Metro Atlanta TIME Task Force

GEORGIA

TRAFFIC INCIDENT MANAGEMENT (TIM)

GUIDELINES

MARCH 2011

DEVELOPED BY:

Delcan

March 14, 2011

RE: Georgia Department of Transportation (GDOT) Traffic Incident Management Guidelines

Dear Traffic Incident Management Partner:

In 2002, GDOT established a task force of transportation and public safety representatives to address the needs of traffic incident management in the state. I am pleased to present you with this document, Georgia Traffic Incident Management Guidelines, which is the culmination of their hard work.

Working in and near traffic is dangerous. Tragically, more and more incident responders are struck by traffic on our nation's highways each year, causing untold injuries and even death. Having a uniform approach to and guidelines for incident management will help provide the safest possible work environment for all Georgia incident responders.

These guidelines are not to serve as a textbook, nor are they a substitute for technical knowledge, experience, or effective judgment. Because no two traffic incidents are alike, the guidelines are general and broad-based. The Incident Commander will require an individual assessment for the specific conditions presented by each traffic incident. This assessment and corresponding actions require constant reevaluation to ensure that apparatus positioning and warning device placement are adequate and safe.

The guidelines found in this document will require ongoing review and updating as conditions, technology, and equipment change. As you apply these guidelines in the field, we encourage you to note any needed revisions and/or enhancements and transmit them to our State Traffic Incident Management Engineer.

We value your continued support and efforts in enhancing traffic incident management in Georgia and remain committed to keeping you and our motorists safe on our highway system.

Sincerely,

Commissioner Vance C. Smith, Jr.

Georgia Department of Transportation

Rudy Bowen

State Transportation Board Chairman

Revisions Table

Revisions	Chapter & Page	File Version	Date	Revision Author

Background

The Georgia Traffic Incident Management (TIM) Guidelines were developed under the direction of Georgia's Traffic Incident Management Enhancement (TIME) Task Force. The TIME Task Force is an organization led by the Georgia Department of Transportation (GDOT) to facilitate coordination, communication and cooperation between multi-agency, multi-discipline incident responders in an effort to clear traffic incidents quickly while promoting the safety of responders and the motoring public.[1]

Since 2002 the TIME Task Force has been educating incident responders on the importance of quickly clearing traffic incidents, improving responder safety, and reducing the number of secondary crashes through training sessions, annual conferences, hands-on exercises, legislative changes, best practices sharing, and workshops. Through discussions and training sessions with numerous statewide responders, it was determined that Georgia needed to adopt common incident management practices and provide comprehensive guidelines to help uniformly train incident responders.

The following frightening statistics released by the National Traffic Incident Management Coalition (NTIMC) illustrate why incident responder safety is so crucial.

- Traffic incidents account for about one-quarter of all congestion on US roadways.
- For every minute that a freeway travel lane is blocked during a peak travel period, four minutes of travel delay results after the incident is cleared.
- Struck-by incidents, where passing motorists hit responders, are on the rise. In 2005, the National Institute for Occupational Safety and Health (NIOSH) reported 390 workers of all kinds were killed in struck-by incidents—up from 278 in 2004. That year, struck-by incidents accounted for 7 percent of the total number of occupational injuries.
- The website www.respondersafety.com reports daily on all known struck-by incidents involving emergency responders. On the average, at least two emergency responders are struck each day in America. Unfortunately, the trend is growing with an average number of responders who are struck and killed each year while working in or near moving traffic:
    - Fire/Rescue and EMS: 6 to 8 per year
    - Law enforcement: 10 to 12 per year
    - Towing and recovery: 50 per year
    - Highway personnel: 100 per year + 20,000 injured

[1] Please refer to Appendix B for more information about the TIME Task Force, including its goals, mission statement, purpose, and history.

- About 20 percent of all firefighter deaths are not related to firefighting at all, but rather occur due to vehicle-related incidents.
- According to FBI statistics, between 1995 and 2006, an average of one US law enforcement officer was struck and killed each month by a passing vehicle.

GDOT and the TIME Task Force intend these TIM Guidelines to explain how to implement effective traffic incident management strategies to ensure responder safety and quick clearance of traffic incidents. These Guidelines complement the Georgia Open Roads Policy[2], which states public safety agencies shall re-open the roadway as soon as possible on an urgent basis with the highest priority given to responders and the public.

THESE GUIDELINES DO NOT REPLACE AGENCY STANDARD OPERATING PROCEDURES; RATHER, THEY PROVIDE INCIDENT MANAGEMENT PRINCIPLES THAT SHOULD BE LOCALLY ADOPTED TO IMPROVE RESPONDER SAFETY AND LESSEN THE LIKELIHOOD OF SECONDARY INCIDENTS.

[2] Full details on the Open Roads Policy can be found in Section 2.4.7.

Acknowledgments

GDOT and the TIME Task Force would like to thank the following agencies/organizations for their time, dedication, and contributions to the development of these Guidelines.

- Atlanta Fire Rescue Department
- Atlanta Regional Commission (ARC)
- Bartow County/Cartersville TIM Team
- Cartersville Fire Department
- Delcan Corporation
- Federal Highway Administration (FHWA) Georgia Division
- Georgia Air Life
- Georgia Department of Transportation (GDOT)
- Georgia Motor Carrier Compliance Division (MCCD)
- Georgia Regional Transportation Authority (GRTA)
- Georgia State Patrol (GSP)
- Georgia State Road & Tollway Authority (SRTA)
- Gwinnett County TIM Team
- Gwinnett Police Department
- Remtech Engineers
- Rural/Metro Ambulance
- Sandy Springs Fire Rescue

Table of Contents

List of Abbreviations

AAA – American Automobile Association

AASHTO – American Association of State Highway and Transportation Officials

AED – Automated External Defibrillator

AIR – After Incident Review

AIS – Accident Investigation Site

ANSI – American National Standards Institute

CCTV – Closed Circuit Television

CFR – Code of Federal Regulations

CMS – Changeable Message Sign

CPR – Cardiopulmonary Resuscitation

DHS – Department of Homeland Security

DOT – Department of Transportation

DPS – Department of Public Safety

EMS – Emergency Medical Services

EMT – Emergency Medical Technician

EOC – Emergency Operations Center

EPD – Environmental Protection Division

ERG – Emergency Response Guidebook

ETC– Estimated Time of Clearance

ETO – Emergency Transportation Operations

FHWA – Federal Highway Administration

GDOT – Georgia Department of Transportation

GEMA – Georgia Emergency Management Agency

GSP – Georgia State Patrol

HAZMAT – Hazardous Material

HOT – High Occupancy Toll

HSPD – Homeland Security Presidential Directive

IAFC – International Association of Fire Chiefs

IAFF – International Association of Fire Fighters

ICS – Incident Command System

ITS – Intelligent Transportation Systems

LZ – Helicopter Landing Zone

MCCD – Motor Carrier Compliance Division

MP – Mile Post

MSDS – Material Safety Data Sheet

MUTCD – Manual on Uniform Traffic Control Devices

NIMS – National Incident Management System

NIOSH – National Institute for Occupational Safety and Health

NTIMC – National Traffic Incident Management Coalition

NUG – National Unified Goal

ORT – Open Road Tolling

P3 – Public Private Partnership

PA – Public Address System

PCMS – Portable Changeable Message Sign

PSAP – Public Safety Answering Point

RP – Response Plan

SDS – Safety Data Sheet

SOC –State Operations Center

SRTA – State Road and Toll Authority

STIX – Southern Traffic Information eXchange

TIM – Traffic Incident Management

TIME – Traffic Incident Management Enhancement

TMC – Transportation Management Center

TIMA – Traffic Incident Management Area

TOC – Traffic (or Transportation) Operations Center

TRAA – Towing and Recovery Association of America

TRAG – Towing and Recovery Association of Georgia

TRIP – Towing and Recovery Incentive Program

TTC – Temporary Traffic Control

UC – Unified Command

1 INTRODUCTION

1.1 PURPOSE

The purpose of the Georgia Traffic Incident Management (TIM) Guidelines is to establish standard recommendations for traffic incident management and operations. These Guidelines are not to serve as a textbook, nor are they a substitute for technical knowledge, experience, or effective judgment. Rather, this document provides standard guidelines to improve responder and motorist safety by efficiently clearing incident scenes. No two traffic incidents are alike; therefore, each responder should assess each incident scene to determine unique conditions and challenges that may require responsive actions, situational awareness, and constant reevaluation to ensure safety. Situational awareness and the availability of equipment and personnel should guide the appropriate response during any incident.

1.2 INTENDED AUDIENCE

Any operator or incident responder that is involved in the incident management process—including incident detection, notification, response, and clearance—should follow the Guidelines. The intended audience includes the primary and support responders listed below.

Primary Responders:

- Law enforcement
- Fire and rescue personnel
- Georgia Department of Transportation (GDOT) personnel
- Local Department of Transportation or public works personnel
- Emergency Medical Services (EMS)
- Towing and recovery agency personnel
- 911 dispatch or Transportation Management Center (TMC) staff

Support Responders:

- Coroner/medical examiner
- Toll operators
- Environmental Protection Division (EPD)
- HAZMAT mitigation agents
- Georgia Emergency Management Agency (GEMA) personnel

1.3 REQUESTING REVISIONS

Due to the dynamic nature of traffic incident management, it is recognized and expected that periodic revisions to these Guidelines will be required. Emergency responders are encouraged to submit suggestions and/or recommended changes as these Guidelines are applied in the field. An Error/Omission Notification and Revision Request Form can be found in Appendix A. The notification/request form is also available online at www.timetaskforce.com. The Record of Revisions table (page i) documents all revisions made since the first version of the Guidelines, which was dated December 22, 2010.

2 GEORGIA TRAFFIC INCIDENT MANAGEMENT FOUNDATION

The Georgia TIM Guidelines provides recommendations and guidance for improving responders' safety during incident response. Various national and statewide initiatives, which are mentioned below, provided a foundational source of information to support these Guidelines.

2.1 FEDERAL HIGHWAY ADMINISTRATION (FHWA)

As part of the FHWA Emergency Transportation Operations (ETO) program, FHWA's Office of Transportation Operations has three major program areas: Traffic Incident Management, Traffic Management for Planned Special Events, and Emergency Transportation Operations for Disasters. The TIM program focuses on integrated interagency communications, on-scene traffic incident management operations, and regional and statewide programs and institutional coordination. Major initiatives include the TIM performance metrics; basic guidance for state and local TIM programs in promoting safe, quick clearance process and laws; and guidance on developing or improving service patrols.

2.2 NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)

The Department of Homeland Security developed the National Incident Management System (NIMS) concept in 2004, following the Homeland Security Presidential Directive 5. NIMS training provides a systematic approach to enable all agencies with responsibilities to manage an incident together by establishing a common set of incident objectives and strategies. NIMS training supports the Incident Command System (ICS) to standardize on-scene response that promotes agency integration, coordinated responses, and common procedures.

2.3 NATIONAL TRAFFIC INCIDENT MANAGEMENT COALITION (NTIMC)

The National Traffic incident Management Coalition (NTMIC), launched in 2004, is a coalition of various incident responder organizations, including the American Automobile Association (AAA), American Association of State Highway and Transportation Officials (AASHTO), International Association of Fire Fighters (IAFF), and International Association of Fire Chiefs (IAFC), to promote the safe and efficient management of traffic incidents. This coalition established the National Unified Goal (NUG) in association with the national and international traffic incident responder's organizations. The NUG is organized into three main objectives:

- Responder safety
- Safe and quick clearance
- Prompt and reliable incident communications

The NUG promotes these objectives though 18 strategies that include development of multijurisdictional and multi-disciplinary traffic incident management policies, procedures, and training. Additional details about the NUG can be found at timcoalition.org.

2.4 EXISTING STATE OF GEORGIA POLICIES, PROGRAMS, AND STATUTES

The State of Georgia has various policies and procedures that are intended to ensure quick clearance of the scene and the safety of responders. They are listed below (with emphasis added).

2.4.1 GEORGIA CODE 32-6-2: AUTHORITY TOW LAW

This law gives towing companies liability exemption and the authority to remove vehicles/cargo from the roadway under the authorization of state or local law enforcement, fire departments, or DOT.

State or local law enforcement officers and the department are further authorized, with or without the consent of the owner, to remove or have removed any obstruction, cargo, or personal property which is abandoned, unattended, or damaged as a result of a vehicle accident which the department determines to be a threat to public health or safety or to mitigate traffic congestion, and any ***person or towing service*** *that is removing an obstruction, cargo, or personal property at the location of such obstruction, cargo, or personal property upon instruction by a law enforcement officer, an official of a fire department acting under the authority of paragraph (1) of Code Section 25-3-1 or paragraph (3) of Code Section 25-3-2, or an official of the department shall be liable only for gross negligence.*

2.4.2 GEORGIA CODE 40-6-275: STEER IT AND CLEAR IT LAW

This law requires drivers involved in minor property damage collisions (i.e., incidents with no serious injuries or deaths) to move the vehicles from the travel lanes and then exchange information.

When a motor vehicle traffic accident occurs with no apparent serious personal injury or death, it shall be the duty of the drivers of the motor vehicles involved in such traffic accident, or any other occupant of any such motor vehicle who possesses a valid driver's license, to ***remove said vehicles from the immediate confines of the roadway into a safe refuge on the shoulder, emergency lane, or median*** *or to a place otherwise removed from the roadway whenever such moving of a vehicle can be done safely and the vehicle is capable of being normally and safely driven, does not require towing, and can be operated under its own power in its customary manner without further damage or hazard to itself, to the traffic elements, or to the roadway. The driver of any such motor vehicle may request any person who possesses a valid driver's license to remove any such motor vehicle as provided in this Code section, and any such person so requested shall be authorized to comply with such request.*

2.4.3 GEORGIA CODE 40-6-16: MOVE OVER LAWS

This law requires passing vehicles to slow down and/or safely move to an adjacent lane when approaching an authorized emergency vehicle (including towing, recovery, or maintenance vehicles) that is parked or otherwise stopped on or next to a multilane highway.

Procedure for passing stationary authorized emergency vehicles, stationary towing or recovery vehicles, or stationary highway maintenance vehicles:

(a) The operator of a motor vehicle approaching a stationary ***authorized emergency vehicle*** *that is displaying flashing yellow, amber, white, red, or blue lights shall approach the authorized emergency vehicle with due caution and shall, absent any other direction by a peace officer, proceed as follows:*

(1) ***Make a lane change into a lane not adjacent to the authorized emergency vehicle*** *if possible in the existing safety and traffic conditions; or*

(2) If a lane change under paragraph (1) of this subsection would be impossible, prohibited by law, or unsafe, reduce the speed of the motor vehicle to a reasonable and proper speed for the existing road and traffic conditions, which speed shall be less than the posted speed limit, and be prepared to stop.

(b) The operator of a motor vehicle approaching a stationary ***towing or recovery vehicle*** *or a stationary highway maintenance vehicle that is displaying flashing yellow, amber, or red lights shall approach the vehicle with due caution and shall, absent any other direction by a peace officer, proceed as follows:*

(1) ***Make a lane change into a lane not adjacent to the towing, recovery, or highway maintenance vehicle*** *if possible in the existing safety and traffic conditions; or*

(2) If a lane change under paragraph (1) of this subsection would be impossible, prohibited by law, or unsafe, reduce the speed of the motor vehicle to a reasonable and proper speed for the existing road and traffic conditions, which speed shall be less than the posted speed limit, and be prepared to stop.

(c) Violation of subsection (a) or (b) of this Code section shall be punished by a fine of not more than $500.00.

2.4.4 GEORGIA CODE 40-11-3: ABANDONED VEHICLE LAW

This law allows for the immediate removal of abandoned vehicles on the highway system to improve safety or mitigate congestion. The actual code language is included below.

Any law enforcement officer who finds a motor vehicle which has been left unattended on the state highway system shall be authorized to cause such motor vehicle to be ***removed immediately*** *to a garage or other place of safety when such motor vehicle poses a threat to public health or safety or to mitigate congestion. Any peace officer who finds a motor vehicle which has been left unattended on a public street, road, or highway or other public property, other than the state highway system, shall be authorized* ***immediately to cause such motor vehicle to be removed immediately*** *to a garage or other place of safety when such motor vehicle poses a* ***threat to public health or safety or to mitigate congestion.***

2.4.5 GEORGIA CODE 40-6-276: ROADWAY DEBRIS REMOVED BY TOWERS

This law states that towing and recovery personnel should help clean debris from roadway.

The driver of each wrecker truck towing away any vehicle from the scene of a wreck shall also take away all parts belonging to the vehicle which he is towing away, or, if they consist of small parts or

broken glass, he shall clear the streets of said small parts or glass, unless the driver is ordered not to do so by the investigating police officer due to circumstances at the scene of the accident. (b) Any person violating subsection (a) of this Code section shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not to exceed $100.00.

2.4.6 TRAFFIC INCIDENT MANAGEMENT ENHANCEMENT (TIME) TASK FORCE

The Metro Atlanta TIME Task Force started in 2002 to facilitate the safest and fastest clearance of traffic incidents to lessen the impact on emergency responders and the motoring public. This organization holds an annual conference in Georgia, quarterly membership meetings, and a variety of responder training courses. For more information, refer to Appendix B or visit www.timetaskforce.com.

2.4.7 OPEN ROADS POLICY

This policy states that whenever a roadway or travel lane is closed or partially blocked by a collision or traffic incident that Law Enforcement, Transportation, and Local Public Safety agencies shall re-open the roadway as soon as possible on an urgent basis with the highest priority given to the safety of the public and responders. The Policy was initiated by GDOT and the Department of Public Safety (DPS) and should be signed by all agencies once finalized. A draft of the Open Roads Agreement can be found in Appendix C.

2.4.8 TOWING AND RECOVERY INCENTIVE PROGRAM (TRIP)

The Towing and Recovery Incentive Program (TRIP) was implemented in Metro Atlanta in January 2008 to quickly and safely clear traffic incidents from the highway system. TRIP pays approved heavy-duty recovering companies a monetary bonus for clearing commercial vehicle wrecks within 90 minutes. Approved companies must meet stringent equipment and formal training and certification requirements. More information can be found on www.timetaskforce.com/trip.html

2.4.9 SOUTHERN TRAFFIC INCIDENT EXCHANGE (STIX)

The I-95 Corridor Coalition implemented a program in April 2008 for the southern states—Florida, Georgia, North Carolina, and South Carolina—to share information across state lines through a centralized communication network. This information is collected and disseminated by the Georgia Transportation Management Center (TMC) located in Atlanta. Any incident manager should report any incident, event, or emergency information that may affect multiple states or regions to the STIX hotline at (877) 499-7849 or stix@dot.ga.gov. For more information regarding STIX, please visit http://www.i95coalition.org/i95/Portals/0/Public_Files/pm/reports/full416.pdf.

2.4.10 GEORGIA NAVIGATOR

The Transportation Management Center (TMC), located in Atlanta is the headquarters and information clearinghouse for NaviGAtor. Operating 24 hours a day, 365 days a year, the TMC is committed to enhancing travel safety and transportation efficiency by managing incidents,

controlling traffic, and providing accurate information to the traveling public. TMC employees work behind the scenes to provide statewide incident management through a three phase process:

1. Collecting Information: The TMC monitors the roadways and collects real-time information from Video Detection System (VDS) cameras along the interstates. Operators also gather information taking 511 calls from travelers regarding traffic congestion and roadway incidents.

2. Confirm and Analyze Information: TMC employees must then confirm each incident by identifying the problem, the cause and the effect it will have on the roadway. The proper authorities, such as police, fire or HERO, are notified so they can respond to the incident.

3. Communicate the Information: The third step is communicating this information to travelers, allowing them to make informed travel decisions, through changeable message signs (CMS) on the roadways, the NaviGAtor website, and media relations.

