Chapter 12  
Driving  
Section 2  
Safe Apparatus Positioning in Traffic

Training Section

Introduction

This section describes parking practices for emergency vehicles which will provide maximum protection and safety for personnel operating in or near moving vehicles on a roadway or highway. Several methods to keep individual firefighters safe while exposed to the hazardous environment created by moving traffic are also provided.

The Ventura County Fire Protection District (VCFPD) positions apparatus and other emergency vehicles at a vehicle-related incident on any street, road, highway or expressway in a manner that best protects the incident scene and the work area. Such positioning shall afford protection to VCFD personnel, law enforcement officers, tow service operators, ambulance personnel, and the motoring public from the hazards of working in or near moving traffic.

All personnel must understand and appreciate the high risk that emergency responders are exposed to when operating in or near moving traffic. Responders should always operate within a protected environment at any vehicle-related roadway incident.

At every vehicle-related emergency scene personnel are exposed to passing motorists of varying driving abilities. Some of these vehicle operators may be vision impaired, under the influence of alcohol and/or drugs, or have a medical condition that affects their judgment or abilities. Additionally, motorists may be completely oblivious to your presence due to distractions caused by cell phone use, loud music, conversation, inclement weather, and terrain or building obstructions. Approaching motorists will often be looking at the accident scene and not the roadway in front of them or driving at various speeds. Relying on the ability of passing motorists to do the right thing may produce fatal results.
Incidents requiring personnel to work in or near moving traffic at night are particularly hazardous. Visibility is reduced and driver reaction time to hazards in the roadway is slowed.

**Terminology**

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

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

**Block**
The positioning of an emergency vehicles on an angle to the lanes of traffic creating a physical barrier between upstream traffic and the work area. This would includes “block to the right” or “block to the left.”

**Buffer Zone**
The distance or space between personnel and vehicles in the protected work zone and nearby moving traffic.

**Downstream**
The direction that traffic is moving as it travels away from the incident scene.

**Flagger**
A VCFPD member or law enforcement officer assigned to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the highway scene.

**Shadow**
The protected work area at a vehicle-related roadway incident that is shielded by the block from apparatus and other emergency vehicles.

**Taper**
The action of merging several lanes of moving traffic into fewer moving lanes.
**Temporary Work Zone**
The physical area of a roadway within which emergency personnel perform their fire, emergency medical (EMS) and rescue tasks at a vehicle-related incident.

**Transition Zone**
The lanes of a roadway within which approaching motorists change their speed and position to comply with the traffic control measures established at an incident scene.

**Upstream**
The direction from which traffic is moving as vehicles approach the incident scene.

**Safety Benchmarks**
All emergency personnel are at risk of injury or death while operating in or near moving traffic. There are several specific tactical procedures that should be taken to protect all crewmembers and emergency service personnel at the incident scene including:

- Never trust approaching drivers.
- Avoid turning your back to approaching traffic.
- Establish an initial “block” with the first arriving emergency vehicle.
- Utilize rear warning lights.
- Wear full structural protective clothing at all vehicle-related emergencies.
- Turn off all headlights, spotlights, red lights and strobe lights, etc not necessary for safety or operations.
- Use fire apparatus and law enforcement vehicles to initially redirect the flow of moving traffic.
- Establish advance warning and adequate transition area traffic control measures upstream of incident to reduce travel speeds of approaching motorists.
- Use traffic cones and/or cones illuminated by flares where appropriate for sustained highway incident traffic control and direction.
- Establish “flagger” function to monitor approaching traffic and activate an emergency signal if the actions of a motorist do not conform to established traffic control measures in place at the highway scene.
Apparatus and Emergency Vehicle Benchmarks

Listed below are benchmarks for safe parking of apparatus and emergency vehicles when operating in or near moving traffic.

**Apparatus Placement**
Always position first-arriving apparatus to protect the scene, patients and emergency personnel.

- Initial apparatus placement should provide a work area protected from traffic approaching in at least one direction.
- Angle apparatus on the roadway with a “block to the left” or a “block to the right” to create a physical barrier between the crash scene and approaching traffic.
- Allow apparatus placement to slow approaching motorists and redirect them around the scene.
- Use fire apparatus to block at least one additional traffic lane more than that already obstructed by the crashed/disabled vehicle(s).
- When practical, position apparatus in such a manner to protect the pump operator position from being exposed to approaching traffic.

Positioning of large apparatus must create a safe parking area for EMS units and other fire vehicles. Operating personnel, equipment and patients should be kept within the “shadow” created by the blocking apparatus at all times.

**Work Zone**
When blocking with apparatus to protect the emergency scene, establish a sufficient size work zone that includes all damaged vehicles, roadway debris, the patient triage and treatment area, the extrication work area, personnel and tool staging area, and the ambulance loading zone.

**Ambulance**
Ambulance(s) should be positioned within the protected work area with their rear doors angled away from the nearest lanes of moving traffic.

**Staging**
The Incident Commander (IC) shall stage unneeded emergency vehicles off the roadway or return these units to service whenever possible.
At all intersections, or where the incident may be near the middle lane of the roadway, two or more sides of the incident will need to be protected.

