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Certified Traffic Incident Management Person

Test Prep Exam Workbook & Study Guide

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Respondersafety.com and The Responder Safety Learning Network are a project of the Emergency Responder Safety Institute, a Committee of the Cumberland Valley Volunteer Fireman's Association. The Emergency Responder Safety Institute (ERSI) serves as an advisory group of public safety leaders and transportation experts committed to reducing deaths and injuries to America's emergency responders. ERSI is dedicated to the safety of these men and women by engaging in and promoting activities that include developing educational material to support responder safety training; promoting the National Unified Goal (NUG) for Traffic Incident Management (TIM) including responder safety, safe, quick clearance and interoperable communications; encouraging the development of TIM Teams; promoting collaboration, communication and cooperation among the nation's emergency responders; and keeping emergency responders up to date on national rules, regulations and trends related to safe roadway incident operations.

The Emergency Responder Safety Institute (ERSI), a Committee of the 118-year-old Cumberland Valley Volunteer Fireman's Association, is an advisory group of public safety leaders and transportation experts committed to reducing deaths and injuries to America's emergency responders while working on the roadways helping others. The ERSI mission includes responder training as well as public education.

The Cumberland Valley Volunteer Firemen's Association (CVVFA) aims to provide for the general improvement of the five states (Delaware, Maryland, Pennsylvania, Virginia, and West Virginia) represented in its membership: to promote fire prevention activities within its member companies; to promote public fire safety awareness; to assist in the education of members of the fire service in the five state region; and to encourage fraternal friendship among firefighters in the five state region.

The Fire Department Safety Officers Association (FSDOA) was established in 1989 as a non-profit Association, incorporated in Massachusetts. In 2013, the offices moved to Michigan. Its mission is to promote safety standards and practices in the fire, rescue and emergency services community by providing education, certification, and networking for safety officers. The Association is led by a volunteer Board of Directors and has a small staff to handle the day to day operations. It is the Association dedicated to the issues that affect your critical role as Safety Officer in protecting and promoting the safety and health responsibilities you have to your department, your community and yourself. In fact, so critical is the role of the Safety Officer in every department in the country, that in a very short time in order to be a qualified Safety Officer, certification may be required. FDSOA works to help you achieve proficiency, promote the recognition of your skills and secure your future.

This publication was produced by the Cumberland Valley Volunteer Firemen's Association Emergency Responder Safety Institute in cooperation with the Fire Department Safety Officers Association and Stonehouse Media and was funded by the FEMA Assistance to Firefighters Fire Prevention & Safety Grant Program.

This Certified Traffic Incident Management Person Test Prep Exam Workbook & Study Guide is available online here: https://www.respondersafety.com/training/tim-person-professional-certification

This first edition of the Traffic Incident Management Personnel Professional Certification Test Prep Exam Workbook & Study Guide used the following editions of the standards mentioned herein:

NFPA 1091 Standard for Traffic Incident Management Personnel Professional Qualifications 2019 Edition

NFPA 1901 Standard for Automotive Fire Apparatus 2016 Edition

NFPA 1917 Standard for Automotive Ambulances 2016 Edition

Manual on Uniform Traffic Control Devices 2009 Edition

ANSI/ISEA 107-2015

The Federal Highway Administration National TIM Responder Training Program content as delivered in 2020

National Unified Goal 2007 Version

Responder Safety Learning Network programs as of May 2020

All other resources referenced were used as of their noted edition number or release date.

Funding for this Exam Workbook and Study Guide was provided by a FEMA Assistance to Firefighters Fire Prevention & Safety Grant.

Table of Contents

Purpose of this Publication and How to Use It

This Exam Workbook and Study Guide prepares the user to take the written test for certification to earn the Certified Traffic Incident Management Person credential offered by the Fire Department Safety Officers Association (FDSOA) in cooperation with The Emergency Responder Safety Institute of the Cumberland Valley Volunteer Firemen's Association. This certification is accredited by The Pro Board.

This Exam Workbook and Study Guide is designed for self-study. It is incumbent upon the self-study user to research the answers to the exercises and questions using the resources listed at the end of each topic chapter. It is also appropriate for this Exam Workbook and Study Guide to be assigned by an instructor, in whole or in part, to students studying for the Certified Traffic Incident Management Person certification exam. An instructor may choose to provide answers or answer keys.

It takes time to complete this workbook. This time is an investment in your career and in your safety and the safety of your colleagues. Do not short-change this investment. Answer as many questions as you can before using the resources to check your answers and answer the questions you could not complete on your own.

To apply for the Certified Traffic Incident Management Person credential offered by FSDOA, click here.

How to Prepare for the Exam

Preparing for the Certified Traffic Incident Management Person Certification Exam requires learning the knowledge and skills needed to fulfill all of the Job Performance Requirements (JPRs) in the standard.

Earning the National TIM Training Certificate is required for this certification. The easiest way to earn this prerequisite certificate is online from the Responder Safety Learning Network (RSLN.org). The ten online learning modules you must complete to earn this Certificate will teach you knowledge and skills related to all of *NFPA 1091's* JPRs.

You are encouraged to take even more RSLN modules beyond the core ten required for the National TIM Certificate. They can help expand your understanding even further, as well as provide you with training specific to your discipline or to a topic of interest to you. To see which modules can help you fulfill which *NFPA 1091* JPRs, please review this document correlations document for NFPA 1091, which can be found here.

You should further expand your knowledge and skills by reviewing the many resources available in the Resources section of ResponderSafety.com. These resources are organized by topic. Many of these topics relate to *NFPA 1091's* JPRs, including Advance Warning (JPR 4.2.4), Blocking/Safe Positioning (JPR 4.2.2), and Incident Command System (ICS) & NIMS (JPRs 4.2.1 and 4.2.3). You will also find videos on ResponderSafety.com to be helpful in your test preparation and traffic control practice, particularly the Roadway Safety Shorts and the longer featured videos.

At the end of each chapter in this Exam Workbook & Study Guide, you will see a specific list of RSLN modules and resources available on ResponderSafety.com and other web sites that will help you answer the questions in that chapter, and thus prepare you for the *NFPA 1091* JPRs related to that topic. These are the minimum you should review to ensure you have a good understanding of the topic in that chapter. You are encouraged to go further with other modules and resources.

Please see the next page for links to the resources mentioned above.

Once you have completed this Exam Workbook & Study Guide, an Answer Key is available for you to check your work.

How to Prepare for the Exam

The following links point you to the main locations to find the modules and resources as explained above. At the end of each chapter are links for the resources specific to learning about the topic in that chapter.

Manual on Uniform Traffic Control Devices. Federal Highway Administration. U.S. Department of Transportation. Available online: https://mutcd.fhwa.dot.gov/

National Unified Goal for Traffic Incident Management. National Traffic Incident Management Coalition. Available online: http://ntimc.transportation.org/Pages/NationalUnifiedGoal(NUG).aspx

NFPA 1091: Standard for Traffic Incident Management Personnel Professional Qualifications. 2019 Edition. National Fire Protection Association. Available online: https://www.nfpa.org/1091

ResponderSafety.com. Emergency Responsder Safety Institute.
Available online: https://www.respondersafety.com/

The Responder Safety Learning Network. Emergency Responsder Safety Institute.
Available online: http://rsln.org

Once you have earned the National TIM Certificate and completed your certification exam preparation, please visit FDSOA.org to apply for the certification and sit for the exam.

Preparation for Roadway Incident Response

Topic 1: Introduction to Roadway Response Safety and Traffic Incident Management (TIM)

Traffic incident management is a critical way to ensure the safety of responders at roadway incident scenes. In this topic area, you will demonstrate your knowledge of the basics of achieving safe, quick clearance and responder safety through traffic incident management.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.1, 4.2.5**

Section A: Key Terms

Define the following terms.

Traffic Incident Management: _____

_____

National Unified Goal: _____

_____

Standard Operating Procedure: _____

_____

Move Over or Slow Down legislation: _____

_____

Driver Removal Law (also called Move It and Fender Bender Law): _____

_____

Topic 1: Introduction to Roadway Response Safety and Traffic Incident Management (TIM)

Section B: Study Questions

1. What are the three major objectives of the National Unified Goal? Then, for each objective, identify three strategies proposed by the National Unified Goal to realize that objective.

