

# Ohio QuickClear

Professional Responders Guide  
for Safe and Effective

## HIGHWAY INCIDENT MANAGEMENT



### Mission Statement

“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.”

October 2007

[www.dot.state.oh.us/quickclear/](http://www.dot.state.oh.us/quickclear/)



## Endorsed by:

AAA Ohio  
 Buckeye State Sheriffs' Association  
 Ohio Association of Chiefs of Police  
 Ohio Department of Commerce- Division of State Fire Marshal and Ohio Fire Academy  
 Ohio Department of Public Safety  
 Ohio Department of Transportation  
 Ohio Environmental Protection Agency  
 Ohio Fire Chiefs Association  
 Ohio State Firefighters Association  
 Ohio Trucking Association  
 Towing and Recovery Association of Ohio

## Web Resources:

[www.artimis.org](http://www.artimis.org)  
[www.buckeyetraffic.org](http://www.buckeyetraffic.org)  
[www.dot.state.oh.us](http://www.dot.state.oh.us)  
[www.dot.state.oh.us/DriversGuide/](http://www.dot.state.oh.us/DriversGuide/)  
[www.dot.state.oh.us/traffic](http://www.dot.state.oh.us/traffic)  
[www.dot.state.oh.us/quickclear/](http://www.dot.state.oh.us/quickclear/)  
[www.fhwa.dot.gov/trafficinfo](http://www.fhwa.dot.gov/trafficinfo)  
[http://plcm.dot.state.oh.us/plcm/plcm\\_web.jsp](http://plcm.dot.state.oh.us/plcm/plcm_web.jsp)  
[www.respondersafety.com](http://www.respondersafety.com)  
[www.timcoalition.org](http://www.timcoalition.org)  
<http://timcoalition.org/?siteid=41&pageid=1973>  
[http://tmc pfs.ops.fhwa.dot.gov/resources/uploaded\\_main\\_files/ics\\_guide.pdf](http://tmc pfs.ops.fhwa.dot.gov/resources/uploaded_main_files/ics_guide.pdf)

## Important Phone Numbers:

ODOT Central Office Radio Room – 1-800-884-4030  
 To Report Non-Emergency Safety Concerns – 1-877-7PATROL or 1-877-772-8765  
 OEPA Emergency Response Hotline – 1-800-282-9378

## Acronyms and Definitions:

<b>ANSI:</b> American National Standards Institute	<b>NFPA:</b> National Fire Protection Association
<b>CCTV:</b> Closed Circuit Television	<b>NUG:</b> National Unified Goal
<b>DMS:</b> Dynamic Message Signs	<b>ODOT:</b> Ohio Department of Transportation
<b>EMA:</b> Emergency Management Agency	<b>ODPS:</b> Ohio Department of Public Safety
<b>EMS:</b> Emergency Medical Services	<b>OEPA:</b> Ohio Environmental Protection Agency
<b>FHWA:</b> Federal Highway Administration	<b>PIO:</b> Public Information Officers
<b>FMS:</b> Freeway Management System	<b>PLC:</b> Permitted Lane Closure
<b>FSP:</b> Freeway Service Patrol	<b>RWIS:</b> Road Weather Information System
<b>HAR:</b> Highway Advisory Radio	<b>SOP:</b> Standard Operating Procedure
<b>IC:</b> Incident Commander	<b>TIM:</b> Traffic Incident Management
<b>ICS:</b> Incident Command System	<b>TMC:</b> Traffic Management Center
<b>MUTCD:</b> Manual of Uniform Traffic Control Devices	<b>TRAA:</b> Towing & Recovery Association of America

**Block:** positioning an emergency services apparatus on an angle to the lanes of traffic creating a physical barrier between upstream traffic and the work area. Includes “block to the right” or “block to the left.”

**Upstream:** the direction that traffic is traveling from as the vehicles approach the incident scene. Downstream is its opposite.



# Ohio QuickClear

## Professional Responders Guide for Safe and Effective Highway Incident Management

### Mission Statement

“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.”

Many departments and agencies respond with a number of different responsibilities during a highway incident. This “best practices guide” is put in place to bring those different departments and agencies together so we can look at and try to understand each others responsibilities. ODOT’s main mission is to keep traffic moving on the highways in Ohio. In the past, ODOT and law enforcement have not always agreed with the decision of the incident commander to close a roadway. This has been a result of not understanding those responsibilities. In reviewing this guide and implementing some changes in each of our organizations, we can make improvements in the way we respond to and operate at these highway incidents. This will only happen if in each and every county in Ohio we bring together all the agencies that have some responsibility in mitigating the highway incident and devise a plan that everyone can live with and follow it. As for the emergency services portion of this guide, you will notice some changes mainly dealing with protecting ourselves from what has become one of our most hazardous working environments imaginable – the highway. By implementing the best practices in this guide along with a good Incident Management System, we will increase the chances of everyone going home at the end of the day.

**Lt. Jeff Cotner**  
*Bloom Township  
Fire Department*





## OBJECTIVE

Thousands of responders and motorists are needlessly killed or injured each year as a result of inefficient incident scene management. Traffic incidents are causing millions of hours of congestion delay annually, which results in billions of dollars wasted. Given their authority to close travel lanes, local public agencies must recognize their part in this process. These best practices were developed to promote safe and efficient incident management in Ohio. This professional responders guide is intended to share best practices with emergency services including fire, law enforcement, Emergency Management Agencies (EMA), Emergency Medical Services (EMS) and other first response agencies.

One of the desired outcomes of this document is the formulation of groups and dialogue promoting additional cooperation. This will provide continued improvement and identify additional best practices.

### Introduction

Transportation analysts estimate that more than half of all congestion delay is caused by incidents such as weather, crashes, spilled loads or disabled vehicles. It is reported that closing one lane on a three lane free-way reduces capacity by about 50 percent and closing two lanes on the same freeway would reduce capacity by nearly 80 percent.<sup>1</sup>

### Preface

In August 2002, the directors of the Ohio Department of Public Safety (ODPS) and Ohio Department of Transportation (ODOT) convened a working group of stakeholders with the mutual goal of reducing the duration of incident-related road closures. The working group developed a checklist for incident responders, and a best practices guide for incident management. In March 2006 the group reconvened to update and enhance this professional responders guide.

Quickly clearing such incidents is universally regarded as the most effective approach to reducing congestion, eliminating costs and protecting responders.

The original guide was developed from a literature review of other state and local agencies, Federal Highway Administration (FHWA) workshops, and input from numerous local Ohio agencies experienced with response to traffic incidents, clearance, recovery, and traffic management. This new guide was created using the same original sources and new documentation of studies that have been performed in response to quick clearance efforts.

