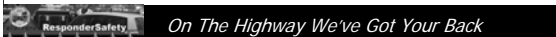


**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**"Watch out behind you!"**



**Responder Safety on the Roadway**



INSTRUCTOR: Audio from Midwest City, OK struck-by incident will play upon clicking on this slide. The clip is approximately 30 seconds in duration. Click on slide and play clip when you are ready to start the program.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Midwest City Fire Department, OK**

- Incident Overview
  - August 5, 1999 – Raining with wet roadways
  - Initial alarm of a one vehicle crash into the median barrier of Interstate 40 Westbound at Hudiburg Drive.
  - Midwest City FD Ladder 2, Squad 2, and one privately owned ambulance dispatched at 1920 hrs.



Midwest City Fire Department, OK. This incident took place on the evening of August 5, 1999. One firefighter was killed and another injured when a vehicle struck them and the patient they were working on next to their apparatus. All three were thrown approximately 47 feet. One over the median barrier and two over the ladder truck.

NIOSH report on this incident has been provided in the resource guide for this program.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Original Incident**

- Ladder 2 and Squad 2 arrive at 1923 hrs.
- Squad 2 positioned behind initial crash (Car #1)
- Ladder 2 establishes a blocking position approximately 150 yards behind the Squad.
- Highway Patrol and City Police units still responding to the scene.



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Original Incident**

- Squad 2 reports no injuries and cancels the ambulance.
- Ladder 2 personnel remain in the truck while in blocking position.



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Secondary Crashes**

- At 1926 hrs Ladder 2 reports being struck from behind (Car #2)
- Ladder 2 personnel and one Squad 2 firefighter begin checking on injuries in the vehicle



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Secondary Crashes**

- At 1927 hrs Ladder 2 reports being struck again (Car #3) with 2 firefighters down.
- 2 firefighters and the occupant of the 1<sup>st</sup> vehicle to strike Ladder 2 were thrown approximately 47 feet

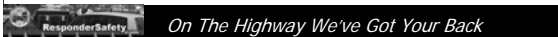


*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Secondary Crashes

- Ladder 2 is struck a third time (Car #4) within the next two minutes
- At 1932 hours the Assistant Chief and Squad 1 arrive on scene.



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Aftermath of the Crashes

- 1 firefighter fatality
- 1 firefighter injured
- 2 civilians injured
- Four crashes in 9 min.



These photos show the final rest of the vehicles involved in the three secondary crashes in Midwest City.

Top-Right: All three cars can be seen. Note that Car #3 that struck the firefighters and patient is backwards having spun around after losing control on the wet highway

Bottom-Left: This is the space between Midwest City Ladder 2 and the median barrier, only five feet, yet Car #3 was able to fit between with enough force to throw all three almost fifty feet

Bottom-Right: Car #4 strikes Car #2 with enough force to under-ride almost entirely.

**\*\*Note that in the Bottom-Left photo the damage to Ladder 2 is not as severe as might be expected. This indicates the ability of fire apparatus to protect responders. The vehicle served it's purpose and blocked the second crash from injuring responders. Tragedy only happened when an additional crash occurred. \*\***

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Additional Factors**

- Highway Patrol delayed response due to high volume of weather related crashes
- High speeds and standing water on highway lead to crashes
- Secondary crashes eliminated the benefit of the blocking apparatus



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

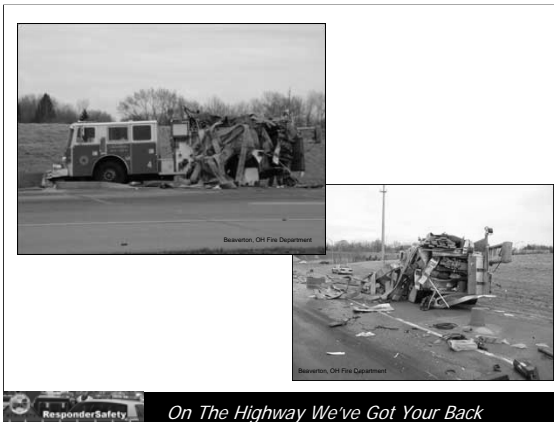
**Overview**

- Responding to Highway Incidents is inherently dangerous
- All the tools available must be used to ensure the safety of responders and to avoid tragedy



*On The Highway We've Got Your Back*

## “Watch out behind you!” Responder Safety on the Roadway Instructor Notes



This engine was severely damaged after being struck by a tractor trailer truck while operating at an EMS incident on an Interstate highway. Nobody was injured. The engine responded to a medical call on the northbound side of the highway and was parked in the highway's shoulder when the accident occurred. The truck was traveling in the right-hand lane when it struck the engine's rear. The force of the impact pushed the engine forward, narrowly missing a police cruiser and attending emergency personnel. The ejected debris rained down on and damaged a medic unit parked 100-feet in front of the incident.

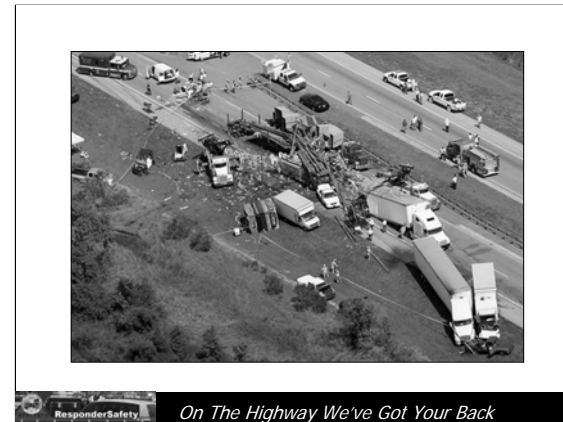
Photos and Information from [www.firefighterclosecalls.com](http://www.firefighterclosecalls.com) and *In Touch* The City of BeaverCreek, OH Newsletter

The following slides are examples of emergency vehicles that have been struck while operating at roadway incidents. Review and discuss potential hazards with students. Point out that cruisers and other light vehicles are not ideal for blocking. They do not have the required mass to divert the forces of an impact away from responders.

