CHESTER COUNTY
HIGHWAY TRAFFIC INCIDENT MANAGEMENT OPERATING GUIDELINES ANNEX

DRAFT

VERSION 1.0

FEBRUARY 2015

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ANNEX APPROVAL

THIS ANNEX IS APPROVED AS THE CHESTER COUNTY HIGHWAY TRAFFIC INCIDENT MANAGEMENT OPERATING GUIDELINES ANNEX. THIS ANNEX IS DESIGNED TO COMPLY WITH ALL APPLICABLE COMMONWEALTH AND COUNTY REGULATIONS AND PROVIDES THE POLICIES AND PROCEDURES TO BE FOLLOWED IN DEALING WITH HIGHWAY TRAFFIC INCIDENT MANAGEMENT OPERATIONS.

THIS PLAN SUPERSEDES ALL PREVIOUS HIGHWAY TRAFFIC INCIDENT MANAGEMENT OPERATING GUIDELINES.

SIGNED THIS _____ DAY OF _____ , 2015

_____

Robert J. Kagel, Director,

Chester County

Department of Emergency Services

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1. INTRODUCTION

The document provides incident responders in Chester County, Pennsylvania with uniform operational guidelines for safe operations at the scene of a highway incident on the limited access highways.

This document is and should be used as an Annex to the Chester County Emergency Operations Plan.

Concepts presented in this document can be utilized on the following limited access highways:

- US 30 Bypass
- US 202
- US 1
- US 422
- PA 100
- PA 422

These operational guidelines are the result of the solicitation of input from all stakeholders that may operate at one of these incidents. It is intended that this document serve as a guideline for decision-making and can be modified by the incident responders as necessary to address existing conditions.

These guidelines identify safe vehicle positioning, common general safety, and onsite best practices for all emergency responders. It provides procedures for maximum protection and safety for emergency responders operating on the designated limited access highways. These guidelines further identify the need to provide mobility for the motoring public. All emergency responders should adhere to the standards set forth in the Manual on Uniform Traffic Control Devices (MUTCD), Chapter 6I, which is listed in Appendix C.

All emergency responders should understand and appreciate the special hazards and high risk that personnel are exposed to when operating at a highway related incident on a limited access highway with motor vehicle traffic, high vehicle speeds, adverse weather conditions, heavy trucks, and exposure to motorists with varying degrees of ability, with possible vision, alcohol, and drug impairment.

Managing a highway incident and any related problem is a TEAM effort. Incidents range from minor to major with many agencies involved. Each responding agency has an important role to

play in the management of an effective incident operation. It is not a question of "who is in charge" but "who is in charge of what". Each agency present has a part to play with the goals of: responder safety; safe, quick clearance; and, to restore the highway to its pre-incident condition.

In order to manage highway incidents efficiently and safely on a consistent basis, it is important that emergency responders have an awareness of expected behavior from other responding stakeholders. All emergency responders should make every effort to increase communication and cooperation at a highway incident to reduce points of conflict and to better understand each stakeholder's concerns.

1.1 Purpose

An incident is defined as any non-recurring event that causes a reduction of roadway capacity such as traffic crashes, brush fires, or vehicle fires. Improving the overall incident management process will improve the safety of responding agency personnel, reduce the chance of a secondary traffic crashes and minimize the amount of apparatus and number of personnel responding onto the highway.

1.2 National Incident Management System (NIMS)

Responders to highway incidents will utilize a National Incident Management System (NIMS) consistent incident management structure. As defined by the Federal Emergency Management Agency (FEMA), NIMS is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. It is intended to:

- Be applicable across a full spectrum of potential incidents, hazards, and impacts; regardless of size, location, or complexity.
- Improve coordination and cooperation between public and private entities in a variety of incident management activities.
- Provide a common standard for overall incident management.

Highway incidents requiring the response of multiple stakeholders will be managed via a Unified Command. As such, each responding discipline will send a representative to the Unified Command Post, where they will work cooperatively and within their respective areas of expertise to safely and effectively mitigate the incident. Decisions will be communicated amongst all stakeholder representatives to ensure coordination of efforts.

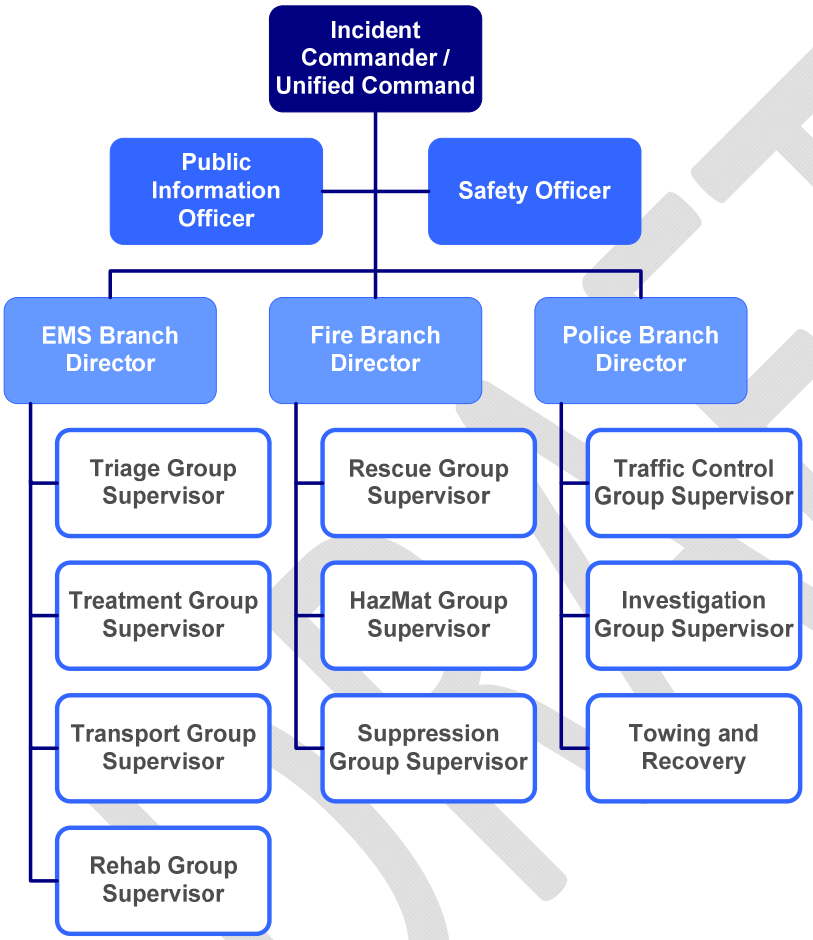
The Primary Police Department has jurisdiction over all incidents that occur on the highways referred to within this document, whether it is the Pennsylvania State Police (PSP) or a local

police department. In those areas in which PSP has primary jurisdiction the senior responding trooper on the scene is the incident commander (IC); in those areas in which a municipal police officer has primary jurisdiction, the senior responding officer on the scene is the incident commander. As an incident evolves and additional senior ranking personnel arrive on scene, the transitioning of the role of incident commander should be accomplished in a seamless manner.

In conformance with NIMS, responders will typically be assigned to one of the following branches: Fire Branch (Rescue, HazMat, Suppression); Emergency Medical Services Branch (Triage, Treatment, Transport, Rehab); and Police Branch (PSP, local police department, assisting law enforcement stakeholders, PennDOT, towing and recovery). These designations will be used throughout this document to define responsibilities of each discipline. Additional branches may be designated for large scale or complex incidents.

