and programs • Provide multidisciplinary training • Promote performance measurement • Implement coordinated technology • Advocate for supportive policies • Build partnerships for awareness and education
Responder Safety	<ul style="list-style-type: none"> • Develop recommended practices • Enact Move Over/Slow Down laws • Establish driver training and awareness programs
Safe, Quick Clearance	<ul style="list-style-type: none"> • Adopt multidisciplinary procedures • Set response and clearance time goals • Ensure 24/7 resource availability
Prompt, Reliable Interoperable Communications	<ul style="list-style-type: none"> • Standardize communication practices and procedures • Improve responder notifications • Develop interoperable voice and data networks • Integrate broadband emergency communications • Provide prompt, reliable traveler information • Build partnerships with news media and information providers

Another significant product of the NTIMC is its TIM Network, a web-based organization of nearly 2,000 practitioners sharing best practices and ideas across more than 40 states.

The most recent significant activity in national TIM thinking is the aforementioned *National Traffic Incident Management Leadership & Innovation: Roadmap for Success*, which outlines results of the Summer 2012 Senior Executive Transportation and Public Safety Summit in Washington, D.C. The document identified four major areas of emphasis moving forward:

- Leadership and Legislation
- Institutional and Sustainability
- Professional Capacity Building
- Public Awareness and Education



2. Overview of TIM in Pennsylvania

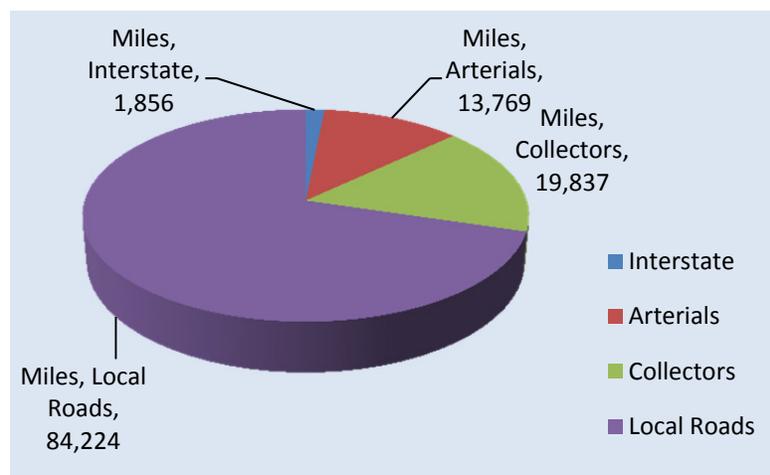
TIM in Pennsylvania is a blend of rural and urban needs, of volunteer and paid professionals, of state and local agencies, and of county government and state directives. As illustrated in the previous section, the fact that responsibilities are divided across many agencies and various levels of government almost guarantees conflicts and inefficiencies. The fact that there are successes in incident management is a testament to the dedication of disparate groups focused on shared goals, despite having no official structure or enabling organizational approach.

This study acknowledges the lack of TIM structure that currently exists, and embraces local and regional efforts that have proven successful.

Coordinating TIM in Pennsylvania has been challenging because state and local roadways fall under different jurisdictions and thus (by law) involve different responding entities and different protocols.

For example, as shown on Figure 2, two-thirds of the road miles in the Commonwealth are owned and maintained by individual municipalities, and are thus governed by municipal policies and dependent on municipal funding decisions.

Figure 2: Pennsylvania Roadway Miles



Source: *State Transportation Statistics 2011*, Research and Innovative Technology Administration, U.S. Department of Transportation

Table 2: Crashes by Road Type

	State Hwy (Interstate)	State Hwy (Other)	Turnpike	Local Road	Other
Crashes	9,235	80,390	2,521	31,930	16
Persons Killed	105	985	18	202	0
Persons Injured	5,631	58,753	1,120	21,362	15
Miles of Maintained Road	1,367	39,248	556	79,412	...
100 MVM ^a Traveled	178.9	582.0	57.8	183.1	...
Crashes/MVM ^a	0.52	1.38	0.44	1.74	...
Persons Killed/100 MVM ^a	0.59	1.69	0.31	1.10	...
Persons Injured/MVM ^a	0.31	1.01	0.19	1.17	...

Source: 2012 PA Crash Facts

^aMVM = million vehicle-miles

Note: "State Highway (Other)" includes state-maintained roads that are not designated as interstates. The road mileage and MVM data are from the 2011 Highway Performance Monitoring System (HPMS) package and reflects 2011 length and travel activity data. Ramps are included as part of the roadway to which it is connected.

Table 2 shows that rates of crashes and persons injured on local roads are higher than on state roads on a per million vehicle-miles standard measurement. The response to an incident on a local roadway is undertaken by a combination of municipal, county, and volunteer agencies and organizations, and is normally a local responsibility. In most cases, there is very little organizational structure to the response.

The Pennsylvania State Police (PSP) is the only state agency with any direct incident management responsibility on local roadways, and PSP does not normally patrol those roadways. PSP responds for traffic accident and criminal investigation only, and only when there is no local police force.

Other state-level entities may become involved if the issue escalates. Pennsylvania Department of Transportation (PennDOT), by statute, may use its resources to respond to incidents on local roadways only after a declaration of emergency by the Governor.

The Pennsylvania Emergency Management Agency (PEMA) supports the county EMA if it is handling issues associated with the local response; again, by its enabling legislation and consistent with the National Response Framework, PEMA is only involved if issues escalate. Other state agencies such as the Department of Health, Department of

This study's recommendations focus on issues that are relevant to all responding agencies, within Pennsylvania's current statutory, regulatory, and policy rules.



Agriculture, and Department of Environmental Protection could possibly have a role in support of response activities.

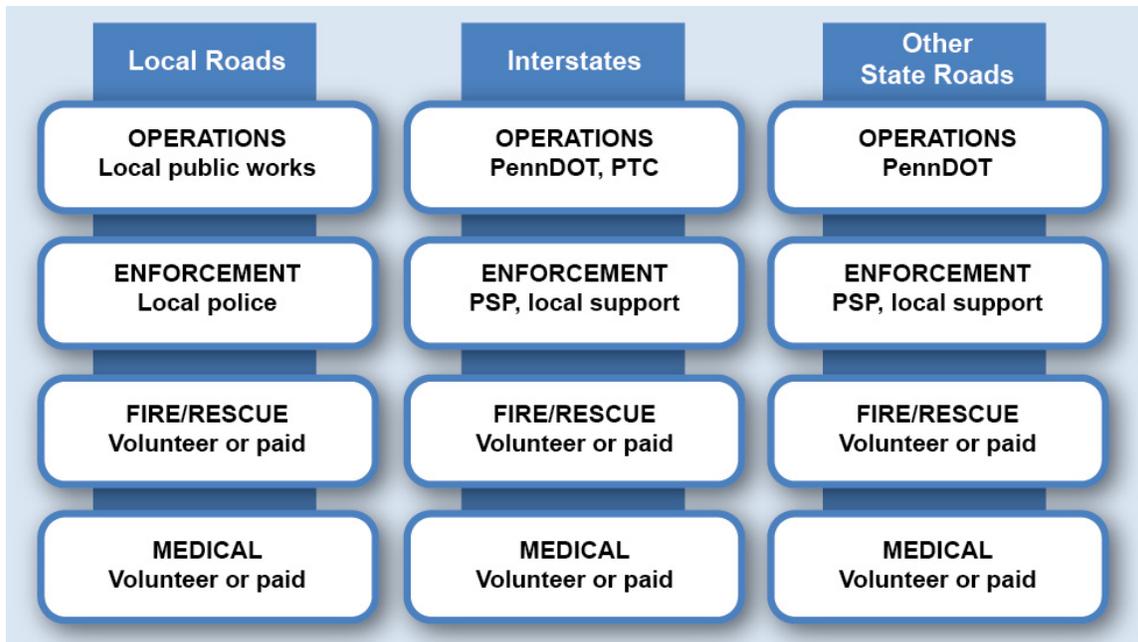
One current unifying concept is the national and Commonwealth focus on the use of the ICS as the command and control structure for all responses to all emergencies. However, training in and application of ICS principles are not monitored. Further, although emergency responders and public works personnel have completed ICS course work, there is no measured system to gauge the effectiveness of that training. There is no clear way to judge improvements in operational capacity due to ICS.

The ownership and responsibility for operation of a roadway is not clearly defined. There are no statutory or regulatory requirements that govern closures for planned events (construction or scheduled maintenance work, parades, etc.), or for unforeseen incidents such as flooding or other weather-related closures, traffic crashes, or security issues.

PennDOT has control of special event closures with a permitting process in place, and the Secretary has authority to close roads for safety concerns, but that is only for state roadways, except in the case of a Governor’s Declaration of Emergency.

In both rural and urbanized areas, traffic incident and event management success is largely the result of a serendipitous environment where strangers congregate at a scene and make the necessary decisions to conduct safe operations and restore traffic capacity. It usually happens in just that order—safety first, mobility second.

Figure 3: TIM Responsibilities Are Divided Across Many Entities and Levels of Government



2.1 Municipal/County Approach

State agencies and regulations may influence TIM on local roadways, but they do not govern specific activities except during declared emergencies.

According to current law in Pennsylvania (PA Act 35), municipal elected officials and elected or appointed administrators are responsible for designating a municipal emergency management coordinator and overseeing activities that involve municipal police, fire/rescue, emergency medical, and public works personnel and resources. This is consistent with the *National Response Framework* published in 2009 by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA). There is no penalty for non-compliance, and no recourse to compel a municipality to follow state mandate.