Traffic incidents and their related congestion create safety hazards. Studies have shown that for every minute an incident remains on a highway there is a 2.8 percent chance of a secondary crash.<sup>2</sup> Another study performed by the FHWA found that secondary incidents make up approximately 20 percent of all incidents.<sup>3</sup> These secondary crashes are usually more severe in nature than the original incidents that take place. This is attributed to the greater speed differential between vehicles.<sup>2</sup>

It is not feasible to suggest a one-size-fits-all approach to traffic incident response: each incident is unique in its character and hazards. However, there are some preferred practices to protect the scene, to manage traffic, and to clear an incident efficiently. This guide reviews those best practices so that local agencies can adopt approaches for more rapid incident clearance. To be successful, all agencies must develop a mind-set that includes the restoration of traffic flow in incident management decision making.



*Figure 1 – The effects of accidents can be far-reaching and costly. Ohio QuickClear is committed to maintaining the safe and effective flow of traffic during emergencies to prevent further damage, injury or undue delay of the motoring public.*



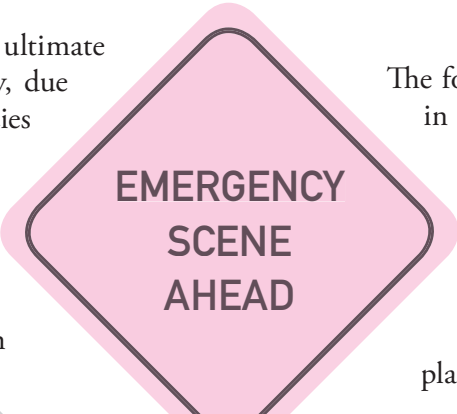
Emergency response personnel are at risk of being struck by passing vehicles as they work an incident scene. A study shows that in 2004, traffic-related deaths among officers in the line of duty made up 48 percent of the total deaths of officers for that year.<sup>4</sup> The longer an incident is in place, the longer incident responders are vulnerable and exposed to possible injury.

In summary, traffic incidents pose three primary concerns:

- Risk to incident responders
- Increased risk of secondary crashes
- Traffic congestion delay, including delay to emergency responders

“Incident management” is a term for the response, management and clearance of traffic incidents. QuickClear is “committed to maintaining the safe and effective flow of traffic during emergencies to prevent further damage, injury or undue delay of the motoring public.”

Safe and effective incident clearance is the ultimate goal of each agency involved. Occasionally, due to the large number of local operating agencies required to handle an incident, the work of these individual agencies can impede the efficiency of clearing traffic incidents resulting in excessive delays. It is common knowledge that working with multiple agencies presents a communication and coordination challenge.



### GOALS OF EFFICIENT INCIDENT MANAGEMENT

- **Safety for incident responders by limiting their time at a scene.**
- Reduce the risk of secondary crashes.
- Reduce the duration of traffic incidents, without compromising effective investigation by law enforcement agencies.
- Manage traffic around incidents to reduce congestion delay, and minimize the amount of traffic flowing past the incident scene.
- Minimize delay costs.

The following is a guide to the best practices in incident management, which have been used effectively by other agencies. The first part of this pamphlet outlines the best practices for each entity involved in incident management. The last part outlines incident scene command issues along with the role of planning and major incident reviews.

### COSTS OF DELAY ARE:

- Attributed to loss of perishables.
- Attributed to missed deadlines (Just In Time Delivery)
- Attributed to fuel and labor costs.
- Include economic and tremendous personal costs due to secondary crashes.
- Over \$100 billion<sup>9</sup> nationally.

Figure 2 – The Annual Effects of Congestion

City Size	Congestion Statistics per City			Congestion Statistics per Traveler		
	Average Cost (\$)	Average Delay (Hours)	Average Fuel (Gallons)	Average Cost (\$)	Average Delay (Hours)	Average Fuel (Gallons)
Large	\$930,000,000	55,500,000	34,500,000	\$620	37	23
Medium	\$313,500,000	18,750,000	11,250,000	\$418	25	15
Small	\$88,800,000	5,200,000	3,200,000	\$222	13	8



# BEST PRACTICES

## ALL AGENCIES

### GOAL: EVERYONE GOES HOME.

When managing an incident there are certain best practices that should be followed by all parties involved. They are:

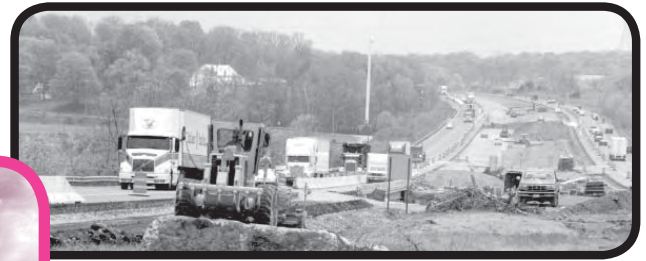


- Protect yourself at the incident so that your work can be done safely and effectively.
- Blocking is to protect the scene. Vehicles should be parked and wheels turned to a block left or block right position. See Figures 6 and 7 for blocking diagrams.
- The first responder will use all available information to determine the expected event duration.
- Contact appropriate personnel in a timely manner to ensure that an incident is handled safely and efficiently.
- When a spill involves 25 gallons of fuel or more or if any amount spills into a waterway, first responders must report the spill to Ohio Environmental Protection Agency (OEPA).
- Fire, law enforcement, EMS, transportation agencies and towing should meet periodically to discuss capabilities and limitations and should hold after action meetings or debriefings after all major incidents.
- Work with available resources to provide advanced information to the public about incidents. Use the media and devices such as portable/permanent message boards and Citizens' Band radio.

- ODOT has installed urban freeway reference markers at 2/10th-mile increments (see Figure 3), which will allow cellular telephone callers to report incident locations with greater accuracy. Emergency and towing dispatchers should ask cellular telephone callers to look for these freeway reference markers to ensure that the incident can be located quickly.

Figure 3 – Freeway Reference Markers, which clearly define roadway locations at 2/10<sup>th</sup>-mile increments, help to quickly identify the location of incidents.





## INCLEMENT WEATHER AND CONSTRUCTION WORK ZONES



During inclement weather and in construction work zones there are some additional best practices to consider. They are:

- Do not attempt to extract any tractor trailers or vehicles that would contribute to excessive lane closures during an inclement weather event.
- Do not block any lanes during snow removal unless absolutely necessary.
- Prompt notification, advance planning and full coordination between the various agencies is extremely important for any incident during inclement weather or in a construction work zone.
- If it is necessary to block a lane or move a vehicle during inclement weather and circumstances warrant, towing vehicles, snow plows and other operations may be directed to approach the incident in the opposite direction of traffic flow. The same approach may need to be used in construction work zones where concrete barriers and narrow

or no shoulders are present. These situations would require detailed coordination with law enforcement and extreme caution.

