- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

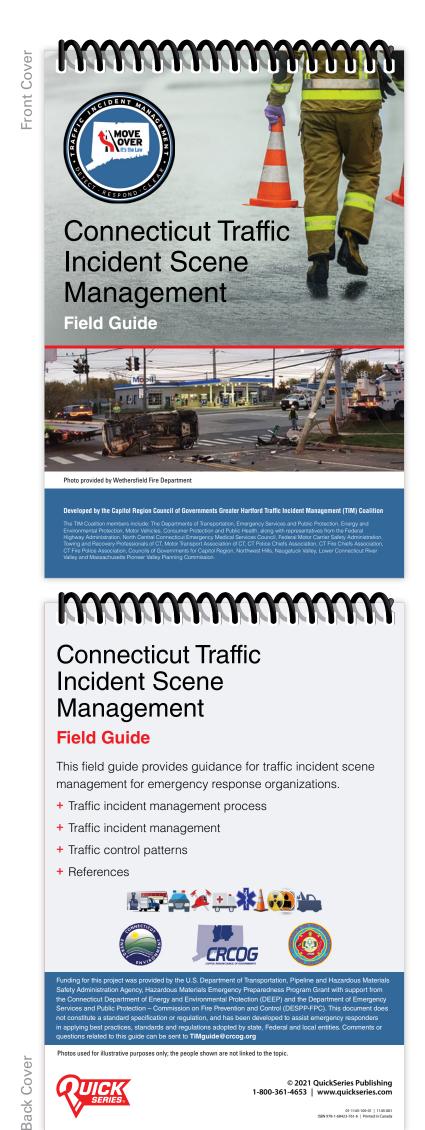
Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

Signature:





ACTUAL SIZE (3.75 x 5.5 in)

### **COPYRIGHTED MATERIAL**

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

+ Are there any fires?

+ If there is an overturned truck, identify the contents.

Are there any spills or leaks? An electric vehicle with a

Changes Requested

6

Signature:

4 SITUATIONAL AWARENESS AND SAFETY

- + Always turn wheels away from the incident space.
- + Turn on vehicle hazard lights and any emergency lights.
- + Put on all appropriate personal protective equipment (PPE) prior to administering any type of aid.
- + Look back for traffic.
- + Open door only as much as needed and exit.
- + Close door and proceed to a safe area.
- + Never turn your back to approaching traffic.
- + At all times, maintain situational awareness where you are and where you can go (escape route).
- + Never stand between vehicles.
- + Instruct civilians where to stay, out of harm's way.
- + Maintain communication with Dispatch.
- + Assess risk If it feels unsafe, leave your vehicle and move to a safe position out of the roadway until the next responder arrives.

QuickNote 🖉

Use plain English to identify location and lane designations.

- + On roadways with three lanes or less, they must be named left, center and right when facing in the direction of traffic flow.
- + For roadways that have more than three lanes in any one direction, designate using lane numbers, starting with the far-left lane called "lane 1." Each lane to the right is then numbered sequentially.
- + Shoulders should be identified using "left/right" and/ or "inside/outside" and "shoulder" (e.g., inside or left shoulder).
- Responder(s) should know specific position assignments. For example, an incoming unit might be told to safe park or "block upstream of the incident" (e.g., "northbound I-384 right lane and right shoulder")

- Separated, high occupancy vehicle (HOV) carpool or bus-only lanes that are physically separated should be designated as HOV1, HOV2, etc., as appropriate.
- If the incident is located before the merge point it shall be considered a separate roadway and identified as such (e.g., "left hand exit ramp").
- The term "upstream" is defined as before the incident point or area. The term "downstream" is defined as past or beyond the incident point or area.