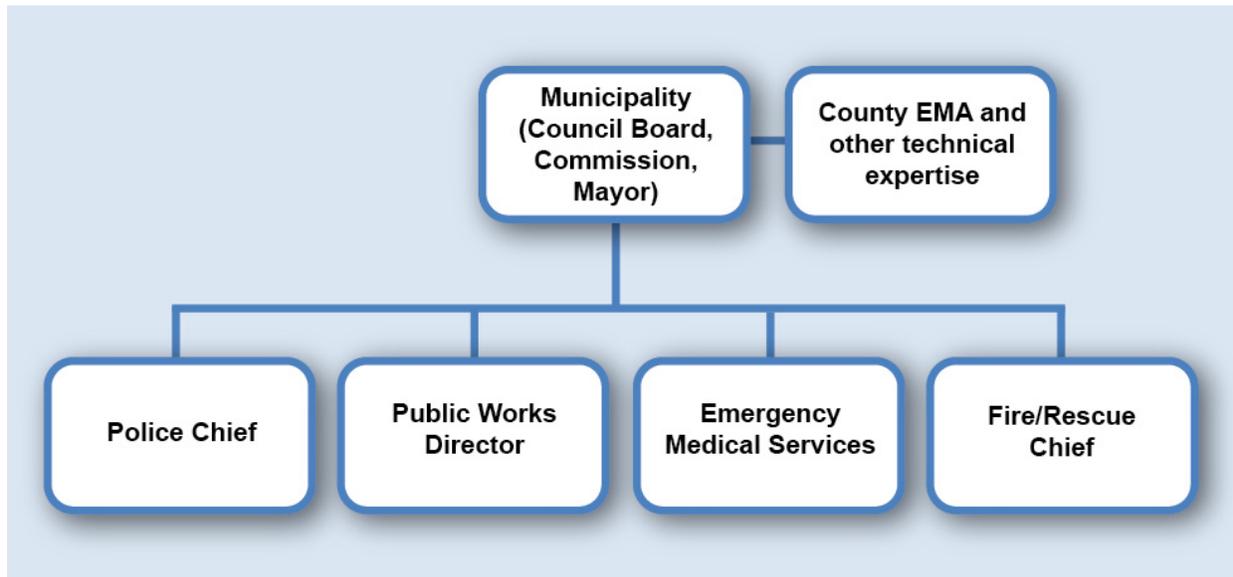
There is no guarantee, even within a municipality, that there will be agreement on the scene of an incident about the approach to resolve safety and traffic issues. It follows that the response in a township in Butler County is likely different from a city in Berks County, or a borough in Carbon County. Likewise, a county coroner procedure in one county is very different from another county, based on the local conditions and personnel availability. Each municipality or county may have its own standards, processes, procedures, and problems to deal with.

Larger municipalities generally have more personnel, equipment, and experience dealing with traffic incidents and their effects. Coordination of multi-municipal approaches to serious traffic disruptions is generally left to the municipal emergency management coordinators, who reach out to the county emergency management agency. The county agencies are the conduit to PEMA, which is responsible for information and resource coordination for multiple-county issues or for coordinating a higher level of response when warranted.

Municipalities with little or no resources available to handle traffic incidents rely on state police, regional municipal police, or county hazardous materials units to help handle incidents.



Figure 4: Municipality Handling Incident on Municipal Road



2.2 State Approach

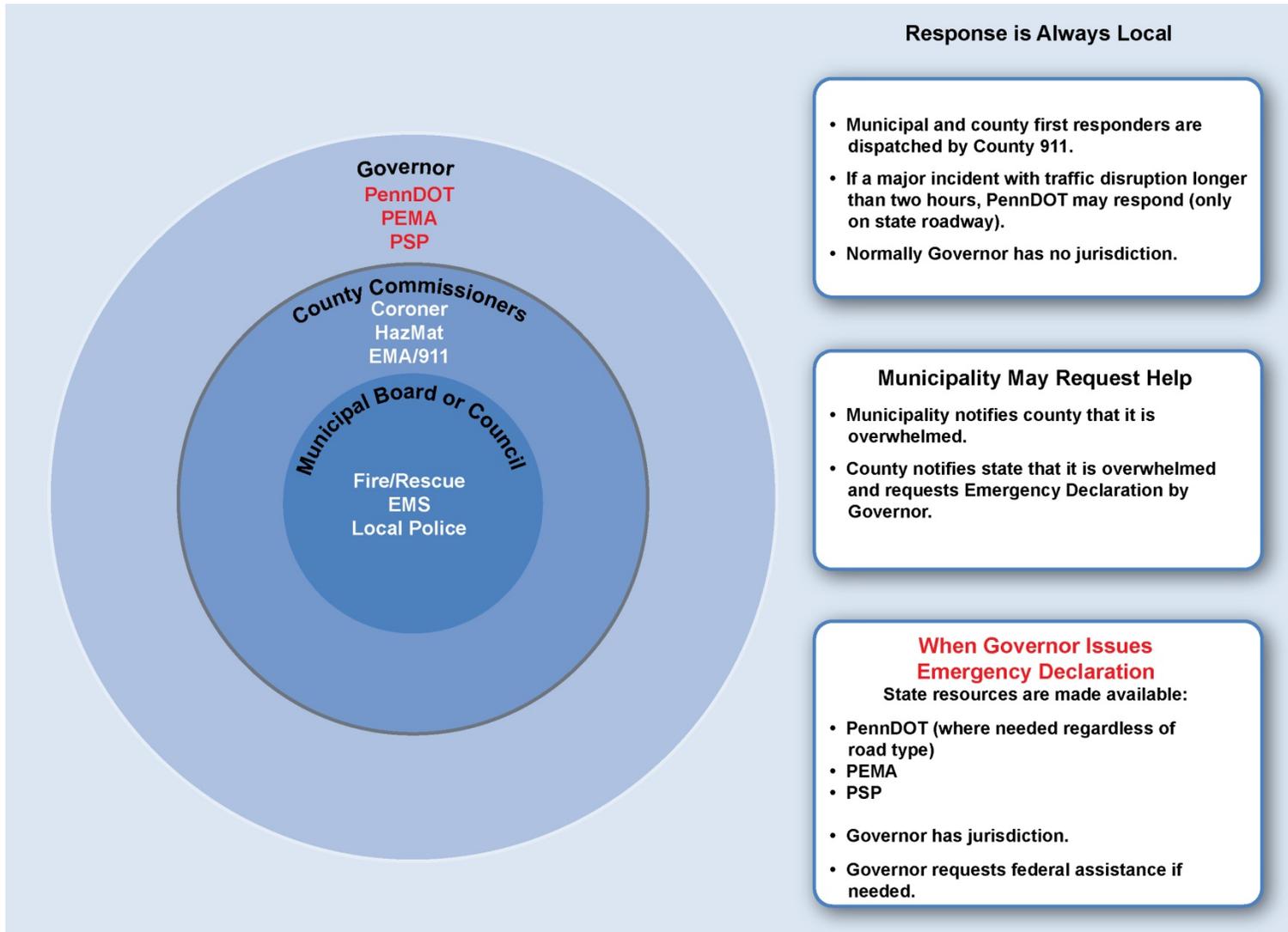
PennDOT and PTC own, maintain, and operate more than 42,000 miles of state roadway, representing nearly one-third of the Commonwealth's total road network. Most of that system is patrolled by the PSP. PEMA is responsible for communications and resource coordination for events and incidents on those roadways, or off the roadway, but utilizing the system for emergency traffic.

PennDOT is working with the FHWA to develop a peer group to review clearance times for TIM in Pennsylvania.

There has been some state-level inter-agency coordination, but it has not involved local partners. PennDOT does not normally respond with personnel or resources for incidents even on state roadways after normal working hours, unless there is a specific call for resources or the traffic disruption is expected to last more than two hours.²

² PennDOT Publication 23: Maintenance Manual, Chapter 9

Figure 5: Multiple Disciplines Handling Incident on State Road



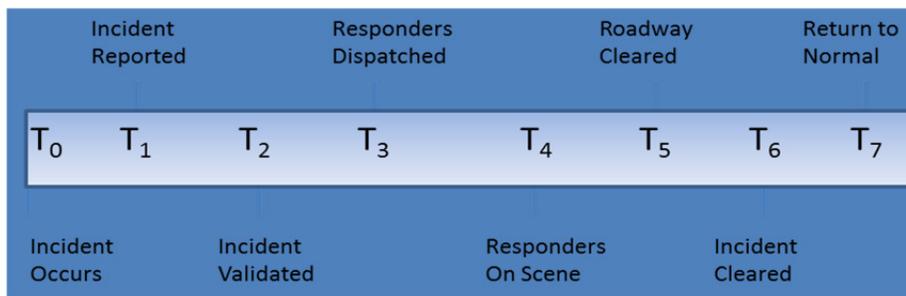


2.3 Common Approach

There are certain activities common to all incident responses. In the U.S., the “Traffic Incident Timeline” (Figure 6) is generally used to describe the eight key events and actions, or time points, in an incident’s life cycle.

The FHWA uses two key indicators: the duration between time points T1 and T5, when “roadway clearance” is achieved for all lanes affected by a disruption, and the duration between T1 and T6, when “incident clearance” is reached and responders leave the roadside.

Figure 6: Traffic Incident Timeline



The NUG and Timeline can be considered as a whole when impacts of NUG strategies are compared to the points on the timeline, as in Figure 7 from the draft Incident Management Manual produced for PennDOT between 2009 and 2013.

