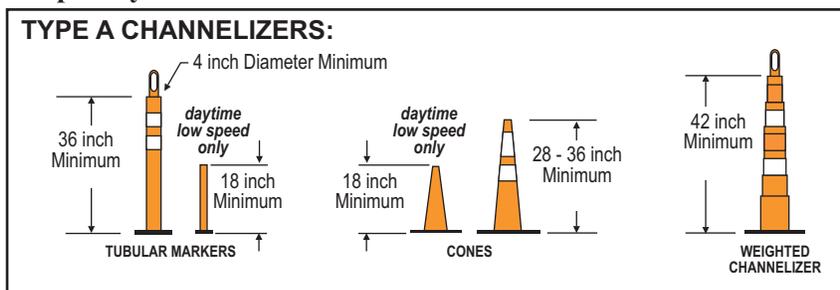


Temporary Traffic Control Distance Charts

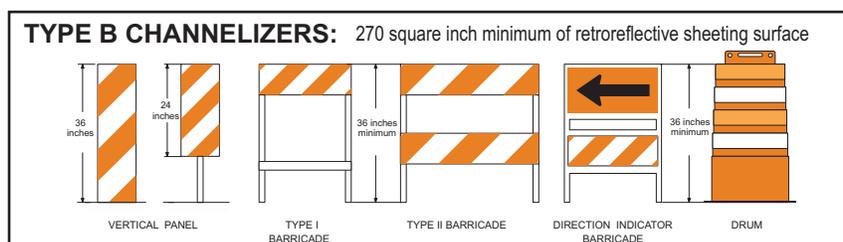
Posted Speed Limit Prior to Work Starting (mph)		Advance Warning Sign Spacing (A) feet	Decision Sight Distance (D) feet	Taper Length (12 ft lane) (L) feet	Shifting Taper (L/2) feet	Typical Shoulder Taper (L/3) feet
0 - 30	G = 25 ft	250	550	200	100	75
35 - 40		325	700	325	175	125
45 - 50	G = 50 ft	600	900	600	300	200
55		750	1200	700	350	250
60 - 65		1000	1400	800	400	275
70 - 75		1200	1600	900	450	300

Posted Speed Limit Prior to Work Starting (mph)	Buffer Space (B) feet	Shadow Vehicle Following Distance (F) feet	Protection Vehicle Roll-Ahead Buffer Distance (with or without TMA) (R)		
			Moving (15 mph max) feet	Stopped feet	
0 - 30	G = 25 ft	200	250 - 550	100	100
35 - 40		305	325 - 700	100	100
45 - 50	G = 50 ft	425	600 - 900	175	125
55		500	750 - 1200	175	125
60 - 65		650	1000 - 1400	225	175
70 - 75		820	1200 - 1600	225	175

Type A channelizing devices are typically used in attended temporary traffic control zones.*

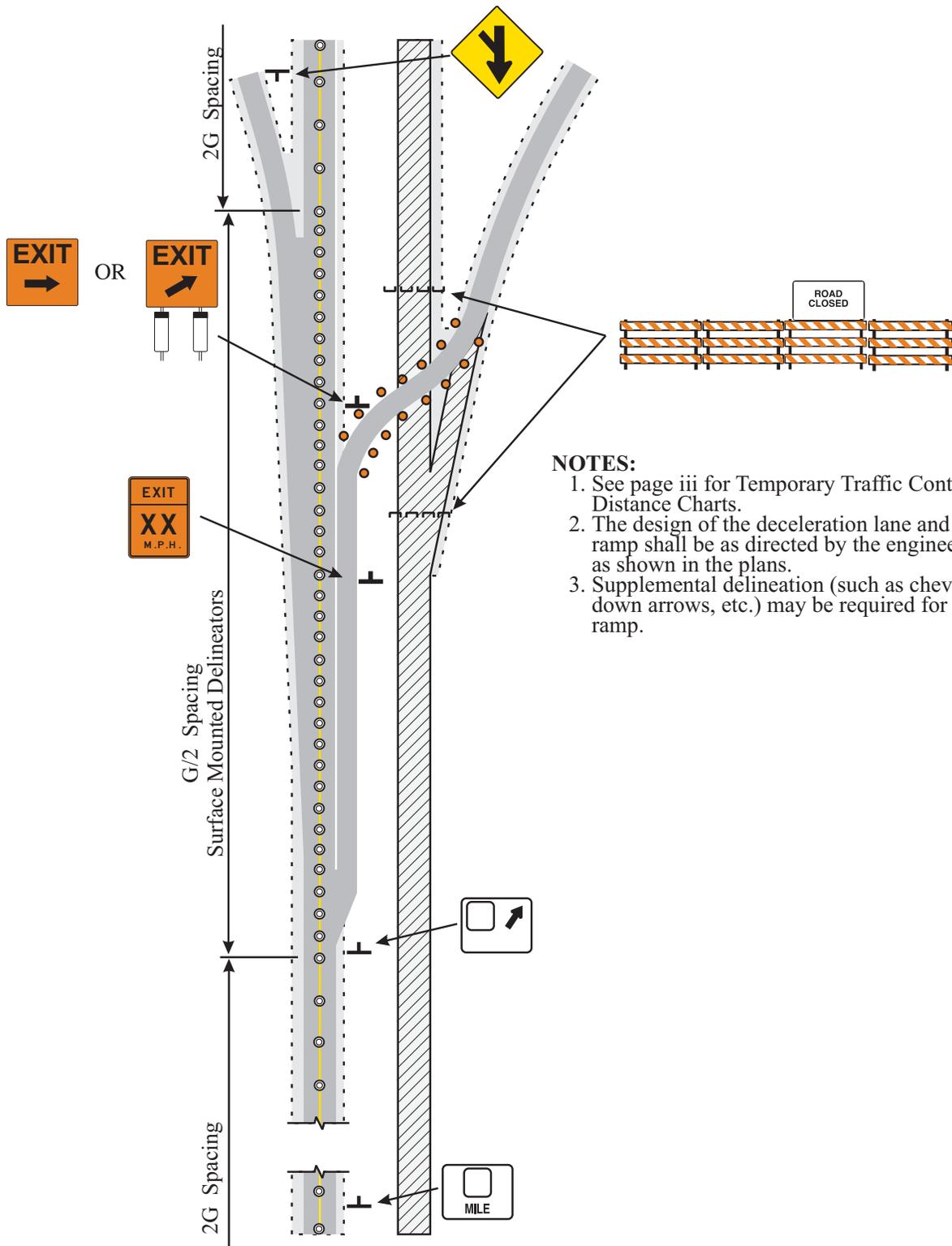


Type B channelizing devices shall be used if the temporary traffic control zone will be installed for more than 12 hours or if it is left unattended.*



* See the MN MUTCD, Part 6F for more details on application restrictions.

Figure 6J-2 Temporary Traffic Control Devices and Distance Charts



NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. The design of the deceleration lane and exit ramp shall be as directed by the engineer or as shown in the plans.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required for the ramp.

