

**2007 NOTICE OF PROPOSED AMENDMENTS**  
for the  
**MANUAL ON UNIFORM TRAFFIC CONTROL**  
**DEVICES**

**MUTCD FIGURES**

**DECEMBER 2007**



**2007 NOTICE OF PROPOSED AMENDMENTS**  
**MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES**  
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Figure 10C-5. Example of Emergency Notification Sign

Figure 10C-6. Example of Placement of Warning Signs and Pavement Markings at Highway-Light Rail Transit Grade Crossings

Figure 10C-7. Highway-Light Rail Transit Grade Crossing Pavement Markings

Figure 10C-8. Light Rail Transit Vehicle Dynamic Envelope

Figure 10C-9. Typical Light Rail Transit Vehicle Dynamic Envelope Pavement Markings

Figure 10C-10. Example of Light Rail Transit Vehicle Dynamic Envelope Pavement Markings

Figure 10C-11. Example of Light Rail Transit Vehicle Dynamic Envelope Contrasting Color and/or Texture

Figure 10D-1. Light Rail Transit Signals

Figure 10D-2. Example of Light Rail Transit Flashing-Light Signal Assembly for Pedestrian Crossings

Figure 10D-3. Example of Pedestrian Gate Placement Behind the Sidewalk

Figure 10D-4. Example of Pedestrian Gate Placement with Pedestrian Gate Arm

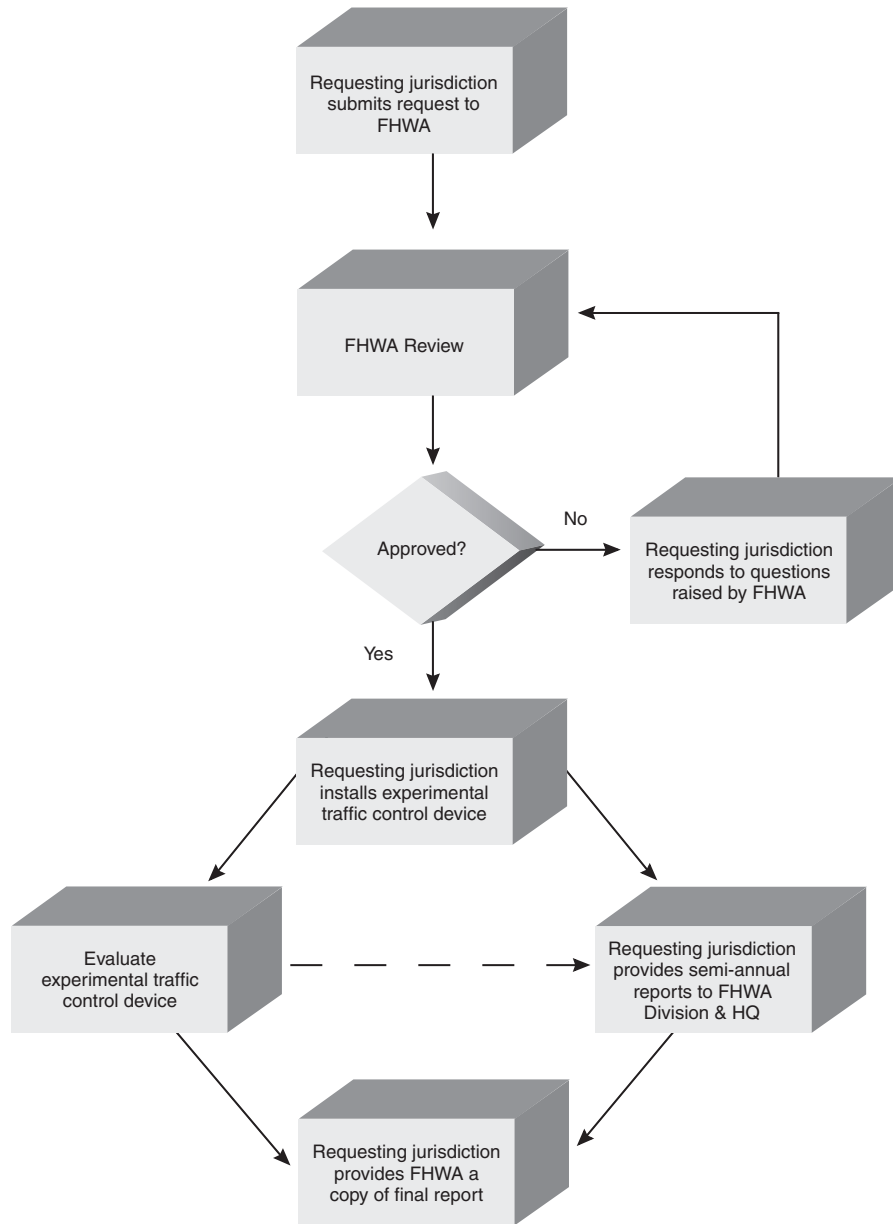
Figure 10D-5. Examples of Placement of Pedestrian Gates

Figure 10D-6. Example of Swing Gates

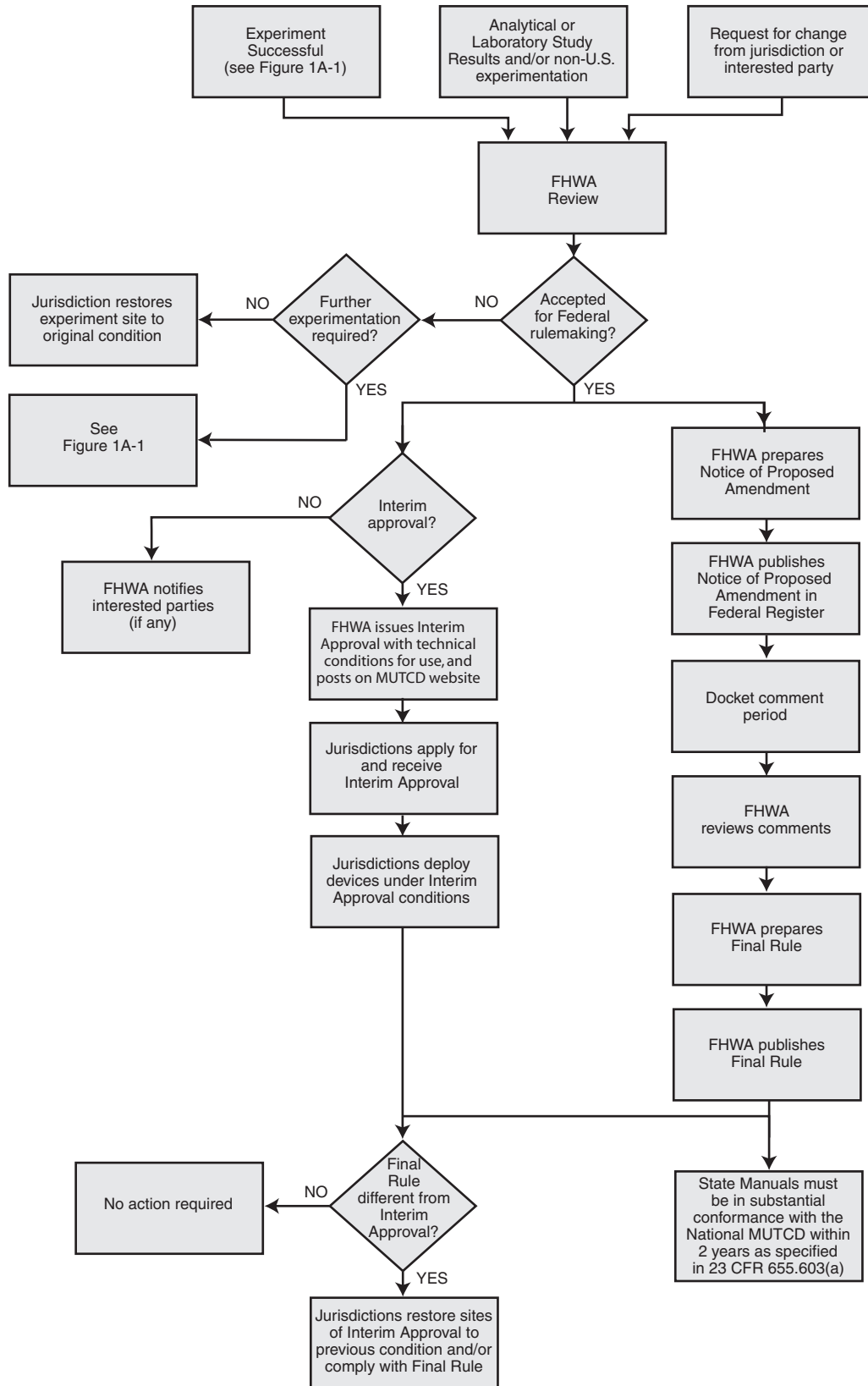
Figure 10D-7. Example of Pedestrian Barriers at an Offset Highway-Light Rail Transit Crossing

Figure 10D-8. Examples of Pedestrian Barrier Installation at an Offset Nonintersection Light Rail Transit Crossing

**Figure 1A-1. Process for Requesting and Conducting Experimentations for New Traffic Control Devices**

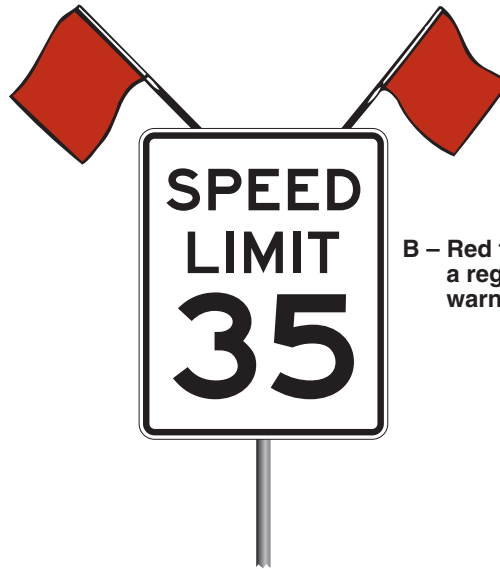


**Figure 1A-2. Process for Incorporating New Traffic Control Devices into the MUTCD**



**Figure 2A-1. Examples of Enhanced Conspicuity for Signs**

**A – Solid yellow or fluorescent yellow header panel above a regulatory sign**



**B – Red flags above a regulatory or warning sign**

**C – Solid red or fluorescent red strip of retroreflective sheeting around a regulatory sign**

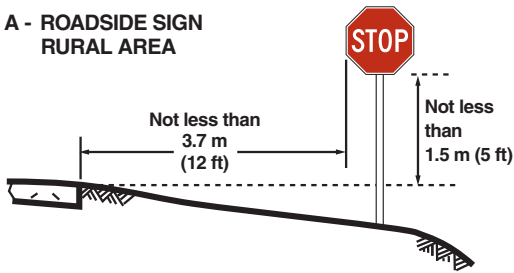


**D – Solid yellow, solid fluorescent yellow, or diagonally striped black and yellow (or black and fluorescent yellow) strip of retroreflective sheeting around a warning sign**

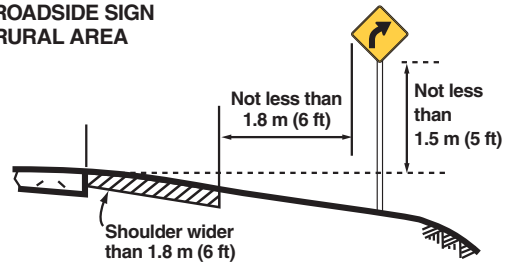


**Figure 2A-2. Heights and Lateral Locations of Signs for Typical Installations**

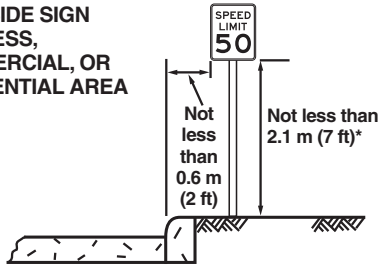
**A - ROADSIDE SIGN  
RURAL AREA**



**B - ROADSIDE SIGN  
RURAL AREA**

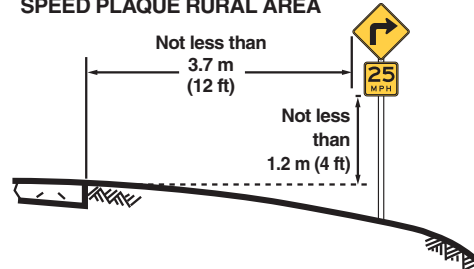


**C - ROADSIDE SIGN  
BUSINESS,  
COMMERCIAL, OR  
RESIDENTIAL AREA**

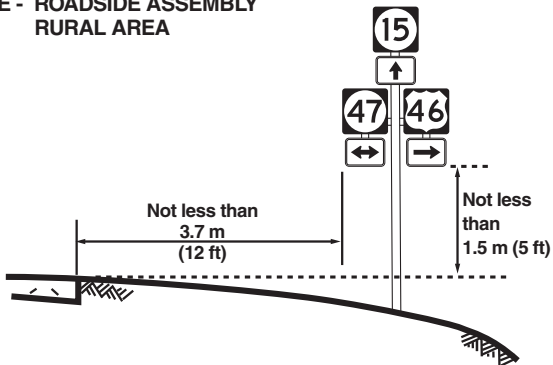


\*Where parking or pedestrian movements might occur

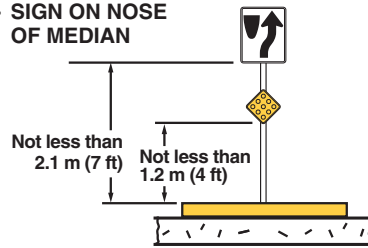
**D - WARNING SIGN WITH ADVISORY  
SPEED PLAQUE RURAL AREA**



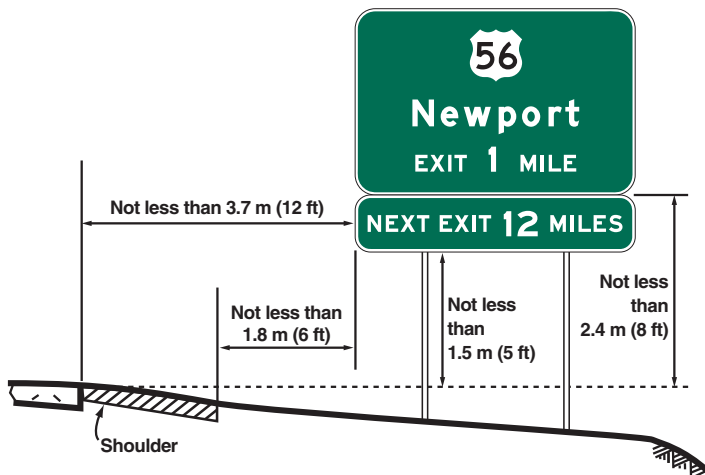
**E - ROADSIDE ASSEMBLY  
RURAL AREA**



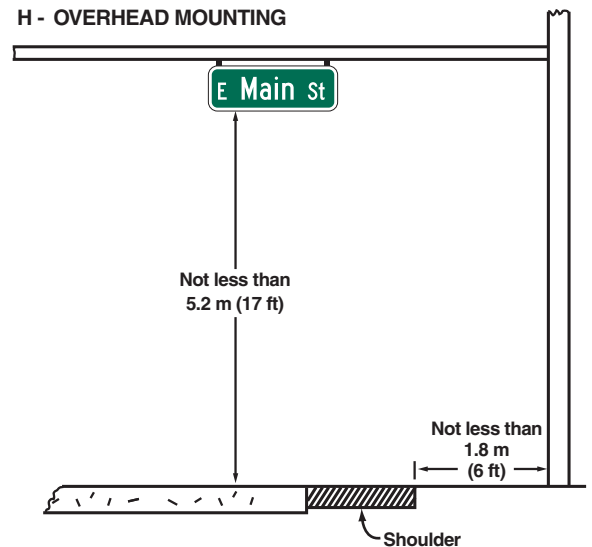
**F - SIGN ON NOSE  
OF MEDIAN**



**G - FREEWAY OR EXPRESSWAY SIGN WITH SECONDARY SIGN**



**H - OVERHEAD MOUNTING**

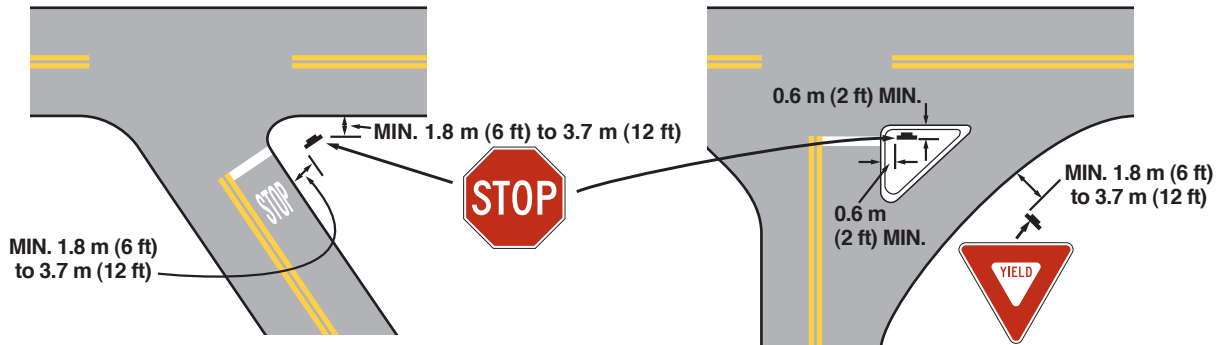


Note:

See Section 2A.19 for reduced lateral offset distances that may be used in areas where lateral offsets are limited, and in urban areas where sidewalk width is limited or where existing poles are close to the curb.

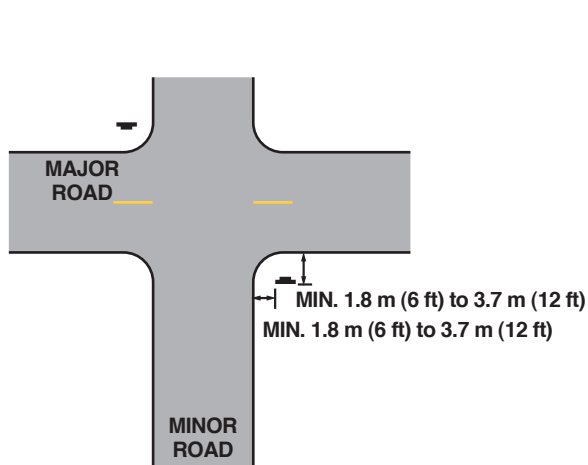


**Figure 2A-3. Examples of Locations for Some Typical Signs at Intersections**

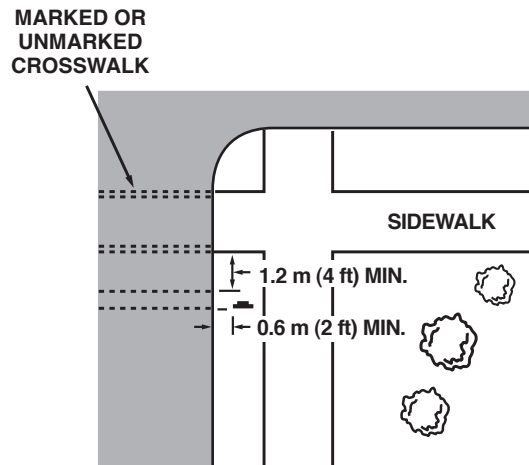


**A - ACUTE ANGLE INTERSECTION**

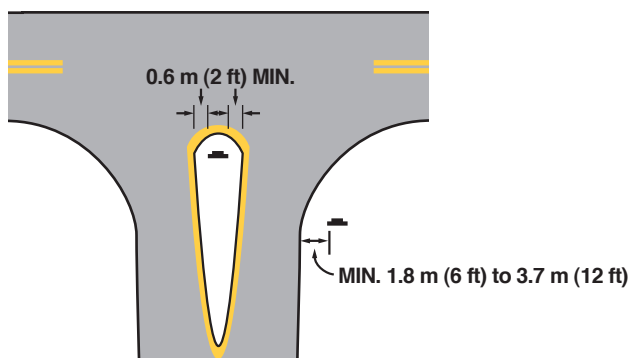
**B - CHANNELIZED INTERSECTION**



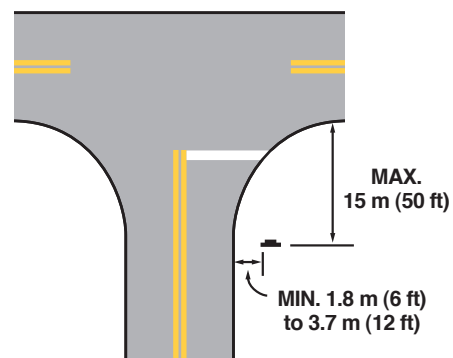
**C - MINOR CROSSROAD**



**D - URBAN INTERSECTION**



**E - DIVISIONAL ISLAND**



**F - WIDE THROAT INTERSECTION**

Note: Lateral offset is a minimum of 1.8 m (6 ft) measured from the edge of the shoulder, or 3.7 m (12 ft) measured from the edge of the traveled way. See Section 2A.19 for lower minimums that may be used in urban areas, or where lateral offset space is limited.

**Figure 2B-1. STOP, YIELD, Speed Limit, FINES HIGHER, and Photo Enforcement Signs and Plaques**



R1-1



R1-3P



R1-2



R1-2aP



R1-10P



R2-1

OR

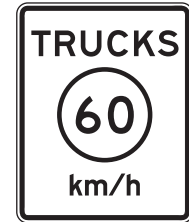


R2-1(M)



R2-2P

OR



R2-2P(M)



R2-3P

OR



R2-3P(M)



R2-5P



R2-5aP



R2-5bP



R2-5cP



R2-6P



R2-6aP



R2-6bP



R10-18



R10-19P



R10-19aP

Figure 2B-2. Unsignalized Pedestrian Crosswalk Signs



R1-5



R1-5a



R1-5b



R1-5c



R1-6



R1-6a



R1-9



R1-9a

**Figure 2B-3. Speed Limit and Movement Prohibition Signs and Plaques**

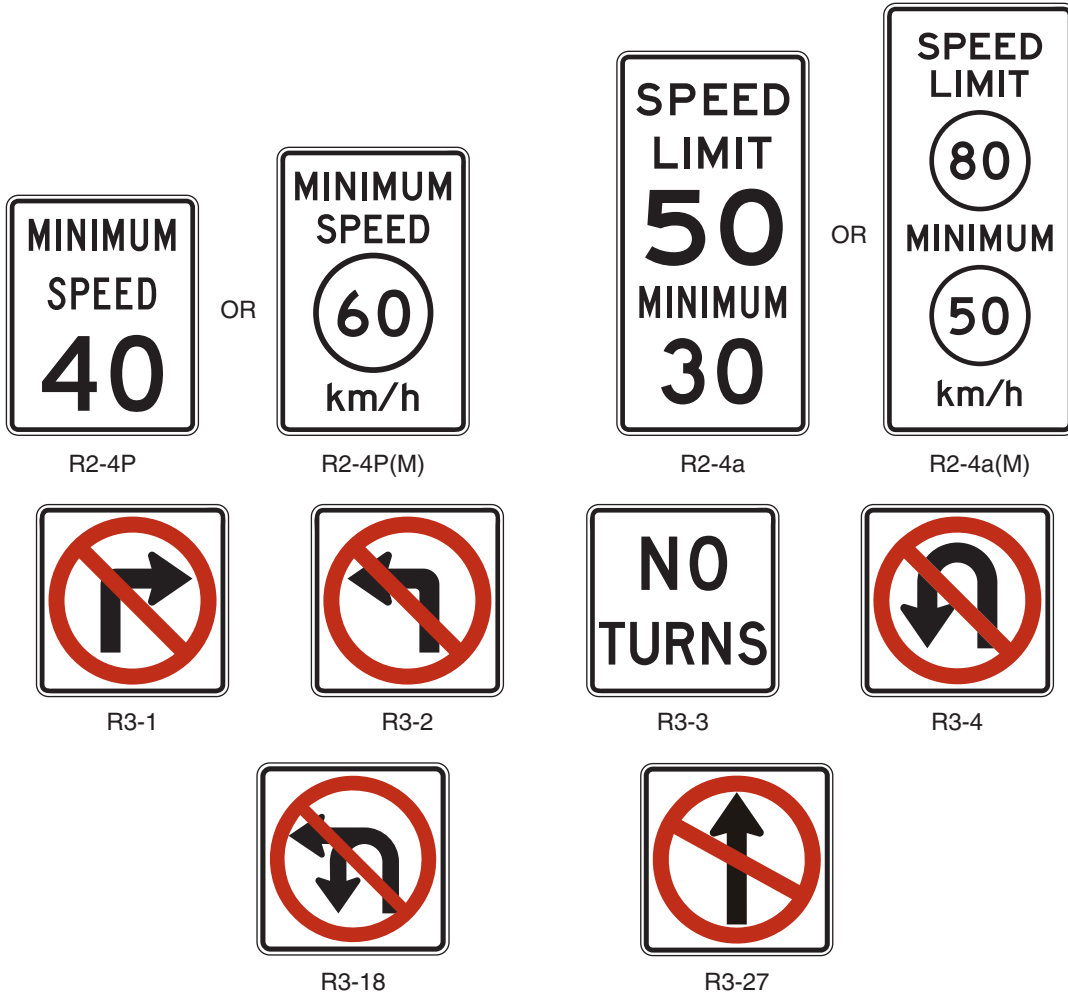


Figure 2B-4. Lane Control Signs and Plaques



R3-5



R3-5a



R3-6

OR



R3-7



R3-5bP



R3-5cP



R3-5dP



R3-5eP



R3-5fP



R3-5gP



R3-8

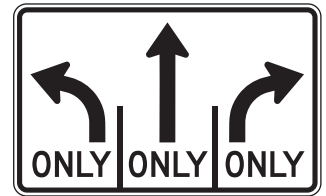
OR



HOV 2+



R3-8a



R3-8b



R3-20L



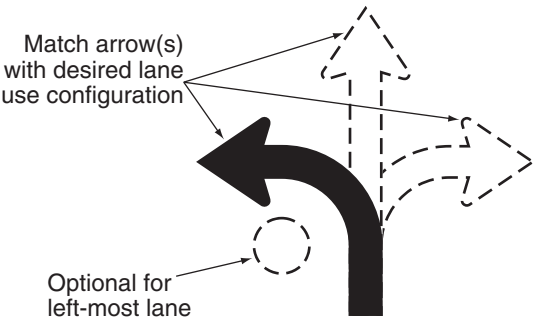
R3-20R



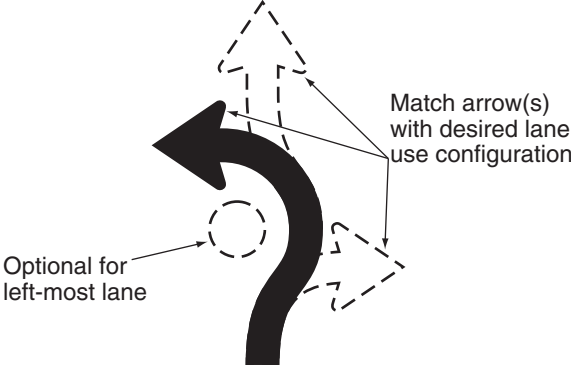
R3-33

\* The diamond symbol may be used instead of the word message "HOV". The minimum vehicle occupancy level may vary, such as 2+, 3+, 4+. The words "LANE" or "ONLY" may be used with this sign when appropriate.

**Figure 2B-5. Intersection Lane Control Sign Arrow Options for Roundabouts**



**A - Normal arrows**



**B - Fish-hook arrows**

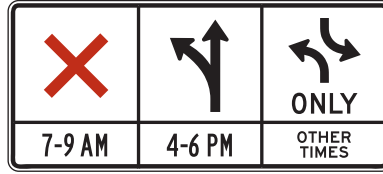
**Figure 2B-6. Center and Reversible Lane Control Signs**



R3-9a



R3-9b



R3-9d



R3-9f



OR



R3-9g



OR

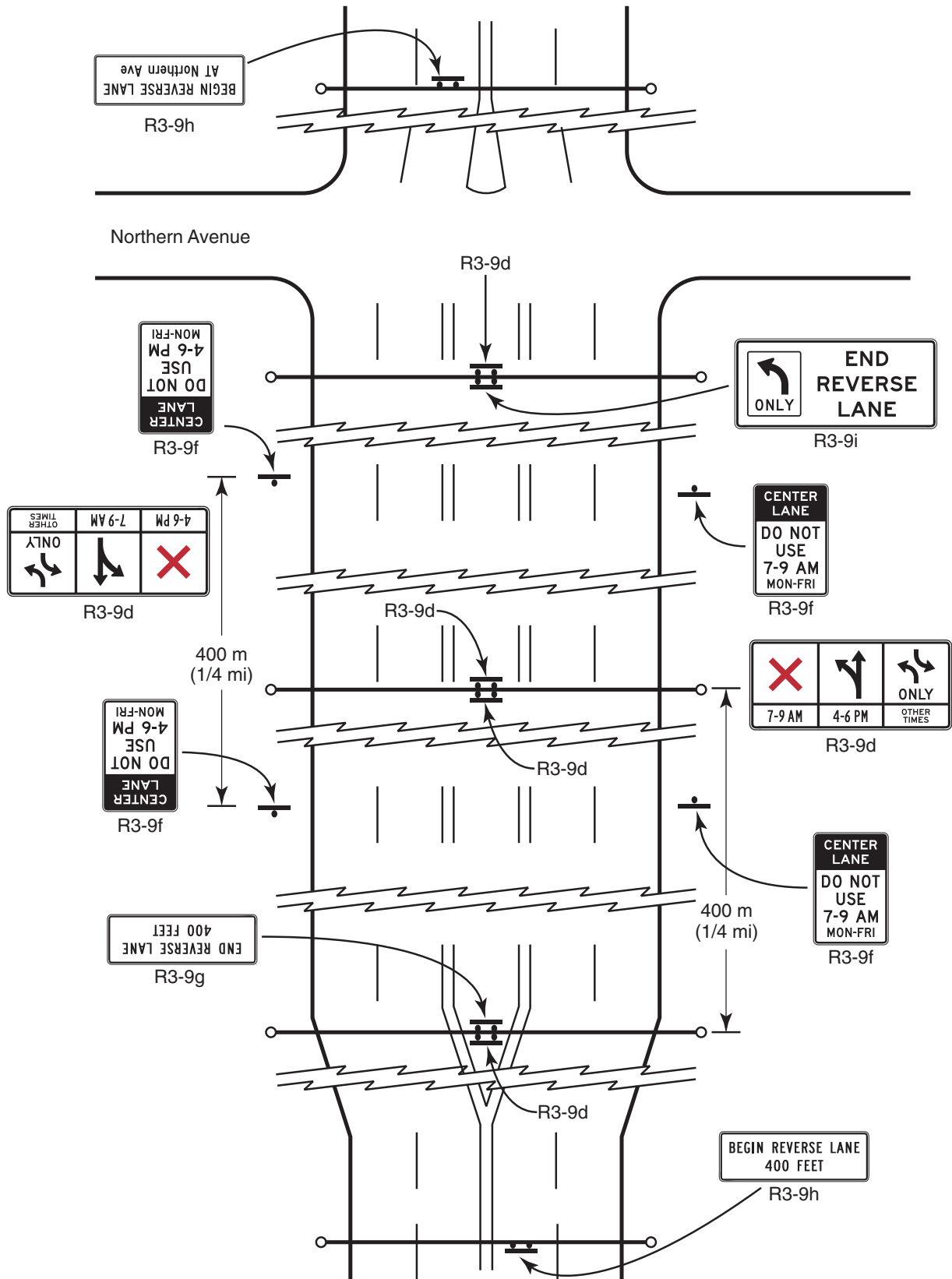


R3-9h



R3-9i

**Figure 2B-7. Location of Reversible Two-Way Left-Turn Signs**



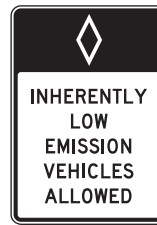


**Figure 2B-8. Preferential Lane Regulatory Signs (Sheet 1 of 2)**

**POST-MOUNTED PREFERENTIAL LANE SIGNS**



R3-10



R3-10a



R3-11



R3-11a



R3-11b



R3-11c



R3-11P



R3-12



R3-12a



R3-12b



R3-12c



R3-12d



R3-12e



R3-12f



R3-12g



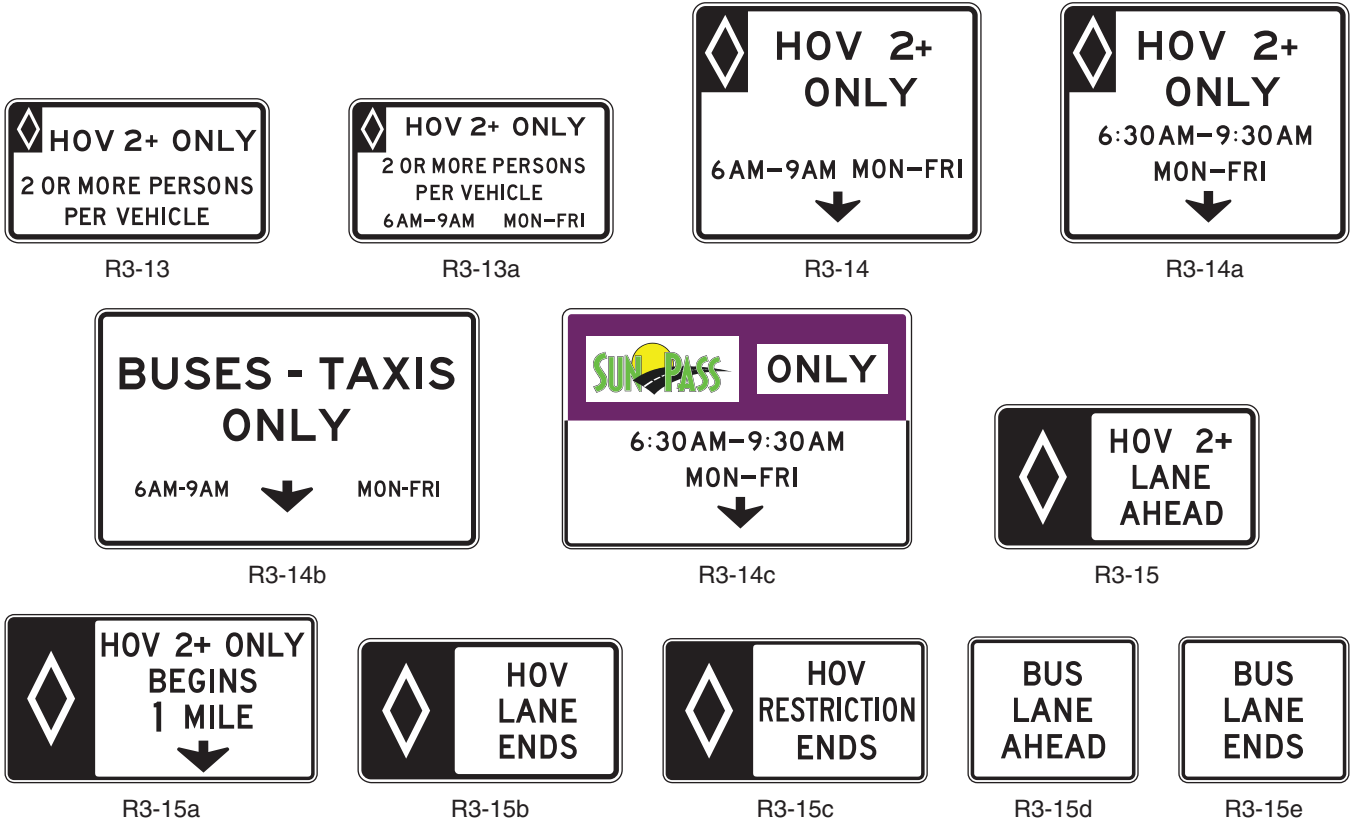
R3-12h

**Notes:**

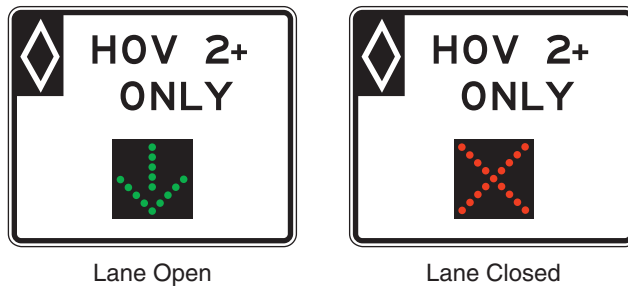
1. The minimum vehicle occupancy requirement may vary for each facility (such as 2+, 3+, 4+).
2. The occupancy requirement may be added to the first line of the R3-12a, R3-12b, R3-12c, and R3-12d signs.
3. Some of the legends shown on these signs are for example purposes only. The specific legend for a particular application should be based upon local conditions, ordinances, and State statutes.

**Figure 2B-8. Preferential Lane Regulatory Signs (Sheet 2 of 2)**

**OVERHEAD PREFERENTIAL LANE SIGNS**



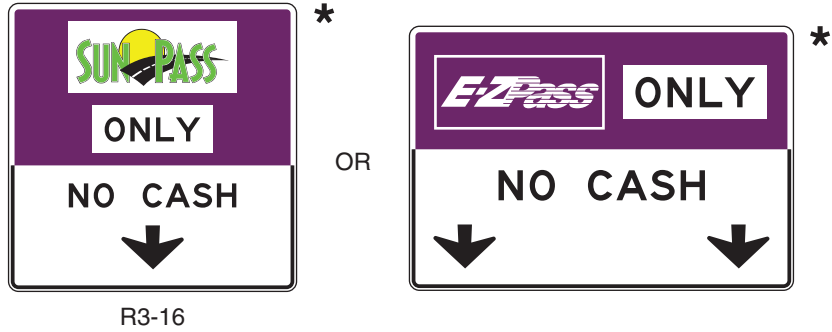
A lane-use control signal may be incorporated into an overhead preferential lane regulatory sign to indicate the status of a reversible operation as shown in the following example:



**Notes:**

1. The minimum vehicle occupancy requirement may vary for each facility (such as 2+, 3+, 4+).
2. The occupancy requirement may be added to the first line of the R3-15b and R3-15c signs.
3. Some of the legends shown on these signs are for example purposes only. The specific legend for a particular application should be based upon local conditions, ordinances, and State statutes.
4. Where sufficient median width is available, the R3-13 series and R3-15 series signs may be post-mounted.

**Figure 2B-9. Electronic Toll Collection and Toll Plaza Signs and Plaques**

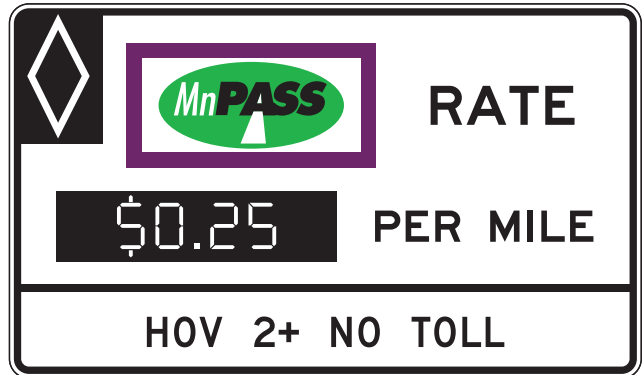


\* The electronic toll collection (ETC) pictographs that are shown are only examples. The pictograph for the toll facility's adopted ETC system shall be used.

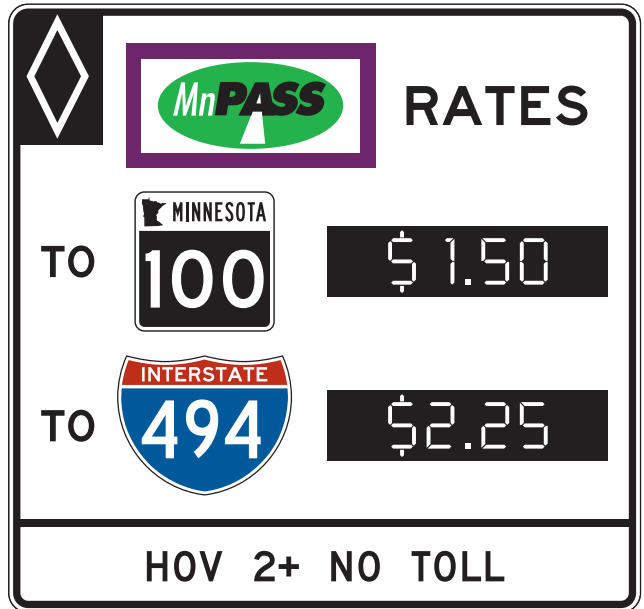
Figure 2B-10. Special Regulatory Signs for Managed Lanes



Vehicle Occupancy Definition Sign Allowing Single-Occupant ETC-Equipped Vehicles



R3-31



R3-32

Notes:

1. The electronic toll collection (ETC) pictograph that is shown is only an example. The pictograph for the toll facility's adopted ETC system shall be used.
2. Changeable message sign elements shall be used for the numerals displayed for the variable toll fees.

**Figure 2B-11. Jughandle Regulatory Signs**



R3-23



R3-23a



R3-24



R3-24a



R3-24b



R3-25



R3-25a



R3-25b

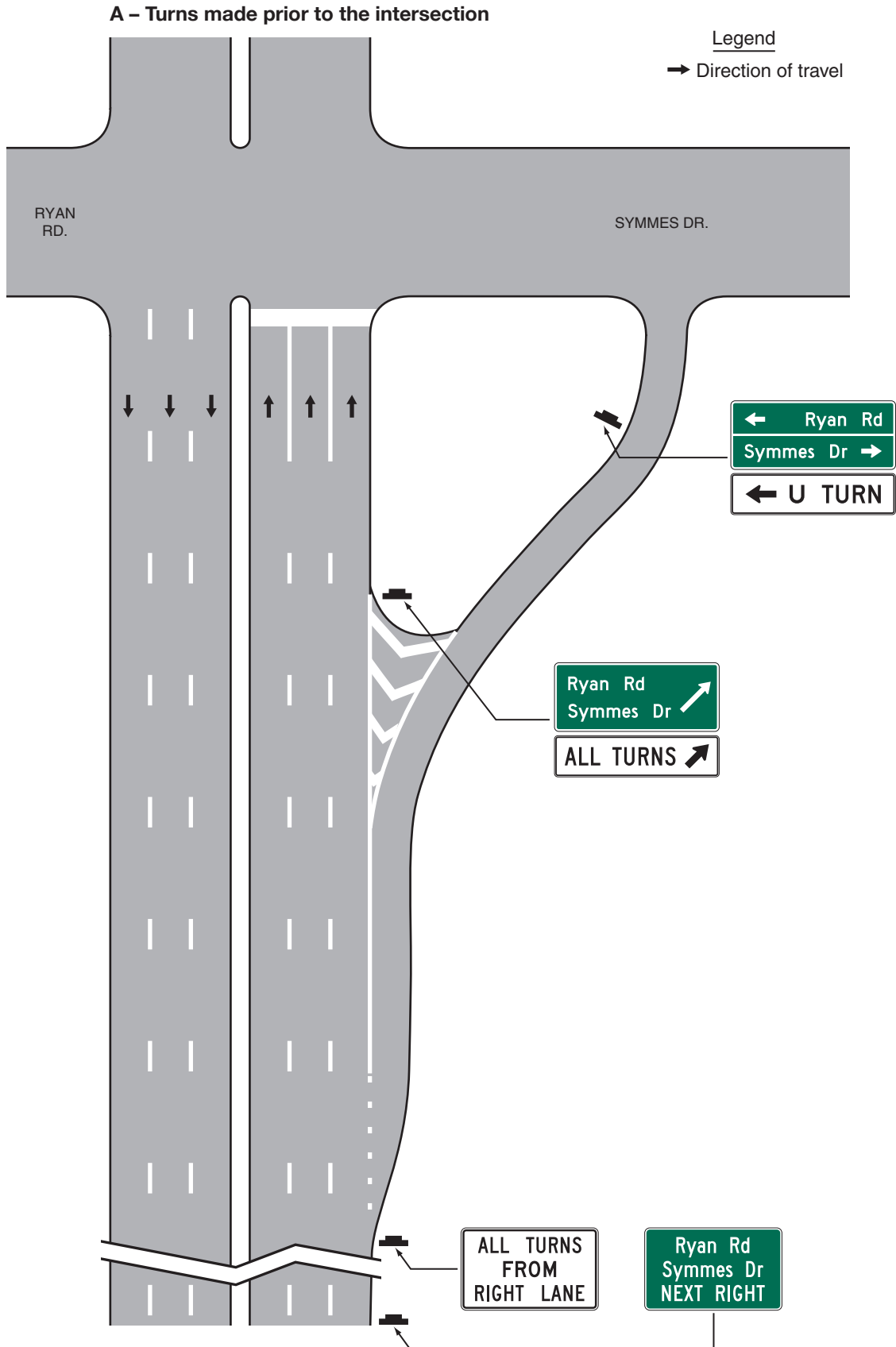


R3-26

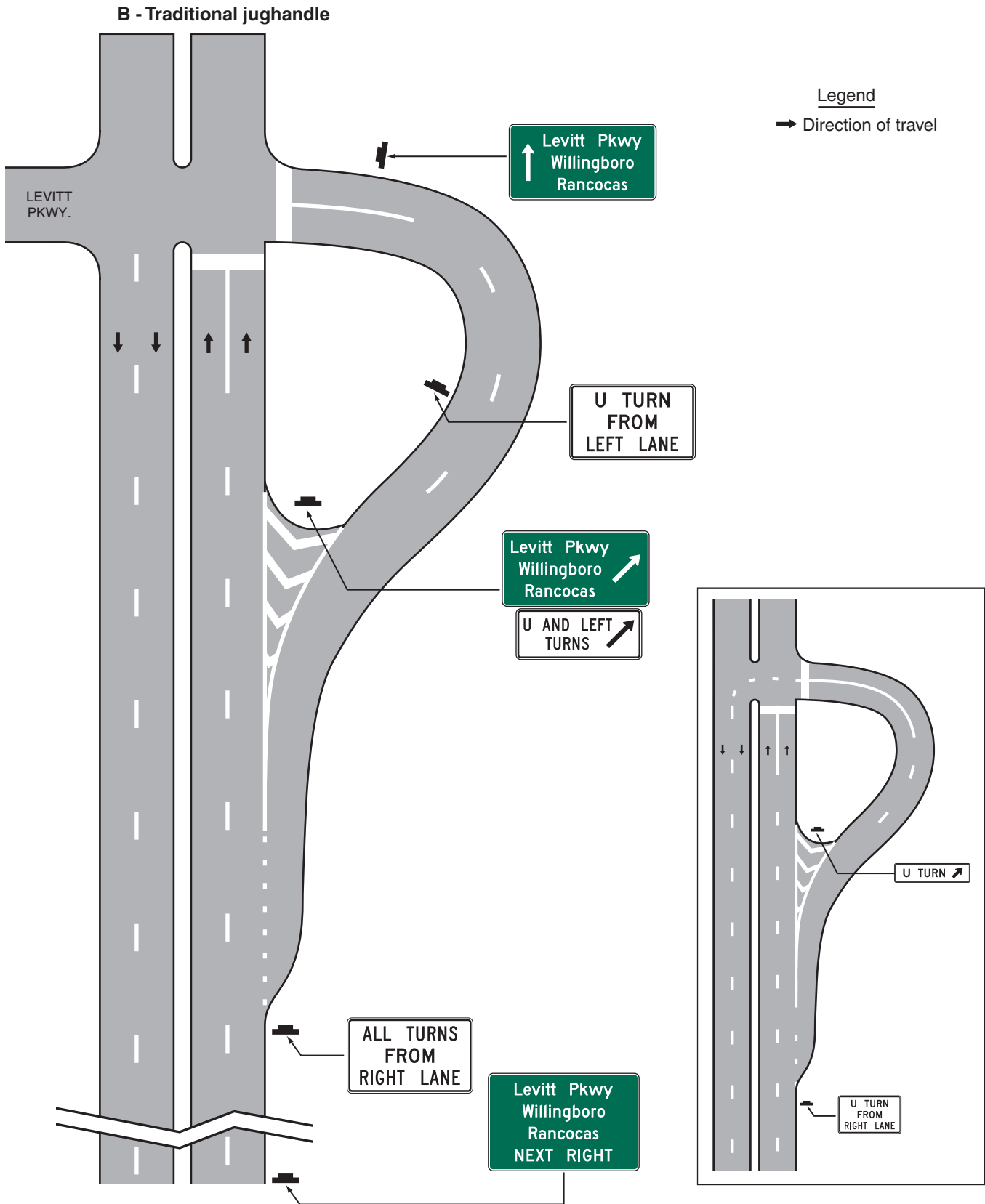


R3-26a

**Figure 2B-12. Examples of Applications of Jughandle Regulatory and Guide Signing  
(Sheet 1 of 3)**



**Figure 2B-12. Examples of Applications of Jughandle Regulatory and Guide Signing**  
 (Sheet 2 of 3)



**Figure 2B-12. Examples of Applications of Jughandle Regulatory and Guide Signing**  
(Sheet 3 of 3)

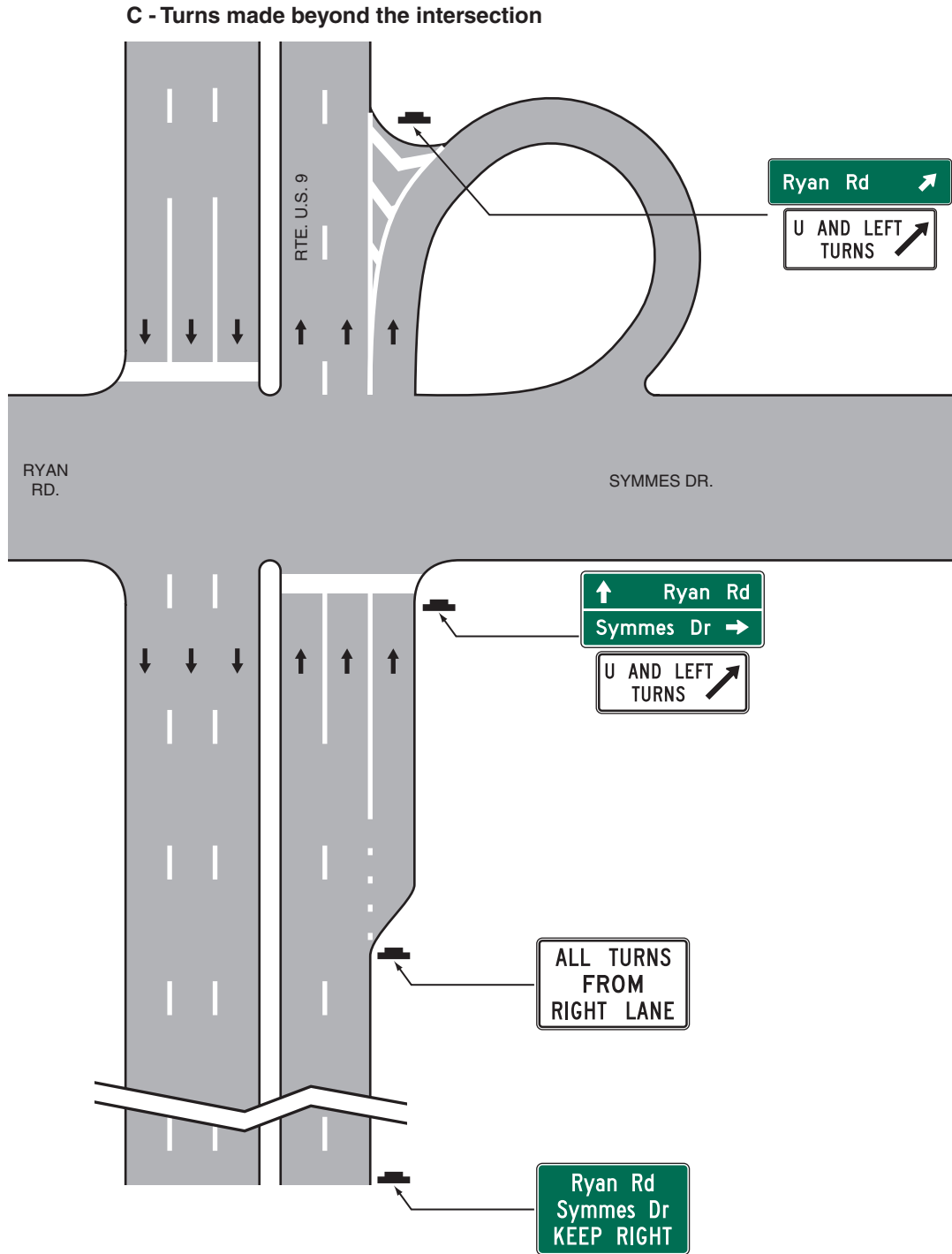




Figure 2B-13. Passing, Keep Right, and Slow Traffic Signs



Figure 2B-14. Selective Exclusion Signs



R5-1



R5-1a



R5-2\*



R5-3



R5-4



R5-5



R5-6



R5-7



R5-8



R5-10a



R5-10b



R5-10c



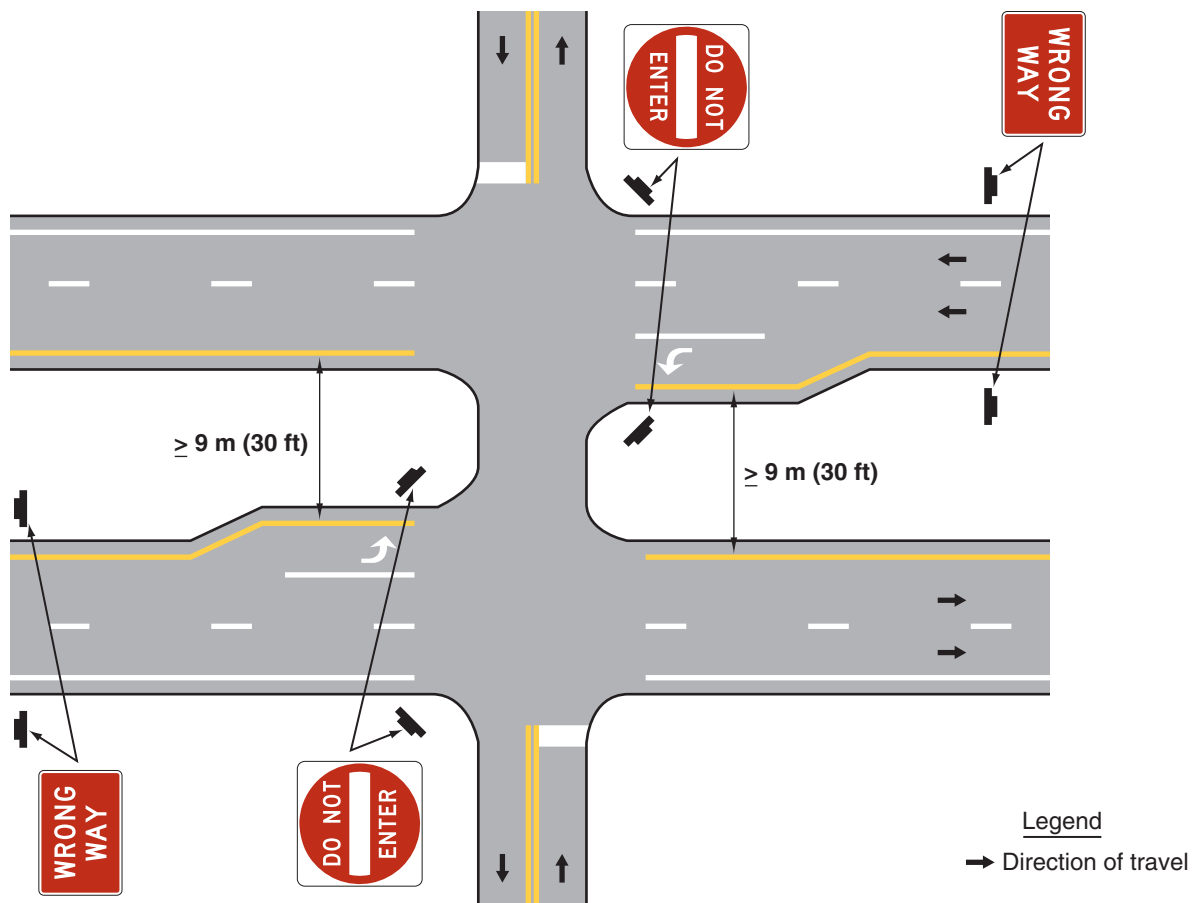
R5-13



R5-14

\* An optional word message sign is shown in the "Standard Highway Signs and Markings" book

**Figure 2B-15. Example of Wrong-Way Signing for a Divided Highway with a Median Width of 9 m (30 ft) or Greater**



**Figure 2B-16. ONE WAY and Divided Highway Crossing Signs**



R6-1



R6-2

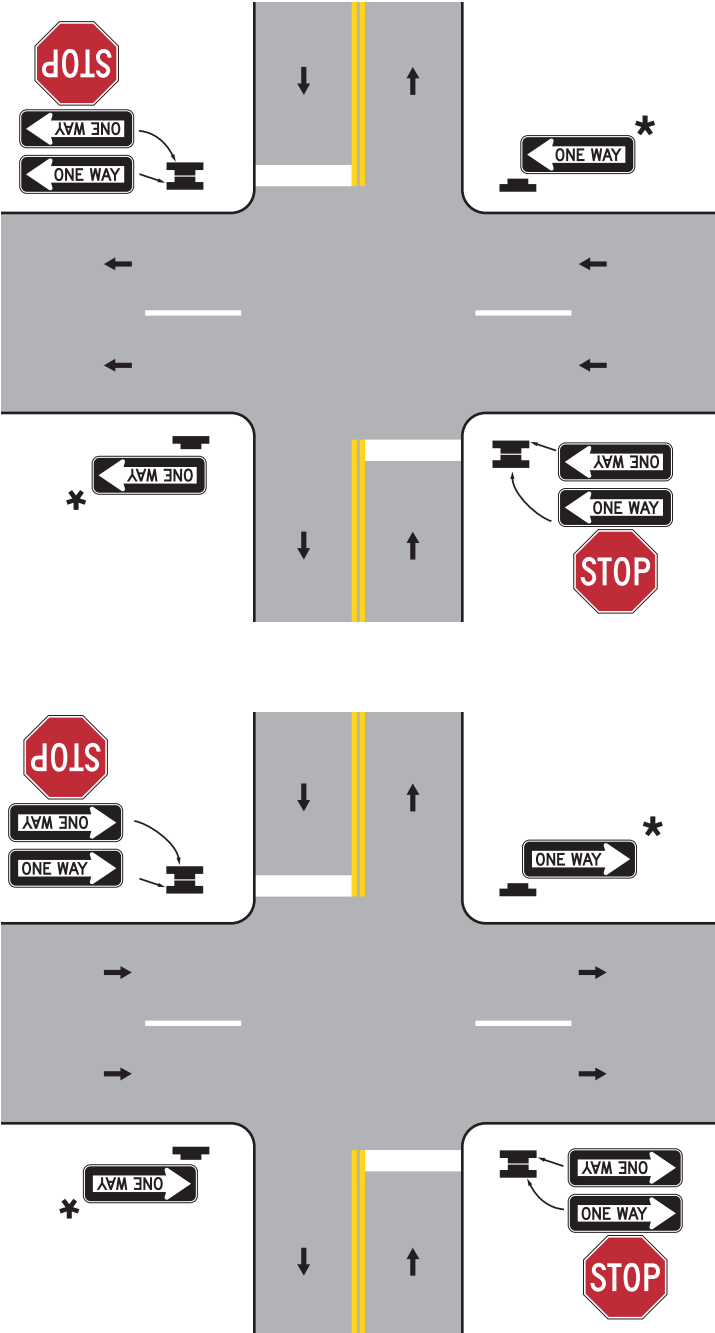


R6-3



R6-3a

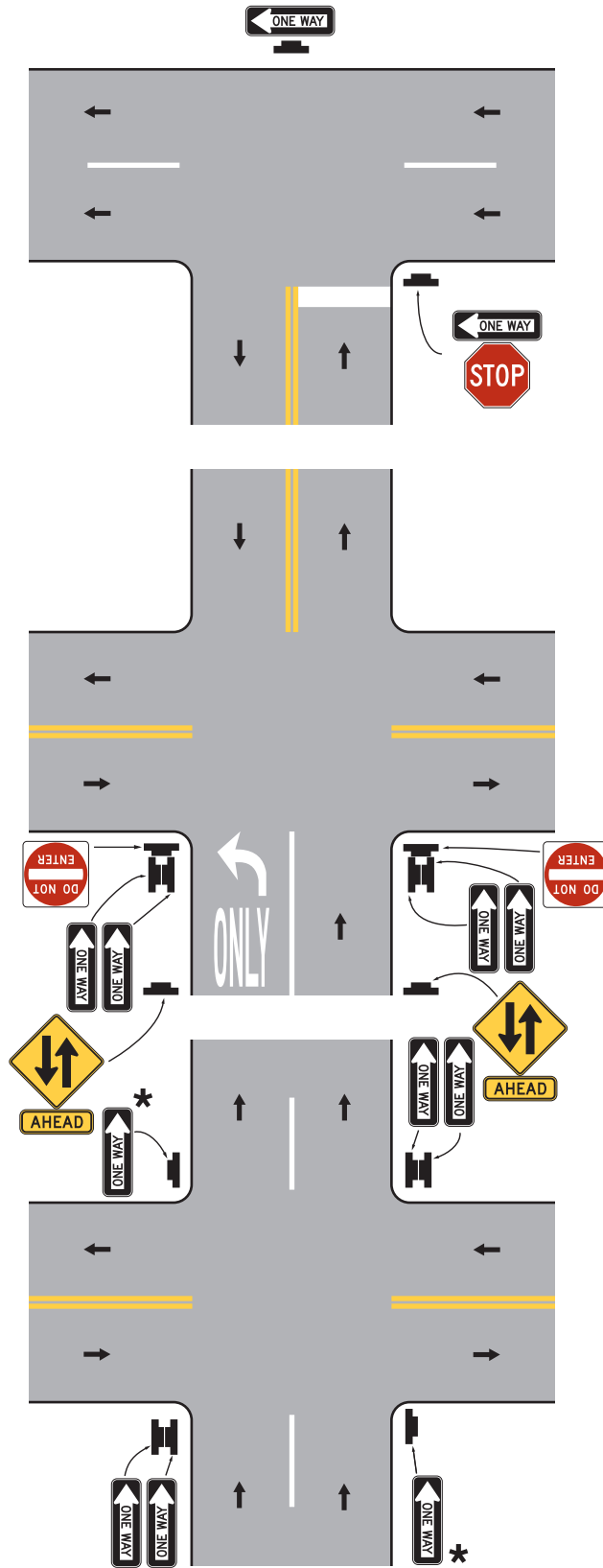
**Figure 2B-17. Locations of ONE WAY Signs**  
(Sheet 1 of 2)



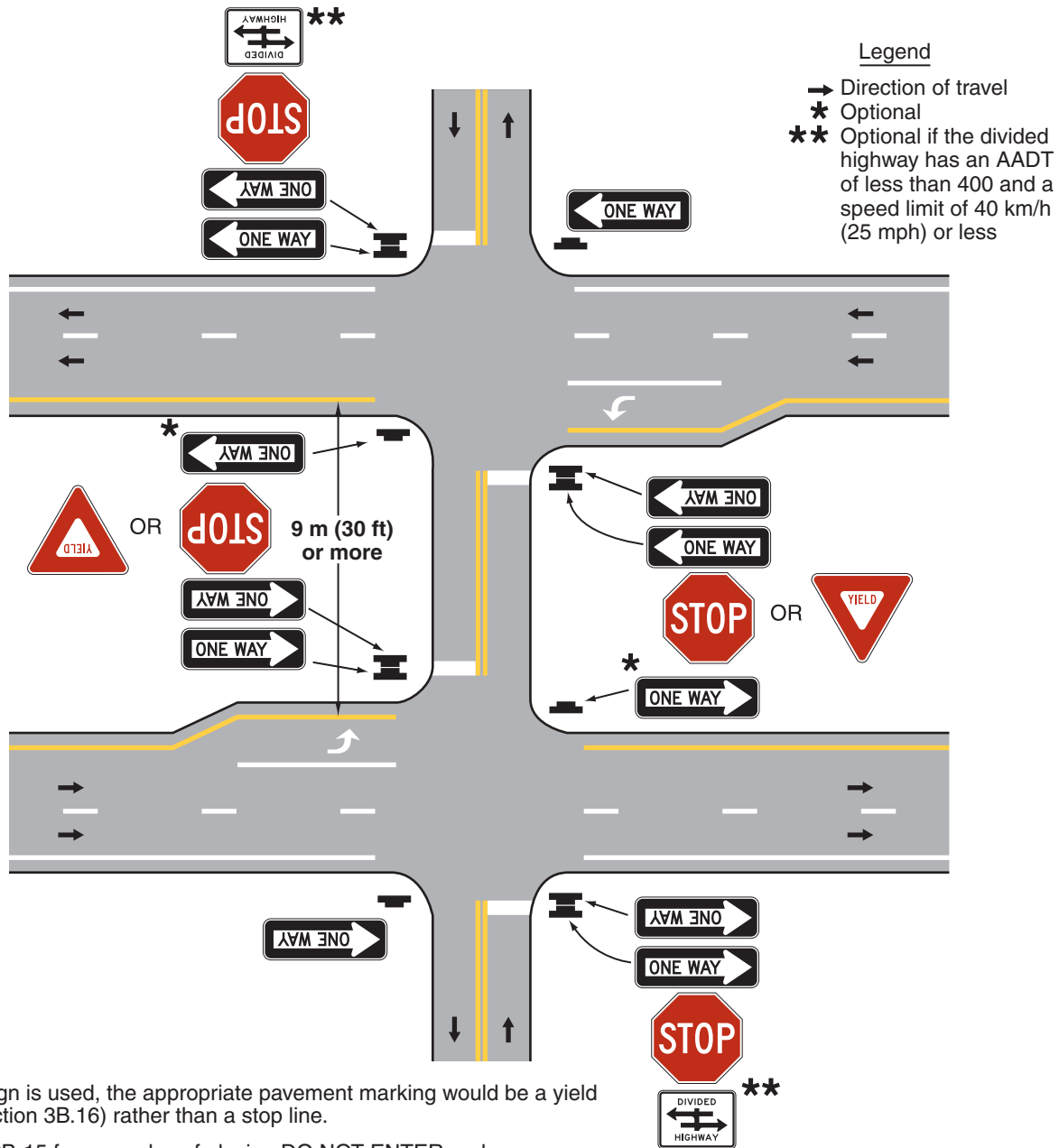
- Legend
- \* Optional
  - Direction of travel

**Figure 2B-17. Locations of ONE WAY Signs  
(Sheet 2 of 2)**

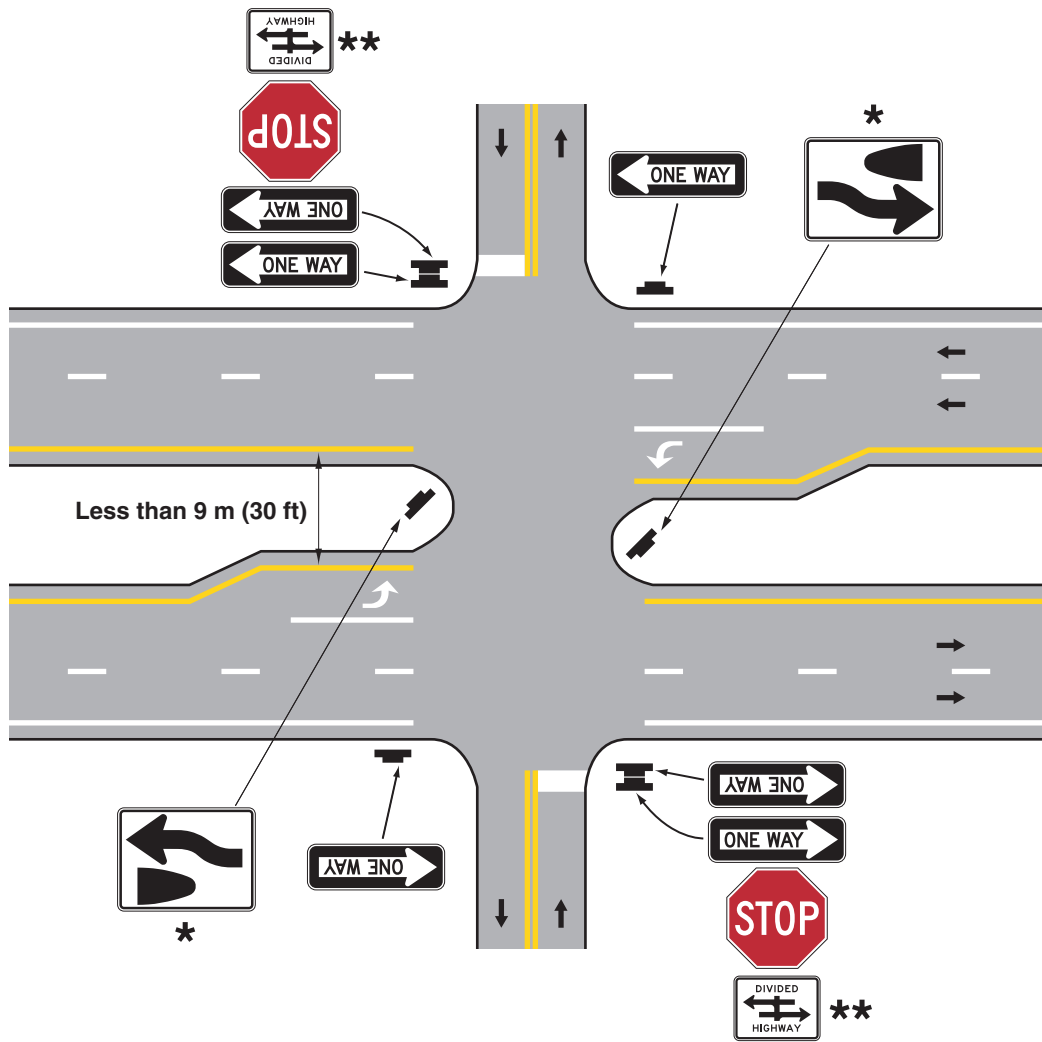
- Legend
- \* Optional
  - Direction of travel



**Figure 2B-18. ONE WAY Signing for Divided Highways with Medians of 9 m (30 ft) or Wider**

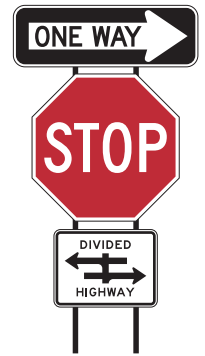


**Figure 2B-19. ONE WAY Signing for Divided Highways with Medians Less Than 9 m (30 ft)**



- Legend**
- Direction of travel
  - \* Optional
  - \*\* Optional if the divided highway has an AADT of less than 400 and a speed limit of 40 km/h (25 mph) or less

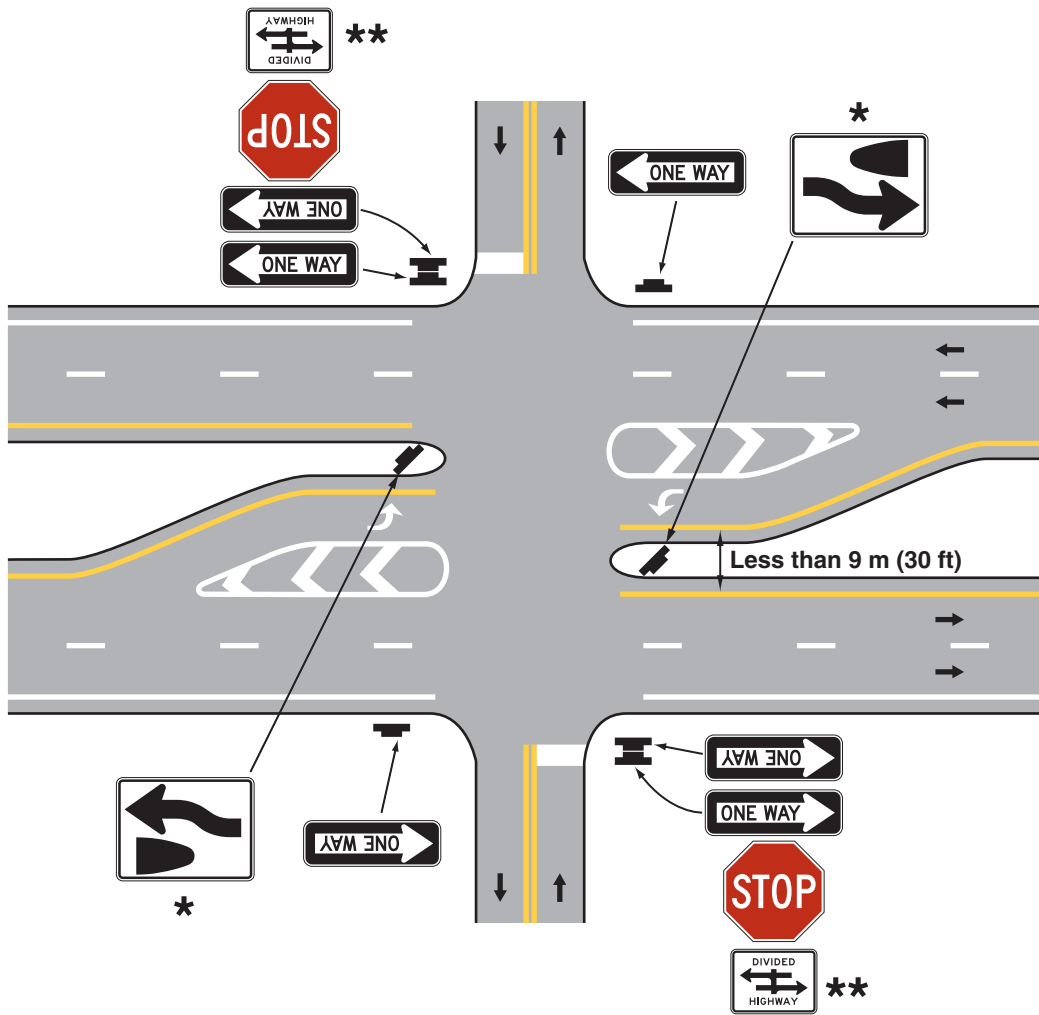
Notes:  
See Figure 2B-15 for examples of placing DO NOT ENTER and WRONG WAY signing.



Typical Mounting



**Figure 2B-20. ONE WAY Signing for Divided Highways with Medians Less Than 9 m (30 ft) and Separated Left-Turn Lanes**



- Legend
- Direction of travel
  - \* Optional
  - \*\* Optional if the divided highway has an AADT of less than 400 and a speed limit of 40 km/h (25 mph) or less

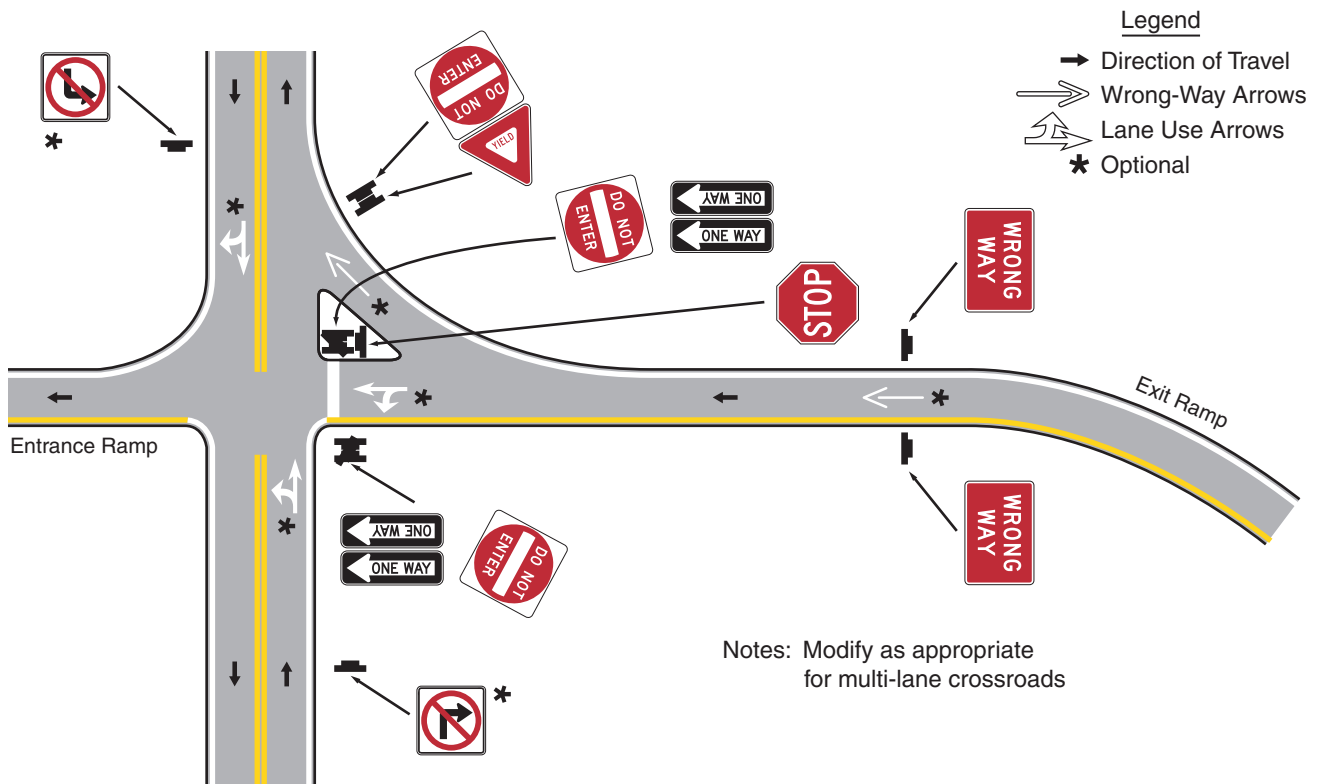
**Notes:**

See Figure 2B-15 for examples of placing DO NOT ENTER and WRONG WAY signing.  
 See Figure 2B-18 if median is 9 m (30 ft) or more in width.

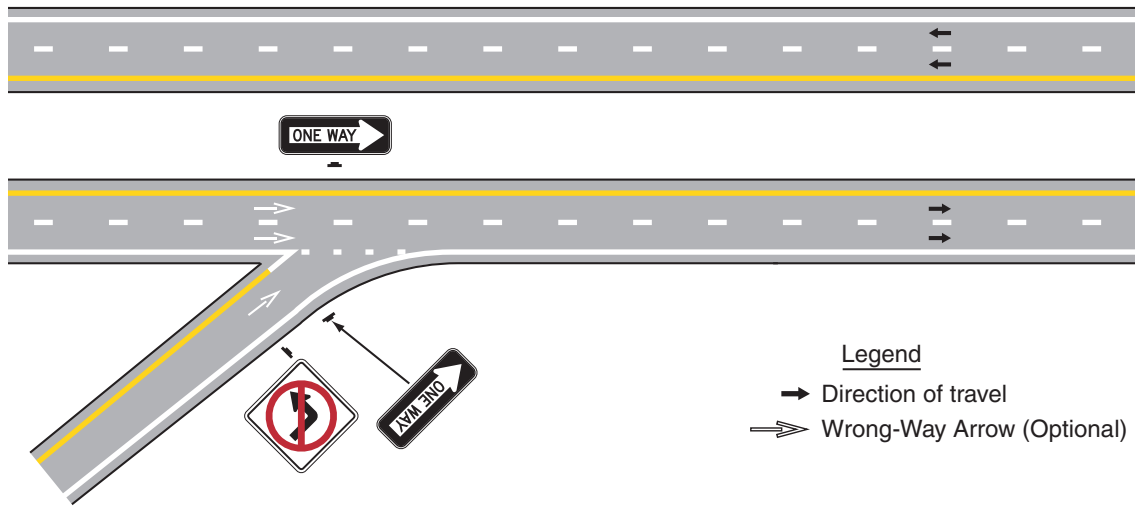


Typical Mounting

**Figure 2B-21. Example of Application of Regulatory Signing and Pavement Markings at Exit Ramp Termination to Deter Wrong-Way Entry**



**Figure 2B-22. Example of Application of Regulatory Signing and Pavement Markings at Entrance Ramp Terminal Where Design Does Not Clearly Indicate the Direction of Flow**



**Figure 2B-23. Roundabout Signs and Plaques**



R6-4



R6-4a

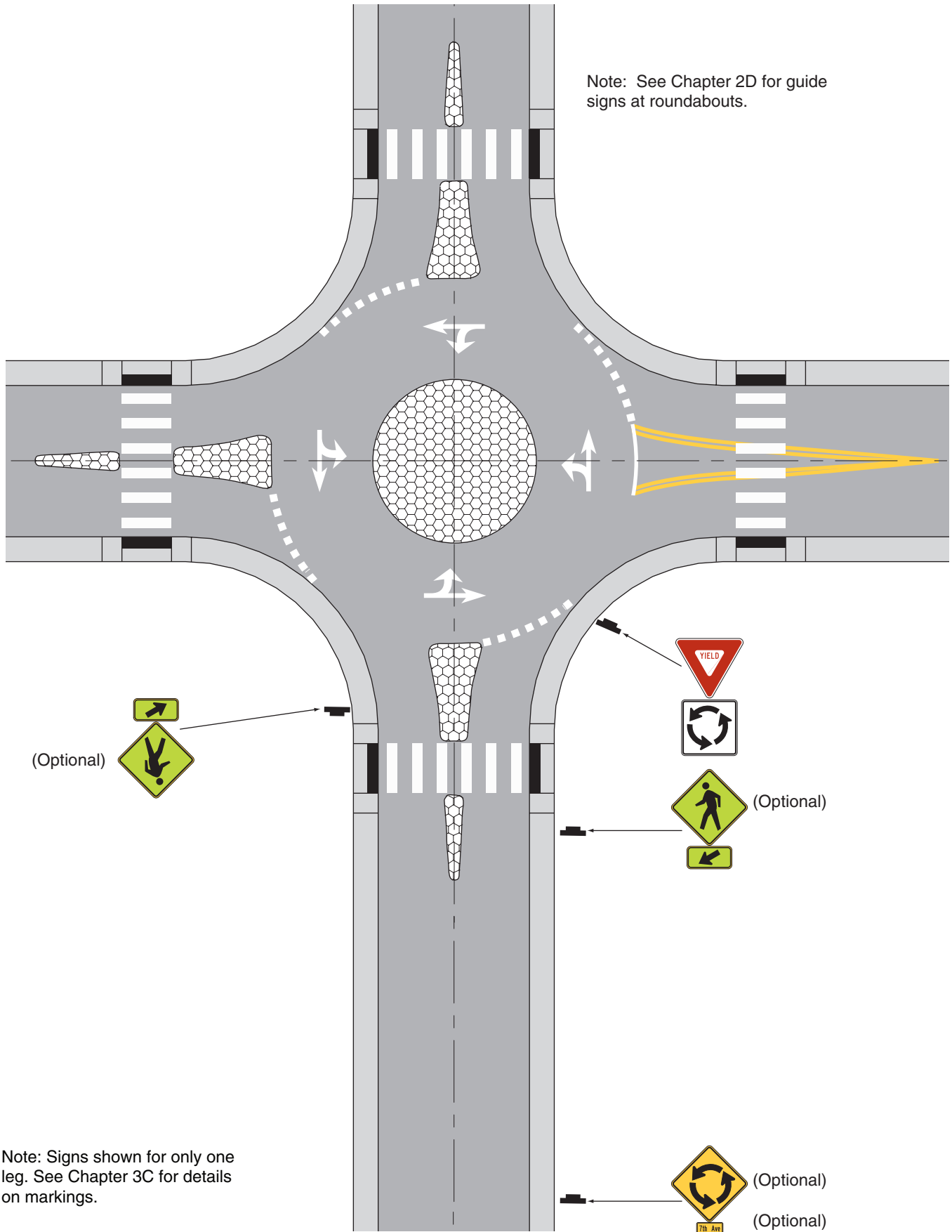


R6-4b

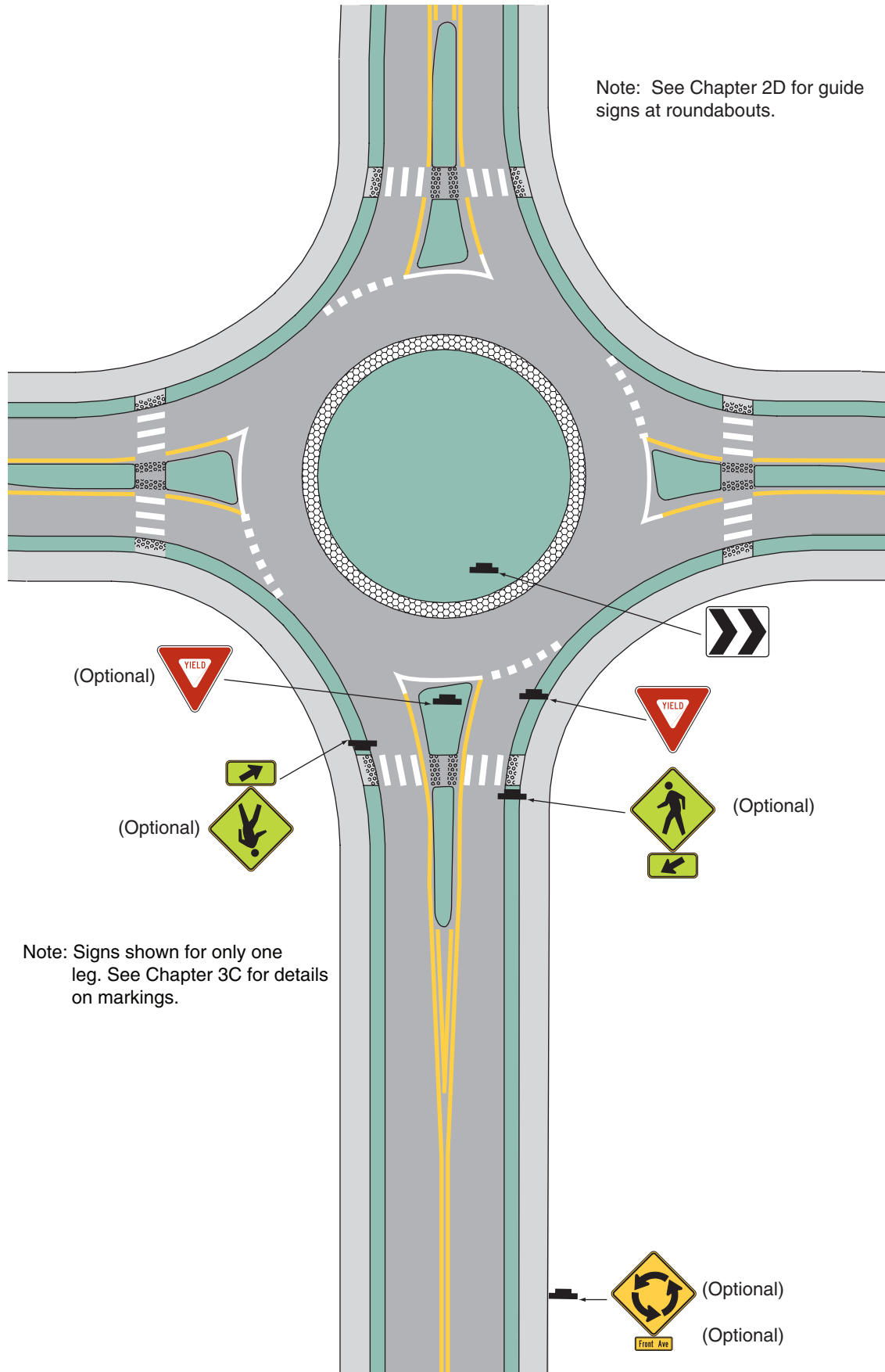


R6-5P

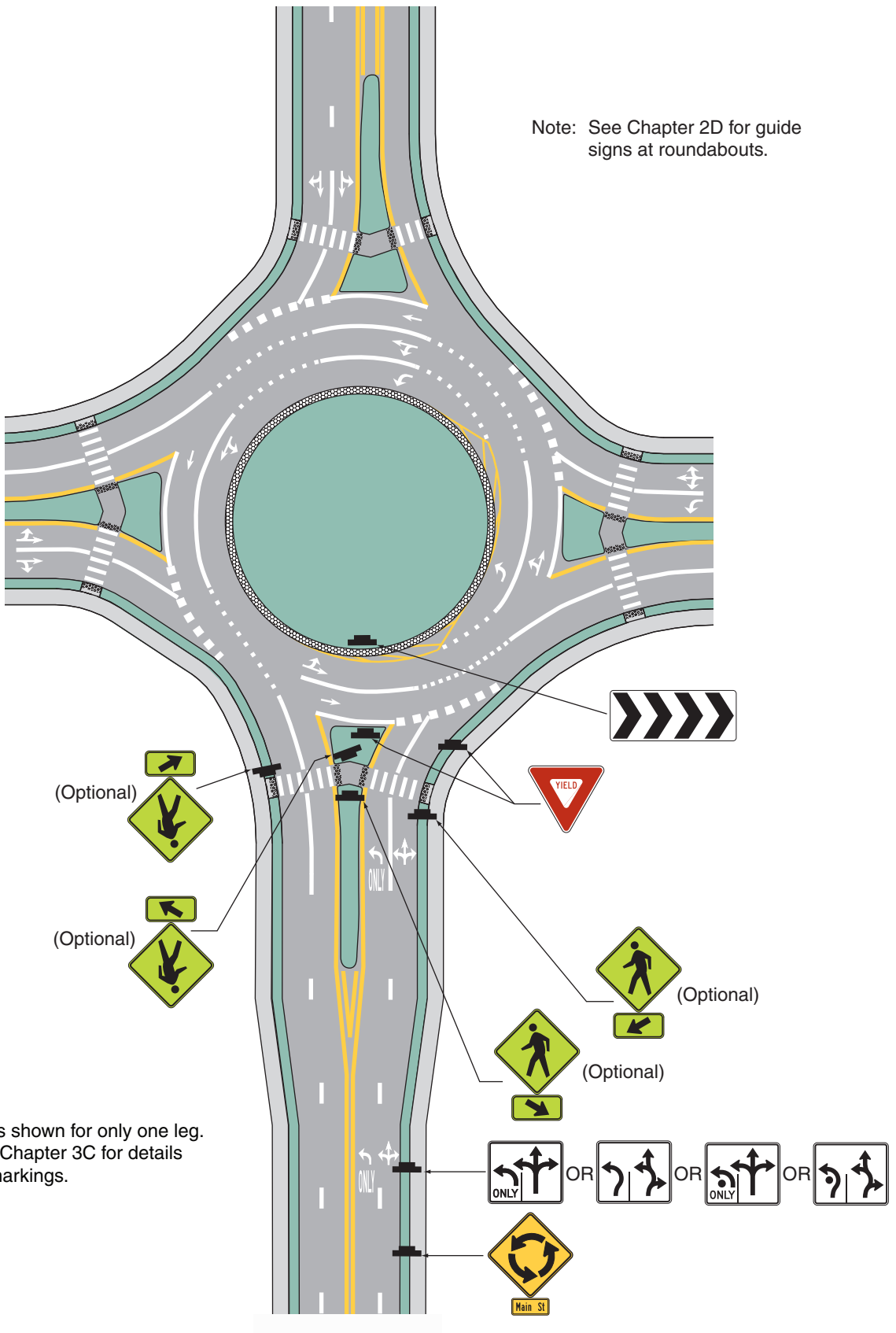
**Figure 2B-24. Example of Regulatory and Warning Signs for a Mini-Roundabout**



**Figure 2B-25. Example of Regulatory and Warning Signs for a One-Lane Roundabout**



**Figure 2B-26. Example of Regulatory and Warning Signs for a Two-Lane Roundabout with Consecutive Double Lefts**



**Figure 2B-27. Parking and Standing Signs and Plaques (R7 Series)**  
 (Sheet 1 of 2)



R7-1



R7-2



R7-2a



R7-3



R7-4



R7-5



R7-6



R7-7



R7-8



R7-8aP



R7-8bP



R7-20



R7-21



R7-21a



R7-22



R7-22a



R7-23



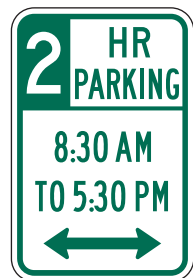
R7-23a



R7-107



R7-107a



R7-108



**Figure 2B-27. Parking and Standing Signs and Plaques (R7 Series)**  
(Sheet 2 of 2)



R7-200



R7-200a



R7-201P



OR



R7-201aP



R7-202P



R7-203

**Figure 2B-28. Parking and Stopping Signs and Plaques (R8 Series)**



R8-1



R8-2



R8-3



R8-3a



R8-3bP



R8-3cP



R8-3dP



R8-3eP



R8-3fP



R8-3gP



R8-3hP



R8-4



R8-5



R8-6

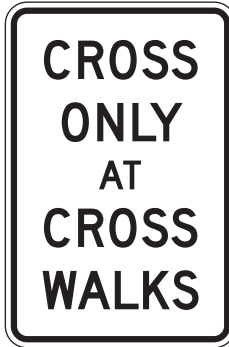


R8-7

Figure 2B-29. Pedestrian Signs and Plaques (Sheet 1 of 2)



R9-1



R9-2



R9-3



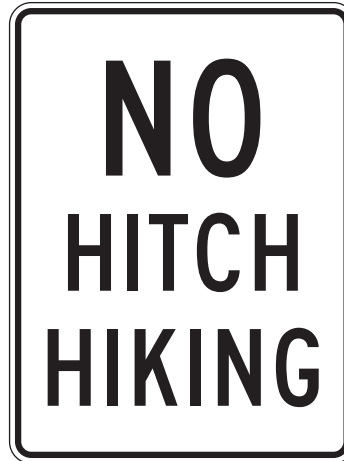
R9-3a



R9-3bP



R9-4



R9-4a



R10-1



R10-2



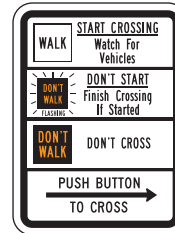
R10-3



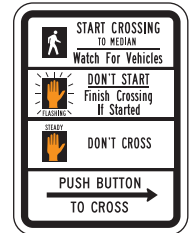
R10-3a



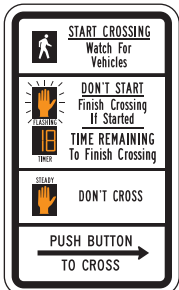
R10-3b



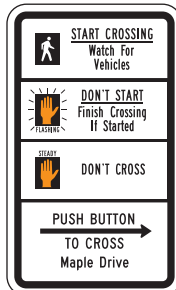
R10-3c



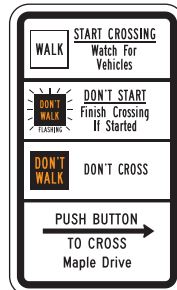
R10-3d



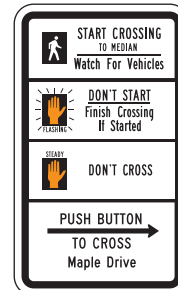
R10-3e



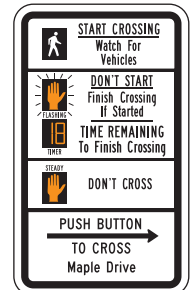
R10-3f



R10-3g



R10-3h



R10-3i

**Figure 2B-29. Pedestrian Signs and Plaques (Sheet 2 of 2)**



R10-4



R10-4a



R10-25



R10-32P

Figure 2B-30. Traffic Signal Signs and Plaques



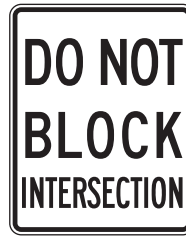
R10-5



R10-6



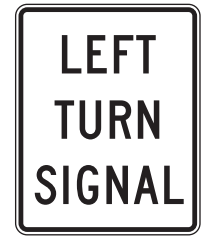
R10-6a



R10-7



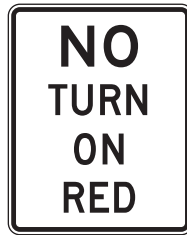
R10-8



R10-10



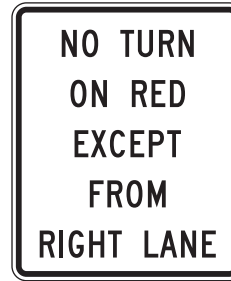
R10-11



R10-11a



R10-11b



R10-11c



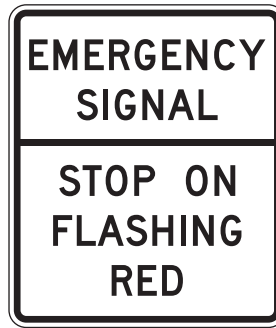
R10-11d



R10-12



R10-13



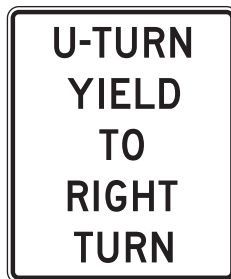
R10-14



R10-14a



R10-15



R10-16



R10-17a



R10-20aP



R10-21



R10-23



R10-27



R10-30



R10-31P

**Figure 2B-31. Ramp Metering Signs**



R10-28



R10-29

Figure 2B-32. Road Closed and Weight Limit Signs and Plaques



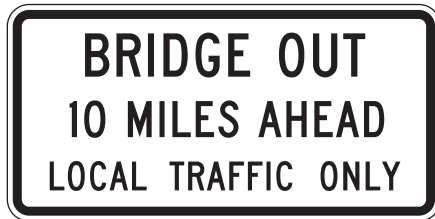
R11-1



R11-2



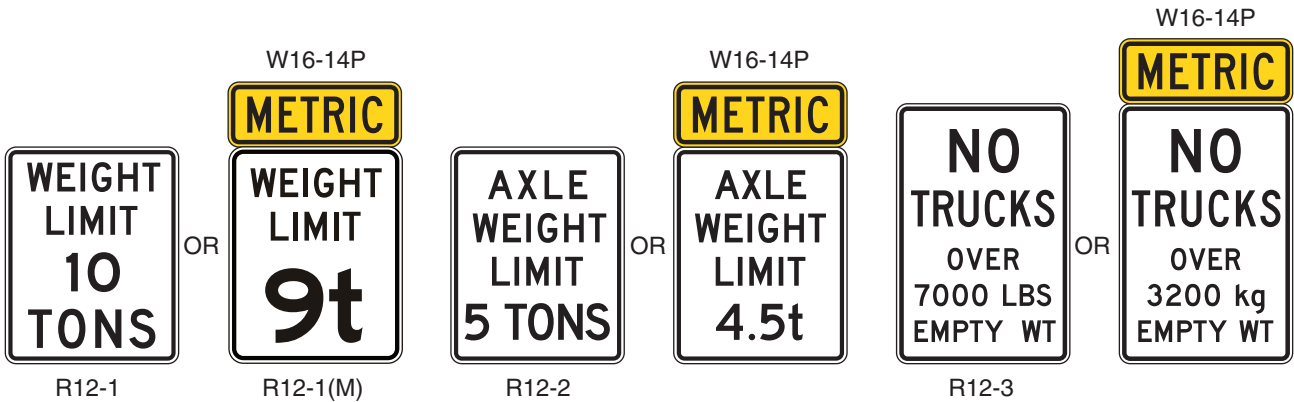
R11-3a



R11-3b



R11-4

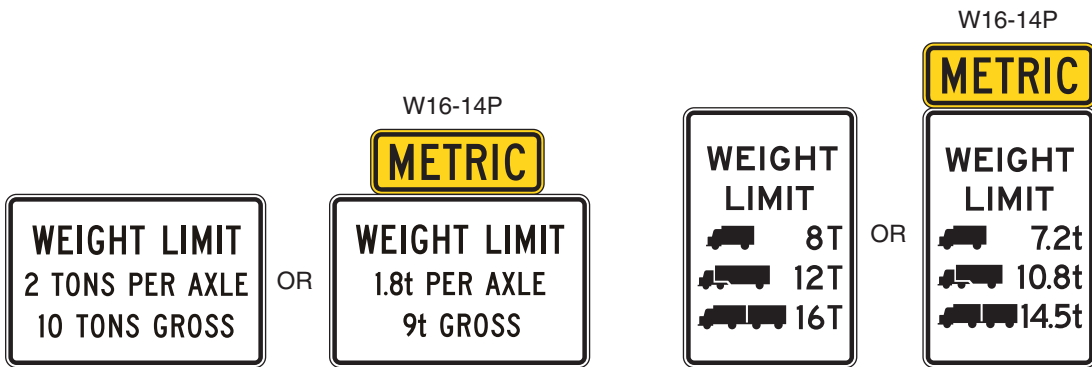


R12-1

R12-1(M)

R12-2

R12-3



R12-4

R12-5

Figure 2B-33. Truck Signs



R13-1



R14-1



R14-2



R14-3



R14-4



R14-5



**Figure 2B-34. Headlight Use Signs**



R16-5



R16-6



R16-7



R16-8



R16-9



R16-10



R16-11



R16-12

**Figure 2B-35. Other Regulatory Signs and Symbols**



R16-4

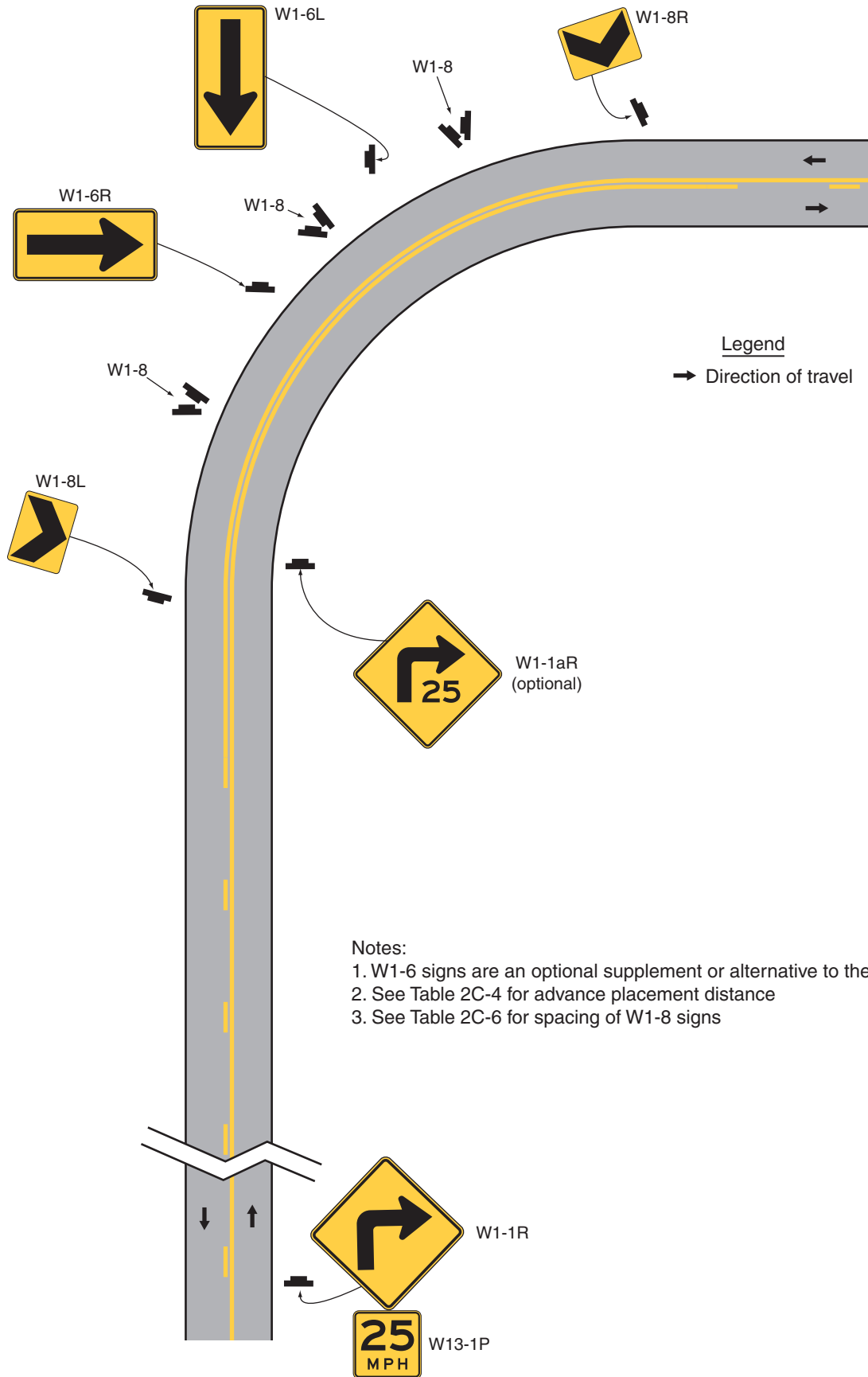


Seat Belt Symbol

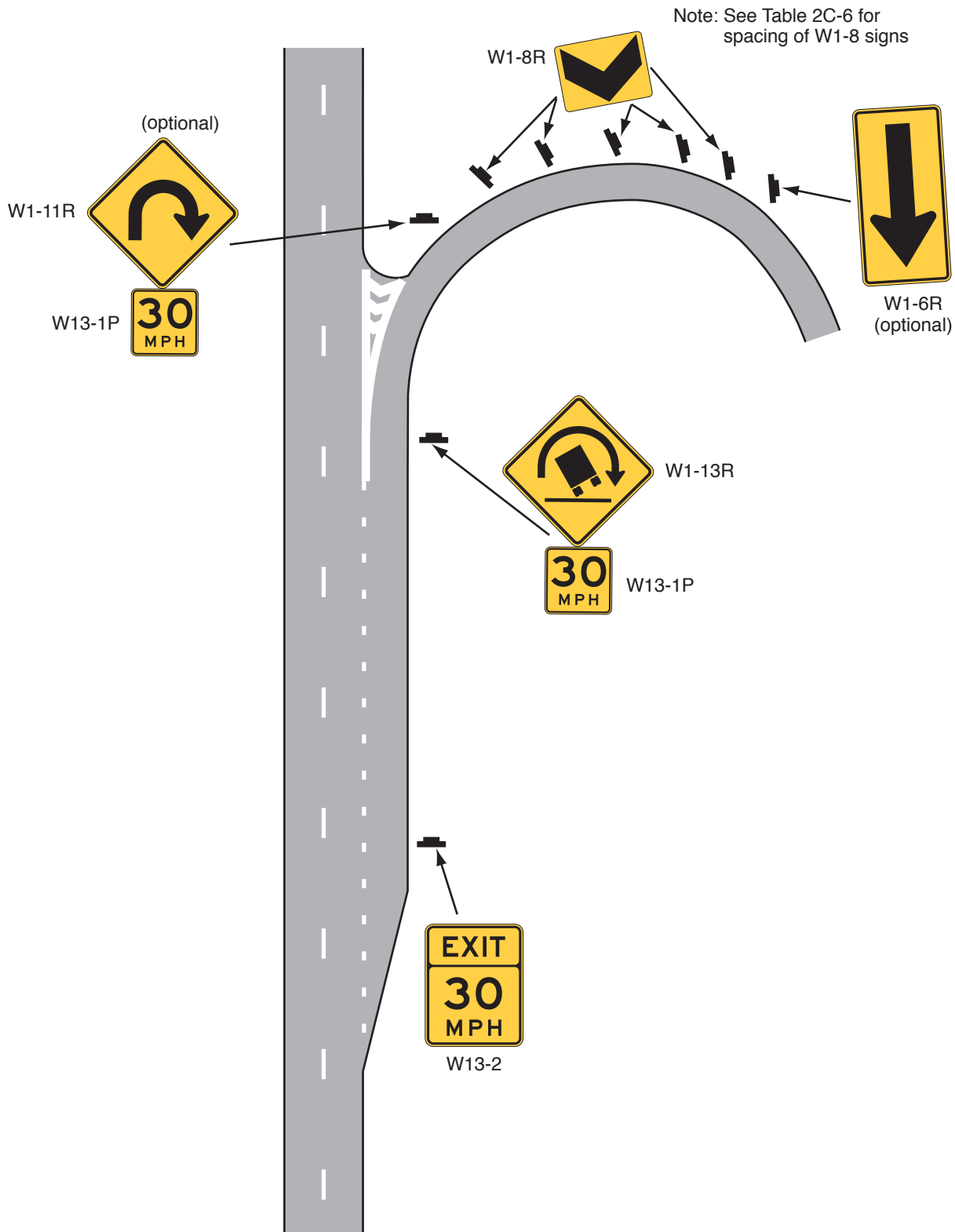
**Figure 2C-1. Horizontal Alignment Signs and Plaques**



**Figure 2C-2. Example of Warning Signs for a Turn**



**Figure 2C-3. Example of Advisory Speed Signing for an Exit Ramp**



**Figure 2C-4. Vertical Grade Signs and Plaques**



W7-1



W7-1a



W7-2P



W7-2bP



W7-3P



W7-3aP



W7-3bP



W7-6

Figure 2C-5. Miscellaneous Warning Signs



W5-1



W5-2



W5-3



W6-1



W6-2



W12-1



W12-2

OR



W12-2(M)



W12-2a

OR



W12-2a(M)



W14-1



W14-1a



W14-2



W14-2a



W19-1



W19-2



W19-3



W19-4



W19-5

**Figure 2C-6. Roadway and Weather Condition and Advance Traffic Control Signs and Plaques**



W3-1



W3-2



W3-3



W3-4



W3-6



W3-7



W3-8



W8-1



W8-2



W8-3



W8-4



W8-5



W8-7



W8-8



W8-9



W8-12



W8-13



W8-14



W8-14P



W8-15



W8-15P



W8-16



W8-15P



W8-17



W8-11P



W8-17P



W8-17a



W8-18



W8-19



W8-21



W8-22



W8-23



W17-1



W23-2



**Figure 2C-7. Speed Reduction Signs**



W3-5



W3-5a

Figure 2C-8. Merging and Passing Signs and Plaques



W4-1



W4-2



W4-3



W4-5



W4-5P



W4-6



W4-7



W6-3



W6-5



W6-6



W9-1



W9-2



W9-7



W14-3

*Figure 2C-9. Toll Road Signs and Plaques*



W9-4



W9-5



W9-6



W9-6a



W9-6P



W9-6aP



W16-16P

**Figure 2C-10. Intersection Warning Signs**



W1-7



W2-1



W2-2



W2-3



W2-4



W2-5



W2-6



W16-12P

OR



W16-17P



W2-7L



W2-7R



W2-8



W4-4P



W4-4aP



W4-4bP



W25-1



W25-2

**Figure 2C-11. Vehicular Traffic Signs and Plaques**



W8-6



W11-1



W11-5



W11-5a



W11-8



W11-10



W11-11



W11-12P



W11-14



W11-15



W11-15P  
(optional)

**Figure 2C-12. Nonvehicular Traffic Signs**



W11-2



W11-3



W11-4



W11-6



W11-7



W11-9



W11-16



W11-17



W11-18



W11-19



W11-20



W11-21

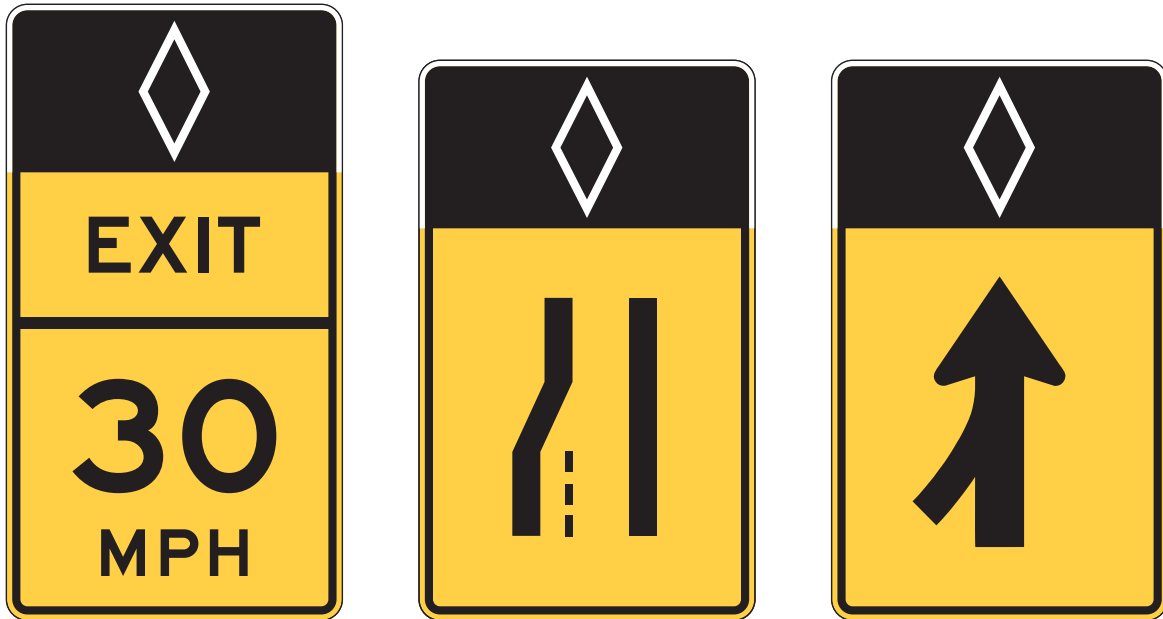


W11-22



W15-1

**Figure 2C-13. Examples of Barrier-Mounted Warning Signs Applicable Only to Preferential Lanes**



Note: An HOV lane example (diamond symbol) is illustrated. For other types of preferential lanes, the appropriate symbol or word message (see Section 2B.26) shall be displayed in white on the black background of the top portion of these signs.

Figure 2C-14. Supplemental Warning Plaques



W16-1P



W16-2P



W16-2aP



W16-3P



W16-3aP



W16-4P



W16-5P



W16-6P



W16-7P



W16-8P



W16-8aP



W16-9P



W16-10P



W16-10aP



W16-11P



W16-13P



W16-14P



W16-15P



**Figure 2D-1. Examples of Color-Coded Destination Guide Signs**

**A - Freeway or Expressway – Airport Terminals**

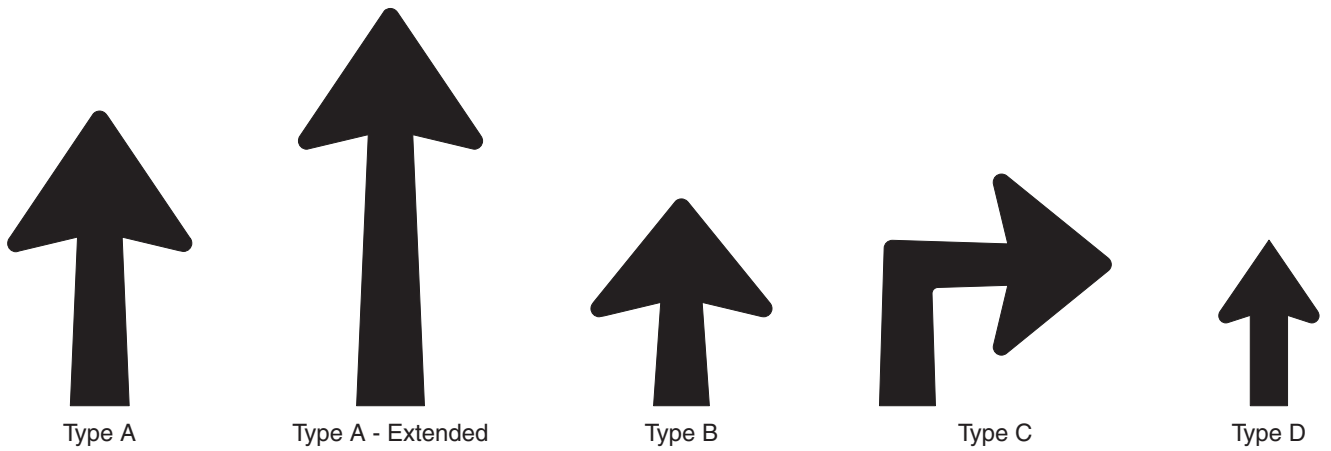


**B - Conventional Road or Street – Urban Areas**

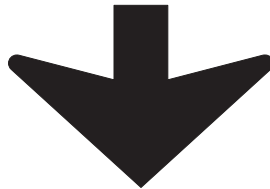


**Figure 2D-2. Arrows for Use on Guide Signs**

**Directional Arrows**



**Down Arrow**



Note: Chapter 6 of the Standard Highway Signs and Markings book contains the details of these arrow designs.

**Figure 2D-3. Route Signs**



Interstate Route Sign  
M1-1



Off-Interstate Business Route Sign  
M1-2 (Loop)  
M1-3 (Spur)



U.S. Route Sign  
M1-4



State Route Sign  
M1-5

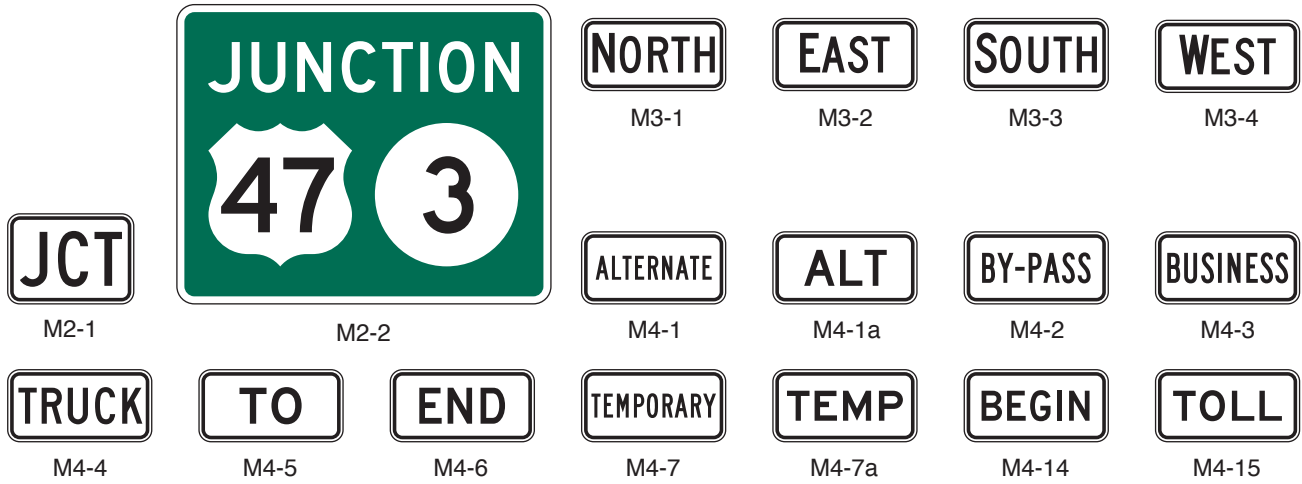


County Route Sign  
M1-6

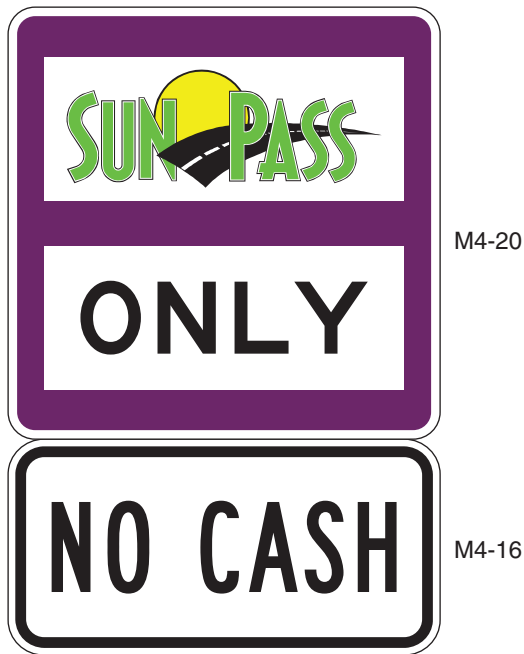


Forest Route Sign  
M1-7

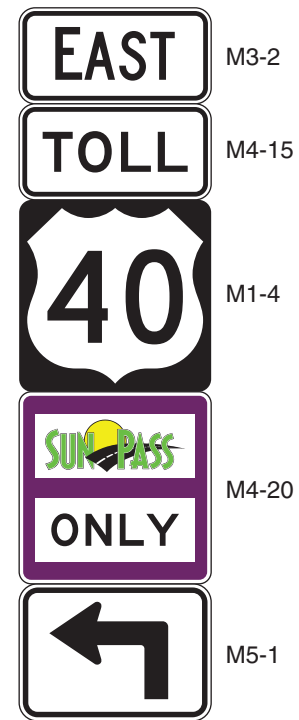
Figure 2D-4. Route Sign Auxiliaries



**Figure 2D-5. ETC Only Auxiliary Signs for Use in Route Sign Assemblies**

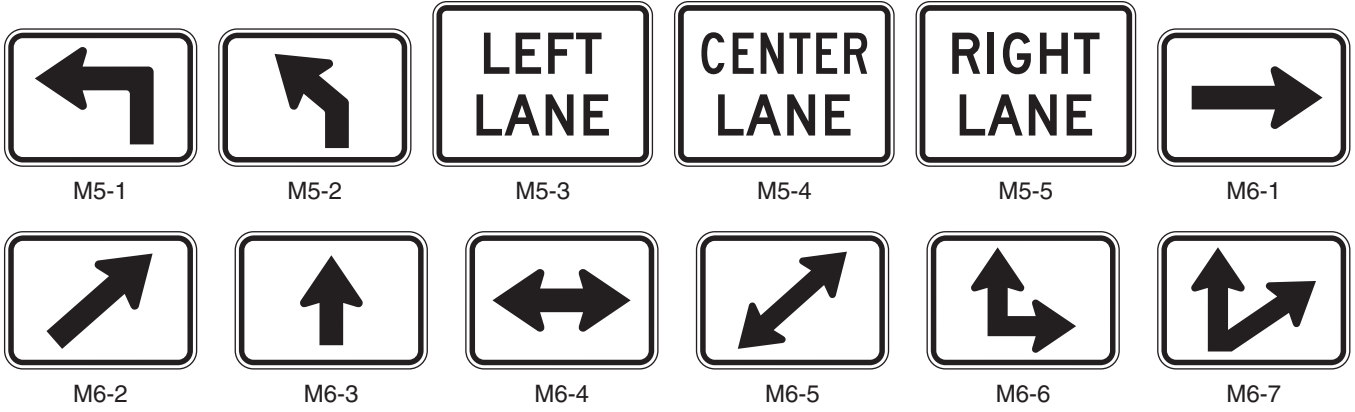


NOTE: ETC pictograph shown is an example only.  
The pictograph for the toll facility's adopted  
ETC system shall be used.

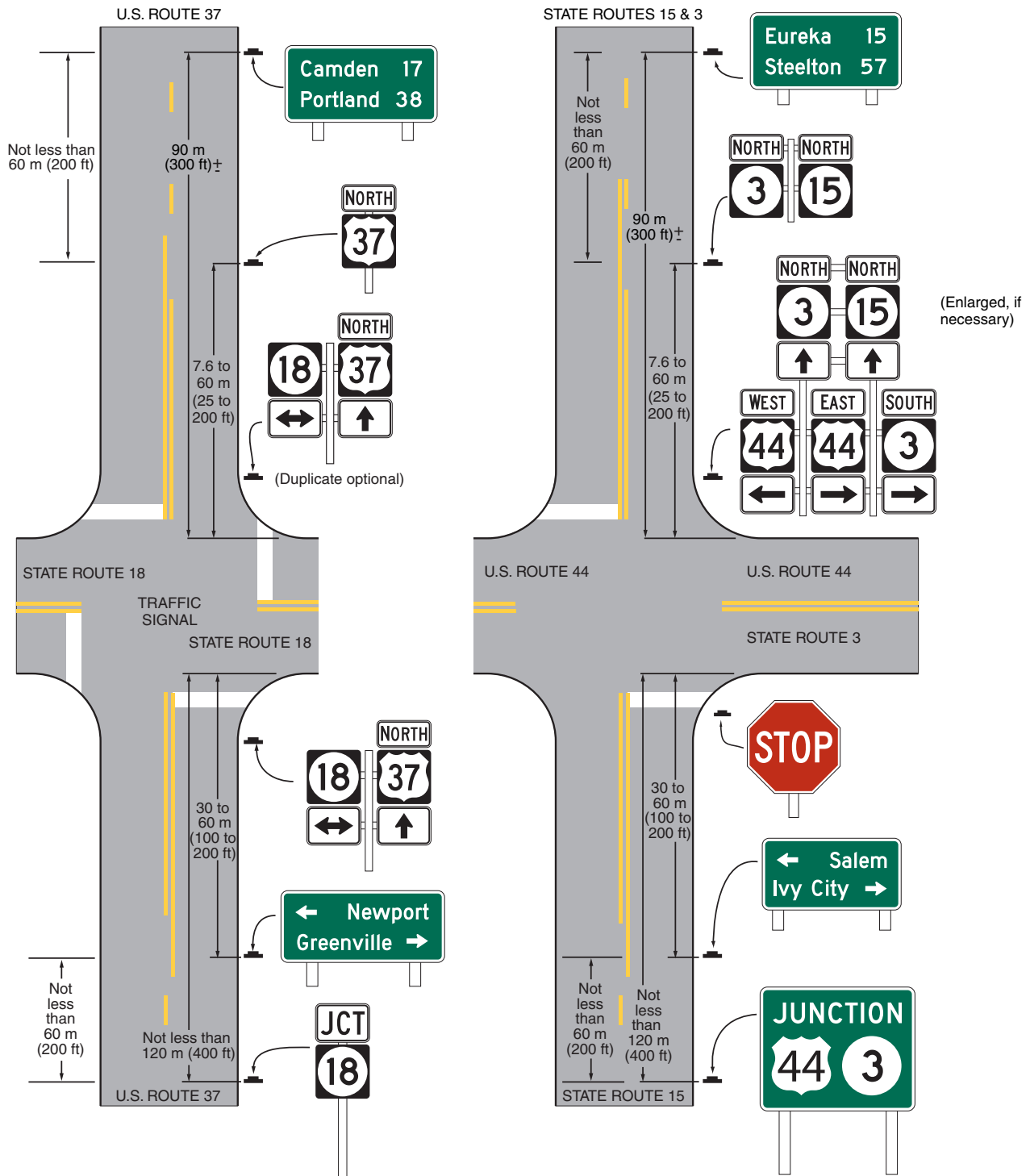


Example Route Sign  
Assembly

**Figure 2D-6. Advance Turn and Directional Arrow Auxiliary Signs**

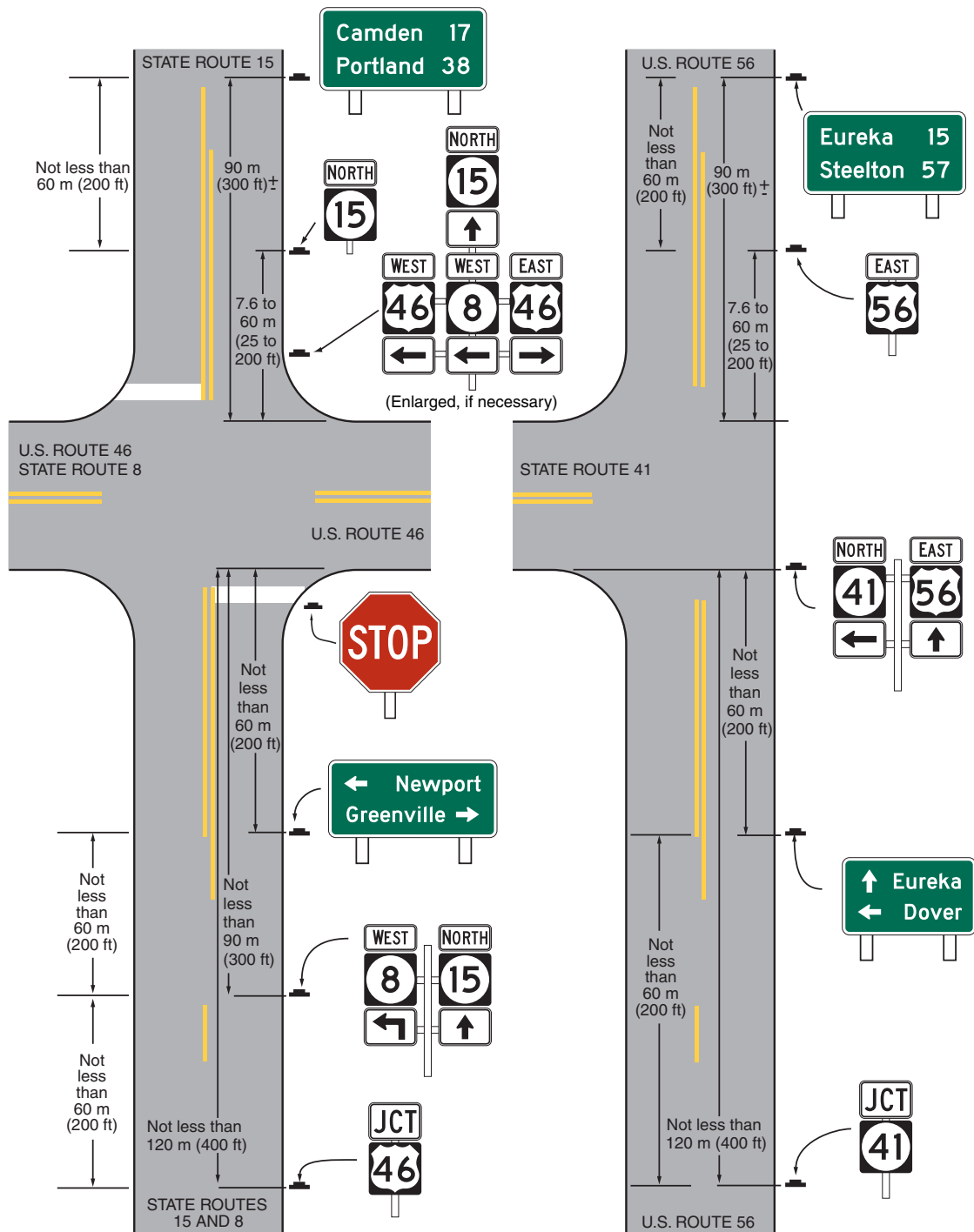


**Figure 2D-7. Illustration of Directional Assemblies and Other Route Signs (For One Direction of Travel Only) (Sheet 1 of 4)**



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.31, 2D.32, 2D.36, and 2D.42 for low-speed and/or urban conditions.

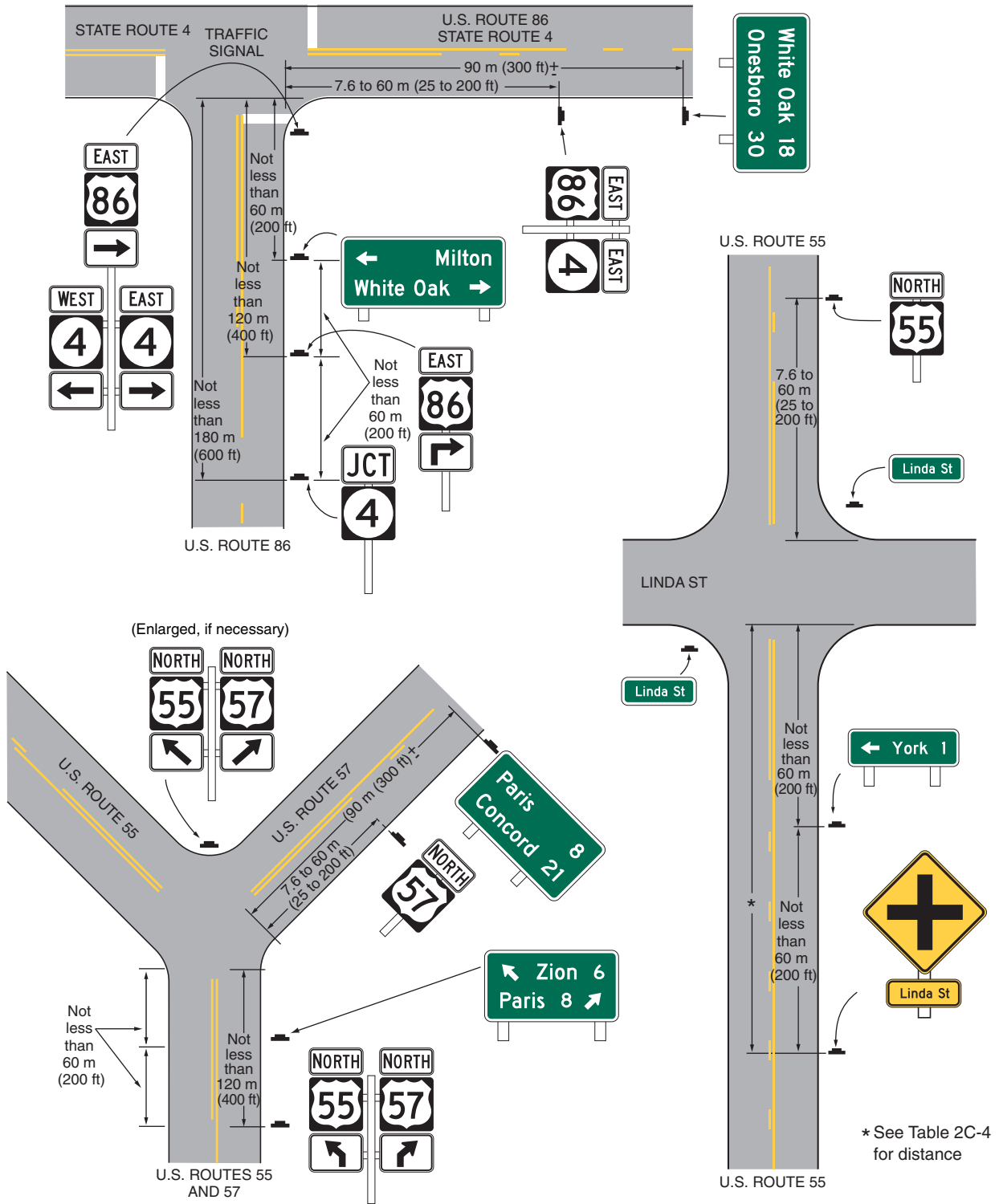
**Figure 2D-7. Illustration of Directional Assemblies and Other Route Signs (For One Direction of Travel Only) (Sheet 2 of 4)**



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.31, 2D.32, 2D.36, and 2D.42 for low-speed and/or urban conditions.