- When a weather event is expected, agencies should take a proactive approach, including notifying personnel in advance.
- When a construction work zone's traffic pattern is scheduled to change, the public should have ample warning.
- During a weather event and in construction work zones, agencies should take advantage of Public Information Officers (PIO), the media, dynamic message sign (DMS) messages and highway advisory radio (HAR) where available to inform the public of incidents in the area.





## FIRE AND EMERGENCY MEDICAL SERVICES

BEST PRACTICES

Traffic incident response is only a small portion of the many responsibilities of fire and rescue agencies. At the traffic incident scene, fire and EMS's first priority is to protect the scene. At any incident, agencies should follow the Incident Command System (ICS). It is essential for responders to notify law enforcement and transportation officials as soon as possible when it becomes apparent that traffic control assistance will be needed. It is reported that in a five year period the number of firefighters killed by motorists increased by 89 percent.<sup>5</sup> The quicker traffic control can be implemented, the less opportunity there is for secondary crashes.

Fire and EMS have traditionally handled traffic control by different means. Some agencies prefer to completely close all lanes of traffic. While this is sometimes necessary for certain incidents, it can cause inordinate traffic congestion and greatly increase the chance of injuries due to secondary crashes. Studies have shown that restoring partial traffic as early as possible can greatly reduce congestion and can provide a safer work environment for responders. It is recommended that, if possible, at least one lane of traffic be restored or traffic be directed to pass cautiously on the shoulder. The traffic should be slowly flagged past the incident to provide responders with safe working conditions. The agencies involved in the incident should also be aware of the permitted lane closures concept, as described in the Transportation Agencies section.

Incident reports have indicated inconsistent practices in handling crashes involving hazardous material. If agencies are inexperienced with hazardous material, they are more likely to order a complete shutdown of travel lanes; this has even been done in the case of small diesel fuel spills from tractor trailer trucks. A reportable spill is 25 gallons or more or of any amount in a waterway. These spills must be reported to the OEPA Emergency Response Hotline at 1-800-282-9378. Incidents involving hazardous materials, extensive fuel spillage and other pollutants should also be reported and may require oversight and coordination with OEPA Emergency Response and local hazardous material agencies where available. In the

future, some ODOT highway technicians will be trained to address minor diesel spills in certain instances, but when they are dispatched to assist with a diesel spill they must follow all ODOT requirements. For example, ODOT highway technicians may not clean up any spill involving more than 300 gallons of diesel fuel. Also, diesel fuel must be the only hazardous material present. If a spill is more than 300 gallons or if the spill contains another hazardous material (such as gasoline or placarded hazmats) ODOT personnel will not be allowed to participate in the clean up. However, ODOT personnel may be able to provide clean up supplies to other first responders. Finally, when a clean up is completed by ODOT staff, it is preferred that the towing company remove the contaminated material from the scene. ODOT District personnel shall follow up with OEPA to ensure that the responsible party removes the absorbent material and other incident debris.



**Figure 4 – Response from Fire and Emergency Medical Services are crucial to saving lives and minimizing injuries at crash scenes. Effective traffic control procedures, communication and coordination between Fire/EMS, law enforcement and transportation agencies are important to protect the responders and the public from further incidents, as well as safely restore the flow of traffic.**







The best practices for fire and emergency medical services include the following:

- In urban areas with Freeway Management Systems (FMS), dispatchers should contact available Traffic Management Center (TMC) staff for site information from closed circuit television (CCTV). This will allow the appropriate equipment to be dispatched which will help to reduce the exposure of personnel at the scene and will reduce the arrival time of responders. TMCs are currently operational in Cincinnati and Columbus, with new facilities being established in Cleveland and Akron in the near future. The Dayton and Toledo areas are also programmed for FMS implementation.
- Provide effective training in the identification of hazardous materials to allow for accurate identification and assessment of posed dangers to avoid unnecessary lane closures.
- Request traffic control assistance from law enforcement and ODOT when appropriate.
- Maintain effective communication as part of the ICS, so that partner response agencies are aware of progress in rescue efforts, can make correct decisions regarding traffic management and can provide traveler information to local media. For larger incidents, using the ICS is essential, but using a unified command approach can greatly increase the effectiveness of incident scene management.

- Clearly identify the command post and Incident Commander (IC) to assist other agencies involved with the incident. The IC should always keep lines of communication open to allow agencies to be afforded the opportunity to provide input throughout the incident.

- An incident action plan will be customized and followed by the IC. All responding agencies will also follow the National Fire Protection Association (NFPA) and Manual on Uniform Traffic Control Devices (MUTCD), Chapter 6I, Control of Traffic Through Traffic Incident Management Areas guidelines for all incidents.<sup>8</sup>

- An after action plan or debriefing should be completed following any major incident. This will help all agencies understand how they can improve on their QuickClear practices.
- Fire and EMS sometimes arrive before law enforcement. Prior to the incident, fire should work with law enforcement to develop a contingency plan for full or partial traffic flow restoration, depending on the severity of the incident.
- If it can be done safely, responders may document the incident before law enforcement arrives with the use of cameras and spray paint marking the location of the vehicle, prior to moving them to a safe area and restoring traffic flow. If the incident is a minor non-injury accident, responders and drivers should implement “Steer It and Clear It” principles.
- Fire and EMS responders should use American National Standards Institute (ANSI) 207 Public Safety High Visibility Vest (see Figure 5) anytime while operating in or near moving traffic. NFPA 1500 recommends the use of high visibility pink early warning signs which can notify motorists of an “Emergency Scene Ahead” or “Incident Ahead.” Traffic cones with DOT-approved retro-reflective collars can also be used to help direct motorists around the scene.



- Fire and EMS responders should utilize reduced lighting at night. Headlights should be turned off unless needed to light the work area. Amber lights should be used as much as possible, understanding red and blue lights can attract a drug or alcohol impaired driver.

**Figure 5—Emergency Scene Ahead sign and High Visibility Vests**



- Dim forward facing emergency warning lights to prevent obstructing traffic in the other direction.
- Fire and EMS apparatus should follow NFPA reflective guidelines with additional chevron striping on the rear of the equipment. Drivers of emergency apparatus should learn proper blocking procedures when parking in or near moving traffic to shield the scene.



