

CHAPTER 2C. WARNING SIGNS AND OBJECT MARKERS

Section 2C.01 Function of Warning Signs

Support:

01 Warning signs call attention to unexpected conditions on or adjacent to a highway, street, or private roads open to public travel and to situations that might not be readily apparent to road users. Warning signs alert road users to conditions that might call for a reduction of speed or an action in the interest of safety and efficient traffic operations.

Section 2C.02 Application of Warning Signs

Standard:

01 **The use of warning signs shall be based on an engineering study or on engineering judgment.**

Guidance:

02 *The use of warning signs should be kept to a minimum as the unnecessary use of warning signs tends to breed disrespect for all signs. In situations where the condition or activity is seasonal or temporary, the warning sign should be removed or covered when the condition or activity does not exist.*

Option:

03 Consistent with the provisions of Chapter 2L, changeable message signs may be used to display a warning message.

04 Consistent with the provisions of Chapter 4L, a Warning Beacon may be used in combination with a standard warning sign.

Support:

05 The categories of warning signs are shown in Table 2C-1.

06 Warning signs provided in this Manual cover most of the conditions that are likely to be encountered. Additional warning signs for low-volume roads (as defined in Section 5A.01), temporary traffic control zones, school areas, grade crossings, and bicycle facilities are discussed in Parts 5 through 9, respectively.

07 Section 1A.09 contains information regarding the assistance that is available to jurisdictions that do not have engineers on their staffs who are trained and/or experienced in traffic control devices.

Section 2C.03 Design of Warning Signs

Standard:

01 **Except as provided in Paragraph 2 or unless specifically designated otherwise, all warning signs shall be diamond-shaped (square with one diagonal vertical) with a black legend and border on a yellow background. Warning signs shall be designed in accordance with the sizes, shapes, colors, and legends contained in the “Standard Highway Signs and Markings” book and Department of Transportation’s California Sign Specifications (see Section 1A.11).**

Option:

02 A warning sign that is larger than the size shown in the Oversized column in Table 2C-2 and 2C-2(CA) for that particular sign may be diamond-shaped or may be rectangular or square in shape.

03 Except for symbols on warning signs, minor modifications may be made to the design provided that the essential appearance characteristics are met. Modifications may be made to the symbols shown on combined horizontal alignment/intersection signs (see Section 2C.11) and intersection warning signs (see Section 2C.46) in order to approximate the geometric configuration of the intersecting roadway(s).

04 Word message warning signs other than those provided in this Manual may be developed and installed by State and local highway agencies. [See Section 2A.06.](#)

04a [Warning signs may be supplemented with a yellow flashing beacon.](#)

05 Warning signs regarding conditions associated with pedestrians, bicyclists, and playgrounds may have a black legend and border on a yellow or fluorescent yellow-green background.

Standard:

⁰⁶ Warning signs regarding conditions associated with school buses and schools and their related supplemental plaques shall have a black legend and border on a fluorescent yellow-green background (see Section 7B.07).

⁰⁷ The use of educational plaques to supplement symbol signs is described in Section 2A.12.

Section 2C.04 Size of Warning Signs

Standard:

⁰¹ Except as provided in Section 2A.11, the sizes for warning signs shall be as shown in Table 2C-2 and 2C-2(CA).

Support:

⁰² Section 2A.11 contains information regarding the applicability of the various columns in Table 2C-2 and 2C-2(CA).

Standard:

⁰³ Except as provided in Paragraph 5, the minimum size for all diamond-shaped warning signs facing traffic on a multi-lane conventional road where the posted speed limit is higher than 35 mph shall be 36 x 36 inches.

⁰⁴ The minimum size for supplemental warning plaques that are not included in Table 2C-2 and 2C-2(CA) shall be as shown in Table 2C-3.

Option:

⁰⁵ If a diamond-shaped warning sign is placed on the left-hand side of a multi-lane roadway to supplement the installation of the same warning sign on the right-hand side of the roadway, the minimum size identified in the Single Lane column in Table 2C-2 and 2C-2(CA) may be used.

⁰⁶ Signs and plaques larger than those shown in Tables 2C-2 and 2C-3 may be used (see Section 2A.11).

Guidance:

⁰⁷ *The minimum size for all diamond-shaped warning signs facing traffic on exit and entrance ramps should be the size identified in Table 2C-2 and 2C-2(CA) for the mainline roadway classification (Expressway or Freeway). If a minimum size is not provided in the Freeway Column, the Expressway size should be used. If a minimum size is not provided in the Freeway or the Expressway Column, the Oversized size should be used.*

Section 2C.05 Placement of Warning Signs

Support:

⁰¹ For information on placement of warning signs, see Sections 2A.16 to 2A.21.

⁰² The time needed for detection, recognition, decision, and reaction is called the Perception-Response Time (PRT). Table 2C-4 is provided as an aid for determining warning sign location. The distances shown in Table 2C-4 can be adjusted for roadway features, other signing, and to improve visibility.

Guidance:

⁰³ *Warning signs should be placed so that they provide an adequate PRT. The distances contained in Table 2C-4 are for guidance purposes and should be applied with engineering judgment. Warning signs should not be placed too far in advance of the condition, such that drivers might tend to forget the warning because of other driving distractions, especially in urban areas.*

⁰⁴ *Minimum spacing between warning signs with different messages should be based on the estimated PRT for driver comprehension of and reaction to the second sign.*

⁰⁵ *The effectiveness of the placement of warning signs should be periodically evaluated under both day and night conditions.*

Option:

⁰⁶ Warning signs that advise road users about conditions that are not related to a specific location, such as Deer Crossing or SOFT SHOULDER, may be installed in an appropriate location, based on engineering judgment, since they are not covered in Table 2C-4.

Standard:

⁰⁷ Warning signs shall be installed in accordance with the general requirements for sign placement as described in Sections 2A.16 to 2A.21 and as shown in Figure 2A-3.

Section 2C.06 Horizontal Alignment Warning Signs

Support:

⁰¹ A variety of horizontal alignment warning signs (see Figure 2C-1), pavement markings (see Chapter 3B), and delineation (see Chapter 3F) can be used to advise motorists of a change in the roadway alignment. Uniform application of these traffic control devices with respect to the amount of change in the roadway alignment conveys a consistent message establishing driver expectancy and promoting effective roadway operations. The design and application of horizontal alignment warning signs to meet those requirements are addressed in Sections 2C.06 through 2C.15.

Standard:

⁰² **In advance of horizontal curves on freeways, on expressways, and on roadways with more than 1,000 AADT that are functionally classified as arterials or collectors, horizontal alignment warning signs shall be used in accordance with Table 2C-5 based on the speed differential between the roadway's posted or statutory speed limit or 85th-percentile speed, whichever is higher, or the prevailing speed on the approach to the curve, and the horizontal curve's advisory speed.**

Option:

⁰³ Horizontal Alignment Warning signs may also be used on other roadways or on arterial and collector roadways with less than 1,000 AADT based on engineering judgment.

Section 2C.07 Horizontal Alignment Signs (W1-1 through W1-5, W1-11, W1-15)

Standard:

⁰¹ **If Table 2C-5 indicates that a horizontal alignment sign (see Figure 2C-1) is required, recommended, or allowed, the sign installed in advance of the curve shall be a Curve (W1-2) sign unless a different sign is recommended or allowed by the provisions of this Section.**

⁰² **A Turn (W1-1) sign shall be used instead of a Curve sign in advance of curves that have advisory speeds of 30 mph or less (see Figure 2C-2).**

Guidance:

⁰³ *Where there are two changes in roadway alignment in opposite directions that are separated by a tangent distance of less than 600 feet, the Reverse Turn (W1-3) sign should be used instead of multiple Turn (W1-1) signs and the Reverse Curve (W1-4) sign should be used instead of multiple Curve (W1-2) signs.*

Support:

^{03a} Refer to Section 2C.10 for Reverse Turn/Advisory Speed (W4-1(CA)) sign or Reverse Curve/Advisory Speed (W4-18(CA)) signs (see Figure 2C-1(CA)).

Option:

⁰⁴ A Winding Road (W1-5) sign may be used instead of multiple Turn (W1-1) or Curve (W1-2) signs where there are three or more changes in roadway alignment each separated by a tangent distance of less than 600 feet.

Guidance:

^{04a} *The Winding Road (W1-5) sign should be used where there is a series of turns or curves which requires driving caution, and where curve or turn signs would be too numerous to be effective. This sign should be erected in advance of the second curve of the winding section of highway. The first curve should be marked with a curve or turn sign and an Advisory Speed (W13-1P) plaque. Where the winding road is 1 mile or more in length, a Next Distance (W7-3a) plaque should supplement the W1-5 sign. Where any of the curves has an advisory speed that is 10 mph or more below that of the first curve then it should be posted with a curve or turn sign and an Advisory Speed (W13-1P) plaque.*

Option:

^{04b} The WINDING LEVEE ROAD (SW22-1(CA)) sign (see Figure 2C-1(CA)) may be used to warn road users of the roadway alignment where the use of curve warning signs have been determined not to be appropriate.

^{04c} The Speed/Distance (SW22-1A(CA)) plaque (see Figure 2C-1(CA)) may be installed below the SW22-1(CA) sign. The Next Distance (W7-3a) plaque may be used when there is no advisory speed.

Standard:

^{04d} **If used, the Speed/Distance (SW22-1A(CA)) plaque shall be installed below the SW22-1(CA) sign.**

⁰⁵ A NEXT XX MILES (W7-3aP) supplemental distance plaque (see Section 2C.55) may be installed below the Winding Road sign where continuous roadway curves exist for a specific distance.

06 If the curve has a change in horizontal alignment of 135 degrees or more, the Hairpin Curve (W1-11) sign may be used instead of a Curve or Turn sign.

07 If the curve has a change of direction of approximately 270 degrees, such as on a cloverleaf interchange ramp, the 270-degree Loop (W1-15) sign may be used instead of a Curve or Turn sign.

Support:

07a Refer to Section 2C.10 for Hairpin Curve /Advisory Speed (W4-10(CA)) sign, 270-degree Loop/Advisory Speed (W4-14(CA)) sign and combination Truck Rollover Warning /Advisory Speed (W4-22(CA)) sign (see Figure 2C-1(CA)).

Guidance:

08 When the Hairpin Curve sign or the 270-degree Loop sign is installed, either a One-Direction Large Arrow (W1-6) sign or Chevron Alignment (W1-8) signs should be installed on the outside of the turn or curve.

Option:

09 The TRACTOR-SEMIS OVER ___ FEET KINGPIN TO REAR AXLE NOT ADVISED (SW48(CA)) sign (see Figure 2C-5(CA)) may be used on certain specified conventional highways and freeways that have restricted turning radii.

Standard:

10 At freeway off-ramps to restricted conventional highways, the freeway sign shall be installed with a NEXT EXIT (SW 48-1(CA)) sign.

Guidance:

11 The SW48(CA) sign should be located far enough in advance of the restricted area to allow the vehicle operator time to select an alternate route.

Option:

12 The NEXT EXIT (SW48-1(CA)) sign (see Figure 2C-5(CA)) or Next Distance (W7-3a) plaque may supplement the SW48(CA) sign, as appropriate. Alternate messages for the SW 48-1(CA) sign may be NEXT RIGHT, SECOND EXIT, SECOND RIGHT, NEXT LEFT or SECOND LEFT.

Section 2C.08 Advisory Speed Plaque (W13-1P)

Option:

01 The Advisory Speed (W13-1P) plaque (see Figure 2C-1) may be used to supplement any warning sign to indicate the advisory speed for a condition.

Standard:

02 The use of the Advisory Speed plaque for horizontal curves shall be in accordance with the information shown in Table 2C-5. The Advisory Speed plaque shall also be used where an engineering study indicates a need to advise road users of the advisory speed for other roadway conditions.

03 If used, the Advisory Speed plaque shall carry the message XX MPH. The speed displayed shall be a multiple of 5 mph.

04 Except in emergencies or when the condition is temporary, an Advisory Speed plaque shall not be installed until the advisory speed has been determined by an engineering study.

05 The Advisory Speed plaque shall only be used to supplement a warning sign and shall not be installed as a separate sign installation.

06 The advisory speed shall be determined by an engineering study that follows established engineering practices.

Support:

07 Among the established engineering practices that are appropriate for the determination of the recommended advisory speed for a horizontal curve are the following:

- A. An accelerometer that provides a direct determination of side friction factors
- B. A design speed equation
- C. A traditional ball-bank indicator using the following criteria:
 1. 16 degrees of ball-bank for speeds of 20 mph or less
 2. 14 degrees of ball-bank for speeds of 25 to 30 mph
 3. 12 degrees of ball-bank for speeds of 35 mph and higher

08 The 16, 14, and 12 degrees of ball-bank criteria are comparable to the current AASHTO horizontal curve design guidance. Research has shown that drivers often exceed existing posted advisory curve speeds by 7 to 10 mph.

Guidance:

09 The advisory speed should be determined based on free-flowing traffic conditions.

10 Because changes in conditions, such as roadway geometrics, surface characteristics, or sight distance, might affect the advisory speed, each location should be evaluated periodically or when conditions change.

Standard:

11 If used, the speed shown on the W13-1P plaque shall not be in excess of the posted or maximum speed limit. The advisory speed shall be determined in accordance with this section.

12 The Advisory Speed plaque shall not be used in conjunction with any sign other than a warning sign, nor shall it be used alone. When used, it shall be positioned below the warning sign.

Guidance:

13 In determining the need for curve or turn warning signs, consideration should be given to driver expectancy based on the driving environment. If the curve can be driven at legal speed without discomfort, there is normally no need for a sign. A curve warning sign should be considered in advance of any curve that produces a reading of 10 degrees on a Ball Bank Indicator at speeds lower than the approach speed. If a curve warning sign is needed, it should be supplemented with an advisory speed message.

14 A mechanical or electronic Ball Indicator should be used to determine the advisory speed for curves.

Support:

15 This speed is shown on the Horizontal Alignment signs (see Section 2C.06), Combination Horizontal Alignment/Advisory Speed Signs (see Section 2C.10), Advisory Exit and Ramp Speed Signs (see Section 2C.14), Combination Horizontal Alignment/Advisory Exit and Ramp Speed Signs (see Section 2C.15) and Advisory Speed Plaque.

Option:

16 The Advisory Speed (W13-1P) plaque may also be used with a number of other warning signs.

Support:

17 One method of determining the advisory speed is to drive the curve at several selected uniform speeds and plot the Ball Bank Indicator readings as shown in Figure 2C-101(CA).

Guidance:

18 A minimum of three speed runs should be made in each direction.

Support:

19 The limiting Ball Bank Indicator value for comfort is 16° for speeds of 20 mph or less, approximately 14° for speeds of 25 to 30 mph, inclusive and 12° for speeds of 35 mph or higher.

Standard:

20 The speeds shown on the sign shall be in mph.

Guidance:

21 The speed shown on the sign should be in 5 mph increments to the lowest appropriate speed found for the condition.

Option:

22 A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed on the same post and in conjunction with any horizontal alignment sign that has an advisory speed.

23 Any horizontal alignment that has an advisory speed may be supplemented with a changeable message sign that displays the horizontal alignment sign, advisory speed and the approaching driver's speed.

Standard:

24 If a changeable message sign is installed, the legend YOUR SPEED XX (MPH) or such similar legend shall be shown.

25 The color of the changeable message sign shall be a yellow legend on a black background or the reverse of these colors.

Section 2C.09 Chevron Alignment Sign (W1-8)

Standard:

01 The use of the Chevron Alignment (W1-8) sign (see Figures 2C-1 and 2C-2) to provide additional emphasis and guidance for a change in horizontal alignment shall be in accordance with the information shown in Table 2C-5.

Option:

02 When used, Chevron Alignment signs may be used instead of or in addition to standard delineators.

Standard:

03 The Chevron Alignment sign shall be a vertical rectangle. No border shall be used on the Chevron Alignment sign.

04 If used, a minimum of three Chevron Alignment signs shall be installed on the outside of a turn or curve, in line with and at approximately a right angle to approaching traffic. Chevron Alignment signs shall be installed at a minimum height of 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way.

Guidance:

05 The approximate spacing of Chevron Alignment signs on the turn or curve measured from the point of curvature (PC) should be as shown in Table 2C-6.

06 If used, Chevron Alignment signs should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.

Standard:

07 Chevron Alignment signs shall not be placed on the far side of a T-intersection facing traffic on the stem approach to warn drivers that a through movement is not physically possible, as this is the function of a Two-Direction (or One-Direction) Large Arrow sign.

08 Chevron Alignment signs shall not be used to mark obstructions within or adjacent to the roadway, including the beginning of guardrails or barriers, as this is the function of an object marker (see Section 2C.63).

Section 2C.10 Combination Horizontal Alignment/Advisory Speed Signs (W1-1a, W1-2a)

Option:

01 The Turn (W1-1) sign or the Curve (W1-2) sign may be combined with the Advisory Speed (W13-1P) plaque (see Section 2C.08) to create a combination Turn/Advisory Speed (W1-1a) sign or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1).

01a The Reverse Turn (W1-3) sign or the Reverse Curve (W1-4) sign may be combined with the Advisory Speed (W13-1P) plaque (see Section 2C.08) to create a combination Reverse Turn/Advisory Speed (W4-1(CA)) sign (see Figure 2C-1(CA)), or combination Reverse Curve/Advisory Speed (W4-18(CA)) sign (see Figure 2C-1(CA)).

01b The Hairpin Curve (W1-11) sign or the 270-degree Loop (W1-15) sign may be combined with the Advisory Speed (W13-1P) plaque (see Section 2C.08) to create a combination Hairpin Curve /Advisory Speed (W4-10(CA)) sign (see Figure 2C-1(CA)), or combination 270-degree Loop/Advisory Speed (W4-14(CA)) sign (see Figure 2C-1(CA)).

01c The Truck Rollover Warning (W1-13) sign may be combined with the Advisory Speed (W13-1P) plaque (see Section 2C.08) to create a combination Truck Rollover Warning /Advisory Speed (W4-22(CA)) sign (see Figure 2C-1(CA)).

02 The combination Horizontal Alignment/Advisory Speed sign may be used to supplement the advance Horizontal Alignment warning sign and Advisory Speed plaque based upon an engineering study.

Standard:

03 If used, the combination Horizontal Alignment/Advisory Speed sign shall not be used alone and shall not be used as a substitute for a Horizontal Alignment warning sign and Advisory Speed plaque at the advance warning location. The combination Horizontal Alignment/Advisory Speed sign shall only be used as a supplement to the advance Horizontal Alignment warning sign.

Guidance:

03a If used, the combination Horizontal Alignment/Advisory Speed sign ~~shall~~ should be installed at the beginning of the turn or curve.

Support:

03b The combination Turn/Advisory Speed (W1-1a) sign or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1) is used at problem locations where the Horizontal Alignment (W1-1 through W1-5) signs have not proven to be effective.

Standard:

03c When used, combination Turn/Advisory Speed (W1-1a) sign or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1) shall be used in the head-on position (left side) and/or at the beginning of the turn or curve(right side).

Guidance:

^{03d} When used, the square shape should be used in the head-on position (left side) for combination Turn/Advisory Speed (W1-1a) sign or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1).

^{03e} When used, the diamond shape should be used in the beginning of the turn or curve (right side) for the combination Turn/Advisory Speed (W1-1a) sign or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1).

^{03f} Existing pavement markings should also be evaluated.