2.4.11 511 TRAVELER INFORMATION

511 is a free, real time travel information line that can be accessed from any phone anywhere in Georgia. The service allows travelers who dial 5-1-1 to:

- Report an incident (statewide) or request HERO motorist assistance (metro Atlanta)
- Hear up-to-date traffic reports
- Get transit options like MARTA, Ridesharing, Amtrak, Greyhound
- Connect to airports in Atlanta or Savannah
- Access Georgia tourism information
- Transfer to surrounding states' 511 systems
- Speak to a live operator

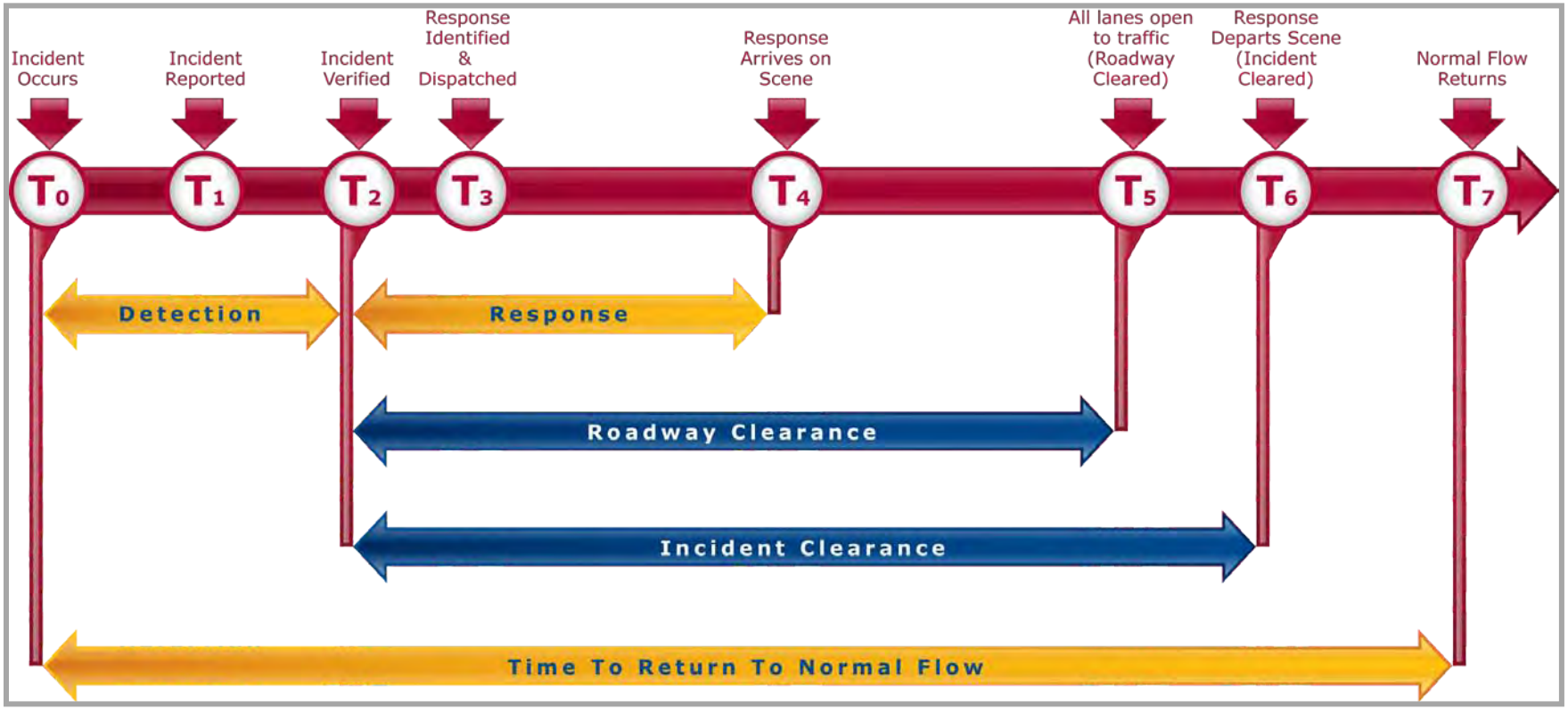
511 operators help make a traveler's experience easier, and 511 callers help NaviGAtor manage incidents, congestion, and accidents in a more timely, efficient manner.

3 INCIDENT MANAGEMENT PROCESS

3.1 TRAFFIC INCIDENT TIMELINE

Georgia has adopted the national traffic incident management timeline, included below in Figure 1. The NTIMC has defined two key measures for traffic incident management: roadway clearance and incident clearance. It is important that all responders understand the difference between these measures.

FIGURE 1: INCIDENT MANAGEMENT TIMELINE



3.1.1 DETECTION

Incident detection involves discovering and identifying the incident. Early detection is vital to ensure the safety of motorists, who are most vulnerable before additional help arrives. Passing motorists typically detect an incident and call 511 or 911 to notify law enforcement.

Responders involved in detection include law enforcement officers, TMC operators, and emergency response operators (HERO or DOT maintenance).

VERIFICATION (T_2): A COMPONENT OF DETECTION INVOLVES CONFIRMING THE INCIDENT LOCATION AND DETAILS. IF TMC CAMERA COVERAGE IS AVAILABLE, OPERATORS SHOULD ASSIST WITH VERIFICATION. HOWEVER, IF CAMERA COVERAGE IS NOT AVAILABLE, MOTORISTS AND RESPONDERS ASSIST WITH VERIFICATION.

3.1.2 RESPONSE

The first component of response is notifying response agencies about the incident, using details collected during verification. Early notification is the key for a quick incident response. Following notification, response is reacting to an incident with appropriate and available technical, material, and human resources.

It is the responding agency's responsibility to assess and solicit required resources and determine the fastest possible route to the incident scene. The initial responder is responsible for:

- Deploying temporary traffic controls (TTC)
- Parking the response vehicle upstream to protect the incident scene
- Assuming the role of Incident Commander
- Providing necessary first aid to victims (without exceeding the responder's skill level)
- Assessing the need for additional responders or resources

Response is a major portion of the incident duration and is explained throughout the Guidelines in detail.

3.1.3 ROADWAY CLEARANCE

Roadway clearance occurs when all travel lanes are open. This is the primary performance measure for traffic incident management in Georgia. The State has adopted a goal to achieve roadway clearance in 30 minutes or less for minor incidents and 90 minutes or less for major incidents.

Roadway clearance time is the number of minutes between verifying the incident (T_2) and confirmation that all travel lanes are open and available for traffic flow (T_5).

3.1.4 INCIDENT CLEARANCE

Incident clearance occurs when the last responder has left the incident scene. This is an important measure because even when all travel lanes are open (after roadway clearance), traffic will not recover and return to free flow while responders are still on-scene. Systematic improvements, such as exiting the highway to finish reports, should be made to reduce the incident clearance time because every minute on-scene is hazardous for emergency responders. A reduction in incident clearance times will improve responder safety by reducing the exposure of secondary incidents. Incident clearance time is the number of minutes between verifying the incident (T_2) and confirming that all responders have left the scene (T_6).

3.1.5 TIME TO RETURN TO NORMAL FLOW

The time to return to normal flow is the period following an incident when traffic is proceeding at its standard or expected rate of speed for a particular segment of roadway.

3.2 INCIDENT TYPES/CLASSIFICATIONS

In Georgia, there are three types of incidents: major, intermediate, and minor.

3.2.1 MAJOR

The expected duration of a major incident is more than two hours. Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding two hours. Examples include:

- Chain reaction crashes
- Crashes that require a significant medical response, a coroner response, and/or a crash reconstruction response (e.g., fatalities)
- Incidents involving advanced, prolonged environmental clean-up (e.g., incidents involving hazardous materials)
- Overturned tractor trailers
- Complex commercial vehicle incidents with large debris fields or cargo fires
- Structural damage
- Wildfires near the roadway
- Acts of terrorism

3.2.2 INTERMEDIATE

Intermediate traffic incidents typically affect travel lanes for a time period of 30 minutes to two hours, and usually require traffic control on the scene to divert road users past the blockage. Full

roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks. Examples include:

- Major roadway debris
- Overturned cars, RVs, or small trailers
- Multi-vehicle crashes
- Commercial carrier crashes

3.2.3 MINOR

Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders typically include law enforcement and towing companies, and occasionally GDOT service patrols. Examples include:

- Disabled vehicles in a travel lane or on the shoulder
- Minor crashes that can be moved or relocated to the shoulder
- Minor roadway debris

3.3 PRIORITIES AT AN INCIDENT SCENE

3.3.1 PRIORITY 1: LIFE SAFETY

The most important concern is the protection of emergency responders, incident victims, and the public. ***Safety must be the first priority throughout the incident.***

3.3.2 PRIORITY 2: INCIDENT STABILIZATION

To enhance operational safety, actions must be taken to stabilize the incident. This will help prevent secondary crashes, protect evidence, and provide safe, quick clearance.

- Prevention of Secondary Crashes: To minimize the risk of another motor vehicle crash involving response units and personnel, responders must properly warn approaching traffic that there is a hazard ahead, to slow down, and to use caution. Responders should utilize available traffic control devices and, if possible, position apparatus to divert traffic around the crash scene. Special attention should be paid to the end of the traffic queue; motorists approaching the end of a queue are unlikely to be aware of the crash ahead. Responders should contact dispatch with incident information for dissemination to travelers to reduce congestion and the potential for secondary incidents. The Transportation Management Center (TMC) in Atlanta is a valuable statewide resource that can alert motorists through Changeable Message Signs (CMS), the 511 telephone system, and the Georgia NaviGAtor website.
- Protection of Evidence: Responders will make every effort to minimize the impact of their presence on the crash scene. For example, responders should not cause damage to vehicles beyond what is necessary for extrication purposes or remove debris not in an actively flowing traffic lane until authorized. Crash scene investigators rely upon scene evidence to reconstruct the event. These reconstructions are often used to hold the involved persons

accountable for their actions during potential criminal proceedings. Responders should understand that any crash is a potential crime scene and must be treated accordingly.

- Safe, Quick Clearance: At an incident, every responder's goal should be to clear the scene safely and quickly to restore traffic flow and limit the diversion of traffic to less desirable, more hazardous routes. It is important to note that Georgia's Steer It and Clear It law requires motorists involved in non-injury crashes to move drivable vehicles to a location where they will obstruct traffic as little as possible. (Georgia Code 40-6-275 is listed in these Guidelines on page 6). The priority of safe, quick clearance also aligns with the National Unified Goals for Traffic Incident Management.
- Protection of the Environment: For hazardous materials and/or potential hazardous materials scenes, responders with the proper personal protective equipment and training will strive to contain the spilled product while minimizing exposure.

3.3.3 PRIORITY 3: PROTECTION OF PROPERTY

Responders will attempt to protect or save property by limiting damage to vehicles to what is necessary to stabilize and remove trapped persons. Property salvage operations will also be conducted as soon as safely possible.

4 STAKEHOLDER RESPONSIBILITIES

Each stakeholder has different roles and responsibilities during the traffic incident management process. The sections below outline the responsibilities of each stakeholder in the traffic incident timeline.

TABLE 1: STAKEHOLDER RESPONSIBILITY

Stakeholders	Detection	Notification	Response	Roadway Clearance	Incident Clearance	After Incident Review	Traveler Information
Law Enforcement	Yes	Yes	Yes	Yes	Yes	Yes	
Medical Examiner			Possible	Possible		Possible	
Crash and Homicide Investigator			Possible	Possible		Possible	
Fire and Rescue			Yes	Yes	Yes	Yes	
Emergency Medical Service			Yes	Yes	Yes	Yes	
Roadway Maintenance/ Public Works			Possible	Possible	Possible	Yes	
Highway Emergency Response Operators	Yes	Yes	Yes	Yes	Yes	Yes	
Public Information Office/Media						Yes	Yes
Transportation Management Center	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Towing/Recovery	Possible	Possible	Yes	Yes	Yes	Yes	
HAZMAT Agency			Possible	Possible	Possible	Possible	
Toll Operators	Yes	Yes	Possible	Possible	Possible	Possible	Yes
Georgia Emergency Management Agency			Yes	Yes	Yes	Yes	

4.1 LAW ENFORCEMENT

Law enforcement agencies are among the most important stakeholders in a traffic incident, since most incidents involve a vehicle crash. Officers play a major role in almost all of the traffic incident management processes, including detection, notification, response, roadway clearance, incident clearance, and after incident review (AIR) meetings. The responsibilities of law enforcement can vary depending on the type of incident or situation involved, but certain basic responsibilities apply to all incidents.

Law enforcement officers should perform the following:

- Upon notification, decide on an appropriate route to reach the incident that will provide the most expedient arrival and allow for immediate scene protection.
- After reaching the scene, stabilize the situation by establishing scene security, providing emergency traffic management and assisting the injured.
- Once the situation has been stabilized, assess the incident and communicate necessary information to both dispatch and other responding units or agencies, and request additional help as may be needed.
- For minor incidents, encourage and assist involved drivers in removing their vehicles from the travel lanes. In more serious incidents, assume the role of Incident Commander, or establish a Unified Command (UC) to coordinate the response of multiple agencies.
- If a traffic crash is involved, after other units or agencies needed have arrived and a safe "work zone" has been established, conduct the appropriate level of crash investigation.
- If a traffic crash is not involved, work to assist other responders to return the roadway to a normal traffic flow condition as soon as possible.
- While the incident is being cleared and until the recovery process is complete, law enforcement should remain at the scene unless circumstances require otherwise.

These points are intended as a general outline for officers responding to traffic incidents, but they should not be considered to be the extent of law enforcement responsibilities. Each situation is different, and officers should thoroughly assess the incident to determine the most appropriate actions to take for that particular event.

Finally, law enforcement officers should participant in AIR meetings to analyze the response efforts, and to address any issues that are found. AIR debrief forms can be found in Appendix D for reference.

4.2 MEDICAL EXAMINERS

Medical examiners should report to an incident scene when called by the on-scene law enforcement officer, or when a fatality is involved. Medical examiners may participate in the response, clearance, and AIR processes. During clearance, the medical examiner may authorize other agencies to move or remove victims from the incident scene.

4.3 CRASH INVESTIGATORS

Incidents involving crashes with serious injuries and/or fatalities require a thorough investigation by trained personnel. A crash investigator must be summoned to the scene unless the initial or on-scene officer is a crash investigator.

Because these severe crashes are considered crime scenes rather than simply traffic incidents, responsibilities for crash investigators are somewhat different from those of the on-scene officers.

Crash investigators should perform the following:

- Immediately upon arrival on the scene, meet with the on-scene officer and Incident Commander to be briefed on the current situation.
- Assess the incident, determine what additional assistance may be needed, and develop a plan for the investigative process.
- Work with the Incident Commander and other agencies on-scene to safeguard potential evidence, and to modify the "work zone" to include the overall scene and evidence, as necessary.
- Prioritize the necessary tasks and conduct those tasks that require closure of travel lanes first.
- Document the scene through photographs and a field sketch.
- Locate and measure all vehicle locations and evidence, or mark these positions with paint so they can be documented at a later time.
- Collect and secure all short-lived evidence.
- Coordinate with other responders the restoration of traffic flow. Reduce the size and impact of the incident scene.
- Maintain communications with the Incident Commander on the needs and progress of the investigation so appropriate changes can be made to the overall incident management plan to expedite the scene recovery.
- Ensure that all on-scene information has been collected and/or documented, and advise the Incident Commander that this portion of your investigation is complete so that the incident clearance and recovery can begin.
- Document, or have documented, the information concerning the drivers, passengers and any witnesses for follow-up.

As with the responsibilities for law enforcement in general, these are basic guidelines and are not intended to be the extent of the investigators tasks. Some incidents may require more time to investigate than others, depending on the complexity of the crash, but the key to remember for quick scene clearance and recovery is communication.

It is imperative that the investigator(s) and Incident Commander maintain good communication throughout the event, so both can accomplish their tasks in the quickest and most efficient manner possible.

4.4 FIRE AND RESCUE

Fire and rescue personnel should respond to all highway incidents involving fire, injury, fatalities, spills, or HAZMAT. Fire and rescue personnel should be prepared to act as an Incident Commander and establish UC at the incident scene.

While fire and rescue agencies typically do not participate in detection, verification, and notification, these responders play a vital role in response. Fire and rescue agencies should respond promptly and safely to the incident scene and perform the following:

- Assess the scene thoroughly to determine estimated time duration.
- Establish a UC if one is not already in place.
- Establish a safe transition area and work zone utilizing proper blocking techniques and traffic cones to define the areas.
- Coordinate activities to save lives, control hazards, and combat fires within agency capabilities.
- Make notifications as needed to further facilitate scene activities.
- Work with all agencies to ensure safe remediation and quick clearance of the roadway.
- Transfer command to remaining on scene agencies once fire activities are completed.

Fire and rescue personnel should coordinate with the UC system during clearance and perform the following roles:

- Assist with removing vehicles, debris, etc. when instructed by law enforcement.
- Handle (if equipped) or coordinate with HAZMAT response agencies to handle HAZMAT issues.
- Reposition fire and rescue vehicles to minimize lane blockage as soon as possible.

During recovery, fire and rescue agencies should provide stand-by assistance only as outlined by the fire rescue agency.

If fire and rescue agencies are responding to an incident involving fire, major spills, or HAZMAT, they should provide a continuous update on incident development and travel conditions when appropriate to established department contacts.

Fire and rescue agencies play an important role in traffic management by assessing necessary lane closure for the rescue effort. Fire and rescue personnel should be trained in setting up Temporary Traffic Controls (TTC), and each fire apparatus should carry traffic cones, as outlined in US Fire Administration and NFPA guidelines. Personnel should coordinate with the on-scene UC system in determining proper vehicle positioning to act as a barrier for the approaching traffic and minimize the lane blockage. Unless more closures are necessary, the Lane Plus One approach should be utilized as a maximum.

Fire and rescue personnel should participate in AIR meetings.

4.5 EMERGENCY MEDICAL SERVICE (EMS)

EMS responders may be a third agency or part of the fire and rescue department responding to a traffic incident. For the purpose of these Guidelines, the term EMS refers to the responders dedicated to assessment and/or transport of potential patients at an incident.

EMS typically does not participate in detection, verification or notification, but they play a vital role in response and clearance. EMS will respond to an incident as directed by a Public Safety Answering Point (PSAP) or when requested by Incident Command. EMS transporting units or EMS supervisory units may assume the role of Incident Commander and/or participate in UC as appropriate.

EMS transport vehicles should never be utilized as a barrier for traffic control. For the safety of responders and the patients during assessment and loading, EMS transport units should be pulled ahead of the scene and other response vehicles as to have protection for assessing and loading patients.

Keeping proper patient care as a high priority, EMS personnel should provide only necessary medical treatment on the scene and move to the transport unit and then off the scene as soon as patient care allows.

As with all participating agencies, EMS personnel should participate in AIR meetings to ensure continued efforts at improving responses from all participants.

4.6 STATE/LOCAL TRANSPORTATION AGENCIES

The state or local transportation agency includes Highway Emergency Response Operators (HERO), the Transportation Management Center (TMC), roadway maintenance, planners and designers, and traffic engineering personnel.

4.6.1 SAFETY SERVICE PATROL/HERO

Typical services provided by HERO include changing tires, assisting in moving vehicles, providing jump-starts, providing gasoline, providing first aid or CPR, containing minor spills, and setting up temporary traffic control devices. The HERO program does not service the entire state of Georgia; however, in Metro Atlanta, where the program is currently available, HERO participates in detection, notification, response, clearance, recovery, traffic management, and AIR meetings. Detailed guidelines for HERO and other safety patrol incident actions can be found in Section 7.

4.6.2 TRANSPORTATION MANAGEMENT CENTER

The TMC in Atlanta is staffed by operators, dispatchers, traffic specialists, media liaisons, and managers dedicated to incident management. The TMC operator's primary role is to monitor and

help coordinate the incident activities using traffic cameras, changeable message signs (CMS), and 511 floodgates and alert messages.

TMC operators continuously monitor the roadway system using CCTV cameras and are actively involved in the incident detection process. Operators receive reports of incidents by answering 511 calls from motorists and from 911 centers. The operators use traffic cameras to verify the incident detail and location. In case of a road-user phone call, they ask a series of questions to the callers to complete the verification process. After verifying the incident, the operators will notify the HERO dispatcher, who then dispatches a HERO unit to the incident.

TMC personnel manage the response process by performing the following functions:

- Implementing response plans, including CMS messages for planned and unplanned events.
- Notifying high level GDOT and GSP personnel through incident paging.
- Coordinating with the on-scene responders to continuously update response plans and the Estimated Time of Clearance (ETC).

The TMC plays a major role in broadcasting traveler information by:

- Activating traveler information systems, such as the Georgia NaviGAtor website (georgia-navigator.com), CMS, and the 511 system.
- Continuously updating traveler information as the incident evolves.

During an incident, TMC operators will:

- Continue with the response plan by updating all information until incident clears.
- Coordinate with TMCs in neighboring states if the incident affects their highway system or if regional traffic diversions can be implemented for long duration incidents.

TMC personnel should close the response plan once the incident scene is cleared. When appropriate, TMC personnel should participate in AIR meetings.

4.6.3 ROADWAY MAINTENANCE

The role of GDOT Maintenance Personnel (GDOT-MP) is to provide a safe, efficient and sustainable highway system for its users. When requested, GDOT-MP will respond and deploy resources to major traffic incidents 24 hours a day, 7 days per week. Each GDOT District will develop and implement response procedures in an attempt to meet the goal of providing assistance within 30 minutes of notification during the assigned working hours of each maintenance yard and 60 minutes after hours.

GDOT-MP, in coordination with unified command, will upgrade temporary traffic controls (TTC), determine detour routes and discuss clearance strategies.

GDOT-MP, in coordination with unified command, will determine and deploy the necessary heavy equipment and manpower to reopen the roadway if there is a delay in clearing the travel lanes or if the task is beyond the capabilities of the wrecker service on scene. If cargo or spilled loads (non-

hazardous) are involved, GDOT-MP will make every effort to assist in the relocation of materials in the shortest possible time, using available equipment. All such materials or any vehicles relocated by GDOT will be moved the minimum distance necessary to eliminate traffic hazards.

GDOT-MP will assess any damage to state assets and notify parties responsible for the repair. GDOT-MP will document all GDOT hours and equipment used for traffic control, roadway clearance and debris clean up. GDOT-MP will secure the traffic scene to the extent possible prior to leaving the travel lanes.

GDOT-MP will continually work with all responders to ensure that the needs of motorists and state roadways are being met in the most professional, safe and efficient manner.

4.6.4 PLANNERS AND DESIGNERS

Planners and designers aid in traffic incident management by:

- Scheduling delivery and funding of construction projects with consideration of feasible route alternates.
- Designing projects with roadway operations, especially incident response and traffic incident management, in mind.
- Mainstream the development of Traffic Management Plans that facilitate incident management during construction.
- Coordinating with agencies, consultants and contractors that are not typically involved in traffic incident management.