Figure 7: Relationship between the National Unified Goal and Traffic Incident Timeline

NUG Strategy ● = Correlation	Incident Timeline Milestone							
	Occurrence (T0)	Report (T1)	Verification T(2)	Dispatch (T3)	Scene Arrival (T4)	Road Cleared (T5)	Incident Cleared (T6)	Traffic Normal (T7)
1-Partnerships and programs	●		●	●				
2-Multidisciplinary NIMS, TIM training			●	●	●	●	●	
3-Goals for performance and progress			●			●		●
4-Technology		●	●			●		●
5-Effective policies	●					●		
6-Awareness and education			●		●		●	●
7-Recommended practices for responder safety				●	●	●	●	
8-Move over/slow down laws	●				●		●	
9-Driver training and awareness	●				●	●	●	●
10-Multidisciplinary procedures			●	●	●	●	●	
11-Response/clearance time goals								●
12-24/7 availability	●		●	●	●	●	●	●
13-Multidisciplinary communications practices and procedures	●	●	●	●		●		
14-Prompt, reliable responder notification	●	●	●	●		●		●
15-Interoperable voice and data networks	●	●	●	●		●		●
16-Broadband emergency communications systems	●	●	●	●				
17-Prompt, reliable traveler information systems					●	●	●	●
18-Partnerships with the news media and information providers	●	●	●	●		●		●



2.4 Pennsylvania Statutes

Pennsylvania has laws governing most aspects of TIM, in disparate places and codes as described on the following table. A brief analysis is included to suggest policy improvements.

Table 3: Pennsylvania Laws Affecting Traffic Incident Management

Subject	PA Law	Summary	Analysis <i>Green = Law is appropriate</i> <i>Yellow = Additional public education required</i> <i>Red = Action required</i>
Emergency Management	Public Health and Safety Code: Title 35	Emergency Management is the responsibility of municipalities, counties, and the State Emergency Management Agency. The act covers fire, emergency medical, and related services.	Amending Title 35 to address traffic incident management separately as a collaborative effort of volunteer professional and paid professional responders would categorize TIM activities as an emergency management responsibility.
Stop Law	Vehicle Code (Title 75), Chapter 37, Sections 3742 (injury crash) and 3743 (non-injury crash)	Drivers shall immediately stop the vehicle at the scene of the accident, or as close thereto as possible but shall forthwith return to and in every event shall remain at the scene of the accident ... Every stop shall be made without obstructing traffic more than is necessary.	Better public outreach and education would be of benefit to Pennsylvanians to promote safety and reduce traffic obstructions following a crash. Outreach to the general public and special instruction for new drivers would be appropriate.
Authority Removal Law	Vehicle Code (Title 75), Chapter 37, Section 3743.1 (cargo), Section 3745.1 (wrecked vehicle)	<p>(cargo) Immediately following an accident, a police officer may remove or direct removal of spilled cargo from any roadway to the nearest point off the roadway where the spilled cargo will not interfere with or obstruct traffic.</p> <p>(vehicle) A police officer may immediately remove or direct removal of a wrecked vehicle if the owner or operator cannot remove the wrecked vehicle or refuses or fails to have the vehicle removed as required under this section.</p> <p><i>Limited Liability for both sections:</i> In carrying out the provisions of this subsection, no liability shall attach to the police officer or, absent a showing of gross negligence, to any person acting under the direction of the police officer, for damage to any vehicle or damage to or loss of any portion of the contents of the vehicle. Drivers who remove vehicles from the roadway do not admit fault by moving the vehicle.</p>	There is no limitation on liability of a fire company, municipality, or state agency, only of the individuals. Adoption of legislation that limits liability of those agencies and departments would be beneficial. Adding “or incident commander” to the “police officer” would be NIMS-compliant.

Subject	PA Law	Summary	Analysis <i>Green = Law is appropriate</i> <i>Yellow = Additional public education required</i> <i>Red = Action required</i>
Steer Clear Law (Move Over)	Title 75, Chapter 37, Section 3327	Drivers approaching an emergency response area must pass in a lane not adjacent to the emergency response area or pass at a careful and prudent reduced speed for safely passing the emergency response area. Flares, signs, or other traffic control devices, as well as visual signals on emergency vehicles, must be present to define the emergency response area.	Pennsylvania has a good law following national standards and no action is necessary beyond public education.
Emergency Vehicle Equipment	Title 75, Chapter 45, Subchapter D	Designates that red lights, blue lights, and yellow lights are appropriate for emergency vehicles, including police, fire, emergency medical, towing, or DOT vehicles, and those deemed by State Police or PennDOT as necessary to the preservation of life or property.	Pennsylvania has no issues with warning light usage or yellow lights when used for emergency purposes.
Coroners	Pa Law 602, No. 152, Sec. 3, Section 1237(a)(3) and Section 1240	In all cases where the coroner has jurisdiction to investigate the facts and circumstances of death, the body and its surroundings shall be left untouched until the coroner has had a view thereof or until he shall otherwise direct or authorize, except as may be otherwise provided by law, or as circumstances may require. Bodies upon a public thoroughfare or in other places may be removed so much as is necessary for precaution against traffic accidents or other serious consequences which might reasonably be anticipated if they were left intact. (As amended 1990, Nov. 29, P.L. 602, No. 152, Sec. 3)	There is no identified statewide issue with delays in roadway clearance based on coroner activities, or delays in arrival.



3. TIM Best Practices Overview

3.1 Policy and Legislation

In compiling the information for this report, the study team conducted numerous interviews and reviewed considerable literature on TIM. This section documents those interviews and reports on the issues that were raised as part of this research.

3.1.1 Driver Removal

The FHWA Office of Operations reports that more than half of all U.S. states have Driver Removal laws that require drivers involved in a crash to move their vehicle from the travel lanes, exchange information, and report crash information as required by law. State-to-state, laws consistently promote the minimal obstruction of traffic but vary significantly in the specific provisions defining where, when, and under what conditions these laws apply.

Pennsylvania's Driver Removal law follows model language promoted by FHWA. In any incident involving death, injury, or property damage, drivers are required to stop as close as possible to the scene of the incident and to exchange information with law enforcement personnel or other motorists. The law states, "Every stop shall be made without obstructing traffic more than is necessary."

FHWA's studies suggest that a more comprehensive Pennsylvania removal law might also address specifics such as:

- applicable roadway facilities and affected features;
- applicable incident types;
- removal authority;
- appropriate removal locations;
- crash investigation; and
- hold harmless clauses.

Although Driver Removal laws are widely enacted, they are not always actively publicized or enforced, which limits their effectiveness. FHWA projects significant benefits from active promotion of Driver Removal laws. Studies show proper driver removal of vehicles involved in a crash reduces incident-related delay by more than 10 percent. Delay cost savings are estimated at more than \$1,600 per incident.

Further reference material on Driver Removal laws is available at http://www.ops.fhwa.dot.gov/publications/fhwahop09005/driv_removal.htm

3.1.2 Authority Removal

FHWA suggests that Authority Removal laws and associated Hold Harmless laws were originally envisioned to ensure adequate accessibility to the roadway infrastructure or appurtenances for transportation agencies when performing roadside construction and maintenance duties and for emergency response vehicles en-route to an emergency. Safety

implications of damaged or disabled vehicles and/or spilled cargo were considered only if travel lanes were sufficiently obstructed.

As years passed, Authority Removal laws became strategies for reducing incident-related congestion and delay. Also, the scope of removal authority expanded to generally include not only obstructions in the travel lanes but also vehicles and/or cargo on the shoulder or in the roadway right-of-way, in recognition of the potential safety hazards.

Model language includes providing responders with the authority to move or order the removal of a vehicle from the roadway, and authorizes a law enforcement officer or the Incident Commander (as defined in NIMS/ICS) to remove vehicles from the highway at the owner's expense if the driver is unwilling or unable to do so. When the decision is made in the absence of a law enforcement officer, the model language suggests that the vehicle's location be reported to the nearest law enforcement agency as soon as practicable. This language addresses the issues associated with delays in arrival or unavailability of law enforcement officers.

Additional guidance related to Authority Removal laws is provided in the *Incident Responders' Safety Model Law*.

One section of the model law (Section 5, in sidebar) provides liability protection to responding agencies and their personnel when incident clearance functions are exercised with reasonable care at the direction of the Incident Commander.

Section 5. Liability Protection for Authorized Incident Clearance Functions

- a. Governmental agencies responding to incidents, including but not limited to law enforcement, firefighting, emergency medical services, hazardous materials, transportation agencies and other emergency governmental responders are authorized to exercise the incident clearance functions enumerated in this section. If such functions are exercised with reasonable care and at the direction of the incident commander, those governmental agencies and their personnel and other designated representatives are insulated from liability resulting from such actions taken pursuant to incident clearance, including:*
- o Incident detection and verification;*
 - o Incident area security and protection;*
 - o Rescue of persons from vehicles and hazardous environments;*
 - o Emergency medical transportation and care;*
 - o Hazardous materials response and containment;*
 - o Fire suppression and elimination;*
 - o Transportation of vehicle occupants;*
 - o Traffic direction and management, and establishment and operation of alternate routes, including but not limited to traffic detours and/or diversion;*
 - o Crash investigation;*
 - o Dissemination of traveler information;*
 - o Incident clearance, including removal of debris, coordination of clearance and repair resources, and temporary roadway repair and facilities restoration;*
 - o Removal of vehicles and cargo;*
 - o Any other actions reasonably necessary.*
- b. When directed by the incident commander, towing and recovery service providers are authorized to perform the following enumerated functions, and any other actions reasonably necessary to perform those enumerated functions:*
- o Removal of vehicles from the incident area;*
 - o Protection of property and vehicles;*
 - o Removal of debris from the roadway;*
 - o Transportation of persons or cargo.*



Another section (Section 6, in sidebar) assigns the costs associated with incident removal to the vehicle or cargo owner(s).