### Suggested Comments

- Civilian drivers have distractions – family – Cell phones – etc. – lengthy advanced warning is necessary.
- Headlights facing oncoming traffic and bright strobe lights obscure the vision of civilian drivers.
- Emergency drivers must always act defensively and wear appropriate equipment (vests) **Never turn back on traffic.**
- POVs of emergency responders should not respond to major highways.
- It is essential to protect emergency responders at the scene.

## “Watch out behind you!” Responder Safety on the Roadway Instructor Notes



Emergency were personnel operating at the scene of a 4 vehicle crash on the Florida Turnpike. The no injury accident involved the right lane and shoulder of the highway. A County Sheriffs vehicle was the first one behind the scene of the first crash. An engine company was positioned behind the sheriffs vehicle to protect the scene and pedestrians from the earlier crash. A semi-truck loaded with soda and water had stopped behind the fire truck. A second flatbed semi had stopped or slowed in the left lane.

Approximately 22 minutes after the initial incident, a car with four occupants traveling southbound in the right lane, did not slow and was unable to stop. The driver swerved to the left but could not avoid the semi loaded with water and soda. The car struck the rear of the semi and came to final rest in the left lane.

An SUV, traveling behind the car also was unable to avoid hitting the rear of the stopped semi. It struck the rear of the semi with the left front of the SUV. The SUV then came to final rest on the west shoulder.

A Semi Tractor trailer loaded with logs was traveling behind the car in the right lane. The Semi slammed into the back of the Semi loaded with soda and water pushing the semi into the fire truck, and the fire truck into the patrol car. The Semi loaded with logs traveled to the left after the initial collision and also slammed into the flatbed semi in the left lane. The semi loaded with logs was then wedged between the flatbed semi and the semi loaded with soda and water. the fire truck was wedged between the log semi and the semi hauling water and soda.

Three occupants of the car were killed on impact. The driver of the SUV was killed instantly. The Sheriffs Deputy was transported by helicopter with serious but stable injuries. No firefighters were injured. The Driver of the Semi hauling logs was killed instantly. The other two semi drivers were not injured.

Approximately one minute after the second crash a truck pulling a concession trailer jackknifed on the shoulder while attempting to avoid the second crash. The trailer overturned but there were no additional injuries.

Information adapted from [www.firefighterclosecalls.com](http://www.firefighterclosecalls.com)

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



Florida Turnpike Incident

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Responder Safety**

- Traffic speeds and congestion are continually increasing
- Responders are being struck by, and seriously injured or killed, by traffic at an alarming, and increasing rate
- There are many things that can be done to prevent these injuries and deaths



It is important to drive home the fact that every time a responder steps out of the apparatus onto a roadway they are at risk. Following an appropriate procedure and being keenly aware of one's surroundings can significantly increase the safety of all responders. Statistics have not been included in this presentation. The instructor may add current and accurate statistics if desired. These statistics could be obtained through safety resources such as NIOSH, IAFF, from specific state and local agencies.

"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes

What is the Impact on Traffic?

[Seattle Traffic Cam Video](#)



This video provides a narrative of the impact of a vehicle accident on the freeway system serving the Seattle Washington area. Once the class has viewed it the instructor should take a few minutes to discuss.

Key Points

- Discuss the impact of emergency apparatus positioning early in the incident
- Discuss the impact of emergency warning lights on traffic in the opposite lanes of traffic
- Discuss the impact of this incident on traffic using the freeway system and the time required to recover after the incident.
- Consider a brainstorming activity addressing the participants ideas on the impact of an incident such as this one has on the community

"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes

Training

- Establish Policies and Procedures
- Initial Training
- Review Policies and Procedures
- Annual Refresher
- Table-top Exercises or Online Simulations



The steps included in this slide are recommendations for agencies to implement training programs for responder safety. Department policy should established and followed during this process.



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Policies and Procedures**

- Follow Department guidelines to establish Policies and Procedures
- Components of a Policy
  - Terminology
  - Incident Command
  - Safety
  - Apparatus Placement
  - Operations – High Volume and Limited Access roadways



 *On The Highway We've Got Your Back*

The development of Policies and Procedures is a very important part of firefighter safety.

Each department should have an established format and system for establishing such policies and procedures.

The following three slides will help to begin this process for responder safety at roadway incidents. A sample policy is available for download on [www.respondersafety.com](http://www.respondersafety.com)

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Policies and Procedures**

- Terminology
  - Establish terminology and agreed definitions to reduce confusion
- Incident Command
  - Identify Incident Command roles required for this type of incident
    - Example – A Traffic Control Sector in Operations or the Position of Spotter in Safety

 *On The Highway We've Got Your Back*

Terminology and definitions are important to ensure that all responders are on the same page and using like terms to avoid confusion during incidents.

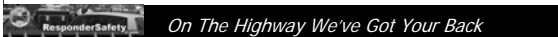
Like any incident the ICS system should be used at roadway incidents to ensure the safety of responders and to efficiently manage these incidents which will involve multiple agencies.

These topics are covered in greater detail in the modules that follow.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Policies and Procedures**

- Safety
  - Include minimum safety requirements or benchmarks for the incident
  - Establish minimum PPE requirements
  - Identify equipment required to safely respond to roadway incidents



Policies and procedures should include safety standards to ensure that all responders operate in a safe manner and utilize the equipment provided.

Recommended procedures and information on protective equipment are discussed in greater detail in the modules that follow.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Policies and Procedures**

- Apparatus Placement
  - Establish apparatus response guidelines
  - Identify apparatus appropriate for blocking
- Operations
  - Identify the issues with the roadways in the jurisdiction
  - Pre-plan for traffic control and diversion in problem areas



Proper apparatus placement is a key factor in responder safety and temporary traffic control. Operators should be trained to identify locations and position apparatus in the appropriate manner.