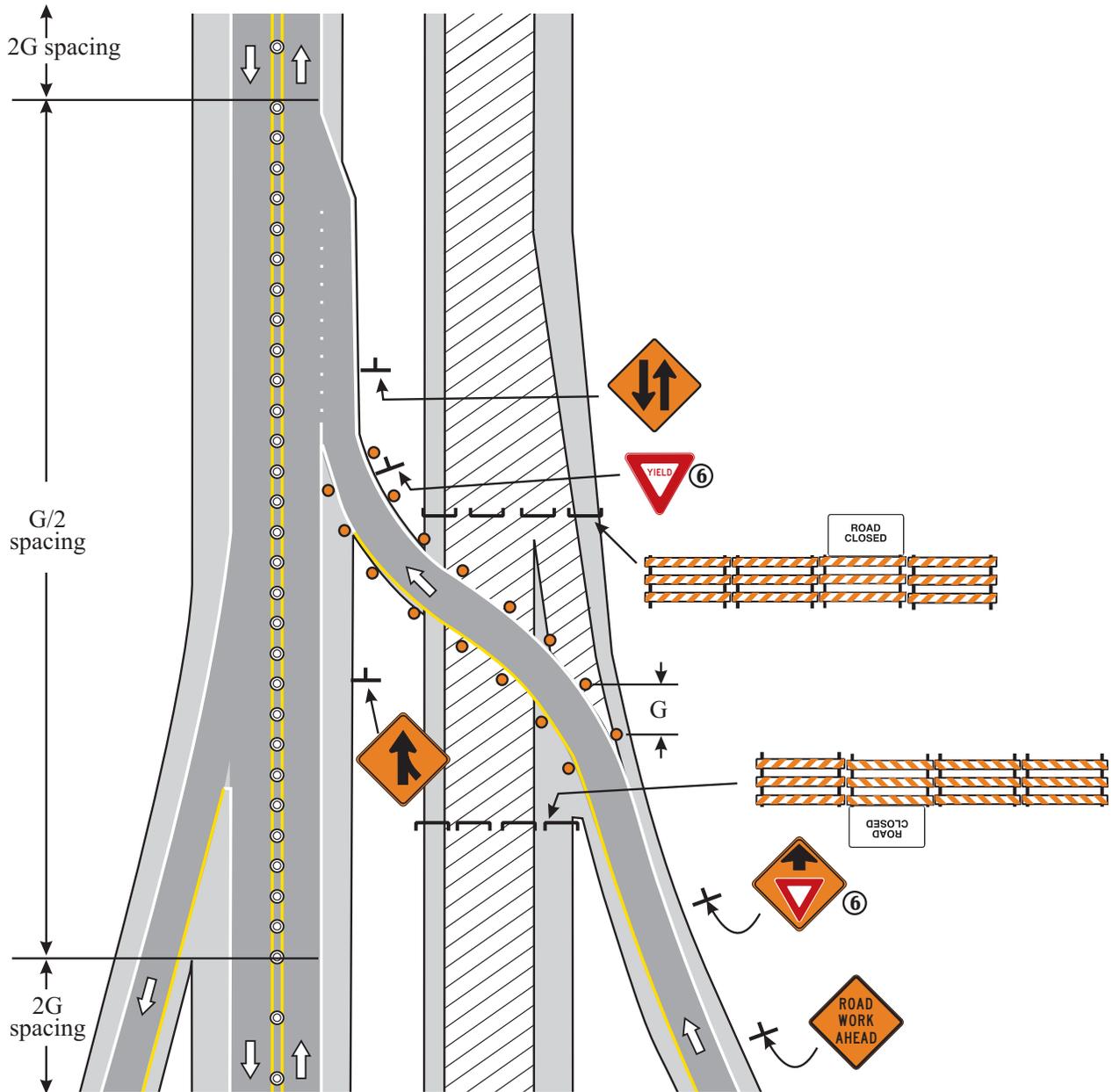
**TWO-LANE, TWO-WAY OPERATION
AT EXIT RAMP ACROSS CLOSED ROADWAY**

LONG TERM

LAYOUT 6J-7

NOTES:

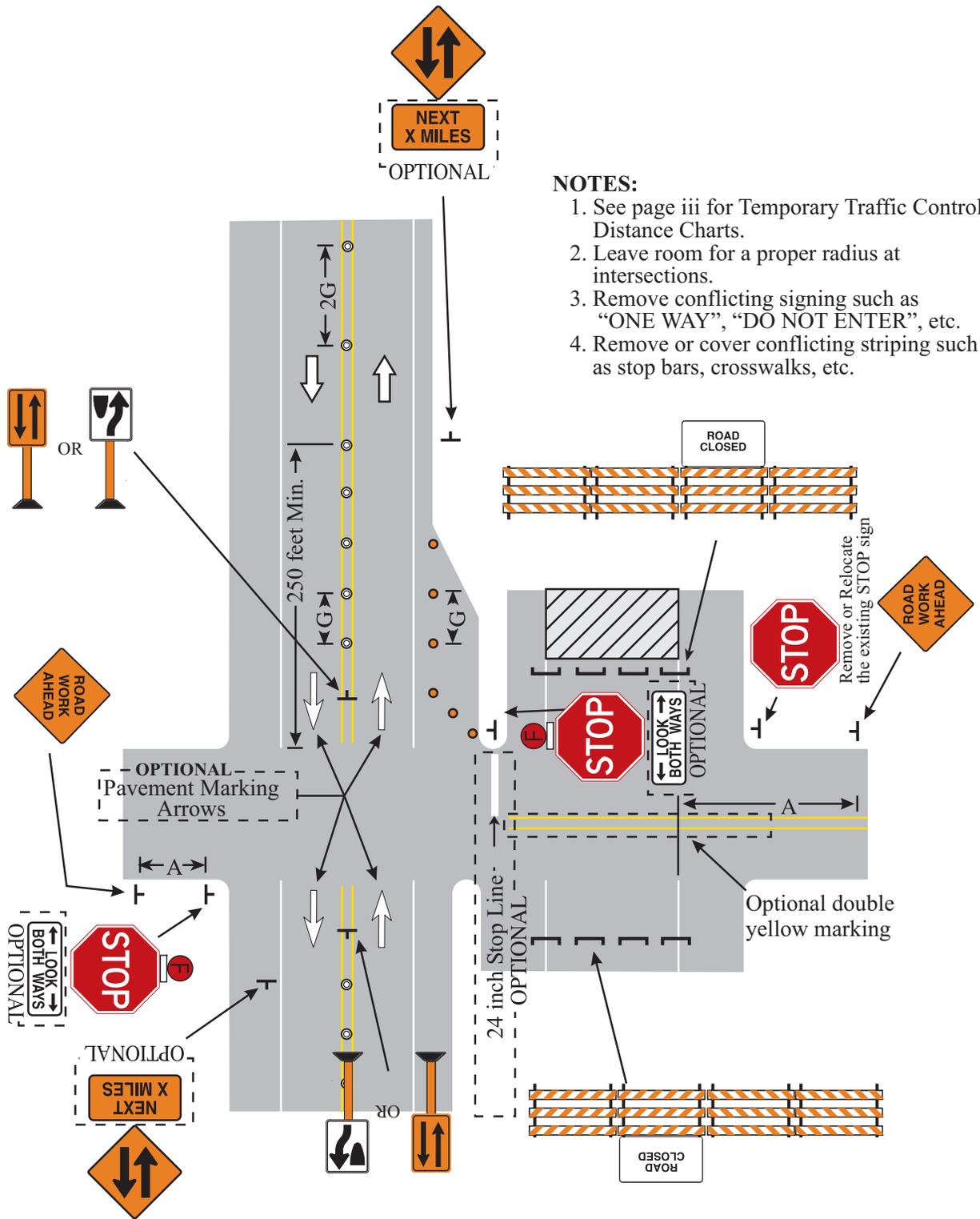
1. See page iii for Temporary Traffic Control Distance Charts.
2. The design of the acceleration lane and entrance ramp shall be as directed by the engineer or as shown in the plans.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required for the ramp.
4. The advance warning sign spacing is dependent on the ramp length and the location of inplace signing. The spacing should be as long as is practical.
5. Remove conflicting pavement markings and install temporary markings (see Figure 6J-1).
6. When an adequate acceleration lane is provided, this sign should be omitted.