4.6.5 TRAFFIC ENGINEERING

Traffic engineers and managers play an important role in establishing the traffic incident management policies and procedures and may get involved in the following scenarios:

- Providing recommendations for Traffic Incident Management during the plan development process.
- Coordinating response with the roadway maintenance resource office.
- Arranging emergency procurement of additional resources.
- Soliciting heavy-duty equipment at the incident scene.
- Assisting in emergency planning, such as evacuation, detour, and alternate route planning.

Traffic engineering personnel should participate in AIR meetings when they play a major role in traffic incident management.

4.7 PUBLIC INFORMATION OFFICES/MEDIA

In the event of incidents or scheduled events that generate heavy traffic congestion, communication of accurate, real-time information is essential. Many larger county agencies have a Public Information Officer (PIO) trained to manage communications regarding an incident within their jurisdiction. All media should be directed to the PIO to ensure that incident responders are able to complete their tasks at an incident as quickly as possible, and that incident information is conveyed according to community standards and local/state policies.

GDOT has one of the oldest and most integrated traffic management systems in the US. While the TMC staff manages the essential messages for those on the roadways via messages on changeable message signs (CMS) and the 511 system, the media liaisons update the media via text, e-mail, phone, and social media networks, such as Facebook and Twitter.

Government agencies and incident responders provide updates to the media outlets, which assist in getting that information to the traveling public via traditional and new media. An "early warning system" may catch motorists before they end up in severe traffic congestion behind an incident, thus helping to prevent a secondary crash. This is especially important in densely populated areas.

The PIO, media liaison, or TMC supervisor decides how much information to provide to the media, especially with regard to a fatal crash. However, when traffic teams know a fatality is involved in an incident, they tend to provide more information to the public, including more intense warnings to avoid the accident area, and even alternate routes. The media may also want to send cameras to the incident scene, whereupon the PIO is essential for keeping them corralled.

While public information office and local media personnel play a vital role in disseminating traveler information, they do not participate in response, clearance, and recovery processes. When they play a major role in the traffic incident management process, however, they should participate in AIR meetings.

4.8 TOWING AND RECOVERY

The safety of responders, crash victims, and motorists is a towing and recovery operator's first priority. Towing and recovery vehicle operators are often on the road and may detect the incident first. In that situation, they should notify the 911 dispatch center. They may play the role of incident responders until additional help arrives.

The first action taken should be to conduct a scene survey and immediately set up traffic control. A buffer and transition for approaching traffic:

- Protects accident victims, and
- Provides a warning and traffic transition to prevent secondary accidents.

The towing and recovery companies should dispatch required equipment to the incident scene promptly. The supervisor and tow truck operators should report to incident command upon their arrival at the scene. Following an assessment of the situation, any additional equipment should be

requested. The towing supervisor should report a plan of action to the incident command and with the approval of the incident command begin rigging for recovery.

Proper rigging and recovery techniques should be followed to ensure a safe recovery. Implement one lane up-righting of overturned vehicles and winching operations without obstructing travel lanes unnecessarily.

Towing and recovery truck operators play a major role in the clearance process in the following ways:

- Help remove crash vehicles and debris from the roadway.
- Contain and assist with clearing travel lanes of vehicle fluids.
- Towing and recovery personnel should help clean debris from roadway, as required by Georgia Code 40-6-276.
- Assist in spill and leak mitigation.
- Transport uninjured crash victims to a safer location.
- Handle financial negotiations outside the incident scene and not while clearance activity is underway.
- Relocate crash vehicles from the roadway for off-loading cargo, if possible.
- Relocate crash vehicles from the roadway to off ramp or safe location for final hookup and rigging for tow to facility.

Towing and recovery operators may assist with setup of the temporary traffic control devices along the traffic incident management area, and they should remove temporary traffic control devices as necessary.

After traffic has been restored to normal flow, set up and maintain traffic control devices for a planned event (up-righting, off-loading, rigging, waiting for non rush hour traffic) on the shoulder of roadway, to provide warning to approaching motorists.

Finally, towing and recovery personnel should participate in AIR meetings.

4.9 HAZMAT MITIGATION AGENCIES

Upon discovery of a HAZMAT incident by on scene fire, law enforcement, or DOT, efforts should be made through contact with the responsible party (the carrier) to activate their hazardous materials mitigation contractor. While the local fire jurisdiction may assist with containment and mitigation of vehicle fluids or HAZMAT cargo leaks and spills, they only provide limited containment/public safety protection and not ultimate clean up.

Activation/notification to the responsible party's contractor as soon as possible will expedite their arrival and shorten the mitigation time. In the event that the responsible party does not have a mitigation contractor, local fire or EPD officials have access to a database of contractors. Contacting the closest contactor will minimize delay or extended arrival times.

HAZMAT mitigation agencies may assume the role of Incident Commander and/or participate in UC. These agencies should minimize clean-up time to reduce the amount of HAZMAT exposure and its lingering effects. When they play a major role in traffic incident management, the HAZMAT agency should participate in AIR meetings.

4.10 TOLLWAY OPERATORS

Georgia's State Road and Tollway Authority (SRTA) operates the SR 400 Extension and Toll Plaza, which is the 6.2 mile road segment from I-285 on the north end to I-85 on the south end. The SRTA SR 400 Toll Plaza has 18 lanes, with four Express or Open Road Toll (ORT) lanes and 14 gated cash lanes. SRTA will also be the operator of the approximately 15-mile long I-85 High Occupancy Toll (HOT) Lanes in Gwinnett County. For more information about HOT Lanes, please refer to Appendix E.

Coordination between SRTA, TMC operators, law enforcement officers and other incident responders is necessary to provide timely messaging to motorists for the effective operations of toll lanes, existing and future, in Georgia. As Georgia develops roads privately built under Public Private Partnership (P3), private firms will be designing, building, financing, operating, and maintaining toll roads. Therefore, effective coordination with private toll road operators will be crucial, as well.

4.11 EMERGENCY MANAGEMENT AGENCY

The agency for the State's emergencies, disasters, and significant events is the Georgia Emergency Management Agency (GEMA). GEMA approaches its responsibilities from an "All Hazards" perspective. Georgia is at risk from a multitude of hazards. Hurricanes, tornadoes, floods, and ice storms are all examples of natural hazards. Manmade hazards include industrial accidents, transportation accidents, criminal activities, transportation accidents, criminal activities, civil unrest, and in today's environment, terrorism.

A basic tenet in Emergency Management is Tiered Response. Local authorities will do everything they can to resolve the emergency. When the local authority sees the need for help, they go to the county, then the county goes to the state and then the state will go to the federal government. Whenever resources from outside the impacted jurisdiction are engaged, they are in support of the local authority that retains responsibility for managing the response.

Based on this guiding principle, through the State Operations Center (SOC), GEMA can play a supporting role in responding to a major transportation incident. GEMA can coordinate with other state agencies for support. Examples of this may include requesting Environmental Protection Division (EPD) assistance on a Hazards Materials incident; Department of Agriculture assistance when animals, animal products or food products are involved; and American Red Cross assistance in sheltering and feeding people associated with the event. GEMA's role is to assist in coordinating the State of Georgia's response to the event.

5 RESPONDER SAFETY

A responder's job environment contains many potential hazards—not just traffic and HAZMAT, but also weather, fire, injury from debris, and shock. All responders must be familiar with vehicle and agency safety policies.

> WORKING ON A HIGHWAY OR NEAR MOVING TRAFFIC IS HAZARDOUS. RESPONDERS MUST BE EXTREMELY ALERT AND USE SOUND JUDGMENT TO PROTECT THEMSELVES, OTHER RESPONDERS, AND MOTORISTS.

5.1 GENERAL RESPONDER SAFETY

Safety is paramount and should always be a part of every responder's daily routine. Following are some specific safety guidelines. At an incident scene, all responders should:

- Position vehicles considering the safety of those at the scene.
- Park in a manner that provides maximum protection for responders outside of the vehicle by creating a buffer zone to separate responder vehicles from the disabled vehicle. If a responder's vehicle is struck by an errant motorist, the probability of injury to a responder or the victim is likely reduced.
- Turn front wheels away from traffic. Should your vehicle be struck, this may direct your vehicle away from the incident scene.
    - Call dispatch with "Windshield Size-up" before leaving the vehicle providing the exact location using as many of the following as possible:
        - Route #
        - Landmark
        - Direction
        - Before/After Exit #
        - Mile post (MP)
        - Town
        - County
        - Lane(s) blocked
        - Describe the nature of the incident by answering, "What do I see?"
        - Number and type of vehicles[3]
        - Extent of damage to vehicles
        - Possible injuries

[3] TRAA has created a Vehicle Classification Guide so incident responders and dispatchers can use the federal vehicle class standards to correctly dispatch towing and recovery units. This guide is included in Appendix F.

- Evaluate each situation, determine what needs to be done to manage the situation, and take appropriate action.
- Maintain situational awareness. Being aware of what is happening helps responders understand how their actions may impact the safety of all responders and motorists. Before taking any action, responders should balance the risks and benefits.
- Consider weather conditions and sight distance when positioning vehicle and setting up traffic controls.
- Always think about safety.

5.2 PERSONAL SAFETY ITEMS

In addition to safety apparel, the following personal safety item guidelines will protect responders in and outside of their vehicles. To ensure safety, responders should:

- Use a seat belt.
- Wear gloves when changing tires or removing debris from the roadway.
- Wear disposable exam gloves if there is a possibility of contact with blood borne pathogens. Leather work gloves are not a substitute.
- Wear safety shoes, such as steel toe boots, to protect feet from falling objects or crushing injuries.
- Avoid loose or hanging clothing or personal items that may become snagged when working on disabled vehicles.

5.3 HIGH-VISIBILITY APPAREL/SAFETY VEST

All responders must wear approved high-visibility apparel at all times when working outside of the vehicle. "Part 634 - Worker Visibility," published by FHWA under Title 23 of the Code of Federal Regulations (CFR), requires all workers within the right-of-way of a Federal-aid highway to wear high-visibility clothing. This requirement applies to all emergency responders.

Safety apparel must be conspicuous during both daytime and nighttime. To ensure the effectiveness of high-visibility apparel, responders should:

- Keep high-visibility apparel clean to maintain reflectivity and visibility.
- Replace high-visibility apparel when it is worn, heavily soiled, or faded.
- Wear high-visibility apparel on top of all other clothing, including jackets.

6 EMERGENCY TEMPORARY TRAFFIC CONTROL AND SCENE SAFETY

A traffic incident management area (TIMA)is a type of temporary traffic control (TTC) zone established in response to a road user incident, natural disaster, hazardous material spill, or other unplanned incident.

Responders should, within 15 minutes of arriving on-scene, estimate:

- The magnitude of the incident including lane blockage.
- The expected duration.
- The expected queue length.

Responders should set up the appropriate TTCs for these estimates.

On-scene responders should also reevaluate traffic control devices, scene safety, emergency vehicle positions, and traffic flow every 15 minutes and provide updated information to dispatch or the TMC.

6.1 TEMPORARY TRAFFIC CONTROL AT A TRAFFIC INCIDENT MANAGEMENT AREA

Upon arrival at an incident scene, responders should work as quickly as possible to establish a TIMA.

TIMAs provide traffic control and advance warning, which are both necessary to maintain a safe working area at an incident scene. In the early stages of an incident, responders should use all equipment on hand to set up traffic control, while realizing that the TIMA will be expanded and/or enhanced as additional responders arrive and more resources become available. As the incident progresses, the scene may escalate (i.e., go from a one-lane closure to multiple lane closure) or de-escalate (i.e., go from a multiple lane closure to a one-lane or shoulder closure).

All TIMAs should conform to the standards established in Chapter 6I of the Manual on Uniform Traffic Control Devices (MUTCD). Chapter 6I provides guidance on the types of TTC devices that should be used at a TIMA based on the incident type.

For instance:

- For major and intermediate incidents, TTC zones should include proper traffic diversions, tapered lane closures, and upstream warning devices to alert approaching traffic of the end of a queue.

- For minor incidents, it is not generally possible or practical to set up a lane closure with traffic control devices. When a minor incident blocks a travel lane, it should be removed from that lane to the shoulder as quickly as possible.

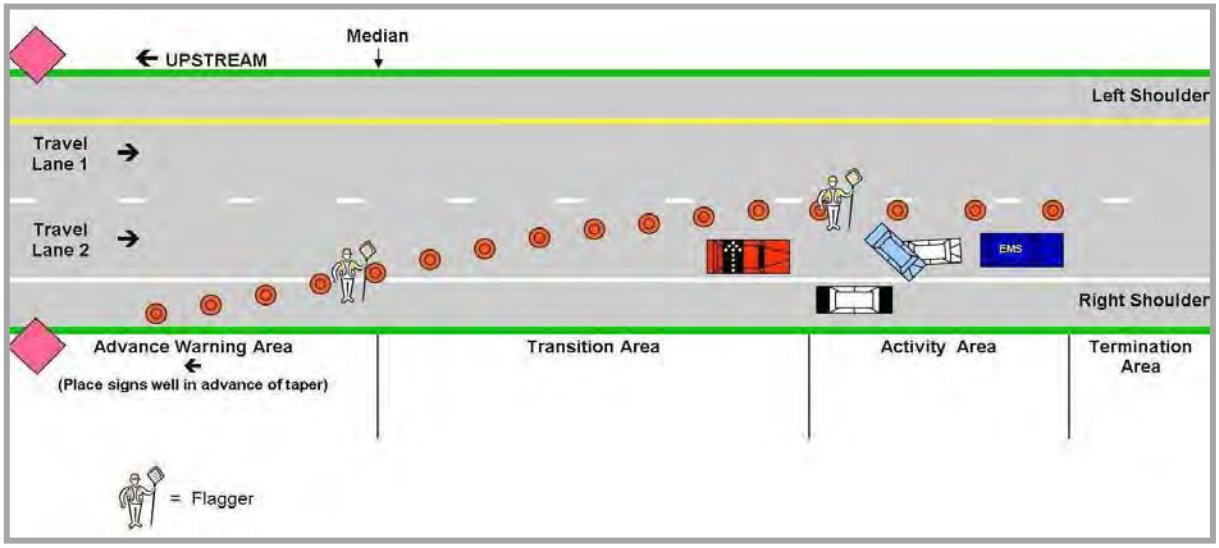
TTCs at a TIMA help move road users safely and quickly past or around an incident, reduce the likelihood of secondary traffic crashes, and keep motorists off the surrounding road system. TTCs include devices such as:

- Traffic cones
- Arrow panels
- Warning signs
- Manual traffic control (flagging).

Motorists have become accustomed to the traffic control measures that are used in work zones and are familiar with how to react to them. TIMAs and traffic control devices that differ from work zones may confuse drivers.

Figure 2 illustrates the components of a TIMA. The following sections discuss these components in greater detail. Please note that warning signs should be placed well in advance of the taper.

FIGURE 2: COMPONENTS OF A TIMA



6.2 SAFE VEHICLE PLACEMENT

Proper vehicle placement upon initial response establishes safe and effective traffic control. This guide describes TIMAs for the two primary types of traffic incidents:

- Non-blocking incidents, which involve a vehicle on the shoulder or off the road and only one or two responders, are the most common type of incident.

- Lane blocking incidents, where at least one lane of traffic is blocked, are more critical than non-blocking incidents because they directly affect approaching motorists.

TIMAs and TTCs apply to both non-blocking and lane blocking incidents. The more complex the incident, the more necessary and important TIMAs and TTCs become.

A typical incident may have one lane or a shoulder blocked on arrival. Under many circumstances it will be necessary to close an additional travel lane to provide working room and a traffic buffer area for responders, primarily fire-rescue and EMS. Closing an additional lane is known as the Lane Plus One protocol. Travel lanes should be reopened as the incident clearance progresses.

6.2.1 NON-BLOCKING INCIDENTS

It is important to note that even though traffic lanes remain open, incidents on the shoulder or off the roadway can sometimes be more hazardous than lane blocking incidents. Traffic controls and advance warning are minimal, and passing motorists are less likely to slow down, Move-Over laws notwithstanding.

Figures 3 and 4 illustrate vehicle placement and traffic controls at non-blocking incidents.

The following are general guidelines for responders working alone on or along active roadways:

- Stay aware of oncoming traffic.
- Minimize the time spent standing or walking between your vehicle and other vehicles.
- Plan an escape path.

At the scene, responders should:

- Park well off the travel lane.
- Practice space safety. Park closely enough to read the license plate, but no closer than two to four car lengths. Exceptions should be limited.
- Avoid stopping in the glide path on the outside of a curve. Vehicles operated by inattentive drivers or at an unsafe speed may drift onto the shoulder.
- Check traffic before exiting the vehicle.
- Turn and look and use peripheral vision to monitor oncoming traffic for potential errant vehicles.
- Approach the incident vehicle on the side away from traffic. In most cases, this is the passenger's side of the vehicle. If the vehicle is on the left shoulder or median, approach the vehicle on the driver's side.
- Scan the interior of the vehicle while approaching it.

When providing traffic controls at a non-blocking incident, responders should:

- Use traffic cones and flares for responder safety as well as for traffic control.

- Use flares when necessary, making sure that there is no fuel spill. Do not use flares for illumination. Never kick a flare.
- Remove all flares and other materials when the incident is clear.

FIGURE 3: NON-BLOCKING INCIDENT WITH SINGLE RESPONDER

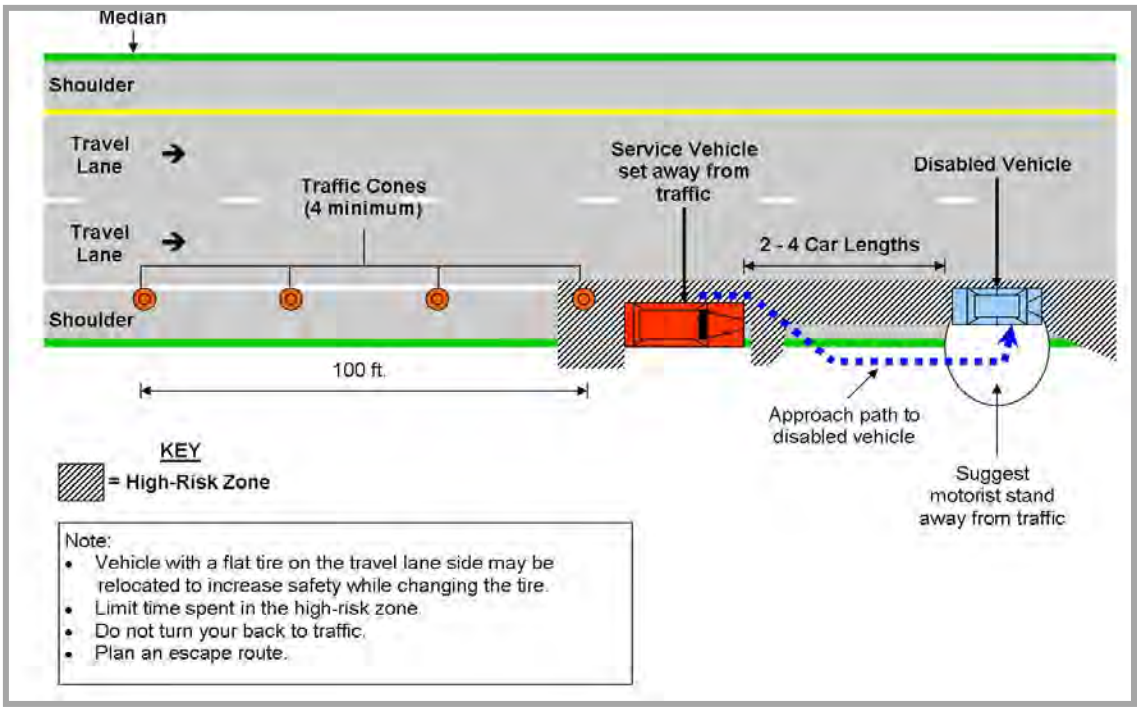
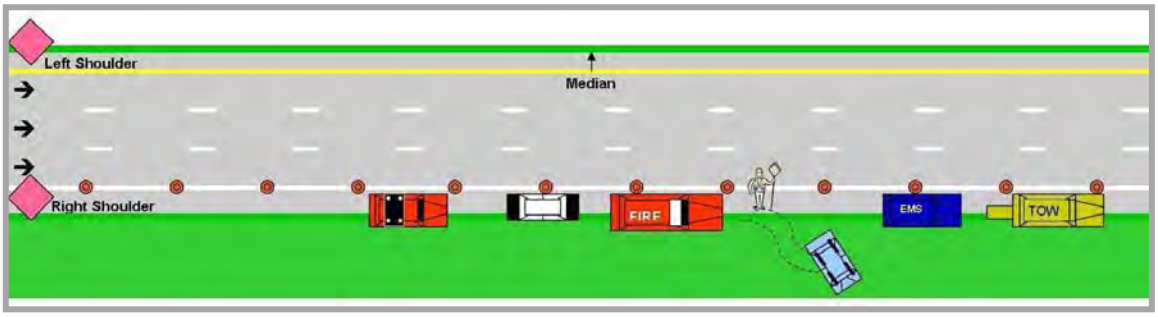


FIGURE 4: NON-BLOCKING INCIDENT WITH MULTIPLE RESPONDERS



6.2.2 LANE BLOCKING INCIDENTS

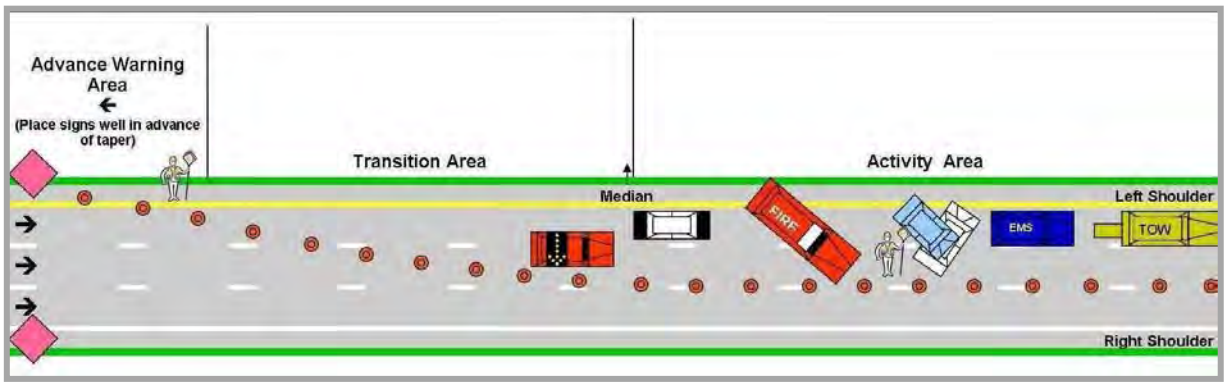
The following are general guidelines for responders working at a lane blocking incident:

- Place the response vehicle in a visible location between the incident and approaching traffic. An arrow panel (when available) and traffic cones should be used to warn motorists and direct traffic around the scene.
- Consider repositioning the initial response vehicle to allow more room for emergency vehicles as additional resources arrive.