Individual departments will have to assess their community to determine issues specific to the roadways within their jurisdiction. Specific considerations are outlined in the modules that follow.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Polices and Procedures

- Review Process
  - Conduct periodic review based on training and response debriefings to assess the effectiveness of Departmental Policies and Procedures
  - Make appropriate changes based upon the above review
  - Update training to account for any changes made to Departmental Policies and Procedures



Fire Department policies and procedures should be fluid documents. Once they have been implemented a review process should be used to make appropriate changes based on review of responses (are the policies and procedures effective?) and to account for changes in national standards and initiatives.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Multi-Agency Response

#### Establish Partnerships:

- Agencies and Services
- Capabilities
- Resources
- Common Practices



Each incident on the roadway could require a response of multiple agencies and private services.

- Prior to an incident determine the capabilities and resources of agencies and services likely to respond.
- Establish common practices for response and safety between agencies.

In addition it may be useful to create a resource guide or list for commanders and dispatchers. This list could provide contact information for resources that may be needed but are not commonly used, such as: Environmental Agencies and clean up companies, Biohazard/scene clean up crews, Heavy tow, lift, and recovery equipment, lumber suppliers, or special rescue resources. Determining these resources prior to an incident and having that information available to those who will be required to call for such assistance can drastically reduce the amount of time required to get the resources on scene.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Multi-Agency Response

- The Three C's
  - Communication
    - Prior to, during, and following the incident
  - Cooperation
    - Cooperation vs. Competition
  - Collaboration/Coordination
    - Collaboration before the incident
    - Coordination during the incident

Every agency has a role to play in safety  
and incident stabilization



Multiple agencies will respond to most roadway incidents. It is important to establish roles and responsibilities prior to an incident. This will avoid unnecessary confusion and conflict during an incident.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### National Initiatives and Standards

The CVVFA Emergency Responder Safety Institute



The resource for responder safety training  
and information



#### About the CVVFA Emergency Responder Safety Institute

Created as a Committee of the Cumberland Valley Volunteer Firemen's Association, the Institute serves as an informal advisory panel of public safety leaders committed to reducing deaths and injuries to America's Emergency Responders. Members of the Institute, all highly influential and expert in their fields, are personally dedicated to the safety of the men and women who respond to emergencies on or along our nation's streets, roads and highways. Members of the Institute include current members of the Fire Service, EMS, and Law Enforcement as well as trainers, writers, managers, government officials, technical experts and leaders who through their individual efforts and collective influence in the public safety world can bring meaningful change.

See the CVVFA web site for more information.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Initiatives and Standards**

**National Unified Goal for Traffic Incident Management – NUG**

**Key Strategies:**

1. Standardized (but not mandated) Responder Safety Operational Procedures
2. Accredited Traffic Safety Control Training for Responders
3. Responder Safety Policies and Legislation
4. Motorist Training and Awareness Programs



*On The Highway We've Got Your Back*

The National Unified Goal (NUG) for Traffic Incident Management (TIM) is a unified national policy currently being developed by major national organizations representing traffic incident responders, under the leadership of the National Traffic Incident Management Coalition (NTIMC). The NUG will encourage state and local transportation and public safety agencies to adopt unified, multi-disciplinary policies, procedures and practices that will dramatically improve the way traffic incidents are managed on U.S. roadways. Additional information regarding the National Unified Goal is available at the National Traffic Incident Management Coalition website.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Unified Goal**

- Standardized Responder Safety Operational Procedures
  - Traffic control at traffic incident scenes
  - High-visibility reflective apparel
  - Incident command system
  - On-scene traffic safety management
  - The use of adjunct warning lights and audible devices

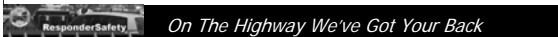


*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Unified Goal**

- Accredited Traffic Safety and Traffic Control Training for Responders
  - Multidisciplinary training for traffic incident responders
  - Specialized Training
    - Traffic safety
    - Traffic control



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Unified Goal**

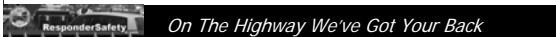
- Responder Safety Policies and Legislation
  - Slow down and Move over Laws
  - Policies requiring pre-planning for traffic control and traffic diversion
  - Policies supporting multi-agency and multi-jurisdictional training



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Unified Goal**

- Driver Training and Awareness Programs
  - Establishing partnerships to increase driver awareness and preparedness for encountering traffic incidents
    - AAA
    - AARP
    - Driver's Education Teachers



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Initiatives and Standards**

**Manual on Uniform Traffic Control  
Devices – MUTCD**

- Defines the standards used by road managers nationwide to install and maintain traffic control devices on all streets and highways.
- For roadway incidents the pertinent section is Part 6I - Temporary Traffic Control



The MUTCD is an important reference. While cumbersome to implement fully at the average scene, Part 6I of the MUTCD may be very valuable for extended incidents. The MUTCD is available online and Part 6I can be found in the Instructor Resource Guide for this program.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Initiatives and Standards**

- NFPA 1500, 2007 Edition - Section 8.7
  - Traffic Incidents
    - Requires
      - Establishing and Implementing Policies and Procedures
      - Blocking apparatus to protect responders
      - Use of Temporary Traffic Control Devices
      - Use of high visibility garments
      - Training



NFPA 1500 is the National Fire Protection Association's Standard on Fire Department Occupational Safety and Health Program. This document establishes minimum safety and health requirements for firefighters. Section 8.7 refers to traffic incidents.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Initiatives and Standards**

- Federal Highway Administration – 23 CFR Part 634
  - To decrease the likelihood of worker fatalities and injuries
  - "Sec. 634.3 Rule.  
All workers within the right-of-way of a Federal-aid highway who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel."
  - Effective November 24, 2008



**Proposed revision to 23 CFR PART 634--WORKER VISIBILITY**

[http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2006\\_register&docid=E6-19910](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2006_register&docid=E6-19910)

**Sec. 634.2 Definitions.**

Close proximity means within the highway right-of-way on Federal-aid highways.

High-visibility safety apparel means personal protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance **Class 2 or 3 requirements of the ANSI/ISEA 107-2004** publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear."