Figure 1 represents a NIMS consistent Unified Incident Command structure for a typical highway incident. The chart is designed to serve as a guide only, and can be expanded or contracted based on incident needs.

Figure 1: Incident Command System Example



2. ROLES AND RESPONSIBILITIES

The following outlines the primary roles and responsibilities of the various agencies that respond to highway incidents. The roles and responsibilities described below are not intended to be recommendations, but merely illustrate how these agencies and emergency services providers are typically involved in the incident management process. It is understood that roles and responsibilities of those involved with incident management activities will vary.

2.1 Common Responsibilities

Typical highway incident management responsibilities applicable to all branches may include:

(a) Protect the incident scene
(b) Protect emergency responders at an incident scene
(c) Perform first responder duties
(d) Assume role of Incident Commander, if appropriate
(e) Support unified command
(f) Clear minor incidents
(g) Follow agency blood borne pathogens protocol
(h) Wear appropriate personal protective equipment (PPE), including Safety Vest
(i) Preserve evidence
(j) Be visible at all times

2.2 Emergency Medical Services Branch

The primary responsibilities of EMS are the triage, treatment, transport of victims and protect emergency responders.

Additional incident management responsibilities may include:

(a) Provide medical treatment to those injured at the incident scene
(b) Determine destination and transportation requirements for injured victims
(c) Coordinate evacuation with fire, police, and ambulance or medical services
(d) Transport victims for additional medical treatment
(e) Provide medical monitoring and rehabilitation for emergency

2.3 Fire Branch

Fire and rescue services are provided by fire departments and the County HazMat Team.

Additional incident management responsibilities may include:

(a) Rescue/extricate victims
(b) Extinguish fires
(c) Stabilize and render safe crash damaged vehicles
(d) Assess incidents involving a hazardous materials release

(e) Contain or mitigate a hazardous materials release
(f) Mitigate minor fluid spills
(g) Establish and monitor Temporary Air Medical Landing Zones

2.4 Police Branch

The Primary Police Department has jurisdiction over all incidents that occur on the highways referred to within this document.

Additional incident management responsibilities may include:

(a) Serve as Incident Commander
(b) Secure incident scene
(c) Assist responders in accessing the incident scene
(d) Establish emergency access routes
(e) Control arrival and departure of incident responders
(f) Police perimeter of incident scene and impact area
(g) Conduct incident investigation
(h) Establish Temporary Traffic Control Zone
(i) Perform traffic control
(j) Remain at the incident scene until the tow truck or other last responder has left the scene, unless PennDOT provides that coverage

2.5 Pennsylvania Department of Transportation

The Pennsylvania Department of Transportation is responsible for running the Regional Traffic Management Center (RTMC), Expressway Service Patrol (ESP) program and District/County Maintenance Units.

Additional incident management responsibilities may include:

(a) Serve as Incident Commander
(b) Monitors Traffic Operations
(c) Performs incident detection and verification (TMC/service patrol)
(d) Service Patrol Operator may perform limited or basic first responder duties
(e) Clears minor incident (service patrol)
(f) If maintenance units are needed, the incident commander (IC) should make a request to PennDOT. Requests can be made by:
    a. Contacting the Chester County 9-1-1 Operation Center to make the call for the IC
    b. Contacting the PennDOT County Maintenance Offices directly during normal business hours between 8 AM – 4 PM
    c. Contacting the PennDOT RTMC during off hours.
(g) Protects incident scene
(h) Implements traffic control strategies and provides supporting resources
(i) Disseminates motorist information
(j) Assesses and directs incident clearance activities

(k) Mitigates incident vehicle fluid spills confined to the roadway (PennDOT's involvement may be limited as PennDOT maintenance personnel are not trained in containment and cleanup of hazardous materials spills and may not have all safety equipment and materials necessary for this work.)
(l) Develops and operates alternate routes
(m) Assesses and performs emergency roadwork and infrastructure repair
(n) Supports unified command, as necessary

2.6 Towing and Recovery

Towing and recovery services are responsible for the safe and efficient removal of wrecked or disabled vehicles, and debris from the incident scene. ***Appendix D*** includes the Towing & Recovery Association of America (TRAA) Vehicle Identification Guide to assist in providing information needed to correctly dispatch towing and recovery units.

Additional incident management responsibilities may include:

(a) Recovers vehicles and cargos
(b) Remove disabled or wrecked vehicles and debris from incident scene debris from roadway
(c) Mitigates non-hazardous material (cargo) spills
(d) Mitigates incident vehicle fluid spills confined to the roadway (Involvement may be limited as are not trained in containment and cleanup of hazardous materials spills and may not have all safety equipment and materials necessary for this work.)
(e) Supports unified command, as necessary
(f) Evaluate scene safety with IC, discussing recovery procedures
(g) Provide technical assistance/information to other responding stakeholders
(h) Mitigate minor fluid spills
(i) Apply absorbents and remove debris/spilled fluids from the roadway, and properly dispose of
(j) Perform recovery by re-aligning the vehicle to tow truck, not tow truck to vehicle, using snatch blocks or other techniques, when able to do so safely
(k) Perform recoveries in one lane, if possible, and load vehicle for transport
(l) Clean up debris and used absorbents. DO NOT place debris and absorbents in the vehicle
(m) Return roadway to pre-incident condition as well as possible
(n) Check in with IC prior to departing the scene
(o) Transport occupants of the vehicle to a safe location after the vehicle is removed from the roadway

2.7 Municipal Public Works

On an as needed basis, and as requested by the IC, local municipal public works may be called upon to provide additional support resources.

Additional incident management responsibilities may include:

(a) Maintain and operate traffic signal systems
(b) Monitor diversion routes
(c) Implements traffic control strategies and provides supporting resources
(d) Maintain local streets and arterials and associated field equipment, lighting, and power
(p) Support debris clearance/ removal and material containment with township owned equipment when possible or by suggesting local vendors
(q) Provide special equipment for clearing incident scenes with township owned equipment when possible or by suggesting local vendors

3. RECOMMENDED EQUIPMENT FOR A RESPONDING STAKEHOLDER

Responding personnel must wear ANSI Class II (or higher) Safety Vests.

In compliance with the MUTCD and where applicable, stakeholders responding to incidents on limited access highways try to bring the following equipment*:*

3.1 A minimum of six (6) DOT approved reflective traffic cones (10 cones are preferable)

3.2 A minimum of one (1) case of traffic flares

3.3 A lighted arrow sticks or sign board, mounted as high as possible on the vehicle, for maximum visibility

3.4 Addition of DOT approved reflective striping to the rear and sides of the vehicle

3.5 Minimum compliment of Basic First Aid equipment will be part of the vehicle inventory

3.6 A 48" x 48" retro-reflective advance warning sign as per MUTCD standards

3.7 Interoperable communication devices to assist with the ability of responders to communicate with one another.

3.8 In responding to an incident, each type of responder brings different equipment to the scene. The following is a list of potential equipment by discipline that may be available upon request by the IC.

(a) Law Enforcement
- Accident Investigation Equipment

(b) Fire Police
- Advance Warning Signs
- Portable Variable Message Signs

(c) DOT / Public Works
- Sand Loader
- Attenuator Trucks

4. GENERAL SAFETY AND RISK MANAGEMENT

As per the National Unified Goal, responders to highway incidents must maintain a constant awareness of the inherent danger of operating on limited access highways. While completely closing the highway whenever an incident occurs may seem the safest option, it can cause a myriad of problems and complications:

- The number of personnel needed to safely and effectively close the highway.
- The greatly increased chance of secondary crashes, both on the affected highway and on secondary roads not designed for the increased traffic volume.
- The likely delay for additional emergency units attempting to access the incident scene.
- Significant traffic congestion in a large geographic area, impeding responses to additional emergency incidents which may occur.