Standard:

^{03g} The advisory speed shall be determined in accordance with Section 2C.08.

Guidance:

⁰⁴ The advisory speed displayed on the combination Horizontal Alignment/Advisory Speed sign should be based on the advisory speed for the horizontal curve using recommended engineering practices (see Section 2C.08).

Section 2C.11 Combination Horizontal Alignment/Intersection Signs (W1-10 Series)

Option:

⁰¹ The Turn (W1-1) sign or the Curve (W1-2) sign may be combined with the Cross Road (W2-1) sign or the Side Road (W2-2 or W2-3) sign to create a combination Horizontal Alignment/Intersection (W1-10 series) sign (see Figure 2C-1) that depicts the condition where an intersection occurs within or immediately adjacent to a turn or curve.

Guidance:

⁰² Elements of the combination Horizontal Alignment/Intersection sign related to horizontal alignment should comply with the provisions of Section 2C.07, and elements related to intersection configuration should comply with the provisions of Section 2C.46. The symbol design should approximate the configuration of the intersecting roadway(s). No more than one Cross Road or two Side Road symbols should be displayed on any one combination Horizontal Alignment/Intersection sign.

Standard:

⁰³ The use of the combination Horizontal Alignment/Intersection sign shall be in accordance with the appropriate Turn or Curve sign information shown in Table 2C-5.

Section 2C.12 One-Direction Large Arrow Sign (W1-6)

Option:

⁰¹ A One-Direction Large Arrow (W1-6) sign (see Figure 2C-1) may be used either as a supplement or alternative to Chevron Alignment signs in order to delineate a change in horizontal alignment (see Figure 2C-2).

⁰² A One-Direction Large Arrow (W1-6) sign may be used to supplement a Turn or Reverse Turn sign (see Figure 2C-2) to emphasize the abrupt curvature.

Standard:

⁰³ The One-Direction Large Arrow sign shall be a horizontal rectangle with an arrow pointing to the left or right.

⁰⁴ The use of the One-Direction Large Arrow sign shall be in accordance with the information shown in Table 2C-5.

⁰⁵ If used, the One-Direction Large Arrow sign shall be installed on the outside of a turn or curve in line with and at approximately a right angle to approaching traffic.

⁰⁶ The One-Direction Large Arrow sign shall not be used where there is no alignment change in the direction of travel, such as at the beginnings and ends of medians or at center piers.

⁰⁷ The One-Direction Large Arrow sign directing traffic to the right shall not be used in the central island of a roundabout.

Guidance:

⁰⁸ If used, the One-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.

⁰⁹ Type N-1(CA) (OM1-3) object marker should be used below and on the same post as the W1-6 sign. See Section 2C.65.

Section 2C.13 Truck Rollover Warning Sign (W1-13)

Option:

01 A Truck Rollover Warning (W1-13) sign (see Figure 2C-1) may be used to warn drivers of vehicles with a high center of gravity, such as trucks, tankers, and recreational vehicles, of a curve or turn where geometric conditions might contribute to a loss of control and a rollover as determined by an engineering study.

Support:

02 Among the established engineering practices that are appropriate for the determination of the truck rollover potential of a horizontal curve are the following:

- A. An accelerometer that provides a direct determination of side friction factors
- B. A design speed equation
- C. A traditional ball-bank indicator using 10 degrees of ball-bank (see Figure 2C-101(CA)).

Standard:

03 **If a Truck Rollover Warning (W1-13) sign is used, it shall be accompanied by an Advisory Speed (W13-1P) plaque indicating the recommended speed for vehicles with a higher center of gravity.**

Option:

04 The Truck Rollover Warning sign may be displayed as a static sign, as a static sign supplemented by a flashing warning beacon, or as a changeable message sign activated by the detection of an approaching vehicle with a high center of gravity that is traveling in excess of the recommended speed for the condition.

Support:

05 The curved arrow on the Truck Rollover Warning sign shows the direction of roadway curvature. The truck tips in the opposite direction.

Section 2C.14 Advisory Exit and Ramp Speed Signs (W13-2 and W13-3)

Standard:

01 **Advisory Exit Speed (W13-2) and Advisory Ramp Speed (W13-3) signs (see Figure 2C-1) shall be vertical rectangles. The use of Advisory Exit Speed and Advisory Ramp Speed signs on freeway and expressway ramps shall be in accordance with the information shown in Table 2C-5.**

Guidance:

02 *If used, the Advisory Exit Speed sign should be installed along the deceleration lane and the advisory speed displayed should be based on an engineering study. When a Truck Rollover (W1-13) sign (see Section 2C.13) is also installed for the ramp, the advisory exit speed should be based on the truck advisory speed for the horizontal alignment using recommended engineering practices.*

03 *If used, the Advisory Exit Speed sign should be visible in time for the road user to decelerate and make an exiting maneuver.*

Support:

04 Table 2C-4 lists recommended advance sign placement distances for deceleration to various advisory speeds.

Guidance:

05 *If used, the Advisory Ramp Speed sign should be installed on the ramp to confirm the ramp advisory speed.*
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06 *If used, Chevron Alignment (W1-8) signs and/or One-Direction Large Arrow (W1-6) signs should be installed on the outside of the exit curve as described in Sections 2C.09 and 2C.12.*

Option:

07 ~~Where there is a need to remind road users of the recommended advisory speed, a horizontal alignment warning sign with an advisory speed plaque may be installed at or beyond the beginning of the exit curve or on the outside of the curve, provided that it is apparent that the sign applies only to exiting traffic. These signs may also be used at intermediate points along the ramp, especially if the ramp curvature changes and the subsequent curves on the ramp have a different advisory speed than the initial ramp curve.~~

Support:

08 ~~Figure 2C-3 shows an example of advisory speed signing for an exit ramp.~~

Guidance:

⁰⁹ *The Advisory Exit Speed (W13-2) sign (see Figure 2C-1) should be placed on the right of exit ramps just beyond the neutral area (gore) to advise motorists of the speed at which the exit ramp can be comfortably negotiated. Consideration should also be given to the speed at which traffic can enter the surface street at the end of the ramp if a stop is not required.*

Support:

¹⁰ *The W13-2 sign is not necessary for an exit ramp that has tangent alignment and terminates at a stop sign or a signal.*

Guidance:

¹¹ *The Advisory Ramp Speed (W13-3) sign (see Figure 2C-1) should be placed on the right of the freeway to freeway connector ramps just beyond the neutral area (gore) where the ramps cannot be comfortably negotiated by motorists at approach speeds.*

¹² *Where additional warning is needed for ramp curvature beyond the neutral area (gore), a curve warning sign and an advisory speed should be posted.*

Standard:

¹³ **The advisory speed shall be determined in accordance with Section 2C.08.**

Section 2C.15 Combination Horizontal Alignment/Advisory Exit and Ramp Speed Signs (W13-6 and W13-7)

Option:

⁰¹ A horizontal alignment sign (see Section 2C.07) may be combined with an Advisory Exit Speed or Advisory Ramp Speed sign to create a combination Horizontal Alignment/Advisory Exit Speed (W13-6) sign or a combination Horizontal Alignment/Advisory Ramp Speed (W13-7) sign (see Figure 2C-1). These combination signs may be used where the severity of the exit ramp curvature might not be apparent to road users in the deceleration lane or where the curvature needs to be specifically identified as being on the exit ramp rather than on the mainline.

Section 2C.16 Hill Signs (W7-1, W7-1a)

Guidance:

⁰¹ *The Hill (W7-1) sign (see Figure 2C-4) should be used in advance of a downgrade where the length, percent of grade, horizontal curvature, and/or other physical features require special precautions on the part of road users.*

⁰² *The Hill sign and supplemental grade (W7-3P) plaque (see Section 2C.57) used in combination, or the W7-1a sign used alone, should be installed in advance of downgrades for the following conditions:*

- A. 5% grade that is more than 3,000 feet in length,
- B. 6% grade that is more than 2,000 feet in length,
- C. 7% grade that is more than 1,000 feet in length,
- D. 8% grade that is more than 750 feet in length, or
- E. 9% grade that is more than 500 feet in length.

⁰³ *These signs should also be installed for steeper grades or where crash experience and field observations indicate a need.*

⁰⁴ *Supplemental plaques (see Section 2C.57) and larger signs should be used for emphasis or where special hill characteristics exist. On longer grades, the use of the Hill sign with a distance (W7-3aP) plaque or the combination distance/grade (W7-3bP) plaque at periodic intervals of approximately 1-mile spacing should be considered.*

Standard:

⁰⁵ **If the percent grade is displayed on a supplemental plaque, the plaque shall be placed below the Hill (W7-1) sign.**

Option:

⁰⁶ A USE LOW GEAR (W7-2P) or TRUCKS USE LOWER GEAR (W7-2bP) supplemental plaque (see Figure 2C-4) may be used to indicate a situation where downshifting as well as braking might be advisable.

⁰⁷ *The SLOW TRUCKS (W51(CA)) sign (see Figure 2C-4(CA)) may be used to inform drivers that slow moving trucks substantially interfere with the flow of traffic. The Next Distance (W7-3a) plaque may be used with the W51(CA) sign.*

Section 2C.17 Truck Escape Ramp Signs (W7-4 Series)

Guidance:

01 *Where applicable, truck escape (or runaway truck) ramp advance warning signs (see Figure 2C-4) should be located approximately 1 mile, and 1/2 mile in advance of the grade, and of the ramp. A sign also should be placed at the gore. A RUNAWAY VEHICLES ONLY (R4-10) sign (see Section 2B.35) should be installed near the ramp entrance to discourage other road users from entering the ramp. ~~No Parking (R8-3) signs should be placed near the ramp entrance.~~ NO STOPPING ANYTIME (R26A(S)(CA)) signs should be placed to keep motorists from stopping in the path of runaway trucks.*

Standard:

02 **When truck escape ramps are installed, at least one of the W7-4 series signs shall be used.**

Option:

03 A SAND (W7-4dP), GRAVEL (W7-4eP), or PAVED (W7-4fP) supplemental plaque (see Figure 2C-4) may be used to describe the ramp surface. State and local highway agencies Department of Transportation (see Section 2A.06) may develop appropriate word message signs for the specific situation.

Standard:

04 **The DEEP GRAVEL (W30B(CA)) sign (see Figure 2C-4(CA)) shall be placed on all truck escape ramps.**

Guidance:

05 *The W30B(CA) sign should be placed near the outside edge of the paved ramp prior to the beginning of the gravel bed. See Figure 3D-103(CA) for Runaway Truck Ramp sign and marking details.*

06 *The RIGHT (LEFT) EXIT (W30C(CA)) sign (see Figure 2C-4(CA)) should be used to indicate a right or left exit to a truck escape ramp.*

Support:

07 *Erect the W30C(CA) sign below and on the same post with the first W7-4 sign.*

Section 2C.18 HILL BLOCKS VIEW Sign (W7-6)

Option:

01 A HILL BLOCKS VIEW (W7-6) sign (see Figure 2C-4) may be used in advance of a crest vertical curve to advise road users to reduce speed as they approach and traverse the hill as only limited stopping sight distance is available.

Guidance:

02 *When a HILL BLOCKS VIEW sign is used, it should be supplemented by an Advisory Speed (W13-1P) plaque indicating the recommended speed for traveling over the hillcrest based on available stopping sight distance.*

Section 2C.19 ROAD NARROWS Sign (W5-1)

Guidance:

01 *Except as provided in Paragraph 2, a ROAD NARROWS (W5-1) sign (see Figure 2C-5) should be used in advance of a transition on two-lane roads where the pavement width is reduced abruptly to a width such that vehicles traveling in opposite directions cannot simultaneously travel through the narrow portion of the roadway without reducing speed.*

Option:

02 The ROAD NARROWS (W5-1) sign may be omitted on low-volume local streets that have speed limits of 30 mph or less.

03 Additional emphasis may be provided by the use of object markers and delineators (see Sections ~~2B.63~~ 2C.63 through ~~2B.65~~ 2C.65 and Chapter 3F). The Advisory Speed (W13-1P) plaque (see Section 2C.08) may be used to indicate the recommended speed.

04 *The Downward Arrow (SW44(CA)) sign (see Figure 2C-5(CA)) may be used where object markers (see Sections 2C.63 and 2C.65) may be ineffective, with the downward arrow either left or right, to mark obstructions in the roadway where traffic is permitted to pass on one side only.*

Section 2C.20 NARROW BRIDGE Sign (W5-2)

Guidance:

01 A NARROW BRIDGE (W5-2) sign (see Figure 2C-5) should be used in advance of any bridge or culvert having a two-way roadway clearance width of 16 to ~~18~~ 28 feet, or any bridge or culvert having a roadway clearance less than the width of the approach travel lanes.

02 Additional emphases should be provided by the use of object markers, delineators, and/or pavement markings.

Option:

03 A NARROW BRIDGE sign may be used in advance of a bridge or culvert on which the approach shoulders are narrowed or eliminated.

Support:

04 See Figure 3F-104(CA) for narrow bridge sign and marking details.

Option:

05 The TUNNEL (SW37(CA)) sign (see Figure 2C-5(CA)) may be used to warn road user that there is a tunnel ahead.

Section 2C.21 ONE LANE BRIDGE Sign (W5-3)

Guidance:

01 A ONE LANE BRIDGE (W5-3) sign (see Figure 2C-5) should be used on two-way roadways in advance of any bridge or culvert:

A. Having a clear roadway width of less than 16 feet, or

B. Having a clear roadway width of less than 18 feet when commercial vehicles constitute a high proportion of the traffic, or

C. Having a clear roadway width of 18 feet or less where the sight distance is limited on the approach to the structure.

02 Additional emphases should be provided by the use of object markers, delineators, and/or pavement markings.

Section 2C.22 Divided Highway Sign (W6-1)

Guidance:

01 A Divided Highway (W6-1) sign (see Figure 2C-5) should be used on the approaches to a section of highway (not an intersection or junction) where the opposing flows of traffic are separated by a median or other physical barrier.

Standard:

02 The Divided Highway (W6-1) sign shall not be used instead of a Keep Right (R4-7 series) sign on the approach end of a median island.

Support:

03 See Figure 3B-14(CA) for signing and marking applications for lane reductions.

Section 2C.23 Divided Highway Ends Sign (W6-2)

Guidance:

01 A Divided Highway Ends (W6-2) sign (see Figure 2C-5) should be used in advance of the end of a section of physically divided highway (not an intersection or junction) as a warning of two-way traffic ahead.

02 The Two-Way Traffic (W6-3) sign (see Section 2C.44) should be used to give warning and notice of the transition to a two-lane, two-way section.

Support:

03 See Figure 3B-14(CA) for signing and marking applications for lane reductions.

Section 2C.24 Freeway or Expressway Ends Signs (W19 Series)

Option:

01 A FREEWAY ENDS XX MILES (W19-1) sign or a FREEWAY ENDS (W19-3) sign (see Figure 2C-5) may be used in advance of the end of a freeway.

02 An EXPRESSWAY ENDS XX MILES (W19-2) sign or an EXPRESSWAY ENDS (W19-4) sign (see Figure 2C-5) may be used in advance of the end of an expressway.

03 The rectangular W19-1 and W19-2 signs may be post-mounted or may be mounted overhead for increased emphasis.

Guidance:

04 *If the reason that the freeway is ending is that the next portion of the freeway is not yet constructed and as a result all traffic must use an exit ramp to leave the freeway, an ALL TRAFFIC MUST EXIT (W19-5) sign (see Figure 2C-5) should be used in addition to the Freeway Ends signs in advance of the downstream end of the freeway.*

Section 2C.25 Double Arrow Sign (W12-1)

Option:

01 The Double Arrow (W12-1) sign (see Figure 2C-5) may be used to advise road users that traffic is permitted to pass on either side of an island, obstruction, or gore in the roadway. Traffic separated by this sign may either rejoin or change directions.

Guidance:

02 *If used on an island, the Double Arrow sign should be mounted near the approach end.*

03 *If used in front of a pier or obstruction, the Double Arrow sign should be mounted on the face of, or just in front of, the obstruction. Where stripe markings are used on the obstruction, they should be discontinued to leave a 3-inch space around the outside of the sign.*

Section 2C.26 DEAD END/NO OUTLET Signs (W14-1, W14-1a, W14-2, W14-2a)

Option:

01 The DEAD END (W14-1) sign (see Figure 2C-5) may be used at the entrance of a single road or street that terminates in a dead end or cul-de-sac. The NO OUTLET (W14-2) sign (see Figure 2C-5) may be used at the entrance to a road or road network from which there is no other exit.

02 DEAD END (W14-1a) or NO OUTLET (W14-2a) signs (see Figure 2C-5) may be used in combination with Street Name (D3-1) signs (see Section 2D.43) to warn turning traffic that the cross street ends in the direction indicated by the arrow.

03 At locations where the cross street does not have a name, the W14-1a or W14-2a signs may be used alone in place of a street name sign.

Standard:

04 **The DEAD END (W14-1a) and NO OUTLET (W14-2a) signs shall be horizontal rectangles with an arrow pointing to the left or right.**

05 **When the W14-1 or W14-2 sign is used, the sign shall be posted as near as practical to the entry point or at a sufficient advance distance to permit the road user to avoid the dead end or no outlet condition by turning at the nearest intersecting street.**

06 **The DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall not be used instead of the W14-1 or W14-2 signs where traffic can proceed straight through the intersection into the dead end street or no outlet area.**

Option:

07 **The END (W31(CA)) sign (see Figure 2C-5(CA)) may be used where a street or highway ends.**

08 **The ROAD ENDS ----- FT (W31A(CA)) sign (see Figure 2C-5(CA)) may be used in advance of the END (W31(CA)) sign.**

Support:

09 **Install in a head-on position (left side) in combination with an end-of-roadway marker. See Section 2C.66.**

10 **See Figure 2C-13 and 2C-13(CA) for examples of object markers and more details.**

Section 2C.27 Low Clearance Signs (W12-2 and W12-2a)

Standard:

01 **The Low Clearance (W12-2) sign (see Figure 2C-5) shall be used to warn road users of clearances less than 12 inches above the statutory maximum vehicle height.**

Guidance:

02 The actual clearance should be displayed on the Low Clearance sign to the nearest 1 inch not exceeding the actual clearance. However, in areas that experience changes in temperature causing frost action, a reduction, not exceeding 3 inches, should be used for this condition.

03 Where the clearance is less than the legal maximum vehicle height, the W12-2 sign with a supplemental distance plaque should be placed at the nearest intersecting road or wide point in the road at which a vehicle can detour or turn around.

04 In the case of an arch or other structure under which the clearance varies greatly, two or more signs should be used as necessary on the structure itself to give information as to the clearances over the entire roadway.

05 Clearances should be evaluated periodically, particularly when resurfacing operations have occurred.

Option:

06 The Low Clearance sign may be installed on or in advance of the structure. If a sign is placed on the structure, it may be a rectangular shape (W12-2a) with the appropriate legend (see Figure 2C-5).

Standard:

07 The Low Clearance (W12-2) sign shall be used to warn motorists of low structure clearances.

08 For clearance 15 feet 6 inch or less, in addition to the W12-2P, two advance Low Clearance signs shall be installed on the right side of the roadway. The first W12-2 sign shall be placed in advance of the nearest intersecting street or highway or wide point in the road at which a motorist can detour or safely turn around.