SCENE SIZE-UP

- + What is the exact location of the incident (road, direction, mile marker)?
- + Are lanes blocked? If so, indicate which lanes.
- + Define the incident type.
- + Is a detour required? Coordinate with local and state agencies along the detour route and utilize approved diversion routes.
- + Identify the type of response needed at the scene (Fire/ Rescue, Emergency Medical Services (EMS), Hazmat, Towing and Recovery, Connecticut Department of Transportation (CTDOT), LIFE STAR, etc.).
- Identify the type(s) of vehicles involved (tractor trailer, box truck, tanker, van, bus, trucks, cars, etc.) and how many.
   Towing companies need to know the exact type and class of vehicle to provide correct resources.
- + Are there injuries? How many? How severe? Is there any entrapment?
- + Is LIFE STAR required? If so, prepare the landing area.
- + What is the condition of the vehicles involved (upright, jackknifed, rollover, overturned, etc.)?

leaking battery requires extra caution. + Is the incident in a work zone area? + Is CTDOT or Public Works required to repair the roadway or infrastructure? + Are utilities affected? **Downed wires and underground** electrical transmission lines may electrify vehicles and other conductive surfaces (e.g., guard rails, light poles). 13 VEHICLE CLASSIFICATION Class 1 Motorcycles Class 7 Four or more TRAFFIC INCIDENT PROCESS Passenge Four or less axle, single trailer Four tire single uni Class 9 Five-axle trac semitrailer

Six or more axle, single

Class 11 Five or less

axle, multi

Class 12

Six axle.

Seven or

For commercial vehicle involvement, notify the Connecticut

Department of Motor Vehicles (CT DMV) - Commercial

Vehicle Safety Division at: 860-263-5490.

trailer

ACTUAL SIZE (3.75 x 5.5 in)

Two axle, six

Class 6 Three axle

single unit

TRAFFIC INCIDENT PROCESS

### COPYRIGHTED MATERIAL

5

7

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

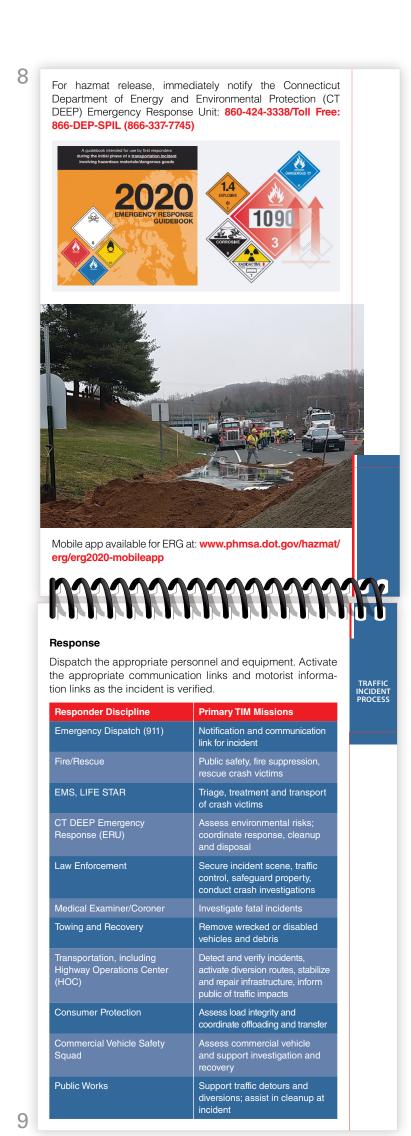
Date: Verified by:

No Changes

Changes Requested

10

Signature:



### PREPLANNING IN A RESPONSE SHOULD INCLUDE:

- + EMS/LIFE STAR In many areas, fire and rescue department companies are also the primary emergency medical services agency. In some areas, separate EMS agencies, independent volunteer rescue squads or private companies (under contract with localities) provide these services.
- + Towing and recovery A list that includes operator capabilities and special equipment available.
- + CT DEEP Hazmat contractors are to be approved through the state's contracting system. CT DEEP has the authority to call in environmental response resources as needed, and to coordinate directly with the state hazmat contractor or the responsible party's hazmat contractor.
- + Medical Examiner The response should be clearly defined and understood for incidents involving fatalities.
- Utility companies' roles should be clearly defined for incidents involving public utilities (power lines, gas lines, communication lines, etc.).

