



**NOTES:**

FLAGGERS

1. Flaggers, one for each direction, shall be used to control traffic continuously for as long as a one lane operation is in effect. The flaggers shall be able to communicate with each other at all times.

LENGTH OF CLOSURE

2. Several small work areas close together should be combined into one work zone. However, the closure shall not be more than 2000' long unless approved by the Engineer. The minimum length between closures shall be 2000'. Only one side of the road shall be closed in any one work zone.

SIGN LOCATION AND SPACING

- 3A. The minimum spacing between work zone signs is shown in Table 1. Maximum spacing should not be greater than 1.5 times the distances shown in Table 1.

- 3B. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs should be 400' for speeds of 50 mph or greater.

- 3C. The location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.

ADJUSTMENTS FOR SIGHT DISTANCE

4. The location of the flagger station and the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.

BASIC SIGNING

- 5A. ROAD WORK AHEAD (W20-1) signs shall be provided on entrance ramps or roadways entering the work limits.
- 5B. END ROAD WORK (G20-2) signs are only required for lane closures of more than 1 day. If it is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits.

- 5C. Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any ROAD WORK AHEAD (W20-1) or END ROAD WORK (G20-2) sign which falls within the limits of another Traffic control zone shall be omitted or covered during the period when both projects are active.

SIGNING DETAILS

- 6A. The Advisory Speed (W13-1P) plaque shall be used when specified in the plan.
- 6B. 36" warning signs may be used when the approach speed limit is 40 mph or less.

FLASHING WARNING LIGHTS

7. Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) signs and on the LANE CLOSED AHEAD (W20-5) signs are required whenever a night lane closure is necessary.

DRUMS / CONES

- 8A. Drum spacing shall be as follows:

- a) Spacing along the closure shall be 40' center-to-center.
- b) Spacing along the approach taper shall be 10' center-to-center.

- 8B. Cones may be substituted for drums as follows:

- a) Cones used for daytime traffic control shall have a minimum height of 28".
- b) Cones used for nighttime traffic control shall have a minimum height of 42".
- c) Use of cones at night shall be prohibited along tapers.

- 8C. Provisions shall be made to stabilize the cones and drums to prevent them from blowing over.

- 8D. A minimum of two drums shall be used to close the paved shoulder.

(RESERVED FOR FUTURE USE)

- 9A. (intentionally blank)

AREA ILLUMINATION

- 10A. Adequate area illumination of each flagger station shall be provided at night. Use of portable flood lighting is acceptable. Luminaires shall be located adjacent to each flagger station.

- 10B. To ensure the adequacy of floodlight placement and the elimination of glare, the Contractor and the Engineer shall drive through the worksite each night when the lighting is in place. Light placement and shielding shall be adjusted to the satisfaction of the Engineer.

INTERSECTION / DRIVEWAY ACCESS

11. Within the length of closure, provision shall be made to control traffic entering from intersecting streets and major drives as necessary to prevent wrong-way movements and to keep vehicles off of new pavement not ready for traffic. The Contractor shall:

- a) Place across the closed lane, either three drums (cones) or barricades, and/or
- b) Provide an additional flagger at every public street intersection and major driveway.

Drums (cones) placed across the closed lane shall be located 25' beyond the projected pavement edges of the roadway cross-section shown on Standard Construction Drawings (SCD) W-37, W-38, W-39, W-40, W-41, W-42, W-43, W-44, W-45, W-46, W-47, W-48, W-49, W-50, W-51, W-52, W-53, W-54, W-55, W-56, W-57, W-58, W-59, W-60, W-61, W-62, W-63, W-64, W-65, W-66, W-67, W-68, W-69, W-70, W-71, W-72, W-73, W-74, W-75, W-76, W-77, W-78, W-79, W-80, W-81, W-82, W-83, W-84, W-85, W-86, W-87, W-88, W-89, W-90, W-91, W-92, W-93, W-94, W-95, W-96, W-97, W-98, W-99, W-100.

Existing STOP signs shall be relocated as necessary to assure proper location for the Traffic conditions.

The method of control shall be subject to the approval of the Engineer.

SHADOW VEHICLE

- 12A. The shadow vehicle shall be in place and unoccupied whenever workers are in the work area. This vehicle shall be removed from the pavement whenever workers are not in the work area.

- 12B. The shadow vehicle shall be equipped with a high-intensity yellow rotating, flashing, oscillating, or strobe light(s).

- 12C. The vehicle shall be equipped with a truck-mounted attenuator when called for in the plans.

- 12D. Other protective devices may be used in lieu of the shadow vehicle shown when approved by the Engineer.

CHIP SEAL OPERATIONS

13. For chip seal operations, additional signing shall be incorporated in the advanced warning area.

- a) The LOOSE GRAVEL (M8-7) and FRESH TAR (M21-2) signs shall both be used in advance of the chip seal operation.
- b) Repeat the LOOSE GRAVEL sign with a 35 mph Advisory Speed (M13-1) plaque every half mile per CMS 422.03.
- c) The FRESH TAR and the LOOSE GRAVEL signs shall both be used for signing of side roads intersecting the work area.