Therefore, police and other emergency responders must work cooperatively to employ the necessary traffic diversions to establish a safe work zone for responders, without unnecessarily restricting the flow of traffic through the area.

Each responder at a highway incident must be constantly aware of his or her personal safety. While traffic control devices and visibility enhancing garments will increase your safety, they will not protect you from a driver who loses control of their vehicle and/or is not paying attention to the road. Therefore, your greatest protection is to keep a physical barrier (blocker vehicle, guiderail, crash vehicles, etc.) between you and moving traffic whenever possible.

The following are additional protective measures you can take to maximize your protection at an incident scene (**BE SAFE. ACT SAFE.)**:

4.1 In accordance with Federal Regulation 23 CFR 634, all emergency workers operating on the highway who are exposed to traffic shall wear a Class II or higher vest complying with ANSI/ISEA 107, 2004 or 2006 or a Public Safety Vest complying with ANSI/ISEA 207, 2006. Firefighters or other emergency responders engaged in emergency operations that directly expose them to flame, fire, heat, and/or hazardous materials are not required to wear a vest, provided they are attired in retro-reflective turn-out gear that is specified and regulated by other organizations, such as the National Fire Protection Association.

4.2 Notwithstanding the visibility requirements described above, fire department members are expected to wear full PPE (coat, pants, helmet) while operating on the highway. As noted above, an approved Class II vest must be worn over the coat (unless the above described exemption criteria is met). The IC may allow firefighters to remove their coats after the hazard has been mitigated, however, the Class II vest must still be worn.

4.3 Responders shall never operate in a live lane. Crossing a live lane should be done with extreme caution and should be avoided when possible.

4.4 Hose lines/equipment should be deployed from the protected, downstream side (opposite live traffic lanes) of emergency vehicles whenever possible.

4.5 ~~Do not~~ Should avoid entering or exiting apparatus near or in live lanes of traffic.

4.6 Do not drive against the flow of traffic without Police approval and confirmation that traffic has been stopped.

4.7 Use designated entrances and exits. Use of the median or paved U-Turns should be reserved for life threatening emergencies and extenuating circumstances. If this maneuver is attempted, try to use traffic control measures for the on-coming traffic.

4.8 Shut down forward facing emergency lights to reduce opposite direction incidents.

4.9 Limit the amount of equipment on the highway, thus reducing your liability exposure. Risk vs. Need.

4.10 Always communicate, coordinate, cooperate, be professional, and work within the framework of unified command.

4.11 Ensure all members are aware of and trained on these guidelines.

4.12 Responders should be aware of Pennsylvania's Quick Clearance law which mandates the removal of vehicles from the travel lanes in an expedient manner to reduce the potential for extended road closures.

5. INCIDENT RESPONSE

5.1 When possible and at the discretion of the senior fire officer, a minimum crew of four firefighters is *recommended* for fire apparatus responding to incidents on the highway.

5.2 Responding members shall be properly seated in the vehicle and secured with supplied seatbelts.

5.3 ***Only official emergency vehicles as defined under the Vehicle Code should respond on the highway.*** Use of personal vehicles should be discouraged unless specifically requested by the IC.

5.4 Companies will be assigned responsibility for a specific area of the highway, and will be directed to enter the highway via a designated ramp. Absent extenuating circumstances, or specific orders to the contrary, companies will utilize their assigned entry ramp whenever responding to incidents on the highway.

5.5 Responding vehicles will transmit their response via radio or electronically [Status Messaging Unit (SMU) or Mobile Data Computer (MDC) on the designated radio channel.

5.6 All vehicles will communicate via radio when entering the highway or arriving at the staging point.

5.7 As a general rule, vehicles should utilize normal entrances and exits to reverse their direction of travel. ***Use of the median or paved U-Turns should be reserved for life threatening emergencies and extenuating circumstances.*** If this maneuver is attempted, try to use traffic control measures for the on-coming traffic.

5.8 Additional arriving equipment and apparatus should stage at a predetermined location off of the highway to await further instruction from command personnel. This protocol shall be utilized in situations involving construction zones on limited access highways.

5.9 In the absence of other options, it may be necessary for emergency vehicles to travel against the normal traffic flow to access an incident scene. ***NO units or vehicles will employ this maneuver unless and until they receive specific approval from the incident commander or his designee that traffic flow has been stopped.*** Once approval is received, the emergency vehicle shall proceed with extreme caution, utilizing the shoulder portion of the roadway if possible.

5.10 Communicate with the PennDOT Regional Traffic Management Center to assist in detection and verification of incident location. The Police branch should report any lane or road closure to RTMC and advise RTMC when lane or road has been re-opened.

5.11 If a specialized Traffic Unit vehicle is available in the area, via the Fire Department or Fire Police, request for on-scene assistance from this unit for additional traffic control and advance warning of the incident scene.

6. ARRIVING ON SCENE

6.1 The first arriving emergency responder will assume command and provide an arrival report with the following information:

(a) Location of the incident (direction of travel, milepost, landmark, waterway, etc.)
(b) Lanes affected by the incident
(c) Number of vehicles involved
(d) Vehicle condition (on fire, overheat, occupied, entrapment, overturned)
(e) Best access for responding units (left shoulder, right shoulder, etc.)

6.2 A detailed size-up should be conducted as quickly as possible. Based on the size-up, a determination will be made regarding the resources needed to handle the incident. Units not needed should be directed to staging or recalled.

6.3 Safe-Positioning Guidance

The positioning of emergency units on the scene can be affected by a variety of factors (nature and scope of the incident, weather, traffic, roadway characteristics, etc.). Refer to ***Appendix E*** for safe-positioning diagrams. The following guiding principles should be considered for each incident:

6.3.1 Units deploying equipment (fire apparatus stretching hoselines, rescue trucks using hydraulic tools, etc.) should be positioned where they can most safely and effectively perform their intended task.

6.3.2 A blocker vehicle (usually a full-size fire apparatus) should be positioned upstream of the incident to provide a physical barrier between emergency responders and approaching traffic.

6.3.3 If a second fire apparatus responds to the scene as a shadow vehicle, it should safe-position at least 50 feet upstream of the blocker vehicle to help ensure an adequate buffer zone. The crew in the shadow vehicle should exit the vehicle and report to a safe area within the incident space. The shadow vehicle assumes a fend-off position to deflect any high speed impact that would otherwise crash into the incident space.

6.3.4 Vehicles used for traffic control (PennDOT, ESP, marked police vehicles) should be positioned upstream of the incident for visibility. Consider positioning an advance warning vehicle upstream of the queue.

6.3.5 Ambulance(s) should be positioned immediately downstream of the incident, as close as safely possible, to facilitate the loading of patient(s) and rapid egress from the scene.

6.3.6 Additional units should be positioned downstream of the incident, as far off the travelled portion of the roadway as possible.

6.3.7 Consideration should be given to traffic flow and to providing an avenue for additional resources to access the incident space.

6.4 When possible, emergency vehicles should be positioned on the same side of the highway as the incident. Exceptions to this rule will sometimes be necessary, but must be approved by the Incident Commander.

Examples when this may be necessary include:
(a) The incident is located on both sides of the highway.
(b) The primary units are delayed or cannot access the scene due to traffic congestion.
(c) Equipment or personnel from units responding in the opposite direction are needed to immediately assist with a life threatening or serious situation.