Workers means people on foot whose duties place them within the right-of-way of a Federal-aid highway, such as highway construction and maintenance forces, survey crews, utility crews, **responders to incidents within the highway right-of-way**, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a Federal-aid highway.

**Sec. 634.3 Rule.**

All workers within the right-of-way of a Federal-aid highway who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel.

**Sec. 634.4 Compliance date.**

States and other agencies shall comply with the provisions of this Part no later than **November 24, 2008**.

[FR Doc. E6-19910 Filed 11-22-06; 8:45 am]



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**National Initiatives and Standards**

- Move Over and Slow Down Initiatives
  - Many states have passed "Move Over and Slow Down" laws
  - Exact requirements vary but the principle is the same move away from emergency responders and travel at a safe speed
  - Penalties also vary but most are substantial civil fines up to criminal penalties



Additional information on move over and slow down initiatives can be found on the [respondersafety.com](http://respondersafety.com) website.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Roadway** – Any place on which a vehicle-related incident could occur (Including but not limited to highways, secondary roads, dirt roads, driveways, and parking lots)



The following slides define common terms associated with roadway incidents. These terms are used throughout the program.

**Roadway** – Any place on which a vehicle-related incident could occur. Including but not limited to highways, secondary roads, dirt roads, driveways, and parking lots.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Highway** – A limited access, divided roadway with high speed traffic



**Highway** – A limited access, divided roadway with high speed traffic.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Advance Warning** – notification procedures that advise approaching motorists to transition from normal driving status to that required by the temporary emergency traffic control measures ahead of them



**Advance Warning** – notification procedures that advise approaching motorists to transition from normal driving status to that required by the temporary emergency traffic control measures ahead of them (Defined by MUTCD)

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Block** — positioning of emergency vehicles on an angle to the lanes of traffic creating a physical barrier between traffic and the work area. Includes: upstream, downstream, block to the left, and block to the right



**Block** — positioning of emergency vehicles on an angle to the lanes of traffic creating a physical barrier between upstream traffic and the work area. Includes: upstream, downstream, block to the left, and block to the right.

- Upstream blocking protects the work area from traffic approaching from the opposite direction.
- Downstream blocking protects the work area from traffic approaching from the same direction.
- Block to the left places the vehicle angled to the left with the rear of the vehicle farthest from the roadway.
- Block to the right places the vehicle angled to the right with the rear of the vehicle closest to the roadway.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Shadow** — the protected work area at a vehicle-related roadway incident that is shielded by the block from emergency vehicles. Also known as Safe Zone or Work Zone



**Shadow** — the protected work area at a vehicle-related roadway incident that is shielded by the block from emergency vehicles. Also known as Safe Zone or Work Zone.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Taper** – the action of merging several lanes of moving traffic into fewer moving lanes



**Taper** – the action of merging several lanes of moving traffic into fewer moving lanes.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

**Temporary Traffic Control (TTC)** – Equipment and apparatus placed on the roadway to temporarily alter the flow of traffic to make a scene safe. This may include but is not limited to: signs, cones, flares, and attenuator vehicles

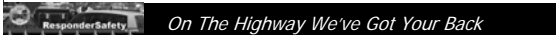


**Temporary Traffic Control (TTC)** – Equipment and apparatus placed on the roadway to temporarily alter the flow of traffic to make a scene safe. This may include but is not limited to: signs, cones, flares, and attenuator vehicles.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

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 (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.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

- **Downstream** – beyond the incident in the direction traffic normally flows



- **Upstream** – prior to the incident in the direction traffic normally flows



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Definitions**

- **Minor Incident** – any incident that will be cleared in 30 minutes or less
- **Intermediate Incident** – any incident that will be cleared in between 30 minutes up to 2 hours
- **Major Incident** – any incident that will be cleared in 2 hours or more



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Personal Protective Equipment (PPE)**

**Personal Protective Equipment**

- Wear appropriate PPE including ANSI high visibility vests as required by department policy.
  - Recommended minimum:
    - Structural Firefighting Helmet
    - ANSI high visibility vest
    - Turnout gear if possible



*On The Highway We've Got Your Back*

**PPE considerations for department policy**

- Hazards
  - Traffic
  - Fire potential
  - Glass/sharp objects
  - Electrical hazards
  - Falls and slips
- Temperature and weather
  - Will inclement weather effect PPE use?
  - Is high temperature enough of a reason to modify the use of full structural gear?
- Equipment/PPE available to responders
  - EMS and Police often have much less PPE available for use.
- Current Department Policy

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Personal Protective Equipment (PPE)**

**ANSI high visibility vests**

- ANSI 107-2004 vs. ANSI 207-2006

- 107 breaks vests into three classes:

- Class 3 – Offers the greatest visibility to the wearer in complex backgrounds and through a full range of body movements



Class 3

- Class 2 – Provides superior visibility to the wearer by additional coverage to the torso, and is more conspicuous than Class 1

- Class 1 – Provides the minimum amount of required material to differentiate the wearer from the work environment



Class 2



**ANSI 107-2004 breaks vests into three classes:**

- Class 3 – Offers the greatest visibility to the wearer in complex backgrounds and through a full range of body movements
  - The requirements of this class effectively require the use of sleeves to meet the background material requirements. Sleeves are not compatible with most structural fire fighting gear and can make quick donning and doffing of the vest difficult.
  - The same requirement also effectively requires a vest that would cover most police gun belts and any type of equipment belt used by fire or EMS personnel this poses a functional and potential safety issue.
- Class 2 – Provides superior visibility to the wearer by additional coverage to the torso, and is more conspicuous than Class 1
  - The requirements of this class effectively require a vest that would cover most police gun belts and any type of equipment belt used by fire or EMS personnel this poses a functional and potential safety issue.
- Class 1 – Provides the minimum amount of required material to differentiate the wearer from the work environment
  - This vest simply would not offer the protection necessary for the types of roadways most often encountered on emergency scenes

In addition ANSI 107 does not address many commonly used design features used by public safety responders such as: badge tabs, microphone loops and identification panels.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Personal Protective Equipment (PPE)**