Further reference material on Authority Removal laws is available at http://www.ops.fhwa.dot.gov/publications/fhwahop09005/auth_removal.htm

3.1.3 Other Examples

Legislation activities are those associated either with enabling or permissive laws that allow practitioners to perform certain activities, or those that mandate or require that actions be taken. There is a place for both types of legislative action.

This summary highlights relevant U.S. laws beyond Move Over and Driver Removal laws, where Pennsylvania is already aligned with national best practices.

Abandoned Vehicles

Indiana Code 9-26-1-2 and other states

Defines an abandoned vehicle as remaining 24 hours, and allows for removal of the vehicle after that time. Pennsylvania is effectively using a seven-day approach unless the vehicle poses a clear safety hazard.

Hold Harmless

Rhode Island §24-8-42. (b)

There shall be no liability incurred by any state or local public safety department or agents directed by them whether those agents are public safety personnel or not for damages incurred to the immobilized vehicle(s), its contents or surrounding area caused by the emergency measures employed through the legitimate exercise of the police powers vested in that agency to move the vehicle(s) for the purpose of clearing the lane(s) to remove any threat to public safety.

Texas §545.3051. (e)...

An authority or a law enforcement agency is not liable for: (2) any damage resulting from the failure to exercise the authority granted by this section.

Virginia §46.2-1212.1. B.

The Department of Transportation, Department of State Police, Department of Emergency Management, local law-enforcement agency and other local public safety agencies and their officers, employees and agents, shall not be held responsible for any damages or claims that may result from the failure to exercise any authority granted under this section provided they are acting in good faith.

Section 6. Compensation for Incident Removal Costs

Notwithstanding any other law or regulation, any agency, person or organization incurring the cost of removing vehicles and/or cargo at an incident, if such removal is authorized by the traffic incident commander, shall have the unqualified right to compensation for the cost of such removal from the owner (or owners) of:

- the vehicles removed; and/or*
- the vehicles whose cargo was removed in whole or in part.*

Oklahoma §47-11-1002. B. 2.

Absent a showing of gross negligence, the law enforcement officer, the employing agency, or any person acting under the direction of the law enforcement officer is not liable for damage to a vehicle or damage or loss to any portion of the contents or cargo of the vehicle when carrying out the provisions of this subsection.

Towing and Recovery

Washington RCW §46 and §47

Washington State’s Revised Code of Washington (RCW) Chapters 46 and 47 reference permitting of towing companies, drivers, and cover inspection of facilities, among other requirements.

<http://apps.leg.wa.gov/rcw/default.aspx>

Harford County, Maryland Police Initiated Towing Regulations

Harford County divides its county into five areas of response, certifies vehicles and operators, and puts a premium on rapid response to clear roadways.

<http://www.harfordcountymd.gov/dilp/Download/1272.pdf>

Pennsylvania Turnpike Commission (PTC)

PTC establishes Authorized Service Provider Agreements—master agreements with service providers authorized to perform repairs and towing services. The agreements specify standards that apply to service calls on the Turnpike. Payment to authorized service providers is made per call, not based on time spent on scene.

PTC is currently assessing practices, including a review of current practices in Pennsylvania and national best practices in as many as 15 states. The study will also consider service and incentive models.

Towing & Recovery Incentive Programming (TRIP)

Atlanta’s TRIP program is recognized as a national best practice; variations of TRIP exist in Washington and in part of Ohio. When heavy wreckers and personnel are called by designated authorities to move large rigs from the interstates in and around Atlanta, those companies receive an incentive payment when clearance is completed within a specified timeframe—90 minutes to two hours for most TRIP programs. The programs work best in metropolitan areas where heavy wrecking is required more often.

3.2 Leadership, Institutional, and Sustainability Activities

3.2.1 Leadership

Leadership activities are those that establish program leadership specifically, and those that signify leadership commitment to TIM improvement from a high level.



Traffic Incident Management Enhancement (TIME program), Wisconsin

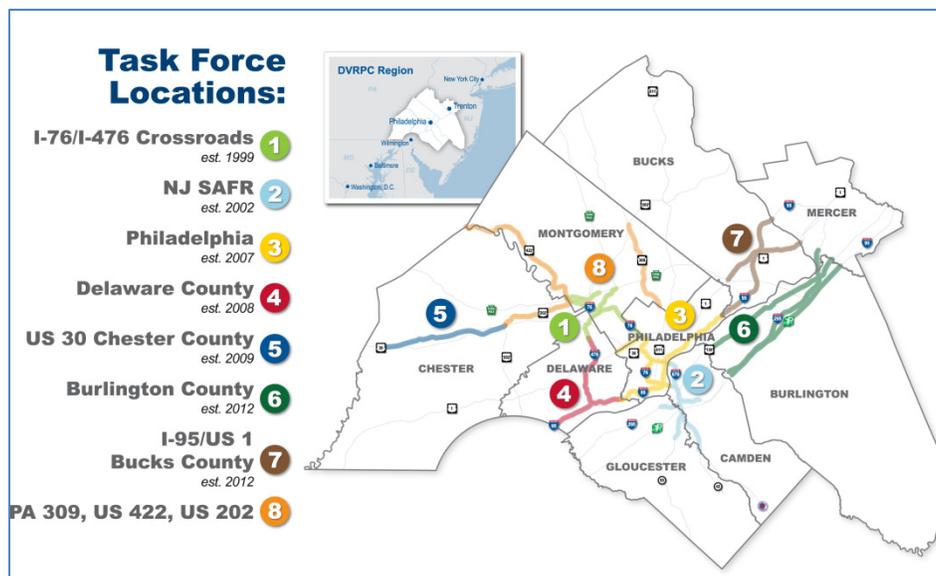
Wisconsin’s TIME program, with DOT leadership, established consistent, statewide scene management guidelines detailed enough to be used in after-action reviews. They were established collaboratively and are monitored collaboratively in DOT-sponsored regional TIME meetings held semi-annually or quarterly.

Delaware Valley Regional Planning Commission (DVRPC) New Jersey Southern Area First Responders Group (SAFR) Incident Management Task Force

DVRPC is the metropolitan planning organization for the nine-county Philadelphia region that includes parts of Pennsylvania and New Jersey. Its “SAFR” Incident Management Task Force assisted in developing scene management guidelines for all responders, signed by all parties, that are in use in one region of New Jersey.

These guidelines have also been a template for other DVRPC incident management task forces in both Pennsylvania and New Jersey currently developing their own versions. The state of New Jersey used these guidelines as a model for a statewide version that has been signed off by the state attorney general.

Figure 8: DVRPC TIM Task Force Corridors



New York Emergency Traffic Control and Scene Management Guidelines

New York modified and adapted the Wisconsin TIME model for its use and used a statewide coordinating committee structure to develop and promote standardized approaches to TIM. It includes information on response roles and responsibilities and is applicable to all responses, not only those where state agencies are involved. It includes guidance on collecting after-action information from all involved in response activities and uses DOT repositories of after-action review data to improve approaches and guidelines.

3.2.2 Institutional

New York Statewide Traffic Incident Management Steering Committee

The New York State Department of Transportation has fostered the development of a Statewide Traffic Incident Management Steering Committee to guide the state's TIM program. The committee includes representatives of the New York State Police; Departments of Health, Transportation, and Emergency Management; Thruway Authority; Sheriffs' Association; Association of Fire Chiefs; Association of Chiefs of Police; Empire State Towing and Recovery Association; and the Office of Fire Prevention and Control. The goal of the committee is to create a standard TIM program to implement statewide across all entities with a TIM role, at both the state and local levels.

DVRPC Incident Management Task Forces

The planning agency manages seven corridor-based TIM teams and assists with operations for three additional teams in Pennsylvania. DVRPC serves as the regional clearinghouse for incident management activities. Establishing IMTFs is a collaborative effort with the Pennsylvania and New Jersey Departments of Transportation, and Pennsylvania and New Jersey State Police Departments. The state of New Jersey also has a statewide incident management policy that is approved by the state's attorney general.

Wisconsin Traffic Incident Management Enhancement (TIME)

Wisconsin DOT led the establishment of a TIME program that uses a regional team approach and represents all stakeholders, including offsite support such as a traffic management center or public safety dispatch center. Regional teams meet at least twice a year and as many as six times per year, based on local needs. The meetings convene stakeholders to discuss regional issues and planned work and review past activities measured against its incident management response guidelines. The teams use video from past responses as training tools. A statewide conference uniting TIM disciplines is conducted.

Ohio QuickClear

QuickClear is the state's traffic incident management program composed of several agencies, including the Ohio Department of Transportation, local and state law enforcement agencies, fire and rescue departments, the Ohio Emergency Management Agency, and towing and recovery services. These agencies work together to advance the QuickClear mission: "Committed to maintaining the safe and effective flow of traffic during emergencies as to prevent further damage, injury or undue delay of the motoring public." QuickClear hosted its first-ever statewide TIM conference in October 2013.

3.2.3 Sustainability Activities

State of New Jersey Highway Incident Traffic Safety Guidelines for Emergency Responders and Feedback Committee

This committee is responsible for feedback on guidelines and updates to the guidelines, beginning with local reviews and results that must be sent to the state police for examination. Issue escalation is to the full committee and that committee makes binding decisions that influence future training and tactical activities.



Metro Atlanta Traffic Incident Management Enhancement (TIME) Task Force

The TIME mission is to develop and sustain a regional incident management program to facilitate the safest and fastest roadway clearance, lessening the impact on emergency responders and the motoring public. The purpose is three-fold:

1. To continue the dialogue on ways to improve inter-agency coordination and cooperation.
2. To create an opportunity for multi-agency training that promotes teamwork.
3. To serve as a platform for participants to develop common operational strategies and a better understanding of other agencies' roles and responsibilities.

