CHAPTER 4

SPECIAL CONDITIONS AND SIGNALING AIDS

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1. PURPOSE. Hand signals are used to direct traffic because they are easy to recognize. Whistles, flashlights, flares, and traffic cones are used when hand signals are not adequate. The purpose of this chapter is to explain methods and techniques for traffic direction during special conditions, utilizing the appropriate signaling aids.

2. SPECIAL CONDITIONS.

a. Darkness. The California Vehicle Code defines darkness as any time one-half hour after sunset to one-half hour before sunrise, and any other time when visibility is not sufficient to render clearly discernable any person or vehicle on the highway at a distance of 1,000 feet. Any of these conditions can be dangerous for officers directing traffic. Officers can make themselves more visible by doing the following:

(1) Place flares in the middle of the intersection, on limit lines, or near their feet.

(2) Use flashlights.

b. Emergency Vehicle Traffic. When emergency vehicles approach an incident scene, officers must ensure they can get through safely:

(1) Stop all traffic.

(2) Clear the intersection.

(3) Try to determine/anticipate the direction and possible route the emergency vehicles will take.

c. Impaired Drivers and Out-of-Control Vehicles. These drivers pose a major threat to the safety of everyone at an incident scene. Impaired drivers are often drawn to the lights of an emergency incident and will fail to notice an officer directing traffic.

(1) Always be aware of traffic. Be alert for the possibility of impaired drivers.

(2) Know your escape routes ***before*** you need them.

d. Stopping Trains.

NOTE: Policy is contained in General Order 100.31, Stopping of Trains.

(1)   Stop a train when there is a hazard to persons or property, such as explosives, or flammable or radioactive materials.

(2)   The stopping distance for a train depends on speed, weight, and the percent of the grade.

(3)   When possible, give the signal to stop a train ***at least two miles*** in advance.

(4)   Slowly swing a visible object horizontally across the tracks:

(a)   The engineer will acknowledge the signal with two blasts of the horn.

(b)   In bright sunlight, use a white handkerchief, newspaper, etc.

(5)   Washout signal.

(a)   Full emergency stop. Used when the train cannot be flagged at a sufficient distance in advance of the hazard to permit a normal stop.

(b)   Full emergency stops are not safe. This type of stop endangers passengers, freight, train crews, and equipment.

(c)   Use a rapid horizontal movement of light or object across the tracks.

(d)   After the train has stopped, contact the conductor and obtain their name and the number of the train.

(e)   Advise the communications center:

1   Name of the railroad.

2   Name of the company who owns the railroad tracks.

3   Nature of the hazard.

4   Location of the hazard.

(f)   A memorandum describing the incident shall be submitted through channels to the Office of the Commissioner.

3. STANDARD SIGNLING AIDS.

a. Whistle.

(1) One long blast with a “stop” signal.

(2) Two short blasts with a “go” signal.

(3) Several short blasts to get the attention of the driver who does not respond.

(4) Whistle blasts directed at pedestrians should not be as loud.

b. Flashlight.

(1) To stop traffic, direct the flashlight out in front of you, at a downward angle. Do not shine the flashlight in the eyes of the approaching driver.

(2) Do not stand directly in front of the approaching vehicle.

(3) After the vehicle has stopped, give the appropriate hand signals.

c. Voice or Verbal Commands.

(1) Usually not used, as verbal orders are not easily heard or understood.

(2) Shouted orders may antagonize motorists.

(3) If the voice must be used, be courteous.

4. FLARES.

a. Benefit. Flares are a good tool for traffic control because they burn very brightly and can be seen from long distances.

b. Limitations. Flares are quick to burn out and need constant attention.

c. Hazards. The greatest hazard is during the lighting process:

(1) Burns to the eyes, face, hands, and clothing are common. Protective equipment such as gloves, goggles, or glasses should be worn when lighting flares.

(2) You must survey the scene for potential fire danger before using flares.

(a) Leaking fuel from vehicles.

(b) Butane gas.

(c) Hazardous materials.

(d) Wind in a fire danger area affecting foliage such as tall grass.

(3) As a health issue, the smoke from flares can irritate the eyes and lungs.

(4) Due to the possibility of accidental ignition, store flares with the end cap in place.

d. Lighting the Flare.

(1) Remove the cap from the flare, while holding the flare in your opposite hand.

(2) Point the flare away and down from your body, turn your face away from the flare and strike down with the cap, away from your body.

(3) Never hold the flare above your head or shoulders. Molten material drips from the end of lit flares and can cause severe burns.