(1) _____

(a) _____

(b) _____

(c) _____

(2) _____

(a) _____

(b) _____

(c) _____

(3) _____

(a) _____

(b) _____

(c) _____

2. What are the benefits of traffic incident management? _____

_____

_____

_____

3. What is the key to implementing the National Unified Goal?

A. cooperation, collaboration, and communication

B. command, contain, cooperate

C. command, intervention, safety

D. safety, life preservation, transportation

4. What multidisciplinary organization is an ideal way to administer implementation of the National Unified Goal?

A. Federal Highway Administration

B. Safety Service Patrol

C. Department of Transportation

D. Traffic Incident Management Committee

5. To achieve the National Unified Goal, SOPs should be consistent with *NFPA 1091* and the National TIM Training Program, as well as:

A. Individualized to each responding agency

B. The same for each responding agency

C. Subject to amendment by each individual agency

D. Written without agency input

6. Describe the role of training in achieving the National Unified Goal: _____

Topic 1: Introduction to Roadway Response Safety and Traffic Incident Management (TIM)

7. How can the individual roadway responder help implement the National Unified Goal?

8. What are some of the ramifications of poor communications?

9. What is the relationship between safe, quick clearance and responder safety?

Topic 1: Introduction to Roadway Response Safety and Traffic Incident Management (TIM)

Resources for Answers

"National Unified Goal for Traffic Incident Management" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/National_Unified_Goal_for_Traffic_Incident_Management.aspx

"Traffic Incident Management Strategies for Public Outreach" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Traffic_Incident_Management__Strategies_for_Public_Outreach.aspx

"Traffic Incident Management: TIM Training & Resources" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Traffic_Incident_Management_TIM_Training_Resources_for_Emergency_Responders.aspx

National Unified Goal for Traffic Incident Management
http://ntimc.transportation.org/Documents/NUGUnifiedGoal-Nov07.pdf

National Unified Goal for Traffic Incident Management Detailed Explanation
http://ntimc.transportation.org/Documents/NUG-4pp_11-14-07.pdf

National Unified Goal Trifold Brochure
http://ntimc.transportation.org/Documents/NUG_brochureUpdate11-07.pdf

National Unified Goal FAQ
http://ntimc.transportation.org/Documents/NUG-FAQ-11-07a.pdf

Topic 2: Traffic Incident Management Teams

Traffic Incident Management Teams (also called Traffic Incident Management Committees) provide a proven model for coordinating response across agencies and jurisdictions. In this topic area, you will demonstrate your knowledge of this approach.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.5**

Section A: Key Terms

Define the following terms.

Traffic Incident Management: _____

_____

TIM Team: _____

_____

Section B: Study Questions

1. List the agencies and organizations that should be part of a local TIM Team: _____

_____

_____

_____

_____

2. What are the typical tasks that TIM Teams tackle? _____

_____

_____

_____

Topic 2: Traffic Incident Management Teams

3. What are the eight elements that form the framework for a successful TIM Team?

4. What are the three national TIM performance measures recommended by the Federal Highway Administration? Select three.

A. safe, quick clearance

B. number of incidents

C. incidence of secondary crashes

D. response time

E. number of responder struck bys

F. roadway clearance time

G. queue length

H. incident clearance time

I. number of civilian deaths and injuries

5. What is the key to success of a TIM Team?

A. Commitment of agency leadership

B. Consistent membership, attendance, and participation

C. Interesting and important tasks to accomplish

D. Emphasis on training

E. Communication of TIM Team work product to the personnel of all participating agencies

F. All of the above

Topic 2: Traffic Incident Management Teams

Resources for Answers

"Starting and Sustaining a TIM Committee" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Starting_and_Sustaining_a_TIM_Committee.aspx

NFPA 1091: Standard for Traffic Incident Management Personnel Professional Qualifications. 2019 Edition. National Fire Protection Association. Chapter 3. https://www.nfpa.org/1091

Topic 3: *NFPA 1091*

NFPA 1091 sets the professional qualifications for traffic control professionals. In this topic area, you will demonstrate your knowledge of this standard.

***NFPA 1091* (2019 Edition) JPRs Covered: all JPRs**

Section A: Key Terms

Define the following terms.

Professional qualifications standard: _____

_____

Job performance requirement: _____

_____

Section B: Diagram

Draw a simple diagram of the NFPA standards development process.

Section C: Study Questions

1. List the advantages of a standardized traffic control protocol: _____

_____

_____

2. What does it mean to be a "voluntary standard"?

A. The standard cannot be made mandatory by any entity.

B. The standard only becomes mandatory for departments to follow when adopted by a given jurisdiction.

C. Adoption of the standard is based on the results of a state referendum.

D. Each responder in a jurisdiction that has adopted the voluntary standard can decide whether or not to follow it.

E. The standard only applies to volunteer departments, not combination or career departments.

3. Who developed *NFPA 1091*?

A. A committee of volunteer experts in traffic incident management and responder safety

B. The staff of the National Fire Protection Association

C. A consortium of organizations led by NFPA

D. The Federal Highway Administration

4. What are some ways to use *NFPA 1091*? _____

_____

_____

_____

5. Why was *NFPA 1091* developed?

A. In response to Congressional mandate

B. As a response to the recognition of the dangers of working on the roadway

C. Due to a directive from the National Governors' Association

D. Due to the requirements of the *Manual on Uniform Traffic Control Devices*

6. If adopted in a jurisdiction, *NFPA 1091* applies to all personnel in that jurisdiction who perform traffic control duties. (Circle one)

True

False

If False, explain: _____

_____

7. Which of the following are NOT job performance requirements in the *NFPA 1091* standard? Select all that apply.

A. Investigate the cause of a roadway incident

B. Establish advance warning for a traffic incident

C. Conduct an initial size-up and establish command of a traffic incident monitor and adjust the temporary traffic control measures at a traffic incident as conditions change

D. Establish a Traffic Incident Management Area

E. Report traffic incident data to the national database

F. Demobilize a Traffic Incident Management Area

Resources for Answers

"Understanding *NFPA 1091*" online training program from RSLN.org
https://learning.respondersafety.com/Training_Programs/Understanding_the_New_NFPA_1091.aspx

NFPA 1091: Standard for Traffic Incident Management Personnel Professional Qualifications. 2019 Edition. National Fire Protection Association. https://www.nfpa.org/1091

NFPA standards development diagram. National Fire Protection Association.
https://www.nfpa.org/Codes-and-Standards/Standards-development-process/How-the-process-works

Topic 4: *Manual on Uniform Traffic Control Devices*

There are provisions of the MUTCD that apply to traffic control professionals. In this topic area, you will demonstrate your knowledge of this application.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.3, 4.2.7**

Section A: Key Terms

Define the following terms.

Manual on Uniform Traffic Control Devices: _____

_____

Traffic incident: _____

_____

Channelizing devices: _____

_____

Temporary traffic control zone: _____

_____

Minor incident: _____

_____

Intermediate incident: _____

_____

Major incident: _____

_____

Section B: Photo Identification

Circle all cones that are MUTCD-compliant for emergency situations on the roadway.

Topic 4: *Manual on Uniform Traffic Control Devices*

Section C: Study Questions

1. What is the purpose of the Manual on Uniform Traffic Control Devices?

A. To standardize manual traffic control signals

B. To standardize the operations of all state departments of transportation

C. To define traffic and roadway engineering terms

D. To provide basic uniformity of traffic control devices so that, no matter where a driver is driving, consistent, recognizable signaling devices guide the operation of the motor vehicle.

2. Which of the following is NOT a permitted way for a State to use the federal *MUTCD*?

A. Adopt the federal *MUTCD* as written

B. Write a state supplement to the federal *MUTCD* and adopt both

C. Develop its own state manual on traffic control devices that is in substantial conformance with the federal *MUTCD*

D. Develop its own state manual on traffic control devices irrespective of the federal *MUTCD's* provisions

3. Why does the *MUTCD* apply to the work of roadway responders?

A. Because the *MUTCD* governs temporary traffic control zones, which roadway responders have the authority to set up

B. Because the *MUTCD* governs the activities of law enforcement agencies

C. Because the *MUTCD* governs interstate commerce conducted on roadways

D. Because the *MUTCD* governs the signals and signage present on roadways where responders are operating

4. To what do ANSI/ISEA standards apply at the roadway incident scene?

A. To response communication protocols

B. To traffic incident management area setup

C. To high visibility apparel specifications

D. To channelizing device specifications

5. Who is required to wear compliant high visibility apparel?

A. All firefighters exposed to moving traffic

B. All responders exposed to moving traffic; firefighters engaged in emergency operations that directly expose them to flame, fire, heat, and/or hazardous materials may wear retroreflective turn-out gear that is specified and regulated by other organizations

C. All responders exposed to moving traffic

D. Only personnel conducting manual traffic control

6. Which entity requires the use of the Incident Command System at traffic incident management scenes?

A. The National Traffic Engineers Review Board

B. The National Incident Management System

C. The Federal Highway Administration

D. The National Transportation Safety Board

E. The ICS is not required

7. According to the *MUTCD*, what color should temporary traffic control signs used at a roadway incident be?

A. Pink with black lettering

B. Orange with black lettering

C. White with red lettering

D. The *MUTCD* does not specify any colors for temporary traffic control signs

8. What recommended steps should be taken in the response to a major incident?

Topic 4: *Manual on Uniform Traffic Control Devices*

9. According to the *MUTCD*, emergency lighting:

A. Is not necessary if effective traffic control has been established

B. Provides only traffic control

C. Provides both warning and traffic control

D. Provides only warning, not effective traffic control

10. First responders who do not follow the *MUTCD* can be criminally charged. (Circle one)

True

False

If False, explain: _____

_____

Resources for Answers

"*Manual On Uniform Traffic Control Devices*" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Manual_on_Uniform_Traffic_Control_Devices_MUTCD.aspx

Manual on Uniform Traffic Control Devices. Federal Highway Administration. U.S. Department of Transportation. https://mutcd.fhwa.dot.gov/

Topic 5: Emergency Vehicle Visibility and Conspicuity

Emergency lighting and vehicle conspicuity are important tools to be used to make vehicles more visible in a Traffic Incident Management Area, but there is a great diversity in regulations and available equipment. In this topic area, you will demonstrate your knowledge of basic principles for successful use of emergency lighting and vehicles with high visibility markings.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.2, 4.2.3, 4.2.4**

Section A: Key Terms

Define the following terms.