### LAW ENFORCEMENT

**BEST PRACTICES**

Law enforcement agencies are concerned with the preservation of the scene to record and collect evidence to determine negligence in the incident. Typically, these agencies serve as a lead on traffic control surrounding an incident. At times, responsible law enforcement officials need to balance the impact of undue delay for investigation with exposure to an unsafe environment. In non-injury crashes, vehicles need to be moved from the travel lanes as soon as possible. Law enforcement agents need to enforce this, as many drivers are reluctant to move to a safe location for crash investigation.

It is most often the case that law enforcement officers request and direct the operation of towing and salvage companies, which are usually under contract to local governments and called out on a rotational basis. It is essential to contact these companies early in the incident clearance process to avoid unnecessary delay. Law enforcement should work with fire to set up a system where the first responder can request towing, providing complete and accurate information on the vehicle and conditions to the towing company. The towing company may be able to provide insight through their experience on what equipment and resources will be needed. Law enforcement should monitor and control the process of salvage recovery to determine the best procedures to avoid unnecessary traffic hazards and delays.

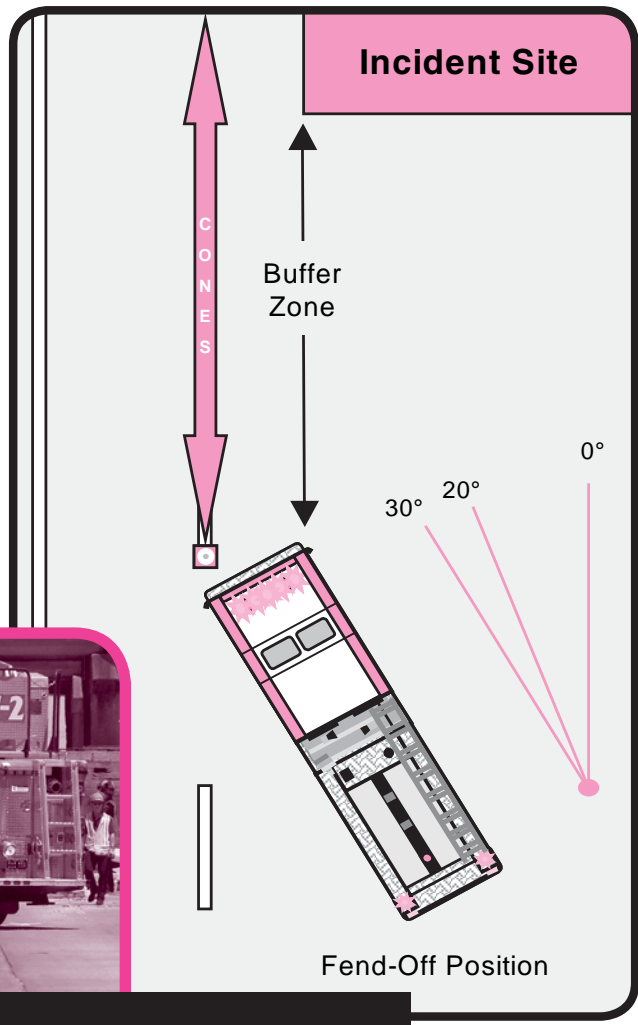
The best practices for law enforcement agencies follow these actions:

- Meet with fire and transportation agencies to review pre-determined incident response plans.
- Within the unified ICS, communicate with transportation agencies to establish traffic management/detours, and direct a partial or complete reopening of the roadway as quickly as possible.
- For accident investigations, efficiently collect evidence and survey the scene using available technologies



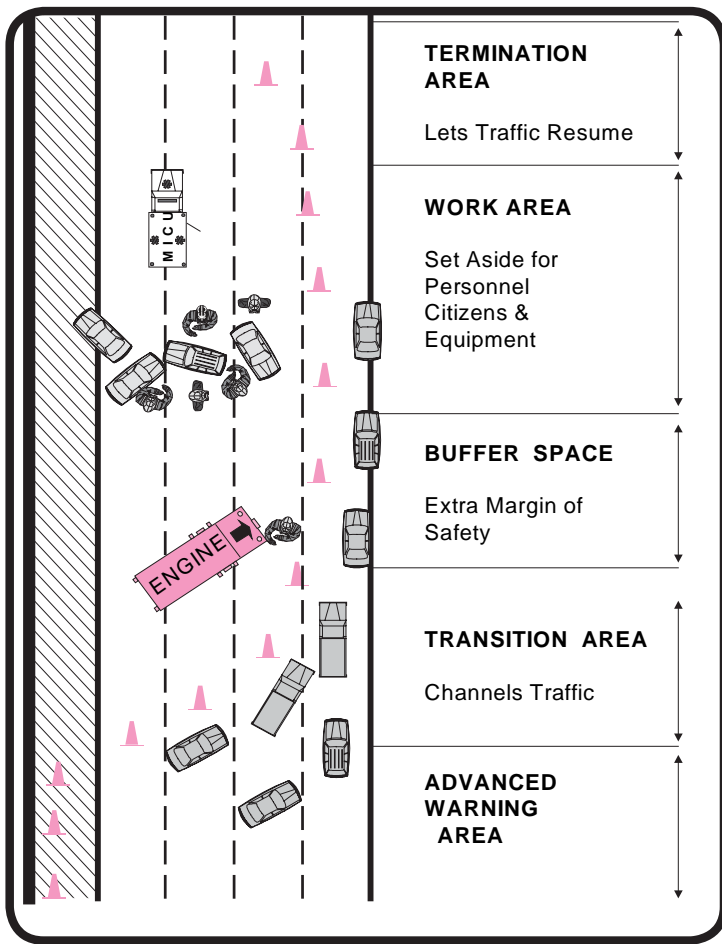
such as Total Station equipment, aerial surveying, or a photo modeling computer software program.

- Routinely use ODOT for traffic control and constantly reevaluate the scene for opportunities to open a lane to traffic, even if only temporarily.



**Figure 6 – Blocking is used to protect the scene.**





- Contact the county manager or equivalent party. Contact information for ODOT County Managers can be found at <http://www.dot.state.oh.us/DriversGuide/>. In many rural areas, personal relationships are an important part of the responders' normal routine and should continue to be implemented in the QuickClear process. If local contact is unavailable, responders may call the ODOT Central Office Radio Room at 1-800-884-4030.
- For minor (non-injury) crashes, consider having dispatchers provide guidance to drivers for moving vehicles to a safe location for exchange of information.
- Prior to the incident, work with fire and EMS to develop contingency plans for full or partial traffic flow restoration depending on the severity of the incidents.
- Contact the towing company as soon as possible taking into account weather and traffic volumes. It is essential to take into account the conditions



**Figure 7 – Blocking zones provide an organized approach to control traffic.**

of the incident and determine whether the vehicle should be moved to the berm or median and recovered during off-peak traffic times.

