

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 1
REVISED 7/31/05

Maintenance of Traffic Special Provisions

General

- (1) The purpose of this portion of the Special Provisions is to set forth the traffic control requirements necessary for the safe and efficient maintenance of traffic within work areas, and to minimize any inconveniences to the traveling public and the Contractor and/or Permittee.
- (2) Proper traffic control through work areas is essential for insuring the safety of the traveling public and of highway workers. Public safety and that of highway workers has the highest priority of all tasks within this project. The proper application of the approved Traffic Control Plan (TCP) will provide the desired level of safety. By agreeing to undertake this project, the Contractor and/or Permittee recognizes the need for proper traffic control.
- (3) Throughout these Special Provisions, any mention of the TCP shall be implied to include any combination of Typical Traffic Control Standards which form the overall TCP for this project which has been approved by the appropriate SHA Traffic Engineer.
- (4) The Contractor and/or Permittee shall be required to adhere to the provisions of the Manual on Uniform Traffic Control Devices (MUTCD), 2003 Edition, and to Section 104 of the Maryland DOT Standard Specifications for Construction and Materials (January, 2001); including all revisions and supplements to each, and the State of Maryland Book of Standards for Highway and Incidental Structures. The Standard Specifications and Book of Standards are available at www.marylandroads.com.
- (5) The Contractor and/or Permittee shall be required to adhere to the requirements set forth in the TCP and these Special Provisions, unless otherwise directed by the Engineer. Any requests to make minor changes to the TCP or the Special Provisions with regard to the traffic control items shall be made in writing to the Engineer a minimum of three (3) working days prior to the proposed scheduling change. The Contractor and/or Permittee shall have written approval of the Engineer prior to the implementation of any change.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 2
REVISED 7/31/05

General (con't)

- (6) No work shall begin on any work activity or work phase until all required traffic control patterns and devices indicated on the TCP for that activity or phase are completely and correctly in place and have been checked for approved usage.
- (7) General and specific warning signs shall only be in place when specific work tasks and activities are actually underway or conditions exist that pose a potential hazard to the public, and any additional signing has been approved by the appropriate SHA Traffic Engineer.

NOTE: The practice of placing signing and other traffic control devices in addition to those indicated on the approved TCP is not permitted.

- (8) The Contractor and/or Permittee shall provide, maintain in new condition, and move when necessary, or as directed by the Engineer, all traffic control devices used for the guidance and protection of motorists, pedestrians, and workers.
- (9) All traffic control devices required by the TCP shall be kept in good condition, fully performing as set forth in the TCP, the MUTCD, and/or Section 104 of the Specifications. For reflective devices, a particular device is assumed to have failed to meet minimum operational standards when the device no longer has retro-reflectance capability of at least 60% of the specified minimum value over at least 90% of the visible reflective surface.
- (10) All traffic control devices not required for the safe conduct of traffic shall be promptly removed, completely covered, turned away from traffic, or otherwise taken out of service. It is intended that no traffic control device is to be in service when there is no clear cut reason for the device.
- (11) Throughout the period(s) of work activities, traffic shall be maintained by implementing the approved TCP. In lieu of the TCP prepared for this project, and/or individual Typical Traffic Control Standards, the Contractor and/or Permittee has the option of preparing and submitting a TCP, wholly or in part, of his own design, following guidelines set forth in the MUTCD and prescribed by the Administration. A TCP developed by the Contractor and/or Permittee shall not be implemented until advance written approval is obtained from the Engineer. TCP's may be implemented within a single project or jointly between two or more projects. In situations where TCP's are jointly implemented, care shall be exercised to present correct and non-conflicting guidance to the traveling public.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 3
REVISED 7/31/05

General (con't)

- (12) Throughout these Special Provisions, where speed of traffic is noted, this means the posted speed or prevailing travel speed, whichever is higher, unless otherwise noted.
- (13) Traffic shall be maintained at all times throughout the entire length of the project, unless otherwise noted. No travel lane(s) other than those designated for possible closure in the TCP shall be closed without obtaining prior approval from the Engineer. All ingress and egress to the work area by the Contractor and/or Permittee shall be performed with the flow of traffic.