**ANSI high visibility vests**

- 207 was created for Public Safety Responders for several issues

- Most emergency scenes would require responders to be in Class 3 vests, essentially requiring sleeves and long vests
  - This is not compatible with structural fire fighting gear and gun or equipment belts



**ANSI 207-2006**

- CVVFA Responder Safety Institute an integral part of the creation of this standard.
- Requirements for fluorescent background are somewhere between that of ANSI 107-2004 Class 1 and Class 2. This allows for a smaller vest that is compatible with equipment typically worn by emergency responders.
- Requirements for retroreflective material are the same as for ANSI 107-2004 Class 2 vests.
- ANSI still recommends following Class 3 guidelines whenever possible.
- Break away vests and the use of ID panels, badge tabs, microphone loops and other options are discussed.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**ANSI/ISEA Compliant Vests**



ANSI/ISEA 207-2006 American National Standard for High-Visibility Public Safety Vests



ANSI/ISEA 107-2004 American National Standard for High-Visibility Safety Apparel and Headwear



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Public Safety Vests**

- Provide access to equipment while worn
- Can be easily worn over firefighting PPE
- Optional breakaway safety feature



- Identification panels assist responders in identifying each other at hectic scenes.
- Select vest size based on the use of turnout gear and or outer wear.
- Radio pockets, microphone clips, and badge tabs are available, though due to the light weight of most vests and weight on the vest its self will cause sagging and may be uncomfortable.



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**4/5 Point Breakaway Feature**



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Labeling**



Label from new Public Safety Vest  
Meets requirements of both  
ANSI/ISEA 207-2006 and 107-2004

Label from older Class 3 vest  
Met requirements of  
ANSI/ISEA 107-1999 would be  
a Class 2 vest under the 2004  
standard



Check existing and new vests for ANSI compliance labeling. Vests purchased prior to the 2004 changes to ANSI/ISEA 107 are still acceptable but may be labeled as a higher class than the current standards outline. Ensure that vests meet the needs of the department and provide adequate protection.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Personal Protective Equipment (PPE)**

**ANSI high visibility vests**

- High Visibility = Fluorescent + Retroreflective
- Existing or in-service vests that meet ANSI 107-2004 are perfectly acceptable
- New vests that meet ANSI 207-2006 are an option



*On The Highway We've Got Your Back*

It is important to find a vest that meets the needs of a particular department. Size, coloring, identification, and other design features can be a large part of encouraging the use of these vests. The personnel that will be the end users should have input into the design.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Personal Protective Equipment (PPE)**

Helmets – Should be worn due to the possibility of traumatic injury while operating along a roadway



*On The Highway We've Got Your Back*

Helmets – Should be worn due to the possibility of traumatic injury while operating along a roadway

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Apparatus Marking

- Apparatus marking and lighting are important factors in responder safety
- Applicable Standards
  - NFPA 1901
  - Federal and state requirements



Apparatus marking and lighting should be considered for both new and existing apparatus. While pending changes to NFPA 1901 and other standards would not apply to existing vehicles, changes could be made to drastically improve the safety of these vehicles at roadway incidents.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Apparatus Marking

- Apparatus should be marked so that it is easily recognized as an emergency vehicle
  - Chevrons or a "Vertical Panel" on rear of vehicle
  - Effective emergency lighting



Coloring of markings especially chevrons should be standardized using the requirements of NFPA 1901. The color should be alternating yellow and red chevron retroreflective striping sloping downward and away from the centerline of the vehicle at an angle of 45 degrees.

**"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes**

**Apparatus Marking**

- Proposed change to NFPA 1901
  - Requiring that 50% of the rear surface of the apparatus must be marked with high visibility chevrons
- Ambulance marking
  - Ensure that State and Federal standards allow for all markings



*On The Highway We've Got Your Back*

**"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes**

**Apparatus Marking**

- Vertical Panel
  - MUTCD Section 6F.61 defines chevrons as retro-reflective stripes that slope downward at a 45 degree angle in the direction that traffic is to pass
  - This cues traffic visually to go around the vehicle



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Apparatus Marking

Halfway, MD

Amber traffic  
advisory light

Chevrons on  
compartment  
interior



*On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

### Apparatus Marking

Montgomery County, MD

Amber traffic advisory lights  
on each side of apparatus for  
use during blocking

Chevrons on front and  
rear of apparatus



*On The Highway We've Got Your Back*

## “Watch out behind you!” Responder Safety on the Roadway Instructor Notes

### Temporary Traffic Control (TTC)



#### Temporary traffic control devices

- Traffic cones
- Warning signs
- Flares
- Paddles
- Flags
- Flashlights
- Arrow and Variable Message Signs

Example of cones and signs as traffic control at a roadway incident.

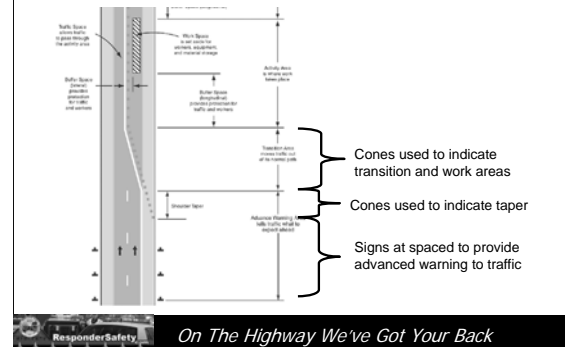


This sequence of slides provides guidance on the type and use of devices used for temporary traffic control at emergency incidents.

Note that the signs in this slide are positioned very close to the incident location. Best practice would position signs away from the immediate incident to provide maximum advanced warning to oncoming traffic. In this incident signage would be appropriate on both sides of the incident due to the closure of one travel lane on a two lane road.