- Contact the party responsible for the removal of contaminated material. ODOT will follow up with OEPA to ensure that the removal takes place.
- Use ANSI 207 Public Safety High Visibility Vest anytime while operating in or near moving traffic. NFPA 1500 recommends the use of high visibility pink early warning signs which can notify motorists of an “Emergency Scene Ahead” or “Incident Ahead.” Traffic cones with DOT-approved retro-reflective collars can also be used to help direct motorists around the scene.
- Dim forward facing emergency warning lights to prevent obstructing traffic in the other lanes.



**Figure 8 – Law Enforcement working in conjunction with transportation agencies, towing and salvage companies can minimize the effects of incidents and obstructions.**



### TRANSPORTATION AGENCIES

**BEST PRACTICES**

The mission of transportation agencies such as ODOT is to provide safe and efficient roads. Relevant to incident management, transportation agencies respond to major incidents in order to assist with traffic control and open lanes to traffic safely and promptly.

A recent study provides information on the effects of congestion on travelers from different sized cities. The Annual Effects of Congestion chart in Figure 2 provides information on the average cost, delay and fuel wasted while waiting in traffic per city and per traveler.<sup>6</sup> Large cities would include Cincinnati, Cleveland and Columbus. Medium cities would include Akron, Dayton and Toledo, and small cities would be those like Canton, Chillicothe and Lima. It has further been determined that blocking one lane for one hour with a one mile backup costs \$50,000. So, if three lanes are blocked for just one hour causing a seven mile queue, over \$1,000,000 will be lost.<sup>6</sup> This data shows that everyone is affected by traffic congestion and that the problem is not present only in large cities. The entire state needs to take a proactive approach towards the QuickClear process.

As the traffic volume on state highways increases, there is an acute need for incident-related traffic management and the quick restoration of capacity. Transportation agencies can add capacity within their budget constraints, but all the agencies who respond to incidents need to work together to provide exemplary service to the public.

Disabled vehicles on the side of the road and debris in the roadway are a major safety concern and contribute to accidents. From 2000 to 2005, a total of 3,652 crashes occurred on the Ohio Interstate highway system which involved a collision with a stopped or parked vehicle in a travel lane or on the shoulder, while 726 crashes involved debris. To report a non-emergency safety concern, such as debris, black ice, hazardous conditions, and dangerous drivers on the highway, dial 1-877-7PATROL (772-8765).

#### THE OHIO MUTCD PRESCRIBES THE FOLLOWING:

<b>MAJOR</b>	<b>Expected Duration of More than 2 Hours</b>	Responders must be aware of their visibility to oncoming traffic and move the incident as far off traveled roadway as possible.
<b>INTERMEDIATE</b>	<b>Expected Duration of 30 Minutes to 2 Hours</b>	All traffic control devices should be set up to be used as quickly as possible. This includes traffic diversions, tapered lane closures, and upstream warning devices.
<b>MINOR</b>	<b>Expected Duration of less than 30 Minutes</b>	When a minor incident blocks a travel lane it should be removed from the lane to the shoulder as quickly as possible.

To improve incident management, the best practices for transportation agencies are to:

- Develop response protocols for freeway closures, which include pre-planned diversionary routes and traffic control in cooperation with local public agencies. ODOT has created the Playbook, a set of predetermined detour routes, which can be used as response protocols for freeway closures. Districts should meet with fire, law enforcement and other local officials before incidents occur to review such plans. Coordination between fire departments, law enforcement, ODOT and local agencies should occur on a





continuous basis during incidents and frequently during normal operations.

- Deploy Freeway Service Patrol (FSP) vehicles to remove debris from travel lanes and assist motorists with disabled vehicles on the freeway shoulder or in travel lanes. The FSP vehicles include arrow boards to assist with traffic control for incidents. Six large urban areas in Ohio have already implemented such a service. These areas include Akron, Cincinnati, Cleveland, Columbus, Dayton and Toledo.

- Create real-time photo links from TMCs, to share with law enforcement and fire/rescue agencies.

These images can be used to minimize the amount of apparatus dispatched to a scene. The real-time photo images can be found for the Columbus area under the web cams link at <http://www.buckeyetraffic.org/>, and images for the Cincinnati area can be found under the camera images link at <http://www.artimis.org/>.

- When possible, capture incidents via video recording for corrective action plan development.
- Participate in after action and debriefing discussions for improvement in future incident management.
- Participate in the ICS to communicate with fire and law

enforcement agencies and advocate for the prompt clearance of the scene.

- Set up safe traffic control around the crash scene, divert traffic upstream of an incident through the use of dynamic and portable changeable message signs, and provide traffic information to the media and general public.

- Ensure responders receive adequate traffic control training. Utilize criteria for point and area traffic control for fire personnel as part of Fire Academy training in order to keep lane(s) of traffic open when possible.

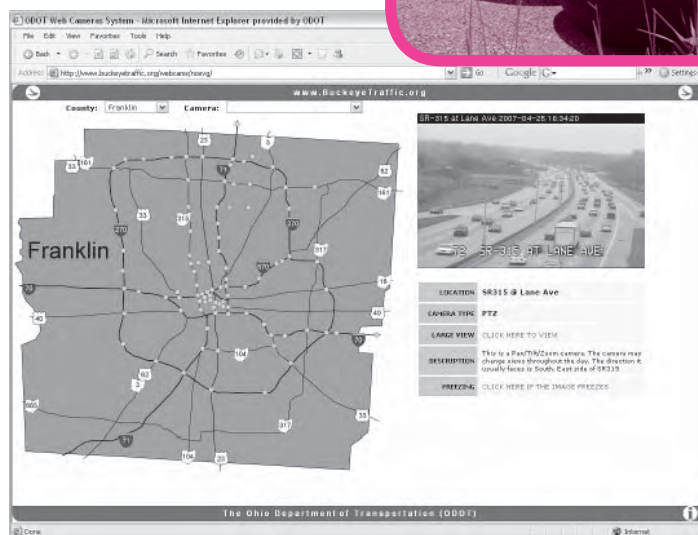
- ODOT has developed a strategy for defining excessive closures with permitted lane closures (PLC). This is based on roadway capacity, volumes and projected miles of congestion. For details, see the ODOT homepage or [plcm.dot.state.oh.us/plcm/plcm\\_web.jsp](http://plcm.dot.state.oh.us/plcm/plcm_web.jsp).