(4) After lighting, do not push the cap onto the end of the flare with the palm of your hand. The striking surface often retains hot residue after the flare is lit and can cause severe burns to the hand.

e. Extinguishing and Disposal.

(1) Flares burn at a very high temperature, which presents a significant fire and/or burn hazard.

(2) To extinguish a lighted flare, employees should grasp the non-lighted end of the flare and gently tap the lighted end on the ground until the flare is extinguished.

(a) Flares shall not be thrown against the ground or any other object.

(b) Throwing flares presents a serious safety risk to the environment, the public, and safety personnel.

(3) Flares are composed of a variety of chemicals that create a distinctive color and brightness. Some of these chemicals may present a risk to the

environment. To avoid unnecessary exposure, the following procedures should be followed:

(a) Flares should be allowed to burn to completion.

(b) Flares not burned to completion shall be extinguished as outlined above. After the flare has cooled, the plastic cap should then be removed from the non-lighted end and placed on the extinguished end.

(c) Extinguishing flares shall be placed in a location which does not present a traffic or fire hazard, avoiding areas where water collects or pools (e.g., drainage canals, culverts, storm drains).

(d) Flares shall be placed in a visible location for removal by highway maintenance personnel.

f. Uniforms Damaged by Flares. California Vehicle Code Section 2259 and Highway Patrol Manual 73.5, Uniform/Grooming and Equipment Standards Manual, both address the replacement of uniforms damaged by flares.

g. Replacement of Flares. California Vehicle Code Section 2419 allows the California Highway Patrol to replace flares used by the public to warn of a hazard.

NOTE: The guidelines above need only be followed if the employee is not placed in a situation where officer safety or the safety of passing motorists is compromised.

5. TRAFFIC CONES.

a. Benefit. Traffic cones are more practical than flares for traffic control if the incident will last for an extended period of time, as they require little attention to maintain.

b. Limitations.

(1) Officers can only carry a limited number of traffic cones, as there is limited space in the trunk of a patrol vehicle.

(a) Other units can assist in bringing more traffic cones to the scene.

(b) The California Department of Transportation can assist officers conducting traffic control duties by bringing additional traffic cones, sign trucks with arrow boards, and/or changeable message signs to help direct traffic.

(2) Traffic cones are not as visible from a distance as flares.

6. FLARE AND TRAFFIC CONE PATTERNS.

a. General. Flare and traffic cone patterns are very useful in helping to control traffic at accident scenes; however, the patterns must be meaningful. Every accident or situation differs, so standard flare and traffic cone patterns would be difficult to develop. Not every pattern can be used in every case; however, as a guide, examples of different patterns are included in this chapter.

b. Improper Placement of Flares.

(1) Flares set too close together will blend into a single light when seen from a distance.

(2) Flares set too far apart may invite drivers to go through the pattern and into the scene.

c. Proper Placement of Flares.

(1) Flares and traffic cones should be set approximately 20 to 25 feet apart in a straight line:

(a) When the pattern is directing traffic to change lanes, set a gradual angle of alignment depending on the speed of traffic.

(b) Flare and cone patterns should be set to direct traffic to only one side of an obstruction if possible.

(c) If it is necessary to direct traffic on each side of an obstruction, an officer should be positioned at the point where traffic splits. A patrol vehicle with flashing amber lights positioned well in advance of a major obstruction can be used to warn motorists of the hazard ahead.

(2) Remember, flare and traffic cone patterns are not barriers, they are only traffic guides. Be alert for vehicles driving through flare/cone patterns.

d. Two-Lane Roadways. (Refer to Illustrations 1 and 2.)