Visibility: _____

_____

Conspicuity: _____

_____

High visibility: _____

_____

Retroreflective materials: _____

_____

Moth-to-flame concept: _____

_____

Flash pattern: _____

_____

NFPA 1901: _____

_____

NFPA 1917: _____

_____

Topic 5: Emergency Vehicle Visibility and Conspicuity

Section B: Diagram

On this vehicle diagram, draw the markings you would add to make it as visible and conspicuous as possible. Consider applicable standards, color, retroreflective striping and chevrons, arrows, and logos.

Topic 5: Emergency Vehicle Visibility and Conspicuity

Section C: Study Questions

1. Who sets the regulations for the color of warning lights on emergency vehicles?

A. The local TIM Team or Committee

B. The federal government

C. The state government

D. The municipal government

2. Once parked, what is the recommended practice for forward-facing white lights on the emergency vehicle?

A. No adjustment is needed.

B. Reduce or extinguish them.

C. Point them toward oncoming traffic to provide advance warning.

D. Place red lenses over the white lamps.

3. Emergency warning lights provide direction for motorists. (Circle one)

True

False

If False, state why: _____

_____

4. What should be the guiding principle of deploying emergency lighting at a roadway response scene?

A. Bigger, brighter, and faster is always the most visible.

B. Put as much light on the incident as possible and minimize the lighting facing motorists.

C. Focus on clear identification of emergency vehicles to oncoming motorists.

D. Gray in day, bright at night.

5. When an emergency scene is properly lit, wearing high visibility apparel is not necessary. (Circle one)

True

False

If False, state why: _____

_____

6. What is key to proper deployment of emergency lighting at a scene?

A. Memorize the relevant *MUTCD* sections.

B. Know the capabilities of the lighting package on the vehicle and how to use those capabilities in different situations.

C. Use all lighting options available at every scene.

D. Keep the scene as dark as possible to avoid glare to oncoming drivers' eyes.

7. Fill in the blanks according to the *NFPA 1901* standard for high visibility markings on fire apparatus.

A. A retroreflective stripe or stripes must be affixed to at least _____ of the front and body length on each side, excluding the pump panel areas for fire apparatus, and at least _____ of the width of the front of the vehicle.

B. The striping on front and sides must be a minimum of _____ in total width.

C. The _____ striping can be interrupted by objects such as receptacles or slat cracks provided the full stripe is seen as conspicuous when approaching the apparatus.

- At least _____ of the rear-facing vertical surfaces, excluding any pump panel areas not covered by a door on a fire apparatus, must have retroreflective striping in a _____ pattern sloping _____ and _____ from the centerline of the vehicle at a _____ angle.
- Each chevron stripe must be a single color, alternating between _____ and either _____, fluorescent _____, or fluorescent _____.
- Each chevron stripe must be _____ wide.

D. A graphic design is permitted to replace all or part of the required striping if the perimeter length previously specified for striping is _____.

Topic 5: Emergency Vehicle Visibility and Conspicuity

8. List the factors that affect visibility and conspicuity of an emergency vehicle: _____

_____

_____

_____

9. Which types of colors offer the best visibility?

A. Fluorescent

B. Pastel

C. Infrared

D. High value

10. How many modes of emergency lighting are required by *NFPA 1901*? _____

What are they? _____

Topic 5: Emergency Vehicle Visibility and Conspicuity

Resources for Answers

NFPA 1901: Standard for Automotive Fire Apparatus. 2016 Edition. National Fire Protection Association. https://www.nfpa.org/1901

"See and Be Seen: Emergency Lighting Awareness" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/See_and_Be_Seen_Emergency_Lighting_Awareness.aspx

Fire Apparatus Emergency Lighting: Study Report. Emergency Responder Safety Institute. June 2019. https://www.respondersafety.com/Download.aspx?DownloadId=6fc5da76-08a9-4c1b-89a8-3fcbfb7919b3

Vehicle Marking and Technology for Increased Highway Visibility: A Reference Guide for Decision-Makers. Emergency Responder Safety Institute. https://www.respondersafety.com/Download.aspx?DownloadId=6a7744e2-e4b7-4c99-ab7b-e13e786972e8

Study of Protecting Emergency Responders on the Highways and Operation of Emergency Vehicles A Review of First Responder Agencies Who Have Adopted Emergency Lighting and Vehicle Conspicuity Technology. Cumberland Valley Volunteer Firemen's Association — Emergency Responder Safety Institute. June 2019. https://www.respondersafety.com/Download.aspx?DownloadId=fa2f464f-2498-4741-917b-809592fcd789

Marked and Seen. Emergency Responder Safety Institute. https://www.respondersafety.com/Download.aspx?DownloadId=50145160-79e9-4593-a6d3-dae7d606e976

Emergency Vehicle Visibility and Conspicuity Study. United States Fire Administration. 2012. https://www.respondersafety.com/Download.aspx?DownloadId=5df324d7-2b60-408a-90a1-056508fefc66

Topic 6: High Visibility Apparel

Wearing high visibility apparel is critical to saving responder lives. In this topic area, you will demonstrate your knowledge of high visibility apparel and its use at the roadway incident scene.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2,1, 4.2.5**

Section A: Key Terms

Define the following terms.

High visibility apparel: _____

_____

ANSI/ISEA compliance: _____

_____

Section B: Photo Identification

Circle all of the following garments that are ANSI/ISEA compliant for emergency operations on the roadway.

Type R Class 3 Vest

Type P Class 2 Vest

Type R Class 2 Vest

Type O Class 1 Vest

Topic 6: High Visibility Apparel

Section C: Study Questions

1. Which standard sets the nationwide mandatory requirement for use of high visibility apparel at the roadway incident scene?

A. *Manual on Uniform Traffic Control Devices*

B. *NFPA 1901*

C. *NFPA 1091*

D. *ANSI/ISEA 107*

2. What are some of the reasons that responders might object to wearing high visibility apparel?

---

3. When should high visibility apparel be donned?

A. Prior to exiting the response vehicle

B. Just after exiting the response vehicle

C. Once initial scene assessment has been made on foot

D. Only if the incident will be longer than 30 minutes

E. Only at night

4. Whose requirements should be taken into account when writing an SOP on the wearing of high visibility apparel? Circle all that apply.

A. National Fire Protection Association

B. Occupational Safety and Health Administration

C. *Manual on Uniform Traffic Control Devices*

D. Applicable state regulation(s)

E. Federal Bureau of Investigation

F. National Transportation Safety Board

G. Federal Highway Administration

Topic 6: High Visibility Apparel

5. What standard does the high visibility apparel worn at a roadway incident scene have to comply with?

A. *Manual on Uniform Traffic Control Devices*

B. *NFPA 1901*

C. *NFPA 1091*

D. *ANSI/ISEA 107*

6. In what situation is NFPA-compliant turnout gear considered an acceptable substitute for a compliant high visibility vest?

A. When the wearer is enroute to a reported structure fire

B. When the wearer is exposed directly to flame, fire, heat, and/or hazardous materials

C. When a firefighter is working any incident on the roadway

D. Turnout gear is never an acceptable substitute

7. Which of the following is NOT a situation in which a law enforcement officer is required to wear a compliant high visibility vest?

A. investigating crashes

B. directing traffic

C. reconstructing crashes

D. enforcing lane closures

E. conducting traffic stops

F. handling obstructed roadways

G. responding to disasters

8. What are the keys to ensuring all department personnel wear compliant high visibility apparel when working roadway incident scenes?

Topic 6: High Visibility Apparel

9. Where is the best place to store a high visibility vest in an emergency response vehicle?

A. In the trunk

B. In a compartment with the temporary traffic control devices

C. In the cab next to the seat where each responder sits

D. on a hook in a compartment just outside the driver door

Resources for Answers

"Law Enforcement and High Visibility PPE" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Law_Enforcement_and_High_Visibility_PPE.aspx

Manual on Uniform Traffic Control Devices. Federal Highway Administration. U.S. Department of Transportation. https://mutcd.fhwa.dot.gov/

Roadway Incident Response Safety Procedures

Topic 7: Incident Command and Scene Management

Incident command and scene management provide the framework for successful operations at a roadway incident. In this topic area, you will demonstrate your knowledge of this approach.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.5**

Section A: Key Terms

Define the following terms.

Incident Command System: _____

_____

Unified Command: _____

_____

Span of Control: _____

_____

Incident Action Plan: _____

_____

Incident Command Post: _____

_____

Staging Area: _____

_____

Helispot: _____

_____

After Action Review: _____

_____

Non-involved person: _____

Section B: Diagrams

Draw a diagram of the incident command system.

Section C: Study Questions

1. What are the six features of a fully-implemented Incident Command System:

2. Fill in the blank:

Each supervisor should have a span of control of between ____ and ____ subordinates.

Each person should be limited to no more than ____ tasks.