- Confer with other on-scene agencies, when appropriate, through the Incident Command structure to ensure that emergency vehicle placement is optimized for scene safety, on-scene operations, and traffic flow past the scene. Consider staging additional response vehicles off-site until needed.
- Take only as many lanes as needed, for only as long as needed.
- Take an extra lane (called Lane Plus One) where needed to provide a safe buffer against moving traffic. Open the lane when the extra buffer is no longer needed.
- Relocate the response vehicle as needed to best utilize the arrow panel once the traffic cones are in place.
- Continue to look for opportunities to improve traffic flow and scene safety.

Figures 2 (Components of a TIMA, Section 6.1) and 5 (Blocking Incident in Two Lanes) illustrate vehicle positioning and TTC device placement at lane-blocking incidents.

FIGURE 5: BLOCKING INCIDENT IN TWO LANES



6.3 ARROW PANEL USE AND TRAFFIC CONE PLACEMENT

An arrow panel is probably the most effective TTC device. Proper use of a vehicle-mounted arrow panel (or CMS, if so equipped) is essential for emergency TTC at an incident scene.

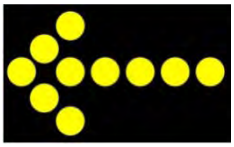
Traffic cones serve as effective traffic control devices, and they are also effective safety devices because they provide an audible warning when hit.

6.3.1 ARROW PANEL

The arrow panel, used in conjunction with traffic cones and other traffic control devices, provides positive guidance to direct approaching traffic away from a blocked travel lane at an incident scene.

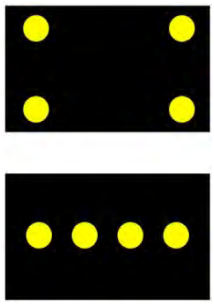
Use the arrow panel in Arrow mode, shown in Figure 6, only to indicate a blocked travel lane.

FIGURE 6: ARROW PANEL INDICATING A BLOCKED LANE



Use the arrow panel in Caution mode, shown in Figure 7, when on or near the shoulder of the roadway. In Metro Atlanta, HERO trucks use the four corner arrow panel when in the shoulder and the line arrow panel when in the travel lane.

FIGURE 7: ARROW PANEL INDICATING CAUTION



6.3.2 TRAFFIC CONE PLACEMENT FOR LANE-BLOCKING INCIDENTS

The following are general guidelines for placing traffic cones at a lane blocking incident:

- Set out traffic cones in a taper to guide approaching traffic into available lanes to safely pass the incident.
- Start deploying cones at the rear of the response vehicle and work upstream.
- Reinforce and straighten traffic cone lines and tapers after their initial placement to increase effectiveness and maximize visibility of the cones.
- Do not turn away from traffic while placing or removing cones.

- Space cones equally, about 40 feet apart, but at least 25 feet apart initially. As an example, if 16 cones are available, use 12 cones for the lane closure taper, which should be approximately 400 feet minimum on high-speed roads, and four cones along the activity area to quickly make the scene safer.
- Place cones around response vehicles, and place at least one cone downstream past the incident to allow a parking spot for the ambulance or EMS vehicle.
- Use pavement markings as a distance reference to help with cone placement. Roadway skip line striping is typically in 40 foot segments (10 foot painted stripe and 30 foot gap).

- Increase the number of cones and the distance between cones as the speed of approaching traffic increases. This gives motorists more time to react, slow down, and merge. Full MUTCD TTC is the goal for intermediate and major incidents, so actions at the scene should be taken to approach this level of traffic control as additional resources arrive.
- Delineate traffic tapers with clean, retroreflectorized cones.
- Use only retroreflectorized cones when working at night.
- Use additional cones from other responding units as available.
- Improve traffic flow by moving the transition taper further upstream from the activity area as additional traffic controls are put in place.

ANY INCIDENT WITH LANE BLOCKAGE EXPECTED TO EXCEED 24 HOURS WARRANTS FULL WORK ZONE TCC.

6.4 SCENE LIGHTING

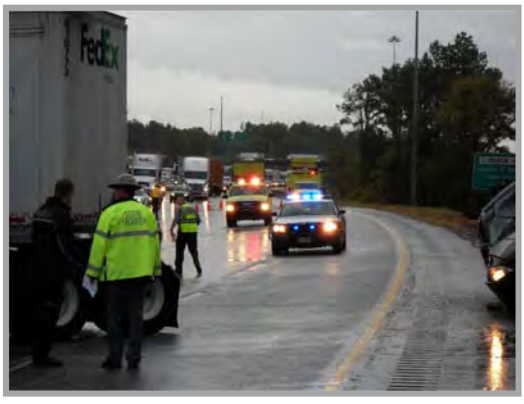
Proper illumination, or lighting, of the incident scene is vital. However, exercise care to ensure that scene lights are not blinding to traffic. When available, use vehicles with special lighting capabilities. Vehicle-mounted lighting setups that can be controlled remotely will allow responders to direct lights downward and minimize the amount of light that reaches motorists.

VEHICLE HEADLIGHTS THAT ARE NOT NEEDED FOR ILLUMINATION OR TO NOTIFY OTHER ROAD USERS OF AN INCIDENT RESPONSE VEHICLE IN AN UNEXPECTED LOCATION SHOULD BE TURNED OFF.

6.5 EMERGENCY LIGHT USE

The appropriate use of emergency lights—high-intensity rotating, flashing, or strobe lights—is essential.

Emergency lighting is most effective when a traffic incident blocks travel lanes and traffic control devices are not yet deployed. Once responders deploy emergency temporary traffic control, the emergency lighting should be reduced. Emergency lighting does not provide traffic control and is not considered a traffic control device.



Excessive or misdirected lighting can create confusion for approaching motorists and increase the chances for secondary crashes. Motorists approaching an incident from the opposite direction on a divided facility are often distracted by emergency vehicle lighting. When they slow down to look at the traffic incident as they pass, they pose a hazard to themselves and other travelers. The lingering effect of this distraction

contributes to increased congestion and resulting delay.

The following guidelines will help responders practice disciplined use of emergency lighting:

- Once channelization with cones and advance warning are established, minimize the use of multiple response vehicle emergency lights.
- Once the travel lanes are cleared, minimize the use of emergency lights on the shoulder.
- Monitor and adjust emergency lighting during the incident to improve the visibility of traffic control devices and reduce onlooker delay.
- Use arrow panels instead of flashing lights to provide traffic control.

6.6 POSITIVE TRAFFIC CONTROL

At an incident scene, manual positive traffic control, also called flagging, reduces rubbernecking and helps keep traffic moving smoothly. When resources permit, the flagger function should assist in slowing and directing approaching traffic. Flaggers shall be outfitted with high-visibility safety apparel.

Stop/Slow paddles are the preferred hand-signaling device because they provide more positive guidance than red flags.[4] Figure 8 illustrates the flagging procedures for emergency situations.

When resources permit, a traffic spotter should monitor traffic and activate an emergency signal if a motorist's actions do not conform to established traffic control measures. A portable air horn or similar device is an ideal emergency signal. A portable radio is not recommended for this purpose, since all responders on the scene are unlikely to be monitoring the same radio frequency.

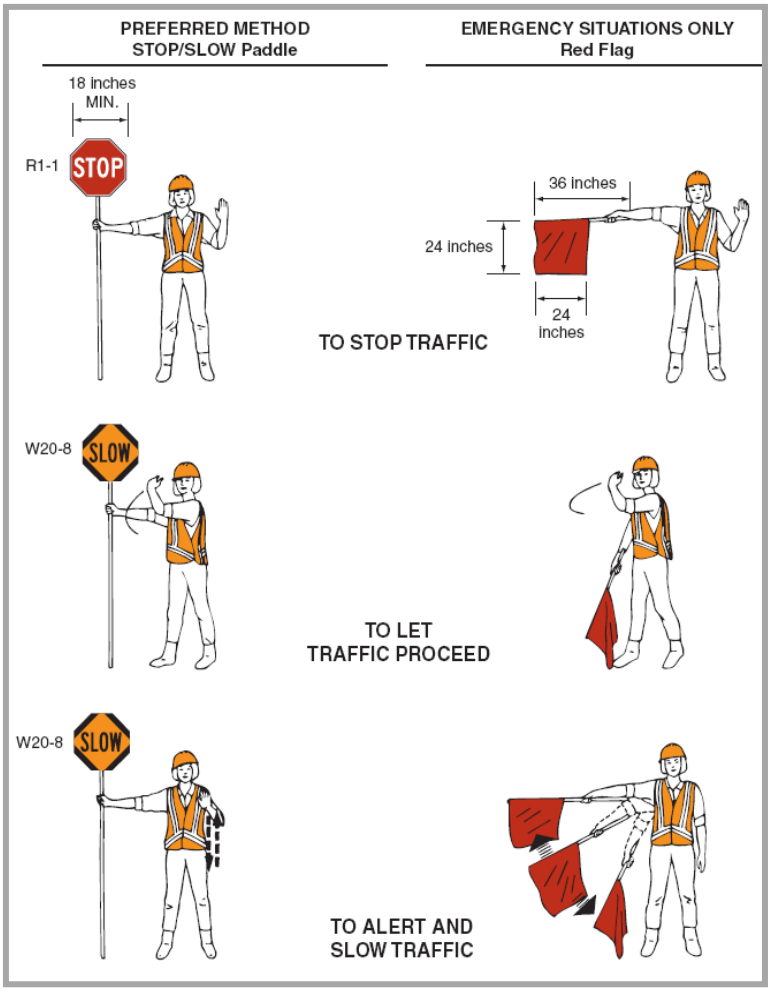
Qualified flaggers should provide manual traffic control, but if necessary, any response personnel can provide it. The following are guidelines for effective positive traffic control:

- Do not use bystanders, good Samaritans, or other untrained personnel for traffic control duties.
- Give commands or directions to traffic in a clear, courteous, but firm tone.
- Accompany verbal commands to "stop," "slow down," and "proceed" with appropriate hand movements or the use of a Stop/Slow paddle or flag. Whistles can also be an effective tool.
- Stand at a safe location adjacent to the wrecked vehicles when providing positive traffic control in the activity area.
- Stand at a safe location near the beginning of the taper when providing positive traffic control in the transition taper area.

[4] MUTCD Chapter 6E. Flagger Control can be found in Appendix G for full guidance.

- Make eye contact with the drivers of approaching vehicles to encourage them to pay attention to their driving and not the incident. This will increase the flow of traffic past the incident scene, reducing delay.
- Avoid providing individualized directions to motorists as this can create more congestion by slowing traffic. The flagger's job is to keep traffic moving safely past the incident scene.

FIGURE 8: FLAGGER COMMANDS FOR EMERGENCY POSITIVE TRAFFIC CONTROL



6.7 ADVANCE WARNING AND QUEUE PROTECTION

Any incident creates a significant potential for the occurrence of a secondary incident, which is often more serious than the initial event. Incident responders play an important role in reducing these secondary incidents.

Vehicles approaching at high speeds will often encounter the stopped queue of traffic before arrow panels and scene emergency lighting are visible. These high-speed motorists do not expect stopped traffic and need appropriate warning.

An advance warning area established upstream of the incident:

- Warns oncoming traffic of the upcoming incident scene, and
- Promotes a reduction in travel speeds.

6.7.1 ADVANCE WARNING SIGNS

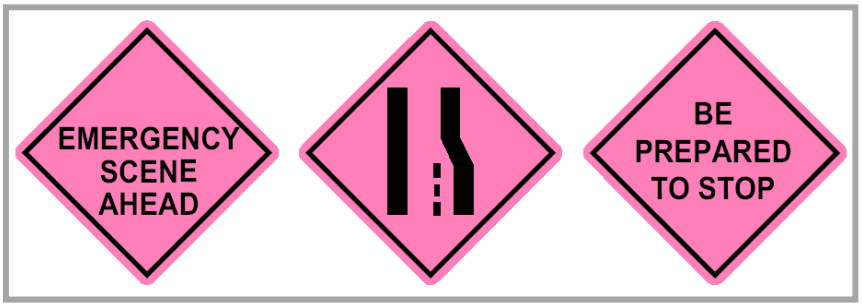
Special incident management advance warning signs placed by responders provide warning to approaching motorists. These signs should be a special fluorescent pink color with black lettering, such as "INCIDENT AHEAD" and "BE PREPARED TO STOP" (per MUTCD Chapter 6I). Examples of these signs are shown in Figure 9.

Since this will likely be approaching motorists' first warning of the incident, responders should take special care to place advance warning signs and/or response vehicles, using these guidelines:

- Incidents on the Interstate system or other high-speed divided roadways should have advance warning signs placed approximately 1,000 – 2,600 feet in advance of the beginning of the transition area.
- Warning signs on other roadways should be placed approximately 500 – 1,000 feet prior to the transition area.

All advance warning signs should be placed to provide enough warning to motorists to slow before reaching the traffic queue. Advance warning signs placed in urban areas may need to be placed at shorter distances to avoid sign clutter. Setting up a TIMA near a corner, hill, or other reduced visibility situation may require the location of the advance warning devices to be adjusted.

FIGURE 9: EXAMPLES OF TIMA ADVANCE WARNING SIGNS



Responders should coordinate with units who are either already on or arriving at the scene to place the advance warning signs or other devices, following these guidelines:

- Double back and place the advance warning signs once the immediate scene is secure if additional units are not available to assist.
- Place the signs well in advance of the queue. Relocate them as needed.
- Maintain continual communication with dispatch while on an incident scene so that traffic warning devices, such as CMS, can be updated with accurate information for approaching motorists.

- Obtain additional signs, if needed, from other response units and place them on both sides of the roadway well in advance of the scene.

6.7.2 PORTABLE CHANGEABLE MESSAGE SIGNS

Portable changeable message signs are another tool for providing drivers advance warning.

Portable changeable message signs can be used for intermediate incidents and are strongly recommended for use during major incidents.

6.7.3 CHANGEABLE MESSAGE SIGNS

Changeable Message Signs (CMS) are permanent, structure-mounted, electronic signs.

CMS are remotely operated and can provide advance warning messages to motorists if an incident occurs downstream.

6.8 DISMANTLING THE INCIDENT SCENE

At each incident, responders need to develop a de-commit plan. Incident Command must monitor and control the dismantling of the scene and plan to remove personnel, apparatus, injured persons, bystanders, and vehicles safely from the scene. All debris must be cleared from the roadway so that it doesn't present an additional hazard.

Dismantle the scene backward from the termination area to the advance warning area.

The following are considerations to keep in mind while removing personnel and apparatus from the scene:

- Ambulance leaving scene with or without traffic control
- Dismantling safe incident space
- Blocking apparatus leaving the scene
- Picking up traffic cones safely

Personnel must realize that conditions change as the incident terminates, and the following will likely occur:

- Safe area may no longer be intact.
- Frustrated drivers may increase speed to make up for lost time.
- Frustrated drivers may enter gaps in safe incident space.
- Vehicles (e.g., ambulances) leaving the scene may be too busy watching traffic to see personnel on scene.

When an incident scene has been cleared, the appropriate agency (generally the maintaining authority) should be notified that the roadway is open. Additionally, if dispatch, the TMC, or other agencies were notified of the incident, they also need to be notified that the incident is clear.

At the conclusion of an incident, responders should facilitate the safe removal of all components—including remaining responders, responder vehicles, and TTC devices—of the incident scene, using these guidelines:

- Remove all debris from the travel lanes and shoulder.
- Remove traffic control devices in the upstream direction. Start at the termination area and work back to the advance warning area.
- Notify dispatch when the lanes are reopened.
- Be alert for impatient motorists. With the incident victims and vehicles removed, delayed drivers will not be as cautious and may not see you.

6.9 HELICOPTER LANDING ZONES

In cases where incident victims need urgent or time-sensitive medical treatment, air ambulances or medical helicopters may be necessary. In preparation for their arrival, responders must designate a landing zone (LZ).

Ideally, a short-distance transport to a suitable site off of the highway should be considered for the safety of responders and for quicker roadway clearance. However, every incident is different. The on-scene medical controller or incident commander must promptly decide where to set up the LZ to expedite the victim's transport to an appropriate trauma center.

The following are guidelines for setting up an LZ:

- An LZ should be no less than 100' x 100' in size on flat terrain during the night, and no less than 50' x 50' during the day. The LZ should be clear of debris and loose soil and free of overhead obstructions, wires, or trees. Other responders and personnel should be at least another 100' from the landing zone.
- Ideally, the LZ is marked with appropriate strobe lights, light sticks, and even emergency vehicles. An ideal landing zone is a vacant, cleared, well-defined area. Traffic cones should

not be used because rotor wash can potentially suck them into the main rotor. Do not use crime scene tape or rope to mark the LZ.

Responders should remember the following safety guidelines at an LZ:

- When communicating and directing the helicopter to the LZ, use the clock method based on the nose of the aircraft.
- Follow the direction of the flight crew for all movement around the aircraft. Only maneuver around the aircraft when escorted to and from the aircraft by a member of the flight crew.
- Approach the aircraft from the front or sides (from 9 o'clock to 3 o'clock), never from the rear, and always within full view of the pilot. Keep low when approaching the aircraft.
- Stay clear of the tail rotor.
- Do not run or smoke.
- Use eye and ear protection if available.

7 INCIDENT ACTIONS

This section provides typical incident scenarios and offers action items for responders to use as guidelines for effective scene management. The actions are addressed to patrolling responders, such as HERO or safety service patrol. However, the principles apply to all responders.

7.1 ABANDONED VEHICLES

Abandoned vehicles left by motorists on roadway shoulders—especially on high-speed, access-controlled roadways—are a safety hazard and can restrict the response of emergency vehicles.

Law enforcement agencies with jurisdiction need to detect, check, and order the removal and impoundment of abandoned vehicles. Any vehicle found in a location that is hazardous to traffic should be processed as an immediate tow. All other abandoned vehicles should be removed as soon as possible after the statutory time allowance has expired.

Any non-law enforcement agencies that do not have impoundment authority can assist in the handling of abandoned vehicles, using these guidelines:

- Check for the following scenarios without entering the vehicle:
  - Injured, sick, or incapacitated individuals
  - Anything suspicious in nature, such as a punched ignition, damaged door lock, or a broken window with glass debris still in the vehicle
- Notify dispatch of anything unusual.
- Advise dispatch if the vehicle is in a hazardous location. Dispatch can contact law enforcement for immediate or expedited removal of the vehicle.
- Tag or mark the rear window to notify other units and law enforcement that the vehicle has been checked. Tag the vehicle only if it is not an immediate hazard.
- Follow procedures for logging or notifying dispatch when tagging a vehicle.

Notify dispatch of previously tagged vehicles that have not been moved after the time limit has expired.

7.2 DISABLED VEHICLES

Occupants of a vehicle that breaks down on any highway, especially a high-speed roadway, face substantial risks. Make every attempt to respond promptly to this type of incident. Quick response will help safeguard vehicle occupants who may be tempted to accept a ride from a stranger or walk alongside the roadway to seek assistance.

Once you observe or become aware of a motorist who needs assistance, you have a special obligation to help out. Within reason, you must adjust your direction of travel and respond to the incident with due caution but without delay.

- Stop to offer assistance when a motorist with a disabled vehicle is encountered unless en route to a higher priority call.
- Call dispatch and indicate your intention to turn around and offer assistance if the disabled vehicle is in the opposite direction of travel.
- Notify dispatch of the location and basic description of the vehicle for follow up if you must bypass a motorist for a higher priority incident.

If you are dispatched to a disabled vehicle and encounter another along the way, you may stop for a short time and check the problem. If you cannot make immediate repairs, advise the motorist that you will return after the other call is cleared.