One strength of the TIME program is its systematic means of collecting multi-agency, multi-jurisdictional input on incident responses.

3.3 Safe, Quick Clearance Best Practices

PennDOT's *Quick Clearance Best Practices* report, prepared in 2009, recommended executive actions based on a review of existing legislation and best practices in other states.

The suggested actions and sub-tasks in Table 4 come from that report, along with an update on known progress toward the recommendations.

Table 4: Recommendations of 2009 Quick Clearance Best Practices Report

Suggested Executive Actions	Suggested Sub-tasks	2013 Updated Status
Evaluate the Need for Changes in Legislation	<ul style="list-style-type: none"> • Driver removal law examination • Consider the need to strengthen hold harmless language in existing laws 	<ul style="list-style-type: none"> • No action to change "hold harmless" to include agencies
Consider the Establishment of an Incident Management Program	<ul style="list-style-type: none"> • Consider Implementing an Incident Management Policy • Consider establishing incident management memorandums of understanding with PSP • Consider developing an incident management Strategic Plan • Consider continuing and expanding the freeway service patrol program • Evaluate the benefit of implementing an incident management module into the Road Condition Reporting System • Consider implementing incident management performance metrics • Consider providing oversight and guidelines for work zone incident management plans • Facilitate the completion of FHWA's TIM Self-Assessment on an annual basis 	<ul style="list-style-type: none"> • Statewide IM Program Manual commissioned, PennDOT received draft report, in progress now for implementation • PEMA, PennDOT, and PSP have agreed to approaches on Interstate closures and restrictions initiation process • No IM module yet in place on RCRS • Performance Metrics under study by Department

Suggested Executive Actions	Suggested Sub-tasks	2013 Updated Status
		<ul style="list-style-type: none"> • Closure data has been provided by PennDOT to urban metropolitan planning organizations (MPOs) for their use
<p>Evaluate the Expansion Capabilities for Training and Outreach Efforts</p>	<ul style="list-style-type: none"> • Develop and disseminate a PennDOT Incident Management Brochure • Dedicate a portion of the PennDOT website to become a focal point for Pennsylvania Quick Clearance information and outreach efforts • Coordinate and hold 11 Saturday Incident Management Symposiums • Require District Incident/Emergency Management Coordinators to attend two county EMA coordination meetings per year • Provide quick clearance training opportunities by nationally recognized experts • Establish a relationship with the Pennsylvania Chiefs of Police Association 	<ul style="list-style-type: none"> • No activity known before this effort
<p>Consider Facilitating the Improvement of the Towing and Recovery Qualification Process</p>	<ul style="list-style-type: none"> • Facilitate coordination efforts between the PSP and the Pennsylvania Towing Industry • 29% Shared with Traffic Engineering • 65% Shared with Maintenance Forces 	<ul style="list-style-type: none"> • One meeting with towing association reps held in March 2012, no follow-up • Towing continues to be discussed internally among PEMA, PSP, PennDOT
<p>Consider developing regional partnerships to seek incident management funding</p>	<ul style="list-style-type: none"> • Investigate relationships and grant opportunities from the Department of Homeland Security 	<ul style="list-style-type: none"> • No activity identified



4. Representative National/Regional TIM Practices

4.1 National Role

The Regional Transportation Systems Management and Operations Committee (RTSMO) of the Transportation Research Board (TRB) is analyzing national strategies for improving regional transportation system operations through more effective and coordinated approaches to TIM. Its Planning for Operations Subcommittee has issued a white paper on interagency agreement subjects that focus on common areas of interest bearing on TIM activities, including:

- Creation of steering committees
- Commitment to communicate
- Definition of common goals/objectives/performance measures
- Adoption of common operating procedures
- Definition of shared fiscal responsibility
- Coordination of study activities
- Implementation of plans and programs

4.2 Pennsylvania Planning Partners

The role of metropolitan planning organizations and rural planning organizations (MPOs and RPOs) continues to evolve as more emphasis is placed on performance and delivering results. Nationally, there is renewed focus on planning partners' involvement in and planning for operations as they facilitate programs related to incident management.

The two largest MPOs in Pennsylvania currently facilitate regional TIM programs. However, other planning partners within Pennsylvania are still determining their role. Additionally, PennDOT is reassessing some of the roles and responsibilities of planning partners as part of its results-oriented planning initiative.

As planning partners take a more active role incident management, consideration needs to be given to the relationship with state agencies such as PennDOT. The Southwestern Pennsylvania Commission (SPC), for example, encompasses three PennDOT engineering districts, while PennDOT Engineering District 8 encompasses multiple planning partners.

FHWA regional TIM self-assessments are a valuable tool, if completed collaboratively, to identify TIM trends and future needs in specific regions. Currently, these assessments have been conducted for five regions in Pennsylvania.

4.2.1 DVRPC

DVRPC provides staff support to its 10 regional TIM Task Forces in the Philadelphia metropolitan area, which includes parts of Pennsylvania and New Jersey and all of PennDOT District 6. DVRPC has a good working relationship with both PennDOT and the PTC, and concentrates some of its teams in the regions where Turnpike facilities connect to state and local facilities. DVRPC has facilitated TIM Task Forces, conducts post incident reviews at each

meeting, helped develop detour mapping and video sharing applications used by TIM responders and planners, and has used its TIM activities to help guide strategic planning for investment in Intelligent Transportation Systems (ITS).

4.2.2 SPC

SPC, which covers the Pittsburgh metropolitan area, has created a regional TIM Steering Committee as well as two working local TIM teams that serve the Cranberry area and the Airport Corridor. The efforts are supported by SPC staff with consultant assistance. Teams are focused on identifying common needs, addressing issues that arise in actual responses, and conducting after-action reviews and improvement planning to increase effectiveness and safety of responses.

4.2.3 Other MPO/RPO Activities

There are no other MPOs or RPOs actively involved in promoting TIM activities beyond the programming that is part of the normal program development and project delivery process, usually concentrated on signals and other ITS device deployment. Smaller planning organizations typically do not have the staff to undertake advanced TIM activities. There may be opportunities to resource-share between larger planning agencies and smaller ones.

4.2.4 Developing Champions

One of the most important roles planning partners can play is convening TIM champions from participating municipalities, state agencies, or other entities in a setting conducive to cooperation and planning. These facilitated engagements are highly effective at building partnerships without being costly, time consuming, or labor-intensive. Planning partners that have established connections with the emergency management and emergency response communities have been able to influence change simply by encouraging dialogue among local and regional entities with a role in TIM.

4.3 Local Emergency Planning Committees (LEPC)

Federal (U.S. Code Title 42, Chapter 116) and state (PA Act 165, 1990, 2001) laws mandate that each county have a Local Emergency Planning Committee (LEPC). This existing structure may be valuable in developing comprehensive TIM programs.

A federal law, the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), is commonly known as SARA Title III. Its purpose is to encourage and support emergency planning efforts at the state and local levels and to provide the public and local governments with information concerning potential chemical hazards present in their communities.

Pennsylvania's Hazardous Material Emergency Planning and Response Act, PA Act 1990-165, was promulgated in December 1990 and amended in February 2001. It implements the planning and preparedness requirements of federal SARA Title III.



PEMA says of the state law,

Act 165 is NOT an unfunded mandate. It establishes a system of fees and grants to help support local efforts in compliance. There are provisions for establishment at the county level of both planning and per-chemical fees to be collected and utilized by the county for its hazmat programs. There is also a state-level program which collects fees from Tier II and TCR/TRI facilities and channels most of those funds back to the counties in the form of matching grants to supplement their hazmat programs.

The Pennsylvania Emergency Management Council (PEMC) serves as the SERC required by SARA Title III. The Pennsylvania Emergency Management Agency is the executive administrative agent for the PEMC.

Each of Pennsylvania's 67 counties is designated as a Local Emergency Planning District and each is required to have a Local Emergency Planning Committee (LEPC).

LEPC responsibilities are essentially those established by SARA Title III, with additional specific requirements under Act 165. In Pennsylvania, an offsite emergency response plan is required for each SARA planning facility. This plan becomes a supplement to the county emergency operations plan.

More than 3,200 SARA planning facilities have been identified in Pennsylvania and more than 97% of the required plans have been reviewed by PEMA on behalf of the PEMC and have been found to provide adequately for the health and safety of the public.

LEPC members are appointed by the PEMC from a list of nominees submitted by the governing body of the county.

www.pema.state.pa.us
accessed December 2013

Evacuation planning mandated by federal and state law is a traffic incident/event management activity, and an opportunity to incorporate TIM into an existing emergency planning component.

4.4 Reverse Peer Review

On September 17, 2013, TAC, in conjunction with the FHWA Peer Review Process, invited a panel of U.S. TIM experts to speak to and interact with representatives from throughout Pennsylvania that have a stake in successful TIM.

The invited guests from Pennsylvania included individuals who constitute the steering committee for this project and representatives of the following agencies and localities:

- Pennsylvania Transportation Advisory Committee
- Pennsylvania Towing Association
- Pennsylvania State Police
- Pennsylvania Department of Transportation
- Pennsylvania State Association of Township Supervisors
- King of Prussia Volunteer Fire Company
- State Fire Commissioner
- Federal Highway Administration
- Pennsylvania Emergency Management Agency
- Pennsylvania Motor Truck Association
- Pennsylvania Turnpike Commission
- Southwest Pennsylvania Commission
- Delaware Valley Regional Planning Commission
- Pennsylvania Coroners Association
- Pennsylvania Office of the Governor

Table 5 provides highlights of the invited speaker comments from the Reverse Peer Review. During their formal remarks and through their interaction with the attendees the panel reinforced the need for TAC to focus on four central high-level areas of TIM: legislation, leadership, institutional, and sustainability opportunities.



