

## TRAFFIC MAINTENANCE

Delete Subsection 643-3.04 TRAFFIC CONTROL DEVICES and replace with the following:

**643-3.04 TRAFFIC CONTROL DEVICES.** Before starting construction, erect permanent and temporary traffic control devices required by the approved TCPs. Use traffic control devices only when they are needed. The Engineer will determine advisory speeds when necessary.

For lane closures on multilane roadways, use sequential arrow panels. During hours of darkness when required by the approved TCP use flashing warning lights to mark obstructions or hazards and steady-burn lights for channelization.

Use only one type of traffic control device in a continuous line of delineating devices, unless otherwise noted on an approved TCP. Use drums or Type II barricades for lane drop tapers.

During non-working hours and after completing a particular construction operation, remove all unnecessary traffic control devices. Store all unused traffic control devices in a designated storage area which does not present a nuisance or visual distraction to traffic. If sign panels are post mounted and cannot be readily removed, cover them entirely with either metal or plywood sheeting. Completely cover signal heads with bags.

Keep signs, drums, barricades, and other devices clean at all times.

Use only traffic control devices that meet the requirements of the "Acceptable" category in ATSSA (American Traffic Safety Services Association) "Quality Guidelines for Temporary Traffic Control Devices" and meet crashworthiness requirements per Section 643-2.02.

Immediately replace any devices provided under this Section that are lost, stolen, destroyed, inoperable or deemed unacceptable while used on the project. Stock repair parts for each Temporary Crash Cushion used on the project. Repair damaged crash cushions within 24 hours.

Maintain pre-existing roadside safety hardware at an equivalent or better level than existed prior to project implementation until the progress of construction necessitates removing the hardware. All existing hazards that are currently protected with roadside safety hardware or new hazards which result from project improvements shall be protected or delineated as required in the plans, specifications, and approved TCPs until permanent roadside safety hardware is installed. All temporary roadside safety hardware shall meet NCHRP 350 or MASH Test Level 3 unless otherwise noted.

All items paid under this Section remain your property. Remove them after completing the project.

1. **Embankments.** Install portable concrete barrier, plastic drums, barricades, tubular markers, plastic safety fence, and cones as specified on the Plans or TCPs to delineate open trenches, ditches, other excavations and hazardous areas when they exist along the roadway for more than one continuous work shift.
2. **Adjacent Travel Lane Paving.** Limit pavement-edge and lane-edge drop-offs as specified in Section 401. When paving is deeper than 1 inches and you cannot finish paving adjacent travel lanes or paved shoulders to the same elevation before the end of the paving shift, install one of the following, as appropriate: CW8-11 (Uneven Lanes), CW8-9 (Low Shoulder), CW14-3 (No Passing Zone), R4-1 (Do Not Pass), and R4-2 (Pass with Care). If the section is longer than 1/2 mile, place additional signs every 1500 feet.

3. **Fixed Objects.** Use flashing warning lights on all vehicles when they are working within 15 feet of the edge of traveled way. Use emergency flashers, flashing strobes or rotating beacons.

Locate private vehicles, idle construction equipment, construction material stockpiles and other items deemed by the Engineer to be fixed objects at least 30 feet from the edge of traveled way at all times. Do not park equipment in medians.

If you cannot meet the preceding restrictions because of land features or lack of right-of-way, place vehicles, equipment, material stockpiles, and other items deemed by the Engineer to be fixed objects as far away as practical but at least 15 feet from the edge of traveled way, as approved by the Engineer. Use drums or Type II barricades with flashing warning lights to delineate vehicles, equipment, material stockpiles, and other fixed objects. These traffic control devices are subsidiary.

4. **Flagging.** Furnish trained and competent flaggers and all necessary equipment, including lighting of the flagging position during nighttime operations, to control traffic through the traffic control zone. The Engineer will approve each flagging operation before it begins and direct adjustments as conditions change.