7.2.1 RELOCATING VEHICLES FROM HAZARDOUS LOCATIONS

Safety is every responder's primary responsibility. If a vehicle is located in a hazardous location or is blocking a travel lane, make every effort to relocate the vehicle prior to rendering assistance.

- Determine if the vehicle should be relocated to a safer location before rendering assistance in:
  - Curves: Motorists tend to hug the inside of a curve or drift off the road on the outside. Make sure there is sufficient sight distance for traffic to see you.
  - Narrow left shoulders.
  - Locations where barrier walls or guardrails limit shoulder width and restrict an escape path.
- Take special care when performing activities such as a tire change on the traffic side of the vehicle. Consider relocating the vehicle unless it is more than six feet off the travel lane.

7.2.2 SAFE AND DAMAGE-FREE PUSH BUMPER USE

Using a response vehicle with a push bumper to relocate a disabled vehicle can be done safely and without damage by following some basic guidelines. Consider the location, weather, and traffic conditions. Contact dispatch to request assistance if you are concerned about highway traffic speeds, your safety, or the competence of the motorist. Do not relocate a vehicle if you suspect the driver is substance impaired.

A push bumper is designed to push a vehicle only for limited distances to reduce a safety hazard. Be prepared to explain to the motorist that you cannot push them down the highway, to an exit, or into a service station. Motorists may even ask you to push them to their home. Be polite but stay in control, and remember that your role is to reduce the potential of a secondary incident. Usually, a

suitable relocation site is nearby—just make sure you and the motorist agree on the location to which you will push the vehicle.

- Do not push a vehicle that has bumper misalignment, previous damage, or an obstruction such as a trailer hitch, tire carrier, or ladder. If possible, photograph the vehicle's bumper before and after pushing it.
- Do not push a vehicle if you cannot see ahead of it.
- Before you start to push:
  - Tell the driver what you want them to do.
  - Confirm that the driver understands you.
  - Advise exactly where you want the driver to go.
  - Remind the driver that steering and braking will be hard but will work.
  - Advise the driver not to hit the brakes hard or abruptly.
  - Make sure the driver can hear your instructions. The driver side window should be open.
- Make sure the vehicle's:
  - Ignition key is in the on position.
  - Transmission is in neutral.
  - Parking brake is off.
- Approach the disabled vehicle to be pushed slowly. Make gentle contact.
- Check traffic.
- Advise the driver that you will start pushing.
- Push slowly, maintaining a shallow angle.
- Back off before the driver brakes.
- Advise the driver when to stop.
- Instruct the driver to set the parking brake and secure the vehicle.

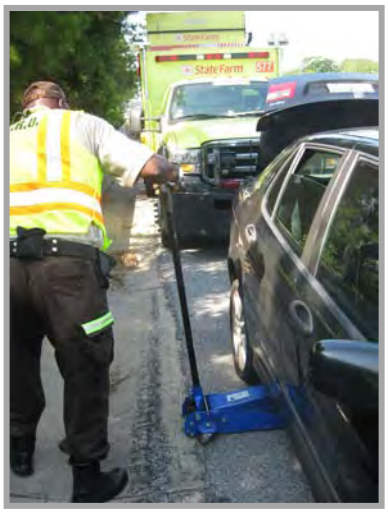
7.2.3 BASIC ASSISTANCE TO MOTORISTS WITH MECHANICAL PROBLEMS

In some instances, you may need to provide basic assistance (e.g., changing tires, giving jump starts, or even providing a small quantity of fuel to reach the next fuel station) to get the motorist safely back on the road. Use the following guidelines when offering assistance to a motorist with a disabled vehicle.

Follow the guidelines in Section 6.2, Safe Vehicle Placement while making motorist assists.

- Contact dispatch prior to leaving your vehicle and provide the following information:
  - Exact location, including direction and a mile post or cross street.

- Color of the vehicle.
- Make of the vehicle.
- License plate (tag) number.
- Description of vehicle problem (e.g., disabled or abandoned).



- Approach on the non-traffic side. Walk past the passenger door, and turn to face traffic. Clearly identify yourself and ask, "Are you okay?" and, "How may I help you?" Do not open the door; ask the driver to lower the window.
- Return to your vehicle if you plan to attempt repairs and place a minimum of four traffic cones behind your vehicle along the edge line, approximately 35 to 40 feet apart. (Use skip lines as a guide for spacing.)
- Move vehicles blocking a travel lane or in a hazardous location, such as on a narrow shoulder or at the end of a gore area, before providing assistance or repairs.
- Relocate the vehicle under its own power if possible or by pushing it to a safe location when possible. Follow the guidelines in section 7.2.2 for proper use of push bumpers.
- Contact dispatch and request back-up assistance if the safe relocation of a vehicle on a narrow shoulder is not possible. Use traffic cones and, if an arrow panel is not available, emergency lighting.
- Get as much information as you can from the driver when attempting to determine what is wrong mechanically with a stalled vehicle. Ask questions that include the following:
  - Has this ever happened before?
  - How did the vehicle act prior to stalling?
  - Do you know of any specific problems with the vehicle?
- Avoid any disassembly or removal of parts. Instead, confine repairs to readily apparent problems that can get the motorist underway. Attempt to limit your assistance to no more than 15 minutes.
- Direct the driver to have permanent repairs made promptly. Do not refer motorists to specific tow companies or repair shops. Give them options.
- Offer the motorist the opportunity to make a local cell phone call if attempted repairs are unsuccessful. If the motorist requests a tow truck or motor club, notify dispatch in accordance with agency practices.

7.2.4 RESPONSE FOR HYBRID VEHICLES

Hybrid vehicles are becoming more popular in the United States. Emergency Response Guides for the majority of auto brands and models can be found on the Internet. There are many types of Hybrid vehicles, including:

- Gas/Electric
- Hydrogen Fuel Cells
- All Electric (Plug ins)

- Multi Fuel Vehicles
- Hydraulic Hybrids

The eight steps below should be followed in order to safely respond to hybrid vehicles.

1. Stop, look, and listen. A hybrid may have gone to sleep. In this mode, you would not hear an engine running. For this reason, NEVER approach an accident vehicle from the front or rear—only from the side.
2. If you smell battery acid or propane gas, do not approach the vehicle without self contained breathing apparatus (SCBA).
3. Chock the wheels.
4. Identify the vehicle.
5. Shift it out of gear or place it in park.
6. Turn off and remove the key (smart keys should be at least 25 feet away from vehicle)
7. Be sure the ready light or auto stop light is off.
8. Set the park brake.
9. Disconnect—**do not cut**—the 12 volt battery. Avoid working in the front or rear of the vehicle as much as possible.
10. **Never cut** or touch the orange, blue, or yellow wires or connectors.

7.3 TRAFFIC CRASHES

Each agency responding to a traffic crash has its own roles and responsibilities. Depending on the severity of the crash, more resources may be deployed to the scene. The guidelines below are generalized and can be considered for use by any responder.

You may be the first to arrive at a vehicle crash. Your ability to quickly analyze the situation and take appropriate action to stabilize the scene and clear the incident is an important part of your job.

- If fire rescue and EMS have not yet arrived, park your vehicle in the blocked lane. If no lanes are blocked, park on the shoulder. After EMS arrives consider using a large vehicle to provide a wider safety buffer for the emergency personnel. This should follow the Lane Plus One procedure outlined in Section 6.2, Safe Vehicle Placement.
- Notify dispatch of:
  - Your exact location.
  - The lanes that are blocked.
  - The number of vehicles and general vehicle description.
  - The license tag number(s) of at least one of the involved vehicles.
- Approach each driver and determine if s/he can drive the vehicle to the shoulder.

- Call dispatch to request law enforcement and EMS if you see any apparent injuries, or if a driver or passenger indicates that s/he is injured. Provide dispatch with as much information as possible on the number and types of injuries.
- If the incident appears to be minor, ask each driver, "Do you want me to call EMS to transport you for treatment?" If no ambulance is needed, advise the driver that you will safely help move the vehicle off the road.
- Note: If this is an injury crash, law enforcement will need to complete an investigation. To aid the investigation, do not move any wrecked cars or debris until permitted.
- If the motorist is cooperative but doesn't feel comfortable driving the car, offer to drive it off the road.
- Relocate the wrecked car with your vehicle if it is not drivable.
- The ideal location to relocate the vehicles to is off the roadway completely. If possible, utilize an AIS (accident investigation site) or a location near the exit ramp on a cross street or a frontage road.
- If the crash cannot be relocated, start setting up emergency TTC and facilitate the flow of traffic past the crash scene.
- Do not leave a lane-blocking incident unprotected.
- To reduce the duration of the incident and limit rubbernecking, leave the crash scene and park off the roadway system to write your final report. Turn off emergency lighting and look for a safe area to park such as a fast food parking lot to complete the report.
- Clean up all debris and mitigate fluid spills before opening a lane. However, do not move any debris until the investigating traffic officer gives approval.

7.3.1 WORKING WITH OTHER RESPONDERS

Responders at a traffic incident make up a team and depend on each other for assistance. You are a professional whose skills include making a scene safe and quickly establishing traffic control. Everyone on the responding team should focus on safely clearing the scene and opening the travel lanes as soon as possible.

Because you will be working with other responders assigned to your area, you should have the opportunity to form a close professional partnership. This partnership will ensure the effective and safe management of traffic incidents on your roadways.

The following are general suggested guidelines for effective teamwork:

- Check in with the Incident Commander and begin to set up your TTC. Position your vehicle to help move traffic safely past the scene.
- Ask other responders to position their vehicles within the coned off activity area.

- Adjust the cones to protect all of the emergency vehicles. Fire and EMS may want to keep one additional lane closed (Lane Plus One) as a buffer between moving traffic and their personnel.
- Talk to the Incident Commander about moving or repositioning some of the response vehicles to improve traffic flow once the injured have been treated. Be persuasive but not confrontational. In some cases, after a few minutes you may again suggest that response vehicles be repositioned to facilitate traffic flow.
- Be sensitive to law enforcement's job of investigating serious crashes, especially if there is potential for a fatality. Protect and preserve the scene as best you can to allow a complete investigation. If you are first on the scene, pay close attention to details, including who the drivers are. Try not to park on skid marks or other potential evidence.
- Allow law enforcement enough time to document the scene and begin the crash report. Offer your assistance and begin to sweep up debris and absorb spilled vehicle fluids, as permitted.
- Ask for authorization to reduce the number of blocked lanes and begin moving the vehicles from the travel lanes. (Vehicles from serious crashes with multiple injured or incidents with possible fatalities will need to remain in place until the crash investigation is sufficiently complete.)
- Work with tow operators to expedite the clearance of the vehicles, fluids, and crash debris. Tow operators are part of the response team. If a wrecker is not yet on scene, suggest to law enforcement that you will move the wreckage off the travel lanes.
- Always look for opportunities to expedite the clearance of the wrecked vehicles from the travel lanes.

7.3.2 RELOCATING CRASH VEHICLES PRIOR TO WRECKER ARRIVAL

In many cases, the towing company may not arrive on-scene immediately. You can assist by relocating the vehicle(s) from the travel lanes for towing later.

Be aggressive in relocating wrecked vehicles from travel lanes to the extent permitted by your agency guidelines. Confer with the Incident Commander and begin to move the wrecked vehicles once injured persons are extricated and investigation is complete, using these guidelines:

- Relocate wrecked vehicles well off the travel lanes to the right side (in most cases). Place the vehicle in a position that gives the wrecker easy access.
- Consider relocating the vehicle to an exit ramp or a safe area out of sight of traffic.
- Drive the wrecked car off the road if it can be started.
- Relocate crash vehicles with your push bumper. Get assistance with traffic and push the wreckage from the road unless it is not safe to do so.
- Consider using a tow strap as an alternate method to relocate wrecked cars from travel lanes. This method works well if there is front end damage where locked wheels may prevent pushing.
- Look for and document any prior damage before relocating the vehicle.

7.3.3 VEHICLE FIRES

Smoke from vehicle fires can cause visibility issues that affect responders and passing motorists. It may be prudent to close traffic lanes adjacent to the fire; however, it is generally a good idea to maintain some traffic flow at the scene to facilitate the arrival of fire apparatus. In some cases on arterial roadways, smoke may require closing both directions of traffic for a short period of time. Upon arrival at a vehicle fire:

- Notify dispatch and provide location and a vehicle description. If it is a commercial truck, look for and report any indication of hazardous materials, and look for placards and HAZMAT ID numbers.
- Assist the vehicle occupants and escort them to a safe area away from the fire.
- Secure the scene. Provide traffic control and, if possible, keep traffic flowing to expedite the arrival and parking of fire crews.
- Attempt to extinguish only small fires if safe to do so.
- Do not approach a completely involved vehicle. There is risk of a tire, bumper support, or the fuel tank exploding.
- Set up cones and other available temporary traffic controls.

7.3.4 TRUCK CRASHES

Major truck crashes can have serious impacts on highway traffic. You can assist in many ways to manage the scene and remove the wreckage and spilled loads from the roadway both quickly and safely.

Your initial role is to set up emergency temporary traffic controls, just as in other incidents. Your devices are short term and will need to be upgraded to comply with the MUTCD as more resources become available.

During a truck crash, all responders should strive to safely reduce the size of the scene and the number of lanes closed. This goal can be accomplished by the following:

- Take quick action to contain or absorb any spilled vehicle fluids.
- Relocate spilled non-hazardous cargo to open an additional lane. In some cases an additional lane can be opened by moving spilled cargo by hand.
- Assist other responders to expedite reopening travel lanes. This assistance may include working with heavy-duty tow operators.
- Modify and upgrade the TTC devices to match the changing scene conditions.

- Stay alert to traffic and maintain a sense of urgency at the scene.
- Communicate frequently with dispatch with status reports from the scene.
- Discuss and coordinate the transfer of the traffic controls with the Incident Commander, other responding personnel, and dispatch.
- An on scene responder should be assigned to facilitate traffic movement past the activity area to reduce rubbernecking. This traffic control does not have to be from law enforcement.

7.4 VEHICLE FLUID SPILL MITIGATION

Incidents occur in which vehicle fluids such as engine oil, radiator fluid, hydraulic fluid, brake fluid, and diesel fuel from a ruptured fuel tank spill into the roadway. The most frequent fluid at a commercial vehicle crash is diesel fuel. Prompt actions by an initial responder to contain or reduce the size of the spill will greatly reduce the impact and duration of the incident. It is important to identify that the spilled fluid is not from a cargo tank. The following actions apply only to non-cargo spilled vehicle fluids.

NO ACTIONS BY RESPONDERS TO CONTAIN OR MITIGATE A VEHICLE FLUID SPILL SHIFTS LIABILITY FROM THE RESPONSIBLE PARTY.

- Identify the spill as a vehicle fluid, not cargo.
- Begin containing the vehicle fluid spill to keep it from spreading.
- Request assistance for large diesel fuel spills like saddle tank ruptures.
- Contain and limit the spill from spreading. Build a dike. Apply any available absorbents—even dirt from the roadside.
- Use available materials to try to reduce leaking vehicle fluids at the source.
- Seek assistance from the fire rescue personnel at the scene if you do not feel safe working with the fluids.
- Advise dispatch of the estimated number of gallons spilled. Dispatch will make proper notifications.
- For large spills beyond the on-scene resources, incident command should discuss the need for and request a maintenance crew or clean-up contractor.

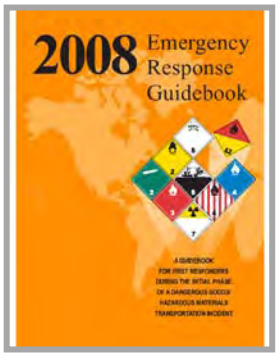
7.5 INCIDENTS INVOLVING HAZARDOUS MATERIALS

Commercial vehicle incidents are among the most challenging and dangerous tasks responders must manage. An incident involving hazardous material cargo is even more perilous.

While you should mitigate spills of vehicle fluids such as diesel fuel, you must address actual hazardous material cargo spills differently and with extreme caution.

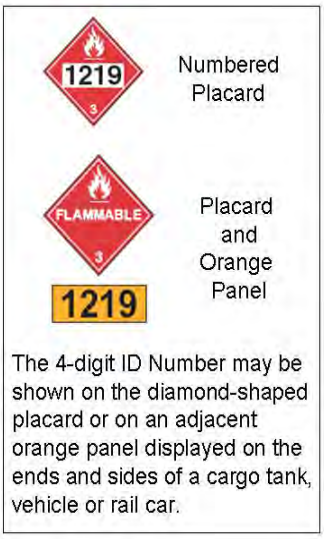
Familiarize yourself with the color and appearance of the material identification placards in the US DOT Emergency Response Guidebook.

At the scene of a truck crash where there is a spill or leak of an unidentified cargo, especially a placarded load, use the following guidance:



- Notify dispatch immediately.
- Approach the incident cautiously; do not rush in.
- Approach the incident from upwind.
- Stay clear of all spills, vapors, fumes, smoke, and any cargo that is the source of these potential hazards.
- Identify the cargo ID number indicated on the placards from a safe distance and update dispatch with the information.
- Check the driver and assist only if it is safe to approach.

FIGURE 10: EXAMPLE OF PLACARD AND PANEL WITH ID NUMBER



7.6 REMOVING DEBRIS NOT RESULTING FROM A TRAFFIC CRASH

Random or unexpected debris of any kind on a highway is a major concern and presents a real threat to motorists. Accidents frequently occur when drivers either stop suddenly or make abrupt lane changes to avoid striking debris. Debris is often kicked up by trucks, wind, or even mowers, and it can become a deadly projectile.

Removing debris from the travel lanes is a dangerous activity and requires appropriate caution. While there is no single safe way to remove debris from travel lanes, consider traffic volume, prevailing speed, sight distance, and time of day when determining how to remove the debris.

Debris on the shoulder has the potential to become a safety concern if a driver pulls off the roadway. Such debris can damage the driver's vehicle, or it could be thrown back into moving traffic. When removing debris from the roadway, a responder should:

- Notify dispatch of any debris. Provide the exact location, which lane(s) are affected, a general description, and whether you can remove the debris unassisted or if backup will be required.
- Pull well off the roadway and correctly position your vehicle.
- Use appropriate emergency lighting.
- Keep personal safety a top priority—safety vest and gloves are a must.
- Park upstream from the debris. This will keep debris that is struck by passing vehicles from being propelled into you or your vehicle.
- Point at the debris to help drivers avoid striking it if you are waiting on the shoulder for traffic to clear.
- Contact dispatch and request assistance if it is not possible to remove the debris safely. You may need to coordinate with police to create a rolling road block to approach the debris in some cases.
- Attempt to remove debris completely from the roadway system. If it cannot be removed, place it well off the travel lanes and shoulder to be picked up at a later time. Consider using a cone to mark the location. Notify dispatch for follow-up.
- After you report the debris, do not continue patrolling until you take action to remove it.
- Turn in any valuable items you find to your supervisor. Disposition of the items will be handled through established agency procedures.
- Use your PA system to notify the driver of a truck with the load spilling on the travel lanes. If the driver does not stop, contact dispatch and give the location, type of material being spilled, direction of travel, license number, and, if possible, the company name and any other pertinent information. Remember only law enforcement has the authority to make the truck pull over. Do not become involved in a pursuit.
- Stop and consider clean-up procedures if a spilled load is a hazard to traffic. Request assistance through dispatch if the location is unsafe or the amount of debris too great.

7.7 ROAD CLOSURES AND DETOURS

Major incidents with all travel lanes blocked for an extended period will likely require an emergency alternate route detour around the incident scene.

Emergency alternate route detours are generally pre-planned along the best available route. Large trucks are a concern on detours because of both their size and weight.

If no pre-established detour exists, work with the Incident Commander and other responders to close the roadway at an exit near the incident that provides a viable alternate route.

Implementing emergency alternate routes requires substantial additional resources. This includes local law enforcement and public works personnel, who can direct traffic and/or optimize traffic signals on the detour route. Agencies may use temporary detour signing and portable CMS to help motorists navigate back.

The alternate route should be monitored or patrolled for congestion levels, breakdowns, or problems with commercial vehicles making turns.

8 GLOSSARY OF TERMS

Activity Area – Section of the highway where incident response activities take place. The activity area is comprised of the upstream buffer space and the incident space.

Advance Warning Area – Section of highway where motorists are informed about the upcoming incident area.

Block – Positioning of an emergency vehicle to create a physical barrier between upstream traffic and the incident space.

Buffer Space – A lateral and/or longitudinal area that separates personnel and vehicles in the protected incident space from nearby moving traffic.

Crash Reconstruction – The process of recreating an accident, including the attempt to identify, based on the best available evidence, the events which led up to the occurrence of the accident, as well as the attempted re-enactment of the accident.

Downstream – Roadway or traffic flow beyond the incident space, when considered from the perspective of a passing motorist.

Emergency Medical Technician (EMT) – A person trained and certified to initiate the administration of emergency care for victims of trauma or acute illness before or during transportation of the victims to a health care facility via ambulance or aircraft.

Emergency Temporary Traffic Controls (TTC) - TTC devices, equipment, and personnel implemented in response to an unplanned traffic incident. Not to be confused with the full TTC imposed in response to highway maintenance, highway work zones or major events with longer durations.

Flagger – Personnel assigned to control stop and go traffic or direct traffic in conformance with the Manual on Uniform Traffic Control Devices (MUTCD).