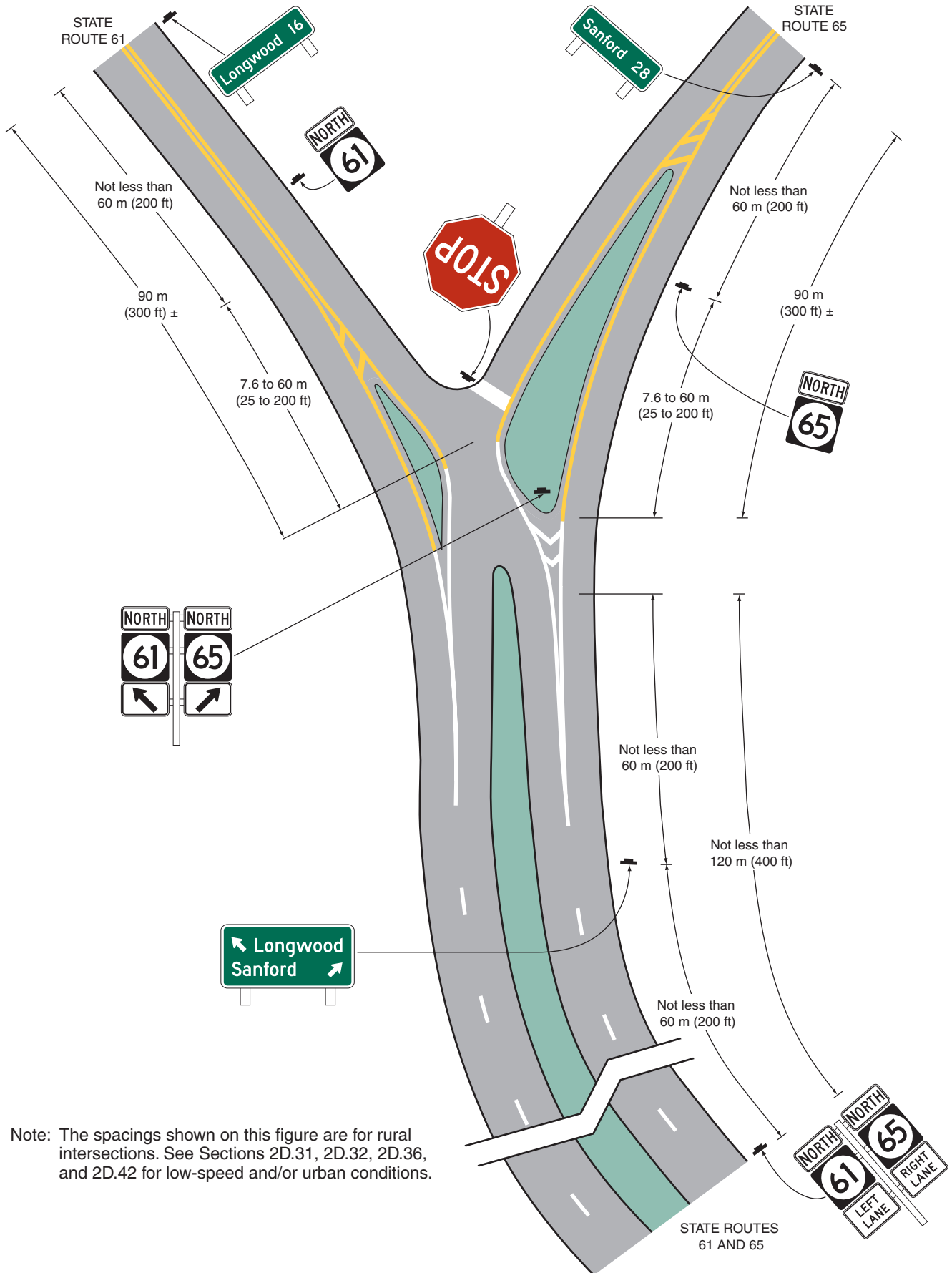


**Figure 2D-7. Illustration of Directional Assemblies and Other Route Signs (For One Direction of Travel Only) (Sheet 3 of 4)**



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.31, 2D.32, 2D.36, and 2D.42 for low-speed and/or urban conditions.

**Figure 2D-7. Illustration of Directional Assemblies and Other Route Signs (For One Direction of Travel Only) (Sheet 4 of 4)**



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.31, 2D.32, 2D.36, and 2D.42 for low-speed and/or urban conditions.

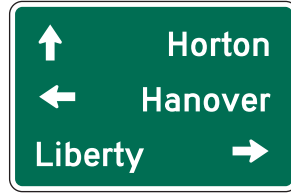
Figure 2D-8. Destination and Distance Signs



D1-1



D1-2



D1-3



D1-1a



D1-2a



D1-3a



D2-1



D2-2



D2-3



D15-1

OR



D15-1

**Figure 2D-9. Destination Signs for Roundabouts**



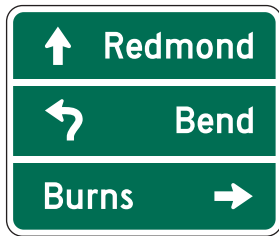
D1-1d



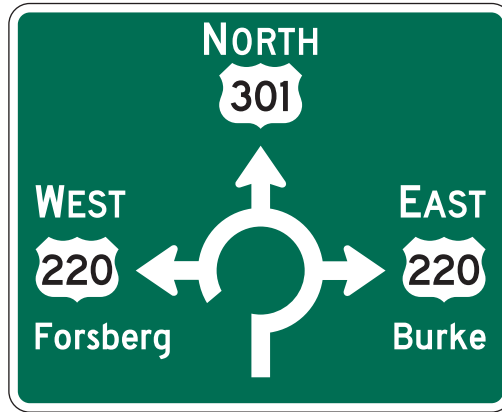
D1-1e



D1-2d

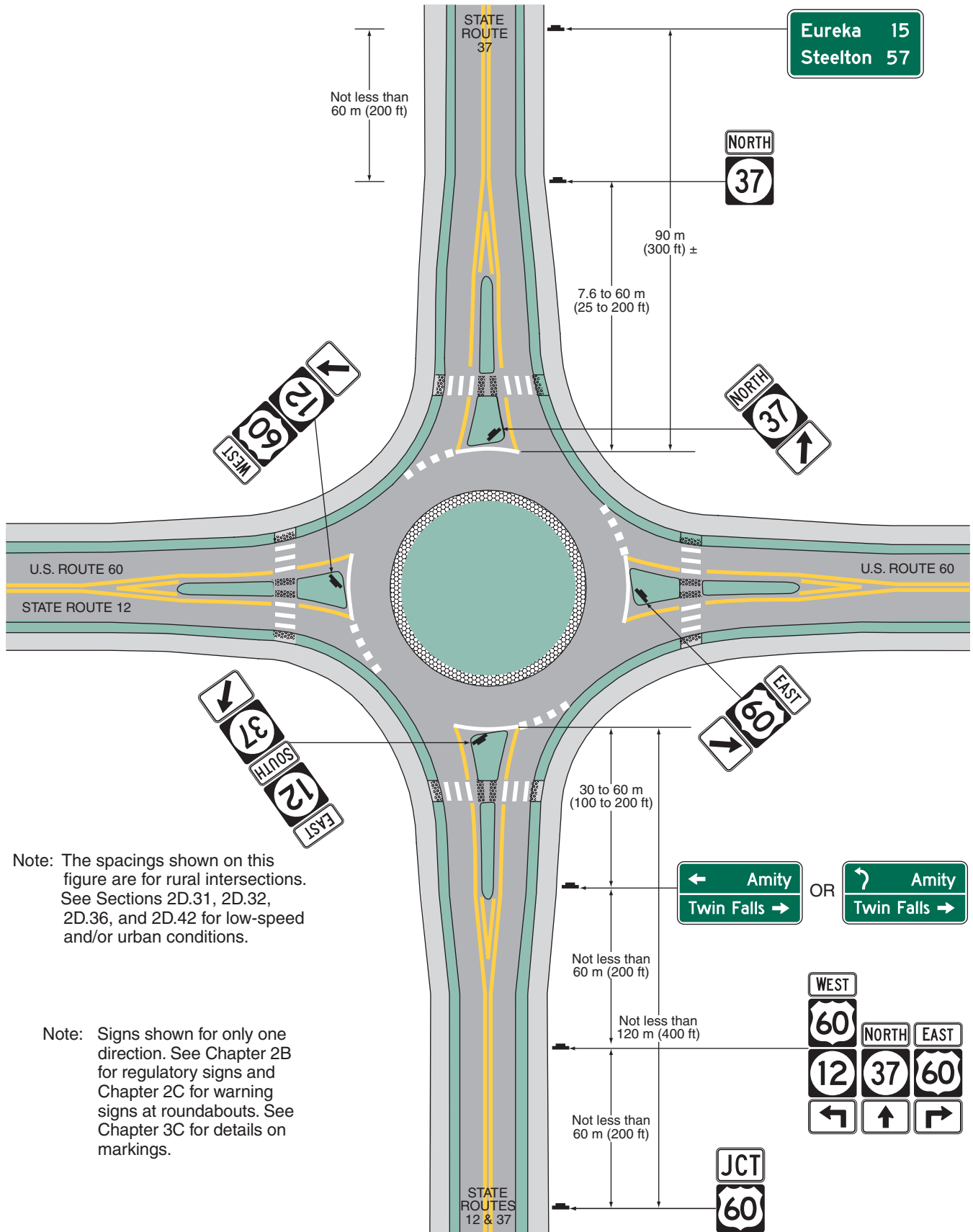


D1-3d



D1-4

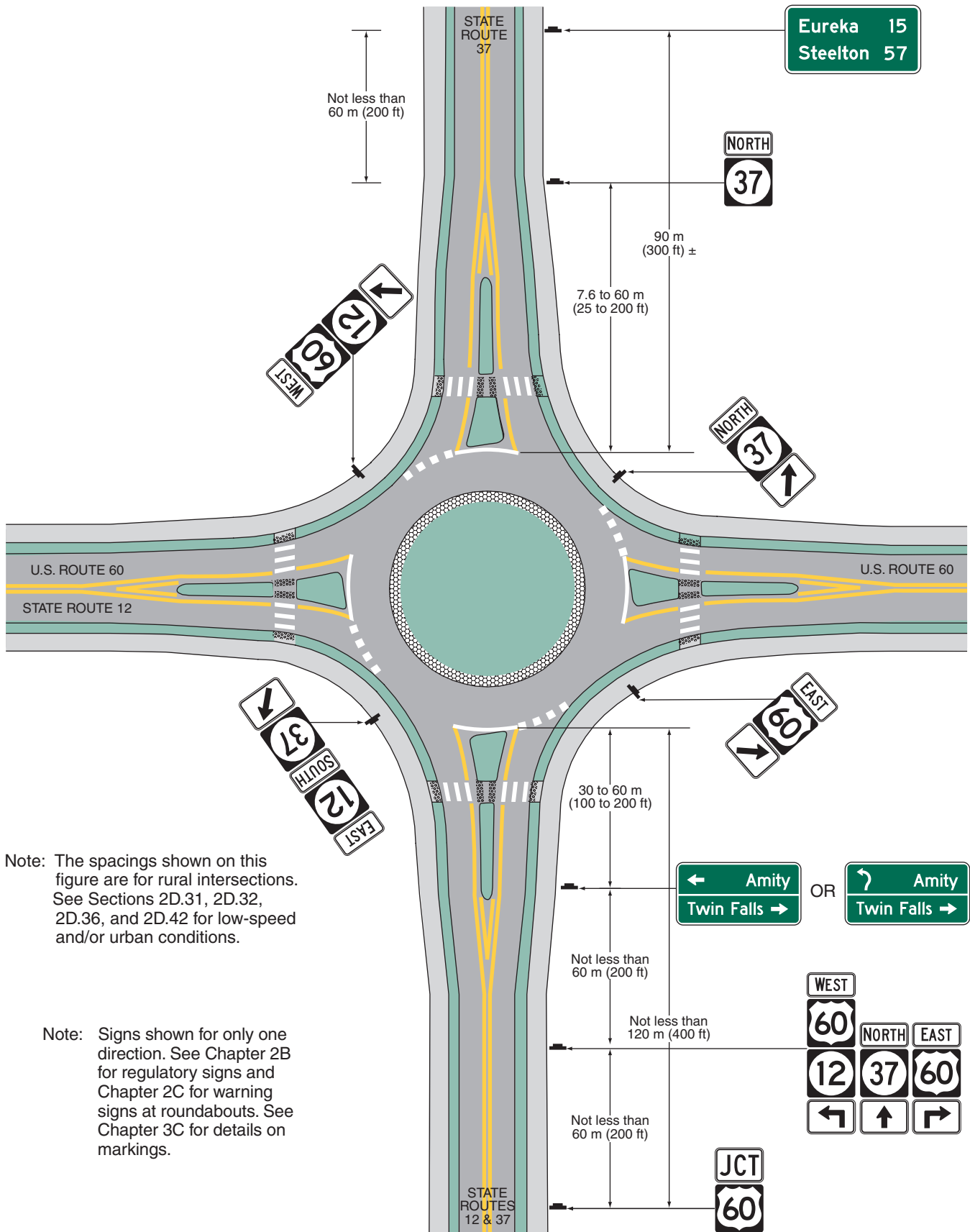
**Figure 2D-10. Examples of Guide Signs for Roundabouts (Sheet 1 of 2)**



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.31, 2D.32, 2D.36, and 2D.42 for low-speed and/or urban conditions.

Note: Signs shown for only one direction. See Chapter 2B for regulatory signs and Chapter 2C for warning signs at roundabouts. See Chapter 3C for details on markings.

Figure 2D-10. Examples of Guide Signs for Roundabouts (Sheet 2 of 2)



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.31, 2D.32, 2D.36, and 2D.42 for low-speed and/or urban conditions.

Note: Signs shown for only one direction. See Chapter 2B for regulatory signs and Chapter 2C for warning signs at roundabouts. See Chapter 3C for details on markings.

Figure 2D-11. Street Name and Parking Signs



OR



OR



OR



D3-2



D3-1a



D3-1



D4-1

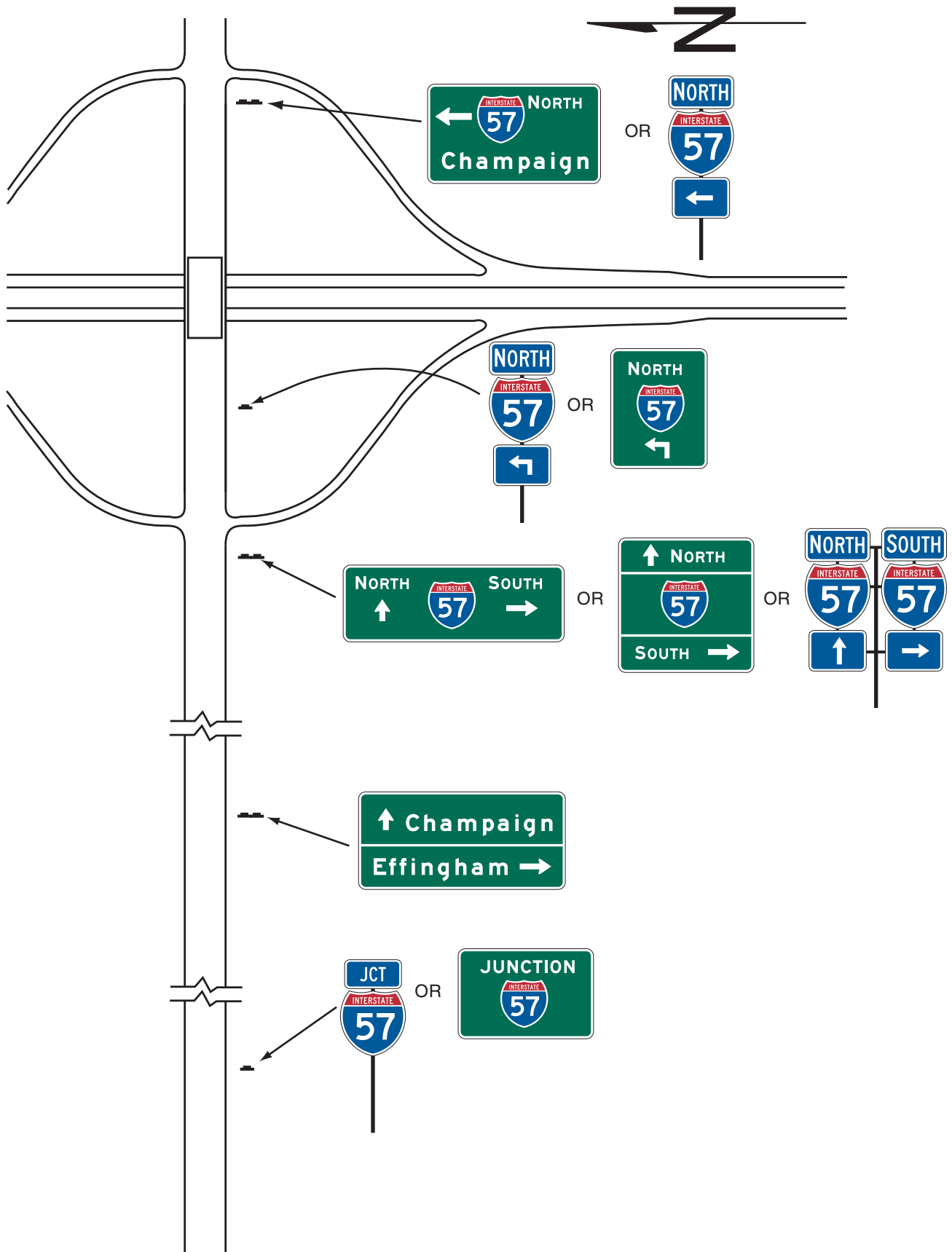


D4-1a



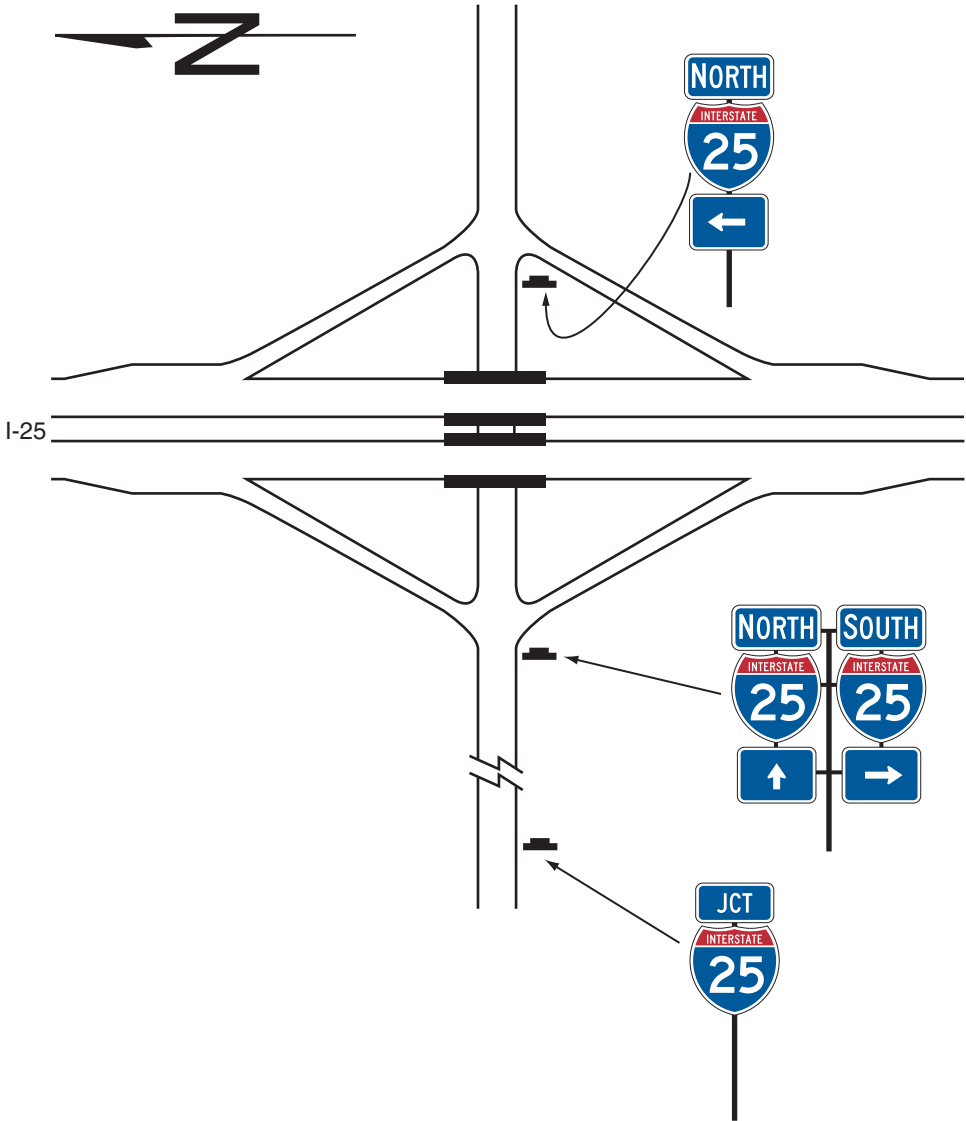
D4-2

Figure 2D-12. Example of Interchange Crossroad Signing for One-Lane Approach

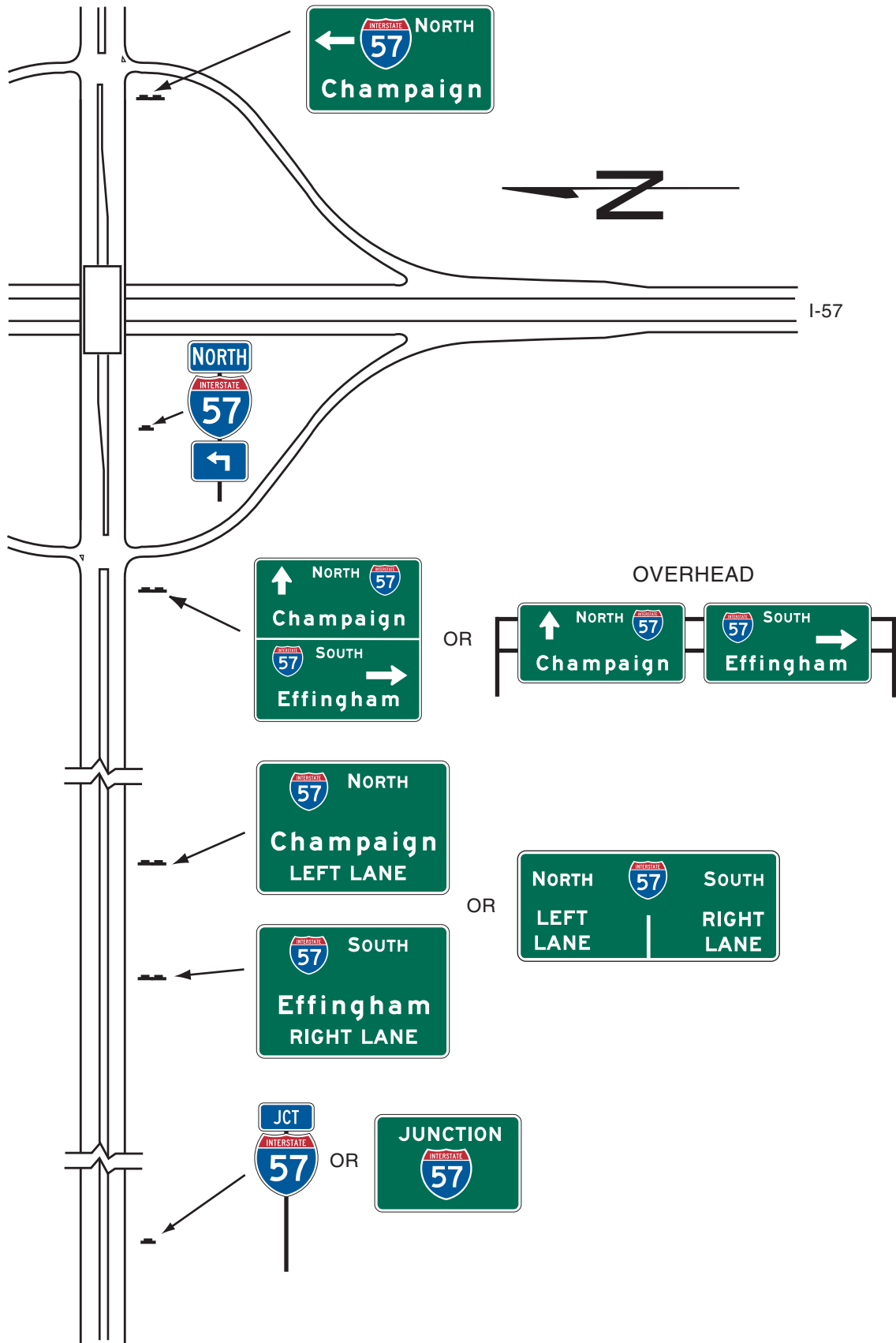




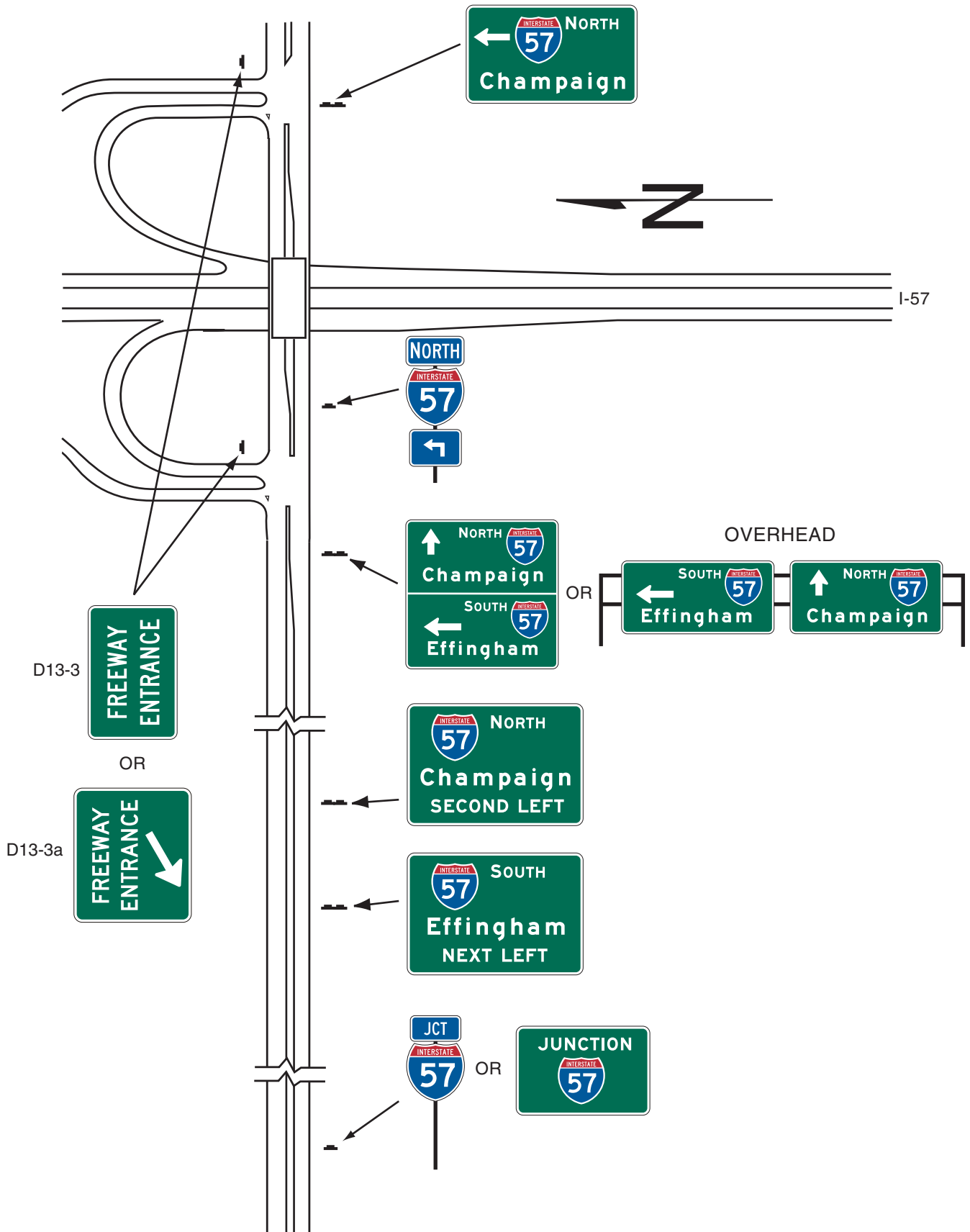
**Figure 2D-13. Example of Minor Interchange Crossroad Signing**



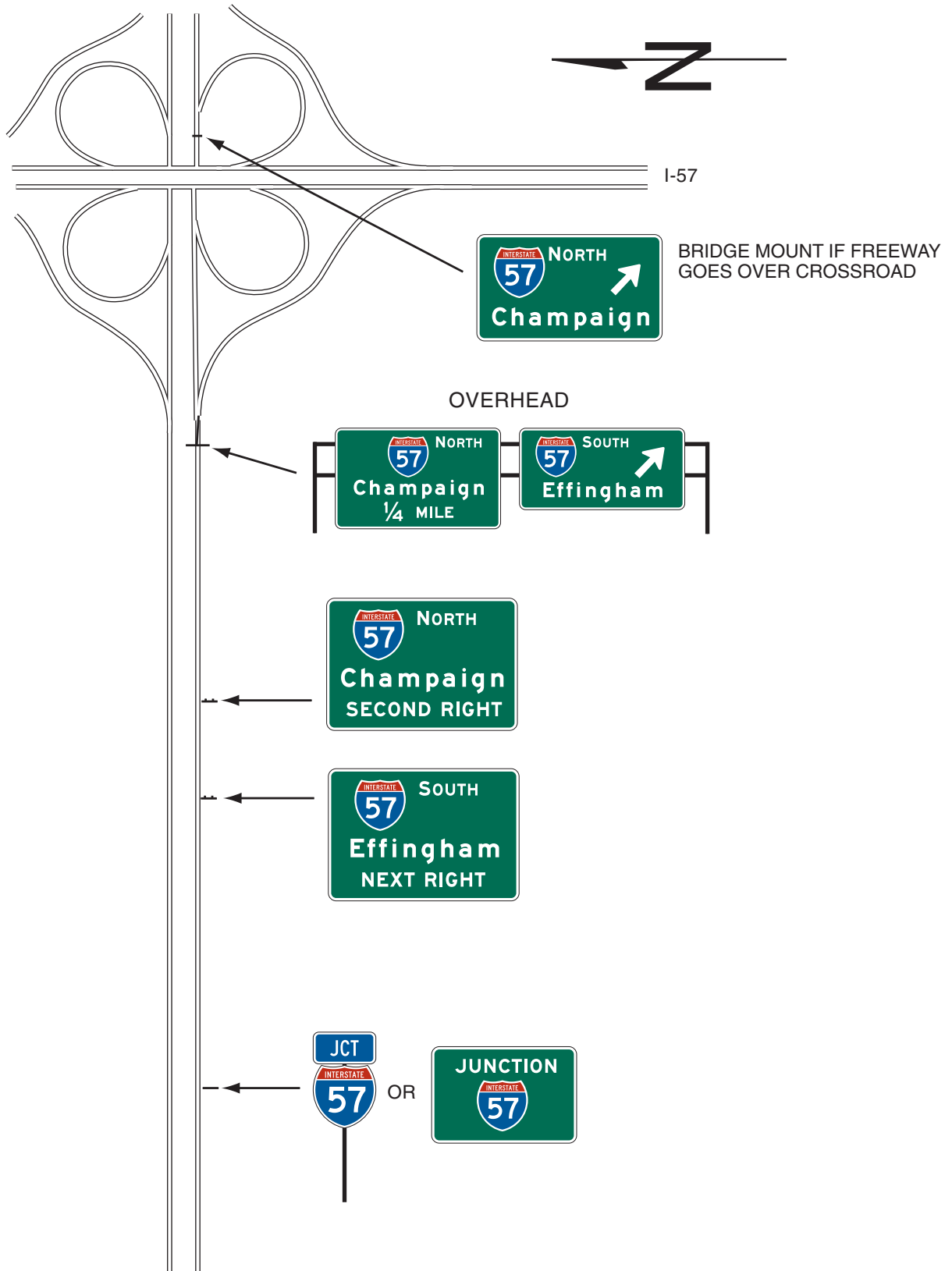
**Figure 2D-14. Examples of Multi-lane Crossroad Signing for Diamond Interchange**



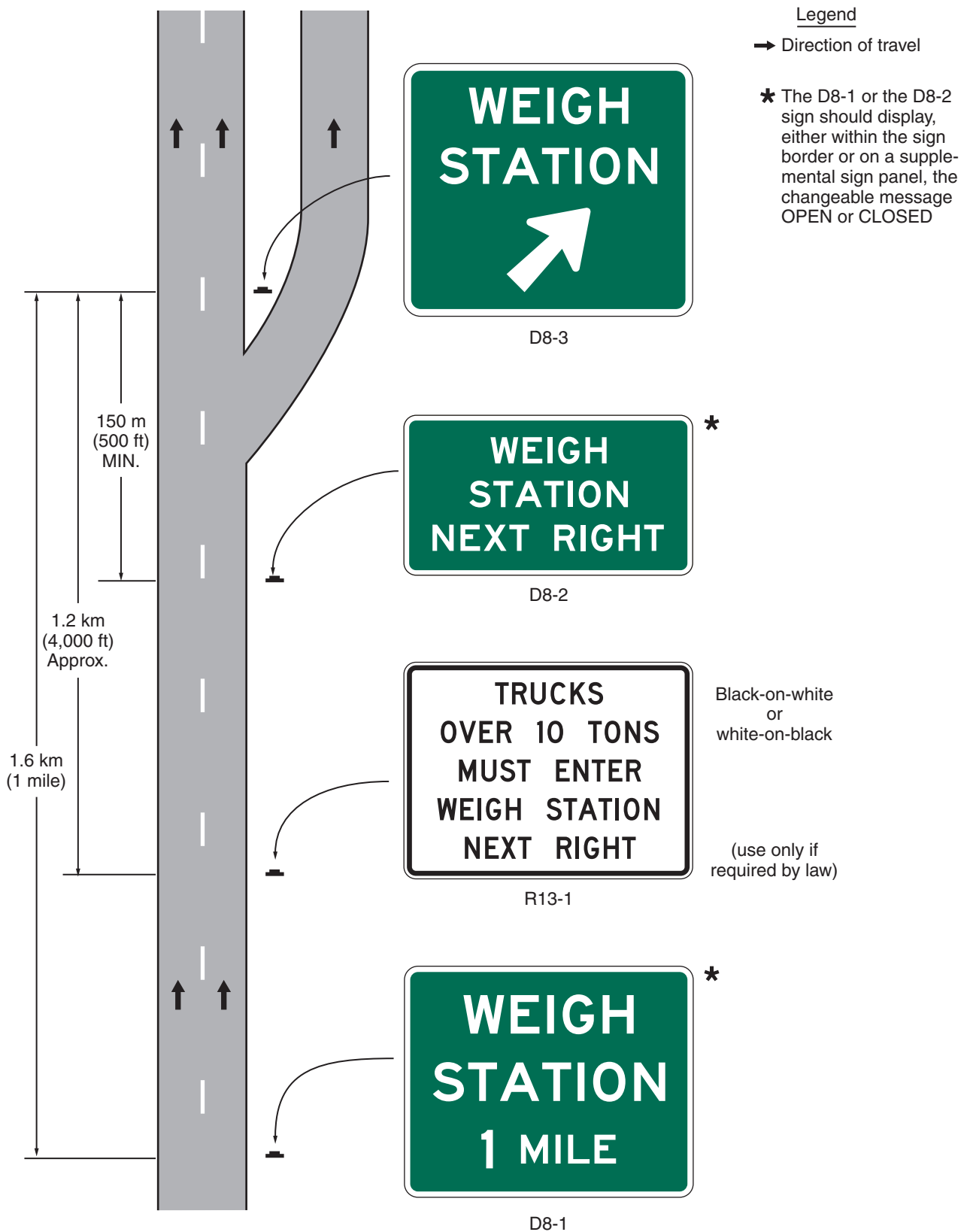
**Figure 2D-15. Examples of Multi-lane Crossroad Signing for Partial Cloverleaf Interchange**



**Figure 2D-16. Examples of Multi-lane Crossroad Signing for Cloverleaf Interchange**



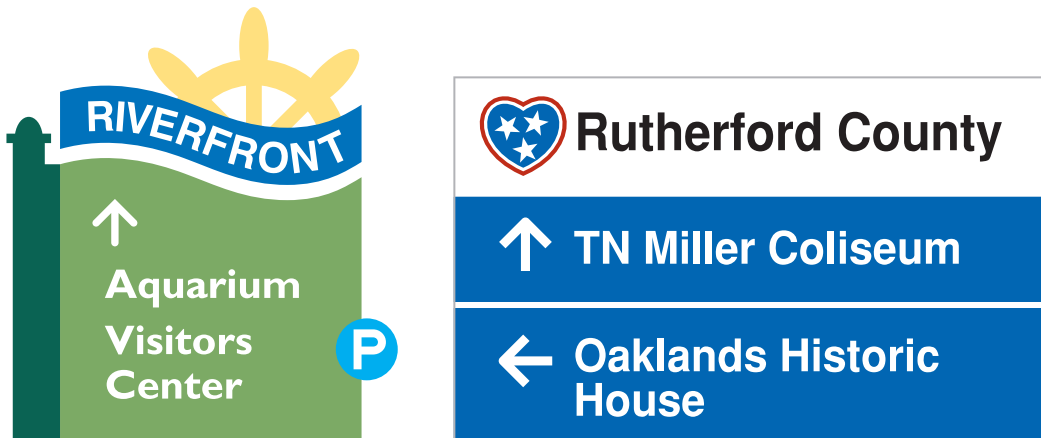
**Figure 2D-17. Example of Weigh Station Signing**



**Figure 2D-18. Alternative Arrow Designs for Use on  
Community Wayfinding Guide Signs**



**Figure 2D-19. Examples of Enhancement Markers on Community Wayfinding Guide Signs**



**Figure 2D-20. Truck, Slow Vehicle, and Crossover Signs**



D13-1



D13-2



D17-1



D17-2



D17-7

\* The words PASSING or CLIMBING may be substituted for the word TRUCK on the D17-1 and D17-2 signs.



**Figure 2D-21. Examples of Use of the National Scenic Byways Sign**



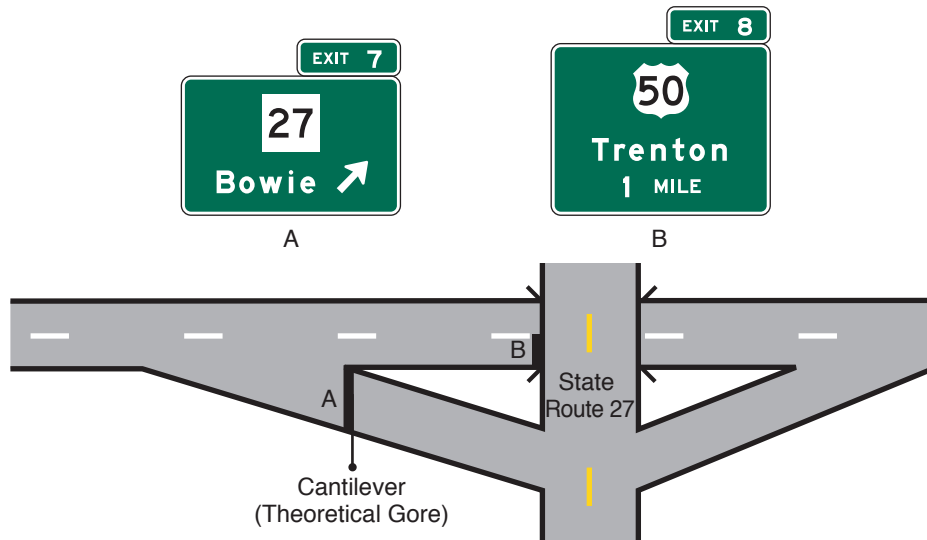
D6-4



D6-4a



**Figure 2E-1. Example of Guide Sign Spreading**



**Figure 2E-2. Pull-Through Signs**



E6-2

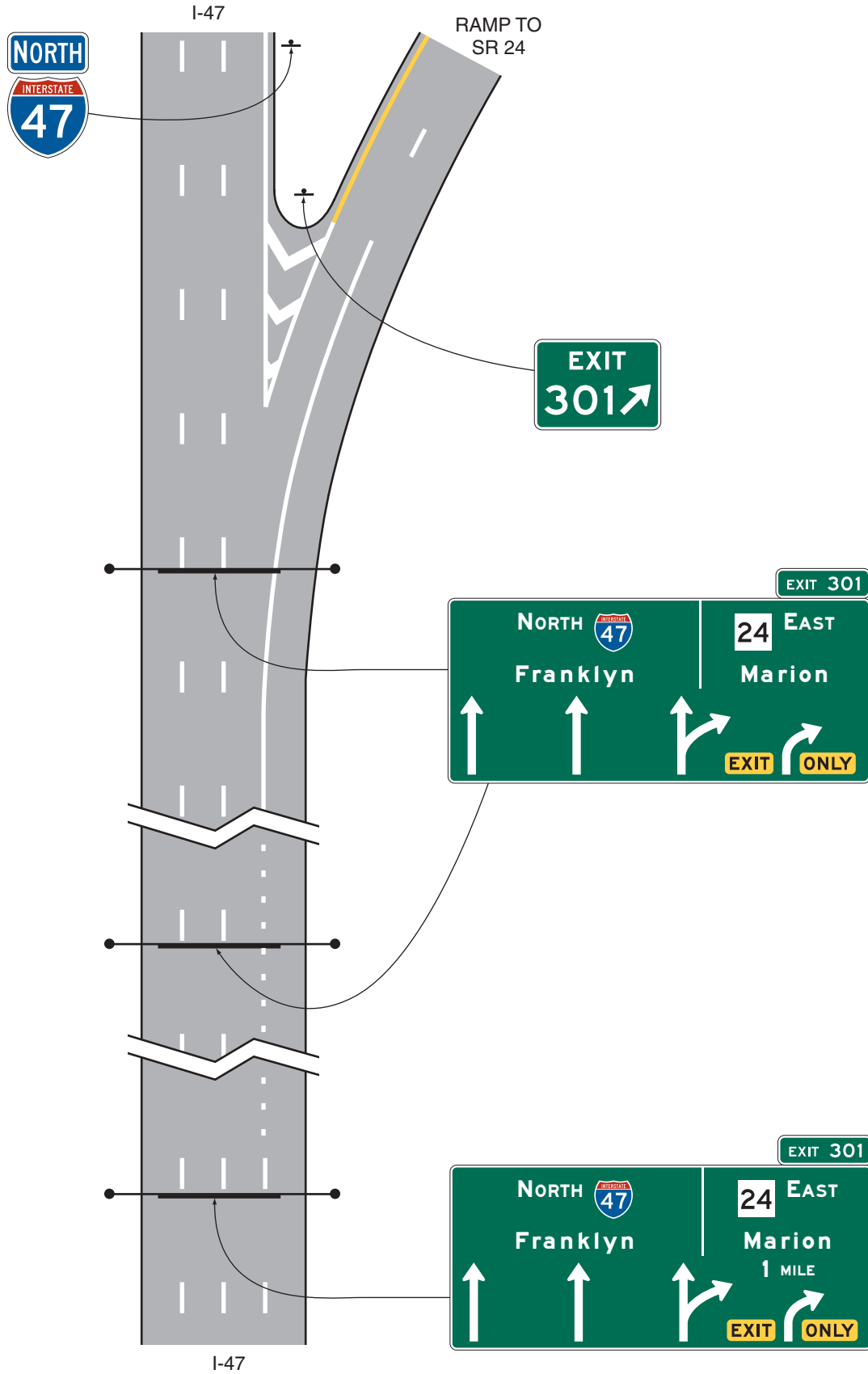


E6-2a

Figure 2E-3. Diagrammatic Sign for a Multi-Lane Exit with an Option Lane



Figure 2E-4. Diagrammatic Signs for a Two-Lane Exit to the Right with an Option Lane



**Figure 2E-5. Diagrammatic Signs for a Two-Lane Exit to the Right with an Option Lane (Through Lanes Curve to the Left)**

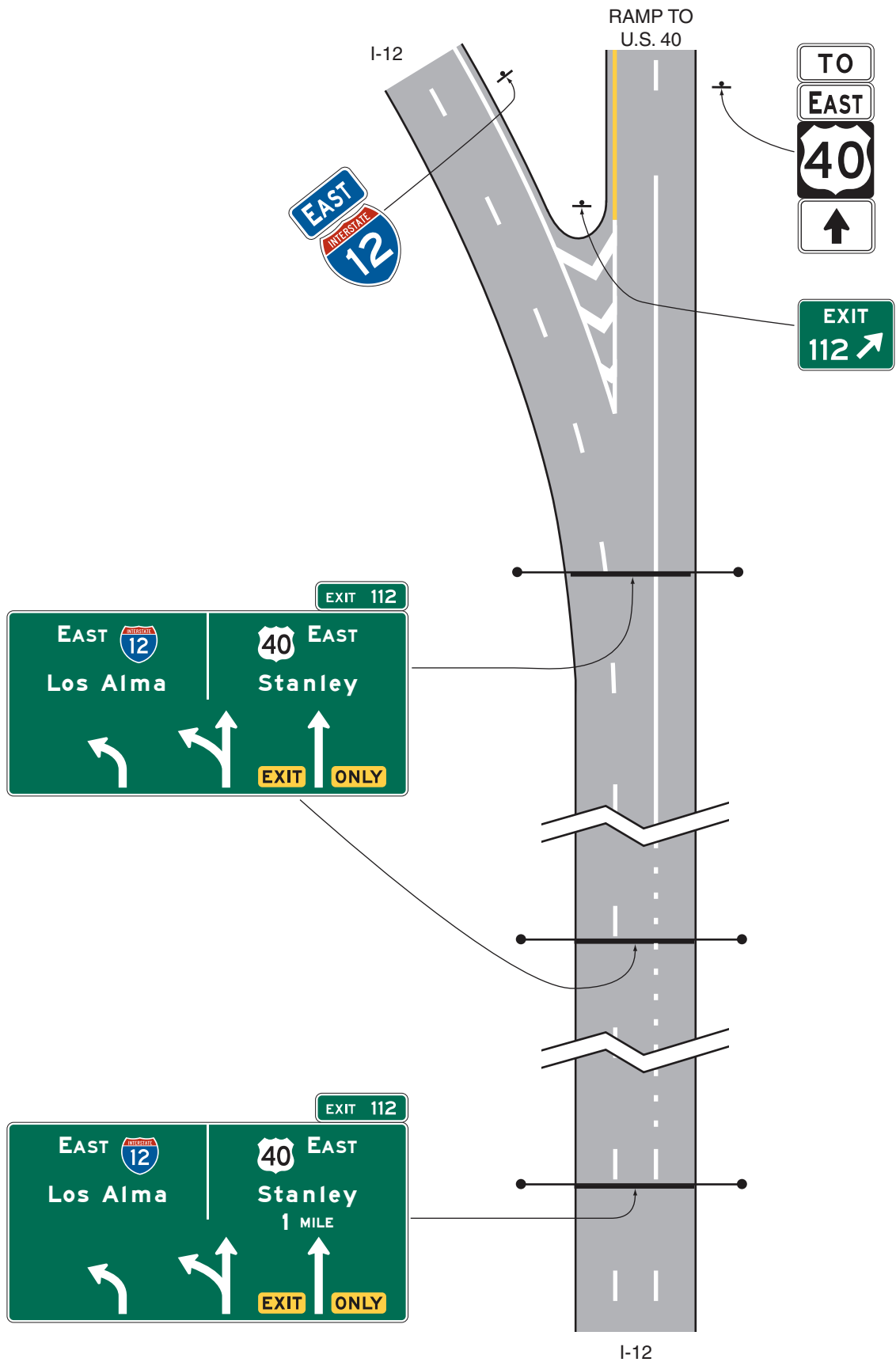


Figure 2E-6. Diagrammatic Signs for a Split with an Option Lane

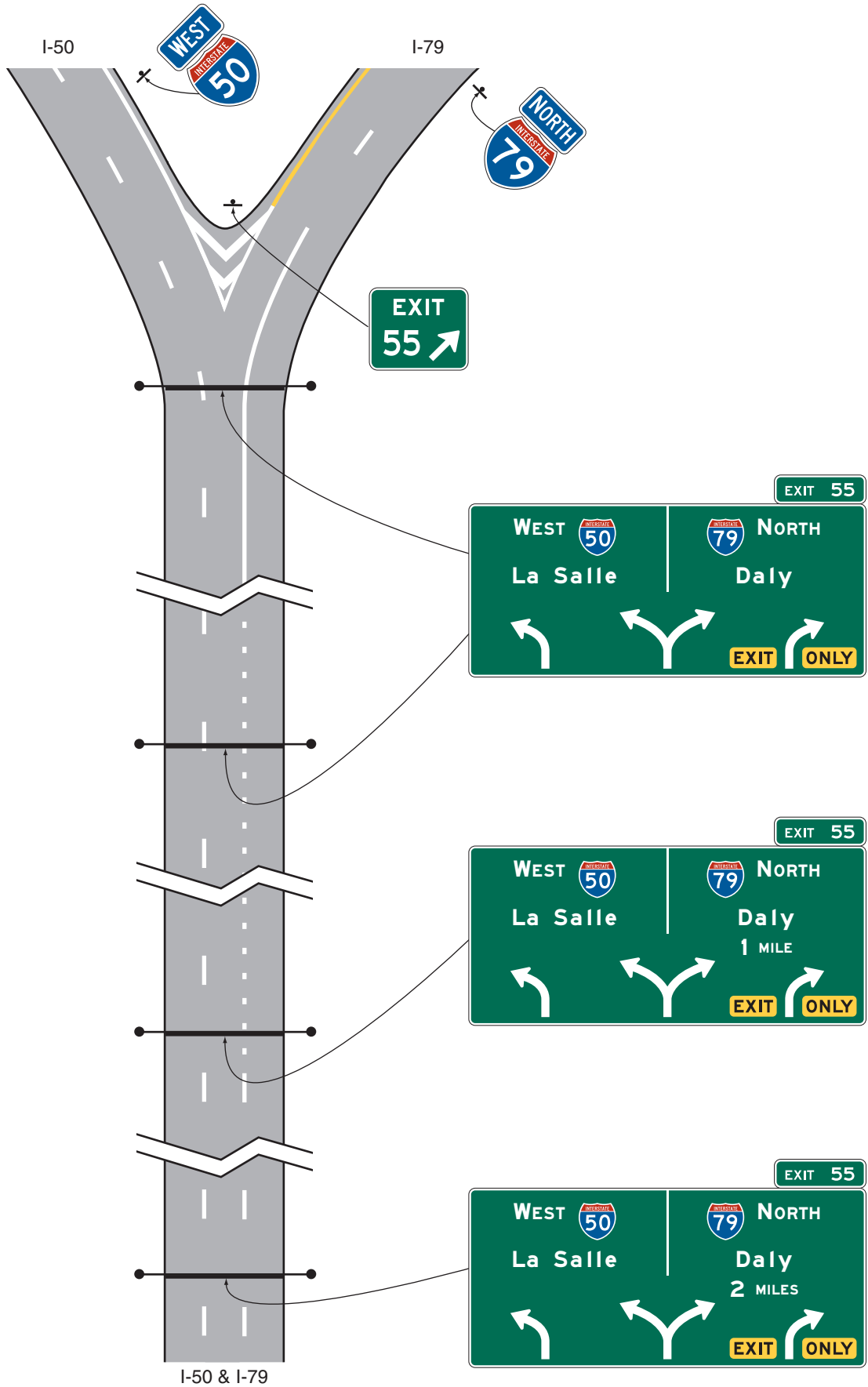


Figure 2E-7. EXIT ONLY and LEFT EXIT Sign Panels



E11-1



E11-1a



E11-1b



E11-1c



E11-1d



E11-1e



E11-1f



E11-2



E11-2a

Figure 2E-8. Guide Signs for a Split with Dedicated Lanes

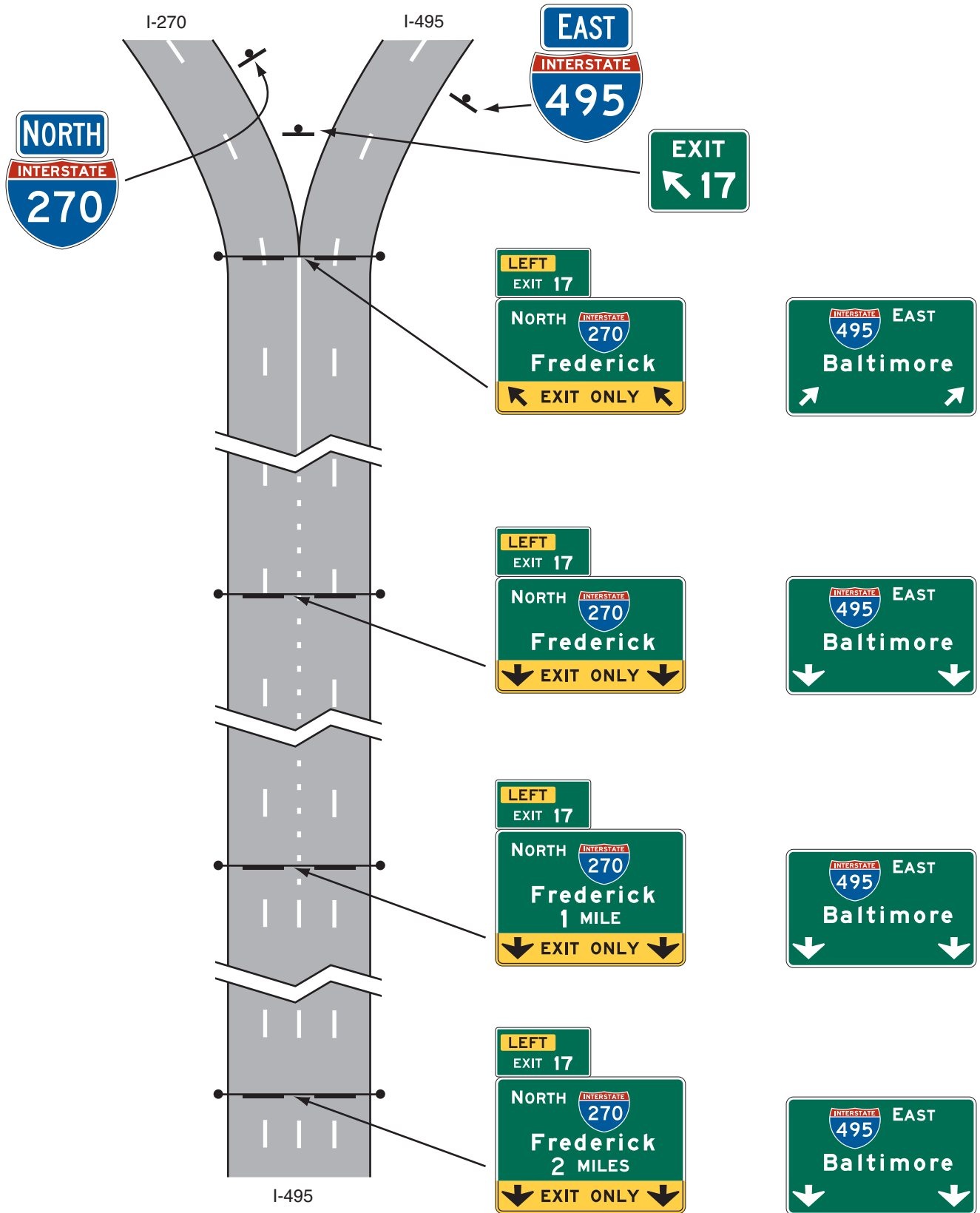




Figure 2E-9. Guide Signs for a Single-Lane Exit to the Left with a Lane Drop

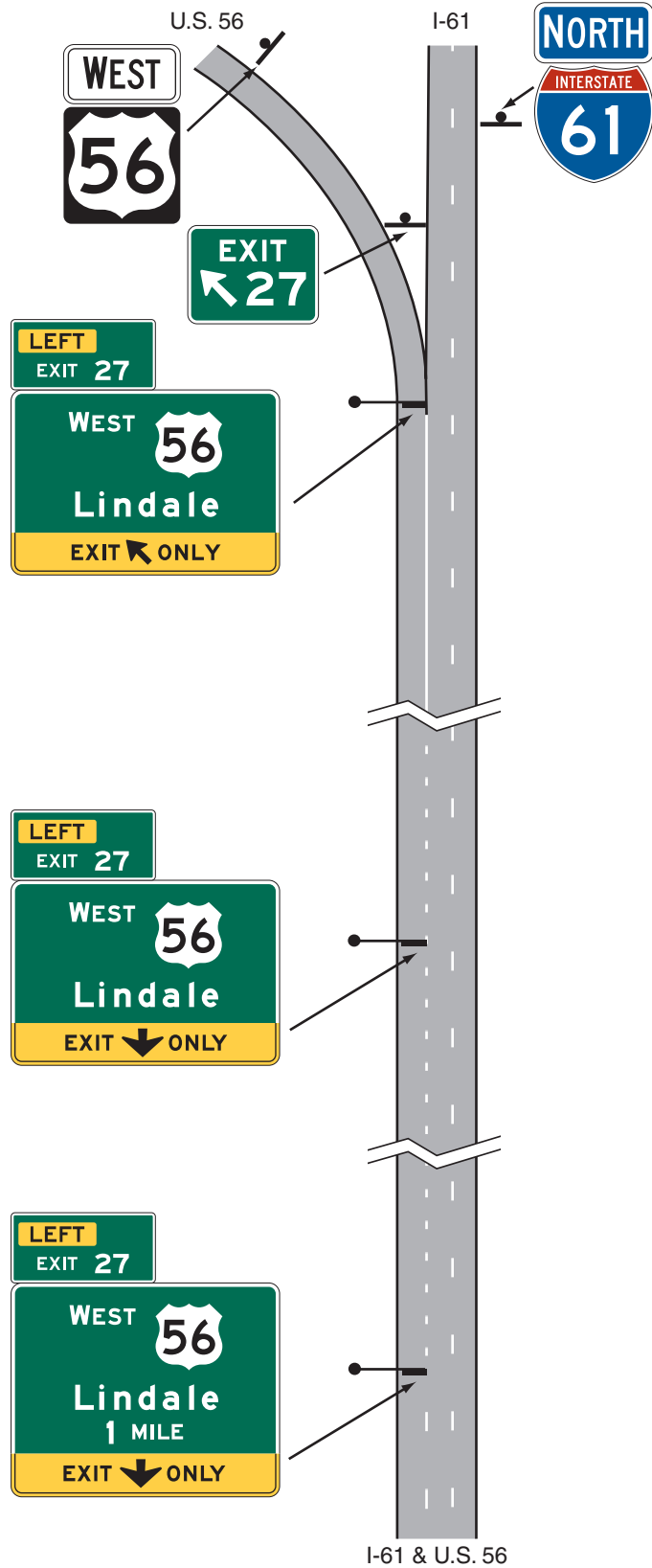
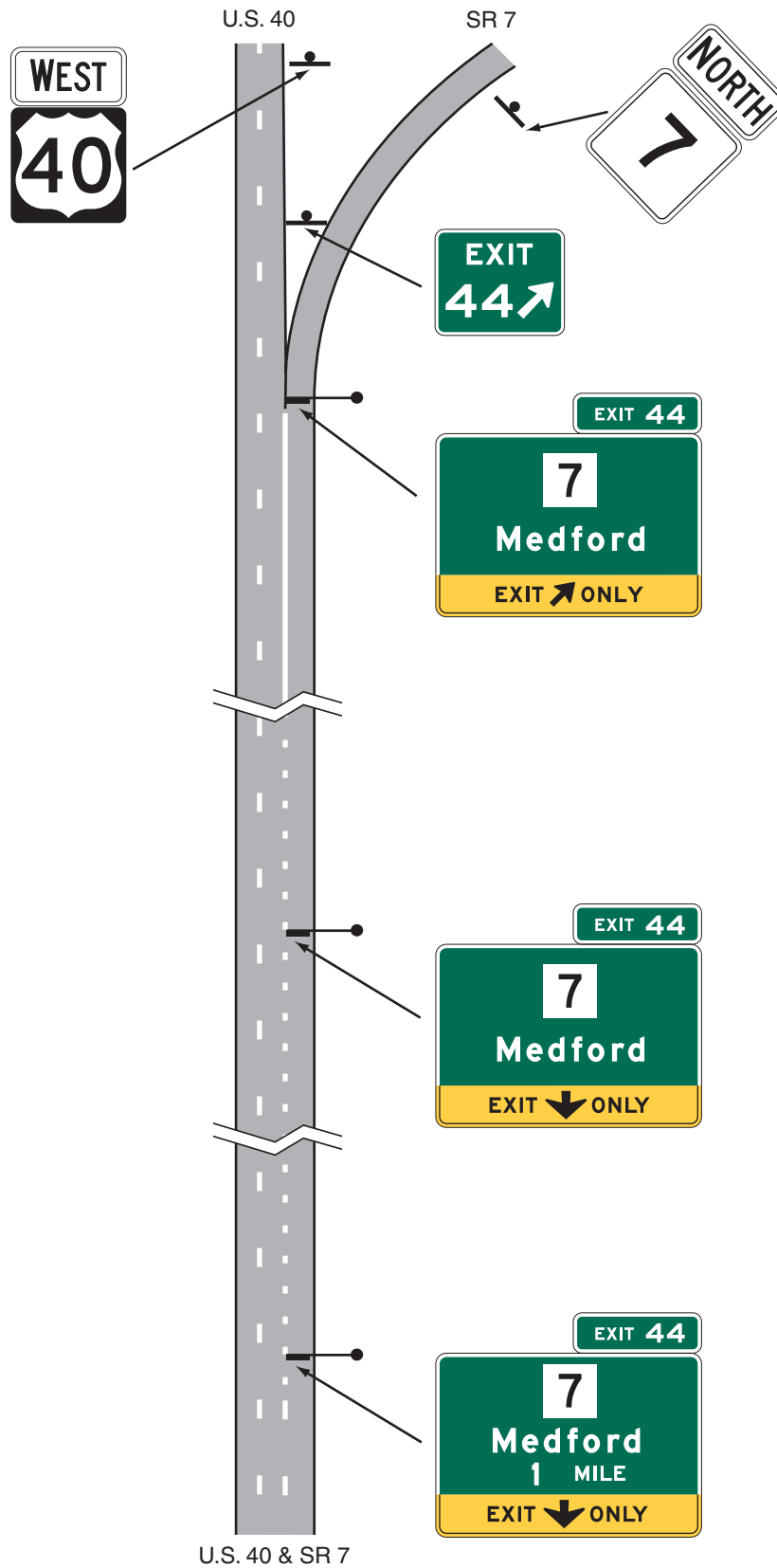


Figure 2E-10. Guide Signs for a Single-Lane Exit to the Right with a Lane Drop



**Figure 2E-11. Interstate and U.S. Route Signs**

FOR GUIDE SIGN AND INDEPENDENT USE



M1-1

OR



M1-2



M1-3

EISENHOWER INTERSTATE SYSTEM



M1-10

OR



M1-10a

FOR GUIDE SIGN USE



M1-4

OR



FOR INDEPENDENT USE

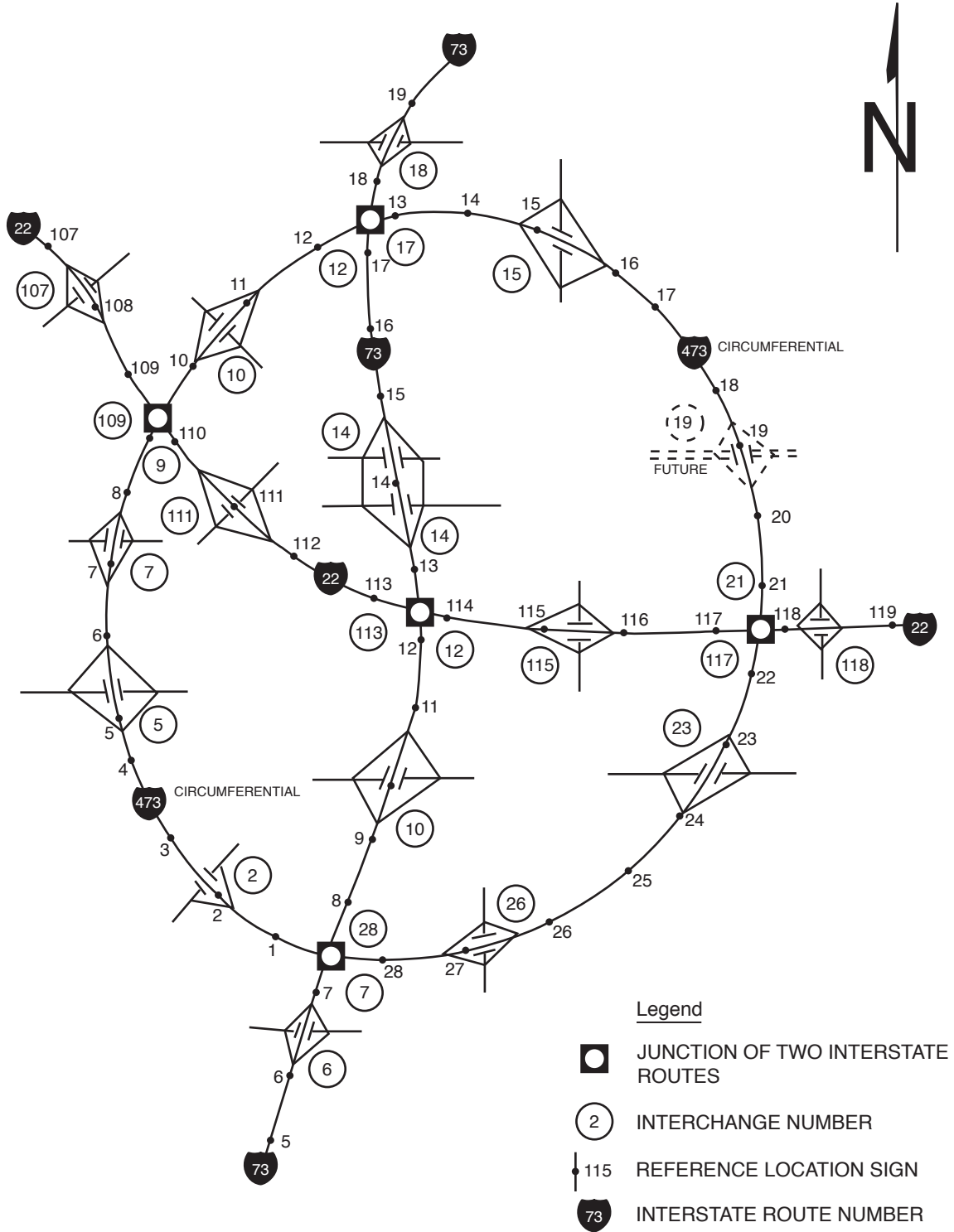


M1-4

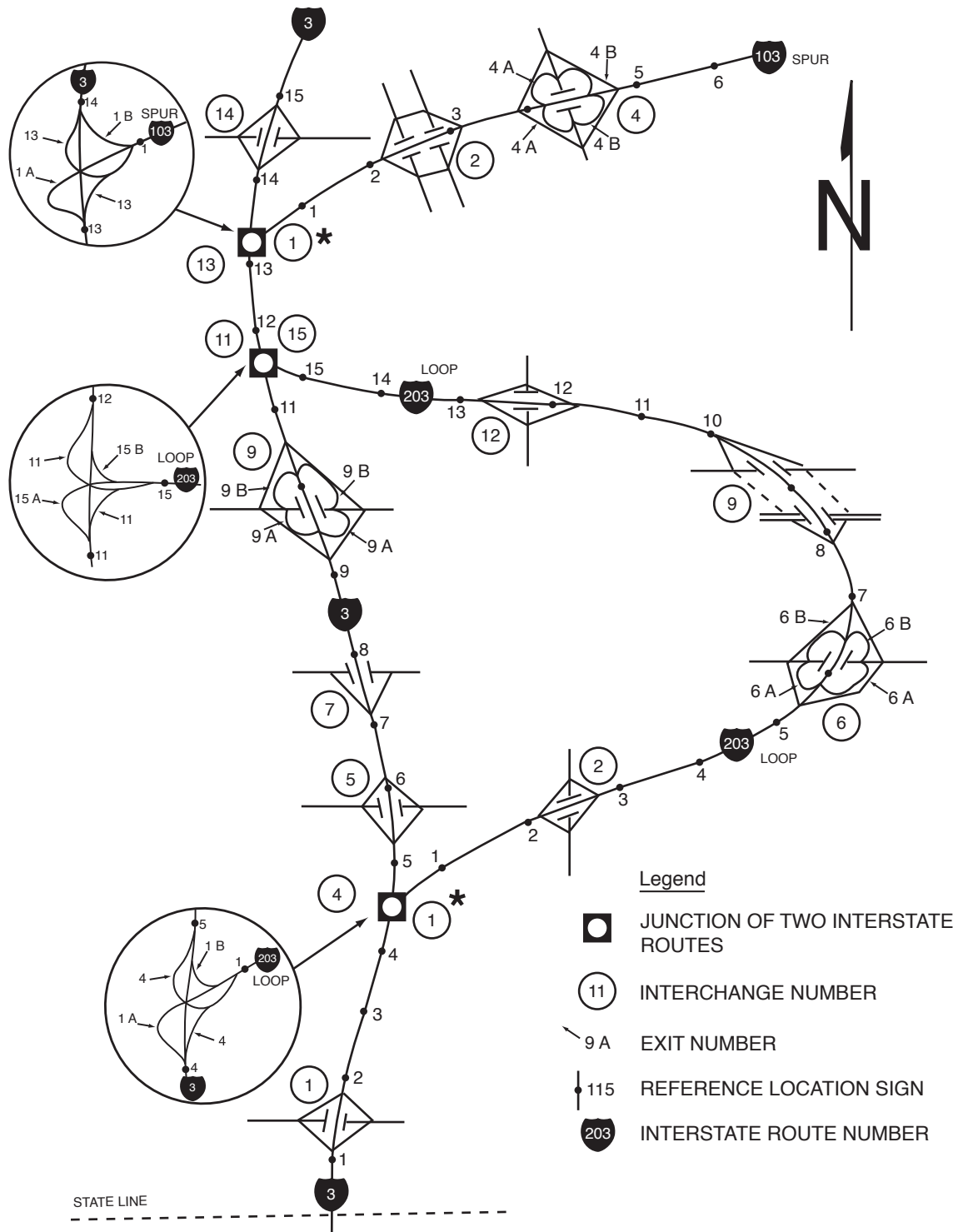
OR



**Figure 2E-12. Example of Interchange Numbering for Mainline and Circumferential Routes**



**Figure 2E-13. Example of Interchange Numbering for Mainline, Loop, and Spur Routes**



\* The freeway/freeway interchange where the beginning of the loop or spur route intersects with the mainline route may be called either Exit 1 or Exit 0 on the loop or spur route.

**Figure 2E-14. Example of Interchange Numbering If Routes Overlap**

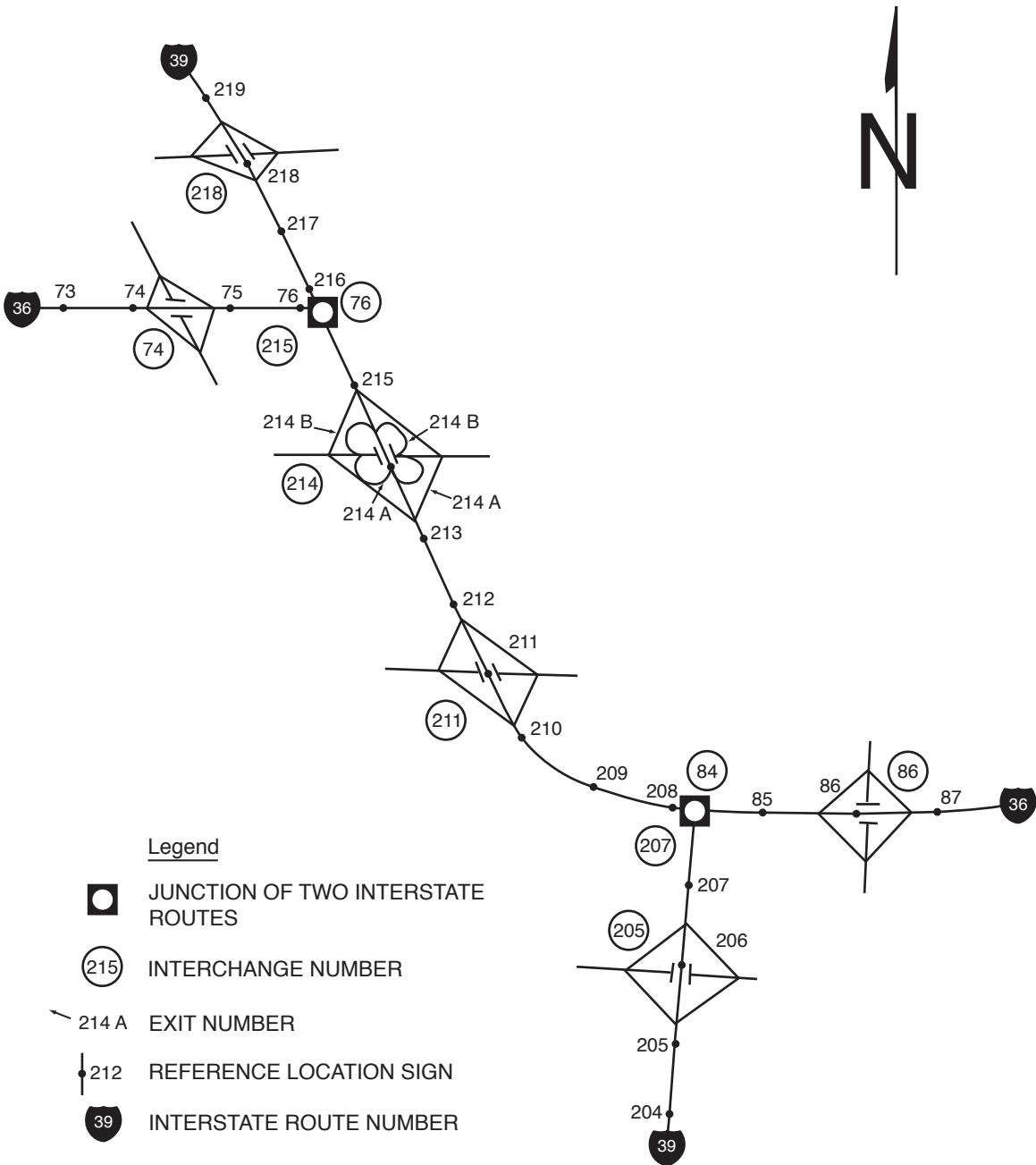
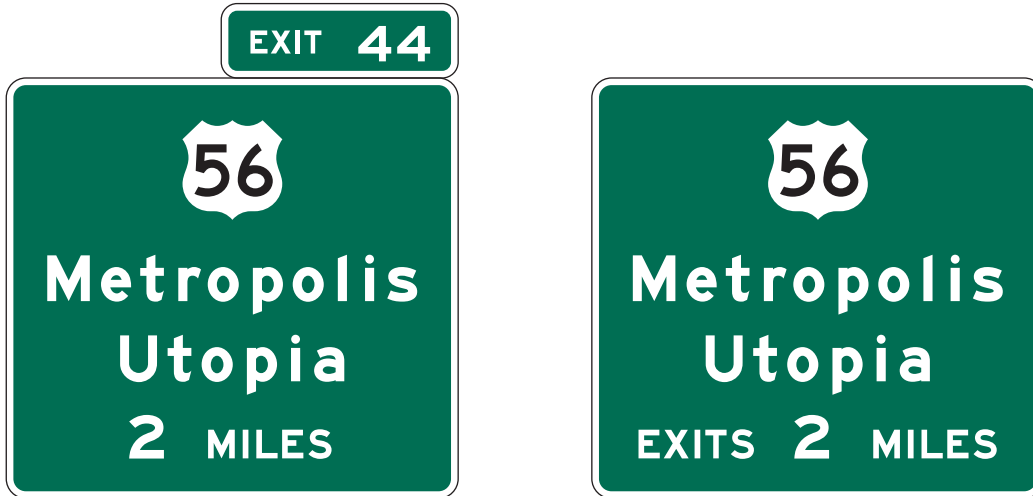


Figure 2E-15. Examples of Interchange Advance Guide Signs



Note: Delete word EXIT(S) if exit number is used.



E1-5P



E1-5aP



E1-5bP

*Figure 2E-16. Next Exit Supplemental Advance Guide Signs*



E2-1



E2-1a



*Figure 2E-17. Supplemental Guide Signs for Multi-Exit Interchanges*



*Figure 2E-18. Supplemental Guide Sign for a Park and Ride Facility  
(Route without Exit Numbering)*



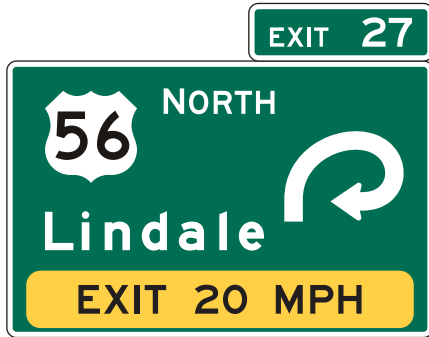
*Figure 2E-19. Supplemental Guide Sign for a Park and Ride Facility  
(Route with Exit Numbering)*



*Figure 2E-20. Interchange Exit Direction Sign*



**Figure 2E-21. Interchange Exit Direction Sign with Advisory Speed**



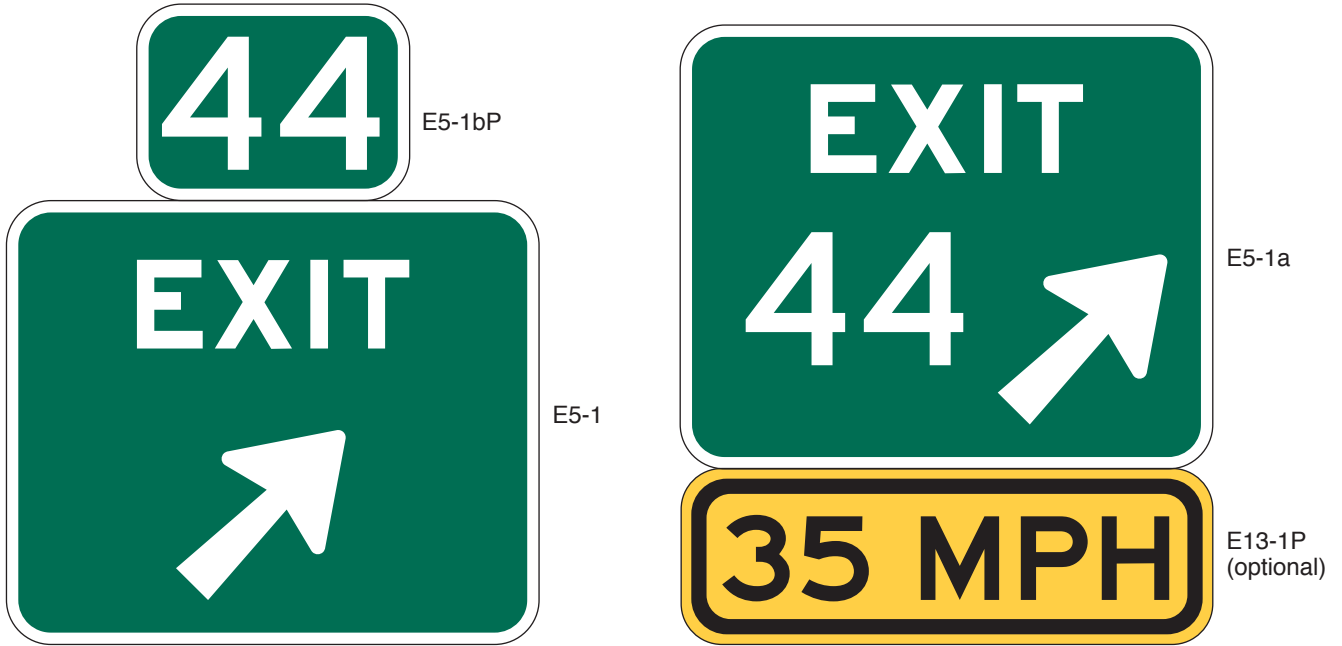
Exit Direction sign with E13-2 sign panel

OR



Exit Direction sign with E13-2 sign panel and flashing yellow beacons

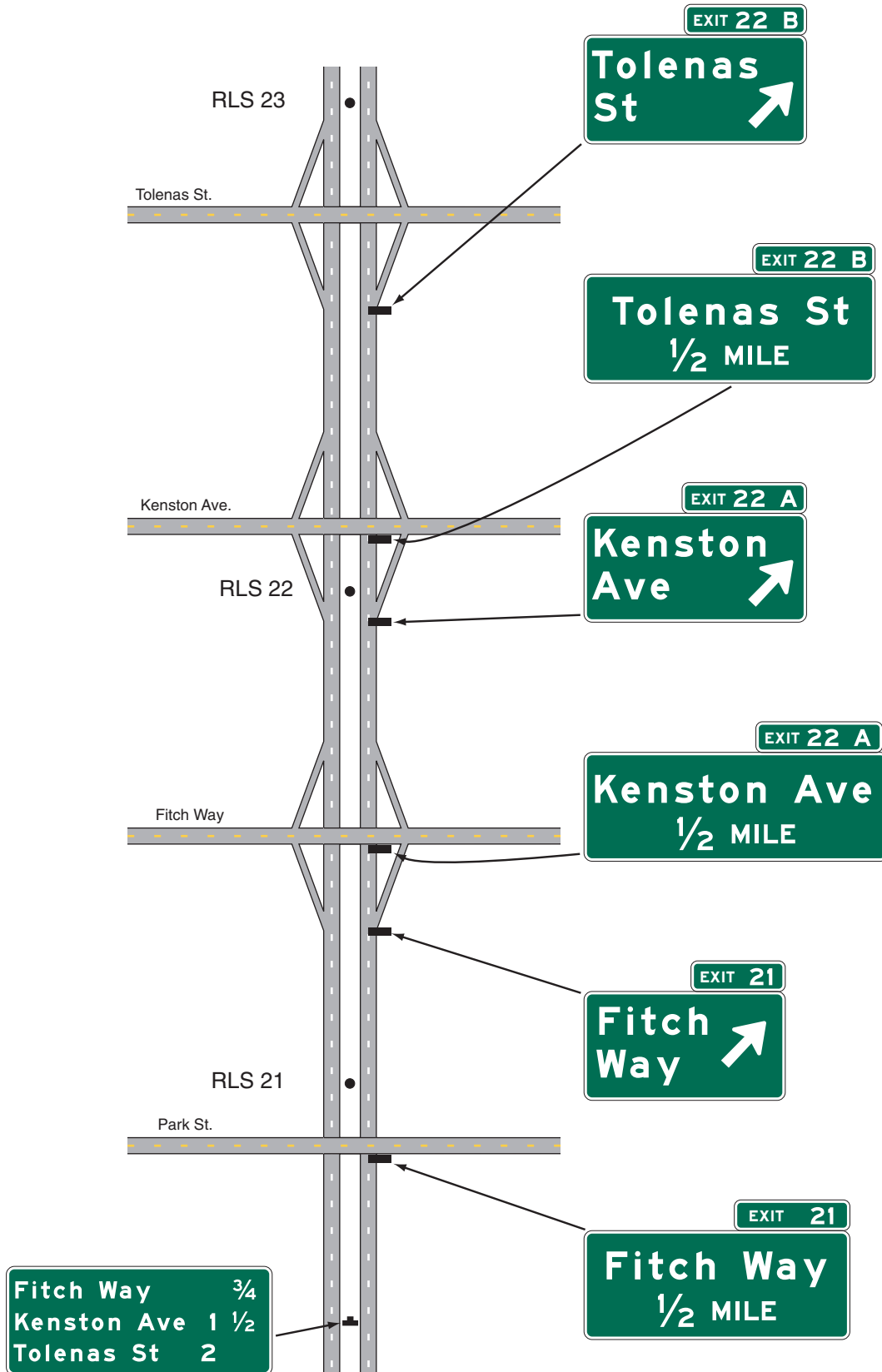
Figure 2E-22. Exit Gore Signs



*Figure 2E-23. Post-Interchange Distance Sign*



**Figure 2E-24. Example of Using Interchange Sequence Sign for Closely Spaced Interchanges**





*Figure 2E-25. Interchange Sequence Sign*



*Figure 2E-26. Community Interchanges Identification Sign*

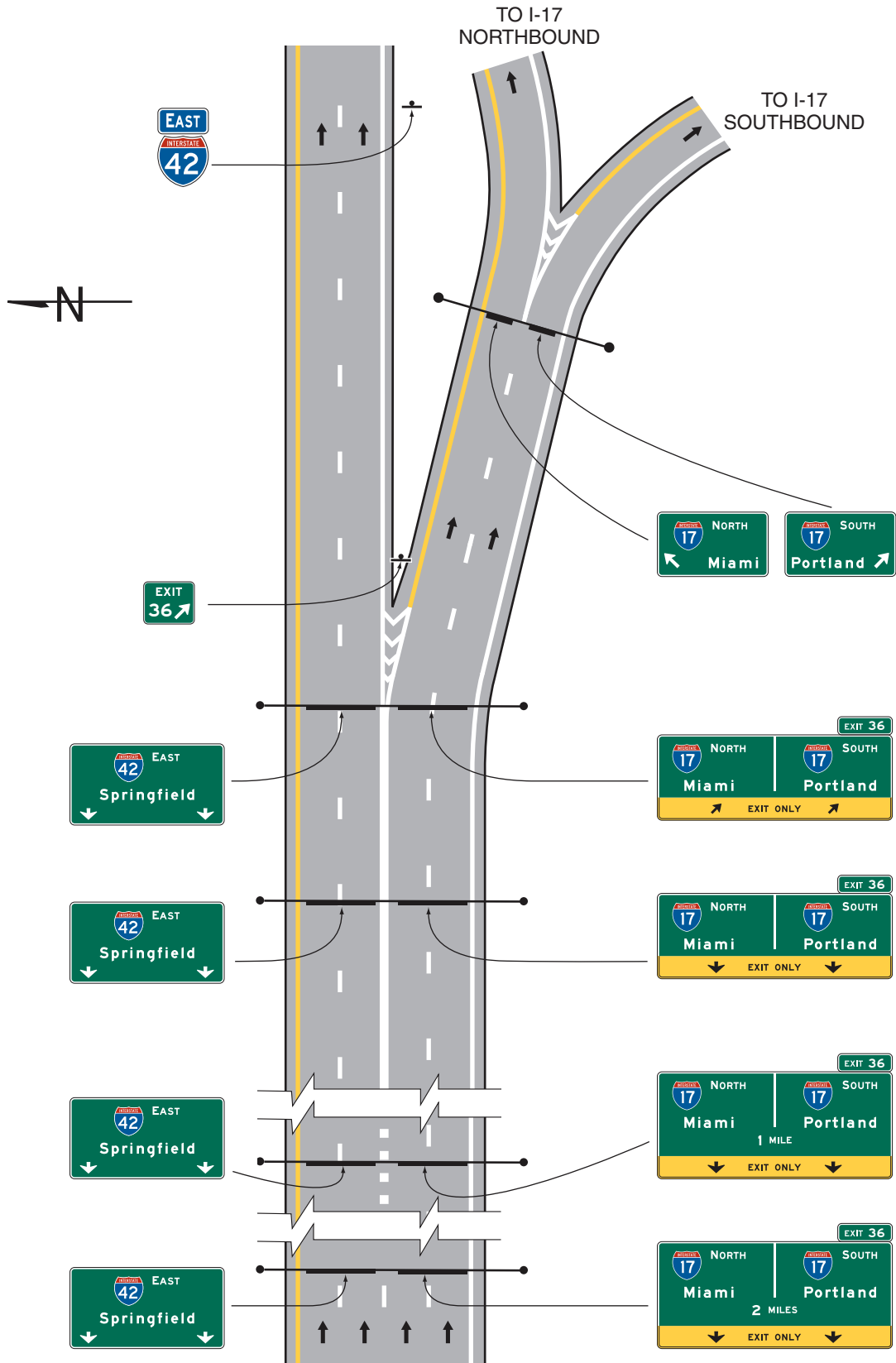


*Figure 2E-27. NEXT EXITS Sign*



**Figure 2E-28. Examples of Freeway-to-Freeway Interchange Guide Signs**  
(Sheet 1 of 2)

**A - Example of Signing for a Two-Lane Exit Ramp with a Dual Lane Drop and a Bifurcation Beyond the Mainline Gore**



**Figure 2E-28. Examples of Freeway-to-Freeway Interchange Guide Signs**  
 (Sheet 2 of 2)

**B - Example of Signing for Successive Exit Ramps with a Lane Drop at the Second Exit**

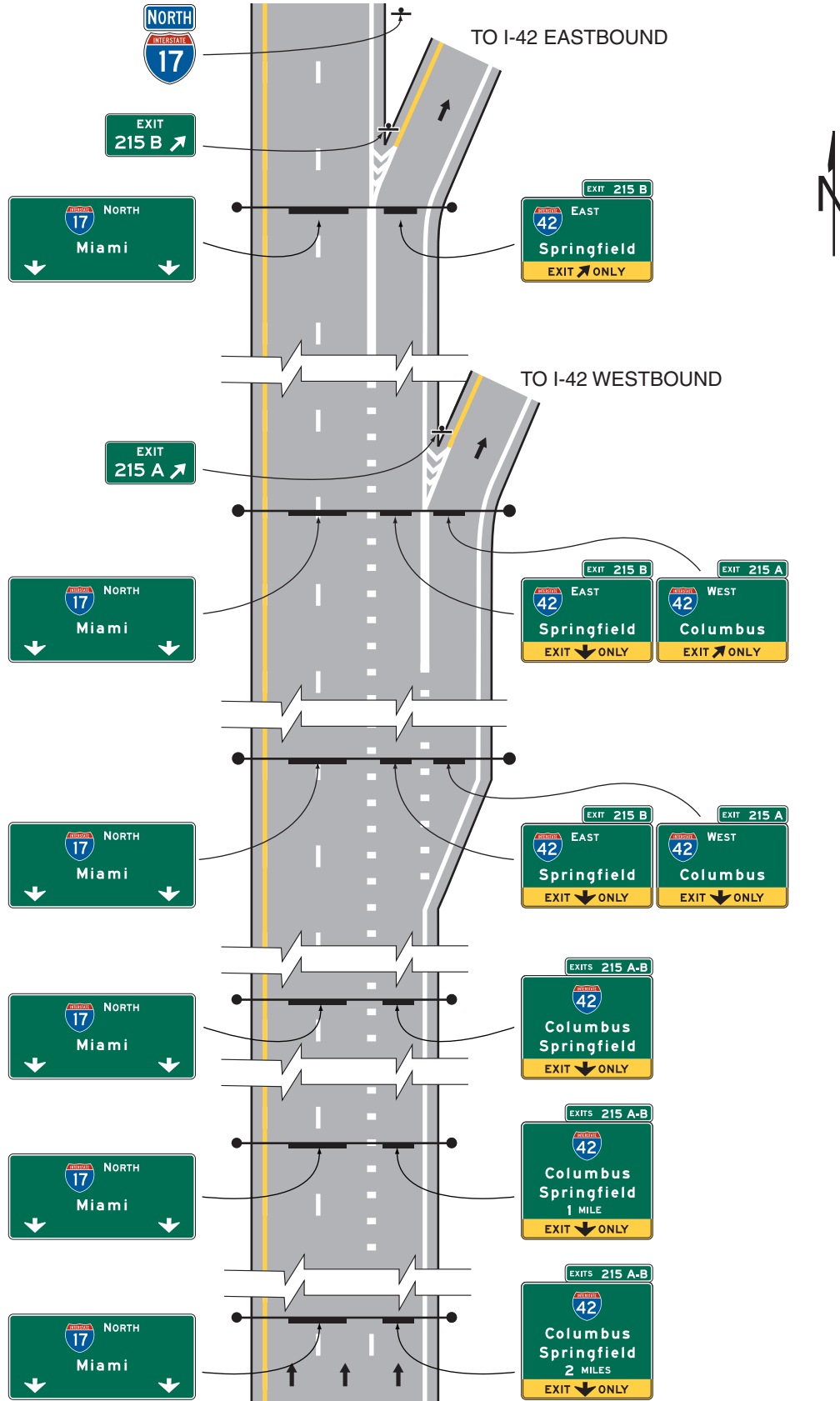
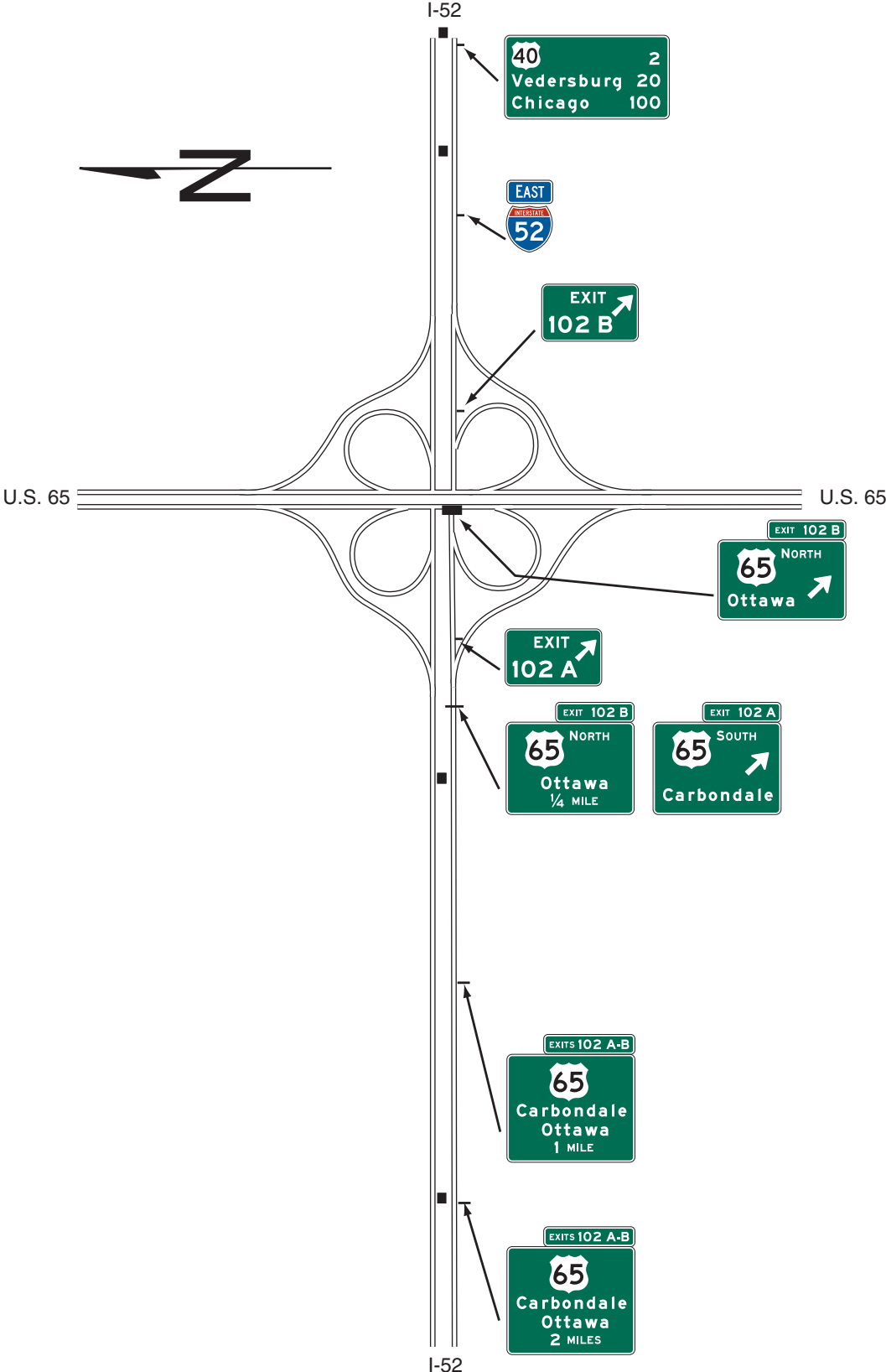
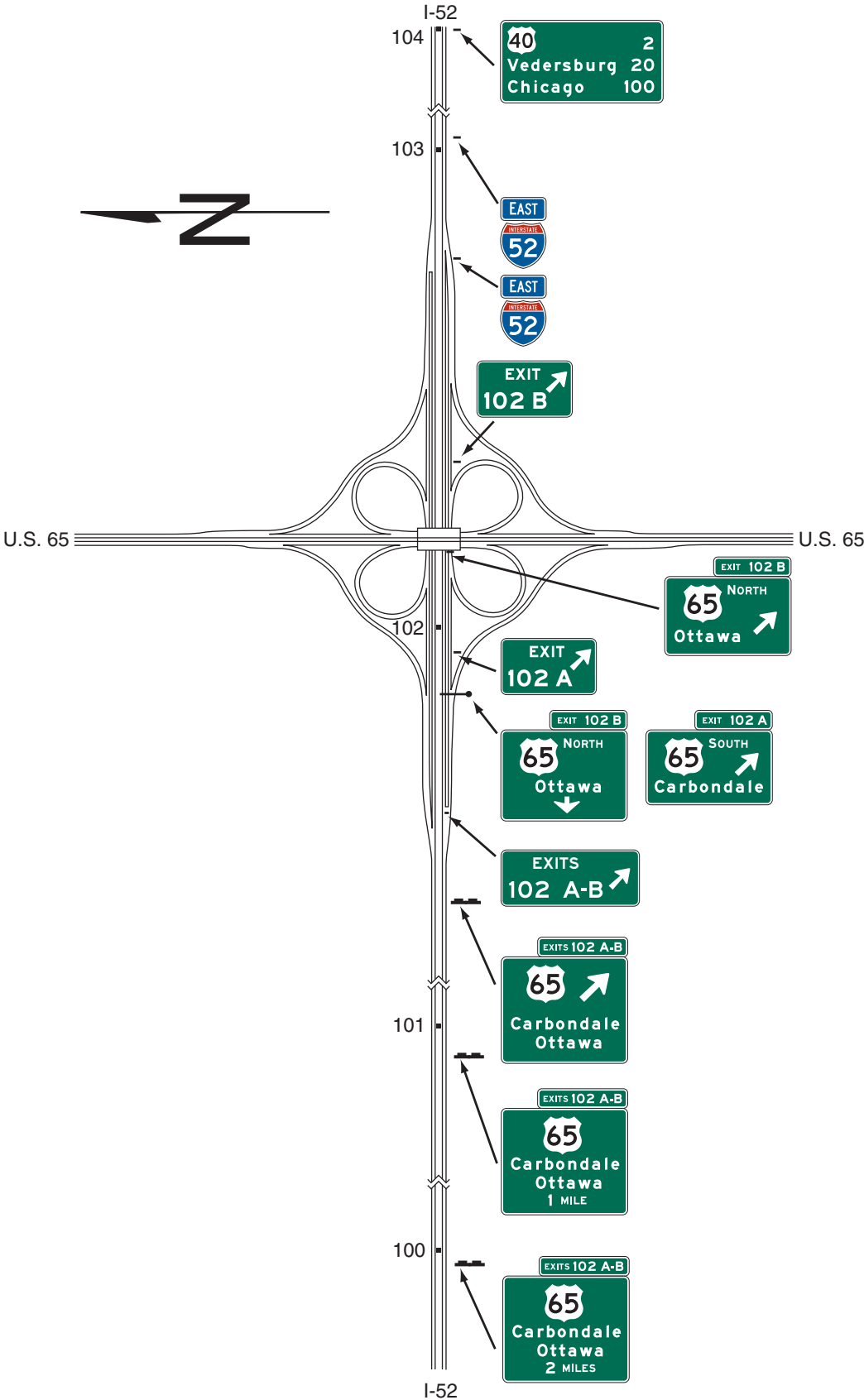


Figure 2E-29. Examples of Guide Signs for Full Cloverleaf Interchange



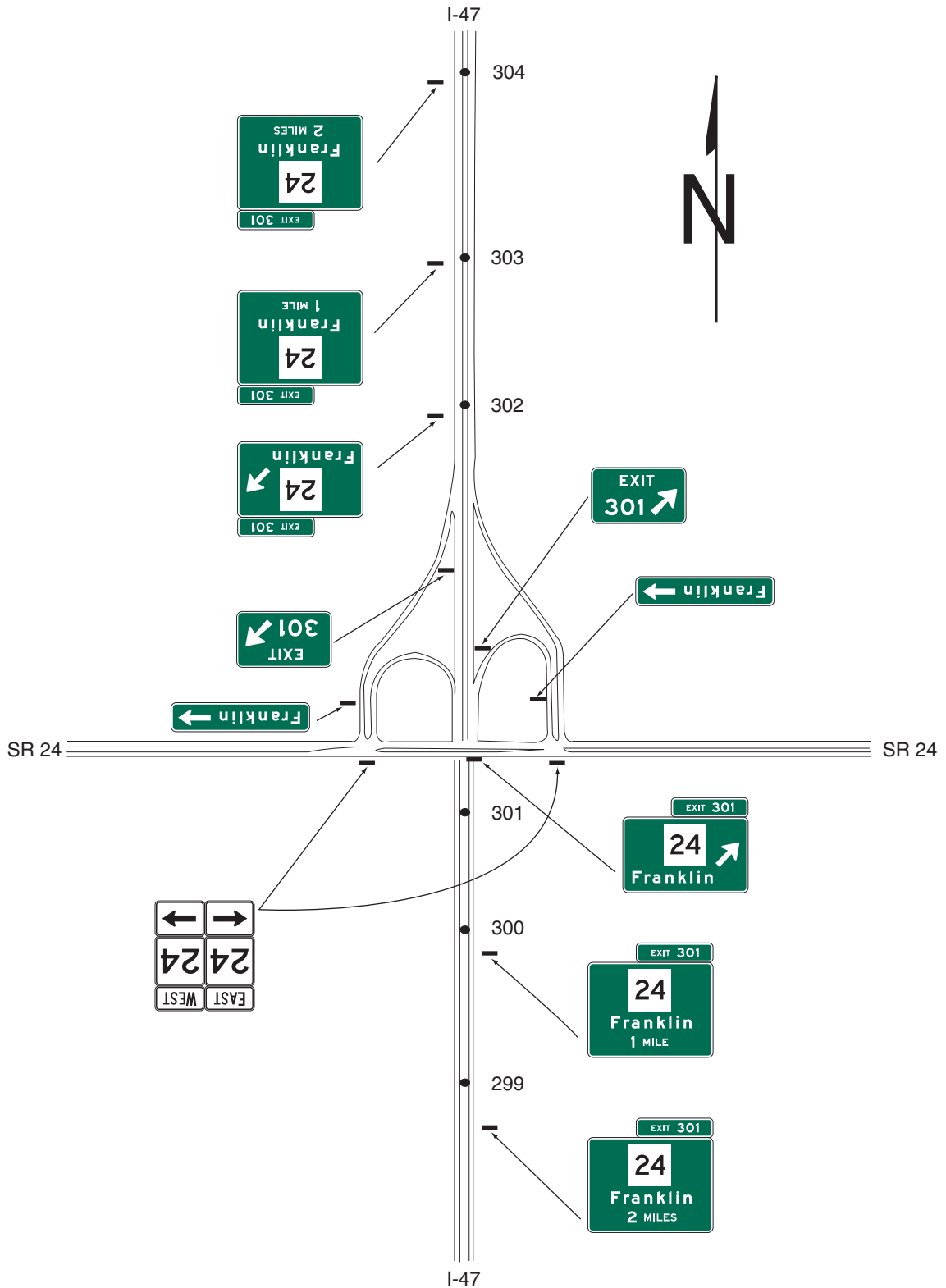
Note: See Figure 2D-16 for examples of multi-lane crossroad signing for cloverleaf interchanges

**Figure 2E-30. Examples of Guide Signs for Full Cloverleaf Interchange With Collector-Distributor Roadways**



Note: See Figure 2D-16 for examples of multi-lane crossroad signing for cloverleaf interchanges

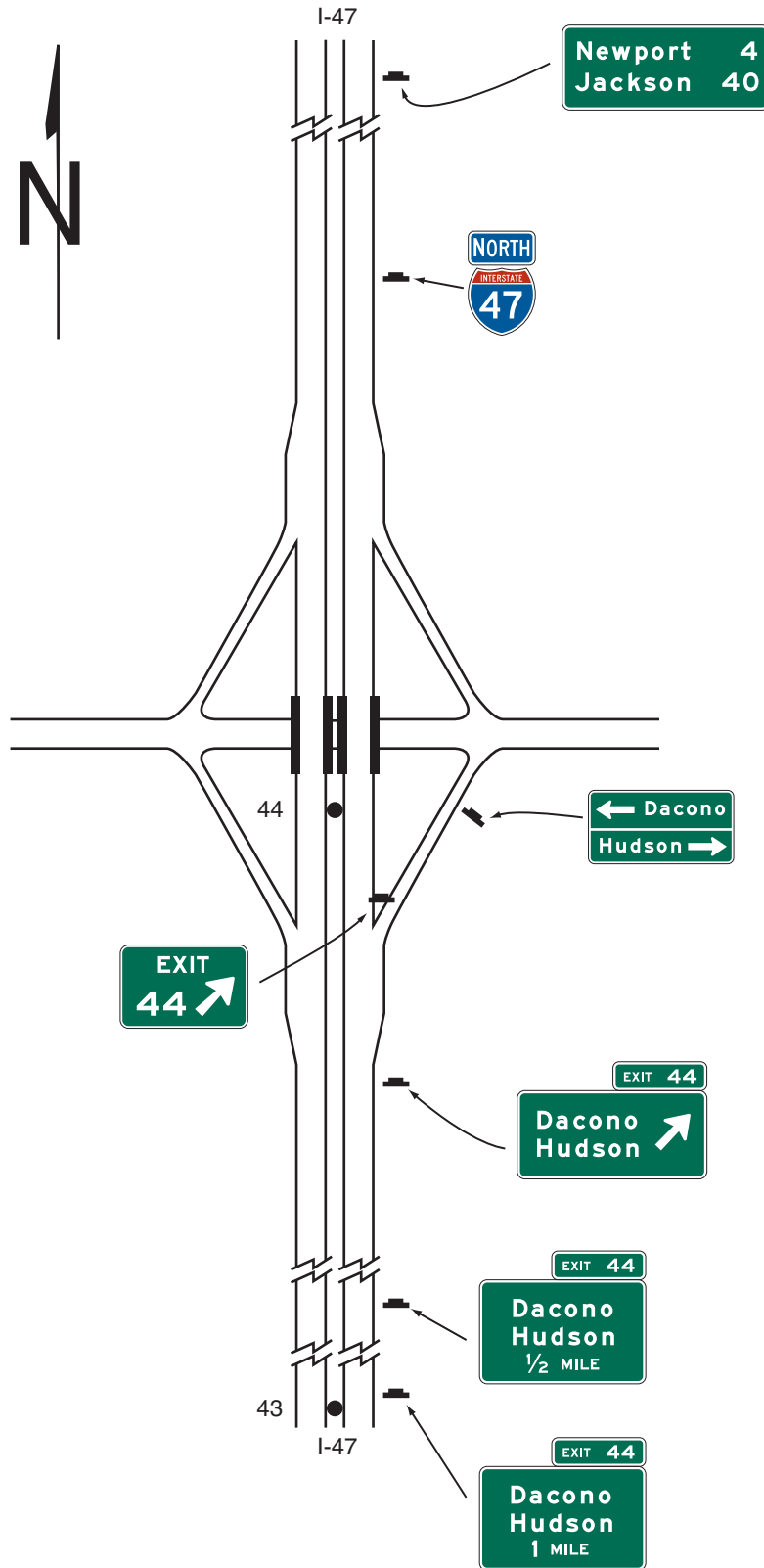
**Figure 2E-31. Examples of Partial Cloverleaf Interchange Guide Signs**



Note: See Figure 2D-15 for examples of multi-lane crossroad signing for partial cloverleaf interchanges

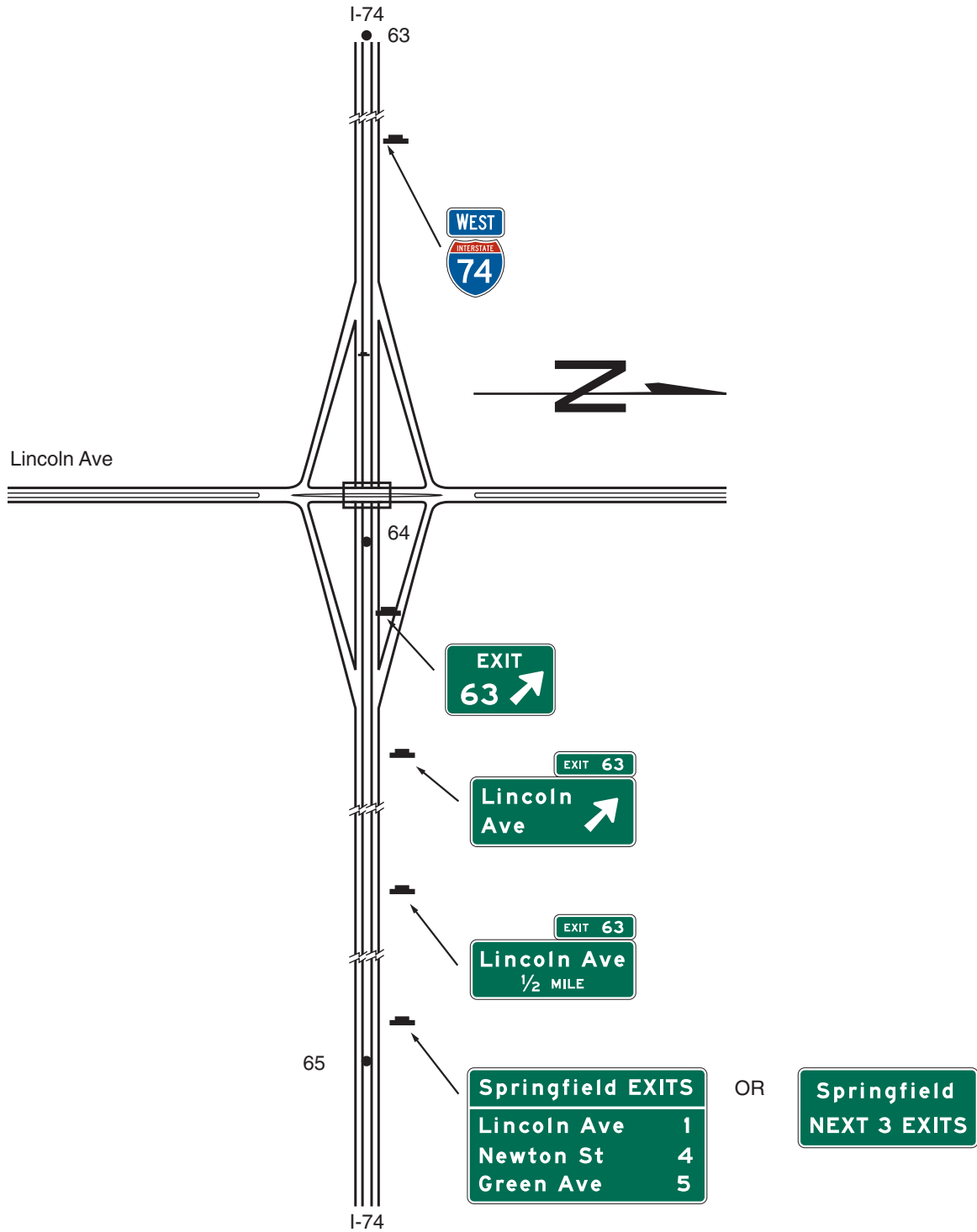


Figure 2E-32. Examples of Diamond Interchange Guide Signs



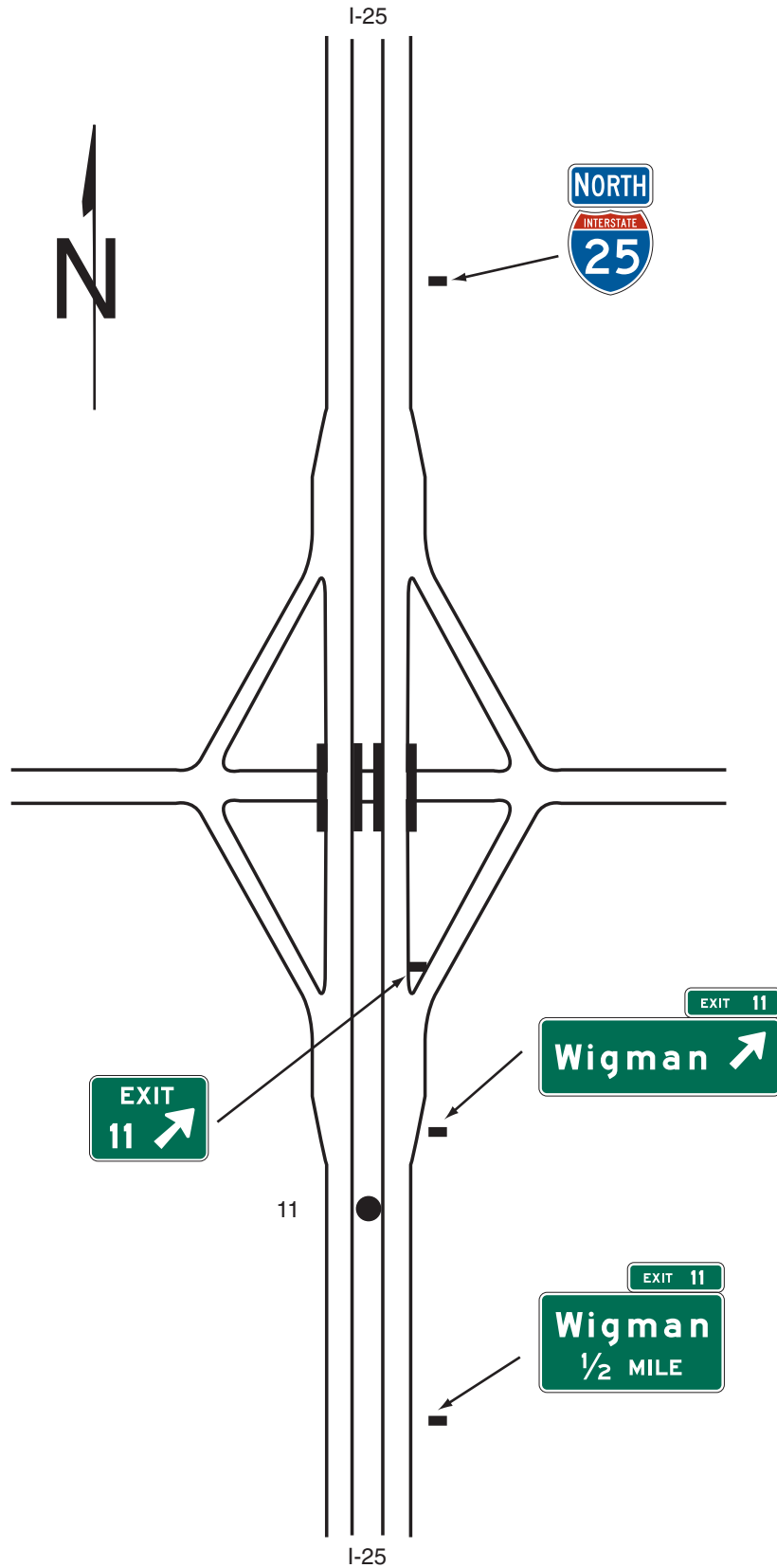
Note: See Figures 2D-12 and 2D-14 for examples of crossroad signing for one-lane approaches and examples of multi-lane crossroad signing for diamond interchanges

**Figure 2E-33. Examples of Diamond Interchange Guide Signs in an Urban Area**



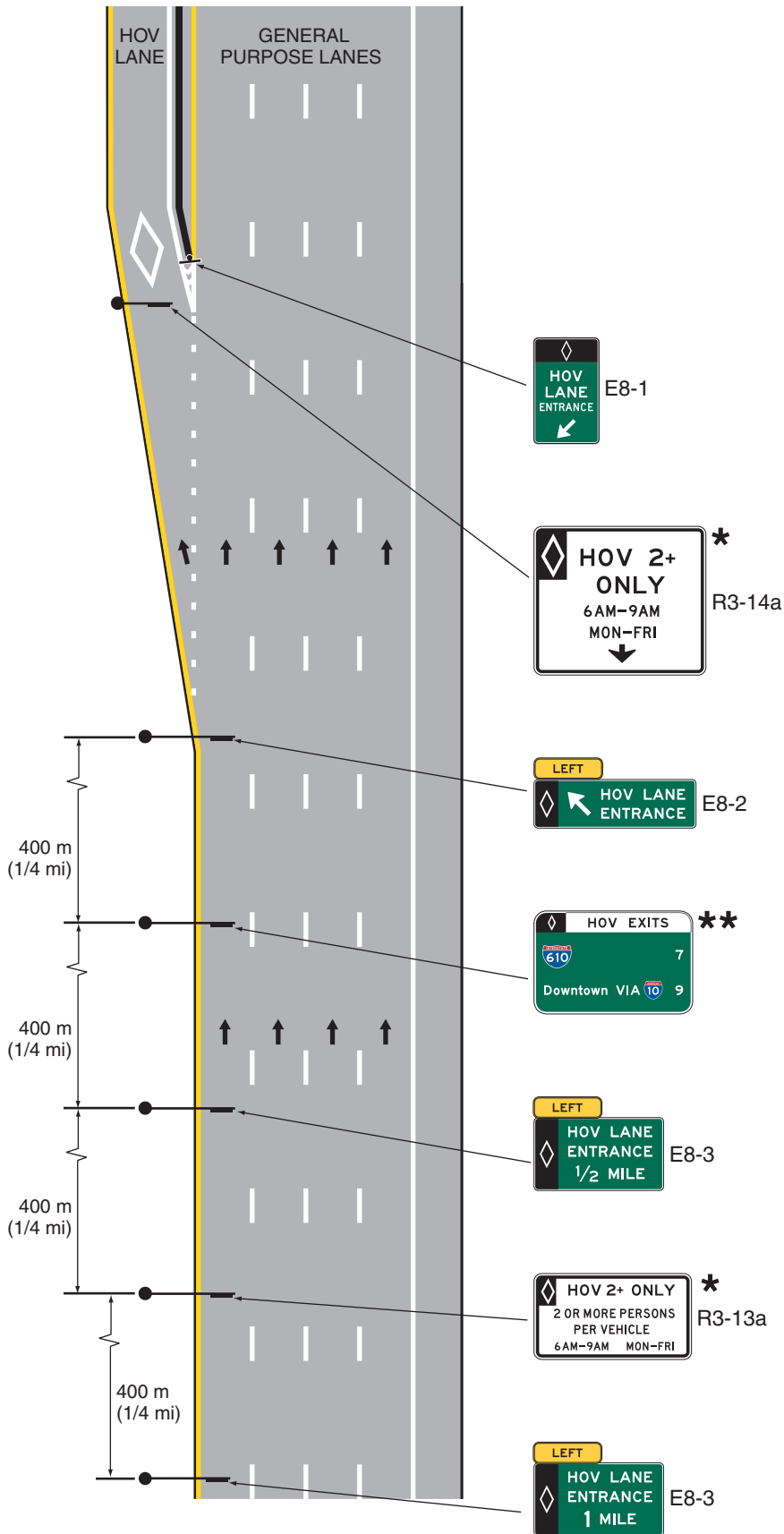
Note: See Figures 2D-12 and 2D-14 for examples of crossroad signing for one-lane approaches and examples of multi-lane crossroad signing for diamond interchanges

Figure 2E-34. Examples of Minor Interchange Guide Signs



Note: See Figure 2D-13 for example of minor interchange crossroad signing

**Figure 2E-35. Example of Signing for the Entrance to Barrier-Separated HOV Lanes**



Legend

→ Direction of travel

Notes:

1. For access to an HOV lane on the right-hand side, the same signing sequence would be used with adjustments made to sign messages
2. Geometry is for illustrative purposes only; use locally applied geometric criteria
3. The minimum vehicle occupancy requirement and hours of operation on the sign may vary for each facility
4. See Sections 3B.24 and 3B.25 for pavement markings
5. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information

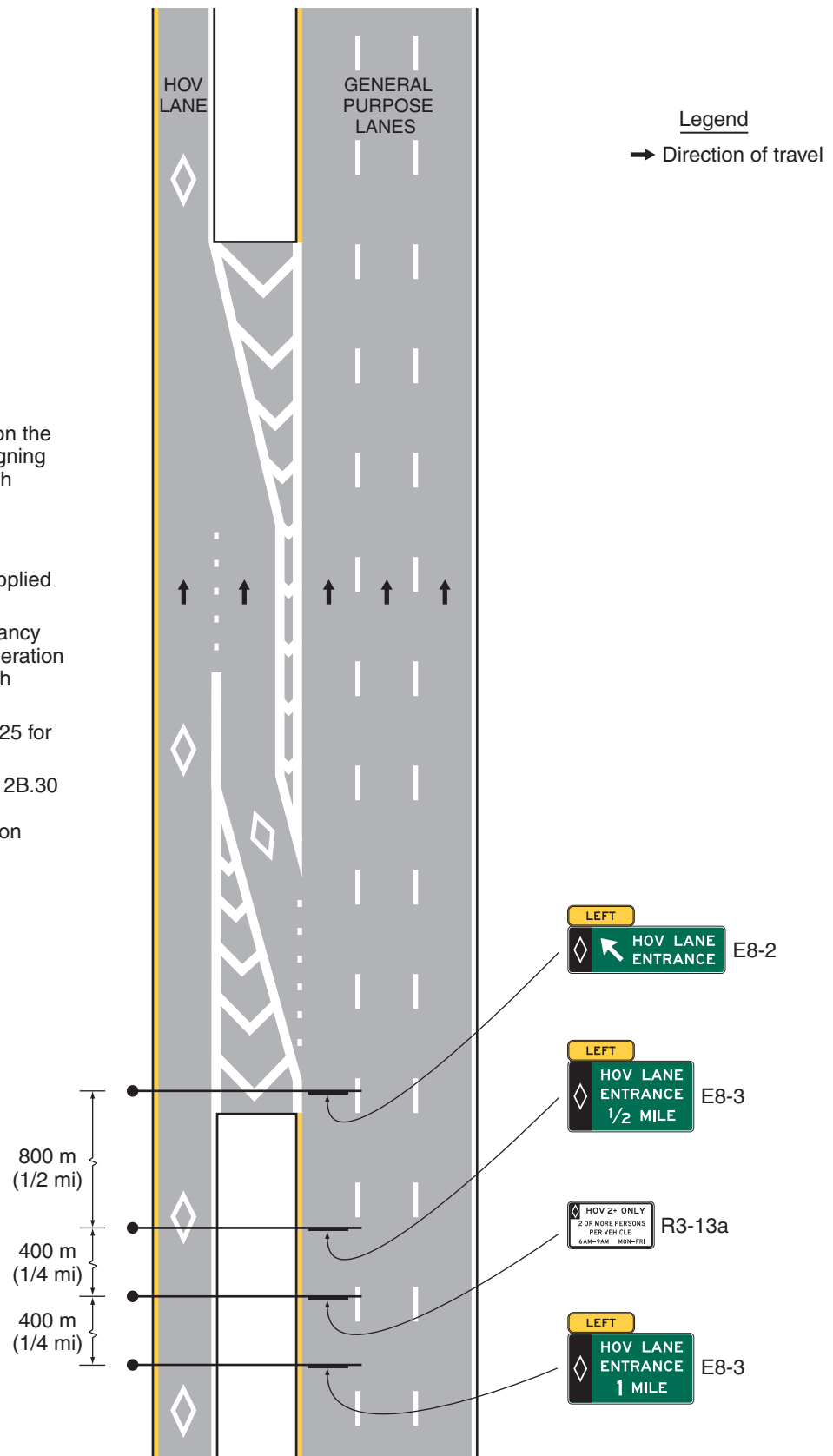
\* Potential location of a Changeable Message Sign (CMS) for reversible or contraflow operations.

\*\* For access-restricted facilities. Destinations may be augmented to accompany routes on Interchange Sequence signs (see Figure 2E-24).

**Figure 2E-36. Example of Signing for an Intermediate Entry to a Barrier- or Buffer-Separated HOV Lane**

**Notes:**

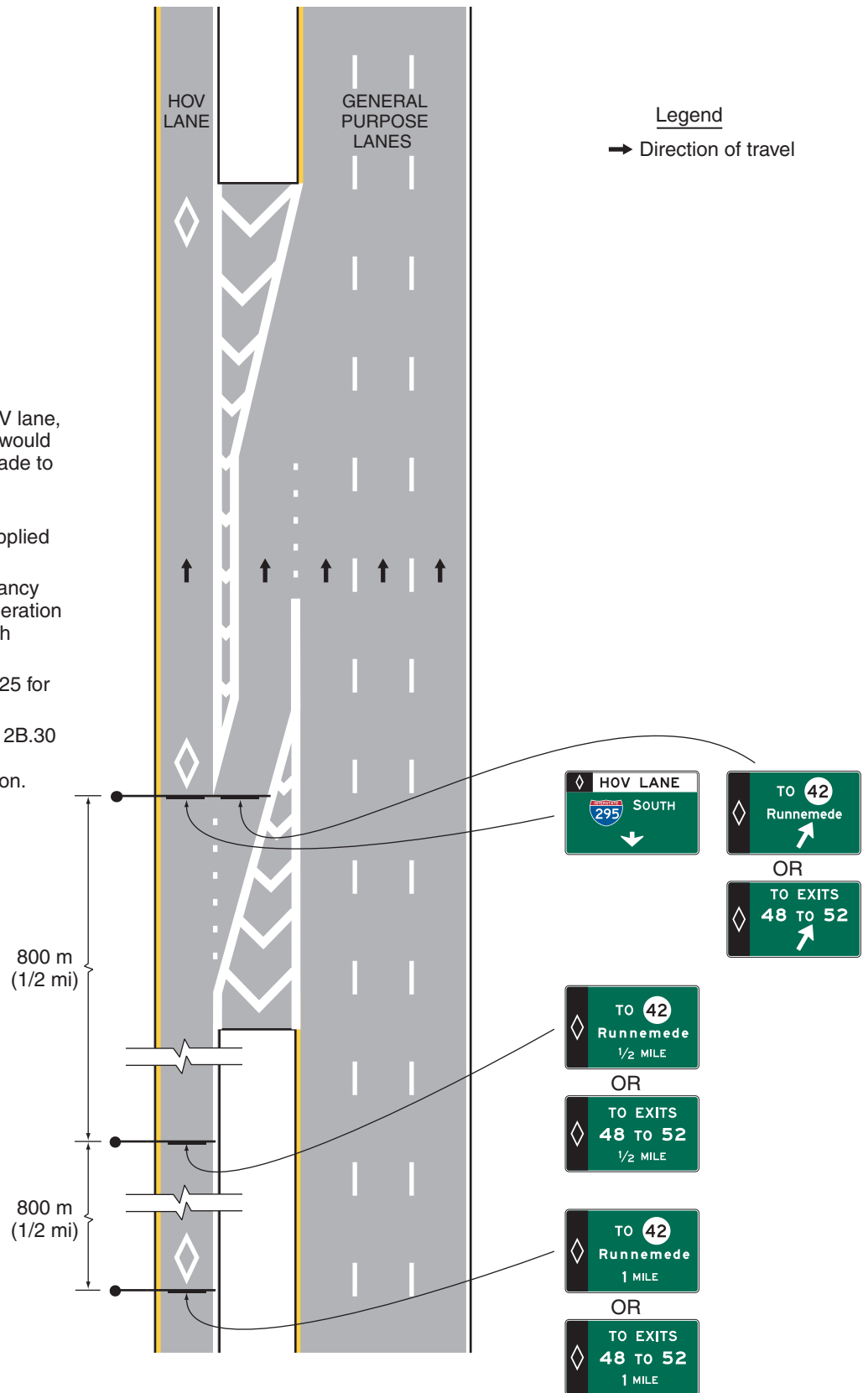
1. For access to an HOV lane on the right-hand side, the same signing sequence would be used with adjustments made to sign messages
2. Geometry is for illustrative purposes only. Use locally applied geometric criteria
3. The minimum vehicle occupancy requirement and hours of operation on the sign may vary for each facility
4. See Sections 3B.24 and 3B.25 for pavement markings
5. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information



**Figure 2E-37. Example of Signing for an Intermediate Exit from a Barrier- or Buffer-Separated HOV Lane**

**Notes:**

1. For left-side exit from an HOV lane, the same signing sequence would be used with adjustments made to sign messages
2. Geometry is for illustrative purposes only. Use locally applied geometric criteria.
3. The minimum vehicle occupancy requirement and hours of operation on the sign may vary for each facility.
4. See Sections 3B.24 and 3B.25 for pavement markings.
5. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information.

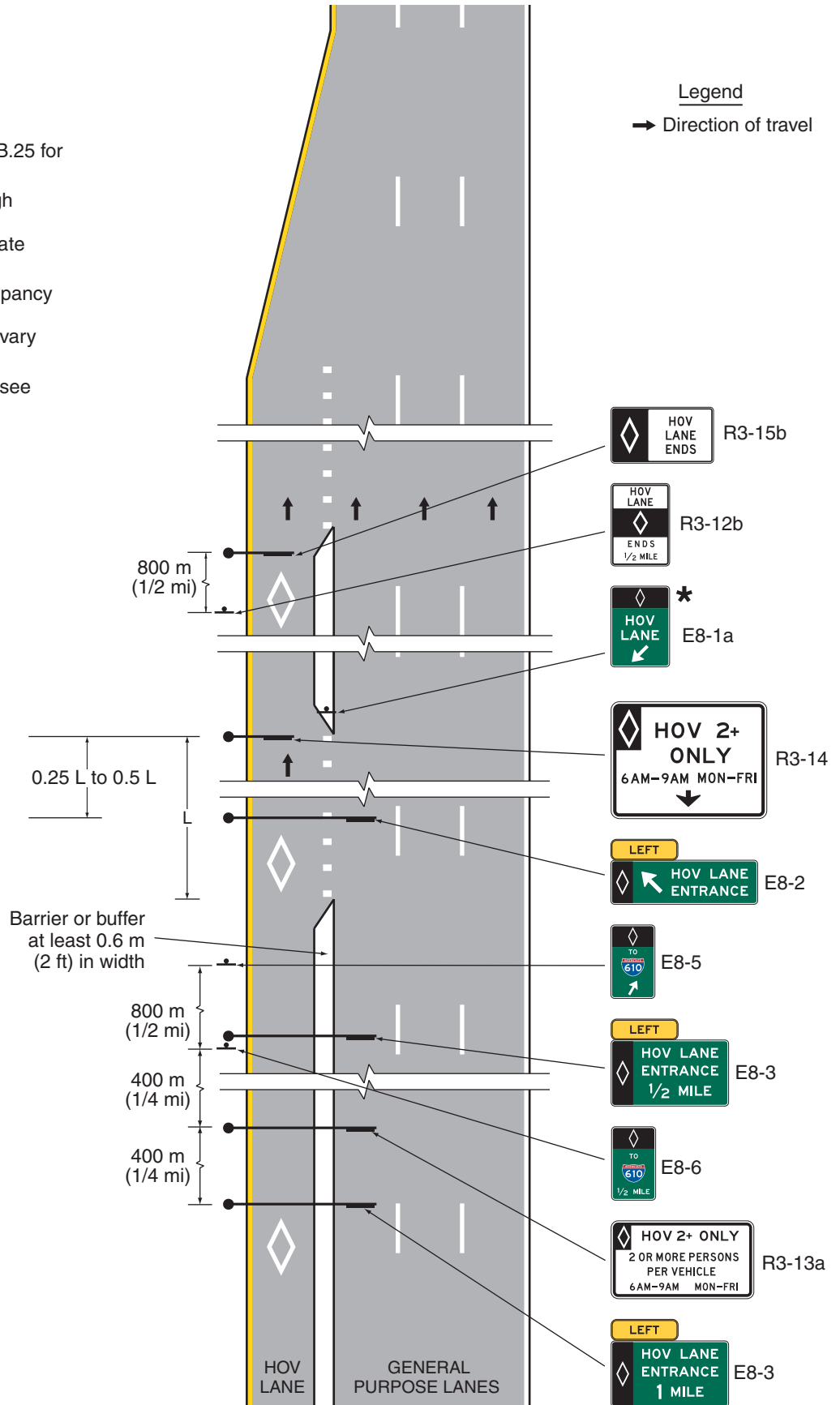


**Figure 2E-38. Example of Signing for the Intermediate Entry to, Exit from, and End of Barrier- or Buffer-Separated HOV Lanes**

Notes:

1. See Sections 3B.24 and 3B.25 for pavement markings
2. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information
3. The minimum vehicle occupancy requirement and hours of operation on the sign may vary for each facility
4. Warning signs not shown (see Chapter 2C)
5. Geometry is for illustrative purposes only

\* Barrier-separated facilities only

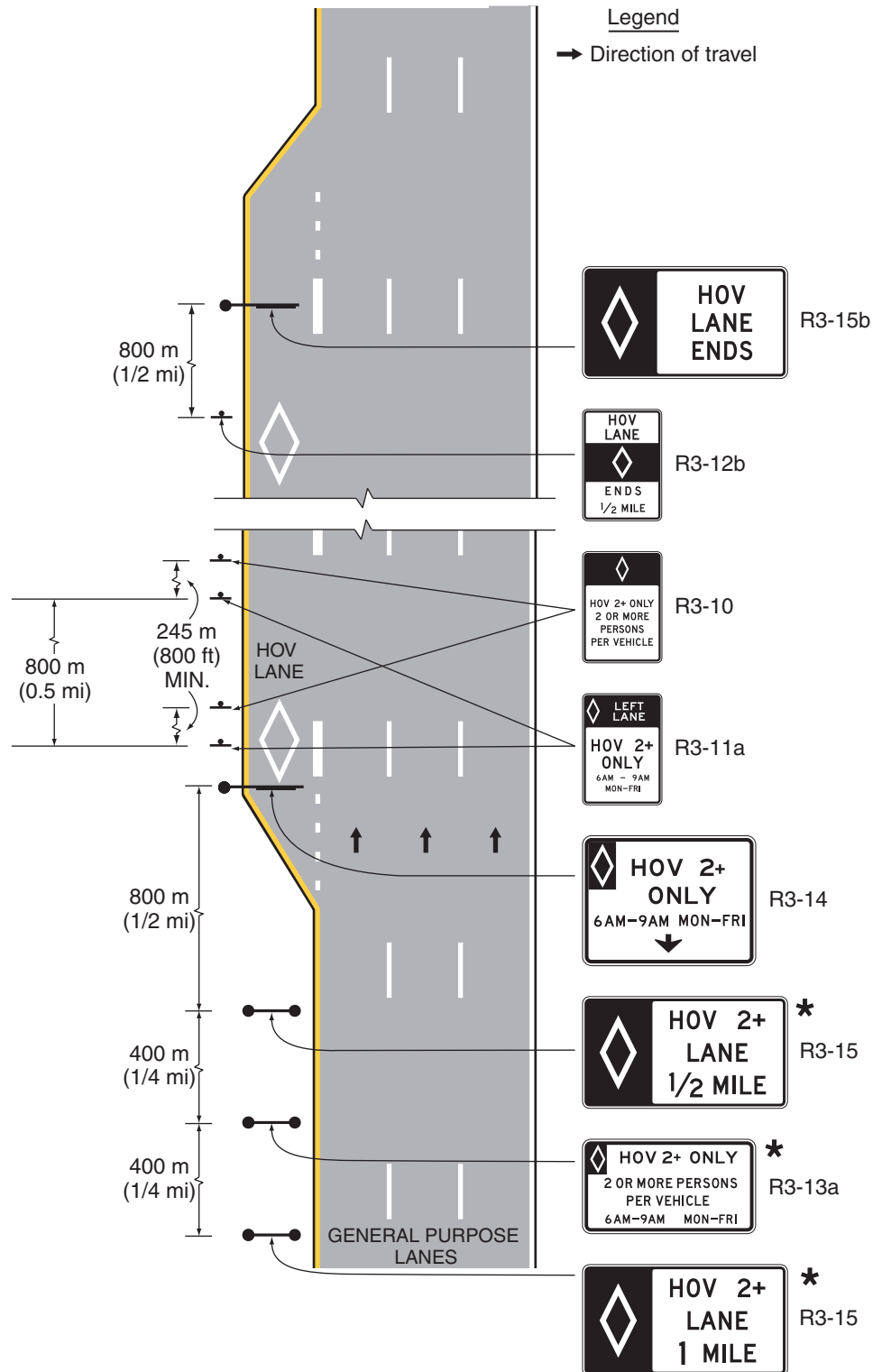


**Figure 2E-39. Example of Signing for the Entrance to, Exit from, and End of an Added Contiguous HOV Lane**

**Notes:**

1. See Sections 3B.24 and 3B.25 for pavement markings
2. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information
3. The minimum vehicle occupancy requirement and hours of operation on the sign may vary for each facility
4. Applicable to part-time or full-time HOV restriction
5. This roadway condition indicates the HOV lane will merge with the General Purpose Lanes upon termination
6. Warning signs not shown (see Chapter 2C)
7. Sets of R3-10 and R3-11a signs should be placed at 800 m (0.5 mi) intervals along the HOV lane and following entrance ramps

\* Where the median width is insufficient, post-mounted designs (R3-10, R3-11, and R3-12 series) may be used.



