



NOTES:

SIGNING

- 1A. The existing gore sign, E5-H1 or E5-H1a, shall be covered when the EXIT CLOSED (E5-2a) signs are in place.
- 1B. END ROAD WORK (G20-2) signs are only required for closures of more than 1 day. It is intended that these signs be placed on the mainline, on all exit ramps, and on roadways exiting the work limits. Any END ROAD WORK sign which would fall within the limits of another work zone may be omitted.
- 1C. The work zone sign spacings shown in Table I are minimums. Maximum spacing should not be greater than 1.5 times the distances shown in Table I.
- 1D. The location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.
- 1E. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200' for speeds of 45 mph or less and a minimum of 400' for speeds of 50 mph or greater.
- 1F. An EXIT CLOSED (W20-H15) overlay shall be placed diagonally across all extrusheet guide signs pertaining to the closed exit when the exit is expected to be closed for a minimum of 24 hours.
- 1G. Detour signing shall be provided to direct traffic at locations where the exit ramp is closed for a minimum of 24 hours, as specified in the plans.

DRUMS / CONES

- 2A. Drums shall be spaced at 20' center-to-center.
- 2B. Cones may be substituted for drums as follows:
 - a) Use of cones is permissible for either daytime operation or for nighttime operation, but shall not be used continuously, day and night. Upon completion of work within the work period, the cones shall be removed. They may again be placed on the highway in order to resume work in the following such work period.
 - b) Cones used for daytime traffic control shall have a minimum height of 28".
 - c) Cones used for nighttime traffic control shall have a minimum height of 42".
 - d) Use of cones at night shall be prohibited along tapers.
 - e) Where cones are substituted for drums along tangents, intermixing of channelizing devices within the same run will not be permitted. Either cones shall be used for the entire length of the tangent section, or drums shall be used for the entire run.
- 2C. Provisions shall be made to stabilize the cones and drums per the manufacturer's specifications to prevent them from blowing over.

FLASHING WARNING LIGHTS

- 3. Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) sign and on the EXIT CLOSED AHEAD (E5-H2c) sign are required at night.

BARRICADES

- 4. Barricades shall be provided for all ramp closures which are not protected by portable barrier. See Standard Construction Drawing (SCD) MT-101.60 for details.

PORTABLE BARRIER (PB)

- 5A. A tapered end section may be used in place of the impact attenuator at locations where the last full section of NCHRP 350 PB can be extended outside of the clear zone for approaching traffic. See Table II for clear zone widths.
- 5B. When used, impact attenuators shall be installed parallel to traffic. Also, the last full section of PB, adjacent to the impact attenuator, shall be located parallel to traffic.
- 5C. For installation procedures, refer to the manufacturer's installation instructions.
- 5D. For details on delineation of PB, see SCD MT-101.70.

TABLE I (SIGN SPACING)

ROAD TYPE	DISTANCE BETWEEN SIGNS (FT)		
	A	B	C
MAJOR CONVENTIONAL	500	500	500
FREEWAY & EXPRESSWAY	1000	1500	2640

TABLE II

SPEED LIMIT (MPH)	SHOULDER TAPER RATE MINIMUM	PB FLARE RATE MINIMUM	CLEAR ZONE WIDTH (E) (FT)
25	4:1	8:1	15
30	5:1	8:1	15
35	7:1	9:1	15
40	9:1	10:1	15
45	15:1	12:1	19
50	17:1	14:1	19
55	19:1	16:1	23
60	20:1	18:1	30
65	22:1	19:1	30
70	24:1	20:1	30

LEGEND