#### **HELICOPTER OPERATIONS – LIFE STAR SAFETY**

#### **Establishing and Marking a Landing Zone**

- + The landing zone should be at least 75 feet X 85 feet, relatively flat and free of overhead obstructions. Inform LIFE STAR of any obstacles near the landing zone (trees, power lines, antennas, cranes, etc.).
- By day, a landing zone may be marked by orange cones or flares at each corner, a strobe light or by a ground cover of contrasting color (this must be removed prior to landing).
- At night, a single strobe light or a road flare in each corner of the landing zone is helpful. Never direct spotlights, white strobes or flash photography toward LIFE STAR, as this will impair the crew's night vision.

# 

### Securing the Area

- + Secure the landing zone to prevent unauthorized persons from approaching LIFE STAR.
- + Keep the landing zone clear of loose articles and hazardous
- debris.Protect yourself and your patient from rotor downwash.
- Keep well clear of the landing zone when LIFE STAR is approaching and taking off.
- + Wear eye protection and, if the landing zone is very dusty, consider wetting down the area if possible.

### Approaching LIFE STAR

- + Do not approach LIFE STAR unless requested by the flight crew. If you are requested to approach LIFE STAR, stay within the pilot's field of vision.
- + Follow the directions of the flight crew when assisting near LIFE STAR.
- Carry equipment horizontally, below your waist level (never upright or over your shoulder).
- Always carry a stretcher in a forward-facing position and standing upright.
- + No smoking inside or within 100 feet of LIFE STAR!

### HI-VISIBILITY APPAREL: BE SAFE BE SEEN

- American National Standards Institute (ANSI)-approved high-visibility, retroreflective safety apparel must be put on and worn for the duration of an incident.
- + Firefighters or other emergency responders may wear retroreflective turn-out gear compliant with National Fire Protection Association (NFPA) standards.
- + Type R Roadway, Class 2 or 3 must be worn on or near roadways where work is in close proximity to traffic.

11

TRAFFIC INCIDENT PROCESS

ACTUAL SIZE (3.75 x 5.5 in)

### **COPYRIGHTED MATERIAL**

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

14

Signature:

12

- + Type P Public Safety, Class 2 or 3 is worn by fire, police, EMS and other public safety personnel.
- + Class E Pants, bib overalls, shorts and gaiters. This apparel cannot be worn alone. When Class E items are worn with Class 2, the overall ensemble meets Class 3.
- + Class 3 apparel is needed for Types R and P for night work and high-volume, high-speed roads.

#### **Unified Command (UC)**

- + Multi-agency coordination and communications are a must.
- + All agencies need to agree upon and practice within an ICS.
- UC differs from the sole ICS structure in that the ICS function is handled by multiple participating agencies and not a single Incident Commander. The UC agencies act as one to establish common objectives and strategies for incident response.

#### **The Three Unified Command Properties**

- + Life Safety Protects emergency responders, any incident victim and the general public.
- Incident Stability Minimizes an incident's impact on the surrounding area, maximizes response efforts and ensures efficiencies in using resources.
- + Property Conservation Minimizes damage to property while still achieving established incident objectives.

**UC Structure** (may vary based on size and scope of incident)

- Law Enforcement Secures incident scene; first responder.
   Fire Department Rescues/extricates victims; protects
- Fire Department Rescues/extricates victims; protects incident scene. Contains/mitigates hazmat and coordinates with CT DEEP.
- + EMS/LIFE STAR Provides medical treatment to injured parties at the scene; transports victims.
- + DOT Protects incident scene; provides traffic information.



# TRAFFIC INCIDENT MANAGEMENT



- To utilize personnel, equipment and devices to inform road users of the incident.
- + To provide guidance information on the path to follow through the area.
- + To quickly install proper temporary traffic controls to reduce secondary crashes or excessive traffic delays.



### Protect the Queue

Severe secondary crashes can occur when vehicles are waiting in the queue or in a backup due to the initial incident.

- Position a properly equipped "queue management" vehicle on the shoulder upstream of the incident with emergency lighting, vehicle hazard lighting and other traffic management equipment activated.
- + Keep sight distance in mind for approaching motorists, especially hills, curves and line-of-sight obstructions.
- + Maintain a reasonable distance between the upstream queue management vehicle and the back of the queue at the maximum possible capacity under the circumstances.