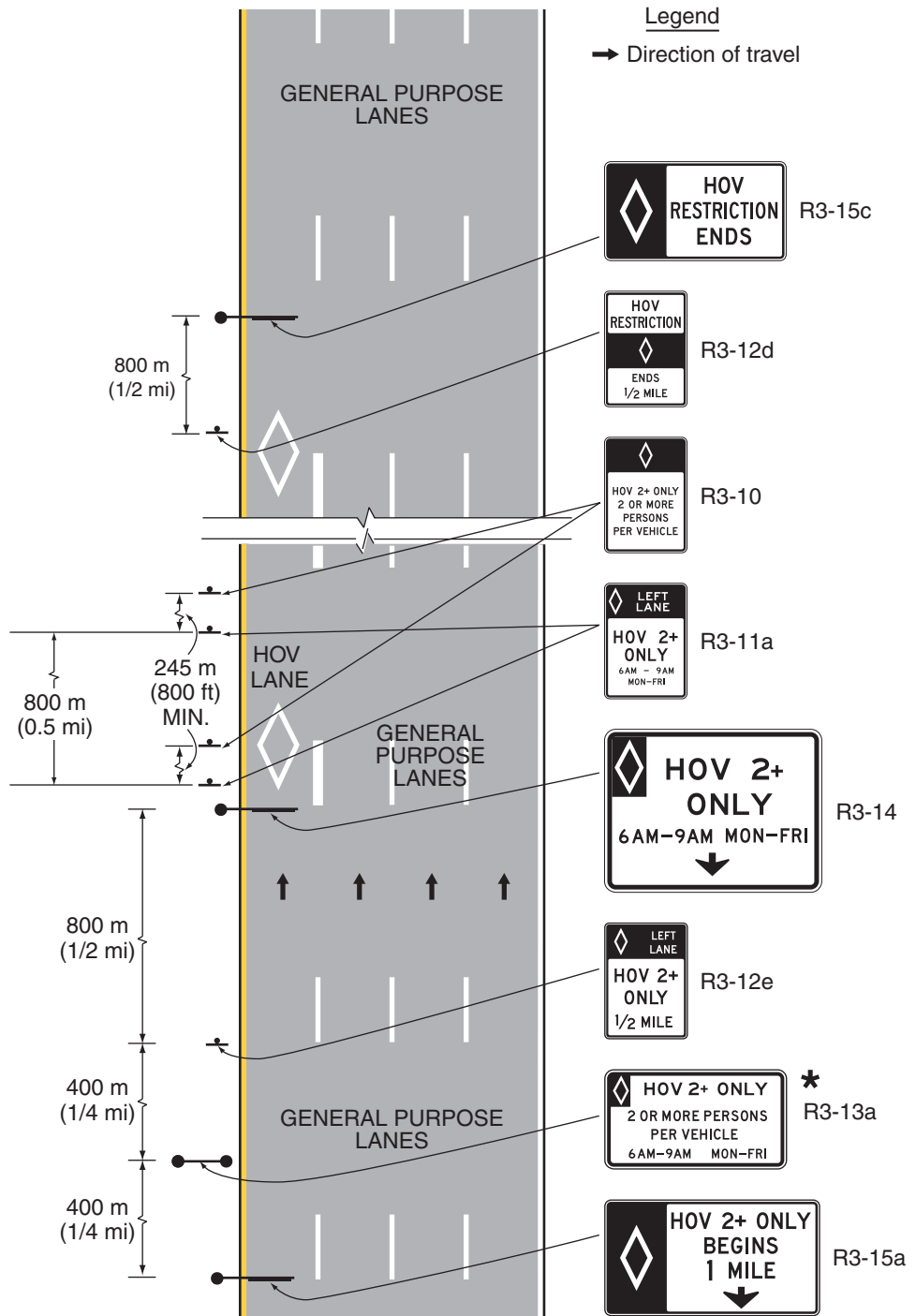


**Figure 2E-40. Example of Signing for the Beginning and End of a General Purpose Lane that Becomes an HOV Lane**

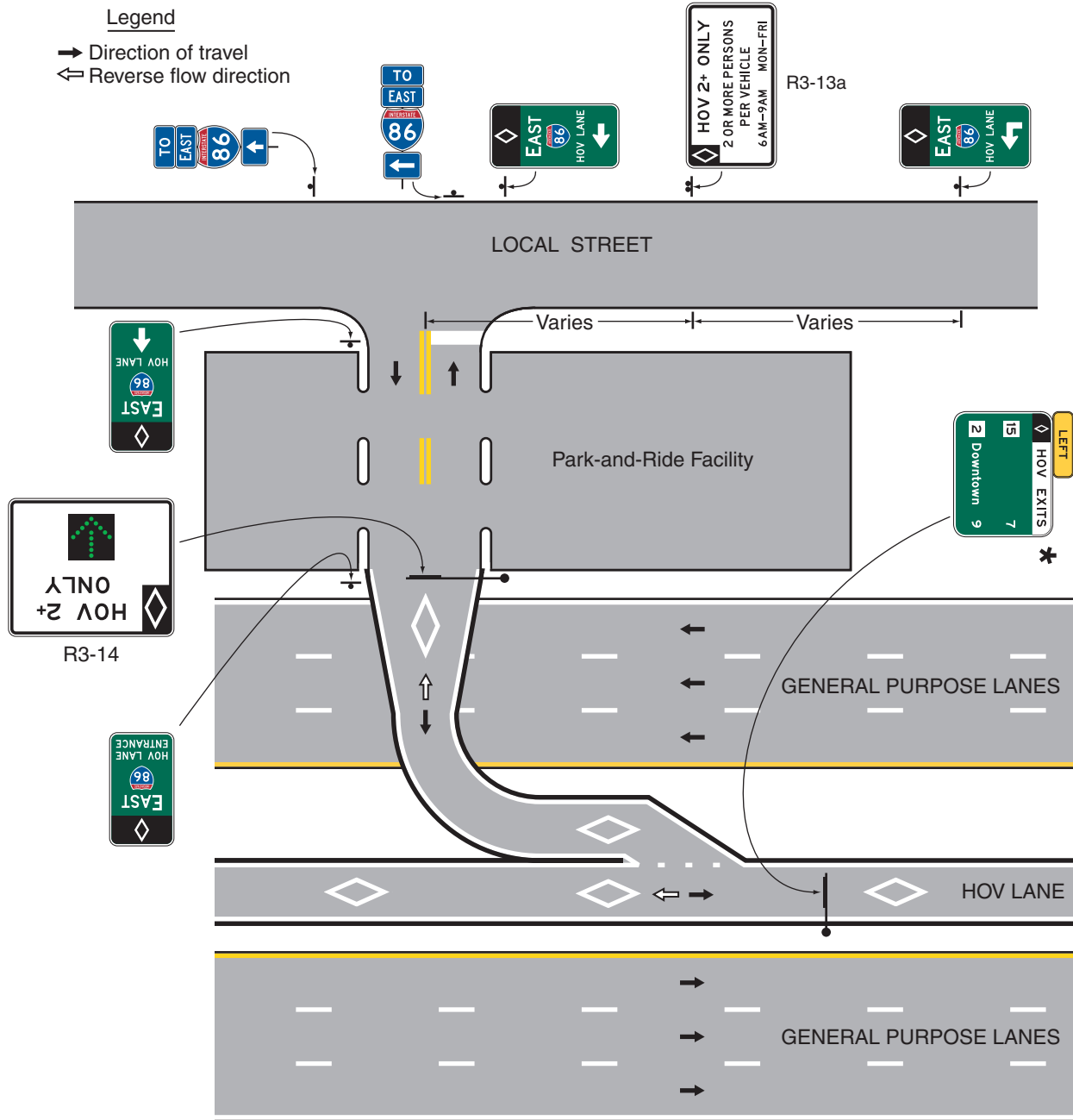
**Notes:**

1. See Sections 3B.24 and 3B.25 for pavement markings
2. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information
3. This signing scheme can also be used for an HOV lane on the right-hand side of the roadway
4. The minimum vehicle occupancy requirement and hours of operation on the sign may vary for each facility
5. Applicable to part-time or full-time HOV restriction
6. This roadway condition indicates the HOV lane will become a general purpose lane upon termination of the restriction
7. Sets of R3-10 and R3-11a signs should be placed at 800 m (0.5 mi) intervals along the HOV lane and following entrance ramps

\* Where the median width is insufficient, this sign may be mounted overhead.



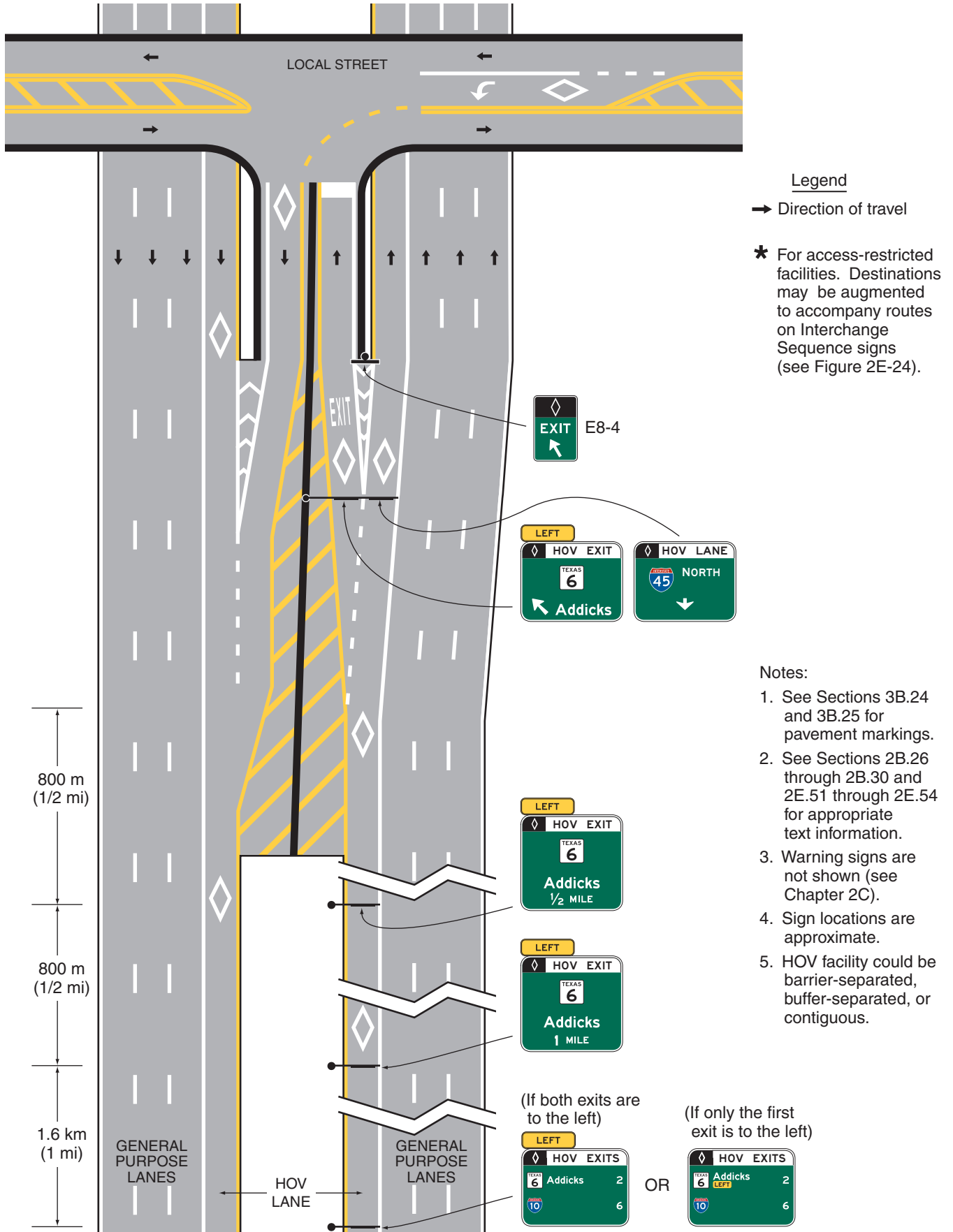
**Figure 2E-41. Example of Signing for a Direct Entrance Ramp to an HOV Lane from a Park-and-Ride Facility and Local Street**



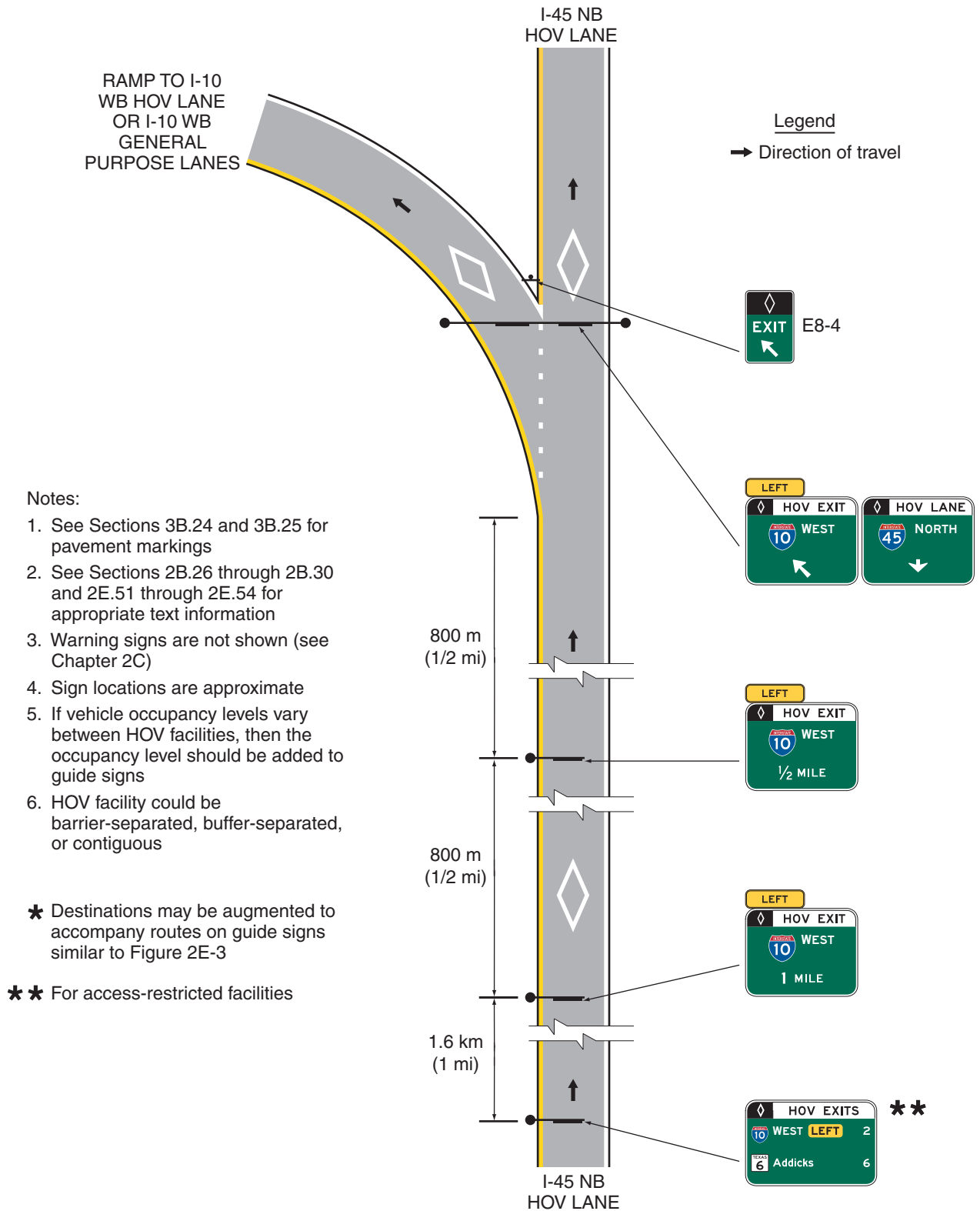
**Notes:**

1. See Sections 3B.24 and 3B.25 for pavement markings.
  2. See Sections 2B.26 through 2B.30 and 2E.51 through 2E.54 for appropriate text information.
  3. Warning signs are not shown (see Chapter 2C).
  4. Sign locations are approximate.
  5. The minimum vehicle occupancy requirement on the sign may vary for each facility.
  6. Additional signs may be required to direct drivers from the surrounding streets into the park-and-ride lot and HOV lane.
  7. Additional signs are required on the adjoining surface streets to inform non-HOVs that they should not enter the HOV facility.
  8. This figure illustrates a reversible HOV lane with a direct access ramp.
  9. The guide signs directing local street traffic to the HOV lane should include the word ENTRANCE when the direct access ramp does not traverse a park-and-ride facility.
- ✱ For access restricted facilities. Destinations may be augmented to accompany routes on Interchange Sequence signs (see Figure 2E-24).

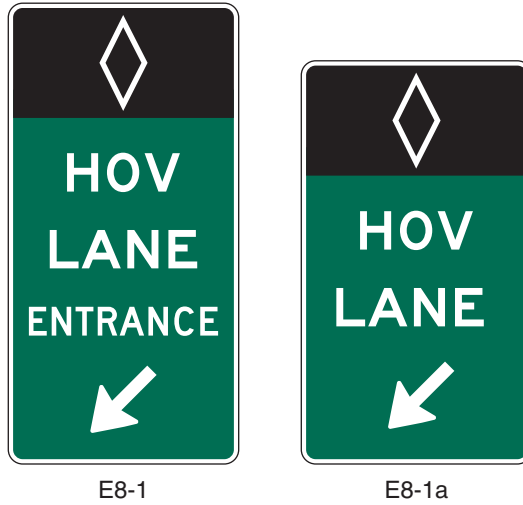
**Figure 2E-42. Example of Guide Signing for Direct HOV Lane Entrance and Exit Ramps**



**Figure 2E-43. Example of Signing for a Direct Access Ramp between HOV Lanes on Separate Freeways**



**Figure 2E-44. Entrance Gore Signs for Barrier-Separated Preferential Lanes**



Note: Examples of HOV Lane (diamond symbol) signs are illustrated. For other types of preferential lanes, the appropriate symbol or word message (see Section 2B.26) is displayed in white on the black background of the top portion of these signs.

**Figure 2E-45. Examples of Overhead or Post-Mounted Preferential Lane Entrance Direction Signs**



E8-2  
(overhead only)



E8-2a  
(Overhead or post-mounted)

A changeable message sign may be incorporated into an overhead preferential lane guide sign to indicate the status of a reversible operation as shown in the following example:



Lane Open



Lane Closed

Note: Examples of HOV Lane (diamond symbol) signs are illustrated. For other types of preferential lanes, the appropriate symbol or word message (see Section 2B.26) is displayed in white on the black background of the left-hand portion of these signs.

**Figure 2E-46. Example of an Overhead Advance Guide Sign for a Preferential Lane Entrance**



E8-3

Note: An example of an HOV Lane (diamond symbol) sign is illustrated. For other types of preferential lanes, the appropriate symbol or word message (see Section 2B.26) is displayed in white on the black background of the left-hand portion of this sign.

**Figure 2E-47. Exit Gore Sign for a Direct Exit from a Preferential Lane**

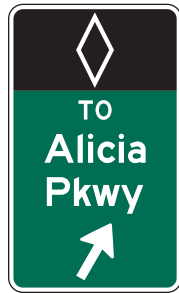


E8-4

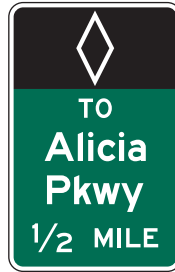
Note: An example of an HOV Lane (diamond symbol) sign is illustrated. For other types of preferential lanes, the appropriate symbol or word message (see Section 2B.26) is displayed in white on the black background of the top portion of this sign.



**Figure 2E-48. Examples of Barrier-Mounted Guide Signs for Intermediate Access from Preferential Lanes**



E8-5



E8-6

Note: Examples of HOV Lane (diamond symbol) signs are illustrated. For other types of preferential lanes, the appropriate symbol or word message (see Section 2B.26) is displayed in white on the black background of the top portion of these signs.

**Figure 2E-49. Example of an Exit Destinations Sign for an HOV/Toll Managed Lane**



Note: The ETC pictograph shown is only an example.  
The pictograph for the toll facility's adopted ETC system shall be used.

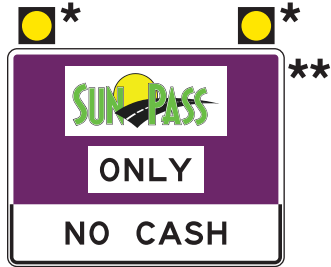
**Figure 2E-50. Examples of Toll Plaza Canopy Signs**



Attended Lane with  
Required M4-17 Toll  
Collector Symbol



Exact Change or ETC Lane  
with Required M4-18  
Exact Change Symbol



ETC Only Lane



M8-3  
Nationally  
Interoperable Symbol

- \* Optional flashing yellow beacons that are separated from any lane-use control signals for the lane
- \*\* The ETC pictographs that are shown are only examples.  
The pictograph for the toll facility's adopted ETC system shall be used.

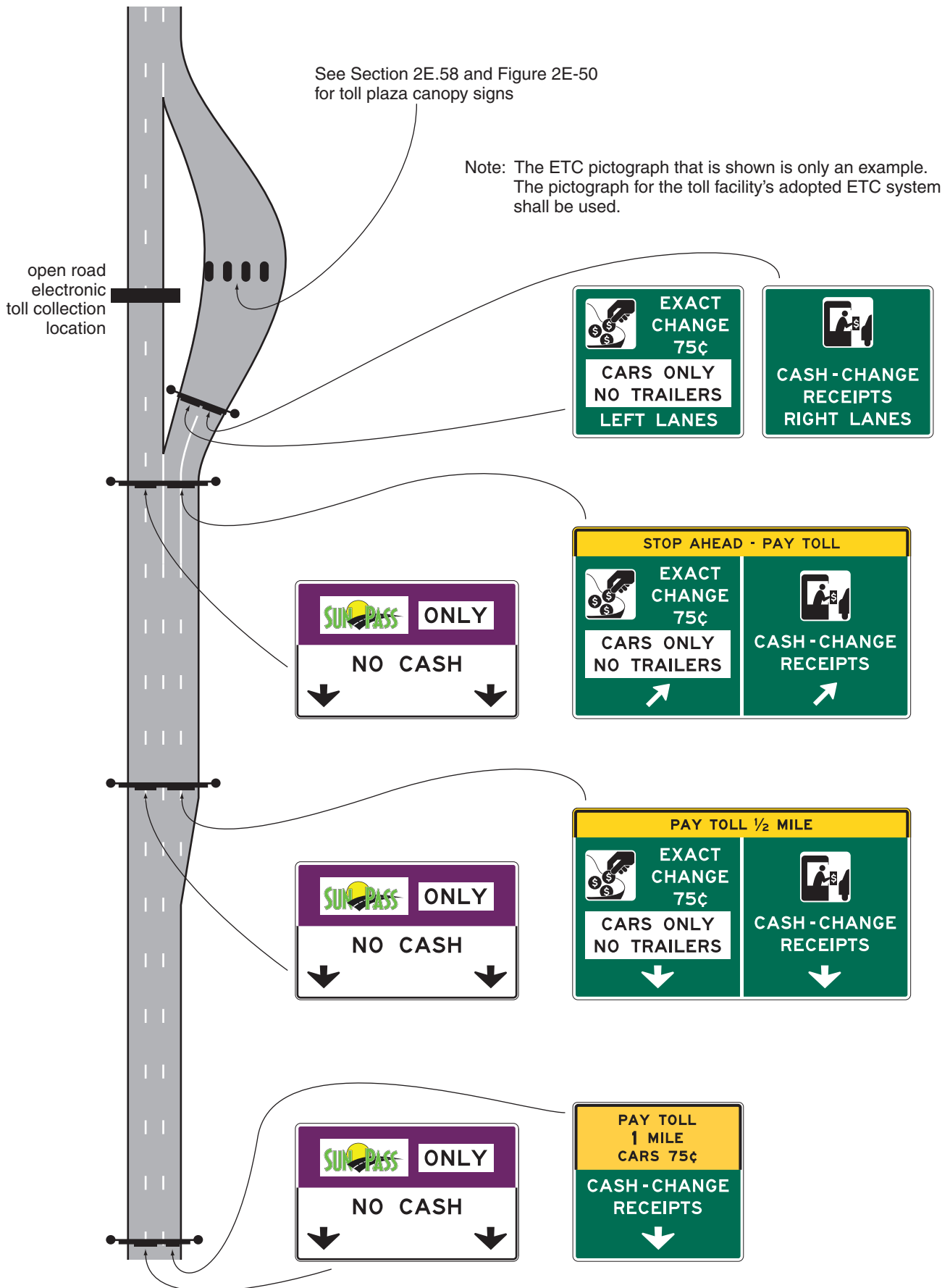
**Figure 2E-51. Examples of Conventional Toll Plaza Advance Signs**



Notes:

1. The M4-17 symbol is required for an attended lane, but the word messages are optional.
2. The M4-18 symbol and the word message are required for an exact change lane.
3. The ETC pictograph that is shown is only an example. The pictograph for the toll facility's adopted ETC system shall be used.

**Figure 2E-52. Example of Guide Signs for a Mainline Toll Plaza on a Diverging Alignment from Open Road ETC Lanes**



**Figure 2E-53. Examples of Guide Signs for Entering Managed Lanes or ETC Only Toll Facilities**

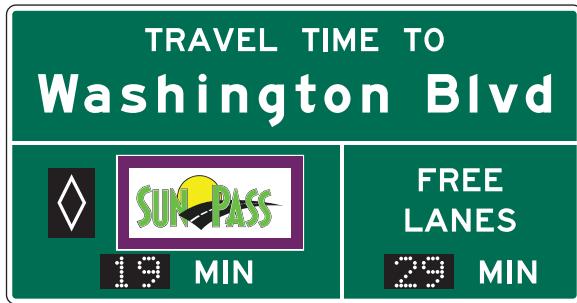


ETC Pictograph Within a Purple Header Section



Note: The ETC pictographs that are shown are only examples.  
The pictograph for the toll facility's adopted ETC system shall be used.

**Figure 2E-54. Example of a Comparative Travel Time Information Sign for Preferential or Managed Lanes**



Notes:

1. The ETC pictograph that is shown is only an example. The pictograph for the toll facility's adopted ETC system shall be used.
2. CMS elements shall be used for the numerals displayed for the estimated travel times.

**Figure 2F-1. General Service Signs and Plaques**



D5-12  
Interstate Oasis



D9-1  
Telephone



D9-2  
Hospital



D9-3  
Camping



D9-3a  
Trailer Camping



D9-4  
Litter Container



D9-6  
Handicapped



D9-7  
Gas



D9-8  
Food



D9-9  
Lodging



D9-10  
Tourist Information



D9-11  
Diesel Fuel



D9-11a  
Alternative Fuel



D9-11b  
Electric Vehicle  
Charging



D9-12  
RV Sanitary  
Station



D9-13  
Emergency  
Medical Services



D9-13a  
Hospital



D9-13b  
Ambulance Station



D9-13c  
Emergency  
Medical Care



D9-13d  
Trauma Center



D9-14  
Police



D9-15  
Propane Gas



D9-16  
Truck Parking



D9-20  
Pharmacy  
D9-20aP  
24-Hour



D9-21  
Telecommunication  
Device for the Deaf



D9-22  
Wireless Internet

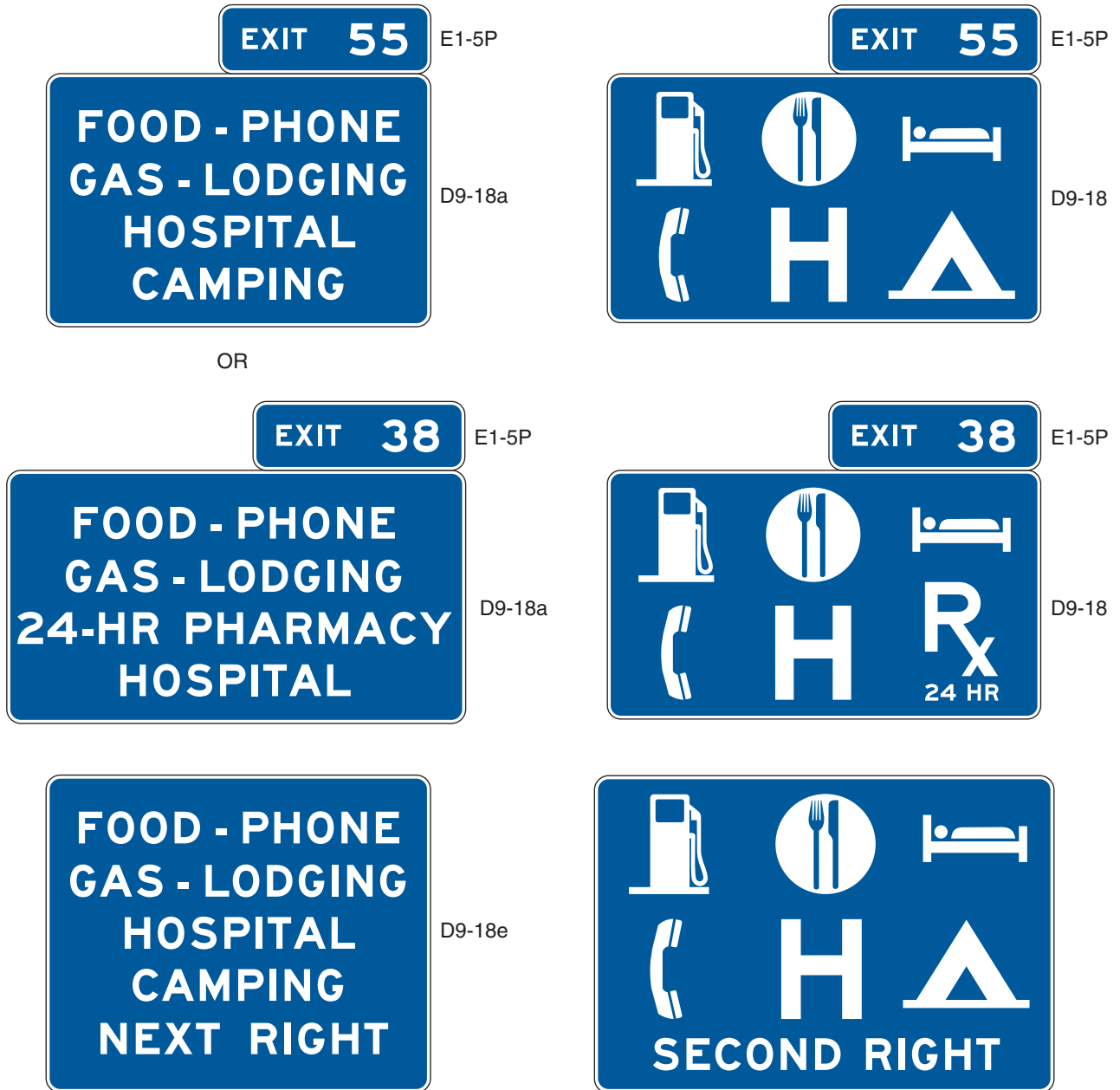


*Figure 2F-2. Example of Next Services Sign*



D9-17

Figure 2F-3. Examples of General Service Signs with and without Exit Numbering



*Figure 2F-4. Examples of Interstate Oasis Signs*



**Figure 2F-5. Rest Area and Other Roadside Area Signs**



D5-1



D5-1b



D5-2



D5-5



D5-6

NOTE: Alternative legends may be substituted for the REST AREA legend. Among the alternatives are PARKING AREA, PICNIC AREA, ROADSIDE TABLE, ROADSIDE PARK, SCENIC AREA, SCENIC VIEW, and SCENIC OVERLOOK.

**Figure 2F-6. Examples of Tourist Information and Welcome Center Signs**



D5-7



D5-8



D5-11

Note: Alternative legends may be substituted for the TOURIST INFO CENTER legend. Among the alternatives are WELCOME CENTER and (State Name) WELCOME CENTER.

*Figure 2F-7. Radio, Telephone, and Car Pool Information Signs*



D12-1



D12-2



D12-3

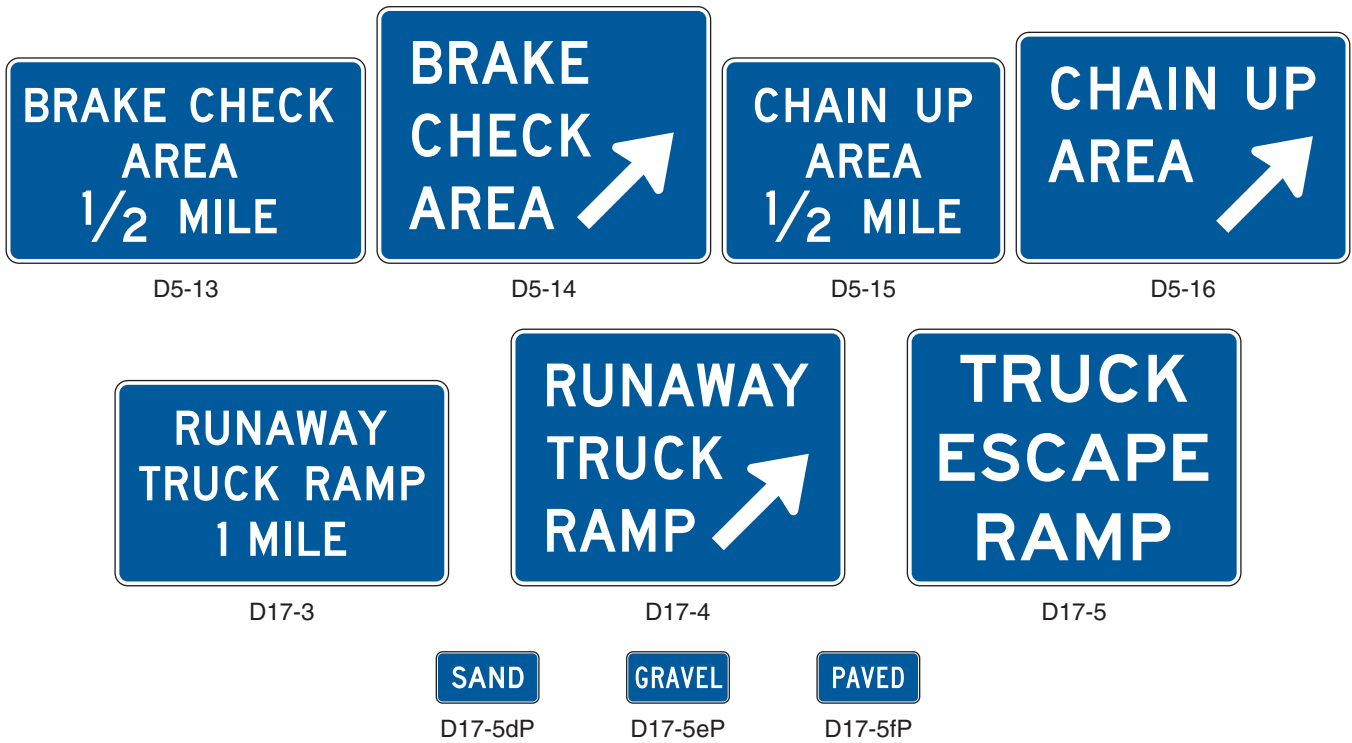


D12-4



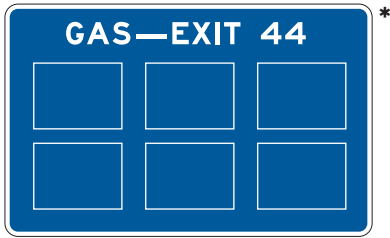
D12-5

**Figure 2F-8. Brake Check Area, Chain Up Area, and Truck Escape Ramp Signs and Plaques**

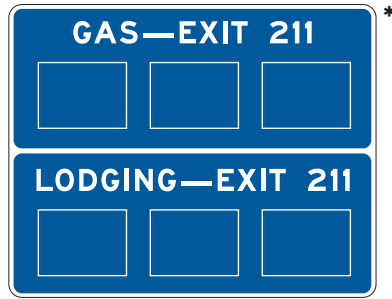


**Figure 2G-1. Examples of Specific Service Signs**

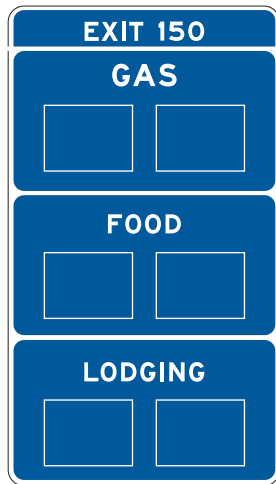
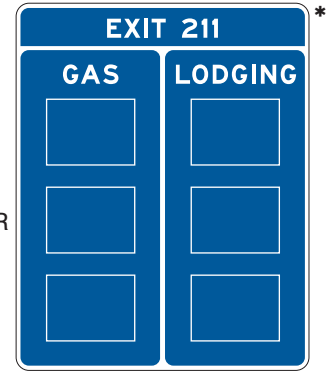
\* See Section 2G.07 for option of putting exit number on a separate plaque instead of on the sign



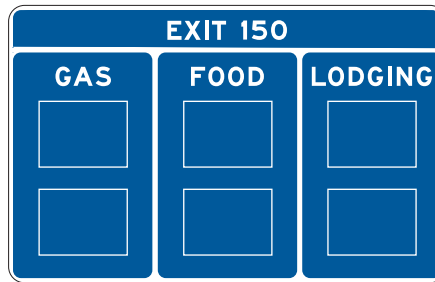
SINGLE-EXIT INTERCHANGE  
(ONE SERVICE)



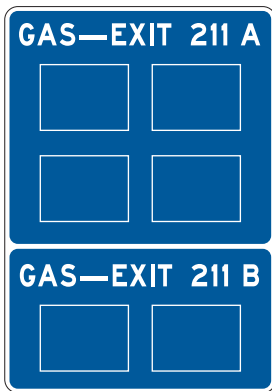
SINGLE-EXIT INTERCHANGE  
(TWO SERVICES)



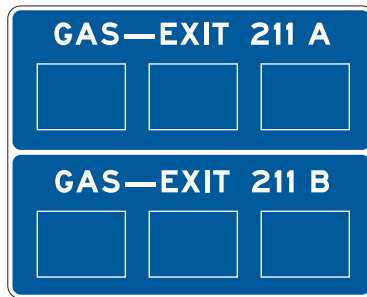
OR



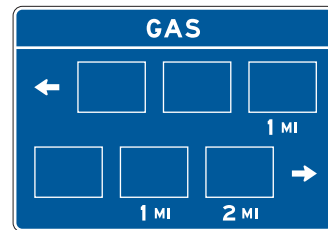
SINGLE-EXIT INTERCHANGE (THREE SERVICES)



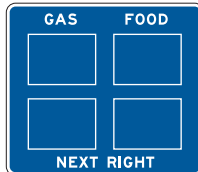
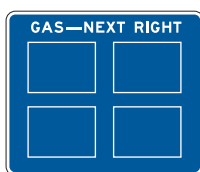
OR



DOUBLE-EXIT INTERCHANGE



RAMP



INTERSECTION



LOGO PANEL

Note: Directional arrows and distance may be used when appropriate





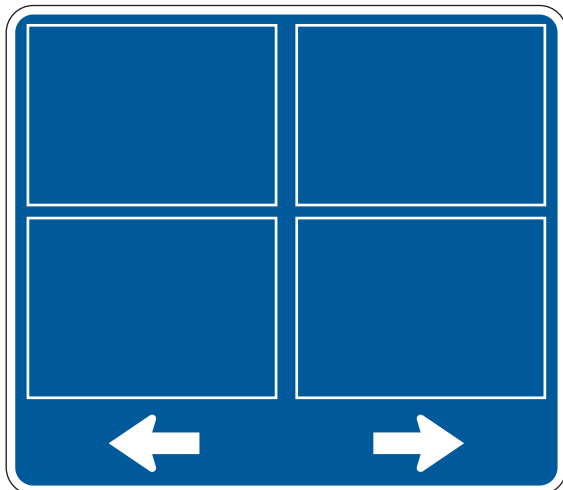
*Figure 2G-3. Examples of Supplemental Messages on Logo Sign Panels*



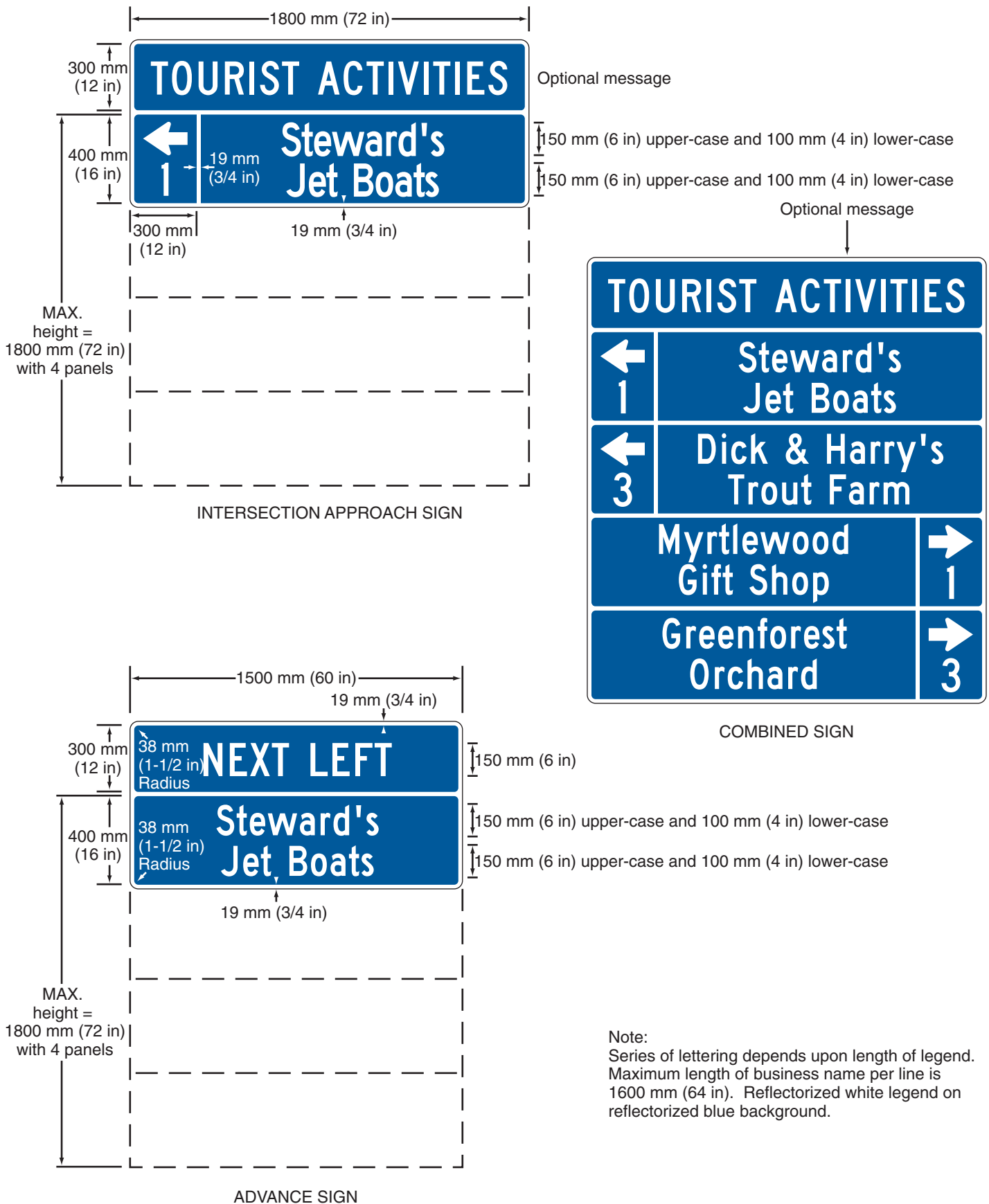
**Figure 2G-4. Examples of RV Access Supplemental Messages on Logo Sign Panels**



**Figure 2G-5. Examples of Specific Service Trailblazer Signs**

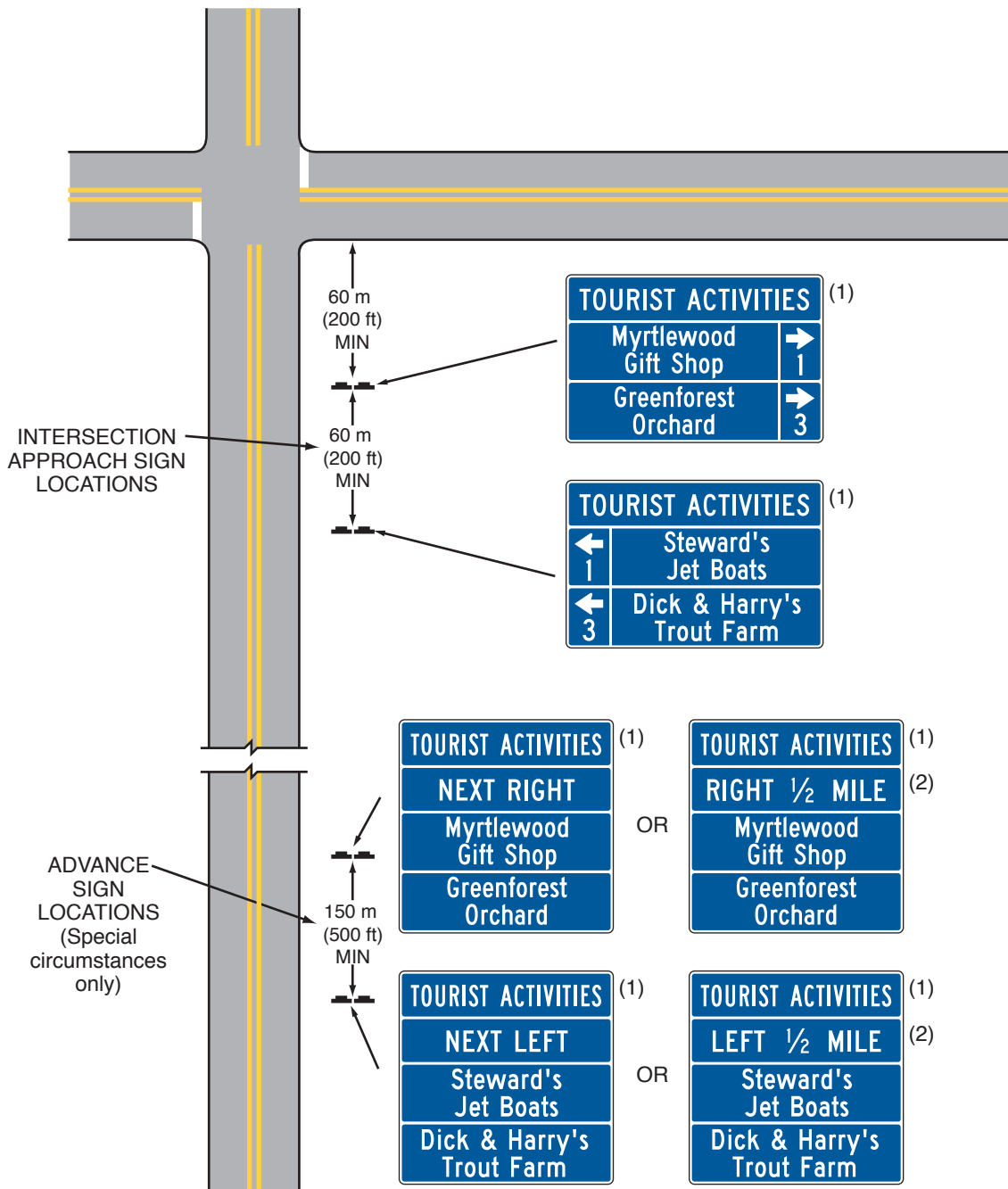


**Figure 2H-1. Examples of Tourist-Oriented Directional Signs**



Note:  
 Series of lettering depends upon length of legend.  
 Maximum length of business name per line is 1600 mm (64 in). ReflectORIZED white legend on reflectORIZED blue background.

**Figure 2H-2. Examples of Intersection Approach Signs and Advance Signs for Tourist-Oriented Directional Signs**



(1) Optional Message

(2) Use if there is an intervening road

*Figure 2I-1. Reference Location Signs*



D10-1



D10-2



D10-3

**Figure 2I-2. Intermediate Reference Location Signs**



D10-1a



D10-2a



D10-3a



Figure 2I-3. Enhanced Reference Location Signs

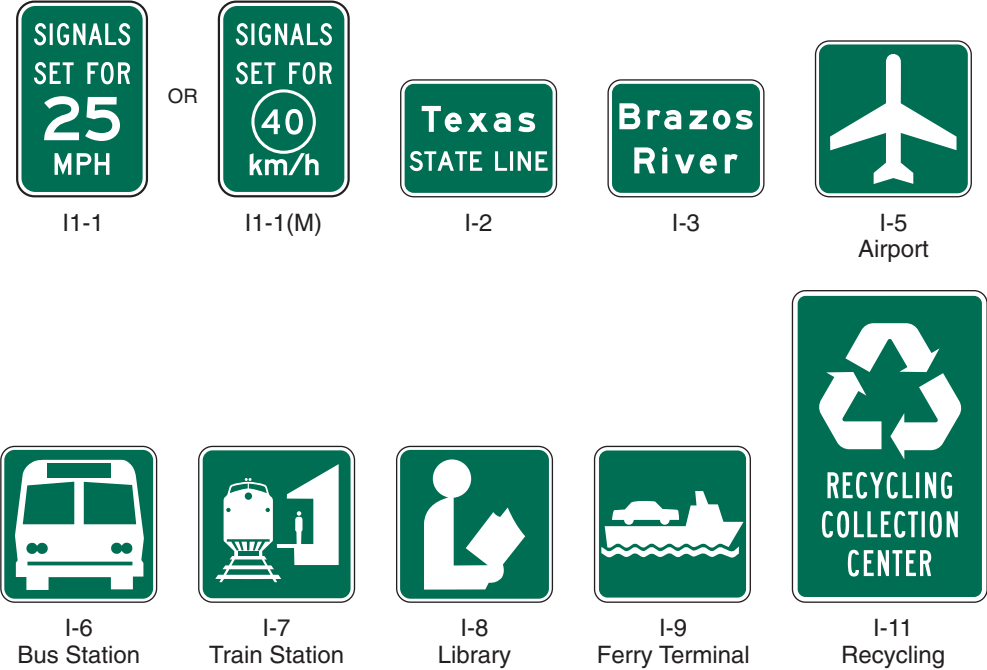


D10-4



D10-5

**Figure 2I-4. General Information and Miscellaneous Information Signs**



**Figure 2I-5. Examples of Acknowledgment Sign Designs**



D14-1



D14-2



D14-3

**Figure 2J-1. Typical Use of Educational Plaques, Prohibitory Slashes, and Arrows**



a) Directional sign with arrow



b) Directional signs with arrow



c) Directional signs with arrows



d) Directional sign with secondary symbol



**NO CAMPFIRES**



**NO SMOKING**

e) Management symbols with prohibitive slashes and educational plaques



**VISITOR  
INFO**



f) Directional sign with educational plaque and arrow

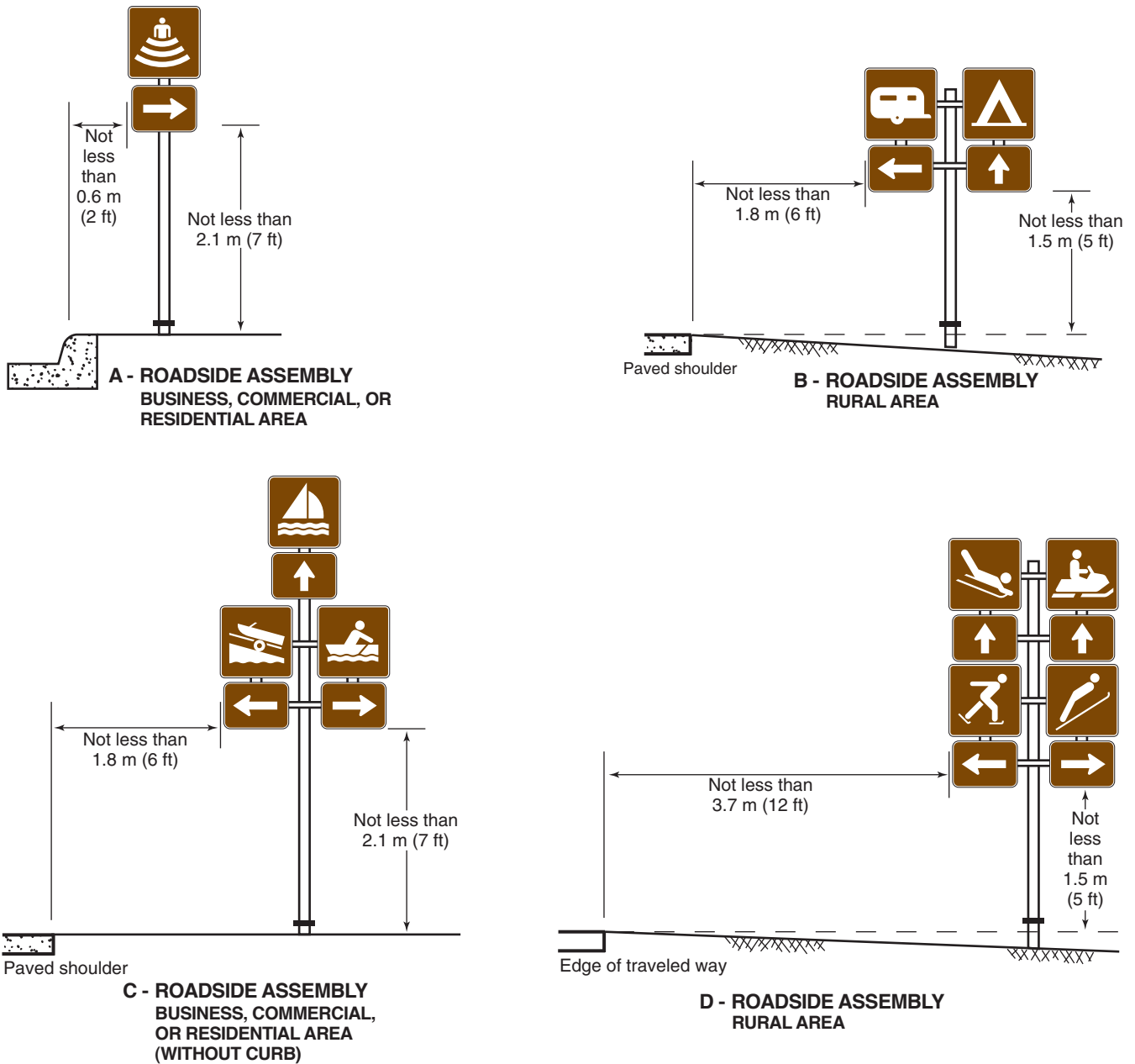
**Figure 2J-2. Examples of General Directional Guide Signs for Conventional Roads**



\* Optional shape

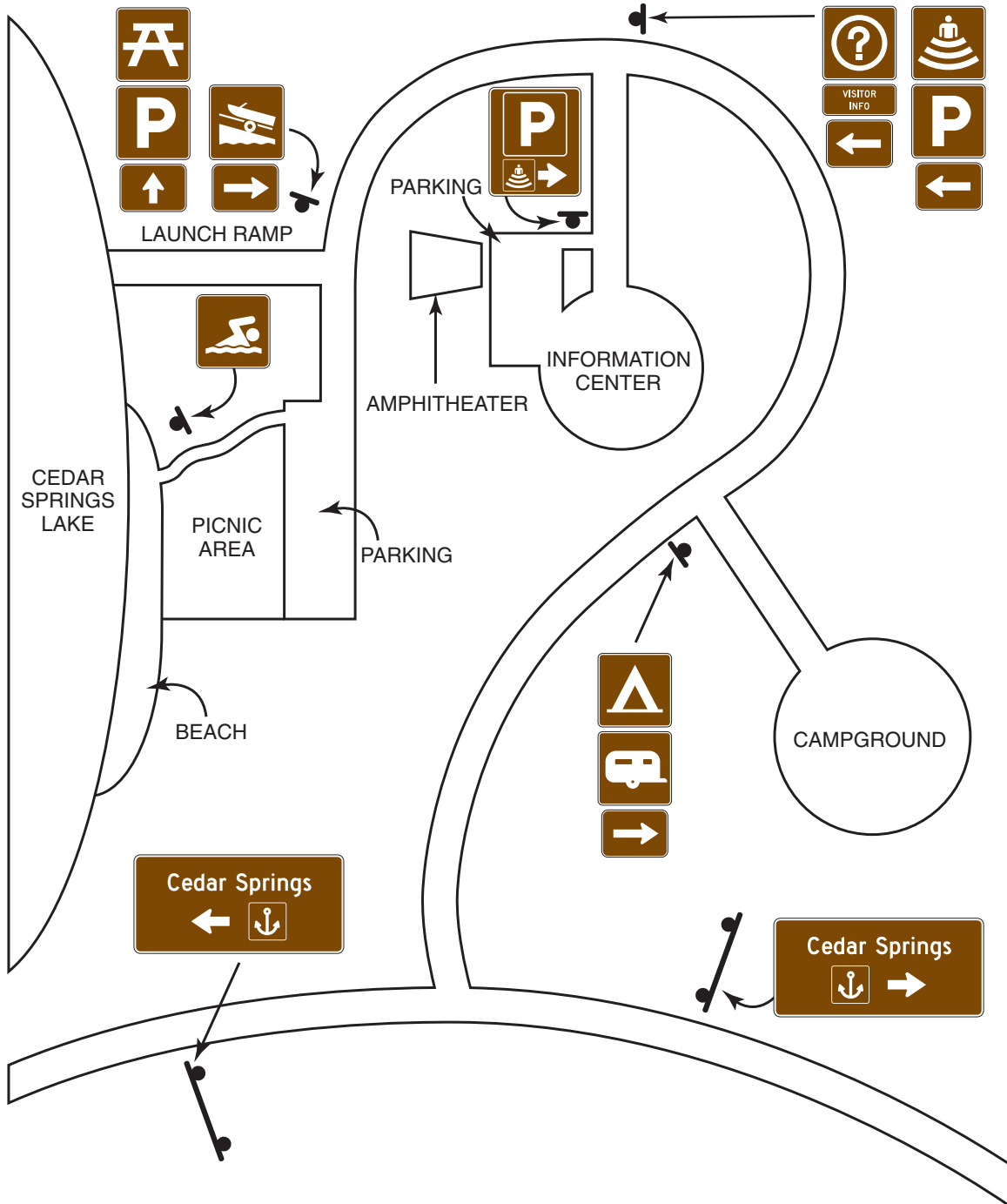
\*\* This sign would be used on a freeway or expressway rather than on a conventional road.

**Figure 2J-3. Arrangement, Height, and Lateral Position of Signs Located Within Recreational and Cultural Interest Areas**



Note: See Section 2A.19 for reduced lateral offset distances that may be used in areas where lateral offsets are limited, and in urban areas where sidewalk width is limited or where existing poles are close to the curb.

Figure 2J-4. Examples of Symbol Signing Layout



**Figure 2J-5. Recreational and Cultural Interest Area Symbol Signs for General Applications**



RS-002  
Smoking



RS-003  
Automobiles



RS-004  
Trucks



RS-005  
Tunnel



RS-006  
Lookout Tower



RS-007  
Lighthouse



RS-008  
Falling Rocks



RS-009  
Dam



RS-011  
Deer Viewing Area



RS-012  
Bear Viewing Area



RS-016  
Pedestrian Crossing



RS-017  
Pets on Leash



RS-031  
Bus Stop



RS-036  
Viewing Area



RS-042  
Campfires



RS-080  
Point of Interest



RS-090  
Fire Extinguisher



RS-099  
Rattlesnakes



RS-101  
Cans or Bottles



RS-102  
Snack Bar



RS-103  
Radios



RS-111  
Strollers



RS-115  
Sea Plane



RS-120  
Wood Gathering



RS-122  
Walk on Boardwalk



RS-123  
Stay on Trail



RS-139  
Buses



RS-140  
Pick-up Trucks



RS-141  
Nature Study Area



RS-142  
Cultural Interest Area



RS-200  
Recycling



**Figure 2J-6. Recreational and Cultural Interest Area Symbol Signs for Accommodations**



RS-018  
Lodging



RS-019  
Restaurant/Food



RS-021  
Men's Restroom



RS-022  
Restrooms



RS-023  
Women's Restroom



RS-028  
Handicapped Access



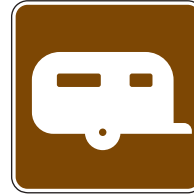
RS-034  
Parking



RS-037  
Sleeping Shelter



RS-038  
Campground



RS-040  
Trailer Site



RS-104  
Recreational Vehicle  
Site



RS-137  
Baby Changing Station  
(Men's Room)



RS-138  
Baby Changing Station  
(Women's Room)



RS-148  
Walk-In Camp

**Figure 2J-7. Recreational and Cultural Interest Area Symbol Signs for Services**



RS-013  
Drinking Water



RS-014  
Information



RS-015  
Ranger Station



RS-020  
Grocery Store



RS-024  
First Aid



RS-025  
Telephone



RS-026  
Post Office



RS-027  
Mechanic



RS-029  
Airport



RS-030  
Lockers/Storage



RS-032  
Gas Station



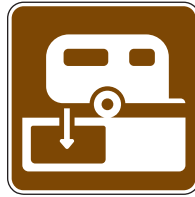
RS-033  
Vehicle Ferry



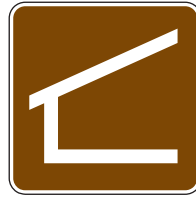
RS-035  
Showers



RS-039  
Picnic Shelter



RS-041  
Sanitary Station



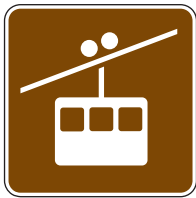
RS-043  
Trail Shelter



RS-044  
Picnic Site



RS-045  
Kennel



RS-071  
Tramway



RS-073  
Stable



RS-085  
Laundromat



RS-086  
Litter Receptacle



RS-091  
Trash Dumpster



RS-109  
Theater



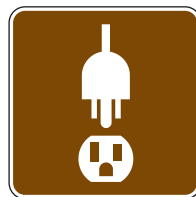
RS-110  
Library



RS-112  
Firewood Cutting



RS-114  
Radiator Water



RS-150  
Electrical Hook-Up



RS-201  
Hospital



24 HR  
RS-202  
Pharmacy (24-Hour)

**Figure 2J-8. Recreational and Cultural Interest Area Symbol Signs for Land Recreation**



RS-064  
Horse Trail



RS-065  
Motor Bike Trail



RS-066  
Bicycle Trail



RS-067  
Off-Road Vehicle Trail



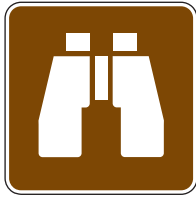
RS-068  
Hiking Trail



RS-069  
Playground



RS-070  
Amphitheater



RS-076  
Wildlife Viewing



RS-081  
Technical Rock Climbing



RS-082  
Climbing



RS-083  
Rock Collecting



RS-084  
Spelunking/Caves



RS-095  
All-Terrain Trail



RS-096  
Baseball



RS-097  
Exercise/Fitness



RS-098  
Skateboarding



RS-113  
Driving Tour



RS-114  
Interpretive Trail



RS-116  
Archery



RS-125  
In-Line Skating



RS-126  
Hang Gliding



RS-128  
Golfing

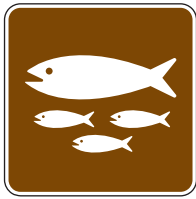


RS-129  
Tennis



RS-149  
Corral

**Figure 2J-9. Recreational and Cultural Interest Area Symbol Signs for Water Recreation**



RS-010  
Fish Hatchery



RS-053  
Marina



RS-054  
Boat Ramp



RS-055  
Motorboating



RS-056  
Sailing



RS-057  
Rowboating



RS-058  
Waterskiing



RS-059  
Surfing



RS-060  
Scuba Diving



RS-061  
Swimming



RS-062  
Diving



RS-063  
Fishing Area



RS-079  
Canoeing



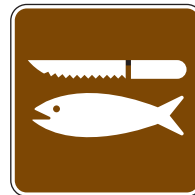
RS-087  
Tour Boat



RS-088  
Wading



RS-089  
Fish Ladder



RS-093  
Fish Cleaning



RS-094  
Lifejackets



RS-106  
Seal Viewing



RS-107  
Whale Viewing



RS-108  
Wind Surfing



RS-117  
Hand Launch/  
Small Boat Launch



RS-118  
Kayaking



RS-119  
Fishing Pier



RS-121  
Jet Ski/Personal  
Watercraft



RS-145  
Beach



RS-146  
Rafting



RS-147  
Boat Motor

**Figure 2J-10. Recreational and Cultural Interest Area Symbol Signs for Winter Recreation**



RS-046  
Cross Country Skiing



RS-047  
Downhill Skiing



RS-048  
Ski Jumping



RS-049  
Sledding



RS-050  
Ice Skating



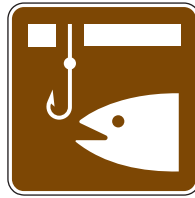
RS-052  
Snowmobiling



RS-077  
Winter Recreational Area



RS-078  
Snowshoeing



RS-092  
Ice Fishing



RS-105  
Chair Lift/Ski Lift



RS-127  
Snowboarding



RS-143  
Dog Sledding



RS-144  
Snow Tubing

**Figure 2J-11. Recreational and Cultural Interest Area Symbol Signs for Prohibited Activities and Items (Sheet 1 of 2)**



PS-001  
No Firearms



PS-002  
No Smoking



PS-003  
No Automobiles



PS-004  
No Trucks



PS-013  
Do Not Drink



PS-016  
Do Not Cross



PS-017  
No Pets



PS-032  
No Gasoline



PS-034  
No Parking



PS-038  
No Camping



PS-040  
No Trailers



PS-042  
No Campfires



PS-044  
No Picnicking



PS-047  
No Downhill Skiing



PS-048  
No Ski Jumping



PS-049  
No Sledding



PS-050  
No Skating



PS-052  
No Snowmobiling



PS-054  
No Boat Launching



PS-055  
No Motorboats



PS-058  
No Waterskiing



PS-059  
No Surfing



PS-060  
No Scuba Diving



PS-061  
No Swimming



PS-062  
No Diving



PS-063  
No Fishing



PS-064  
No Horses



PS-065  
No Motor Bikes



PS-066  
No Biking



PS-067  
No Off-Road Vehicles



PS-072  
No Hunting



PS-081  
No Technical  
Rock Climbing



PS-082  
No Climbing



PS-083  
No Rock Collecting



PS-086  
No Littering



PS-088  
No Wading

**Figure 2J-11. Recreational and Cultural Interest Area Symbol Signs for Prohibited Activities and Items (Sheet 2 of 2)**



PS-092  
No Ice Fishing



PS-093  
No Fish Cleaning



PS-095  
No All-Terrain Vehicles



PS-096  
No Ball Playing



PS-098  
No Skateboarding



PS-100  
No Alcoholic Beverages



PS-101  
No Cans or Bottles



PS-102  
No Food or Drink



PS-103  
No Radios



PS-104  
No Recreational Vehicles



PS-111  
No Baby Strollers



PS-112  
No Wood Chopping



PS-117  
No Hand Launch/  
Small Boat Launch



PS-120  
No Wood Gathering



PS-121  
No Jet Ski/  
Personal Watercraft



PS-122  
Stay on Boardwalk



PS-124  
No Step



PS-125  
No In-Line Skating



PS-126  
No Hang Gliding



PS-127  
No Snowboarding



PS-130  
Do Not Feed  
Animals



PS-131  
Do Not Feed  
Ducks



PS-132  
Do Not Feed  
Squirrels



PS-133  
Do Not Feed  
Coyotes



PS-134  
Do Not Feed  
Deer



PS-135  
Do Not Feed  
Bears



PS-139  
No Buses



PS-143  
No Dog Sledding



PS-144  
No Snow Tubing

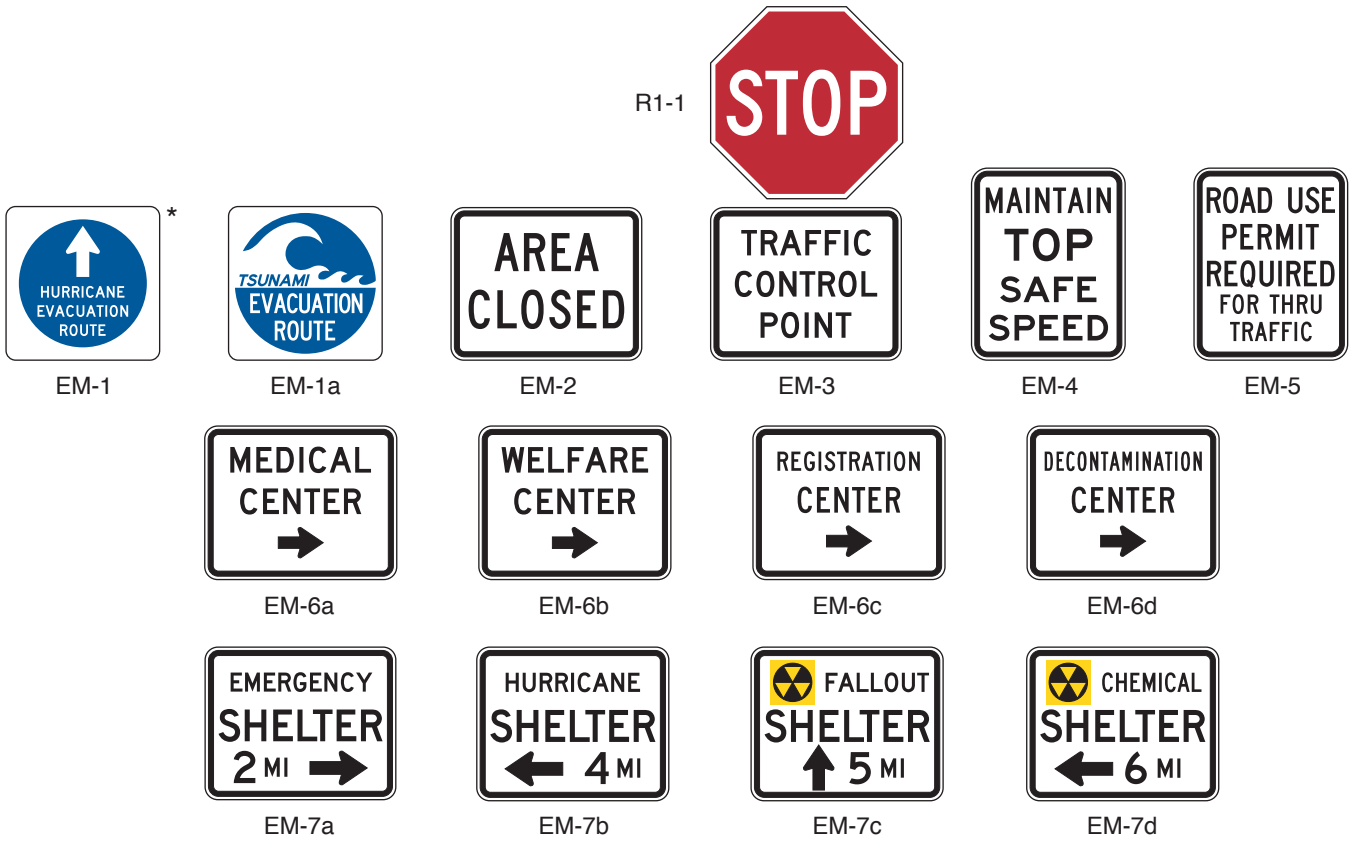


PS-146  
No Rafting



PS-147  
No Boat Motors

Figure 2K-1. Emergency Management Signs

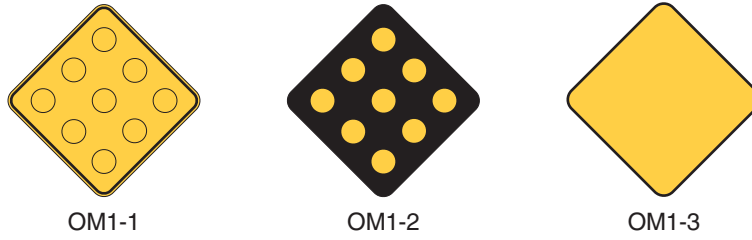


\* HURRICANE is an example of one type of evacuation route. Legends for other types may also be used, or this line of text may be omitted.

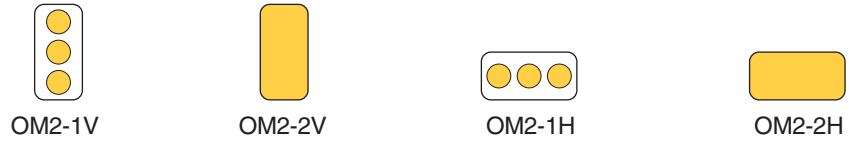


**Figure 2L-1. Object Markers**

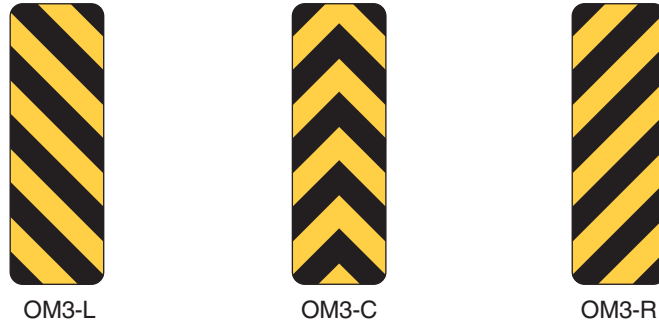
**Type 1 Object Markers (Obstructions Within the Roadway)**



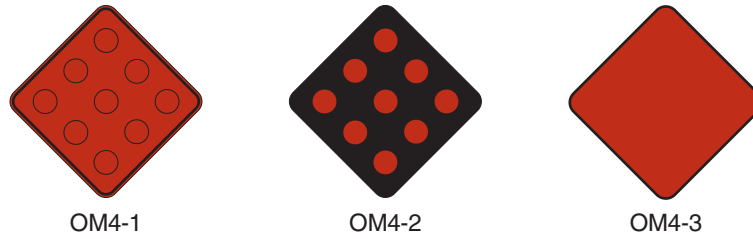
**Type 2 Object Markers (Obstructions Adjacent to the Roadway)**



**Type 3 Object Markers (Obstructions Adjacent to or Within the Roadway)**

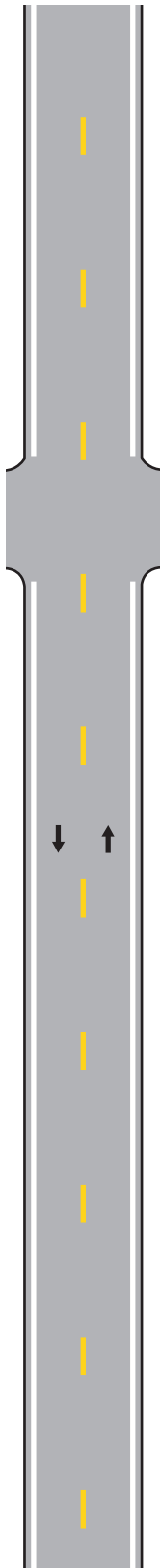


**Type 4 Object Markers (End of Roadway)**

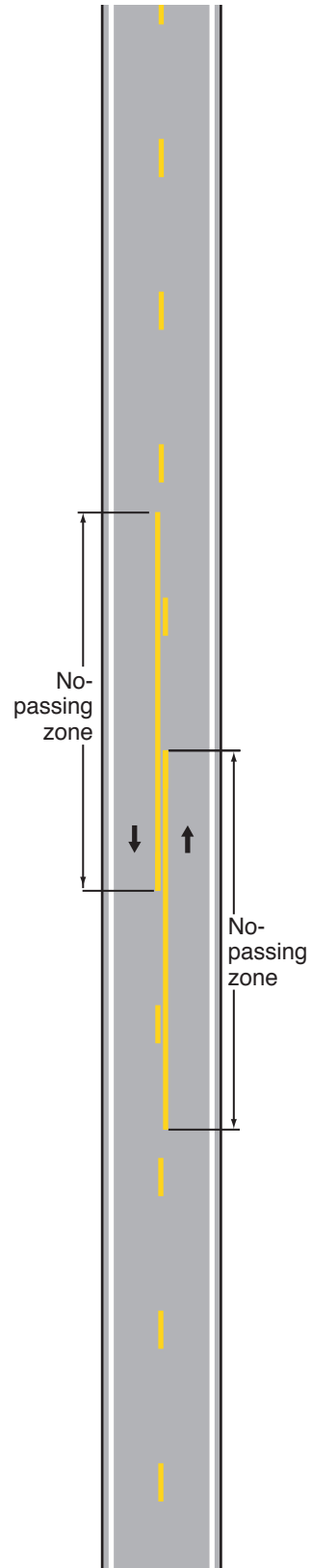


**Figure 3B-1. Examples of Two-Lane, Two-Way Marking Applications**

**A - Typical two-lane, two-way marking with passing permitted in both directions**



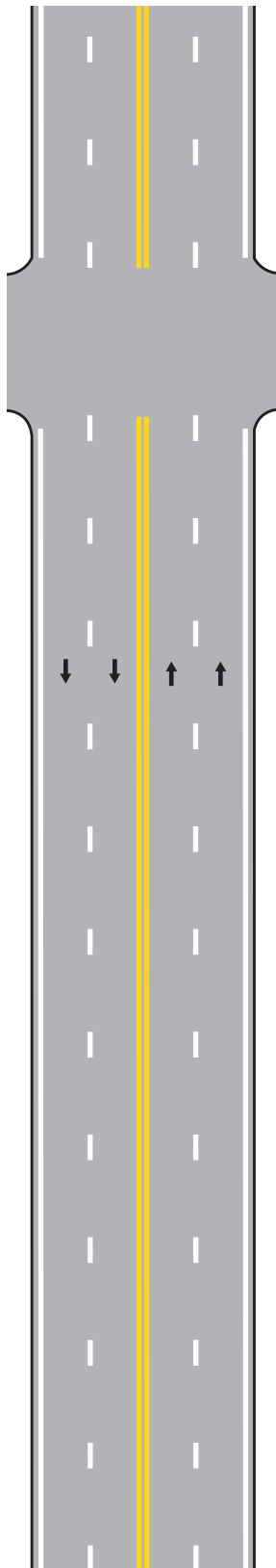
**B - Typical two-lane, two-way marking with no-passing zones**



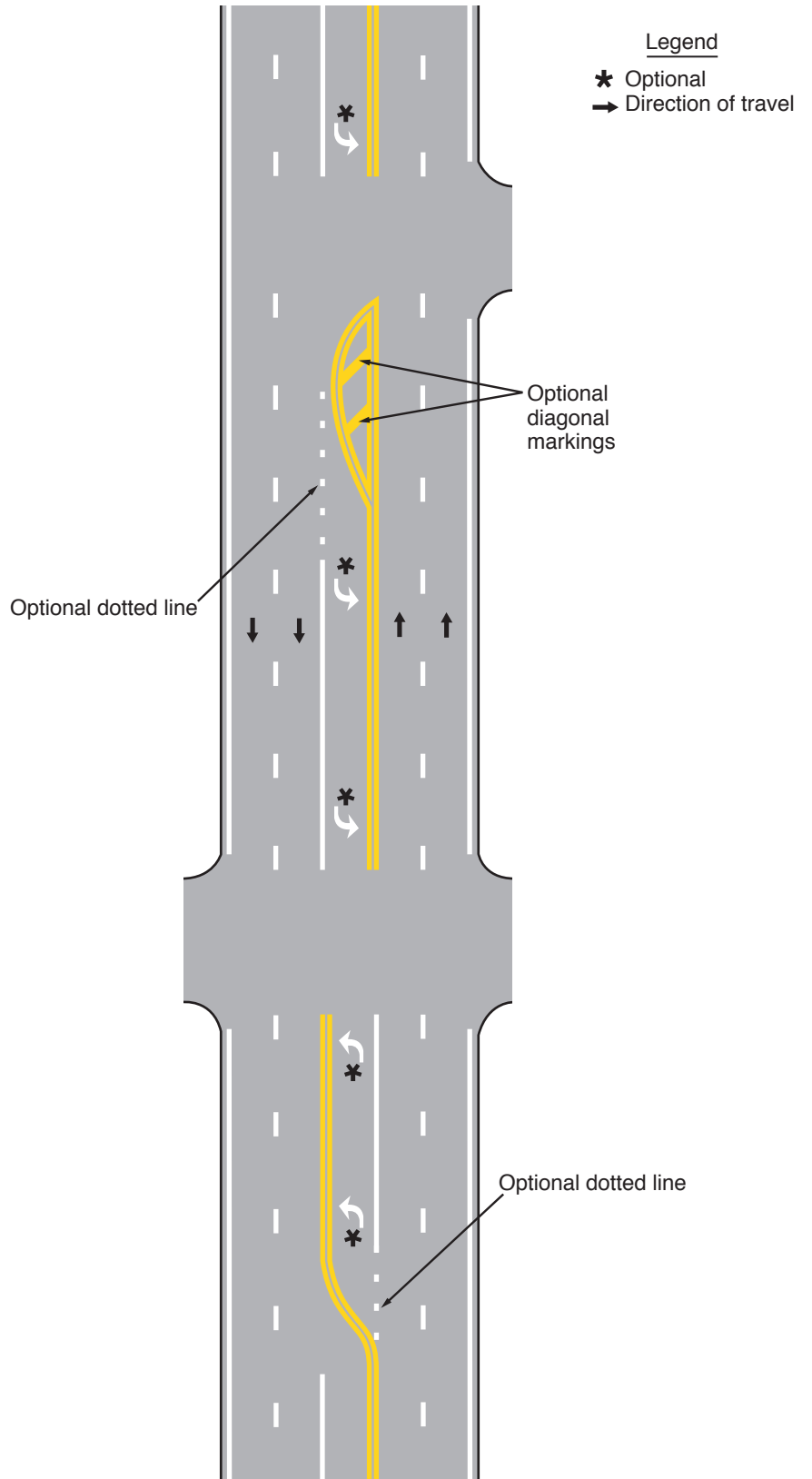
Legend  
→ Direction of travel

**Figure 3B-2. Examples of Four-or-More Lane, Two-Way Marking Applications**

**A - Typical multi-lane, two-way marking**

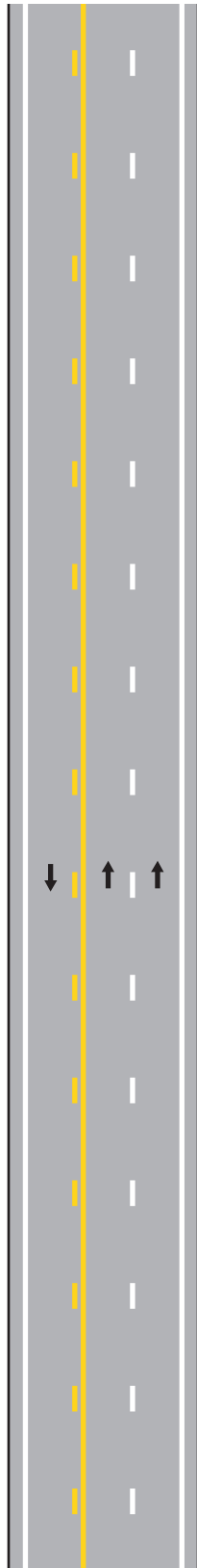


**B - Typical multi-lane, two-way marking with single lane left turn channelization**

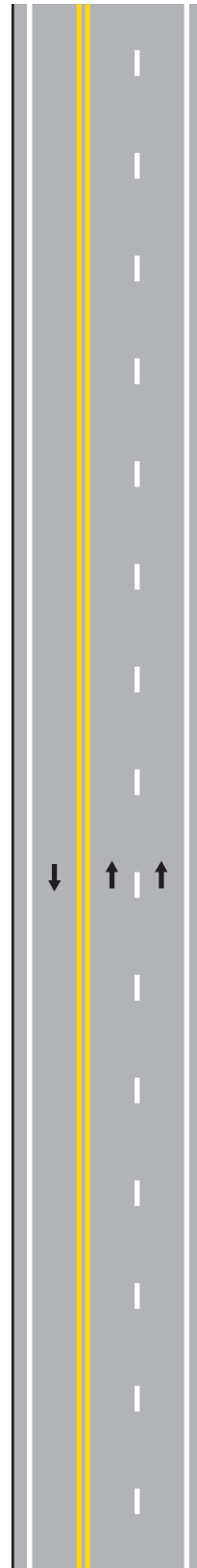


**Figure 3B-3. Examples of Three-Lane, Two-Way Marking Applications**

**A - Typical three-lane, two-way marking with passing permitted in single-lane direction**

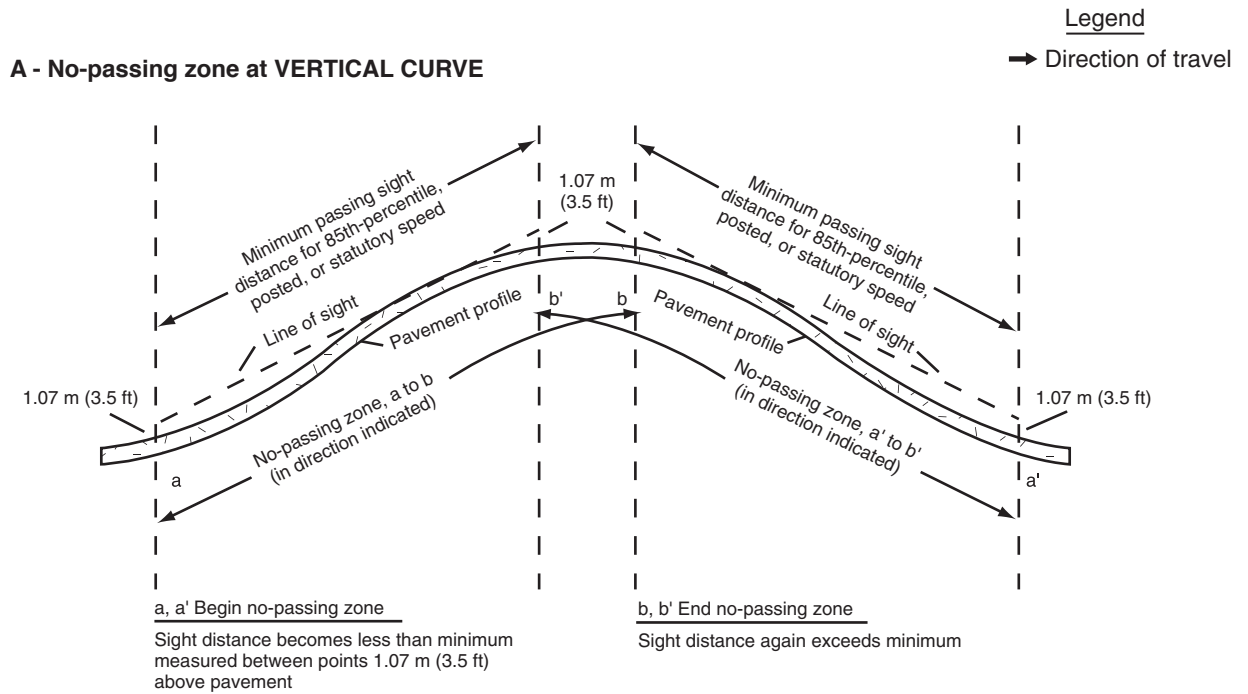


**B - Typical three-lane, two-way marking with passing prohibited in single-lane direction**



Legend  
→ Direction of travel

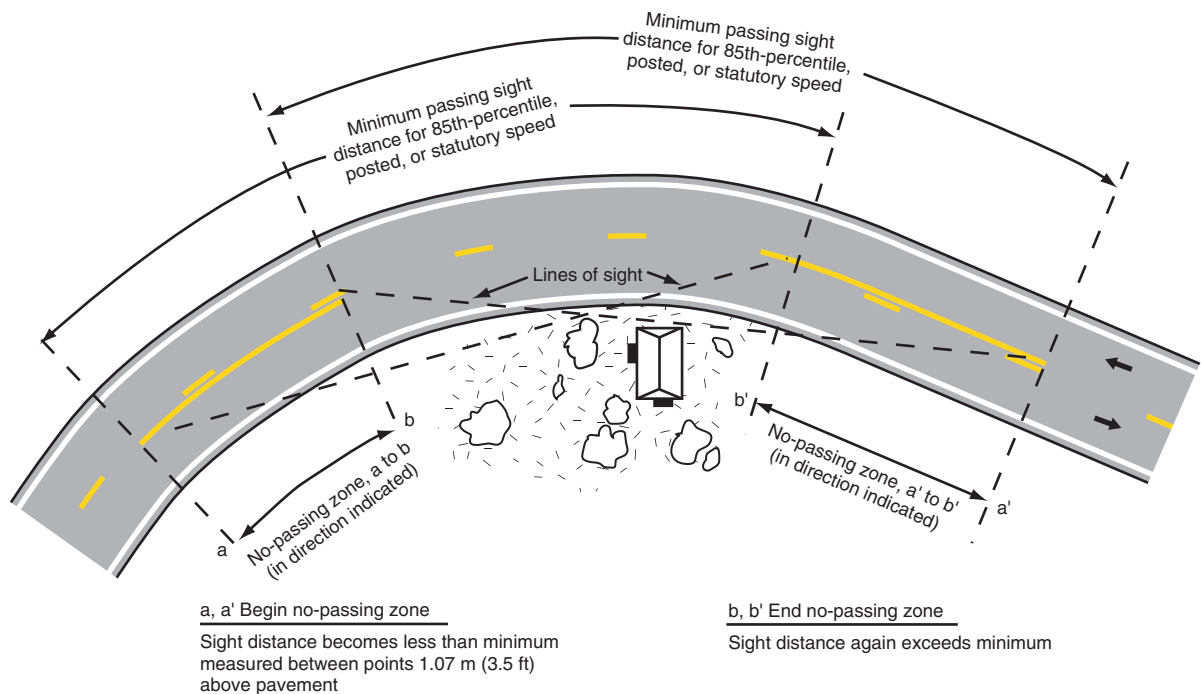
**Figure 3B-4. Method of Locating and Determining the Limits of No-Passing Zones at Curves**



**Profile View**

Note: No-passing zones in opposite directions may or may not overlap, depending on alignment

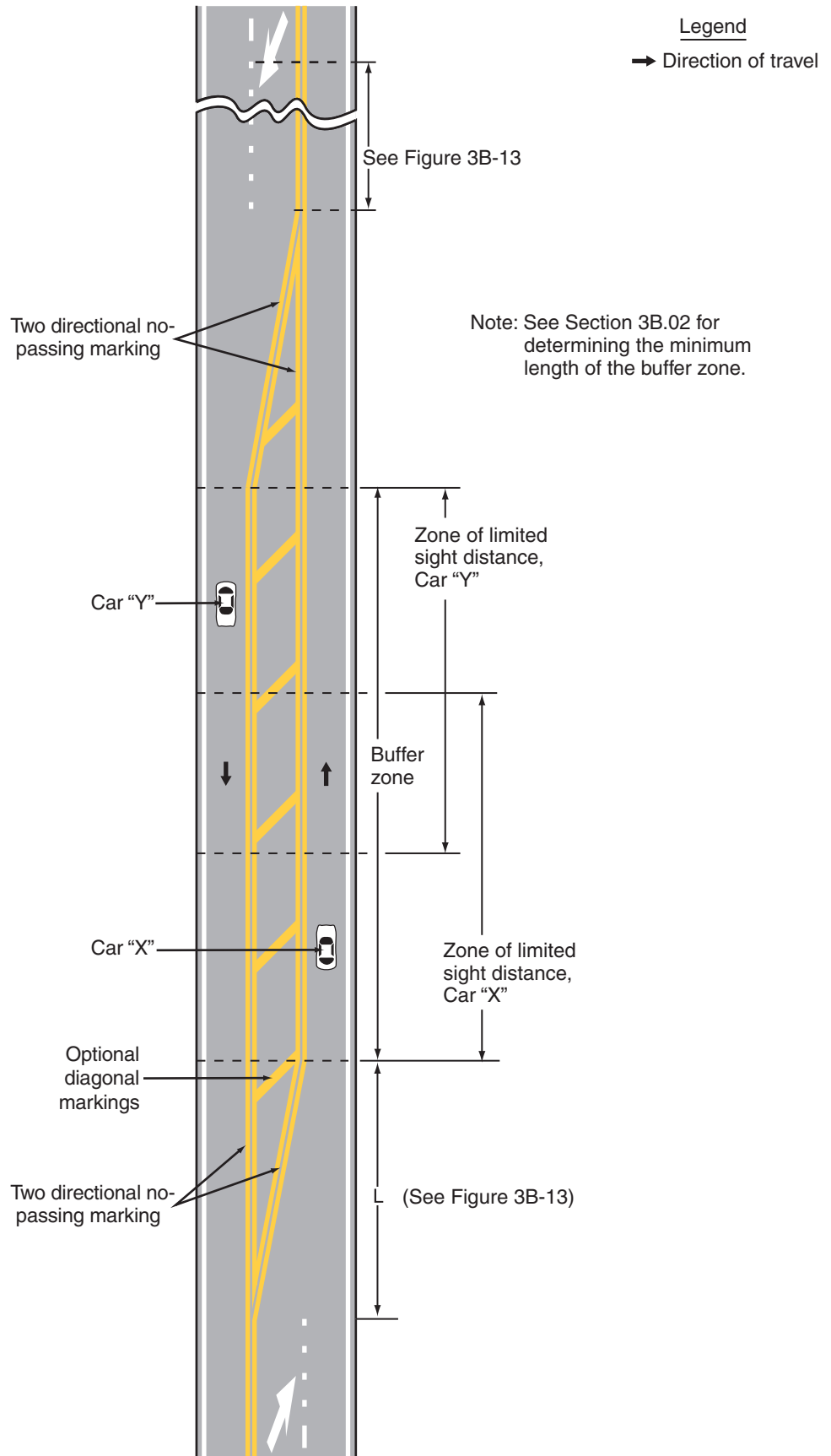
**B - No-passing zone at HORIZONTAL CURVE**



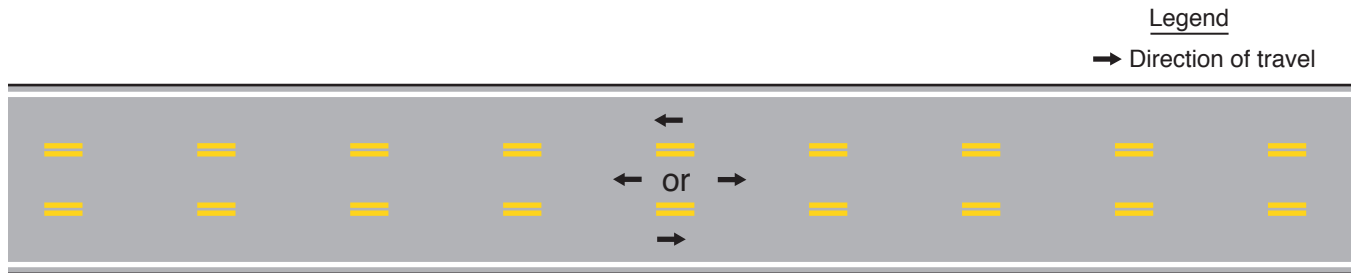
**Plan View**

Note: No-passing zones in opposite directions may or may not overlap, depending on alignment

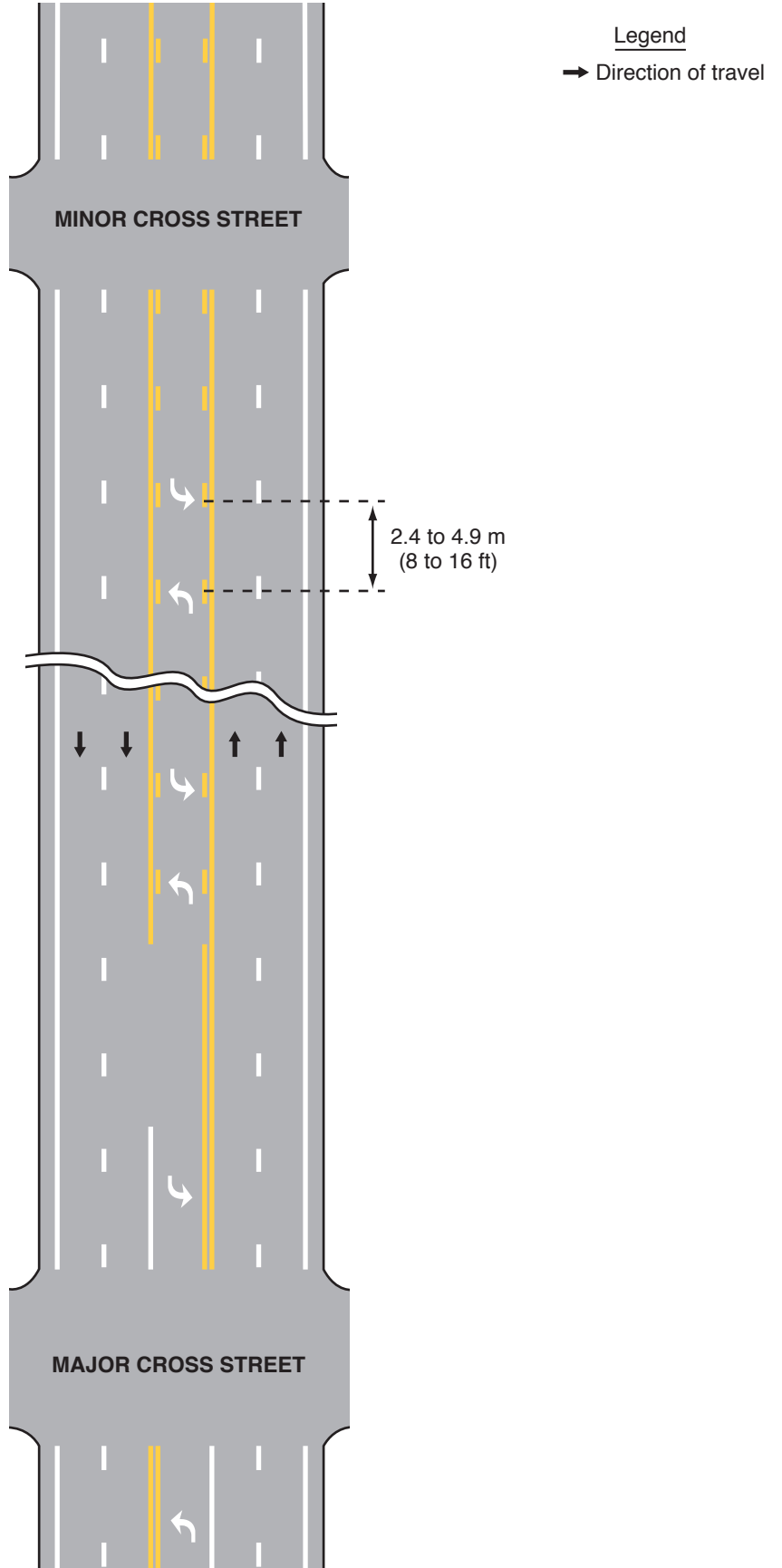
**Figure 3B-5. Example of Application of Three-Lane, Two-Way Marking for Changing Direction of the Center Lane**



**Figure 3B-6. Example of Reversible Lane Marking Application**

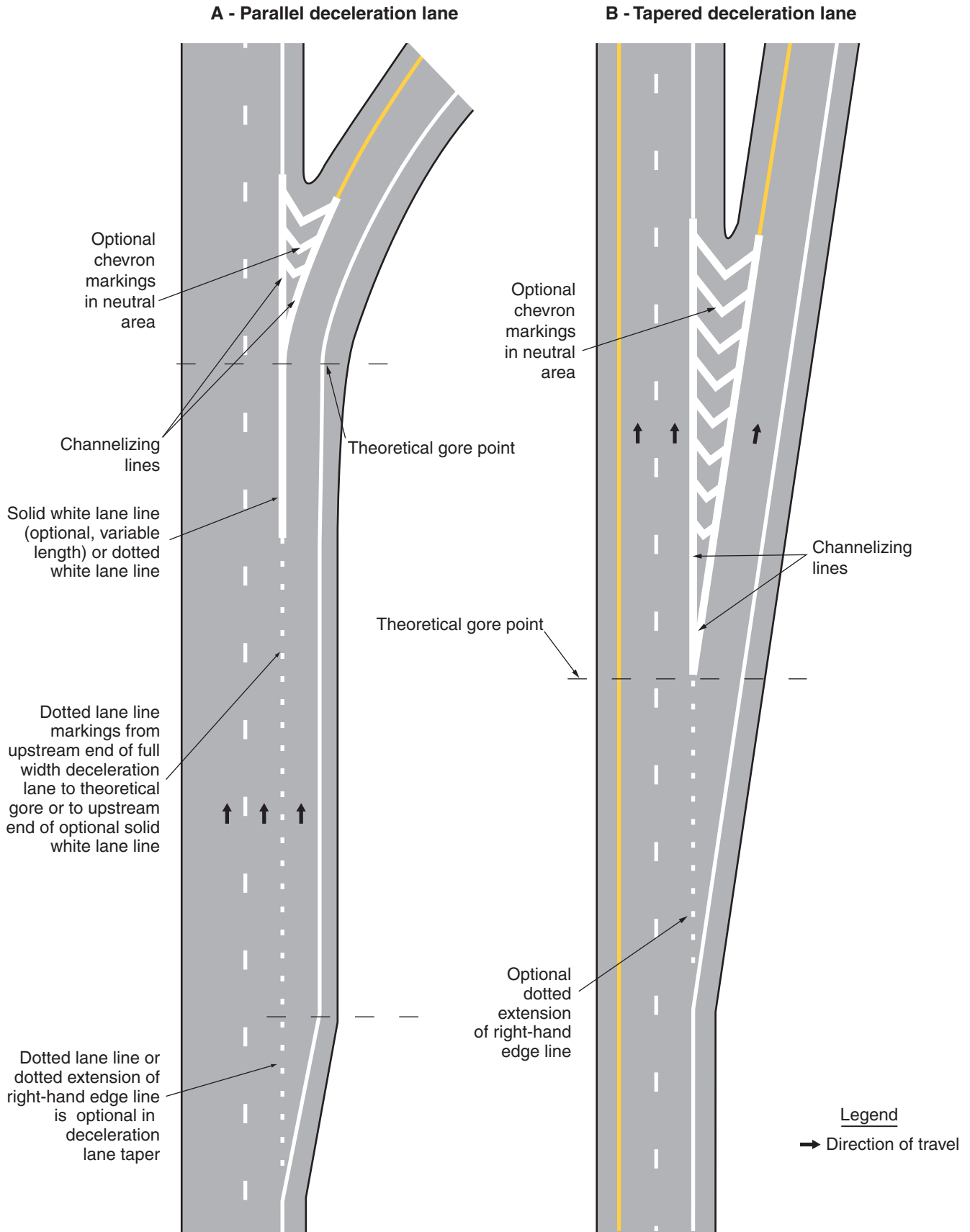


**Figure 3B-7. Example of Two-Way Left-Turn Lane Marking Applications**



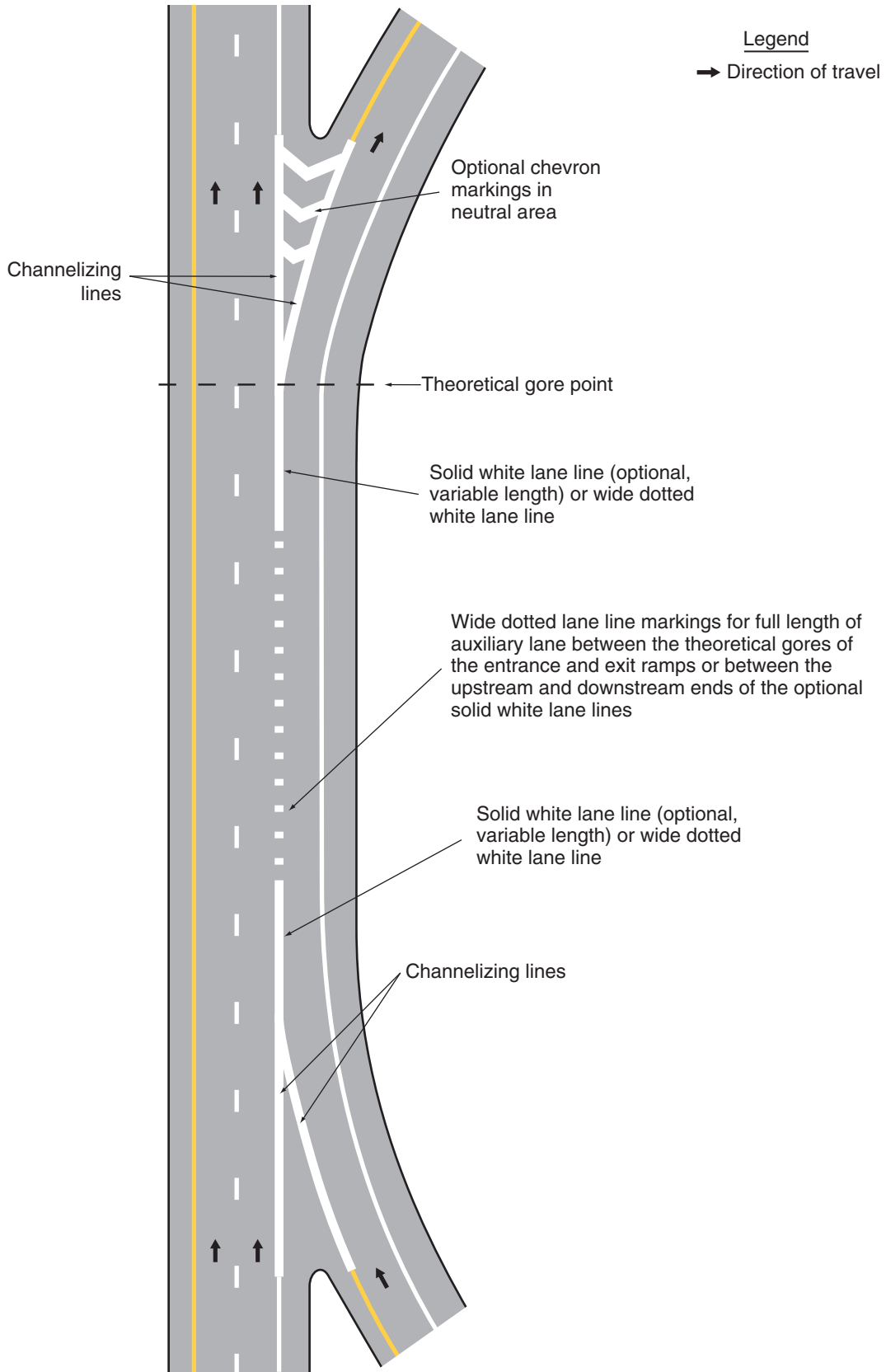


**Figure 3B-8. Examples of Dotted Line and Channelizing Line Applications for Exit Ramp Markings (Sheet 1 of 2)**

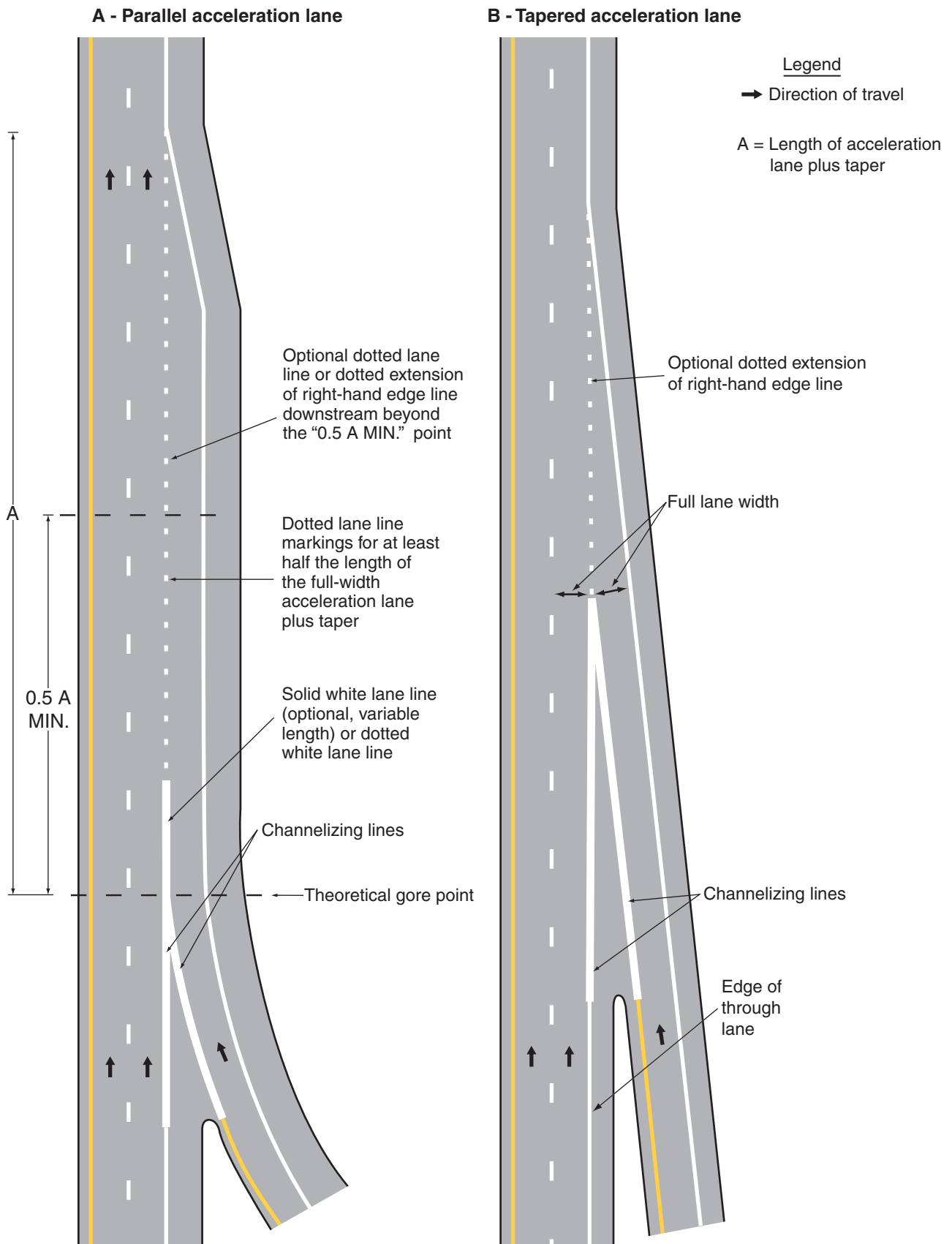


**Figure 3B-8. Examples of Dotted Line and Channelizing Line Applications for Exit Ramp Markings (Sheet 2 of 2)**

**C - Auxiliary lane, such as at cloverleaf interchange**

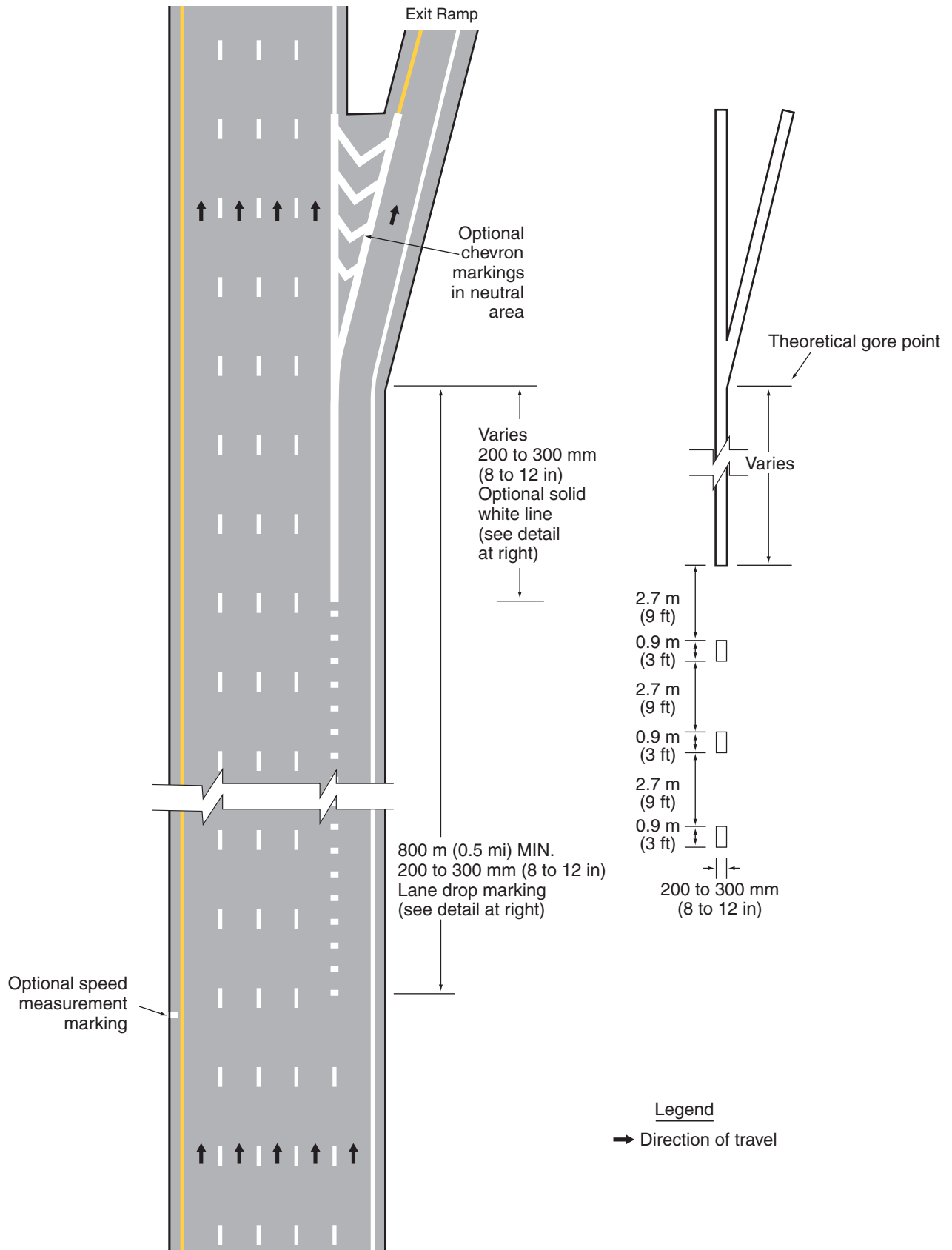


**Figure 3B-9. Examples of Dotted Line and Channelizing Line Applications for Entrance Ramp Markings**



**Figure 3B-10. Examples of Applications of Lane Drop Markings (Sheet 1 of 4)**

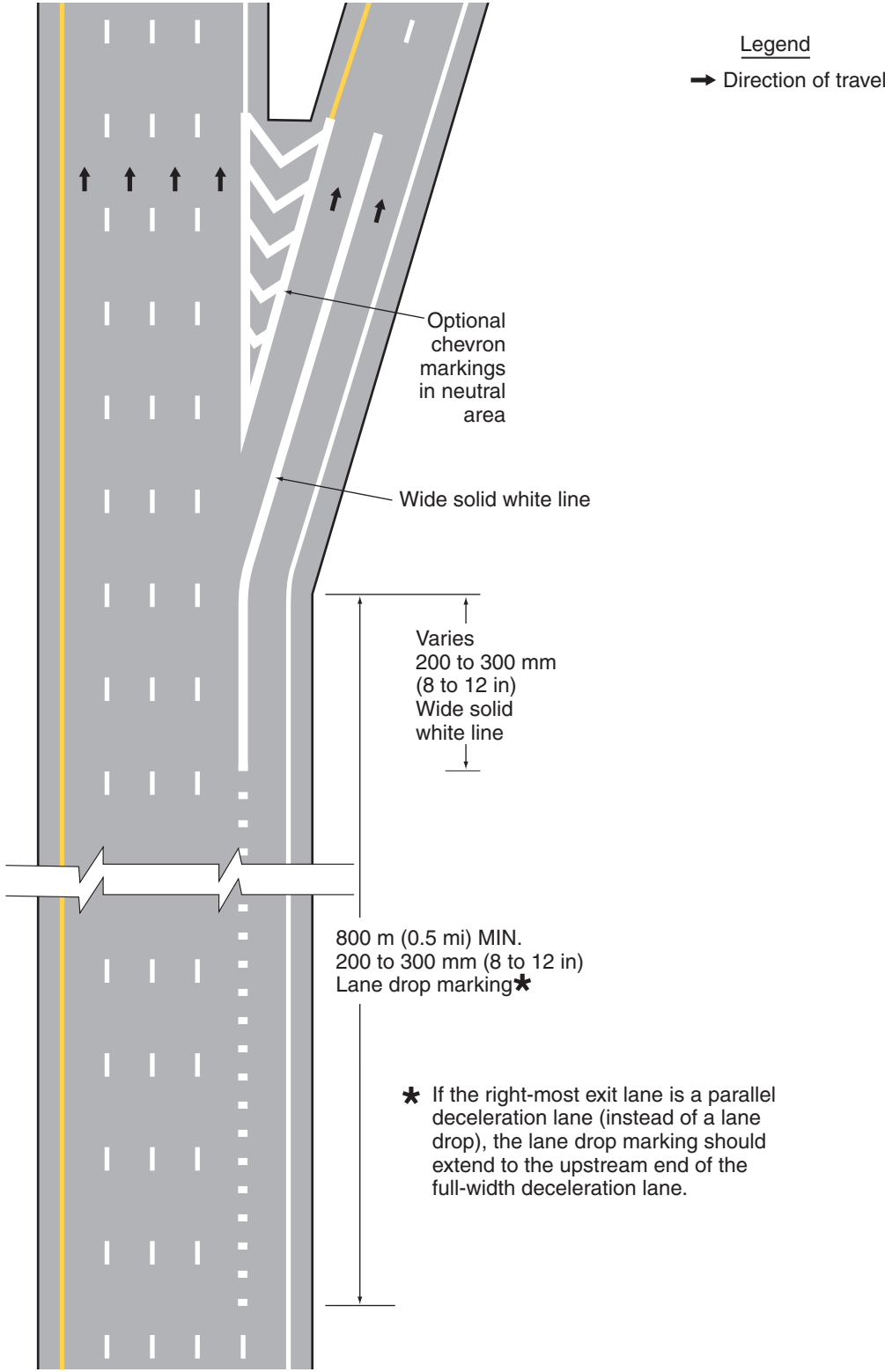
**A – Lane drop at a single lane exit ramp**



**Figure 3B-10. Examples of Applications of Lane Drop Markings**

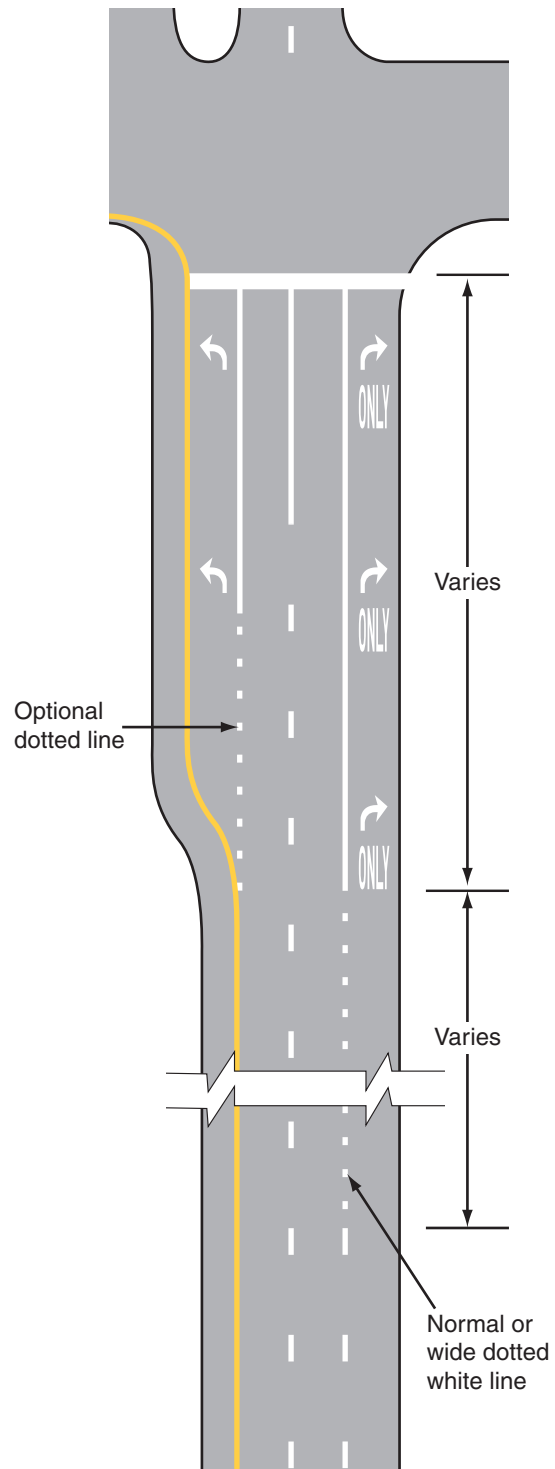
(Sheet 2 of 4)

**B – Lane drop at a multi-lane exit ramp having an optional exit lane that also carries the through route**



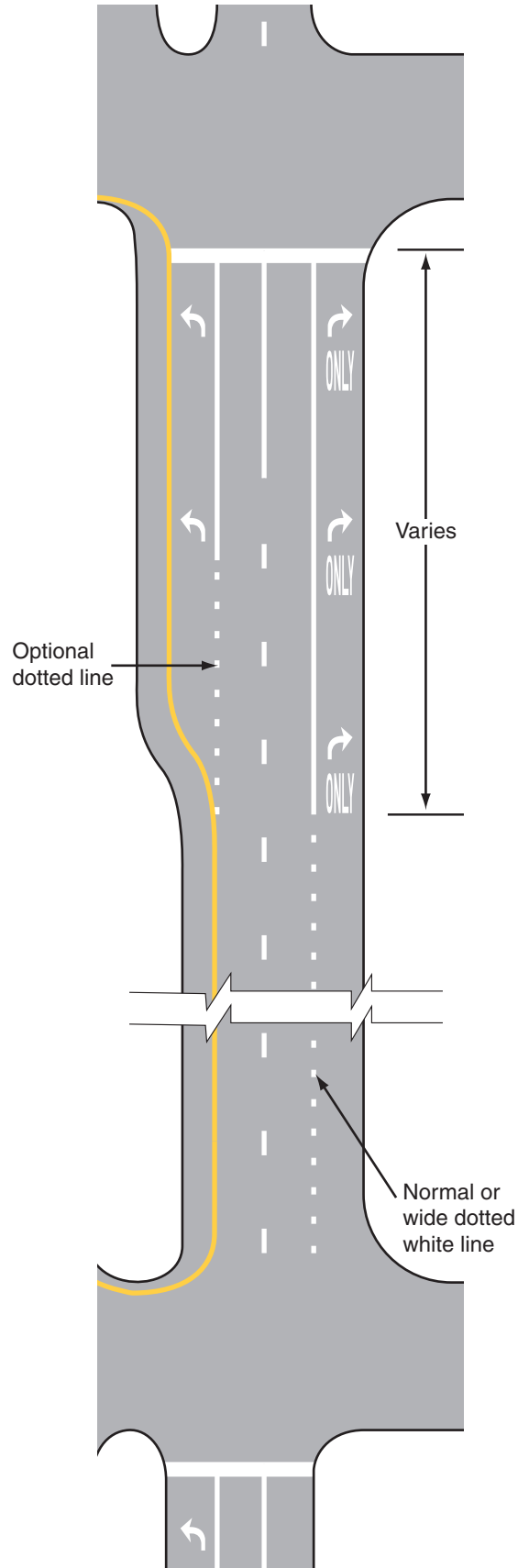
**Figure 3B-10. Examples of Applications of Lane Drop Markings**  
(Sheet 3 of 4)

**C – Lane Drop at a Signalized intersection**

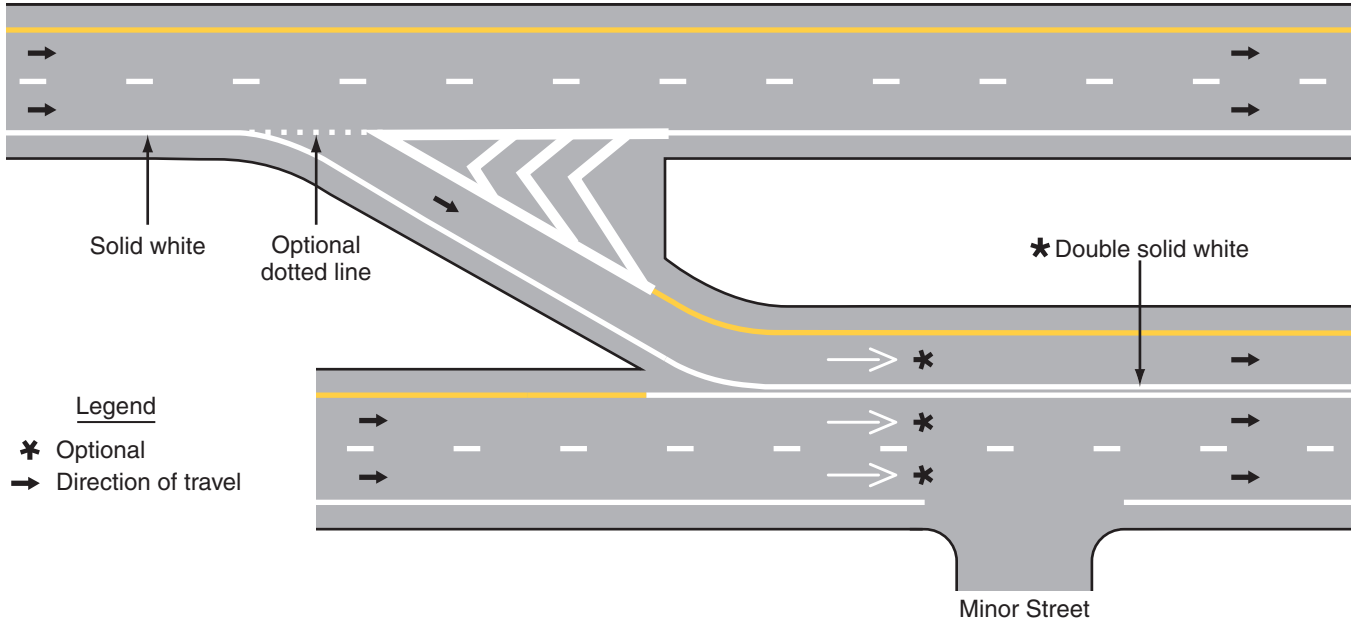


**Figure 3B-10. Examples of Applications of Lane Drop Markings**  
(Sheet 4 of 4)

**D – Auxiliary lane between intersections**



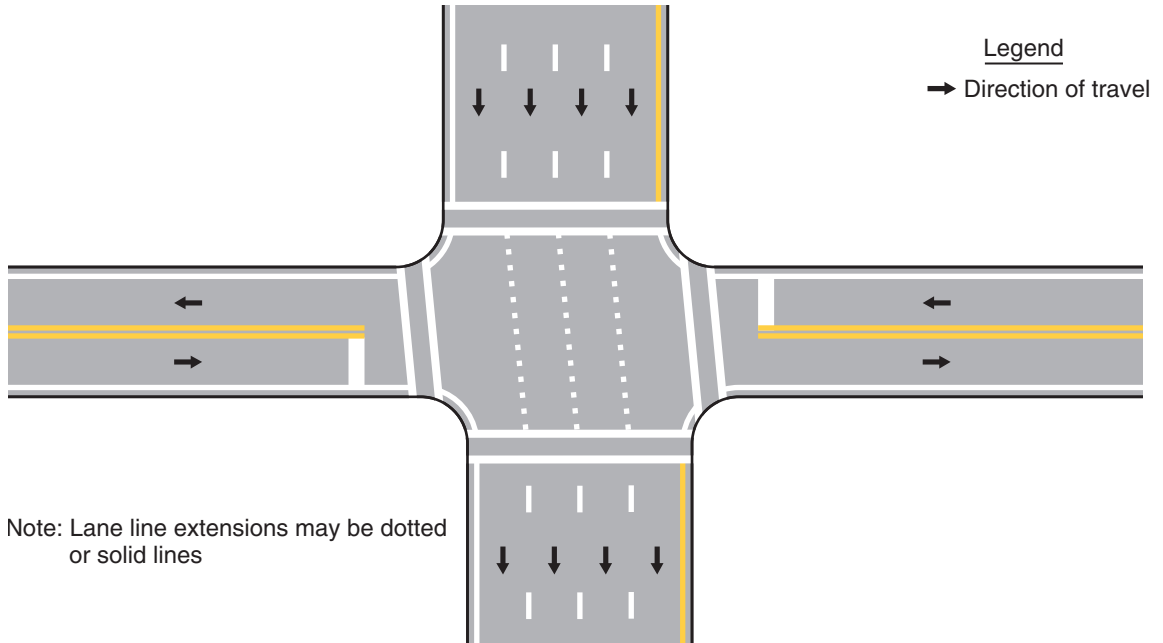
**Figure 3B-11. Example of Double White Solid Lines Used to Prohibit Lane Changing**



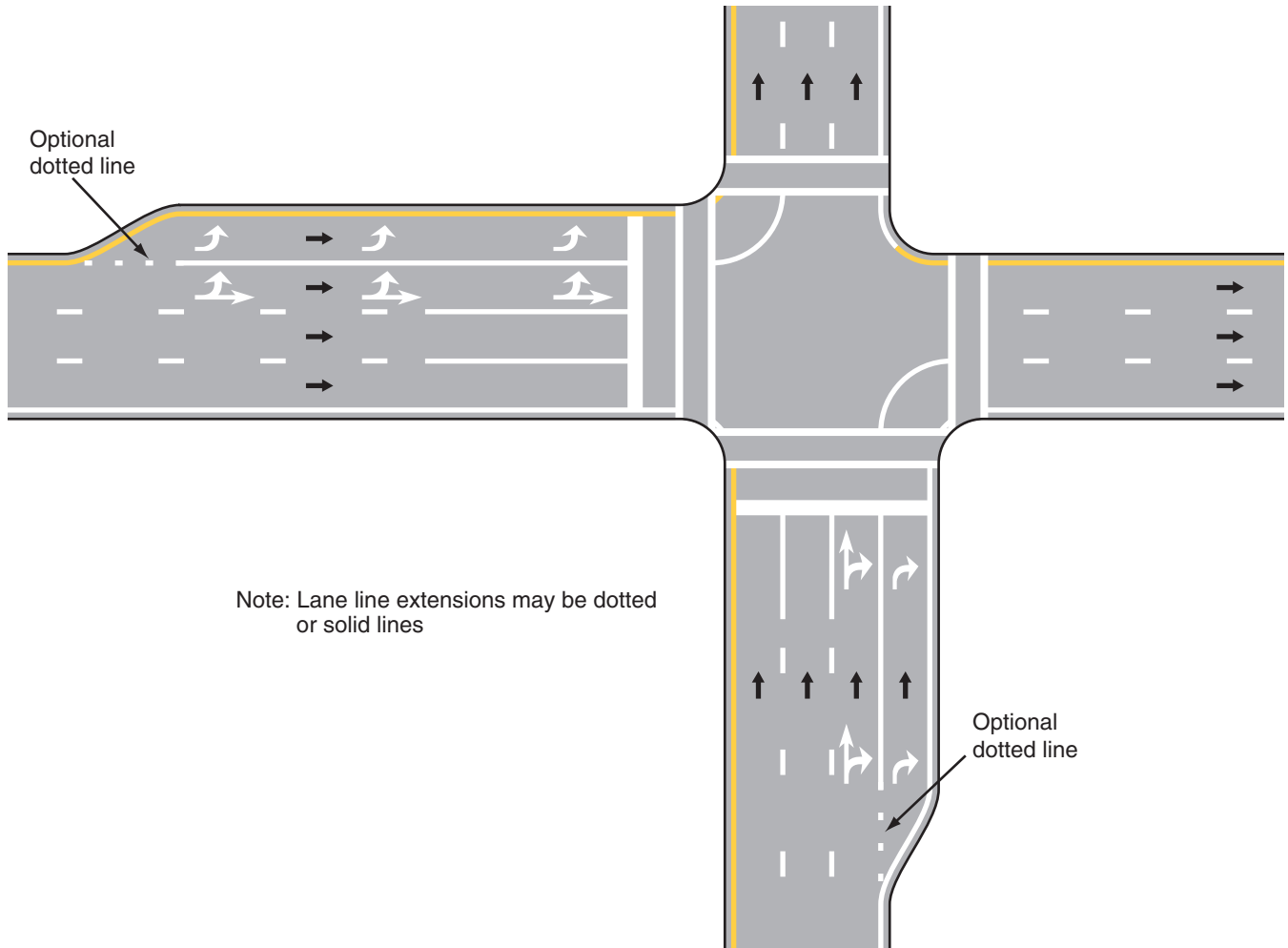


**Figure 3B-12. Examples of Line Extensions through Intersections (Sheet 1 of 2)**

**A - Typical pavement markings with offset lane lines continued through the intersection and optional crosswalk lines and stop lines**