The Incident Commander and Company Officer is responsible for ensuring the following:
(a) Only necessary units are approved for opposite side positioning.
(b) Units are safe positioned and necessary traffic controls are employed.
(c) Units are moved as soon as practical.

6.5 Lane Designations

For purposes of uniformity, the following plain text guidance, which has been adopted by the National Traffic Incident Management Coalition, will be used to communicate the lane or portion of roadway affected by the incident:

6.5.1 ***Use plain English where possible to identify incident location and lane designations***. On roadways with 3 or less lanes, they are named left, center, and right when facing in the direction of traffic flow.

6.5.2 Shoulders should be identified as “right shoulder” or “left shoulder.”

6.5.3 Indicate the relative direction of travel (e.g. northbound or southbound) along with other incident location detail and any specific position assignments. For example, an incoming unit might be told to safe park or “Upon arrival, position as a blocker for the right shoulder and right lane.”

6.5.4 If the incident is located before the merge point it shall be considered a separate roadway and identified as such, i.e. left hand exit ramp.

6.5.5 Exits:

The term “Off-Ramp” will be used to describe a lane(s) which leads from the highway to another roadway.

The term “On-Ramp” will be used to describe a lane(s) which leads from another roadway onto the highway.

6.6 Lighting Discipline

Emergency warning lights are an effective tool to notify approaching motorists of an emergency ahead. However, when multiple emergency vehicles are on location, the number of activated warning lights can overwhelm approaching motorists. The lights can obscure motorist’s views of traffic controls and emergency responders, especially at nighttime scenes. Also, front facing warning lights attract the attention of motorists traveling in the opposite direction and can adversely affect the flow of traffic on that side of the highway. To avoid the negative impacts of emergency warning lights, the following steps should be taken:

6.6.1 Most front facing lights should be cancelled immediately upon arrival.

6.6.2 Once the necessary traffic controls have been established (cone tapers, blocker vehicle, etc.), the use of rear-facing warning lights should be reduced to only those necessary to warn approaching motorists of the emergency and safely direct them through the Temporary Traffic Control Zone.

6.7 When possible, crew members should enter/exit their units on the side opposite the traffic flow. Emergency responders should always check for approaching traffic before exiting their vehicle.

6.8 The magnitude of the incident should be estimated within the first fifteen (15) minutes of arrival using the criteria set below.

(a) Minor – 30 minutes or less (contact PennDOT)
(b) Intermediate – 30 minutes to 2 hours (contact PennDOT)
(c) Major – more than 2 hours (contact PennDOT)

The classification should be promptly transmitted to the appropriate stakeholders so necessary notifications can be made (PSP, PennDOT, local municipal public works, etc.). All incidents should be updated every 15-30 minutes.

6.9 Treat all incidents as a crime scene. When possible, avoid driving over or parking on top of skid marks or other potential evidence. Members operating on the scene should avoid moving or disturbing vehicle parts or any other potential evidence, unless necessary for patient treatment or hazard mitigation.

7. TRAFFIC CONTROL

Emergency responders shall control oncoming traffic prior to turning their attention to the incident. Understanding that there is no absolute means to protect emergency responders at the scene of an incident on a limited access highway, responders are urged to constantly keep in mind the "four guiding principles" when operating in or near moving traffic. Recognizing the following principles will increase the margin of safety.

Provide Advance Warning

Use traffic control devices such as signs, other emergency vehicles, or any other appropriate device that will warn or direct motorists away from an approaching incident.

Protect the Scene

Position vehicles and traffic control devices in such a way that allows for adequate space between the point where the traffic is diverted and the actual incident space. Fire apparatus should position in a manner that best protects the incident space. Such positioning affords protection to responders from the hazards of working in or near motor vehicle traffic.

Be Visible

All responders operating at the incident on a highway with moving traffic shall wear highly visible, highly reflective garments to increase the ability of motorists to see the emergency responders during day and night operations.

Protect Yourself

Responders should make every effort to keep a physical barrier between themselves and moving traffic. If engaged in emergency activities, try to position a blocker vehicle between you and moving traffic. If standing-by at a scene, sit inside your vehicle (unless the vehicle is the blocker vehicle), or stand behind the guide rail. ***The less time you're exposed to moving traffic, the safer you are!***

7.1 For complex or long term incidents the Incident Commander shall provide for traffic control measures as a part of the Incident Action Plan.

7.2 It is the responsibility of initial responders to establish a safe work zone at an incident scene. Traffic cones, flares and/or emergency vehicles may be used for this purpose until additional equipment becomes available.

7.3 Lanes should be closed only when necessary to protect civilians or emergency workers, and should be reopened as soon as safety permits. Responders should take all reasonable precautions to provide adequate notice to approaching traffic of the lane closure.

7.4 Scene conditions may necessitate the use a buffer lane to provide an additional margin of safety for emergency workers. Conditions which would indicate the need for a buffer lane include, but are not limited to:

(a) Light traffic conditions, with vehicles approaching and/or passing the scene at a high rate of speed.

(b) A fire with heavy smoke conditions, or anticipated steam generation caused by the application of water.

(c) A vehicle with injured occupants who need to be removed on a long board from the side of the vehicle facing traffic.

(d) A motor vehicle crash requiring the use of hydraulic rescue tools.

(e) Insufficient room to safely remove equipment from an emergency vehicle positioned close to a travel lane.

(f) Any other unforeseen circumstances which would expose emergency workers to increased risk from passing traffic.

7.5 When placing traffic control devices, consideration should be given to drivers' reaction time and visual obstructions. Advance warning may need to be extended upstream based on factors such as topography, time of day, and weather to reduce the potential for secondary crashes.

7.6 Personnel should attempt to face traffic at all times when placing and retrieving traffic control devices. Refer to ***Appendix E*** for cone taper and additional information on Advanced Warning.

7.6.1 When creating a cone taper, start at the furthest point upstream of the incident and build the taper at a left or right angle, moving downstream (walking backwards to observe traffic) until the entire lane(s) to be closed is covered. If a blocker or shadow vehicle is being used, the taper should meet the front bumper of the vehicle. If sufficient cones are available, the cone line should continue to the downstream terminus of the Temporary Traffic Control Zone.

7.6.2 Prior to opening a previously closed lane, secure IC and/or PennDOT permission and ensure the lane is clear of vehicles and debris, and safe for vehicular traffic. Make sure that IC, PennDOT and the communications center(s) are aware that the closed lane is being opened.

7.6.3 When retrieving a cone taper, start at the furthest point downstream and pick up the cones while facing traffic. Consider having IC or PennDOT assist with traffic control for increased safety.

7.7 A 48" x 48" retro-reflective advance warning sign as per MUTCD standards should be deployed on the shoulder, upstream of all apparatus and traffic control devices.

7.8 Traffic should *never* be allowed to pass an incident scene on both sides of emergency workers. The traffic should be diverted to the left or the right of the scene.

7.9 Consider the availability or use of the Pennsylvania Department of Transportation Emergency Service Patrols for traffic control and vehicle removal to safer location during their operational hours.

7.10 The Fire Branch Director should consider, in coordination with the IC, designating a full size fire apparatus to act as a blocker vehicle, thereby providing a physical barrier between emergency workers and passing traffic. This is especially important during times of low traffic volume, when vehicles are traveling at higher speeds. A cone taper of a sufficient distance to adequately warn approaching traffic should be deployed upstream of the blocking apparatus.