**TWO-LANE, TWO-WAY OPERATION
AT ENTRANCE RAMP ACROSS CLOSED ROADWAY**

LONG TERM

LAYOUT 6J-8



NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. Leave room for a proper radius at intersections.
3. Remove conflicting signing such as "ONE WAY", "DO NOT ENTER", etc.
4. Remove or cover conflicting striping such as stop bars, crosswalks, etc.

TWO-LANE, TWO-WAY OPERATION THROUGH TYPICAL INTERSECTION

LONG TERM

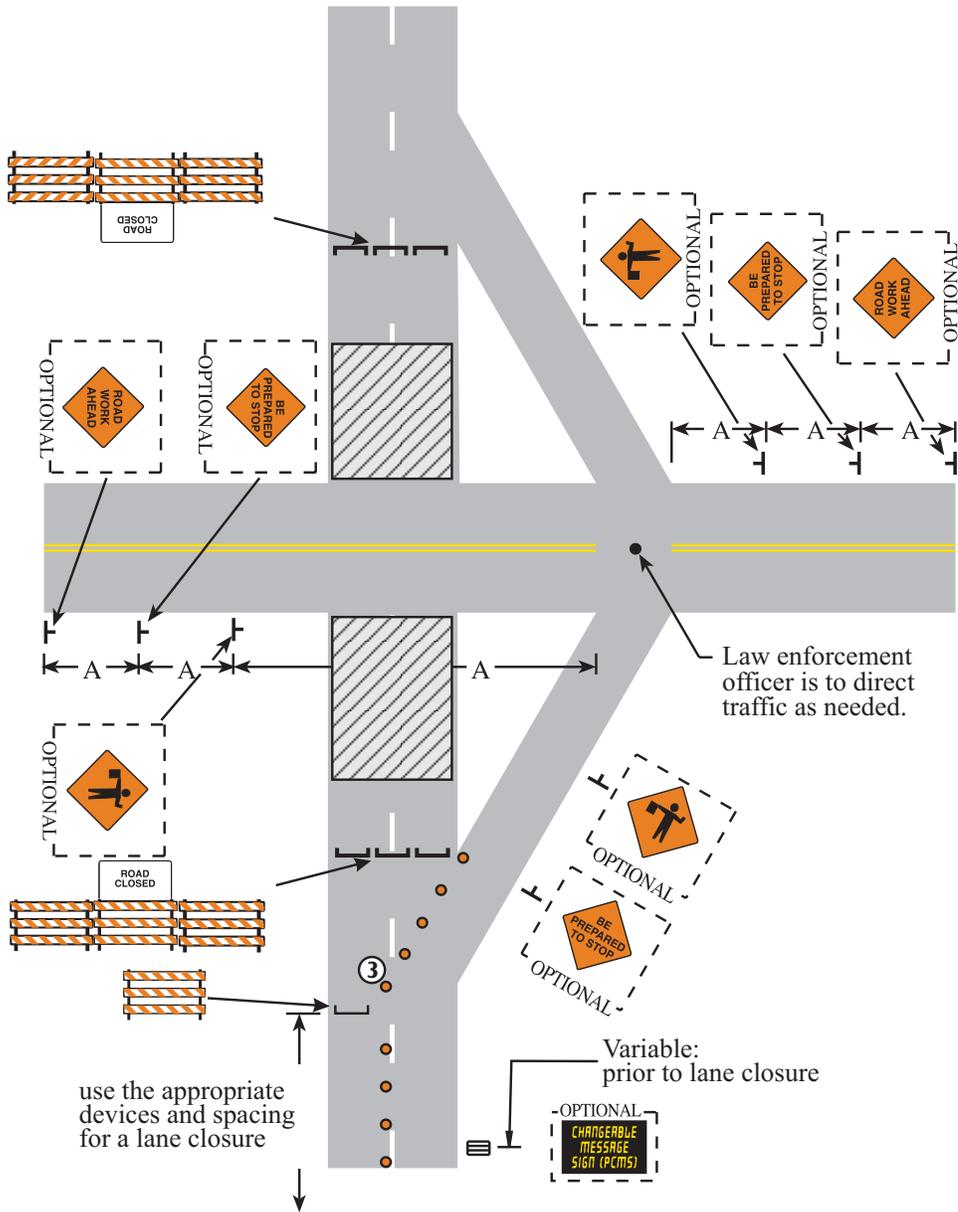
LAYOUT 6J-11

NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. The closed road volume should be below 800-1000 vehicles per hour.
3. Supplemental delineation such as chevrons, down arrows, etc. may be required in the bypass.