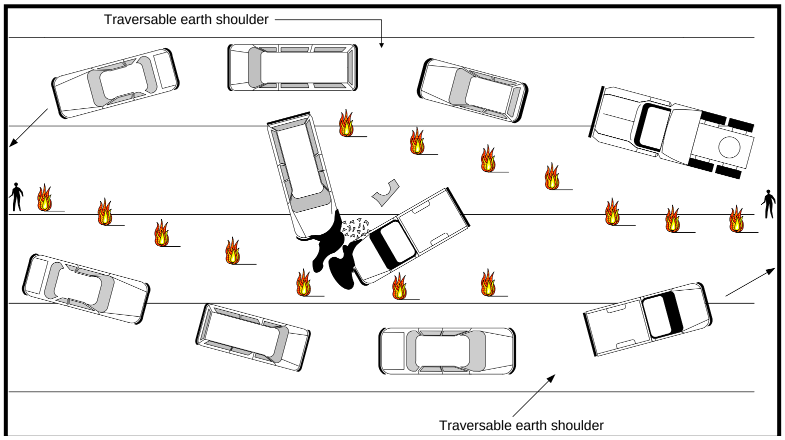

ILLUSTRATION 1

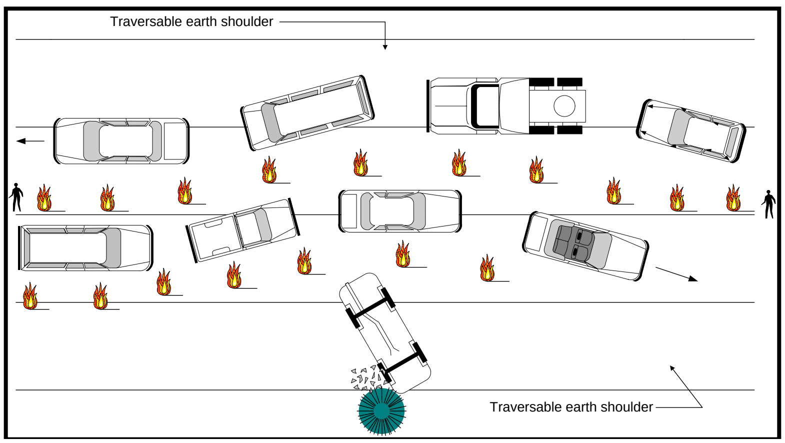

ILLUSTRATION 2

e. Freeways. (Refer to Illustrations 3 and 4.) Because of the large number of vehicles and high speeds, freeways present a number of safety issues, both for motorists and officers. When an obstruction exists, it is important to direct traffic around the scene as smoothly and safely as possible. Use all the resources available to accomplish this:

(1) Flares

(2) Traffic cones

(3) Patrol vehicles

(4) Sign trucks

(5) Additional officers to direct traffic around a hazard

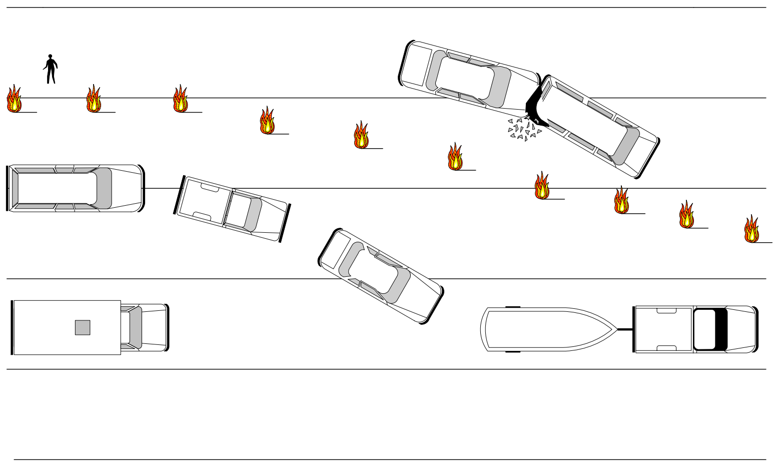

ILLUSTRATION 3

(6) If all lanes are blocked and traffic has to be directed off the freeway, be sure to do two things:

(a) Notify the allied agency with jurisdiction for the area the traffic will be going into. Many times they will be able to help with traffic control.

(b) Have an officer available to tell drivers where they can reenter the freeway.

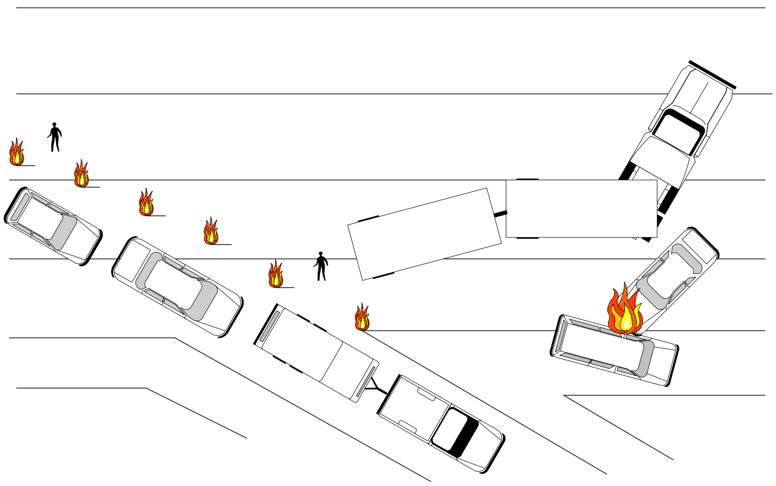

ILLUSTRATION 4