7.11 If PSP or other responding law enforcement arrive on scene and determine that a previously closed lane must be opened to traffic, they will order lanes reopened in consultation with the fire department and/or EMS at the scene. A reasonable amount of time will be afforded for responders to move to a safe area before the lane is opened.

7.12 The closing of additional lanes not affected by the crash, to include on and off ramps, shall require the approval of the Pennsylvania State Police or the municipal Police Department.

7.13 The IC and/or Fire Branch Director are responsible insuring the duties of a Safety Officer are carried out. The safety officer duties are responsible for ensuring the safety of all personnel operating on the scene and should assume primary responsibility for ensuring that proper traffic controls have been established.

8. OPERATING ON SCENE

As used below, the term “primary engine” refers to the engine responding in the reported direction of travel. The term “secondary engine” refers to the engine responding opposite the reported direction of travel.

8.1 Vehicle Fires

8.1.1 The first engine company and command vehicle in each direction may enter the highway and announce same via radio. A second full size fire apparatus may enter the highway in the reported direction of travel. This apparatus will stage on the shoulder upstream of the incident scene and prepare to act as a blocker if needed. The remainder of responding apparatus is to stage off the highway in the area of their assigned entry ramp.

8.1.2 The first arriving engine will position in accordance with Section 6, Arriving on Scene. The first arriving officer will establish command, perform a “size-up” and determine the necessary resources to safely mitigate the incident. Any unneeded resources will be directed to staging or recalled.

8.1.3 The Fire Branch Director should attempt to identify the senior trooper at the scene, and request his/her presence at the command post to ensure a unified command.

8.1.4 Additional responding apparatus will position in accordance with *Section 6, Arriving on Scene*. The company officer will proceed to the command post for orders unless instructed otherwise.

8.1.5 Apparatus positioned in the travel lanes of the highway should be moved to the shoulder as soon as practical. If possible, apparatus should be moved prior to restoring hose lines and other equipment to their location on the engine.

8.2 Motor Vehicle Crashes

8.2.1 The first command officer, engine, rescue company and EMS unit in each direction will enter the highway and announce same via radio. An additional full-size fire apparatus may enter the highway in the reported direction of travel. This apparatus will stage on the shoulder prior to the incident scene and prepare to act as a blocker if needed. The remainder of responding apparatus will stage off the highway, in the area of their assigned entry ramp.

8.2.2 Units will position in accordance with operating guide Section 8, Arriving on Scene, allowing a route of travel for arriving/departing EMS vehicles. Only necessary units will be positioned close to the scene.

8.2.3 The first arriving officer will establish command, perform a size-up, and determine the necessary resources to safely mitigate the incident. Any unneeded resources will be directed to stage off the highway and/or recalled.

8.2.4 The Fire Branch Director should attempt to identify the senior police officer and EMS member at the scene, and request their presence at the command post to ensure a unified command.

8.3 Brush/Grass Fire:

Adhere to Section 8.1 Operating On Scene, Vehicle Fires.

8.4 Highway Hazard:

Adhere to Section 8.1 Operating On Scene, Vehicle Fires.

8.5 Temporary Air Medical Landing Zones/Helispots:

The routine use of highways or roadways as temporary air medical landing zones or helispots is discouraged. This is because of the unique hazards, security problems, and traffic problems associated with this practice. EMS / Fire Branch Directors should consider the use of the pre-designated landing zones off of the highway to transport patients and minimize road closures.

8.6 Hazardous Materials Incidents:

8.6.1 If there is a confirmed hazardous materials incident, a notification should be made to Pennsylvania Department of Environmental Protection (PADEP), and they can make the determination if a response is needed. This should be coordinated through a county assessment or hazmat team.

8.6.2 Follow appropriate hazardous materials protocols.

8.7 Trapped Queue

During an incident designated as "Major" a significant queue may develop. While all efforts will be made to clear the trapped queue, sometimes that is not possible. Incident Commanders should be aware people in the trapped queue may have unique medical needs. Consideration should be given to the following:

(a) EMS Branch should assign a minimum of two personnel to move through the trapped queue [on foot or on a motorized All-Terrain Vehicle (ATV)] and identify potential medical needs of those in the queue (Insulin-Dependency, oxygen, battery-operated medical devices, etc.).
(b) Provisions should be considered to provide snacks/food, water, blankets, medical supplies to those in the trapped queue.

(g) Consideration should be given to checking carbon monoxide levels inside vehicles left running for extended periods of time.
(c) Consideration should be given to refueling capability for vehicles trapped in the queue that run out of fuel.
(d) In situations of an extended trapped queue with severe weather, consideration should be given of opening an off-site emergency shelter and providing transportation of motorists to the shelter.
(e) Consider potential severe weather (tornadoes, severe thunderstorms, etc.) that may require the rapid evacuation of motorists to a safe area. Consideration should be given to how the evacuation will be done, how motorists will be notified, where motorists will go to be safe.
(f) In situations of snow or ice accumulation, consider early planning of how the trapped queue roadway will be cleared and how the trapped queue (and motorists) will get out of the trapped queue.

9. DEMOBILIZATION

9.1 Demobilization of the incident must be managed with the same aggressiveness as initial actions. Apparatus and equipment should be removed from the highway promptly, to reduce exposure to moving traffic and minimize traffic congestion.

9.2 Demobilization begins at the downstream termination area and ends at the furthest most upstream advance warning device. All responders and apparatus should clear the travel lanes before the last device is picked up and secured.

9.3 Vehicle operators shall ensure that all equipment has been properly returned to the apparatus, and all doors are closed and secure.

9.4 All personnel should be properly seated and secured with seat belts.

9.5 Departing the scene can be hazardous for emergency responders, especially when attempting to merge large fire apparatus into traffic moving at highway speeds. Merging into the left lane from the center median is particularly hazardous. If the company officer does not feel the apparatus can safely merge into traffic, assistance should be sought from on-scene law enforcement and/or PennDOT to employ a slow down or other protective measures to assist the apparatus in safely departing the scene. When possible, apparatus should use the shoulder as an acceleration lane before merging into traffic. Emergency warning lights should be cancelled only after the vehicle has completely merged into traffic.

10. GUIDELINE MAINTENANCE AND UPDATES

A significant effort was exerted to make this document as comprehensive as possible in identifying appropriate and applicable traffic incident operating guidelines. However, it has been acknowledged that this must be a living and evolving document that will be strengthened and enhanced over time as it is exercised and tested.

Continued collaboration, coordination, and communication among stakeholders are critical to reinforcing and maintaining the Traffic Incident Operating Guidelines. The guidelines should be reviewed annually. Collaborative and regular review keeps the plans current and relevant, incorporates new partners or processes, and retires obsolete content.

No change shall be made to this document unless coordinated through the Traffic Incident Operating Guidelines Advisory Committee and communicated to all organizations impacted by these guidelines.

Each revision will be numbered and documented. As new versions are created and distributed to the participants, older versions will be replaced. This will assure that all users are working off of the same version of the plan. The table below will keep a record of revisions made to the plan since it was first published.

10.1 Record of Changes

Change Number	Date of Change	Section of Plan

APPENDIX A: GLOSSARY

The following terms shall be used during incident operations, post-incident analyses, and training activities related to working in or near moving traffic:

activity area – an area comprised of the Buffer Space and the Incident Space.

advance warning area – an area established upstream of the incident to alert drivers of the upcoming incident scene. This area should be a high priority for emergency responders. Placement of advance warning devices may need to be adjusted for situations near a curve, corner, hill, or other reduced visibility situations.