## “Watch out behind you!” Responder Safety on the Roadway Instructor Notes

### Temporary Traffic Control (TTC)

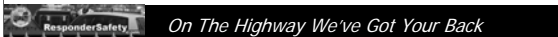
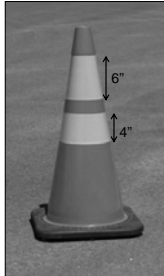
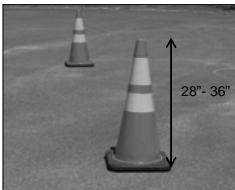


This slide depicts the component parts of a temporary traffic control zone. The graphic is from MUTCD Section 6 and shows the components of a traffic diversion.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**

**Cones**



Refer to standard below to select appropriate cones for emergency scenes

- 28"- 36" in height
- Orange in color
- White retro-reflective striping
- Made of a material that will not damage vehicle if struck

Consider cones with integrated lighting or cones lit by flares for night time operations.

*\*Note – Lime green cones are not intended for traffic use but for pedestrian warning. They are not acceptable for TTC*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**

- Cone deployment
  - Use hand signals while placing cones to direct the flow of traffic



The operator must use safe practices while deploying cones. Facing the flow of traffic and using hand signals to direct the flow of traffic is good practice.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**

- Cone deployment
  - At a minimum apparatus should be able to deploy a 200' taper with five cones placed at 50' spacing between cones
  - A "safety cone" should be placed approximately 10' behind the apparatus, located so that it provides a safe work zone next to the vehicle



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Cone Deployment**



One lane taper with safety cone



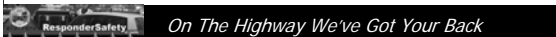
Point out that the first cone behind the vehicle is approximately 10 feet from the rear bumper and serves as the "safety" cone. The remaining four cones are spaced approximately 50 feet apart providing a one lane taper of 200 feet from the rear of the apparatus.



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**

- Flares
  - Used to initiate Temporary Traffic Control at incidents until more permanent devices can be placed (MUTCD 61.02 and 61.03)
  - Used to illuminate cones during nighttime incidents



MUTCD 61.02: When flares are used to initiate TTC at traffic incidents, more permanent traffic control devices should replace them as soon as practical. Both the flare and its supporting device should then be removed from the roadway.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**



- Warning signs used in the TTC
  - Fluorescent pink background
  - Black letters and border
- Signs should be positioned to provide maximum advanced warning to oncoming traffic

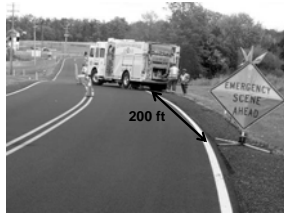


**Section 6I-1** Warning and guide signs used for TTC traffic incident management situations may have a black legend and border on a fluorescent pink background (see Figure 6I-1).

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**

**Advanced Warning Sign Placement**



- For low-speed streets advance warning signage should be a minimum of 200 feet from the first apparatus
- Distances should be increased to approximately 4 to 8 times the speed limit on higher speed urban streets



- For low-speed streets advance warning signage should be a minimum of 200 feet from the first apparatus
- Distances should be increased to approximately 4 to 8 times the speed limit on higher speed urban streets
- Consider sightlines created by corners and hills when placing advanced warning signs

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Temporary Traffic Control (TTC)**

- Paddles
- Flags
- Flashlights



Personnel assigned to traffic control should be equipped with the appropriate device for the roadway and time of day. Paddles and flags work well during daylight hours. Flashlights with traffic cones are needed during the hours of darkness.

"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes

Temporary Traffic Control (TTC)

- Arrow and Variable Message Signs



Arrow and Variable Message Signs both vehicle and trailer mounted can be extremely useful in TTC, especially if lane closures are needed.

Consider the use of permanently installed VMS if available. Ensure that your department knows the contact information for who is able to change these signs beforehand to save time.

"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes

Safety

Firefighters responding to calls, need to operate "as if someone is trying to run them over."

James Joyce, Commissioner  
Chicago Fire Department  
January 2001



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Video**



View and discuss the video provided.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Considerations**

- Disembark on the side of the apparatus opposite traffic if possible



As many members of a crew should disembark from the curb side or the side of the vehicle away from traffic. It is understood that either the Driver/Operator or the Fire Officer will have to disembark from the traffic side. This should be done using caution.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Considerations**

- Like atomic exposure Time, Distance, and Shielding will protect responders
  - Time – The more efficiently an incident can be safely resolved the less exposure responders will have to the hazards of traffic
  - Distance – The farther away from moving traffic responders can operate the safer they will be
  - Shielding – Blocking is essential to protect responders from vehicles that do not or cannot conform to the altered flow of traffic due to the incident



Like atomic exposure Time, Distance, and Shielding will protect responders

- Time – The more efficiently and incident can be safely resolved the less exposure responders will have to the hazards of traffic
- Distance – The farther away from moving traffic responders can operate the safer they will be
- Shielding – Blocking is essential to protect responders from vehicles that do not or cannot conform to the altered flow of traffic due to the incident

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Considerations**

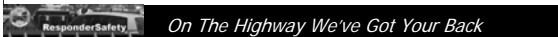
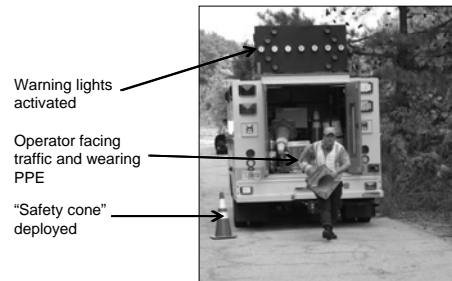
- Driver/Operator issues
  - The Driver may have to disembark to the traffic side, use caution and possibly a spotter
  - In Block Left position the operator will be between traffic and the apparatus, consider Block Right or an additional blocking apparatus if hose line is needed



These issues should be considered prior to arrival and as the apparatus arrives on scene. If a hoseline is needed consider the Block Right position.

## "Watch out behind you!" Responder Safety on the Roadway Instructor Notes

### Safety Considerations



The appropriate level of warning lights should be activated on the vehicle. Consider reducing the amount of lights or the use of blinding lights especially white flashing lights that can disorient traffic.

The operator should face traffic at all times if possible, so that they may observe oncoming traffic.