3. When should the first arriving responder begin the scene size up?

A. As soon as the responder has arrived

B. After the Incident Commander has arrived

C. After all initial dispatched units have arrived

D. After a Traffic Incident Management Area has been established

4. In what direction should lanes be numbered?

A. Right to left in the direction of travel

B. Left to right in the direction of travel

C. Left to right when facing north

D. Left to right when facing south

5. Who establishes initial command at an incident?

A. The member of the unit who is most experienced with that particular type of incident, regardless of rank

B. The highest ranking officer in the first-arriving law enforcement unit

C. The highest ranking officer in the first-arriving fire service unit

D. The highest ranking officer in the first-arriving unit, no matter what agency

6. What step indicates formal completion of a task assigned by the Incident Commander?

A. Returning to service

B. Informing incident command of task completion

C. Informing the traffic incident management center

D. Starting another task

E. Requesting permission for relief

7. What is assignment of position, role, and title within the ICS organizational and administrative structure based on?

A. Rank

B. Expertise

C. Years of experience

D. Availability

8. The Incident Command System is flexible and can be tailored to fit the incident. (Circle one)

True

False

If False, explain: _____

_____

9. What is the purpose of an After Action Review?

A. To determine who is responsible for any problems during the response

B. To transfer command and responsibilities to a new crew

C. To discuss what went well and what could have been done better

D. To formulate an incident report to agency leadership

10. For each topic, explain what measures can be taken to establish scene control?

a. Traffic control: _____

b. News media: _____

c. Non-involved persons: _____

d. Personnel accountability: _____

e. Scene access: _____

f. Personnel dispatch: _____

g. Incident command and task assignment: _____

h. Towing: _____

11. Which agency regulates the use of unmanned aerial vehicles (drones)?

A. U.S. Air Force

B. National Transportation Safety Board

C. American UAV Alliance

D. Federal Aviation Administration

E. Transportation Security Agency

F. Customs and Border Patrol

12. Fill in the blanks:

According to regulations, UAV pilots must be at least ___ years old and pass an _____ test and a _____ .

UAVs ____ pounds and under can fly during daylight where their remote pilots can see them, but they must stay below _____ feet and fly less than ____ mph.

13: In general, persons in a public space are allowed to photograph or video whatever is in plain view. (Circle one)

True

False

If False, explain: _____

_____

14. What are the five questions to ask during an After Action Review?

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

Topic 7: Incident Command and Scene Management

Resources for Answers

“Traffic Incident Management: Incident Command & Management” online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Traffic_Incident_Management_Incident_Command_Management.aspx

“Scene Control” online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Scene_Control.aspx

Incident Command System Resource Center. Federal Emergency Management Agency. Accessed May 2020. https://training.fema.gov/emiweb/is/icsresource/

“Everyone Goes Home: After Action Review” online training program. The National Fallen Firefighters Foundation. Accessed May 2020. http://www.fireherolearningnetwork.com/Training_Programs/Everyone_Goes_Home__After_Action_Review.aspx

Topic 8: The Traffic Incident Management Area

A traffic Incident management area (TIMA) provides the organizational framework for response to a roadway incident. Knowing how to properly set up, revise, and demobilize a TIMA is critical to the safety of first responders and the public, the ability to render service to victims and the community, and the safe, quick clearance of the incident so traffic flow is restored. In this topic area, you will demonstrate your knowledge of the anatomy of a TIMA, how to set up a TIMA, and how to revise and demobilize the TIMA as conditions change.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.3 and 4.2.7**

Section A: Key Terms

Define the following terms.

Traffic Incident Management Area: _____

_____

Cone Taper: _____

_____

Buffer: _____

_____

Upstream: _____

_____

Downstream: _____

_____

Transition Area: _____

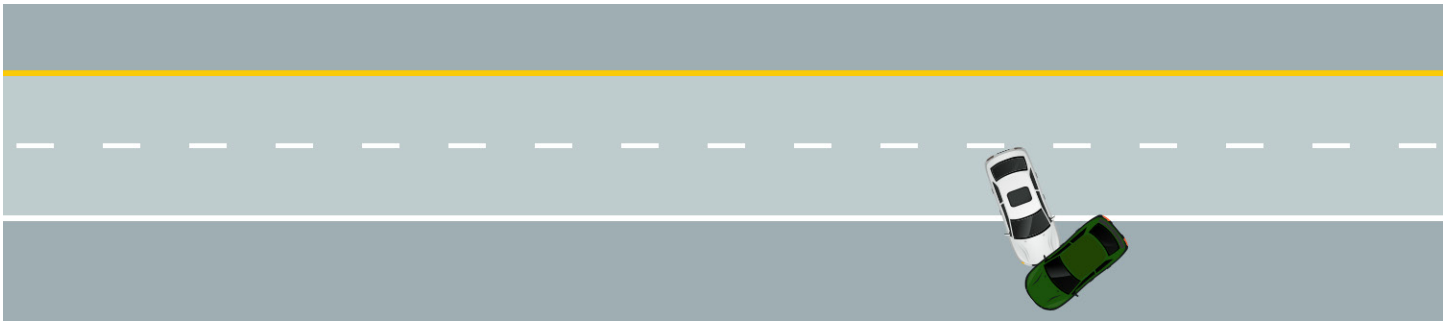
_____

Advance Warning Area: _____

_____

Topic 8: The Traffic Incident Management Area

Section B: TIMA Diagram



1. Draw on the above diagram to show how you would set up a Traffic Incident Management Area for the incident depicted. Include proper traffic control devices and emergency vehicles in your setup. Assume that the following emergency vehicles respond: 1 fire apparatus, 1 police cruiser, 1 ambulance, 1 tow truck.

2. Write the following labels on your diagram to define each area of the TIMA you have set up. You may draw segments or use line breaks to show the different areas.

Advance Warning Area

Transition Area

Incident Space

Activity Area

Termination Area

3. Shade in all the Buffer Areas on your diagram.

Section C: Study Questions

1. What part of a traffic incident management area is used to close lanes upstream of the incident?

A. Advance warning area

B. Transition area

C. Incident space

D. Termination area

E. Buffer area

2. What are the effects of lane closure on traffic flow? _____

_____

_____

_____

3. Complete the blank with the type of traffic control required by the federal *Manual on Uniform Traffic Control Devices* for the incident category noted:

Incident Severity with Required Traffic Control

Minor _____

Intermediate _____

Major _____

4. What are the responder safety benefits of setting up a traffic incident management area?

5. You are first arriving at the scene of a two-vehicle crash in the middle of the intersection at four-way stop on a rural road. All roads are one lane in each direction. The north entry to the intersection has limited sight distance due to a curve. The two victims are out of their cars and talking. One is complaining of back pain. Would you set up a traffic incident management area at this scene? Why or why not? If you chose to set up a traffic incident management area, what would it consist of? Where would you place traffic control devices? Draw a diagram of your TIMA setup at a four-way intersection, if you choose to do one.

Topic 8: The Traffic Incident Management Area

Resources for Answers

Traffic Incident Management Area Reference Card. ResponderSafety.com. Accessed May 2020. https://d35c9cxlt8mg8m.cloudfront.net/Downloads/c7d9fce3-da26-4f4e-9dd5-cbe335fbe9d1/1/TIMA_ReferenceCard.pdf?response-content-disposition=attachment

“Advance Warning” online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Advance_Warning.aspx

“Blocking Procedures at Roadway Incidents” online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Blocking.aspx

“Termination” online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Termination.aspx

Topic 9: Advance Warning

Advance warning provides motorists with notification that an emergency scene is ahead. This notification is designed to increase motorist vigilance and set the expectation that traffic flow may be different than it normally is in the area of the incident. Advance warning is critical to the safety of first responders, incident victims, bystanders, and motorists because it puts drivers on alert that there will be people working in the roadway. In this topic area, you will demonstrate your knowledge of advance warning parameters and methods.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.4**

Section A: Key Terms

Define the following terms.