ANSI – American National Standards Institute.

blocker vehicle – the initial on-scene emergency vehicle, preferably a fire apparatus, positioned on an angle to the lanes of traffic creating a physical barrier between upstream traffic and the work area. This includes using the vehicle to "block to the left" or "block to the right."

buffer space – the empty, unoccupied space or distance between the Transition Area and the Incident Space.

company officer – the officer or senior member in charge of a particular resource, usually a fire apparatus crew.

cold zone – also referred to as the support zone, the cold zone is a contamination-free zone established around the warm zone where emergency operations can be directed and supported.

DOT – Department of Transportation

downstream – the area past the incident in the direction of normal traffic flow as it travels away from the incident space.

EMS – Emergency Medical Services

emergency responder – Fire, Police, EMS and any other personnel responding to assist at an emergency scene.

ESP – Expressway Service Patrol

FB – Fire Branch

helispot – see landing zone

hot zone – also referred to as the exclusion zone in some jurisdictions. The hot zone is usually set up in the immediate area surrounding the spilled material or incident scene. Access to the hot zone should be controlled for accountability purposes as well as contamination control purposes.

IC – Incident Commander

incident – any non-recurring event that causes a reduction of roadway capacity due to motor vehicle crashes, vehicle fires, natural disaster, or other unplanned event that affects or impedes the normal flow of traffic.

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 space – the area contained in the Activity Area which includes the incident and the necessary space around the incident required to manage the event, including vehicles and personnel.

landing zone – a designated location where a helicopter may safely take off and land. Landing zones may be used for medical evacuation and loading of supplies, equipment, or personnel.

law enforcement – Pennsylvania State Police or other law enforcement agency with jurisdictional authority.

limited access highway – designation of a highway with limited access points.

MUTCD – The Manual on Uniform Traffic Control Devices, published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F.

NIMS – National Incident Management System

off-ramp – exit from the highway to another roadway.

on-ramp – entrance onto the highway.

OIC – Officer in Command

PennDOT – Pennsylvania Department of Transportation

PB – Police Branch

protected space – the space not occupied by responders or response vehicles between the blocking vehicle and the incident. A blocker vehicle should be positioned a sufficient distance in advance of responders to absorb contact by an errant vehicle.

queue – a line of vehicles waiting to be served by the system in which the flow rate from the front of the queue determines the average speed within the queue. Queues result in travel time delays by creating slower speeds in both the queue and the transition/activity/termination areas of the work zone.

RTMC – Regional Traffic Management Center

SCBA – Self Contained Breathing Apparatus

shadow vehicle – the second due fire apparatus or other emergency responder vehicle, which positions upstream of the Blocker vehicle at an angle.

staging – an area away from the incident scene where units are positioned until notified to respond to the scene or return to quarters.

taper – the action of directing several lanes of traffic into fewer or more lanes utilizing traffic control devices. This action should be used prior to the Buffer Space, and may also be used in the Termination Area.

temporary traffic control zone – defined by the MUTCD as an area of highway where road user conditions are changed because of a work zone or an incident through the use of temporary traffic control devices, uniformed law enforcement officers, or authorized personnel.

termination area – the area used to notify drivers that the Traffic Incident Management Area is ending and they may resume normal driving.

traffic incident management area – this area is a type of Temporary Traffic Control Zone and extends from the first warning device to an area where the moving traffic returns to original traffic patterns and is clear of the incident. Consideration should be given to include the area which is part of the police investigation. This area has four main components: Advance Warning Area, Transition Area, Activity Area and Termination Area.

TRAA – Towing & Recovery Association of America

transition zone – the area/lane of roadway where approaching motorists change their speed and position to comply with the traffic control measures established at an incident scene.

unified command – when a response requires a multi-agency or multi-jurisdictional approach, the leadership of an Incident Command System (ICS) organization may be expanded into a Unified Command (UC). As defined in NIMS5, UC is “an application of the ICS used when there

is more than one agency with incident jurisdiction or when incidents cross political jurisdiction. Agencies work together through the designated members of the UC, often the senior person from agencies or disciplines participating in the UC, to establish a common set of objectives and strategies and a single Incident Action Plan (IAP)." The UC is a structure that brings together the Incident Commanders of all major organizations involved in the incident in order to coordinate an effective response, while at the same time allowing each to carry out their own jurisdictional, legal, and functional responsibilities.

upstream – the area prior to the incident in the direction of normal traffic flow as the vehicles approach the Traffic Incident Management Area.

warm zone – also referred to as the contamination reduction zone, the warm zone is usually established around the hot zone to provide a buffer between the hot and cold zones. Decontamination often takes place in the warm zone.

APPENDIX B: MUTCD 2009 EDITION - CHAPTER 6I.

Control of Traffic Through Traffic Incident Management Areas

(from Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, http://mutcd.fhwa.dot.gov/

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).

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

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.

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.*

APPENDIX C: TRAA VEHICLE IDENTIFICATION GUIDE

Law enforcement communications with towing and recovery operators describing an incident and the vehicles involved can insure quick and efficient clearing of these scenes and less disruption to traffic flow. In an effort to standardize communications, the towing industry is adopting the federal vehicle class standards as outlined herein.

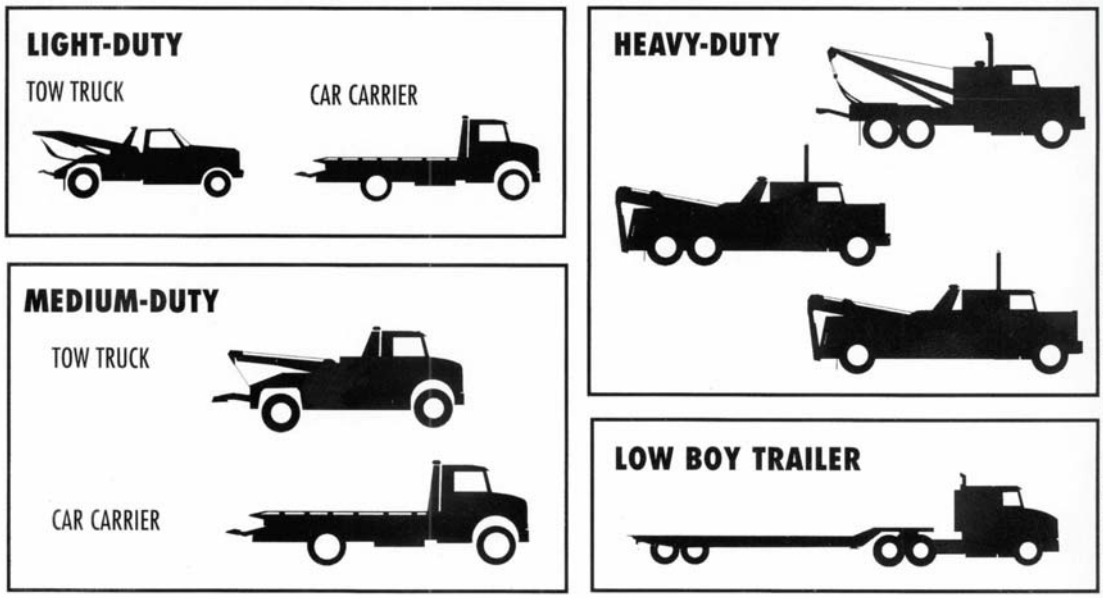
VIN CODES

The year of the vehicle is critical information for towing operators in order for them to reference correct towing procedures. The diagrams on the front are examples of classifications. The following information about vehicle identification numbers affixed to the chassis will help determine the vehicle's year. As noted, the vehicle's year, identified by a letter or number in the VIN sequence, is the eighth character from the right.