Flaggers must be certified as one of the following:

- a. Flagging Level I Certification by IMSA (International Municipal Signal Association)
- b. Flagger Certification by ATSSA (American Traffic Safety Services Association)
- c. Traffic Control Supervisor, ATSSA
- d. Work Zone Safety Specialist, IMSA
- e. ATSSA Flagging Instructor

Flaggers shall maintain current flagger certification. Flaggers must be able to show their flagger certification anytime they are on the project.

Flaggers must maintain their assigned posts at all times, unless another qualified flagger relieves them, or the approved traffic control plan terminates the flagging requirements. Remove, fully cover, or lay down flagger signs when no flagger is present. Keep the flaggers' area free of encumbrances, keep the flagger vehicle well off the roadway and not close to the flagger station, so that flaggers can be seen easily.

Provide approved equipment for two-way radio communications between flaggers when flaggers are not in plain, unobstructed view of each other.

Obtain the Engineer's written approval before flagging signalized intersections. When you flag a signalized intersection, either turn off and cover the traffic signal or place it in the All-Red Flash mode. Coordinate changing traffic signal modes and turning off or turning on traffic signals with the agency responsible for signal maintenance and operation and the Engineer. Get their written approval in advance. Only uniformed police officers are permitted to direct traffic in an intersection with an operating traffic signal.

5. **Pilot Cars.** You may use pilot cars if the route through a traffic control zone which is particularly hazardous, involved, or frequently altered to preclude adequate signing, or if the Engineer deems one-way traffic necessary. Do not use pilot cars to avoid localized traffic control at several locations.

Organize construction operations so the total of all stoppages experienced by a vehicle traveling through a project does not exceed 20 minutes. However, this does not imply that you may allow 20 minutes in all cases. Coordinate multiple pilot-car operations within a project or adjoining projects to minimize inconvenience to the traveling public. You may use two or more pilot cars to provide two-way traffic through the traffic control zone to reduce the waiting period. The flagger or pilot car operator must record each pilot car's departure time in a bound field book furnished by the Engineer.

Whenever practical, the flagger should tell the motorist the reason for and approximate length of the delay. Make every reasonable effort to yield right-of-way to the public and prevent excessive delay.

Use an automobile or pickup as the pilot car, with your company logo prominently displayed. Equip the pilot car with a two-way radio for contact with flaggers and other pilot cars. Mount a G20-4 sign (Pilot Car Follow Me) on the rear at least 5 feet above the driving surface. Identify the last vehicle in the column.

When pilot cars are authorized, use them before beginning work and continue until no longer necessary or until you have properly placed and checked functioning of all traffic control devices required for non-working hours.

6. **Street Sweeping and Power Brooming.** Keep free of loose material all paved portions of the roadway and haul routes open to the public, including sections of roadway off the project where your operations have deposited loose material. Use a power broom that can eject the material outside the traveled way. Use a street sweeper that can collect the material.
7. **Watering.** Furnish, haul, and place water for dust control and pavement flushing, as directed. Use water trucks that can provide a high-pressure water stream to flush the pavement and a light-water spray to control dust. If the flushing operations contaminate or fill adjacent catch basins, clean and restore them to their original condition. This requirement includes sections of roadway off the project where flushing is required. The Engineer will control water application.

If you take water from a lake, stream, or other natural water body, first obtain a water removal permit from the Alaska Department of Natural Resources. Comply with the Alaska Department of Fish and Game screening requirements for all water removal operations.

8. **Portable Changeable Message Board Signs.** Furnish Changeable Message Signs when approved on a TCP. Display only messages approved on the TCP. Follow application guidelines in the ATM.
9. **Truck Mounted Attenuator, TMA.** TMAs are mounted on the rear of work vehicles. Impact attenuators are defined by NCHRP 350 as a category III device. TMA shall be mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight in accordance with the manufacturer's recommendations. TMA shall have an adjustable height so that it can be placed at the correct elevation during usage and to a safe height for transporting. Approach ends of TMAs shall have impact attenuator markings in accordance with the MUTCD. Do not use a damaged attenuator in the work. Replace at your expense, an attenuator damaged from an impact during work.