MN Rev. 3

MN Rev. 3



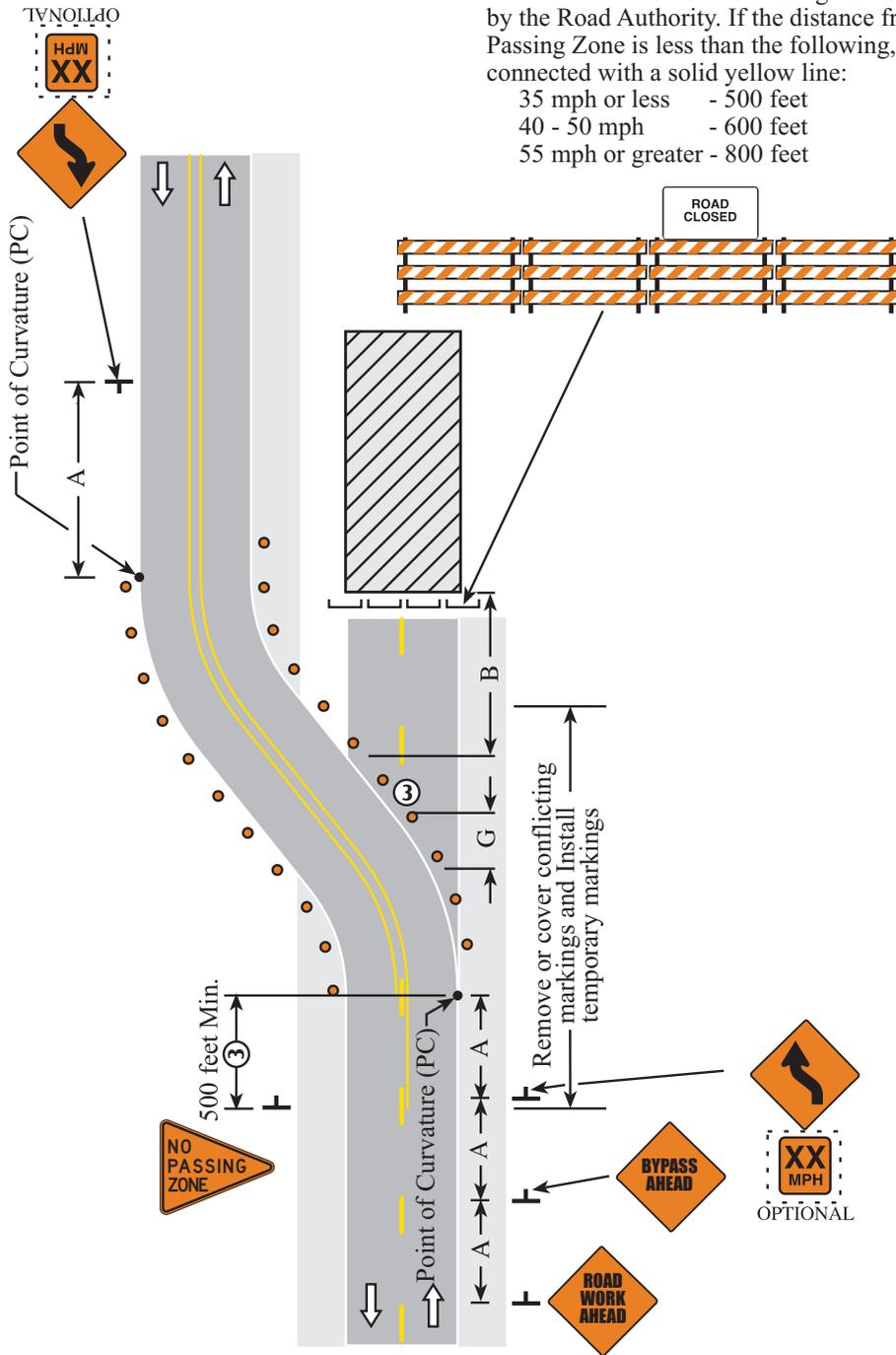
ROAD CLOSURE AT INTERCHANGE

SHORT TERM
LONG TERM

LAYOUT 6J-15

NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. Typical traffic control is shown for one approach only.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required on the bypass.
4. The exact location of No Passing Zones is to be determined by the Road Authority. If the distance from an in-place No Passing Zone is less than the following, the zones shall be connected with a solid yellow line:
 - 35 mph or less - 500 feet
 - 40 - 50 mph - 600 feet
 - 55 mph or greater - 800 feet



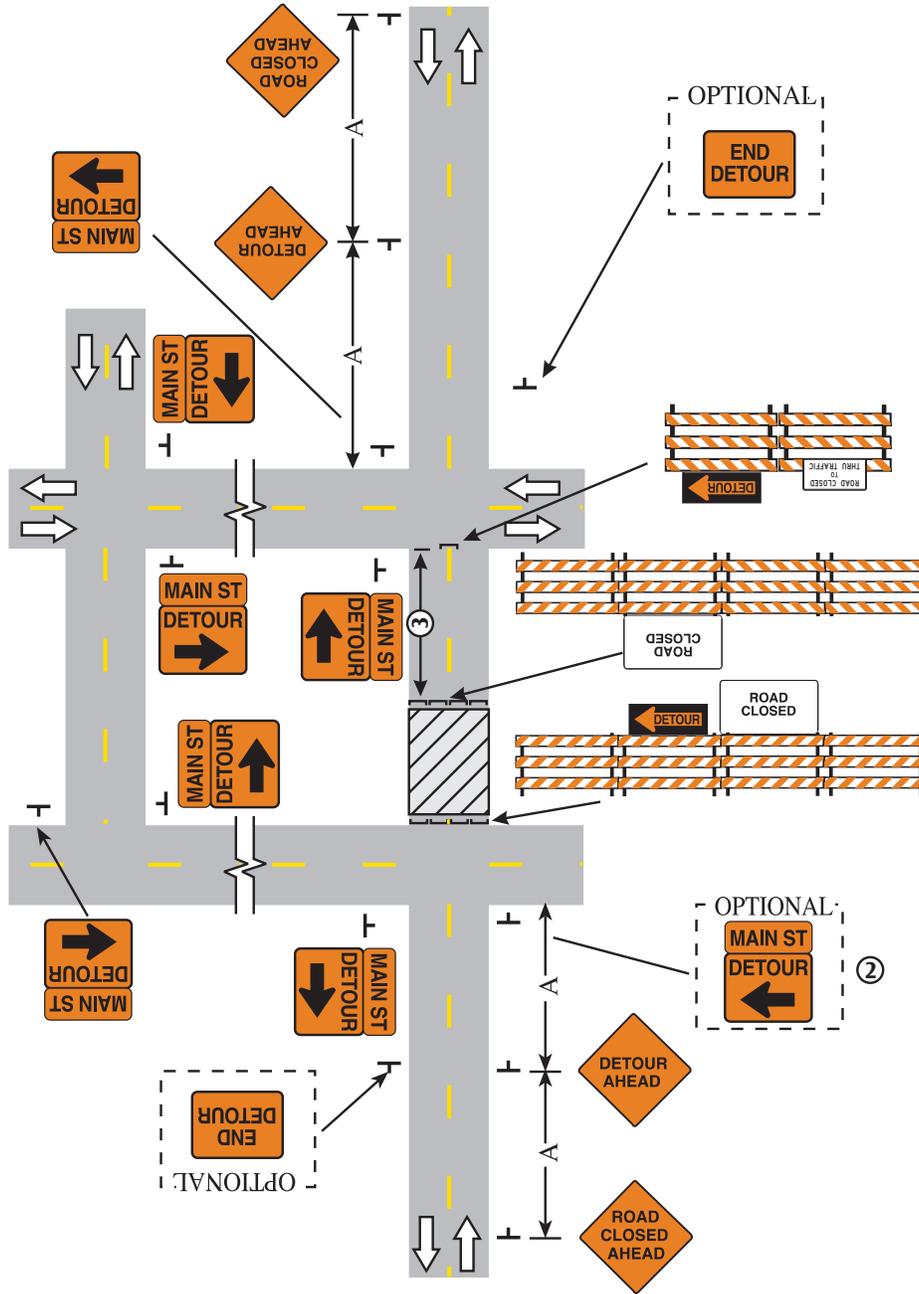
**ROAD CLOSURE WITH DIVERSION (BYPASS)
TWO-LANE, TWO-WAY ROAD**

LONG TERM

LAYOUT 6J-16

NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. A M4-9 Detour Sign with an advance turn arrow may be used in advance of a turn. On multi-lane streets, such signs should be used.
3. See Long Term Layout 6J-20 for devices and spacing.