High Occupancy Toll (HOT) Lane – A high occupancy vehicle lane available to single-occupant vehicles that are willing to pay a dynamically-priced toll.

High Occupancy Vehicle (HOV) Lane – An expressway lane restricted to vehicles with at least two occupants; intended to move more people rather than more cars.

Incident Command – Responsible for overall management of the incident and consists of the Incident Commander, either single or Unified Command, and any assigned supporting staff.

Incident Command Post – The field location where the primary tactical-level, on-scene incident command functions are performed.

Incident Command System (ICS) – A standardized, on-scene, all-hazard incident management concept that is based upon a flexible, scalable response organization providing a common framework within which people can work together effectively.

Incident Commander (IC) – The on-scene ranking officer, representing the agency with incident jurisdiction that performs the command function.

Incident Space – Physical area of the roadway within which the emergency responders perform their EMS, fire, law enforcement, and recovery tasks at a vehicle-related incident.

Initial Responder – The first responding person or unit to arrive at an incident scene.

Investigator – Law enforcement officer that examines crime scenes to gather and process physical evidence that may link suspects to the crime scenes.

Landing Zone (LZ) – A designated location where a helicopter may safely take off and land.

Lane Numbering Convention – Lanes are numbered starting with the left most lane as seen from the motorist's direction of travel (the lane nearest the median) being Lane 1. Example for a 3 lane highway:

Lane 1 - left lane nearest the median

Lane 2 - middle lane

Lane 3 - right lane nearest the shoulder

Lane Plus One – The practice of Fire Rescue, EMS and others to close an additional travel lane as a buffer space to the work zone.

Manual on Uniform Traffic Control Devices (MUTCD) – The national standard for traffic control devices. MUTCD Chapter 6I covers the use of traffic control devices at an incident scene.

National Incident Management System (NIMS) – A system mandated by Homeland Security Presidential Directive 5 that provides a consistent nationwide approach for governments, the private sector, and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

National Traffic Incident Management Coalition (NTIMC) – The NTIMC is a forum of national organizations representing EMS, fire, law enforcement, public safety communications, towing and recovery, and transportation communities working together to promote multi-disciplinary, multi-jurisdictional Traffic Incident Management (TIM) programs and activities.

National Unified Goal (NUG) – Established by the NTIMC, the NUG is: responder safety; safe, quick clearance; and prompt, reliable, interoperable communications.

Open Roads Policy – The interagency agreement that serves to inform incident responders of the urgent need to rapidly remove disabled or wrecked vehicles, spilled cargo, and debris that obstruct the normal flow of traffic.

Public Address (PA) System – An electronic amplification system used to reinforce a sound source.

Responders – All personnel who have a responsibility in managing an incident and mitigating its impacts.

Staging Area – Location established where available resources can be temporarily housed or parked while awaiting operational assignment.

Tapers – Used to move traffic out of or into the normal path through the use of a series of channelizing devices.

Termination Area – Area used to return motorists to their normal path. The termination area extends from the downstream end of the incident space to the last temporary traffic control device.

Traffic Control Device – All signs, signals, markings, and other devices used to regulate, warn, or guide traffic.

Traffic Homicide Investigator – A sworn law enforcement officer, who is assigned to investigate fatalities resulting from motor vehicle collisions.

Traffic Incident – A non-recurring event that causes a reduction of roadway capacity or an abnormal increase in demand.

Traffic Incident Management (TIM) - The systematic, planned, and coordinated use of human, institutional, mechanical, and technical resources to reduce the duration and impact of incidents, and improve the safety of motorists, crash victims, and incident responders.

Traffic Incident Management Area (TIMA) – Area of a highway where temporary traffic controls are imposed by authorized officials in response to an incident. A TIMA is a type of TTC Zone and extends from the first warning device to the last TTC device or to a point where vehicles return to the original lane alignment and are clear of the incident. The components of a TIMA include an advance warning area, a transition area, an activity area and a termination area.

Transition Area – The section of the highway where motorists are redirected out of their normal path. The transition area is the area in which approaching motorists should change their speed and position to comply with the emergency traffic control measures established at an incident scene.

Unified Command – An ICS application in which responding agencies and/or jurisdictions with responsibility for the incident work together to establish a common set of objectives and strategies.

Upstream – Roadway or traffic flow prior to the incident space, when considered from the perspective of a passing motorist.

Appendix A: Revisions Form

E-mail

Print Form

Georgia TIM Guidelines
ERROR/OMMISION NOTIFICATION AND REVISION REQUEST

Today's Date		**Date of Guidelines**	
Requestor Name		**Date Requested**	
Requestor Agency		**Version Number**	
Requestor Title			
Requestor Email			
Requestor Phone			

Change Request Section Number, Title and Page Number

Error / Omission Notification and / or Revision Request
1.
2.
3.
4.

Reason for Notification / Revision
1.
2.
3.
4.

Decision	
☐ Approved	☐ Rejected
☐ Approved with modifications	☐ Deferred
Date Change / Version Number	

From available electronically on www.timetaskforce.com

Appendix B: TIME Task Force

Metro Atlanta Traffic Incident Management Enhancement (TIME) Task Force

The Issue

- The problem of traffic in our urban environment is far reaching. The ramifications of our congested roads can be felt in areas that most of us have not considered.
- Nearly 40% of law enforcement officers killed in line of duty were killed in traffic related incidents of some sort.
- From 1995 to 1997 there has been an 89% increase in the number of firefighters killed in traffic related problems.
- More than 50% of the congestion in Metro Atlanta is caused by non-recurring incidents, such as vehicular collisions. The average delay per peak road traveler is 70 hours. The cost of that congestion for delay time to motorists is estimated at $1.7 billion.

The Mission

TIME was formed to address the critical issues related to incident management in the region. This task force is made up of concerned incident responders from transportation, fire, rescue, police, towing, and emergency medical agencies. The mission of TIME is to develop and sustain a region-wide incident management program to facilitate the safest and fastest roadway clearance, lessening the impact on emergency responders and the motoring public.

The Purpose

The purpose of TIME is to continue the dialogue of inter-agency coordination and cooperation, to create an opportunity for multi-agency training which promotes teamwork, and to serve as a platform for participants to develop common operation strategies and a better understanding of other agencies' roles and responsibilities.

The Goals

- Increase public awareness of regional incident management.

- Develop/deliver common training for incident responders.
- Coordinate, communicate, and cooperate between different agencies in the region.

TIME's Accomplishments

Originally developed in 2002 in Metro Atlanta, the TIME program has been instrumental in coordinating traffic incident management activities among disciplines. Noteworthy activities include:

- Multi-Discipline Incident Responder Training: This training is usually free of charge for public agency representatives. Training has included quick clearance, responder safety, tanker truck emergencies, traffic incident management, vehicle placement, emergency light discipline, full scale emergency table top exercise, train-the-trainer, National Incident Management Systems (NIMS), National Highway Institute (NHI), heavy duty towing and recovery, Hazardous Materials (HAZMAT) awareness, work zone safety, and manual of uniform traffic control devices (MUTCD) compliance.
- Quarterly Meetings: Emergency responders, transportation officials and other representatives from around the Metro Atlanta Area come together once a quarter to discuss issues to help improve the safety of the emergency responders and traveling public while improving operational procedures in quick clearance. This includes presentations on outcomes of After Incident Reviews.
- Annual Conference: Each year since TIME's inception the governor's has declared an incident management day in Georgia. This proclamation is shared at an annual 2-day conference where over 100 responders from various agencies participate in hands-on exercises, hear state and national experts share best practices and build multi-discipline relationships.
- Traffic Incident Responder Directory: This directory contains contact information, response assignments, and GIS jurisdictional maps highlighting the response assignments for each participating emergency service agency within Metro Atlanta.
- After Incident Reviews (AIR): Monthly multi-discipline, multi-agency debriefs are conducted for major incidents occurring on the Metro Atlanta interstate system.
- TIM Teams: Localized teams have been established for members from local emergency agencies who work together on a daily basis in a particular jurisdiction or County. These teams meet on a regular basis (usually quarterly) to discuss specific issues relating to their jurisdiction.
- Metro Atlanta Strategic Vision: Developed in 2006 and supported by GDOT, Georgia Regional Transportation Authority (GRTA), and the Federal Highway Administration (FHWA); the vision identified priority initiatives to achieve measurable improvements in TIM that can have an immediate, substantial, and lasting impact on reducing non-recurring

congestion. A major result of the Strategic Vision was the implementation of the Towing and Recovery Incentive Program (TRIP).

- Georgia Traffic Incident Management (TIM) Guidelines: This document is another product of the TIME Task Force's efforts to encourage incident responders from multi-disciplines and multi-agencies to manage traffic incidents in a safe and efficient manner.

TIME is critical to the continued safety, mobility, and quality of life in Georgia, and we hope that you will join with others to champion its success.

For traffic incident management resources or for more information about joining the TIME Task Force, volunteering for a committee, forming a TIM Team, visit www.timetaskforce.com.

Appendix C: DRAFT Georgia Open Roads Policy

STATE OF GEORGIA

OPEN ROADS POLICY

Quick Clearance for Safety and Mobility

Whenever a roadway or travel lane is closed or partially blocked by a collision or traffic incident, Law Enforcement, Transportation and Local Public Safety agencies shall re-open the roadway as soon as possible ON AN URGENT BASIS. Safety of the public and responders is the highest priority and must be preserved.

This agreement by and between the Georgia Department of Public Safety[1] (DPS) and the Georgia Department of Transportation (GDOT) establishes a policy for DPS and GDOT personnel to expedite the removal of vehicles, cargo and debris to restore, in

[1] *The Georgia Department of Public Safety (DPS) oversees the day-to-day operation of the Georgia State Patrol (GSP), Capitol Police and the Motor Carrier Compliance Division (MCCD). All DPS references in this policy specifically include GSP and MCCD.*

an **URGENT MANNER**, the safe and orderly flow of traffic following a motor vehicle crash or incident on Georgia's roadways. This policy establishes a suggested benchmark for all Georgia traffic incident response agencies to adopt.

Whereas: *Public safety is the highest priority and must be maintained, especially if injuries or hazardous materials are involved. The quality of life in the State of Georgia is heavily dependent upon the free movement of people, vehicles and commerce. DPS and GDOT share the responsibility for achieving and maintaining the degree of order necessary to make this free movement possible. Both agencies have the responsibility to do whatever is reasonable to reduce the risk to responders, secondary crashes and delays associated with incidents, crashes, roadway maintenance, construction and enforcement.*

The following operating standards are based on the philosophy that our roadways will not be closed or restricted any longer than is absolutely necessary.

Be it resolved: *Roadways will be cleared of wrecked vehicles, spilled cargo and debris as soon as it is safe to do so. It is understood that damage to vehicles or cargo may occur as a result of clearing the roadway on an urgent basis. While reasonable attempts to avoid such damage shall be taken, the highest priority is restoring traffic to normal conditions. Incident caused congestion has an enormous cost to society. This cost is significantly greater than the salvage value of an already damaged vehicle and its cargo.*

Department of Public Safety Responsibilities

Members of DPS who respond to the scene of traffic incidents will make clearing the travel portion of the roadway a high priority. When an investigation is required, it will be conducted in the most expedient manner considering the severity of the collision. Non-critical portions of the investigation may be delayed until lighter traffic conditions allow completion of those tasks. DPS will close only those lanes absolutely necessary to conduct the investigation safely.

DPS will coordinate with GDOT representatives to set up appropriate traffic control, establish alternate routes, expedite the safe movement of traffic trapped at the scene, and restore the roadway to normal as soon as possible.

Whenever practical, crashes on access-controlled roadways will be relocated to off- ramps, frontage roads, accident investigation sites or other safe areas for completion of investigations to reduce the delays associated with motorists slowing to "gawk" or "rubber neck." Tow trucks will be requested as soon as it is evident that they will be needed to clear the roadway. DPS will review and update their wrecker authorization programs to include provisions that responding tow operators have met recognized competency levels and that the equipment is of appropriate size, capacity and design capable of providing quick clearance of roadway incidents.

DPS will not unnecessarily delay reopening a roadway to allow a commercial vehicle company to dispatch its own equipment to off-load hazardous cargo or to recover a vehicle or load during peak traffic hours. DPS and GDOT will cooperate in planning and implementing roadway clearance operations in the most safe and expeditious manner.

DPS, along with GDOT, will research, evaluate, and conduct training in the most advanced technologies, equipment and approved methods for the documentation and investigation of crash or incident scenes. DPS, using these techniques, will prioritize the investigative tasks and reopen the travel lanes as soon as those tasks that must be conducted without traffic flowing are completed.

Georgia Department of Transportation Responsibilities

GDOT, when requested by DPS or other law enforcement or emergency agency, will respond and deploy resources to major traffic incidents 24 hours a day, 7 days per week. Each GDOT District will develop and implement notification and response procedures to meet the goal of providing initial traffic control within ***30 minutes*** *of notification during normal working hours and* ***60 minutes*** *after hours and on weekends.*

GDOT, in coordination with DPS, will upgrade scene safety by providing arrow boards, advanced warning signs, cones and scene traffic controls; determine appropriate detour routes; and discuss incident clearance strategies.

GDOT will provide fully compliant temporary work zone traffic controls at major incidents expected to exceed 24 hours to ensure a safe incident scene for all responders and the motoring public.

GDOT, in cooperation with DPS, will determine and deploy the necessary heavy equipment and manpower to reopen the roadway if clearance of the travel lanes is being or could be expected to be delayed, or if the task is beyond the capabilities of the wrecker service on scene. If cargo or spilled loads (non-hazardous) are involved, GDOT will make every effort to assist in the relocation of the materials in the shortest possible time, using whatever equipment necessary. All such materials or any wreckage relocated by GDOT will be moved as short a distance as possible to eliminate the roadway blockage or hazard to traffic.

GDOT personnel will document all hours and equipment used for traffic control, roadway clearance and debris removal to seek reimbursement. GDOT will place cones or traffic control devices at the scene should any damaged vehicles or cargo remain adjacent to the travel lanes on the shoulder for removal at a later time.

GDOT and DPS will continually work together to ensure that the needs of motorists on our highways are being met in the most professional, safe, and efficient manner.

Therefore, it is agreed that:

Traffic incidents will be cleared from Georgia roadways as soon as possible. It is the goal of all traffic incident response agencies that all incidents be cleared from the travel portion of the roadway <u>within 90 minutes</u>.

DPS and GDOT will evaluate and continually update and modify their operating policies, procedures, rules and standards to assure they are consistent with this Open Roads Policy agreement.

DPS and GDOT will ensure that all management, operational and response personnel are aware of and trained in the procedures and intention of this Open Roads Policy agreement.

It is further agreed that:

Both agencies will actively solicit and enlist other state, county and local agencies or political subdivisions to endorse and become party to this Open Roads Policy of the State of Georgia.

In witness whereof, each party hereto has caused this document to be executed in its name and on its behalf by the duly authorized Chief Executives of these state agencies.

GEORGIA DEPT OF TRANSPORTATION

_____

Vance Smith

GDOT Commissioner

Date: _____

GEORGIA DEPT OF PUBLIC SAFETY

_____

Colonel Bill Hitchens

DPS Commissioner

Date: _____

ENDORSED, AGREED and EXECUTED THIS _____ DAY of _____, 2010.

_____

Governor, State of Georgia

Appendix D: AIR Debrief Form

Traffic Incident Management Debrief Form

Electronic Form can be found on www.timetaskforce.com

Submit completed form to:
TIME Task Force
ATTN: Operations Committee Chairman
www.timetaskforce.com

Incident Information

Incident Type:	
Date:	
Time:	
Location:	
County:	
Municipality:	
Weather:	

Responding Agencies Involved

Police	
Fire	
HERO	
DOT Maintenance	
Towing/Recovering	
Other	

Incident Statement *(Provide a brief overview of the lesson learned)*

Discussion of Activities *(Provide a factual description of the events and circumstances)*

Incident Information
Analysis *(Provide an analysis of the activities, describing both good practices and opportunities for improvement)*
Recommended Actions *(Make specific recommendations for actions to be taken by agency type or specific agency.)*
Applicable Agencies *(List the agencies or organizations to which the lesson learned will apply.)*
Additional Key Phrase(s) *(Include key words or phrases that will assist in recovering this incident using search engines.)*

Can this lesson be included in the TIME Debrief Database? *Yes or No*	

Contact Information	
Title	
Name	
Agency	
Address	
Phone	
Email	
Discipline (Fire, Police, Haz-Mat, DOT, Towing, EMS, etc)	

Appendix E: High Occupancy Toll (HOT) Lanes in Metro Atlanta

Tolling in Georgia is conducted by the State Road and Tollway Authority (SRTA), a state-level, independent authority created by the Georgia General Assembly to operate tolled facilities. SRTA's mission is to maintain and operate safe and efficient toll facilities, provide innovative transportation finance opportunities to enhance the mobility of Georgians.

Georgia was awarded a $110 million U.S. Department of Transportation Congestion Reduction Demonstration (CRD) grant in 2008 to help fund a pilot project on I-85 to reduce congestion by employing transit enhancements, innovative technology and variable pricing. The initial phase of the demonstration project is the conversion of a 15-mile stretch of HOV lanes to High Occupancy Toll (HOT) lanes along I-85 from Chamblee Tucker Road in DeKalb County to Old Peachtree Road in Gwinnett County. The CRD implementation also will result in a total of $122 million for new transit activities—both in the I-85 corridor and throughout the metro Atlanta region.

This initiative is being implemented by the Georgia Department of Transportation (GDOT), the State Road & Tollway Authority (SRTA), the Georgia Regional Transportation Authority (GRTA) and a number of federal, regional and local transportation partners.

Appendix F: TRAA Vehicle Classifications

CLASS 7 - HEAVY-DUTY

(26,001 - 33,000 lbs. GVWR - 6 tires or more)*

CLASS 8 - HEAVY-DUTY

(33,001 lbs. and over GVWR - 10 tires or more)*

Class 7 and 8 includes a range of heavier vehicles including large delivery trucks, motor coaches, all tractor-trailer combinations, refuse trucks, construction vehicles, etc.

CLASS 7 AND 8 - HEAVY-DUTY TOW

Gross Vehicle Weight Rating
(Class 7 - 26,001 to 33,000 lbs.)
(Class 8 - 33,001 and up to state limit)

- ☐ Year, make and model?
- ☐ Bus or motor home?
- ☐ Number of occupants?
- ☐ Two or three axle truck or tractor-trailer?
- ☐ What is the load and is it damaged?
- ☐ Keys?

STRAIGHT TRUCKS, BUSES OR MOTOR HOMES IN THESE CLASSES WILL USUALLY HAVE SIX TO TEN TIRES. TRACTOR AND TRAILER COMBINATIONS WILL HAVE FOURTEEN OR MORE TIRES.

MOTORCYCLES - LIGHT-DUTY TOW

Sports motorcycle – off road/basic street type
Performance motorcycle – "racing" model type
Touring motorcycle – large, heavy road touring type
Custom or 3-wheel motorcycle

TRAILERS - LIGHT-, MEDIUM- OR HEAVY-DUTY TOW

- ☐ Is it a truck and trailer to tow or just a trailer to tow?
- ☐ Number of axles and what is it hauling or is it designed to haul?
- ☐ Type of load or weight of load?
- ☐ If a tow, does the trailer have a ball, pintle or a fifth wheel hitch?

MOTOR HOMES - LIGHT-, MEDIUM- OR HEAVY-DUTY TOW

Class C – usually built on a van or pickup type truck chassis
Class A – usually built on a medium to large truck or bus chassis

LOCATION:

All locations are considered to be on the right hand shoulder unless advised the incident is in a lane of travel, in the center divider or off the road.
Locations should always be given so the tow truck can access the scene safely.
Freeway locations should always be given going in one direction, such as southbound south of a specific landmark or intersection.

REASON FOR THE TOW: Service call, storage, wreck or recovery

Service call: Specify the reason, fuel, tire, etc.
Tow: Specify the reason
Storage: Arrest or impound tow
- ☐ Is the vehicle stripped, burned, flat tires or no wheels?

Wreck: Condition of the vehicle
- ☐ Is the vehicle/truck overturned?
- ☐ Are lanes blocked?
- ☐ Is the vehicle off the road? ☐ How far?
- ☐ Any special problems at the scene or special equipment needed?

11F1322

TRAA

* **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.

LAW ENFORCEMENT VEHICLE IDENTIFICATION GUIDE

CLASS 1 - LIGHT-DUTY

(6,000 lbs. or less GVWR - 4 tires)*

CLASS 2 - LIGHT-DUTY

(6,001 - 10,000 lbs. GVWR - 4 tires)*

Class 1 through 2 include passenger cars, light trucks and mini vans, full size pickups, sport utility vehicles, full size vans

CLASS 1 AND 2 - LIGHT-DUTY TOW

Gross Vehicle Weight Rating (6,000 to 10,000 lbs.)

Passenger cars, small SUVs and pickup trucks

- ☐ Year, make and model?
- ☐ Number of occupants?
- ☐ Full-size pickup or van?
- ☐ Is it loaded?
- ☐ 4x4 or AWD?
- ☐ Keys?
- ☐ Trailer?
- ☐ What is the load?

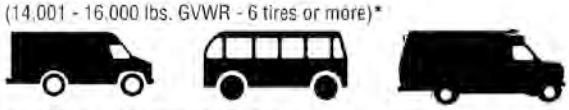
VEHICLES IN THESE CLASSES USUALLY HAVE FOUR TIRES.