The use of a "Safety Cone" or a cone placed just behind and to the traffic side of the vehicle should be considered. This provides a reference to oncoming traffic to avoid the operator as other traffic control measures are being deployed.

## "Watch out behind you!" Responder Safety on the Roadway Instructor Notes

### Safety Benchmarks

#### 1. Windshield Size-up



The Safety Benchmarks in this presentation are adapted from the University of Extrication "Safe Parking" SOP by Ron Moore.

#### 1. Windshield Size-up

- While information gathered from the reporting party is valuable it is often incomplete or inaccurate. The exact layout of a scene cannot be known until arrival.
- Therefore the first arriving responders and even following responders must make a size-up of the scene through the windshield as they arrive to determine:
  - Safety considerations
  - Blocking positions
  - Additional resources that might be required

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

2. Never trust approaching traffic.



3. Avoid turning your back to approaching traffic.



*On The Highway We've Got Your Back*

2. Never trust approaching traffic – It is important not to assume that approaching traffic is aware of the situation ahead (i.e. not paying attention or distracted) or that they do not understand what the traffic control devices are telling them to do. Therefore responders cannot trust traffic to do as expected.
3. Avoid turning your back to approaching traffic – See rule one, because traffic cannot be expected to do as desired, responders should avoid turning their backs to approaching traffic. This means positioning yourself so you can see approaching traffic as you work, alternating looking to traffic and ahead as you walk, and or having a spotter when in a position to monitor approaching traffic when you cannot monitor traffic yourself.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

4. Establish an initial block with the first arriving emergency vehicle or fire apparatus.



*On The Highway We've Got Your Back*

4. Establish an initial block with the first arriving emergency vehicle or fire apparatus.
- A *Block* is defined as positioning of fire apparatus (or emergency vehicles) on an angle to the lanes of traffic creating a physical barrier between upstream traffic and the work area.

Note: While blocking provides some protection keep in mind that emergency vehicles are not designed as attenuators. Depending on the size and application of the vehicle it will provide varying protection from a vehicle strike. Obviously a police cruiser will provide considerably less protection than a fire engine carrying 500-1000 gallons of water. Another important consideration is that the blocking vehicle not only physically blocks traffic from the work area but it blocks the view of responders in the work area to monitor traffic.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

5. Wear appropriate PPE including ANSI high visibility reflective vests as required by department policy.



*On The Highway We've Got Your Back*

5. Wear appropriate PPE including ANSI high visibility reflective vests as required by department policy.

At the time this presentation was created the new ANSI emergency responder compliant vests were not readily available. However, this will be the standard for reflective clothing to be worn by emergency responders. The standard was created because the Class III requirements necessitated sleeves on the vest which are not practical for responders.

It is important for organizations to have department policy that stipulates what level of PPE is required at roadway incidents. Consideration should be given to the wearing full structural fire fighting gear (bunker gear) including helmets. Police and EMS departments may have less to consider.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

6. At nighttime incidents turn off all sources of vision impairment to approaching vehicles including vehicle headlights and spotlights.



*On The Highway We've Got Your Back*

6. At nighttime incidents turn off all sources of vision impairment to approaching vehicles including vehicle headlights and spotlights.

Consider the effect on approaching traffic of all emergency lighting. The high intensity lights that are so effective for emergency warning can also be blinding and confusing to approaching traffic in darkness, especially white light.



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

7. Use fire apparatus and police vehicles to initially redirect the flow of moving traffic.



7. Use fire apparatus and police vehicles to initially redirect the flow of moving traffic.

Early on in a roadway incident it may not be possible to deploy traffic control devices in an effective manner. However response cannot be delayed until these devices are completely set up. Therefore, vehicles can be used, similarly to blocking position, to redirect the flow of traffic.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

8. Establish advance warning and adequate transition area traffic control measures upstream of incident to reduce travel speeds of approaching motorists.



8. Establish advance warning and adequate transition area traffic control measures upstream of incident to reduce travel speeds of approaching motorists.

A transition area or zone is defined as the lanes of a roadway within which the approaching motorists change their speed and position to comply with the traffic control measures established at an incident scene.

## "Watch out behind you!" Responder Safety on the Roadway Instructor Notes

### Safety Benchmarks

8. Establish advance warning and adequate transition area traffic control measures upstream of incident to reduce travel speeds of approaching motorists.



#### Benchmark 8 Notes Continued

Advance warning is defined as notification procedures that advise approaching motorists to transition from normal driving status to that required by the temporary emergency traffic control measures ahead of them.

**Section 6I-1** 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).

**Section 6F.16 Position of Advance Warning Signs** Guidance: Where highway conditions permit, warning signs should be placed in advance of the TTC zone at varying distances depending on roadway type, condition, and posted speed. Table 6C-1 contains information regarding the spacing of advance warning signs. Where a series of two or more advance warning signs is used, the closest sign to the TTC zone should be placed approximately 30 m (100 ft) for low-speed urban streets to 300 m (1,000 ft) or more for freeways and expressways. Support: Various conditions, such as limited sight distance or obstructions that might require a driver to reduce speed or stop, might require additional advance warning signs. Option: As an alternative to a specific distance on advance warning signs, the word AHEAD may be used. Support: At TTC zones on lightly-traveled roads, all of the advance warning signs prescribed for major construction might not be needed. Option: Utility work, maintenance, or minor construction can occur within the TTC zone limits of a major construction project, and additional warning signs may be needed. Guidance: Utility, maintenance, and minor construction signing and TTC should be coordinated with appropriate authorities so that road users are not confused or misled by the additional TTC devices.

## "Watch out behind you!" Responder Safety on the Roadway Instructor Notes

### Safety Benchmarks

9. Use signs and traffic cones and/or cones illuminated by flares where appropriate for sustained highway incident traffic control and direction.



9. Use signs and traffic cones and/or cones illuminated by flares where appropriate for sustained highway incident traffic control and direction.