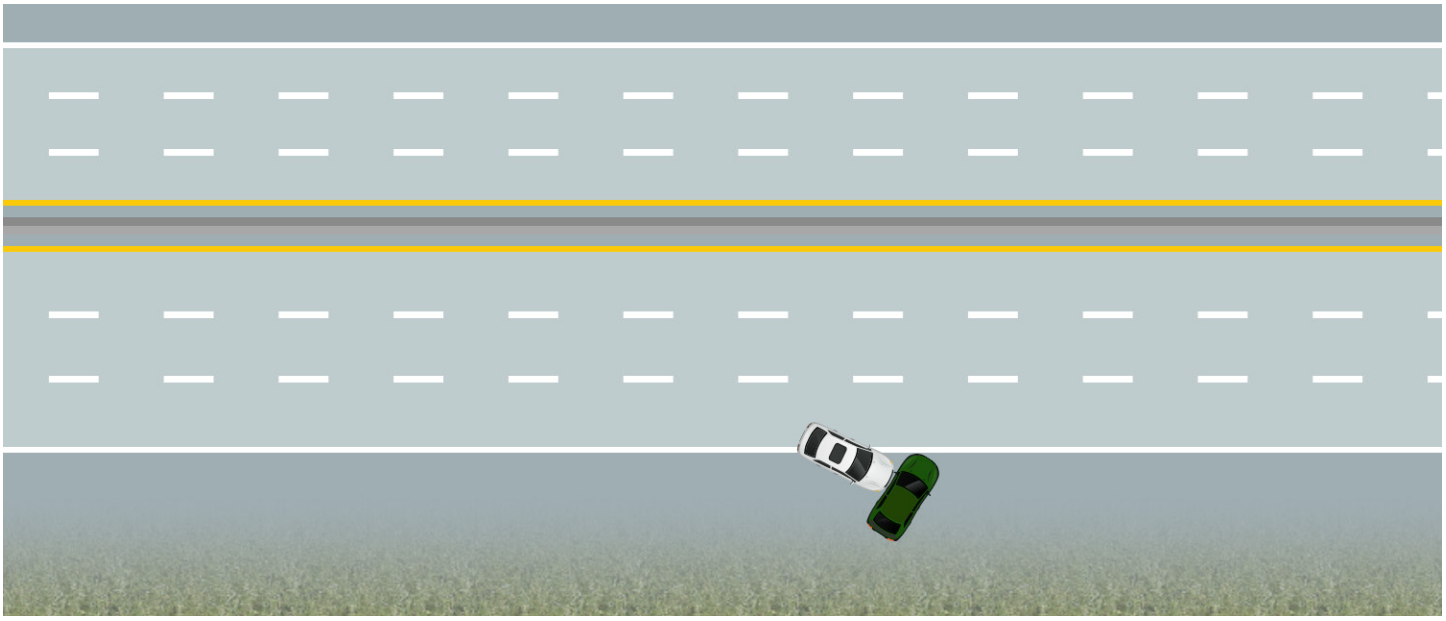
Advance warning: _____

Arrow board: _____

Variable message sign: _____

Section B: Diagram

Indicate on this diagram which advance warning devices you would place and where you would place them. Write the distance of each device you place from the incident itself.



Section C: Study Questions

1. Identify each advance warning device in the photos. Write your answer below each photo.

2. Is this cone MUTCD-compliant? Why or why not?

Topic 9: Advance Warning

3. Emergency vehicles equipped with high visibility markings and devices to direct traffic can be used as advance warning devices.

True

False

If False, state why: _____

4. Which NFPA standard specifies high visibility markings required on new automotive fire apparatus?

A. *NFPA 1910*

B. *NFPA 1901*

C. *NFPA 1091*

D. *NFPA 1099*

5. Describe the process for safely setting a cone taper. _____

6. List the ways in which a state's Department of Transportation can assist with advance warning.

Topic 9: Advance Warning

7. What factors affect the length of the advance warning area at a given roadway incident?

8. Match the incident type to the minimum advance warning required by the federal *Manual on Uniform Traffic Control Devices*:

Minor	A full work zone setup
Intermediate	Upstream warning signs and a cone taper
Major	Flashing lights on an emergency vehicle

9. List the benefits of advance warning.

10. The first arriving unit always places the advance warning devices.

True

False

If False, state why:

Topic 9: Advance Warning

11. Circle all the characteristics of a vehicle properly equipped to act as advance warning.

A. equipped with flashing emergency lighting

B. marked with high visibility, retroreflective markings in compliance with applicable standards

C. at least 15’ in length

D. fluorescent red or fluorescent yellow in majority body color

E. in use for incident operations as well as advance warning

F. MUTCD-compliant body and chassis style

Resources for Answers

Manual on Uniform Traffic Control Devices. Federal Highway Administration. U.S. Department of Transportation. https://mutcd.fhwa.dot.gov/

“Advance Warning” online training program from RSLN.org
https://learning.respondersafety.com/Training_Programs/Advance_Warning.aspx

Traffic Incident Management Area Reference Card. ResponderSafety.com. Accessed May 2020.
https://d35c9cxlt8mg8m.cloudfront.net/Downloads/c7d9fce3-da26-4f4e-9dd5-cbe335fbe9d1/1/TIMA_ReferenceCard.pdf?response-content-disposition=attachment

Topic 10: Blocking and Safe Positioning

Blocking provides a protected work area for responders to render service to victims at a roadway incident scene. Safe positioning ensures that all emergency vehicles parked at the scene are done so in a manner consistent with safety and with their purpose at the scene, including placing emergency vehicles not yet needed and/or POVs in a location where they will not interfere with operations or confuse drivers. In this topic area, you will demonstrate your knowledge of blocking and safe positioning procedures.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.2**

Section A: Key Terms

Define the following terms.

Linear positioning: _____

_____

Angled block positioning: _____

_____

Lane +1: _____

_____

Block-to-the-right: _____

_____

Block-to-the-left: _____

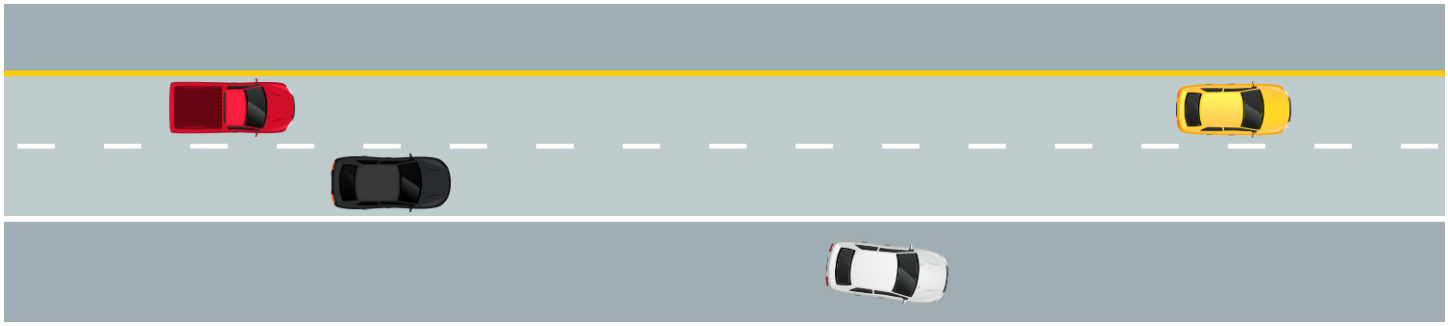
_____

Zero buffer area: _____

_____

Section B: Diagram

For each situation, select whether you would linear block or angle block, draw the position of your block on the diagram, and list the reasons why.



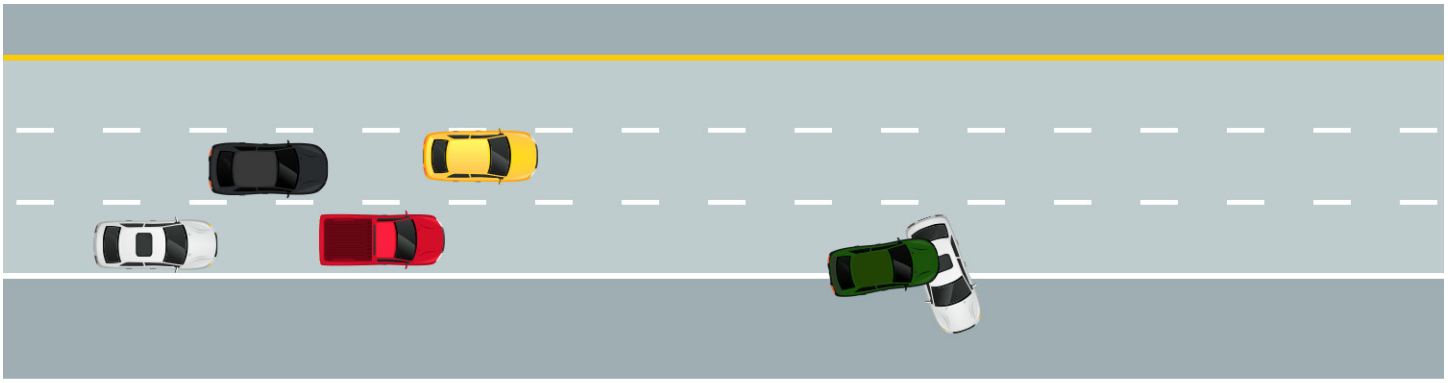
You are first on scene in a police cruiser for this disabled vehicle. It's 2 AM and the traffic is light. The weather is clear.