Guidance:

09 A Distance Ahead (W34A(CA)) plaque should be placed below the W12-2 sign at this location.

Standard:

10 The second W12-2 sign shall be placed in advance of the structure.

Support:

11 No W34A(CA) plaque is needed at the second location.

Standard:

12 The W12-2 sign shall display the same clearance as shown on the W12-2P sign.

Guidance:

13 The Distance Ahead (W34A(CA)) plaque when used, should be placed below a W12-2 sign.

Standard:

14 The ___ FT ___ IN plaque (W12-2P) shall be used to warn motorists of structural clearance 15 feet 6 inch or less.

Guidance:

15 The W12-2P plaque should be centered over the traveled way on the approach side of all underpasses, overheads, viaducts, overcrossings, undercrossings, and grade separations for state highways.

Standard:

16 The W12-2P plaque shall not encroach over the shoulder area.

17 The W12-2P plaque shall display the minimum vertical clearance to the nearest inch, not exceeding the measured value.

18 The CAUTION, VERTICAL CLEARANCE ___' ___" Arrow (W34C(CA)) sign (see Figure 2C-5(CA)) shall be used on all blind approaches to structures with clearances 15 feet 6 inch or less.

Support:

19 The W34C(CA) sign is used to warn motorists of low structure clearance around corners.

Guidance:

20 The W34C(CA) sign should be placed at a location where the motorist can detour or safely turn around before making the turn.

Standard:

21 The W34C(CA) sign shall display the same clearance as shown on the W12-2P sign.

Section 2C.28 BUMP and DIP Signs (W8-1, W8-2)

Guidance:

01 BUMP (W8-1) and DIP (W8-2) signs (see Figure 2C-6) should be used to give warning of a sharp rise or depression in the profile of the road.

Standard:

^{01a} When used at a cattle guard, the BUMP (W8-1) or DIP (W8-2) signs shall be supplemented with a diagonal downward pointing arrow (W16-7p) plaque showing the location of the cattle guard.

Option:

⁰² These signs may be supplemented with an Advisory Speed plaque (see Section 2C.08).

Standard:

⁰³ The DIP sign shall not be used at a short stretch of depressed alignment that might momentarily hide a vehicle.

Guidance:

⁰⁴ A short stretch of depressed alignment that might momentarily hide a vehicle should be treated as a no-passing zone when center line striping is provided on a two-lane or three-lane road (see Section 3B.02).

Section 2C.29 SPEED HUMP Sign (W17-1)

Guidance:

⁰¹ The SPEED HUMP (W17-1) sign (see Figure 2C-6) should be used to give warning of a vertical deflection in the roadway that is designed to limit the speed of traffic.

⁰² If used, the SPEED HUMP sign should be supplemented by an Advisory Speed plaque (see Section 2C.08).

Option:

⁰³ If a series of speed humps exists in close proximity, an Advisory Speed plaque may be eliminated on all but the first SPEED HUMP sign in the series.

⁰⁴ The legend SPEED BUMP may be used instead of the legend SPEED HUMP on the W17-1 sign.

Support:

⁰⁵ Speed humps generally provide more gradual vertical deflection than speed bumps. Speed bumps limit the speed of traffic more severely than speed humps. Other forms of speed humps include speed tables and raised intersections. However, these differences in engineering terminology are not well known by the public, so for signing purposes these terms are interchangeable.

Section 2C.30 PAVEMENT ENDS Sign (W8-3)

Guidance:

⁰¹ A PAVEMENT ENDS (W8-3) word message sign (see Figure 2C-6) should be used where a paved surface changes to either a gravel treated surface or an earth road surface.

Option:

⁰² An Advisory Speed plaque (see Section 2C.08) may be used when the change in roadway condition requires a reduced speed.

Section 2C.31 Shoulder Signs (W8-4, W8-9, W8-17, W8-23, and W8-25)

Option:

⁰¹ The SOFT SHOULDER (W8-4) sign (see Figure 2C-6) may be used to warn of a soft shoulder condition.

⁰² The LOW SHOULDER (W8-9) sign (see Figure 2C-6) may be used to warn of a shoulder condition where there is an elevation difference of less than 3 inches between the shoulder and the travel lane.

Guidance:

⁰³ The Shoulder Drop Off (W8-17) sign (see Figure 2C-6) should be used where an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 3 inches in depth for a significant continuous length along the roadway, based on engineering judgment.

Option:

⁰⁴ A SHOULDER DROP-OFF (W8-17P) supplemental plaque (see Figure 2C-6) may be mounted below the W8-17 sign.

⁰⁵ The NO SHOULDER (W8-23) sign (see Figure 2C-6) may be used to warn road users that a shoulder does not exist along a portion of the roadway.

⁰⁶ The SHOULDER ENDS (W8-25) sign (see Figure 2C-6) may be used to warn road users that a shoulder is ending.

Standard:

07 When used, shoulder signs shall be placed in advance of the condition (see Table 2C-4).

Guidance:

08 Additional shoulder signs should be placed at appropriate intervals along the road where the condition continually exists.

Support:

09 The low shoulder condition (elevation difference up to 3 inches) between shoulder and the travel lane) is not treated as a permanent condition on State highways.

Standard:

10 The black on yellow background LOW SHOULDER (W8-9) sign shall not be used on State highways.

Option:

11 The black on orange background LOW SHOULDER (W8-9) sign may be used on State highways to warn of a shoulder condition where there is an elevation difference of less than 3 inch between the shoulder and the travel lane. See Section 6F.44.

Section 2C.32 Surface Condition Signs (W8-5, W8-7, W8-8, W8-11, W8-13, and W8-14)

Option:

01 The Slippery When Wet (W8-5) sign (see Figure 2C-6) may be used to warn of unexpected slippery conditions. Supplemental plaques with legends such as ICE, WHEN WET, STEEL DECK, or EXCESS OIL may be used with the W8-5 sign to indicate the reason that the slippery conditions might be present.

Standard:

01a When used at a cattle guard, the Slippery When Wet (W8-5) signs shall be supplemented with a diagonal downward pointing arrow (W16-7p) plaque showing the location of the cattle guard.

Option:

02 The LOOSE GRAVEL (W8-7) sign (see Figure 2C-6) may be used to warn of loose gravel on the roadway surface.

03 The ROUGH ROAD (W8-8) sign (see Figure 2C-6) may be used to warn of a rough roadway surface. It may be desirable to supplement this sign with an Advisory Speed (W13-1P) plaque. Where the rough road is 1 mile or more in length, the W8-8 sign may be supplemented with a Next Distance (W7-3a) plaque.

04 An UNEVEN LANES (W8-11) sign (see Figure 2C-6) may be used to warn of a difference in elevation between travel lanes.

05 The BRIDGE ICES BEFORE ROAD (W8-13) sign (see Figure 2C-6) may be used in advance of bridges to advise bridge users of winter weather conditions. The BRIDGE ICES BEFORE ROAD sign may be removed or covered during seasons of the year when its message is not relevant.

Guidance:

06 The ~~FALLEN ROCKS (W8-14) sign (see Figure 2C-6)~~ may Rock Slide Area symbol (W50-1(CA)) sign (see Figure 2C-6(CA)) should be used in advance of an area that is adjacent to a hillside, mountain, or cliff where rocks frequently fall onto the roadway.

Guidance:

07 When used, Surface Condition signs should be placed in advance of the beginning of the affected section (see Table 2C-4), and additional signs should be placed at appropriate intervals along the road where the condition exists.

Option:

08 The SLIDE AREA (W38(CA)) sign (see Figure 2C-6(CA)) may be used in advance of where slides on the highway could be expected.

09 The SNOW SLIDE AREA (SW41(CA)) sign (see Figure 2C-6(CA)) may be used in areas of known snow slide or avalanche activity.

10 The Next Distance (W7-3a) plaque may be used below the W38(CA), W50-1(CA) and SW41(CA) signs.

11 The DRIFTING SAND (SW32(CA)) sign (see Figure 2C-6(CA)) may be used to warn traffic of drifting sand on the roadway.

12 The WATCH FOR SNOW SLIPPERY (SW46(CA)) sign (see Figure 2C-6(CA)) may be used to warn road users of conditions where snow may be on the roadway surface, but chains are not yet required. The SW46(CA) sign may be placed

in advance of areas where such conditions may exist, and intermittently as needed where such conditions may exist for long sections of highways.

¹³ The SW46(CA) sign may be displayed when weather conditions are such that it would be reasonable to assume that snow on the roadway would be a possibility.

Guidance:

¹⁴ *The SW46(CA) sign should be removed when such conditions are no longer present.*

Section 2C.33 Warning Signs and Plaques for Motorcyclists (W8-15, W8-15P, and W8-16)

Support:

⁰¹ The signs and plaques described in this Section are intended to give motorcyclists advance notice of surface conditions that might adversely affect their ability to maintain control of their motorcycle under wet or dry conditions. The use of some of the advance surface condition warning signs described in Section 2C.32, such as Slippery When Wet, LOOSE GRAVEL, or ROUGH ROAD, can also be helpful to motorcyclists if those conditions exist.

Option:

⁰² If a portion of a street or highway features a roadway pavement surface that is grooved or textured instead of smooth, such as a grooved skid resistance treatment for a horizontal curve or a brick pavement surface, a GROOVED PAVEMENT (W8-15) sign (see Figure 2C-6) may be used to provide advance warning of this condition to motorcyclists, bicyclists, and other road users. Alternate legends such as TEXTURED PAVEMENT or BRICK PAVEMENT may also be used on the W8-15 sign.

⁰³ If a bridge or a portion of a bridge includes a metal or grated surface, a METAL BRIDGE DECK (W8-16) sign (see Figure 2C-6) may be used to provide advance warning of this condition to motorcyclists, bicyclists, and other road users.

⁰⁴ A Motorcycle (W8-15P) plaque (see Figure 2C-6) may be mounted below or above a W8-15 or W8-16 sign if the warning is intended to be directed primarily to motorcyclists.

Section 2C.34 NO CENTER LINE Sign (W8-12)

Option:

⁰¹ The NO CENTER LINE (W8-12) sign (see Figure 2C-6) may be used to warn of a roadway without center line pavement markings.

Section 2C.35 Weather Condition Signs (W8-18, W8-19, W8-21, and W8-22)

Option:

⁰¹ The ROAD MAY FLOOD (W8-18) sign (see Figure 2C-6) may be used to warn road users that a section of roadway is subject to frequent flooding. A Depth Gauge (W8-19) sign (see Figure 2C-6) may also be installed within a roadway section that frequently floods.

Standard:

⁰² **If used, the Depth Gauge sign shall be in addition to the ROAD MAY FLOOD sign and shall indicate the depth of the water at the deepest point on the roadway.**

Guidance:

^{02a} *The FLOODED (W55(CA)) sign (see Figure 2C-6(CA)) should be used in advance of locations where the highway is flooded.*

Standard:

^{02b} **The W55(CA) signs shall be removed or covered when the condition no longer exists.**

Option:

^{02c} The FLASH FLOOD AREA (SW35(CA)) sign (see Figure 2C-6(CA)) may be used in advance of depressions in the highway alignment that are subject to flash flooding.

Option:

⁰³ The GUSTY WINDS AREA (W8-21) sign (see Figure 2C-6) may be used to warn road users that wind gusts frequently occur along a section of highway that are strong enough to impact the stability of trucks, recreational vehicles, and other vehicles with high centers of gravity. A NEXT XX MILES (W7-3a) supplemental plaque may

be mounted below the W8-21 sign to inform road users of the length of roadway that frequently experiences strong wind gusts.

04 The FOG AREA (W8-22) sign (see Figure 2C-6) may be used to warn road users that foggy conditions frequently reduce visibility along a section of highway. A NEXT XX MILES (W7-3a) supplemental plaque may be mounted below the W8-22 sign to inform road users of the length of roadway that frequently experiences foggy conditions.

Section 2C.36 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)

Standard:

01 **The Advance Traffic Control symbol signs (see Figure 2C-6) include the Stop Ahead (W3-1), Yield Ahead (W3-2), and Signal Ahead (W3-3) signs. These signs shall be installed on an approach to a primary traffic control device that is not visible for a sufficient distance to permit the road user to respond to the device (see Table 2C-4). The visibility criteria for a traffic control signal shall be based on having a continuous view of at least two signal faces for the distance specified in Table 4D-2.**

Support:

02 Figure 2A-4 shows the typical placement of an Advance Traffic Control sign.

03 Permanent obstructions causing the limited visibility might include roadway alignment or structures. Intermittent obstructions might include foliage or parked vehicles.

Guidance:

04 *Where intermittent obstructions occur, engineering judgment should determine the treatment to be implemented.*

Option:

05 An Advance Traffic Control sign may be used for additional emphasis of the primary traffic control device, even when the visibility distance to the device is satisfactory.

06 An advance street name plaque (see Section 2C.58) may be installed above or below an Advance Traffic Control sign.

07 A warning beacon may be used with an Advance Traffic Control sign.

07a **A BE PREPARED TO STOP (W3-4) sign (see Figure 2C-6) may be used in advance of a traffic control device that could require motorists to stop, such as a traffic control signal or a STOP sign.**

08 **A BE PREPARED TO STOP (W3-4) sign (see Figure 2C-6) WATCH FOR STOPPED VEHICLES (SW60(CA)) sign (see Figure 2C-6(CA)) may be used to warn motorists of stopped traffic caused by a traffic control signal or such as in advance of a section of roadway that regularly experiences traffic congestion.**

Standard:

09 **When a BE PREPARED TO STOP sign is used in advance of a traffic control signal, it shall be used in addition to a Signal Ahead sign and shall be placed downstream from the Signal Ahead (W3-3) sign.**

Option:

10 The BE PREPARED TO STOP (W3-4) sign or WATCH FOR STOPPED VEHICLES (SW60(CA)) sign may be supplemented with a warning beacon (see Section 4L.03).

Guidance:

~~11 *When the warning beacon is interconnected with a traffic control signal or queue detection system, the BE PREPARED TO STOP sign should be supplemented with a WHEN FLASHING (W16-13P) plaque (see Figure 2C-12).*~~

Support:

12 Section 2C.40 contains information regarding the use of a NO MERGE AREA (W4-5P) supplemental plaque in conjunction with a Yield Ahead sign.

Standard:

13 **WHEN FLASHING (W16-13p) plaque shall not be used to supplement the BE PREPARED TO STOP (W3-4) sign or WATCH FOR STOPPED VEHICLES (SW60(CA)) sign.**

Support:

14 Studies indicate that W16-13p is generally not effective as a warning device for motorists approaching signalized intersections. The non-use of WHEN FLASHING (W16-13p) plaque also addresses the situation when a warning beacon is inoperative for any reason.

Guidance:

¹⁵ *The Stop Ahead sign (W3-1) should not be used in the approach to an intersection where there is channelization and the majority of the traffic turns to the right without being required to stop.*

Option:

¹⁶ *The STOP AHEAD pavement markings may be placed in accordance with Section 3B.20.*

¹⁷ *The SIGNAL/STOP AHEAD Arrow sign (SW26(CA)) may be used in the head-on position (left side) where W3-1 and W3-3 signs have proven ineffective.*

Guidance:

¹⁸ *The W3-1 and W3-3 signs should be left in place when the SW26(CA) sign is placed.*

Section 2C.37 Advance Ramp Control Signal Signs (W3-7 and W3-8)

Support:

⁰⁰ *For State highways, see Department of Transportation's Ramp Metering Design Manual. See Section 1A.11 for information regarding this publication.*

Option:

⁰¹ *A RAMP METER AHEAD (W3-7) sign (see Figure 2C-6) may be used to warn road users that a freeway entrance ramp is metered and that they will encounter a ramp control signal (see Chapter 4I).*

Guidance:

⁰² *When the ramp control signals are ~~in operation operated only during certain periods of the day~~, a RAMP METERED WHEN FLASHING (W3-8) sign (see Figure 2C-6), or an internally illuminated "METER ON" indication, or an extinguishable "PREPARE TO STOP" message sign should be installed in advance of the ramp control signal near the entrance to the ramp, or on the arterial on the approach to the ramp, to alert road users to the presence and operation of ramp meters.*

Standard:

⁰³ **The RAMP METERED WHEN FLASHING sign shall be supplemented with a warning beacon (see Section 4L.03) that flashes when the ramp control signal is in operation.**

Section 2C.38 Reduced Speed Limit Ahead Signs (W3-5, W3-5a)

Guidance:

⁰¹ *A Reduced Speed Limit Ahead (W3-5 or W3-5a) sign (see Figure 2C-7) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.*

Standard:

⁰² **If used, Reduced Speed Limit Ahead signs shall be followed by a Speed Limit (R2-1) sign installed at the beginning of the zone where the speed limit applies.**

⁰³ **The speed limit displayed on the Reduced Speed Limit Ahead sign shall be identical to the speed limit displayed on the subsequent Speed Limit sign.**

Option:

⁰⁴ *The TRAILERS-CAMPERS-GUSTY WIND AREA NEXT ___ MILES (SW17-1(CA)) sign (see Figure 2C-7(CA)) may be used where known or potential wind collision problems exist.*

Section 2C.39 DRAW BRIDGE Sign (W3-6)

Standard:

⁰¹ **A DRAW BRIDGE (W3-6) sign (see Figure 2C-6) shall be used in advance of movable bridge signals and gates (see Section 4J.02) to give warning to road users, except in urban conditions where such signing would not be practical.**

Guidance:

⁰² *Where physical conditions prevent a motorist driving at the legal speed limit from having a continuous view of at least one signal indication before reaching the stop line, an auxiliary device should be provided in advance of movable bridge signals and gates.*

Option:

⁰³ This device may be either a supplemental signal or the mandatory DRAW BRIDGE (W3-6) sign to which has been added a flashing yellow beacon interconnected with movable bridge control.

Support:

⁰⁴ See Figure 3F-104(CA) for narrow bridge sign and marking details.

Section 2C.40 Merge Signs (W4-1, W4-5)

Option:

⁰¹ A Merge (W4-1) sign (see Figure 2C-8) may be used to warn road users on the major roadway that merging movements might be encountered in advance of a point where lanes from two separate roadways converge as a single traffic lane and no turning conflict occurs.

⁰² A Merge sign may also be installed on the side of the entering roadway to warn road users on the entering roadway of the merge condition.

Guidance:

⁰³ *The Merge sign should be installed on the side of the major roadway where merging traffic will be encountered and in such a position as to not obstruct the road user's view of entering traffic.*

⁰⁴ *Where two roadways of approximately equal importance converge, a Merge sign should be placed on each roadway.*

⁰⁵ *When a Merge sign is to be installed on an entering roadway that curves before merging with the major roadway, such as a ramp with a curving horizontal alignment as it approaches the major roadway, the Entering Roadway Merge (W4-5) sign (see Figure 2C-8) should be used to better portray the actual geometric conditions to road users on the entering roadway.*

⁰⁶ *The Merge sign should not be used where two roadways converge and merging movements are not required.*

⁰⁷ *The Merge sign should not be used in place of a Lane Ends sign (see Section 2C.42) where lanes of traffic moving on a single roadway must merge because of a reduction in the actual or usable pavement width.*

Option:

⁰⁸ An Entering Roadway Merge (W4-5) sign with a NO MERGE AREA (W4-5P) supplemental plaque (see Figure 2C-8) mounted below it may be used to warn road users on an entering roadway that they will encounter an abrupt merging situation without an acceleration lane at the downstream end of the ramp.