Blocking

- + Initial blocking Protect the scene or incident from approaching traffic and allow the responder a short time to size it up, gather information visually and verbally that will determine steps or actions to be taken and prioritize those actions.
- Always leave enough room between the blocking vehicle and the work area to allow the blocking vehicle to roll forward without hitting equipment or personnel if it is struck.
- Angle block signals to approaching traffic to show that the emergency vehicle is stopped, parked and not moving.



TRAFFIC INCIDENT MANAGEMENT AREA (TIMA)

also know as a Temporary Traffic Control Zone (TTC)

also know as a Temporary Traffic Control Zone (TTC)

Advance Transition Area

Warning

Advance Transition Area

Warning

Area

Advance Transition Area

Manufact

Advance Transition Area

Advance Transit

### Advance Warning: Tells Motorists of the Situation Ahead

Department of Transportation (DOT) or other advance warning – To be placed at the furthest upstream position prior to the scene and at the end of the queue. If DOT is not available, another emergency responder vehicle, variable message boards or static signs may also be used.

13

15

ACTUAL SIZE (3.75 x 5.5 in)

### COPYRIGHTED MATERIAL

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

18

TRAFFIC CONTROL DEVICES

TRAFFIC CONTROL DEVICES

19

Signature:

16 **Transition Area: Redirects Traffic Away from Closure** + Vehicle fires – Smoke from vehicle fires can cause visibility issues that affect responders and passing motorists. It is generally better to maintain some traffic flow at the scene to + Police - Must park at the upstream position outside facilitate the arrival of fire apparatus. In some cases, smoke of the buffer space and as far off the roadway as may require closing both directions of traffic for a short practicable. Use emergency lighting to supplement any period of time. advance warning devices in place. + Fire 1 – Blocking vehicle(s) must park in the most upstream position. The angle of the truck must mimic the transition area. Taper Length (ft) # Cones 40 350 320 **Activity Area: Where Responders Are Operating and** 750 660 16 **Includes Incident and Buffer Spaces** 1000/1500 780 **Ways to Estimate Distance** + Towing and Recovery - Must park at the furthest downstream position, but may stage in other areas + Use utility poles: 75 ft to 100 ft between utility poles depending on activity. Must remain off to the side to + Use roadway skip lines: line 10 ft long; break 30 ft long allow access for ambulance and response vehicles until + Use human paces: 1 step is approximately 3 ft activated for removal of vehicles. + Ambulance/Emergency medical services (EMS) - Must park at the next furthest downstream position with easy access to and from the scene. Position vehicle to have + All response vehicles should be equipped adequate buffer space for doors and patient-loading areas. with traffic cones. For high-speed Assure the ambulance is in a "block to the right" or "block roadways and nighttime operations. to the left" at the scene in order to position the rear patient-36 inches is preferred loading area away from the closest lane of moving traffic. TRAFFIC INCIDENT MANAGEMENT AREA + Fire 2 - Must park in the activity area just upstream of Signs the incident and in a blocking position. The angle of the truck must mimic the transition area. Position the truck to + Black lettering and a black border provide safe area to work in and allow for safe access to on a fluorescent pink or orange background should be used. all equipment necessary to handle the incident. **Flaggers Termination Area: Where Normal Traffic Flow Resumes** and Includes a Buffer Space + The use of a red flag or + Responsive vehicles and personal vehicles – Must park in lighted baton for emergency a downstream area off to the side. situations is allowed. AAAAAAAAAAAAAAAA TEMPORARY TRAFFIC Three basic types of flare devices can be used: CONTROL **ESTABLISHING** + Incendiary flares - Cannot be used at scenes with fuel spills, hazardous materials + A temporary traffic control (TTC) zone is an area of a roadway (hazmat), high-fire risk where traffic conditions are changed because of a work conditions or during highzone or an incident. Temporary traffic control devices (TCD), wind conditions uniformed law enforcement officers or other authorized Chemical light sticks - chemiluminescence in an enclosed personnel will be present. container. Suitable for use in hazardous environments. + The primary function is to provide for the safe and efficient + Light-emitting diode (LED) flares - This is extremely bright light, movement of traffic through or around an incident while with a visibility of 360° from great distances. May be adjusted protecting responders. between a steady, flashing or rotating mode. Remove light sticks TTC should include upstream advance warning signs and and flares after the incident is terminated. devices to alert traffic approaching the queue, and tapered lane closures. It may also include traffic detours to encourage early diversion to an appropriate alternative route. If manual **Directional Arrow Boards** traffic control is needed, it should be provided by qualified Must be used in conjunction with other TTC flaggers or uniformed law enforcement officers. devices, such as channelizing equipment. Higher speed limits, limited visibility, wet or snowy roads = longer advance warning and transitions! The arrow panel must indicate a blocked lane ahead. AVERAGE TOTAL STOPPING DISTANCE AT 55 MPH\* Use caution mode when on or near the shoulder of the roadway or in a closed lane. **Use of Emergency Lighting** Tractor-Trailer 256 ft Emergency lights are most effective when a traffic incident blocks with Cool Brakes travel lanes and TTD are not yet deployed. Lighting is not considered Tractor-Trailer a TTD but may supplement them. Tractor-Trailer, Empty + Minimize the use of emergency lights by multiple response vehicles once traffic control devices are deployed **Tractor Unit Only** Excessive or misdirected lighting increases the risk of 200 ft 300 ft secondary crashes \*Distance based on a study of average braking distances by the Insu ance Institute for + Adjust intensity and flash patterns based on the time of day and + The overall stopping distances are doubled for wet roads and whether you are mobile or stationary. multiplied by 10 for snow and icy conditions 17