Table 5: Traffic Incident Management Interviews

Participant	Key Points on Priorities for Success
<p>John Corbin, P.E. Chair, National Traffic Incident Management Coalition</p>	<ul style="list-style-type: none"> • Legislative: <ul style="list-style-type: none"> – Reinforce by statute the principles of safe, quick clearance. • Leadership: <ul style="list-style-type: none"> – Form statewide PA TIM Coalition. – Establish PA as leader in the multi-state I-95 Corridor Coalition. • Policy: <ul style="list-style-type: none"> – Prepare Joint Operations Policy Statement (JOPS) and follow the Washington State model; establish joint accountable leadership at the state level. – Commit to track and reduce struck-by incidents. – Conduct multidisciplinary TIM training at the state level, and tie grants for equipment and training to groups' participation. – Recognize agencies that participate in TIM trainings. – Accomplish TIM objectives through PA's Strategic Highway Safety Plan (SHSP). – Track TIM teams' effectiveness in terms of traffic flow and safety. – 80% of incidents are minor, yet take 60% of responders' efforts; focus on these through improved public education and safety service patrols.
<p>Michael Scott Vice President, Towing and Recovery Association of America</p>	<ul style="list-style-type: none"> • Legislative: <ul style="list-style-type: none"> – There are benefits to having tow trucks be regarded as emergency vehicles. • Policy: <ul style="list-style-type: none"> – Explore ways to continue to improve interoperability. – Cross-train fire and towing personnel. – Be creative in terms of public education. – Work to implement towing and recovery personnel qualification requirements.
<p>Capt. Roger Hannay Ohio Highway Patrol, Ohio TIM Steering Committee</p>	<ul style="list-style-type: none"> • Leadership: <ul style="list-style-type: none"> – Work at the local and county levels to build effective partnerships. – Ensure the right responder is the Incident Commander case-by-case. • Policy: <ul style="list-style-type: none"> – Improve Driver Education in terms of moving minor incidents off the roadway. – Set up zones where vehicles involved in minor incidents can be parked and towed later. – After-Action Reviews are critical. – Promote training by offering continuing education credits to responders. – Mandate that responders train in a multidisciplinary setting following a flexible statewide curriculum.

Participant	Key Points on Priorities for Success
Steve Austin Emergency Responder Safety Institute	<ul style="list-style-type: none">• Leadership:<ul style="list-style-type: none">- Organize effective local TIM teams.• Policy:<ul style="list-style-type: none">- Culture change: work with responders to reiterate they are responsible for their own safety; also address the issue of unnecessarily closing the roadway, which increases the potential for secondary accidents.- Better educate the public on the personal costs of congestion.- PennDOT should consider 24/7 response, where appropriate, if funding is available.- Utilize local trainers.- Engage the EMS community in TIM trainings by advertising that personnel can obtain TIM continuing education credits online for free.- In general, encourage responders to utilize available online trainings, such as through the Emergency Responder Safety Institute (ERSI).



5. Findings and Recommendations

5.1 Findings

The TAC Incident Management Task Force has researched the current state of traffic incident management policy and practice in Pennsylvania, reviewed national research and studies done on the TIM practice, and compiled practices that appear to have positive potential, including those presented at the September 17, 2013, Reverse Peer Review. Using this information, the study team has distilled several key findings regarding traffic incident management in four areas:

- **Legislation and Leadership**
 - Pennsylvania “Move Over” (75 Pa.C.S. § 3327) and “Driver Removal” laws are clear, though perhaps not familiar to the public.
 - Pennsylvania’s “Authority Removal” law exempts persons removing vehicles from liability, but does not extend that exemption to the agencies or organizations those persons represent.
 - Pennsylvania laws covering coroners allow the removal of a body from the roadway “*so much as is necessary for precaution against traffic accidents or other serious consequences which might reasonably be anticipated if [the scene was] left intact.*”³
 - Pennsylvania’s Emergency Services Code (P.L. 35) does not specifically reference traffic incidents or approaches that are to be used to coordinate crash detection, validation, dispatch, response, recovery, or performance measurement.
 - There is no meaningful towing/recovery certification program and there are no standards.
 - There is no mechanism in place for providing incentives to towing and recovery providers for quick clearance.
- **Institutional and Sustainability**
 - There is no statewide coordination body tasked with TIM responsibility. The effort is left to individuals whose passion for and interest in building a sustainable program is the driving force.
 - There is no official documentation of roles and responsibilities at the strategic or tactical levels.
 - There is no plan in place to expand the understanding of TIM at the municipal/county levels.
- **Professional Capacity-Building**
 - There is no unified or coordinated state training program associated with TIM.
 - There are no adopted minimum standards for incident responders.
 - It is difficult to achieve widespread implementation of the national emergency responder training because of the lack of resources for trainers and time availability to deliver instruction.

³ (As amended 1990, Nov. 29, P.L. 602, No. 152, Sec. 3)

- **Public Information and Outreach**

- There is limited evidence of an effort to educate responders, experienced motorists, or new drivers on the importance of all parties' understanding of and commitment to the shared responsibility for TIM.



5.2 Action Plan

Based on the research completed and its understanding of the issues, the task force recommends eight actions be undertaken in Pennsylvania. Detailed recommendation descriptions follow the matrix. Detailed recommendation descriptions follow the matrix.

Table 6 summarizes the recommendations and groups them by category and the likely timeframe in which they could be implemented. These timeframes offer a guide for the order in which recommendations should be pursued, with the near-term recommendations being a high priority with less complexity. It is suggested that medium-term and long-term recommendations should also be given consideration, but their greater complexity and need for stakeholder and partner input will require a longer time period to implement.

In general, the timeframes should be interpreted as follows:

- Near-term – less than one year
- Medium-term – one to five years
- Long-term – greater than five years

Detailed recommendation descriptions follow the matrix.

Table 6: Recommendations Summary Matrix

No.	Recommendation	Time-frame	Lead Champion	Return on Investment Considerations
Legislative and Leadership				
1	Establish Hold Harmless legislation, protecting: <ul style="list-style-type: none"> • Response agencies and organizations • Private towing and recovery companies • Hazmat response units 	Near-term	Legislature	Less time lost by commercial vehicles waiting in queues created by minor crashes.
2	Amend Title 35 to address TIM: <ul style="list-style-type: none"> • Collaborative effort of volunteer and paid responders • PEMA Operations Deputy as responsible state officer • Address multidisciplinary training and after-action reviews • Designate TIM strategic planning leadership 	Near-term	Legislature	Improved preparedness for significant regional events.
3	Establish an Executive Statewide Incident Management Panel: <ul style="list-style-type: none"> • Guide policy development • Represent all disciplines and government levels represented 	Near-term	Agency Leads	Streamlined initiative implementation, reducing duplicative efforts by individual agencies.

No.	Recommendation	Time-frame	Lead Champion	Return on Investment Considerations
4	Establish Joint Operational Policy: <ul style="list-style-type: none"> Guides statewide TIM program Sets expectations for communications, training, review activities, standards, etc. 	Near-term	Agency Leads	Improved standardization that will improve response efficiency.
Institutional and Sustainability				
5	Establish PennTIME program: <ul style="list-style-type: none"> Statewide institutional responsibility Bidirectional communication structure, state-regional-local Expand use of FHWA TIM self-assessments Invest in performance measurement data and resources Establish scene safety and scene management guidelines Create towing certification, incentive, and cost recovery program Implement multi-agency, multidisciplinary after-action review policies and procedures Institutionalize TIM at municipal/county levels Develop model guidelines for coroner procedures Address signal operations responsibilities for detour routes of NHS roadways Advance operations-related projects that address NUG Work to advance dedicated TIM funding line items in state budget 	Mid-term	Agency Leads/Reps	Will improve integration of effort with large-scale preparedness and provide additional training resources.
Professional Capacity-Building				
6	Expand LEPC connections <ul style="list-style-type: none"> Amend legislation to require involvement in LEPC committees by PennDOT, PSP, PADEP, and all other state and local response agencies and companies. Charge LEPC committees with considering TIM as part of SARA-related evacuation planning. 	Mid-term	PennTIME	Will merge transportation and emergency planning at the local level, leading to a more complete understanding of resource needs.



No.	Recommendation	Time-frame	Lead Champion	Return on Investment Considerations
7	<p>Enhance and coordinate joint training activities:</p> <ul style="list-style-type: none"> Includes training opportunities through PennTIME and other organizations Office of State Fire Commissioner to: <ul style="list-style-type: none"> Implement national emergency responder training statewide (coordinate with other disciplines to achieve broad acceptance) Receive funding to maintain multi-agency TIM training calendar and implement training through PA fire academies Determine need for and value of other training curricula 	Mid-term	PennTIME	Greater standardization will be achieved, leading to safer and faster incident clearance and the ability to measure benefits quantitatively.
Public Education				
8	<p>Improve driver education and outreach:</p> <ul style="list-style-type: none"> Promote awareness of TIM-related laws PennDOT, PSP, and PTC to provide updated outreach and educational materials using various mediums to PennTIME organizations Establish Responder Safety Week and track related safety improvements Conduct annual surveys (through PennDOT driver licensing centers) tracking awareness of TIM-related laws 	Mid-term	PennDOT	An improved traveling experience in Pennsylvania that includes enhanced motorist and responder safety, and improved economic performance.

The following description amplifies the items identified in the matrix, providing more detailed recommendation statements and related sub-recommendations.