Circle one: Linear Angled

Reasons: _____

_____

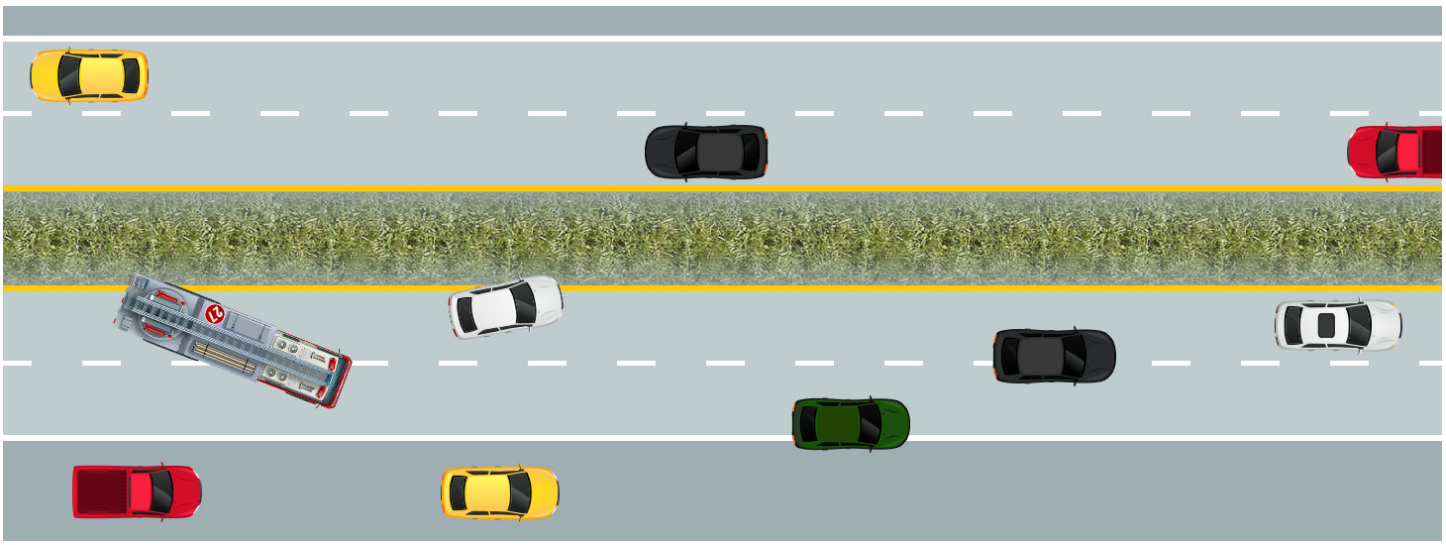
Topic 10: Blocking and Safe Positioning



You are the fire officer on a fire engine that is first on scene. It's rush hour and traffic is heavy. Your windshield size up and information from dispatch indicate that extrication may be necessary. The weather is mist and light fog.

Circle one: Linear Angled

Reasons: _____



You are the driver of an ambulance that arrives on scene just after the first-arriving fire engine. According to dispatch, the driver may have fallen unconscious. The traffic on the road is heavy and the speed limit is 55 mph. The weather is clear.

Circle one: Linear Angled

Reasons: _____

Topic 10: Blocking and Safe Positioning

Section C: Study Questions

1. Where is the zero buffer area in this photo?

2. List the guiding principles for the use of blocking vehicles established by the SHRP2 National TIM Training Program.

A. _____

B. _____

3. List the factors to consider when deciding whether to use a linear block or an angled block:

_____

_____

_____

4. You are the driver/operator of a fire apparatus second-arriving to a vehicle fire in the lefthand lane of a four lane divided highway. The first-arriving engine is suppressing the fire. You have been dispatched to provide blocking. The fire officer suggests block-to-the-right angled positioning, closing lane +1, 500' upstream of the first-arriving engine so approaching drivers have plenty of warning. Do you agree or disagree with this positioning? Why?

5. What steps are to be taken in each category of tasks after the emergency vehicle has assumed a blocking position?

Brake:

Lighting:

Wheels:

6. Describe how to safely pass through the zero buffer area.

Resources for Answers

"Blocking Procedures at Roadway Incidents" online training module from RSLN.org
https://learning.respondersafety.com/Training_Programs/Blocking.aspx

Hardening Blocking Vehicles for Traffic Incidents and Planned Special Events. Emergency Responder Safety Institute. April 2019. https://www.respondersafety.com/Download.aspx?DownloadId=7c2cc4cd-16fe-4894-bea5-951bc5ee9982

Topic 11: Move It or Work It

The decision whether to move the incident vehicles or work the incident in place has significant ramifications for scene safety. This decision is impacted by many factors, including laws in your state. In this topic area, you will demonstrate your knowledge of how to make the move it or work it decision.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.1**

Section A: Key Terms

Define the following terms.

Authority Removal Law: _____

_____

Driver Removal Law: _____

_____

Move It: _____

_____

Work It: _____

_____

Section B: Scenarios

Given the situation described, decide whether you would Move It or Work It and explain your decision.

A. In a single vehicle incident, an SUV has hit the concrete wall on an overpass that is one lane in each direction. The vehicle will no longer start, but the driver is not seriously injured. (Circle one)

Move It

Work It

Explain: _____

_____

B. It is rush hour on the interstate, which is three lanes in each direction with a wide, grassy median in between and a right-hand soft shoulder. A van has collided with a pickup in the lefthand lane of the northbound side. The driver of the van is pinned inside the vehicle. Traffic is backed up for at least two miles when the first unit arrives. (Circle one)

Move It

Work It

Explain: _____

_____

C. A bicyclist was hit by a car at a rural intersection. Initially, the intersection was closed and the incident worked in place while the bicyclist received treatment. The bicyclist has now been transported to the hospital. Debris from the bicycle and the car that hit it remains in the roadway. The car is parked in the grass next to the road. The sheriff's department is on scene investigating the incident. (Circle one)

Move It

Work It

Explain: _____

_____

D. A 14' box truck has overturned on a curve on a mountain roadway, blocking both lanes (one in each direction). The cargo, furniture being moved, has partially spilled out of the truck because the latch was not properly secured. The driver of the truck has a broken arm and is being transported by ambulance to the hospital. (Circle one)

Move It

Work It

Explain: _____

_____

Section C: Study Questions

1. If a vehicle accident has no injuries, the vehicles are driveable, and there is a safe location nearby where the vehicles can be relocated, the drivers of the vehicles are permitted to drive the vehicles to the safe location.

True

False

If False, indicate why: _____

2. What are the advantages of moving vehicles out of an active roadway before working the incident?

_____

_____

_____

_____

3. List the major factors that affect the Move It or Work It decision.

4. Circle all the instances that necessitate a Work It response in all situations.

A. Stolen car

B. Vehicle fluid spill

C. Active vehicle fire

D. Multiple vehicle crash

E. Incapacitated victim inside a vehicle

F. Cargo spill

G. Vehicle stabilization required

H. Vehicle is too damaged to be driveable

I. There is no safe place for removal near the incident

J. Law enforcement has declared the incident a crime scene where items must remain in "as found" condition

5. Who has the power to determine whether a vehicle can be moved from the roadway if there is a fatality in the vehicle?

A. Incident commander

B. Medical examiner

C. Fire chief

D. Whoever is designated by state law

E. Whoever is named in the relevant MOU

F. It depends on the state and local jurisdiction's regulations and policies

6. In general, who retains ownership of spilled cargo?

A. The responsible party, such as the owner or contractee of the carrier

B. The owner of the roadway where the cargo spilled

C. The state department of transportation

D. The insurer who insured the cargo

7. Which laws provide legal permission to remove a vehicle or an obstruction on the roadway? Circle all that apply.

A. Authority Removal Laws

B. Driver Removal Laws

C. Roadway Liability Assumption Laws

D. Slow Down Move Over Laws

8. Move It or Work It is a one-time decision made early on in the incident.

True

False

If False, explain: _____

Resources for Answers

"Move It or Work It" online training program from RSLN.org
https://learning.respondersafety.com/Training_Programs/Move_It_or_Work_It.aspx

Topic 12: Manual Traffic Control

Manual traffic control is sometimes necessary at roadway incident scenes. In this topic area, you will demonstrate your knowledge of how to conduct manual traffic control.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.3, 4,2,7**

Section A: Key Terms

Define the following terms.

Traffic control professional: _____

_____

Flagger: _____

_____

Section B: Photo Identification

Write the meaning of each hand signal below the photographs. Assume the responder depicted is directing oncoming traffic.

Flag moving in a figure 8

_____ _____

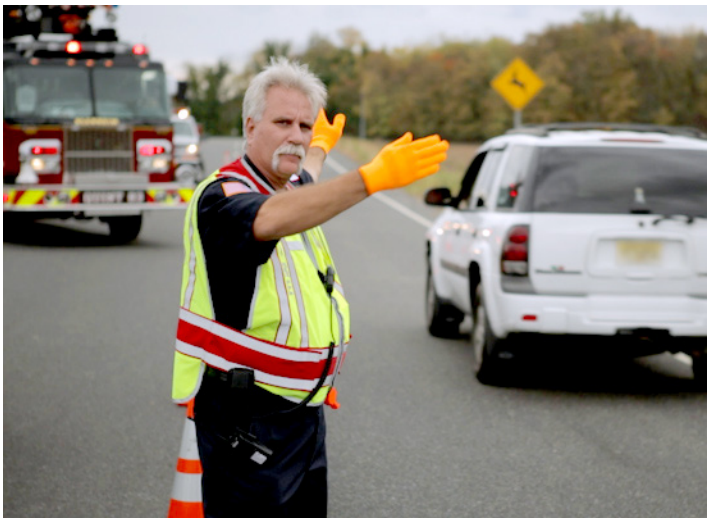
_____ _____

_____ _____

_____

Section B: Photo Identification (Continued)

Write the meaning of each hand signal below the photographs.



_____ _____

_____ _____

_____ _____

_____ _____

Which of the following positions correctly shows a "proceed" signal to oncoming traffic when using a flag? Circle one.