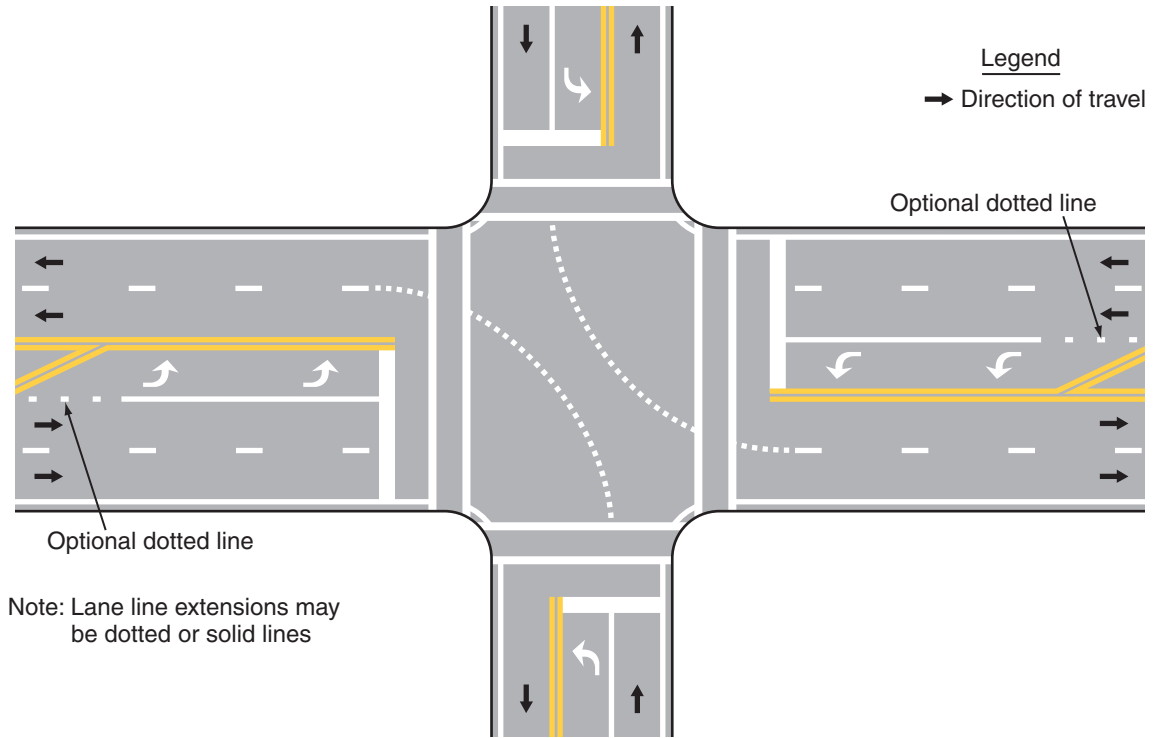


**B - Typical pavement markings with double-turn lanes, lane-use turn arrows, and optional crosswalk lines, stop lines, and line extensions into intersection for double turns**

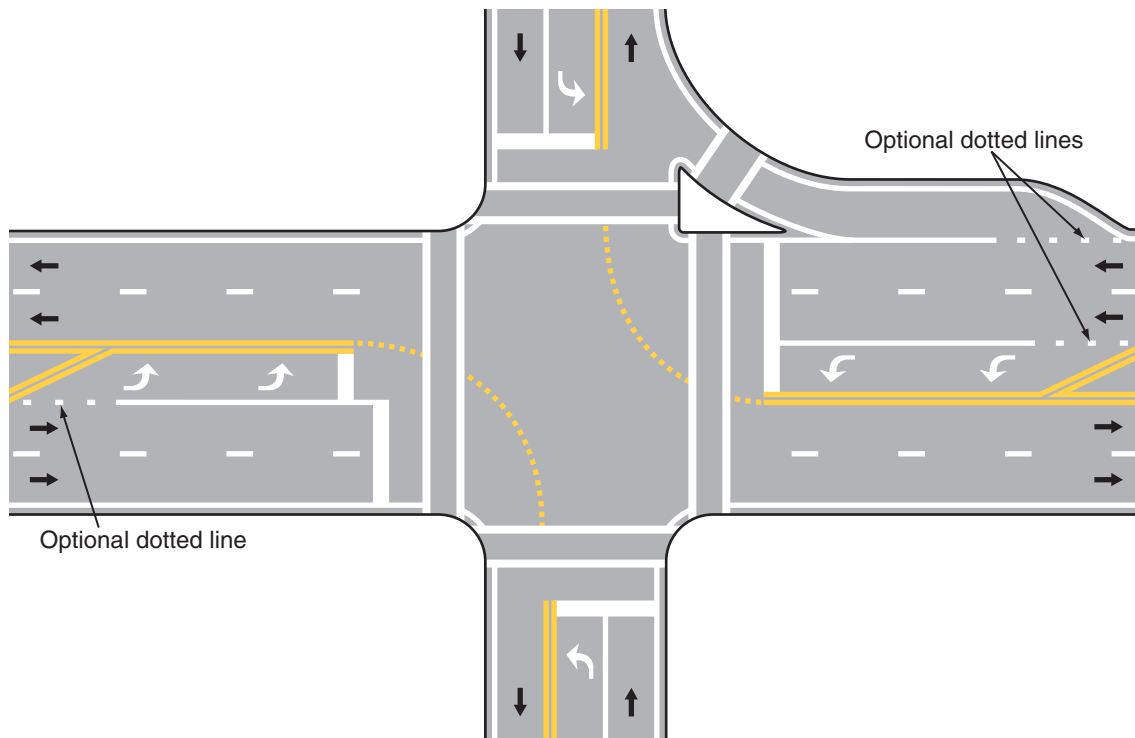


**Figure 3B-12. Examples of Line Extensions through Intersections (Sheet 2 of 2)**

**C - Typical dotted line markings to extend longitudinal lane line markings**

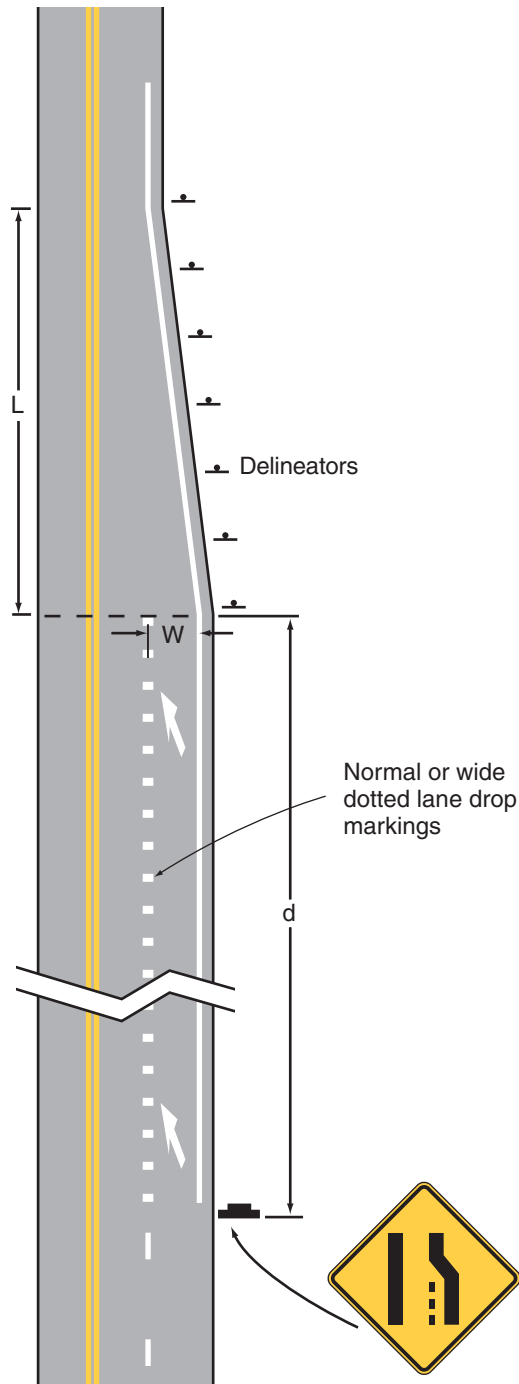


**D - Typical dotted line markings to extend longitudinal center line markings**

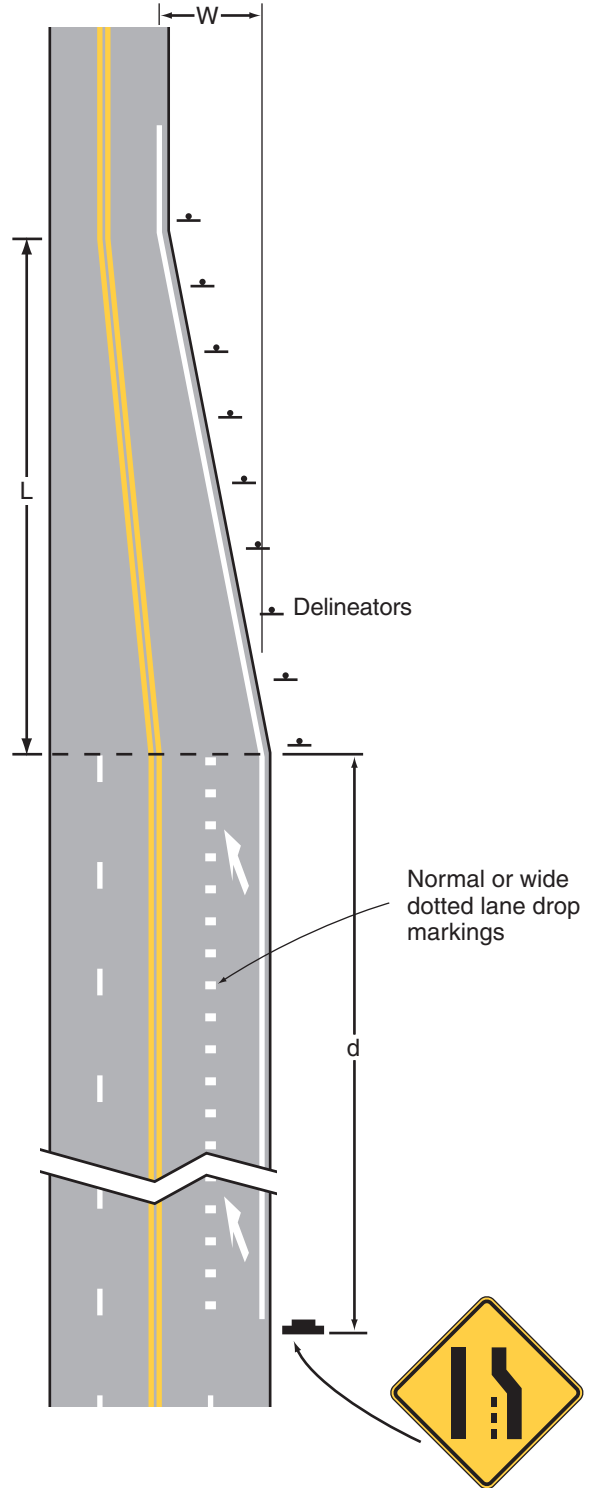


**Figure 3B-13. Examples of Applications of Lane-Reduction Transition Markings**

**A – Lane reduction**



**B – Lane reduction with lateral shift to the left**



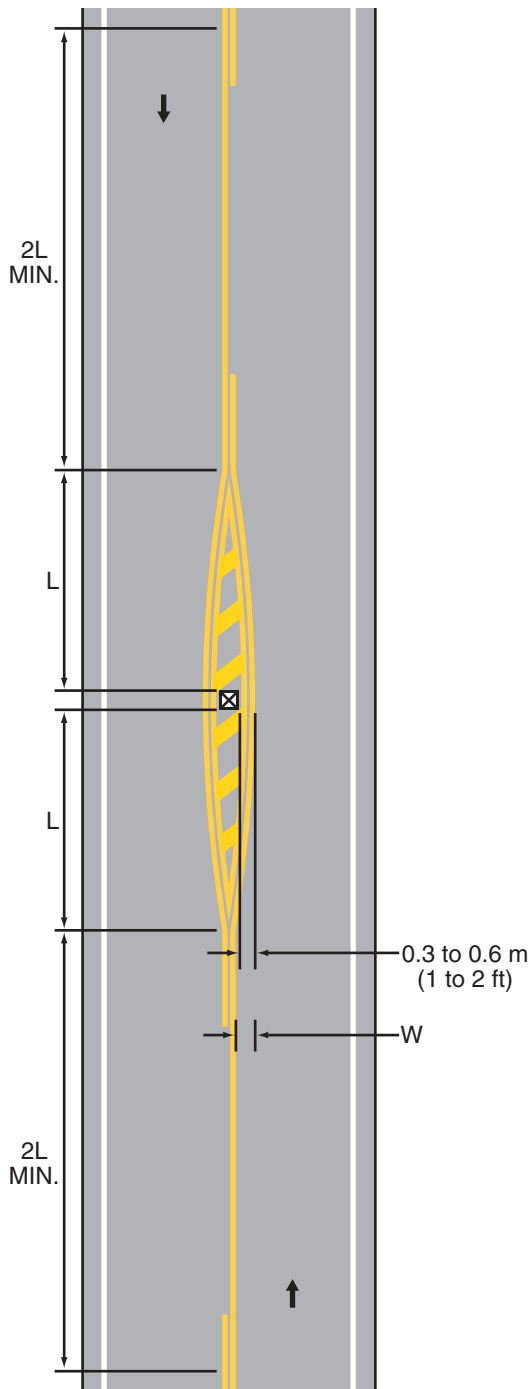
$L$  = Length in meters (feet)  
 $S$  = Posted, 85th-percentile, or statutory speed in km/h (mph)  
 $W$  = Offset in meters (feet)  
 $d$  = Advance warning distance (see Section 2C.05)  
 See Section 3D.04 for delineator spacing

For speeds 70 km/h (45 mph) or more:  
 $L = 0.62 WS$  ( $L=WS$ )

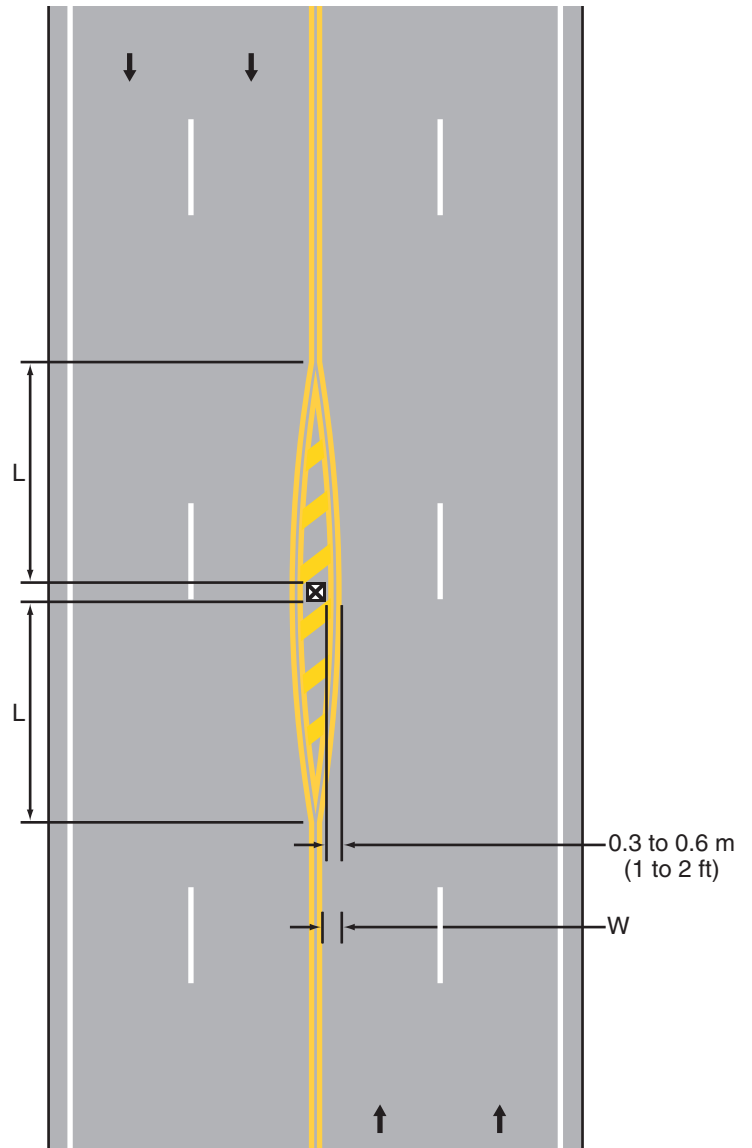
For speeds less than 70 km/h (45 mph):  
 $L = \frac{WS^2}{155}$  ( $L = \frac{WS^2}{60}$ )

**Figure 3B-14. Examples of Applications of Markings for Obstructions in the Roadway**  
(Sheet 1 of 2)

**A - Center of two-lane road**



**B - Center of four-lane road**



For speeds 70 km/h (45 mph) or more  $L=0.62 WS$  ( $L=WS$ )  
 For speeds less than 70 km/h (45 mph)  $L = WS^2/155$  ( $L=WS^2/60$ )  
 $S$  = Posted, 85th-percentile, or statutory speed in km/h (mph)  
 $W$  = Offset distance in meters (ft)

Minimum length of :  $L = 30$  m (100 ft) in urban areas  
 $L = 60$  m (200 ft) in rural areas

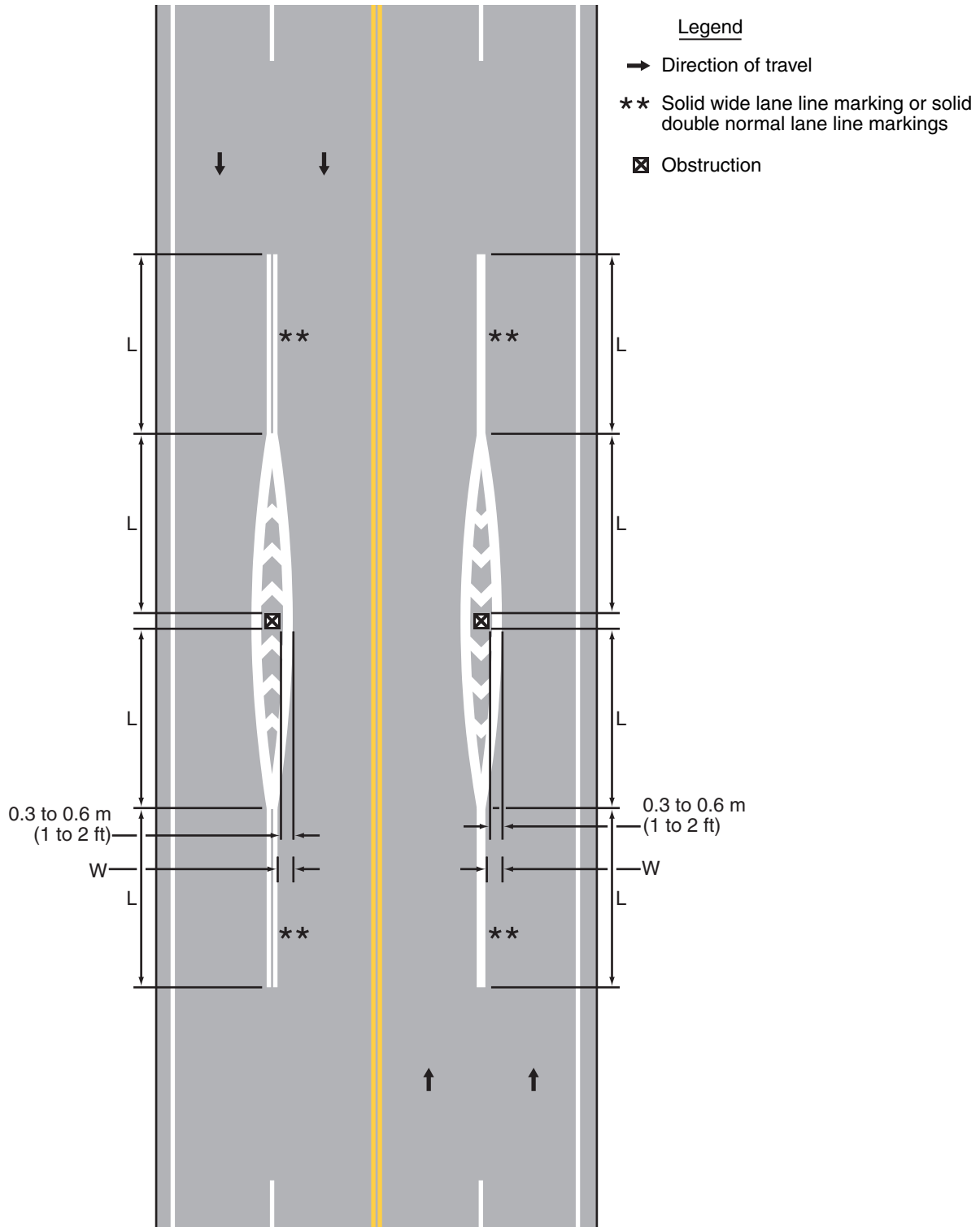
Length "L" should be extended as required by sight distance conditions

**Legend**

- ➔ Direction of travel
- ⊠ Obstruction

**Figure 3B-14. Examples of Applications of Markings for Obstructions in the Roadway**  
(Sheet 2 of 2)

**C - Traffic passing both sides of obstruction**

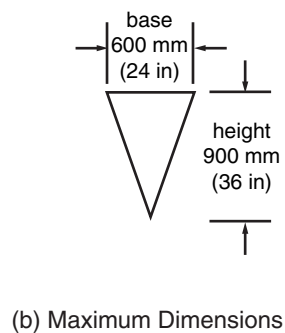
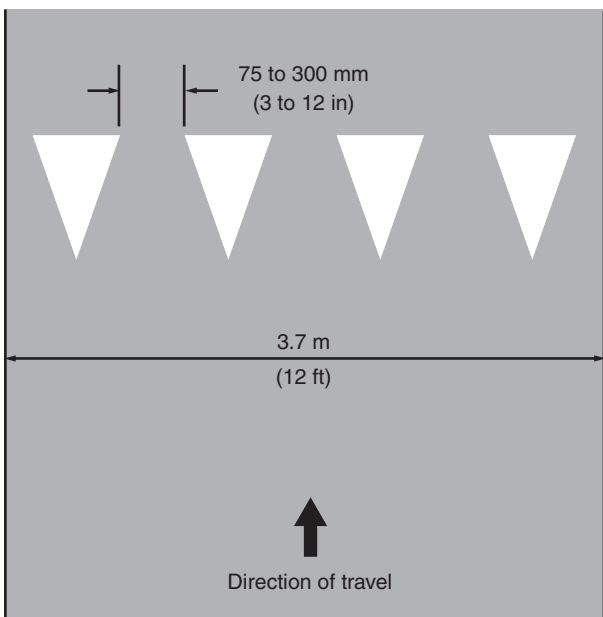
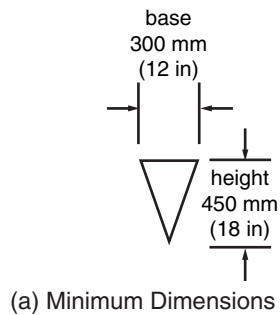
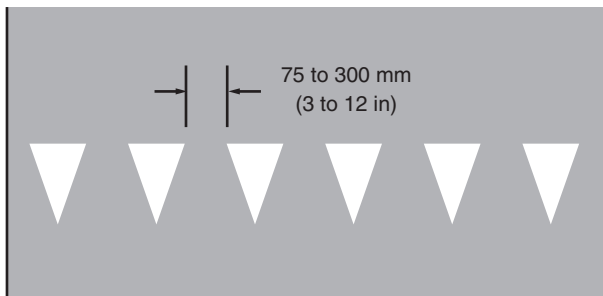


For speeds 70 km/h (45 mph) or more  $L=0.62 WS$  ( $L=WS$ )  
 For speeds less than 70 km/h (45 mph)  $L = WS^2/155$  ( $L=WS^2/60$ )  
 S = Posted, 85th-percentile, or statutory speed in km/h (mph)  
 W = Offset distance in meters (ft)

Minimum length of :  $L = 30$  m (100 ft) in urban areas  
 $L = 60$  m (200 ft) in rural areas

Length "L" should be extended as required by sight distance conditions

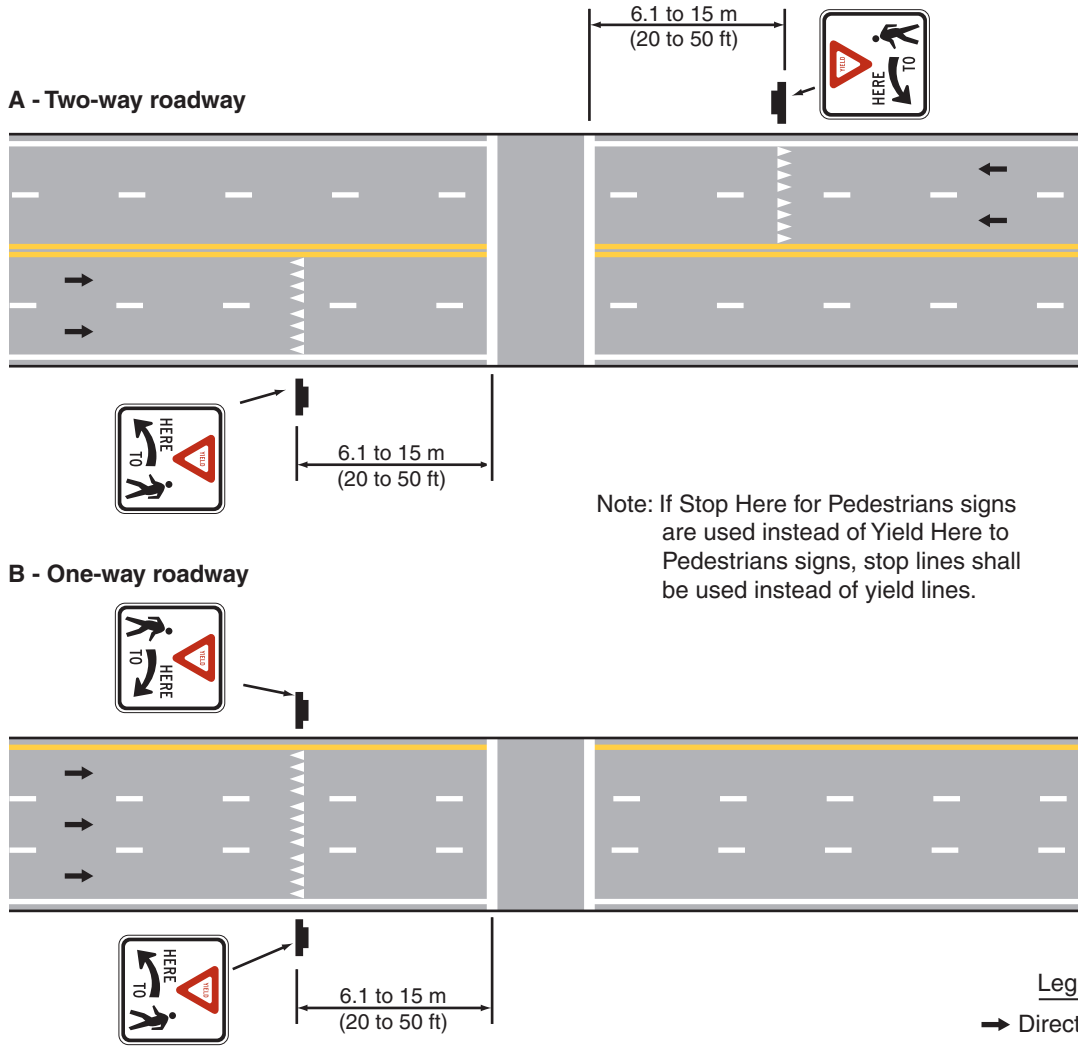
**Figure 3B-15. Recommended Yield Line Layouts**



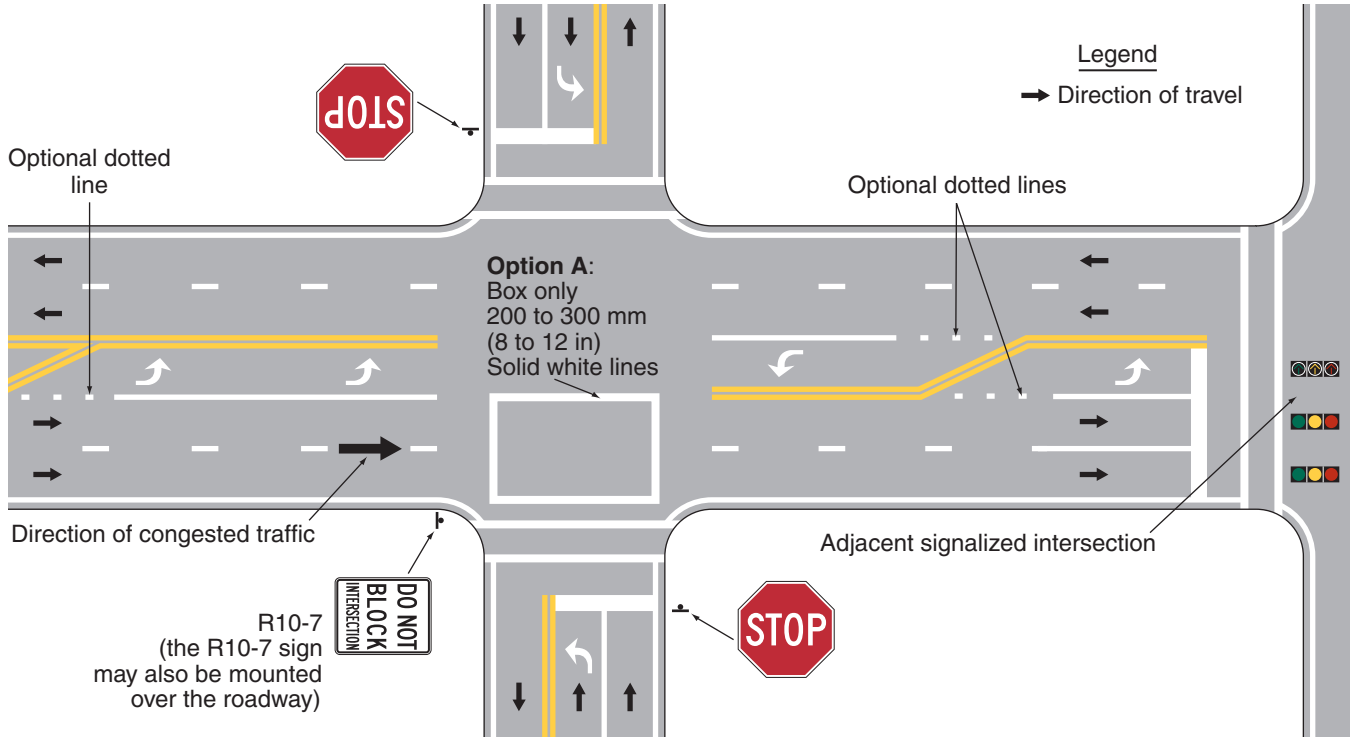
Notes:  
Triangle height is equal to  
1.5 times the base dimension.

Yield lines may be smaller than  
suggested when installed on much  
narrower, slow-speed facilities such  
as shared-use paths.

**Figure 3B-16. Examples of Yield Lines at Unsignalized Midblock Crosswalks**



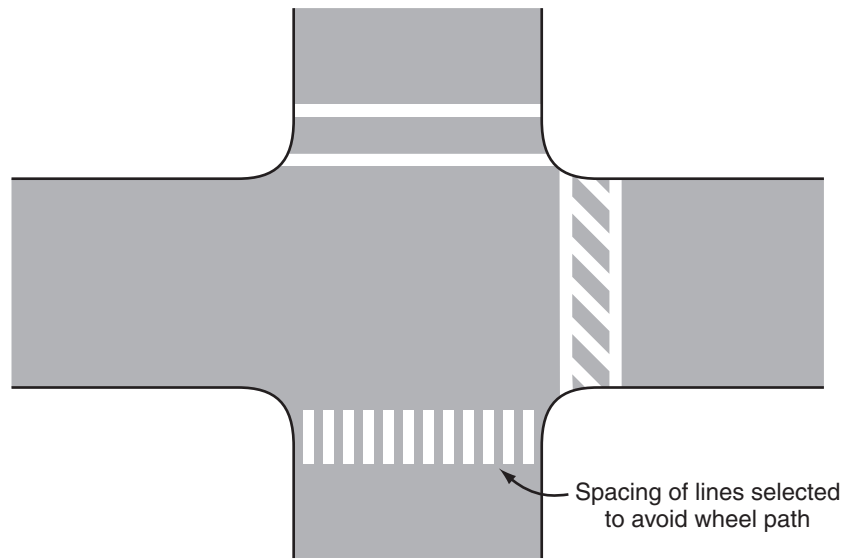
**Figure 3B-17. Do Not Block Intersection Markings**



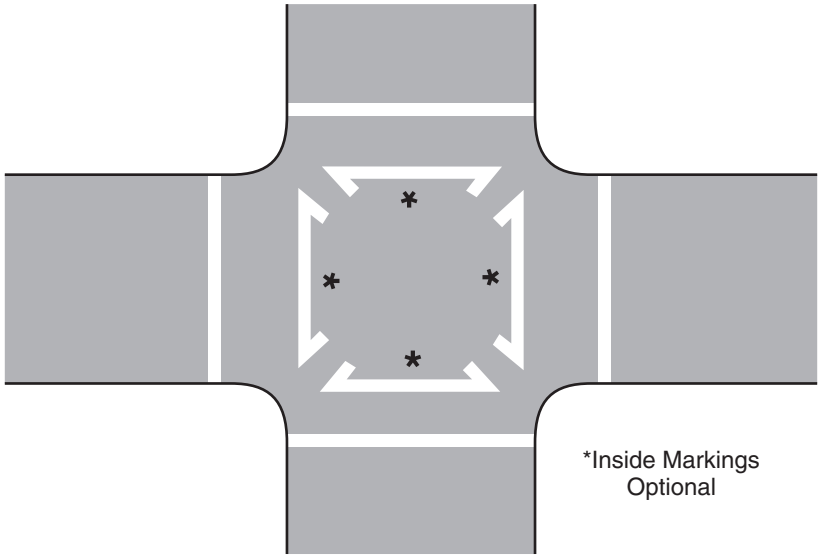
Note: Align the edges of the box to define the specific area that is not to be blocked. The box does not have to be rectangular in shape.



**Figure 3B-18. Examples of Crosswalk Markings**

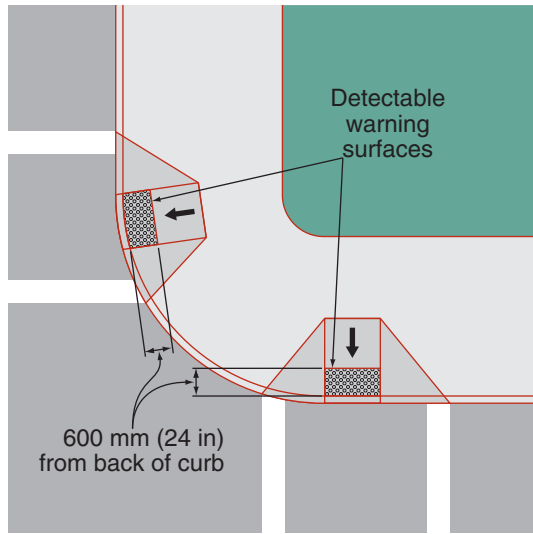


**Figure 3B-19. Example of Crosswalk Markings for Exclusive Pedestrian Phase That Permits Diagonal Crossing**

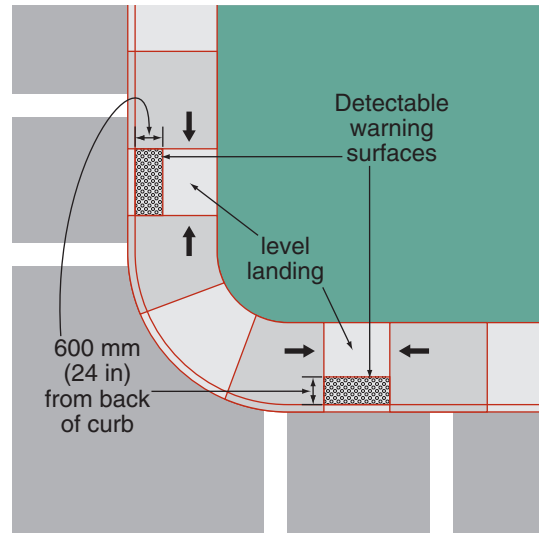


**Figure 3B-20. Examples of Detectable Warning Installations at Curb Ramps**

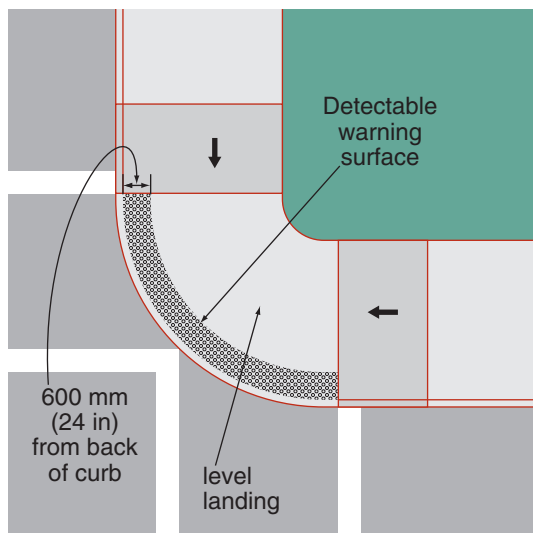
**A - Perpendicular Ramps**



**B - Parallel Ramps**

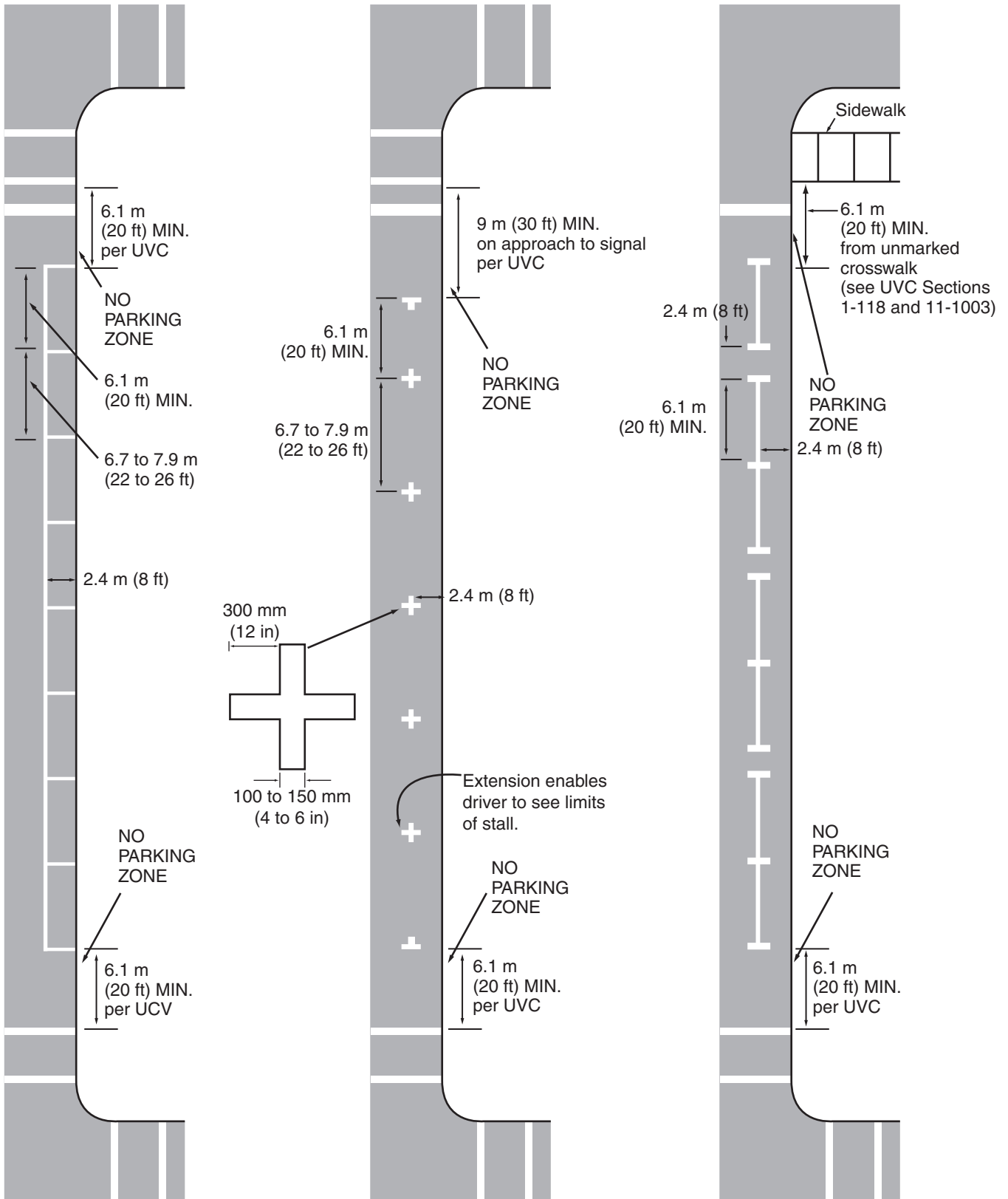


**C - Blended Corner**



Legend  
 → Downward slope

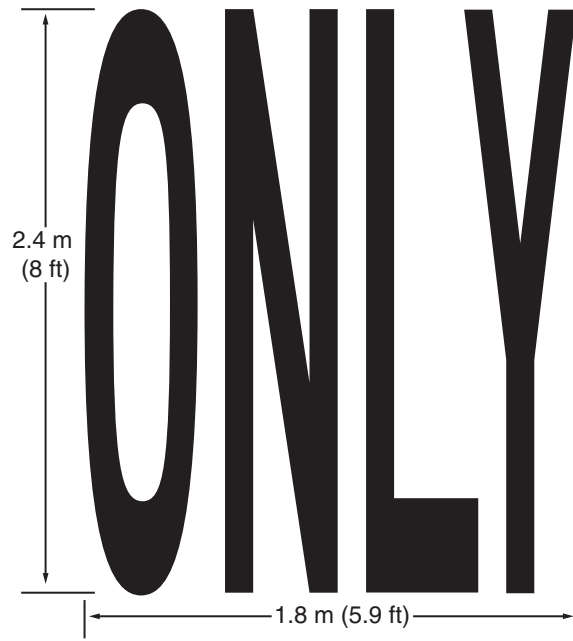
**Figure 3B-21. Examples of Parking Space Markings**



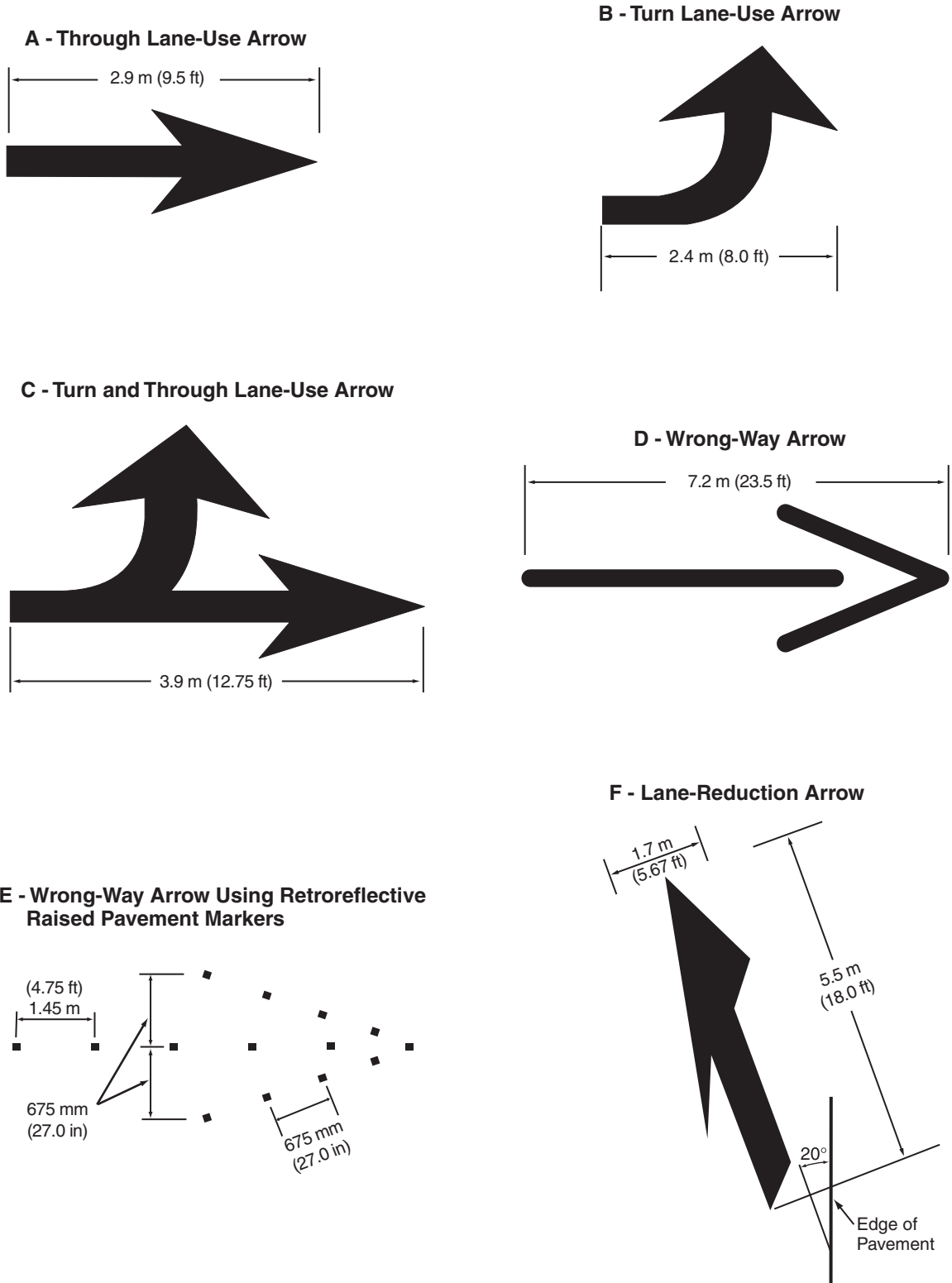
**Figure 3B-22. International Symbol of Accessibility Parking Space Marking with Blue Background and White Border Options**



**Figure 3B-23. Example of Elongated Letters for Word Pavement Markings**



**Figure 3B-24. Examples of Standard Arrows for Pavement Markings**



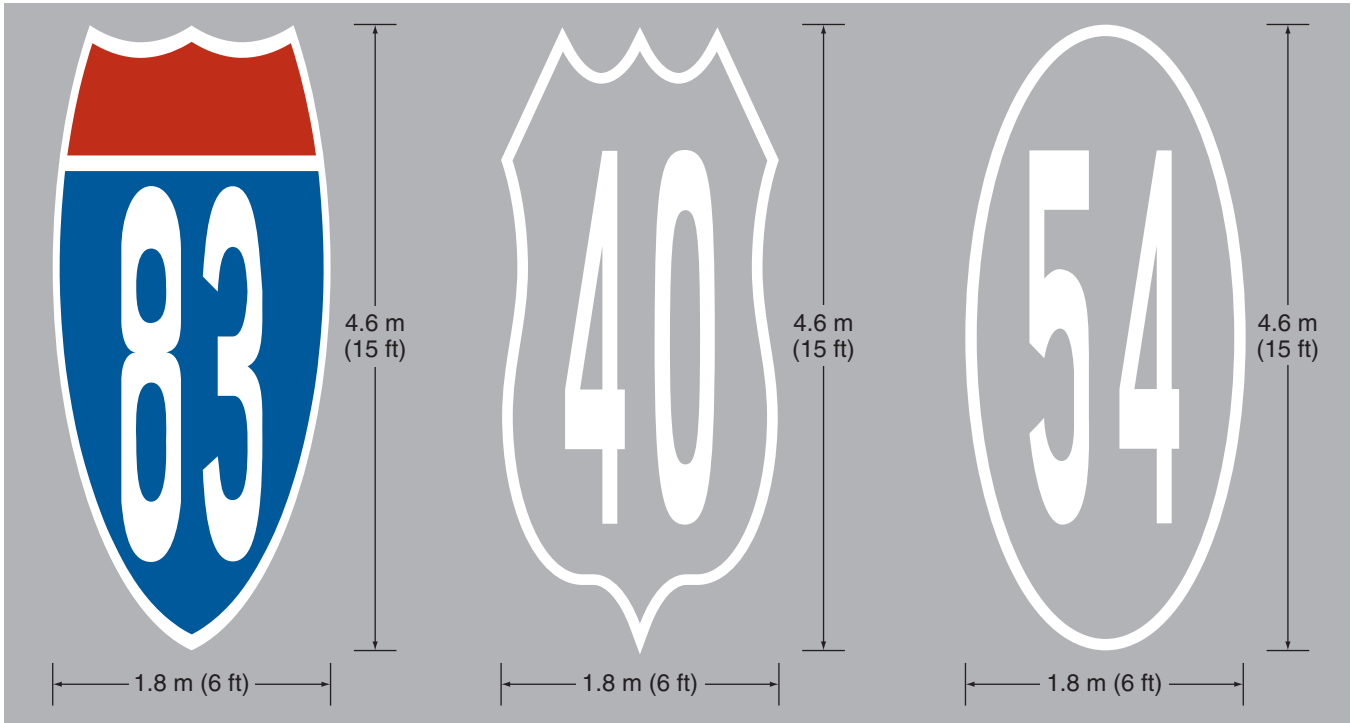
Typical sizes for normal installation; sizes may be reduced approximately one-third for low-speed urban conditions; larger sizes may be needed for freeways, above average speeds, and other critical locations. A narrow elongated arrow design is optional. For proper proportion, see the Pavement Markings chapter of the "Standard Highway Signs" book (see Section 1A.11).

**Figure 3B-25. Examples of Elongated Route Shields for Pavement Markings**

**A - Interstate Shield**

**B - U.S. Route Shield**

**C - State Route Shield**

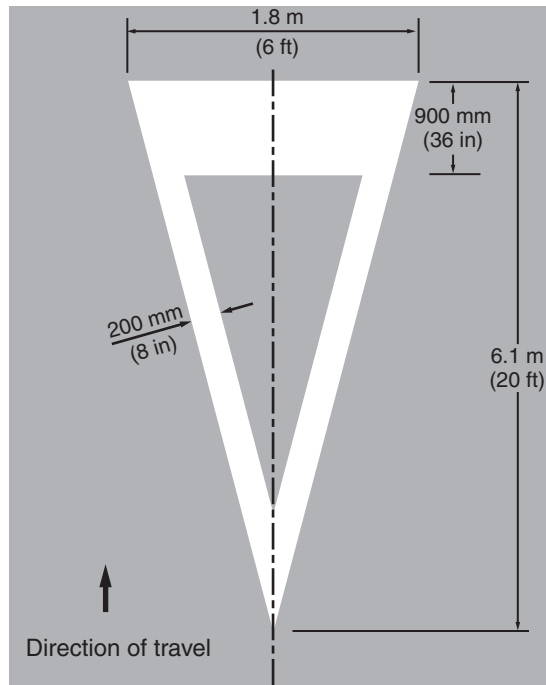


Note: See Chapter 10 of the Standard Highway Signs and Markings book for other sizes and details.

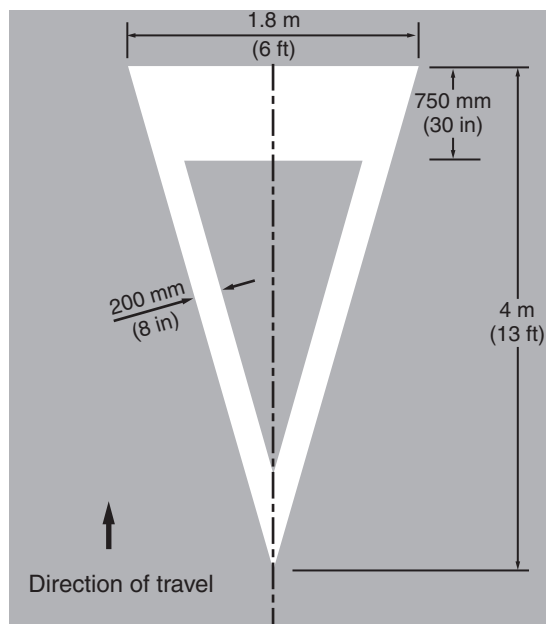


**Figure 3B-26. Yield Ahead Triangle Symbols**

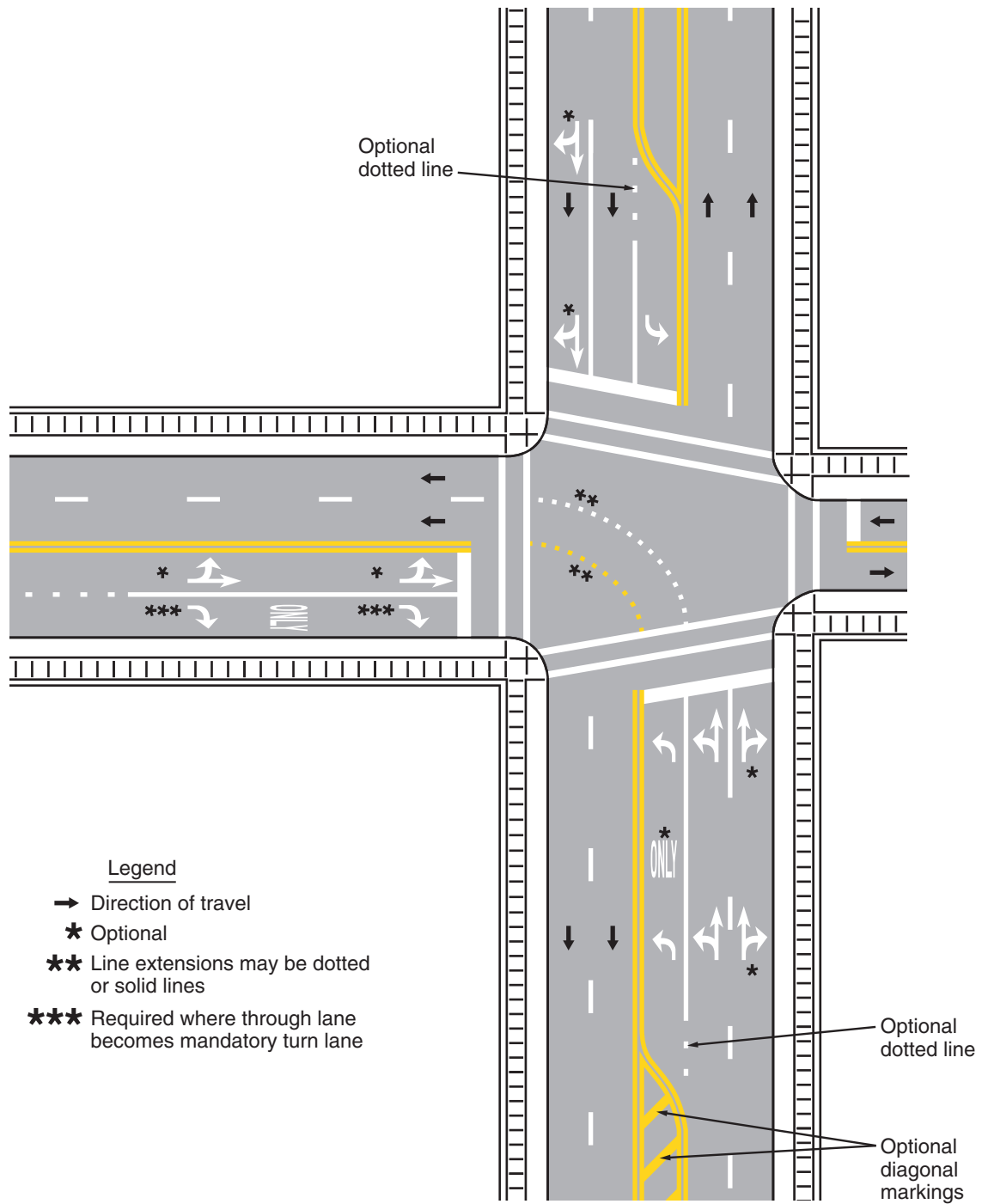
**A - Posted or Statutory Speed Limit 70 km/h (45 mph) or greater**



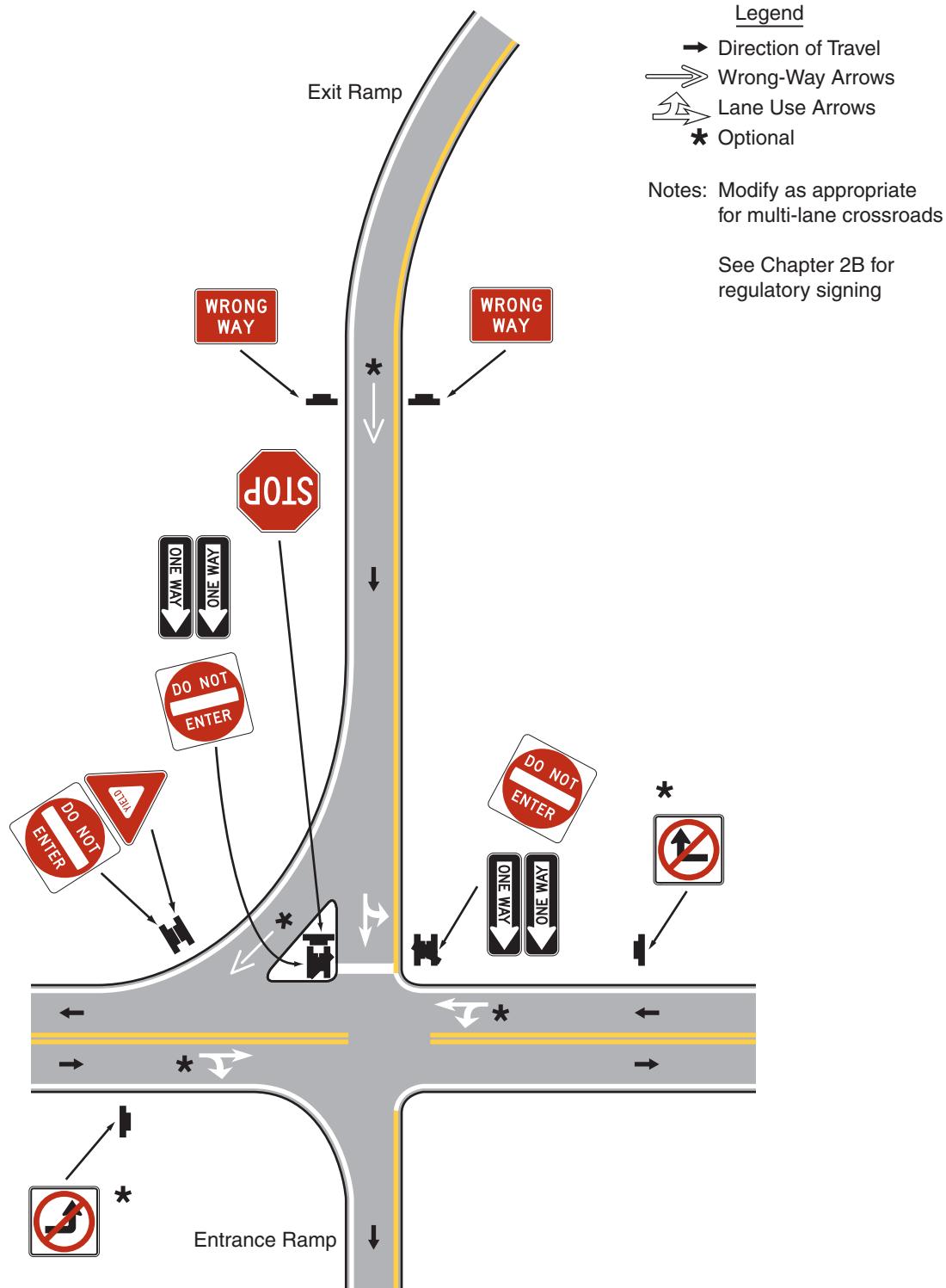
**B - Posted or Statutory Speed Limit less than 70 km/h (45 mph)**



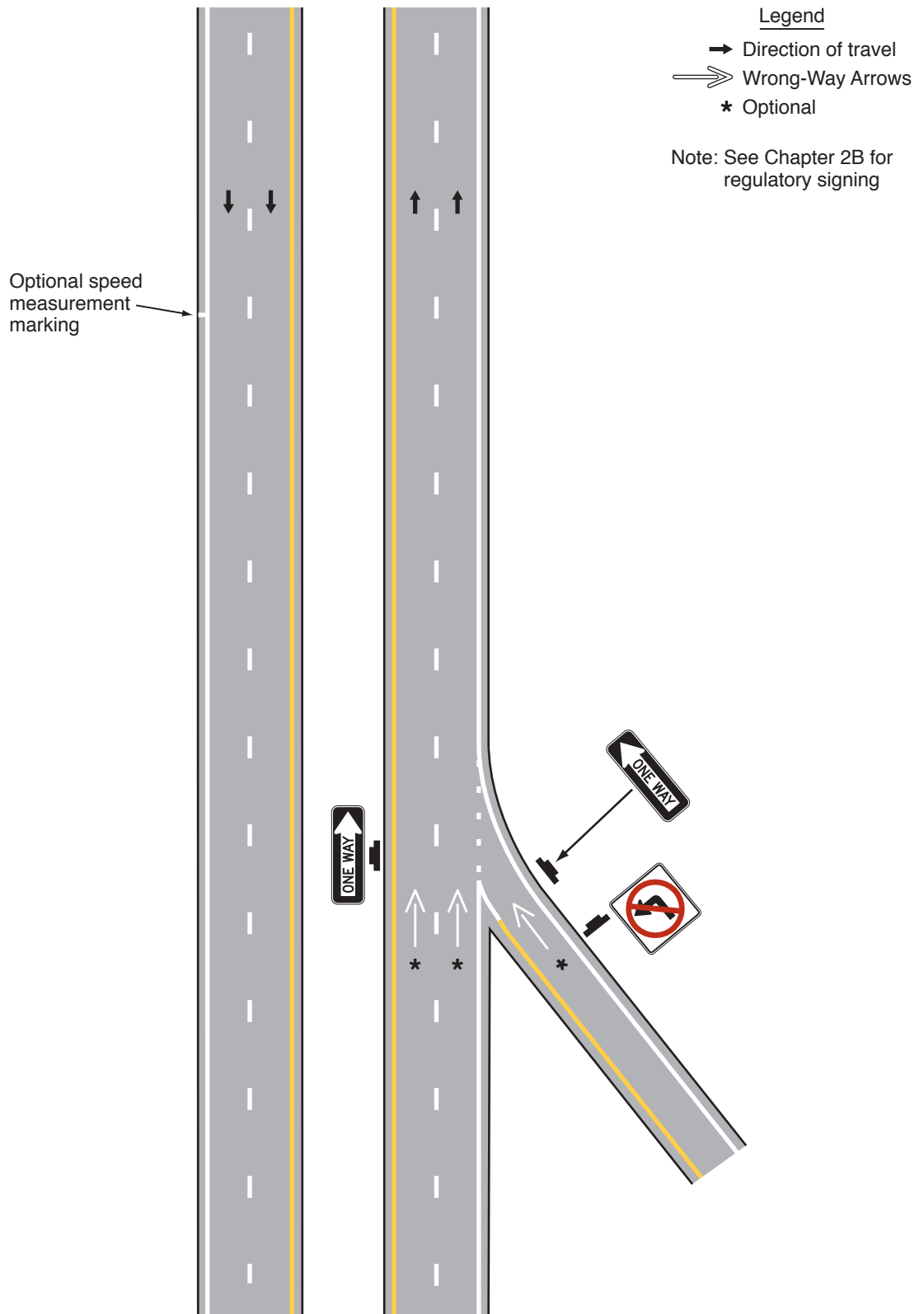
**Figure 3B-27. Examples of Lane Use Control Word and Symbol Markings**



**Figure 3B-28. Examples of Arrow Markings at Exit Ramp Terminals**



**Figure 3B-29. Examples of Arrow Markings at Entrance Ramp Terminals**



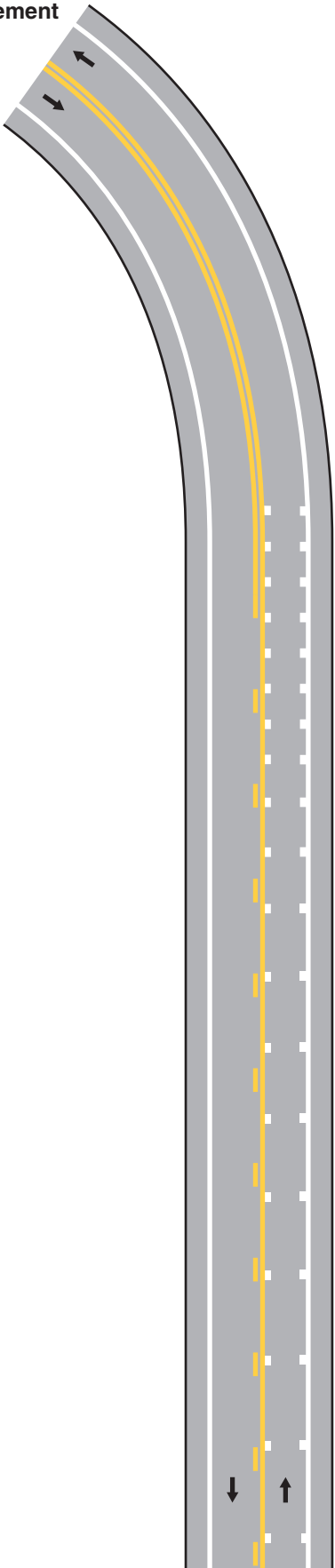
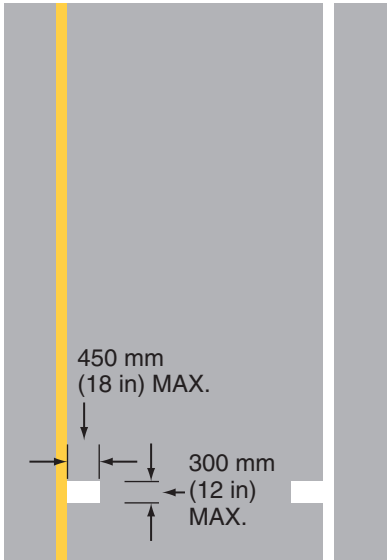
**Figure 3B-30. Example of the Application of Speed Reduction Markings**

Legend

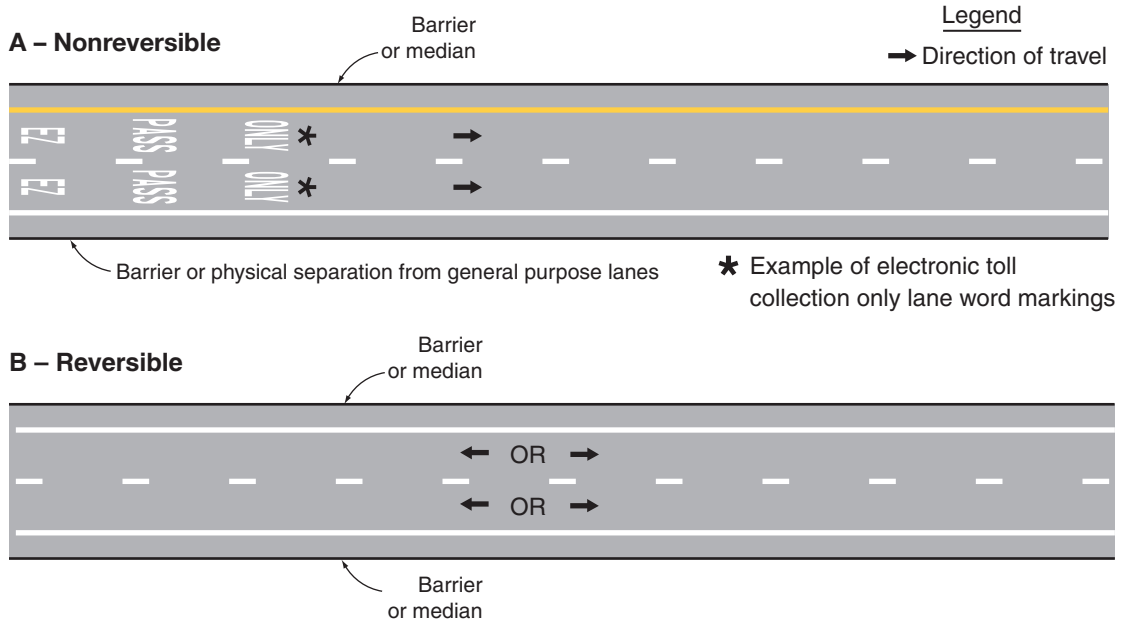
→ Direction of travel

**B – Example of placement**

**A – Recommended dimensions**

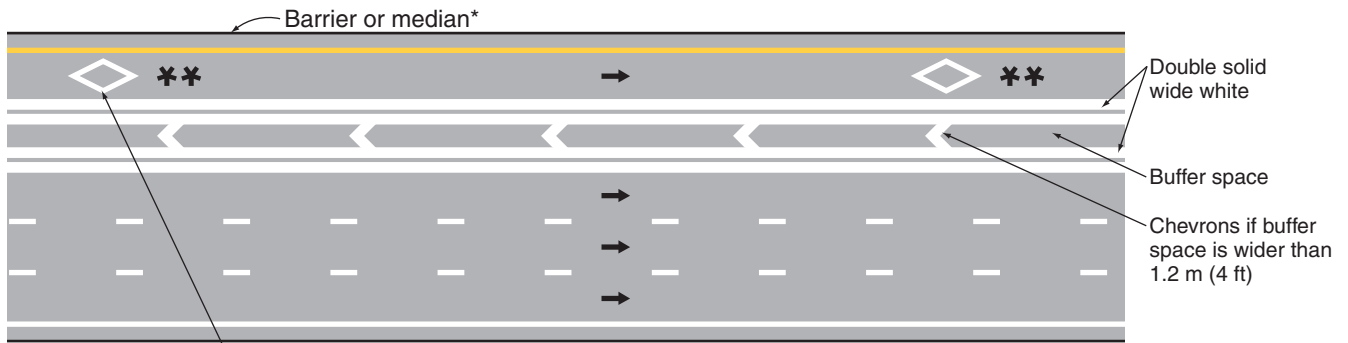


**Figure 3B-31. Markings for Barrier-Separated Preferential Lanes**



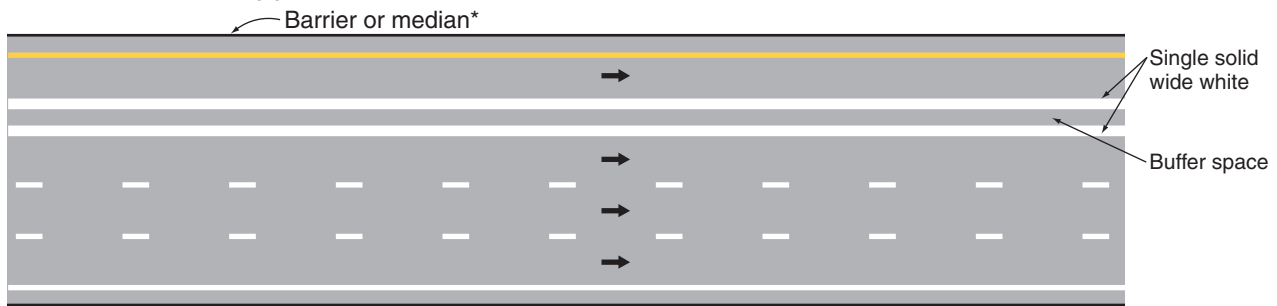
**Figure 3B-32. Markings for Buffer-Separated Preferential Lanes (Sheet 1 of 2)**

**A – Full-time preferential lane(s) where enter/exit movements are PROHIBITED**



Space at 400 m (0.25 mi) intervals or as determined by engineering judgment (see Section 3B.24)

**B – Preferential lane(s) where enter/exit movements are DISCOURAGED**



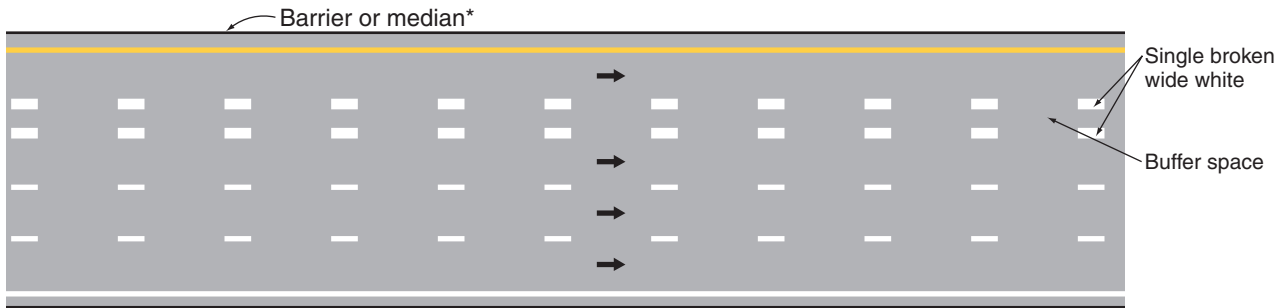
- \* If no barrier or median is present and the left-hand side of the lane is the center line of a two-way roadway, use a double yellow center line
- \*\* Example of HOV only lane symbol markings

Legend

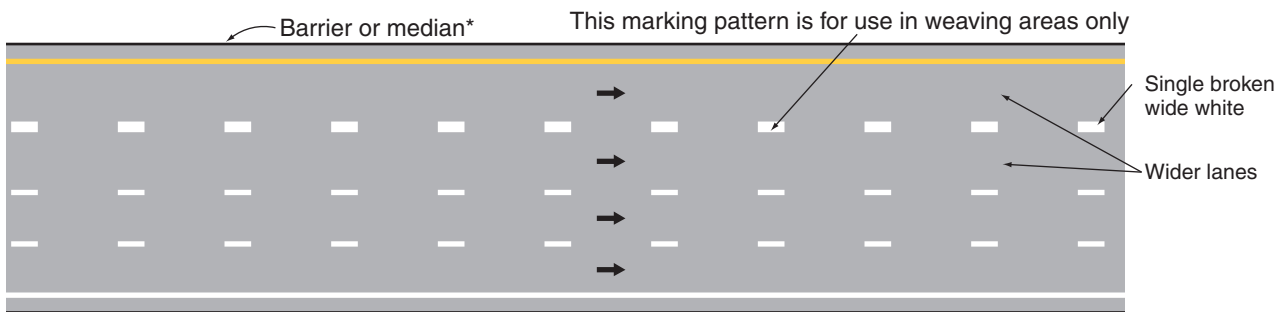
→ Direction of travel

**Figure 3B-32. Markings for Buffer-Separated Preferential Lanes (Sheet 2 of 2)**

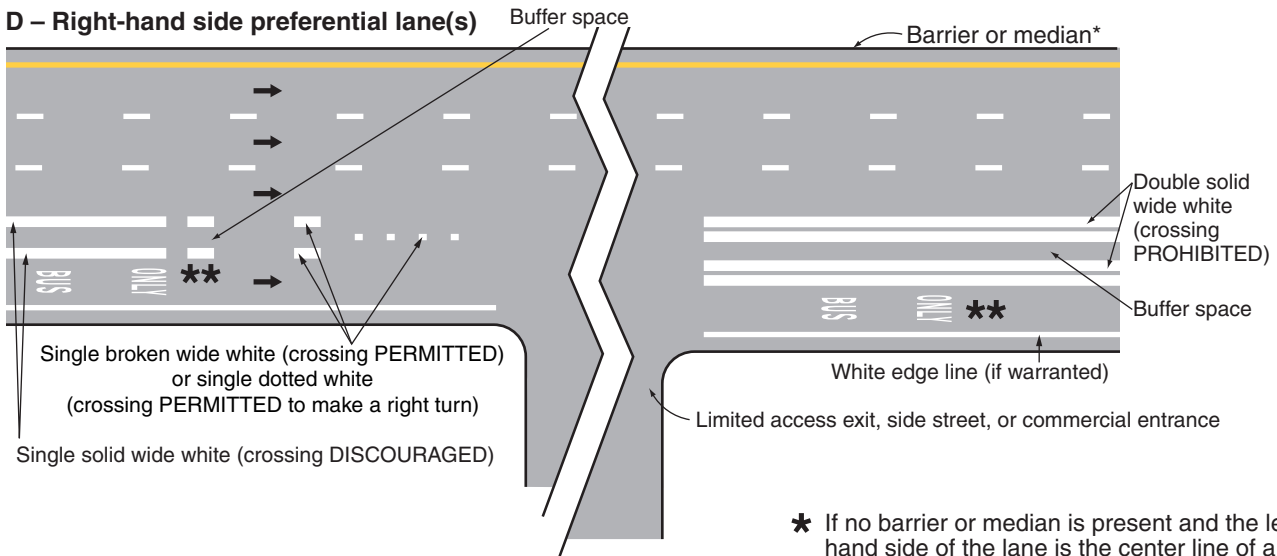
**C – Preferential lane(s) where enter/exit movements are PERMITTED**



**OR**



**D – Right-hand side preferential lane(s)**



\* If no barrier or median is present and the left-hand side of the lane is the center line of a two-way roadway, use a double yellow center line

\*\* Example of bus lane word markings

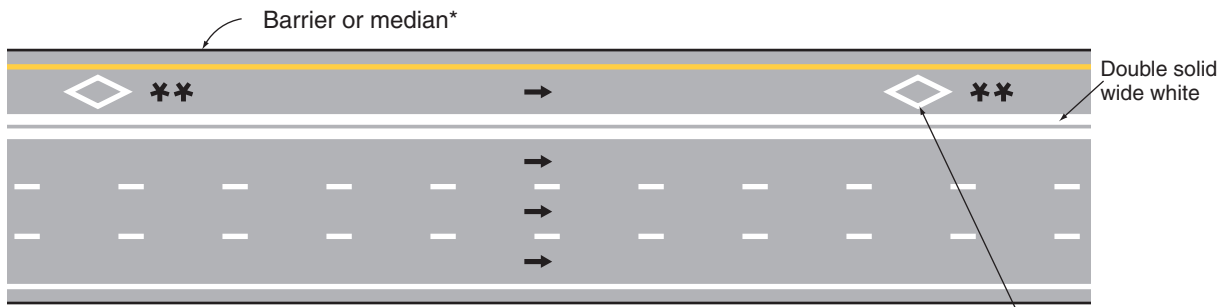
**Legend**

→ Direction of travel

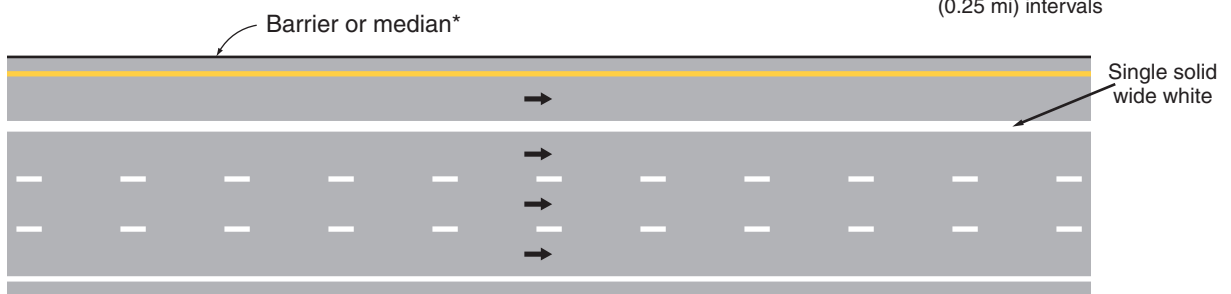


**Figure 3B-33. Markings for Contiguous Preferential Lanes**

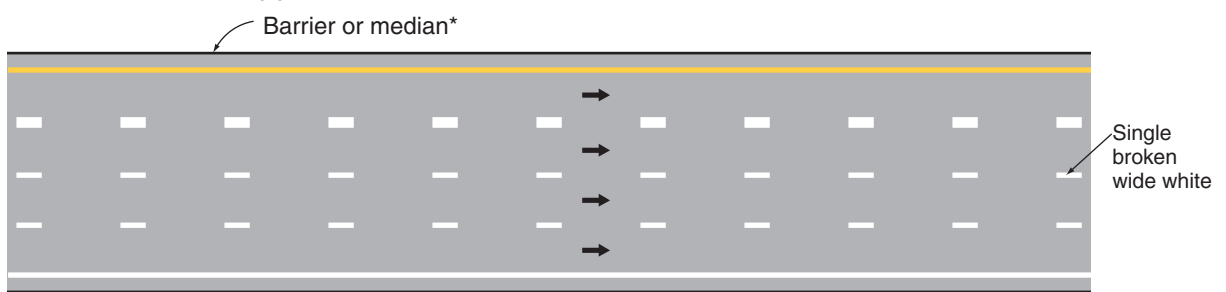
**A – Full-time preferential lane(s) where enter/exit movements are PROHIBITED**



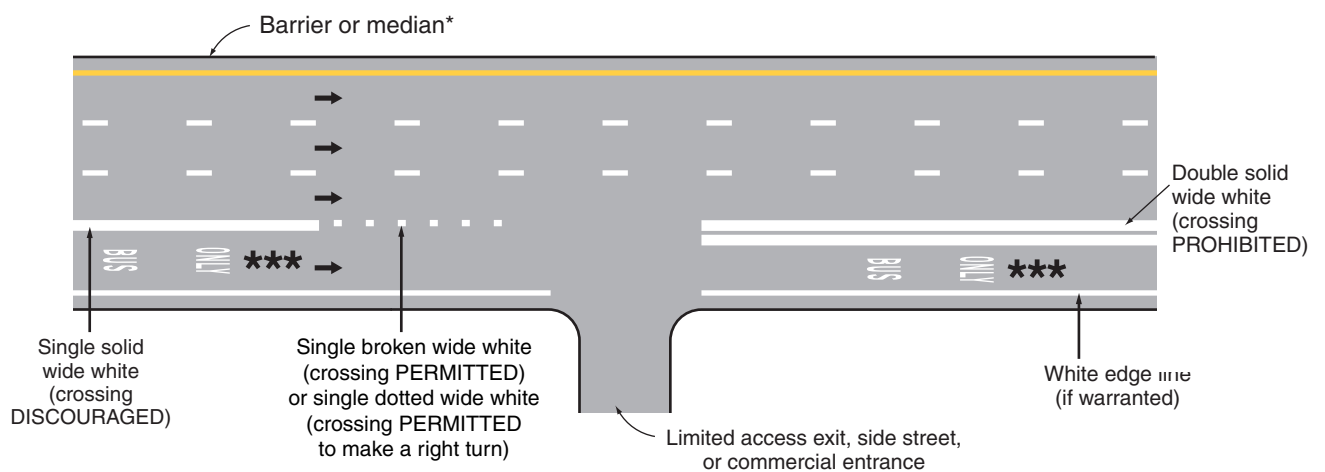
**B – Preferential lane(s) where enter/exit movements are DISCOURAGED**



**C – Preferential lane(s) where enter/exit movements are PERMITTED**



**D – Right-hand side preferential lane(s)**



Legend

→ Direction of travel

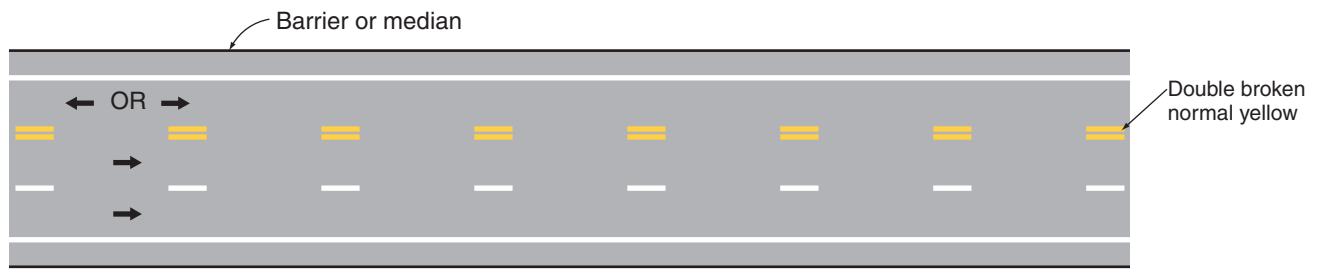
\* If no barrier or median is present and the left-hand side of the lane is the center line of a two-way roadway, use a double yellow center line

\*\* Example of HOV only lane symbol markings

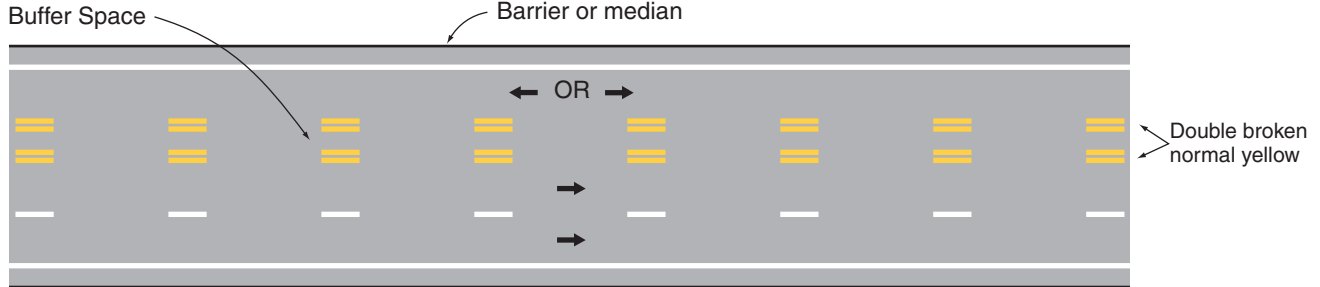
\*\*\* Example of bus lane word markings

**Figure 3B-34. Markings for Counter-Flow Preferential Lanes on Divided Highways**

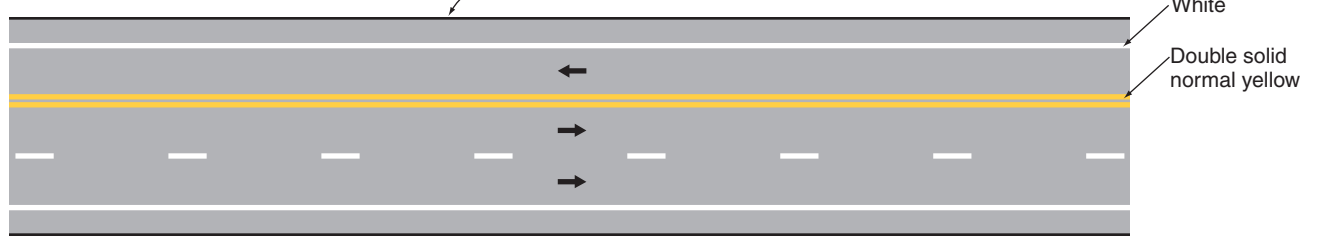
**A – Part-time contiguous**



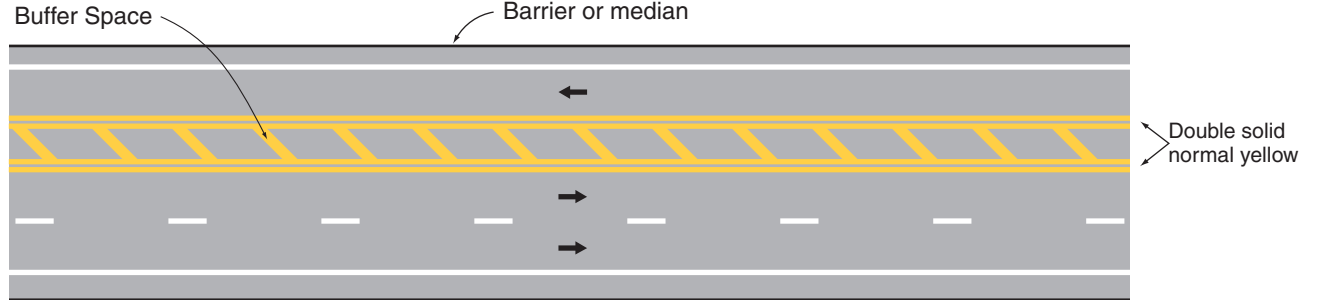
**B – Part-time buffer-separated**



**C – Full-time contiguous**

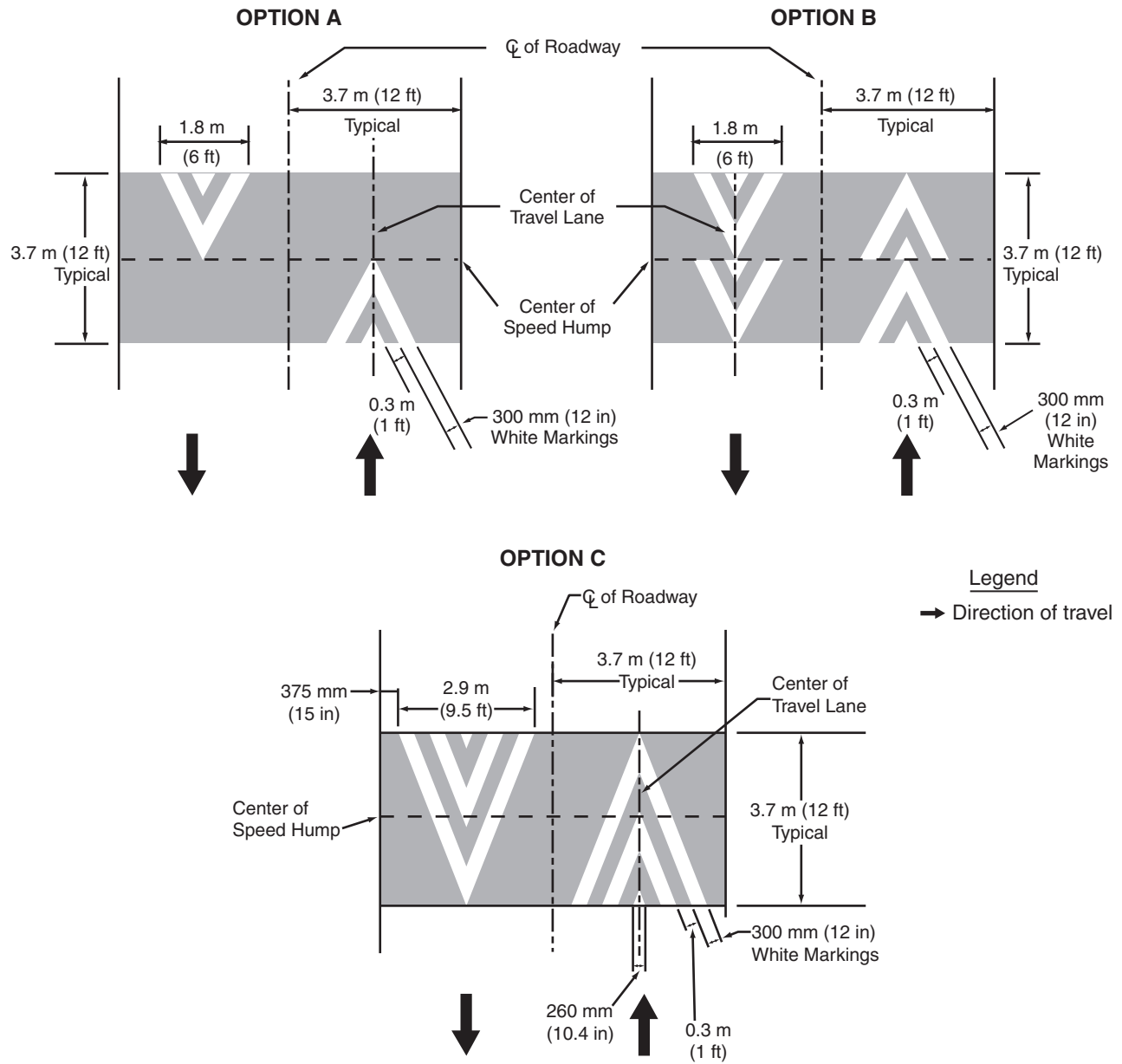


**D – Full-time buffer-separated**

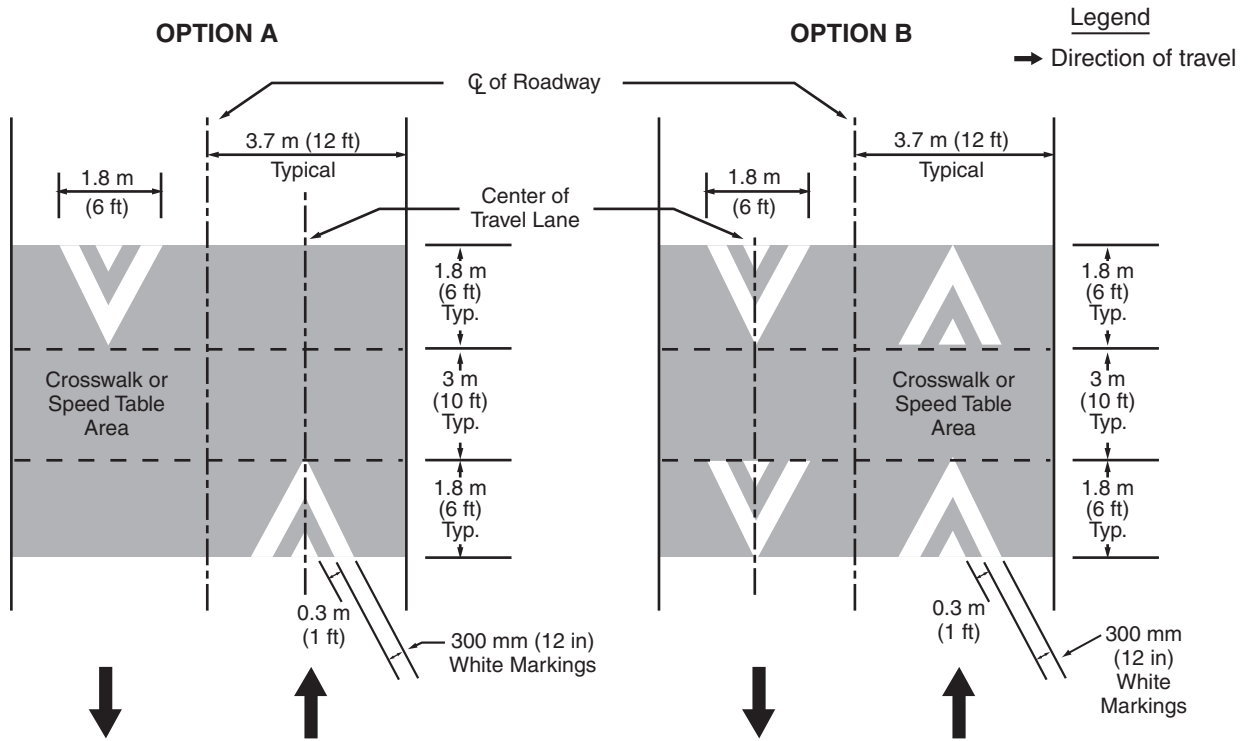


Legend  
 → Direction of travel

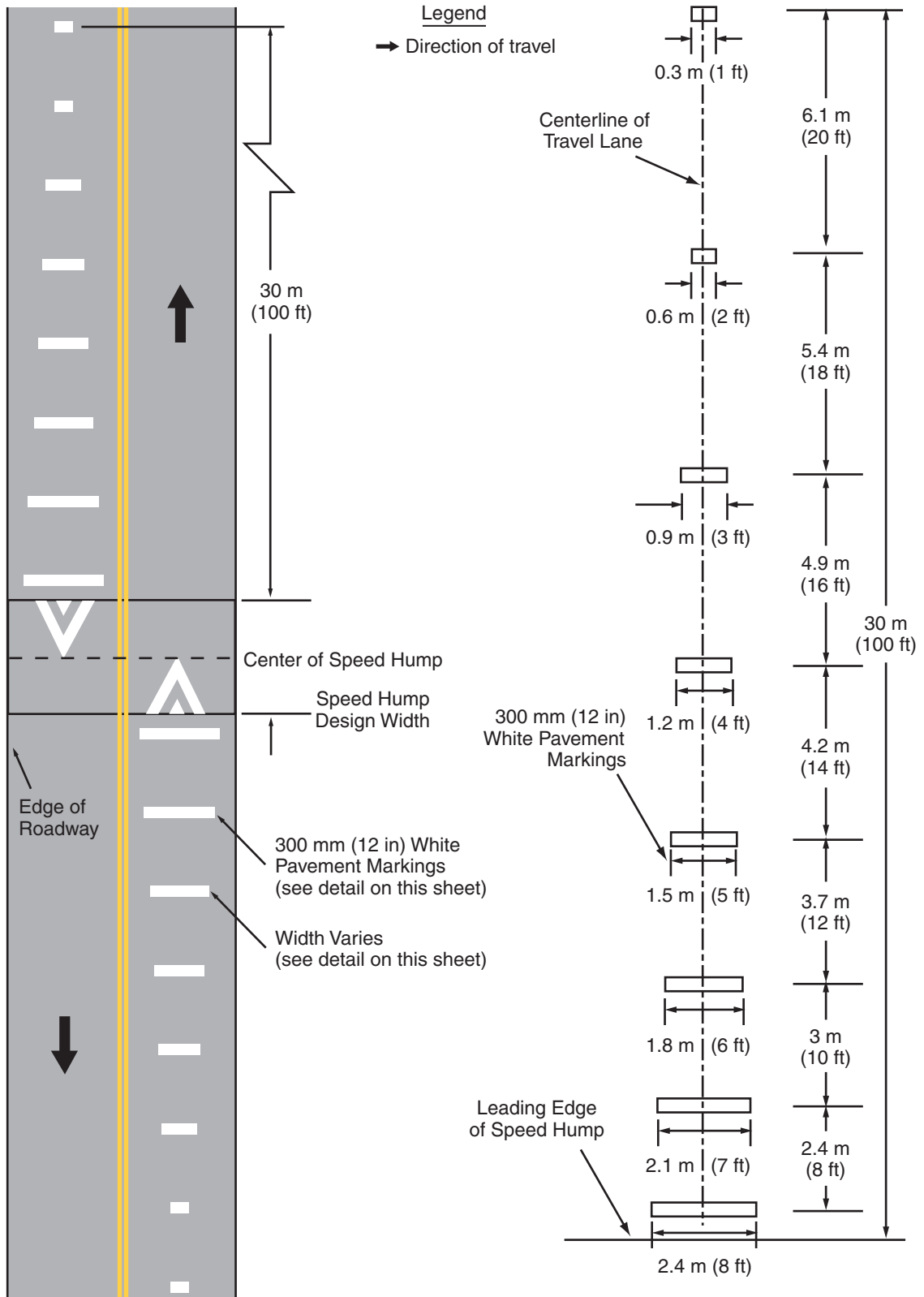
**Figure 3B-35. Pavement Markings for Speed Humps Without Crosswalks**



**Figure 3B-36. Pavement Markings for Speed Tables or Speed Humps with Crosswalks**

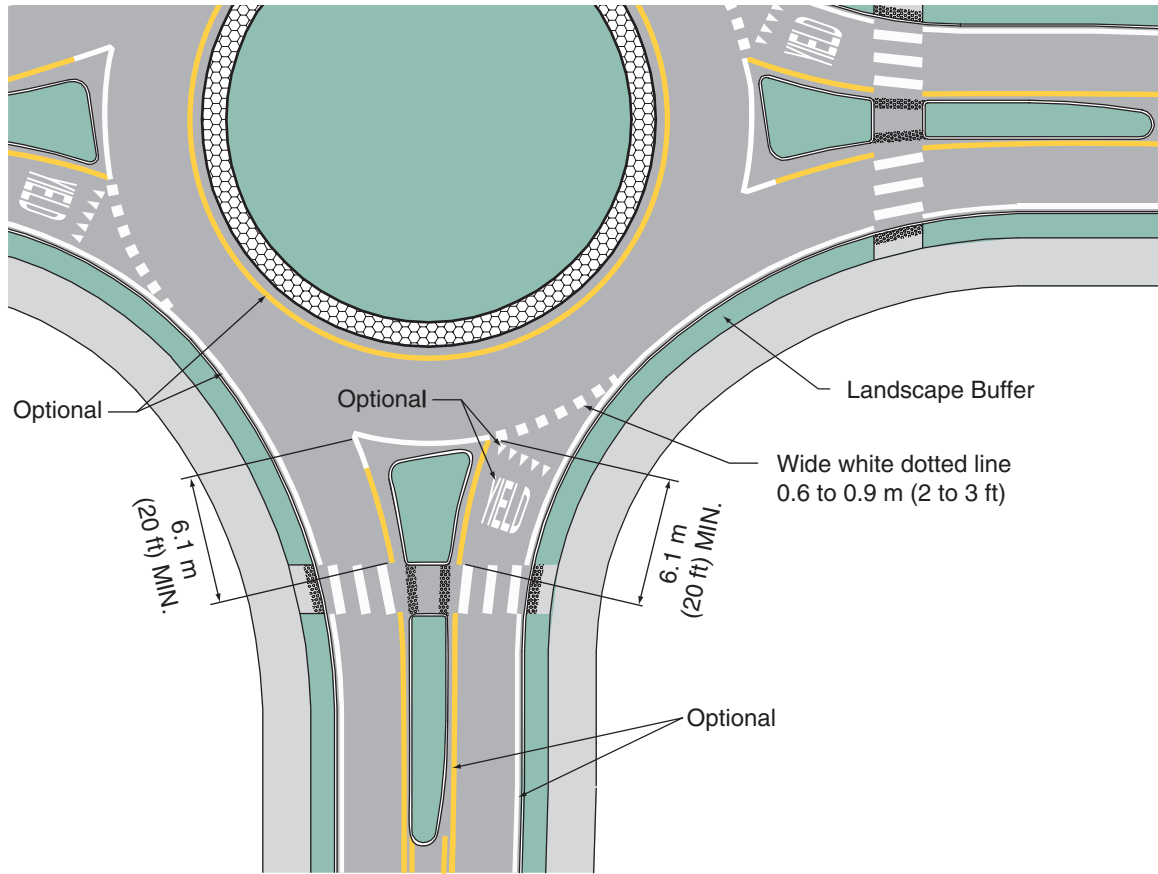


**Figure 3B-37. Advance Warning Markings for Speed Humps**



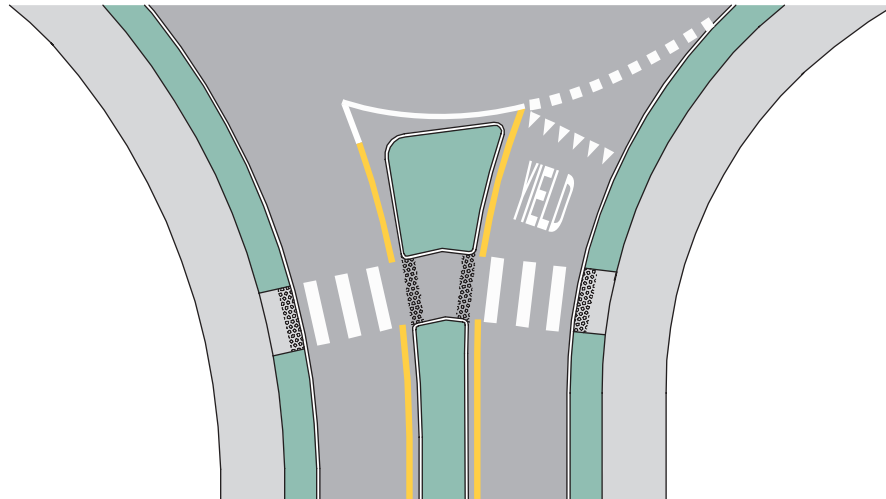
**DETAIL—SPEED HUMP ADVANCE WARNING MARKINGS**

**Figure 3C-1. Example of Markings for Approach and Circulatory Roadway Markings at a Roundabout**

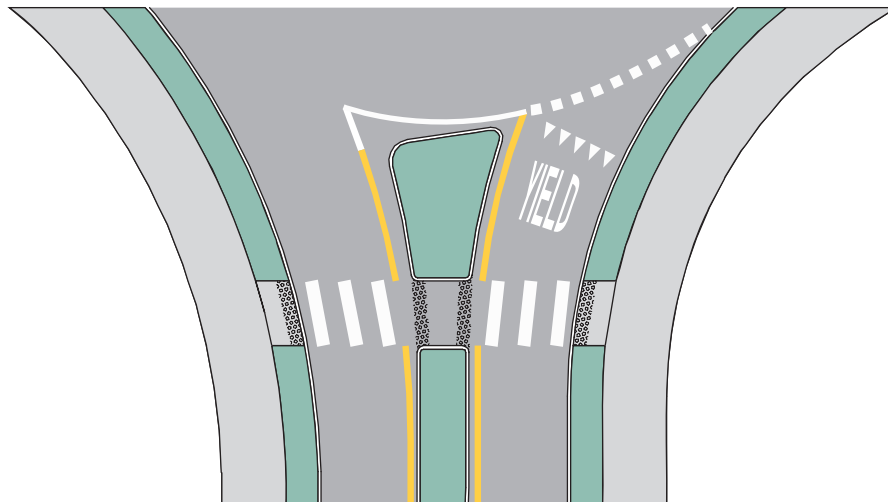


**Figure 3C-2. Examples of Markings for Pedestrian Crosswalks at Roundabouts**

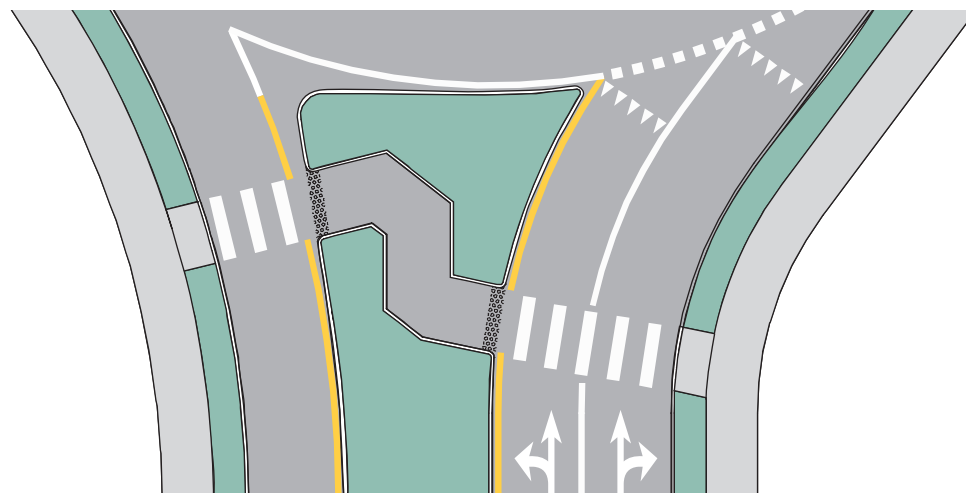
**A – Crosswalks perpendicular to travel lanes**



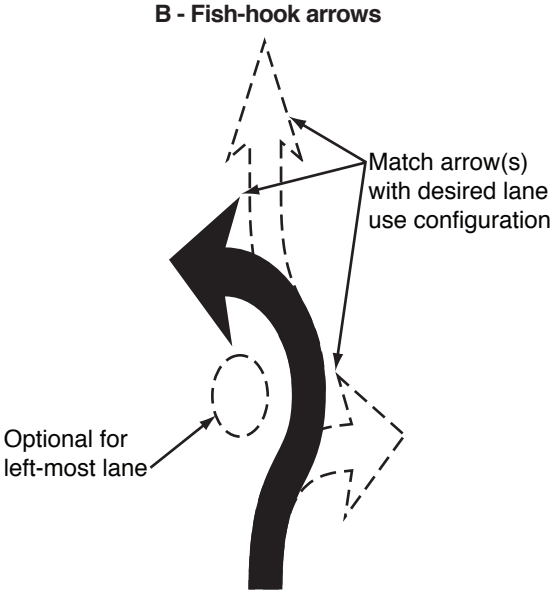
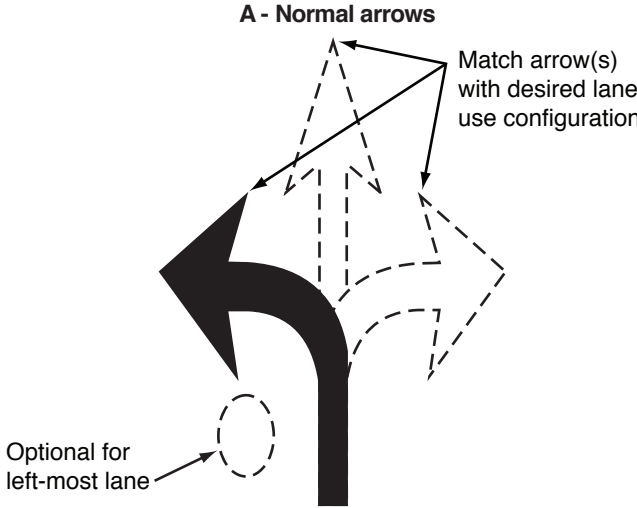
**B – Crosswalks perpendicular to center line of roadway**



**C – Offset crosswalks**

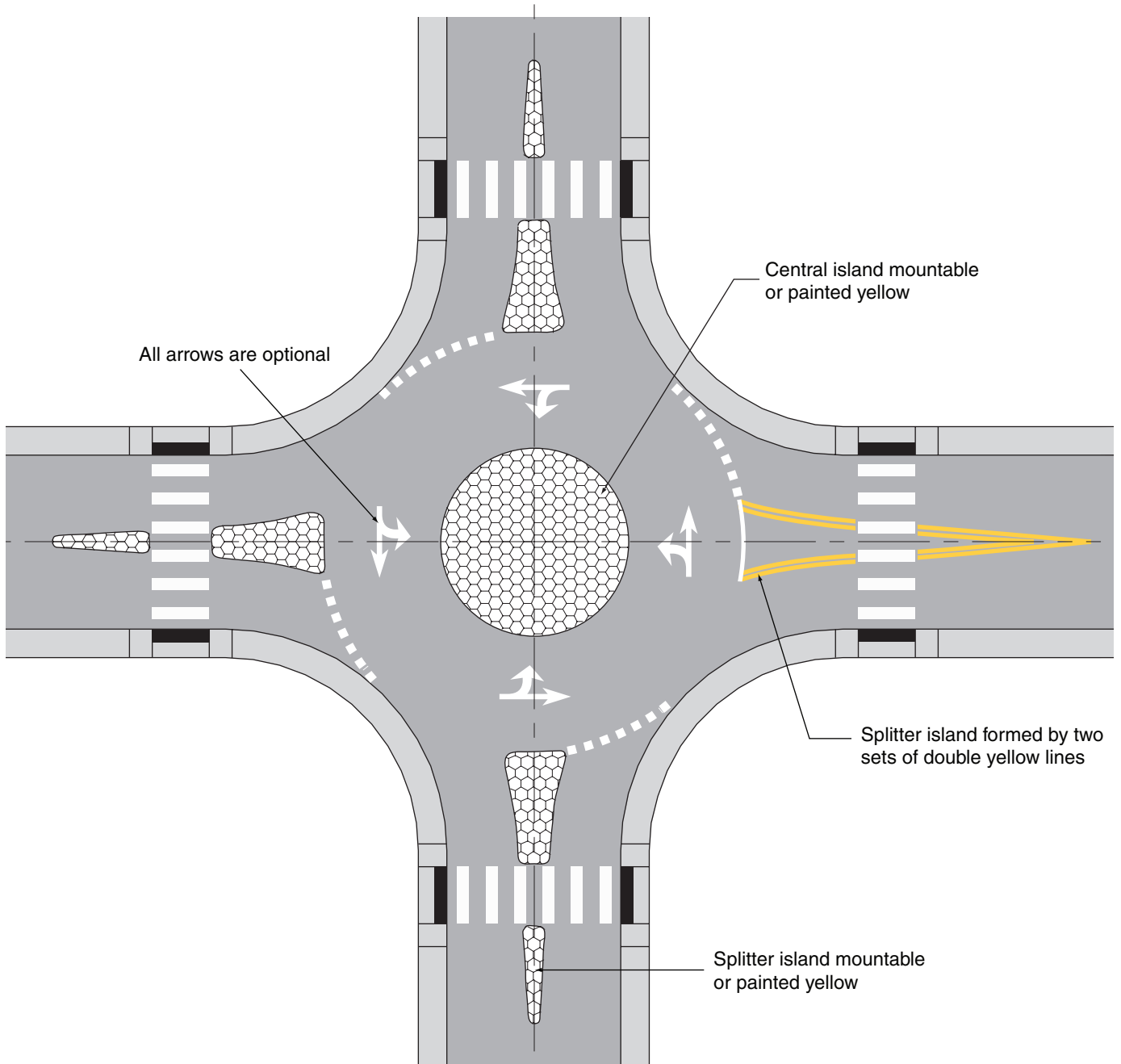


**Figure 3C-3. Lane-Use Arrow Pavement Marking Options for Roundabout Approaches**

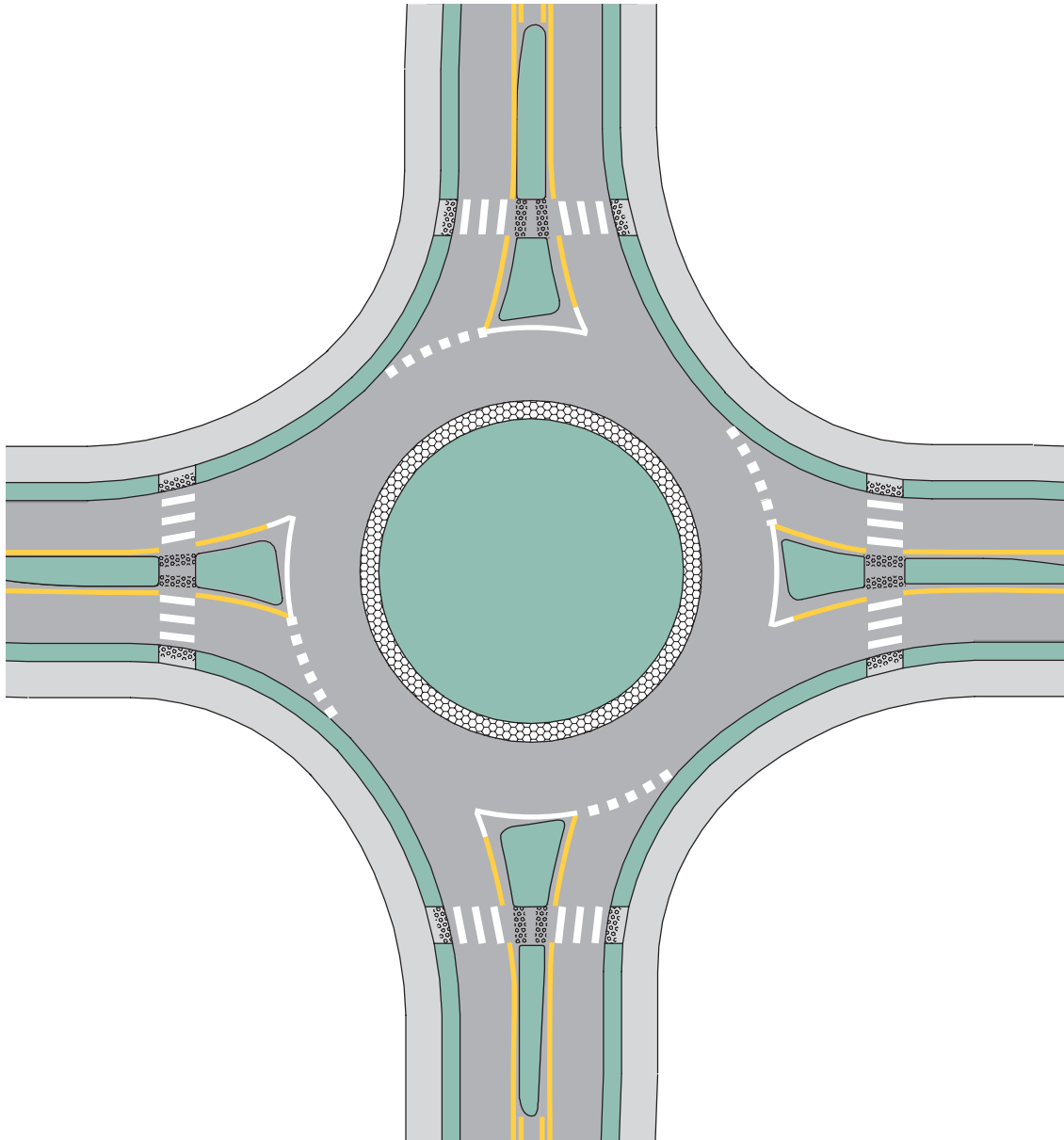




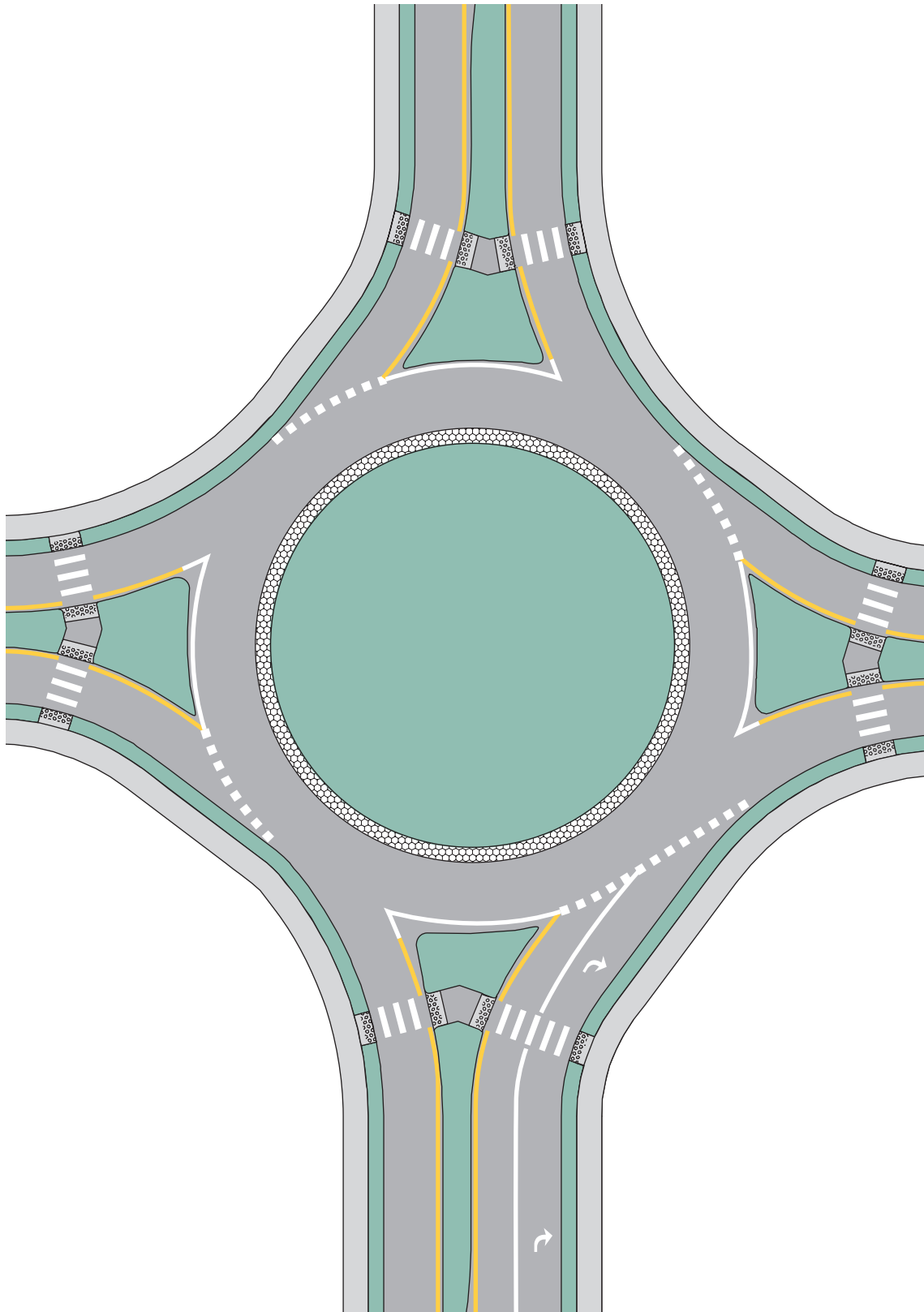
**Figure 3C-4. Example of Markings for a Mini-Roundabout**



**Figure 3C-5. Example of Markings for a One-Lane Roundabout**

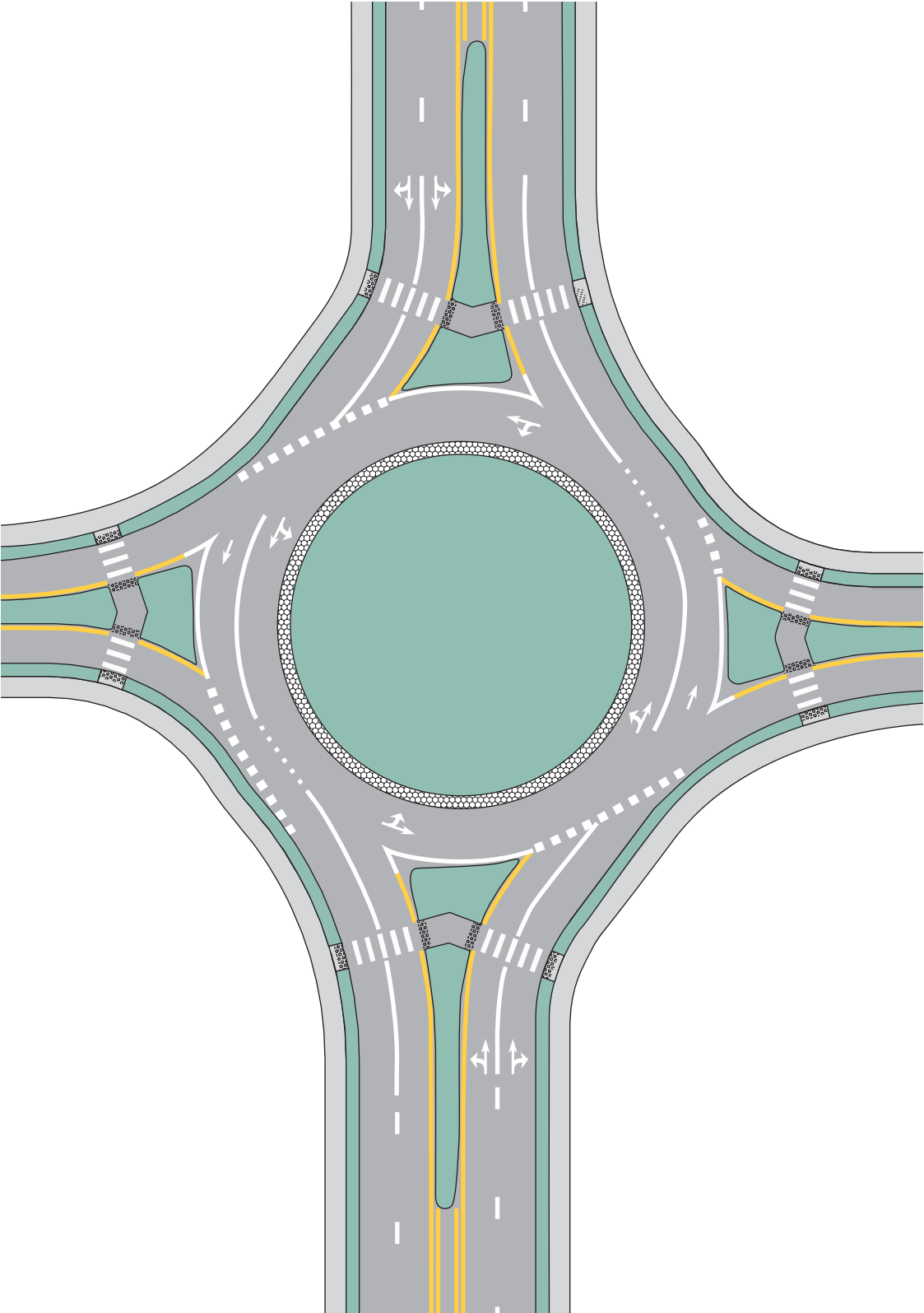


**Figure 3C-6. Example of Markings for a One-Lane Roundabout with a Dedicated Right-Turn Lane**



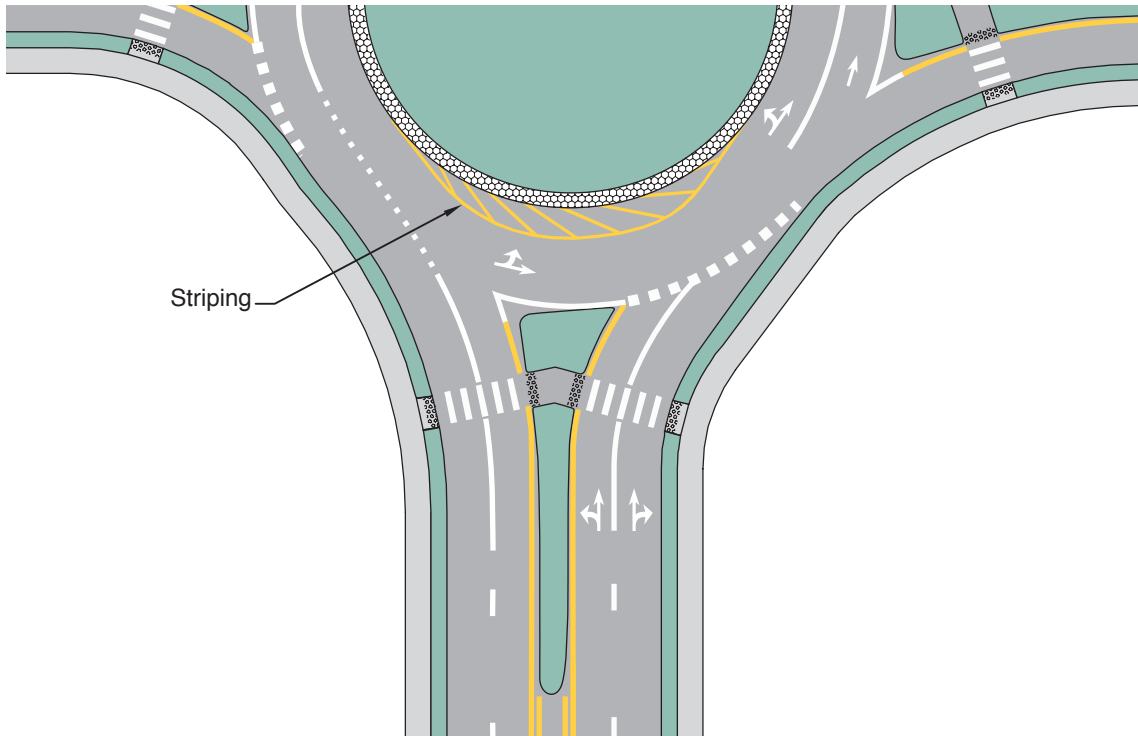
**Figure 3C-7. Example of Markings for a Two-Lane Roundabout with One- and Two-Lane Approaches (Sheet 1 of 2)**

**A – Unextended central island**

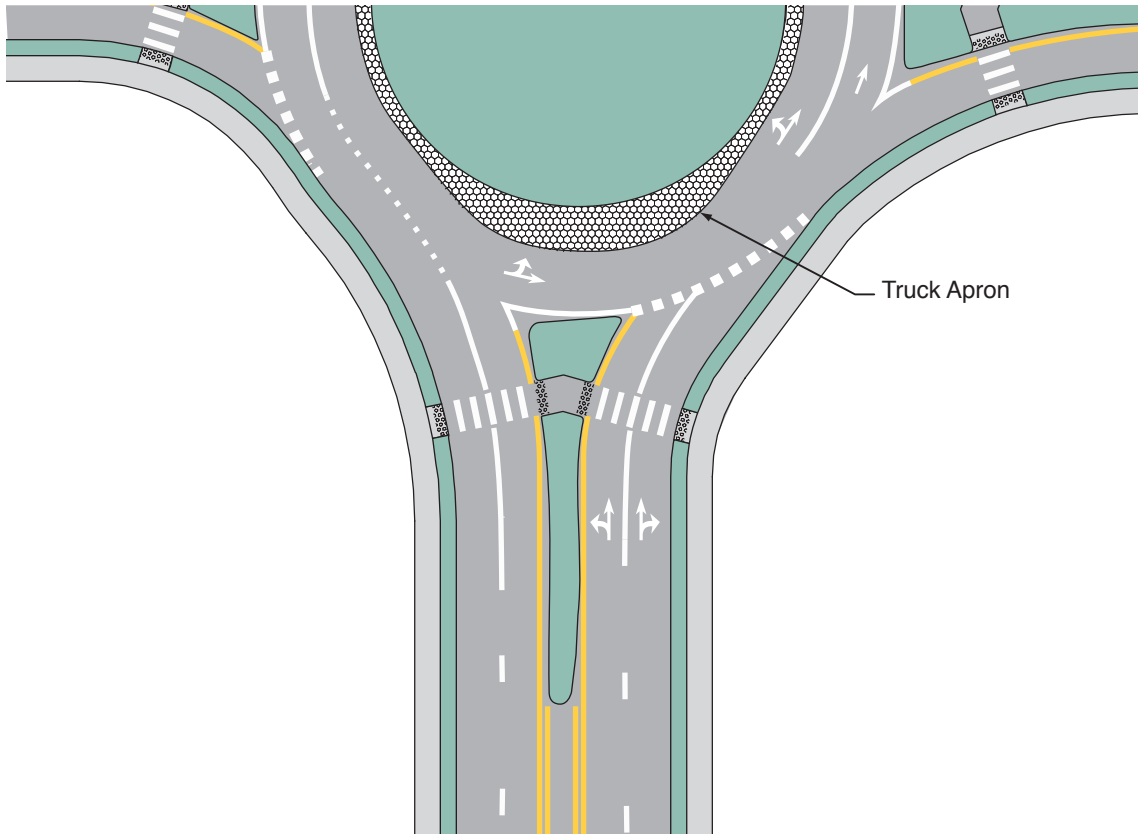


**Figure 3C-7. Example of Markings for a Two-Lane Roundabout with One- and Two-Lane Approaches (Sheet 2 of 2)**

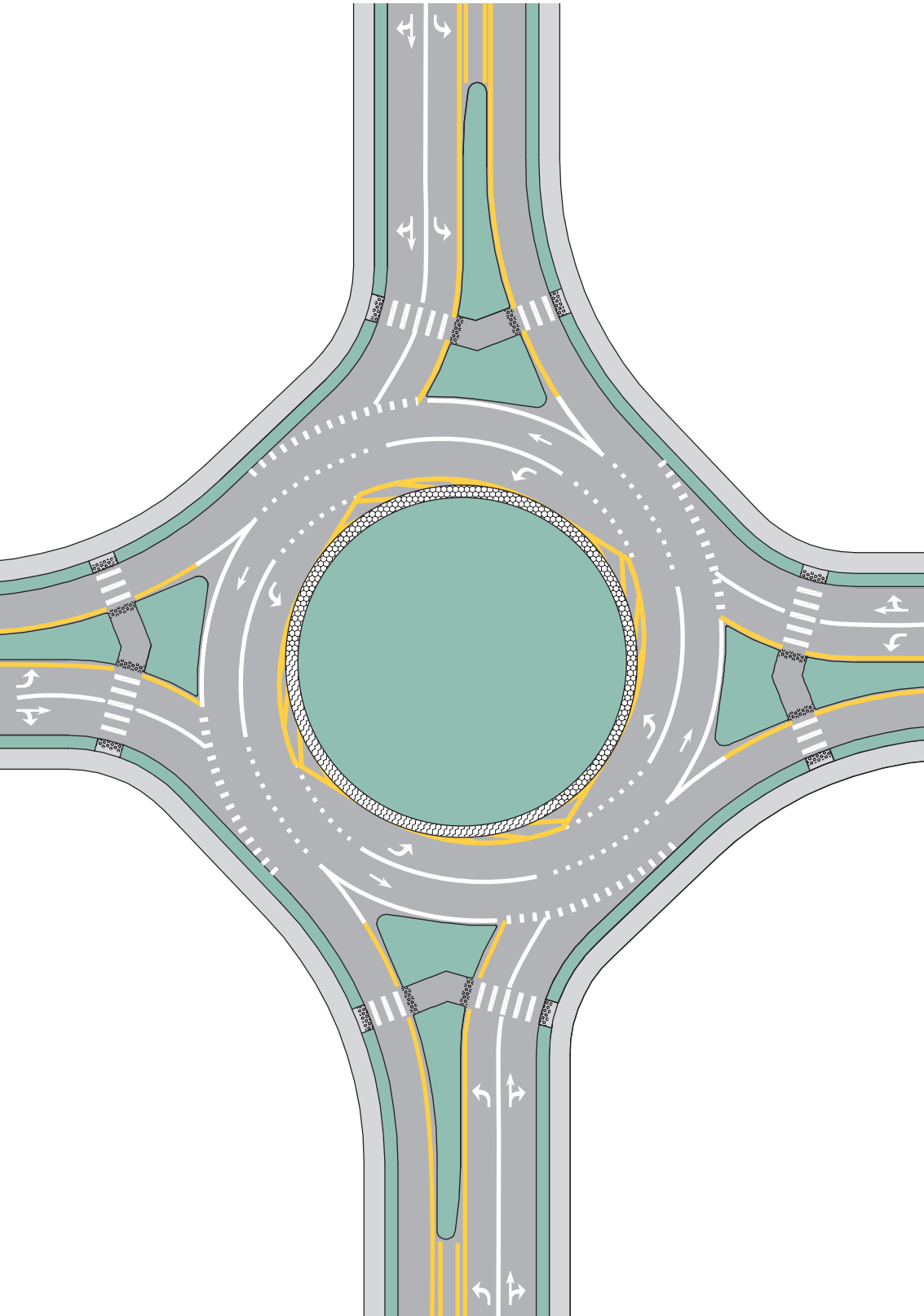
**B – Central island extended by pavement markings**