⁰⁹ A Merge (W4-1) sign with a NO MERGE AREA (W4-5P) supplemental plaque mounted below it may be used to warn road users on the major roadway that traffic on an entering roadway will encounter an abrupt merging situation without an acceleration lane at the downstream end of the ramp.

¹⁰ For a yield-controlled channelized right-turn movement onto a roadway without an acceleration lane, a NO MERGE AREA (W4-5P) supplemental plaque may be mounted below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering judgment indicates that road users would expect an acceleration lane to be present.

Guidance:

¹¹ *When installed at freeway entrance ramps, the W4-1 sign should be installed in advance of the paved gore area.*

Option:

¹² On expressways, the THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign (see Figure 2C-8(CA)) may be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Guidance:

¹³ *On conventional highways, the RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD (W73A(CA)) sign (see Figure 2C-8(CA)) and/or the THRU TRAFFIC MERGE LEFT (RIGHT) sign (W74(CA)) should be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).*

Support:

¹⁴ See Figure 3B-14(CA) for signs and lane reduction markings.

Standard:

¹⁵ **The THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign shall be used on freeways and expressways to inform motorists that the outside or inside lane is being dropped at the next exit, and through traffic must merge into the adjacent lane.**

Guidance:

¹⁶ The W74(CA) sign should not be used for a lane reduction.

Option:

¹⁷ The W74(CA) signs may also be used on conventional highways.

Support:

¹⁸ See Figure 3B-10(CA) for lane drop signing and markings at exit ramps.

Option:

¹⁹ The RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD (W73A(CA)) sign (see Figure 2C-8(CA)) and/or the THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign may be used in black on orange version for temporary traffic control zones.

Support:

²⁰ See Figures 6H-22, 6H-24 and 6H-25 for merge signs used for temporary traffic controls.

Section 2C.41 Added Lane Signs (W4-3, W4-6)

Guidance:

⁰¹ The Added Lane (W4-3) sign (see Figure 2C-8) should be installed in advance of a point where two roadways converge and merging movements are not required. When possible, the Added Lane sign should be placed such that it is visible from both roadways; if this is not possible, an Added Lane sign should be placed on the side of each roadway.

⁰² When an Added Lane sign is to be installed on a roadway that curves before converging with another roadway that has a tangent alignment at the point of convergence, the Entering Roadway Added Lane (W4-6) sign (see Figure 2C-8) should be used to better portray the actual geometric conditions to road users on the curving roadway.

⁰³ When installed at freeway entrance ramps, the sign should be installed in advance of the paved gore area.

Section 2C.42 Lane Ends Signs (W4-2, W9-1, W9-2)

Guidance:

⁰¹ The ~~LANE ENDS MERGE LEFT (RIGHT) (W9-2) sign~~ or the Lane Ends (W4-2) sign should be used to warn of the reduction in the number of traffic lanes in the direction of travel on a multi-lane highway (see Figure 2C-8).

Standard:

^{01a} For consistency, the ~~LANE ENDS MERGE LEFT (RIGHT) (W9-2) sign~~ is deleted, only Lane Ends (W4-2) symbol sign shall be used.

Option:

⁰² The RIGHT (LEFT) LANE ENDS (W9-1) sign (see Figure 2C-8) may be used in advance of the Lane Ends (W4-2) sign ~~or the LANE ENDS MERGE LEFT (RIGHT) (W9-2) sign~~ as additional warning or to emphasize that the traffic lane is ending and that a merging maneuver will be required.

Guidance:

⁰³ If used, the RIGHT (LEFT) LANE ENDS (W9-1) sign should be installed adjacent to the Lane-Reduction Arrow pavement markings.

Option:

⁰⁴ On one-way streets or on divided highways where the width of the median will permit, two Lane Ends signs may be placed facing approaching traffic, one on the right-hand side and the other on the left-hand side or median.

Support:

⁰⁵ Section 3B.09 contains information regarding the use of pavement markings in conjunction with a lane reduction.

Guidance:

⁰⁶ Where an extra lane has been provided for slower moving traffic (see Section 2B.31), a Lane Ends word sign or a Lane Ends (W4-2) symbol sign should be installed in advance of the downstream end of the extra lane.

⁰⁷ Lane Ends signs should not be installed in advance of the downstream end of an acceleration lane.

Standard:

08 In dropped lane situations, regulatory signs (see Section 2B.20) shall be used to inform road users that a through lane is becoming a mandatory turn lane. The W4-2, W9-1, and W9-2 signs shall not be used in dropped lane situations.

Guidance:

09 The RIGHT (LEFT) LANE ENDS sign (W9-1) should be used in conjunction with the Lane Ends (W4-2) sign.

Support:

10 The W9-2 or W4-2 sign is not to be used for a lane drop at an exit.

11 See Figure 3B-14(CA) for signing and marking applications for lane reductions.

Standard:

12 The RIGHT (LEFT) LANE EXITS AHEAD (W73(CA)) sign (see Figure 2C-8(CA)) shall be placed between the THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign (see Figure 2C-8(CA)) and the RIGHT (LEFT) LANE MUST EXIT sign (R18A(CA)), at locations where overhead Exit Only signs (E11-1 Series or W61(CA) Series) are not in place for lane drops at freeway exit ramps.

Guidance:

13 On expressways, the RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD (W73A(CA)) sign (see Figure 2C-8(CA)) should be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

14 On conventional highways, the RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD (W73A(CA)) sign and/or the THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign (see Figure 2C-8(CA)) should be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Support:

15 See Figure 3B-10(CA) for lane drop signing and markings at exit ramps.

16 See Figure 3B-14(CA) for signs and lane reduction markings.

Section 2C.43 RIGHT (LEFT) LANE EXIT ONLY AHEAD Sign (W9-7)

Option:

01 The RIGHT (LEFT) LANE EXIT ONLY AHEAD (W9-7) sign (see Figure 2C-8) may be used to provide advance warning to road users that traffic in the right-hand (left-hand) lane of a roadway that is approaching a grade-separated interchange will be required to depart the roadway on an exit ramp at the next interchange.

Standard:

02 The W9-7 sign shall be a horizontal rectangle with a black legend and border on a yellow background.

Guidance:

03 If used, the W9-7 sign should be installed upstream from the first overhead guide sign that contains an EXIT ONLY sign panel or upstream from the first RIGHT (LEFT) LANE MUST EXIT (R3-33) regulatory sign, whichever is farther upstream from the exit.

Support:

04 Section 2B.23 contains information regarding a regulatory sign that can also be used for lane drops at grade-separated interchanges.

Section 2C.44 Two-Way Traffic Sign (W6-3)

Guidance:

01 A Two-Way Traffic (W6-3) sign (see Figure 2C-8) should be used to warn road users of a transition from a multi-lane divided section of roadway to a two-lane, two-way section of roadway.

02 A Two-Way Traffic (W6-3) sign with an AHEAD (W16-9P) plaque (see Figure 2C-12) should be used to warn road users of a transition from a one-way street to a two-lane, two-way section of roadway (see Figure 2B-14).

Option:

03 The Two-Way Traffic sign may be used at intervals along a two-lane, two-way roadway and may be used to supplement the Divided Highway (Road) Ends (W6-2) sign discussed in Section 2C.23.

Guidance:

04 The Two-Way Traffic (W6-3) sign should also be used at locations where motorists could perceive that they are on a one-way roadway when, in fact, they are on a two lane, two-way highway. Following are some typical situations:

A. Construction sites where a two-lane highway is being converted to a freeway or an expressway.

- B. Two-lane, two-way highways where ultimate freeway or expressway right-of-way has been purchased and grading for the full width has been completed.
- C. Two-lane, two-way highways following long sections of multi-lane freeway or expressway.
- D. Two-way highway with edge lines but with no centerlines.

Standard:

⁰⁵ The **TWO WAY TRAFFIC (W44A(CA))** plaque (see figure 2C-8(CA)), if used, shall be positioned below the **W6-3** sign.

⁰⁶ The **Black on Yellow PASS WITH CARE (W83(CA))** sign (see figure 2C-8(CA)), when used, shall be positioned below the **Two Way Traffic (W6-3)** sign where two-way traffic is being routed over a single roadway of a divided highway and passing is permitted.

Support:

- ⁰⁷ See Figure 3B-14(CA) for signing and marking applications for lane reductions.
- ⁰⁸ Typical example of W6-3 sign application is shown in Figure 3B-104(CA).

Section 2C.45 NO PASSING ZONE Sign (W14-3)

Standard:

⁰¹ The **NO PASSING ZONE (W14-3)** sign (see Figure 2C-8) shall be a pennant-shaped isosceles triangle with its longer axis horizontal and pointing to the right. When used, the **NO PASSING ZONE** sign shall be installed on the left side of the roadway at the beginning of no-passing zones identified by pavement markings or **DO NOT PASS** signs or both (see Sections 2B.28 and 3B.02).

Option:

⁰² The **NO PASSING ZONE (W14-3)** sign may be used at the beginning of no-passing zones identified by either pavement markings or **DO NOT PASS** signs or both (see Sections 2B.28 and 3B.02).

Section 2C.46 Intersection Warning Signs (W2-1 through W2-8)

Option:

⁰¹ A **Cross Road (W2-1)** symbol, **Side Road (W2-2 or W2-3)** symbol, **T-Symbol (W2-4)**, or **Y-Symbol (W2-5)** sign (see Figure 2C-9) may be used in advance of an intersection to indicate the presence of an intersection and the possibility of turning or entering traffic.

⁰² The **Circular Intersection (W2-6)** symbol sign (see Figure 2C-9) may be installed in advance of a circular intersection (see Figures 2B-21 through 2B-23).

Guidance:

⁰³ *If an approach to a roundabout has a statutory or posted speed limit of 40 mph or higher, the **Circular Intersection (W2-6)** symbol sign should be installed in advance of the circular intersection.*

Option:

⁰⁴ An educational plaque (see Figure 2C-9) with a legend such as **ROUNDABOUT (W16-17P)** or **TRAFFIC CIRCLE (W16-12P)** may be mounted below a **Circular Intersection** symbol sign.

⁰⁵ The relative importance of the intersecting roadways may be shown by different widths of lines in the symbol.

⁰⁶ An advance street name plaque (see Section 2C.58) may be installed above or below an **Intersection Warning** sign.

Guidance:

⁰⁷ *The **Intersection Warning** sign should illustrate and depict the general configuration of the intersecting roadway, such as cross road, side road, T-intersection, or Y-intersection.*

⁰⁸ *Intersection Warning signs, other than the **Circular Intersection (W2-6)** symbol sign and the **T-intersection (W2-4)** symbol sign should not be used on approaches controlled by **STOP** signs, **YIELD** signs, or signals.*

⁰⁹ *If an **Intersection Warning** sign is used where the side roads are not opposite of each other, the **Offset Side Roads (W2-7)** symbol sign (see Figure 2C-9) should be used instead of the **Cross Road** symbol sign.*

¹⁰ *If an **Intersection Warning** sign is used where two closely-spaced side roads are on the same side of the highway, the **Double Side Roads (W2-8)** symbol sign (see Figure 2C-9) should be used instead of the **Side Road** symbol sign.*

¹¹ *No more than two side road symbols should be displayed on the same side of the highway on a W2-7 or W2-8 symbol sign, and no more than three side road symbols should be displayed on a W2-7 or W2-8 symbol sign.*

Support:

¹² Figure 2A-4 shows the typical placement of an Intersection Warning sign.

Option:

¹³ A bulb shape may be placed on the appropriate leg of the Cross Road (W2-1), Side Road (W2-2 or W2-3), T-Symbol (W2-4), or Y-Symbol (W2-5) advance intersection signs to indicate a "Dead End" condition. See Section 2C.26 for DEAD END (W14-1) sign.

Guidance:

¹⁴ *The END FREEWAY _____ MI (W69(CA)) sign (see Figure 2C-9(CA)) should be used at locations where traffic leaving the freeway comes into a lower standard roadway. At problem locations dual installations with yellow flashing beacons or overhead installations should be considered. The W69(CA) sign should also be used at transitions from freeways to expressways.*

Option:

¹⁵ The END FREEWAY (SW36(CA)) sign (see Figure 2C-9(CA)) may be used at locations where traffic leaving the freeway comes into a lower standard roadway. It may also be used where additional emphasis is needed for the W69(CA) sign.

Guidance:

¹⁶ *The CROSS TRAFFIC AHEAD (W70(CA)) sign (see Figure 2C-9(CA)) should be used at locations where traffic leaves a freeway section and enters an expressway section to warn motorists that crossing at grade may be expected.*

Option:

¹⁷ Where two sections of freeway are connected by a section of expressway of a relatively short distance, the Next Distance (W7-3a) plaque may be installed below the W70(CA) sign.

Section 2C.47 Two-Direction Large Arrow Sign (W1-7)

Standard:

⁰¹ **The Two-Direction Large Arrow (W1-7) sign (see Figure 2C-9) shall be a horizontal rectangle.**

⁰² **If used, it shall be installed on the far side of a T-intersection in line with, and at approximately a right angle to, traffic approaching from the stem of the T-intersection.**

⁰³ **The Two-Direction Large Arrow sign shall not be used where there is no change in the direction of travel such as at the beginnings and ends of medians or at center piers.**

⁰⁴ **The Two-Direction Large Arrow sign directing traffic to the left and right shall not be used in the central island of a roundabout.**

Guidance:

⁰⁵ *The Two-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the intersection configuration.*

⁰⁶ *Type N-1(CA) (OM1-3) object marker should be used below and on the same post as the W1-7 sign. See Section 2C.65.*

Section 2C.48 Traffic Signal Signs (W25-1, W25-2)

Standard:

~~⁰¹ At locations where either a W25-1 or a W25-2 sign is required based on the provisions in Section 4D.05, the W25-1 or W25-2 sign (see Figure 2C-9) shall be installed near the left-most signal head. The W25-1 and W25-2 signs shall be vertical rectangles.~~

Guidance:

⁰² *The "yellow trap" should be eliminated rather than trying to correct it with these signs. See Part 4.*

Section 2C.49 Vehicular Traffic Warning Signs (W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10, W11-11, W11-12P, W11-14, W11-15, and W11-15a)

Option:

⁰¹ Vehicular Traffic Warning (W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10, W11-11, W11-12P, W11-14, W11-15, and W11-15a) signs (see Figure 2C-10) may be used to alert road users to locations where unexpected entries into the roadway by trucks, bicyclists, farm vehicles, emergency vehicles, golf carts, horse-drawn

vehicles, or other vehicles might occur. The TRUCK CROSSING (W8-6) word message sign may be used as an alternate to the Truck Crossing (W11-10) symbol sign.

Support:

⁰² These locations might be relatively confined or might occur randomly over a segment of roadway.

Guidance:

⁰³ *Vehicular Traffic Warning signs should be used only at locations where the road user's sight distance is restricted, or the condition, activity, or entering traffic would be unexpected.*

⁰⁴ *If the condition or activity is seasonal or temporary, the Vehicular Traffic Warning sign should be removed or covered when the condition or activity does not exist.*

Option:

⁰⁵ The combined Bicycle/Pedestrian (W11-15) sign may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. A TRAIL X-ING (W11-15P) supplemental plaque (see Figure 2C-10) may be mounted below the W11-15 sign. The TRAIL CROSSING (W11-15a) sign may be used to warn of shared-use path crossings where pedestrians, bicyclists, and other user groups might be crossing the roadway.

⁰⁶ The W11-1, W11-15, and W11-15a signs and their related supplemental plaques may have a fluorescent yellow-green background with a black legend and border.

⁰⁷ Supplemental plaques (see Section 2C.53) with legends such as AHEAD, XX FEET, NEXT XX MILES, or SHARE THE ROAD may be mounted below Vehicular Traffic Warning signs to provide advance notice to road users of unexpected entries.

Guidance:

⁰⁸ *If used in advance of a pedestrian and bicycle crossing, a W11-15 or W11-15a sign should be supplemented with an AHEAD or XX FEET plaque to inform road users that they are approaching a point where crossing activity might occur.*

Standard:

⁰⁹ **If a post-mounted W11-1, W11-11, W11-15, or W11-15a sign is placed at the location of the crossing point where golf carts, pedestrians, bicyclists, or other shared-use path users might be crossing the roadway, a diagonal downward pointing arrow (W16-7P) plaque (see Figure 2C-12) shall be mounted below the sign. If the W11-1, W11-11, W11-15, or W11-15a sign is mounted overhead, the W16-7P supplemental plaque shall not be used.**

Option:

¹⁰ The crossing location identified by a W11-1, W11-11, W11-15, or W11-15a sign may be defined with crosswalk markings (see Section 3B.18).

Standard:

¹¹ **The Emergency Vehicle (W11-8) sign (see Figure 2C-10) with the EMERGENCY SIGNAL AHEAD (W11-12P) supplemental plaque (see Figure 2C-10) shall be placed in advance of all emergency-vehicle traffic control signals (see Chapter 4G).**

Option:

~~¹² The Emergency Vehicle (W11-8) sign, or a word message sign indicating the type of emergency vehicle (such as rescue squad), may be used in advance of the emergency vehicle station when no emergency vehicle traffic control signal is present.~~

Standard:

^{12a} **The Emergency Vehicle (W11-8) sign or the EMERGENCY VEHICLES (SW52(CA)) sign (see Figure 2C-10(CA)) shall be used for all types of emergency vehicles.**

Guidance:

^{12b} *Vehicular Traffic signs should not be placed on the highway where the unexpected entry is located on an intersecting roadway.*

Option:

¹³ A Warning Beacon (see Section 4L.03) may be used with any Vehicular Traffic Warning sign to indicate specific periods when the condition or activity is present or is likely to be present, or to provide enhanced sign conspicuity.

~~14 A supplemental WHEN FLASHING (W16-13P) plaque (see Figure 2C-12) may be used with any Vehicular Traffic Warning sign that is supplemented with a Warning Beacon to indicate specific periods when the condition or activity is present or is likely to be present.~~

Standard:

15 WHEN FLASHING (W16-13p) plaque shall not be used to supplement any Vehicular Traffic Warning sign.

Support:

16 Studies indicate that W16-13p is generally not effective as a warning devices for motorists approaching signalized intersections. The non-use of WHEN FLASHING (W16-13p) plaque also addresses the situation when a warning beacon is inoperative for any reason.

Option:

17 The Snowmobile (W11-6) and Golf Cart (W11-11) signs may be used to alert road users to locations where unexpected entries into the roadway by snowmobiles or golf carts might occur, such as at snowmobile or golf cart crossings. Refer to CVC 38025. Also refer to CVC 21115.1.

18 The W11-11 sign may also be used in combination with the SHARE THE ROAD (W16-1) sign at locations where a local agency permits the sharing of the roadway with slower moving golf carts. Refer to CVC 21115.

19 The OFF HIGHWAY VEHICLES (SW47(CA)) sign (see Figure 2C-10(CA)) may be used in advance of a segment of highway that permits the use of regular vehicular traffic and also the driving of off highway motor vehicles on that portion of the highway.

Guidance:

20 *A Next Distance (W7-3a) plaque should supplement this sign.*

Option:

21 The WATCH FOR SNOW REMOVAL EQUIPMENT (SW58(CA)) sign (see Figure 2C-10(CA)) may be used on highways leading to snow areas.