Traffic Manager (TM)

- (1) The Contractor and/or Permittee shall be required to submit to the engineer the name of the person he designates as his TM for this project prior to any work being done. The TM shall be responsible for properly implementing and maintaining the TCP as well as conducting regular day and night inspections of the traffic control devices and overall traffic operations. The TM shall work closely with SHA staff on all matters pertaining to traffic control throughout the traffic control work area(s). The TM shall be responsible for coordination between adjacent and nearby work area operations to assure that inappropriate and/or conflicting traffic control devices are not displayed. Refer to Section 104.18 of the Specifications for more information on the subject of the TM.

Work Restrictions

- (1) The SHA reserves the right to modify and/or expand the methods of traffic control specified and to restrict working hours if, in the opinion of the Engineer, the Contractor and/or Permittee's operations are a detriment to the safe and efficient flow of traffic.
- (2) With an approved TCP, and with the appropriate traffic patterns and traffic control devices implemented, the Contractor and/or Permittee may be permitted to work between sunrise and sunset; however, travel lanes shall not be blocked or adversely affected by the Contractor and/or Permittee's operations during the hours of 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m. daily. The Contractor and/or Permittee shall notify the District Utility Engineer, or Resident Maintenance Engineer of the day, time, route and location, (where work will take place), direction, lane(s) to be closed, type of work, traffic control plan typical to be used for such work, as well as the Contractor and/or Permittee's name. All travel lanes shall be restored at the end of each day unless set forth in these Special Provisions or permitted by the Engineer.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 4
REVISED 7/31/05

Work Restrictions (con't)

- (3) Generally, work is not permitted on Saturdays, Sundays, National or State holidays, or days preceding the following said holidays, unless otherwise allowed by the Engineer. All equipment, barricades, etc., shall be removed from the roadway and full traffic capacity maintained throughout periods of partial shutdown or extended periods of no work being performed (including lunchtime and overnight periods). See "Storage of Equipment and Materials" subtitle for requirements and restrictions.
- (4) On expressways/freeways, all Contractor and/or Permittee's equipment shall enter on and exit from the roadway at interchanges or legally allowed public-use crossovers; not on or across grass medians or crossovers signed to prohibit such use by the general public.

Temporary Traffic Signs:

- (1) The signing shall conform to MUTCD or the Administration's Standard Highway Sign Booklet (SHSB). All work area warning signs shall be 48 x 48 in. unless otherwise specified. The SHSB may be obtained from our web site at www.marylandroads.com. Designs of signs not included in the SHSB may be prepared by the Contractor in sketch form, to scale, and approved by the Engineer or the sign designs may be obtained upon seven day request from the Office of Traffic and Safety. Requests shall be directed to the Engineer in writing.
- (2) Special care shall be exercised to properly space signs along the highway to ensure that traffic is provided adequate sight distance to both work zone signs and existing signs. When a sign is not indicative of actual conditions such as during periods of temporary shutdown or extended periods of no work being performed (including lunchtimes and overnight periods), the Contractor shall remove the entire work zone setup and remove the sign, turn it away from all traffic (turning parallel to traffic is prohibited), or completely cover it with an opaque material that is approved by the Engineer. This will not be required for nonwork periods of time up to one hour.
- (3) Signs that will be in place for more than three working days shall be mounted on two 4 x 4 in. wood posts unless otherwise specified. The height of the sign shall be as specified in the Contract Documents. Additional bracing of signs is prohibited. The tops of the wood posts shall not protrude more than 3 in. beyond the nearest edge of the sign. Wood posts 4 x 4 in. shall be placed a minimum of 4 ft. into the ground. Wood posts 4 x 6 in. shall be placed a minimum of 5 ft. into the ground.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC -5
REVISED 7/31/05

Temporary Traffic Signs (con't)

- (4) Signs on portable supports for temporary conditions shall be mounted so that the bottom of the sign shall not be less than 1 ft. above the roadway pavement elevation. Portable sign supports shall be self-erecting, able to withstand a wind velocity of 70 mph, and shall be able to maintain themselves within five degrees rotation around their vertical axis.