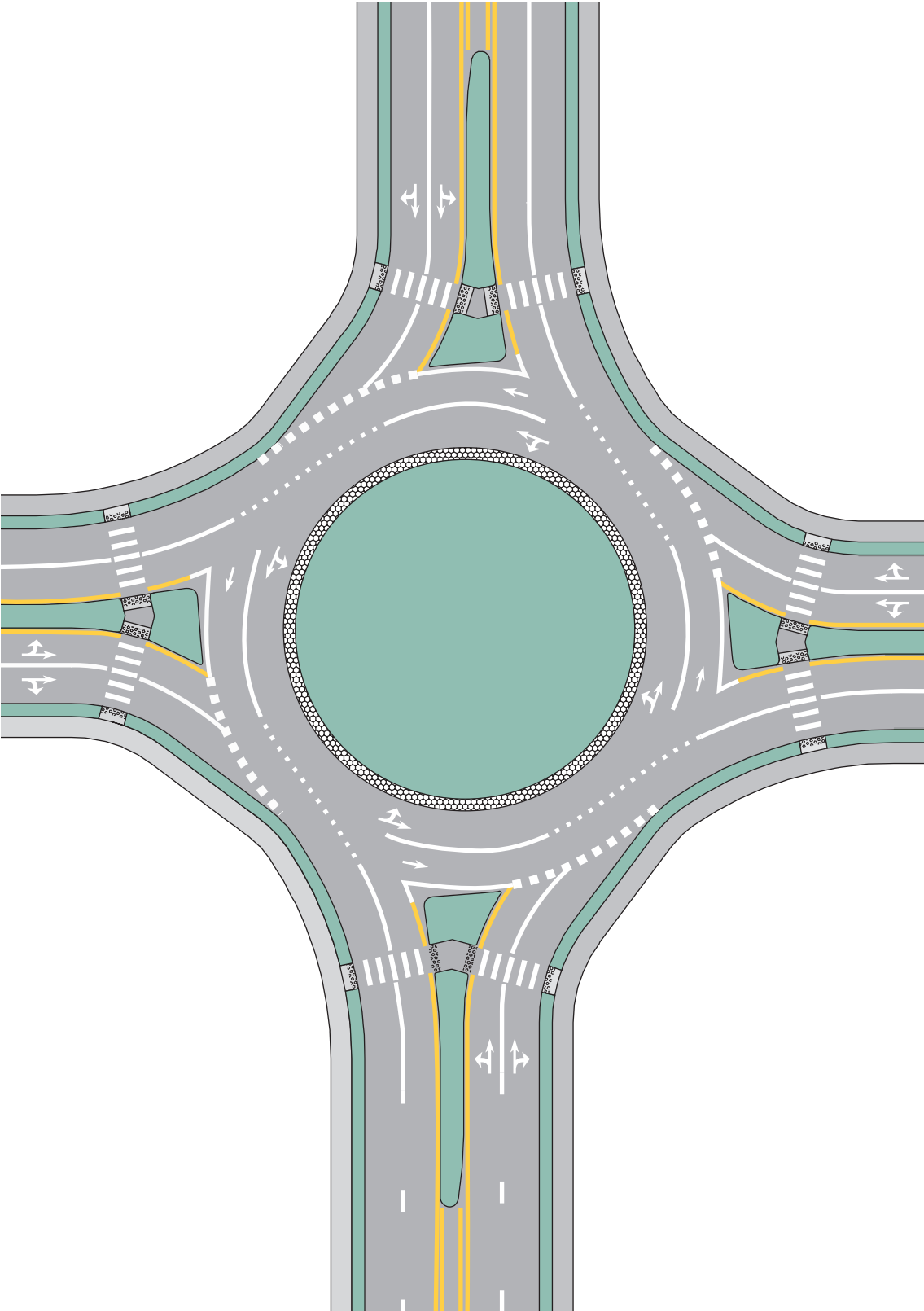
**C – Central island extended by a truck apron**



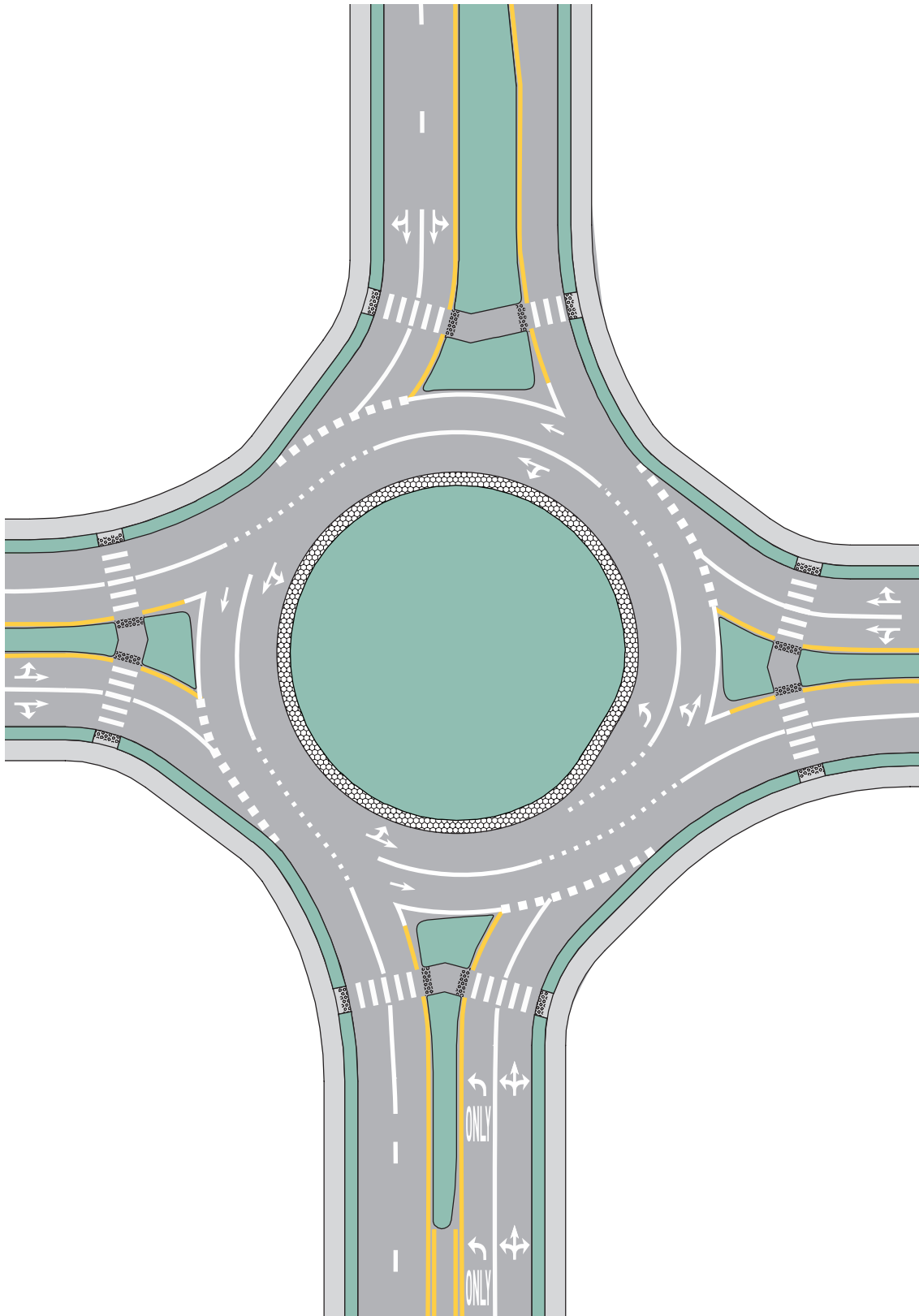
**Figure 3C-8. Example of Markings for a Two-Lane Roundabout with One-Lane Exits**



**Figure 3C-9. Example of Markings for a Two-Lane Roundabout with Two-Lane Exits**

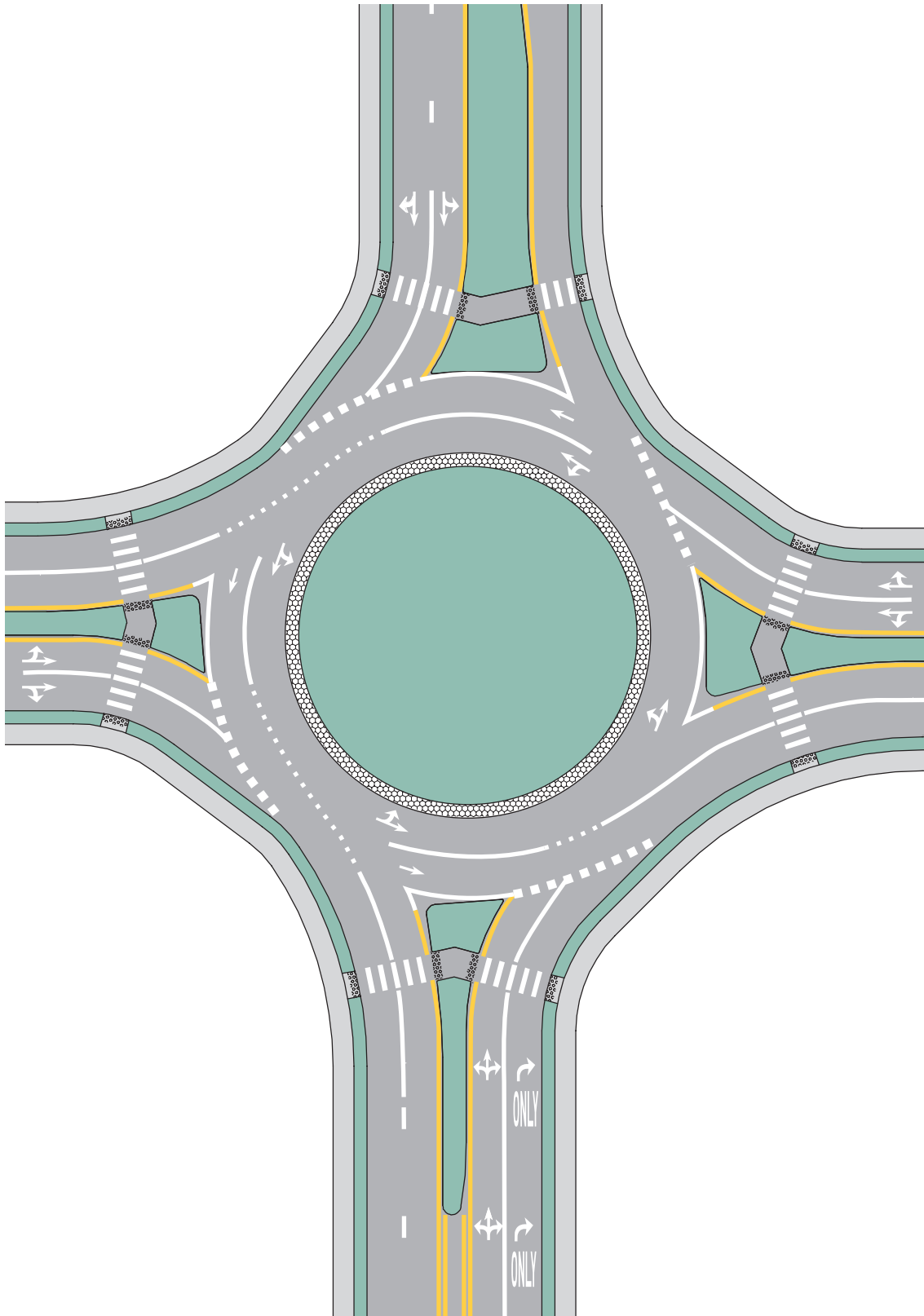


**Figure 3C-10. Example of Markings for a Two-Lane Roundabout with a Double Left Turn**

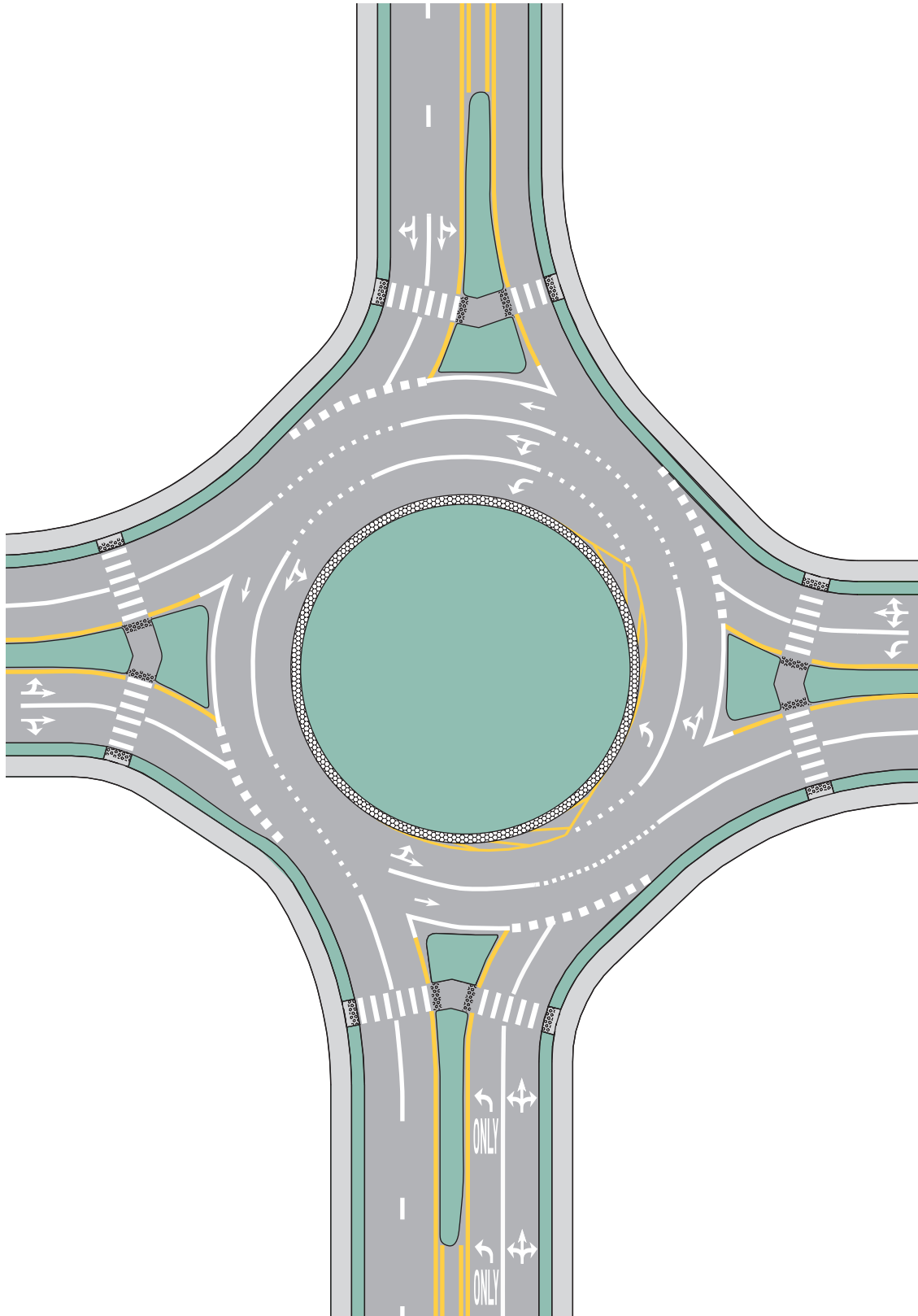




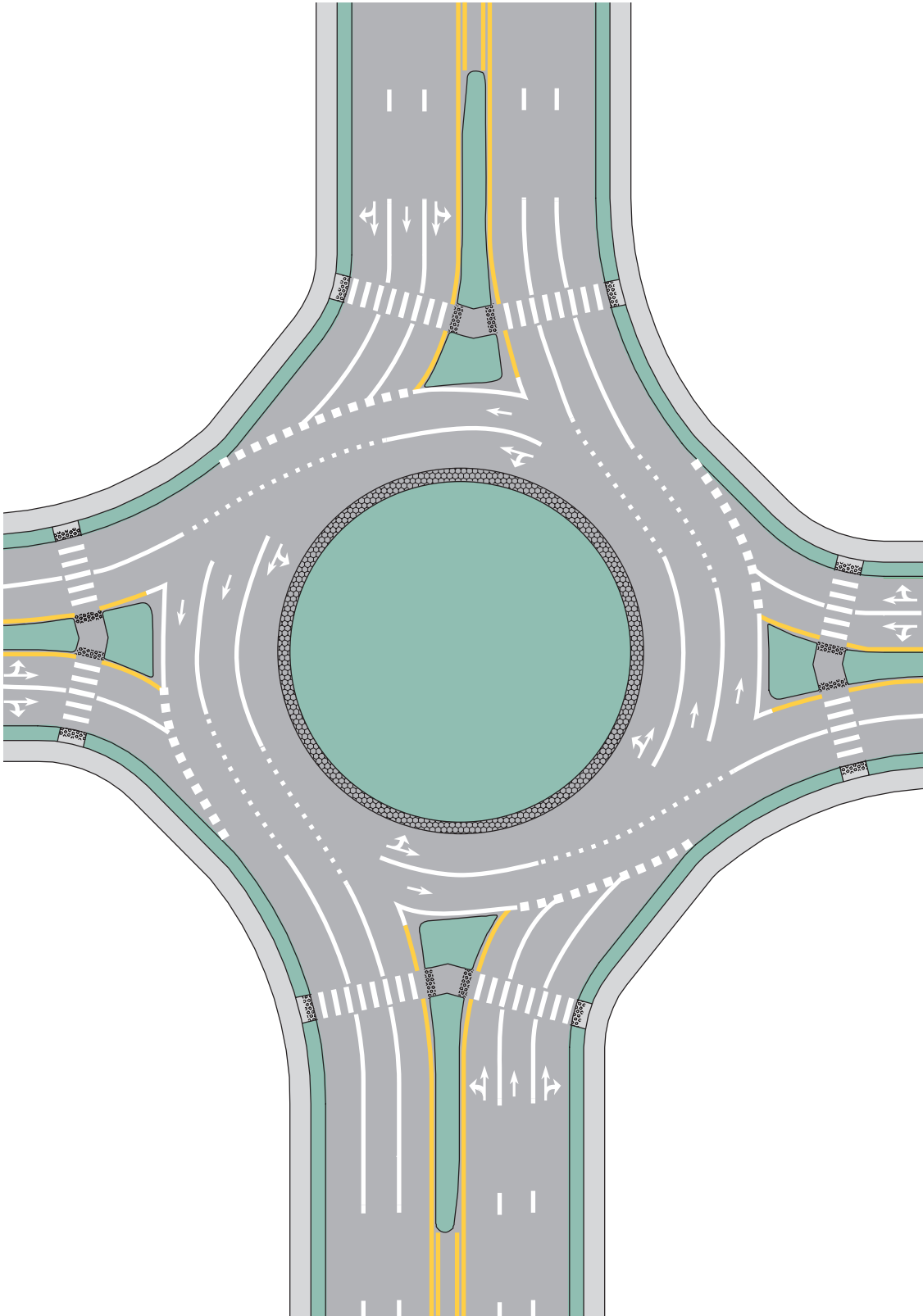
**Figure 3C-11. Example of Markings for a Two-Lane Roundabout with a Double Right Turn**



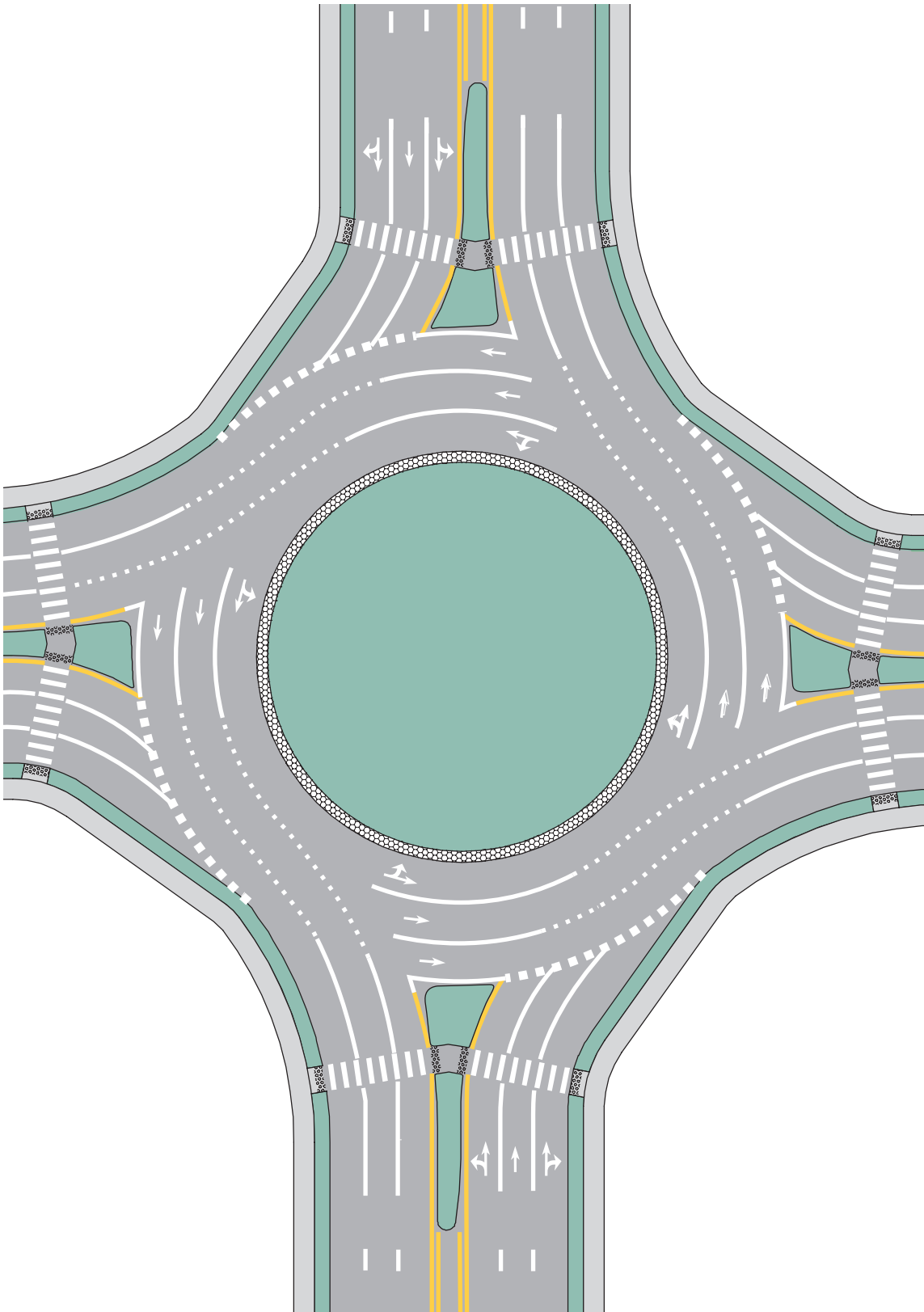
**Figure 3C-12. Example of Markings for a Two-Lane Roundabout with Consecutive Double Lefts**



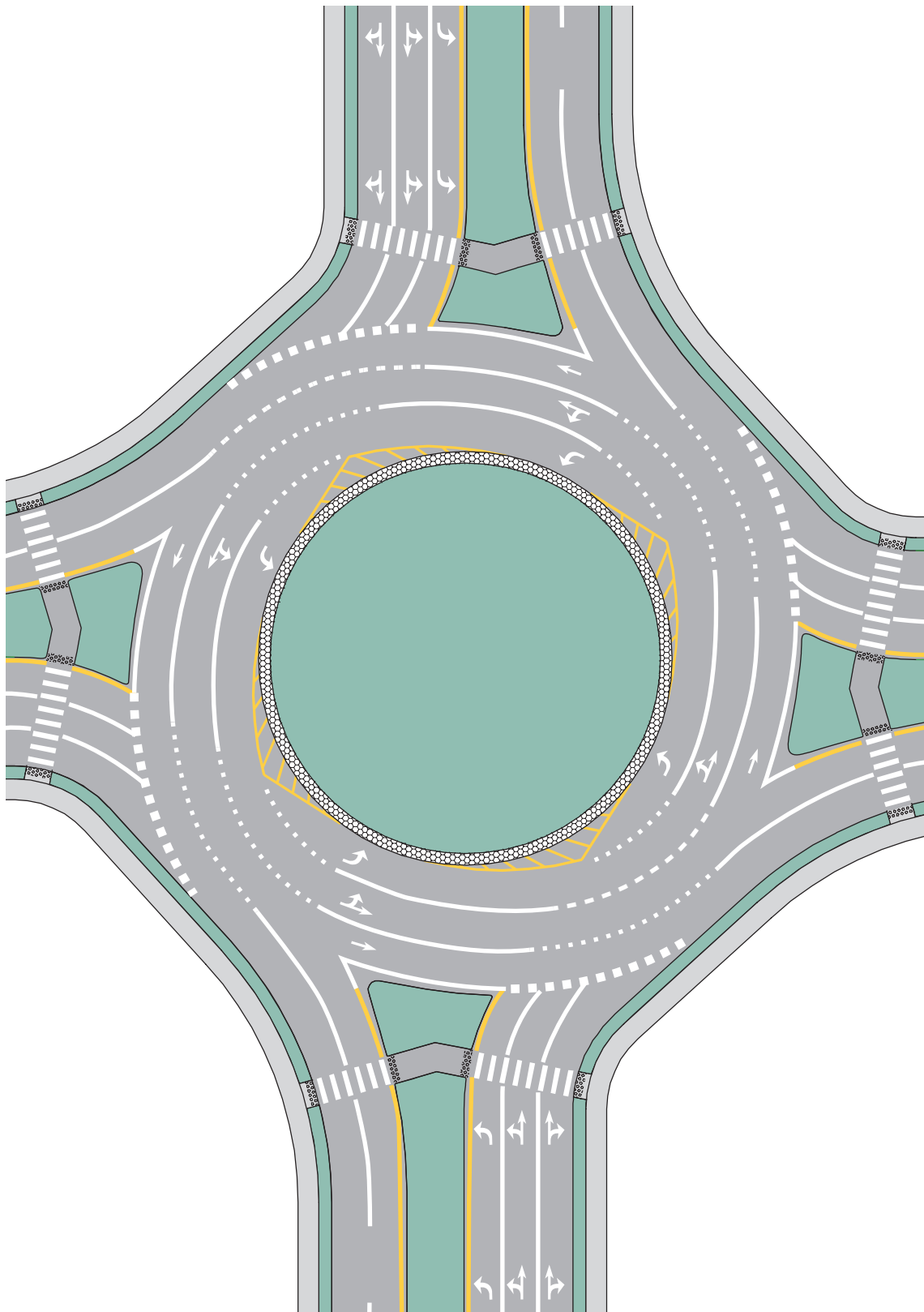
**Figure 3C-13. Example of Markings for a Three-Lane Roundabout with Two- and Three-Lane Approaches**



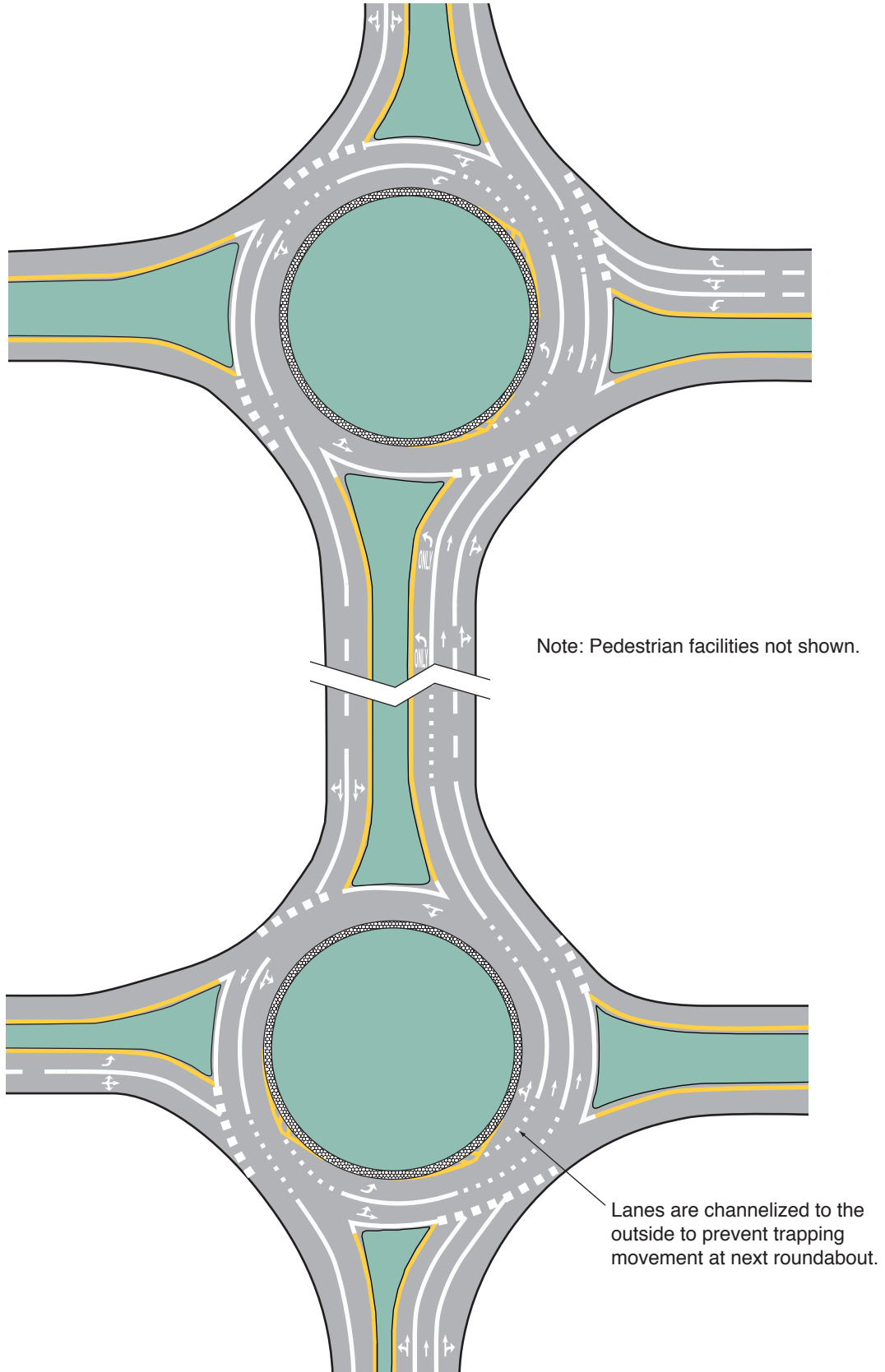
**Figure 3C-14. Example of Markings for a Three-Lane Roundabout with Three-Lane Approaches**



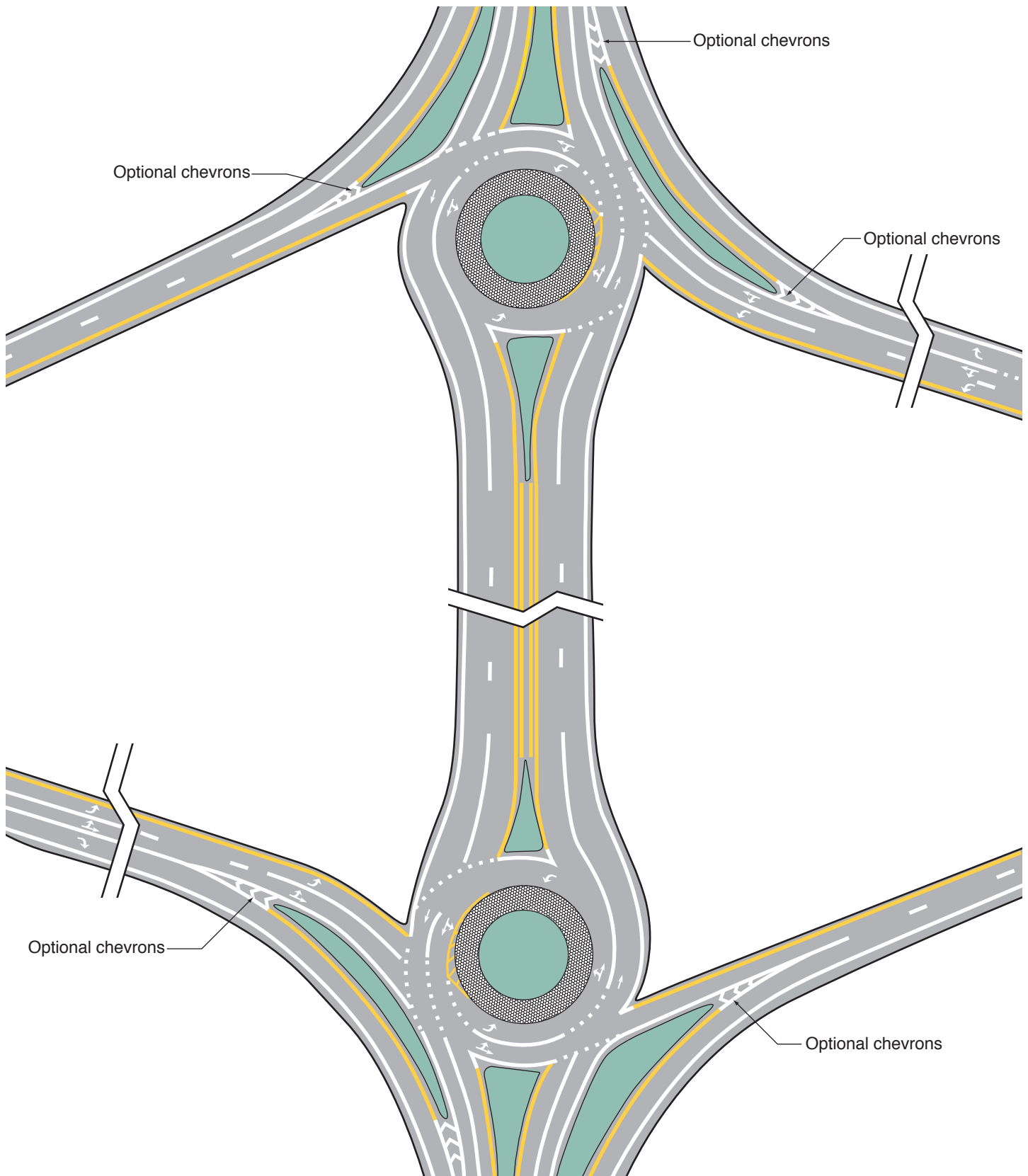
**Figure 3C-15. Example of Markings for a Three-Lane Roundabout with Two-Lane Exits**



**Figure 3C-16. Example of Markings for Two Linked Roundabouts**



**Figure 3C-17. Example of Markings for a Diamond Interchange with Two Circular-Shaped Roundabout Ramp Terminals**

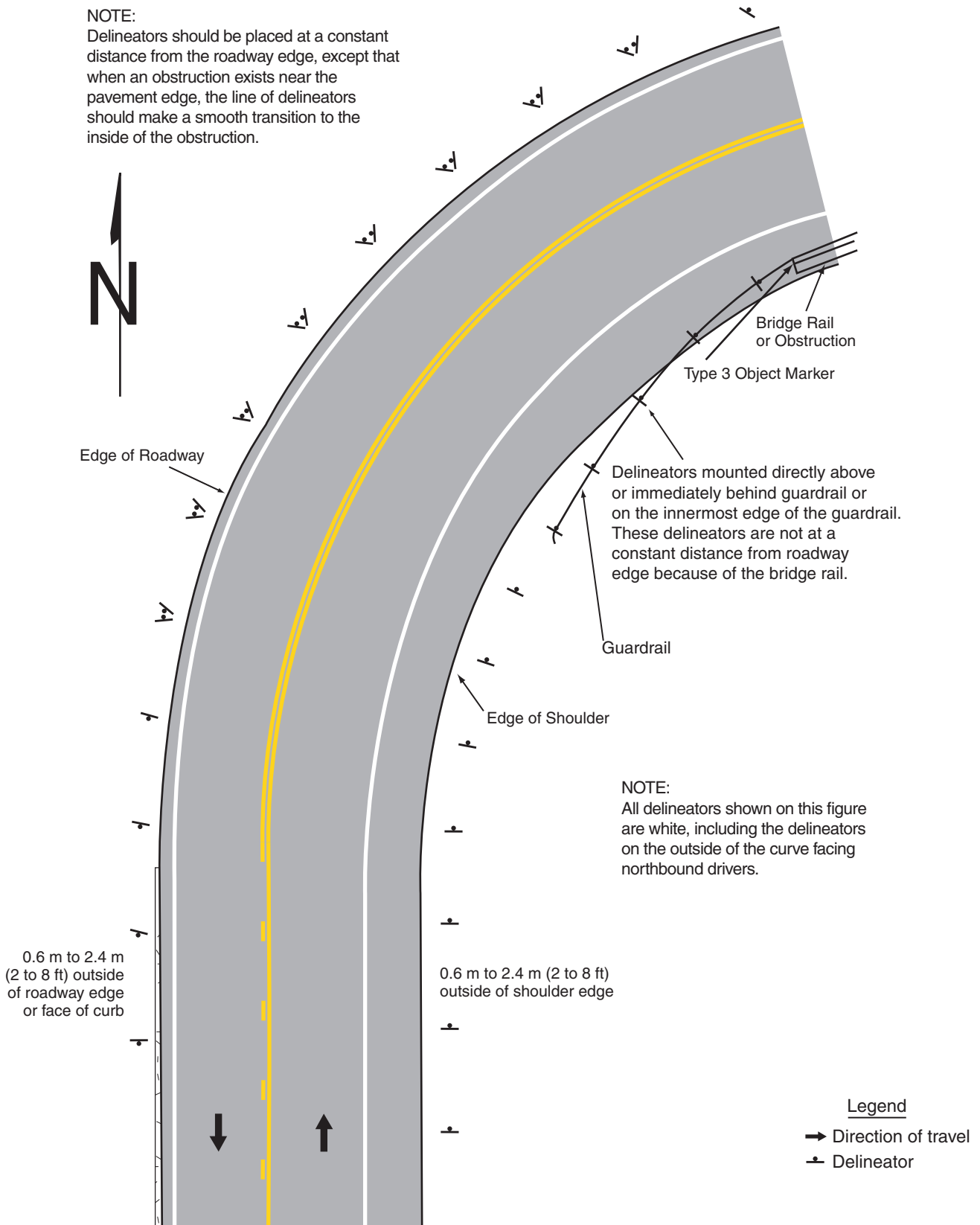




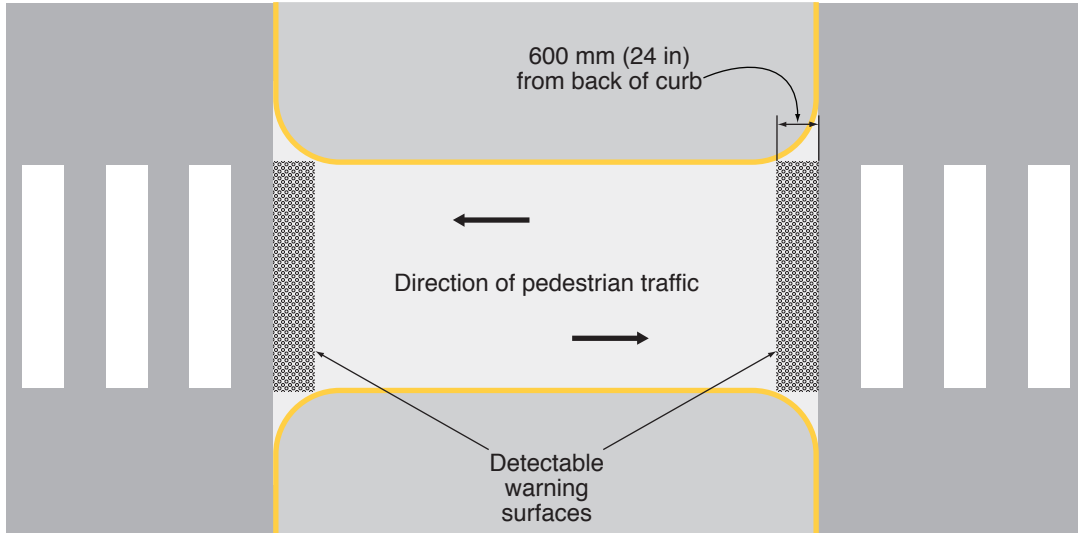


**Figure 3D-1. Examples of Delineator Placement**

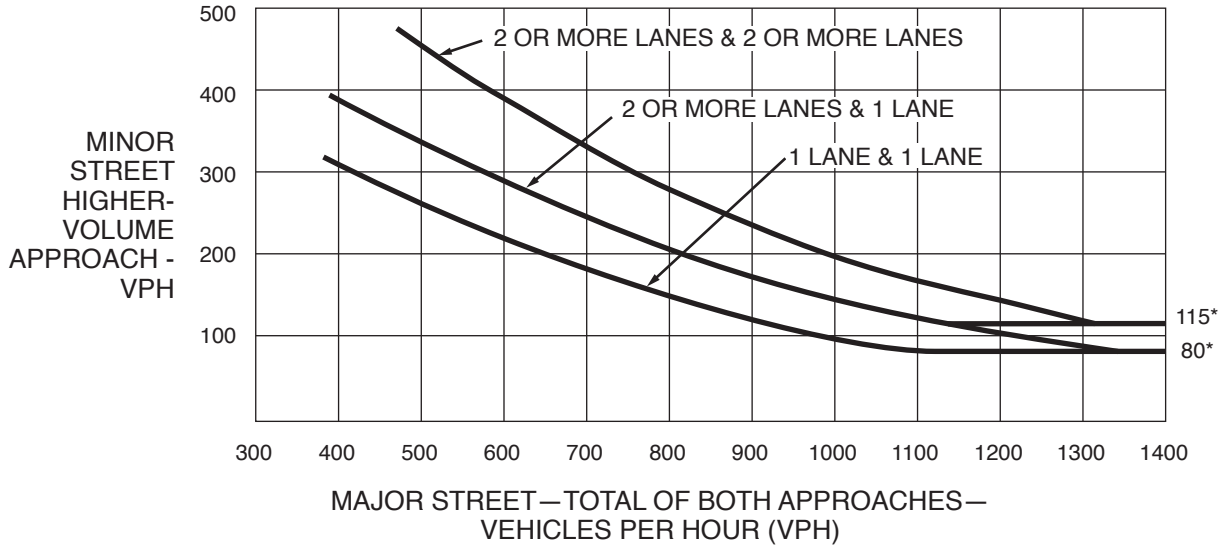
**NOTE:**  
Delineators should be placed at a constant distance from the roadway edge, except that when an obstruction exists near the pavement edge, the line of delineators should make a smooth transition to the inside of the obstruction.



**Figure 3G-1. Examples of Detectable Warnings at an Island Cut-Through**



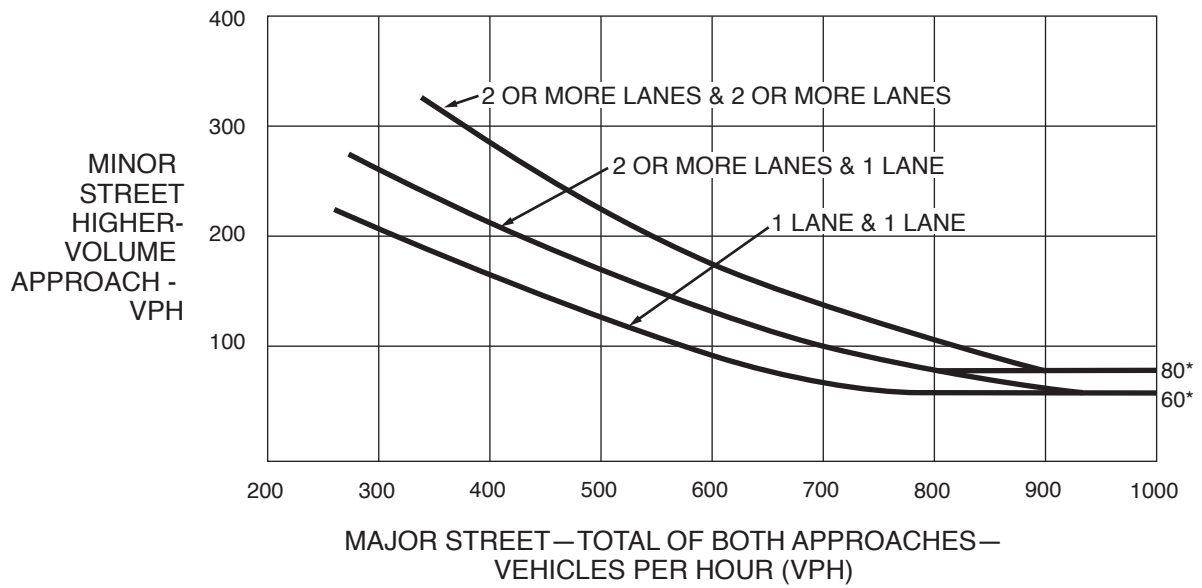
**Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume**



\*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

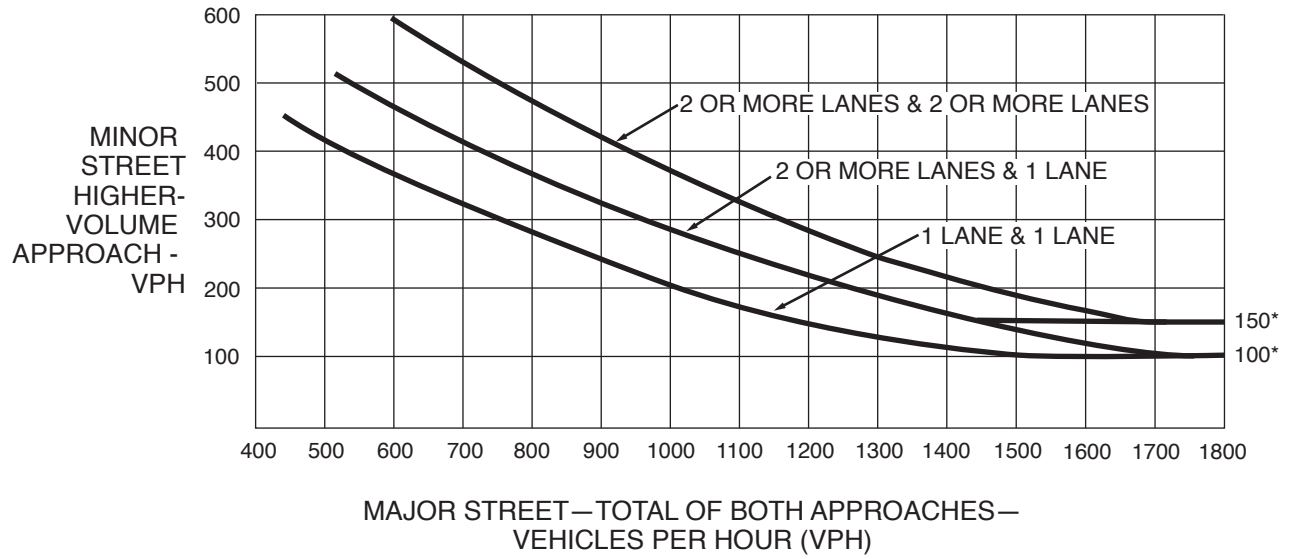
**Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



\*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

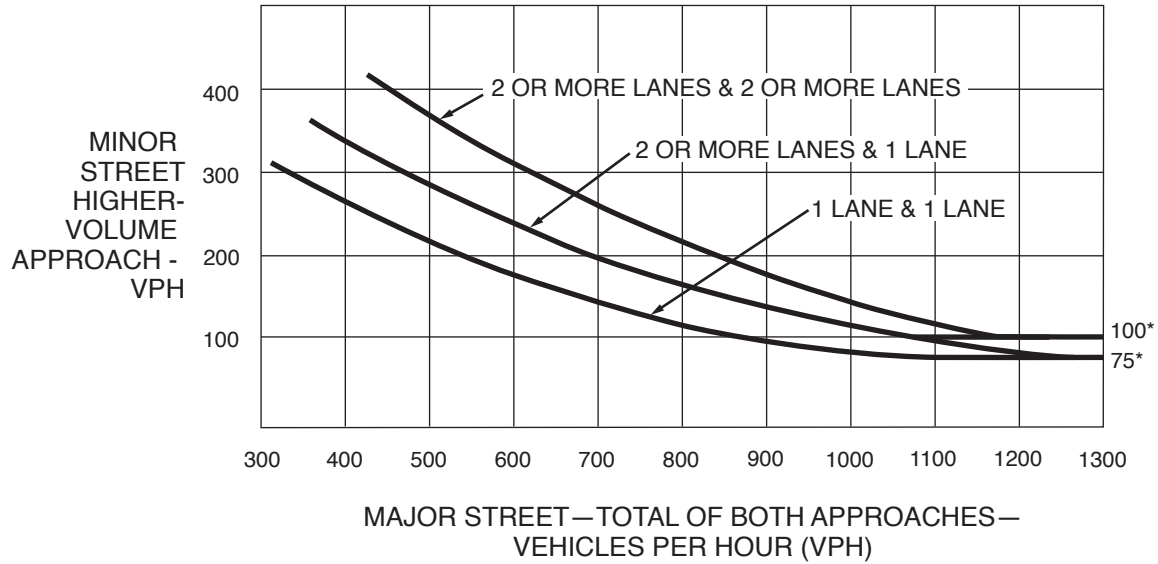
**Figure 4C-3. Warrant 3, Peak Hour**



\*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

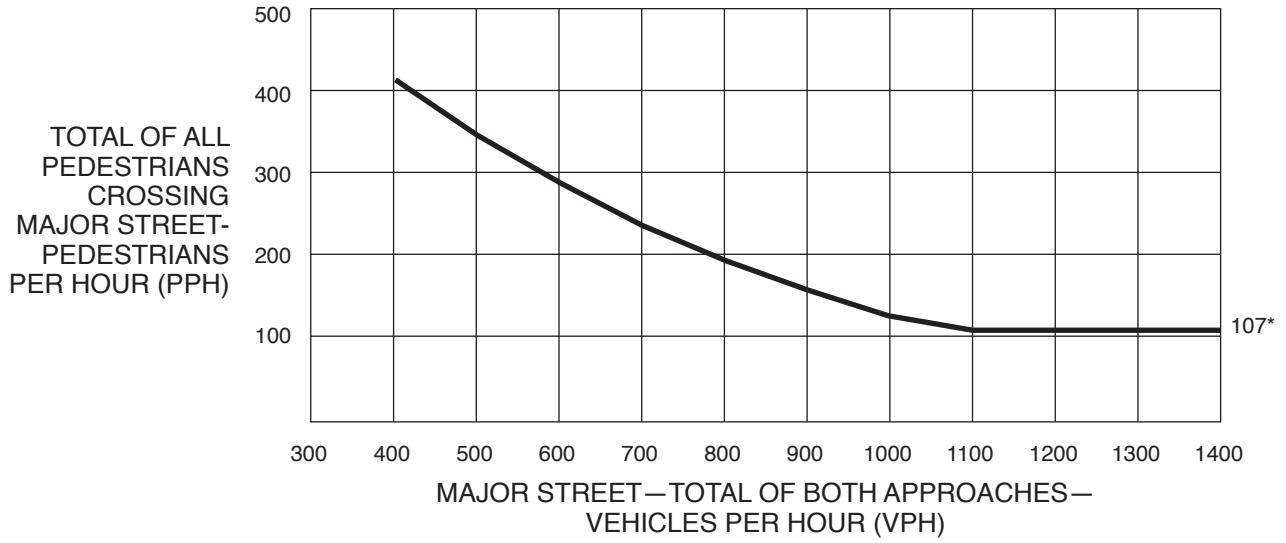
**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



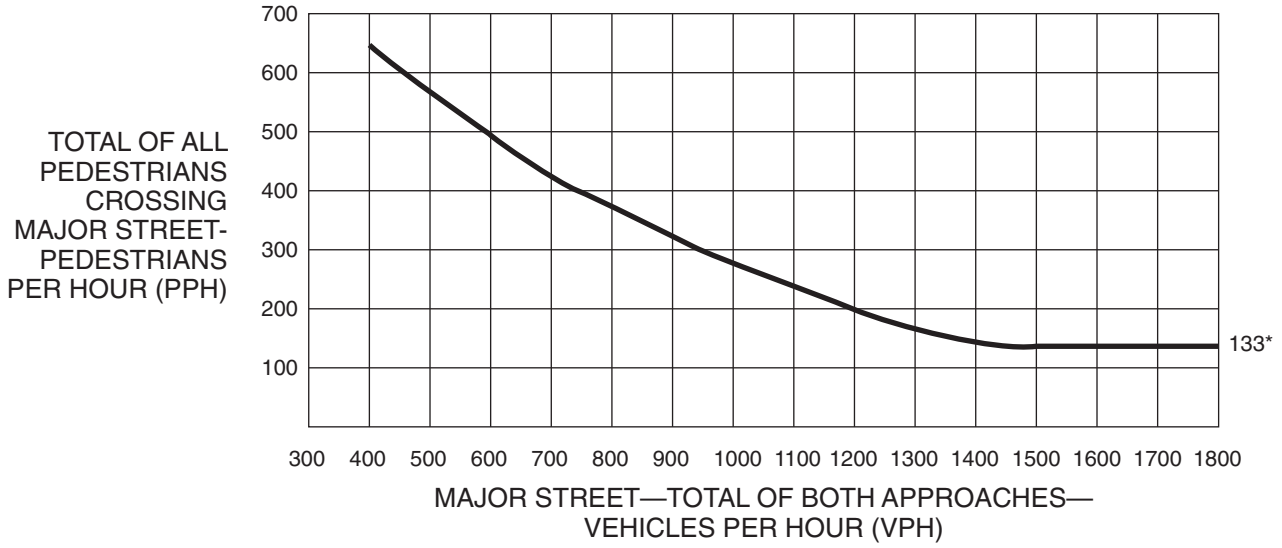
\*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

**Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume**



\*Note: 107 pph applies as the lower threshold volume.

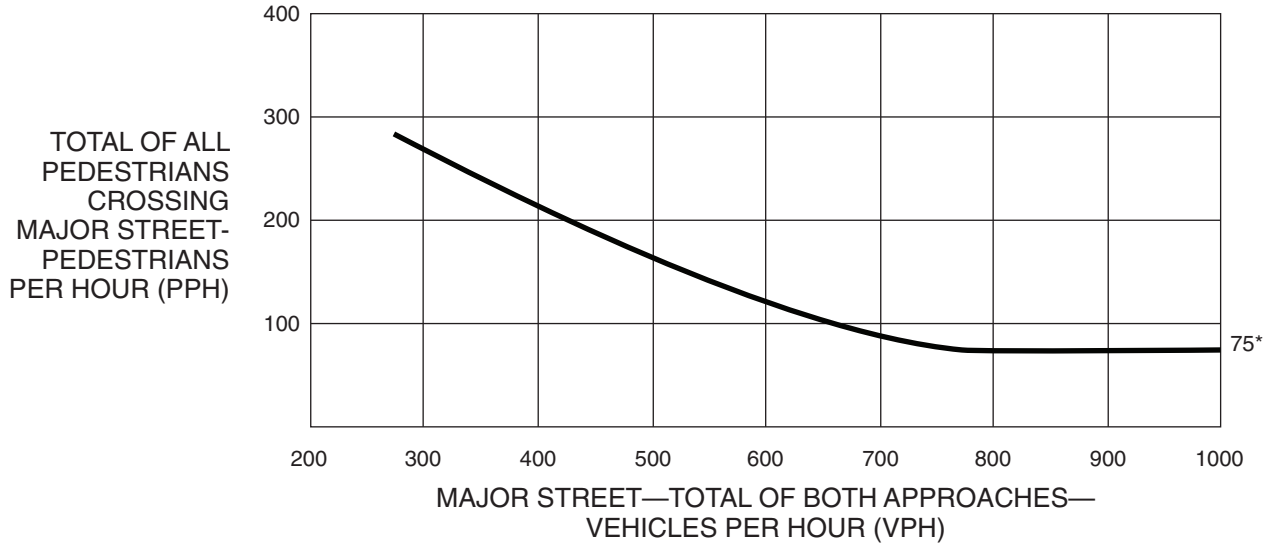
**Figure 4C-6. Warrant 4, Pedestrian Peak Hour**



\*Note: 133 pph applies as the lower threshold volume.

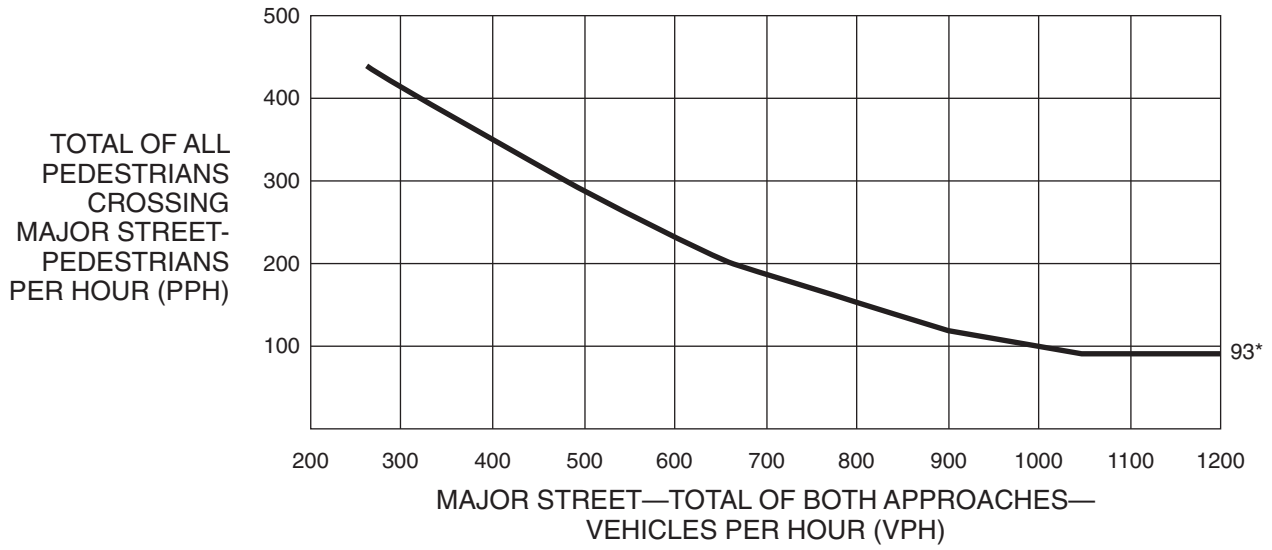


**Figure 4C-7. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)**



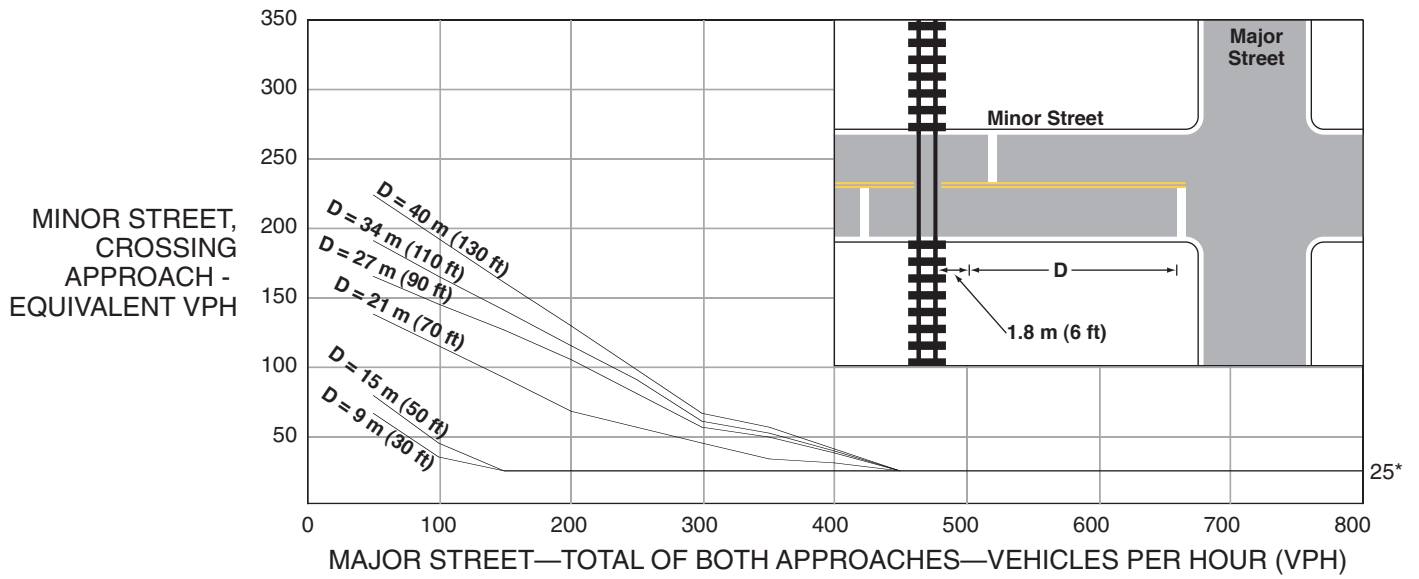
\*Note: 75 pph applies as the lower threshold volume.

**Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)**



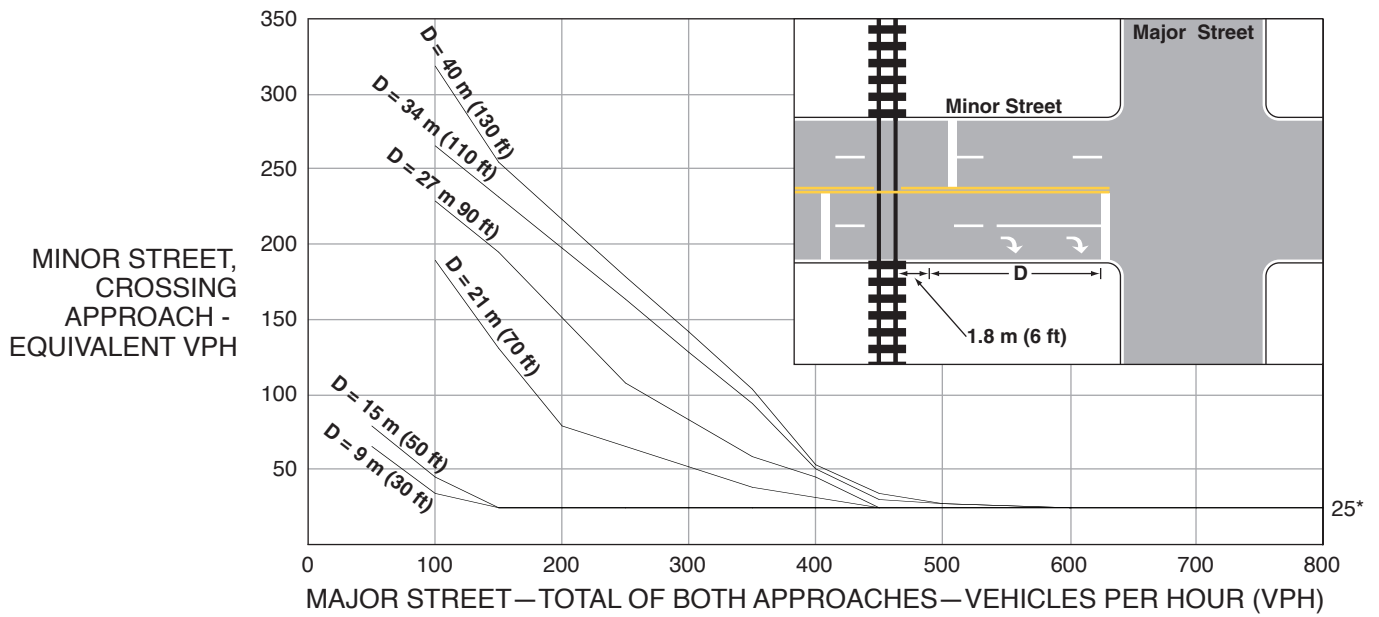
\*Note: 93 pph applies as the lower threshold volume.

**Figure 4C-9. Warrant 9, Intersection Near a Highway-Rail Grade Crossing  
(One Approach Lane at the Track Crossing)**



\* Note: 25 vph applies as the lower threshold volume.

**Figure 4C-10. Warrant 9, Intersection Near a Highway-Rail Grade Crossing  
(Two or More Approach Lanes at the Track Crossing)**

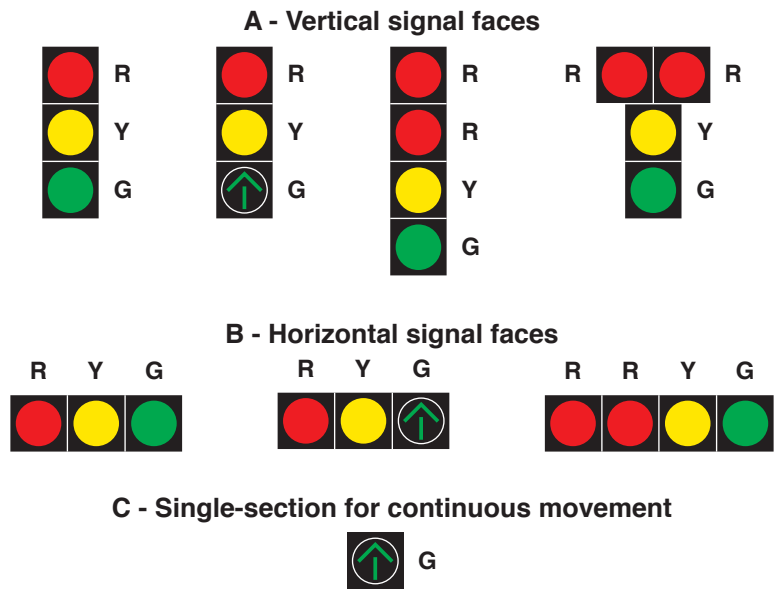


\* Note: 25 vph applies as the lower threshold volume.

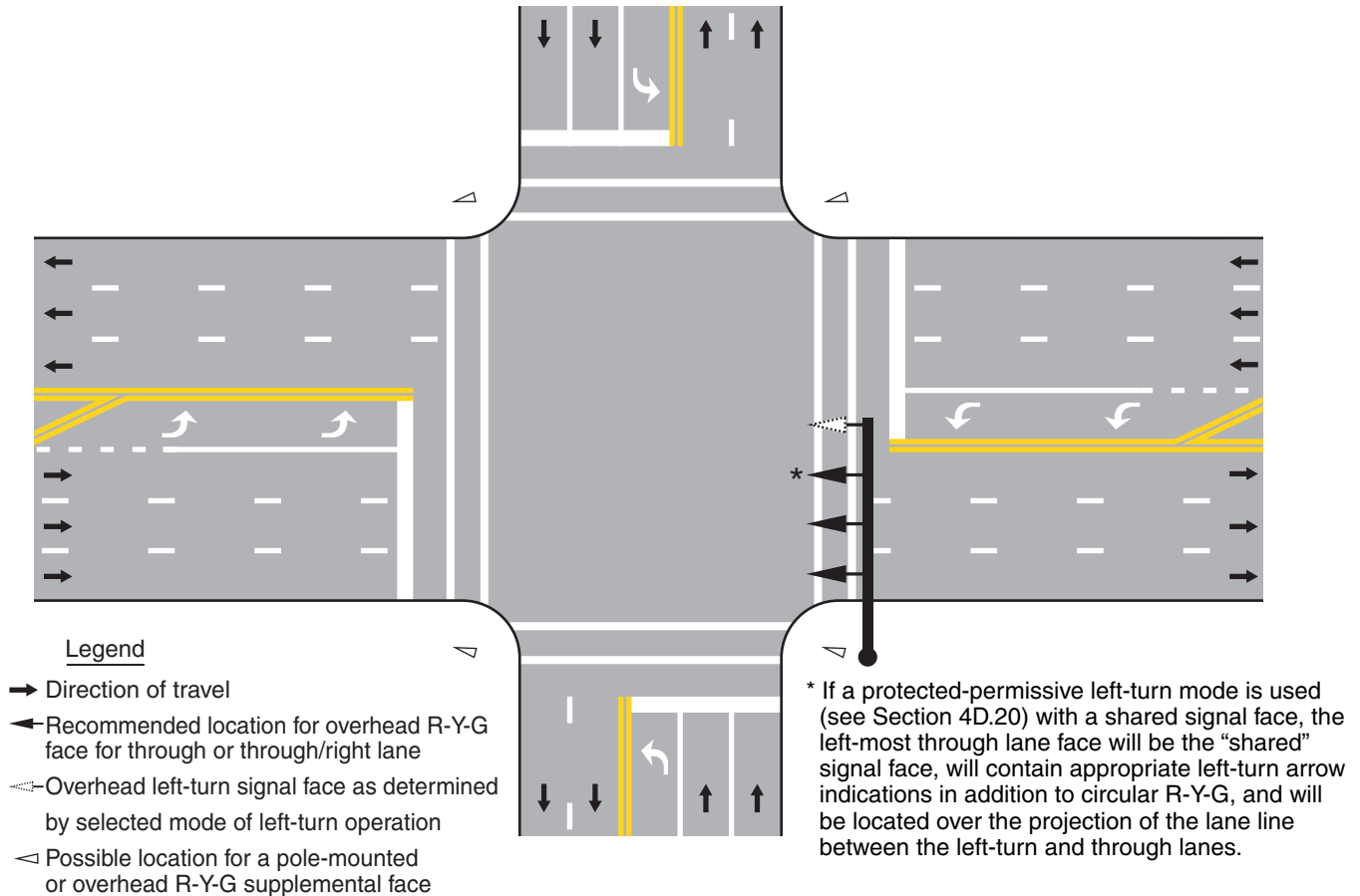
**Figure 4D-1. Example of U-Turn Signal Face**



**Figure 4D-2. Typical Arrangements of Signal Sections in Signal Faces That Do Not Control Turning Movements**



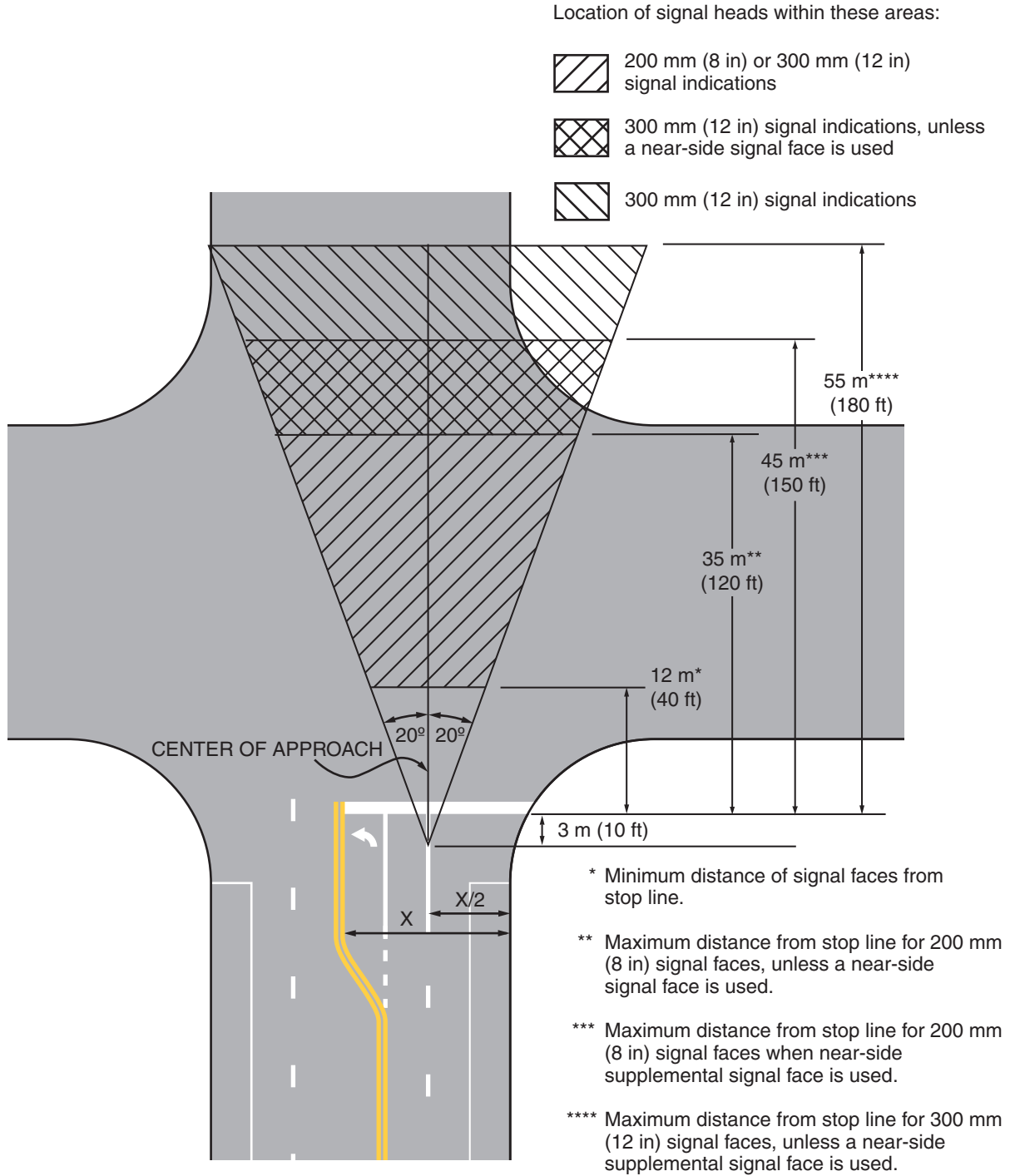
**Figure 4D-3. Recommended Vehicular Signal Faces for Approaches with 85th Percentile Speed Over 60 km/h or 40 mph**



**Notes:**

1. Signal faces for only one direction and only one possible set of geometrics (number of lanes, etc.) are illustrated.
2. One or more pole-mounted or overhead supplemental faces should be strongly considered, based on the geometrics of the approach, to maximize visibility for approaching traffic.
3. Any left-turn and/or right-turn signal faces, as determined by Sections 4D.17 through 4D.24, should be overhead for each exclusive turn lane.
4. All signal faces should have backplates.

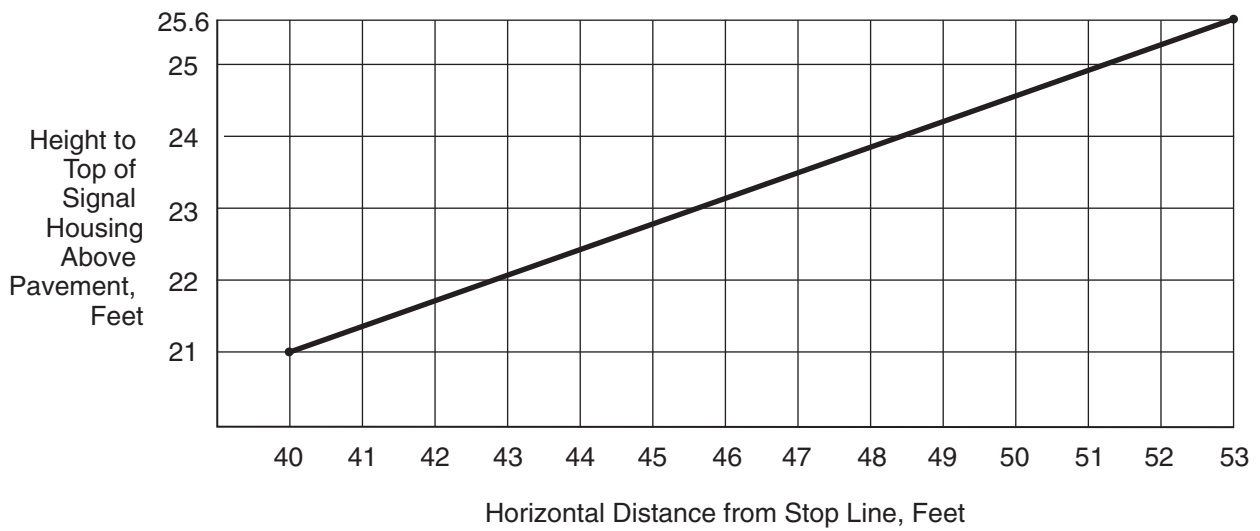
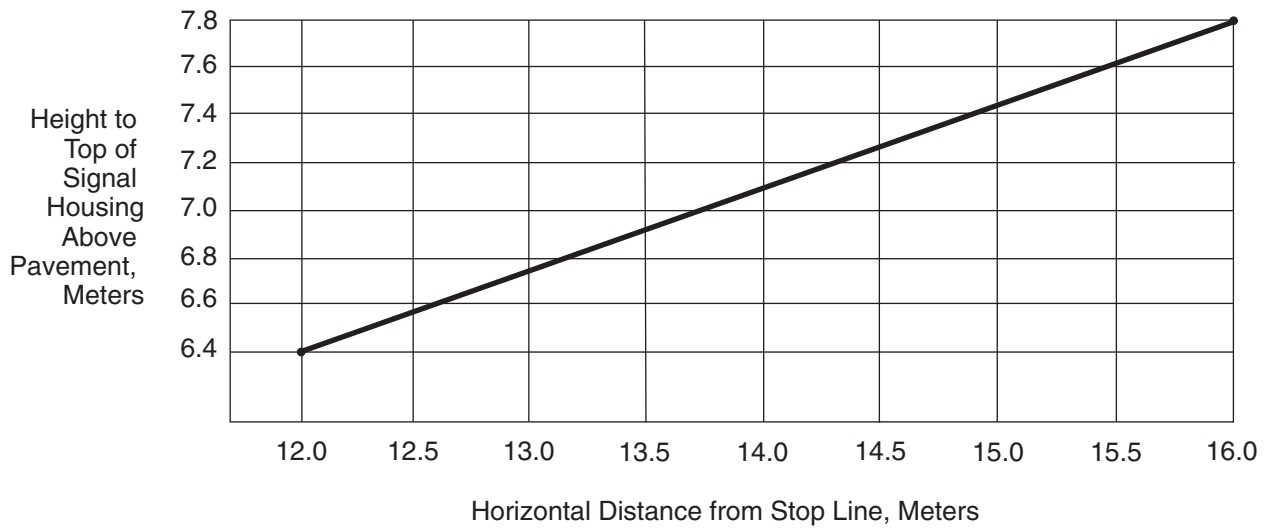
**Figure 4D-4. Lateral and Longitudinal Location of Signal Faces**



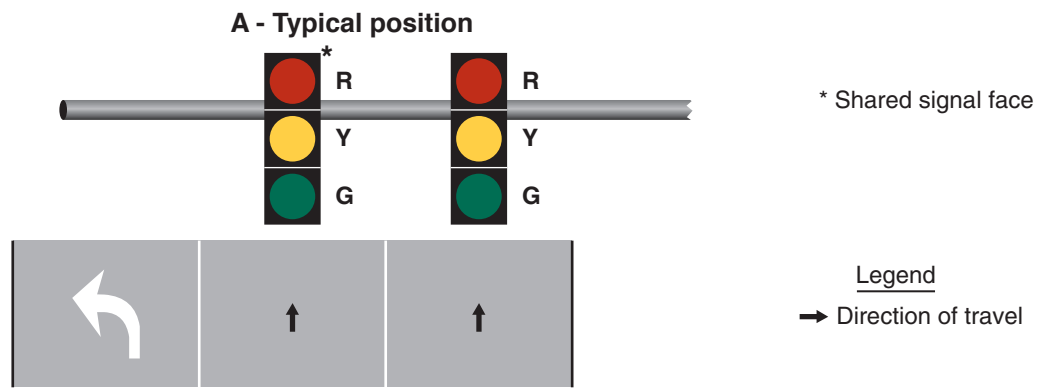
Note: Although existing 200 mm (8 in) signal faces may be retained for the remainder of their useful service life, all new signal faces shall have 300 mm (12 in) signal indications (see Section 4D.05).



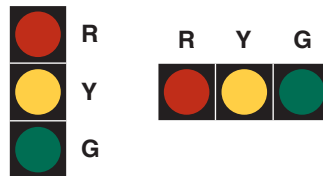
**Figure 4D-5. Maximum Mounting Height of Signal Faces Located Between 12 Meters (40 Feet) and 16 Meters (53 Feet) from Stop Line**



**Figure 4D-6. Typical Position and Arrangements of Shared Signal Faces for Permissive Only Mode Left Turns**

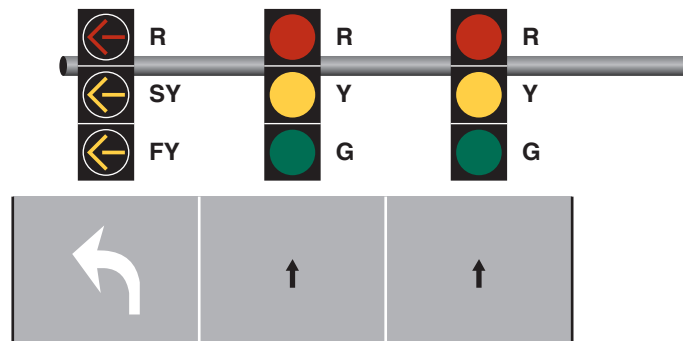


**B - Typical arrangements**



**Figure 4D-7. Typical Position and Arrangements of Flashing Yellow Arrow Signal Faces for Permissive Only Mode Left Turns**

**A - Typical position**

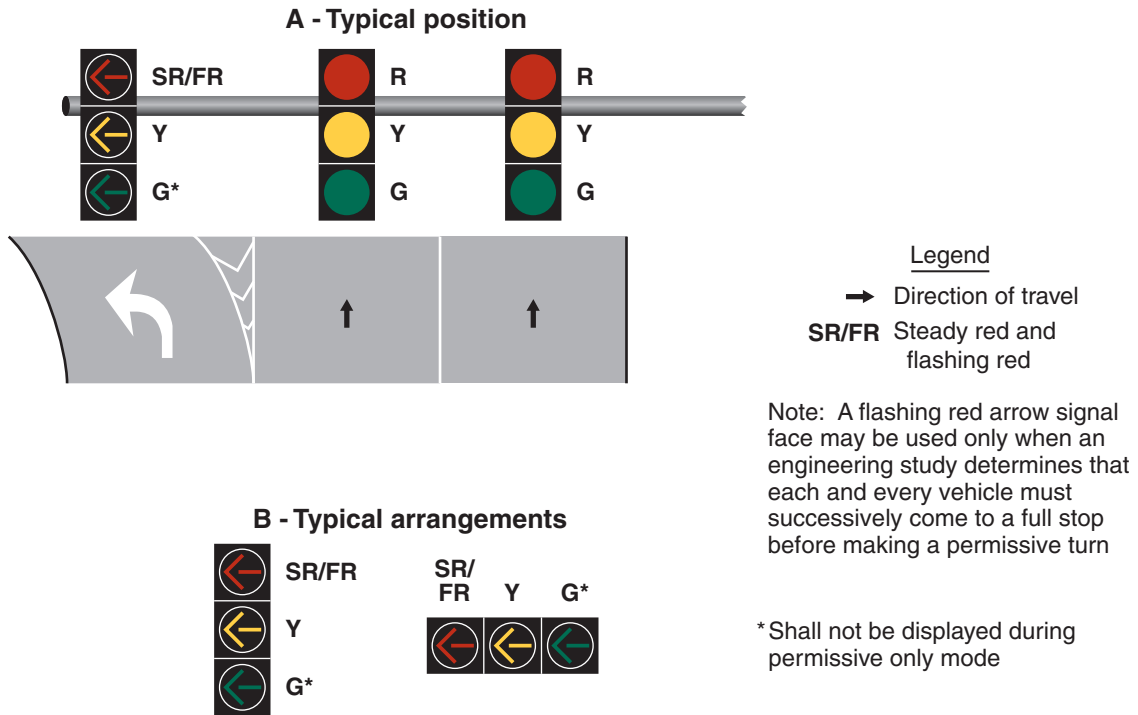


- Legend
- Direction of travel
  - SY Steady yellow
  - FY Flashing yellow

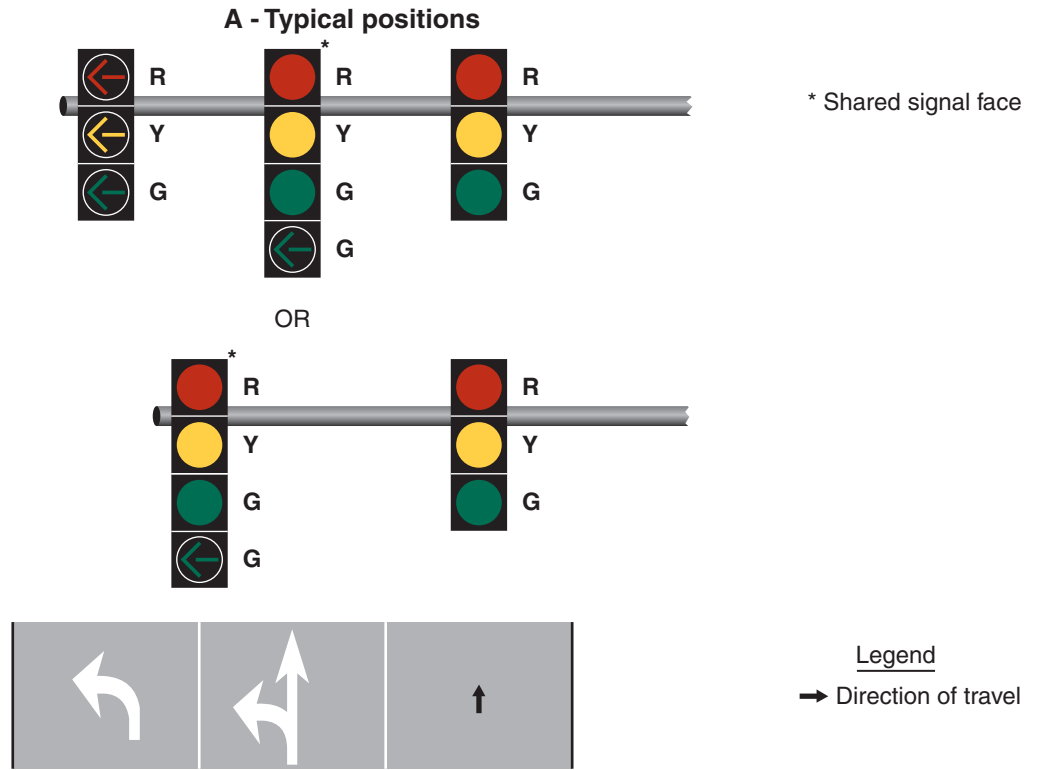
**B - Typical arrangements**



**Figure 4D-8. Typical Position and Arrangements of Flashing Red Arrow Signal Faces for Permissive Only Mode and Protected/Permissive Mode Left Turns**



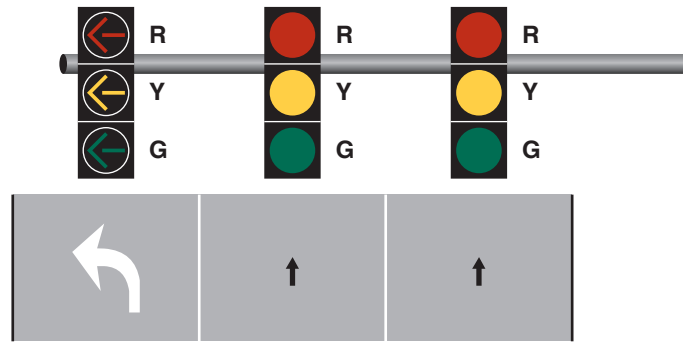
**Figure 4D-9. Typical Positions and Arrangements of Shared Signal Faces for Protected Only Mode Left Turns**



Note: Shared signal faces shall only be used for a protected-only mode left turn if the circular green and green left-turn arrow indications always begin and terminate together

**Figure 4D-10. Typical Position and Arrangements of Separate Signal Faces for Protected Only Mode Left Turns**

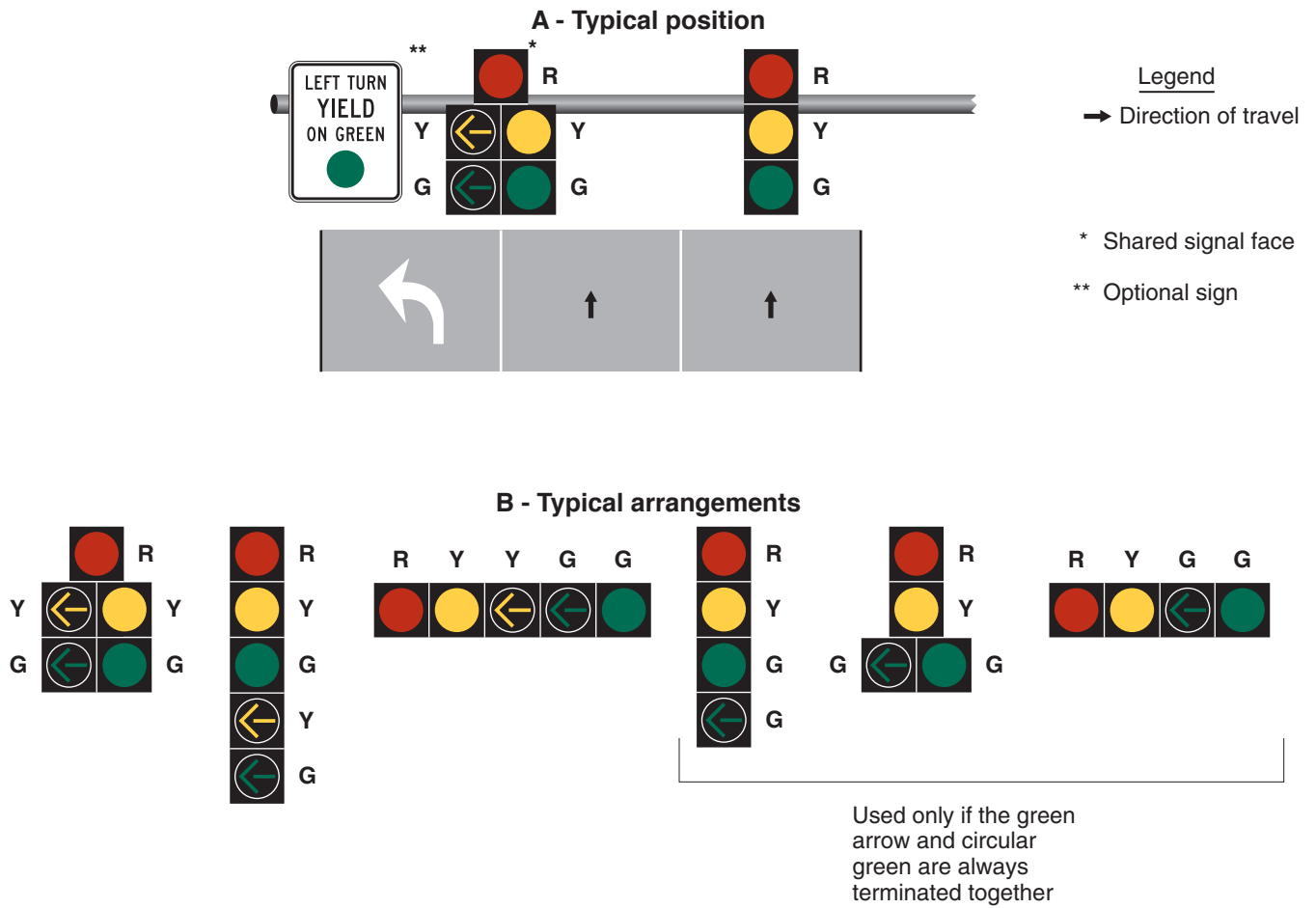
**A - Typical position**



**B - Typical arrangements**

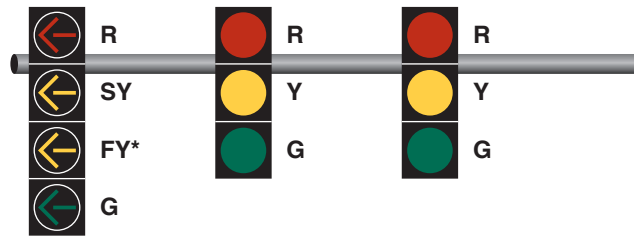


**Figure 4D-11. Typical Position and Arrangements of Shared Signal Faces for Protected/Permissive Mode Left Turns**



**Figure 4D-12. Typical Position and Arrangements of Flashing Yellow Arrow Signal Faces for Protected/Permissive Mode and Protected Only Mode Left Turns**

**A - Typical position**



- Legend
- Direction of travel
  - SY Steady yellow
  - FY Flashing yellow

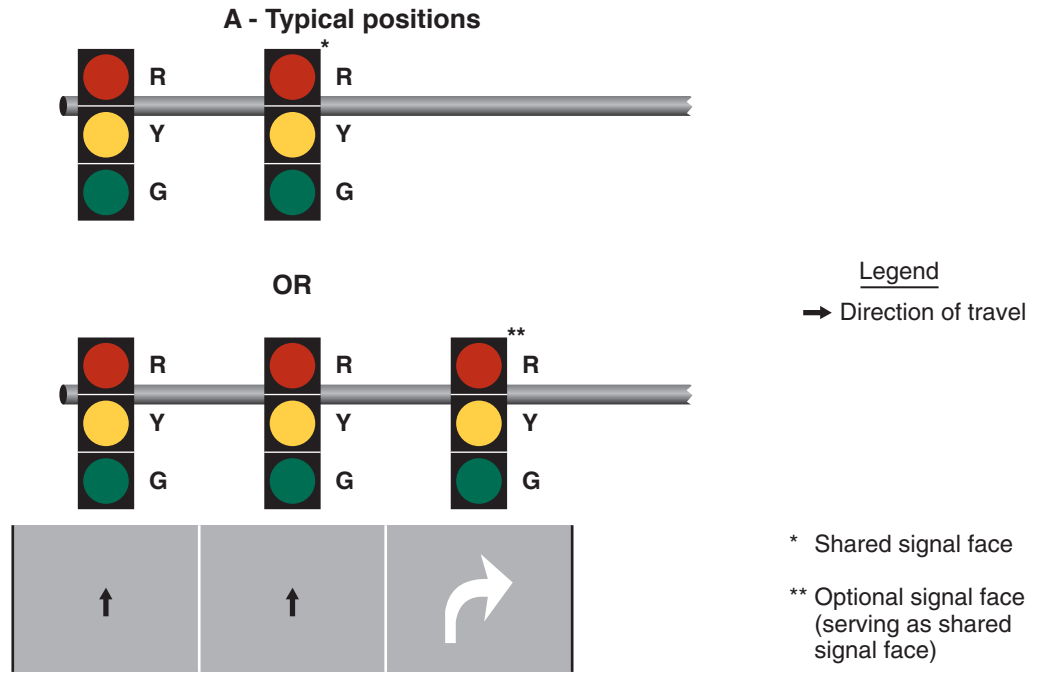
**B - Typical arrangements**



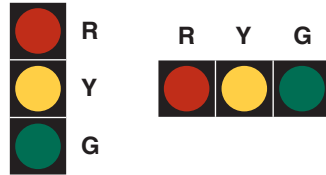
\* Shall not be displayed during protected only mode



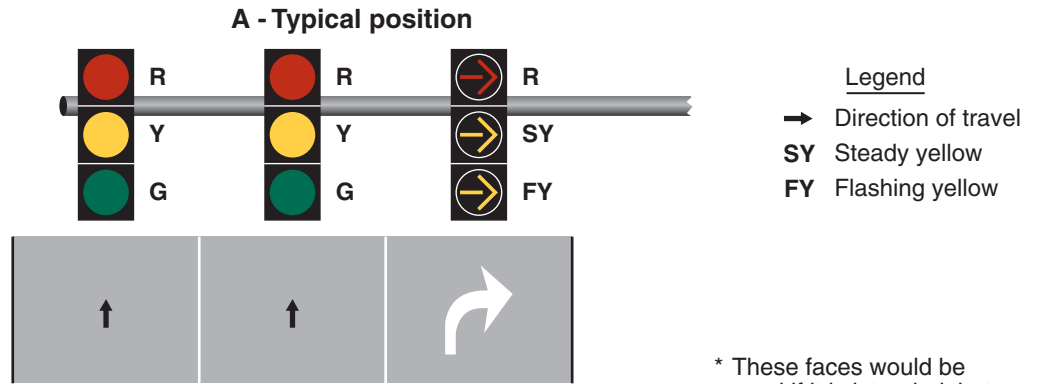
**Figure 4D-13. Typical Positions and Arrangements of Shared Signal Faces for Permissive Only Mode Right Turns**



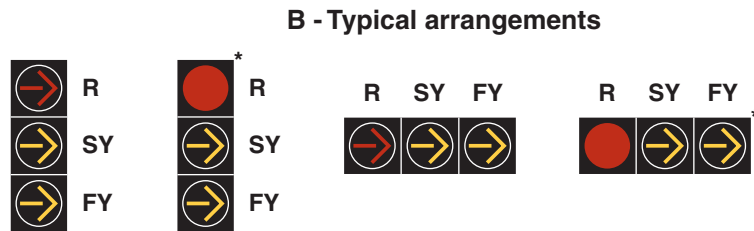
**B - Typical arrangements**



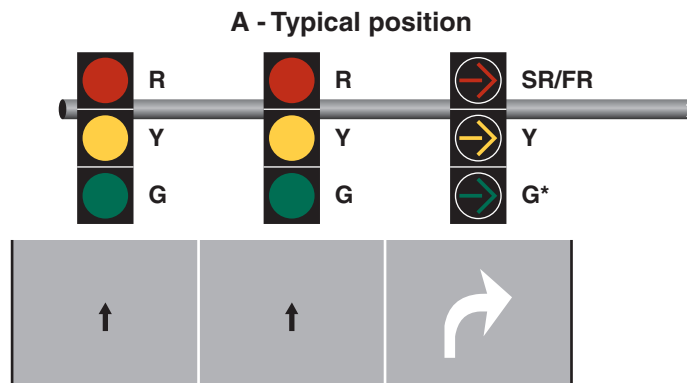
**Figure 4D-14. Typical Position and Arrangements of Flashing Yellow Arrow Signal Faces for Permissive Only Mode Right Turns**



\* These faces would be used if it is intended that a right turn on red after stop be permitted; a RIGHT TURN SIGNAL (R10-10R) sign shall be used with these faces if the red indication is sometimes displayed when the signal faces for the adjacent through lane(s) are not displaying a red indication and the red indication in the right-turn signal face is not visibility limited



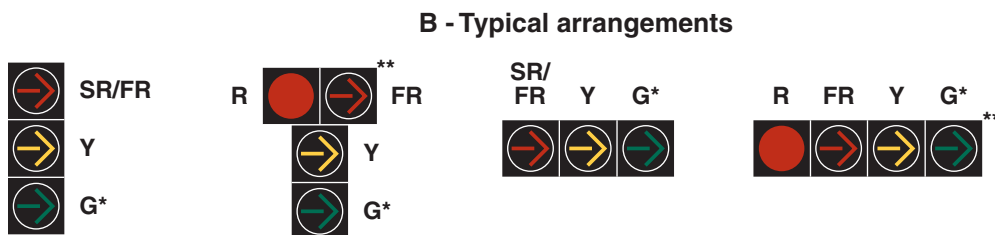
**Figure 4D-15. Typical Position and Arrangements of Flashing Red Arrow Signal Faces for Permissive Only Mode and Protected/Permissive Mode Right Turns**



- Legend**
- Direction of travel
  - SR/FR Steady red and flashing red
  - FR Flashing red

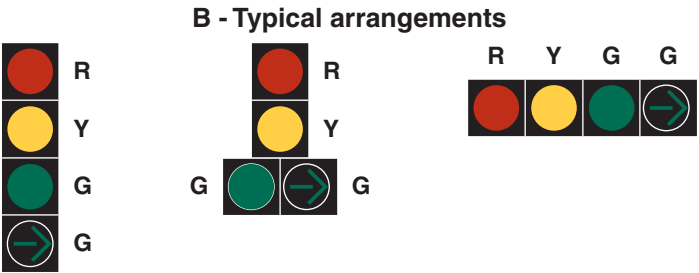
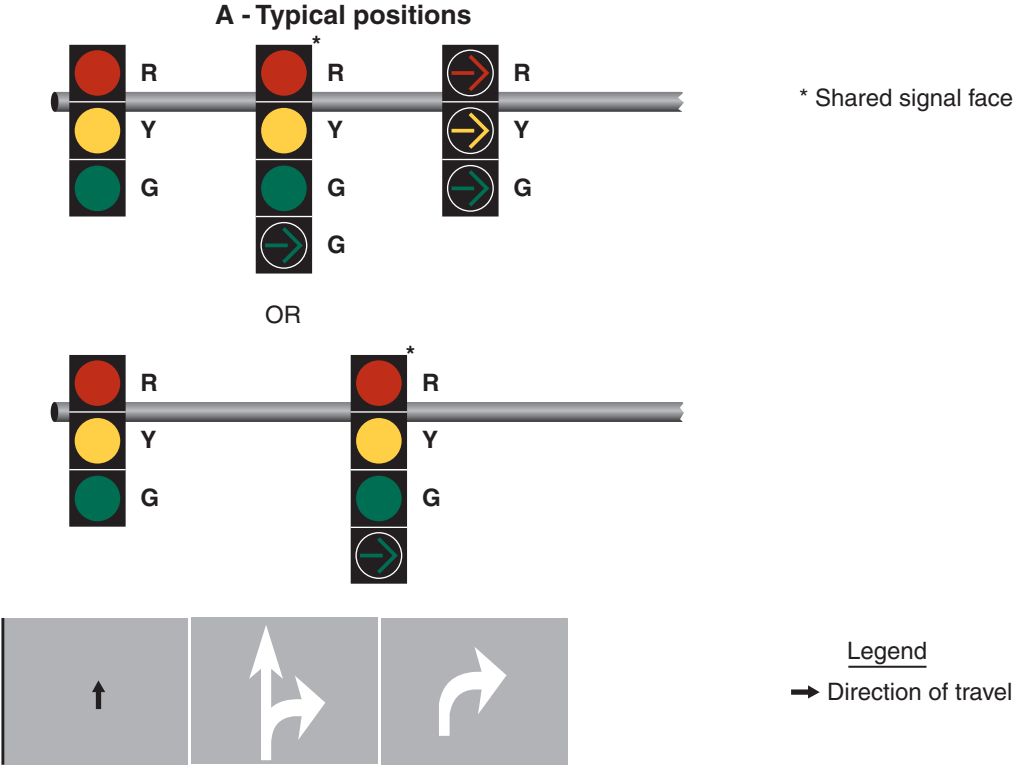
\* Shall not be displayed during permissive only mode

\*\* These faces would be used if it is intended that a right turn on red after stop be permitted; a RIGHT TURN SIGNAL (R10-10R) sign shall be used with these faces if the red indication is sometimes displayed when the signal faces for the adjacent through lane(s) are not displaying a red indication and the red indication in the right-turn signal face is not visibility limited



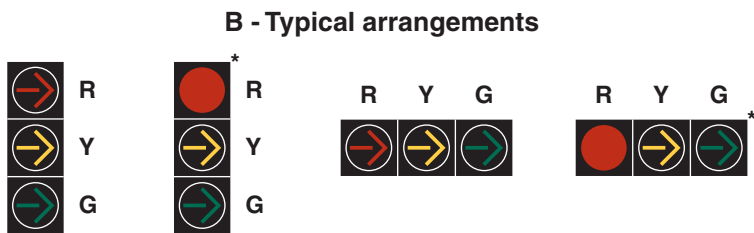
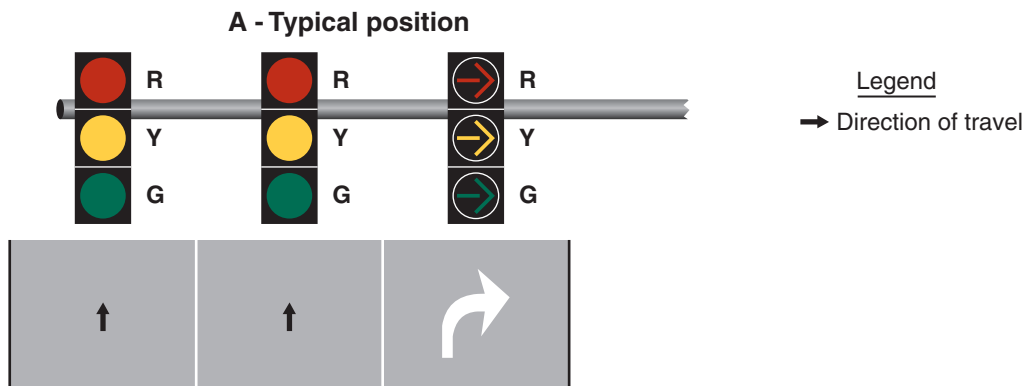
Note: A flashing red arrow signal face may be used only when an engineering study determines that each and every vehicle must successively come to a full stop before making a permissive turn

**Figure 4D-16. Typical Positions and Arrangements of Shared Signal Faces for Protected Only Mode Right Turns**



Note: Shared signal faces shall only be used for a protected-only mode right turn if the circular green and green right-turn arrow indications always begin and terminate together

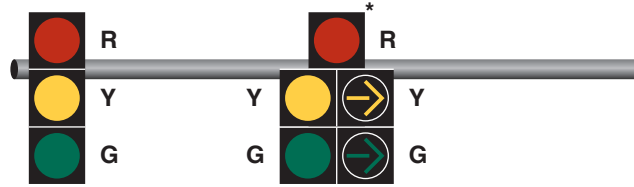
**Figure 4D-17. Typical Position and Arrangements of Separate Signal Faces for Protected Only Mode Right Turns**



\* These faces would be used if it is intended that a right turn on red after stop be permitted; a RIGHT TURN SIGNAL (R10-10R) sign shall be used with these faces if the red indication is not visibility limited

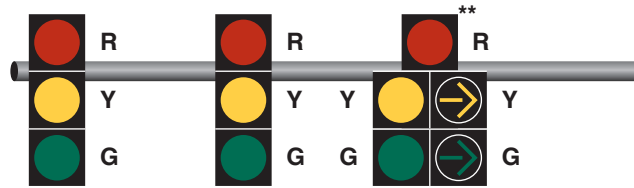
**Figure 4D-18. Typical Positions and Arrangements of Shared Signal Faces for Protected/Permissive Mode Right Turns**

**A - Typical positions**



Legend  
 → Direction of travel

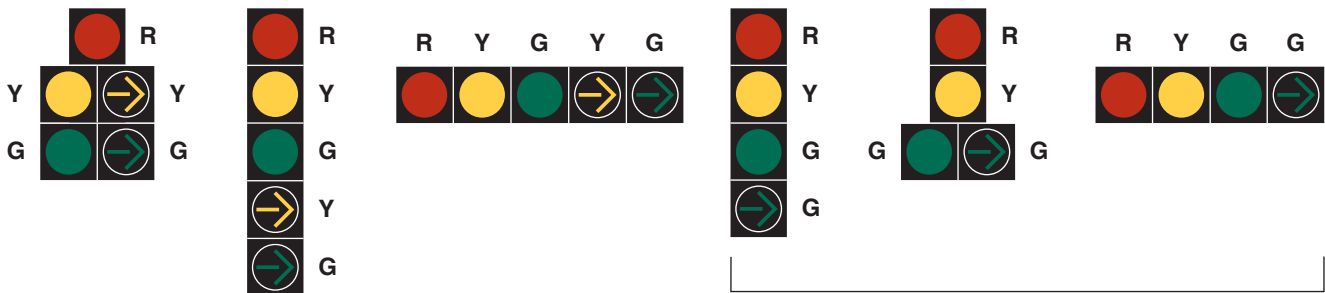
OR



\* Shared signal face  
 \*\* Optional signal face (serving as shared signal face)



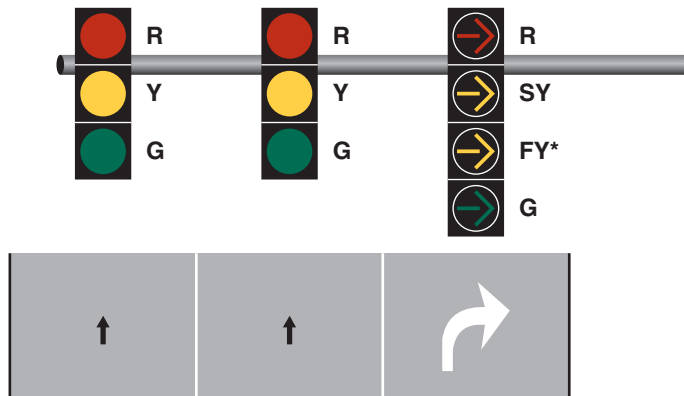
**B - Typical arrangements**



Used only if the green arrow and circular green are always terminated together

**Figure 4D-19. Typical Position and Arrangements of Flashing Yellow Arrow Signal Faces for Protected/Permissive Mode and Protected Only Mode Right Turns**

**A - Typical position**



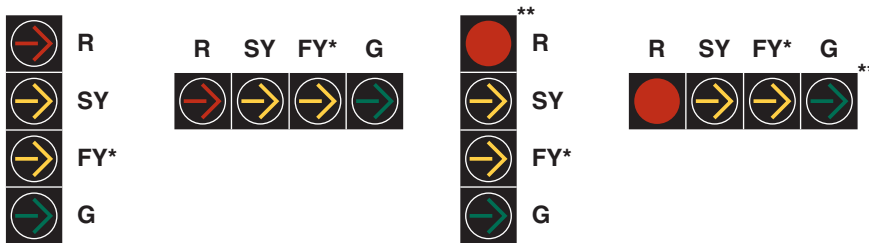
Legend

- Direction of travel
- SY Steady yellow
- FY Flashing yellow

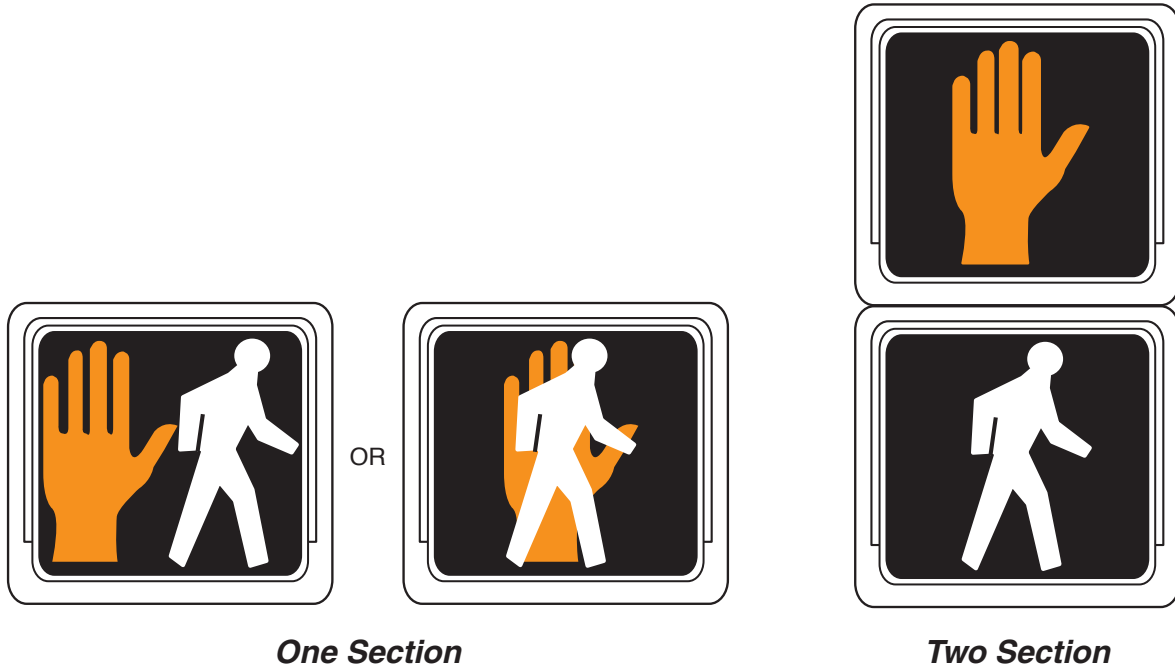
\* Shall not be displayed during protected only mode

\*\* These faces would be used if it is intended that a right turn on red after stop be permitted; a RIGHT TURN SIGNAL (R10-10R) sign shall be used with these faces if the red indication is not visibility limited

**B - Typical arrangements**

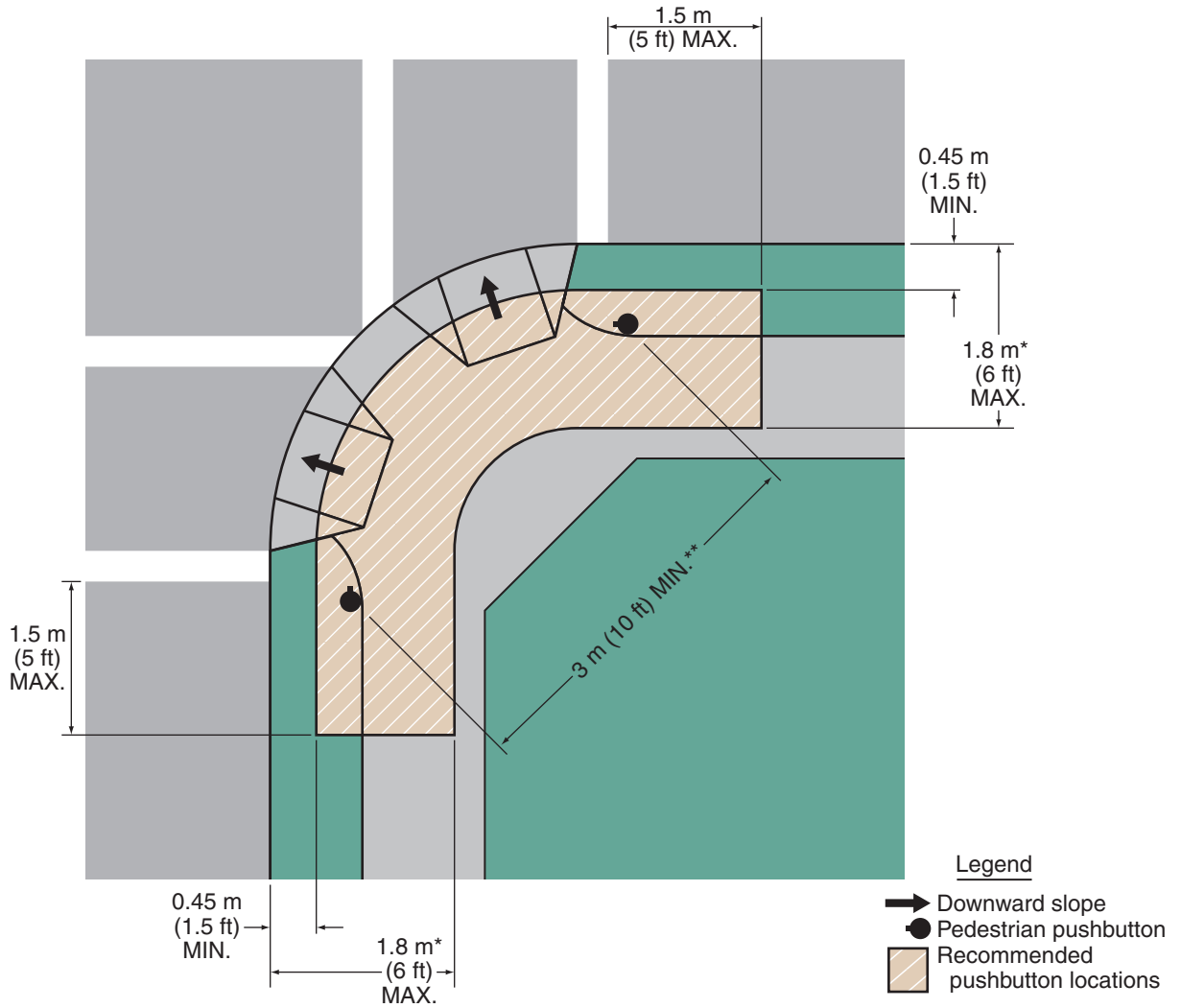


**Figure 4E-1. Typical Pedestrian Signal Indications**





**Figure 4E-2. Recommended Pushbutton Locations**

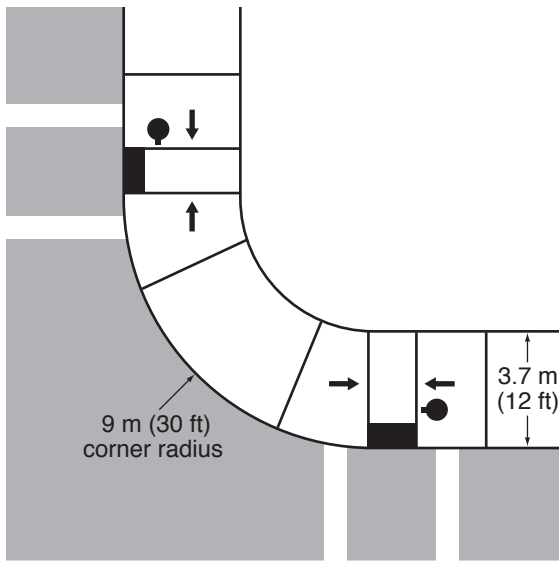


\* Where there are constraints that make it impractical to place the pedestrian pushbutton between 0.45 m (1.5 ft) and 1.8 m (6 ft) from the edge of the curb, shoulder, or pavement, it should not be further than 3 m (10 ft) from the edge of curb, shoulder, or pavement.

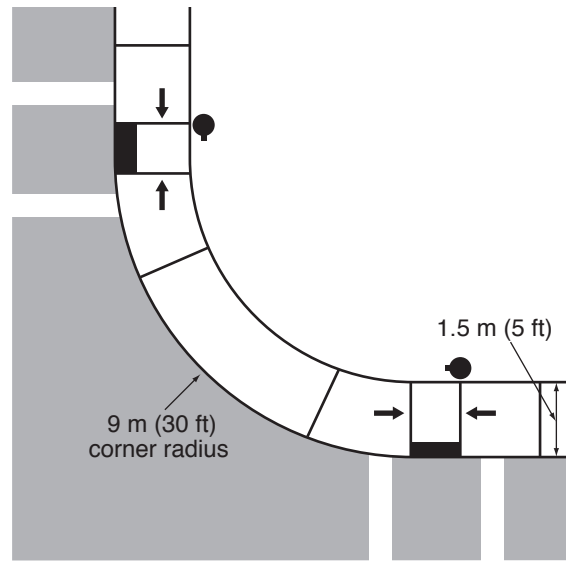
\*\* Where there are constraints on a particular corner that make it impractical to provide the 3 m (10 ft) separation between the two pedestrian pushbuttons, the pushbuttons may be placed closer together or on the same pole.

**Figure 4E-3. Typical Pushbutton Locations (Sheet 1 of 2)**

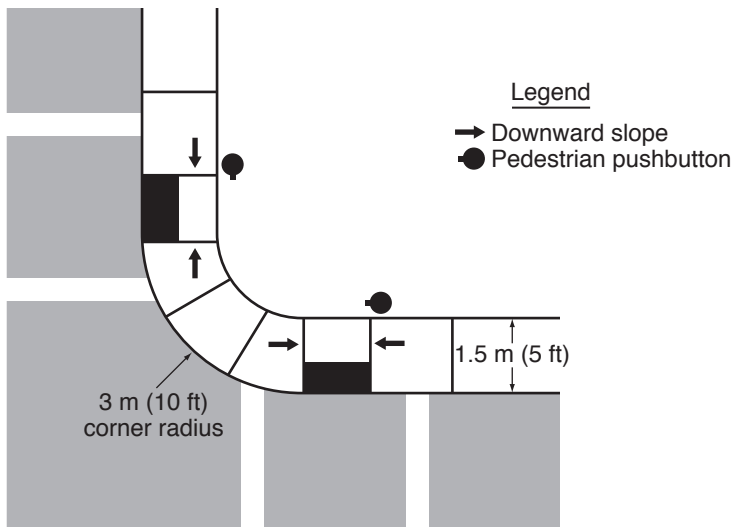
**A - Parallel ramps with wide sidewalk**



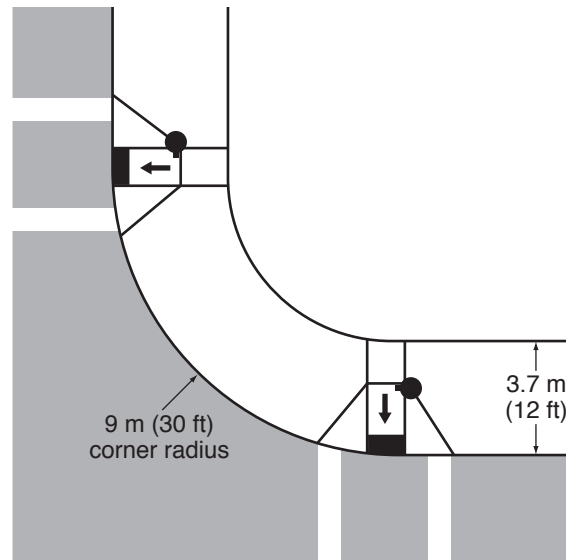
**B - Parallel ramps with narrow sidewalk**



**C - Parallel ramps with narrow sidewalk and tight corner radius**

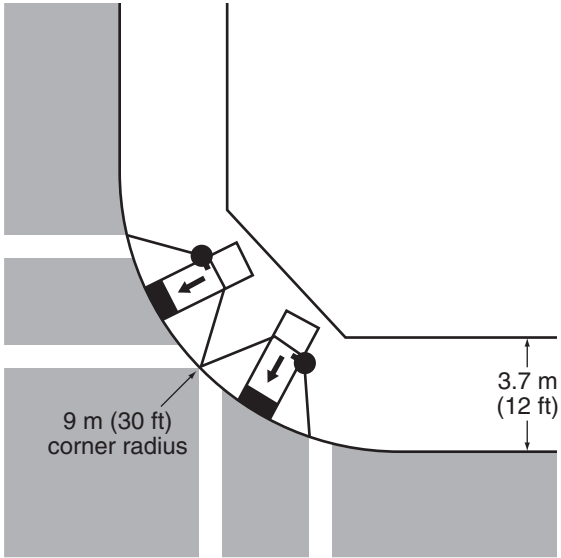


**D - Perpendicular ramps with crosswalks far apart**

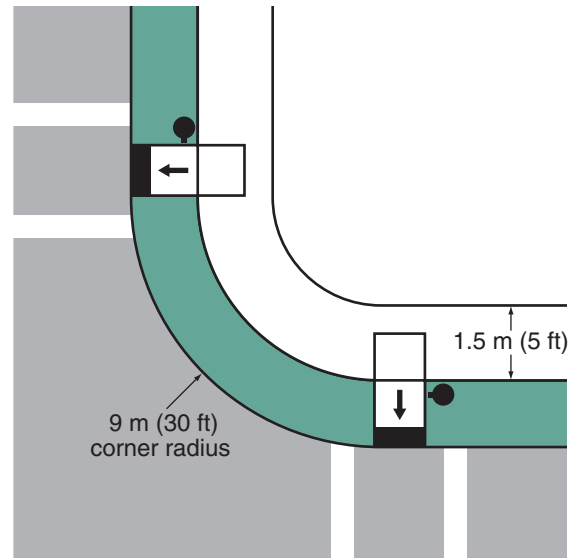


**Figure 4E-3. Typical Pushbutton Locations (Sheet 2 of 2)**

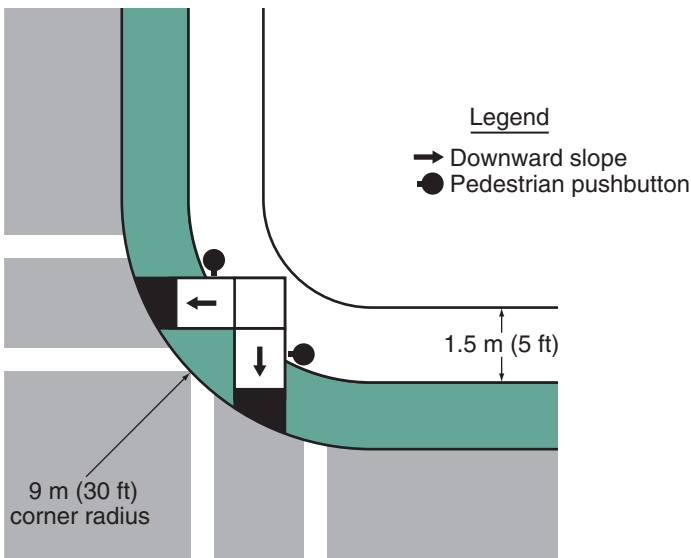
**E - Perpendicular ramps with crosswalks close together**



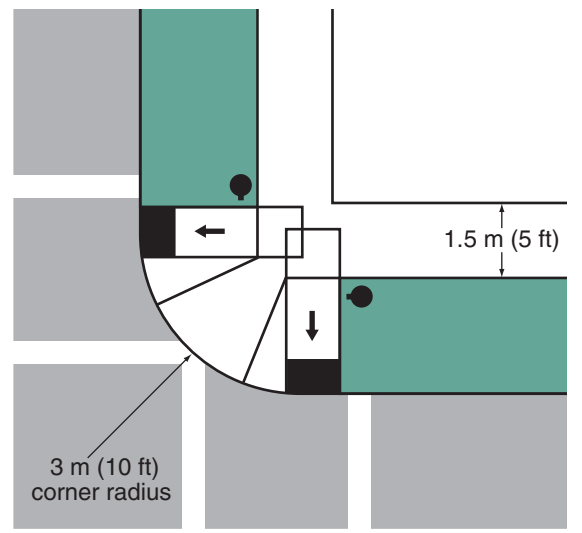
**F - Perpendicular ramps with sidewalk set back from road with crosswalks far apart**



**G - Perpendicular ramps with sidewalk set back from road with crosswalks close together**

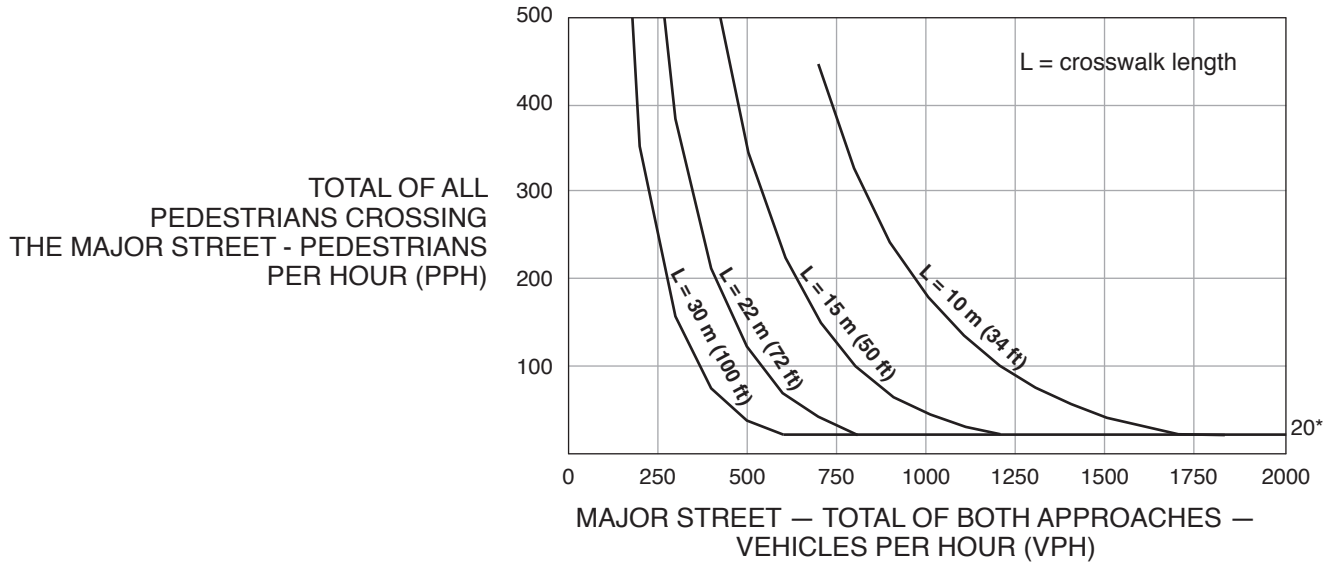


**H - Perpendicular ramps with sidewalk set back from road with continuous sidewalk between ramps**



**Figure 4F-1. Guidelines for the Installation of Pedestrian Hybrid Signals on Low-Speed Roadways**

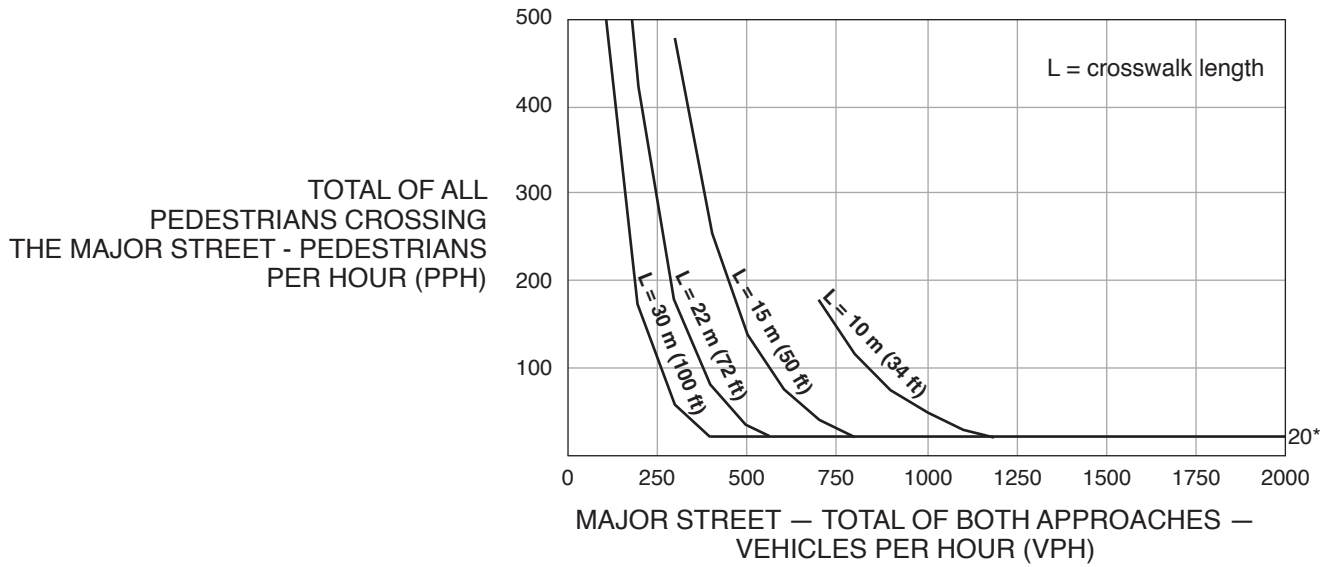
Speeds of 60 km/h or 35 mph or less



\* Note: 20 pph applies as the lower threshold volume.

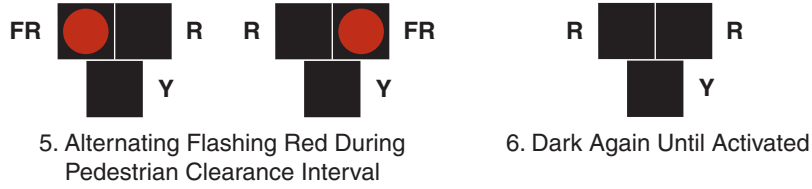
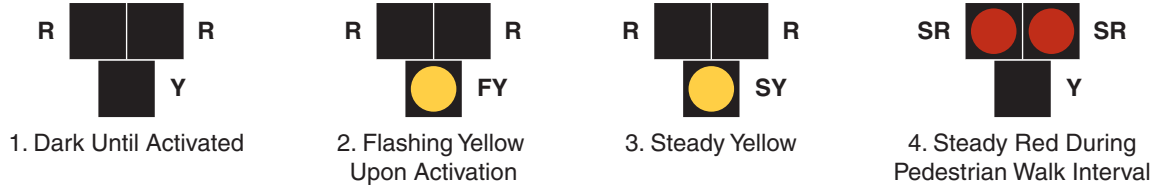
**Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Signals on High-Speed Roadways**

Speeds of more than 60 km/h or 35 mph



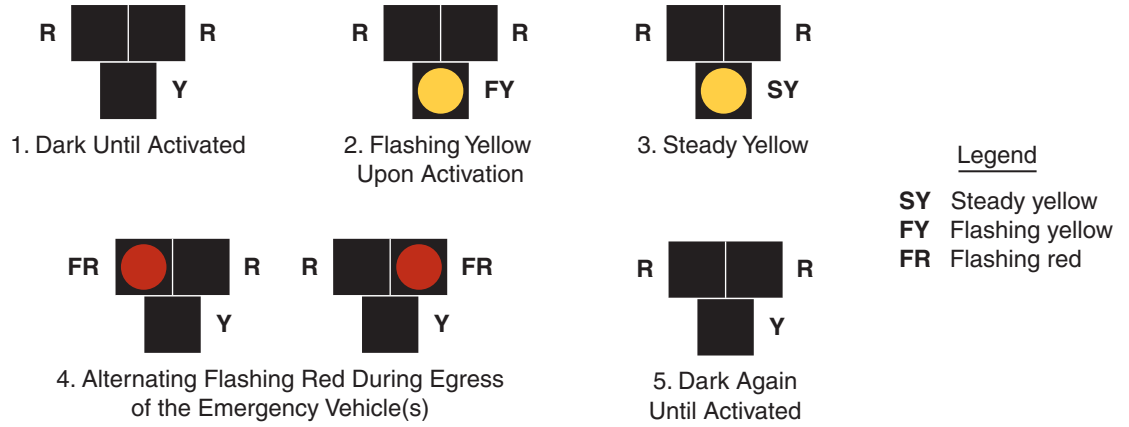
\* Note: 20 pph applies as the lower threshold volume.