Guidance:

22 *The SW58(CA) sign should be covered or removed during the summer season.*

Support:

23 The SW58(CA) sign is normally placed at lower elevations where the first snow is usually encountered.

Section 2C.50 Non-Vehicular Warning Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22)

Option:

01 Non-Vehicular Warning (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22) signs (see Figure 2C-11) may be used to alert road users in advance of locations where unexpected entries into the roadway might occur or where shared use of the roadway by pedestrians, animals, or equestrians might occur.

Support:

02 These conflicts might be relatively confined, or might occur randomly over a segment of roadway.

Guidance:

03 *If used in advance of a pedestrian, snowmobile, or equestrian crossing, the W11-2, W11-6, W11-7, and W11-9 signs should be supplemented with plaques (see Section 2C.55) with the legend AHEAD or XX FEET to inform road users that they are approaching a point where crossing activity might occur.*

Standard:

04 If a post-mounted W11-2, W11-6, W11-7, or W11-9 sign is placed at the location of the crossing point where pedestrians, snowmobilers, or equestrians might be crossing the roadway, a diagonal downward pointing arrow (W16-7P) plaque (see Figure 2C-12) shall be mounted below the sign. If the W11-2, W11-6, W11-7, or W11-9 sign is mounted overhead, the W16-7P plaque shall not be used.

Option:

05 A Pedestrian Crossing (W11-2) sign may be placed overhead or may be post-mounted with a diagonal downward pointing arrow (W16-7P) plaque at the crosswalk location where Yield Here To ~~(Stop Here For)~~ Pedestrians signs (see Section 2B.11) have been installed in advance of the crosswalk.

Standard:

06 If a W11-2 sign has been post-mounted at the crosswalk location where a Yield Here To ~~(Stop Here For)~~ Pedestrians sign is used on the approach, the Yield Here To ~~(Stop Here For)~~ Pedestrians sign shall not be placed on the same post as or block the road user's view of the W11-2 sign.

Option:

07 An advance Pedestrian Crossing (W11-2) sign with an AHEAD or a distance supplemental plaque may be used in conjunction with a Yield Here To ~~(Stop Here For)~~ Pedestrians sign on the approach to the same crosswalk.

08 The crossing location identified by a W11-2, W11-6, W11-7, or W11-9 sign may be defined with crosswalk markings (see Section 3B.18).

09 The W11-2 and W11-9 signs and their related supplemental plaques may have a fluorescent yellow-green background with a black legend and border.

Support:

09a Refer to CVC 21364 and 21365 for the Cattle (W11-4) sign.

09b Refer to CVC 21805 for the Equestrian (W11-7) sign.

Guidance:

09c *The Deer Crossing (W11-3) sign should be used only after confirmation from a Department of Fish and Game warden having jurisdiction in the area that a substantial problem exists.*

Option:

09d The Migrating Bears (SW59(CA)) sign (see Figure 2C-11(CA)) may be used in advance of an area known to be inhabited by bear and there have been reported instances where bears are crossing the roadway.

Guidance:

09e *If used, the NEXT XX MILES supplemental plaque should be placed at approximately 5 mile intervals, or when intersecting major traffic generators.*

Option:

09f The DEAF CHILDREN NEAR (SW38(CA)) sign (see Figure 2C-11(CA)) may be used on city streets or county roads to indicate that a deaf child is near. Refer to CVC 21351.7.

Guidance:

09g *The SENIOR CITIZEN FACILITY (SW50(CA)) sign (see Figure 2C-11(CA)) should not be used alone.*

Option:

09h The SW50(CA) sign may be used in combination, above the Speed Limit (R2-1 (25,20 or 15)) sign on any street or road, other than a State highway, with a speed limit greater than 25 mph that is adjacent to a senior citizen facility. Refer to CVC 22352 and 22358.4.

Guidance:

10 *When a fluorescent yellow-green background is used, a systematic approach featuring one background color within a zone or area should be used. The mixing of standard yellow and fluorescent yellow-green backgrounds within a selected site area should be avoided.*

Option:

11 A Warning Beacon (see Section 4L.03) may be used with any Non-Vehicular Warning sign to indicate specific periods when the condition or activity is present or is likely to be present, or to provide enhanced sign conspicuity.

~~12 A supplemental WHEN FLASHING (W16-13P) plaque (see Figure 2C-12) may be used with any Non-Vehicular Warning sign that is supplemented with a Warning Beacon to indicate specific periods when the condition or activity is present or is likely to be present.~~

Standard:

13 WHEN FLASHING (W16-13p) plaque shall not be used to supplement any Non-Vehicular Warning sign.

Support:

14 Studies indicate that W16-13p is generally not effective as a warning devices for motorists approaching signalized intersections. The non-use of WHEN FLASHING (W16-13p) plaque also addresses the situation when a warning beacon is inoperative for any reason.

Section 2C.51 Playground Sign (W15-1)

Option:

⁰¹ The Playground (W15-1) sign (see Figure 2C-11) may be used to give advance warning of a designated children's playground that is located adjacent to the road.

⁰² The Playground sign may have a fluorescent yellow-green background with a black legend and border.

Guidance:

⁰³ *If the access to the playground area requires a roadway crossing, the application of crosswalk pavement markings (see Section 3B.18) and Non-Vehicular Warning signs (see Section 2C.50) should be considered.*

⁰⁴ *The PLAYGROUND (SW49(CA)) sign (see Figure 2C-11(CA)) should not be used alone.*

Option:

⁰⁵ The SW49(CA) sign may be used in combination above the Speed Limit (R2-1 (25)) sign and WHEN CHILDREN ARE PRESENT (S4-2) sign on any street or road, other than a state highway, with a speed limit greater than 25 mph that is adjacent to a children's playground within a public park. Refer to CVC 22357.1.

Section 2C.52 NEW TRAFFIC PATTERN AHEAD Sign (W23-2)

Option:

⁰¹ A NEW TRAFFIC PATTERN AHEAD (W23-2) sign (see Figure 2C-6) may be used on the approach to an intersection or along a section of roadway to provide advance warning of a change in traffic patterns, such as revised lane usage, roadway geometry, or signal phasing.

Guidance:

⁰² *The NEW TRAFFIC PATTERN AHEAD sign should be removed when the traffic pattern returns to normal, when the changed pattern is no longer considered to be new, or within six months.*

Section 2C.53 Use of Supplemental Warning Plaques

Option:

⁰¹ A supplemental warning plaque (see Figure 2C-12) may be displayed with a warning or regulatory sign when engineering judgment indicates that road users require additional warning information beyond that contained in the main message of the warning or regulatory sign.

Standard:

⁰² **Supplemental warning plaques shall be used only in combination with warning or regulatory signs. They shall not be mounted alone or displayed alone. If used, a supplemental warning plaque shall be installed on the same post(s) as the warning or regulatory sign that it supplements.** ⁰³ **Unless otherwise provided in this Manual for a particular plaque, supplemental warning plaques shall be mounted below the sign they supplement.**

Section 2C.54 Design of Supplemental Warning Plaques

Standard:

⁰¹ **A supplemental warning plaque used with a warning sign shall have the same legend, border, and background color as the warning sign with which it is displayed. A supplemental warning plaque used with a regulatory sign shall have a black legend and border on a yellow background.**

⁰² **Supplemental warning plaques shall be square or rectangular.**

Section 2C.55 Distance Plaques (W16-2 Series, W16-3 Series, W16-4P, W7-3aP)

Option:

⁰¹ The Distance Ahead (W16-2 series and W16-3 series) plaques (see Figure 2C-12) may be used to inform the road user of the distance to the condition indicated by the warning sign.

⁰² The Next Distance (W7-3aP and W16-4P) plaques (see Figures 2C-4 and 2C-12) may be used to inform road users of the length of roadway over which the condition indicated by the warning sign exists.

⁰³ *The Distance Ahead (W34A(CA)) plaque (see Figure 2C-12(CA)) may be used to inform the road user of the distance to the condition indicated by the warning sign.*

Guidance:

04 When the distance is in miles, the mileage shown should be to the nearest 1/4 mile for a distance of less than 1 mile and to the nearest mile for distances over one mile. The text "MILE" should be used for a distance of one mile or less. The text "MILES" should be used for distances over one mile.

Section 2C.56 Supplemental Arrow Plaques (W16-5P, W16-6P)

Guidance:

01 If the condition indicated by a warning sign is located on an intersecting road and the distance between the intersection and condition is not sufficient to provide adequate advance placement of the warning sign, a Supplemental Arrow (W16-5P or W16-6P) plaque (see Figure 2C-12) should be used below the warning sign.

Standard:

02 Supplemental Arrow plaques shall have the same legend design as the Advance Turn Arrow and Directional Arrow auxiliary signs (see Sections 2D.26 and 2D.28) except that they shall have a black legend and border on a yellow or fluorescent yellow-green background, as appropriate.

Section 2C.57 Hill-Related Plaques (W7-2 Series, W7-3 Series)

Guidance:

01 Hill-Related (W7-2 series, W7-3 series) plaques (see Figure 2C-4) or other appropriate legends and larger signs should be used for emphasis or where special hill characteristics exist.

02 On longer grades, the use of the distance plaque (W7-3aP or W7-3bP) at periodic intervals of approximately 1-mile spacing should be considered.

Option:

03 The WATCH DOWNHILL SPEED (SW4-1(CA)) sign (see Figure 2C-4(CA)) may be used on long downhill grades to remind motorists to maintain the posted speed.

Section 2C.58 Advance Street Name Plaque (W16-8P, W16-8aP)

Option:

01 An Advance Street Name (W16-8P or W16-8aP) plaque (see Figure 2C-12) may be used with any Intersection sign (W2 series, W10-2, W10-3, or W10-4) or Advance Traffic Control (W3 series) sign to identify the name of the intersecting street.

Standard:

02 The lettering on Advance Street Name plaques shall be composed of a combination of lower-case letters with initial upper-case letters.

03 If two street names are used on the Advance Street Name plaque, a directional arrow pointing in the direction of the street shall be placed next to each street name. Arrows pointing to the left shall be placed to the left of the street name, and arrows pointing to the right shall be placed to the right of the street name.

Guidance:

04 If two street names are used on the Advance Street Name plaque, the street names and associated arrows should be displayed in the following order:

A. For a single intersection, the name of the street to the left should be displayed above the name of the street to the right; or

B. For two sequential intersections, such as where the plaque is used with an Offset Side Roads (W2-7) or a Double Side Road (W2-8) symbol sign, the name of the first street encountered should be displayed above the name of the second street encountered, and the arrow associated with the second street encountered should be an advance arrow, such as the arrow shown on the W16-6P arrow plaque (see Figure 2C-12).

Section 2C.59 CROSS TRAFFIC DOES NOT STOP Plaque (W4-4P)

Option:

01 The CROSS TRAFFIC DOES NOT STOP (W4-4P) plaque (see Figure 2C-9) may be used in combination with a STOP sign when engineering judgment indicates that conditions are present that are causing or could cause drivers to misinterpret the intersection as an all-way stop.

⁰² Alternative messages (see Figure 2C-9) such as TRAFFIC FROM LEFT (RIGHT) DOES NOT STOP (W4-4aP) or ONCOMING TRAFFIC DOES NOT STOP (W4-4bP) may be used when such messages more accurately describe the traffic controls established at the intersection.

Guidance:

^{02a} *The CROSS TRAFFIC DOES NOT STOP (W4-4p) plaque should be used in combination with a STOP sign at two-way stop-controlled intersections when a conversion from four-way stop to two-way stop operation is implemented.*

⁰³ *Plaques with the appropriate alternative messages of TRAFFIC FROM LEFT (RIGHT) DOES NOT STOP or ONCOMING TRAFFIC DOES NOT STOP should be used at intersections where STOP signs control all but one approach to the intersection, unless the only non-stopped approach is from a one-way street.*

Standard:

⁰⁴ **If a W4-4P plaque or a plaque with an alternative message is used, it shall be mounted below the STOP sign.**

Section 2C.60 SHARE THE ROAD Plaque (W16-1P)

Option:

⁰¹ In situations where there is a need to warn drivers to watch for other slower forms of transportation traveling along the highway, such as bicycles, golf carts, horse-drawn vehicles, or farm machinery, a SHARE THE ROAD (W16-1P) plaque (see Figure 2C-12) may be used.

Standard:

⁰² **A W16-1P plaque shall not be used alone. If a W16-1P plaque is used, it shall be mounted below either a Vehicular Traffic Warning sign (see Section 2C.49) or a Non-Vehicular Warning sign (see Section 2C.50). The background color of the W16-1P plaque shall match the background color of the warning sign with which it is displayed.**

Support:

⁰³ Refer to Section 9B.06 for Bicycles May Use Full Lane (R4-11) sign.

Section 2C.61 Photo Enforced Plaque (W16-10P)

Option:

⁰¹ A Photo Enforced (W16-10P) plaque or a PHOTO ENFORCED (W16-10aP) word message plaque (see Figure 2C-12) may be mounted below a warning sign to advise road users that the regulations associated with the condition being warned about (such as a traffic control signal or a toll plaza) are being enforced by photographic equipment.

Standard:

⁰² **If used below a warning sign, the Photo Enforced (W16-10P or W16-10aP) plaque shall be a rectangle with a black legend and border on a yellow background.**

Section 2C.62 NEW Plaque (W16-15P)

Option:

⁰¹ A NEW (W16-15P) plaque (see Figure 2C-12) may be mounted above a regulatory sign when a new regulation takes effect in order to alert road users to the new traffic regulation. A NEW plaque may also be mounted above an advance warning sign (such as a Signal Ahead sign for a newly-installed traffic control signal) for a new traffic regulation.

Standard:

⁰² **The NEW plaque shall not be used alone.**

⁰³ **The NEW plaque shall be removed no later than 6 months after the regulation has been in effect.**

Section 2C.63 Object Marker Design and Placement Height

Support:

⁰¹ Type 1, 2, and 3 object markers are used to mark obstructions within or adjacent to the roadway. Type 4 object markers are used to mark the end of a roadway.

Standard:

02 When used, object markers (see Figure 2C-13) shall not have a border and shall consist of an arrangement of one or more of the following types:

Type 1—a diamond-shaped sign, at least 18 inches on a side, consisting of either a yellow (OM1-1) or black (OM1-2) sign with nine yellow retroreflective devices, each with a minimum diameter of 3 inches, mounted symmetrically on the sign, or an all-yellow retroreflective sign (OM1-3).

Type 2—either a marker (OM2-1V or OM2-1H) consisting of three yellow retroreflective devices, each with a minimum diameter of 3 inches, arranged either horizontally or vertically on a white sign measuring at least 6 x 12 inches; or an all-yellow horizontal or vertical retroreflective sign (OM2-2V or OM2-2H), measuring at least 6 x 12 inches.

Type 3—a striped marker, 12 x 36 inches, consisting of a vertical rectangle with alternating black and retroreflective yellow stripes sloping downward at an angle of 45 degrees toward the side of the obstruction on which traffic is to pass. The minimum width of the yellow and black stripes shall be 3 inches.

Type 4—a diamond-shaped sign, at least 18 inches on a side, consisting of either a red (OM4-1) or black (OM4-2) sign with nine red retroreflective devices, each with a minimum diameter of 3 inches, mounted symmetrically on the sign, or an all-red retroreflective sign (OM4-3).

Type L(CA) Utility Pole marker (see Figure 2C-13(CA)) shall be yellow retroreflective material consisting of three 2 x 12 inch horizontal rectangles arranged vertically on a utility pole.

Type Q(CA) object marker (see Figure 2C-13(CA)) shall be a vertical tubular marker, with a height of 18 to 24 inch and a minimum cross sectional dimension of 2 ¼ inch. The yellow retroreflective material shall consist of three bands, each 3 inch in height or a single band 9 inch in height.

Type R(CA) (OM-3C) object marker (see Figure 2C-13(CA)) size shall be 24 x 30 inch.

Support:

02a A cross-reference of object markers is shown in Table 2C-101(CA).

03 A better appearance can be achieved if the black stripes are wider than the yellow stripes.

04 Type 3 object markers with stripes that begin at the upper right side and slope downward to the lower left side are designated as right object markers (OM3-R). Object markers with stripes that begin at the upper left side and slope downward to the lower right side are designated as left object markers (OM3-L).

Guidance:

~~**05** When used for marking obstructions within the roadway or obstructions that are 8 feet or less from the shoulder or curb, the minimum mounting height, measured from the bottom of the object marker to the elevation of the near edge of the traveled way, should be 4 feet.~~

~~**06** When used to mark obstructions more than 8 feet from the shoulder or curb, the clearance from the ground to the bottom of the object marker should be at least 4 feet.~~

~~**07** Object markers should not present a vertical or horizontal clearance obstacle for pedestrians.~~

Standard:

07a Figure 2C-13(CA) shall be used for mounting height of object markers.

Option:

08 When object markers or markings are applied to an obstruction that by its nature requires a lower or higher mounting, the vertical mounting height may vary according to need.

Support:

09 Section 9B.26 contains information regarding the use of object markers on shared-use paths.

Section 2C.64 Object Markers for Obstructions Within the Roadway

Standard:

01 Obstructions within the roadway shall be marked with a Type 1 or Type 3 object marker. In addition to markers on the face of the obstruction, warning of approach to the obstruction shall be given by appropriate pavement markings (see Section 3B.10).

Option:

02 To provide additional emphasis, a Type 1 or Type 3 object marker may be installed at or near the approach end of a median island.

03 To provide additional emphasis, large surfaces such as bridge piers may be painted with diagonal stripes, 12 inches or greater in width, similar in design to the Type 3 object marker.

Standard:

04 **The alternating black and retroreflective yellow stripes (OM3-L, OM3-R) shall be sloped down at an angle of 45 degrees toward the side on which traffic is to pass the obstruction. If traffic can pass to either side of the obstruction, the alternating black and retroreflective yellow stripes (OM3-C) shall form chevrons that point upwards.**

Option:

05 Appropriate signs (see Sections 2B.32 and 2C.25) directing traffic to one or both sides of the obstruction may be used instead of the object marker.

06 Objects in a paved area within 8 feet of the traveled way may be marked with a Type P(CA) (OM-3L, OM-3R) or Type R(CA) (OM-3C) object marker.

07 The Type Q(CA) object marker may be used to emphasize objects within the roadway, for example, curb noses, where it is desirable that the marker be visible from all directions.

Guidance:

08 *If any object marker is located behind the guard rail, all of the marker panel should be visible to approaching traffic.*

09 *The Type P(CA) (OM-3L, OM-3R) object marker should be in line with the inner edge of the obstruction.*

Section 2C.65 Object Markers for Obstructions Adjacent to the Roadway

Support:

01 Obstructions not actually within the roadway are sometimes so close to the edge of the road that they need a marker. These include underpass piers, bridge abutments, handrails, ends of traffic barriers, utility poles, and culvert headwalls. In other cases there might not be a physical object involved, but other roadside conditions exist, such as narrow shoulders, drop-offs, gores, small islands, and abrupt changes in the roadway alignment, that might make it undesirable for a road user to leave the roadway, and therefore would create a need for a marker.

Standard:

02 **If a Type 2 or Type 3 object marker is used to mark an obstruction adjacent to the roadway, the edge of the object marker that is closest to the road user shall be installed in line with the closest edge of the obstruction.**

03 **Where Type 3 object markers are applied to the approach ends of guardrail and other roadside appurtenances, sheeting without a substrate shall be directly affixed to the approach end of the guardrail in a rectangular shape conforming to the size of the approach end of the guardrail with alternating black and retroreflective yellow stripes sloping downward at an angle of 45 degrees toward the side of the obstruction on which traffic is to pass.**

04 **Type 1 and Type 4 object markers shall not be used to mark obstructions adjacent to the roadway.**

Guidance:

05 *Standard warning signs in this Chapter should also be used where applicable.*

Option:

06 Objects outside of the paved shoulder, within 12 feet of the traveled way, may be marked with Type L(CA) object markers.