ACTUAL SIZE (3.75 x 5.5 in)

### **COPYRIGHTED MATERIAL**

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

Signature:

20

#### SAFE AND QUICK CLEARANCE

Rapidly and safely remove obstructions from the roadway to restore it to its pre-incident capacity. Key goals are to:

- + Minimize motorist delay through traffic control and opening of lanes.
- + Make effective use of all clearance resources.
- + Enhance the safety of responders and motorists.
- Protect the roadway system and private property from unnecessary damage during the removal process.

#### Keep in Mind

- Fatalities generally increase incident duration due to the need for crash investigation and involvement of the medical examiner.
- Hazmat incidents generally take longer to resolve and clean up. Prompt notification of Connecticut Department of Energy and Environmental Protection (CT DEEP) can reduce the overall incident duration.
- + Commercial vehicle incidents, particularly when spilled cargo is involved, often take longer to resolve. Agencies like Consumer Protection may need to be called in. The property rights of the commercial vehicle owners may also need to be coordinated to move spilled cargo quickly. CT DEEP may need to coordinate the environmental response to the spilled cargo.
- When establishing a detour, large trucks might need to follow a separate route from that of automobiles due to bridge, weight, clearance or geometric restrictions, and vehicles carrying hazmat might need to follow a different route from other vehicles.

SAFE AND QUICK CLEARANCE

SAFE AND QUICK

# 

### Clearance/Demobilization

Demobilization time is very dangerous and must be managed appropriately to prevent secondary incidents.

- + Sign patterns are removed in reverse of installation. The advance warning area should be the last to be uninstalled, especially if visibility is reduced due to sightline restrictions or weather.
- + Temporary traffic control or blocking may be required for responder departure (e.g., ambulances, towing and recovery, etc.).
- + Caution Blocking vehicles (e.g., fire apparatus, truck-mounted attenuators, etc.) may no longer be present and the "safe" area may no longer be intact. Never turn your back to traffic and always watch for errant vehicles entering the scene.
- + Make sure all personnel are accounted for before units leave the scene.
- + Frustrated motorists that have been delayed by the incident may be aggressive and drive at higher speeds or weave into lanes that appear to be open. If possible, position a vehicle with its emergency vehicle lighting activated upstream of responders that are removing traffic control devices.
- Notify dispatch when the scene is demobilized so they can advise traffic-operation centers and news media for their traffic reports.

### RESPONDER DEPARTURE

The typical order from the scene is as follows and is dependent on response required:

Emergency medical services
 For incomparable Direction\*

- 2. Environmental Protection\*
- 3. Towing and recovery (may be last at scene within shoulder area)
- 4. Fire and rescue\*
- 5. Safety Patrol and/or temporary traffic control services
- 6. Department of Transportation (DOT) (if applicable)
- 7. Law enforcement
- \* Must remain until the spill is mitigated and/or fire response is completed.