**Figure 4F-3. Sequence for a Pedestrian Hybrid Signal**

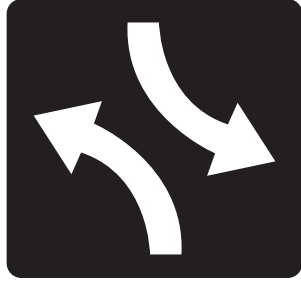


- Legend
- SY** Steady yellow
  - FY** Flashing yellow
  - SR** Steady red
  - FR** Flashing red

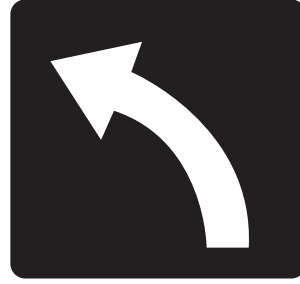
**Figure 4G-1. Sequence for an Emergency-Vehicle Hybrid Signal**



**Figure 4M-1. Left-Turn Lane-Use Control Signals**



Two-way left-turn arrow

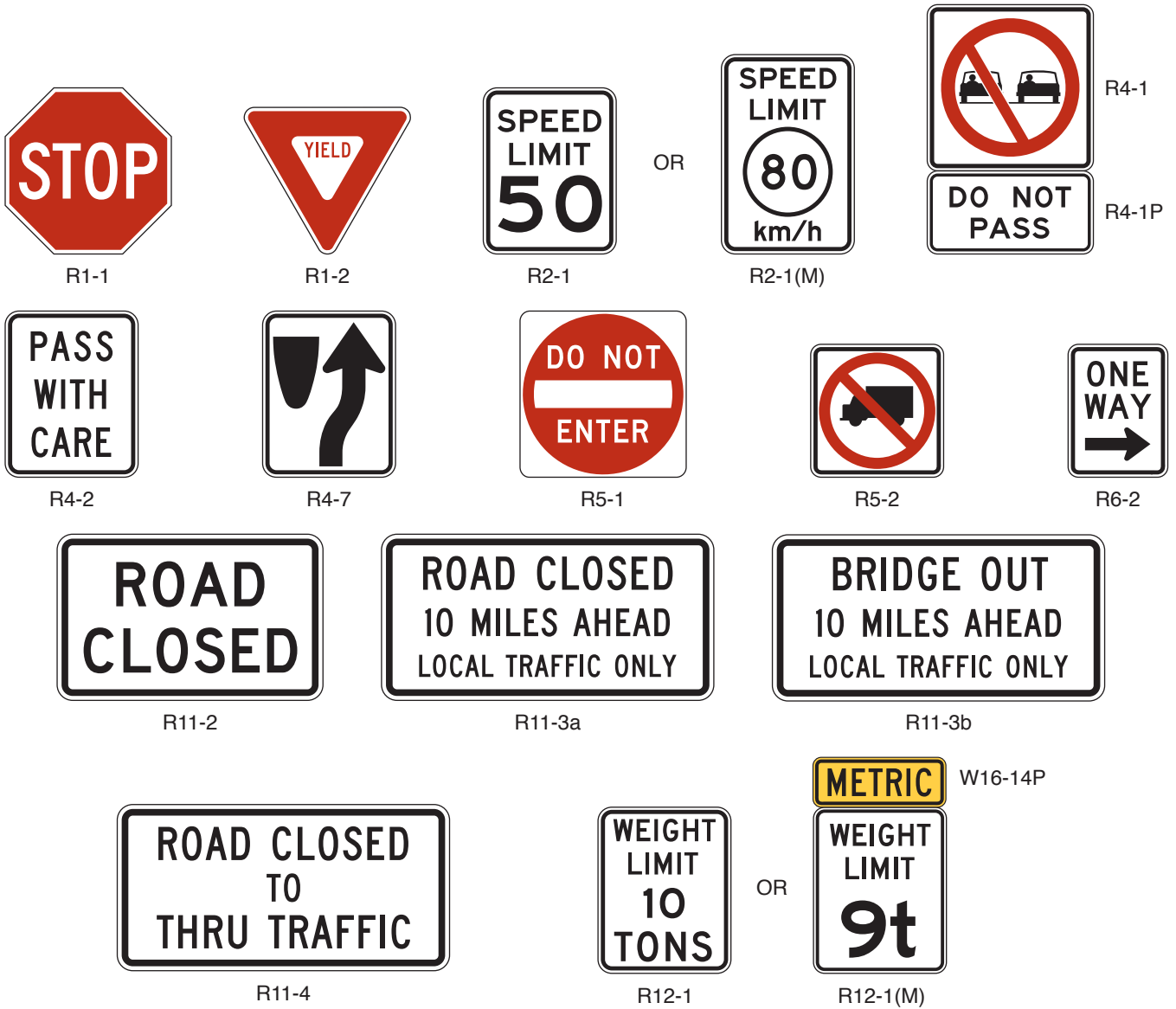


One-way left-turn arrow

White arrows on an opaque 750 x 750 mm (30 x 30 in) background



Figure 5B-1. Regulatory Signs and Plaques on Low-Volume Roads



**Figure 5B-2. Parking Signs and Plaques on Low-Volume Roads**



R8-3



R8-3a



R8-3cP



R8-3dP

**Figure 5C-1. Horizontal Alignment and Intersection Warning Signs and Plaques on Low-Volume Roads**



W1-1



W1-2



W1-3



W1-4



W1-5



W1-6



W1-7



W1-8



W2-1



W2-2



W2-3



W2-4



W2-5



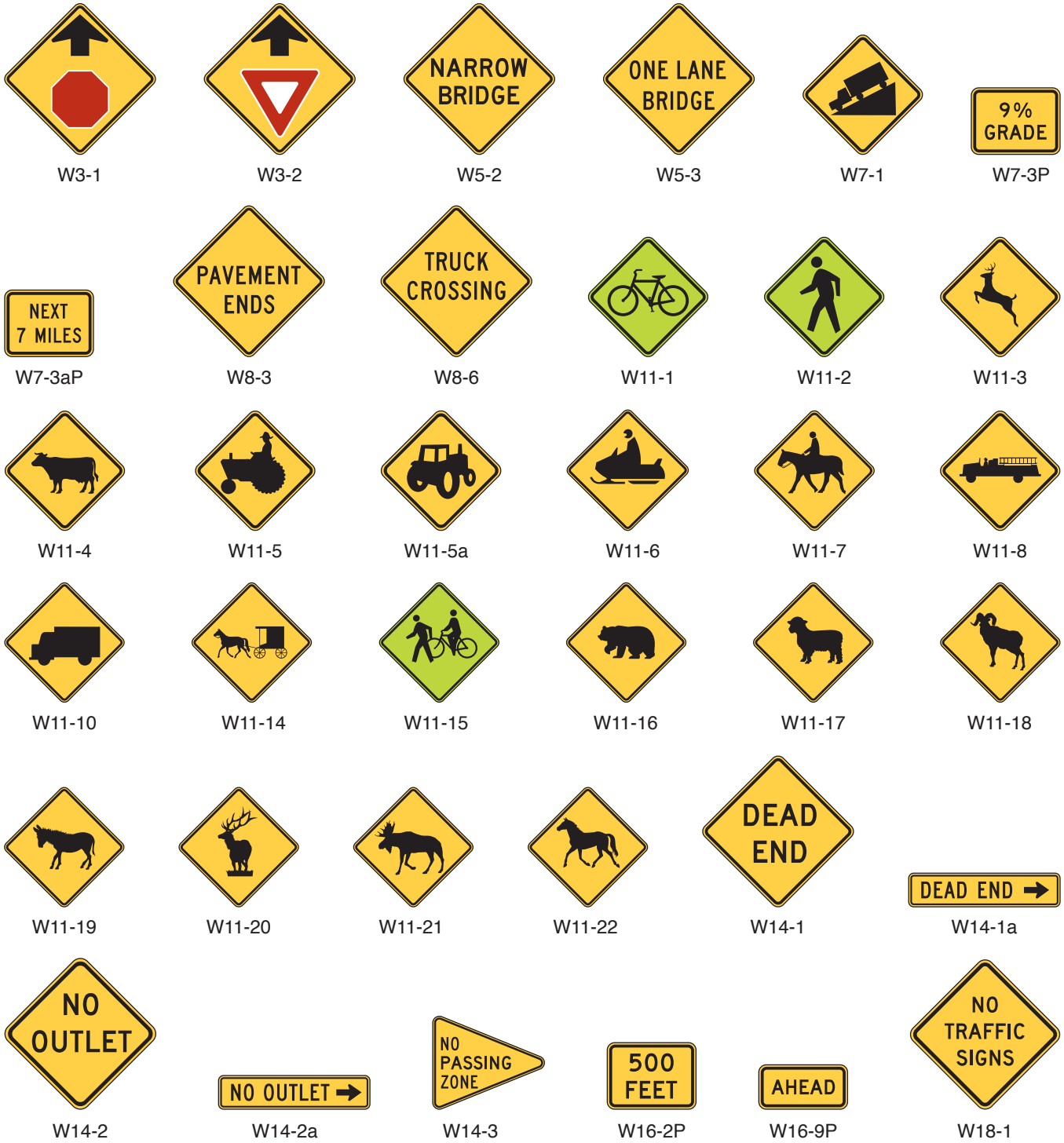
W13-1P

OR



W13-1P(M)

**Figure 5C-2. Other Warning Signs and Plaques on Low-Volume Roads**



**Figure 5F-1. Highway-Rail Grade Crossing Signs and Plaques for Low-Volume Roads**



R15-1



R15-2P



W10-1



W10-2



W10-3



W10-4



W10-10P



W10-16P

**Figure 5G-1. Temporary Traffic Control Signs and Plaques on Low-Volume Roads**



W3-4



W8-7



W13-1P

OR



W13-1P(M)



W14-3



W16-2P



W20-1



W20-7



W21-1



W21-2



W21-3

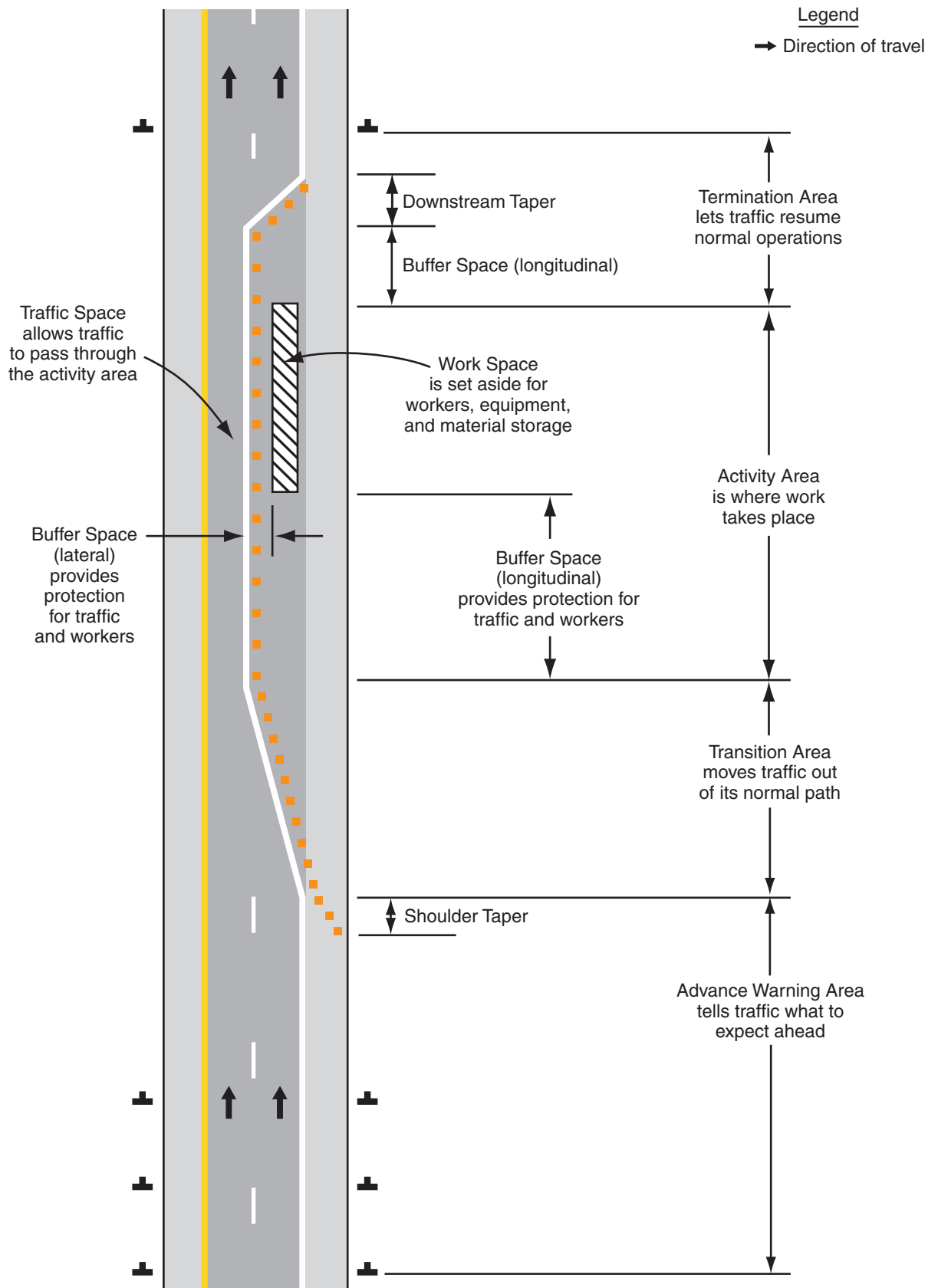


W21-5

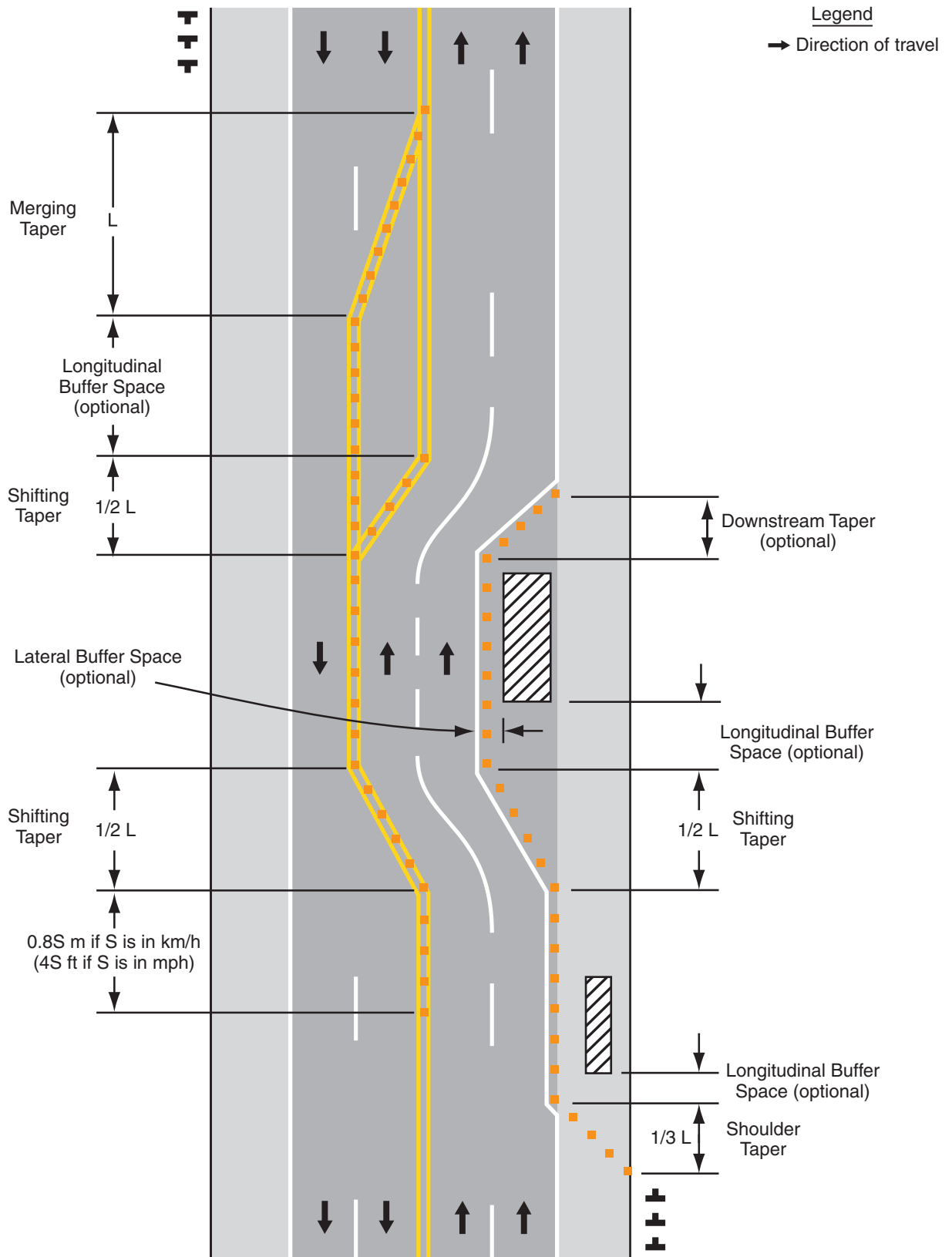


W21-6

**Figure 6C-1. Component Parts of a Temporary Traffic Control Zone**

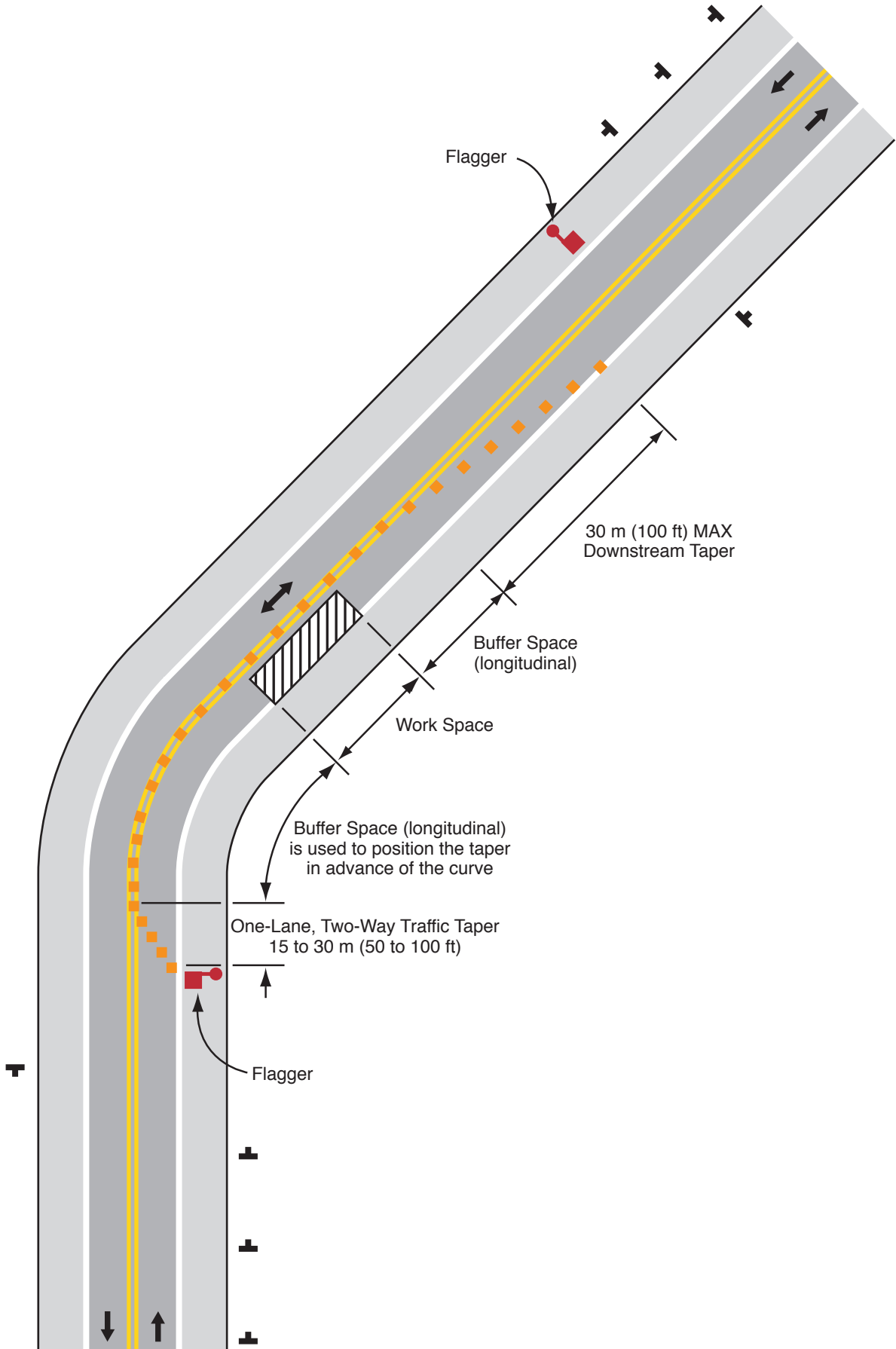


**Figure 6C-2. Types of Tapers and Buffer Spaces**

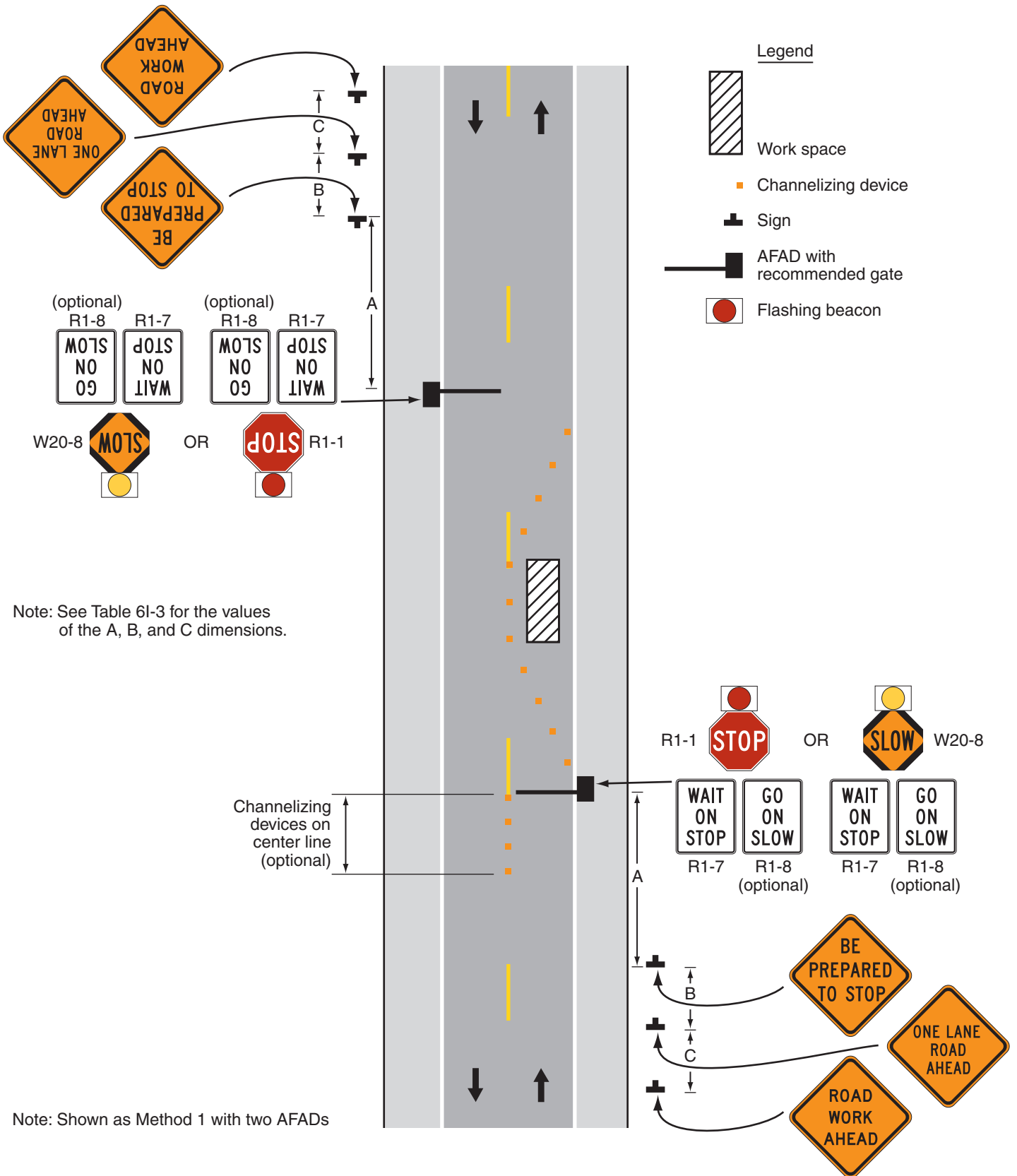




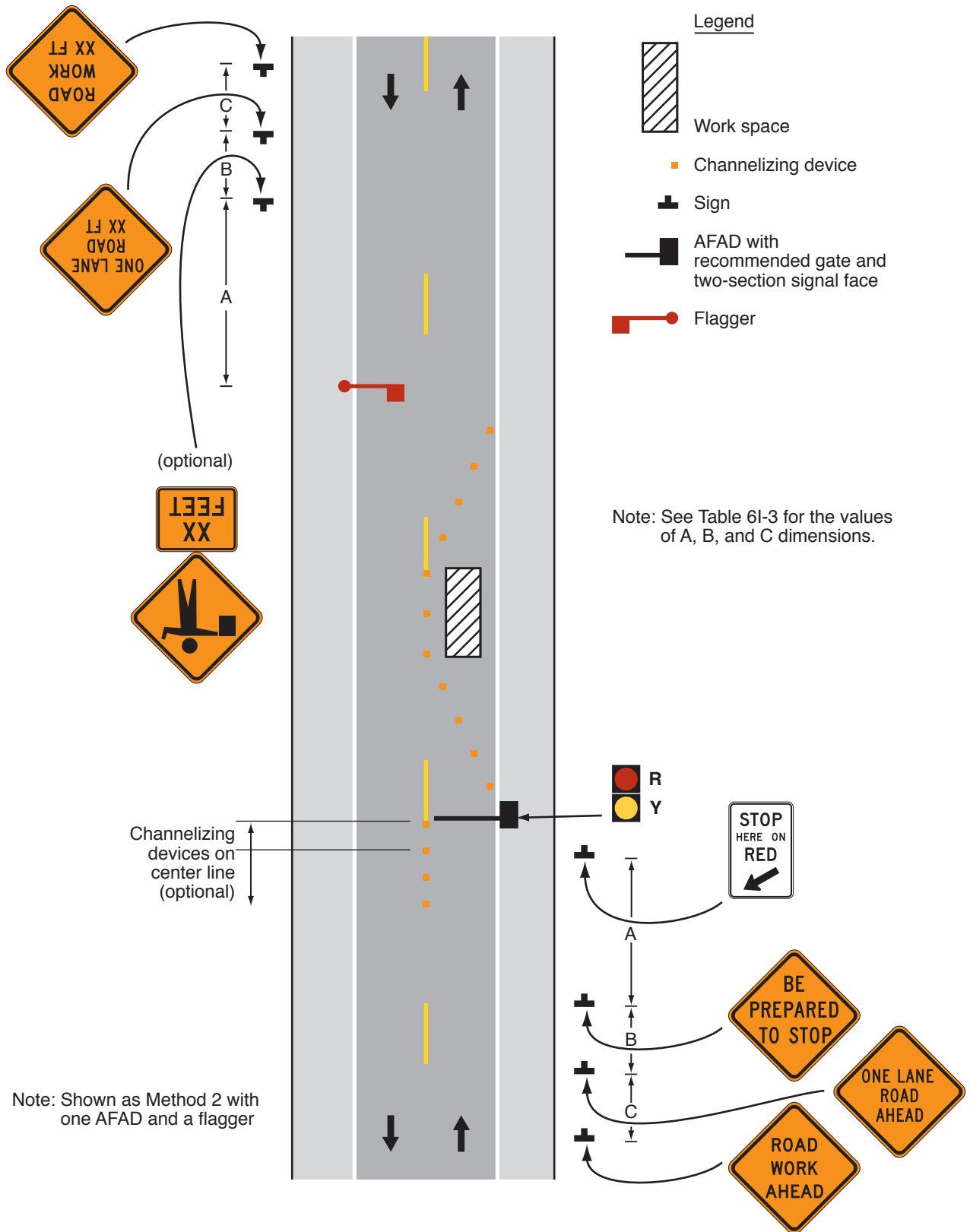
**Figure 6C-3. Example of a One-Lane, Two-Way Traffic Taper**



**Figure 6E-1. Example of the Use of a STOP/SLOW Automated Flagger Assistance Device (AFAD)**



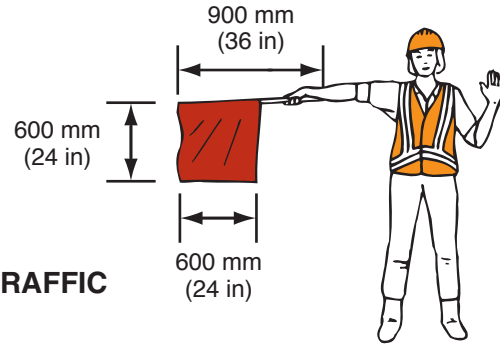
**Figure 6E-2. Example of the Use of a Red/Yellow Lens Automated Flagger Assistance Device (AFAD)**



**Figure 6E-3. Use of Hand-Signaling Devices by Flaggers**

**PREFERRED METHOD  
STOP/SLOW Paddle**

**EMERGENCY SITUATIONS ONLY  
Red Flag**



**TO STOP TRAFFIC**

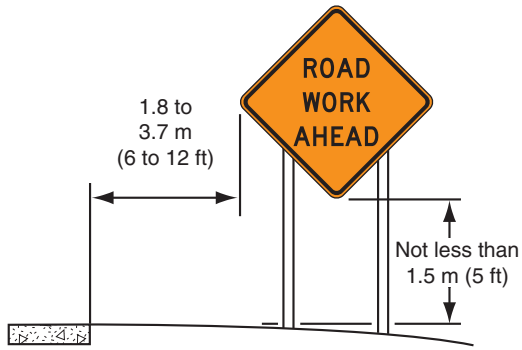


**TO LET  
TRAFFIC PROCEED**

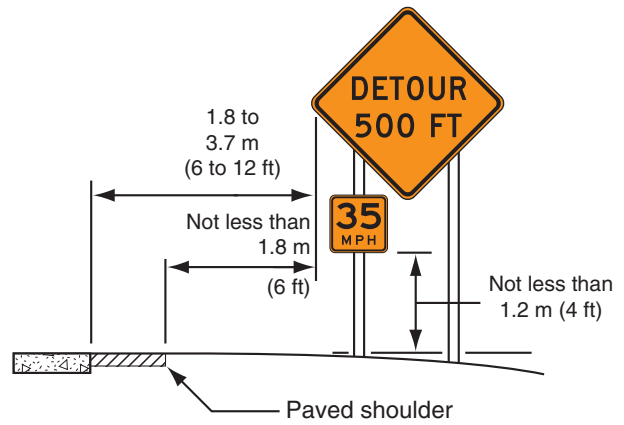


**TO ALERT AND  
SLOW TRAFFIC**

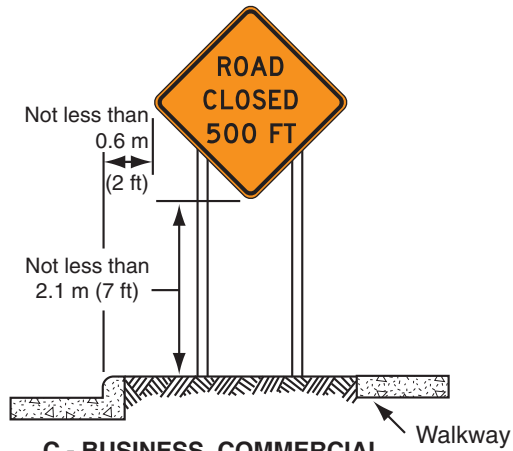
**Figure 6F-1. Height and Lateral Location of Signs—Typical Installations**



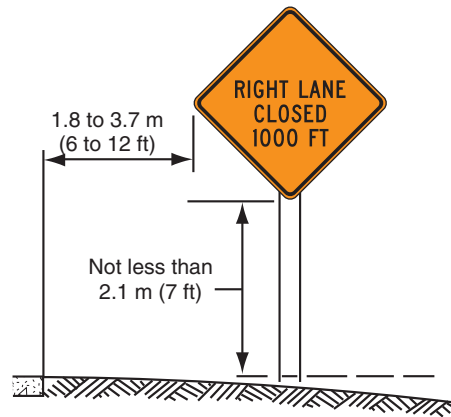
**A - RURAL AREA**



**B - RURAL AREA WITH ADVISORY SPEED PLAQUE**

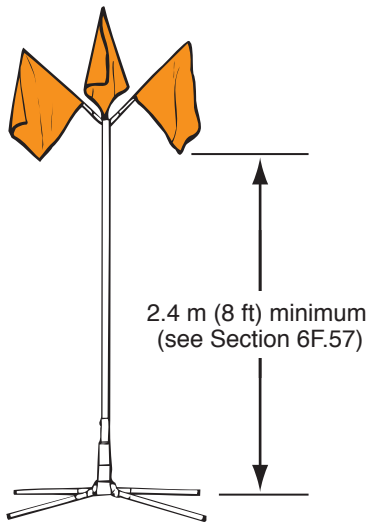


**C - BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA**

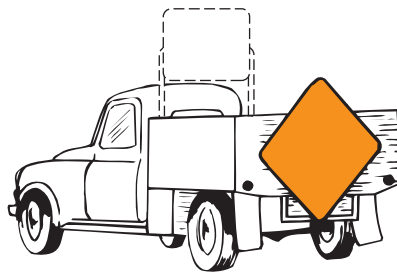
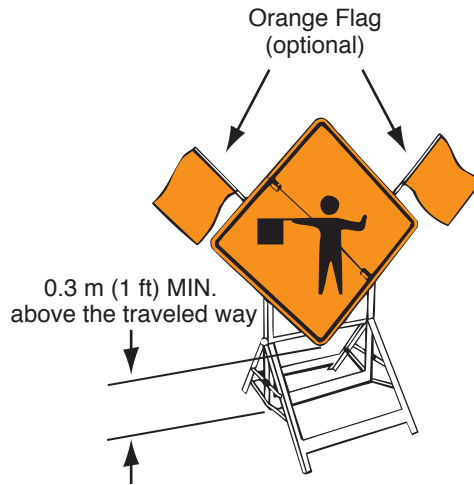


**D - BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA (WITHOUT CURB)**

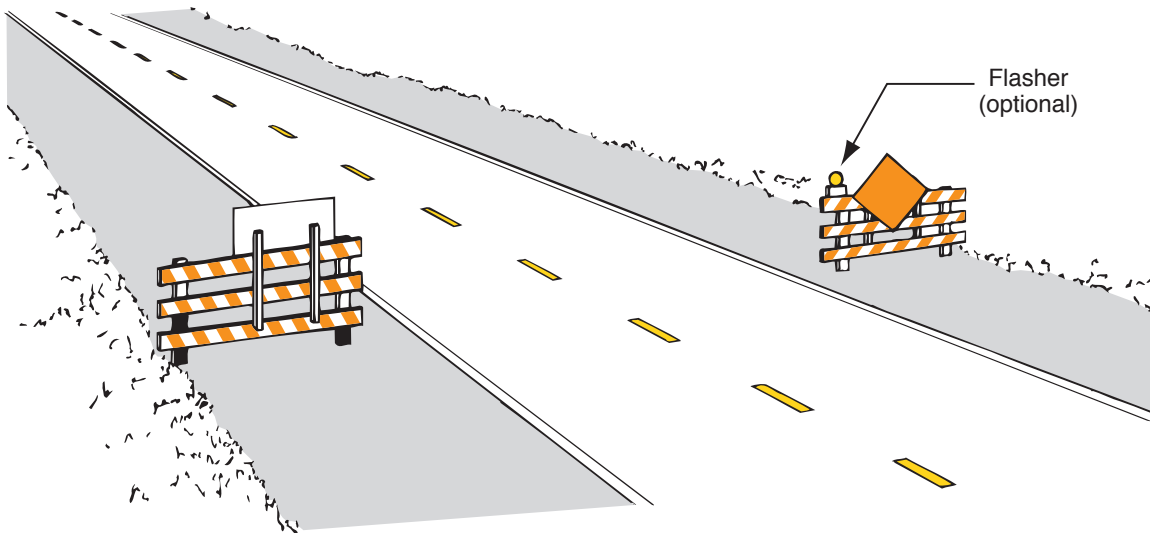
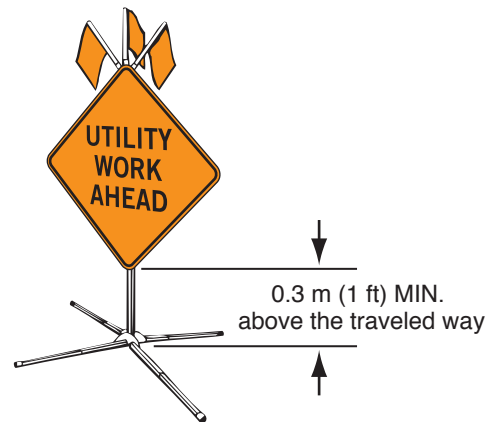
**Figure 6F-2. Methods of Mounting Signs Other Than on Posts**



High-Level Warning Device  
(Flag Tree)

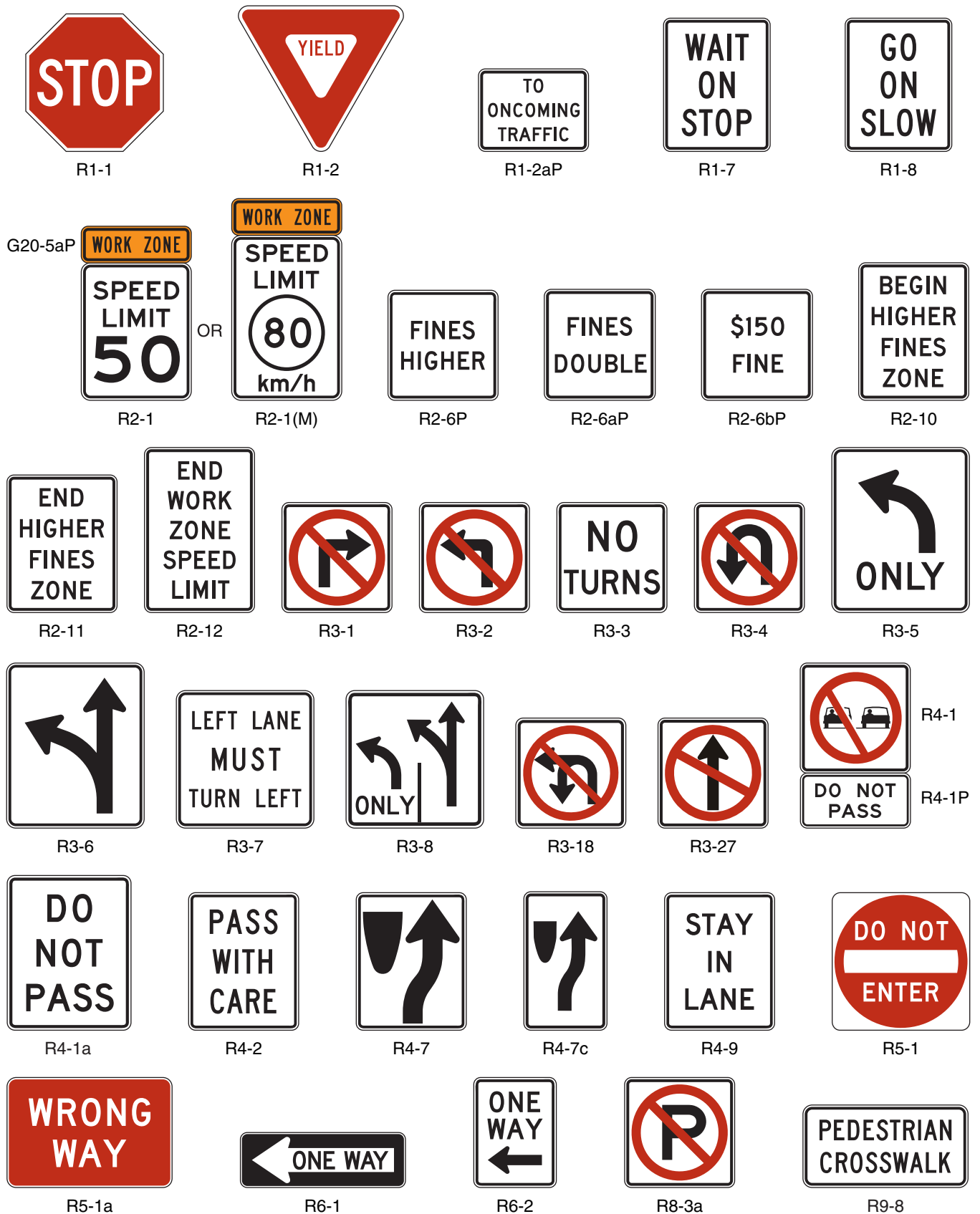


PORTABLE AND TEMPORARY MOUNTINGS



BARRICADES

**Figure 6F-3. Regulatory Signs and Plaques in Temporary Traffic Control Zones**  
(Sheet 1 of 2)



**Figure 6F-3. Regulatory Signs and Plaques in Temporary Traffic Control Zones**  
(Sheet 2 of 2)



R9-9



R9-10



R9-11



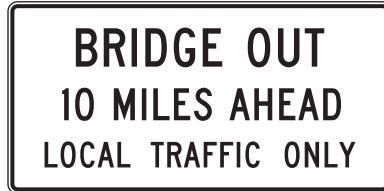
R9-11a



R11-2



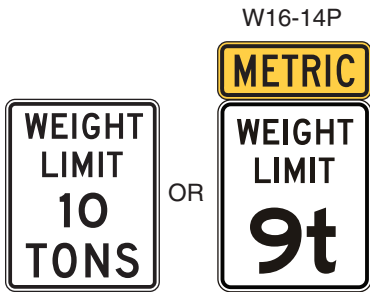
R11-3a



R11-3b



R11-4



R12-1



R12-1(M)



R12-2



W16-14P



R12-5



W16-14P



**Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones**  
 (Sheet 1 of 4)



W1-1



W1-2



W1-3



W1-4



W1-4b



W1-4c



W1-6



W1-8



W3-1



W3-2



W3-3



W3-4



W3-5



W3-5a



W4-1



W4-2



W4-3



W4-5



W4-5P



W4-6



W4-7



W5-1



W5-2



W5-3



W5-4

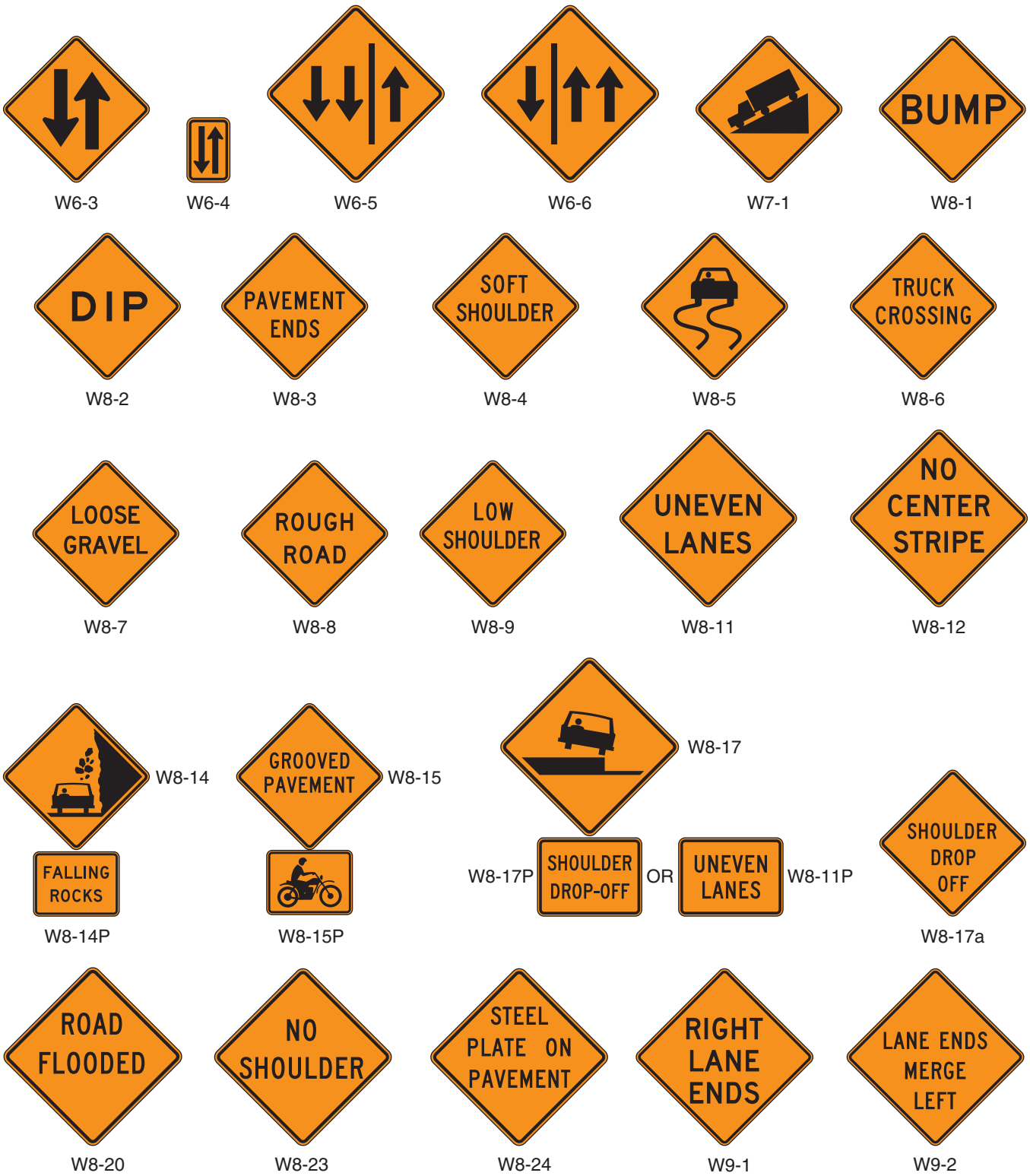


W6-1



W6-2

**Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones**  
(Sheet 2 of 4)

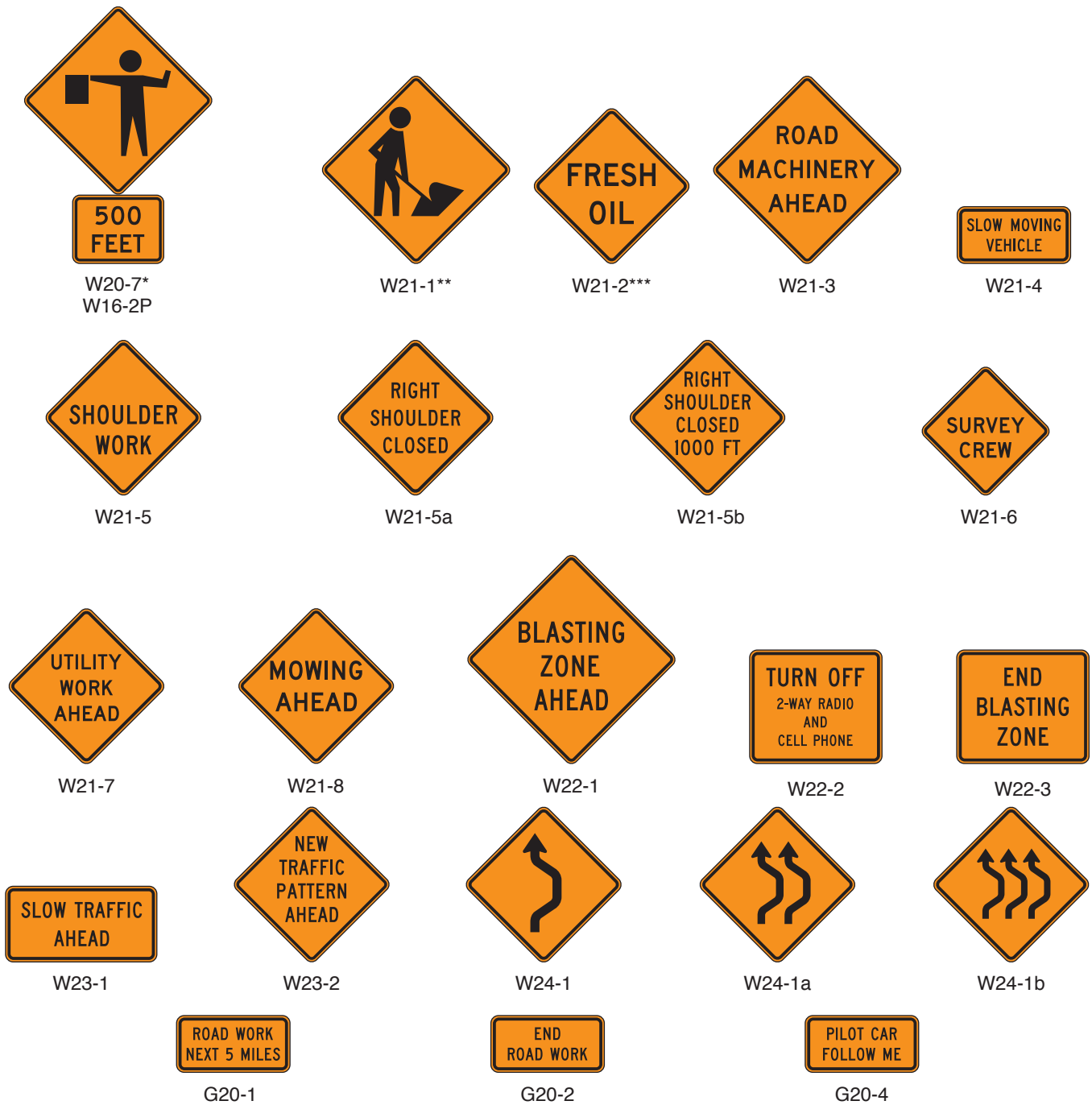


**Figure 6F-4. Warning Signs in Temporary Traffic Control Zones**  
(Sheet 3 of 4)



\* An optional STREET WORK word message sign is shown in the "Standard Highway Signs" book.  
 \*\* An optional STREET CLOSED word message sign is shown in the "Standard Highway Signs" book.

**Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones**  
(Sheet 4 of 4)



\* An optional FLAGGER (W20-7a) word message sign is shown in the "Standard Highway Signs" book.  
 \*\* An optional WORKERS (W21-1a) word message sign is show in the "Standard Highway Signs" book.  
 \*\*\* An optional FRESH TAR word message sign is show in the "Standard Highway Signs" book.

*Figure 6F-5. Exit Open and Closed and Detour Signs*



E5-2



E5-2a



E5-3



M4-8



M4-8a



M4-8b



M4-9



M4-9a



M4-9b








M4-9c



M4-10

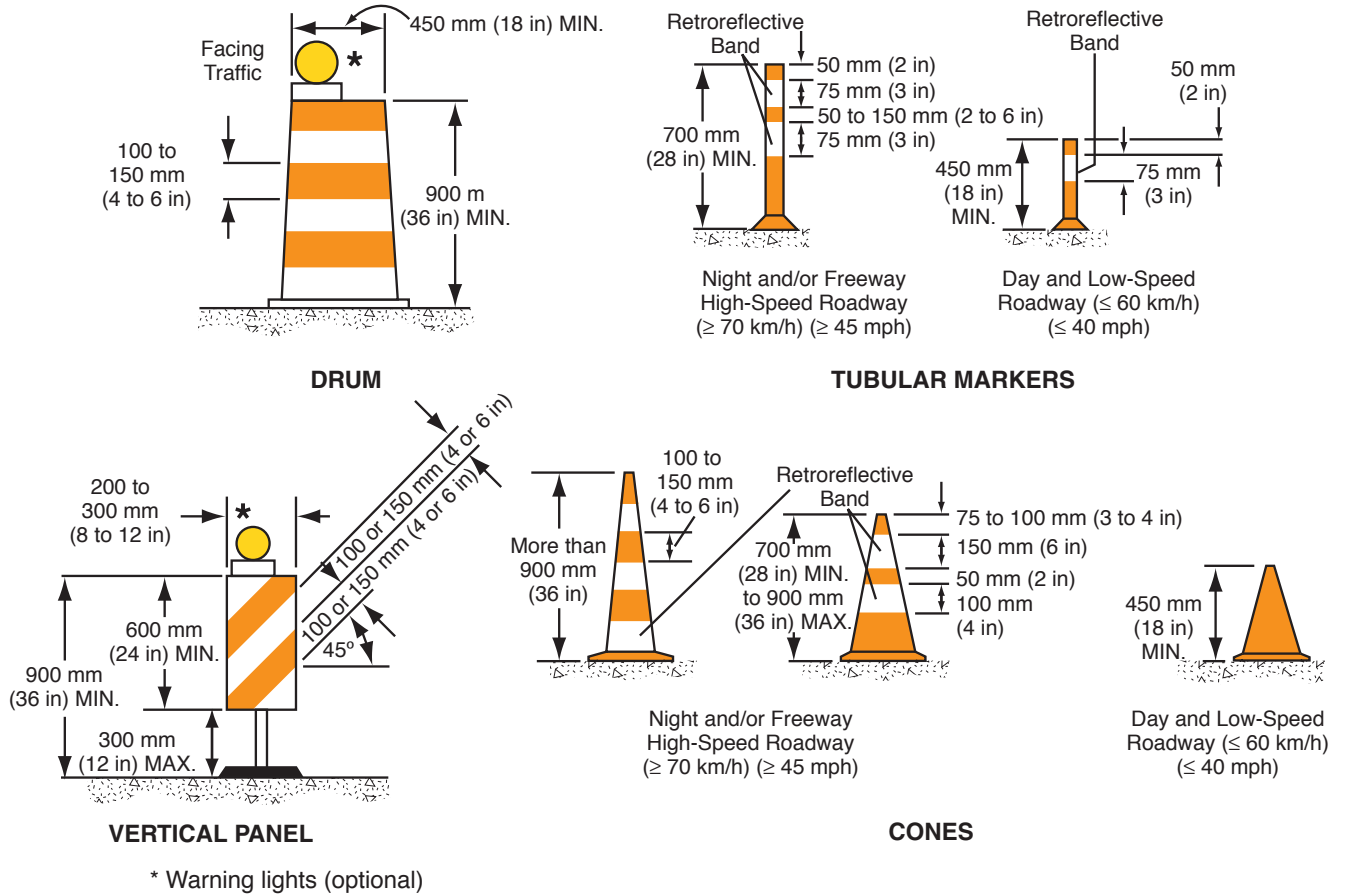
**Figure 6F-6. Advance Warning Arrow Display Specifications**

Operating Mode	Panel Display (Type C panel illustrated)			
I. At least one of the three following modes shall be provided:	(Right arrow shown; left is similar)			
Flashing Arrow	 Merge Right			
Sequential Arrow				Merge Right
Sequential Chevron				Merge Right
II. The following mode shall be provided: Flashing Double Arrow	 Merge Right or Left			
III. At least one of the following modes shall be provided: Flashing Caution or Alternating Diamond Caution	 Flashing Caution	 Flashing Caution	 Alternating Diamond Caution	

Panel Type	Minimum Size	Minimum Legibility Distance	Minimum Number of Elements
A	1200 x 600 mm (48 x 24 in)	0.8 km (1/2 mi)	12
B	1500 x 750 mm (60 x 30 in)	1.2 km (3/4 mi)	13
C	2400 x 1200 mm (96 x 48 in)	1.6 km (1 mi)	15
D	None*	0.8 km (1/2 mi)	12

\*Length of arrow equals 1200 mm (48 in), width of arrowhead equals 600 mm (24 in)

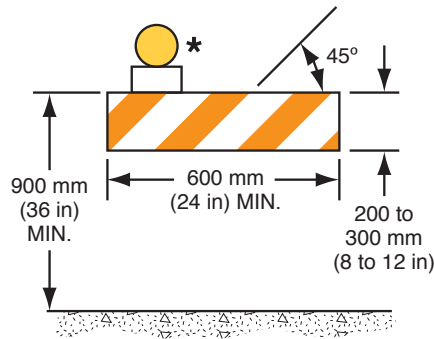
**Figure 6F-7. Channelizing Devices (Sheet 1 of 2)**



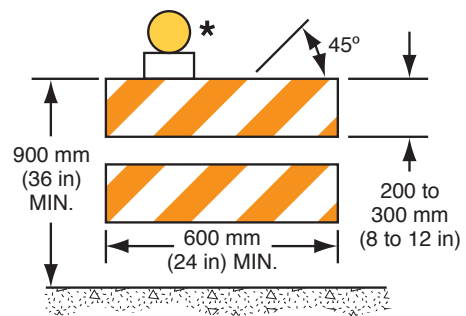
\* Warning lights (optional)

Note: If drums, cones, or tubular markers are used to channelize pedestrians, they shall be located such that there are no gaps between the bases of the devices, in order to create a continuous bottom, and the height of each individual drum, cone, or tubular marker shall be no less than 900 mm (36 in) to be detectable to users of long canes.

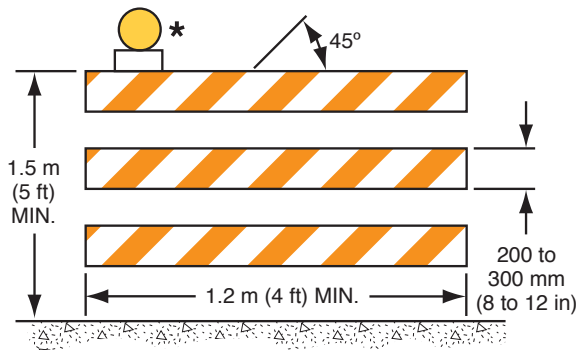
**Figure 6F-7. Channelizing Devices (Sheet 2 of 2)**



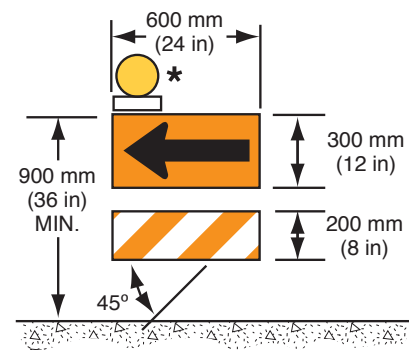
**TYPE 1 BARRICADE \*\***



**TYPE 2 BARRICADE \*\***



**TYPE 3 BARRICADE \*\***



**DIRECTION INDICATOR BARRICADE \*\***

\* Warning lights (optional)

\*\* Rail stripe widths shall be 150 mm (6 in), except that 100 mm (4 in) wide stripes may be used if rail lengths are less than 900 mm (36 in). The sides of barricades facing traffic shall have retroreflective rail faces.

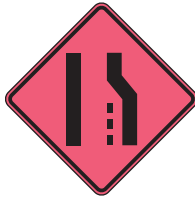
Note: If barricades are used to channelize pedestrians, there shall be continuous detectable bottom and top rails with no gaps between individual barricades to be detectable to users of long canes. The bottom of the bottom rail shall be no higher than 150 mm (6 in) above the ground surface. The top of the top rail shall be no lower than 900 mm (36 in) above the ground surface.



**Figure 6H-1. Examples of Traffic Incident Management Area Signs**



W3-4



W4-2



W9-3



E5-2a



M4-8a

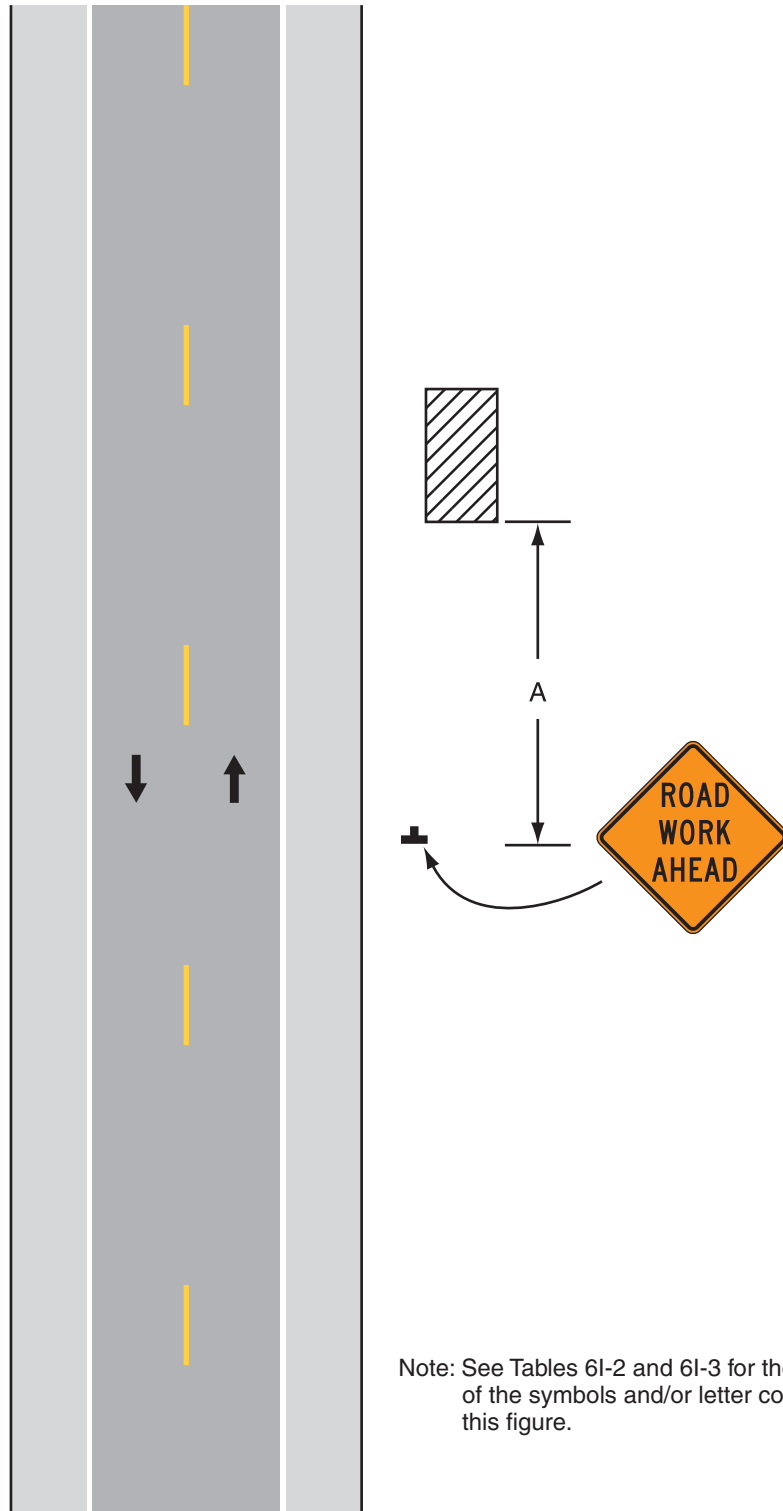


M4-9



M4-10

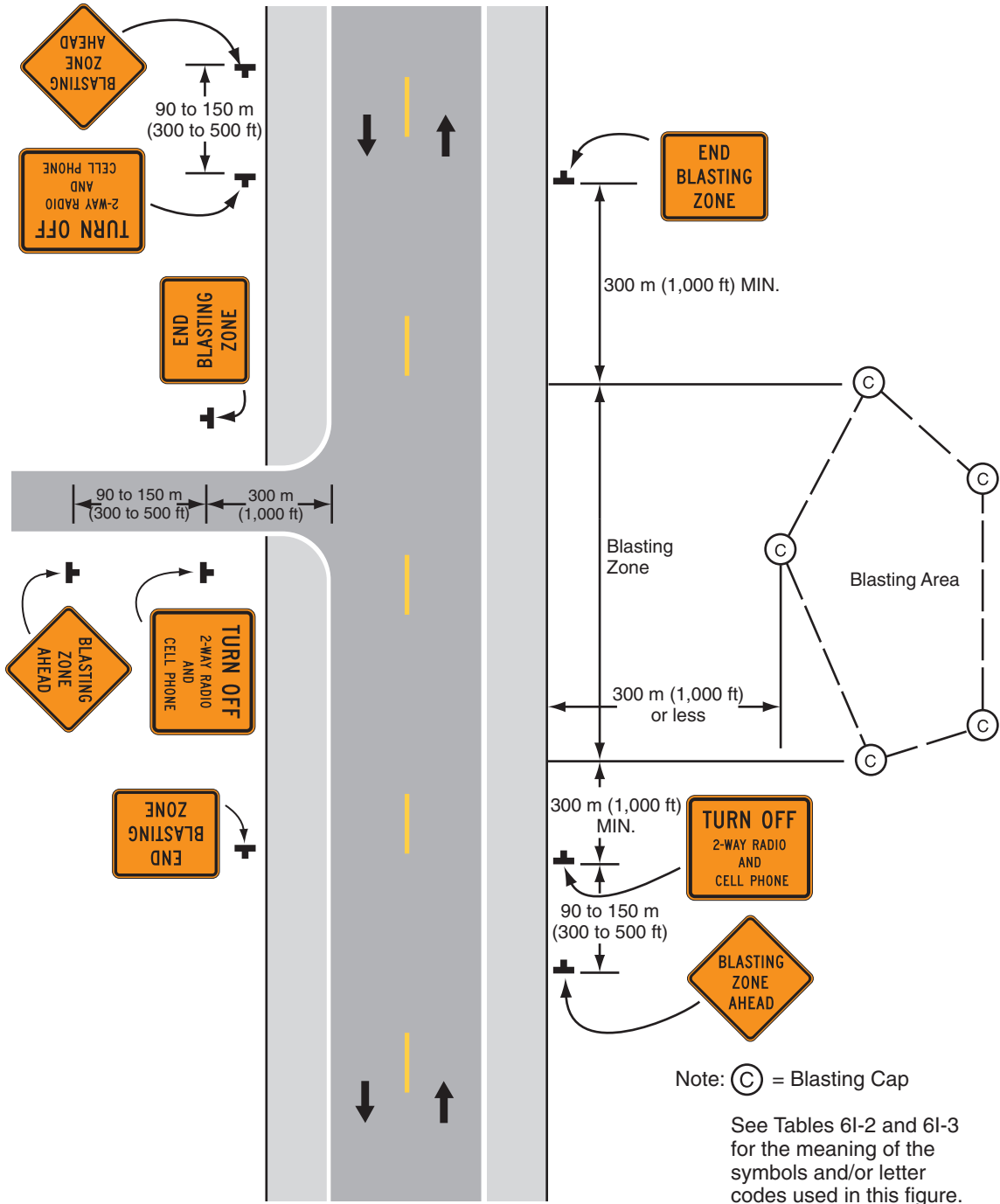
**Figure 6I-1. Work Beyond a Shoulder (TA-1)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

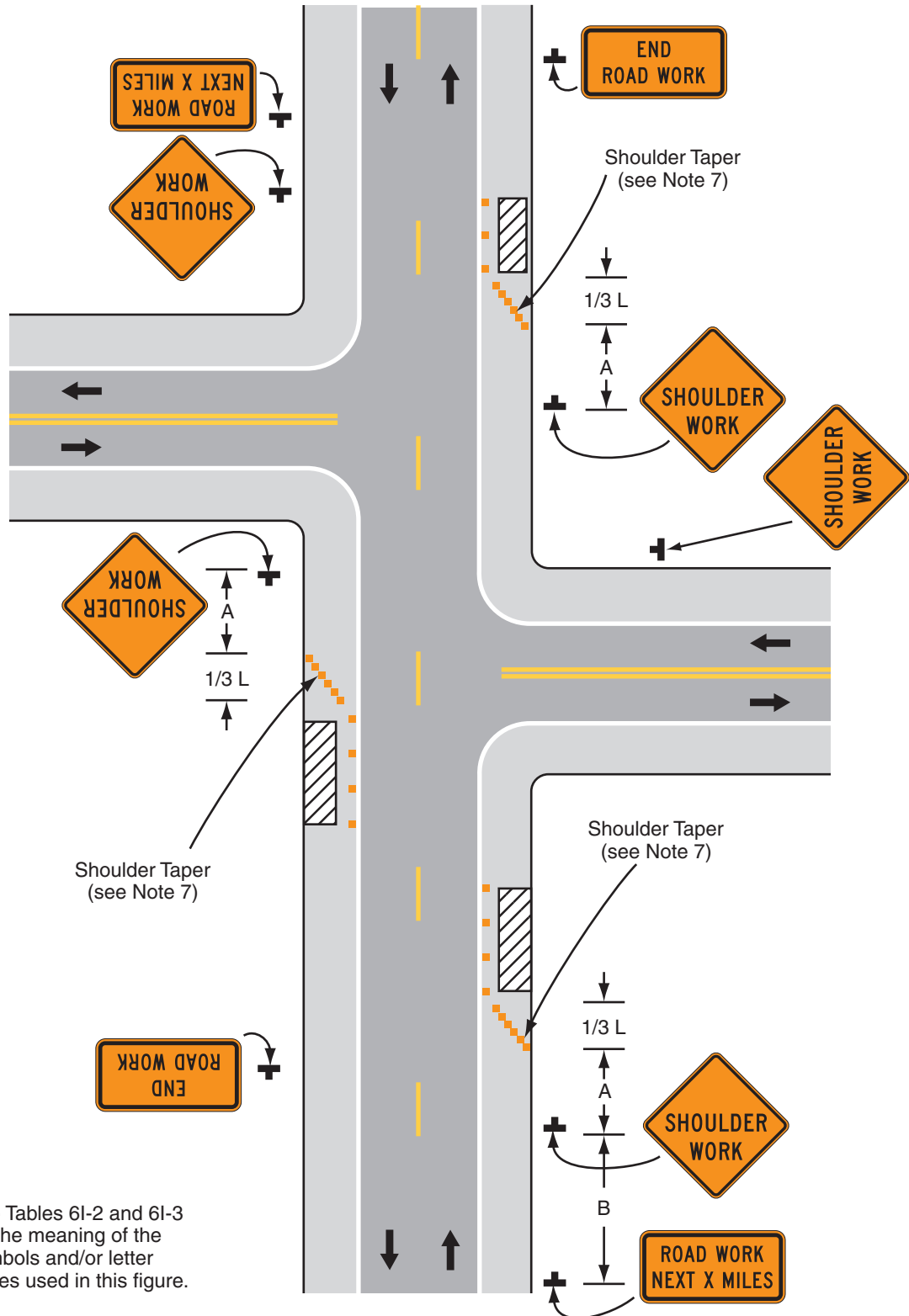
**Typical Application 1**

Figure 6I-2. Blasting Zone (TA-2)



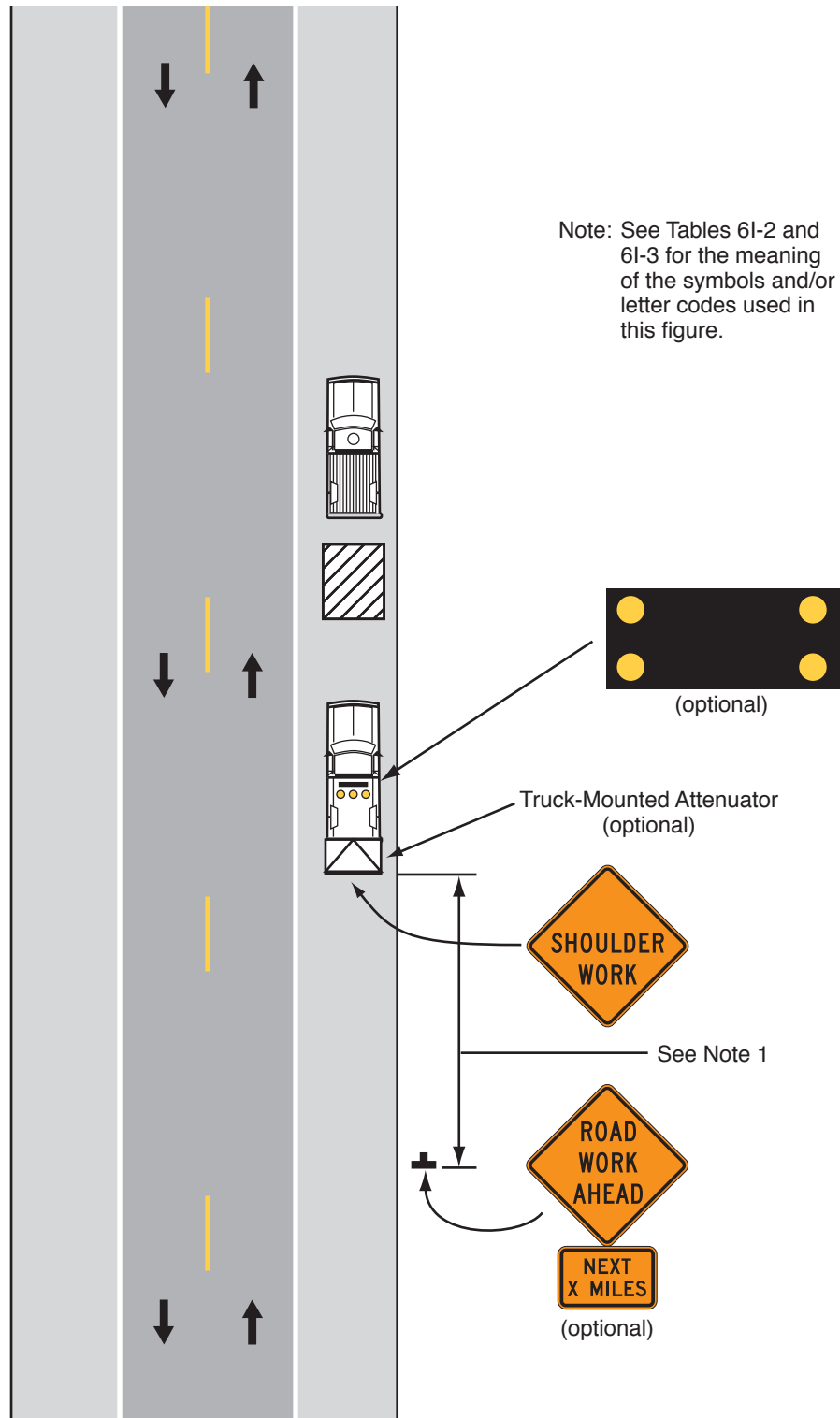
Typical Application 2

Figure 6I-3. Work on Shoulders (TA-3)



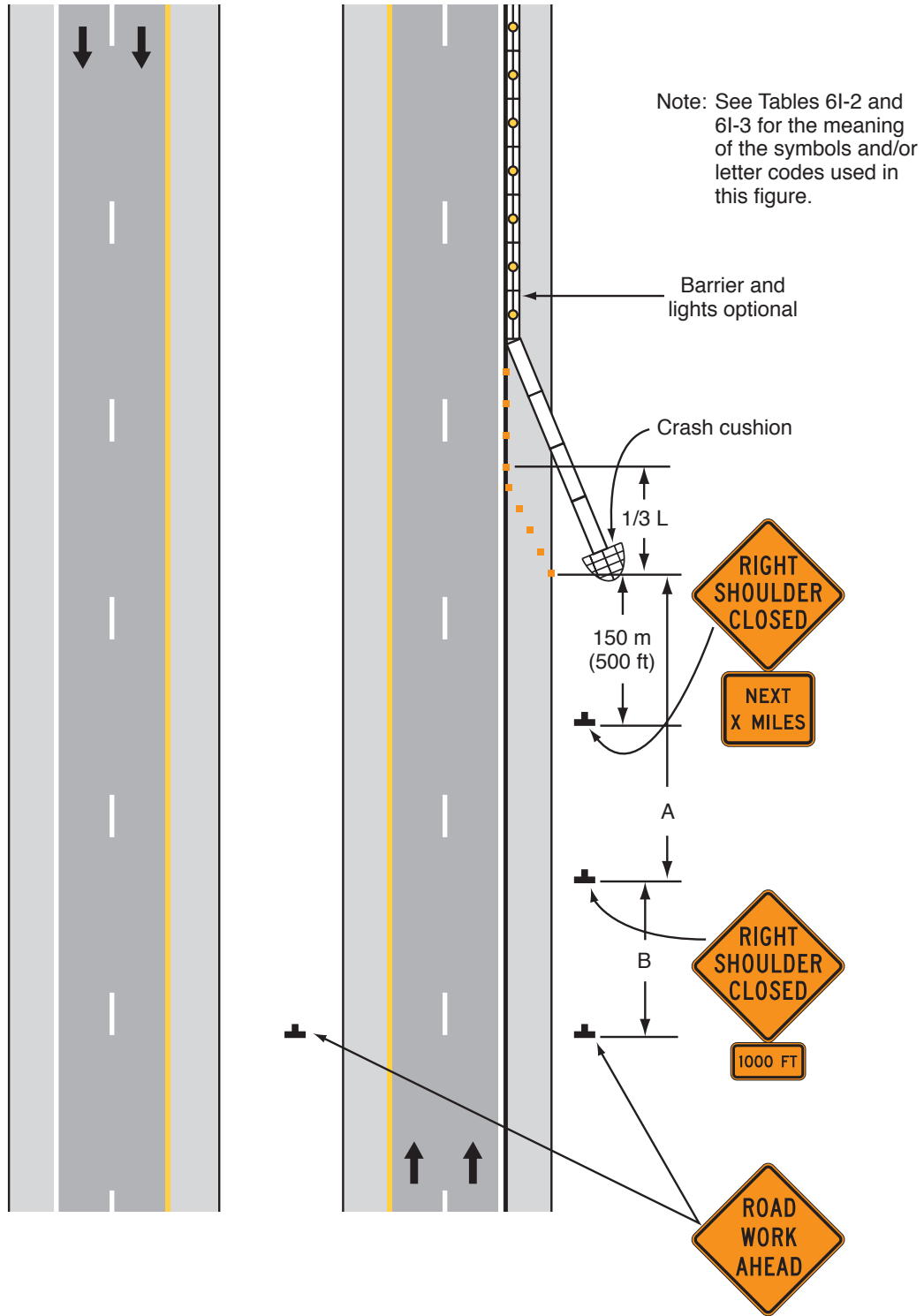
Typical Application 3

Figure 6I-4. Short-Duration or Mobile Operation on a Shoulder (TA-4)



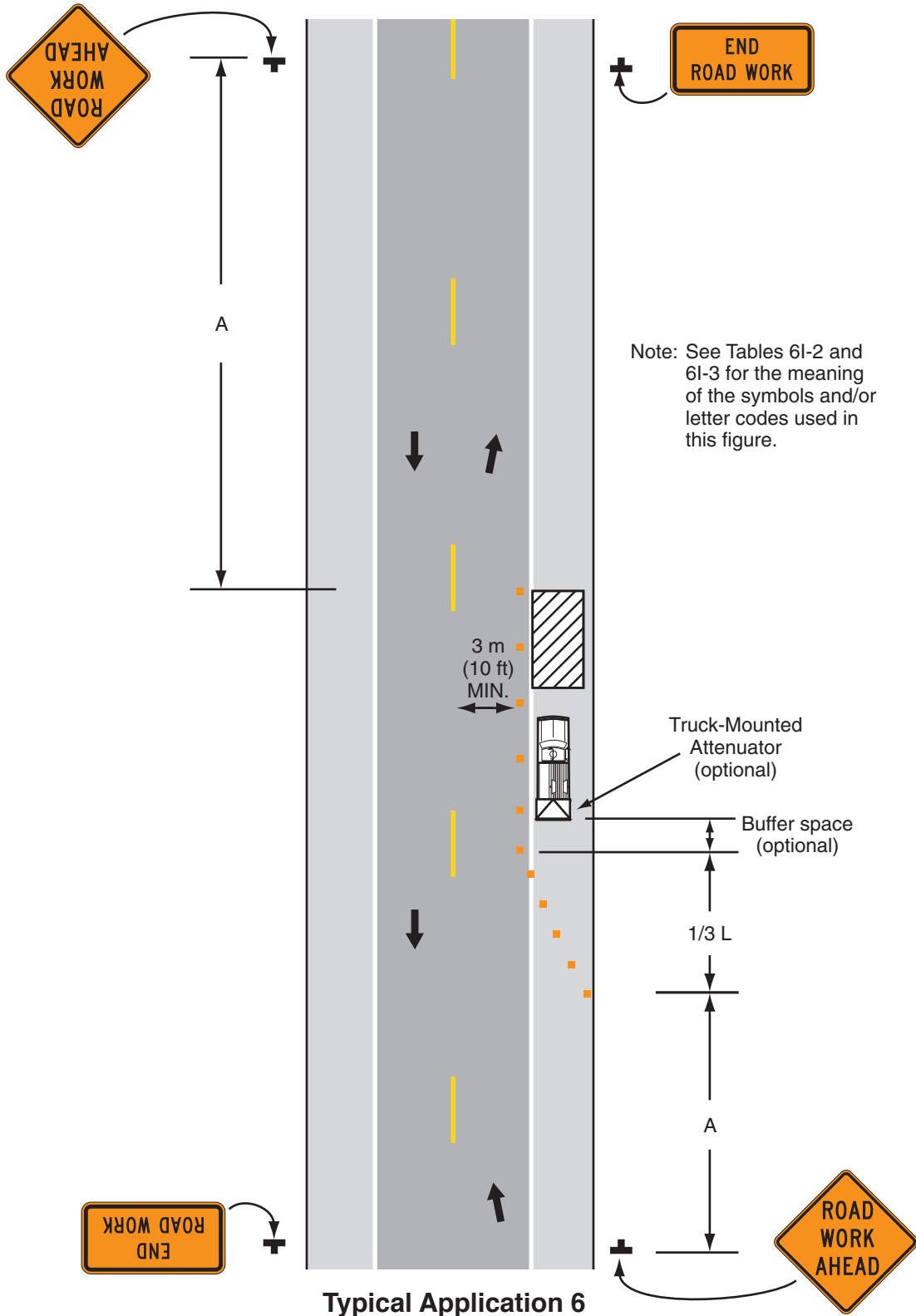
Typical Application 4

**Figure 6I-5. Shoulder Closure on a Freeway (TA-5)**



**Typical Application 5**

Figure 6I-6. Shoulder Work with Minor Encroachment (TA-6)



**Figure 6I-7. Road Closure with a Diversion (TA-7)**

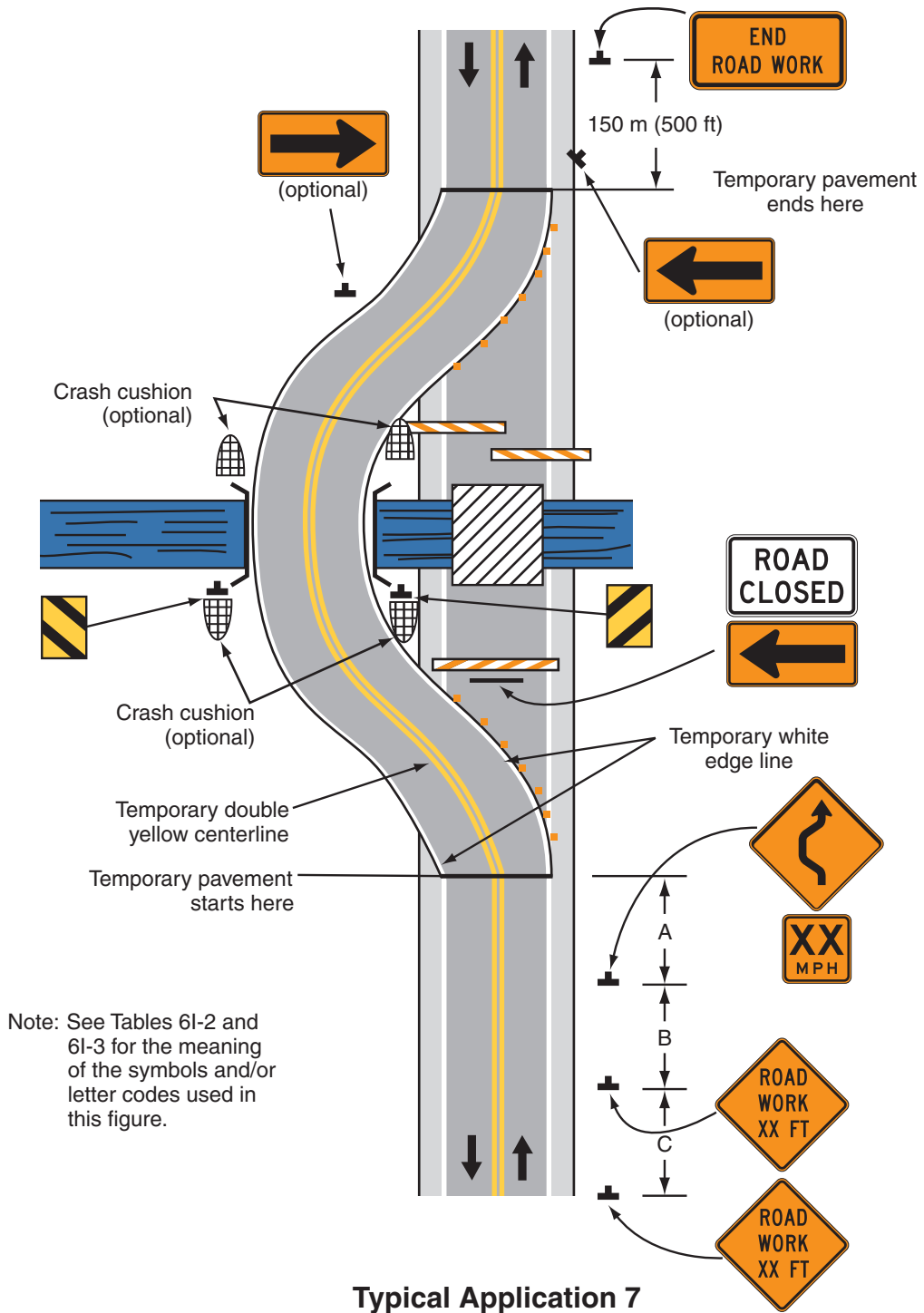
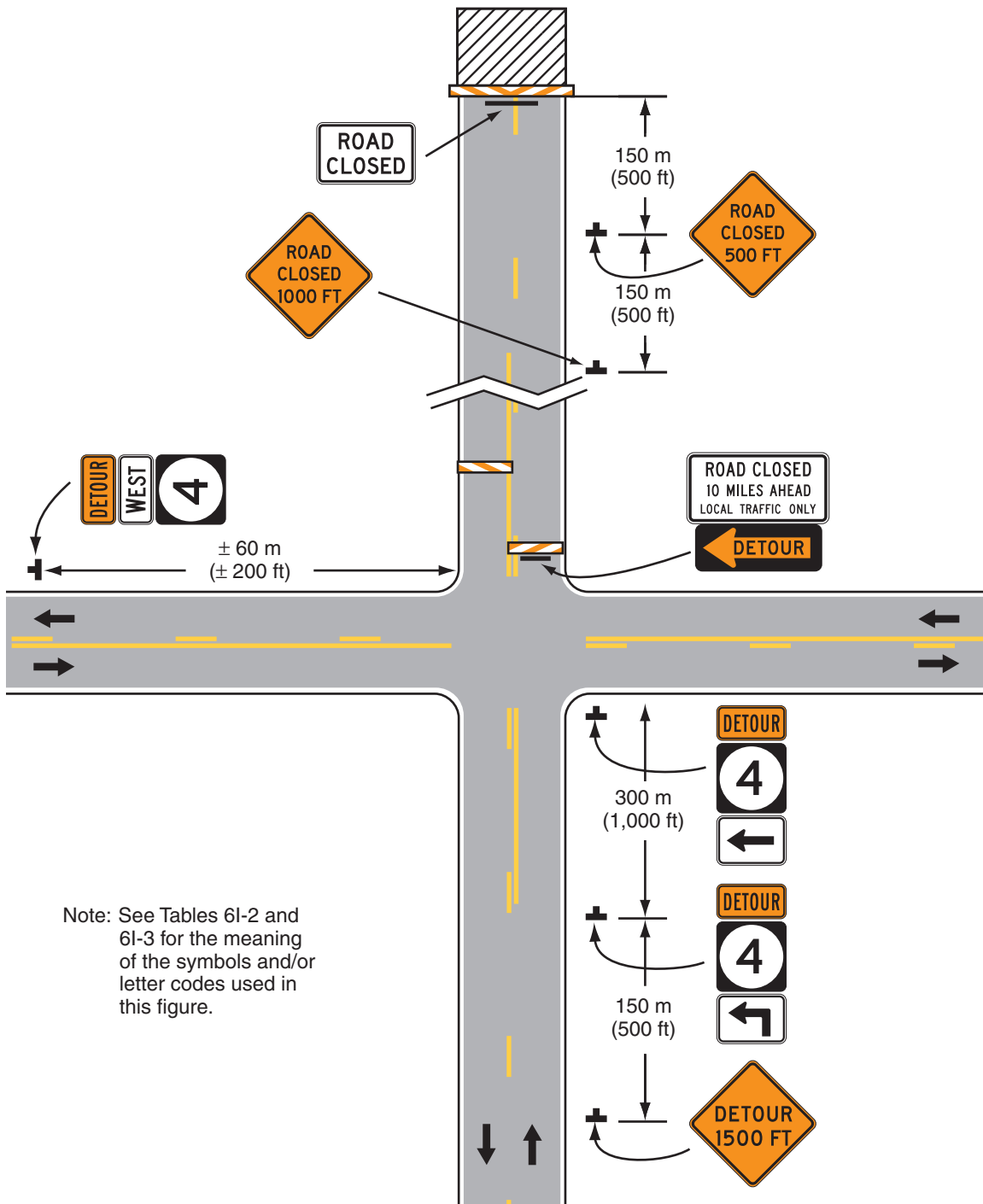




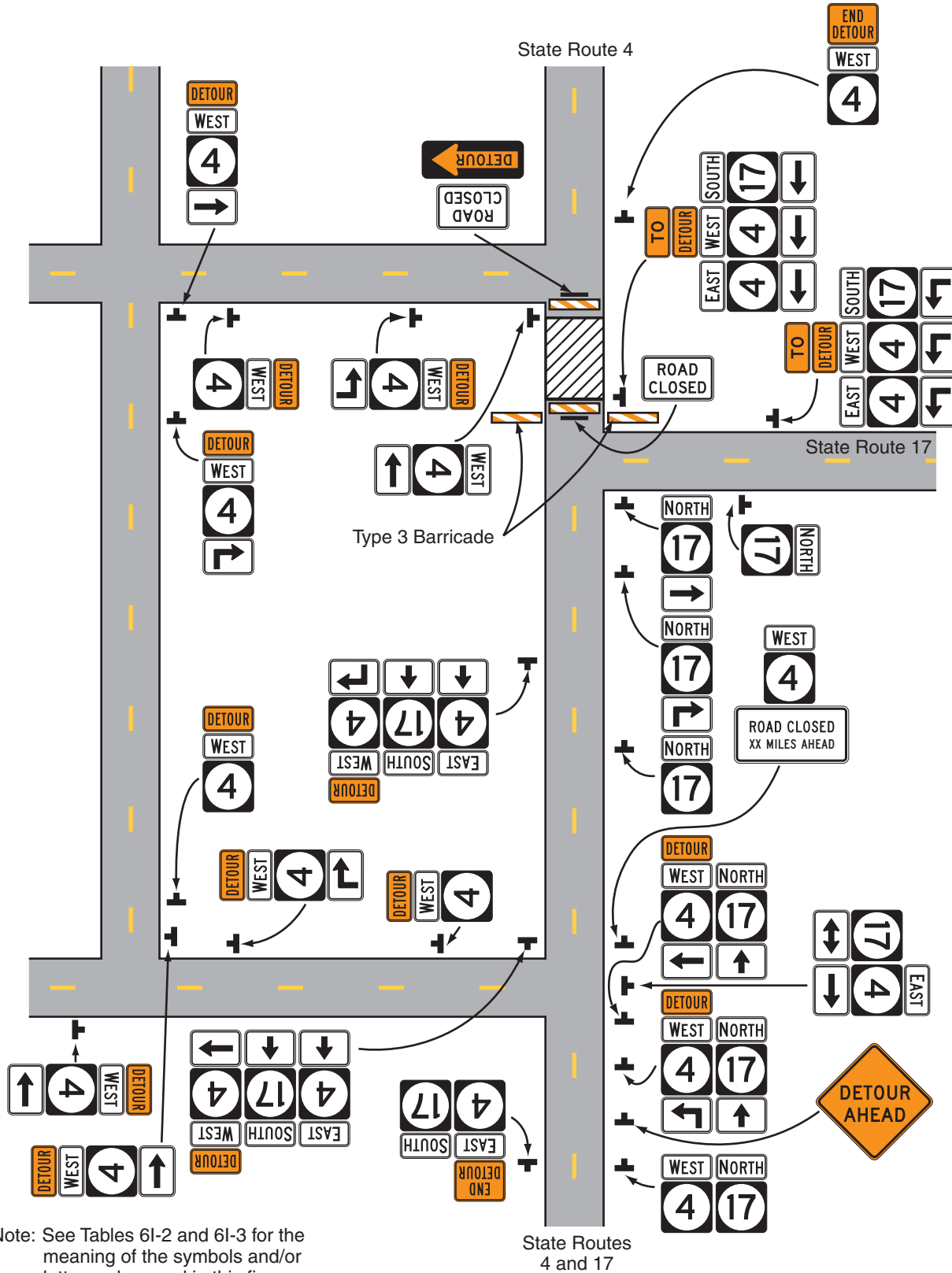
Figure 6I-8. Road Closure with an Off-Site Detour (TA-8)



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 8

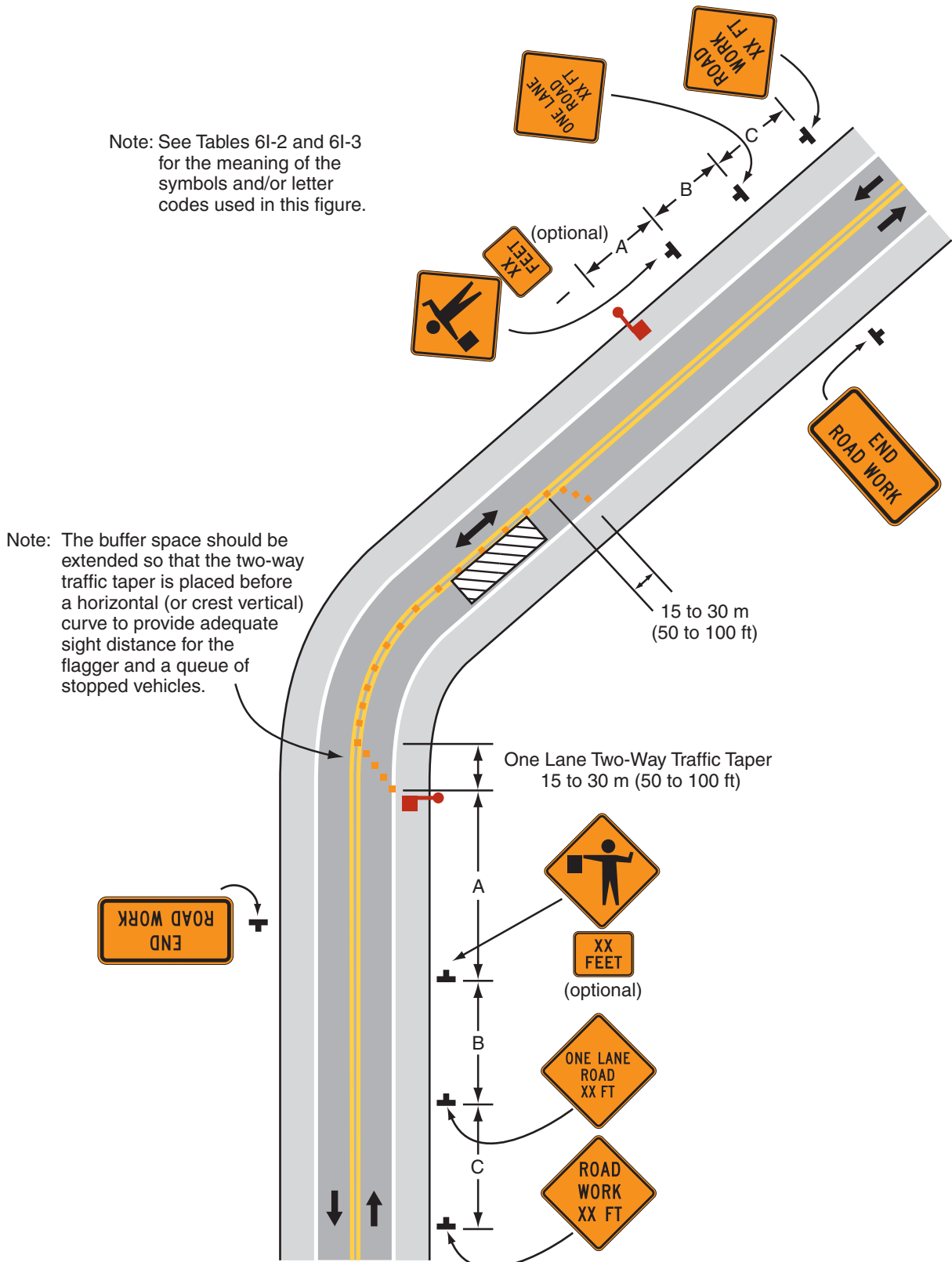
Figure 6I-9. Overlapping Routes with a Detour (TA-9)



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

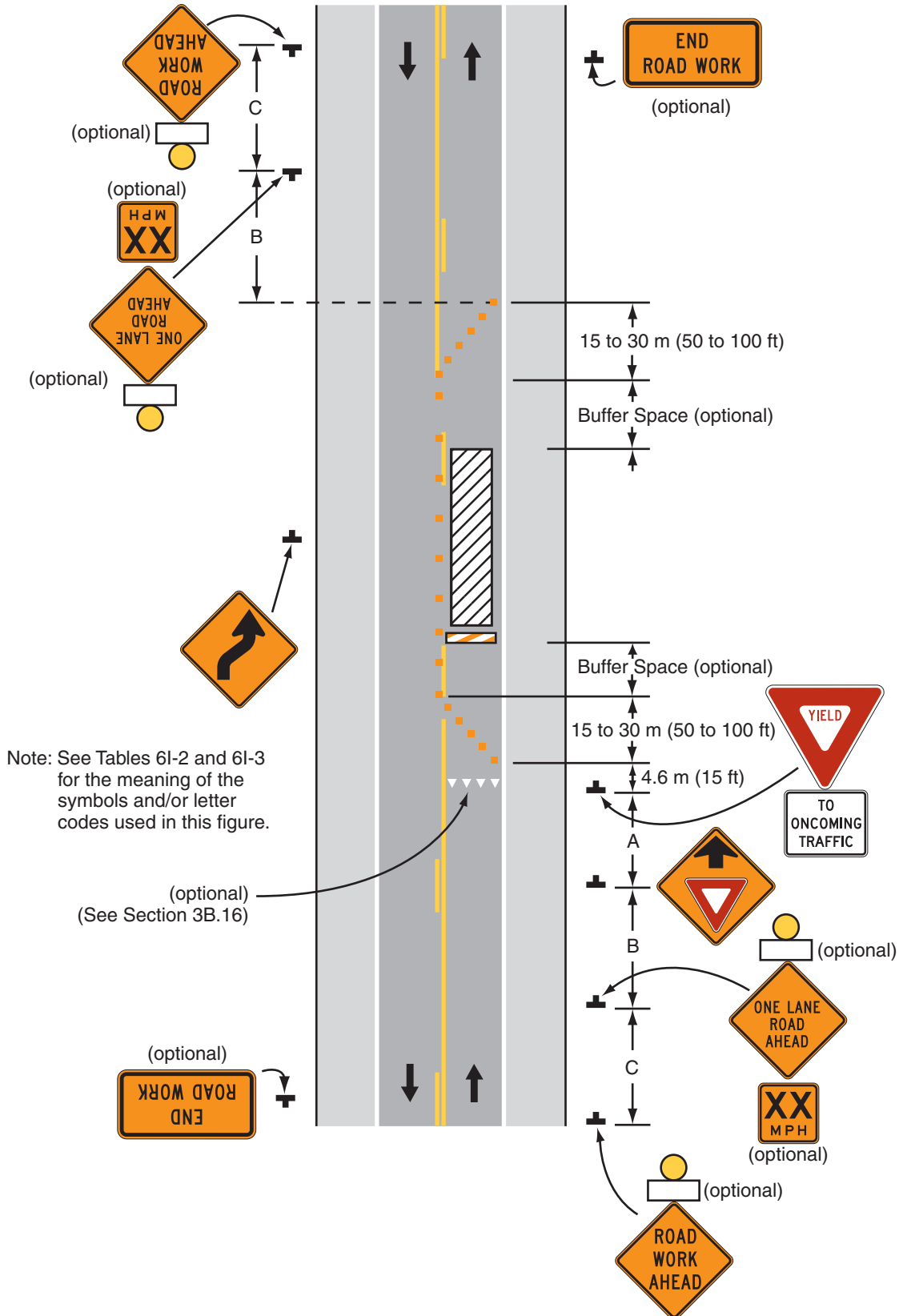
Typical Application 9

**Figure 6I-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)**



**Typical Application 10**

**Figure 6I-11. Lane Closure on a Two-Lane Road with Low Traffic Volumes**



**Typical Application 11**

**Figure 6I-12. Lane Closure on a Two-Lane Road Using Traffic Control Signals (TA-12)**

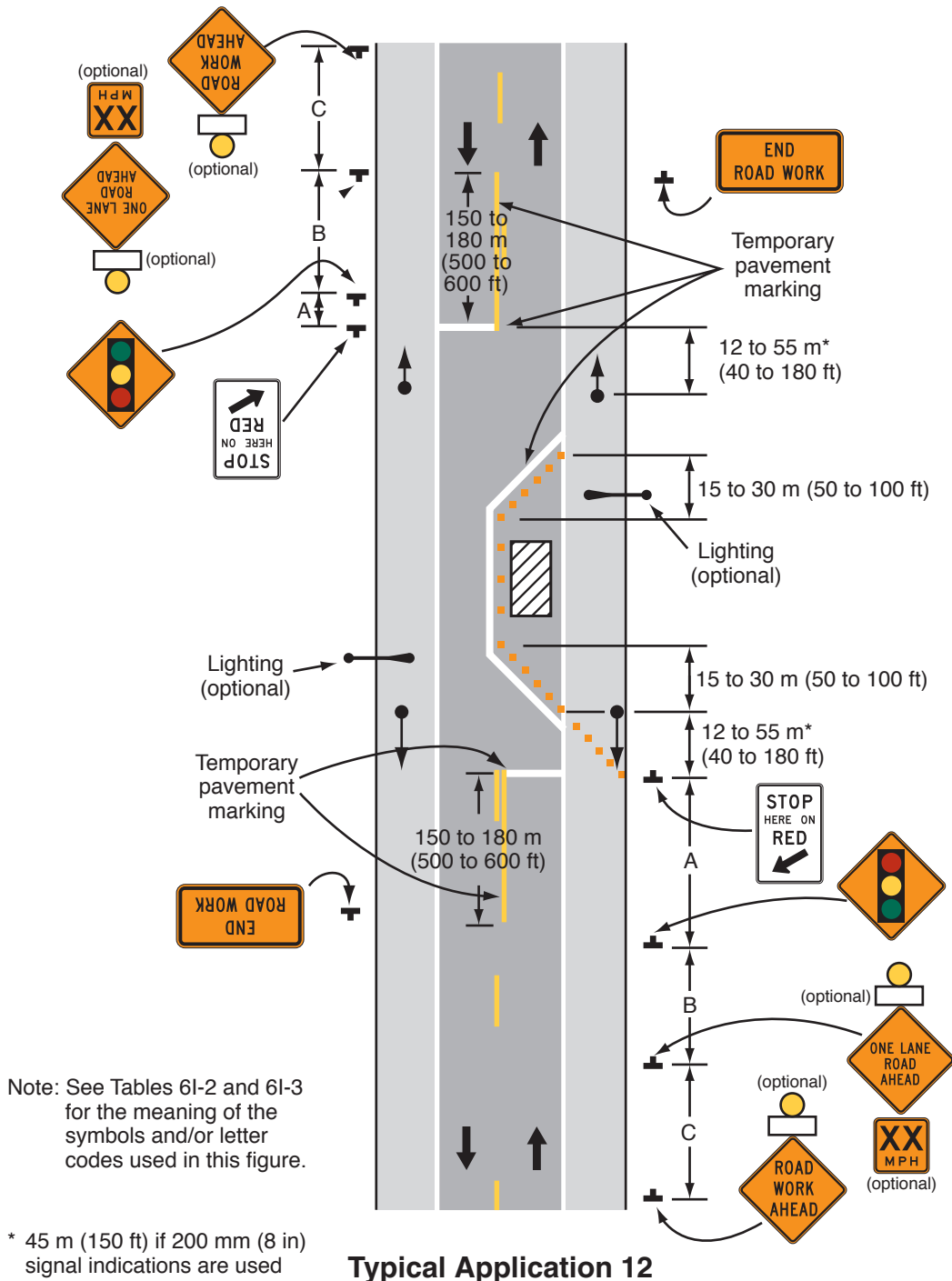
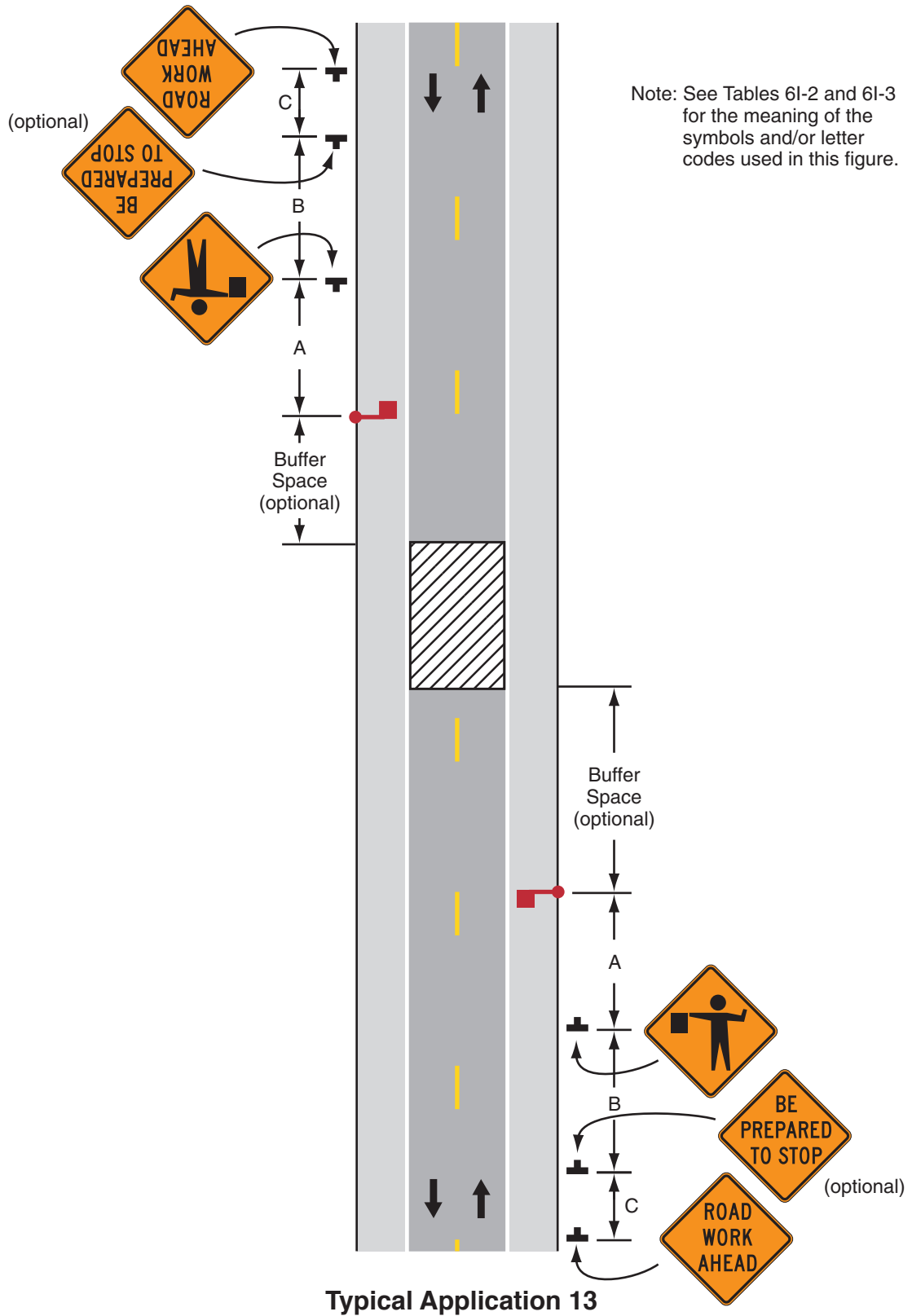
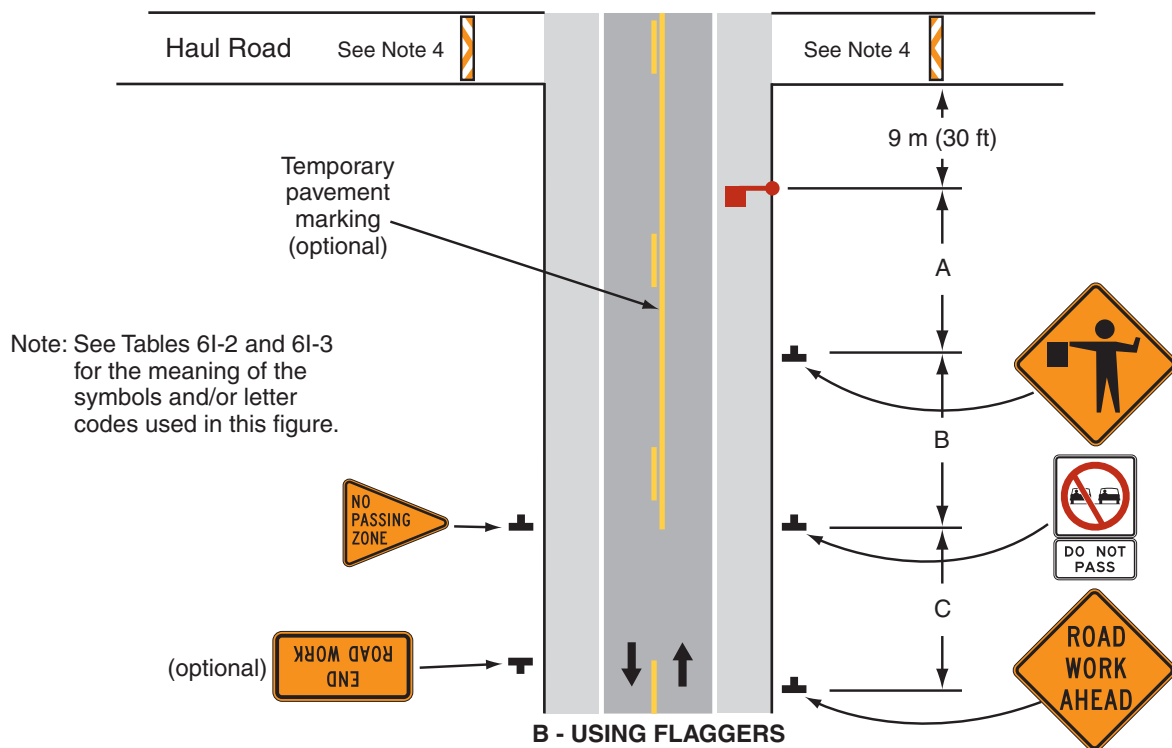
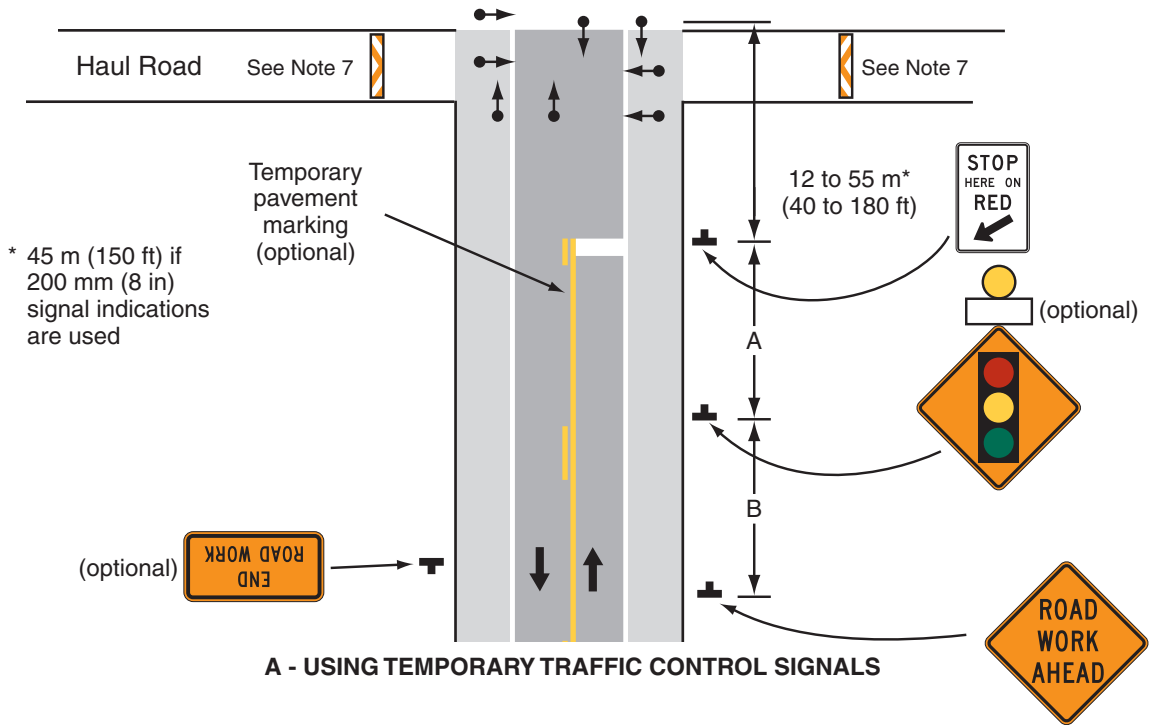


Figure 6I-13. Temporary Road Closure (TA-13)

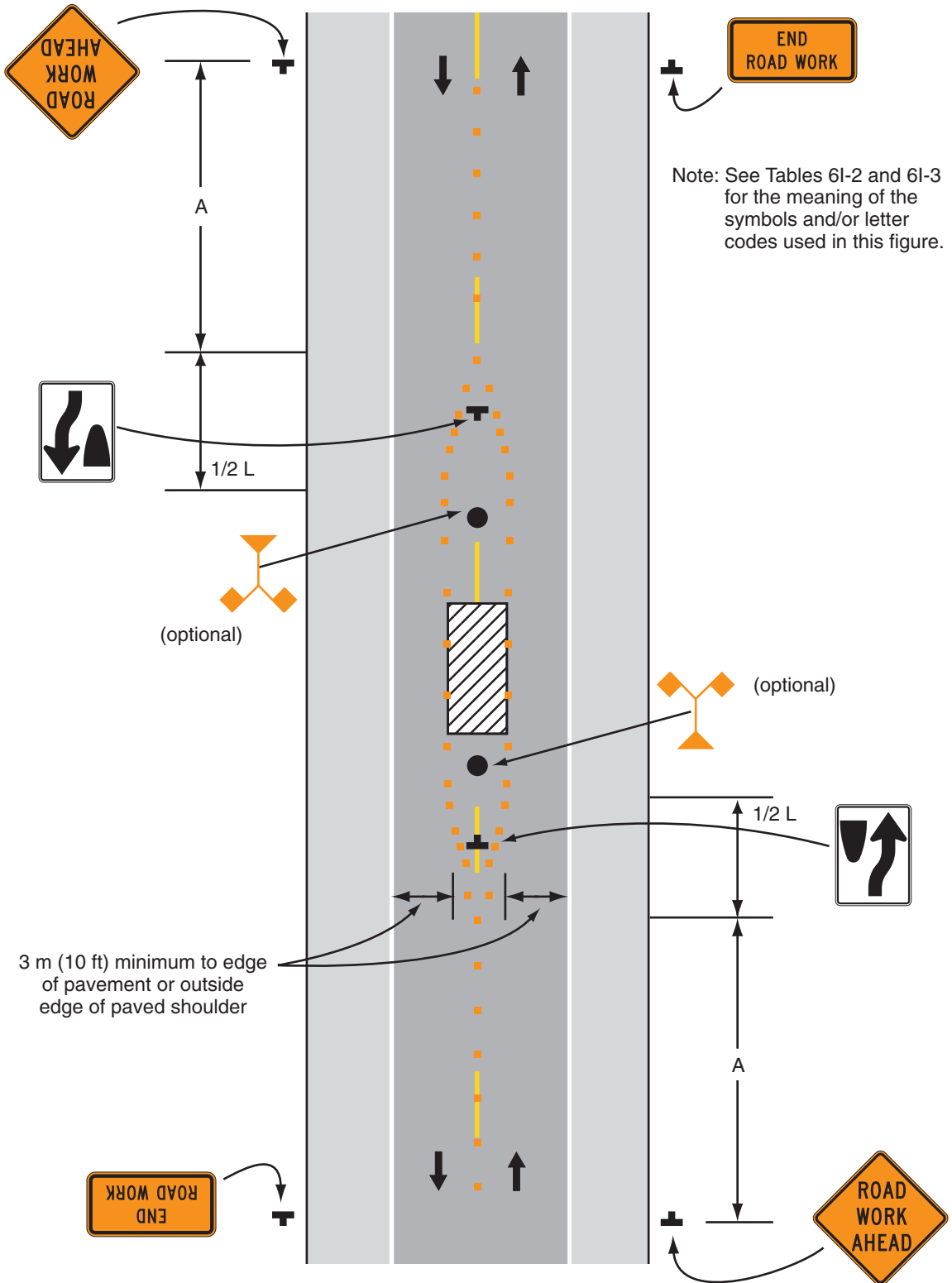


**Figure 6I-14. Haul Road Crossing (TA-14)**



**Typical Application 14**

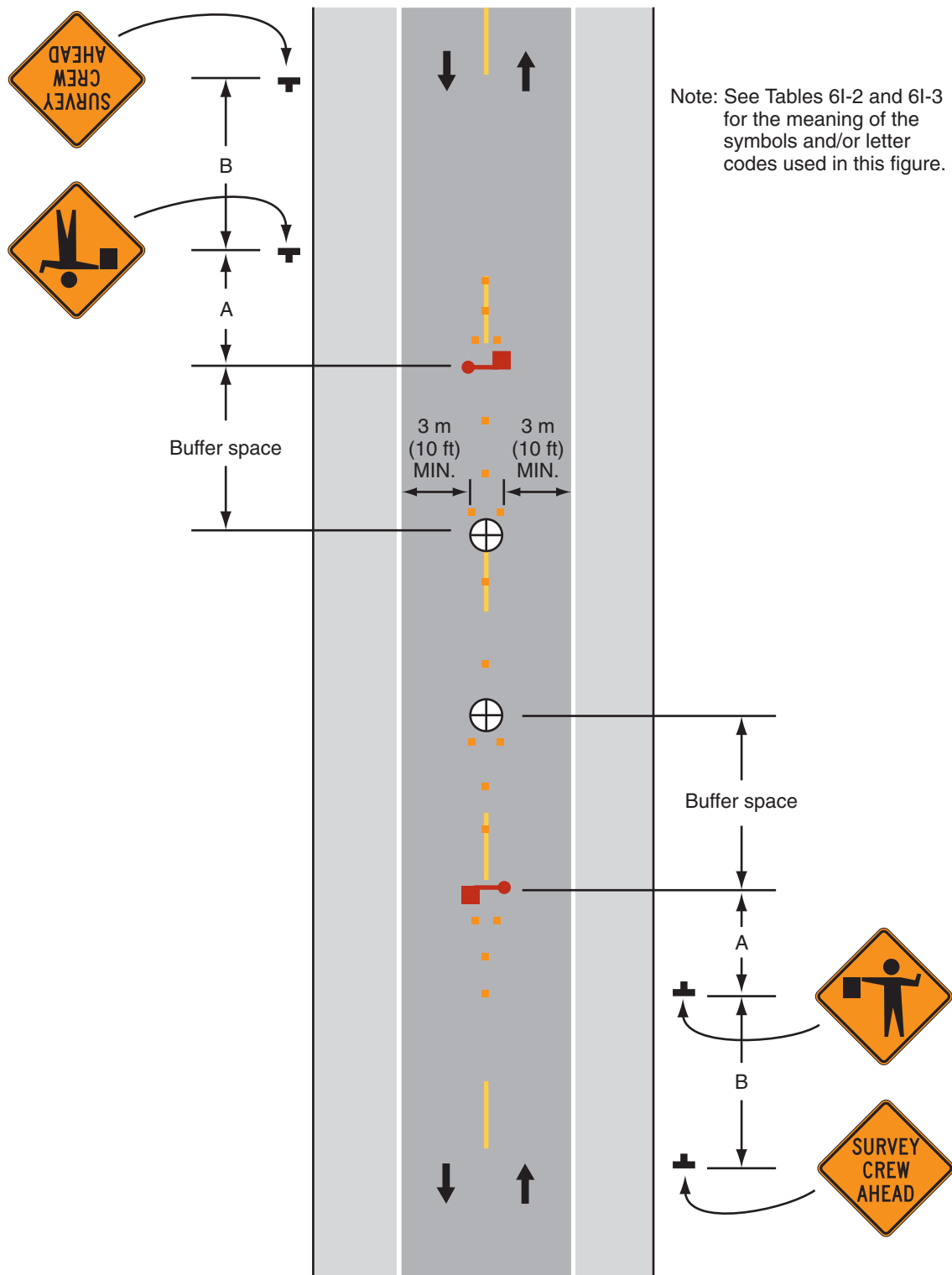
**Figure 6I-15. Work in the Center of a Road with Low Traffic Volumes (TA-15)**



**Typical Application 15**

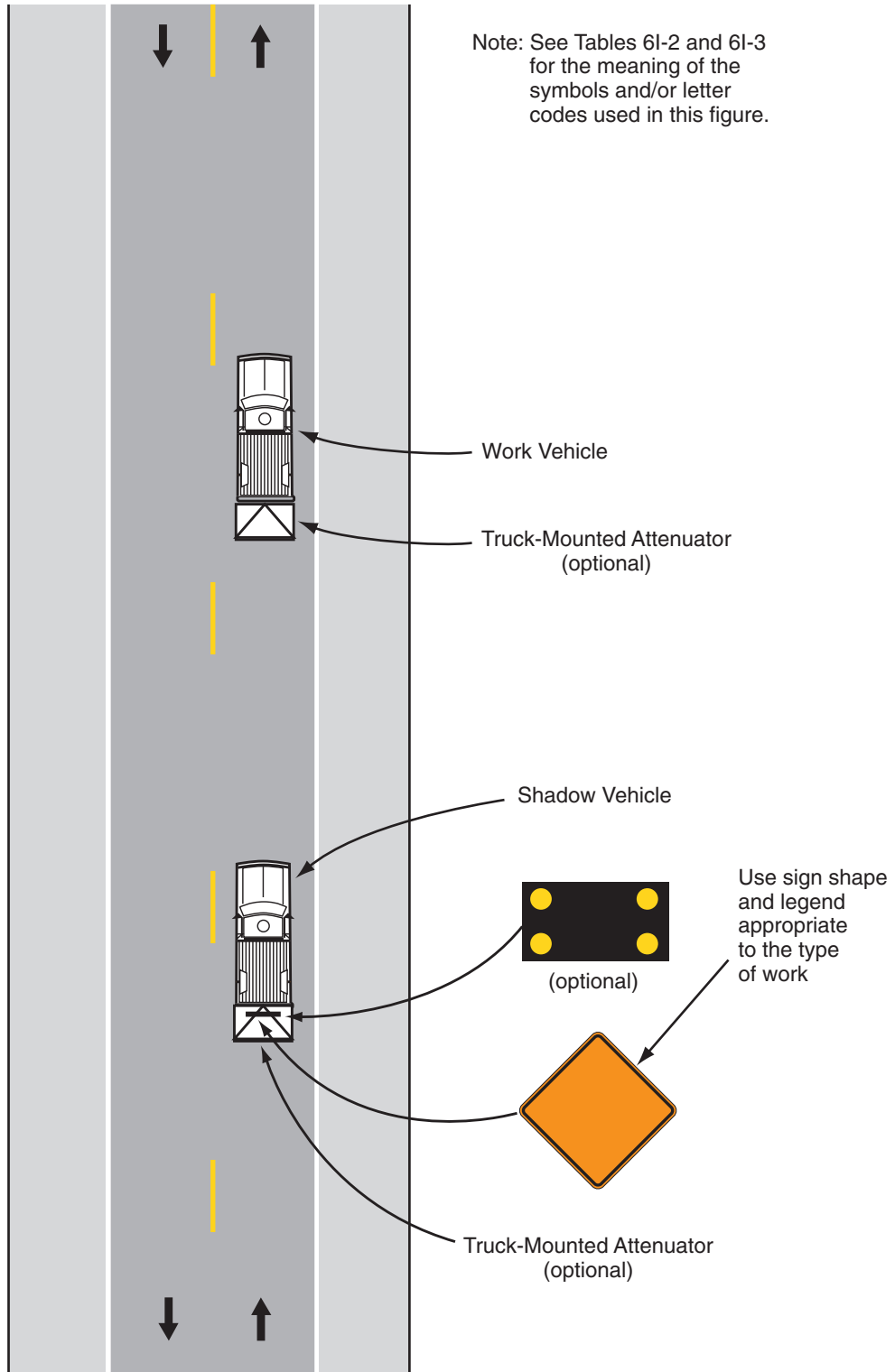


**Figure 6I-16. Surveying Along the Centerline of a Road with Low Traffic Volumes (TA-16)**



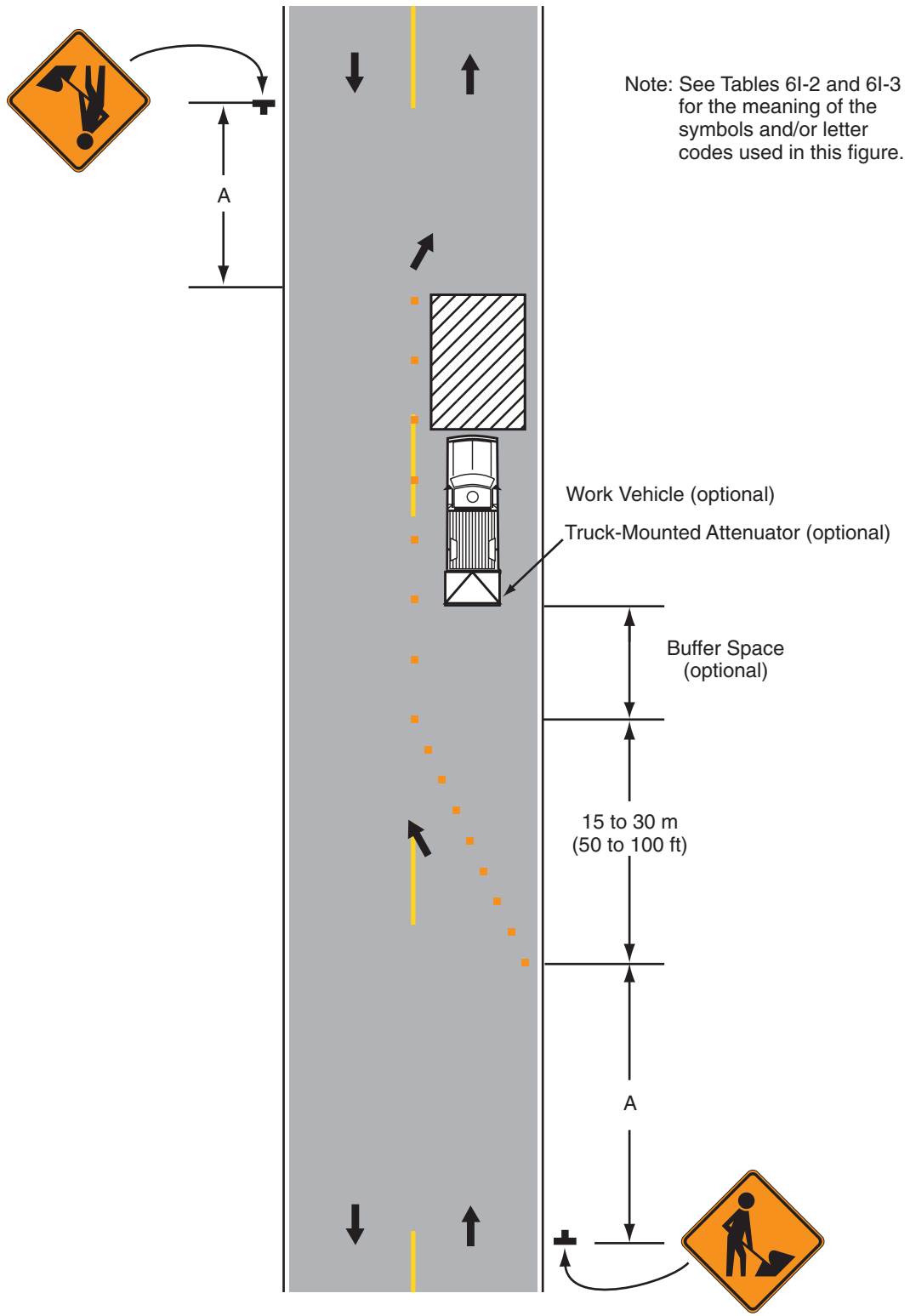
**Typical Application 16**

**Figure 6I-17. Mobile Operations on a Two-Lane Road (TA-17)**



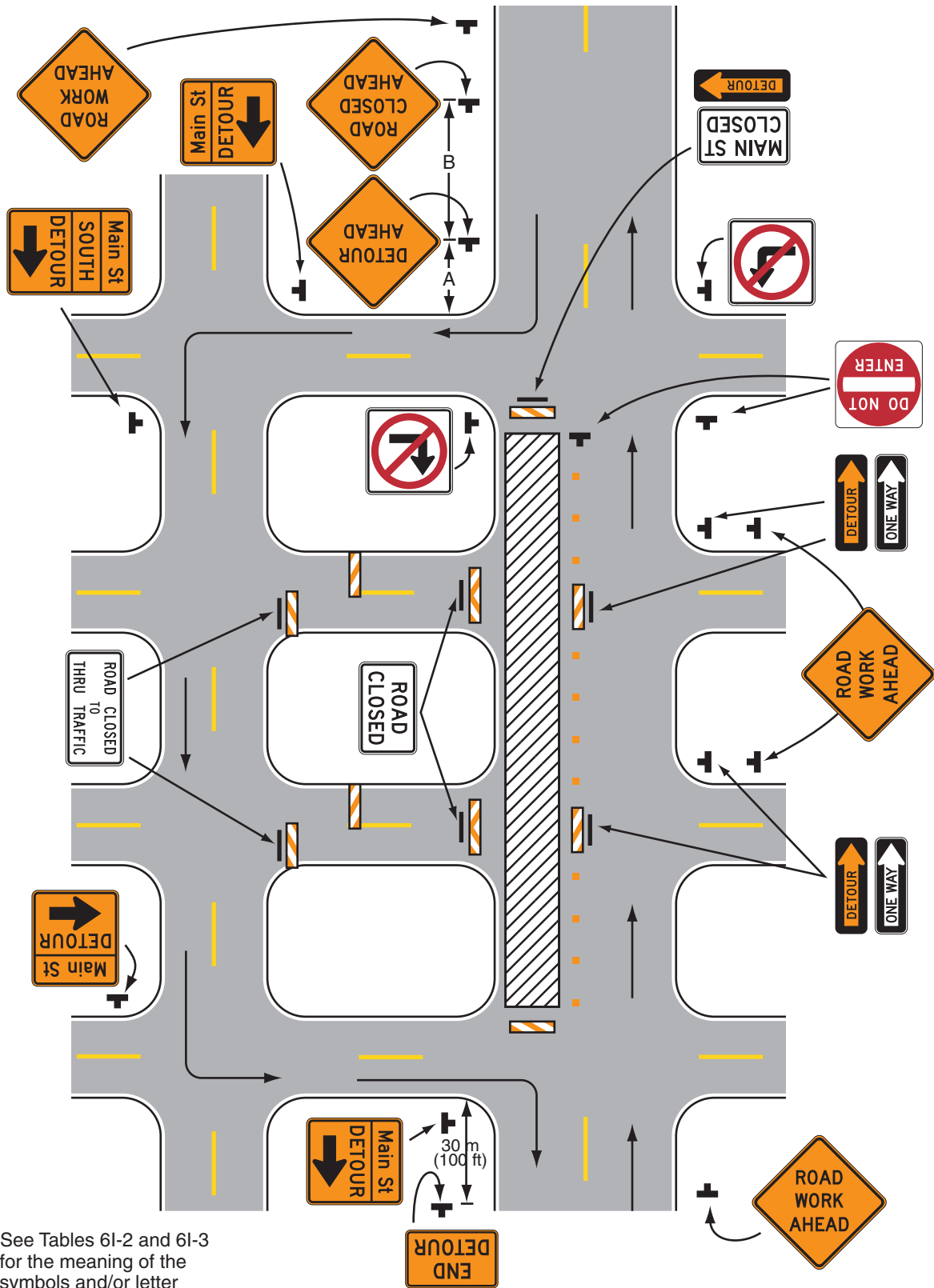
**Typical Application 17**

**Figure 6I-18. Lane Closure on a Minor Street (TA-18)**



**Typical Application 18**

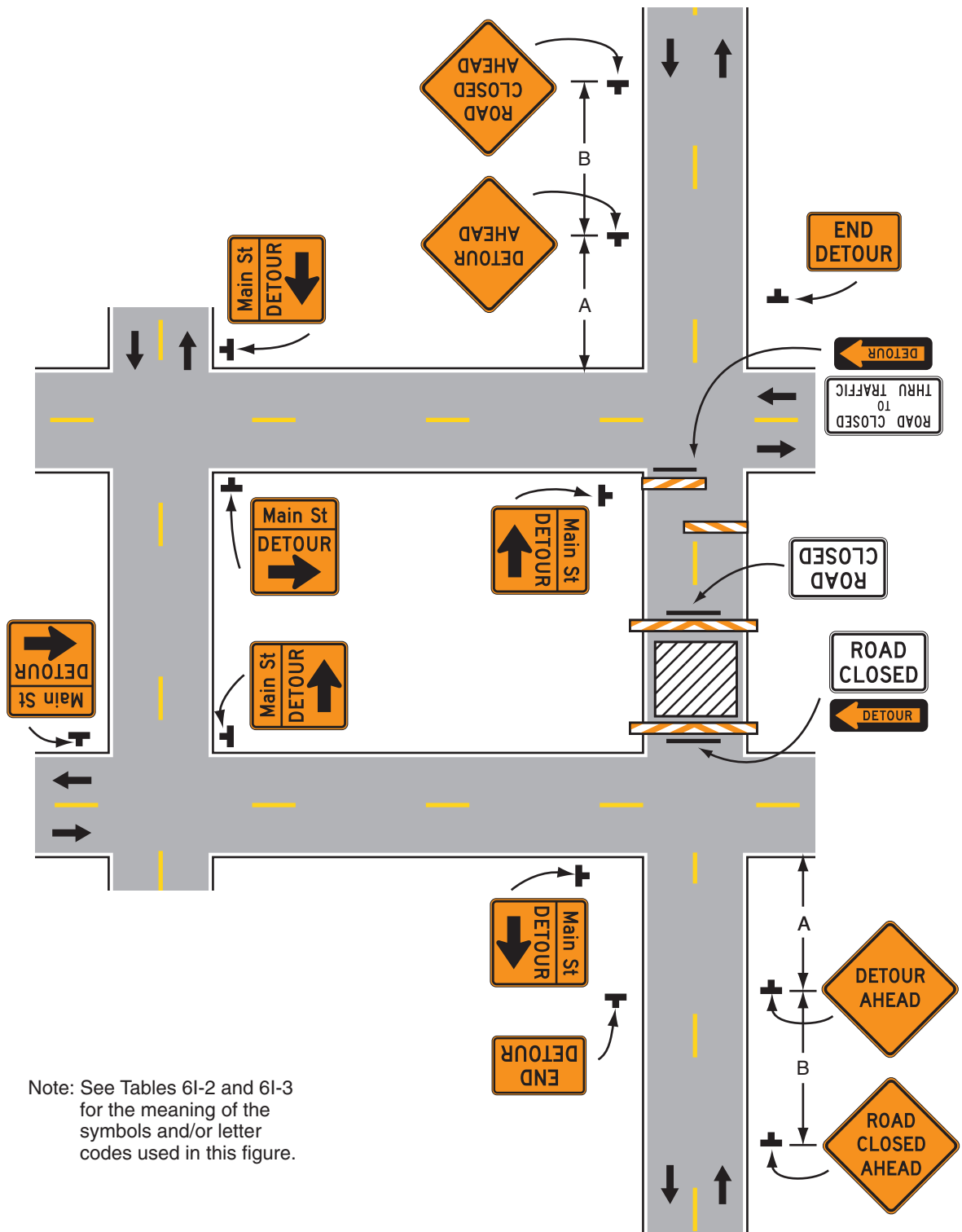
Figure 6I-19. Detour for One Travel Direction (TA-19)



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 19

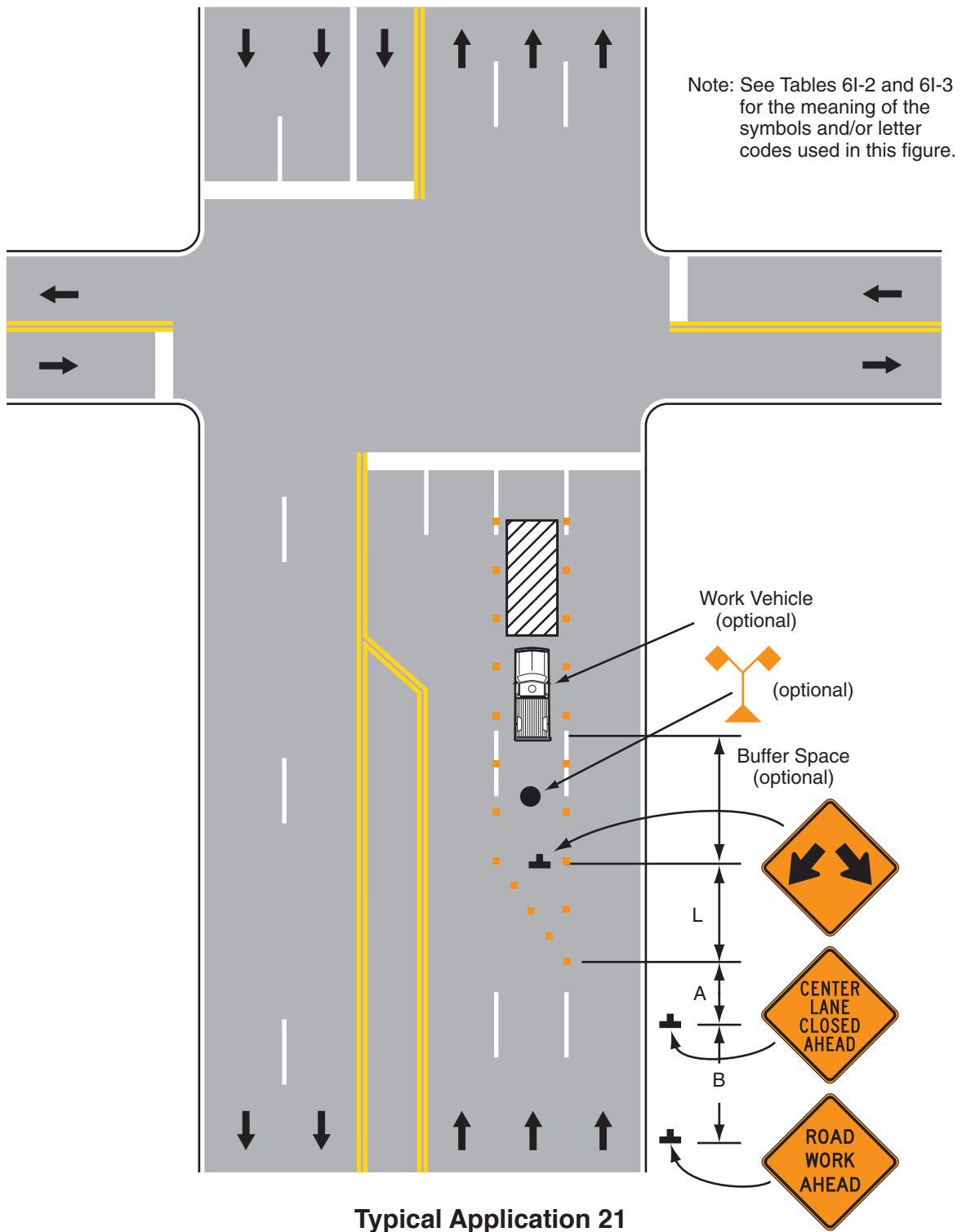
Figure 6I-20. Detour for a Closed Street (TA-20)



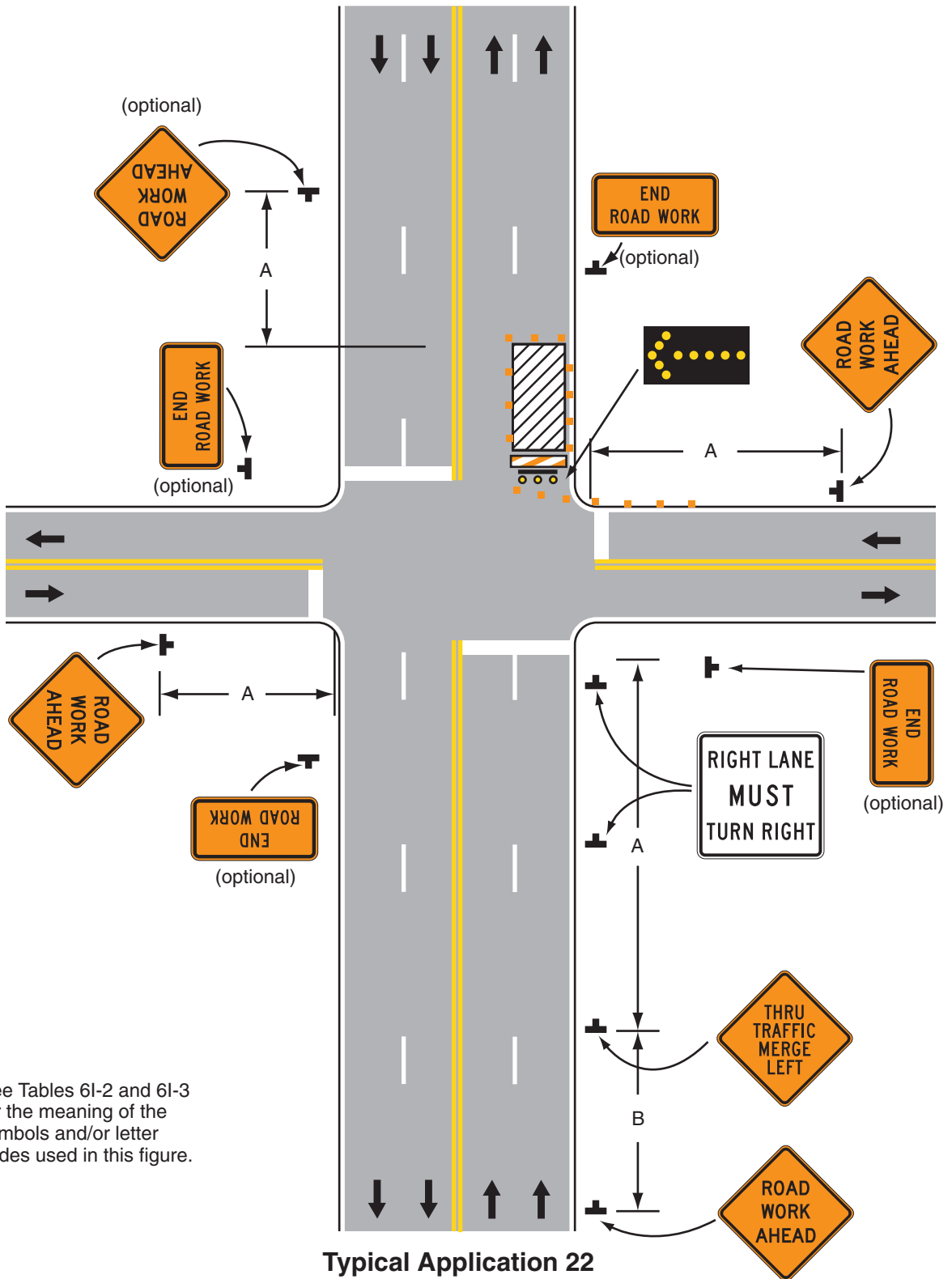
Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 20

**Figure 6I-21. Lane Closure on the Near Side of an Intersection (TA-21)**

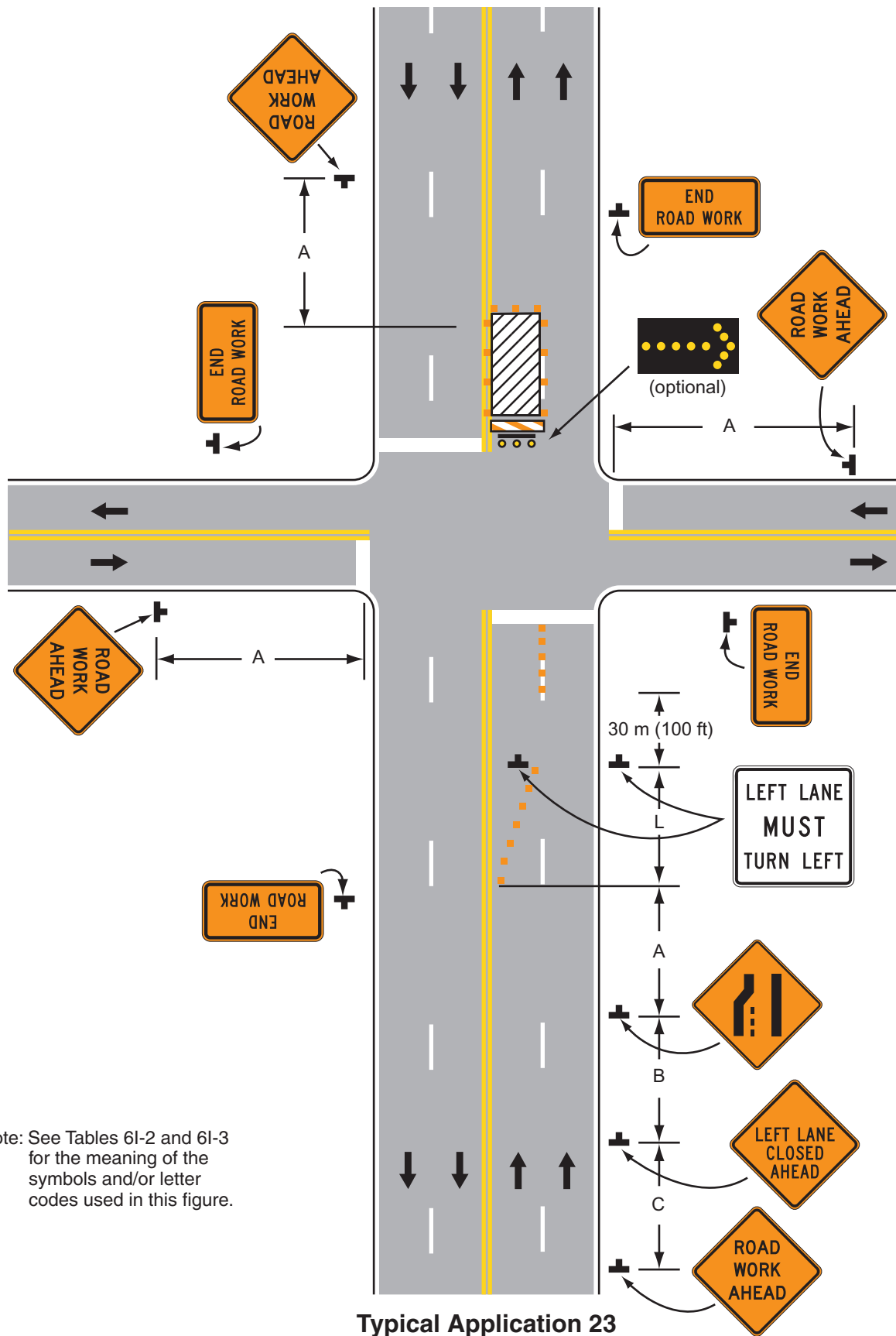


**Figure 6I-22. Right Lane Closure on the Far Side of an Intersection (TA-22)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

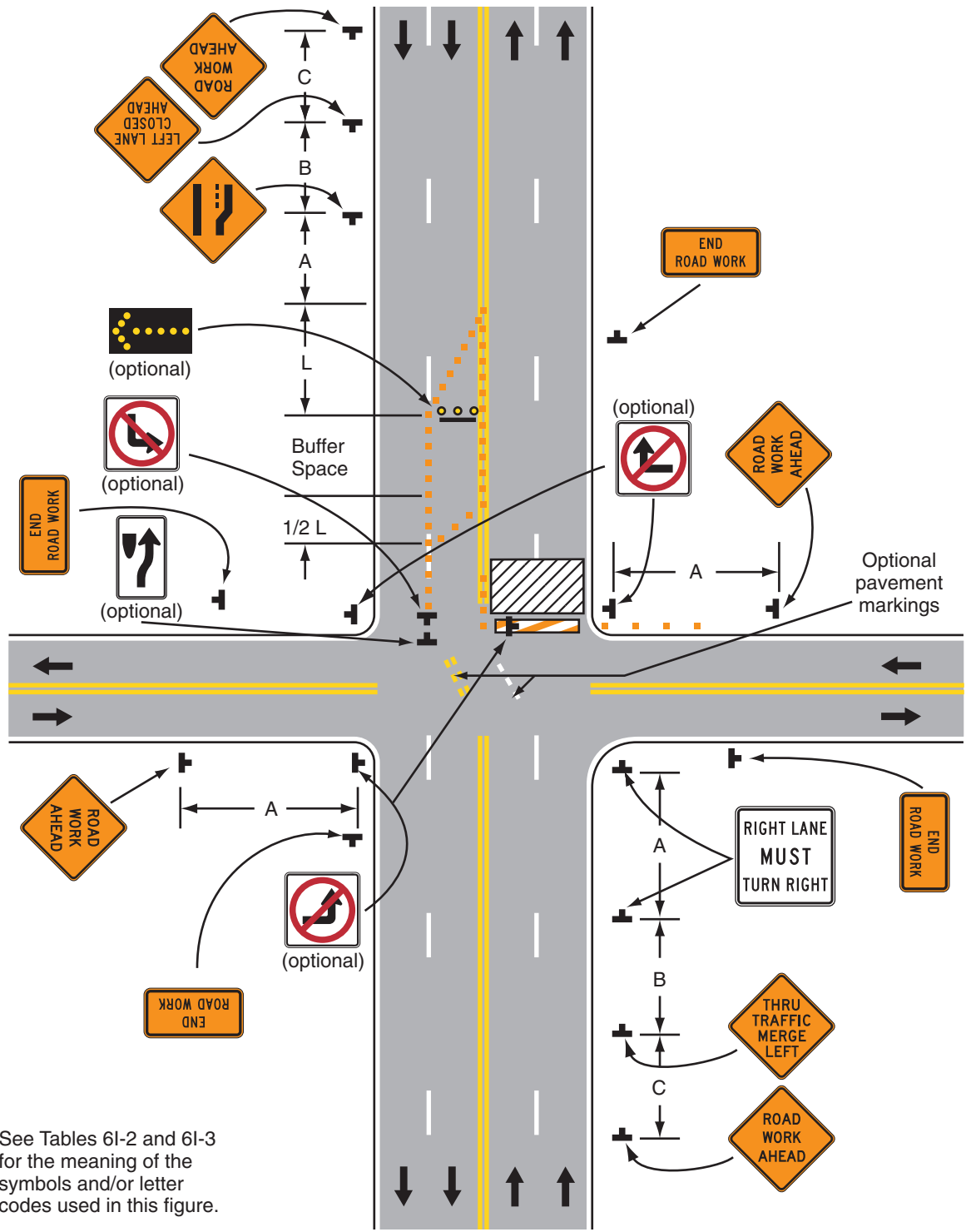
**Figure 6I-23. Left Lane Closure on the Far Side of an Intersection (TA-23)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.