As a roadway incident progresses more traffic control devices can be set up and may be required to maintain traffic flow. This includes traffic cones and other control devices such as emergency signage, arrow boards, and attenuators.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Safety Benchmarks**

10. Assign personnel to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the highway scene.



10. Assign personnel to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the highway scene.

Due to the fact that approaching traffic cannot be trusted to conform to the traffic control measures established at a scene it is recommended that one or more responders be assigned to monitor traffic. All responders are responsible for monitoring traffic, however due to blocking vehicles and responsibilities on scene this may not always be easily accomplished. A dedicated monitor of approaching traffic can warn all other responders of a threat and possibly take action to alert the motorist of the problem.

\* Note – If manual traffic control is needed it should be provided by qualified flaggers or uniformed law enforcement officers. 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. (MUTCD 6I.03)

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Incident Command**

- Command
  - For large scale operations on a roadway a unified command with Fire, Police, and DPW is recommended
- Operations
  - Traffic Control Group for temporary traffic control



Unified Command is essential for large scale incidents involving multiple agencies. In smaller scale incidents it may not be necessary. However, considerations should be made by the commander to the different roles, responsibilities, and uses of the responding agencies.

In the Operations Section a Traffic Control Group should be utilized to deploy TTC devices and perform any manual traffic control.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Incident Command**

- Safety Officer
  - Spotter/Flagger is an Assistant Safety Officer
- Staging
  - Staging off the roadway to prevent unnecessary exposure to traffic hazards

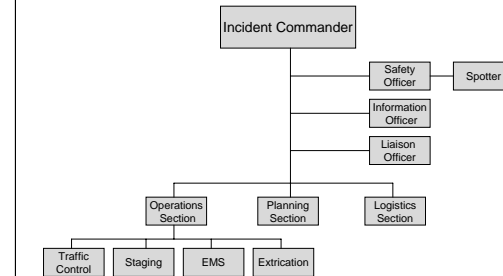


A spotter should be assigned as an assistant Safety Officer. This position has the responsibility to warn responders of incoming vehicles that do not comply with temporary traffic controls. They can also perform manual traffic control.

Staging areas should be off the roadway if at all possible. This removes the responders from the hazards of the roadway and limits distraction and congestion on the roadway.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Sample Command Structure**

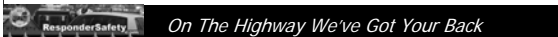


This diagram shows a sample Incident Command Structure for a roadway incident. This structure may vary depending on the incident or the Policies and Procedures of the department.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Video**

**The Many Hats of Highway Incident Management**



Click on link to view video, "The Many Hats of Highway Incident Management"

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

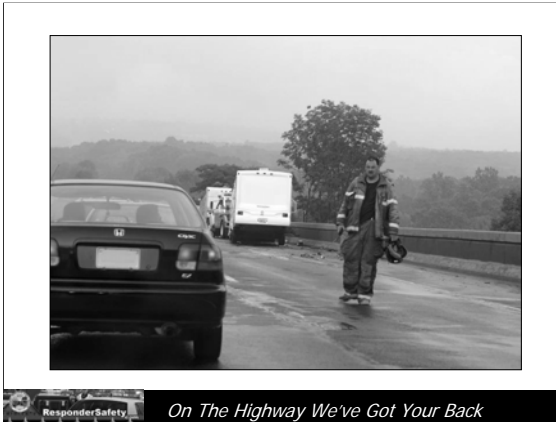
**Evaluate the Scene**



The following eight slides show scenes from a single incident. The instructor should assign the class to evaluate the incident. Following these slides the class should discuss the issues observed in these pictures and outline any changes that should have been made.

The first indication of a roadway incident is this firefighter standing in the travel lane. No TTC used prior to the incident and the responder is not wearing high visibility garments

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



A second firefighter stands in the roadway prior to the scene.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



A tow operator removes debris from the roadway. Note his back is to traffic and is wearing no PPE.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



The first vehicle exposed to traffic is a camper trailer and its tow vehicle that were involved in the incident, no emergency vehicles or TTC provide protection to the scene.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



The only TTC used on scene are these three cones, laid out in line behind a police cruiser. Note multiple responders not wearing high visibility garments.

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



This is the first emergency vehicle observed at the scene, it is directly behind the fire apparatus and has minimal emergency lighting. Note firefighters rehabbing on the tailgate of the fire apparatus. Is this good practice?



**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**



 *On The Highway We've Got Your Back*

**"Watch out behind you!"**  
**Responder Safety on the Roadway**  
**Instructor Notes**

**Tabletop Exercise**



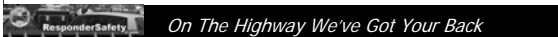
 *On The Highway We've Got Your Back*

Instructions and suggested scenarios for the tabletop exercise are included in the instructors manual that accompanies this program.

**"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes**

**Video**

**"Ten Cones of Highway Safety"**



View and discuss the video "Ten Cones of Highway Safety" available on [www.Respondersafety.com](http://www.Respondersafety.com) in the training section. The instructor should use this discussion as an opportunity to overview the program, then open up the discussion for questions.

Instructor Note: Use the Student Viewing Guide provided in the User Manual for this program to focus the discussion of the video.

**Answers to Student Viewing Guide Questions**

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| <b>Cone 1</b> – Listen, Learn, Do    | <b>Cone 6</b> – Where you are, Target |
| <b>Cone 2</b> – Unified              | <b>Cone 7</b> – Possibilities         |
| <b>Cone 3</b> – Exposure, Time       | <b>Cone 8</b> – Slow Down             |
| <b>Cone 4</b> – (Any warning device) | <b>Cone 9</b> – Wearing               |
| <b>Cone 5</b> – Apparatus            | <b>Cone 10</b> – Safety Officer       |

**"Watch out behind you!"  
Responder Safety on the Roadway  
Instructor Notes**

This program was developed by the CVVFA  
Emergency Responder Safety Institute with  
the support of the following organizations

The United States Fire Administration  
The U.S. Department of Justice  
The Pennsylvania Turnpike Commission  
VFIS  
Fire Protection Publications/Oklahoma State University  
GDOT H.E.R.O.S.