- Law enforcement vehicles and additional fire apparatus must be strategically positioned to expand the initial safe work zone for traffic approaching from opposing directions effectively blocking all exposed sides of the work zone. The blocking of the work zone must be prioritized, from the most critical to the least critical traffic direction.

- For first arriving engine or truck companies where a charged hose line may be needed, block so that the pump panel is “down stream,” on the opposite side of oncoming traffic. This will protect the pump operator.

- At intersection incidents, consider requesting law enforcement response. Provide specific directions to the law enforcement officers as to your exact traffic control needs. Ensure that law enforcement vehicles are positioned to provide additional protection of the scene.

- Traffic cones shall be deployed from the rear of the blocking apparatus toward approaching traffic to increase the advance warning provided for approaching motorists. Cones identify the transition and tapering actions that are required of the approaching motorist.

- Personnel shall place and retrieve cones and flares while facing oncoming traffic.

- Traffic cones shall be deployed at 15-foot intervals upstream of the blocking apparatus with the farthest cone approximately 75 feet upstream to allow adequate advance warning to drivers.

- Additional traffic cones shall be obtained from law enforcement units to extend the advance warning area for approaching motorists.

**High-Volume, Limited-Access Roadway Operations**

High-volume limited-access roadways include the highways, freeways, and multi-lane roadways within the VCFPD response area. Law enforcement agencies and the Department of Transportation (DOT) have a desire to keep the traffic moving on these high-volume thoroughfares. When, in the judgment of the
IC, it becomes essential for the safety of operating personnel and the patients involved, any or all lanes, shoulders, and entry/exit ramps of these limited access roadways can be completely shut down. This should rarely occur and should be for as short a period of time as practical. High-volume, limited-access roadway operations require procedures in addition to those mentioned previously.

- First-arriving engine company apparatus shall establish an initial block of the lane(s) occupied by the damaged vehicle plus one additional traffic lane.

- The position of apparatus shall take into consideration all factors that limit sight distance of the approaching traffic including ambient lighting conditions, weather-related conditions, road conditions, design curves, bridges, hills and over- or underpasses.

- Traffic cones on limited-access high-volume roadways shall be placed farther apart, with the last cone approximately 150 feet “upstream” to allow adequate warning to drivers. Personnel shall place and retrieve cones and flares while facing the traffic.

- The flagger shall notify all personnel on the incident of any approaching traffic that is not responding to the speed changes, transition, tapering and merging directions.

Command should establish a liaison with the law enforcement representative as soon as possible to jointly coordinate a safe work zone, and to determine how to most efficiently resolve the incident and establish normal traffic flows.

The termination of the incident must be managed with the same aggressiveness as initial actions. Crews, apparatus, and equipment must be removed from the highway promptly, to reduce exposure to moving traffic and minimize traffic congestion.

**Incident Command Benchmarks**

The first-arriving company officer and/or the IC must complete critical benchmarks to assure that a safe and protected work environment for emergency personnel is established and maintained including:
Assure that the first-arriving apparatus establishes a block to create an initial safe work area.

Assign a parking location for all ambulances as well as later-arriving apparatus.

- The directions “left” and “right” shall be identified from the perspective of the approaching motorist.
- Lanes of traffic shall be identified numerically as “Lane 1,” “Lane 2,” etc., beginning from the left to the right from the approaching motorist’s perspective.
- Instruct the driver of the ambulance of the proper position to park their vehicle.

Assure that all ambulances on-scene are placed within the shadow of the larger apparatus.

Assure that all patient loading into medical units is done from within the shadow.

The initial company officer and/or IC must operate as the scene Safety Officer until this assignment is delegated.

The IC shall assure that strobe systems are turned OFF and that other appropriate emergency lighting remains ON.

At residential medical emergencies, the IC shall direct ambulances to park at the curb nearest to the residence for safe patient loading whenever possible.

**Emergency Crew Personnel Benchmarks**

Listed below are benchmarks for safe actions of individual personnel when operating in or near moving vehicle traffic.

- Always maintain an acute awareness of the high risk of working in or near moving traffic. They are out to get you!
- Never assume that motorists will react appropriately.
- Always look before you move!
- Always keep an eye on the moving traffic.
- Avoid turning your back to moving traffic.

Protective clothing and helmet must be donned prior to exiting the emergency vehicle.
Personnel arriving in crew cabs of fire apparatus should exit and enter the apparatus from the protected “shadow” side, away from moving traffic.

All emergency personnel must exit and enter their units with extreme caution remaining alert to moving traffic at all times.

When walking around fire apparatus or emergency vehicles, be alert to your proximity to moving traffic:

- Stop at the corner of the unit, check for traffic, and then proceed along the unit remaining as close to the emergency vehicle as possible.
- Maintain a ‘reduced profile’ when moving through any area where a minimum buffer zone condition exists.

Law enforcement personnel may place traffic cones or flares at the scene to direct traffic. This action builds upon initial VCFPD cone deployment and can be expanded as additional law enforcement officers arrive. Always place and retrieve cones while facing oncoming traffic.

Placing flares, where safe to do so, adjacent to and in combination with traffic cones for nighttime operations greatly enhances scene safety. Where safe and appropriate to do so, place warning flares to slow and direct approaching traffic.