CLASS 3 - LIGHT- OR MEDIUM-DUTY

(10,001 - 14,000 lbs. GVWR - 6 tires or more)*

CLASS 4 - MEDIUM-DUTY

(14,001 - 16,000 lbs. GVWR - 6 tires or more)*



CLASS 5 - MEDIUM-DUTY

(16,001 - 19,500 lbs. GVWR - 6 tires or more)*

CLASS 6 - MEDIUM-DUTY

(19,501 - 26,000 lbs. GVWR - 6 tires or more)*

Class 3 through 6 include a range of mid-sized to larger vehicles including delivery trucks, utility vehicles, motor homes, package parcel trucks, ambulances, small dump trucks, landscape vehicles, small flatbed and stake-type trucks, refrigerated and box trucks, small and medium-duty buses (school and local transit buses.)

CLASS 3, 4, 5 & 6 - LIGHT- OR MEDIUM-DUTY TOW

Gross Vehicle Weight Rating (10,001 up to 26,000 lbs.)

- ☐ Year, make and model?
- ☐ Body type – pickup truck, box truck, flatbed, step van
- ☐ What is the load and is it damaged?
- ☐ Pickup, van, shuttle bus or motor home?
- ☐ Number of occupants?
- ☐ Keys?
- ☐ Vehicle description is critical to determine the proper tow vehicle

VEHICLES IN THESE CLASSES USUALLY HAVE SIX TIRES.

This card is produced and distributed by the Towing and Recovery Association of America.

www.towserver.net • 800-728-0136

Appendix G: MUTCD 6E. FLAGGER CONTROL

CHAPTER 6E. FLAGGER CONTROL

Section 6E.01 Qualifications for Flaggers

Guidance:

01 *Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:*

A. Ability to receive and communicate specific instructions clearly, firmly, and courteously;
B. Ability to move and maneuver quickly in order to avoid danger from errant vehicles;
C. Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations;
D. Ability to understand and apply safe traffic control practices, sometimes in stressful or emergency situations; and
E. Ability to recognize dangerous traffic situations and warn workers in sufficient time to avoid injury.

Section 6E.02 High-Visibility Safety Apparel

Standard:

01 **For daytime and nighttime activity, flaggers shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 publication entitled "American National Standard for High-Visibility Apparel and Headwear" (see Section 1A.11) and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. The apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person.**

Guidance:

02 *For nighttime activity, high-visibility safety apparel that meets the Performance Class 3 requirements of the ANSI/ISEA 107–2004 publication entitled "American National Standard for High-Visibility Apparel and Headwear" (see Section 1A.11) and labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure should be considered for flagger wear.*

Standard:

03 **When uniformed law enforcement officers are used to direct traffic within a TTC zone, they shall wear high-visibility safety apparel as described in this Section.**

Option:

04 In lieu of ANSI/ISEA 107-2004 apparel, law enforcement personnel within the TTC zone may wear high-visibility safety apparel that meets the performance requirements of the ANSI/ISEA 207-2006 publication entitled "American National Standard for High-Visibility Public Safety Vests" (see Section 1A.11) and labeled as ANSI 207-2006.

Section 6E.03 Hand-Signaling Devices

Guidance:

01 *The STOP/SLOW paddle should be the primary and preferred hand-signaling device because the STOP/SLOW paddle gives road users more positive guidance than red flags. Use of flags should be limited to emergency situations.*

Standard:

02 **The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. STOP/SLOW paddles shall be at least 18 inches wide with letters at least 6 inches high. The STOP (R1-1) face shall have white letters and a white border on a red background. The SLOW (W20-8) face shall have black letters and a black border on an orange background. When used at night, the STOP/SLOW paddle shall be retroreflectorized.**

Guidance:

03 *The STOP/SLOW paddle should be fabricated from light semi-rigid material.*

Support:

04 The optimum method of displaying a STOP or SLOW message is to place the STOP/SLOW paddle on a rigid staff that is tall enough that when the end of the staff is resting on the ground, the message is high enough to be seen by approaching or stopped traffic.

Option:

05 The STOP/SLOW paddle may be modified to improve conspicuity by incorporating either white or red flashing lights on the STOP face, and either white or yellow flashing lights on the SLOW face. The flashing lights may be arranged in any of the following patterns:

A. Two white or red lights, one centered vertically above and one centered vertically below the STOP legend; and/or two white or yellow lights, one centered vertically above and one centered vertically below the SLOW legend;
B. Two white or red lights, one centered horizontally on each side of the STOP legend; and/or two white or yellow lights, one centered horizontally on each side of the SLOW legend;
C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below the SLOW legend;
D. A series of eight or more small white or red lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/or a series of eight or more small white or yellow lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or
E. A series of white lights forming the shapes of the letters in the legend.

Standard:

06 **If flashing lights are used on the STOP face of the paddle, their colors shall be all white or all red. If flashing lights are used on the SLOW face of the paddle, their colors shall be all white or all yellow.**

07 **If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the octagonal shape of the STOP face of the paddle and/or the diamond shape of the SLOW face of the paddle.**

08 **If flashing lights are used on the STOP/SLOW paddle, the flash rate shall be at least 50, but not more than 60, flashes per minute.**

09 **Flags, when used, shall be red or fluorescent orange/red in color, shall be a minimum of 24 inches square, and shall be securely fastened to a staff that is approximately 36 inches in length.**

Guidance:

10 *The free edge of a flag should be weighted so the flag will hang vertically, even in heavy winds.*

Standard:

11 **When used at nighttime, flags shall be retroreflectorized red.**

Option:

12 When flagging in an emergency situation at night in a non-illuminated flagger station, a flagger may use a flashlight with a red glow cone to supplement the STOP/SLOW paddle or flag.

Standard:

13 **When a flashlight is used for flagging in an emergency situation at night in a non-illuminated flagger station, the flagger shall hold the flashlight in the left hand, shall hold the paddle or flag in the right hand as shown in Figure 6E-3, and shall use the flashlight in the following manner to control approaching road users:**

A. To inform road users to stop, the flagger shall hold the flashlight with the left arm extended and pointed down toward the ground, and then shall slowly wave the flashlight in front of the body in a slow arc from left to right such that the arc reaches no farther than 45 degrees from vertical.
B. To inform road users to proceed, the flagger shall point the flashlight at the vehicle's bumper, slowly aim the flashlight toward the open lane, then hold the flashlight in that position. The flagger shall not wave the flashlight.
C. To alert or slow traffic, the flagger shall point the flashlight toward oncoming traffic and quickly wave the flashlight in a figure eight motion.

Section 6E.04 Automated Flagger Assistance Devices

Support:

01 Automated Flagger Assistance Devices (AFADs) enable a flagger(s) to be positioned out of the lane of traffic and are used to control road users through temporary traffic control zones. These devices are designed to be remotely operated either by a single flagger at one end of the TTC zone or at a central location, or by separate flaggers near each device's location.

02 There are two types of AFADs:

A. An AFAD (see Section 6E.05) that uses a remotely controlled STOP/SLOW sign on either a trailer or a movable cart system to alternately control right-of-way.
B. An AFAD (see Section 6E.06) that uses remotely controlled red and yellow lenses and a gate arm to alternately control right-of-way.

03 AFADs might be appropriate for short-term and intermediate-term activities (see Section 6G.02). Typical applications include TTC activities such as, but not limited to:

A. Bridge maintenance;
B. Haul road crossings; and
C. Pavement patching.

Standard:

04 **AFADs shall only be used in situations where there is only one lane of approaching traffic in the direction to be controlled.**

05 **When used at night, the AFAD location shall be illuminated in accordance with Section 6E.08.**

Guidance:

06 *AFADs should not be used for long-term stationary work (see Section 6G.02).*

Standard:

07 **Because AFADs are not traffic control signals, they shall not be used as a substitute for or a replacement for a continuously operating temporary traffic control signal as described in Section 6F.84.**

08 **AFADs shall meet the crashworthy performance criteria contained in Section 6F.01.**

Guidance:

09 *If used, AFADs should be located in advance of one-lane, two-way tapers and downstream from the point where approaching traffic is to stop in response to the device.*

Standard:

10 **If used, AFADs shall be placed so that all of the signs and other items controlling traffic movement are readily visible to the driver of the initial approaching vehicle with advance warning signs alerting other approaching traffic to be prepared to stop.**

11 **If used, an AFAD shall be operated only by a flagger (see Section 6E.01) who has been trained on the operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the AFAD(s) unattended at any time while the AFAD(s) is being used.**

12 **The use of AFADs shall conform to one of the following methods:**

A. An AFAD at each end of the TTC zone (Method 1), or
B. An AFAD at one end of the TTC zone and a flagger at the opposite end (Method 2).

13 **Except as provided in Paragraph 14, two flaggers shall be used when using either Method 1 or Method 2.**

Option:

14 A single flagger may simultaneously operate two AFADs (Method 1) or may operate a single AFAD on one end of the TTC zone while being the flagger at the opposite end of the TTC zone (Method 2) if both of the following conditions are present:

A. The flagger has an unobstructed view of the AFAD(s), and
B. The flagger has an unobstructed view of approaching traffic in both directions.

Guidance:

15 *When an AFAD is used, the advance warning signing should include a ROAD WORK AHEAD (W20-1) sign, a ONE LANE ROAD (W20-4) sign, and a BE PREPARED TO STOP (W3-4) sign.*

Standard:

16 **When the AFAD is not in use, the signs associated with the AFAD, both at the AFAD location and in advance, shall be removed or covered.**

Guidance:

17 *A State or local agency that elects to use AFADs should adopt a policy, based on engineering judgment, governing AFAD applications. The policy should also consider more detailed and/or more restrictive requirements for AFAD use, such as the following:*

A. Conditions applicable for the use of Method 1 and Method 2 AFAD operation,
B. Volume criteria,
C. Maximum distance between AFADs,

D. Conflicting lenses/indications monitoring requirements,
E. Fail safe procedures,
F. Additional signing and pavement markings,
G. Application consistency,
H. Larger signs or lenses to increase visibility, and
I. Use of backplates.

Section 6E.05 STOP/SLOW Automated Flagger Assistance Devices

Standard:

01 **A STOP/SLOW Automated Flagger Assistance Device (AFAD) (see Section 6E.04) shall include a STOP/SLOW sign that alternately displays the STOP (R1-1) face and the SLOW (W20-8) face of a STOP/SLOW paddle (see Figure 6E-1).**

02 **The AFAD's STOP/SLOW sign shall have an octagonal shape, shall be fabricated of rigid material, and shall be mounted with the bottom of the sign a minimum of 6 feet above the pavement on an appropriate support. The size of the STOP/SLOW sign shall be at least 24 x 24 inches with letters at least 8 inches high. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be diamond shaped and orange with black letters and border. Both faces of the STOP/SLOW sign shall be retroreflectorized.**

03 **The AFAD's STOP/SLOW sign shall have a means to positively lock, engage, or otherwise maintain the sign assembly in a stable condition when set in the STOP or SLOW position.**

04 **The AFAD's STOP/SLOW sign shall be supplemented with active conspicuity devices by incorporating either:**

A. White or red flashing lights within the STOP face and white or yellow flashing lights within the SLOW face meeting the provisions contained in Section 6E.03; or
B. A Stop Beacon (see Section 4L.05) mounted a maximum of 24 inches above the STOP face and a Warning Beacon (see Section 4L.03) mounted a maximum of 24 inches above, below, or to the side of the SLOW face. The Stop Beacon shall not be flashed or illuminated when the SLOW face is displayed, and the Warning Beacon shall not be flashed or illuminated when the STOP face is displayed. Except for the mounting locations, the beacons shall comply with the provisions of Chapter 4L.

Option:

05 Type B warning light(s) (see Section 6F.83) may be used in lieu of the Warning Beacon during the display of the SLOW face of the AFAD's STOP/SLOW sign.

Standard:

06 **If Type B warning lights are used in lieu of a Warning Beacon, they shall flash continuously when the SLOW face is displayed and shall not be flashed or illuminated when the STOP face is displayed.**

Option:

07 The faces of the AFAD's STOP/SLOW sign may include louvers to improve the stability of the device in windy or other adverse environmental conditions.

Standard:

08 **If louvers are used, the louvers shall be designed such that the full sign face is visible to approaching traffic at a distance of 50 feet or greater.**

Guidance:

09 *The STOP/SLOW AFAD should include a gate arm that descends to a down position across the approach lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is displayed.*

Option:

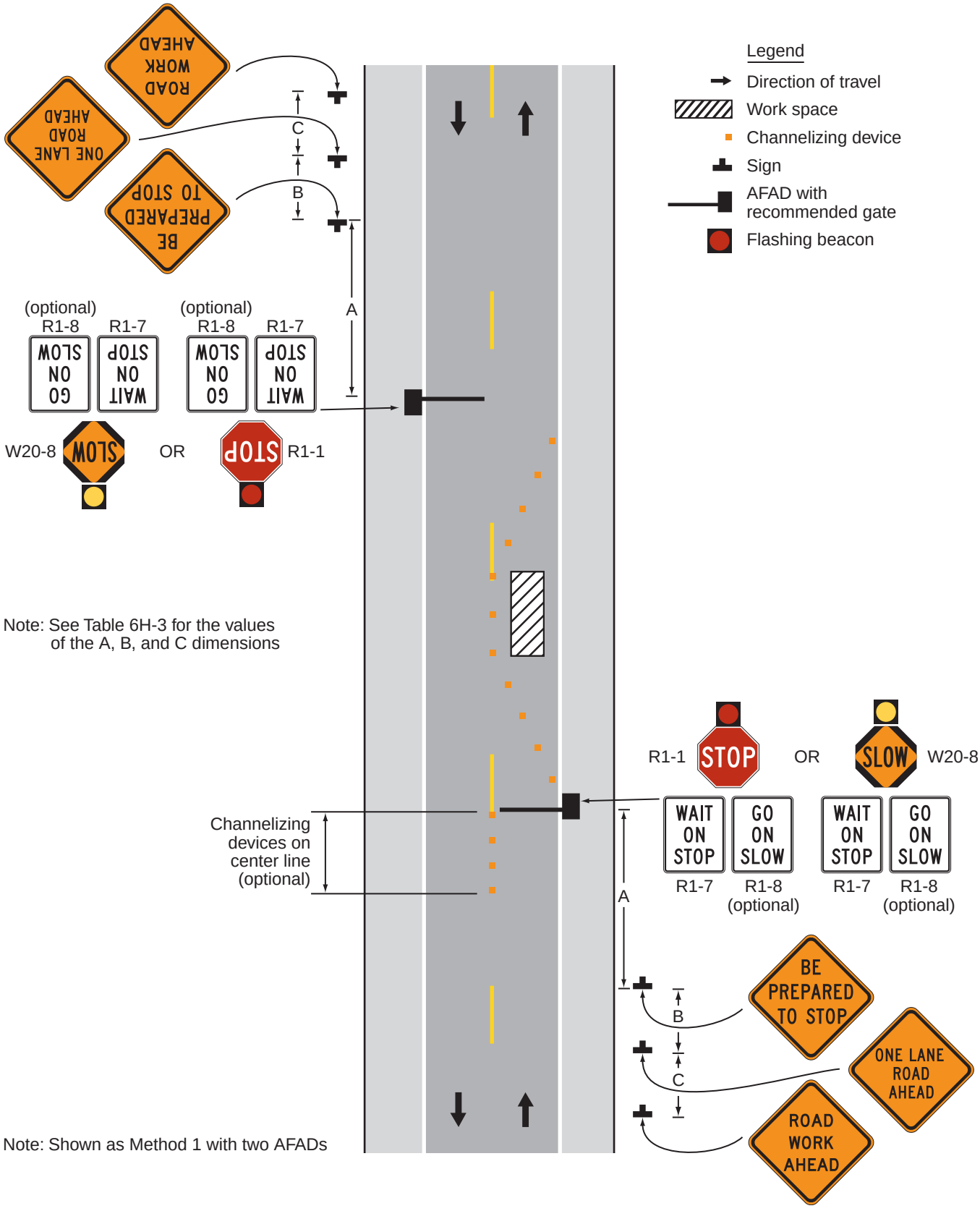
10 In lieu of a stationary STOP/SLOW sign with a separate gate arm, the STOP/SLOW sign may be attached to a mast arm that physically blocks the approach lane of traffic when the STOP face is displayed and then moves to a position that does not block the approach lane when the SLOW face is displayed.

Standard:

11 **Gate arms, if used, shall be fully retroreflectorized on both sides, and shall have vertical alternating red and white stripes at 16-inch intervals measured horizontally as shown in Figure 8C-1. When the arm is in the down position blocking the approach lane:**

A. The minimum vertical aspect of the arm and sheeting shall be 2 inches; and
B. The end of the arm shall reach at least to the center of the lane being controlled.

Figure 6E-1. Example of the Use of a STOP/SLOW Automated Flagger Assistance Device (AFAD)



12 **A WAIT ON STOP (R1-7) sign (see Figure 6E-1) shall be displayed to road users approaching the AFAD.**

Option:

13 A GO ON SLOW (R1-8) sign (see Figure 6E-1) may also be displayed to road users approaching the AFAD.

Standard:

14 **The GO ON SLOW sign, if used, and the WAIT ON STOP sign shall be positioned on the same support structure as the AFAD or immediately adjacent to the AFAD such that they are in the same direct line of view of approaching traffic as the sign faces of the AFAD. Both signs shall have black legends and borders on white backgrounds. Each of these signs shall be rectangular in shape and each shall be at least 24 x 30 inches in size with letters at least 6 inches high.**

15 **To inform road users to stop, the AFAD shall display the STOP face and the red or white lights, if used, within the STOP face shall flash or the Stop Beacon shall flash. To inform road users to proceed, the AFAD shall display the SLOW face and the yellow or white lights, if used, within the SLOW face shall flash or the Warning Beacon or the Type B warning lights shall flash.**

16 **If STOP/SLOW AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall be incorporated to prevent the flagger(s) from simultaneously displaying the SLOW face at each end of the TTC zone. Additionally, the flagger(s) shall not display the AFAD's SLOW face until all oncoming vehicles have cleared the one-lane portion of the TTC zone.**

Section 6E.06 Red/Yellow Lens Automated Flagger Assistance Devices

Standard:

01 **A Red/Yellow Lens Automated Flagger Assistance Device (AFAD) (see Section 6E.04) shall alternately display a steadily illuminated CIRCULAR RED lens and a flashing CIRCULAR YELLOW lens to control traffic without the need for a flagger in the immediate vicinity of the AFAD or on the roadway (see Figure 6E-2).**

02 **Red/Yellow Lens AFADs shall have at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses that are 12 inches in diameter. Unless otherwise provided in this Section, the lenses and their arrangement, CIRCULAR RED on top and CIRCULAR YELLOW below, shall comply with the applicable provisions for traffic signal indications in Part 4. If the set of lenses is post-mounted, the bottom of the housing (including brackets) shall be at least 7 feet above the pavement. If the set of lenses is located over any portion of the highway that can be used by motor vehicles, the bottom of the housing (including brackets) shall be at least 15 feet above the pavement.**

Option:

03 Additional sets of CIRCULAR RED and CIRCULAR YELLOW lenses, located over the roadway or on the left-hand side of the approach and operated in unison with the primary set, may be used to improve visibility and/or conspicuity of the AFAD.