#### MOVE IT!

Do not move if serious injury/fatality exists. Only move to a safe location if:

- + Vehicles are operable.
- + There are no serious injuries or fatalities.
- + No unidentified fluids are leaking.

Properly equipped vehicles may remove vehicles from the travel lane.

Move-It Law CGS § 14-224(d): Allows each person involved in non-injury accidents to remove their vehicles from the travel portion of a limited access highway to a non-traveled area near the accident site.

**Authority Removal Law CGS 14-66(g):** Any law enforcement officer or traffic authority [...] may determine that a vehicle blocking a travel lane on a limited access highway constitutes an emergency and a threat to public safety [...] may direct the operator of a wrecker to remove such vehicle.

#### **WORK IT!**

- + Working fire
- + Vehicle not drivable+ No safe place to remove to
- + Extrication required+ Fatality or injuries
- + Crime scene
- + Cargo spill, hazmat or fuel leak/spill

TRAFFIC CONTROL PATTERNS

The following traffic control plan diagrams are provided with permission from the Wisconsin Department of Transportation (DOT) Traffic Management Center. The information and diagrams represent the minimum requirements in the proper set up of a Traffic Incident Management Area (TIMA). All traffic control devices used must follow the Manual of Uniform Traffic Control Devices (MUTCD). For further information and additional application diagrams refer to Part 6 of the MUTCD.

TYPICAL TRAFFIC CONTROL LAYOUT Activity Advance Warning Area Advance Warning Sign Recommended Lengths (ft) **25** 100 100 100 300 45 125 250 25 **35** 350 350 350 1.050 85 245 490 250 35 **45** 500 500 500 1,500 180 540 1,080 360 45 50-100 **55** 1 000 1 500 2 640 5 140 220 660 1 320 495 55 **65** 1,000 1,500 2,640 5,140 260 780 1,560 645 65 **75** 1,000 1,500 2,640 5,140 300 900 1,800 75 820 A: Distance from transition area to first sign B: Distance between the first and second signs C: Distance between the second and third signs

22

MOVE IT – WORK IT

TRAFFIC CONTROL LAYOUT

TTC/ TRAFFI CONTRO PATTERI

23

ACTUAL SIZE (3.75 x 5.5 in)