Topic 12: Manual Traffic Control

Section C: Study Questions

1. Which document sets the national standard for hand signals used in manual traffic control?

A. *NFPA 1091*

B. *Manual on Uniform Traffic Control Devices*

C. National TIM Training

D. 29 USC CFR 108.2

E. There is no national standardization of manual traffic control hand signals

2. Which standards include manual traffic control requirements? Select all that apply.

A. *NFPA 1001*

B. *NFPA 1091*

C. *NFPA 1500*

D. *Manual on Uniform Traffic Control Devices*

3. What is the goal of manual traffic control? _____

_____

4. What are the criteria for selecting the location from which to manually direct traffic?

_____

_____

_____

5. What are the five expectations set by the *MUTCD* for traffic control professionals?

_____

_____

_____

_____

6. Which of the following are requirements for performing traffic control? Check all that apply.

A. physical fitness

B. mental sharpness

C. instinct

D. professional appearance

E. financial stability

F. communication skills

7. How does a traffic control professional demonstrate professionalism? _____

_____

_____

8. In what ways can traffic control professionals communicate with each other at the scene? Circle all that apply.

A. using flags

B. by radio

C. verbally in person

D. using hand signals

E. using light flash patterns

9. Which device or devices is preferred for conducting manual traffic control? Circle all that apply.

A. flags

B. flashlights

C. flares

D. STOP/SLOW paddle

E. hands only

10. When using the right arm to hold a STOP/SLOW paddle and directing traffic to stop, what should be done with the left arm?

A. Point it downward toward the ground

B. Point it toward the incident

C. Raise it above the shoulder and face the palm toward approaching traffic

D. Hold it across the chest with the palm resting over the right shoulder

11. Which describes the correct procedure when using a flashlight to signal traffic to proceed?

A. Bend the elbow to move the flashlight 90º from pointing straight at the vehicle to pointing straight up in the air.

B. Move the flashlight rapidly in a straight line from waist to shoulder with arm fully extended toward the oncoming traffic.

C. Point the flashlight at the vehicle's bumper, slowly aiming the flashlight toward the open lane in a vertical arc, then holding the flashlight in that position.

D. Wave the flashlight in the direction the vehicle is to travel.

12. When directing traffic, do not ever turn your back to traffic.

True

False

If False, explain: _____

Resources for Answers

"Intro to Fire Service Traffic Control Professional" online training module from RSLN.org https://learning.respondersafety.com/Training_Programs/Intro_to_Fire_Service_Traffic_Control_Professional.aspx

Safe Fire Service Traffic Control Practices online training module from RSLN.org https://learning.respondersafety.com/Training_Programs/Safe_Fire_Service_Traffic_Control_Practices.aspx

Manual on Uniform Traffic Control Devices. Federal Highway Administration. U.S. Department of Transportation. https://mutcd.fhwa.dot.gov/

Topic 13: Termination

The termination phase of a roadway incident has its own specific procedures and safety risks. In this topic, you will demonstrate your knowledge of how to properly clear and demobilize a roadway incident response.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.9**

Section A: Key Terms

Define the following terms.

Termination: _____

_____

Incremental lane reopening: _____

_____

Relocation and return: _____

_____

Section B: Planning

A. Fill in the elements of your department's termination plan explaining how each task is to be accomplished and by whom:

Vehicle removal _____

_____

Cargo clearance _____

_____

Spill cleanup _____

_____

Topic 13: Termination

Recovery of roadway from any damage

Demobilization of equipment, response vehicles, and personnel

Traffic control device removal

Removal of detours

Restoration of normal traffic flow

Notification of DOT, Traffic Management Center, media, and other relevant parties of the conclusion of operations

B. Towing & Recovery: List the six keys to a successful relationship with towing and recovery.

1.
2.
3.
4.
5.
6.

Topic 13: Termination

Section C: Study Questions

1. Why is termination a dangerous time in the life of an incident response? _____

_____

_____

_____

2. Which direction should personnel face when removing traffic control devices?

A. downstream

B. toward oncoming traffic

C. north

D. away from oncoming traffic

3. Blocking should remain in place until the last person, including towing, has returned inside their vehicle to depart. (Circle one)

True

False

If False, explain: _____

4. Wearing high visibility apparel is not necessary when removing temporary traffic control devices because the devices are reflective and incident operations have concluded. (Circle one)

True

False

If False, explain: _____

5. In which direction should the traffic incident management area be dismantled?

A. Termination Area backwards to the Advance Warning Area

B. Advance Warning area forwards to the Termination Area

C. Outward from the Incident Space toward both the Termination Area and the Advance Warning Area simultaneously

D. The direction doesn't matter

6. During the termination process, when should temporary traffic control devices be removed?

A. After the blocking vehicle departs

B. As the first task in dismantling the traffic incident management area, before any vehicles or personnel depart

C. As the last task in dismantling the traffic incident management area, after all vehicles and personnel have departed except the blocking vehicle

D. Before towing operations commence

7. A blocking vehicle should be established upstream of the first temporary traffic control device prior to manual removal of the device. (Circle one)

True

False

If False, explain: _____

8. Emergency vehicle departures should begin with the vehicle that is the furthest:

A. Upstream

B. To the left

C. To the right

D. Downstream

Topic 13: Termination

9. List the information that should be provided to the tower when making a request for response:

10. Circle all the safety practices necessary when conducting termination tasks:

A. Wear high visibility apparel.

B. Never turn your back to traffic.

C. Work downstream to upstream when removing traffic control devices.

D. Leave temporary traffic control devices in the shoulder for another responder to pick up later.

E. Maintain situational awareness.

F. Report your position to command every 30 seconds.

G. Minimize the amount of time you are exposed to traffic on the roadway.

H. Require responders to sit in the advance warning vehicle if not doing a termination task.

I. Stay in the buffer area when not executing a termination task

Resources for Answers

"Termination" online training module from RSLN.org
https://learning.respondersafety.com/Training_Programs/Termination.aspx

Safety in Special Roadway Incident Response Situations

Topic 14: Vehicle Fires

Active vehicle fires pose safety hazards for firefighters, other first responders, and victims. Risks include explosion, hazardous materials leak, and electric shock. These risks compound when alternatively-fueled vehicles are involved, such as LNG, electric, and hybrid. In this topic, you will demonstrate your knowledge of the safety aspects of responding to vehicle fires on the roadway.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.7, 4.2.8**

Section A: Key Terms

Define the following terms.

Hybrid vehicle: _____

_____

Electric vehicle: _____

_____

Section B: Scenarios

A. Heavy smoke from a vehicle fire and steam from suppression with water are obscuring the scene and making it difficult for oncoming traffic to see responders. What measures would you take to improve safety under these conditions? Write your response for each category of actions.

Traffic control: _____

_____

Blocking vehicles: _____

_____

Additional resources: _____

_____

B. You are the incident commander at a vehicle fire involving a hybrid sedan. A police officer directing traffic reports that her nose and throat are becoming irritated. What do you do?

Section C: Study Questions

1. NFPA-compliant turnout gear is an acceptable substitute for a ANSI-compliant high visibility apparel when the responder is exposed to direct flame or heat when in the vicinity of moving traffic. (Circle one)

True

False

If False, explain: _____

2. What is the first step that should be taken after arriving at an active vehicle fire and establishing traffic control at the scene?

A. Rescue victims and begin fire suppression

B. Close the road

C. Secure the involved vehicle(s) with wheel chocks

D. Request a HAZMAT response

3. List as many potential safety hazards at the vehicle fire scene as you can:

4. When approaching a vehicle fire, which safety principles should be observed? Circle the correct answer(s) for each set of choices.

Proximity: Work as [far from / close to] the vehicle as possible.

Angle: Approach from an angle that is [not in the path of components that may fail / directly in line with the front or back bumper]

Initial attack: Use a [straight hose stream / narrow fog pattern / medium fog pattern / wider than medium fog pattern] to darken down the fire.

Advance: Use a [straight hose stream / narrow fog pattern / medium fog pattern / wider than medium fog pattern] as the crew approaches the involved vehicle more closely.

Compartments: Work from the [front / side / back] when opening compartments to cool them.

5. List the sources of explosion hazards at the vehicle fire scene:

6. Match the hybrid/electric vehicle component to the appropriate safety practice(s).

Battery	Assume it is running
Electrical components and wires	Avoid inhalation
Vapors	Avoid touching due to shock hazard
Orange cables	Assume it is energized and charged
Engine	Stay out of the travel path

7. What are the signs of a lithium ion battery fire?

8. Number the following steps to show the order in which to execute tasks when securing a hybrid/electric vehicle manually:

_____ Set the parking brake

_____ Move the vehicle keys at least 20 feet away from the vehicle

_____ Place the shift in Park

_____ Disconnect the 12-volt battery, if permitted and you are trained to do so

_____ Activate the hazard lights

_____ Turn off the vehicle

9. What is the proper way to store an electric or hybrid vehicle that has been involved in a fire?

A. Follow whatever instructions the towing professional gives you.

B. Close all doors and windows and contact the manufacturer or authorized service center for instructions.

C. Leave the vehicle windows open and contact the manufacturer or authorized service center for instructions.

D. Contact the National Highway Traffic Safety Administration for instructions.

E. Leave all windows and doors in “as found” condition, remove the battery and contact the manufacturer or an authorized service center for instructions.