07 The Type L(CA) (OM2-2V and OM2-2H) object markers may be placed in front of, alongside of, or attached to the object. Where objects are very close to each other, only the first object may need to be marked.

08 The Type L(CA) Utility Pole marker may be used to mark a utility pole.

Standard:

09 **If used on State highways, Type L-1(CA) (OM2-2V) object marker shall be used instead of Type L-2(CA) (OM2-2V).**

Guidance:

10 *If used, the utility company should be responsible for installing and maintaining the Type L(CA) Utility Pole marker.*

Support:

11 See Section 2C.12 and 2C.47 for use of Type N-1(CA) (OM1-3) object markers in conjunction with One-Directional Large Arrow (W1-6) and Two-Direction Large Arrow (W1-7) signs for abrupt changes in the roadway alignment.

¹² See Section 6F.105(CA) for use of Type N(CA), P(CA) and R(CA) object markers for temporary traffic control.

Option:

¹³ If engineering judgment indicates that the exit gore at an interchange cannot be negotiated in a reasonable manner, then in addition to the Type F and G delineators, Type R(CA) (OM-3C) object marker may be used as shown in Figure 3F-102(CA).

Section 2C.66 Object Markers for Ends of Roadways

Support:

⁰¹ The Type 4 object marker is used to warn and alert road users of the end of a roadway in other than construction or maintenance areas.

Standard:

⁰² **If an object marker is used to mark the end of a roadway, a Type 4 object marker shall be used.**

Option:

~~⁰³ The Type 4 object marker may be used in instances where there are no alternate vehicular paths.~~

Standard:

^{03a} **The end-of-roadway marker shall be used at the end of a road or cul-de-sac street where there is no alternate vehicular path.**

⁰⁴ Where conditions warrant, more than one marker, or a larger marker with or without a Type 3 Barricade (see Section 2B.67), may be used at the end of the roadway.

Standard:

~~⁰⁵ **The minimum mounting height, measured vertically from the bottom of a Type 4 object marker to the elevation of the near edge of the traveled way, shall be 4 feet.**~~

^{05a} **Figure 2C-13(CA) shall be used for mounting height of the end-of-the-roadway marker.**

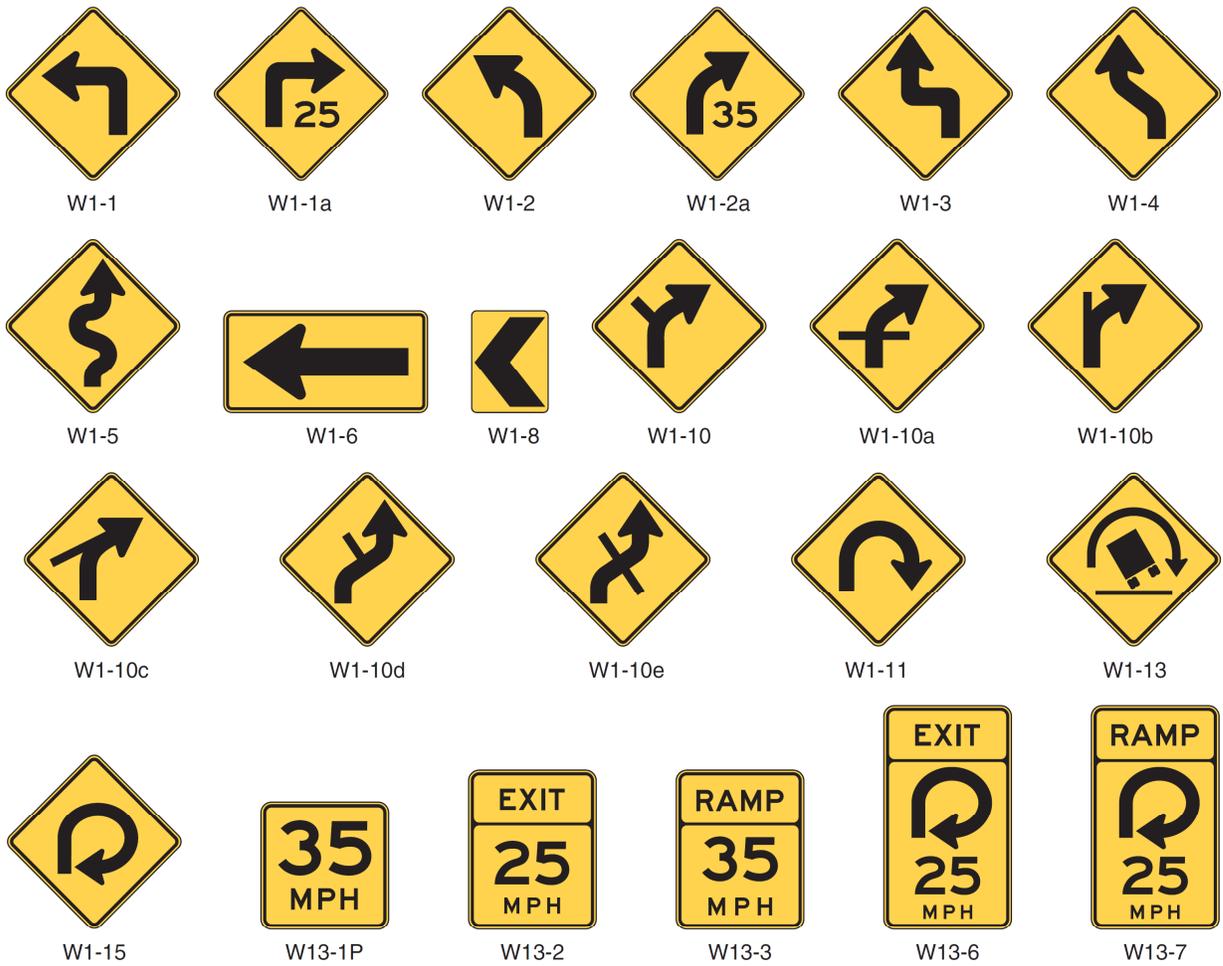
Guidance:

⁰⁶ *Appropriate advance warning signs in this Chapter should be used.*

Support:

⁰⁷ See Section 2C.26 for use of end-of-roadway marker in conjunction with END (W31(CA)) sign.

Figure 2C-1. Horizontal Alignment Signs and Plaques



Note: Turn arrows and reverse turn arrows may be substituted for the curve arrows and reverse curve arrows on the W1-10 series signs where appropriate.

Figure 2C-1 (CA). Horizontal Alignment Signs and Plaques



W4-1 (CA)



W4-10 (CA)



W4-14 (CA)



W4-18 (CA)



W4-22 (CA)



SW22-1 (CA)

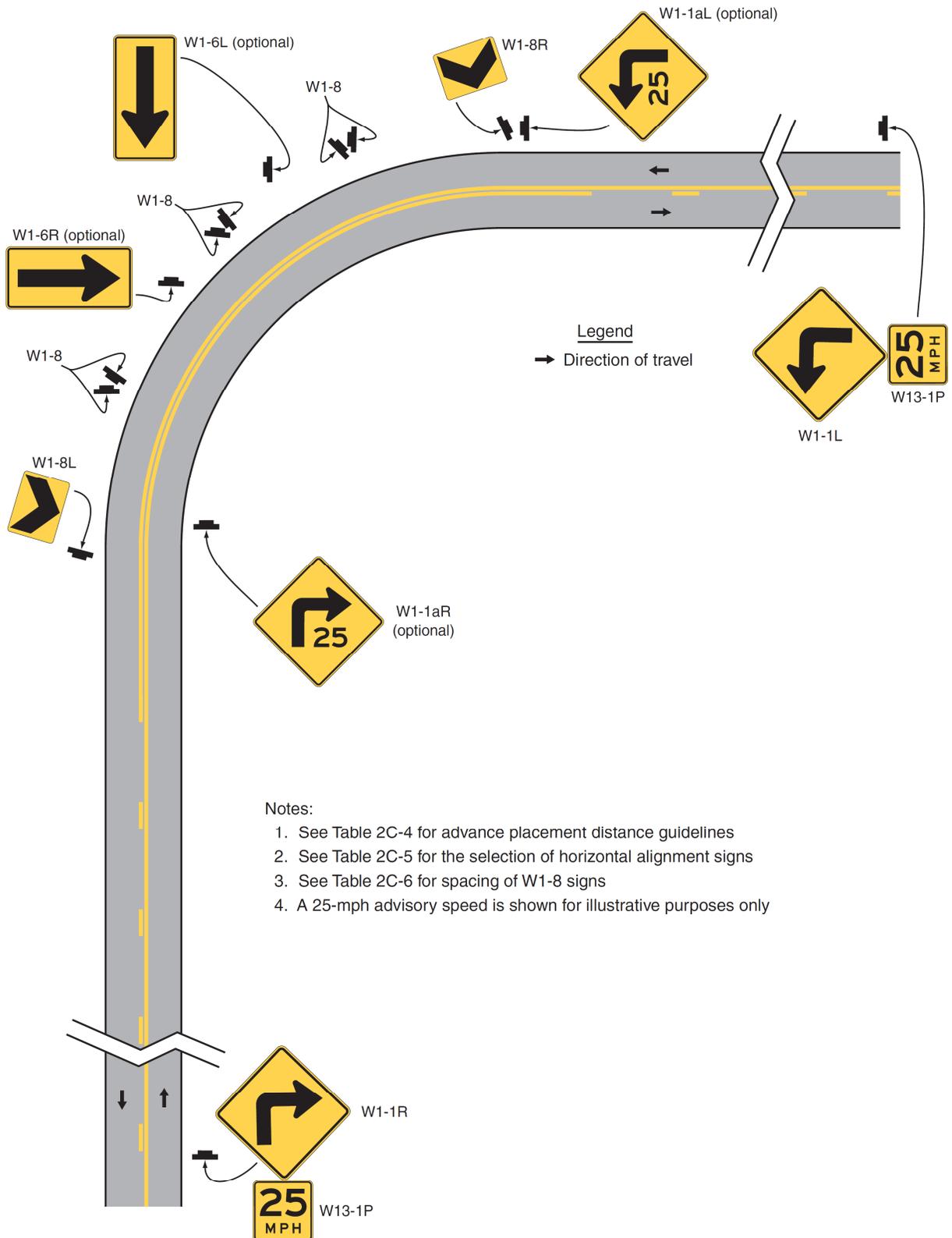


SW22-1A (CA)



Vehicle Speed Feedback Sign
(Assembly example shown with W1-2a)

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



Notes:

1. See Table 2C-4 for advance placement distance guidelines
2. See Table 2C-5 for the selection of horizontal alignment signs
3. See Table 2C-6 for spacing of W1-8 signs
4. A 25-mph advisory speed is shown for illustrative purposes only