- Depending on the roadway and the traffic situation, the ODOT representative may provide services for the removal of less than 300 gallons of diesel spilled. (This opportunity is only recently being developed and will depend on the availability of supplies and trained personnel.) Under no circumstances will an ODOT employee load the contaminated material into an ODOT vehicle or bring the contaminated

material back to an ODOT facility. Any spill over 25 gallons or any amount that spills into a waterway should be reported to OEPA. ODOT should report the spill even if other responders indicate that it has been reported.



**Figure 9 – Freeway Service Patrol service helps by clearing debris and assisting motorist. BuckeyeTraffic.org provides access to real-time images of traffic conditions.**





## TOWING AND RECOVERY

### BEST PRACTICES

At a traffic incident scene, towing and recovery companies are responsible for the safe removal of vehicles from the scene, protection of victims' property and vehicles, and removal of debris from the roadway. Companies vary in their equipment and ability to perform different types of salvage operation, so contacting the appropriate company at the beginning of an incident is critical.

Generally, towing companies are under contract to municipalities, which establish a roster of companies which respond to traffic incidents on a rotational basis. When a tow is required, a law enforcement officer notifies the dispatcher, who in turn notifies the towing company. To ensure that the towing company is properly prepared for the incident, it is essential to fully describe the vehicle, cargo and conditions to the towing company.

Commercial vehicle recovery involves unique considerations. Most importantly, commercial vehicle loads might still have value and there is an implicit right to salvage such cargo, which can delay the prompt reopening of travel lanes. This needs to be balanced with the need to provide responders and the public with safe conditions.

For recovery of some commercial loads, specialist companies are called in to handle a certain material, such as the case with a hazardous material or fuel spill. Other times, the trucking company or owner of the cargo will want to dispatch their own vehicles and personnel for the salvage operation. Involvement of such "third-party" recovery teams often take inordinate amounts of time, depending on the distance of the company from the incident. Incidents involving fuel spills that are 25 gallons or more or of any amount in a waterway should be reported to the OEPA Emergency

Response Hotline at 1-800-282-9378. Spills involving other hazardous materials, extensive fuel spillage and other pollutants should also be reported.

Best practices for towing and recovery include:

- Pre-qualification of towing companies by municipalities so that the towing company called to an incident scene has the capability to handle the vehicles involved.
- Training law enforcement in the Towing & Recovery Association of America's (TRAA) vehicle identification guide (on the next page), to ensure the correct equipment can be requested and dispatched to the incident.
- Weighing the cost-benefit of calling in third-party recovery teams, if their distance/time of travel will have excessive impact on the amount of time lanes remain closed.
- Move commercial vehicles or trailers to the roadside or shoulder to restore as many travel lanes as possible, as soon as possible; then perform any necessary salvage operations after the peak hour according to PLC specifications.
- Recover contaminated diesel fuel clean up materials used by ODOT in a timely matter and in compliance with ODOT and law enforcement requirements.
- Other responders are encouraged to involve towing as soon as possible and to provide them with as much information as possible about the vehicle to be towed. An image may be sent of the vehicle, such as a photo from a camera phone.



**Figure 10 – Towing and recovery efforts can be dangerous, lengthy and complicated for accidents involving large commercial vehicles and hazardous material spills. Correctly identifying vehicles and spilled materials is important to ensure the appropriate companies are contacted with equipment able to handle the recovery safely and quickly.**





## TRAA Vehicle Identification Guide

TRAA VEHICLE IDENTIFICATION GUIDE<sup>®</sup>**CLASS 1 • LIGHT-DUTY • (6,000 lbs. or less GVW - 4 tires)\*****CLASS 2 • LIGHT-DUTY • (6,001 - 10,000 lbs. GVW - 4 tires)\***

Classes 1 and 2 include passenger vehicles, light trucks, minivans, full size pickups, sport utility vehicles and full size vans.

**CLASS 3 • MEDIUM-DUTY • (10,001 - 14,000 lbs. GVW - 6 tires or more)\*****CLASS 4 • MEDIUM-DUTY • (14,001 - 16,000 lbs. GVW - 6 tires or more)\*****CLASS 5 • MEDIUM-DUTY • (16,001 - 19,500 lbs. GVW - 6 tires or more)\*****CLASS 6 • MEDIUM-DUTY • (19,501 - 26,000 lbs. GVW - 6 tires or more)\***

Classes 3 through 6 include a wide range of mid-size vehicles, delivery trucks, utility vehicles, motorhomes, parcel trucks, ambulances, small dump trucks, landscape trucks, flatbed and stake trucks, refrigerated and box trucks, small and medium school and transit busses.

**CLASS 7 • HEAVY-DUTY • (26,001 - 33,000 lbs. GVW - 6 tires or more)\*****CLASS 8 • HEAVY-DUTY • (33,001 lbs. and over GVW - 10 tires or more)\***

Classes 7 and 8 include a wide range of heavy vehicles, large delivery trucks, motor coaches, refuse trucks, cement mixers, all tractor trailer combinations including double trailers.

### Information Needed To Correctly Dispatch Towing and Recovery Units:

- Year, Make and Model of Vehicle to be Towed or Recovered
- DOT Classification (Class 1 – 8 based on GVW)
- Location of Vehicle
- Type of Tow (impound, accident, recovery motorist assist, etc.)
- Additional Vehicle Information
  - 2 wheel drive, 4 wheel drive, all wheel drive
  - damage to vehicle, tire condition
  - vehicle loaded or empty
  - cargo contents
  - does the vehicle have a trailer
  - are the keys with the vehicle

**Note:** Any vehicle may carry hazardous materials. Advise if placarded.

**\* Note:** The Gross Vehicle Weight Rating (GVWR) of the vehicle to be towed or recovered can be found on the identification label on the vehicle's driver's side doorframe. The number of pounds listed on the label can then be compared with the DOT Classification Vehicle Type Chart for the correct DOT class.



## RECOMMENDATIONS FOR FUTURE IMPROVEMENTS

### BEST PRACTICES

While individual agencies can make changes to improve the efficiency of incident clearance, there is a web of underlying policies—generally at the local level—which impacts the operations of local law enforcement. Adopting best practices at the local level can reduce the risk of traffic incidents, reduce incident duration and restore traffic flow as quickly as possible. Particular issues and associated best practices are presented below.

### *Disabled or Abandoned Vehicles*

Vehicles broken down or abandoned on the freeway shoulder create a risk to passing traffic. One study recorded shoulder collisions for seven years and found that on average, 450 shoulder collisions happen a year.<sup>7</sup> Some jurisdictions allow vehicles to remain on the freeway shoulder for 72 hours or more before being towed to an impound lot which can greatly increase the probability of a shoulder collision. To decrease this risk certain best practices must be implemented.