F. No special procedures are required, so the SOP for a traditionally-fueled vehicle can be followed.

10. Match the post-fire action to its potential safety risk(s).

Fire suppression materials	Rekindle
Spill cleanup	Slip and fall
Overhaul	HAZMAT
	Debris

Topic 14: Vehicle Fires

Resources for Answers

Manual on Uniform Traffic Control Devices. Federal Highway Administration. U.S. Department of Transportation. https://mutcd.fhwa.dot.gov/

"Special Circumstances: Safe Operations for Vehicle Fires" online training module from RSLN.org https://learning.respondersafety.com/Training_Programs/Special_Circumstances_Safe_Operations_for_Vehicle_Fires.aspx

Traffic Incident Management Area Reference Card. ResponderSafety.com https://d35c9cxlt8mg8m.cloudfront.net/Downloads/c7d9fce3-da26-4f4e-9dd5-cbe335fbe9d1/1/TIMA_ReferenceCard.pdf?response-content-disposition=attachment

Topic 15: Hazardous Materials

Roadway spills can compromise travel, health, life, and the environment. In this topic, you will demonstrate your knowledge of handling scenes with spills.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.7, 4.2.8**

Section A: Key Terms

Define the following terms.

HAZMAT: _____

_____

The Emergency Response Guidebook: _____

_____

Section B: Study Questions

1. Match the motor vehicle fluid to its typical color.

Antifreeze	red
Battery	acid green
Transmission fluid	brown/green
Fuel	clear

2. List the resources that can be used to identify hazardous materials: _____

_____

_____

3. Match the Emergency Response Guide section to its page color.

General Guidance	yellow
Compounds list	green
Response guides	blue
ID numbers	white
Evacuation and shelter in place distances	orange

4. Labels on hazardous material containers are always correct and can be relied upon to look up the substance's name. (Circle one)

True

False

If you have selected, False, explain why: _____

_____

5. For a spill that is determined to be NOT a hazardous material and is not of reportable quantity, number these cleanup steps in the order in which they should be taken.

____ Properly dispose of any absorbents and tools used in the cleanup.

____ Contain the spill with a dike or absorbent.

____ Set up traffic control devices to allow for enough room to handle the spill.

____ Clean up the spill according to your SOP.

____ Wear proper PPE.

____ Restore traffic flow.

____ Stop the leak at the source.

Resources for Answers

"Special Hazards" online training program from RSLN.org
https://learning.respondersafety.com/Training_Programs/Special_Hazards.aspx

The Emergency Response Guidebook. 2016 Edition. Pipeline and Hazardous Materials Safety Administration. U.S. Department of Transportation.
https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/ERG2016.pdf

Topic 16: Medical Helicopter Landings

Evacuation by medical helicopter is an important life-safety option for patient care. Providing a safe and proximate landing zone is necessary to save critical minutes for injured patients, as well as safeguard the operation and responder lives. In this topic, you will demonstrate your knowledge of how to create safe landing zones for helicopters at roadway incident scenes.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.7, 4.2.8**

Section A: Key Terms

Define the following terms.

Landing zone: _____

_____

Section B: Study Questions

1. List the advantages of pre-designated landing zones: _____

_____

_____

_____

_____

2. For each concern regarding landing a helicopter at or near an incident location, describe what can be done to address it:

Need to close the roadway: _____

_____

Responders may be hit by flying debris: _____

_____

Landing zone must be on the roadway: _____

_____

Topic 16: Medical Helicopter Landings

Non-involved persons may attempt to enter the restricted landing zone: _____

_____

A vehicle may drive into the landing zone: _____

_____

The helicopter may not be able to land or take off: _____

_____

3. Who sets the requirements for medical helicopter landing zones?

A. local police department

B. U.S. Congress

C. air medical ambulance service provider

D. state Governor's office

E. United States Department of Transportation

Resources for Answers

"Special Hazards" online training program from RSLN.org
https://learning.respondersafety.com/Training_Programs/Special_Hazards.aspx

Topic 17: Crash Investigation and Fatalities

Crash investigation, especially in the case of fatalities, has implications for responder safety and crash clearance. In this topic, you will demonstrate your knowledge of responder safety practices hen crash investigation and fatalities occur.

***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.5**

Section A: Key Terms

Define the following terms.

Extrication: _____

_____

Section B: Study Questions

1. What is the purpose of a crash scene investigation? Circle all that apply.

A. Document the incident for later presentation in court proceedings

B. Clear the incident as soon as possible

C. Determine the cause of the crash

D. Provide data to support existing vehicle recalls

E. Satisfy reporting requirements to the national crash database

F. Identify fault

G. Provide the basis for taking enforcement action

2. When an investigation is necessary, list the steps to be taken to preserve the scene:

_____

_____

_____

3. All debris should be treated as evidence until determined to be otherwise by law enforcement. (Circle one)

True

False

If False, explain why: _____

_____

4. If permitted in your jurisdiction, which are possible reasons to remove a vehicle to an off-site location for later investigation? Select all that apply.

A. A fatality is in the vehicle

B. Traffic is backing up

C. Extensive investigation is required

D. The medical examiner is required and will not arrive for over an hour

E. The vehicle is leaking fluid

5. Who is permitted to certify death in a fatality?

A. Varies by jurisdiction

B. Only the medical examiner

C. Any police officer

D. The Incident Commander

6. List common situations that can cause incident clearance delays when an investigation is necessary:

_____

_____

_____

_____

7. In order to prioritize lifesaving, extrication operations should begin immediately, even if that is before traffic control is in place. (Circle one)

True

False

If False, explain why: _____

_____

Resources for Answers

“Special Hazards” online training program from RSLN.org
https://learning.respondersafety.com/Training_Programs/Special_Hazards.aspx

Topic 18: Rural Roads

Some characteristics of rural roads can make it challenging to implement recommended responder safety and traffic incident management best practices. In this topic, you will demonstrate your knowledge of when and how to adapt these best practices to rural roads.
***NFPA 1091* (2019 Edition) JPRs Covered: 4.2.1, 4.2.2, 4.2.3, 4.2.4**

Section A: Key Terms

Define the following terms.

POV (Privately Owned Vehicle): _____

_____

Section B: Study Questions

1. Because rural roads typically have light traffic, standard traffic incident management procedures like setting up a traffic incident management area are rarely needed. (Circle one)

True

False

If False, explain why: _____

_____

2. Which of the following situations commonly found on rural roads present challenges for temporary traffic control? Circle all that apply.

A. Two-lane roads, one in each direction

B. Lack of shoulders

C. Lack of alternate roads for convenient detours

D. Limited sight distances due to curves and hills

E. Large coverage areas for response agencies

F. Lack of resources to purchase and maintain traffic control devices

3. For each category, which traffic incident management principles can be implemented unchanged in rural road responses?

Preplanning steps: _____

Adoption of standards and SOPs: _____

PPE: _____

Vehicle markings: _____

Incident command: _____

Safe positioning: _____

Emergency lighting: _____

Post-incident debriefing: _____

Public education: _____

4. What can a traffic incident management committee do to preplan for roadway incident response in rural jurisdictions? Select all that apply.

A. Write SOPs/SOGs applicable to all response agencies

B. Provide a forum for information exchange between leaders

C. Mandate who the Incident Commander is

D. Pool resources

E. Host multidisciplinary training

F. Conduct preplanning for specific roadways and/or situations

G. Standardize traffic control procedures

H. Hold partner agencies legally liable for policy violations

5. What is the minimum high visibility apparel piece that should be issued to every roadway responder from every agency?

A. NFPA-compliant turnout gear

B. High visibility gloves for manual traffic control

C. A full head-to-toe, ANSI/ISEA-compliant high visibility garment consisting of a jumpsuit or shirt/jacket and pants

D. An ANSI/ISEA-compliant high visibility traffic safety vest or similar garment

Topic 18: Rural Roads

6. What roadway and traffic management features should be assessed at an incident on a rural road when determining which traffic incident management practices should be implemented?

7. In the rural roads context, what factors influence the determination of where to place advance warning devices upstream of the incident?

8. Why might the characteristics of rural roads cause an issue for the recommended practice of blocking lane +1? Circle all that apply.

A. Private road ownership

B. On two-lane roads (one lane in each direction), lane +1 blocking effectively closes the road

C. The first arriving vehicle may not be long enough to block two lanes

D. Unsignalized intersections

E. Non-asphalt road surfaces

F. Lack of space to turn around a large emergency vehicle

9. Describe alternate blocking options for each situation above that you selected:

10. What is the safest, and therefore preferred, option for POV response to rural roadway incidents?

A. Ban response in POVs

B. Allow responders to self-dispatch in POVs

C. Allow only officers, supervisors, and commanders to respond in POVs, provided they meet all applicable requirements

D. Allow all personnel to respond in POVs

11. Which professional qualifications standard applies to personnel who perform traffic control duties?

A. *NFPA 1900*

B. *NFPA 1901*

C. *NFPA 1091*

D. *NFPA 1910*

E. *NFPA 1001*

12. Manual traffic control is usually not needed on rural roads because the road typically has to be closed because it is narrow. (Circle one)

True

False

If False, explain why: _____

_____

Resources for Answers

"Traffic Incident Management on Rural Roads" online training program from RSLN.org https://learning.respondersafety.com/Training_Programs/Traffic_Incident_Management_on_Rural_Roads.aspx