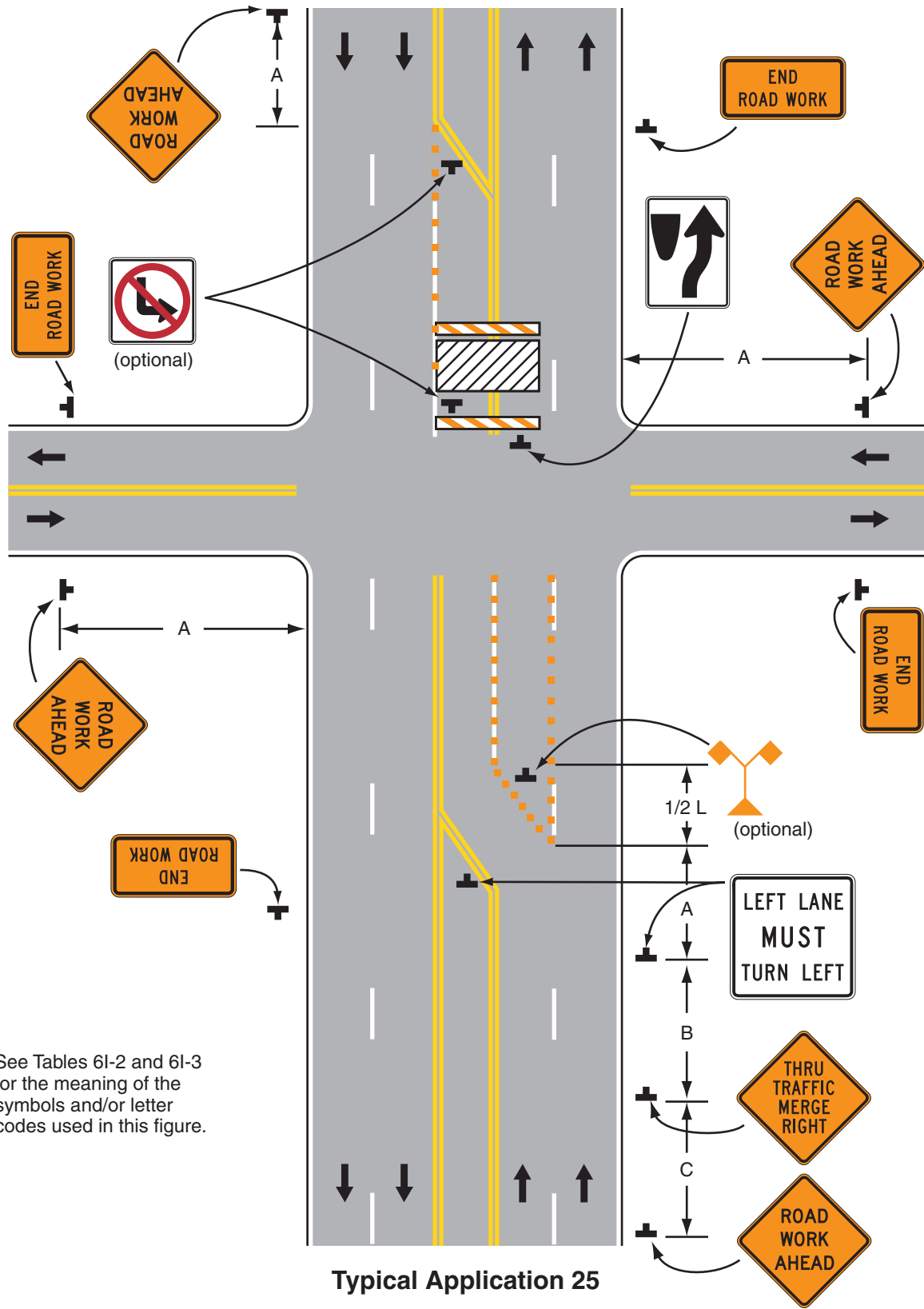
Figure 6I-24. Half Road Closure on the Far Side of an Intersection (TA-24)



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 24

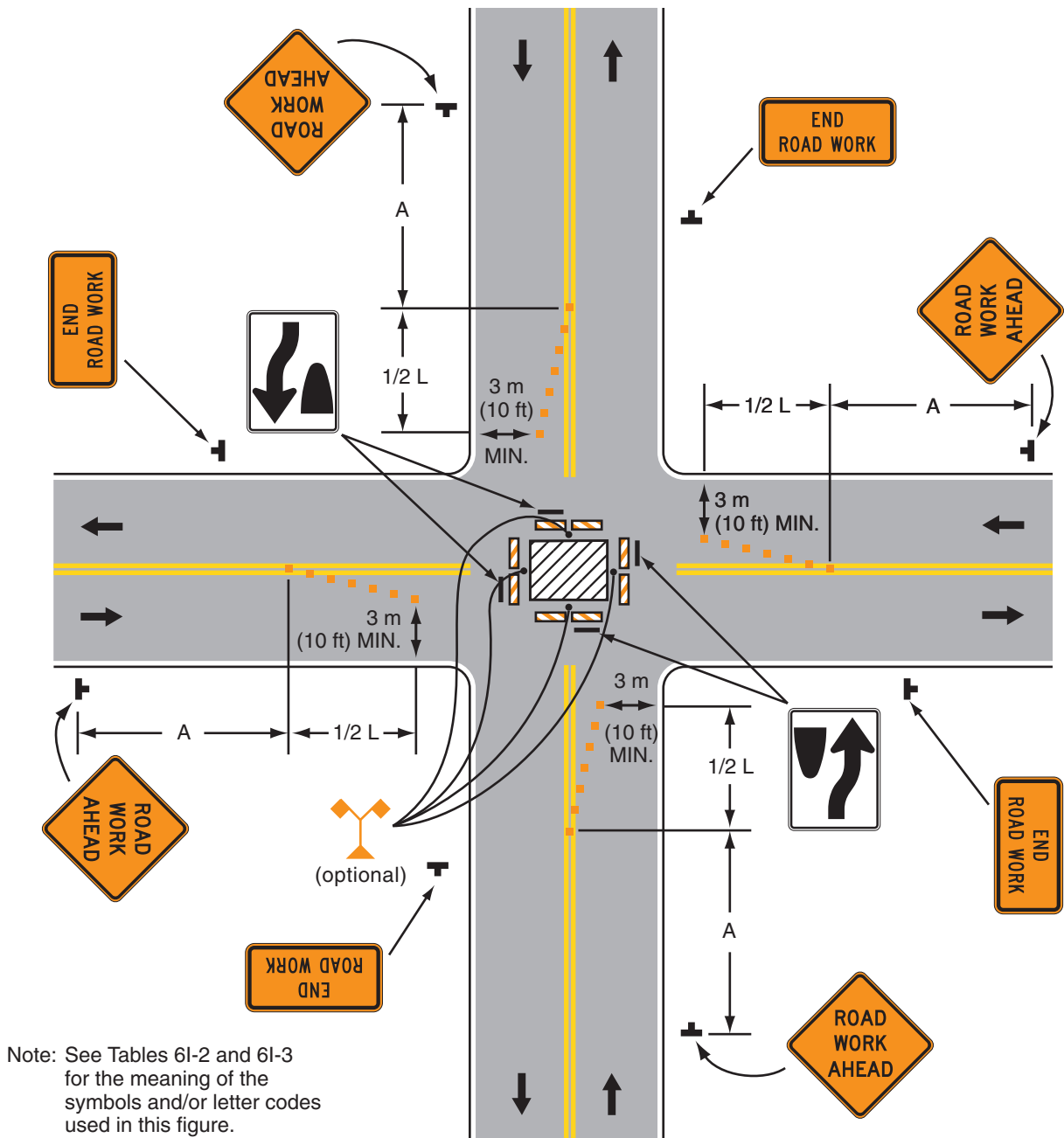
**Figure 6I-25. Multiple Lane Closures at an Intersection (TA-25)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

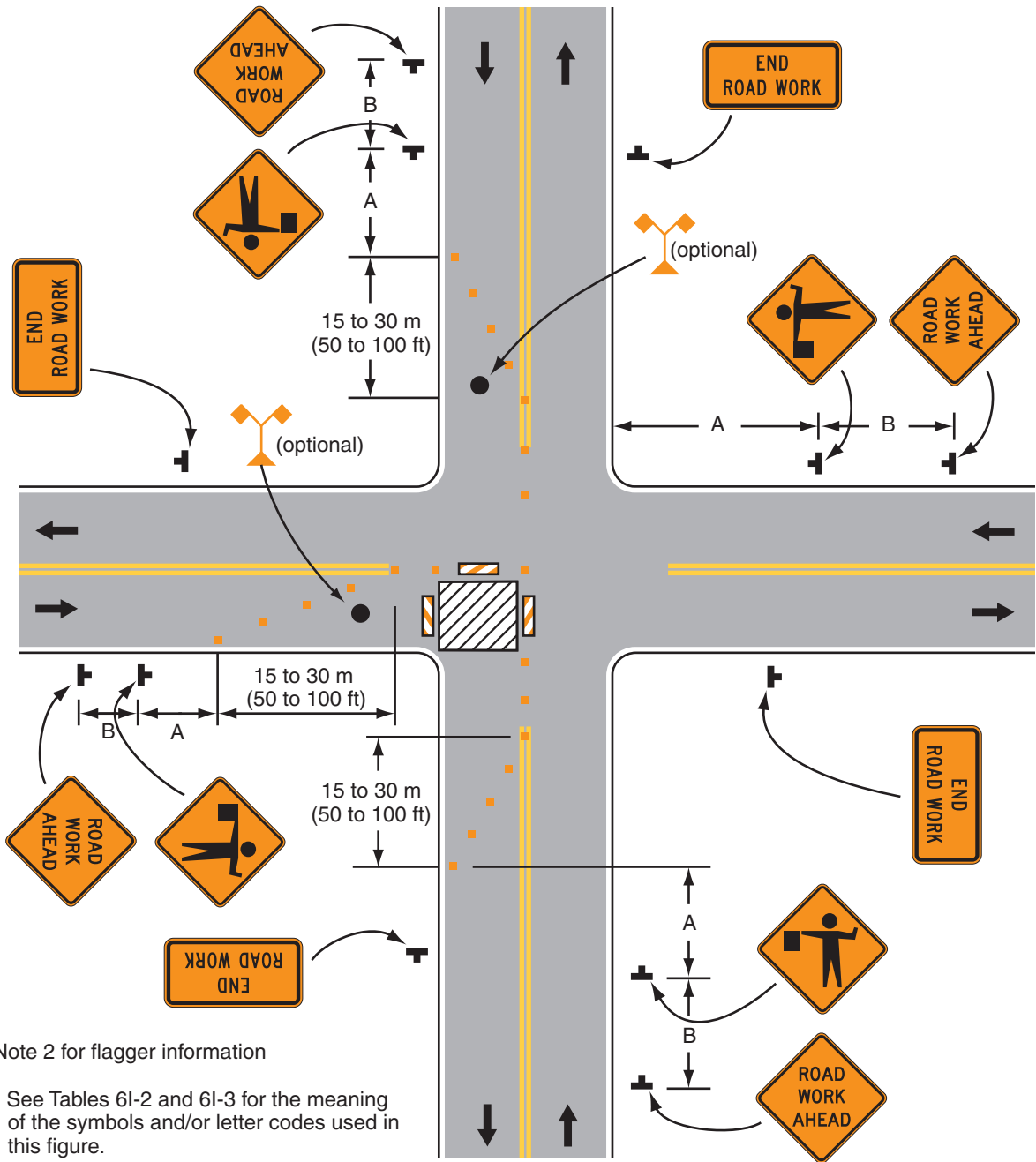
**Typical Application 25**

Figure 6I-26. Closure in the Center of an Intersection (TA-26)



Typical Application 26

**Figure 6I-27. Closure at the Side of an Intersection (TA-27)**

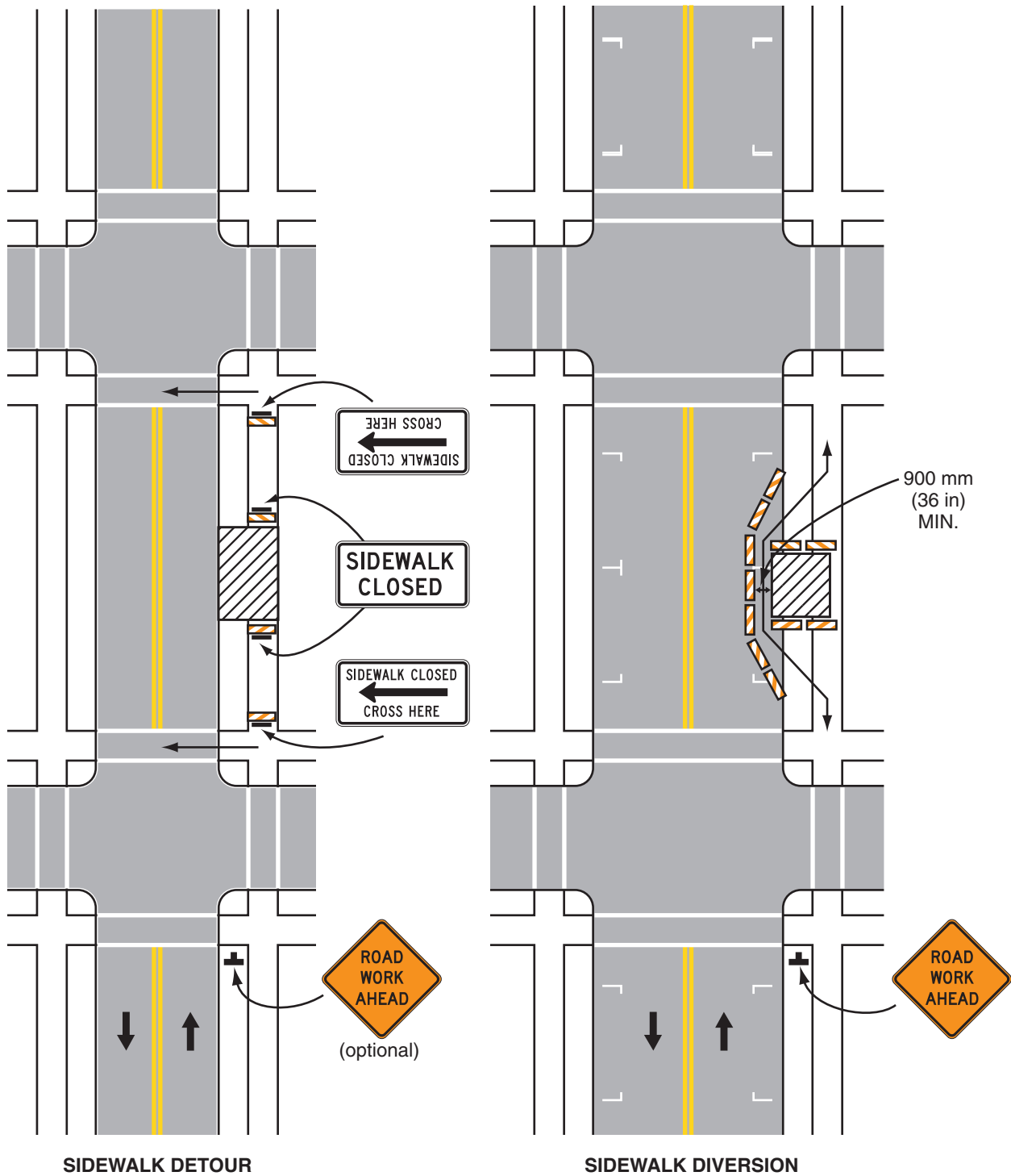


See Note 2 for flagger information

Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Typical Application 27**

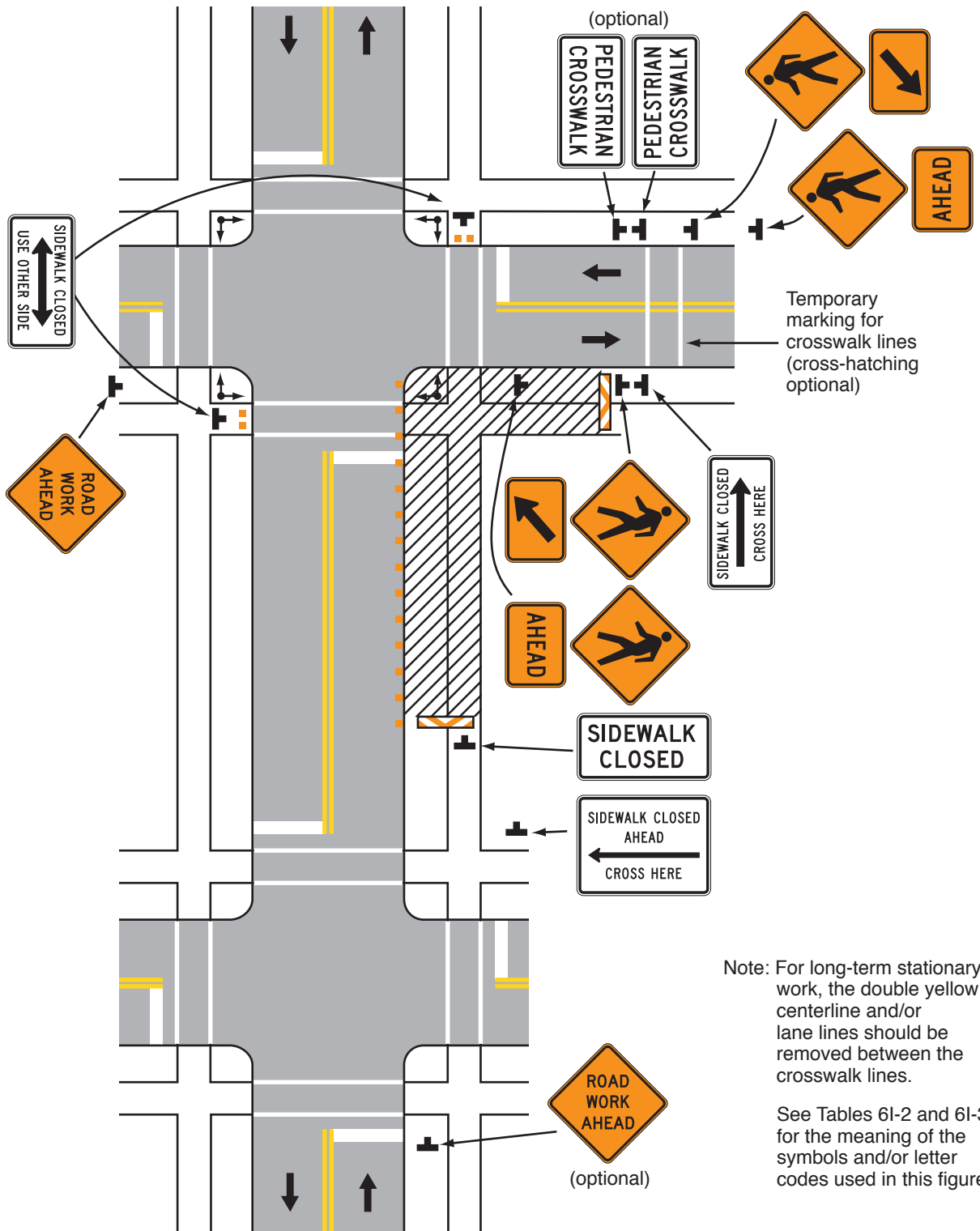
**Figure 6I-28. Sidewalk Detour or Diversion (TA-28)**



**Typical Application 28**

Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Figure 6I-29. Crosswalk Closures and Pedestrian Detours (TA-29)**

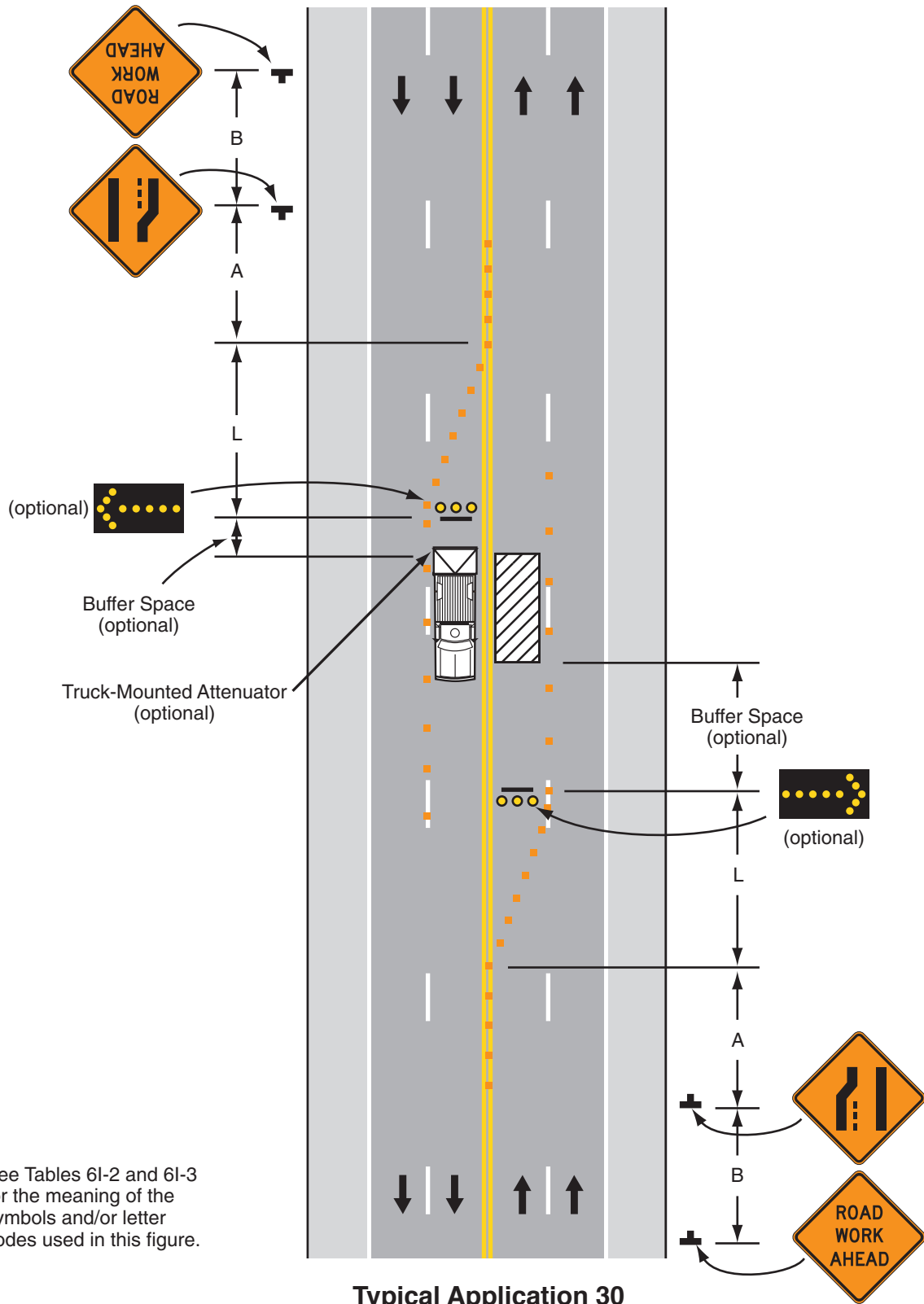


Note: For long-term stationary work, the double yellow centerline and/or lane lines should be removed between the crosswalk lines.

See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

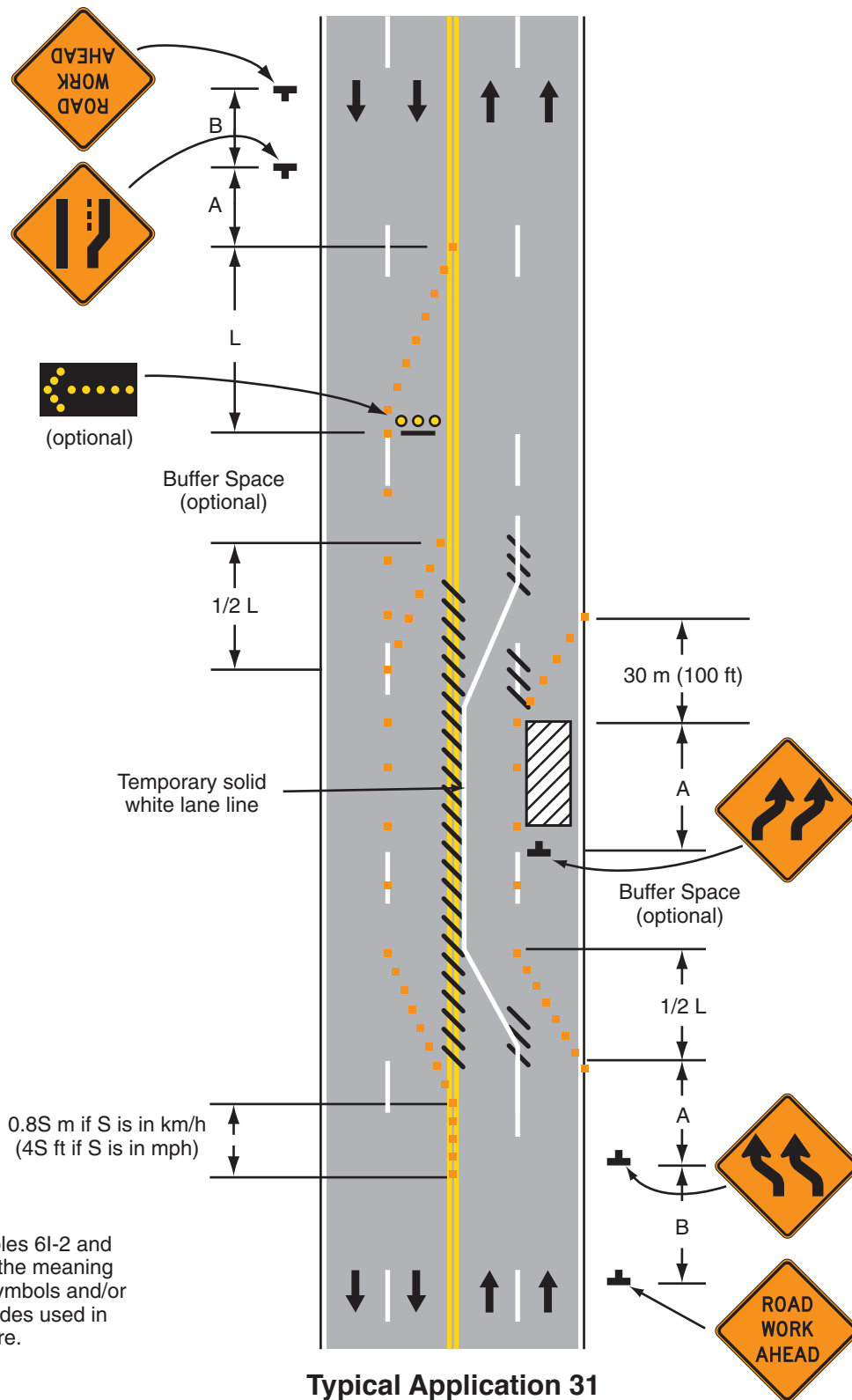
**Typical Application 29**

**Figure 6I-30. Interior Lane Closure on a Multi-lane Street (TA-30)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

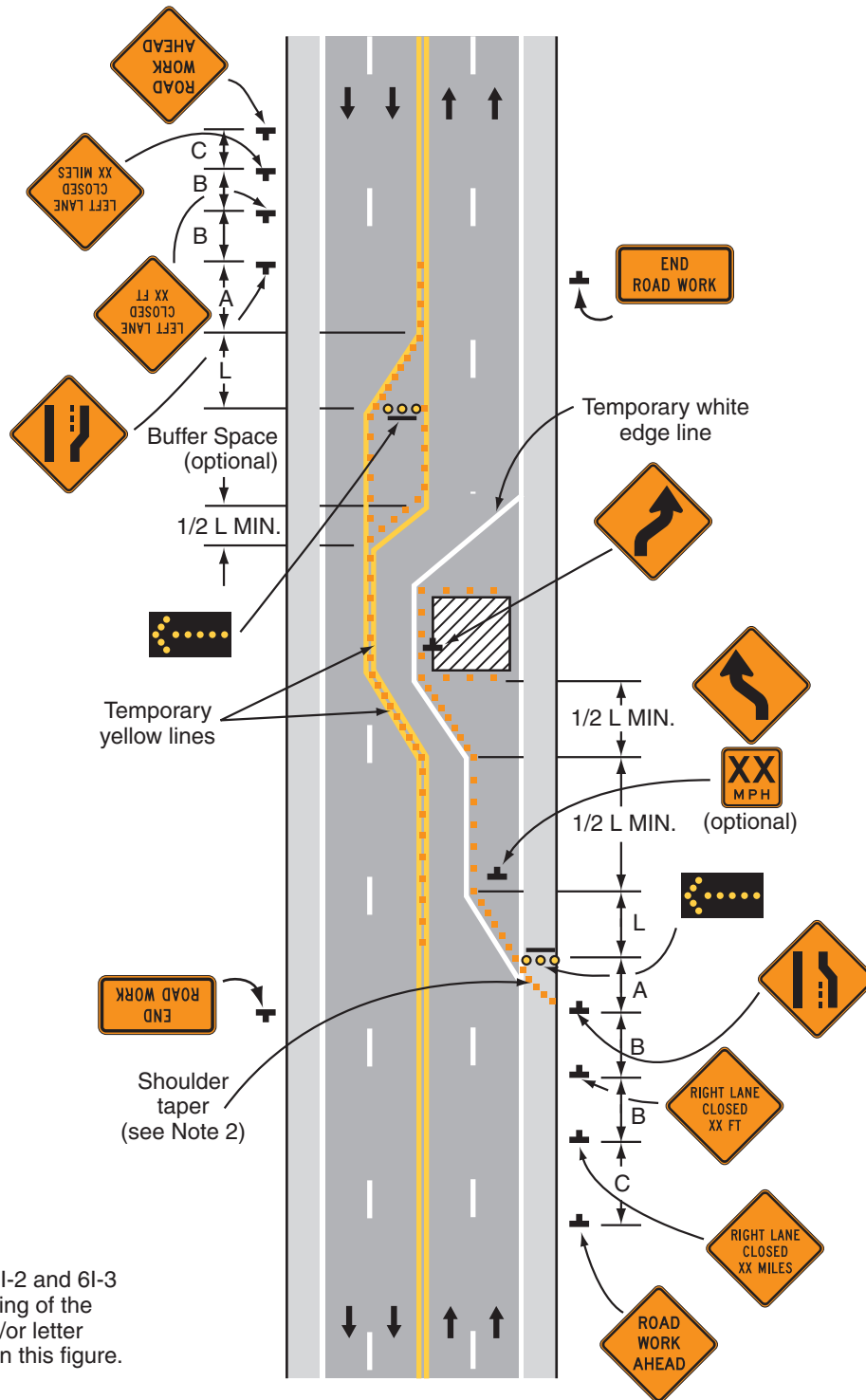
**Figure 6I-31. Lane Closures on a Street with Uneven Directional Volumes (TA-31)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.



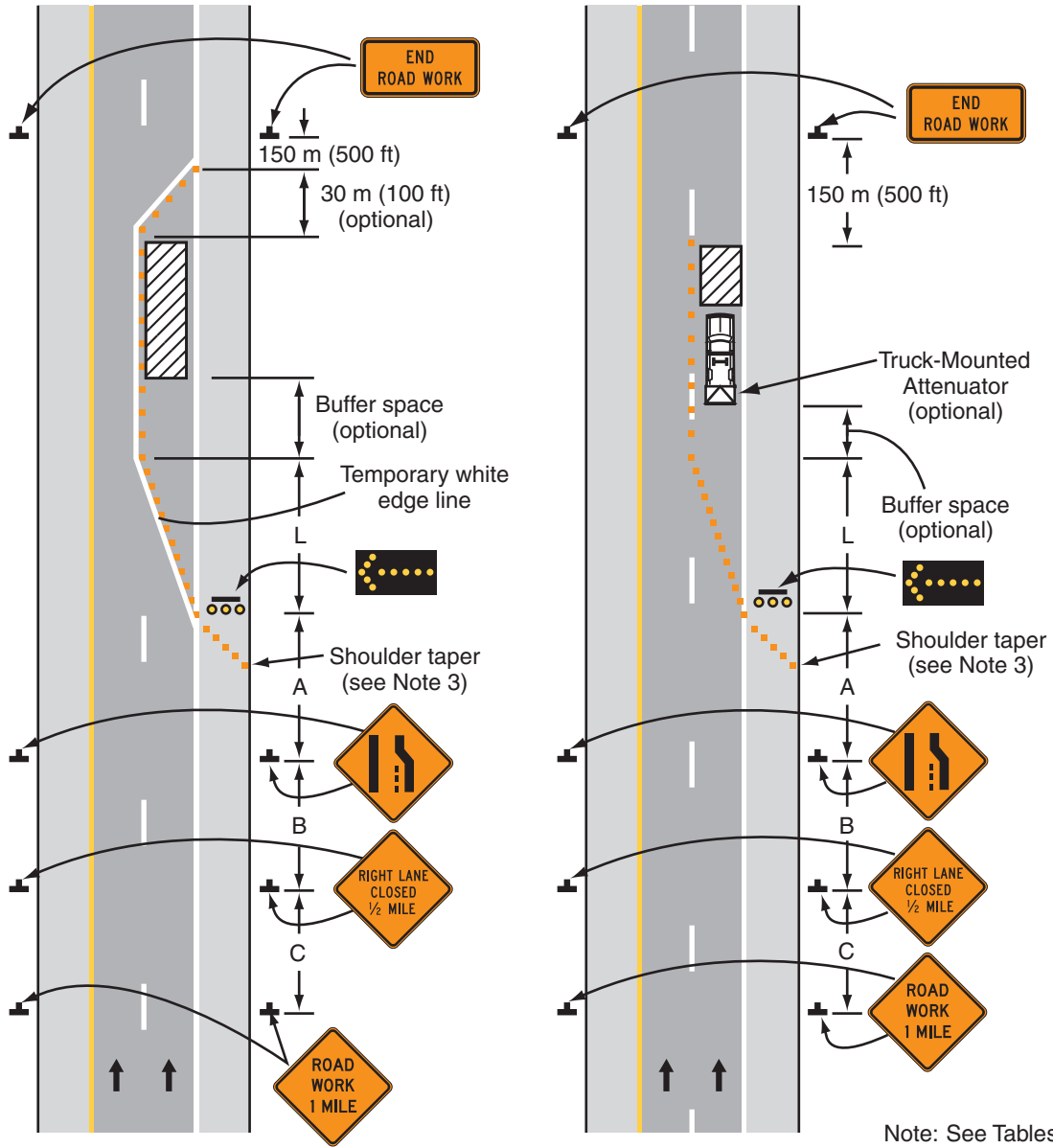
**Figure 6I-32. Half Road Closure on a Multi-lane, High-Speed Highway (TA-32)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Typical Application 32**

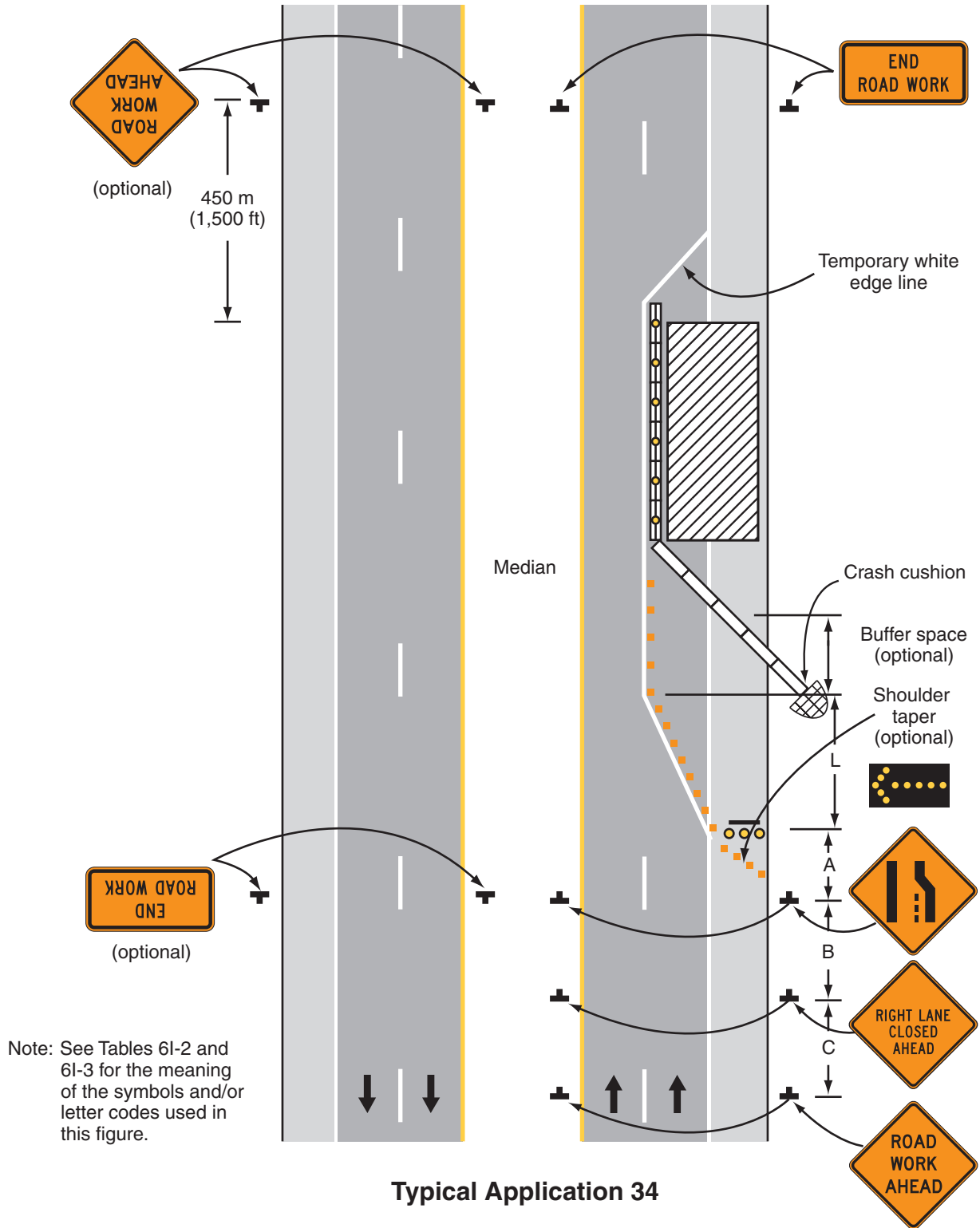
**Figure 6I-33. Stationary Lane Closure on a Divided Highway (TA-33)**



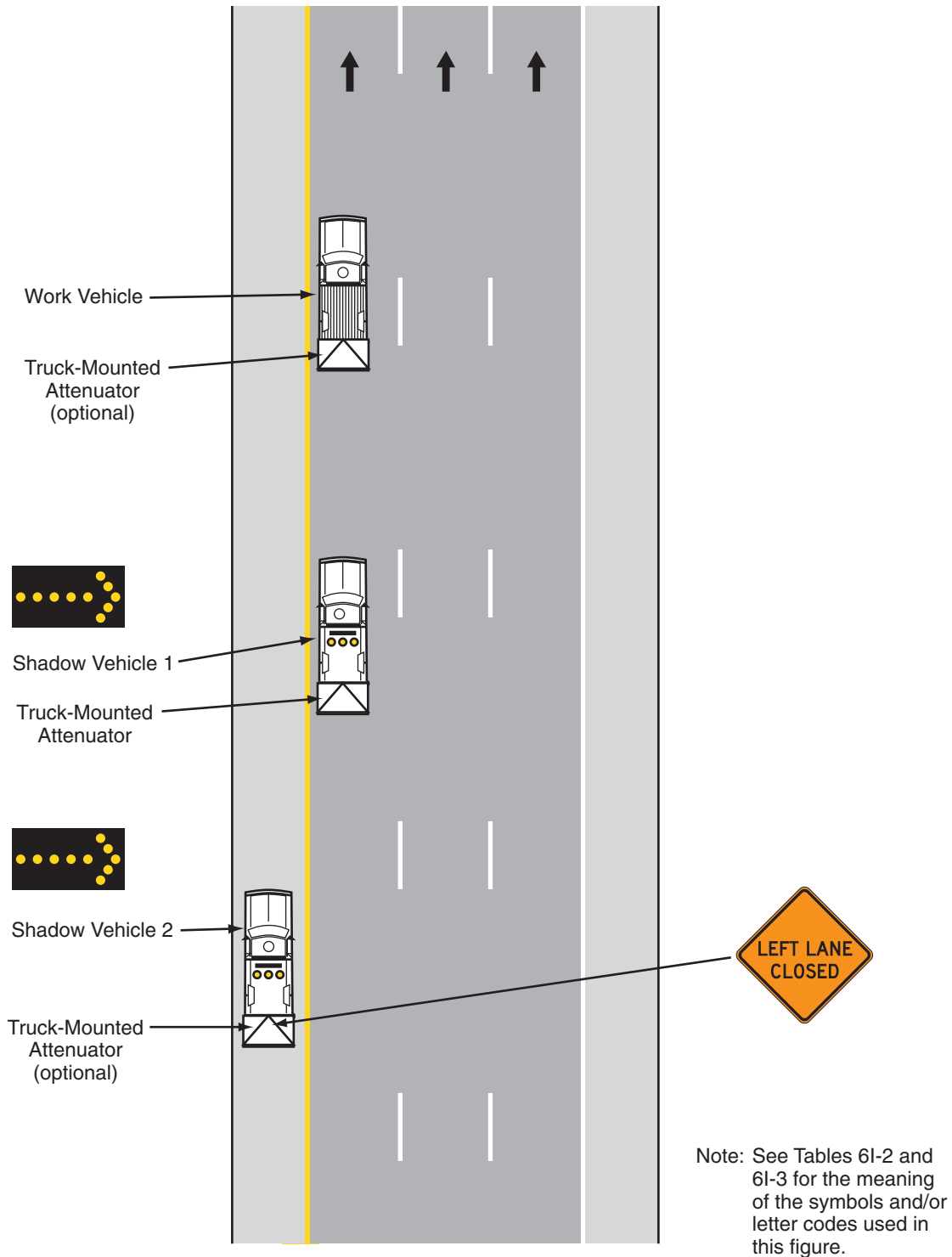
Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Typical Application 33**

**Figure 6I-34. Lane Closure with a Temporary Traffic Barrier (TA-34)**



**Figure 6I-35. Mobile Operation on a Multi-lane Road (TA-35)**



**Typical Application 35**

Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Figure 6I-36. Lane Shift on a Freeway (TA-36)**

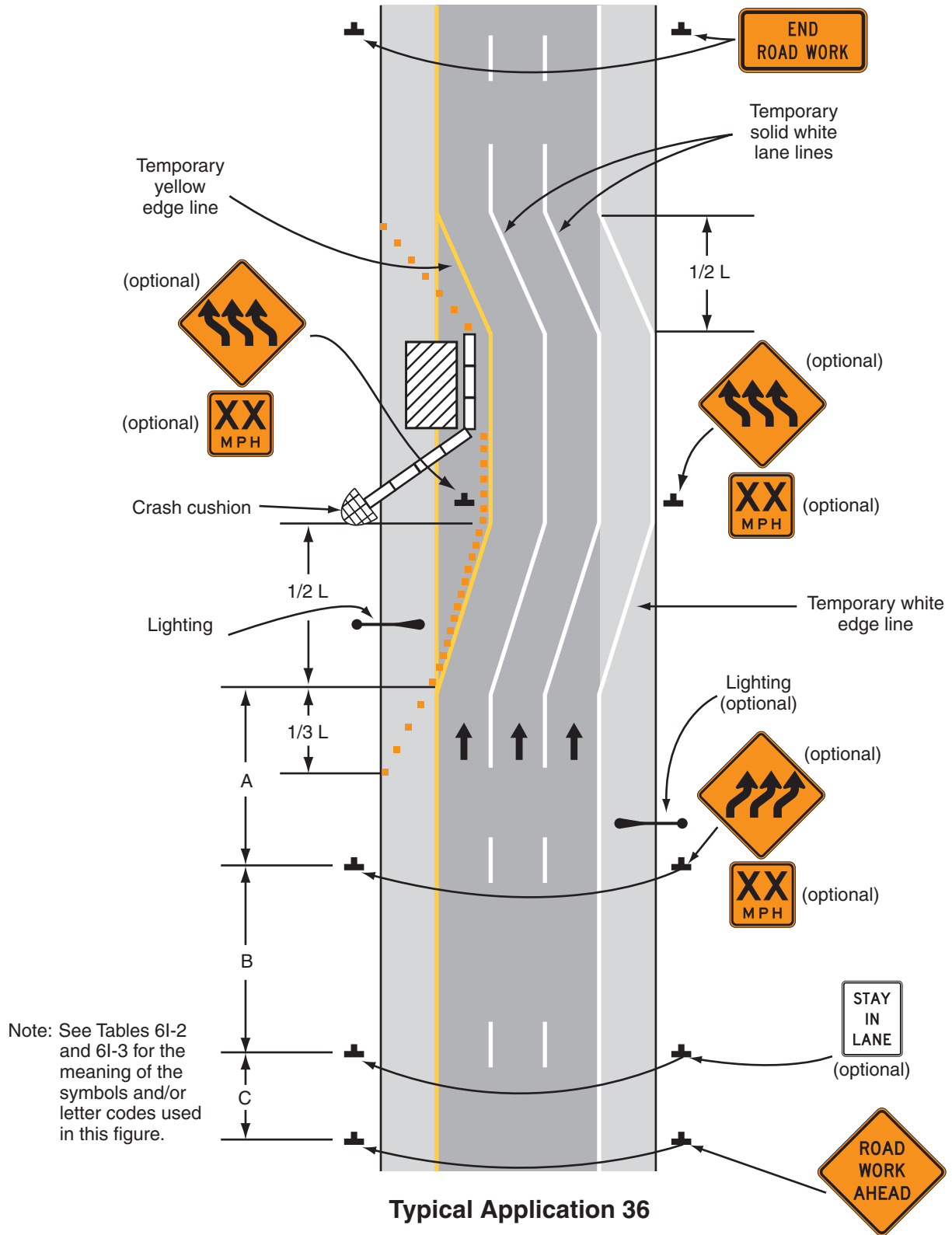
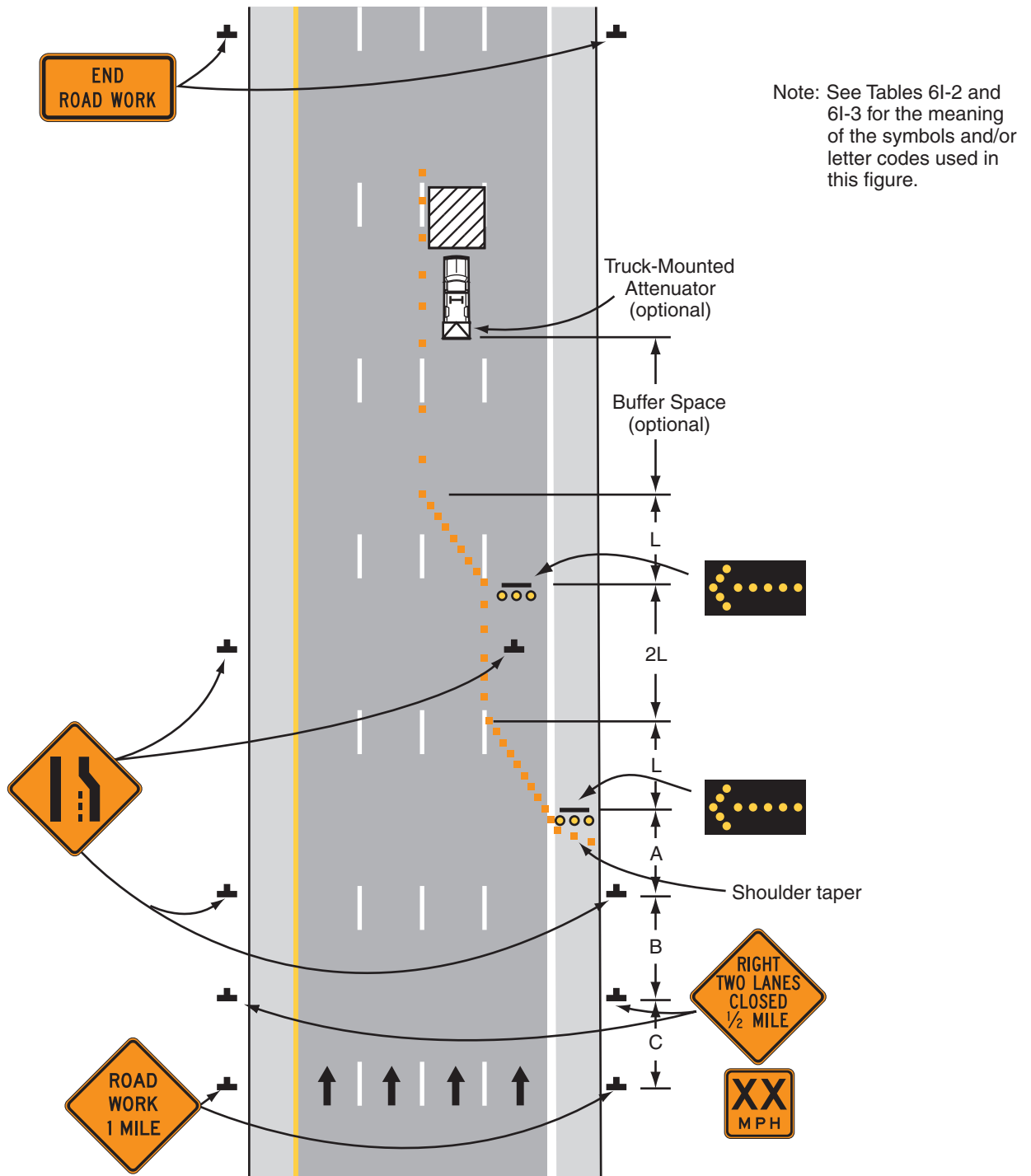
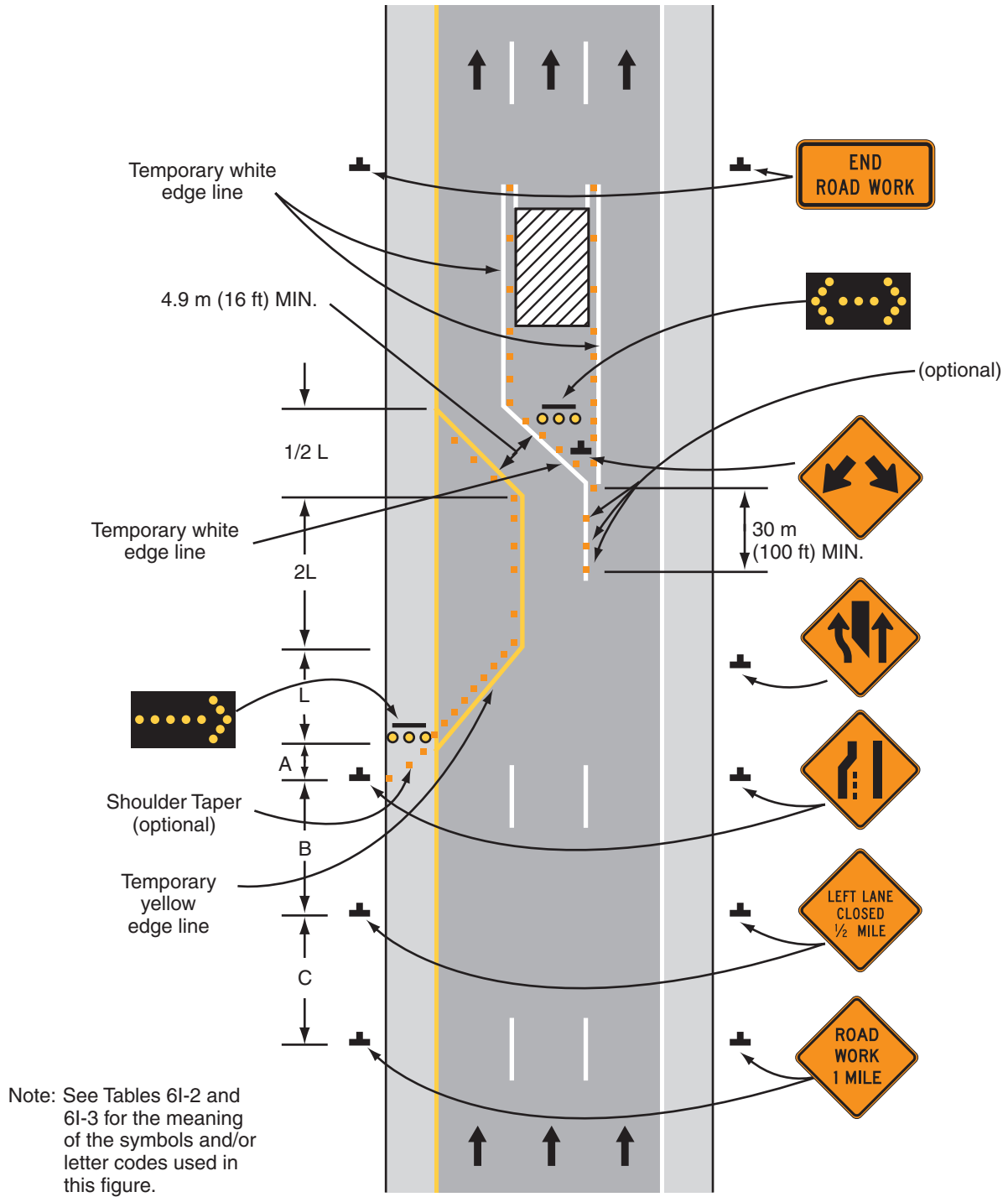


Figure 6I-37. Double Lane Closure on a Freeway (TA-37)



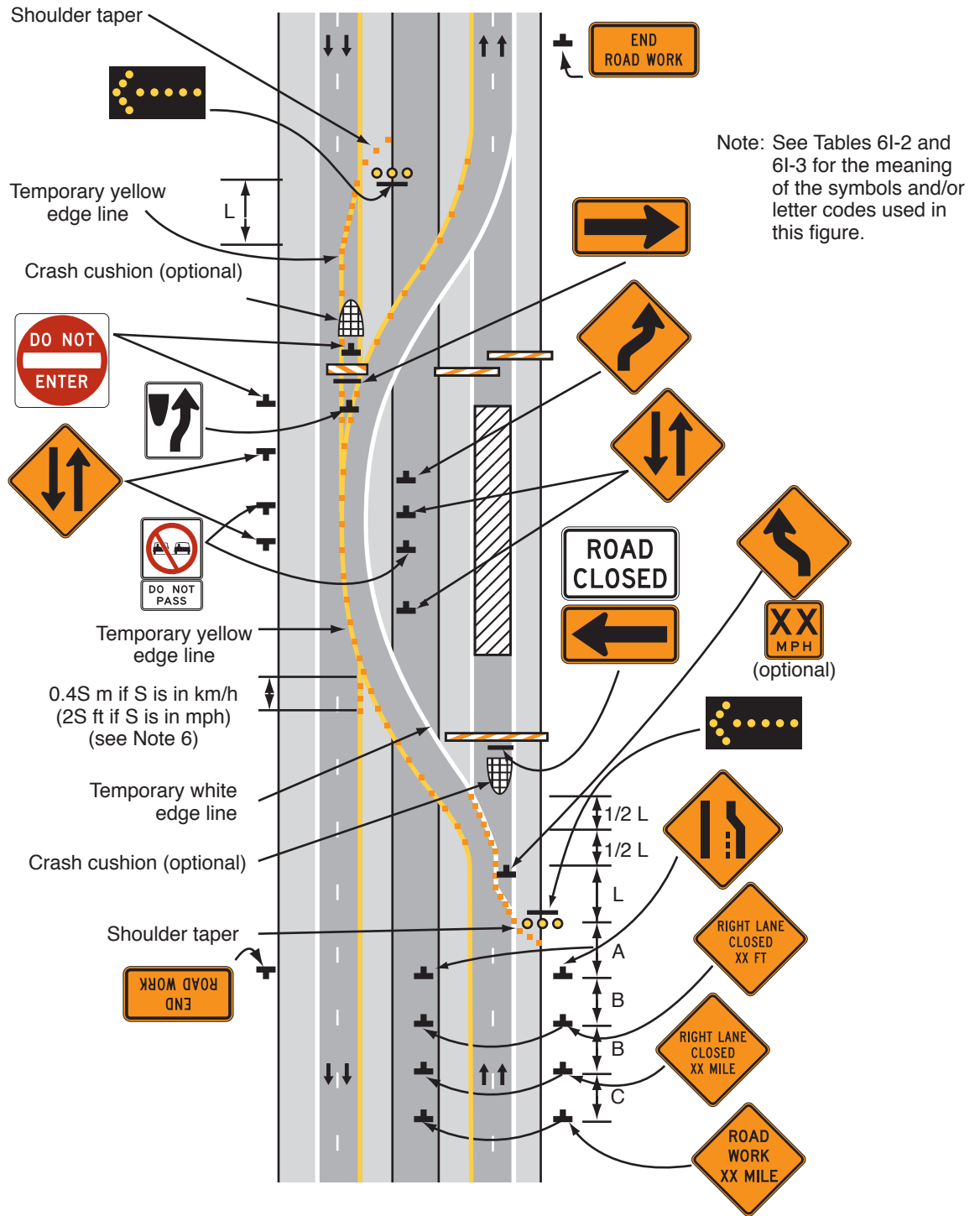
Typical Application 37

**Figure 6I-38. Interior Lane Closure on a Freeway (TA-38)**



**Typical Application 38**

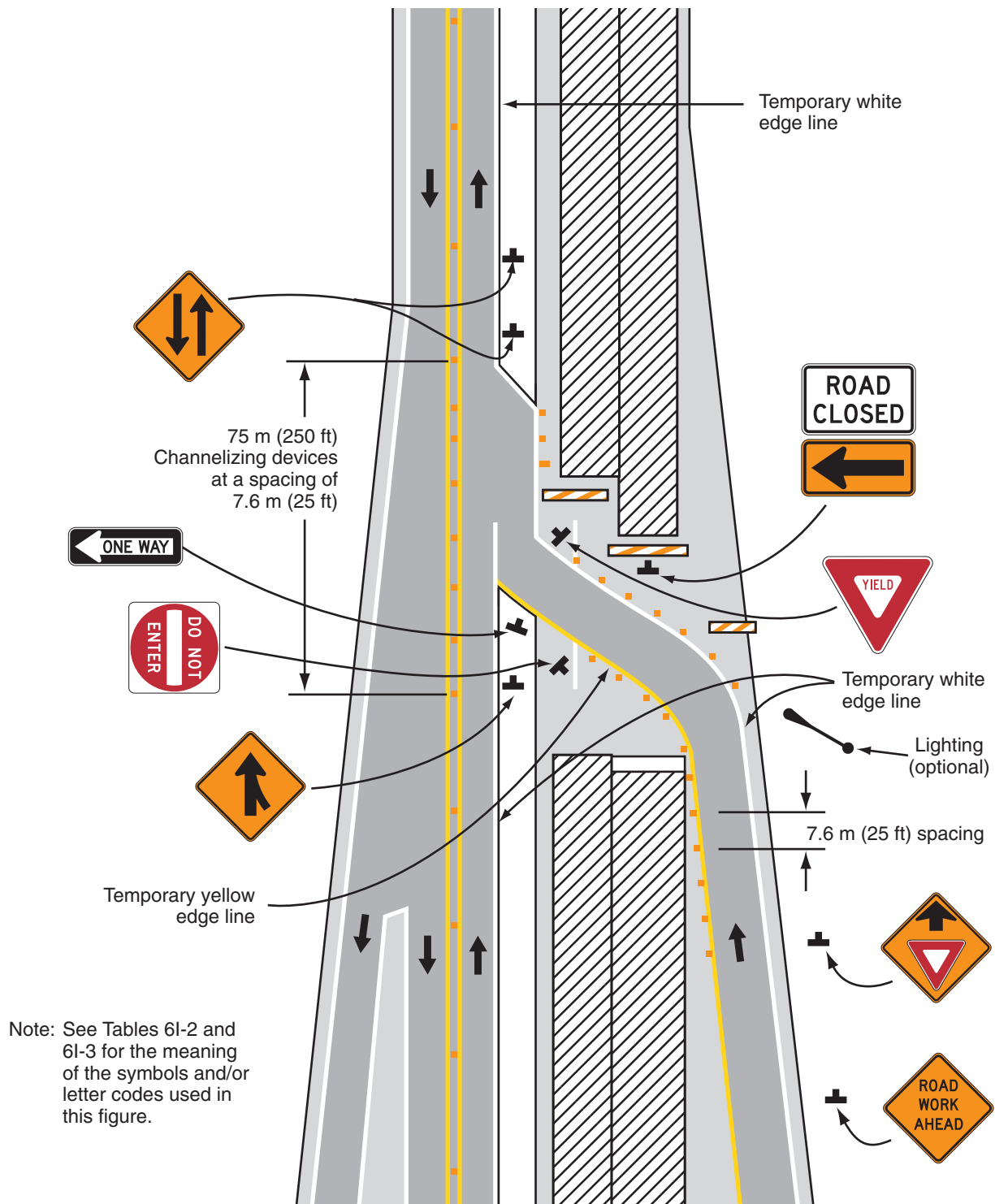
**Figure 6I-39. Median Crossover on a Freeway (TA-39)**



**Typical Application 39**

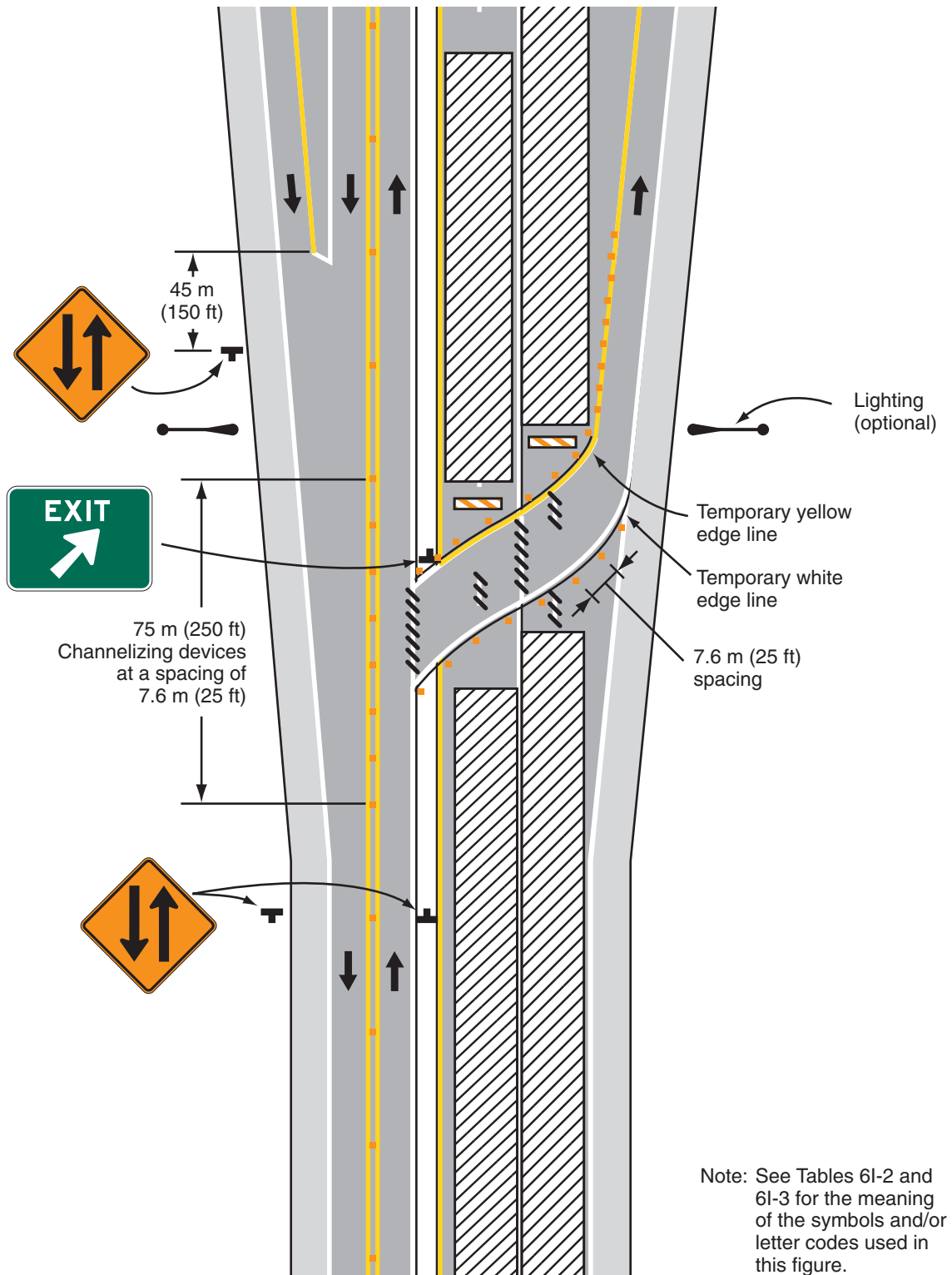


**Figure 6I-40. Median Crossover for an Entrance Ramp (TA-40)**



**Typical Application 40**

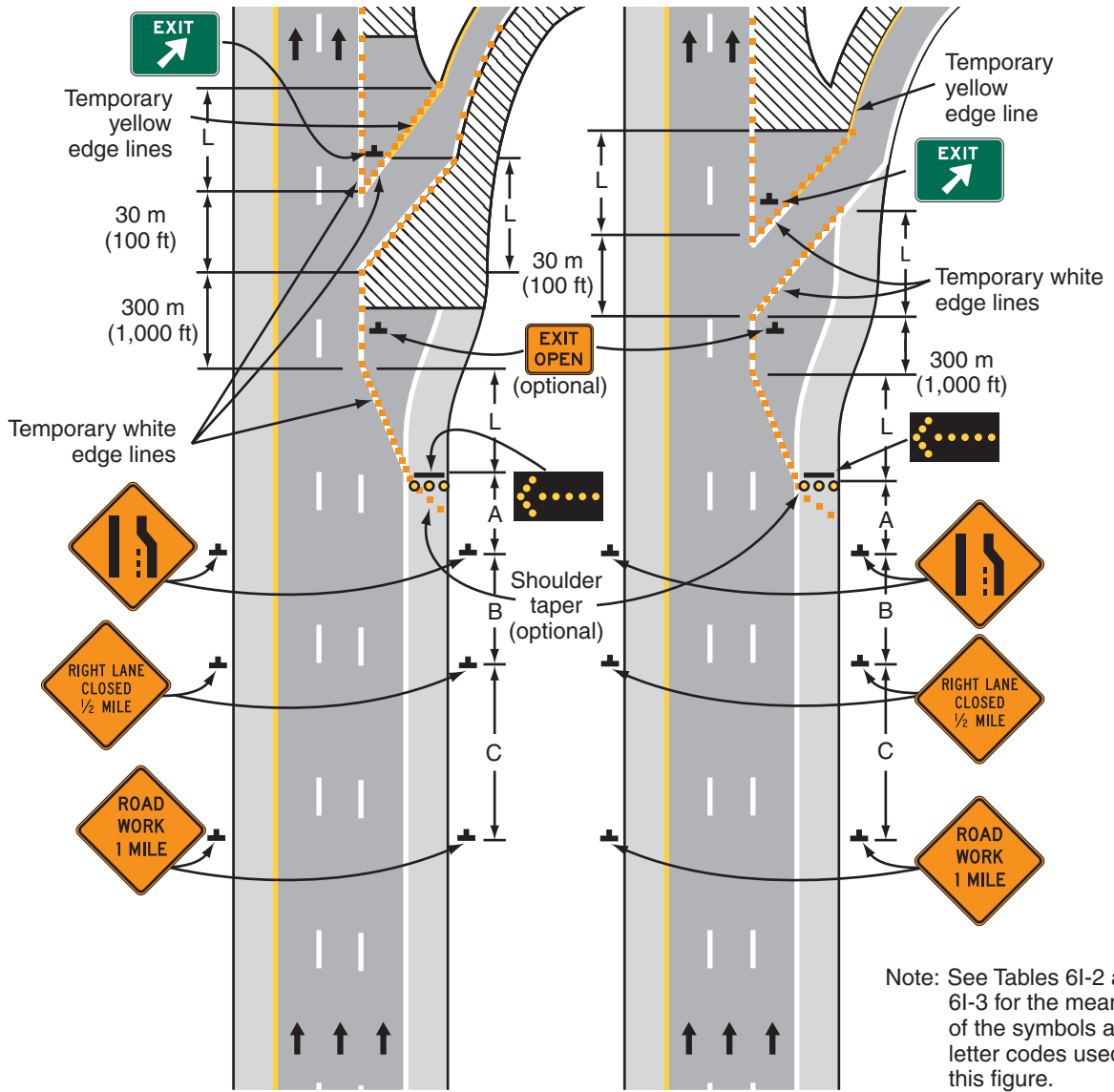
Figure 6I-41. Median Crossover for an Exit Ramp (TA-41)



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 41

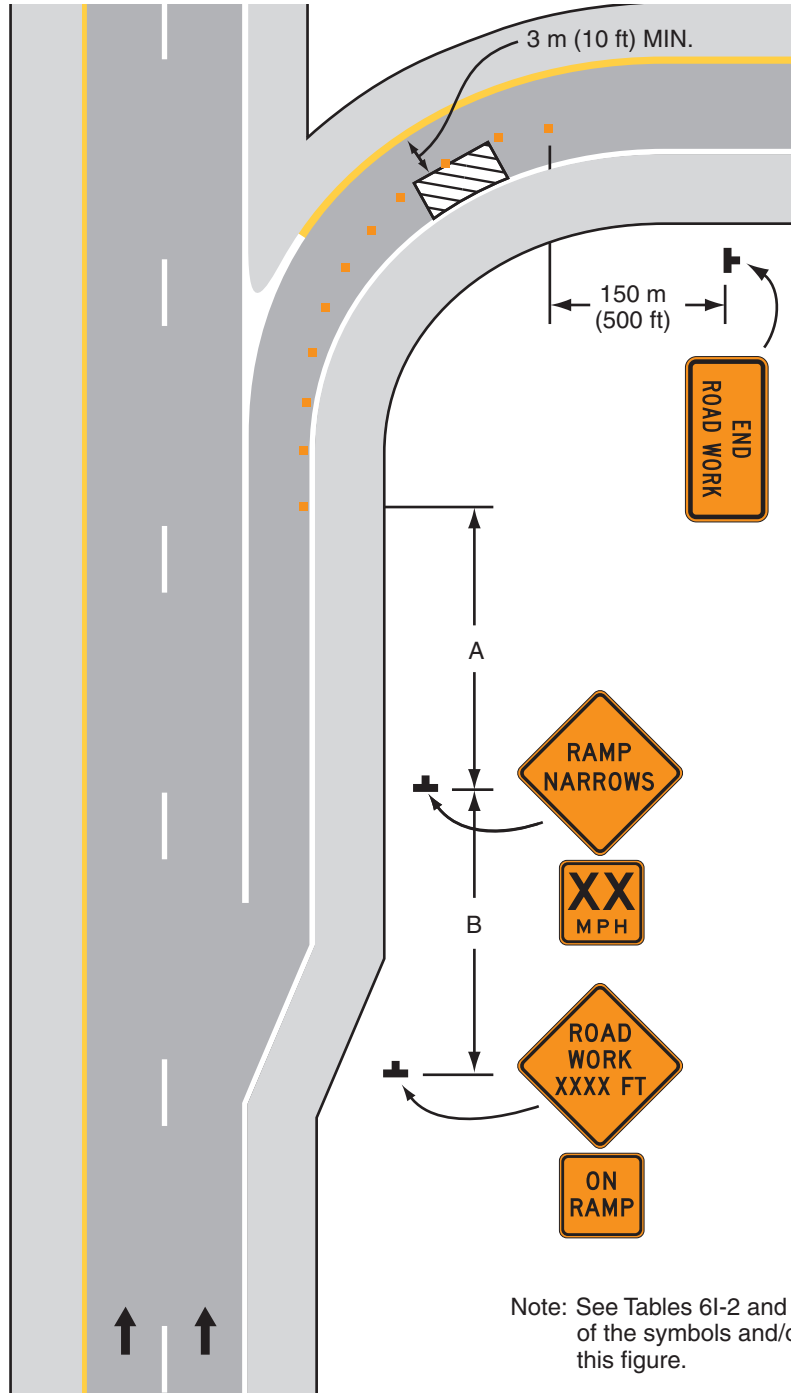
**Figure 6I-42. Work in the Vicinity of an Exit Ramp (TA-42)**



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Typical Application 42**

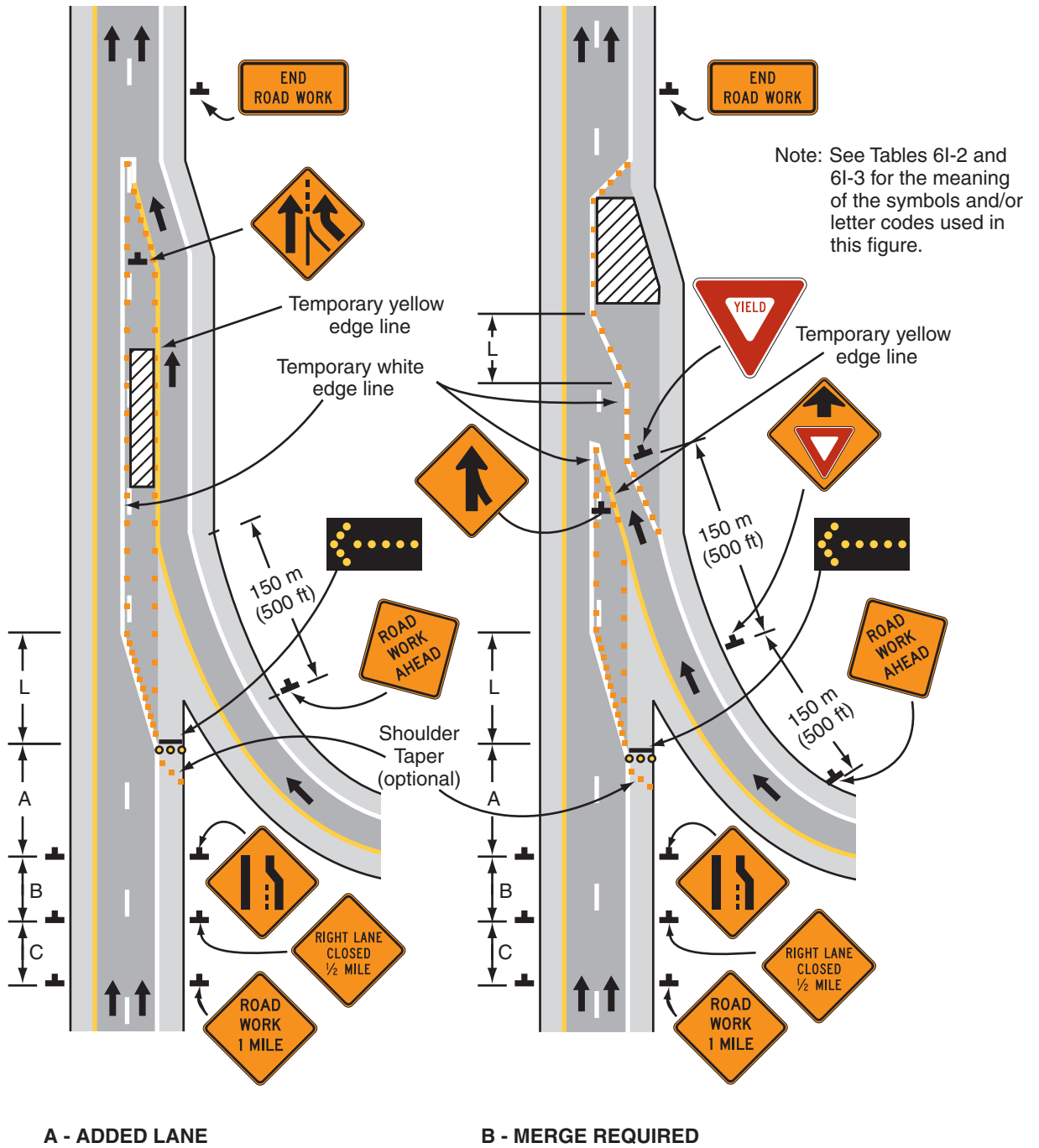
Figure 6I-43. Partial Exit Ramp Closure (TA-43)



Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

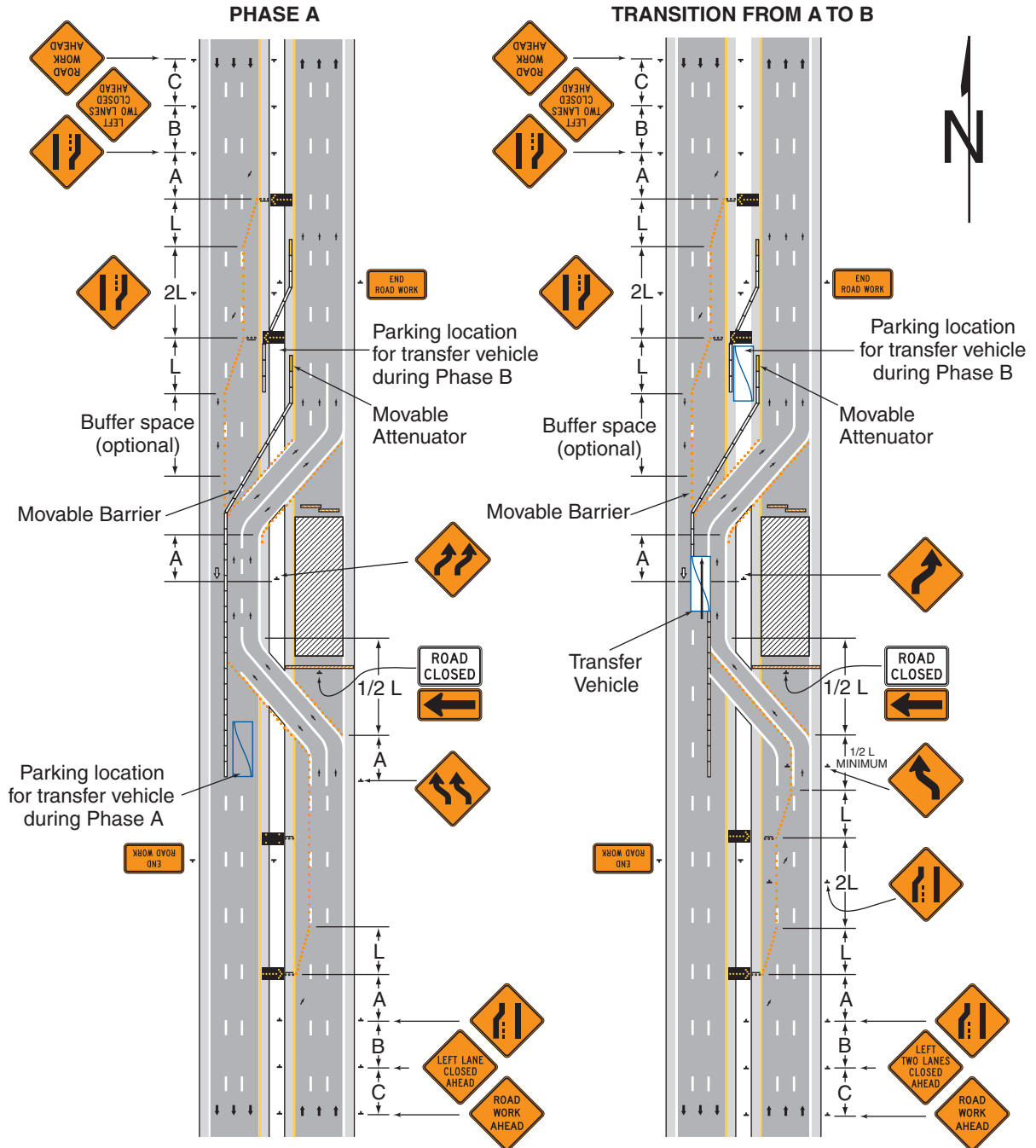
Typical Application 43

**Figure 6I-44. Work in the Vicinity of an Entrance Ramp (TA-44)**



**Typical Application 44**

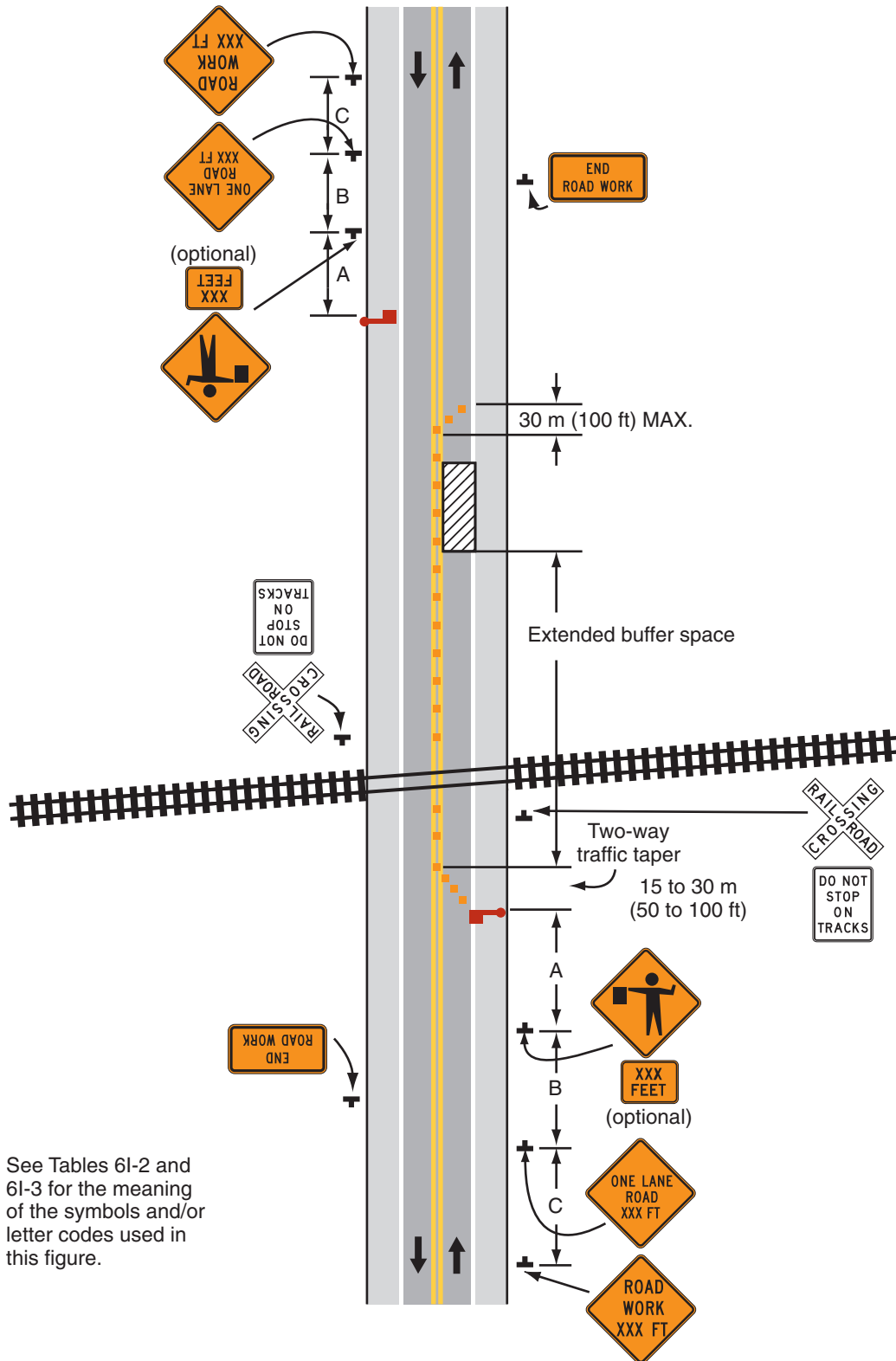
**Figure 6I-45. Temporary Reversible Lane Using Movable Barriers (TA-45)**



**Typical Application 45**

Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure. Although leader lines point to signs on the right side of roadway, most signs should be installed on both sides of roadway.

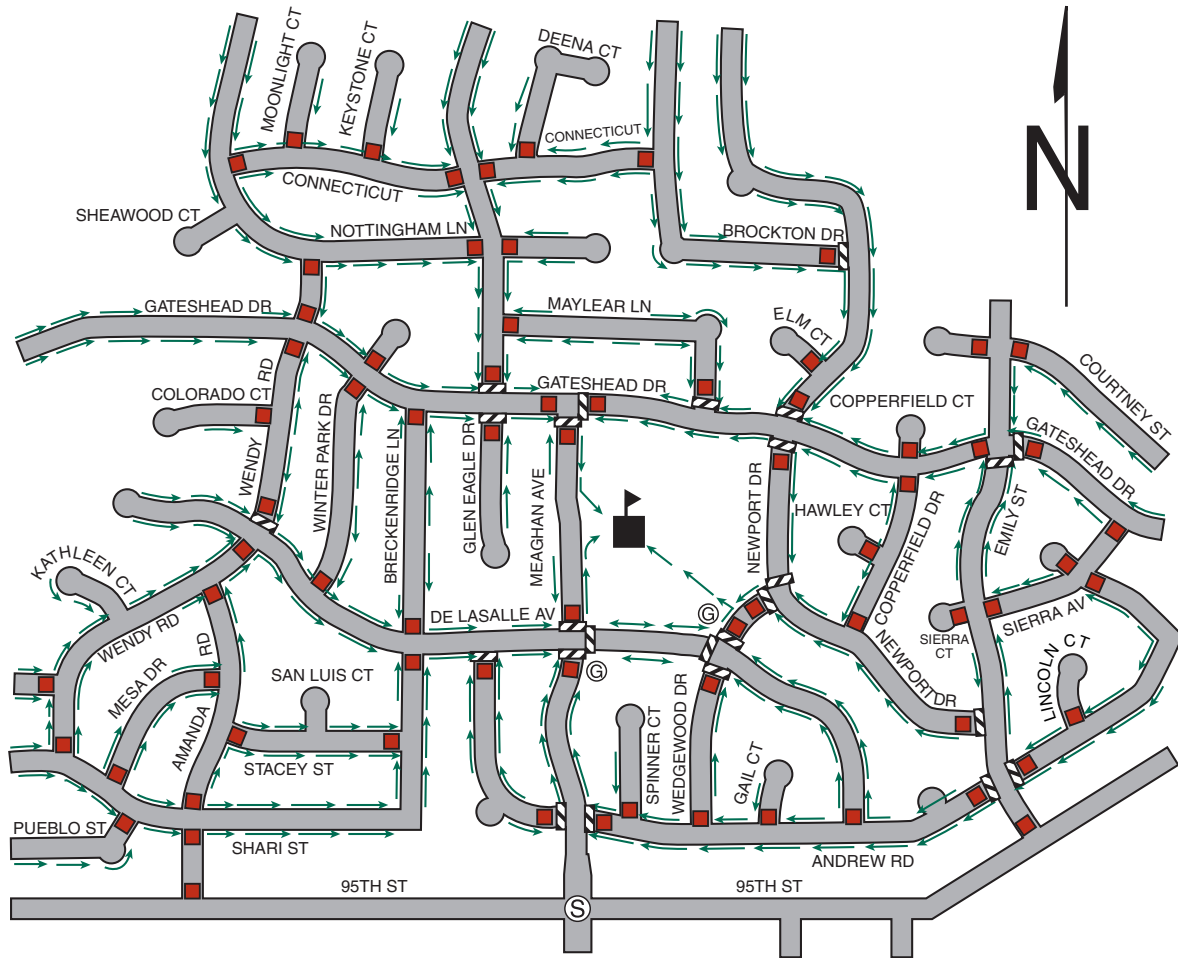
**Figure 6I-46. Work in the Vicinity of a Highway-Rail Grade-Crossing (TA-46)**








Note: See Tables 6I-2 and 6I-3 for the meaning of the symbols and/or letter codes used in this figure.

**Typical Application 46**

**Figure 7A-1. Example of School Route Plan Map**



**Legend**

- |   |                  |   |                         |
|---|------------------|---|-------------------------|
|  | School           |  | Signalized Intersection |
|  | Marked Crosswalk |  | STOP Sign Approach      |
|  | Crossing Guard   |  | Pedestrian Route        |



**Figure 7B-1. School Area Signs**

School Advance  
Crossing Assembly



S1-1



W16-9P

OR



W16-2aP

OR



W16-2P

School Crossing  
Assembly



S1-1



W16-7P

School Area or  
School Zone Sign



S1-1



S4-3P (optional)

School Speed  
Limit Assembly

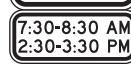


S4-3P



R2-1

OR



S4-1P

OR



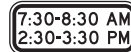
S4-2P

OR



S4-4P

OR



S4-1P



S4-6P



S4-3P



R2-1(M)



S4-1P



S3-1



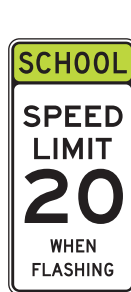
S3-2



S4-5



S4-5a

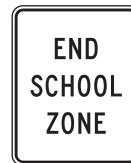


S5-1

OR

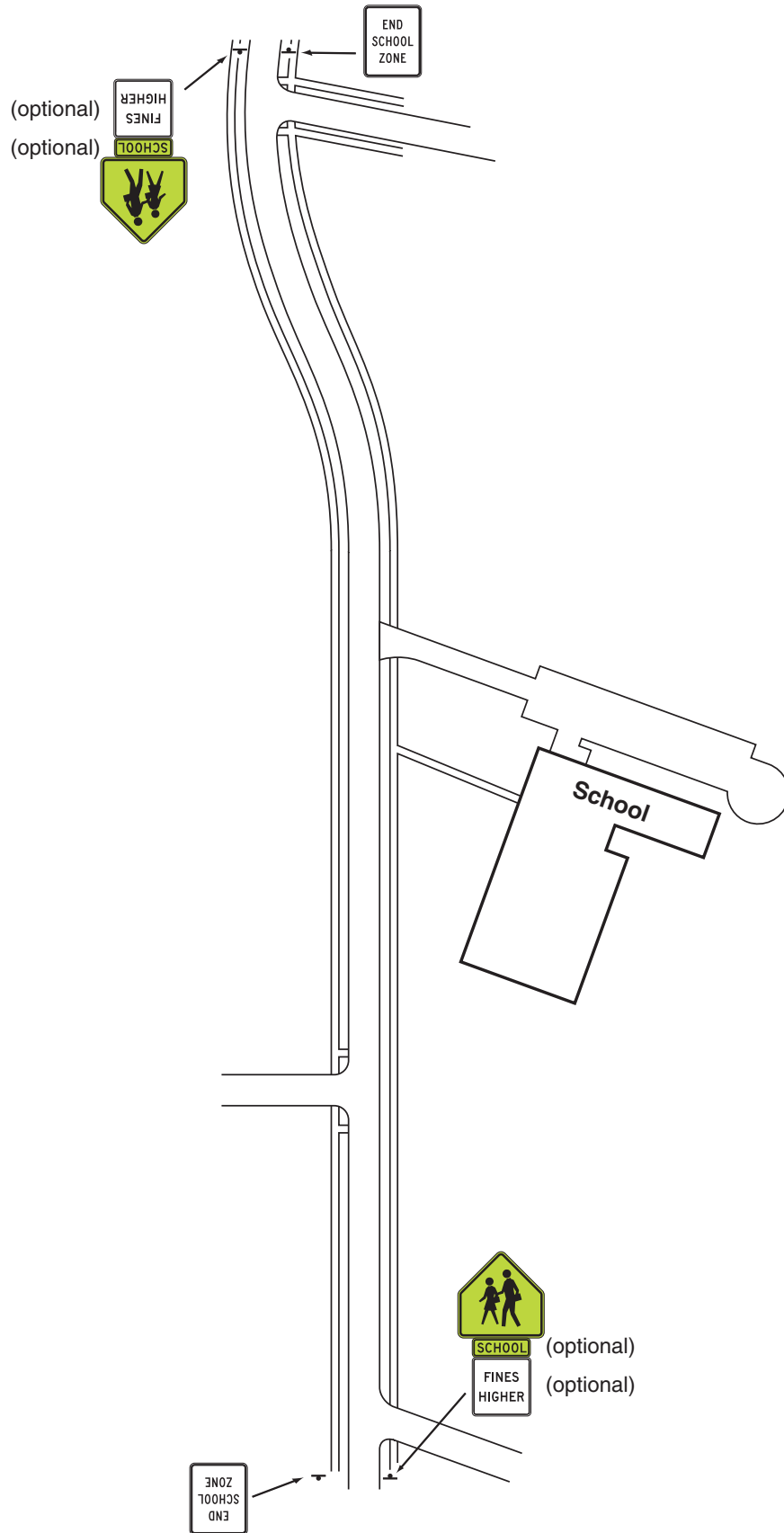


S5-1(M)

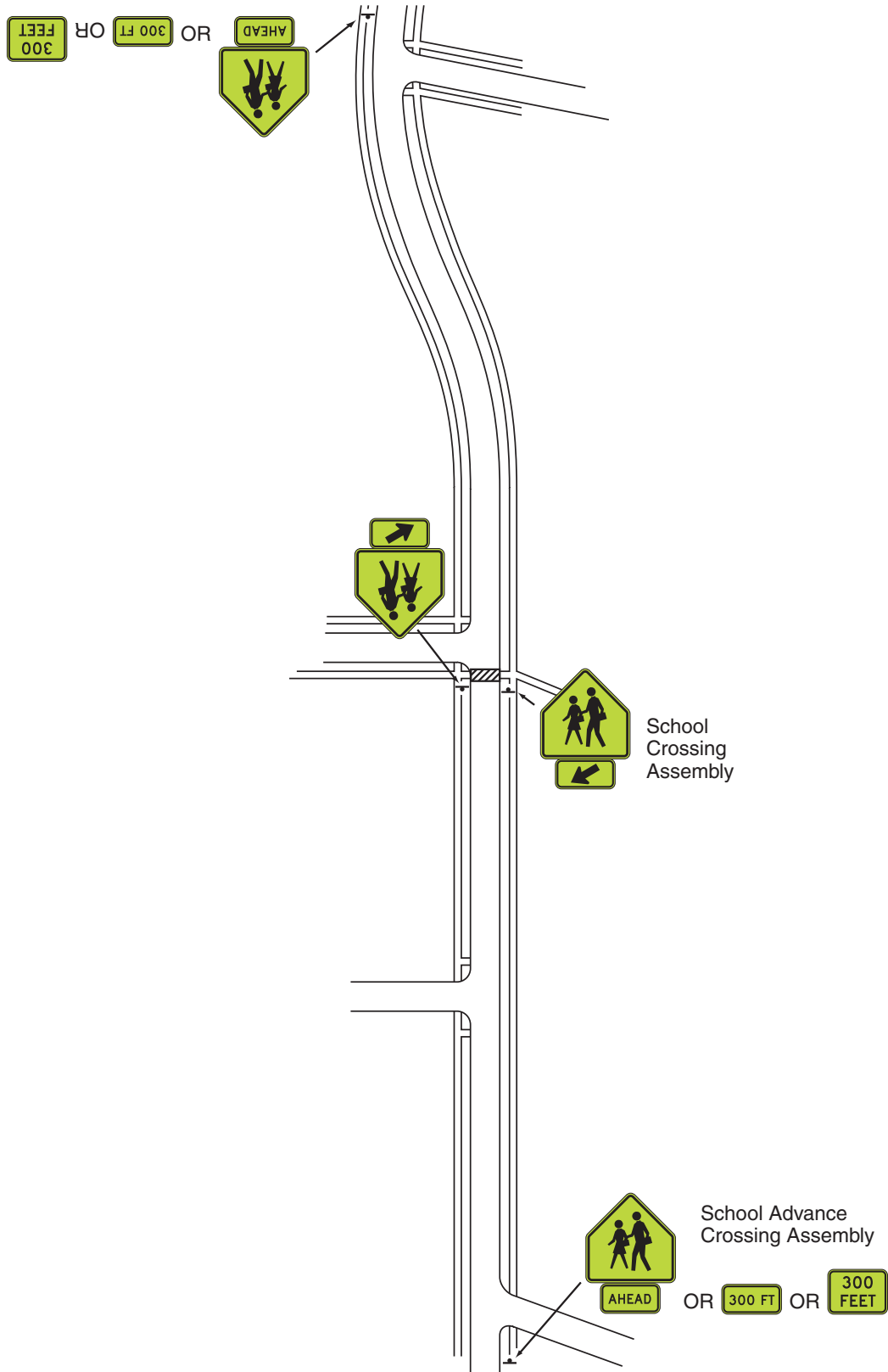


S5-2

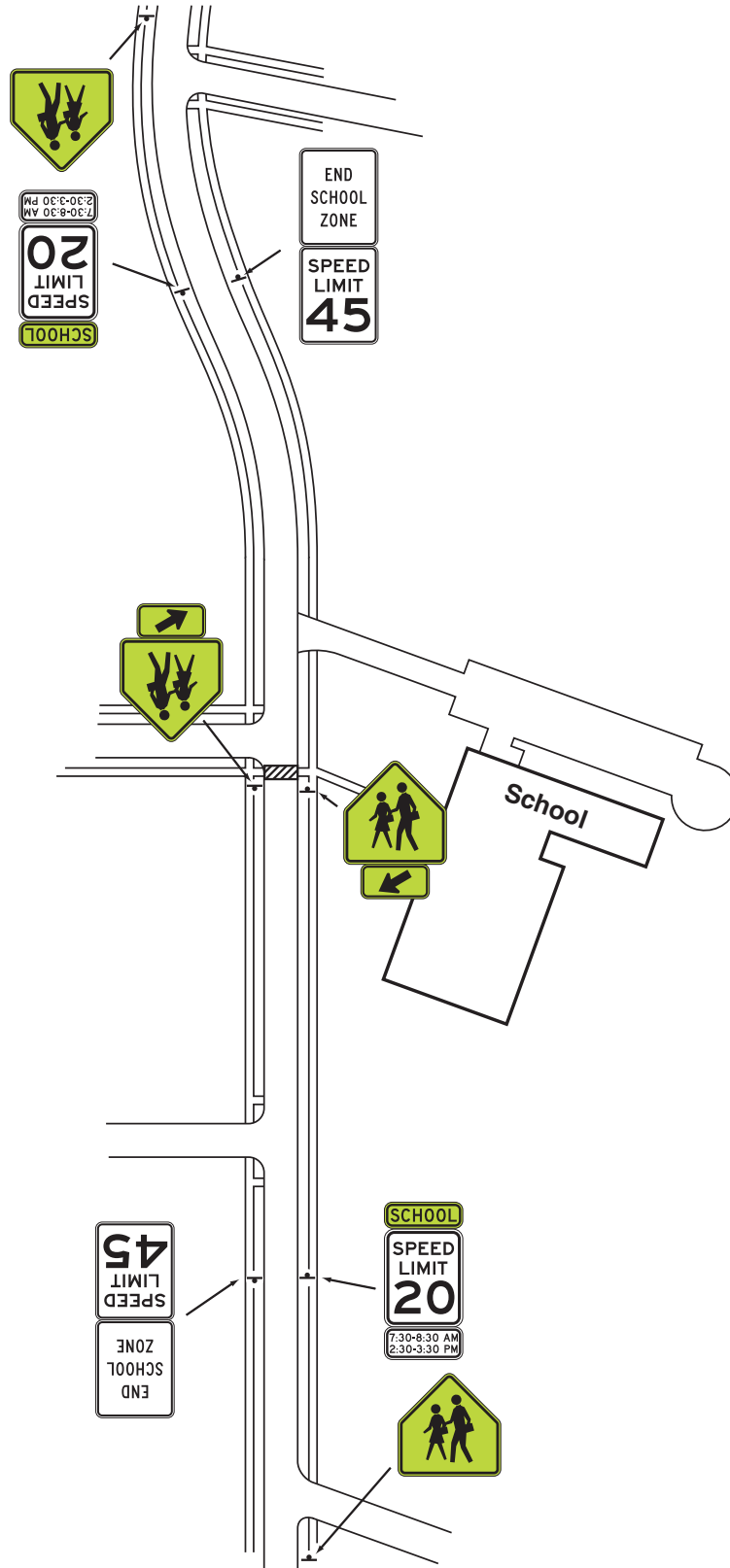
**Figure 7B-2. Example of Signing for a School Zone**



**Figure 7B-3. Example of Signing for a School Crossing**

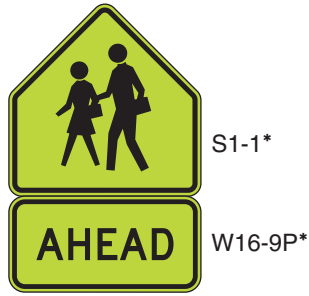


**Figure 7B-4. Example of Signing for School Area Traffic Control with School Speed Limits**



**Figure 7B-5. In-Street Signs in School Areas**

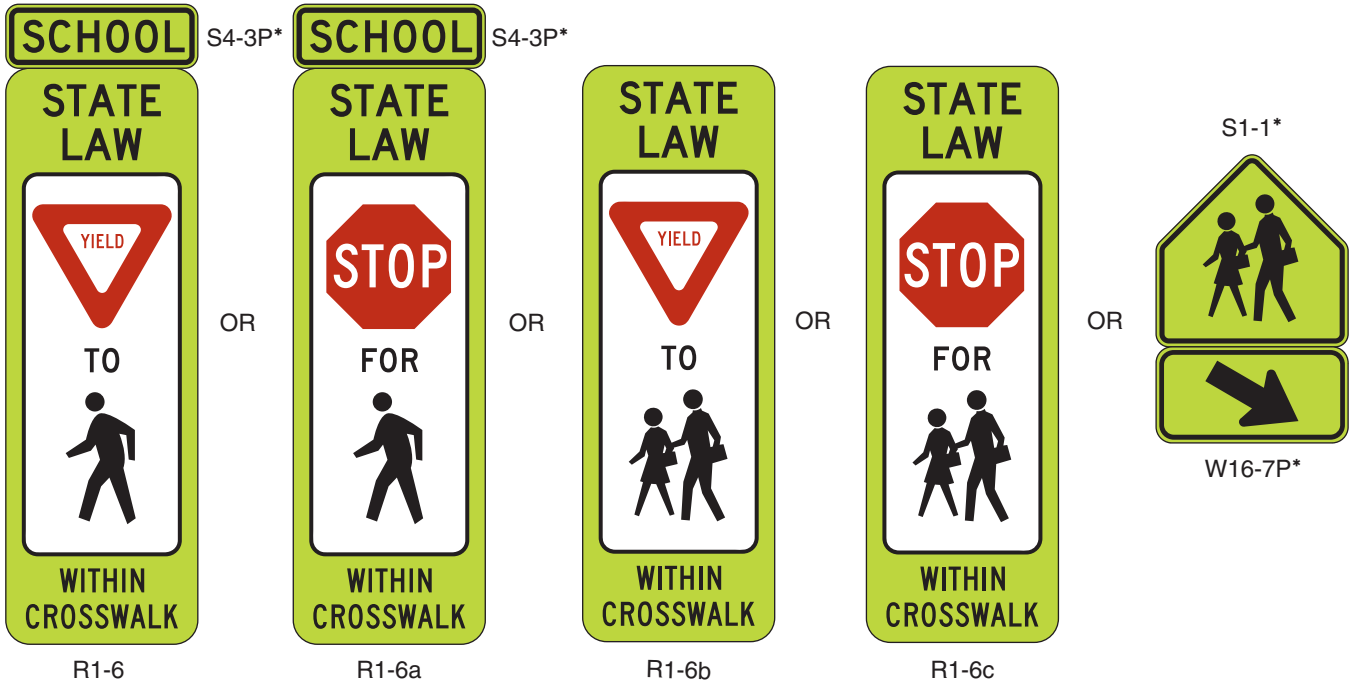
**A - In advance of the school crossing**



\* Reduced size signs:

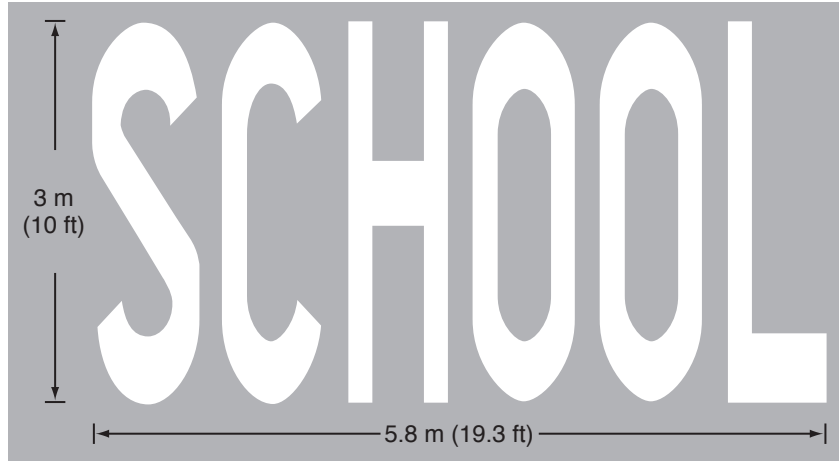
S1-1	300 x 300 mm (12 x 12 in)
S4-3P	300 x 100 mm (12 x 4 in)
W16-7P	300 x 150 mm (12 x 6 in)
W16-9P	300 x 150 mm (12 x 6 in)

**B - At the school crossing**

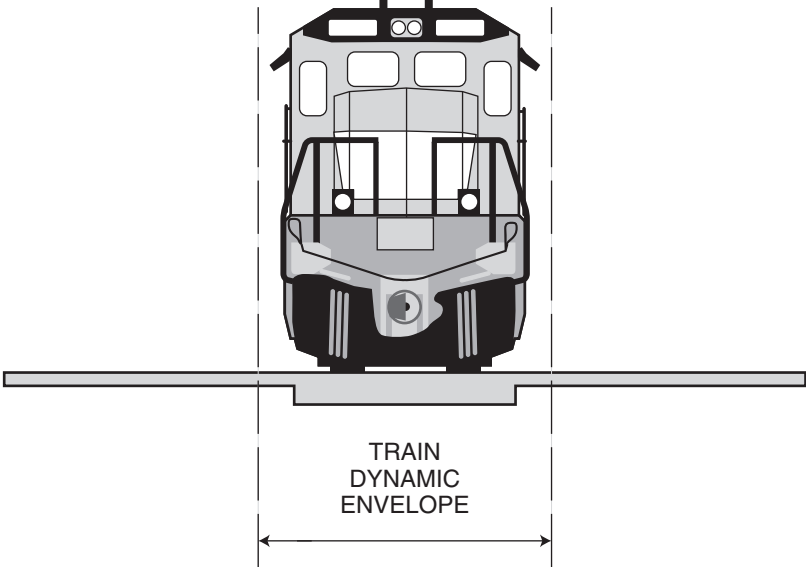


Note: The use of the SCHOOL plaque above the R1-6 and R1-6a signs is optional.

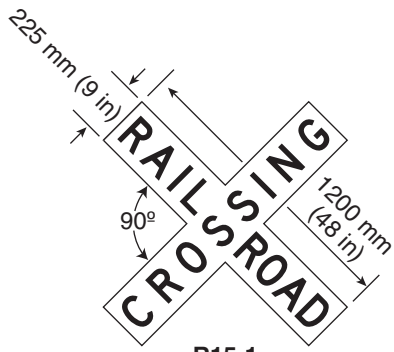
**Figure 7C-1. Two-Lane Pavement Marking of "SCHOOL"**



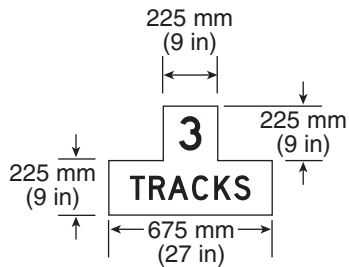
**Figure 8A-1. Train Dynamic Envelope**



**Figure 8B-1. Highway-Rail Grade Crossing Regulatory Signs and Plaques**



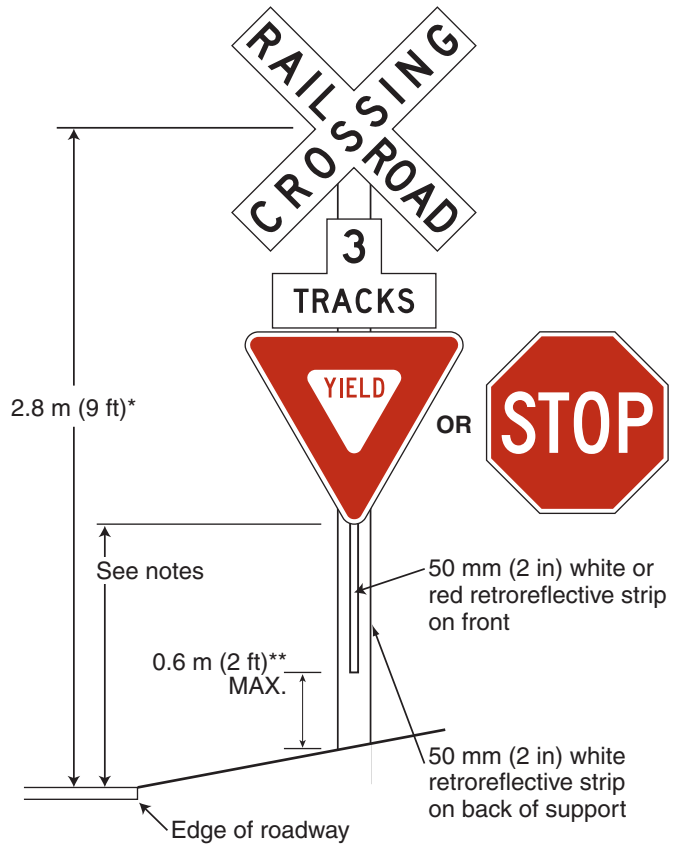
**R15-1**



**R15-2P**

\* Height may be varied as required by local conditions

\*\* Measured to the ground level at the base of the support



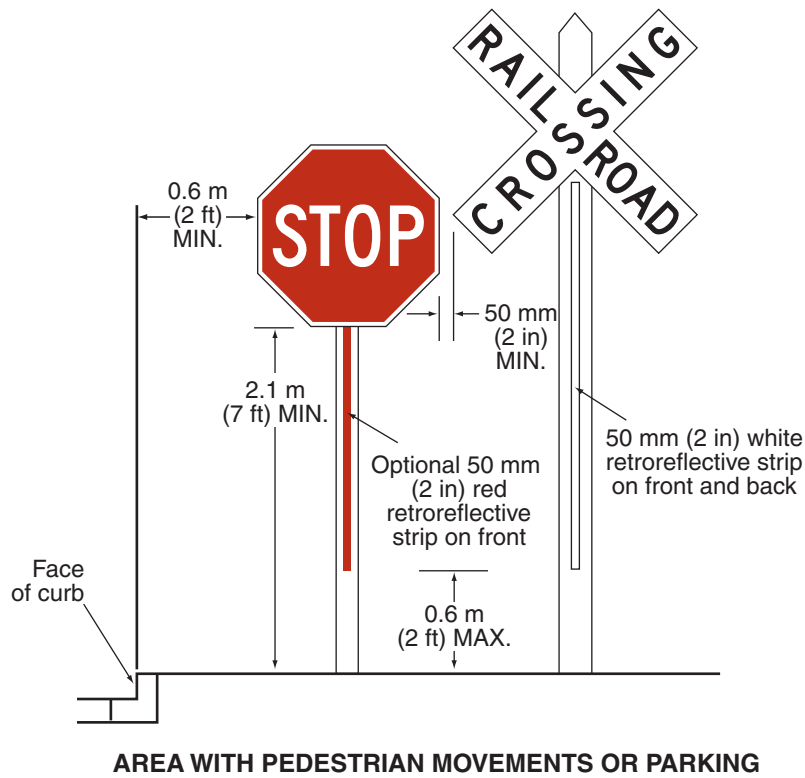
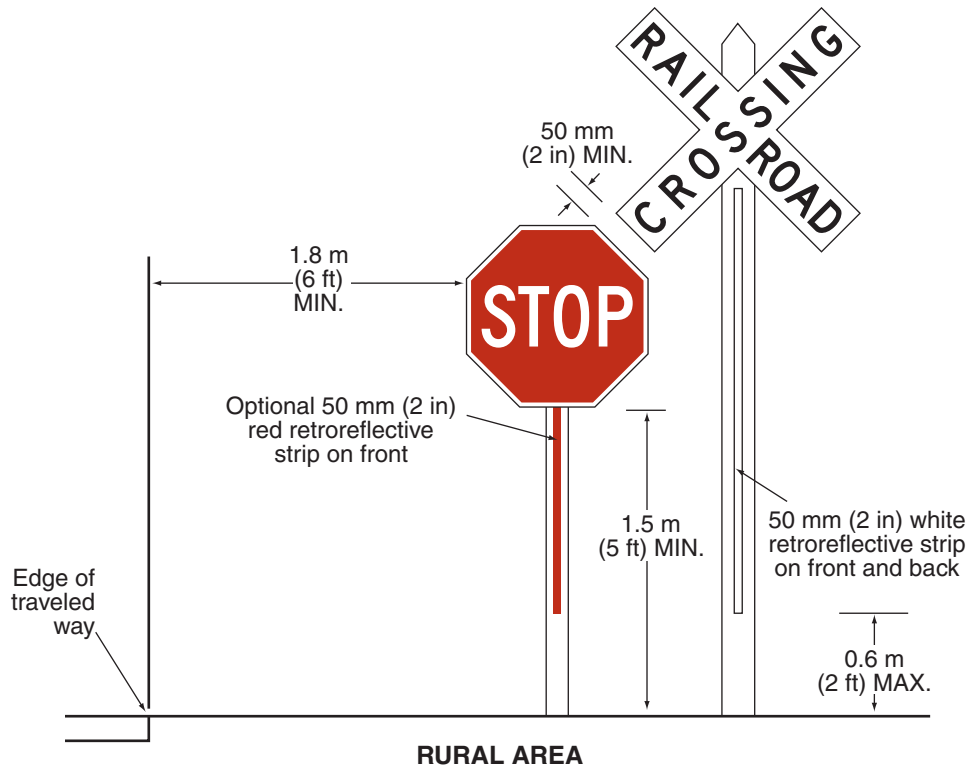
Notes: 1. YIELD or STOP sign used only at passive crossings

2. Mounting height of at least 1.2 m (4 ft) for installations of YIELD or STOP signs on existing Crossbuck sign supports

3. Mounting height of at least 2.1 m (7 ft) in areas with pedestrian movements or parking

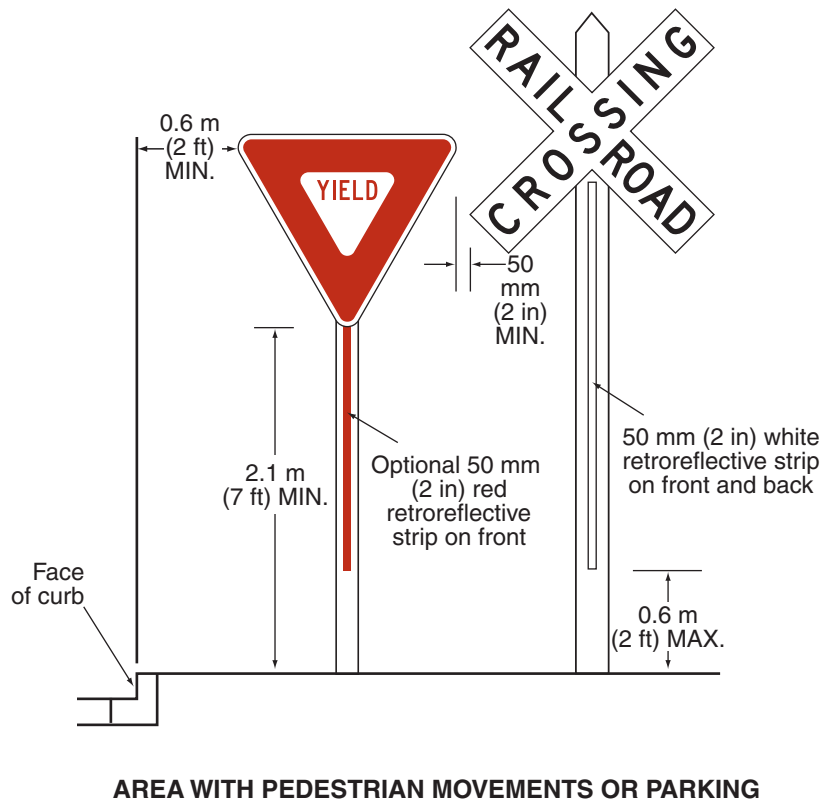
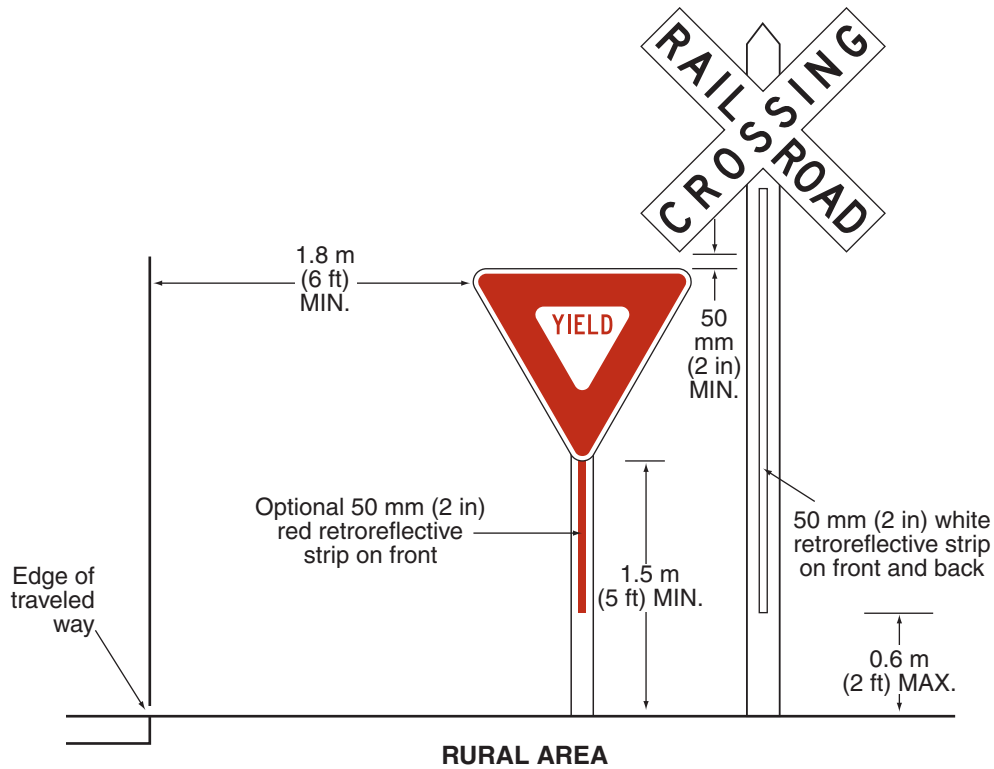


**Figure 8B-2. Highway-Rail Grade Crossing (Crossbuck) Regulatory Signs with Separate Posts (Sheet 1 of 2)**



Note: Place the face of the signs in the same plane and place the STOP sign closest to the traveled way. Provide a 50 mm (2 in) minimum separation between the edge of the Crossbuck sign and the edge of the STOP sign.