Best practices are to:

- Adopt a law or policy to limit the time that vehicles can remain on the freeway shoulder. For example, in the City of Columbus the limit is three hours.
- Allow ODOT personnel to assist law enforcement with tagging abandoned vehicles so that their duration on the freeway shoulder is tracked as accurately as possible.
- With the owner's permission, it is recommended that FSP push the disabled vehicle to the nearest safe location. It should be noted that capabilities vary from one FSP vehicle to another.



**Figure 11 – Abandoned cars, vehicles involved in minor crashes and debris pose a significant hazard.**



### *Driver Opportunities*

Most of the driving public is indoctrinated to remain with their vehicles in the original crash position after a traffic incident until law enforcement officers arrive to perform a proper investigation. In practice, this can be very dangerous, especially on urban freeways. For property damage crashes with no injuries and mobile vehicles, it is far better for drivers to exchange information in a safe location.

These drivers should move their vehicles to the shoulder or exit ramp, exchange information (driver's and owner's name/address, driver's license number, vehicle license plate number, insurance information) and obtain a police report if necessary.

Best practice are for:

- Municipalities to adopt "Steer It and Clear It" statutes or policies, with signs directing motorists to move fender-benders to the roadside.
- Cities to implement QuickClear concepts into driver training programs including the "Steer It and Clear It" concept.







**Figure 12 – The “Steer It and Clear It” concept includes implementing signs directing motorists to move fender-benders to the roadside. When severe weather is anticipated, ODOT pre-treats roadways with brine.**

- Drivers to call 1-877-7PATROL (772-8765) to report any hazardous conditions, such as debris, black ice, and dangerous drivers on the highways.
- Motorists to adhere to “Move Right For Sirens and Lights” by slowing down and moving as far to the right as possible in order to get out of the way of emergency vehicles.
- Drivers to visit [www.buckeyetraffic.org](http://www.buckeyetraffic.org) or [www.fhwa.dot.gov/trafficinfo](http://www.fhwa.dot.gov/trafficinfo) when preparing to drive on Ohio’s highways.

**During inclement weather there are some additional best practices to consider. They are:**

- Do not park on snow routes.
- Remove your vehicle from the path of snow plows.
- Remember that ODOT pre-treats roadways with brine if severe winter weather is anticipated. If the roadways are being treated it is a good indica-



tion that severe weather has been forecasted and checking ODOT’s road weather information system (RWIS) site in addition to commercially available weather sites and the sites listed above is advisable.

- Do not tailgate any vehicles and especially not the snow plows.
- Give snow plows due consideration and a wide berth to allow them to operate in a safe and efficient manner.
- Try to avoid materials, such as snow, dirt, etc., being expelled by the snow plows.
- Do not drive under an overpass while a snow plow is attempting to clear it.
- Do not call first responders (i.e. law enforcement, fire, and EMS) for driving conditions. This information is available in a variety of locations including the previously mentioned web sites and local radio stations.



- Do not exceed the limitation of your skills or equipment
- Use common sense and judgment, stay off the road during severe winter weather.

**Towing**

As stated above, local governments establish contracts with towing companies for call-out to traffic incident scenes. Such contracts sometimes lack specificity as to qualification for handling different types of wrecked vehicles.

Best practices are to:

- Use only pre-qualified towing companies, to ensure the towing company called to an incident scene has the capability to handle the situation.
- Train law enforcement in the TRAA vehicle identification guide (on page 15), to ensure the correct equipment can be requested and dispatched to the incident. If possible, send an image of the vehicle to be towed.



## COORDINATION AND DOCUMENTATION

### BEST PRACTICES

Communication, cooperation, and coordination are the keys to improving incident management practices. Agencies are often unaware of the impacts their operations have on traffic or are unaware of the value of communicating incident information, which can be relayed to the public. This section reviews pre-planning, on-scene command, and post-incident reviews to outline the best practices in communication.

### Pre-Incident Planning

Pre-incident planning brings agencies together to review policies and best practices, so that all incident management operations can be carried out efficiently and safely when the need arises.

The best practices for pre-incident planning are:

- Transportation agencies should pre-plan diversion routes or Plays, so that traffic control and detours are arranged as efficiently as possible when the need arises. Such pre-planning includes a review of practices for incident command (outlined below) and communication with local media. This has been initiated in ODOT's Playbook. ODOT has developed the Playbook which will be made available to other agencies in an electronic format in the future.
- Transportation agencies should meet periodically to review pre-planned diversionary routes or Plays.
- Transportation agencies should have traffic control equipment on-hand such as cones, arrow boards, portable message signs, etc. Some ODOT Districts have a fully stocked Playbook Trailer for this purpose.
- All agencies involved in incident management should meet regularly to improve best practices and policies.
- A sample Standard Operating Procedure (SOP) between multiple response agencies is available at [www.respondersafety.com](http://www.respondersafety.com).

### Incident Command

The ICS is a universally-recognized management approach for the command, control and coordination of incident response, including traffic crashes. The ICS establishes the on-scene organizational structure to coordinate the efforts of individual agencies as they work to stabilize the incident scene and protect life, property and the environment. While working in the ICS, it is essential that all agencies involved strive to achieve the National Unified Goal (NUG) as it pertains to incident management and respond properly using Traffic Incident Management (TIM). More information about NUG can be found at <http://timcoalition.org/?siteid=41&pageid=1973> and information pertaining to TIM can be found at <http://timcoalition.org/?siteid=41&pageid=1973>.

The ICS can be as large or as small as necessary to manage an incident, and incident command can change depending on the type and size of an incident. For traffic incidents, law enforcement agencies will generally be first on the scene and establish command. If the accident scene requires fire, rescue, EMS or EMA, however, incident command might shift to those agencies while rescue is taking place. At some point, scene command almost always reverts back to law en-



Figure 13– Response vehicles and personnel are dedicated to safe roadways.





forcement to supervise the towing, recovery and clearance of vehicles and debris.

Best practices are to:

- Communicate with transportation agencies in the ICS, so that proper decisions can be made regarding traffic management.
- Assess and request the proper towing equipment in parallel with other activities, so that towing and salvage can begin as soon as possible.
- Provide regular updates to the media and PIOs, who can help inform the public about road closures, detours and expected duration of the incident.
- Coordinate with TMC staff in urban areas with FMS.

### **Major Incident Review**

It is expected that major traffic incidents will plague Ohio for the foreseeable future. Improvements need to be made so incidents can be handled as efficiently as possible, leading to decreased exposure of incident responders, less traffic congestion delay and reduced secondary crashes.