Specific Signing Instructions

- (1) PAVEMENT DROP-OFF signs shall be placed in advance of any pavement drop-off, and spaced at appropriate intervals throughout the area of any pavement drop-off. The Permittee should reference Maryland Standard No. 104.00-14 for information on traffic control for pavement drop-offs.
- (2) In areas where longitudinal paving joints are left exposed to traffic, warning signs shall be erected indicating UNEVEN PAVEMENT. They shall be placed in advance of the uneven joints and spaced at appropriate intervals throughout the area of the uneven joint. In areas of exposed lateral paving joints, the warning sign message shall be BUMP (W8-1). When milling a pavement (removing the top layer to smooth the roadway) a ROUGH ROAD (W8-8) sign or a GROOVED PAVEMENT (W8-8a) sign shall be the warning message.
- (3) Along two and three-lane, two-way roadways where a standard centerline is not provided and passing is not permitted (due to resurfacing, etc.), DO NOT PASS (R4-1) signs shall be erected at the beginning of such zones along the right side and at appropriate intervals throughout the project. A NO PASSING ZONE pennant (W14-3) shall be erected at the beginning of such zones on the left-hand side of the roadway across from the first DO NOT PASS sign. The NO PASSING ZONE pennants shall be used only at the beginning of such zones and shall not be placed at intermediate points throughout the zone. The Permittee should reference Maryland Standard No. 104.06-10 for additional information on temporary pavement markings for no passing zones.
- (4) When complete pavement markings are not in place, and passing is permitted, sign(s) shall be erected indicating WARNING: PASSING ZONES UNMARKED-NEXT X MILES (W14-3a). These signs shall be placed in advance of the unmarked zone and at appropriate intervals throughout the unmarked zone where passing is permitted.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 6
REVISED 7/31/05

Pavement Markings:

(1) Glossary:

- Permanent - not intended for removal or modification.
- Temporary - intended for removal or modification.
- Short term - less than standard marking for use not longer than 2 weeks.
- Full dimension - marking fully meeting the width, length and spacing requirements of the MUTCD.

- (2) A full complement of full dimension pavement markings shall be used in work areas unless temporary, short term and/or less than full dimension pavement markings are specified or directed by the Engineer. These short term pavement markings may be used for a period of two weeks and are described below.
- (3) When permanent and/or full dimension pavement markings cannot be placed, temporary short term pavement markings shall be installed along all centerlines and lane lines at the end of each day's paving operations. The temporary lane line markings and the centerline markings along two (2) and three (3) lane roadways shall consist of, as a minimum, a single four (4) foot segment spaced at forty (40) foot intervals (4' pavement marking strip, 36' gap). These markings shall be the same colors as would normally be used for permanent markings.
- (4) Temporary centerline markings along roadways of four (4) or more lanes without a median are to be marked as follows:
- (4a) - Two (2) or more lanes in each direction with no reversible lanes - double solid yellow centerline
 - (4b) - Two (2) or more lanes in each direction with reversible lanes - double dashed yellow lane lines fully meeting MUTCD length and spacing requirements.

SPECIAL PROVISIONS
TRAFFIC - 7
REVISED 7/31/05

Pavement and Markings (con't)

- (4c) - Two (2) or more lanes in each direction with a continuous two-way left turn lane - demarcate with channelizing devices, drums or barricades, unless otherwise specified or directed by the Engineer. The channelizing devices (spaced a maximum of 200 feet apart) shall separate opposing flows of traffic and yet still permit the fifth lane to be used for storage of turning vehicles.
- (5) No passing zones shall be marked and signed as provided for in the MUTCD and SHA Standards, and these Special Provisions as noted under Specific Signing Instructions. No Passing Zones may be identified by using signs rather than pavement markings for a period of time not to exceed seven days.
- (6) For lane drops or mandatory turn lanes, correct pavement marking symbols shall be placed or a combination of channelizing devices and signs shall be used to clearly convey the regulation to the motorists.
- (7) In the rare instances where it is impossible or impracticable in the Engineer's judgment to place temporary pavement markings, channelizing devices and signing may be used to provide the travel path alignment for traffic passing through the work area.
- (8) Pavement marking line widths for all conditions shall be as follows:
- Lane Lines 5" wide
 - Centerlines 5" wide
 - Edge Lines 5" wide, except that lines may be 10" if traffic engineering study indicates such a need.
 - Gore Marking 10" wide