MIN Rev. 3

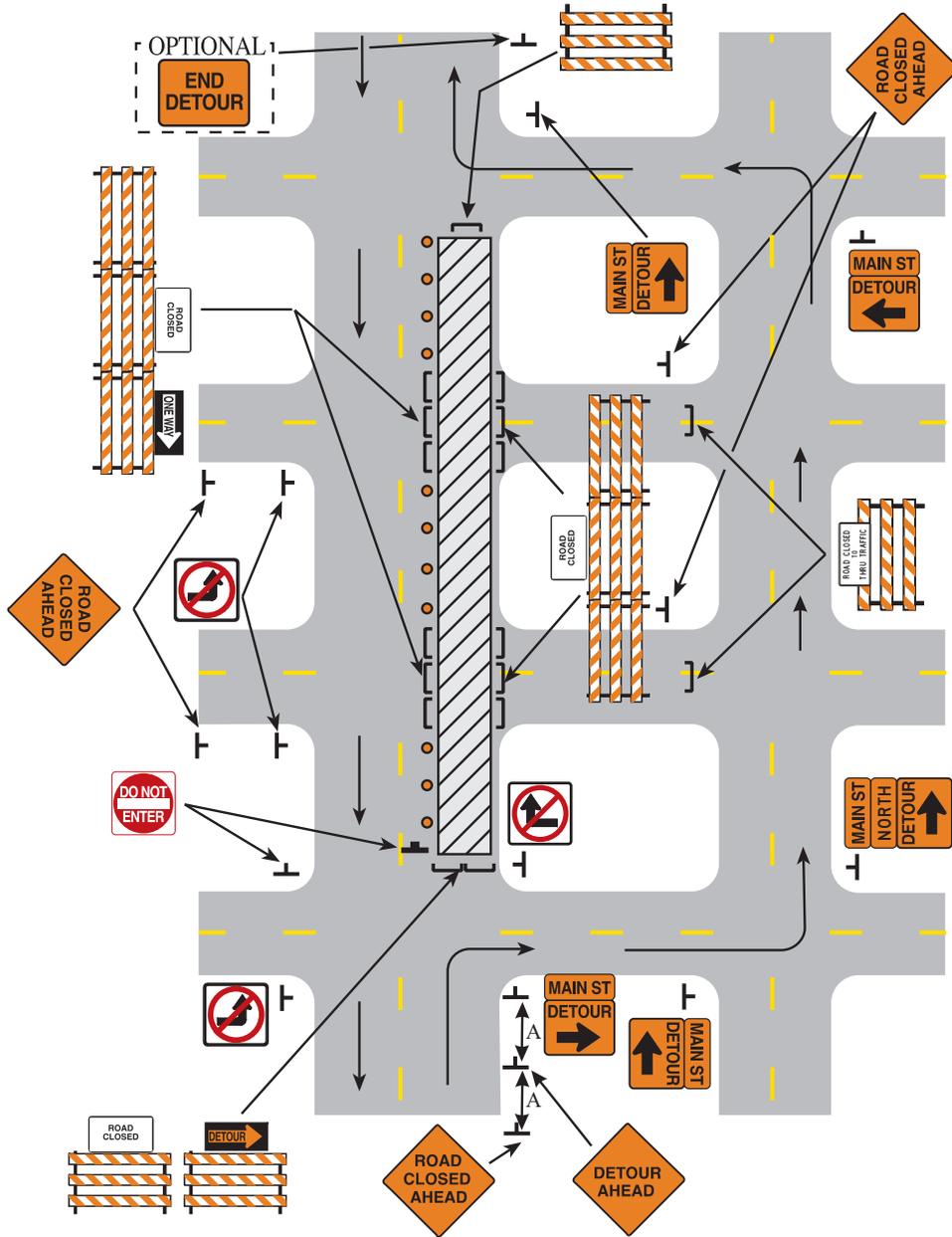
DETOUR FOR CLOSED STREET

LONG TERM

LAYOUT 6J-18

NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. Additional "DO NOT ENTER" signs may be desirable at intersections with intervening streets.
3. For sidewalk and crosswalk closures, see Layouts 6K-24 and 6K-25.
4. Additional side street signs may be required.