Legislative and Leadership

- Establish Hold Harmless legislation changes that clearly exempt agencies, municipalities, and volunteer emergency service organizations from any liability in removal of obstructions (vehicles and cargo) from the roadway to improve quick clearance, thus maximizing operational capacity and enhancing the safety of motorists and on-scene responders.**

 - The existing legislation in Pennsylvania exempts individuals, not agencies and organizations. Utilizing the Rhode Island model language and laws in other states, we recommend language that clarifies which “agents” of law enforcement officials and incident commanders are covered, as well as private towing and recovery companies and hazardous materials response units. This would address incidents when law enforcement officers are either not required, or are not available, to lead on-scene efforts. The approach is consistent with the National Incident Management System (NIMS) command and control requirements. It is also aligned with FHWA recommendations to include the field title of incident commander, rather than limiting it to a law enforcement official.
- Amend Title 35 to address traffic incident management separately as a collaborative effort of volunteer professional and paid professional responders, specifically**

charging the PEMA Operations Deputy as the responsible state officer for leading TIM efforts.

- Specific additions to the existing law could address TIM concerns such as multidisciplinary training, after-action review practices, and leadership of incident management coordination at a strategic planning level.
- **Establish an Executive Statewide Incident Management Panel to guide overarching policy.**
 - State agencies, planning partners, representatives of municipalities, fire, emergency medical, towing/recovery, hazardous materials, and law enforcement organizations would be part of the executive panel.
- **Establish a Joint Operational Policy statement that formalizes executive leadership expectations for TIM and gives guidance to the statewide program.**
 - Set expectations for communications; training; reviewing activities; establishing standards for tactical response activities, including rapid removal and enhanced crash investigation models; an open roads policy; and public education/outreach activities.

Institutional and Sustainability

- **Establish statewide institutional responsibility under a Pennsylvania Traffic Incident Management Enhancement (PennTIME) program.**
 - Implement a bidirectional communication structure to include statewide, regional, and local elements.
 - Expand the use of the FHWA regional TIM self-assessments as a tool to engage regions on TIM and to develop a strategy to enhance TIM.
 - Invest in data and resources to help establish TIM performance baselines and provide a basis to address future performance management needs.
 - Establish a statewide set of scene safety and scene management guidelines for adoption by state associations of municipalities, response agencies, and state agencies, using existing models from New York, New Jersey, and Wisconsin.
 - Create a towing certification, incentive, and cost recovery program that includes performance requirements and clearance time goals. Utilize PTC’s towing best practices study and other studies as a framework to establish model enhanced towing policies and procedures that incentivize quick clearance. Consideration should be given to tiered towing incentives based on incident classification for complementary operational objectives.
 - Implement multi-agency/multidisciplinary after-action review policies and procedures. Develop a guideline for after-action reviews that requires the county emergency management agency to conduct after-action reviews and identify improvement opportunities for incidents on non-state roadways, and requires PennDOT county maintenance organizations to conduct the same activities for state roadways. PEMA would be the responsible state repository for all reports and would be charged with statewide coordination and improvement plans.



- PEMA and planning partners should take the lead on institutionalizing TIM at the municipal/county levels through outreach, education, and policy development assistance where needed.
- Assess standard operating procedures for coroners across jurisdictional bodies and develop model guidelines.
- PennDOT and planning partners should take the lead on working with municipal/county governments to address signal operations responsibilities for detour routes of NHS roadways.
- PennDOT and PEMA should work with planning partners to establish opportunities for programming and funding operations-related projects that specifically address the NUG.
- PennTIME should explore the opportunity for dedicated TIM funding line items with the Pennsylvania budget and make a recommendation to the Governor.

Professional Capacity-Building

- **Amend legislation or policy and require PennDOT, PSP, the Pennsylvania Department of Environmental Protection, and representatives of towing, fire, emergency medical, and law enforcement response agencies to be part of county Local Emergency Preparedness Committees (LEPC) and activities. Charge those committees with considering TIM as part of SARA-related evacuation planning.**
- **Enhance and coordinate joint training activities. This includes the communication and facilitation of existing training opportunities through the state, regional, and local communication model (PennTIME) as well as through other organizations.**
 - Establish a statewide implementation plan to be administered by the Office of the State Fire Commissioner for the national emergency responder training. The plan should address funding for instructor reimbursement and identify a lead agency that is responsible for making training materials and resources available.
 - The Office of the State Fire Commissioner should receive funding to maintain a multi-agency TIM training calendar in coordination with PEMA, PSP, and PennDOT, and be responsible for implementing the statewide training program through the various fire academies within the Commonwealth.
 - The Office of the State Fire Commissioner should coordinate with professional development groups representing other disciplines to achieve broad acceptance of the national emergency responder training curriculum.
 - PennTIME participating agencies should identify other training curricula to be considered and submit them to the Office of the State Fire Commissioner. The State Fire Commissioner should determine if identified training curricula meet the learning objectives set forth in the emergency responder training and approve or reject alternative TIM training.

Public Information and Outreach

- **The Pennsylvania Department of Transportation and Pennsylvania Turnpike Commission should pilot a driver education program that promotes awareness**

of Driver Stop, Move Over, Driver Removal, and Authority Removal laws. The program should be delivered in driver education and/or health education classes in high schools, middle schools, and elementary schools. Additionally, PennDOT should include TIM education in public education efforts such as social media, traditional media, roadside education, and driver renewal education.

- PennTIME should work with the Emergency Responder Safety Institute and other not-for-profit organizations to promote broad awareness and acceptance of TIM-related laws across Pennsylvania.
- PennDOT, PSP, and PTC should provide updated outreach and educational materials to PennTIME organizations annually for dissemination and use. These materials should be a comprehensive toolkit of printed and electronic documents, social media communications, and public service announcements.
- PennTIME should work with the Pennsylvania Legislature to establish a Responder Safety Week in Pennsylvania to raise awareness of the dangers that emergency responders and roadside workers face on the highway.
 - To track the long-term effectiveness of Responder Safety Week, PennTIME should develop a multi-agency emergency responder struck-by/near miss database.
 - PennTIME should coordinate with PennDOT driver licensing centers to conduct annual surveys to track the level of awareness of TIM laws and responder safety.



5.3 Local-to-Statewide TIM Communication and Coordination Structure

The communications and coordination structure for TIM activities should be simple, and should focus on approaches that promote regional and corridor-based interactions.

When TIM issues are identified locally, they should be addressed by the local TIM team or LEPC organization for the county. If no local fix is evident, the issue should be raised with the regional TIM body or PEMA region. This regional entity will either assist the local entity in resolving the issue, or will advance it to the statewide PennTIME program. As appropriate, the PennTIME program will provide guidance to the regional teams or organizations, which serve as the communication conduit to local and county teams.

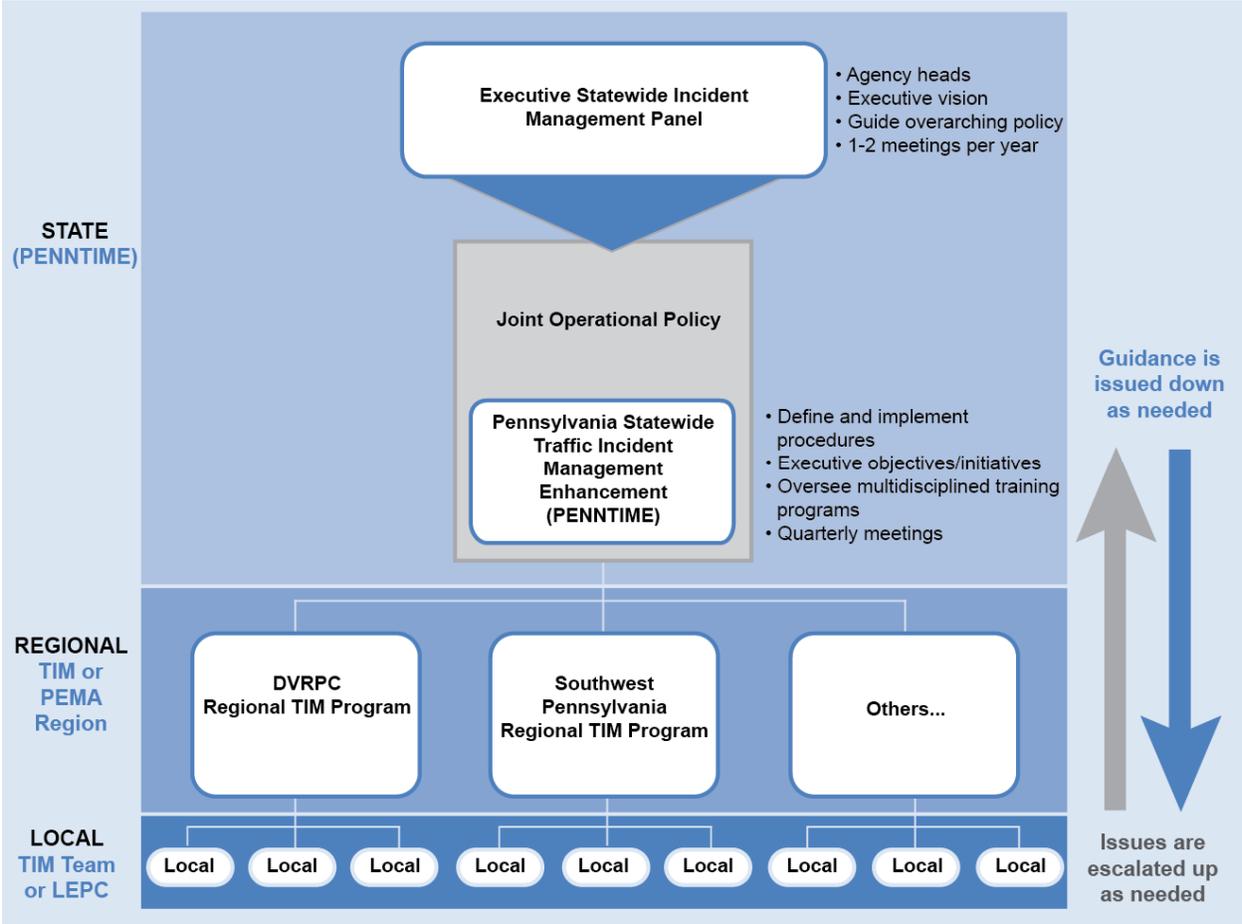
5.4 Vision-Setting Session

The Commonwealth Vision Setting Session should be held to include TAC Task Force members as well as executive-level personnel from PennDOT, PSP, PEMA, PTC, the Fire Commissioner, and Department of Health. It should also include representatives of DVRPC, SPC, municipal government, fire, police, towing, and emergency medical services.