EXAMPLE 1995 VIN NUMBER: 1P8ZA1279SZ215470

1980.....A	1987.....H	1994.....R	2001.....1	2008.....8
1981.....B	1988.....J	1995.....S	2002.....2	2009.....9
1982.....C	1989.....K	1996.....T	2003.....3	2010.....A
1983.....D	1990.....L	1997.....V	2004.....4	2011.....B
1984.....E	1991.....M	1998.....W	2005.....5	2012.....C
1985.....F	1992.....N	1999.....X	2006.....6	
1986.....G	1993.....P	2000.....Y	2007.....7	

TOW TRUCK/CAR CARRIER CLASSIFICATION

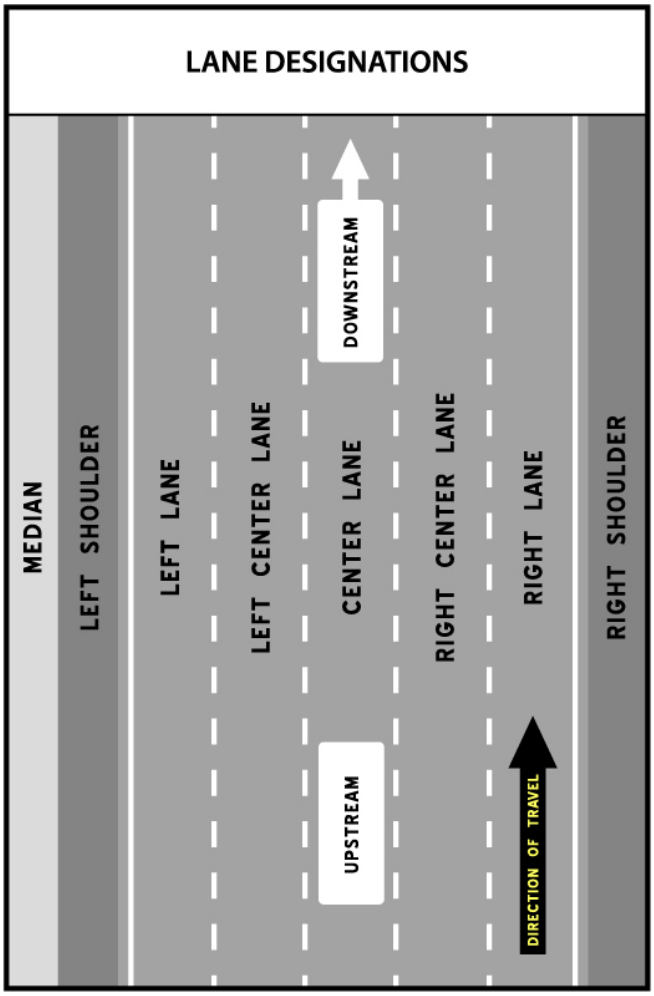


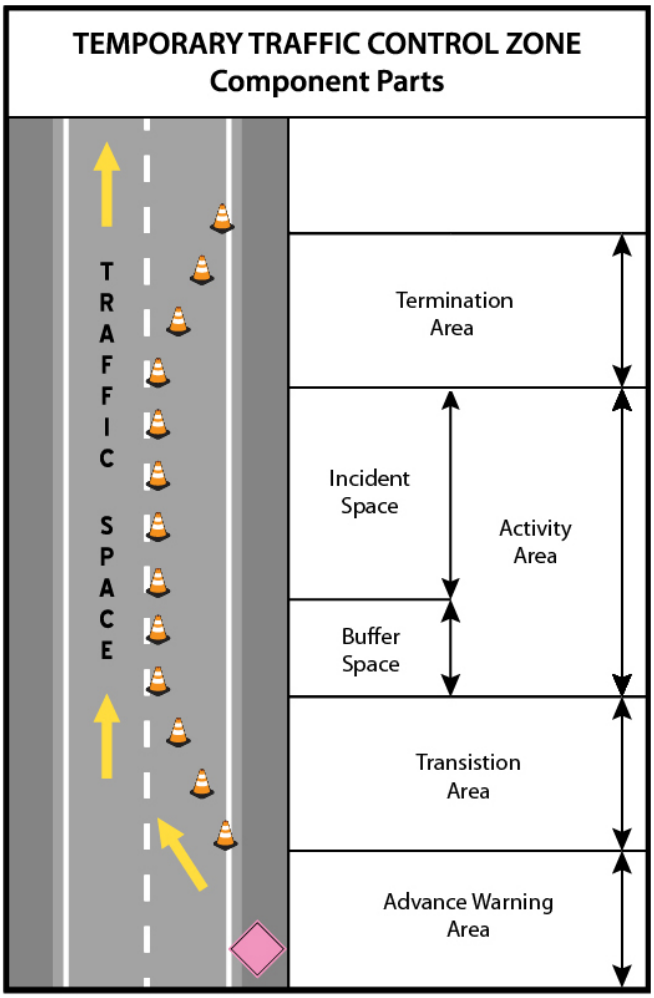
Compliments of Delaware Valley Regional Planning Commission.