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 8
REVISED 7/31/05

Channelizing Devices

- (1) When channelizing traffic, the Contractor and/or Permittee shall meet all of the requirements specified in Section 6C and 6F of the MUTCD and Maryland Standard No. 104.00-10. Special attention shall be given to providing adequate tapers, as specified in Section 6C-08 of the MUTCD. Maximum spacing for channelizing devices in a taper is equal, in feet, to the posted speed limit. Maximum spacing for channelizing devices in a tangent is equal, in feet, to twice the posted speed limit. Example - posted speed limit 55: maximum spacing in a taper = 55 feet; maximum spacing in a tangent = 110 feet. Channelizing devices shall be spaced at closer intervals (typically 25 feet) to define interchange gore areas or other unusual highway alignments.
- (2) The Contractor and/or Permittee shall provide a sufficient number of channelizing devices to delineate the desired travel path. Unless otherwise specified or permitted, channelizing devices shall be traffic cones, plastic drums, Type I, Type II, and/or Type III barricades. Channelizing devices that become discolored, dirty, or damaged shall be cleaned, repaired, or replaced as required at the expense of the Contractor and/or Permittee.
 - (2a) Temporary concrete barrier (TCB) is not considered a primary channelizing device but may have a secondary function as such.
- (3) Traffic cones shall be a minimum of 28 inches in height, have an inside cone base diameter of 10", with the predominant color being orange and shall meet all of the applicable requirements specified in Section 6F of the MUTCD and Maryland Standard Specifications. If cones are used during darkness, they shall be reflectorized as per Section 6F of the MUTCD. Stricter reflectorization standards for cones became effective December 31, 1989. Retroreflection of cones shall be provided by a minimum 6 inch wide white band placed a minimum of 3 inches but no more than 4 inches from the top and shall be supplemented with an additional 4 inch white band spaced a minimum of 2 inches below the 6 inch band. Traffic cones shall be kept upright at all times utilizing stacked cones, collar weights, or other acceptable means for stabilization. The Contractor and/or Permittee shall be responsible for conducting periodic inspections to insure that all traffic cones remain in an upright position.

SPECIAL PROVISIONS (DEAP'S)

TRAFFIC--9

REVISED 7/31/05

Channelizing Devices (con't)

- (4) Drums shall be 36 inches in height, with a minimum diameter of 18 inches, and made of plastic. The markings on drums shall be horizontal, circumferential, 6 inch wide, alternate reflective bands (orange and white). The top stripe shall be orange.
- (5) Type II barricades shall be 36 inches in height and 24 inches in width (minimum) with 12 inch rails. Type II barricades may be used on all types of highways.
- (6) Other barricades uses in work zones are Type I and Type III Barricades. Type I barricades meeting the above design requirements may be used on conventional roads such as two lane/two-way, or multi-lane undivided highways. For all roadway closures, Type III barricades 5 feet high (minimum) and 4 feet wide (minimum) with 12" rails shall be used. All barricades shall meet the applicable requirements specified in Section 6F of the MUTCD.
- (7) The markings on the rail of Type I, Type II, and Type III barricades vary in width and shall be as specified in the MUTCD. Barricade rail stripes shall slope downward at an angle of 45 degrees in the direction traffic is to pass. Where a barricade extends entirely across a roadway, it is desirable that the stripes slope downward in the direction toward which traffic must turn in detouring. Where both right and left turns are provided for, the chevron striping may slope downward in both directions from the center of the barricades.
- (8) TCB, when serving a secondary function as a channelizing device, shall meet all of the applicable requirements specified on Section 6F of the MUTCD. Generally, warning lights shall not be used on TCB. The Permittee should reference Maryland Standard No. 104.01-23, 104.01-24, 104.01-25 and 104.01-26.
- (9) Refer to Section 104.12 of the Specifications for more information on the subject of drums.

Lighting Devices

Warning Lights

- (1) The Contractor and/or Permittee shall be responsible for assuring that all warning lights, Whenever used or required, are in good working condition and are operated and maintained as specified in Section 6F of the MUTCD, Section 104.02 of the 2001 Edition of the Standards Specifications and Maryland Standards 104.00-14.

SPECIAL PROVISIONS (DEAP'S)

TRAFFIC - 10

REVISED 7/31/05

Warning Lights (con't)

- (2) Warning lights and flags may be used on warning signs, as required by the TCP, these Special Provisions, or as directed by the Engineer. During hours of darkness, any channelizing device used to warn of a spot hazard shall have one (1) Type A Low-Intensity Flashing Warning Light attached to its traveled side. Two (2) Type A Low-Intensity Flashing Warning Lights shall be attached to each Type III barricade.
- (3) Generally, warning lights are not required on channelizing devices, including TCB.