The participants at the Vision-Setting session should be asked to sign a charter for cooperation, which will be a start to developing a Joint Operational Policy Statement that will include:

- Commitment to NIMS/ICS principles
- Commitment to strategic planning efforts including the PennTIME program
- Commitment to developing statewide standards for all responders
- Commitment to multidisciplinary training and evaluation of efforts

Figure 9: Preliminary Recommendations



As depicted in Figure 9, the Joint Operational Policy would establish the Pennsylvania Statewide Traffic Incident Management Enhancement (PennTIME) program.



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Appendix: Reverse Peer Review Summary Newsletter

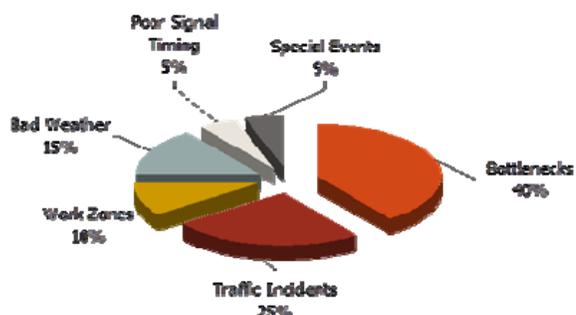


TIM Experts Visit Pennsylvania

Using Pennsylvania roads as effectively as possible is part of the Transportation Advisory Committee (TAC) vision, and looking at how to best deal with traffic incidents is a big part of the solution.

The Federal Highway Administration (FHWA) estimates that as much as 25 percent of congestion on highways is due to traffic incidents.¹

Sources of Traffic Congestion



source: FHWA

¹http://www.fhwa.dot.gov/congestion/describing_problem.htm

On September 17, 2013, TAC invited a panel of traffic incident management (TIM) experts from around the country to the Pennsylvania Farm Show Complex. For the day-long meeting, TAC invited these experts to speak to and interact with representatives from across Pennsylvania that have a stake in successful TIM.

The group was hosted by the Honorable Robert Regola on behalf of TAC, shown seated, middle, in the above photo. The day's proceedings included formal remarks from the experts followed by an interactive question and answer session.

During their formal remarks and through their interaction with the attendees, the panel reinforced the need for TAC to focus on four central high-level areas of TIM:

- **Legislation**
- **Leadership**
- **Institutional**
- **Sustainability**

November 2013

The invited guests from Pennsylvania included individuals who constitute the steering committee for TAC's current project to analyze TIM policy and legislation best practices. The steering committee represents the following agencies and localities:

- The Transportation Advisory Committee
- The Pennsylvania Towing Association
- Pennsylvania State Police
- Pennsylvania Department of Transportation
- Pennsylvania State Association of Township Supervisors
- King of Prussia Volunteer Fire Company
- State Fire Commissioner
- Federal Highway Administration
- Pennsylvania Emergency Management Agency
- Pennsylvania Motor Truck Association
- Pennsylvania Turnpike Commission
- Southwest Pennsylvania Commission
- Delaware Valley Regional Planning Commission
- Pennsylvania Coroners Association
- Pennsylvania Office of the Governor

The invited experts (shown seated) included:

- **Steve Austin, Director of the Emergency Responder Safety Institute**
- **Mike Scott, Vice President of the Towing and Recovery Association of America**
- **Captain Roger Hannay, State of Ohio Highway Patrol**
- **John Corbin, Chairman of the National Traffic Incident Management Coalition**



About TIM Legislation:

Comprehensive legislation needs to address five core issues:

- Protecting on-scene emergency responder personnel and their agencies from liability.
- Recognizing the need to get the road open as quickly as possible, while holding the safety of responders and the public in high regard.
- Establishing standards for what qualifies and certifies individuals to respond to the scene of a traffic incident.
- Including all emergency responders in laws that govern TIM.
- Protecting the dignity and rights of the individuals involved in the incident.

About Institutionalizing TIM:

TIM initiatives are often started by a single individual who serves as a champion at the local level. In the short term this approach typically yields great progress. However, over the long term, this can cause problems because as the champions move on, the knowledge that was gained is lost.

The panel spoke about the need for executives to implement policies with accountability at multiple levels of their organizations on topics such as multi-disciplinary training, memorandums of understanding, after-action reviews, and joint manuals and processes. In this way TIM steadily becomes part of the way various organizations operate, rather than depending on the advocacy of a small number of individuals.

About TIM Leadership:

Supporting a culture of change is essential among TIM agency executives. One important way that the culture of change can be embraced is by forming a statewide TIM coalition.

Several of the panelists noted the role of such a coalition. Practitioners at the tactical level (those engaged in scene response) are passionate about what they do. When they encounter barriers that impede their processes or threaten their safety, they are less effective. A defined escalation process that allows issues to be raised from the local level, to the region, and eventually to the statewide level is imperative.

About Sustaining TIM:

All panelists discussed the importance of performance measures. By collecting data on key performance measures such as incident duration, roadway clearance, secondary crashes, and responder struck-by incidents, technology and institutional change can be justified and fine-tuned.

The panel emphasized that to implement a sustainable TIM program, leaders must understand and remember that the number one objective of TIM is to improve the safety of responders. To sustain institutional relationships, there must be a focus on responder safety in every element of the program.



TIM for TAC Informational Sheet

The Pennsylvania State Transportation Advisory Committee (TAC) assists the State Transportation Commission and the Secretary of Transportation in determining goals and allocating available resources among modes in the planning, development, and maintenance of programs and technologies for Pennsylvania’s transportation system.

FWHA describes Traffic Incident Management (TIM) as a planned and coordinated approach among many different types of agencies to detect, respond to, and clear traffic incidents. The theory behind TIM is straightforward: blocked roads make travel less safe, hurt the economy, hurt the environment, and negatively impact the quality of life in Pennsylvania. TIM is implemented by a wide variety of practitioners as shown in the table above.

Traffic Incident Emergency Responders	
Baseline Responders	Specific Situation Responders
<ul style="list-style-type: none"> • Emergency Medical Services • Fire/Rescue Services • Law Enforcement • Towing and Recovery • Transportation/Public Works 	<ul style="list-style-type: none"> • Hazardous Materials Mitigation • Utility Companies • Department of Agriculture • Department of Environmental Protection • Coroner/Medical Examiner • Traffic Media • Insurance Companies • Crash Reconstructionists • Public Utility Commission

Ways to Think about TIM		
<ul style="list-style-type: none"> • Leadership & Legislation • Institutional & Sustainability • Practitioner Capacity-Building • Outreach & Education 	<ul style="list-style-type: none"> • Strategic • Tactical • Support 	<ul style="list-style-type: none"> • Strategic Planning • Operational Response Plans • Partnership Agreements • Services, Tools, and Resources

There are common focus areas that need to be addressed in developing and evaluating a TIM program. The table at left shows different ways of thinking about a TIM program. TAC is focusing on the two items shown in bold.



TAC is focusing on Leadership and Legislation, as well as Institutional and Sustainability opportunities.

FHWA’s National Agenda for TAC’s TIM Areas of Concentration

Action #	Action Item	Target Due
National Leadership & Legislation (NLL)		
NLL-1	Define & Develop Model TIM Safe, Quick Clearance Legislation for consistency & wider adoption	6 to 12 months
NLL-2	Conduct Additional Research on Compliance with Move Over Laws	12 to 18 months
NLL-3	Establish Structure to Advance Post-Summit Action Items Recommended to FHWA	1 to 6 months
NLL-3.1	Establish National TIM Executive Leadership Group (ELG) for policy issues & needs	3 to 6 months
NLL-3.2	Establish National TIM Technical Working Group (TWG)	3 to 6 months
NLL-3.3	Establish National Networking Group to aid in outreach	3 to 6 months
Institutional & Sustainability (I&S)		
I&S-1	Encourage major metro areas to develop TIM Committees as a platform to discuss differing goals & interests	6 to 12 months
I&S-2	Collect and share good practices on how TIM Committees & leadership can empower the TIM Practitioners	6 to 12 months
I&S-3	Adopt TIM Performance Measurement (PM) Systems to Determine Response and Program Effectiveness	18 to 24 months
I&S-3.1	Develop a National, Consistent Definition of a Secondary Crash, Place on Crash/Incident Intake Forms & Collect data	6 to 12 months
I&S-3.2	Encourage States to Begin Collecting Incident-Specific Performance Measurements with High-Priority, High-Volume Routes	12 to 36 months
I&S-3.3	Educate TIM Responders on the Importance of Collecting & Reporting Performance Measures	3 to 18 months
I&S-3.4	Encourage States to Gather Additional TIM PM Data on Struck-By Incidents	3 to 18 months
I&S-3.5	Establish National TIM PM Pilots in Selected Jurisdictions	6 to 18 months