Best practices are:

- In an environment of mutual professional respect, hold meetings after major traffic incidents to review performance, decisions, policies or procedures that supported or conflicted with the goal of efficient incident management.
- Communicate the meeting results so as to resolve conflicts in future traffic incidents.
- Use the reviews and discussions to develop additional best practices.

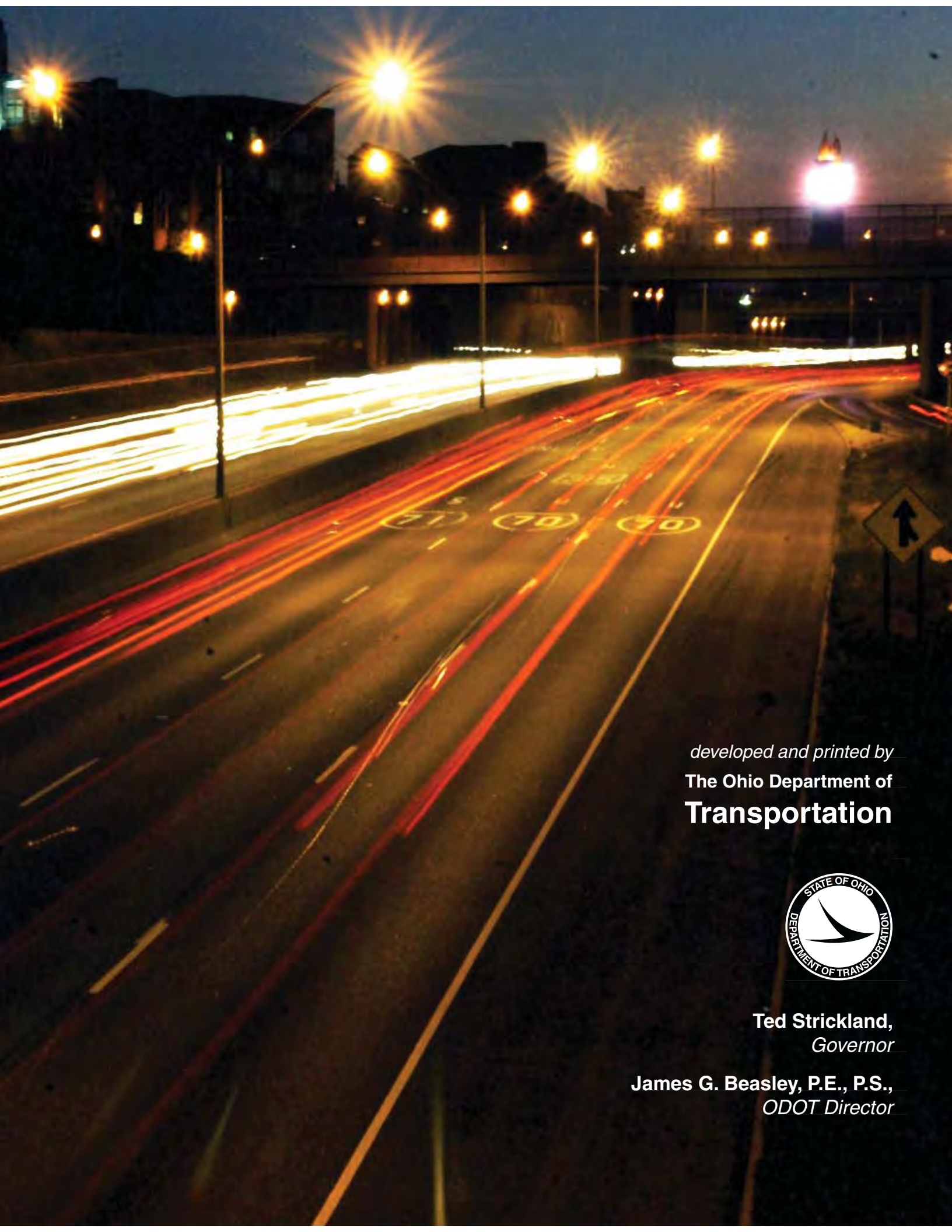
## CONCLUSION

Every incident involves many individuals with their own priorities. Communication, cooperation, and coordination are essential to accomplish the ultimate goal of safety. This guide will help individuals complete this goal. One report presents data showing that through operational treatments 336 million hours of delay and \$5.6 billion in congestion costs were eliminated in the U.S.<sup>6</sup> By communicating and following the best practices outlined in this pamphlet, QuickClear can become a reality, resulting in more efficient travel and higher public satisfaction.

After reviewing this Professional Responders Guide please send all comments, suggestions and questions to the link provided on the QuickClear website ([www.dot.state.oh.us/quickclear/](http://www.dot.state.oh.us/quickclear/)).

## REFERENCES

- <sup>1</sup> Helman, David L. "Traffic Incident Management." Federal Highway Administration, November/December 2004. 6/13/2006. <<http://www.tfhr.gov/pubrds/04nov/03.htm>>.
- <sup>2</sup> Minnesota Department of Transportation. Minnesota Statewide Highway Systems Operation Plan, April 2005.
- <sup>3</sup> "Operations – Did You Know? – Archive." Federal Highway Administration. 5/11/2006. <[http://ops.fhwa.dot.gov/resources/didyouknow/didyouknow\\_archive.asp](http://ops.fhwa.dot.gov/resources/didyouknow/didyouknow_archive.asp)>.
- <sup>4</sup> "NLEOMF Launches Nationwide Effort to Protect Peace Officers from Traffic-Related Deaths." National Law Enforcement Officers Memorial Fund, 2005. 6/20/2006. <<http://www.nleomf.com/media/press/DriveSafely.htm>>.
- <sup>5</sup> "Traffic Hazards to Fire Fighters While Working Along Roadways." NIOSH, June 2001. 6/29/06. <<http://www.cdc.gov/niosh/hid12.html>>.
- <sup>6</sup> Lomax, Tim and David Schrank. The 2005 Urban Mobility Report. Texas Transportation Institute: The Texas A&M University System, May 2005.
- <sup>7</sup> Traffic Incident Management Handbook. PB Farradyne. Federal Highway Administration Office of Travel Management, November 2000.
- <sup>8</sup> MUCTD Chapter 6I (2005 edition) and NFPA 1500 section 8.7(2007 edition).
- <sup>9</sup> "The Cost of Congestion." The Daily Source, July 2006. 7/6/2006. <[http://www.sightline.org/daily\\_score/archive/2006/07/06/the-cost-of-congestion](http://www.sightline.org/daily_score/archive/2006/07/06/the-cost-of-congestion)>.



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