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

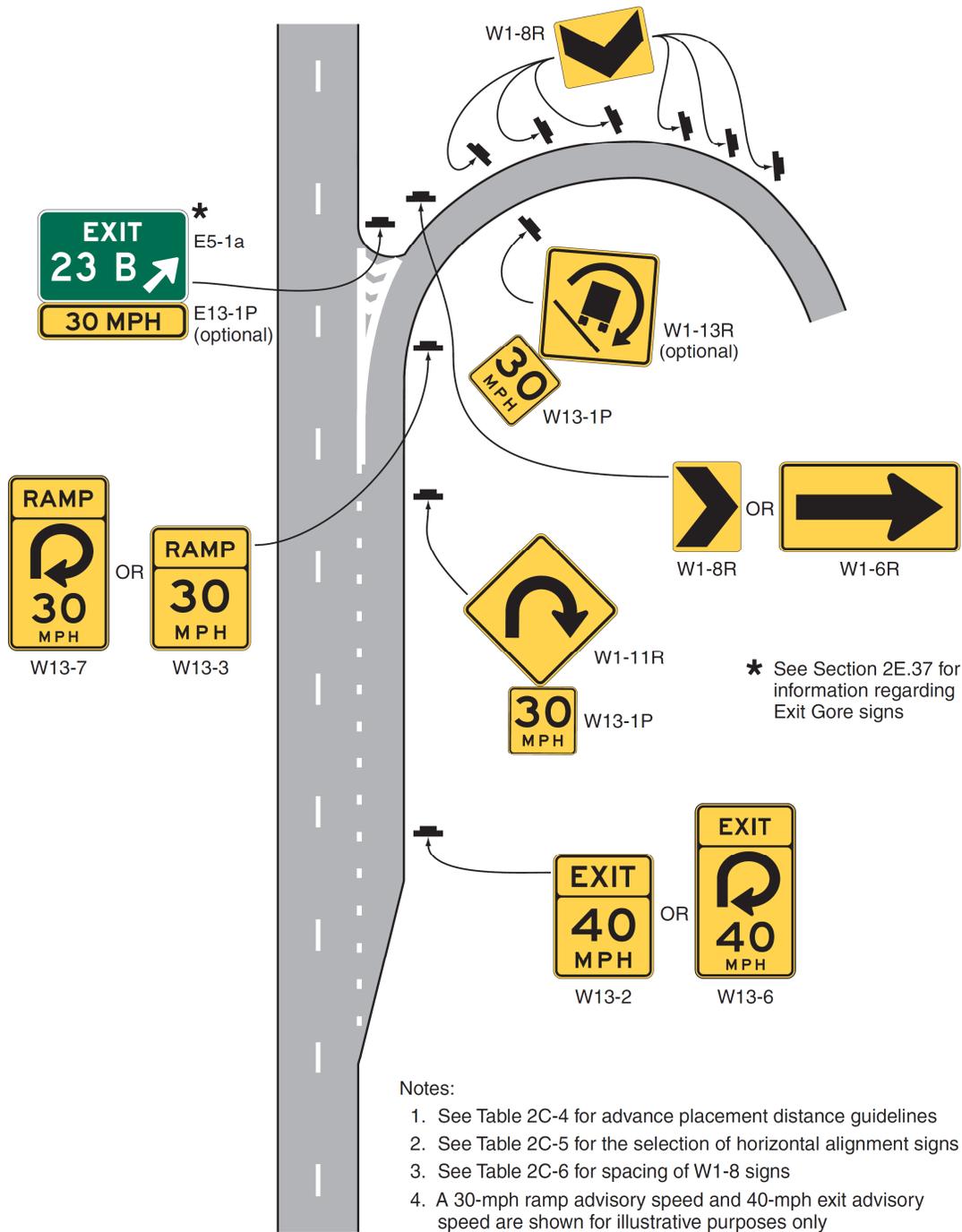


Figure 2C-4. Vertical Grade Signs and Plaques

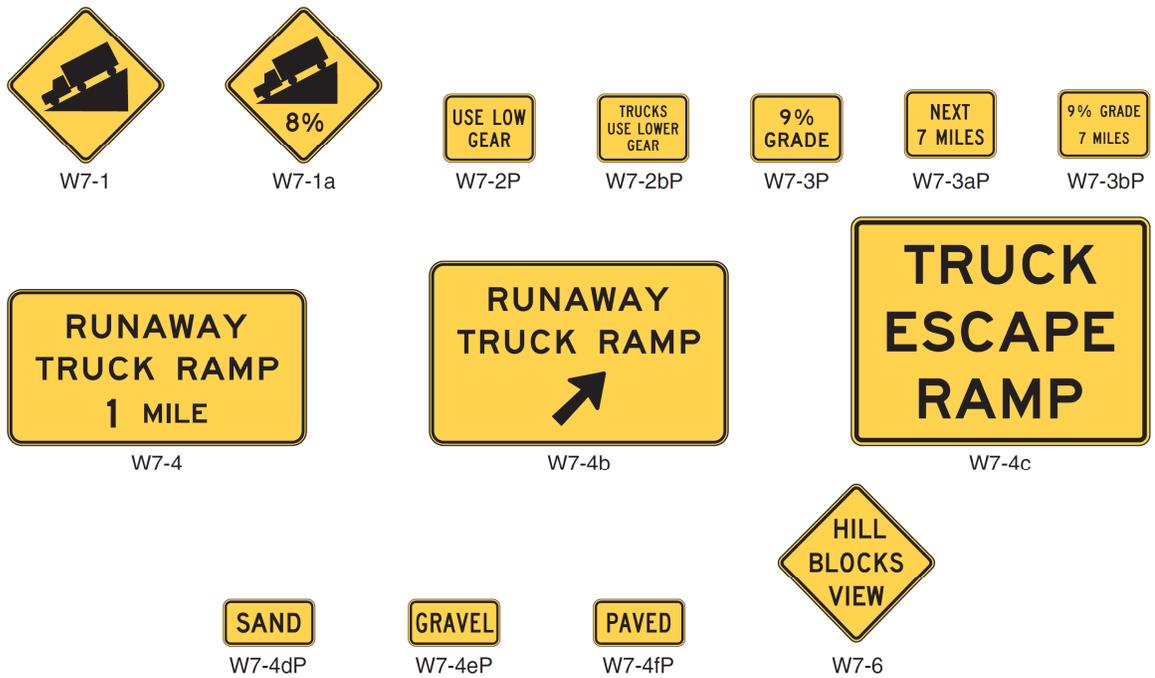


Figure 2C-4 (CA). Vertical Grade Signs and Plaques

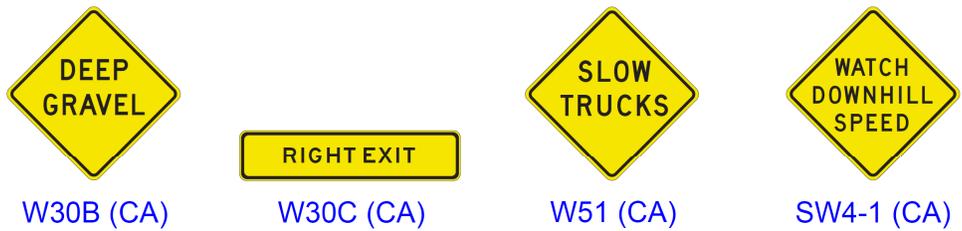


Figure 2C-5. Miscellaneous Warning Signs

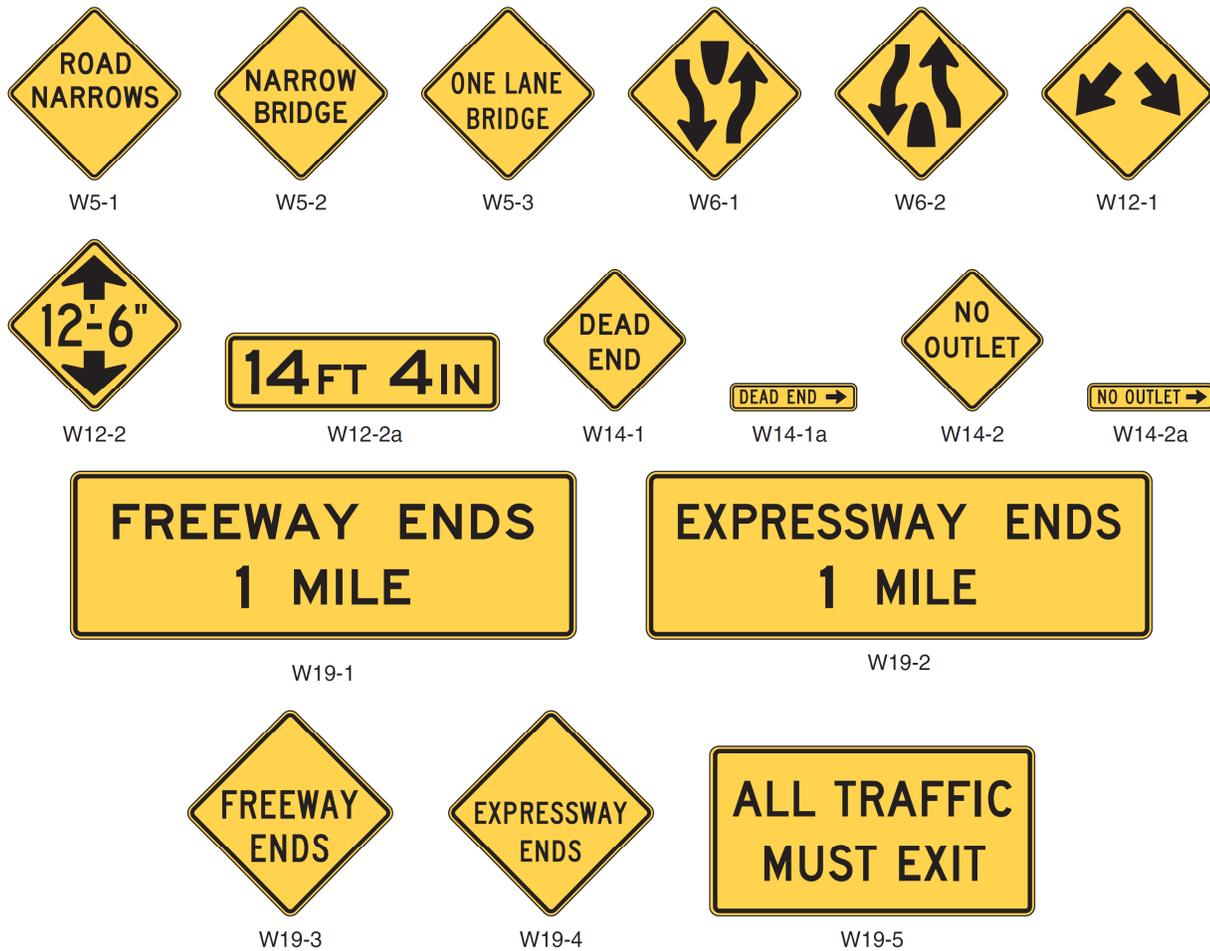


Figure 2C-5 (CA). Miscellaneous Warning Signs

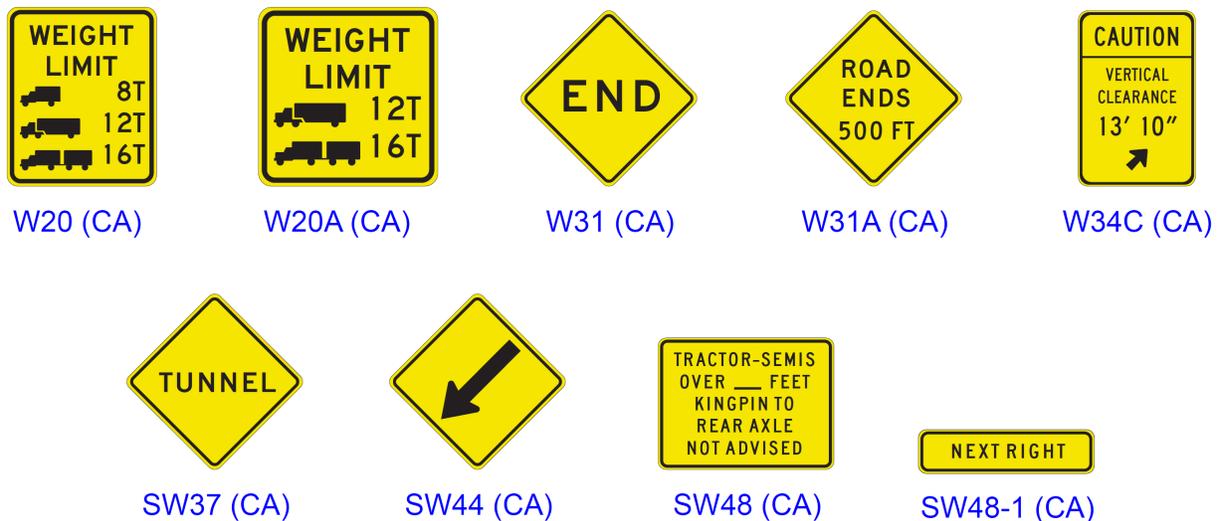


Figure 2C-6. Roadway and Weather Condition and Advance Traffic Control Signs and Plaques

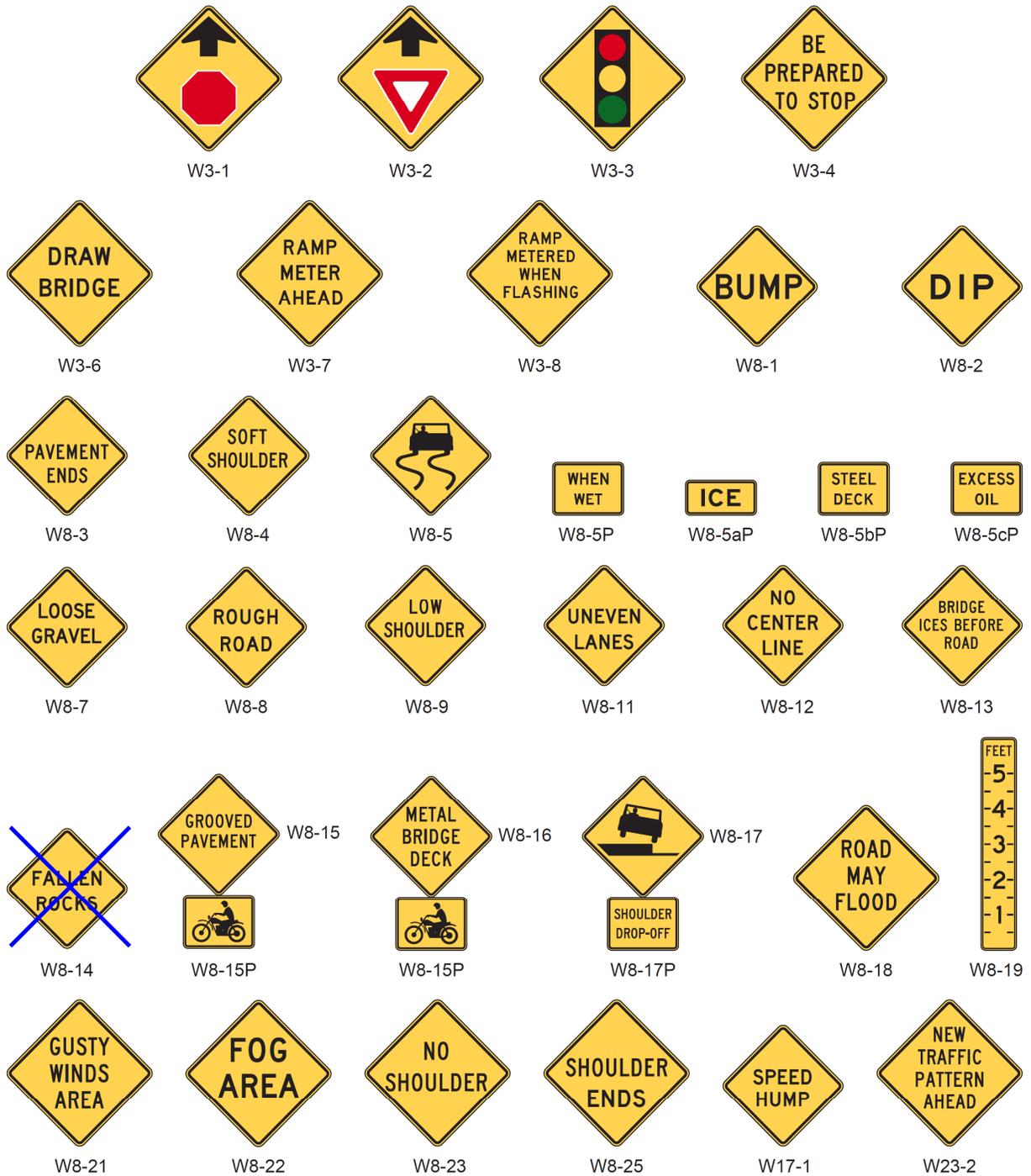


Figure 2C-6 (CA). Roadway and Weather Condition and Advance Traffic Control Signs and Plaques

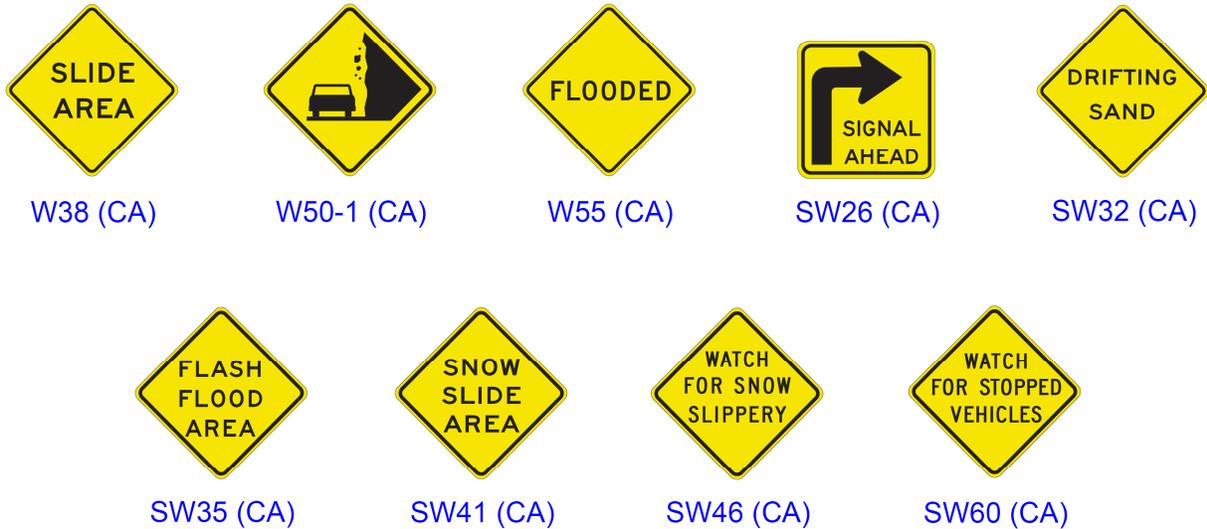


Figure 2C-7. Reduced Speed Limit Ahead Signs



Figure 2C-7 (CA). Reduced Speed Limit Ahead Signs



SW17-1 (CA)

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

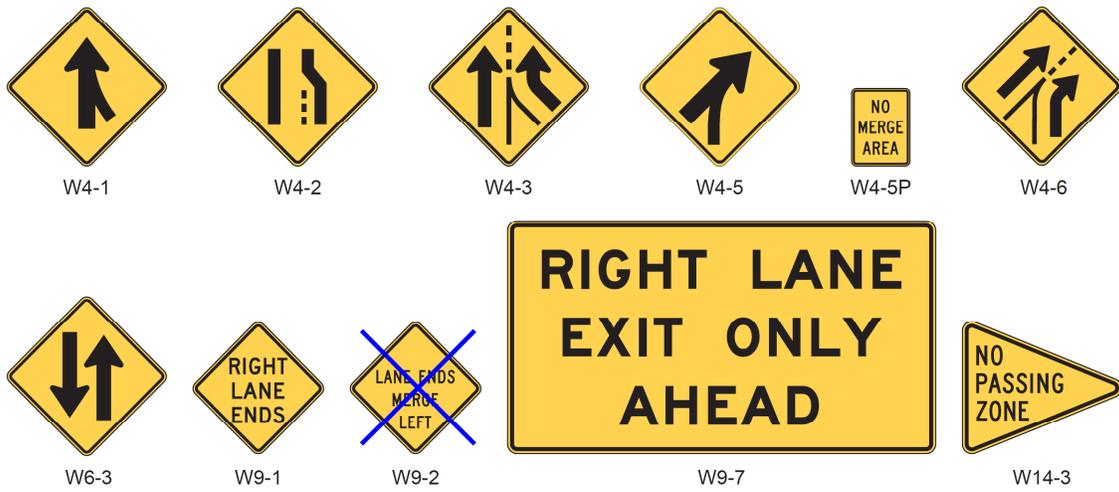


Figure 2C-8 (CA). Merging and Passing Signs and Plaques



Figure 2C-9. Intersection Warning Signs and Plaques

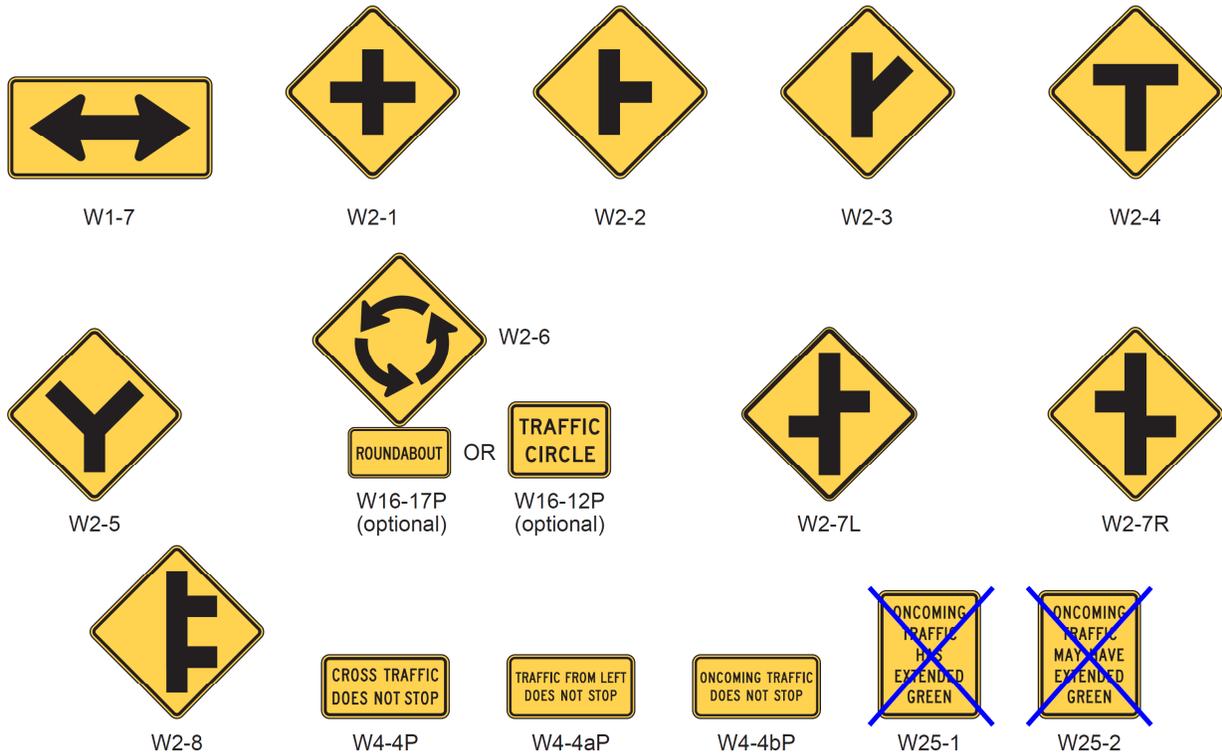
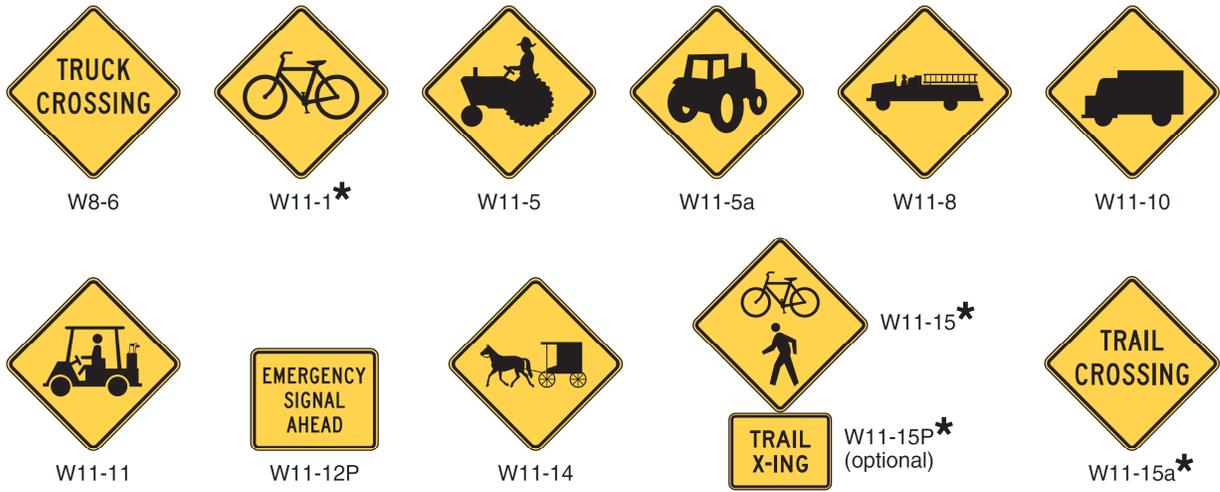


Figure 2C-9 (CA). Intersection Warning Signs and Plaques



Figure 2C-10. Vehicular Traffic Warning Signs and Plaques

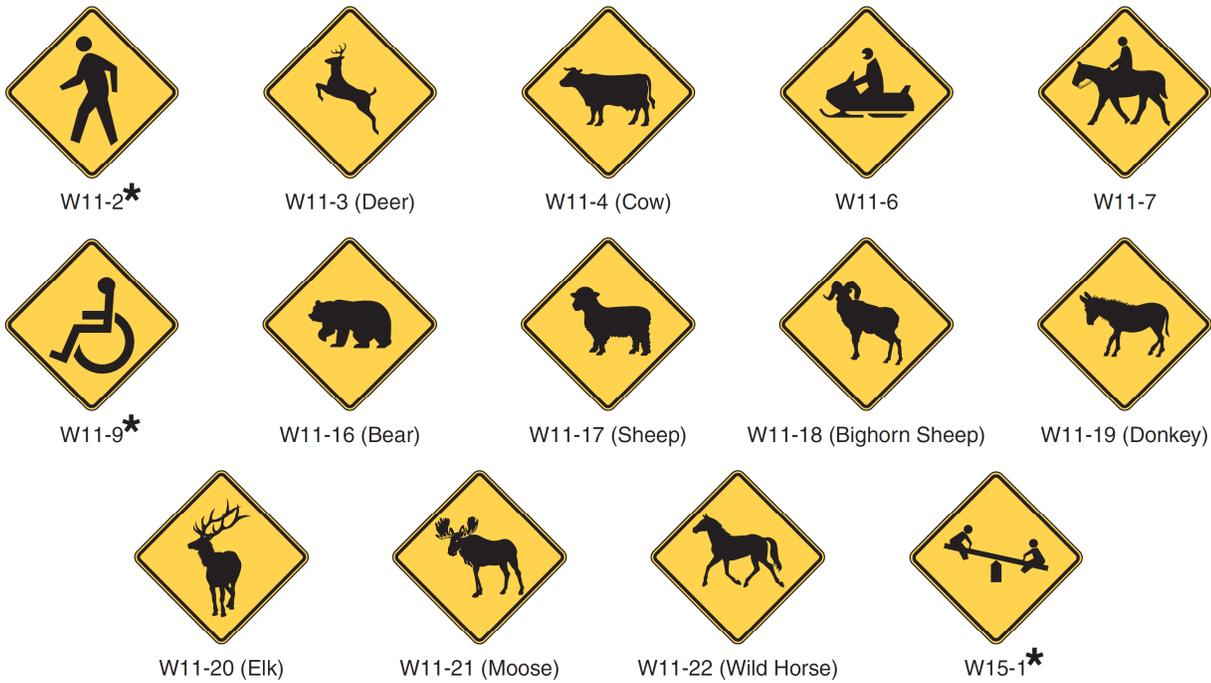


* A fluorescent yellow-green background color may be used for this sign or plaque.