### COPYRIGHTED MATERIAL

21

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

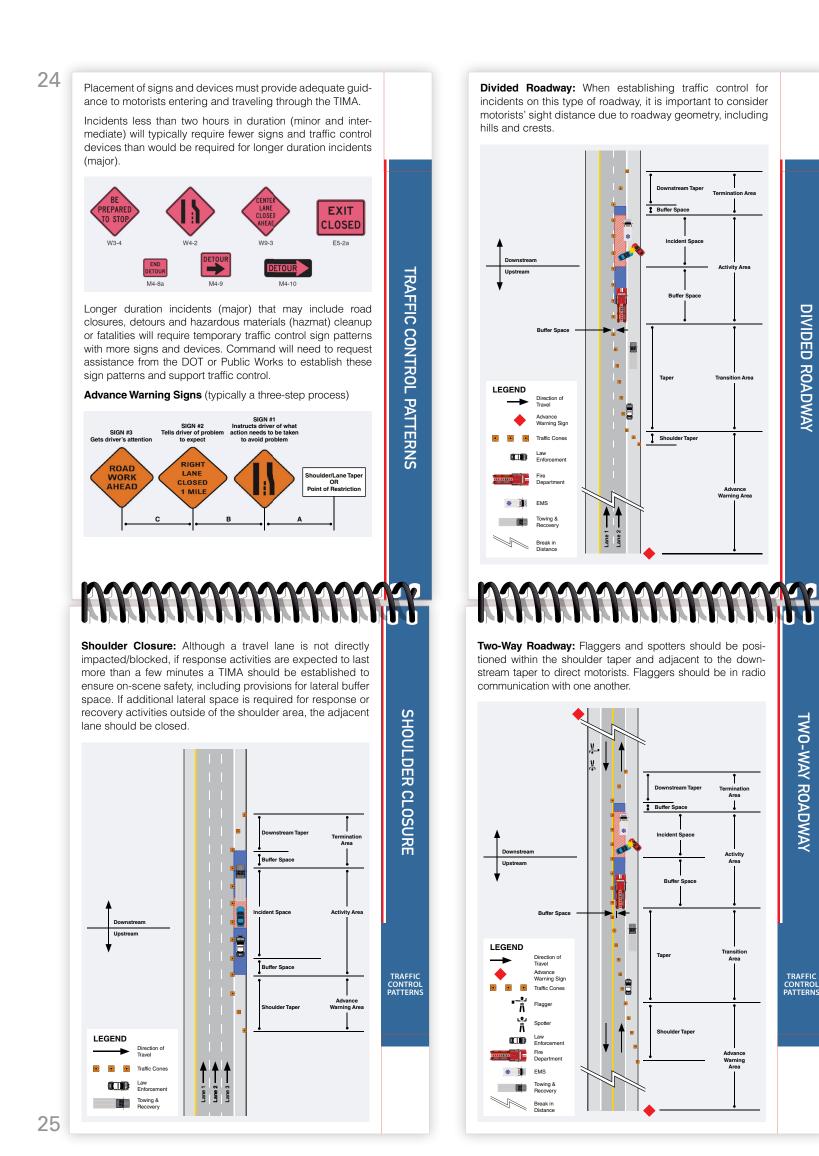
26

**DIVIDED ROADWAY** 

TWO-WAY ROADWAY

27

Signature:



ACTUAL SIZE (3.75 x 5.5 in)

### COPYRIGHTED MATERIAL

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

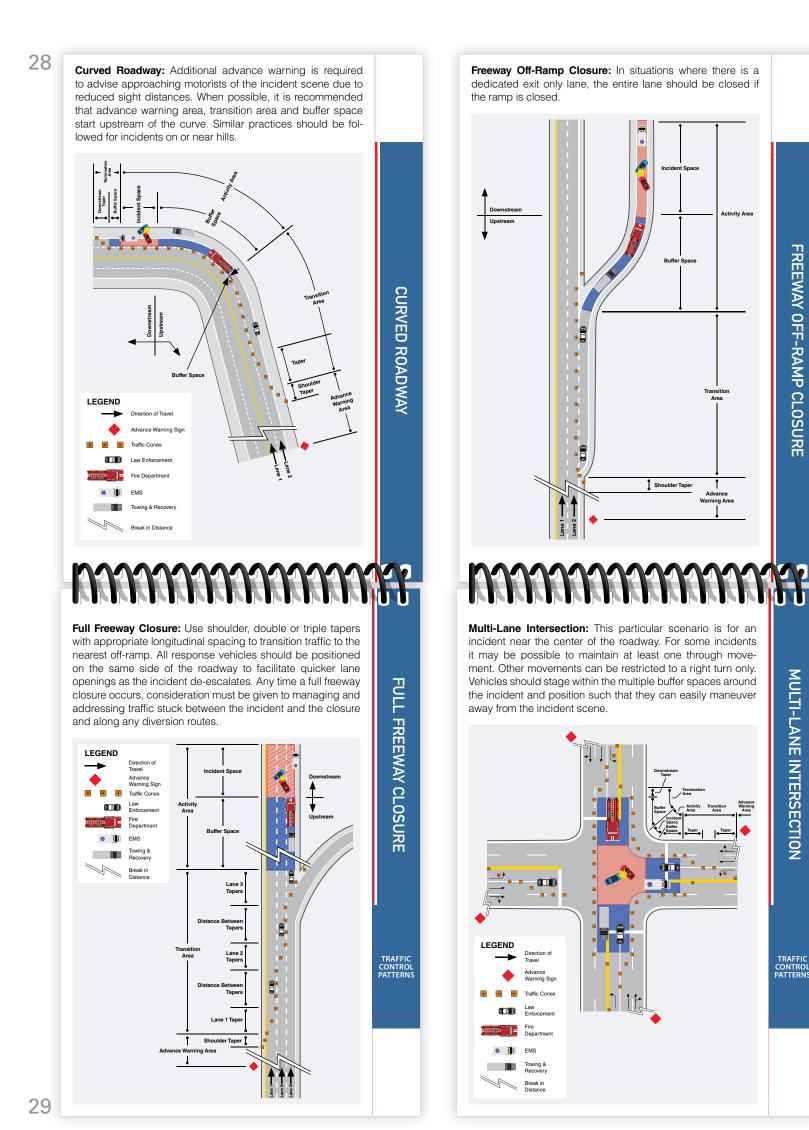
30

FREEWAY OFF-RAMP CLOSURE

**MULTI-LANE INTERSECTION** 

31

Signature:



ACTUAL SIZE (3.75 x 5.5 in)

### COPYRIGHTED MATERIAL

- 1. Verify all pages and indicate changes if necessary in writing.
- 2. Sign each page (whether changes are needed or not).
- 3. Return all pages by email or fax to: 1-877-329-3291

Publications will not be released for print until all original proof pages are signed.

Date: Verified by:

No Changes

Changes Requested

34

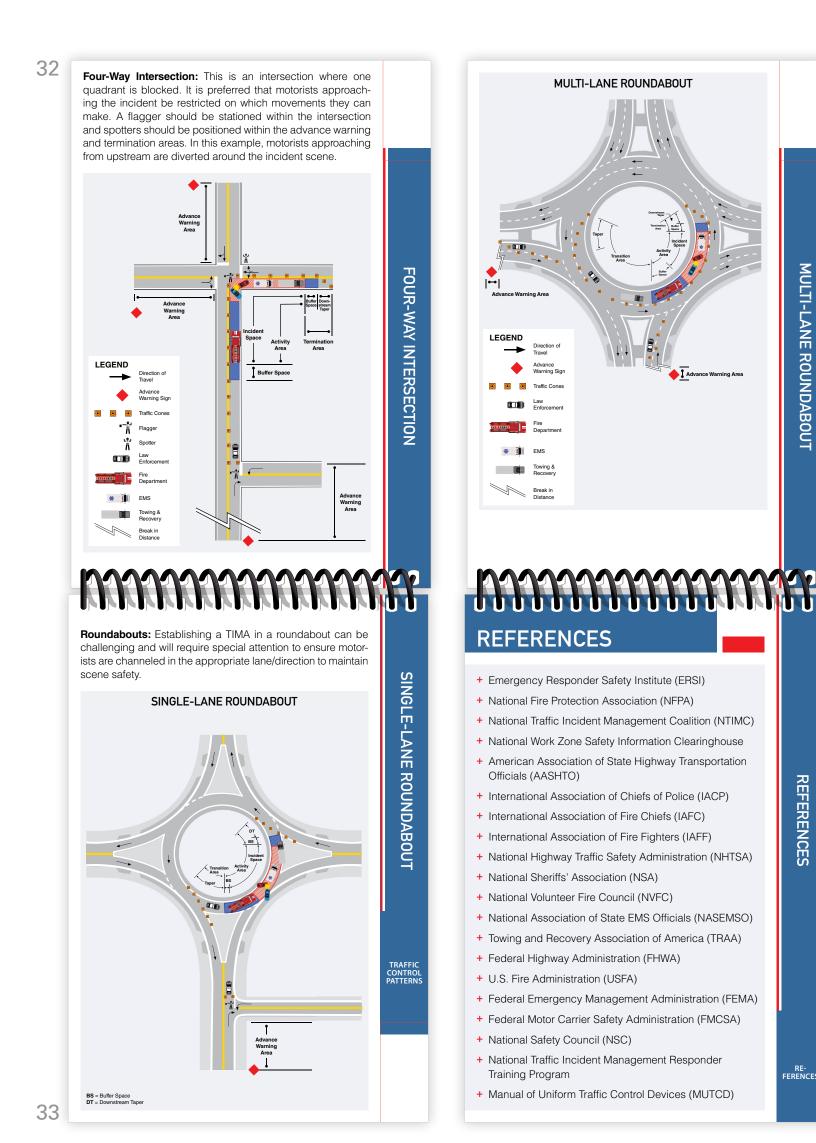
**MULTI-LANE ROUNDABOUT** 

REFERENCES

RE-FERENCES

35

Signature:



ACTUAL SIZE (3.75 x 5.5 in)

### COPYRIGHTED MATERIAL