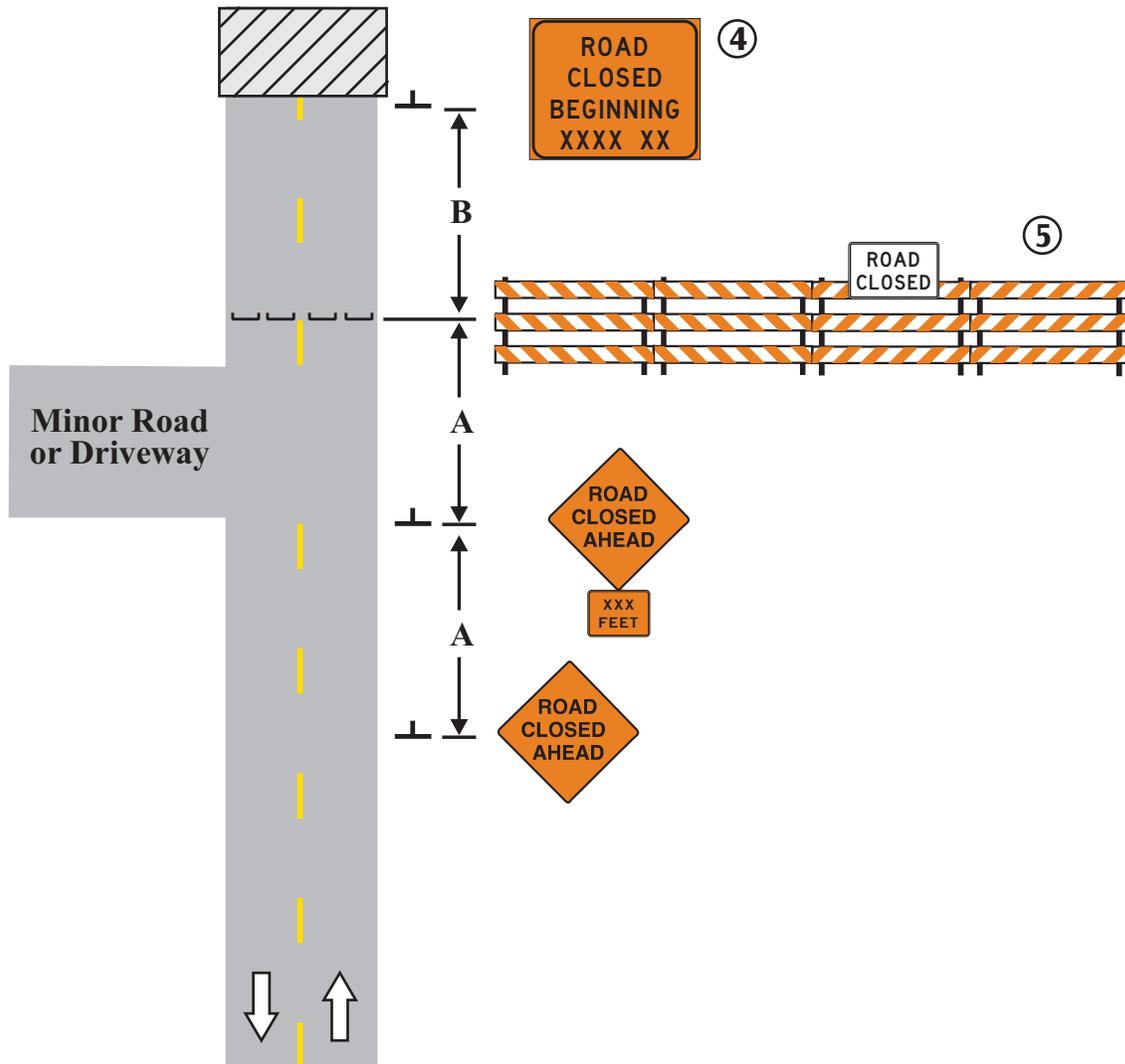
DETOUR FOR ONE TRAVEL DIRECTION

LONG TERM

LAYOUT 6J-19

NOTES:

1. See page iii for Temporary Traffic Control Distance Charts.
2. All devices are shown for one direction. Devices for the other direction should be similar.
3. The Road Authority will determine if a detour is required and specify the detour route.
4. Advance warning signs should be used seven days in advance of the closure.
5. Install at the last driveway or intersection beyond which there is no public access.



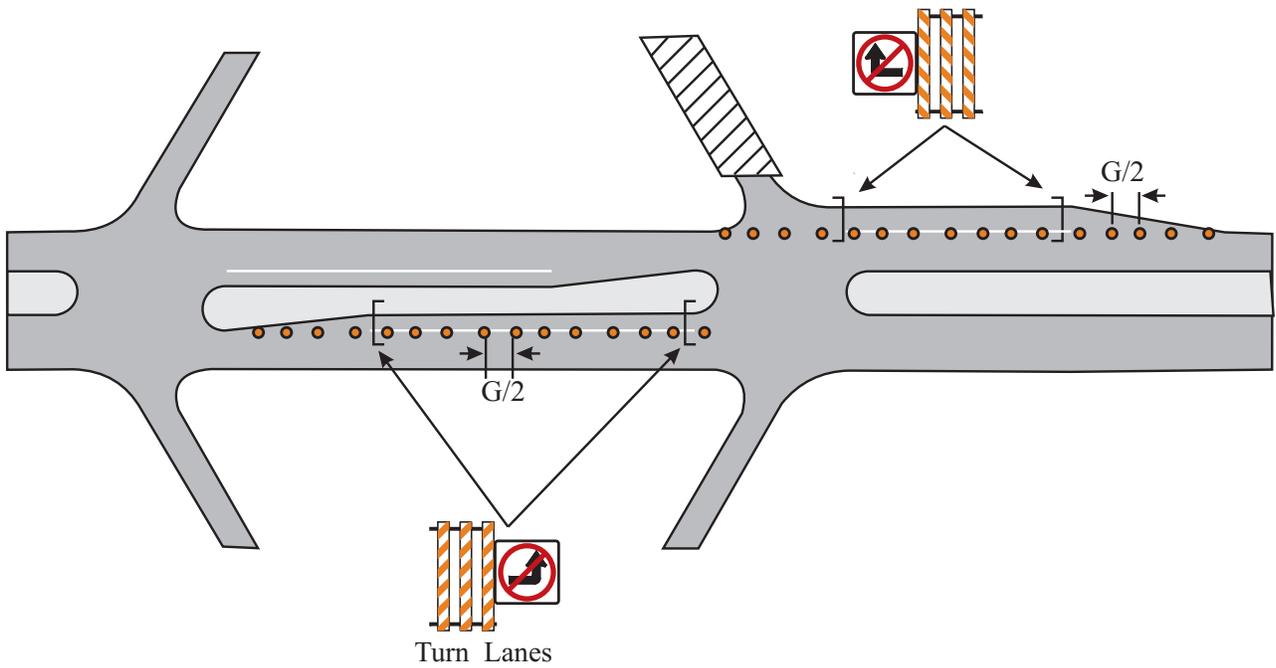
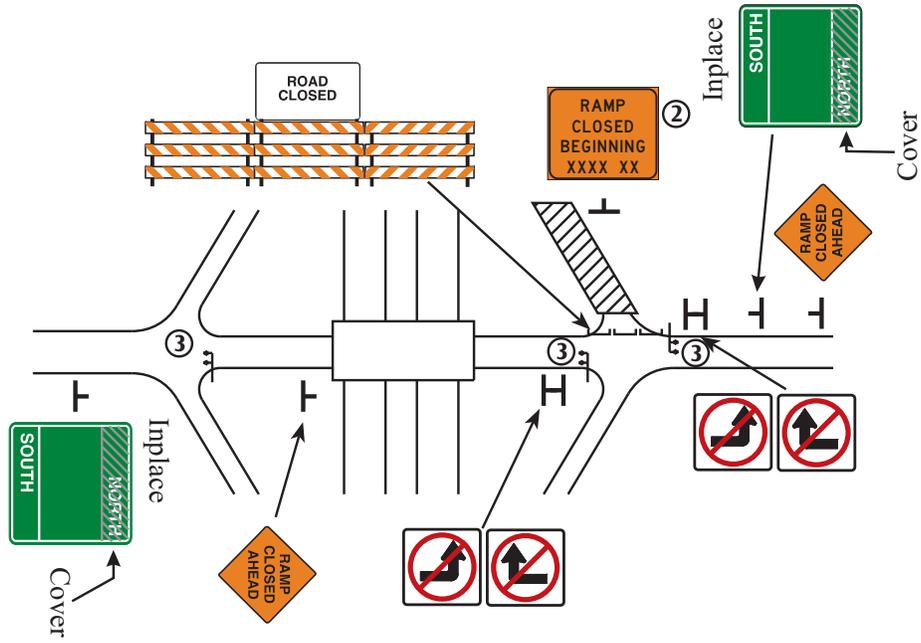
TYPICAL SIGNING FOR ROAD CLOSURE

LONG TERM

LAYOUT 6J-20

NOTES:

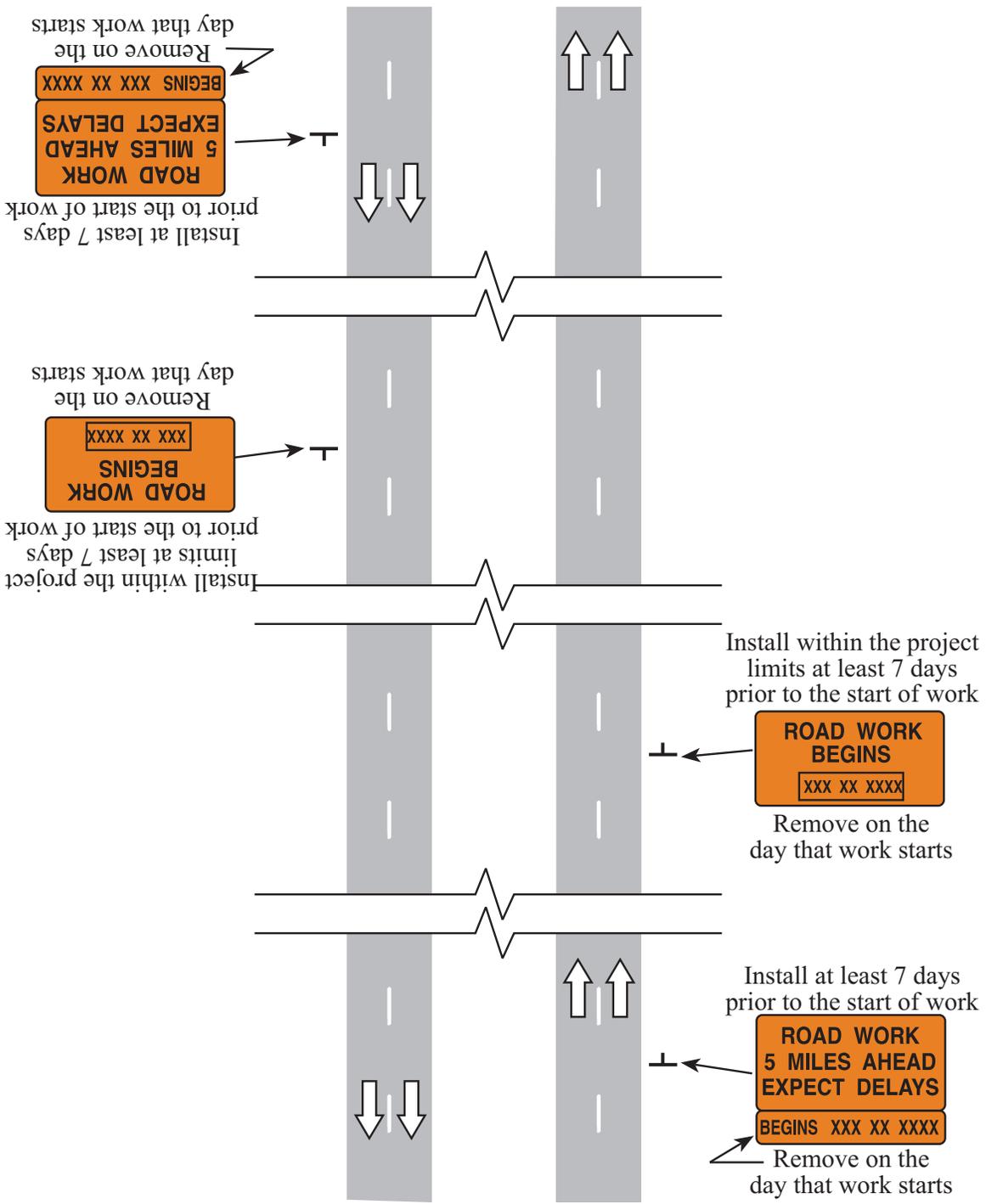
1. See page iii for Temporary Traffic Control Distance Charts.
2. Advance warning signs should be used seven days in advance of the closure.
3. Cover all directional signing for the closed ramp.



ENTRANCE RAMP CLOSURES

LONG TERM

LAYOUT 6J-21



TYPICAL ADVANCE SIGNING

LONG TERM

LAYOUT 6J-23

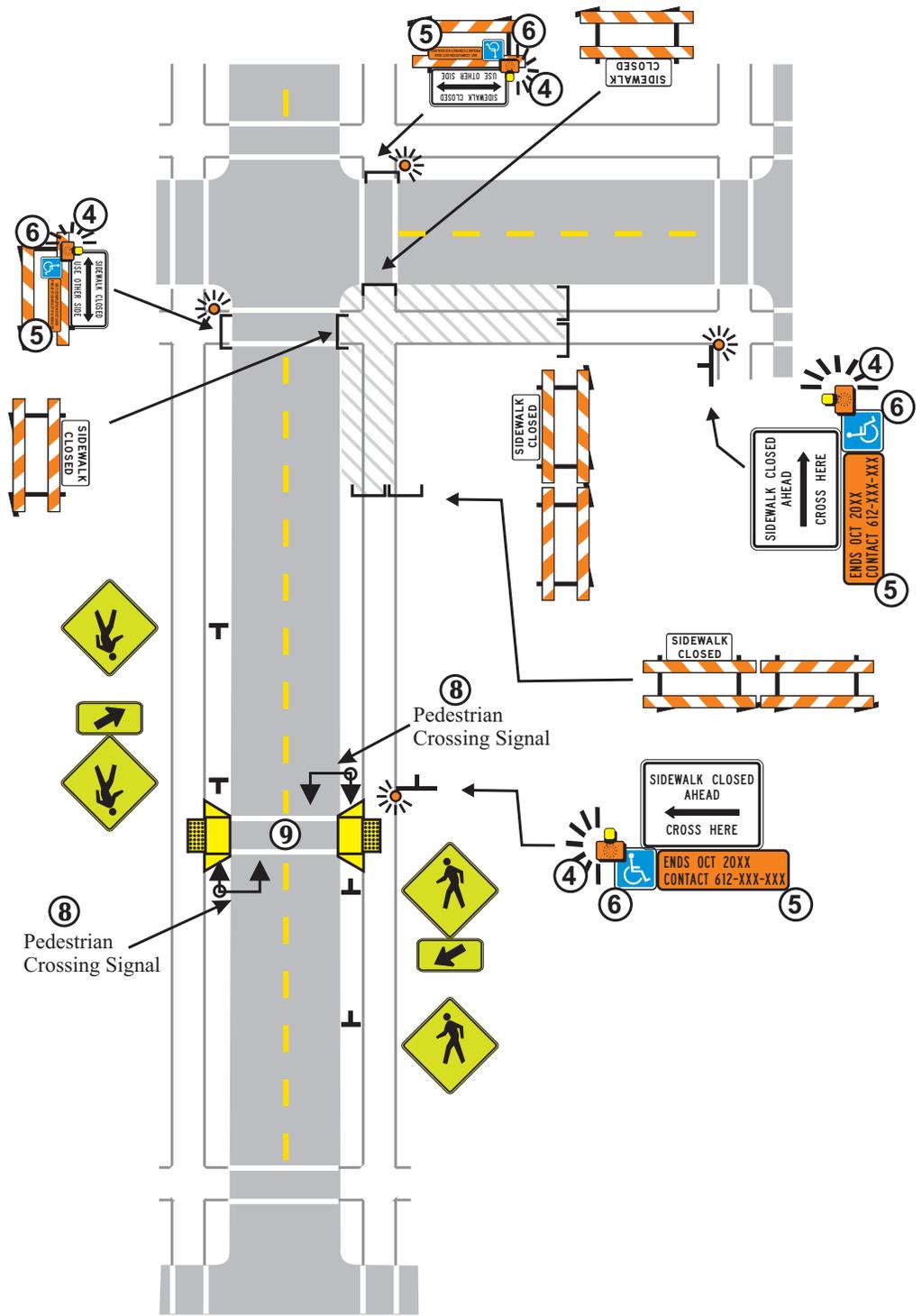
NOTES:

1. When crosswalks, sidewalks or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall include accessibility features consistent with the features present in the existing pedestrian facility.
2. The examples show only key typical dimensions. Refer to the MnDOT "Temporary Pedestrian Access Route" (TPAR) website (<http://www.dot.state.mn.us/trafficeng/workzone/tpar.html>) for standards, guidance and options when blocking, closing, or relocating pedestrian facilities.
3. Only traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets.
4. An approved audible message device or tactile message should be provided for sight-impaired pedestrians. When used, a message device should provide a complete physical description of the temporary pedestrian detour including duration, length of (and/or distance to) the bypass, any restrictions or hazards and project information as listed in note 5 below. The number and location of devices should be determined for each project prior to starting work. Devices may be placed prior to sidewalk work to warn regular users of the planned work.
5. Typical sign message for a temporary pedestrian detour should include information such as the duration of the walkway restrictions (beginning and/or end dates) and a project contact number for 24/7 questions or reporting hazards.
6. The International Symbol of Accessibility should be displayed when any walkway through a work zone has been determined to be TPAR compliant. The Symbol of Accessibility shall not be displayed if persons with disabilities should not use the primary temporary pedestrian detour. The reason for the non-compliance should be posted and an alternate route should be posted when the primary temporary pedestrian detour is non-complaint to TPAR standards.
7. Conditions that are beyond recommended standards should be documented. A walkway is non-compliant if it is missing key ADA elements such as curb ramp(s), truncated domes, and detectable edging. Other restrictions or hazards may include insufficient width or pinch-point widths, traffic conflicts, steep grades, non-continuous railings, tripping hazards, or uneven/rough/soft surface conditions, etc.
8. Pedestrian traffic signal displays controlling closed crosswalks shall be covered. Temporary pedestrian signals should be considered when creating a new crossing location.
9. Curb marking shall be prohibited for a minimum of 30 feet in advance of the mid-block pedestrian crossing. Crosswalk marking shall be installed and conflicting marking removed or covered. Curb ramps with detectable warnings shall be provided to transition from the sidewalk to the crosswalk.
10. Pedestrian detour trailblazing signs should be used if the pedestrian detour is located someplace other than across the street from the sidewalk closure.

CROSSWALK CLOSURES AND PEDESTRIAN DETOURS

LONG TERM

LAYOUT 6J-24a

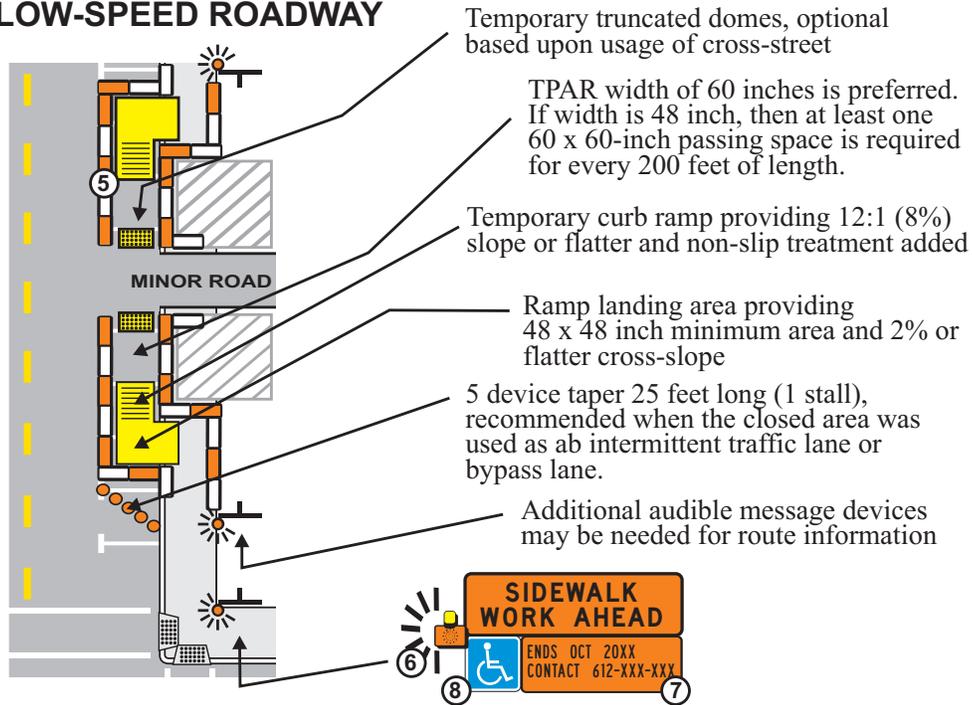


CROSSWALK CLOSURES AND PEDESTRIAN DETOURS

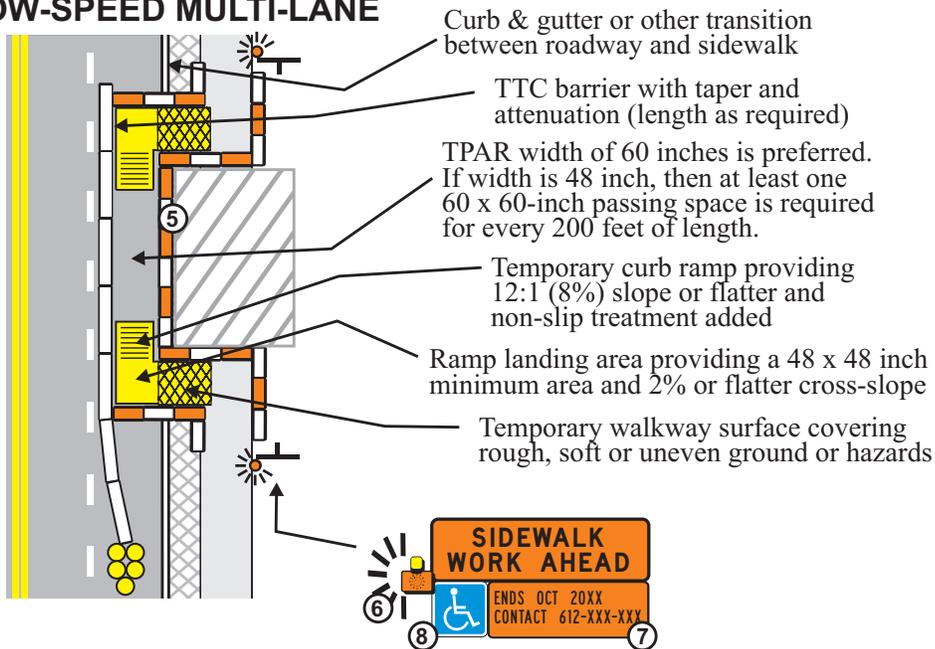
LONG TERM

LAYOUT 6J-24b

LOW-SPEED ROADWAY



HIGH-SPEED ROADWAY or LOW-SPEED MULTI-LANE



SIDEWALK BYPASS

LONG TERM

LAYOUT 6J-25b