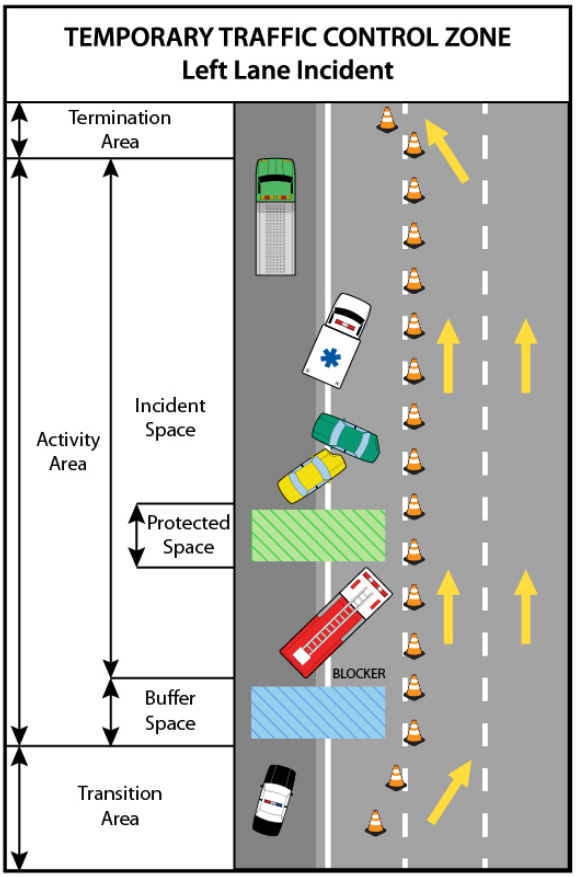
APPENDIX D: SAFE-POSITIONING GUIDELINES

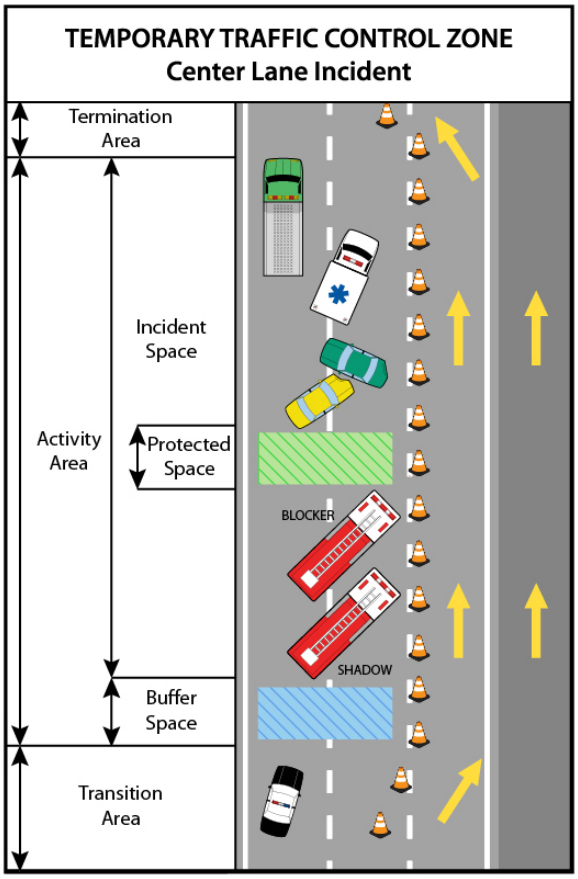
Incident Management Guide		
MAGNITUDE	**DURATION**	**PROTOCOL**
Minor	< 30 minutes	• Notify law enforcement if incident is on roadway where a minor delay can create significant traffic impact • Establish Advanced Warning Area and other TTC Components as time/personnel permits
Intermediate	30 minutes to 2 hours	• Notify PSP or local law enforcement • Establish TTC Components • Consider DOT Response (Supervisor Only)
Major	2+ hours	• Notify PSP or local law enforcement • Request DOT Response (Trailer) Early • Establish Full Work Zone (Same as Non-Emergency)

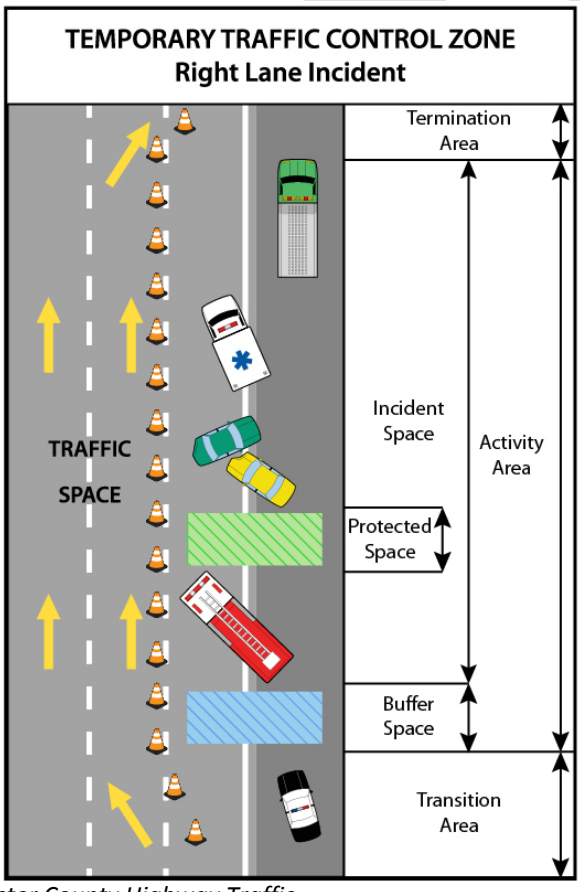
Temporary Traffic Control Zone Configuration			
POSTED SPEED LIMIT	**ADVANCED WARNING AREA**	**TRANSITION ZONE**	
	Sign Distance	**Taper Length**	**Typical # Cones**
40	A 350 ft	320 ft	8
55	A 750 ft	660 ft	16
65	A/B 1000/1500 ft	780 ft	18

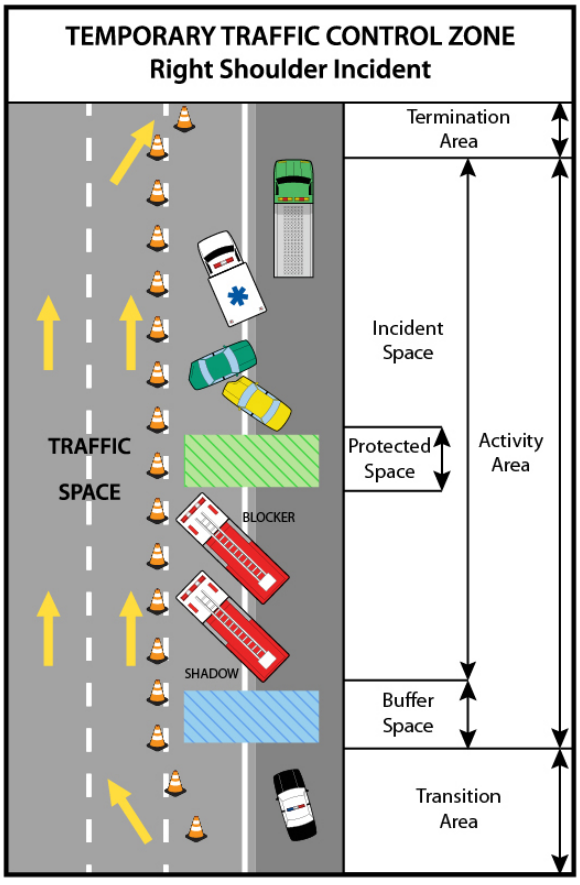

LANE DESIGNATIONS
MEDIAN
LEFT SHOULDER
LEFT LANE
LEFT CENTER LANE
CENTER LANE
RIGHT CENTER LANE
RIGHT LANE
RIGHT SHOULDER
DOWNSTREAM
UPSTREAM
DIRECTION OF TRAVEL


TEMPORARY TRAFFIC CONTROL ZONE
Component Parts
TRAFFIC SPACE
Termination Area
Incident Space
Activity Area
Buffer Space
Transistion Area
Advance Warning Area


TEMPORARY TRAFFIC CONTROL ZONE
Left Lane Incident
Termination Area
Activity Area
Incident Space
Protected Space
Buffer Space
Transition Area
BLOCKER


TEMPORARY TRAFFIC CONTROL ZONE
Center Lane Incident
Termination Area
Activity Area
Incident Space
Protected Space
Buffer Space
Transition Area
BLOCKER
SHADOW


TEMPORARY TRAFFIC CONTROL ZONE
Right Lane Incident
TRAFFIC SPACE
Termination Area
Activity Area
Incident Space
Protected Space
Buffer Space
Transition Area


TEMPORARY TRAFFIC CONTROL ZONE
Right Shoulder Incident
TRAFFIC SPACE
Termination Area
Activity Area
Incident Space
Protected Space
Buffer Space
Transition Area
BLOCKER
SHADOW

APPENDIX E: TRAFFIC INCIDENT MANAGEMENT RESOURCES

FHWA Traffic Operations
http://www.ops.fhwa.dot.gov/index.asp

FHWA Traffic Incident Management
http://www.ops.fhwa.dot.gov/incidentmgmt/index.htm

FEMA – National Incident Management System (NIMS) Resource Center
http://www.fema.gov/emergency/nims/index.shtm

National Traffic Incident Management Coalition (NTIMC)
http://timcoalition.org

Responder Safety.com
www.respondersafety.com

I-95 Corridor Coalition – Incident Management
http://www.i95coalition.net/i95/Committees/IncidentManagement/tabid/74/Default.aspx

TIM Network
http://timnetwork.org