Arrow Panels (AP)

- (4) AP's shall meet all of the applicable requirements specified in Section 6F of the MUTCD and Section 104.07 of the Standard Specifications. AP's shall only be used to supplement other required traffic control devices. AP's shall be used in the "Arrow" mode only when closing a through travel lane on a multi-lane roadway. Only one AP in the "Arrow" mode shall be used for each stationary lane closure. Moving work operations may utilize one or more AP's for a single lane closure. Care shall be taken in the placement of AP's to avoid driver confusion in the vicinity of ramps, median crossovers, and side road intersections.
- (5) AP's shall be aimed at approaching traffic to insure that the minimum legibility distance, as specified in Section 6F of MUTCD, is met. Every attempt shall also be made to erect AP's so that the arrow is level in relation to the roadway.
- (6) All AP's shall have both manual and automatic dimmer devices installed that are capable of reducing the light intensity by 50 percent. These dimmer devices shall be adjusted as necessary to reduce the AP's light intensity so that the arrow mode is clearly visible after sunset, but does not blind oncoming traffic.
- (7) For stationary lane closures, the AP shall be placed on the shoulder at the beginning of the taper (nearest to oncoming traffic); or, where there are narrow or no existing shoulders, in the closed lane behind the channelizing devices as near to the beginning of the taper as possible. Placement at the beginning of the taper is preferred to placement in the middle of the taper.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 11
REVISED 7/31/05

Arrow Panels (con't)

- (8) For moving maintenance type activities along multi-lane highways where a lane is closed, It is preferable that the AP be placed at the rear of the activity in the closed lane on a vehicle separate from the maintenance vehicle itself. For paint striping-type activities, additional vehicles with AP's in the arrow mode, may be required to supplement this work operation to discourage motorists from entering the closed lane and reduce paint tracking. AP's shall always remain upstream of the maintenance vehicle where adequate recognition distance is available. The vehicle(s) carrying the AP(s) shall also be equipped with signing and lighting, as required by the standard TCP's.
- (9) AP's shall only display the "Caution" mode for lane closure on a two-lane/two-way roadway, or for a shoulder closure on any roadway. The "Caution" mode on an AP shall show only one (1) light in each corner of the AP rather than a straight bar or horizontal line of lights. AP's shall not be flashed in the "Arrow" mode for the above situations.

Flaggers

- (1) The Contractor and/or Permittee shall provide flaggers when specified or required for the various TCP's and/or when directed by the Engineer. All flaggers shall wear an approved reflective vest. They shall be equipped and instructed in accordance with Section 6E of the MUTCD and Maryland Standard No. 104.00-12. They shall utilize two-way radios whenever they are not within sight distance of each other or when so directed by the Engineer. Flaggers shall use STOP/SLOW paddles. Paddles shall be a minimum of 24" x 24" in size with letters at least 8 inches high. Standard paddle sign designs are in the SHA Standard Highway Sign Booklet.
- (2) Refer to Section 104.15 of the Specifications for more information on the measurement and payment of flaggers.

Existing Regulatory, Warning and Guide Signs

- (1) Existing signs within the limits of the project shall only be removed with advance written approval from the Engineer. Existing signs are to be relocated if possible, but in the event that signs are removed, they shall be replaced as soon as the specific work activity allows. The Contractor and/or Permittee shall be required to replace immediately any existing signs misplaced or damaged by his operations during work on this project.

SPECIAL PROVISIONS (DEAP'S)
TRAFFIC - 12
REVISED 7/31/05

Storage of Equipment and Materials

- (1) No equipment or materials shall be stored or permitted to stand in unprotected areas (areas without the protection that traffic barriers afford or open areas within 30 feet from where traffic is being maintained). However, Contractors may install equipment or material behind traffic barriers or in areas greater than 30 feet from where traffic is maintained.
- (2) The Contractor and/or Permittee's employees shall not be permitted to park their vehicles within the right-of-way limits of the through roadway except in protected areas or areas greater than 30 feet from the traveled roadway. All storage/parking areas shall have advance written approval from the Engineer.
- (3) Storage equipment and materials may be permitted closer than 30 feet, subject to the following restrictions:
 - (3a) - Temporary traffic barrier shall be in place prior to storage of any materials or equipment. This traffic barrier will have a configuration and length as directed by the Engineer.
 - (3b) - No equipment or material shall be permitted to stand within a four (4) foot distance behind the face of any section of traffic barrier.
- (4) All areas used for storage of equipment shall be restored to their original condition immediately upon completion of this work by regrading or placement of topsoil, seeding and mulching.