**Figure 8B-2. Highway-Rail Grade Crossing (Crossbuck) Regulatory Signs with Separate Posts (Sheet 2 of 2)**



Note: Place the face of the signs in the same plane and place the YIELD sign closest to the traveled way. Provide a 50 mm (2 in) minimum separation between the edge of the Crossbuck sign and the edge of the YIELD sign.

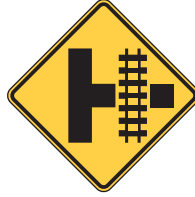
**Figure 8B-3. Advance Warning Signs and Plaques**



W10-1



W10-2



W10-3



W10-4



W10-10P



W10-16P

*Figure 8B-4. Regulatory Signs and Plaques*



R3-1a  
Activated Blank-Out



R3-2a  
Activated Blank-Out



R8-8



R8-9



R8-10



R8-10a



R10-6



R10-6a



R15-3P



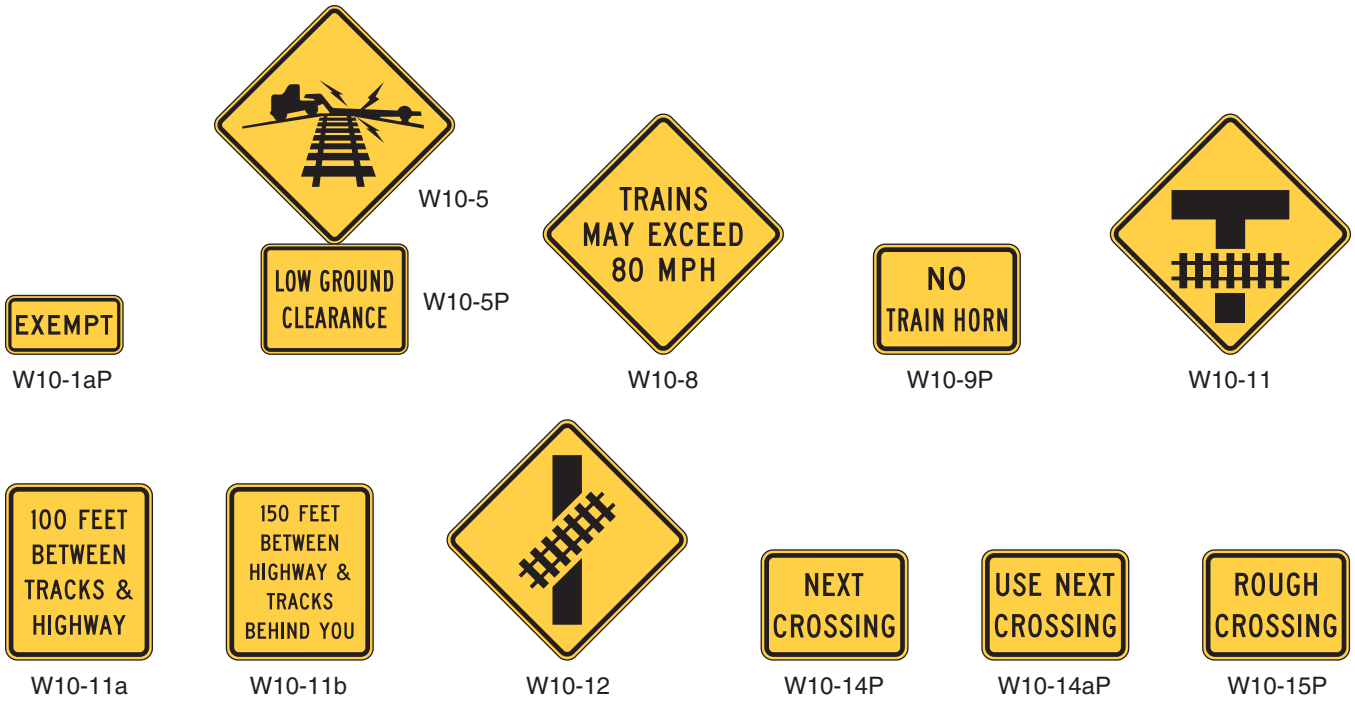
R15-8

**Figure 8B-5. Example of Emergency Notification Sign**



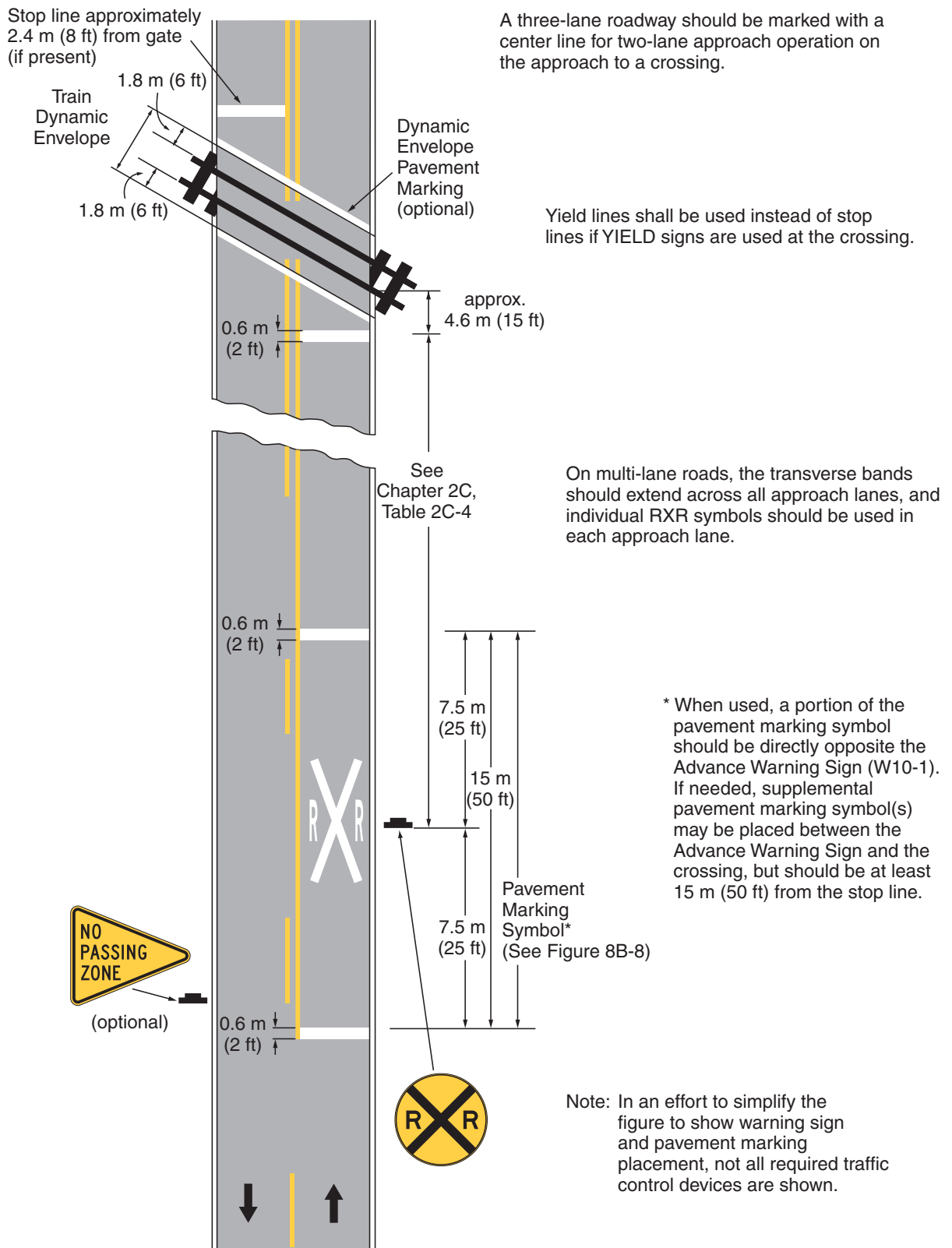
I-13

Figure 8B-6. Warning Signs and Plaques



Note: The W10-11 sign is a W10-3 sign modified for geometrics. Other signs can be oriented or revised as needed to satisfy the geometrics of the roadways and the railroad tracks.

**Figure 8B-7. Example of Placement of Warning Signs and Pavement Markings at Highway-Rail Grade Crossings**



A three-lane roadway should be marked with a center line for two-lane approach operation on the approach to a crossing.

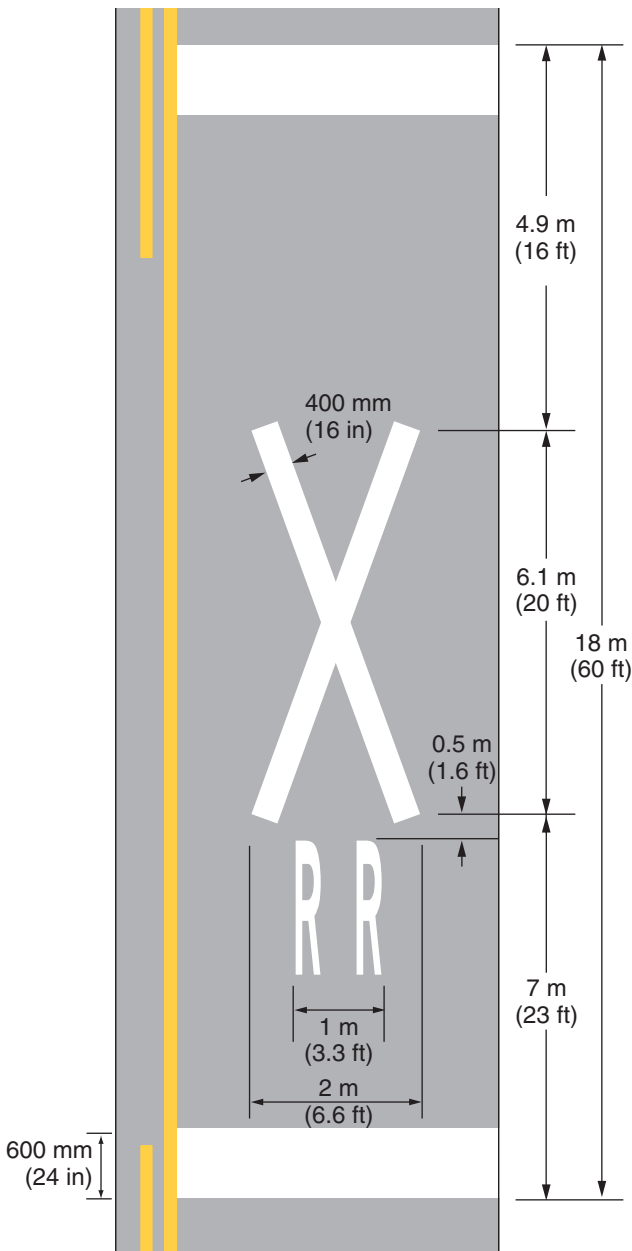
Yield lines shall be used instead of stop lines if YIELD signs are used at the crossing.

On multi-lane roads, the transverse bands should extend across all approach lanes, and individual RXR symbols should be used in each approach lane.

\* When used, a portion of the pavement marking symbol should be directly opposite the Advance Warning Sign (W10-1). If needed, supplemental pavement marking symbol(s) may be placed between the Advance Warning Sign and the crossing, but should be at least 15 m (50 ft) from the stop line.

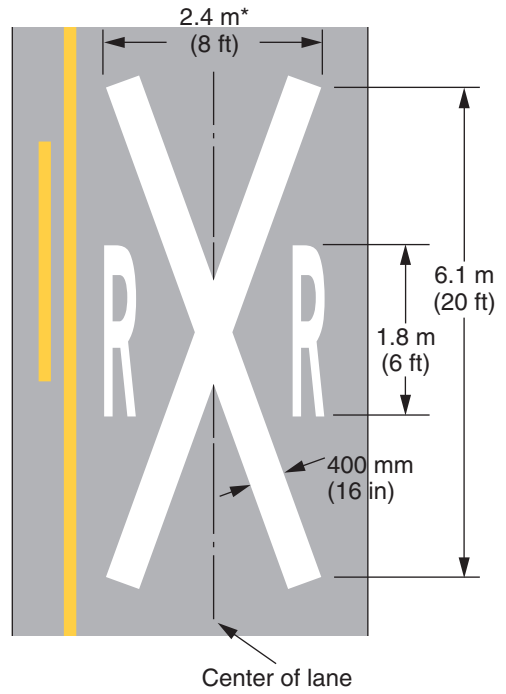
Legend  
 → Direction of travel

**Figure 8B-8. Highway-Rail Grade Crossing Pavement Markings**



**Highway-rail grade crossing alternative (narrow) pavement markings**

Note: Refer to Figure 8B-7 for placement

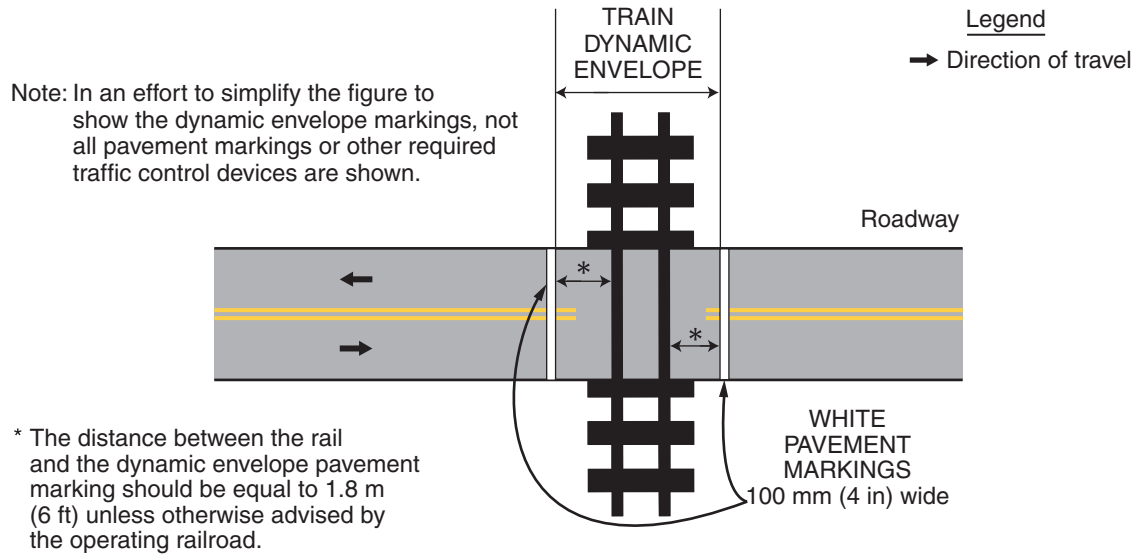


**Highway-rail grade crossing pavement markings**

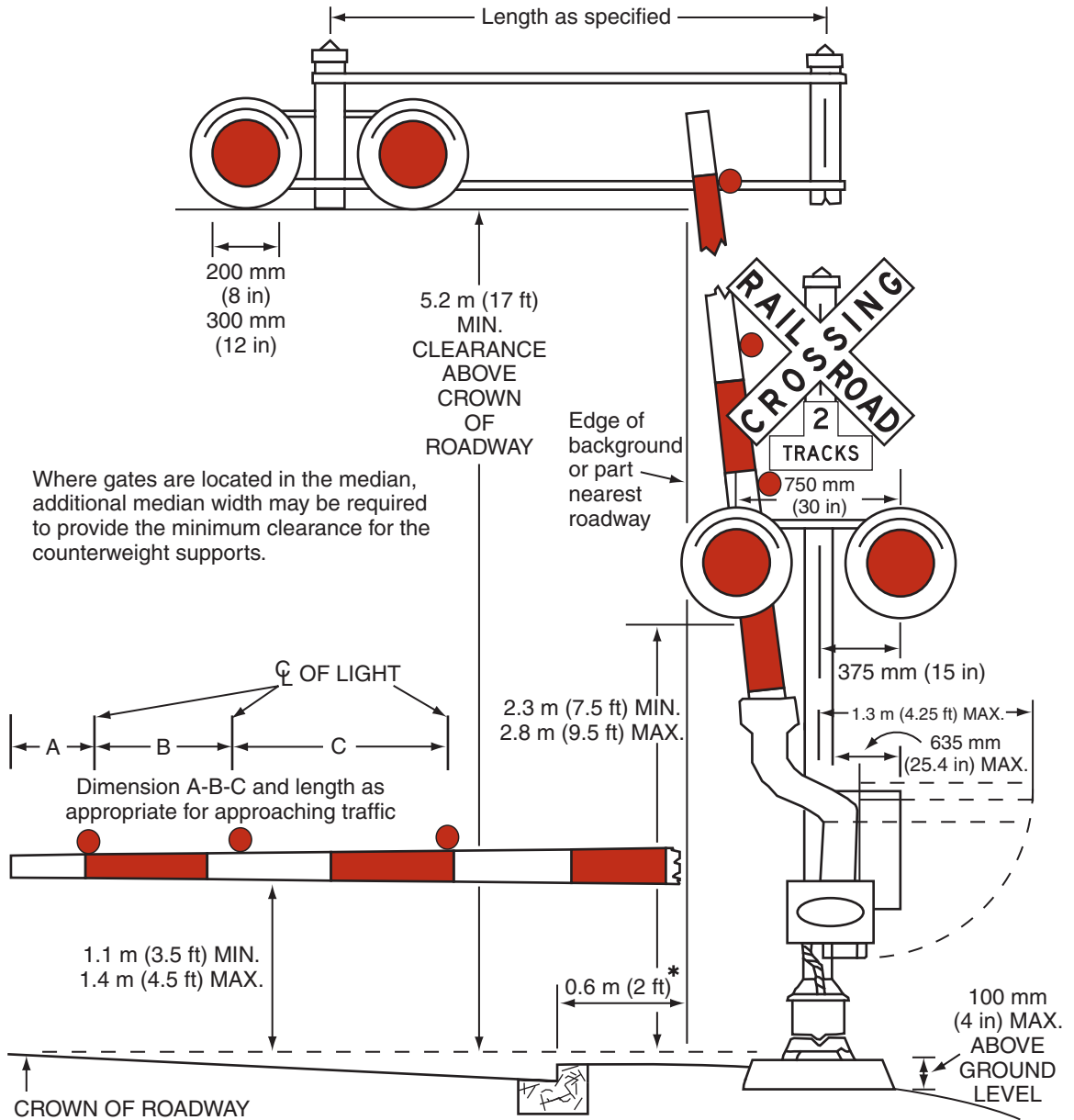
\*Width may vary according to lane width



**Figure 8B-9. Typical Train Dynamic Envelope Pavement Markings**

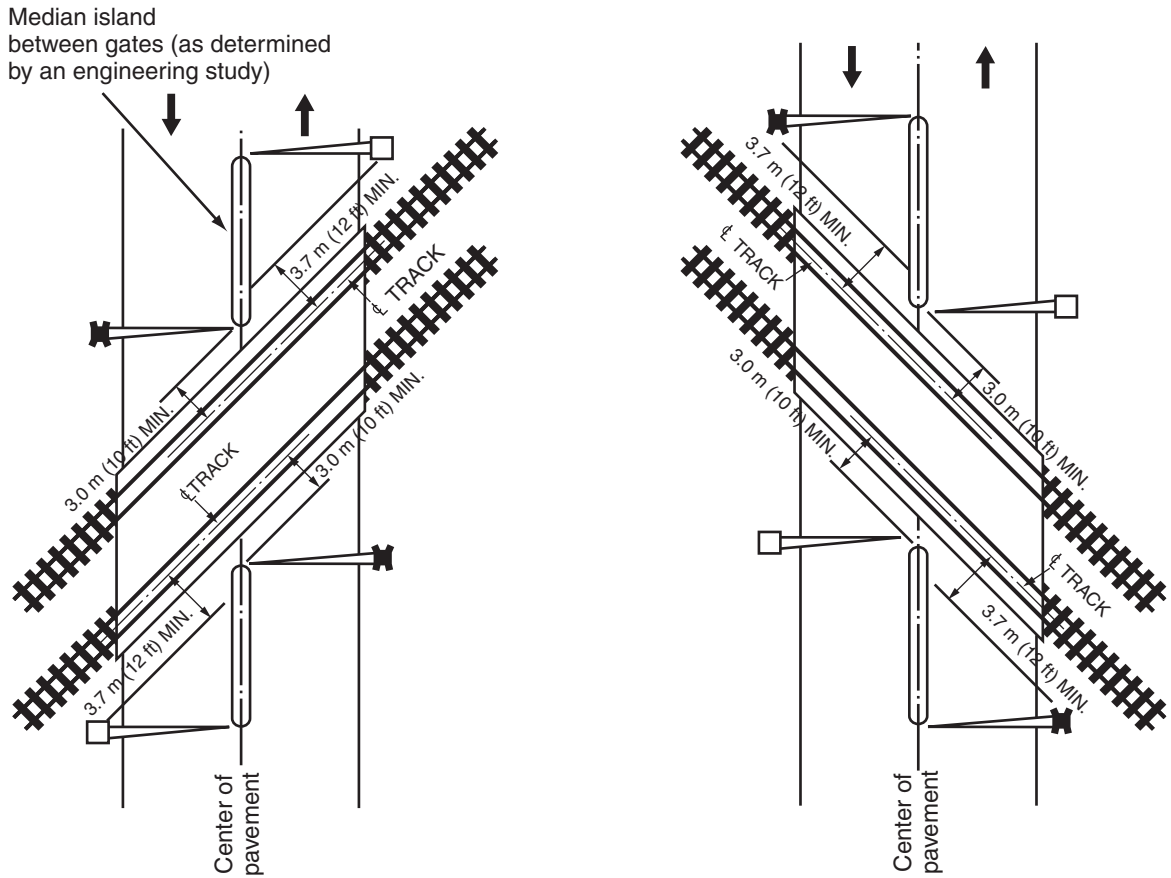


**Figure 8C-1. Composite Drawing of Active Traffic Control Devices for Highway-Rail Grade Crossings Showing Clearances**



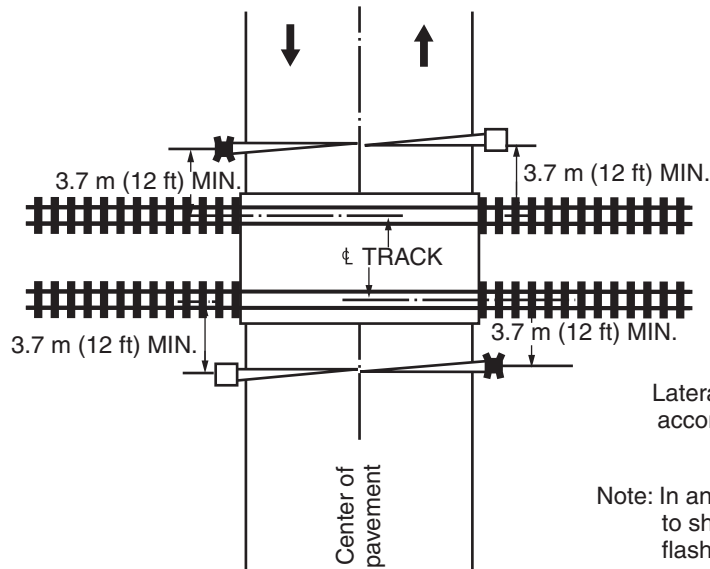
\* For locating this reference line at other than curb section installation, see Section 8C.01.

**Figure 8C-2. Example of Location Plan for Flashing-Light Signals and Four-Quadrant Gates**



**OBTUSE ANGLE**

**ACUTE ANGLE**



**RIGHT ANGLE**

Legend  
 → Direction of travel

Lateral clearances shall be in accordance with Figure 8C-1 and Chapter 8C.

Note: In an effort to simplify the figure to show typical location plans for flashing-light signals and four-quadrant gates, not all traffic control devices are shown on this figure.

**Figure 9B-1. Sign Placement on Shared-Use Paths**

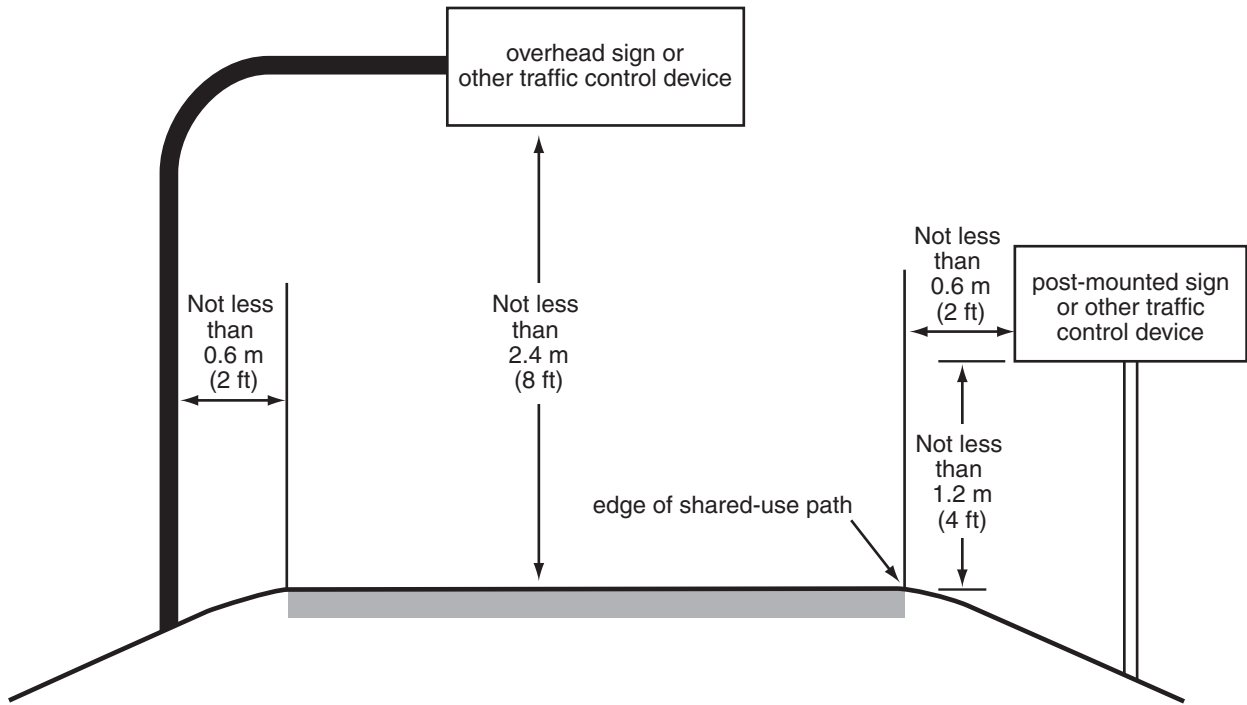
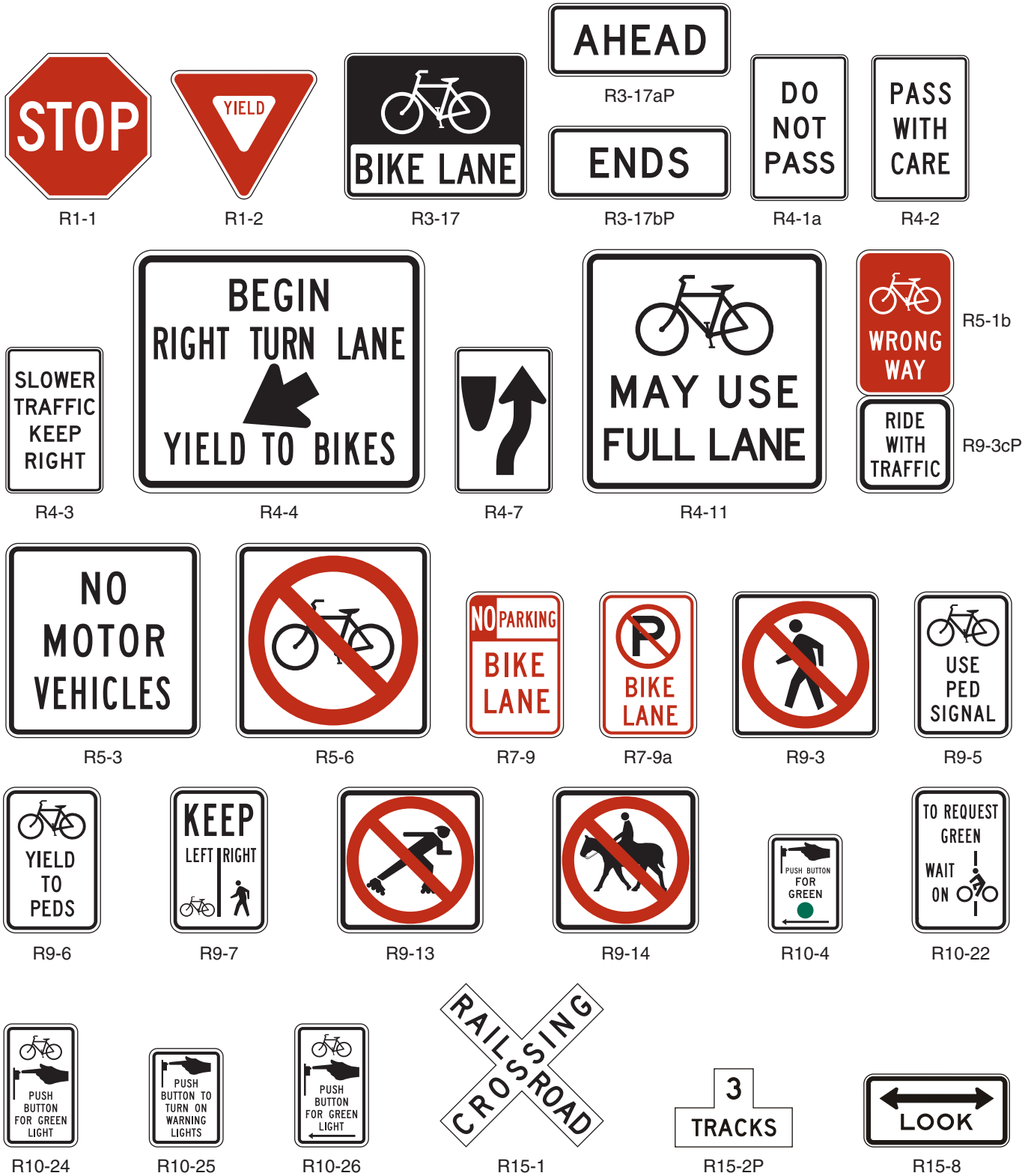


Figure 9B-2. Regulatory Signs and Plaques for Bicycle Facilities



**Figure 9B-3. Warning Signs and Plaques for Bicycle Facilities (Sheet 1 of 2)**



W1-1



W1-2



W1-3



W1-4



W1-5



W1-6



W1-7



W2-1



W2-2



W2-3



W2-4



W2-5



W3-1



W3-2



W3-3



W5-2



W5-4a



W7-5



W8-1



W8-2



W8-3



W8-10



W8-10P



W10-1



W10-12

Figure 9B-3. Warning Signs and Plaques for Bicycle Facilities (Sheet 2 of 2)

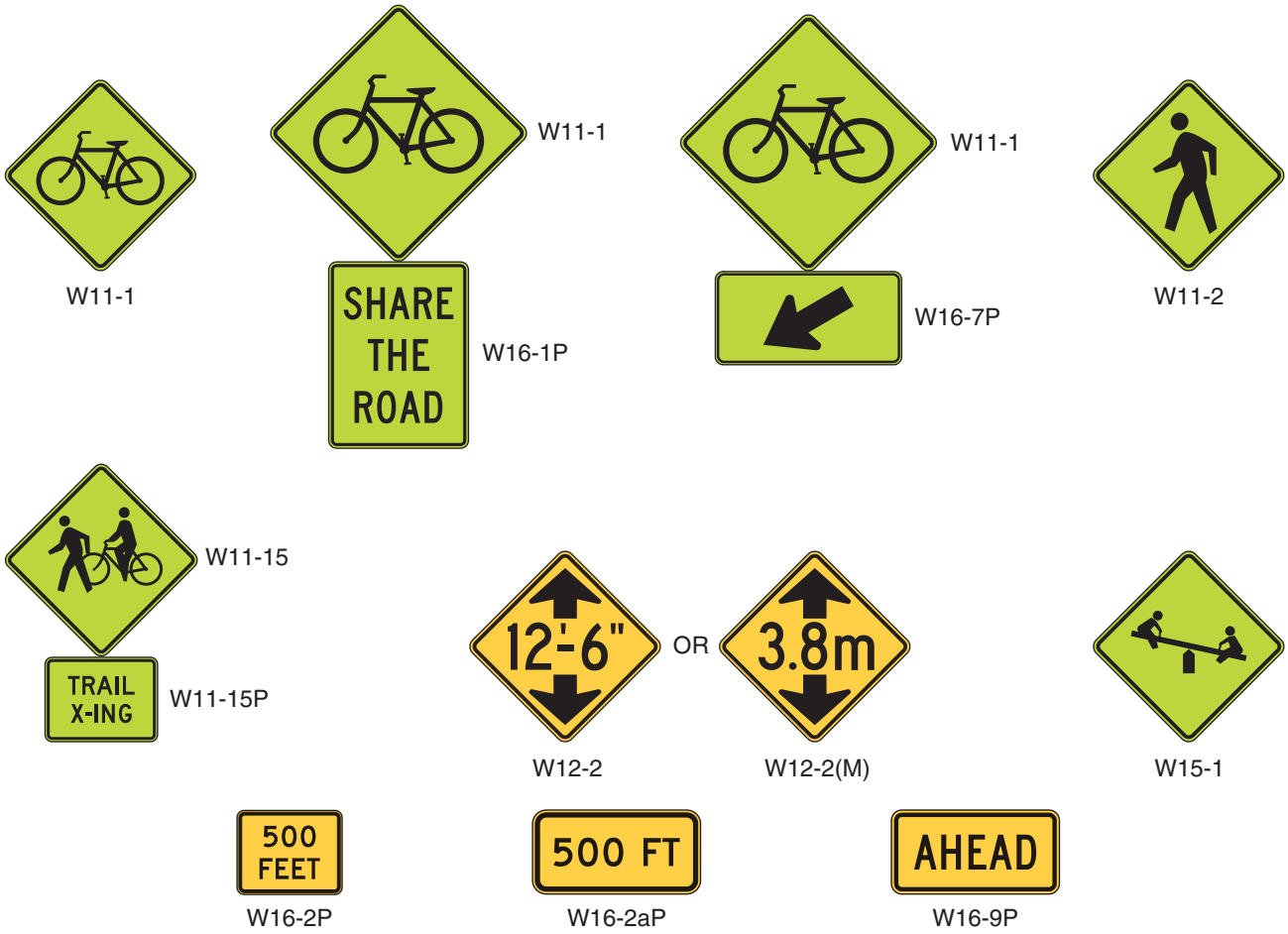


Figure 9B-4. Guide Signs and Plaques for Bicycle Facilities (Sheet 1 of 2)



D1-1



D1-1a



D1-1b



D1-1c



D1-2



D1-2a



D1-2b



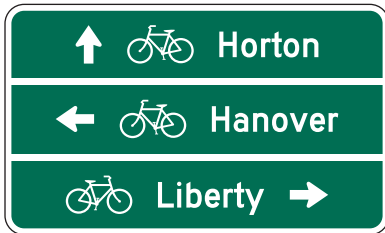
D1-2c



D1-3



D1-3a



D1-3b



D1-3c



D3-1



D4-3



D10-1



D10-1a



D10-2



D10-2a



D10-3



D10-3a



Figure 9B-4. Guide Signs and Plaques for Bicycle Facilities (Sheet 2 of 2)



D11-1



D11-1a



D11-1bP



D11-1c



D11-2



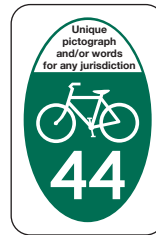
D11-3



D11-4



M1-8



M1-8a



M1-9



M2-1



M3-1



M3-2



M3-3



M3-4



M4-1



M4-1a



M4-2



M4-3



M4-5



M4-6



M4-7



M4-7a



M4-8



M4-14



M5-1



M5-2



M6-1



M6-2



M6-3



M6-4



M6-5

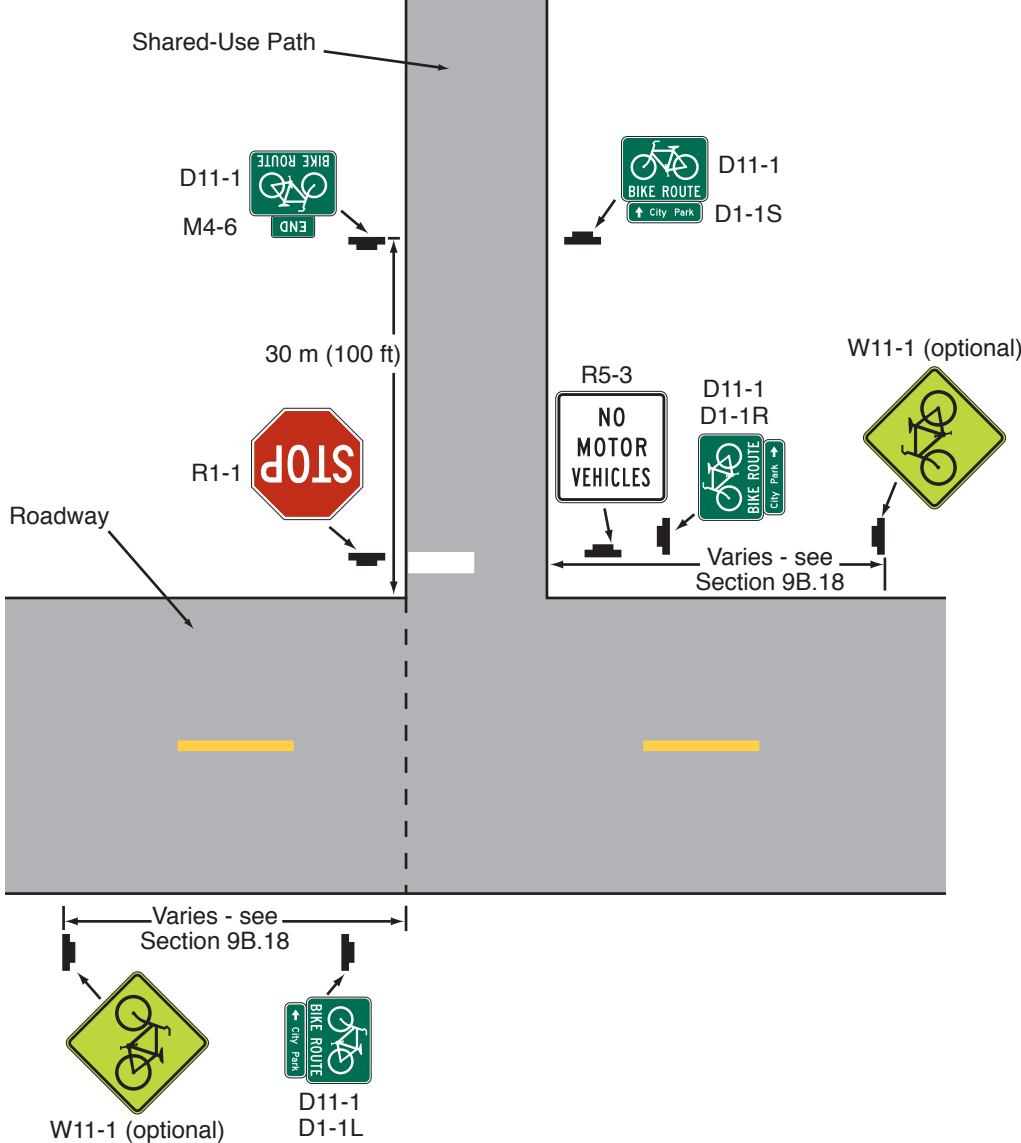


M6-6

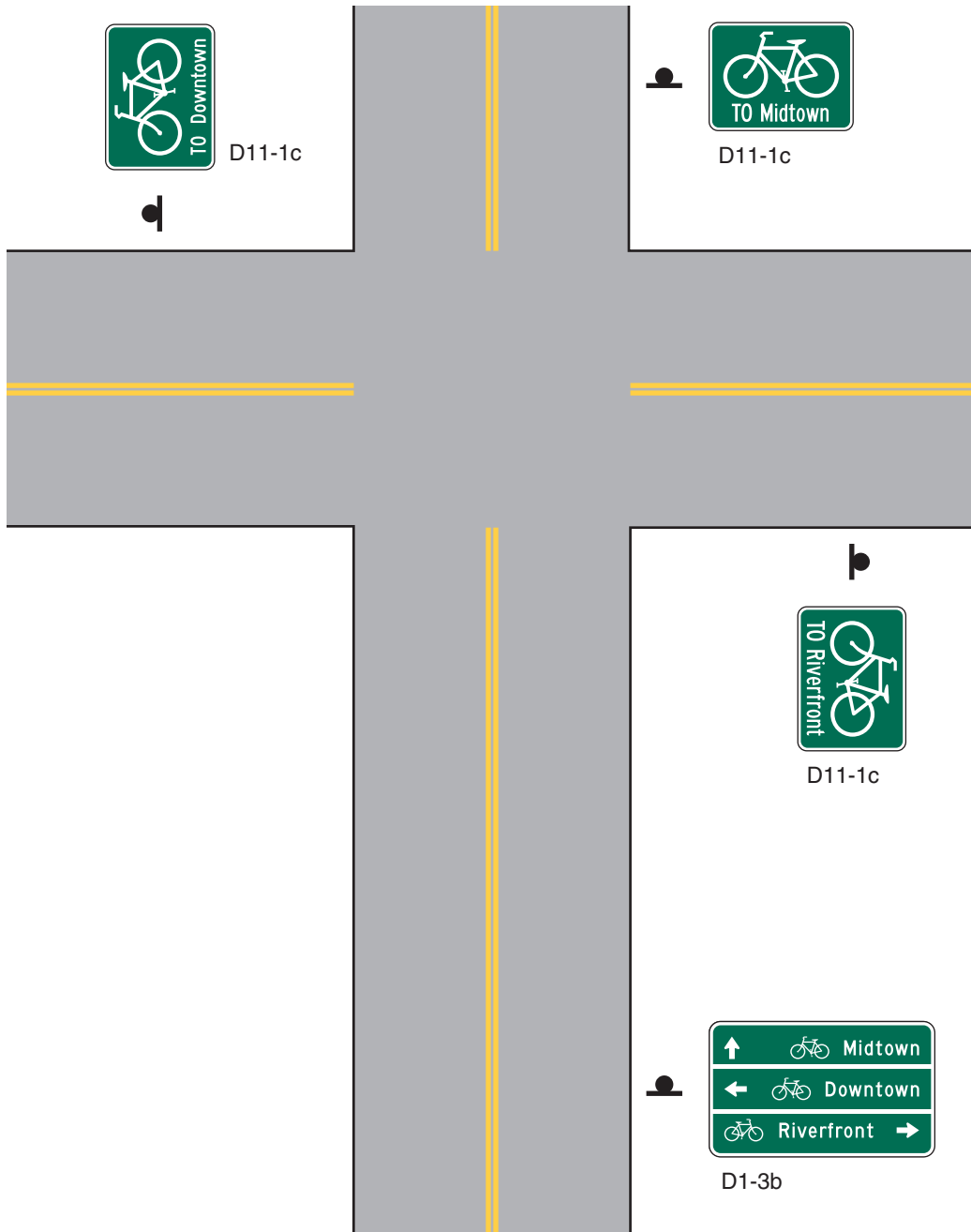


M6-7

**Figure 9B-5. Example of Signing for the Beginning and End of a Designated Bicycle Route on a Shared-Use Path**



**Figure 9B-6. Example of Bicycle Guide Signing**



**Figure 9B-7. Examples of Signing and Markings for Shared-Use Paths**

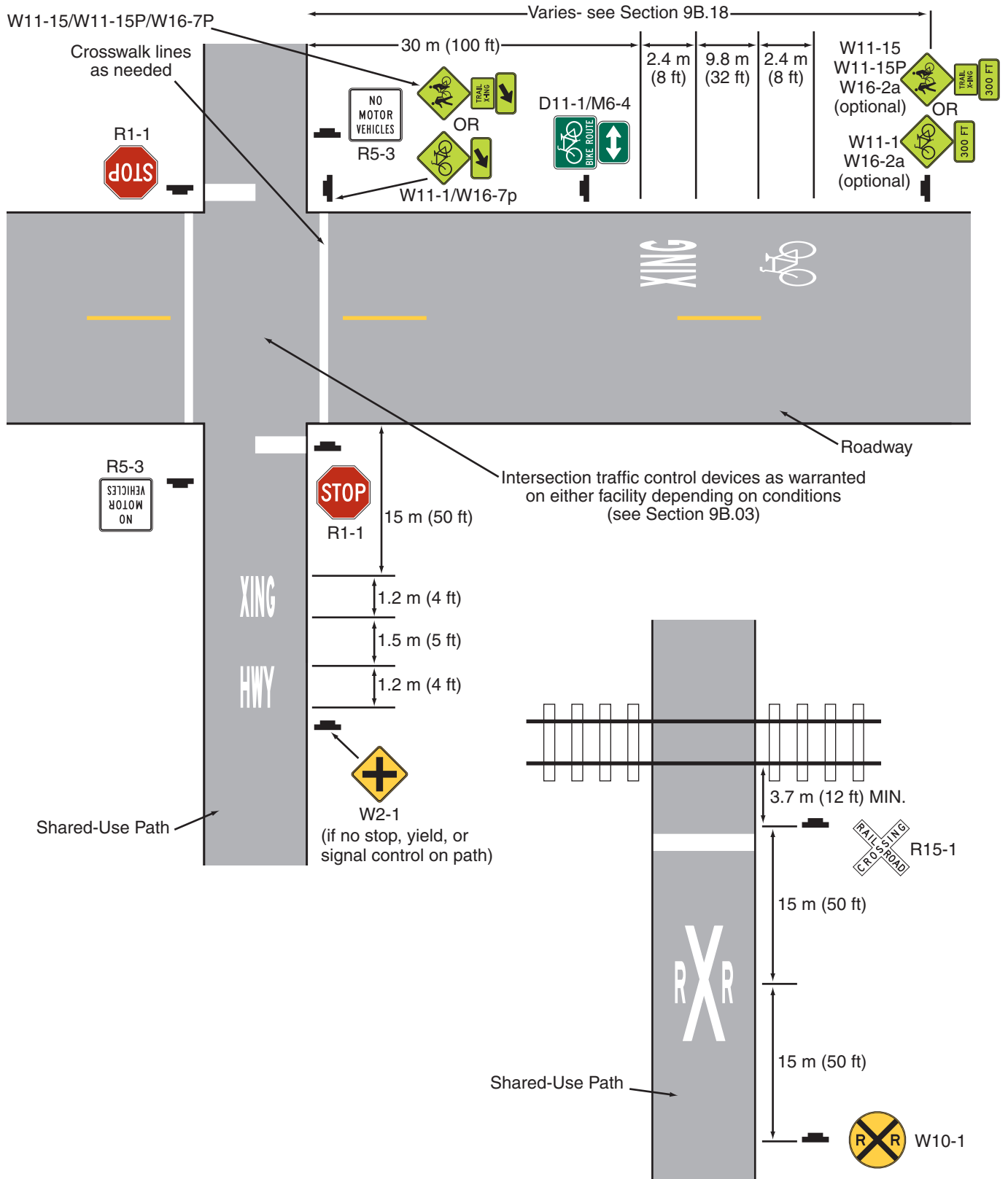
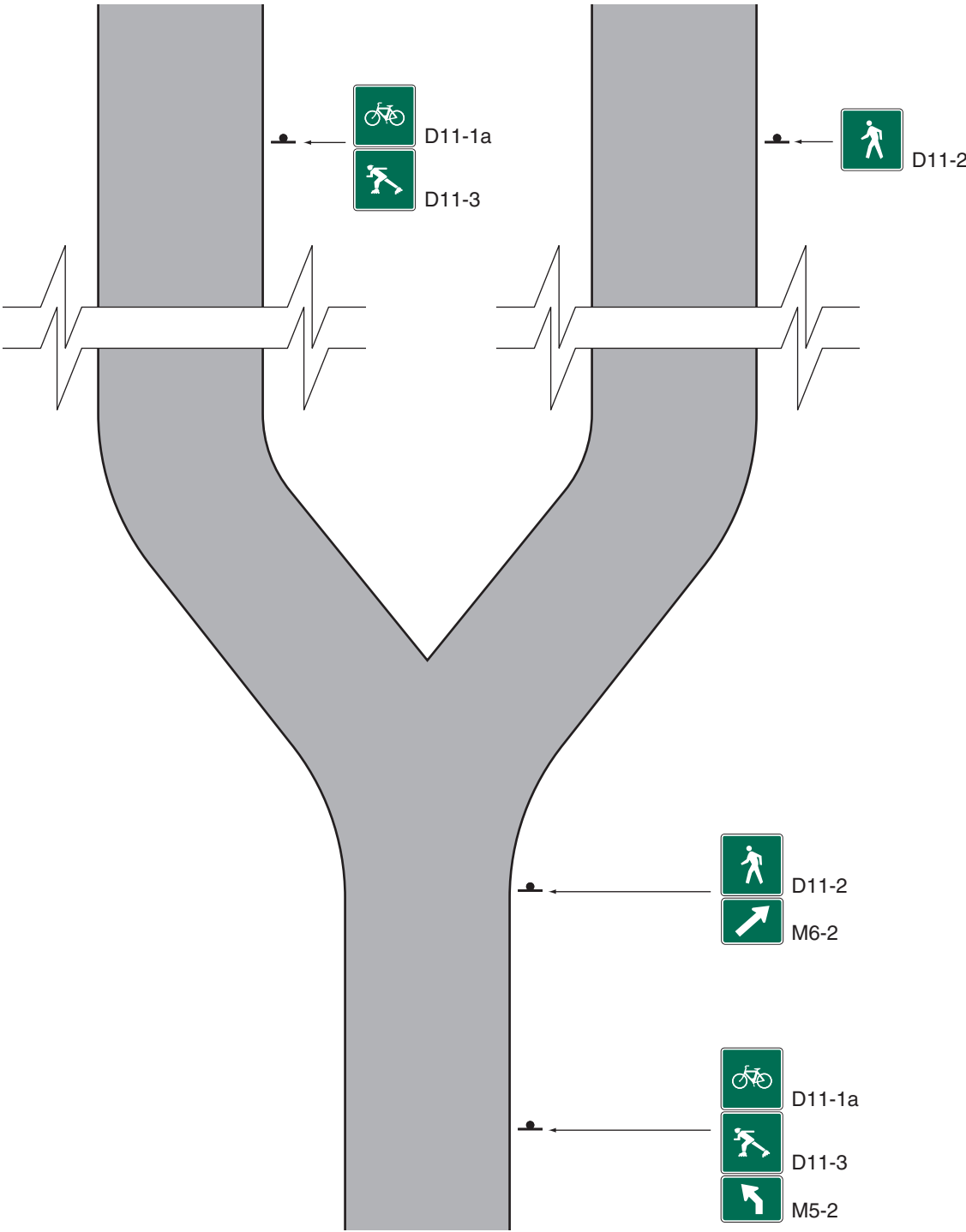
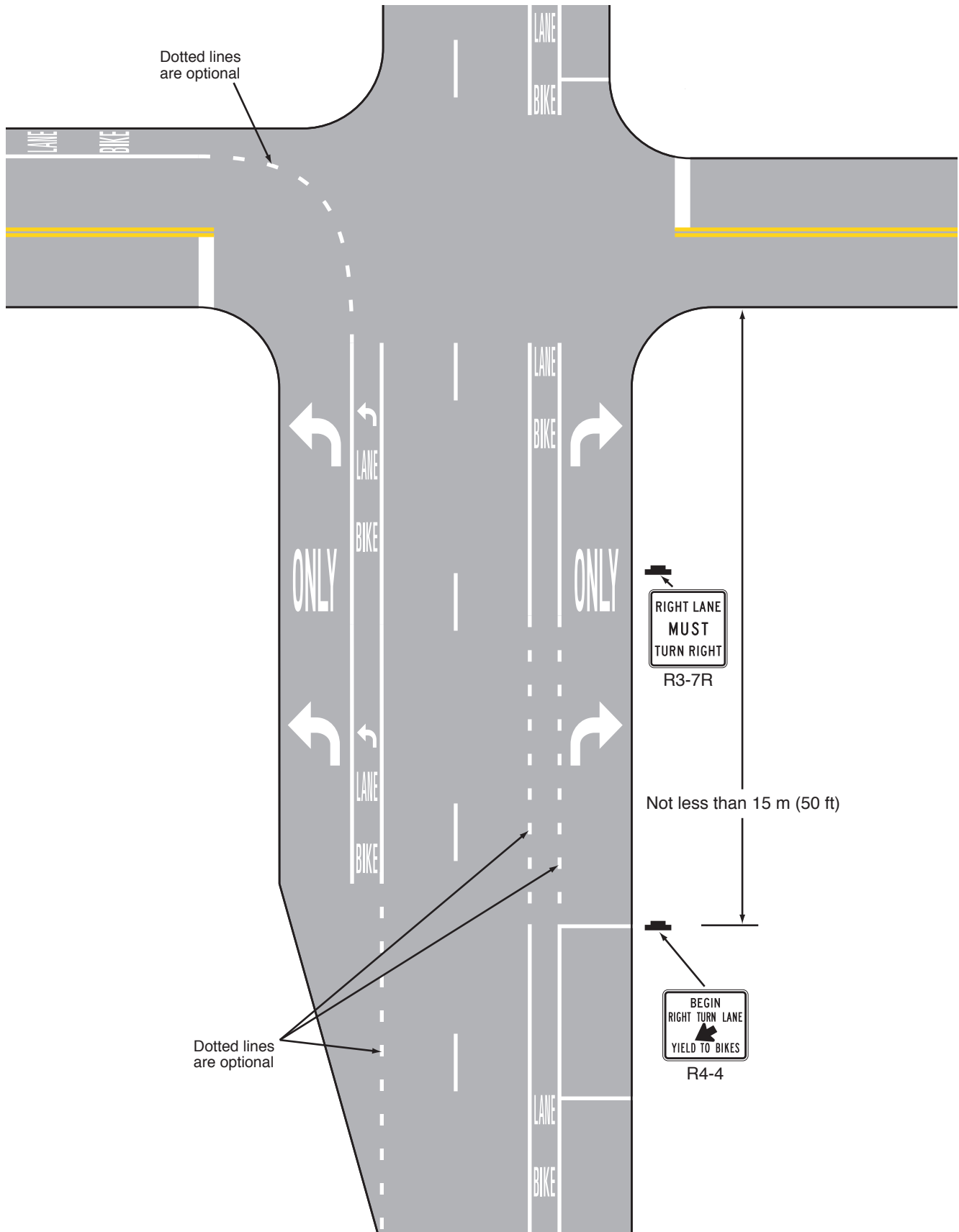


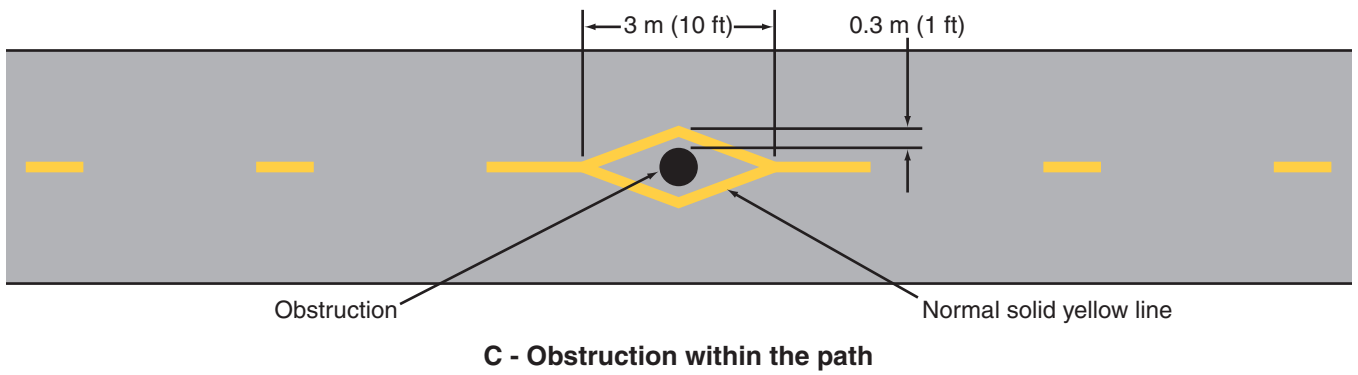
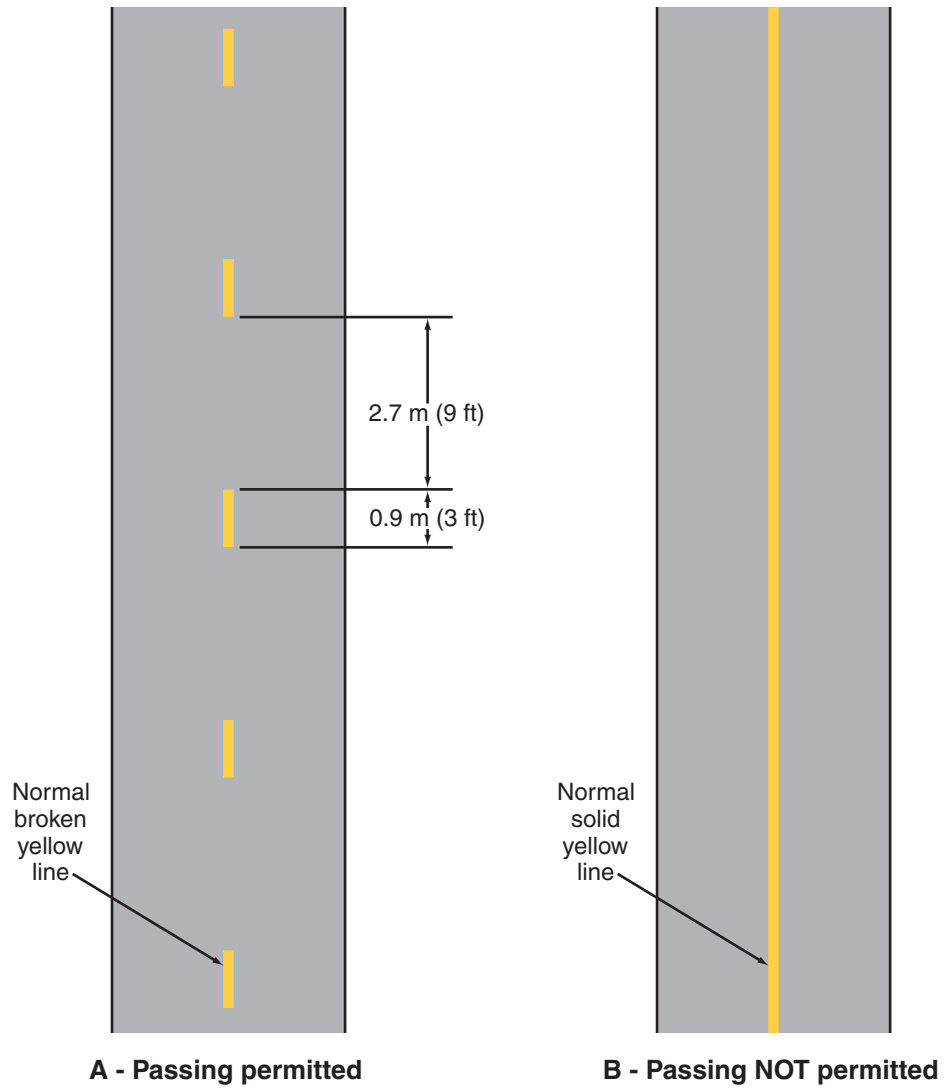
Figure 9B-8. Example of Mode-Specific Guide Signing on a Shared-Use Path



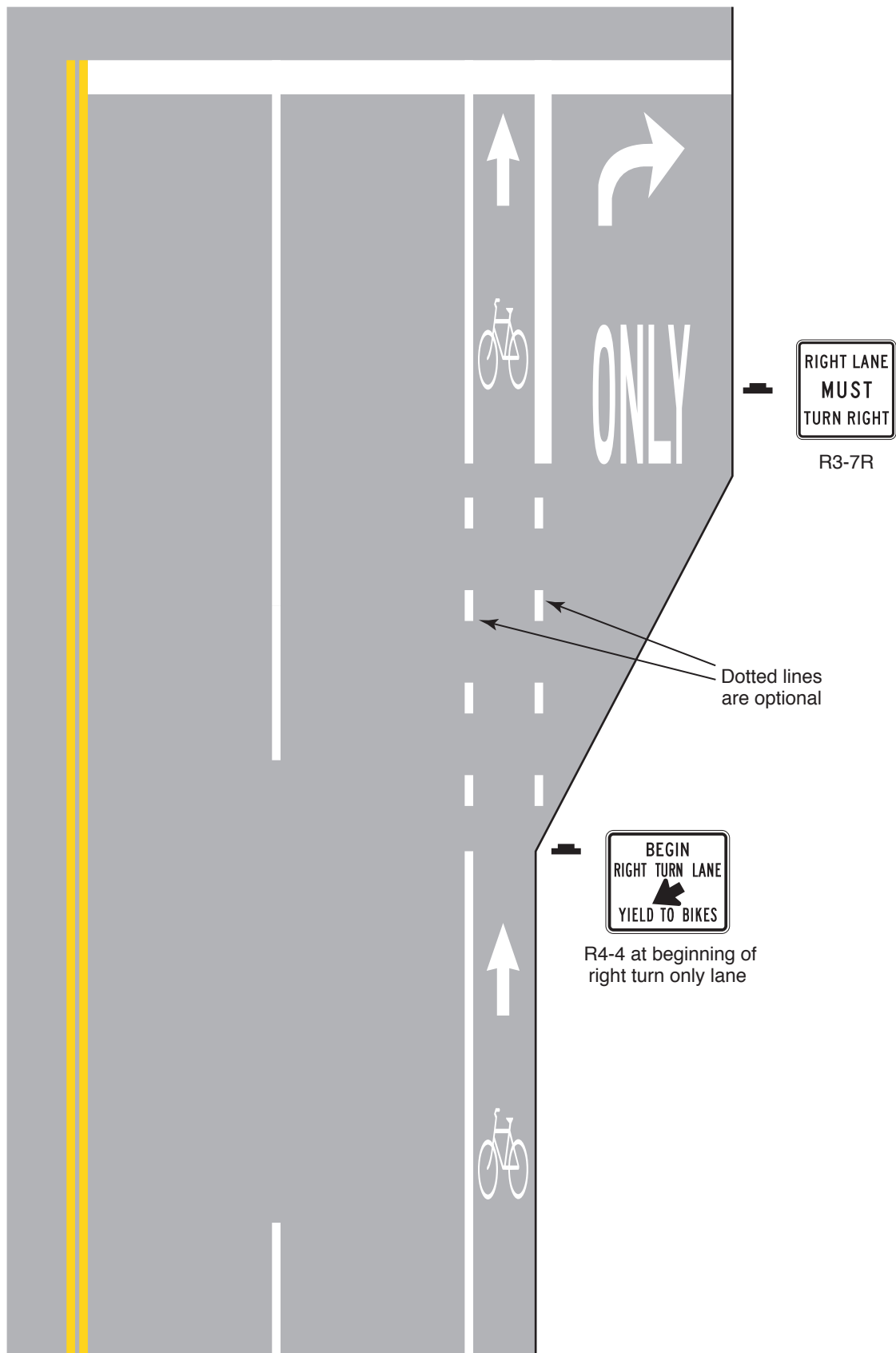
**Figure 9C-1. Example of Intersection Pavement Markings—Designated Bicycle Lane with Left-Turn Area, Heavy Turn Volumes, Parking, One-Way Traffic, or Divided Highway**



**Figure 9C-2. Examples of Center Line Markings for Shared-Use Paths**

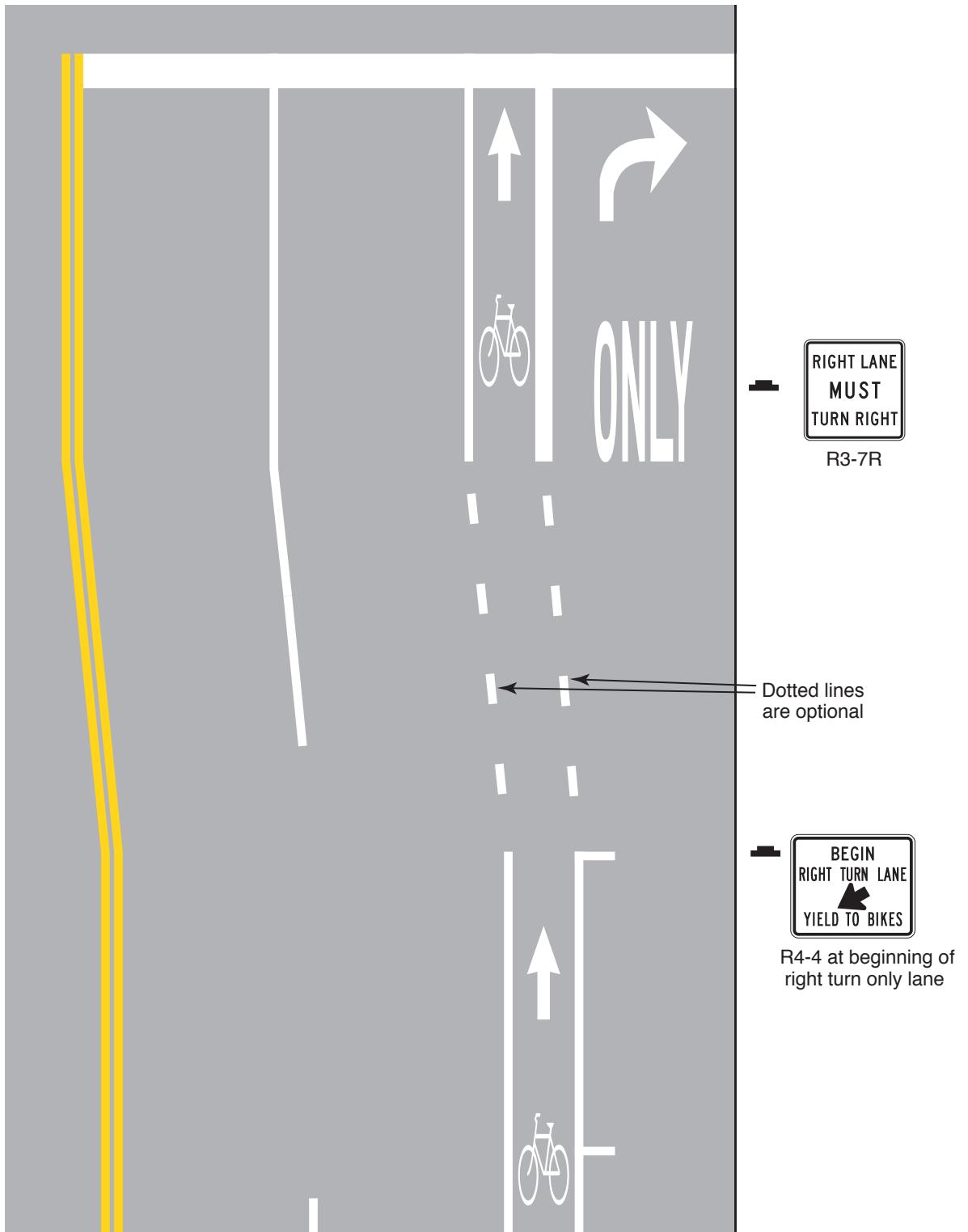


**Figure 9C-3. Example of Bicycle Lane Treatment at a Right Turn Only Lane**

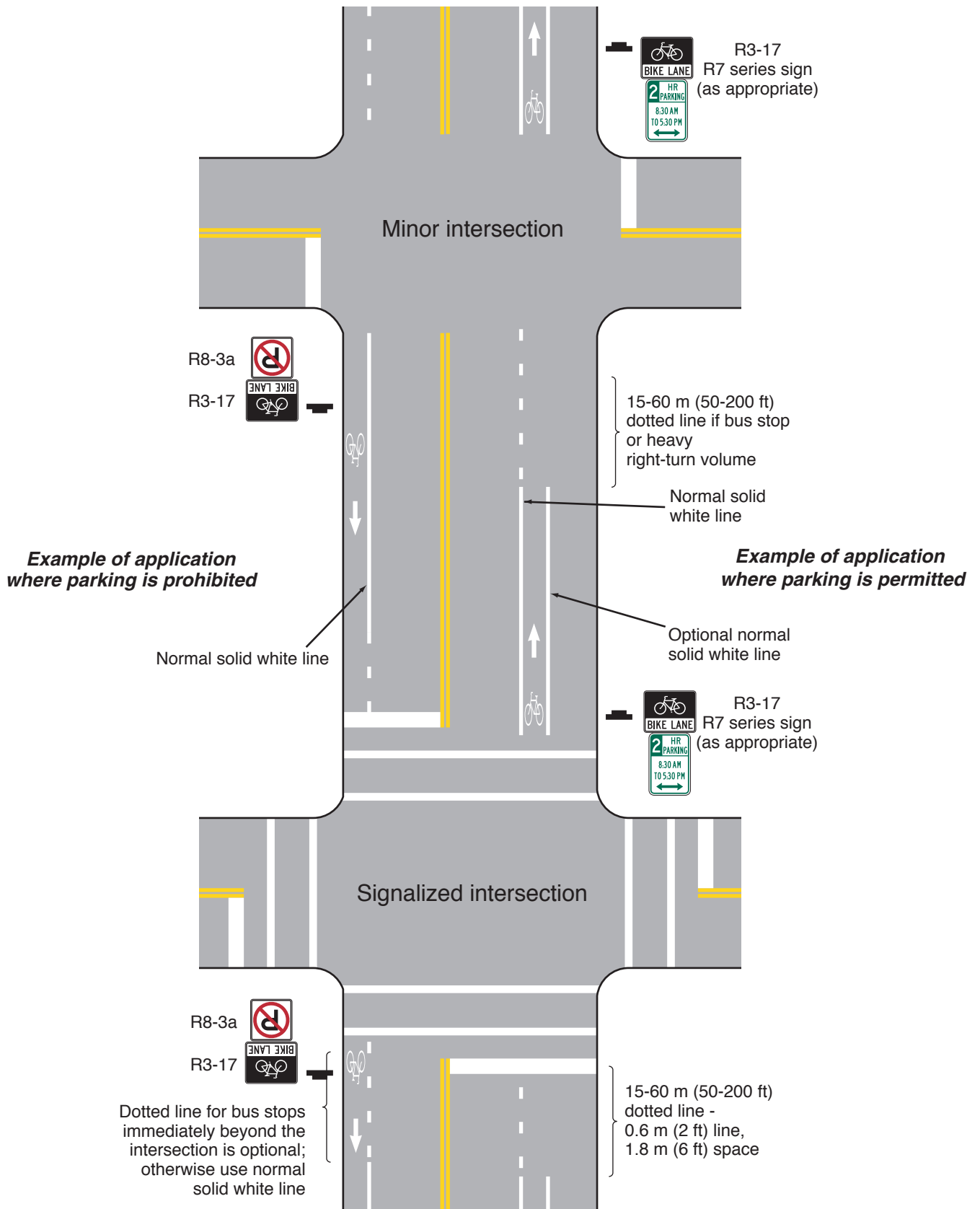




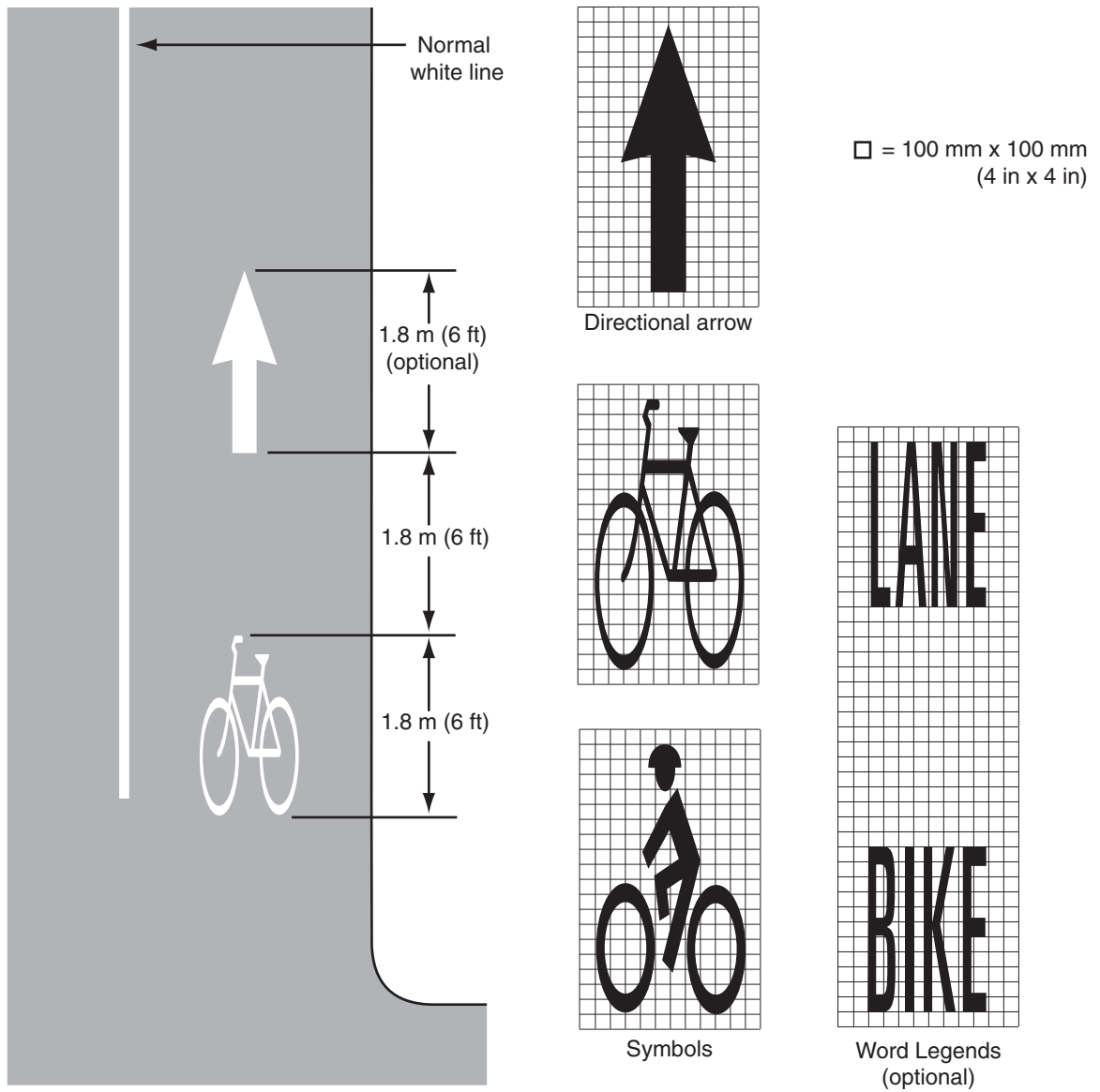
**Figure 9C-4. Example of Bicycle Lane Treatment at Parking Lane into a Right Turn Only Lane**



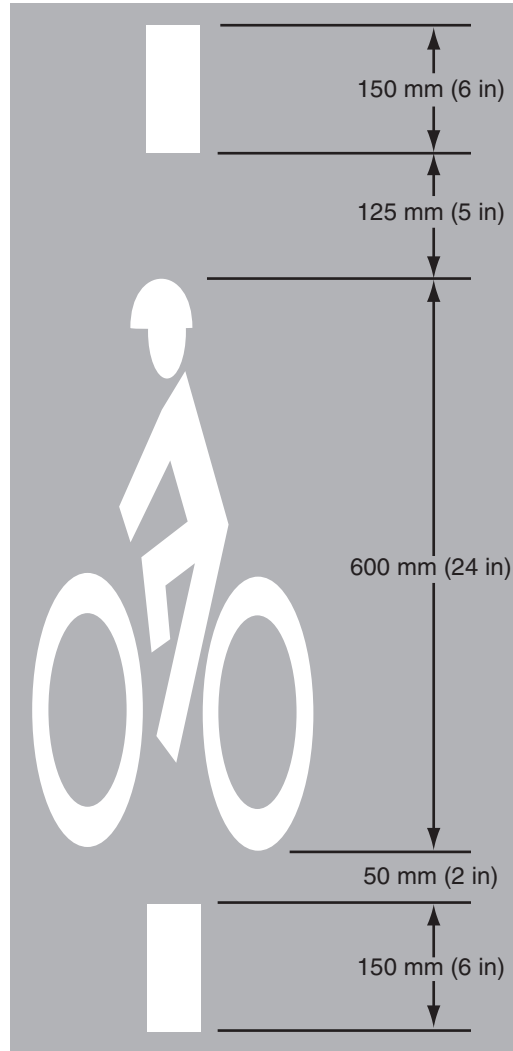
**Figure 9C-5. Example of Pavement Markings for Bicycle Lanes on a Two-Way Street**



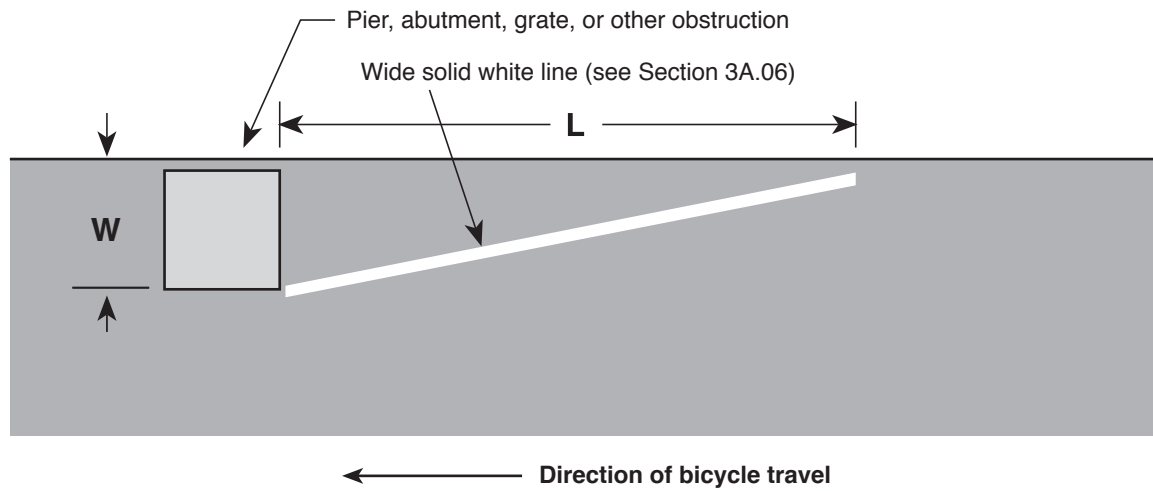
**Figure 9C-6. Optional Word and Symbol Pavement Markings for Bicycle Lanes**



**Figure 9C-7. Bicycle Detector Pavement Marking**



**Figure 9C-8. Example of Obstruction Pavement Marking**



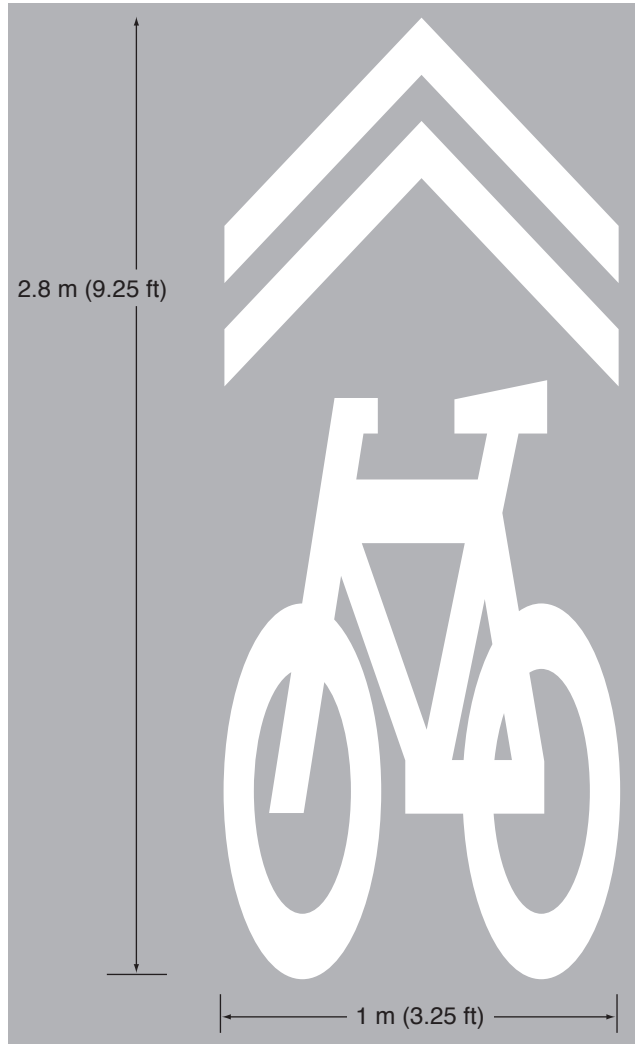
**For metric units:**

$L = 0.6 WS$  , where S is bicycle approach speed in kilometers per hour

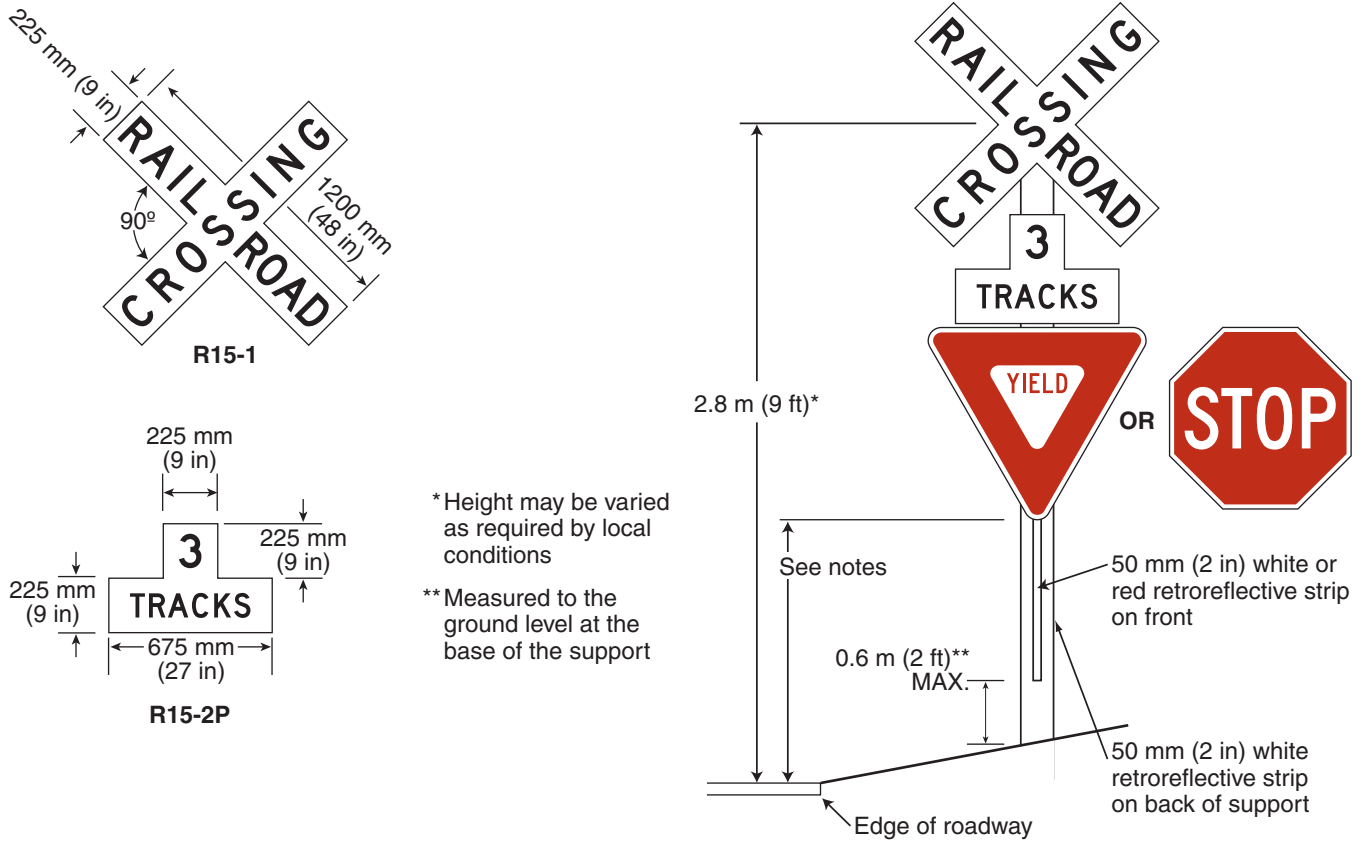
**For English units:**

$L = WS$  , where S is bicycle approach speed in miles per hour

**Figure 9C-9. Shared Lane Marking**

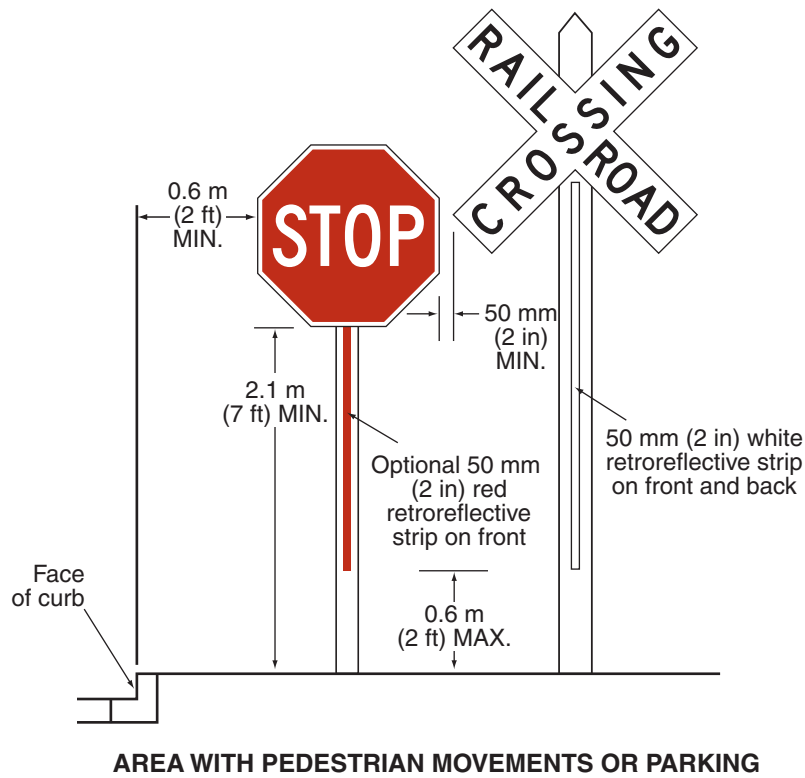
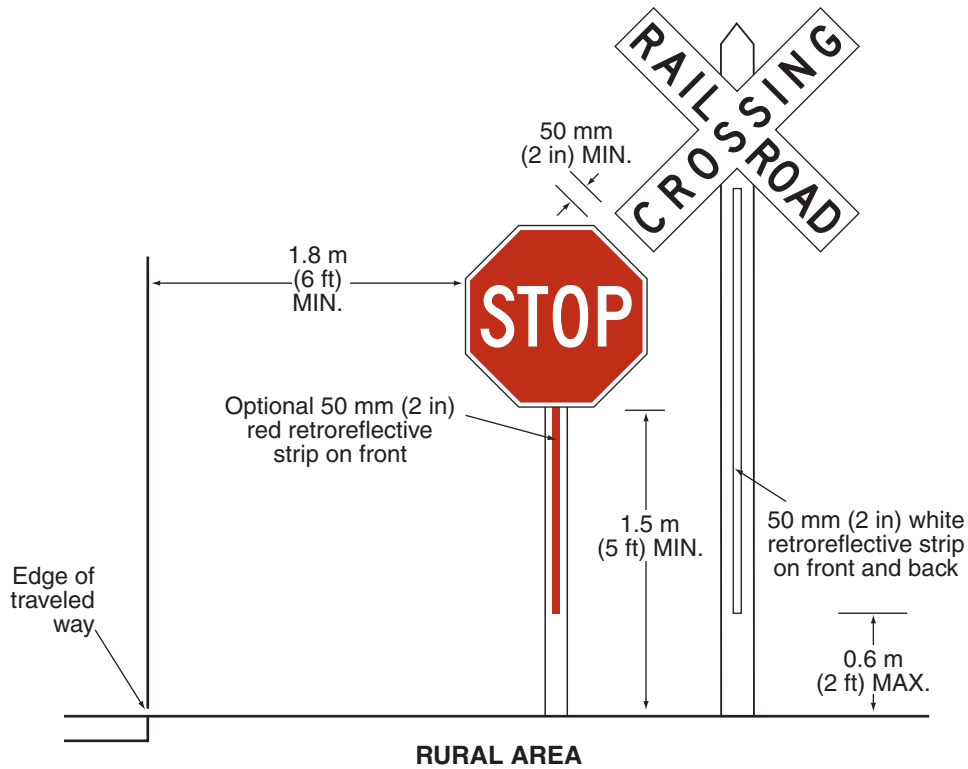


**Figure 10C-1. Highway-Light Rail Transit Grade Crossing Regulatory Signs and Plaques**



- Notes:
1. YIELD or STOP sign used only at passive crossings
  2. Mounting height of at least 1.2 m (4 ft) for installations of YIELD or STOP signs on existing Crossbuck sign supports
  3. Mounting height of at least 2.1 m (7 ft) in areas with pedestrian movements or parking

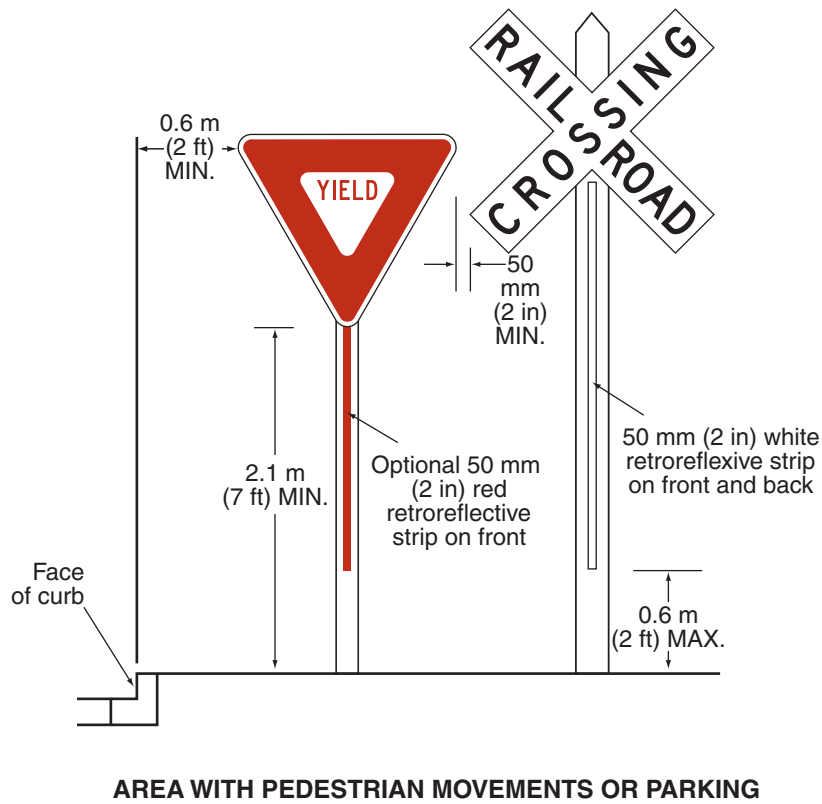
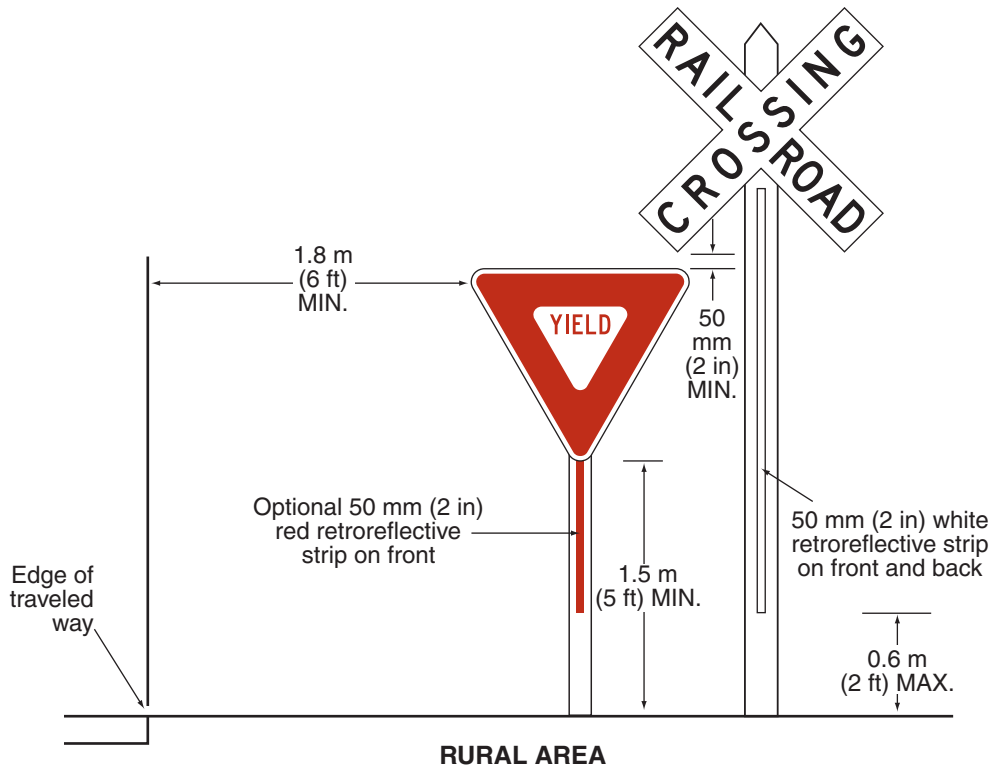
**Figure 10C-2. Highway-Light Rail Transit Grade Crossing Regulatory Signs with Separate Posts (Sheet 1 of 2)**



Note: Place the face of the signs in the same plane and place the STOP sign closest to the traveled way. Provide a 50 mm (2 in) minimum separation between the edge of the Crossbuck sign and the edge of the STOP sign.



**Figure 10C-2. Highway-Light Rail Transit Grade Crossing Regulatory Signs with Separate Posts (Sheet 2 of 2)**



Note: Place the face of the signs in the same plane and place the YIELD sign closest to the traveled way. Provide a 50 mm (2 in) minimum separation between the edge of the Crossbuck sign and the edge of the YIELD sign.

Figure 10C-3. Regulatory Signs and Plaques



R3-1a  
Activated Blank-Out



R3-2a  
Activated Blank-Out



R8-8



R8-9



R8-10



R10-6



R15-3P



R15-4a



R15-4b



R15-4c



R15-5



R15-5a



R15-6



R15-6a



R15-7

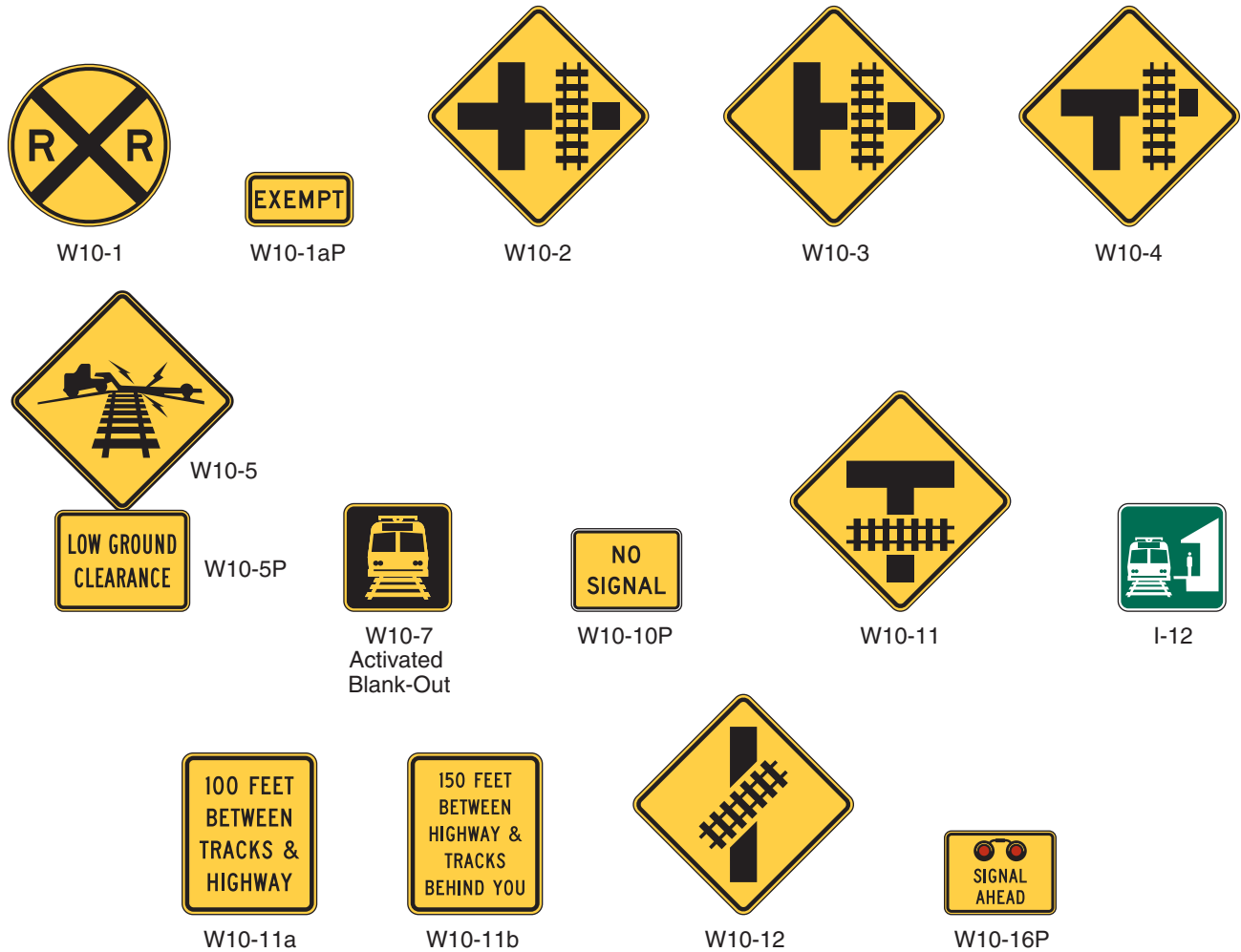


R15-7a



R15-8

**Figure 10C-4. Warning Signs and Plaques and Light Rail Station Sign**



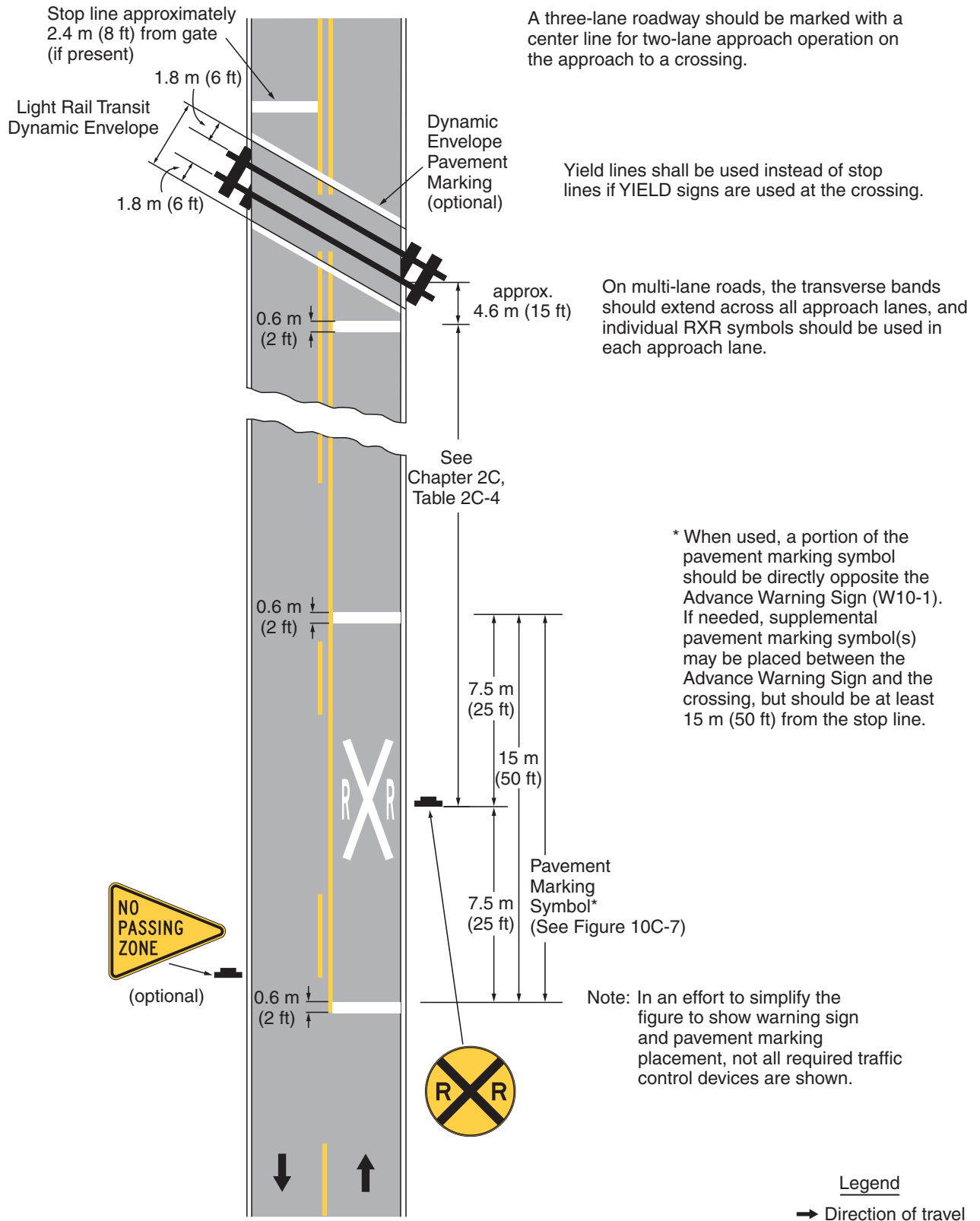
Note: The W10-11 sign is a W10-3 sign modified for geometrics. Other signs can be oriented or revised as needed to satisfy the geometrics of the roadways and the light rail transit tracks.

**Figure 10C-5. Example of Emergency Notification Sign**

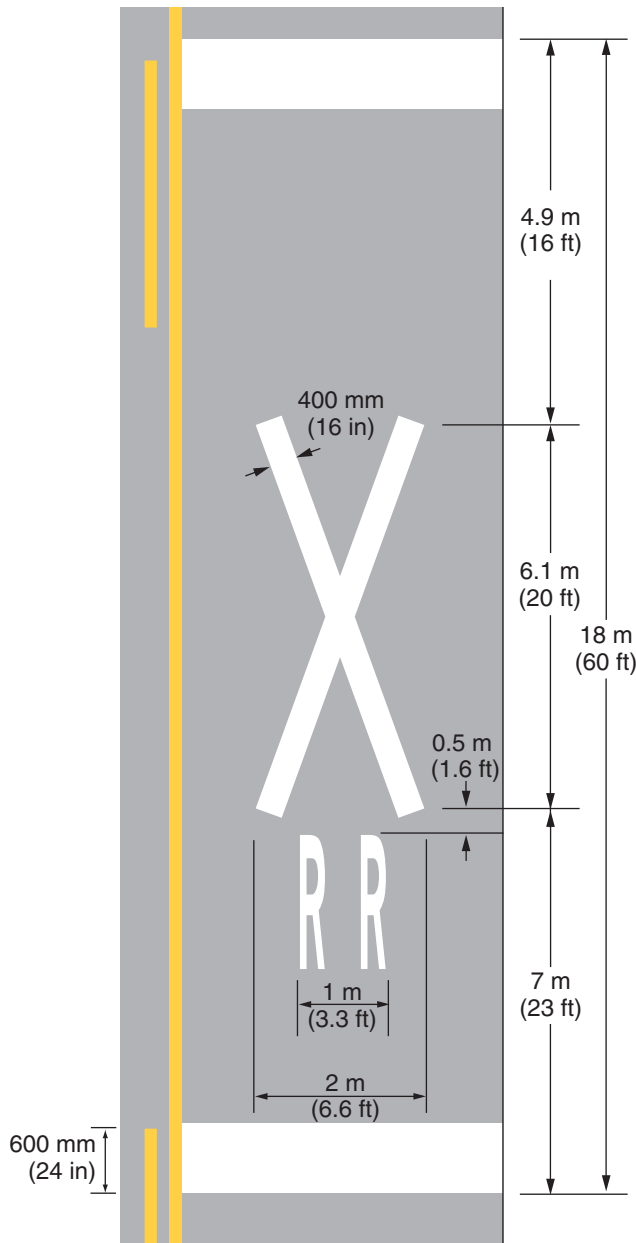


I-13

**Figure 10C-6. Example of Placement of Warning Signs and Pavement Markings at Highway-Light Rail Transit Grade Crossings**

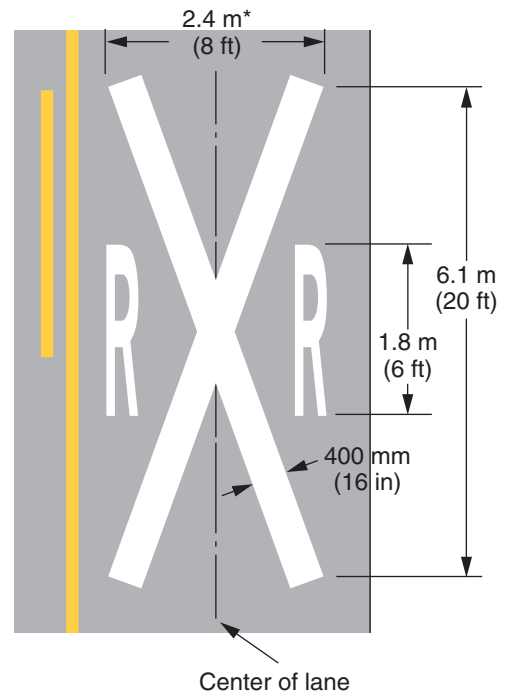


**Figure 10C-7. Highway-Light Rail Transit Grade Crossing Pavement Markings**



**A - Highway-Light Rail Transit grade crossing alternative (narrow) pavement markings**

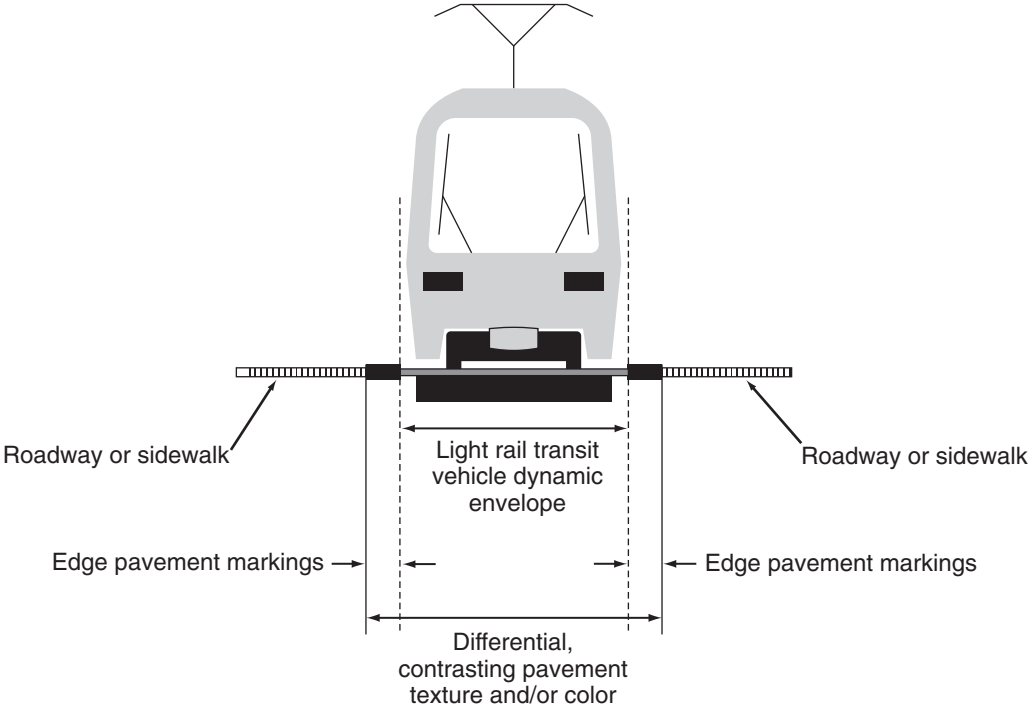
Note: Refer to Figure 10C-6 for placement



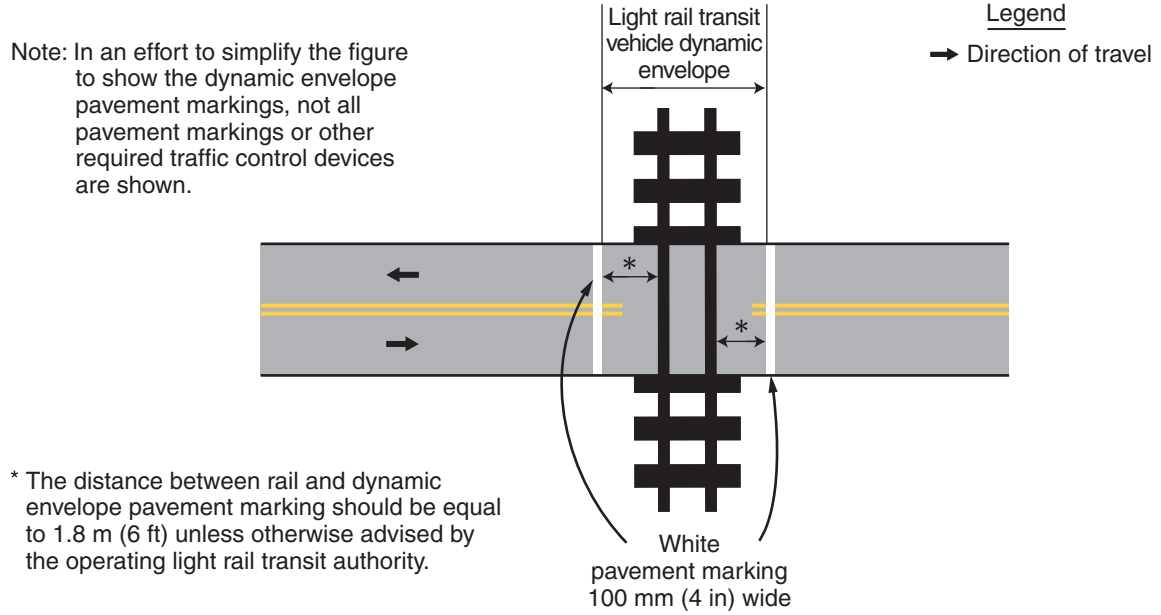
**B - Highway-Light Rail Transit grade crossing pavement markings**

\*Width may vary according to lane width

**Figure 10C-8. Light Rail Transit Vehicle Dynamic Envelope**

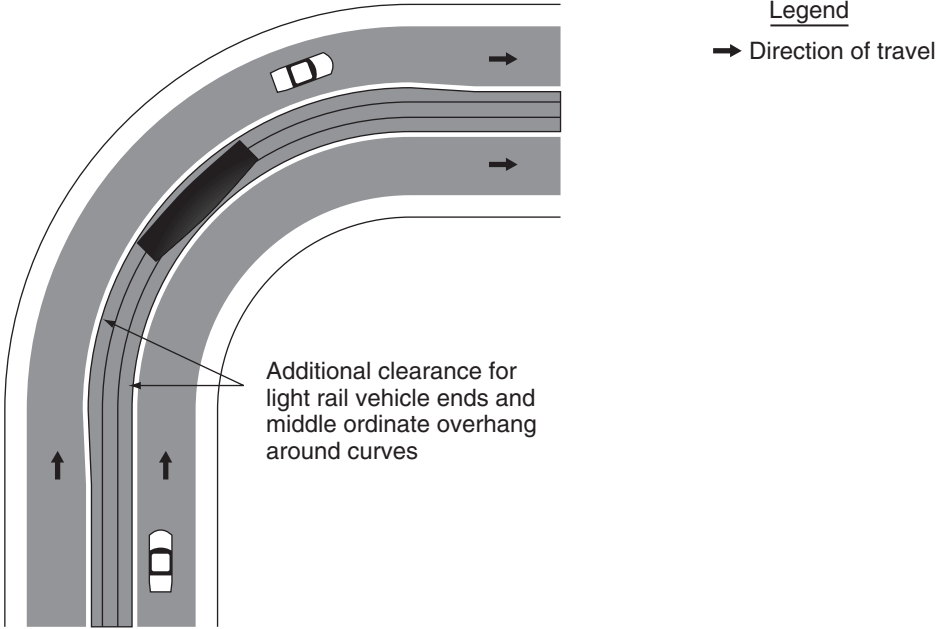


**Figure 10C-9. Typical Light Rail Transit Vehicle  
Dynamic Envelope Pavement Markings**

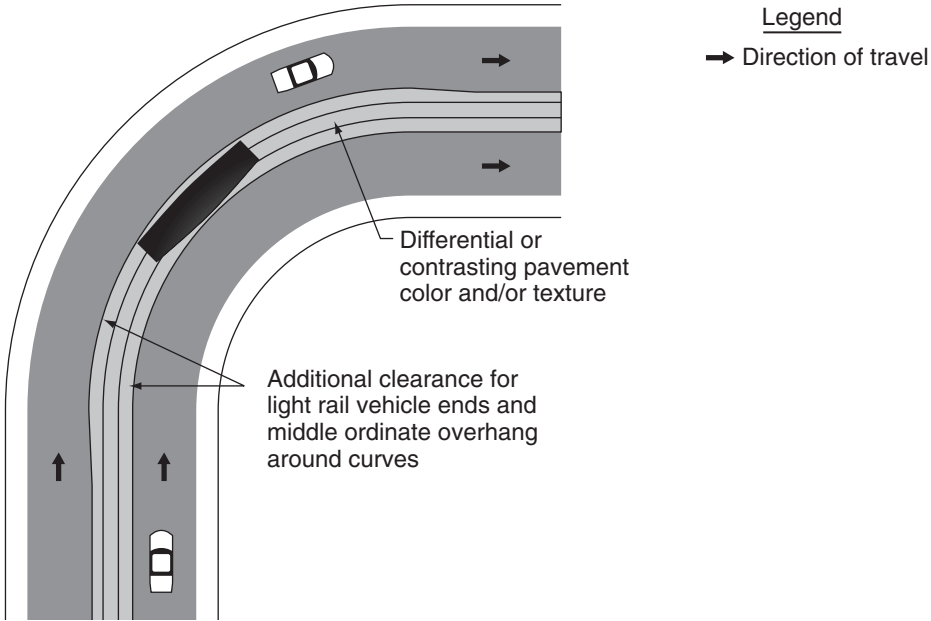




































**Figure 10C-10. Example of Light Rail Transit Vehicle Dynamic Envelope Pavement Markings**



**Figure 10C-11. Example of Light Rail Transit Vehicle Dynamic Envelope  
Contrasting Color and/or Texture**



**Figure 10D-1. Light Rail Transit Signals**

	Three-Lens Signal	Two-Lens Signal
<p><b>SINGLE LRT ROUTE</b></p> 	<p>STOP </p> <p>PREPARE TO STOP  <i>Flashing</i></p> <p>GO </p>	<p> STOP</p> <p><sup>(2)</sup> GO</p>
<p><b>TWO LRT ROUTE DIVERSION</b></p> 	<p></p> <p> <i>Flashing</i></p> <p> <sup>(1)</sup></p>	<p></p> <p> <sup>(1),(2)</sup></p>
	<p></p> <p><i>Flashing</i> </p> <p> <sup>(1)</sup></p>	<p></p> <p> <sup>(1),(2)</sup></p>
<p><b>THREE LRT ROUTE DIVERSION</b></p> 	<p></p> <p> <i>Flashing</i></p> <p>  <sup>(1)</sup></p>	<p></p> <p>  <sup>(1),(2)</sup></p>

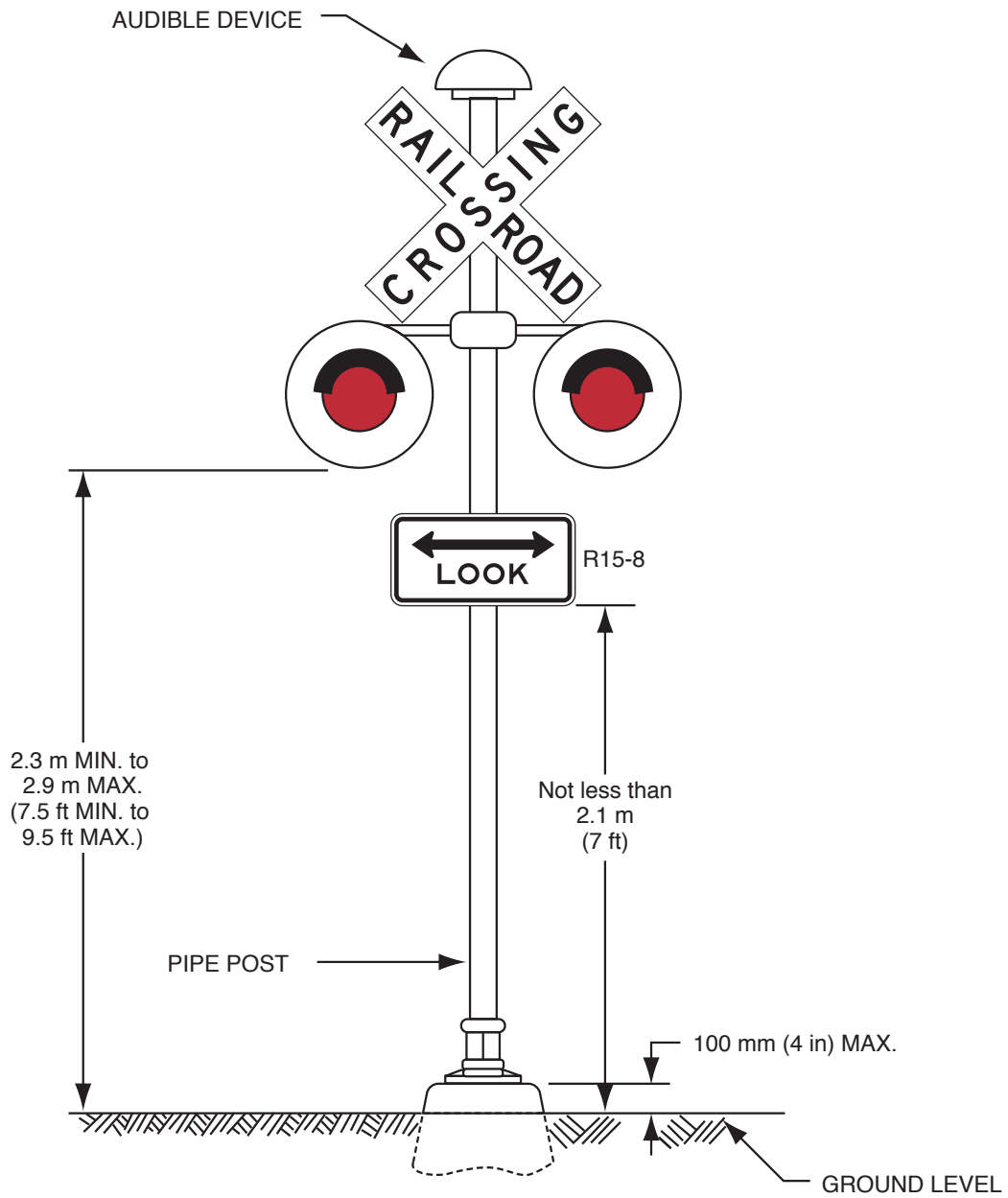
Notes:

All aspects (or signal indications) are white.

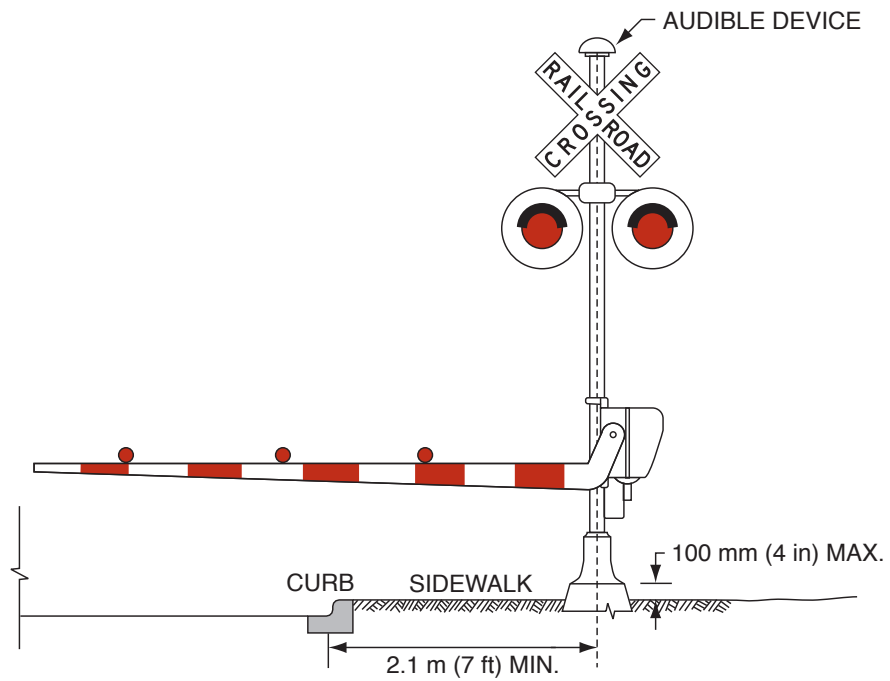
(1) Could be in single housing.

(2) "Go" lens may be used in flashing mode to indicate "prepare to stop".

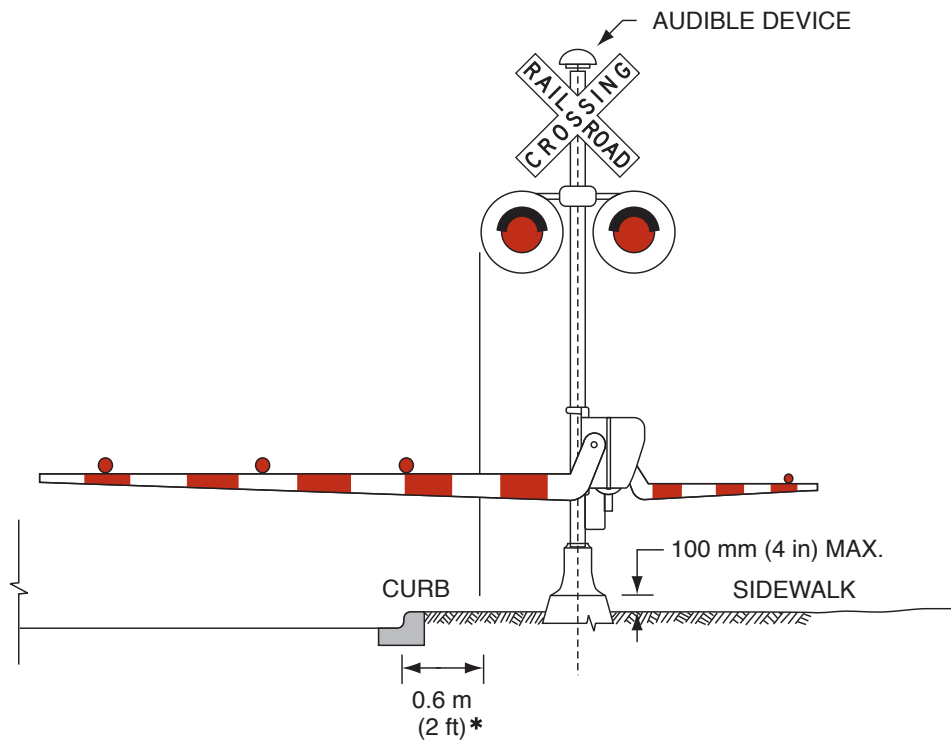
**Figure 10D-2. Example of Light Rail Transit Flashing-Light Signal Assembly for Pedestrian Crossings**



**Figure 10D-3. Example of Pedestrian Gate Placement Behind the Sidewalk**



**Figure 10D-4. Example of Pedestrian Gate Placement with Pedestrian Gate Arm**



\* For locating this reference line at other than curb section installation, see Section 8C.01.

**Figure 10D-5. Examples of Placement of Pedestrian Gates**

Legend

→ Direction of travel

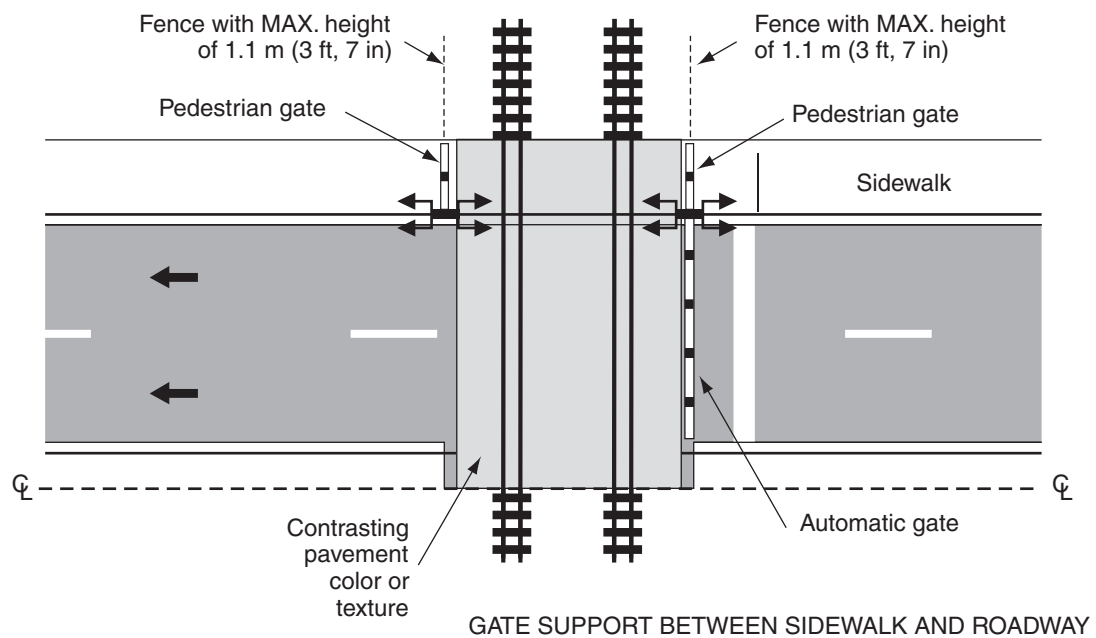
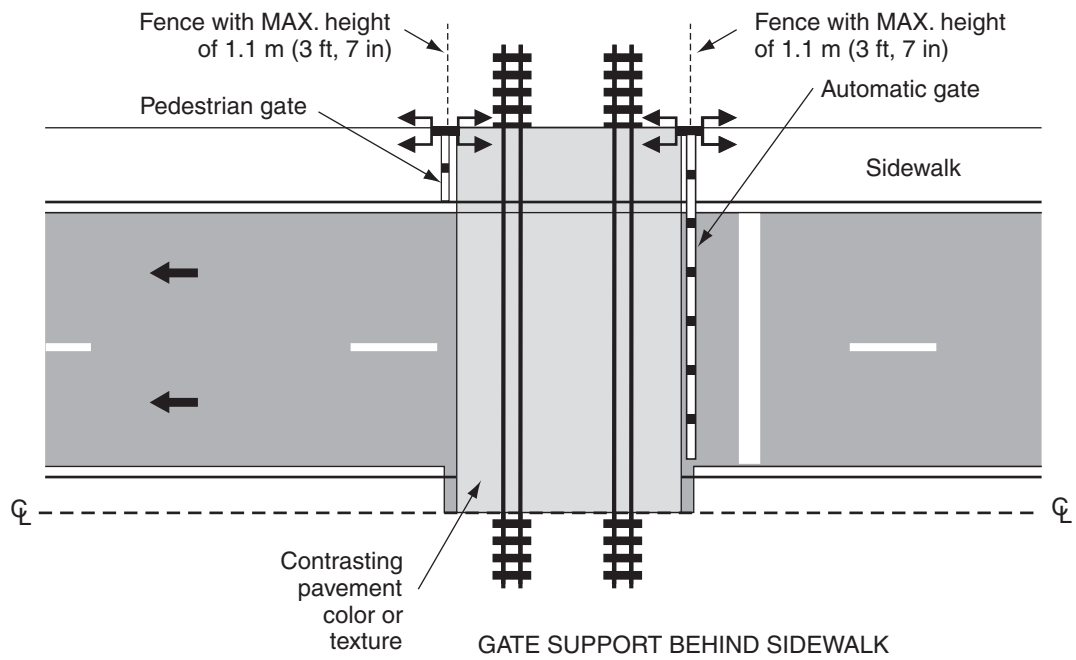
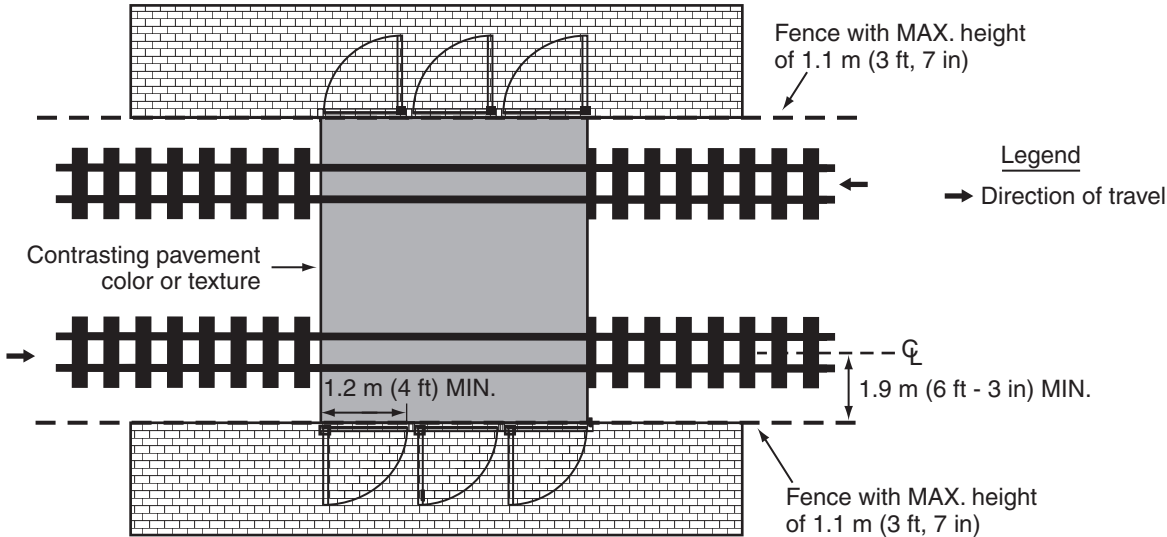
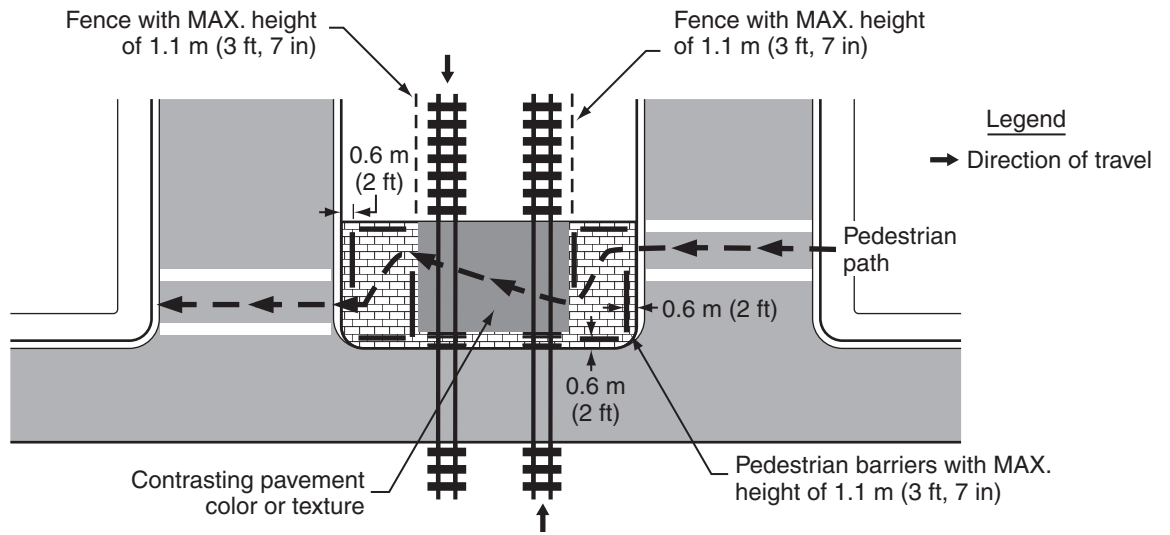


Figure 10D-6. Example of Swing Gates



**Figure 10D-7. Example of Pedestrian Barriers at an Offset Highway-Light Rail Transit Crossing**





**Figure 10D-8. Examples of Pedestrian Barrier Installation at an Offset Nonintersection Light Rail Transit Crossing**