Standard:

04 **A Red/Yellow Lens AFAD shall include a gate arm that descends to a down position across the approach lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated. The gate arm shall be fully retroreflectorized on both sides, and shall have vertical alternating red and white stripes at 16-inch intervals measured horizontally as shown in Figure 8C-1. When the arm is in the down position blocking the approach lane:**

A. The minimum vertical aspect of the arm and sheeting shall be 2 inches; and

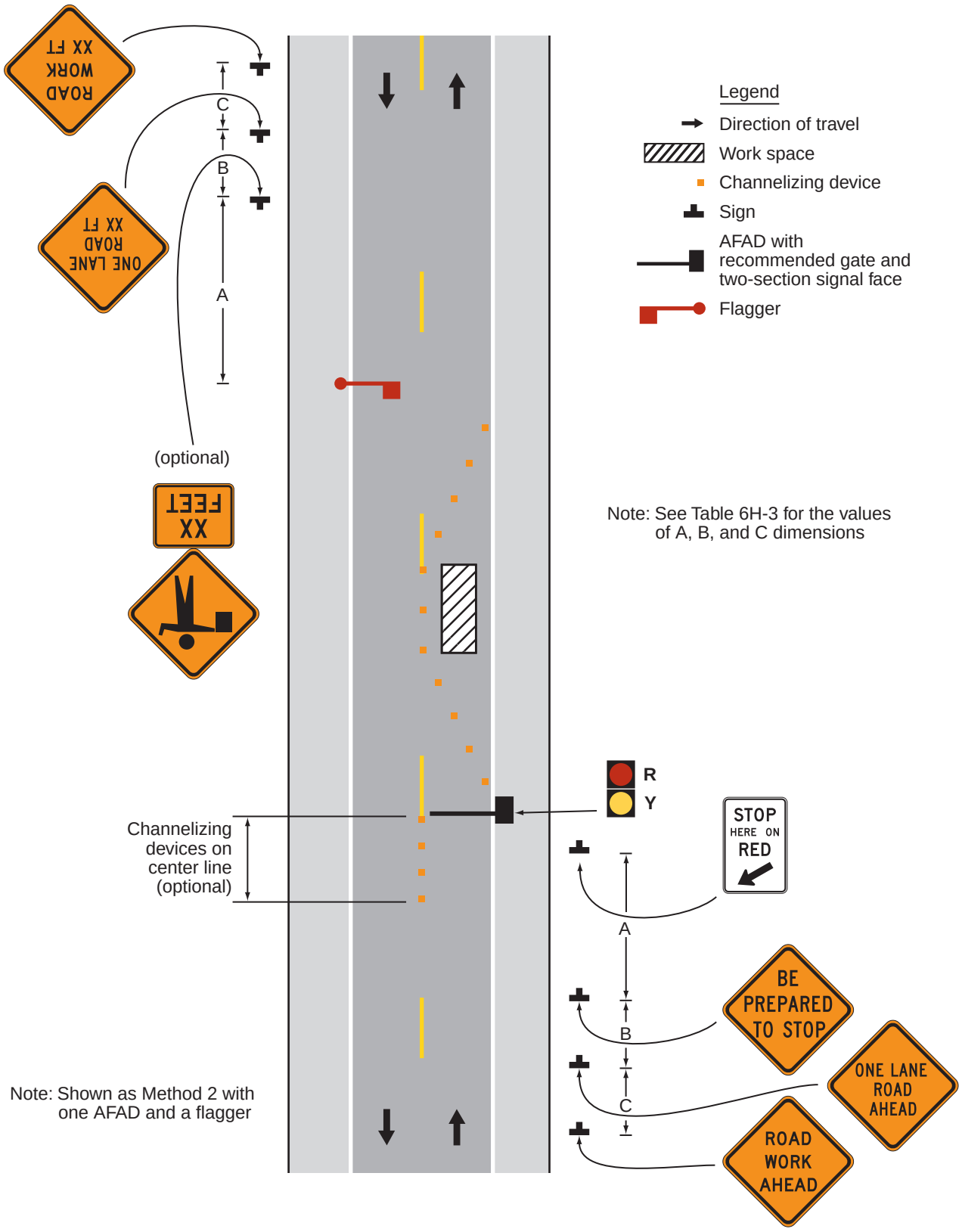
B. The end of the arm shall reach at least to the center of the lane being controlled.

05 **A Stop Here On Red (R10-6 or R10-6a) sign (see Section 2B.53) shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated (see Figure 6E-2).**

06 **To inform road users to stop, the AFAD shall display a steadily illuminated CIRCULAR RED lens and the gate arm shall be in the down position. To inform road users to proceed, the AFAD shall display a flashing CIRCULAR YELLOW lens and the gate arm shall be in the upright position.**

07 **If Red/Yellow Lens AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall be incorporated to prevent the flagger(s) from actuating a simultaneous display of a flashing CIRCULAR YELLOW lens at each end of the TTC zone. Additionally, the flagger shall not actuate the AFAD's display of the flashing CIRCULAR YELLOW lens until all oncoming vehicles have cleared the one-lane portion of the TTC zone.**

Figure 6E-2. Example of the Use of a Red/Yellow Lens Automated Flagger Assistance Device (AFAD)



08 **A change interval shall be provided as the transition between the display of the flashing CIRCULAR YELLOW indication and the display of the steady CIRCULAR RED indication. During the change interval, the CIRCULAR YELLOW lens shall be steadily illuminated. The gate arm shall remain in the upright position during the display of the steadily illuminated CIRCULAR YELLOW change interval.**

09 **A change interval shall not be provided between the display of the steady CIRCULAR RED indication and the display of the flashing CIRCULAR YELLOW indication.**

Guidance:

10 *The steadily illuminated CIRCULAR YELLOW change interval should have a duration of at least 5 seconds, unless a different duration, within the range of durations recommended by Section 4D.26, is justified by engineering judgment.*

Section 6E.07 Flagger Procedures

Support:

01 The use of paddles and flags by flaggers is illustrated in Figure 6E-3.

Standard:

02 **Flaggers shall use a STOP/SLOW paddle, a flag, or an Automated Flagger Assistance Device (AFAD) to control road users approaching a TTC zone. The use of hand movements alone without a paddle, flag, or AFAD to control road users shall be prohibited except for law enforcement personnel or emergency responders at incident scenes as described in Section 6I.01.**

03 **The following methods of signaling with paddles shall be used:**

- **A. To stop road users, the flagger shall face road users and aim the STOP paddle face toward road users in a stationary position with the arm extended horizontally away from the body. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.**
- **B. To direct stopped road users to proceed, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body. The flagger shall motion with the free hand for road users to proceed.**
- **C. To alert or slow traffic, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body.**

Option:

04 To further alert or slow traffic, the flagger holding the SLOW paddle face toward road users may motion up and down with the free hand, palm down.

Standard:

05 **The following methods of signaling with a flag shall be used:**

- **A. To stop road users, the flagger shall face road users and extend the flag staff horizontally across the road users' lane in a stationary position so that the full area of the flag is visibly hanging below the staff. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.**
- **B. To direct stopped road users to proceed, the flagger shall face road users with the flag and arm lowered from the view of the road users, and shall motion with the free hand for road users to proceed. Flags shall not be used to signal road users to proceed.**
- **C. To alert or slow traffic, the flagger shall face road users and slowly wave the flag in a sweeping motion of the extended arm from shoulder level to straight down without raising the arm above a horizontal position. The flagger shall keep the free hand down.**

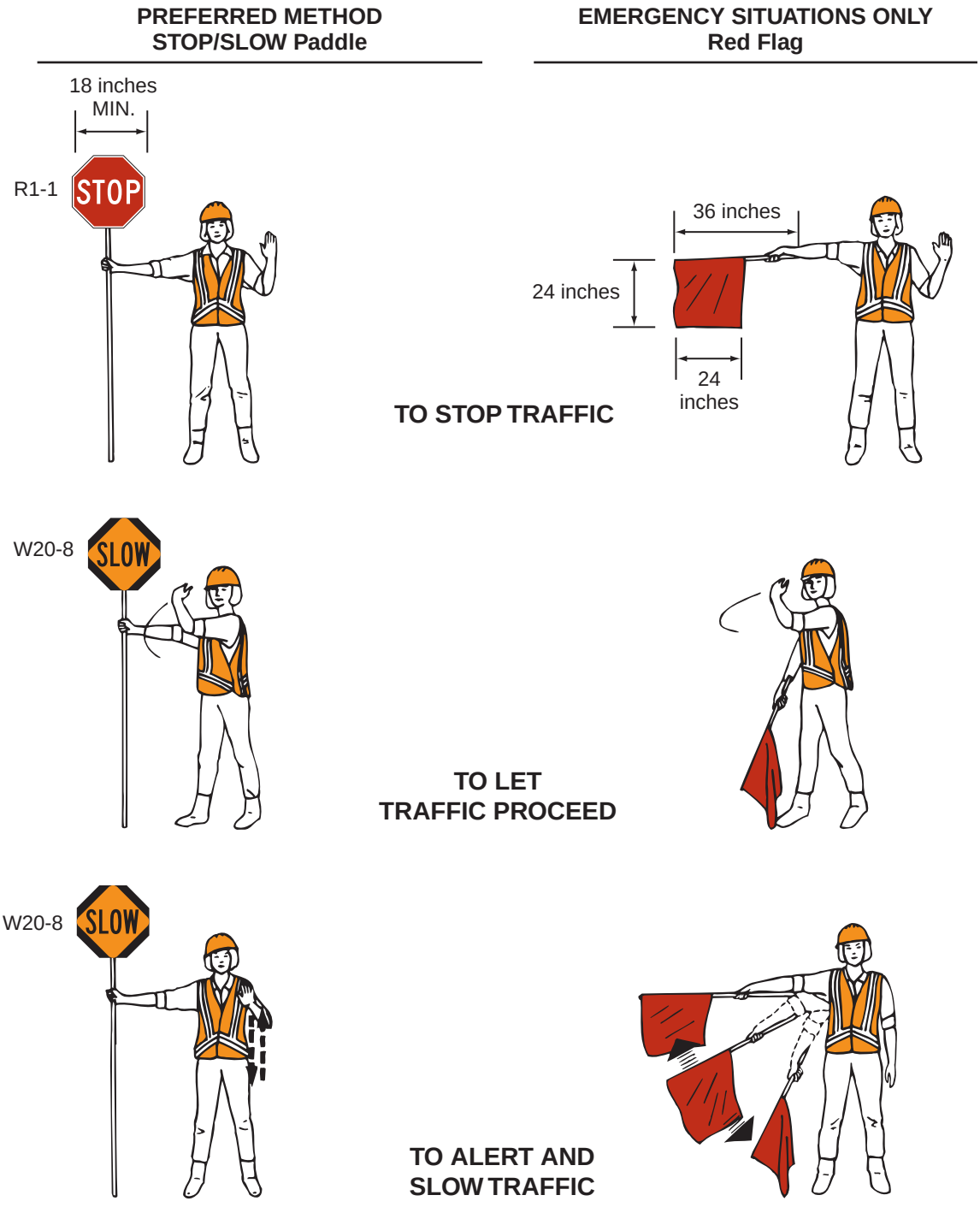
Guidance:

06 *The flagger should stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users. A flagger should only stand in the lane being used by moving road users after road users have stopped. The flagger should be clearly visible to the first approaching road user at all times. The flagger also should be visible to other road users. The flagger should be stationed sufficiently in advance of the workers to warn them (for example, with audible warning devices such as horns or whistles) of approaching danger by out-of-control vehicles. The flagger should stand alone, away from other workers, work vehicles, or equipment.*

Option:

07 At spot lane closures where adequate sight distance is available for the reasonably safe handling of traffic, the use of one flagger may be sufficient.

Figure 6E-3. Use of Hand-Signaling Devices by Flaggers



Guidance:

08 *When a single flagger is used, the flagger should be stationed on the shoulder opposite the spot lane closure or work space, or in a position where good visibility and traffic control can be maintained at all times.*

Section 6E.08 Flagger Stations

Standard:

01 **Flagger stations shall be located such that approaching road users will have sufficient distance to stop at an intended stopping point.**

Option:

02 The distances shown in Table 6E-1, which provides information regarding the stopping sight distance as a function of speed, may be used for the location of a flagger station. These distances may be increased for downgrades and other conditions that affect stopping distance.

Guidance:

03 *Flagger stations should be located such that an errant vehicle has additional space to stop without entering the work space. The flagger should identify an escape route that can be used to avoid being struck by an errant vehicle.*

Standard:

04 **Except in emergency situations, flagger stations shall be preceded by an advance warning sign or signs. Except in emergency situations, flagger stations shall be illuminated at night.**

Table 6E-1. Stopping Sight Distance as a Function of Speed

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed

Appendix H: MUTCD 6I CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS

CHAPTER 6I. CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS

Section 6I.01 General

Support:

01 The National Incident Management System (NIMS) requires the use of the Incident Command System (ICS) at traffic incident management scenes.

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

03 A traffic incident management area is an area of a highway where temporary traffic controls are installed, as authorized by a public authority or the official having jurisdiction of the roadway, in response to a road user incident, natural disaster, hazardous material spill, or other unplanned incident. It is a type of TTC zone and extends from the first warning device (such as a sign, light, or cone) to the last TTC device or to a point where vehicles return to the original lane alignment and are clear of the incident.

04 Traffic incidents can be divided into three general classes of duration, each of which has unique traffic control characteristics and needs. These classes are:

A. Major—expected duration of more than 2 hours,
B. Intermediate—expected duration of 30 minutes to 2 hours, and
C. Minor—expected duration under 30 minutes.

05 The primary functions of TTC at a traffic incident management area are to inform road users of the incident and to provide guidance information on the path to follow through the incident area. Alerting road users and establishing a well defined path to guide road users through the incident area will serve to protect the incident responders and those involved in working at the incident scene and will aid in moving road users expeditiously past or around the traffic incident, will reduce the likelihood of secondary traffic crashes, and will preclude unnecessary use of the surrounding local road system. Examples include a stalled vehicle blocking a lane, a traffic crash blocking the traveled way, a hazardous material spill along a highway, and natural disasters such as floods and severe storm damage.

Guidance:

06 *In order to reduce response time for traffic incidents, highway agencies, appropriate public safety agencies (law enforcement, fire and rescue, emergency communications, emergency medical, and other emergency management), and private sector responders (towing and recovery and hazardous materials contractors) should mutually plan for occurrences of traffic incidents along the major and heavily traveled highway and street system.*

07 *On-scene responder organizations should train their personnel in TTC practices for accomplishing their tasks in and near traffic and in the requirements for traffic incident management contained in this Manual. On-scene responders should take measures to move the incident off the traveled roadway or to provide for appropriate warning. All on-scene responders and news media personnel should constantly be aware of their visibility to oncoming traffic and wear high-visibility apparel.*

08 *Emergency vehicles should be safe-positioned (see definition in Section 1A.13) such that traffic flow through the incident scene is optimized. All emergency vehicles that subsequently arrive should be positioned in a manner that does not interfere with the established temporary traffic flow.*

09 *Responders arriving at a traffic incident should estimate the magnitude of the traffic incident, the expected time duration of the traffic incident, and the expected vehicle queue length, and then should set up the appropriate temporary traffic controls for these estimates.*

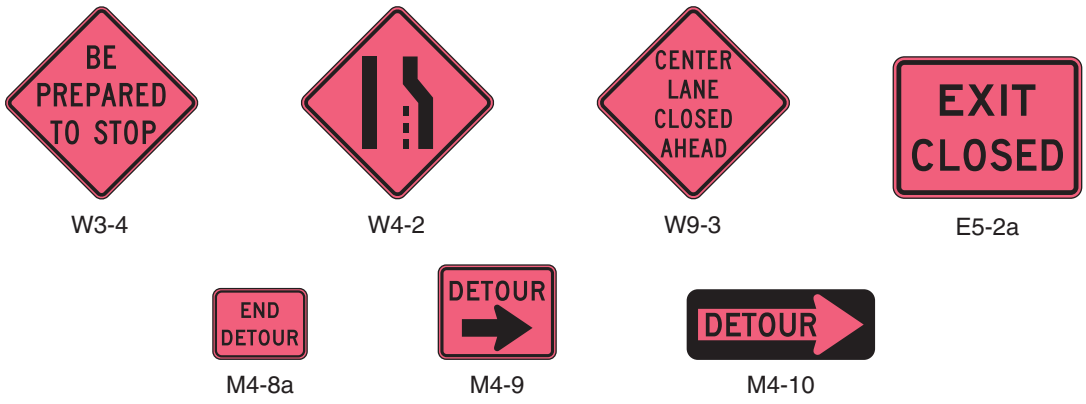
Option:

10 Warning and guide signs used for TTC traffic incident management situations may have a black legend and border on a fluorescent pink background (see Figure 6I-1).

Support:

11 While some traffic incidents might be anticipated and planned for, emergencies and disasters might pose more severe and unpredictable problems. The ability to quickly install proper temporary traffic controls might greatly reduce the effects of an incident, such as secondary crashes or excessive traffic delays. An essential part of fire, rescue, spill clean-up, highway agency, and enforcement activities is the proper control of road users through the traffic incident management area in order to protect responders, victims, and other personnel at the site. These operations might need corroborating legislative authority for the implementation and enforcement of appropriate road user regulations, parking controls, and speed zoning. It is desirable for these statutes to provide sufficient flexibility in the authority for, and implementation of, TTC to respond to the needs of changing conditions found in traffic incident management areas.

Figure 6I-1. Examples of Traffic Incident Management Area Signs



Option:

12 For traffic incidents, particularly those of an emergency nature, TTC devices on hand may be used for the initial response as long as they do not themselves create unnecessary additional hazards.

Section 6I.02 Major Traffic Incidents

Support:

01 Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

Guidance:

02 *If the traffic incident is anticipated to last more than 24 hours, applicable procedures and devices set forth in other Chapters of Part 6 should be used.*

Support:

03 A road closure can be caused by a traffic incident such as a road user crash that blocks the traveled way. Road users are usually diverted through lane shifts or detoured around the traffic incident and back to the original roadway. A combination of traffic engineering and enforcement preparations is needed to determine the detour route, and to install, maintain or operate, and then to remove the necessary traffic control devices when the detour is terminated. Large trucks are a significant concern in such a detour, especially when detouring them from a controlled-access roadway onto local or arterial streets.

04 During traffic incidents, large trucks might need to follow a route separate from that of automobiles because of bridge, weight, clearance, or geometric restrictions. Also, vehicles carrying hazardous material might need to follow a different route from other vehicles.

05 Some traffic incidents such as hazardous material spills might require closure of an entire highway. Through road users must have adequate guidance around the traffic incident. Maintaining good public relations is desirable. The cooperation of the news media in publicizing the existence of, and reasons for, traffic incident management areas and their TTC can be of great assistance in keeping road users and the general public well informed.

06 The establishment, maintenance, and prompt removal of lane diversions can be effectively managed by interagency planning that includes representatives of highway and public safety agencies.

Guidance:

07 *All traffic control devices needed to set up the TTC at a traffic incident should be available so that they can be readily deployed for all major traffic incidents. The TTC should include the proper traffic diversions, tapered lane closures, and upstream warning devices to alert traffic approaching the queue and to encourage early diversion to an appropriate alternative route.*

08 *Attention should be paid to the upstream end of the traffic queue such that warning is given to road users approaching the back of the queue.*

09 *If manual traffic control is needed, it should be provided by qualified flaggers or uniformed law enforcement officers.*

Option:

10 If flaggers are used to provide traffic control for an incident management situation, the flaggers may use appropriate traffic control devices that are readily available or that can be brought to the traffic incident scene on short notice.

Guidance:

11 *When light sticks or flares are used to establish the initial traffic control at incident scenes, channelizing devices (see Section 6F.63) should be installed as soon thereafter as practical.*

Option:

12 The light sticks or flares may remain in place if they are being used to supplement the channelizing devices.

Guidance:

13 *The light sticks, flares, and channelizing devices should be removed after the incident is terminated.*

Section 6I.03 Intermediate Traffic Incidents

Support:

01 Intermediate traffic incidents typically affect travel lanes for a time period of 30 minutes to 2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

02 The establishment, maintenance, and prompt removal of lane diversions can be effectively managed by interagency planning that includes representatives of highway and public safety agencies.

Guidance:

03 *All traffic control devices needed to set up the TTC at a traffic incident should be available so that they can be readily deployed for intermediate traffic incidents. The TTC should include the proper traffic diversions, tapered lane closures, and upstream warning devices to alert traffic approaching the queue and to encourage early diversion to an appropriate alternative route.*

04 *Attention should be paid to the upstream end of the traffic queue such that warning is given to road users approaching the back of the queue.*

05 *If manual traffic control is needed, it should be provided by qualified flaggers or uniformed law enforcement officers.*

Option:

06 If flaggers are used to provide traffic control for an incident management situation, the flaggers may use appropriate traffic control devices that are readily available or that can be brought to the traffic incident scene on short notice.

Guidance:

07 *When light sticks or flares are used to establish the initial traffic control at incident scenes, channelizing devices (see Section 6F.63) should be installed as soon thereafter as practical.*

Option:

08 The light sticks or flares may remain in place if they are being used to supplement the channelizing devices.

Guidance:

09 *The light sticks, flares, and channelizing devices should be removed after the incident is terminated.*

Section 6I.04 Minor Traffic Incidents

Support:

01 Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies, and occasionally highway agency service patrol vehicles.

02 Diversion of traffic into other lanes is often not needed or is needed only briefly. It is not generally possible or practical to set up a lane closure with traffic control devices for a minor traffic incident. Traffic control is the responsibility of on-scene responders.

Guidance:

03 *When a minor traffic incident blocks a travel lane, it should be removed from that lane to the shoulder as quickly as possible.*

Section 6I.05 Use of Emergency-Vehicle Lighting

Support:

01 The use of emergency-vehicle lighting (such as high-intensity rotating, flashing, oscillating, or strobe lights) is essential, especially in the initial stages of a traffic incident, for the safety of emergency responders and persons involved in the traffic incident, as well as road users approaching the traffic incident. Emergency-vehicle lighting, however, provides warning only and provides no effective traffic control. The use of too many lights at an incident scene can be distracting and can create confusion for approaching road users, especially at night. Road users approaching the traffic incident from the opposite direction on a divided facility are often distracted by emergency-vehicle lighting and slow their vehicles to look at the traffic incident posing a hazard to themselves and others traveling in their direction.

02 The use of emergency-vehicle lighting can be reduced if good traffic control has been established at a traffic incident scene. This is especially true for major traffic incidents that might involve a number of emergency vehicles. If good traffic control is established through placement of advanced warning signs and traffic control devices to divert or detour traffic, then public safety agencies can perform their tasks on scene with minimal emergency-vehicle lighting.

Guidance:

03 *Public safety agencies should examine their policies on the use of emergency-vehicle lighting, especially after a traffic incident scene is secured, with the intent of reducing the use of this lighting as much as possible while not endangering those at the scene. Special consideration should be given to reducing or extinguishing forward facing emergency-vehicle lighting, especially on divided roadways, to reduce distractions to oncoming road users.*

04 *Because the glare from floodlights or vehicle headlights can impair the nighttime vision of approaching road users, any floodlights or vehicle headlights that are not needed for illumination, or to provide notice to other road users of an incident response vehicle being in an unexpected location, should be turned off at night.*

Metro Atlanta

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