Figure 2C-10 (CA). Vehicular Traffic Warning Signs and Plaques



Figure 2C-11. Non-Vehicular Warning Signs



* A fluorescent yellow-green background color may be used for this sign or plaque.

Figure 2C-11 (CA). Non-Vehicular Warning Signs



Figure 2C-12. Supplemental Warning Plaques

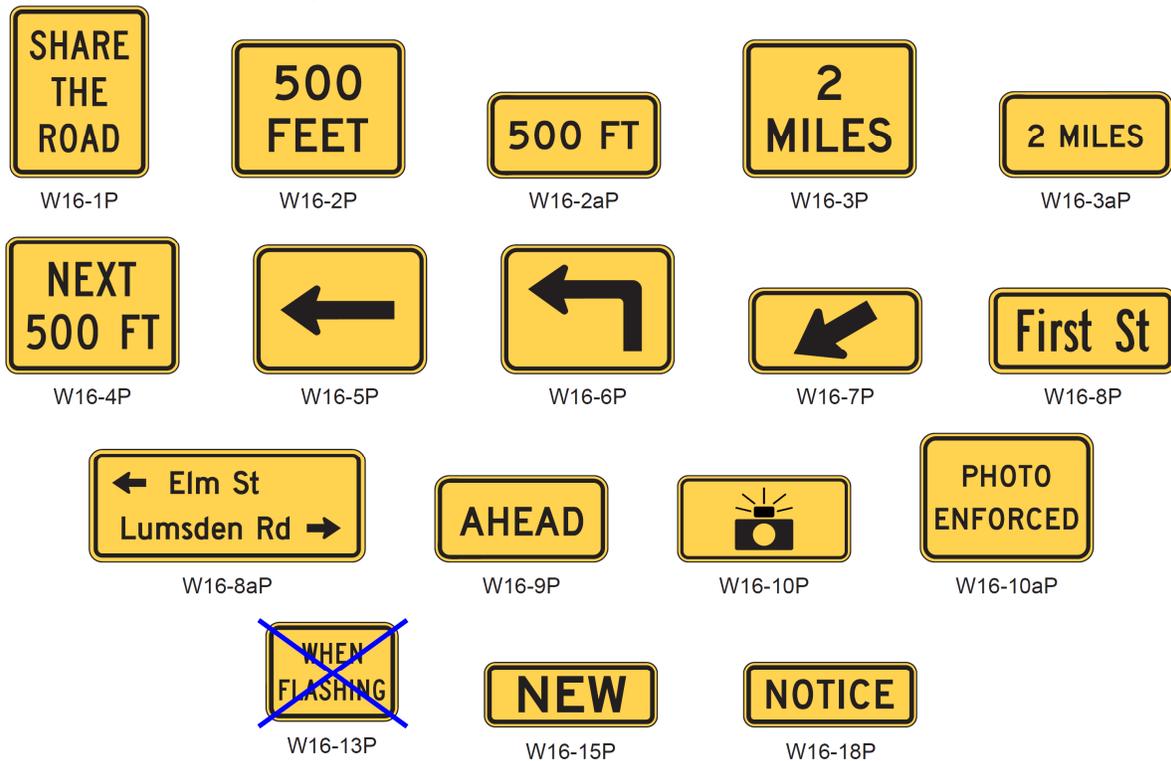


Figure 2C-12 (CA). Supplemental Warning Plaques



W34A (CA)

Figure 2C-13. Object Markers

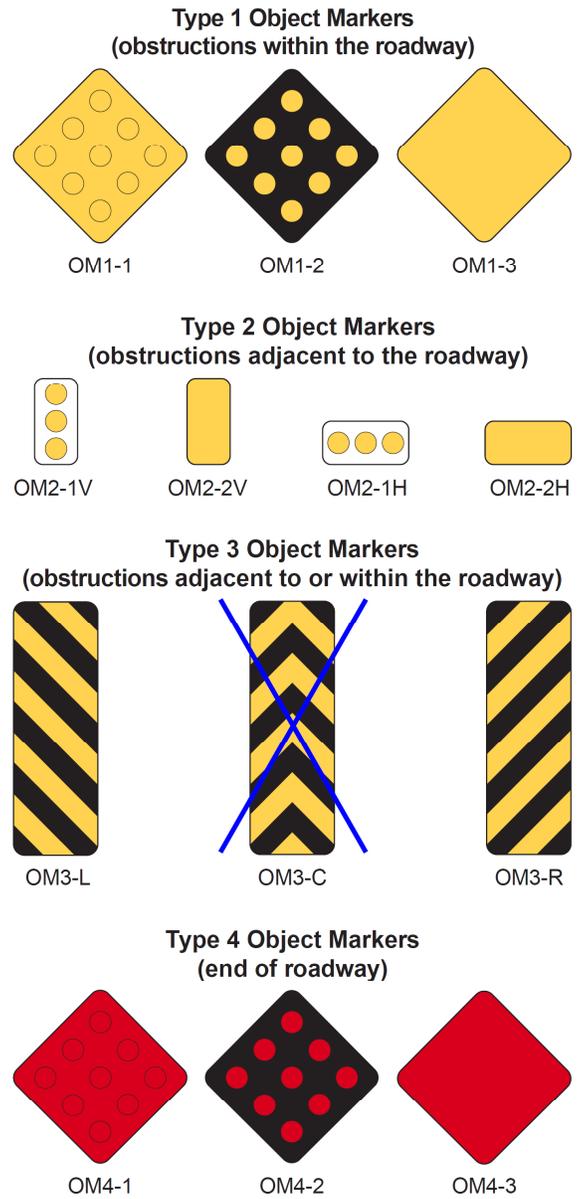
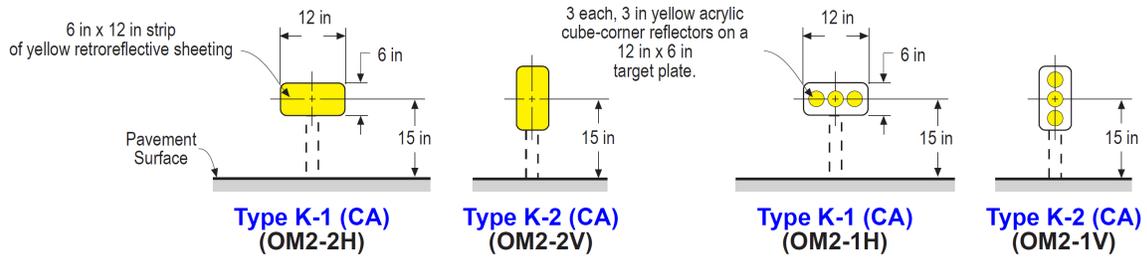
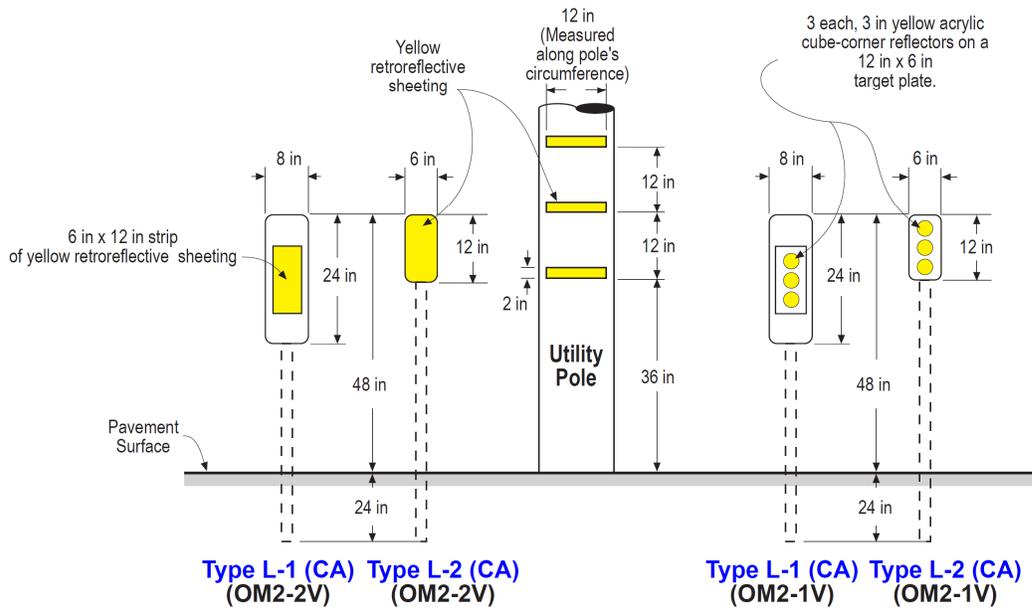


Figure 2C-13 (CA). California Object Markers (Sheet 1 of 2)

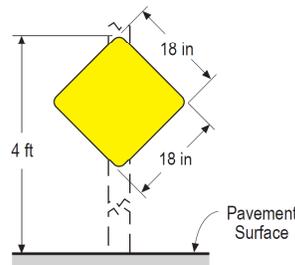
**Type K (CA) Object Marker (Type 2)
 (obstructions adjacent to the roadway)**



**Type L (CA) Object Marker (Type 2)
 (obstructions adjacent to the roadway)**



**Type N (CA) Object Marker (Type 1 or Type 4)
 (obstructions within the roadway or end of roadway)**

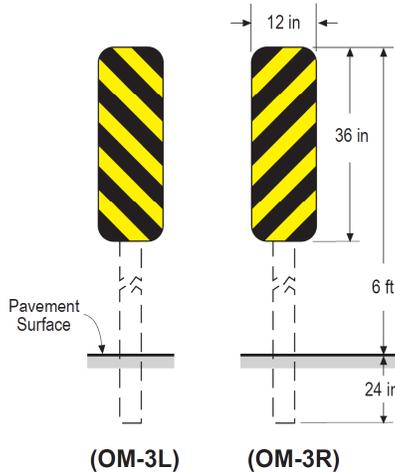


Type N-1 (CA) (OM1-3), Type N-2 (CA) (OM4-3)

NOT TO SCALE

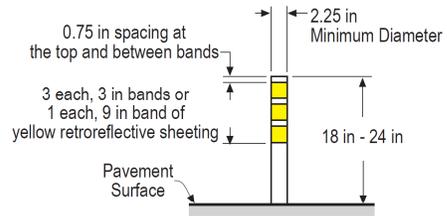
Figure 2C-13 (CA). California Object Markers (Sheet 2 of 2)

**Type P (CA) Object Marker (Type 3)
 (obstructions adjacent to the roadway)**



NOT TO SCALE

**Type Q (CA) Object Marker (Type 1)
 (obstructions within the roadway)**



**Type R (CA) Object Marker (Type 1)
 (obstructions within the roadway)**

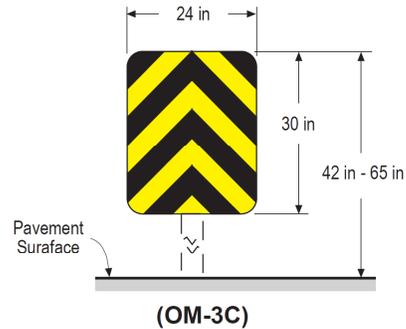


Figure 2C-101 (CA). Determination of Comfortable Speed From Ball Bank Indicator Readings

Driver _____ Co. _____ Rte. _____ PM _____
 Observer _____ Sta. _____ To _____
 Vehicle _____ Min. Sight Dist. Thru Curve _____ Direction _____
 Date _____ Approach Speed _____ Weather _____
 (Estimated or Observed) _____

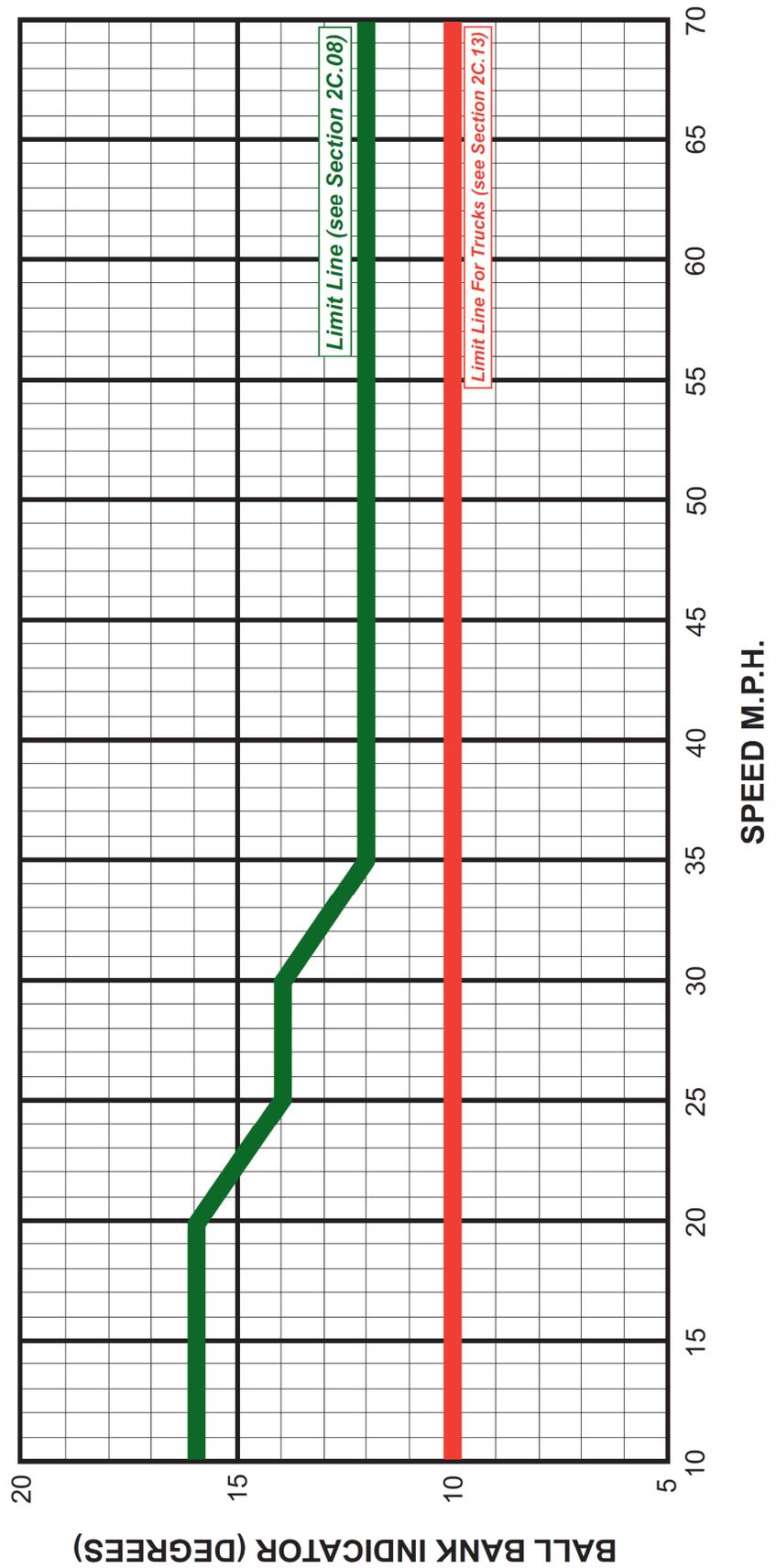


Table 2C-1. Categories of Warning Signs and Plaques

Category	Group	Section	Signs or Plaques	Sign Designations
Roadway Related	Changes in Horizontal Alignment	2C.07	Turn, Curve, Reverse Turn, Reverse Curve, Winding Road, Hairpin Curve, 270-Degree Curve	W1-1,2,3,4,5,11,15
		2C.08	Advisory Speed	W13-1P
		2C.09	Chevron Alignment	W1-8
		2C.10	Combination Horizontal Alignment/Advisory Speed	W1-1a,2a
		2C.11	Combination Horizontal Alignment/Intersection	W1-10,10a,10b,10c,10d
		2C.12	Large Arrow (one direction)	W1-6
		2C.13	Truck Rollover	W1-13
		2C.14	Advisory Exit or Ramp Speed	W13-2,3
	Vertical Alignment	2C.15	Combination Horizontal Alignment/Advisory Exit or Ramp Speed	W13-6,7
		2C.16	Hill	W7-1,1a,2P,2bP,3P,3aP,3bP
		2C.17	Truck Escape Ramp	W7-4,4b,4c,4dP,4eP,4fP
	Cross Section	2C.18	Hill Blocks View	W7-6
		2C.19	Road Narrows	W5-1
		2C.20,21	Narrow Bridge, One Lane Bridge	W5-2,3
		2C.22,23,25	Divided Highway, Divided Highway Ends, Double Arrow	W6-1,2; W12-1
		2C.24	Freeway or Expressway Ends, All Traffic Must Exit	W19-1,2,3,4,5
		2C.26	Dead End, No Outlet	W14-1,1a,2,2a
		2C.27	Low Clearance	W12-2,2a
	Roadway Surface Condition	2C.28,29	Bump, Dip, Speed Hump	W8-1,2; W17-1
		2C.30	Pavement Ends	W8-3
2C.31		Shoulder, Uneven Lanes	W8-4,9,11,17,17P,23,25	
2C.32		Slippery When Wet, Loose Gravel, Rough Road, Bridge Ices Before Road, Fallen Rocks	W8-5,7,8,13,44	
2C.33		Grooved Pavement, Metal Bridge Deck	W8-15,15P,16	
2C.34		No Center Line	W8-12	
Weather	2C.35	Road May Flood, Flood Gauge, Gusty Winds Area, Fog Area	W8-18,19,21,22	
Traffic Related	Advance Traffic Control	2C.36-39	Stop Ahead, Yield Ahead, Signal Ahead, Be Prepared To Stop, Speed Reduction, Drawbridge Ahead, Ramp Meter Ahead	W3-1,2,3,4,5,5a,6,7,8
	Traffic Flow	2C.40-45	Merge, No Merge Area, Lane Ends, Added Lane, Two-Way Traffic, Right Lane Exit Only Ahead, No Passing Zone	W4-1,2,3,5,5P,6; W6-3; W9-1,2,7; W14-3
	Intersections	2C.46	Cross Road, Side Road, T, Y, Circular Intersection, Side Roads	W2-1,2,3,4,5,6,7,8; W16-12P,17P
		2C.47	Large Arrow (two directions)	W1-7
		2C.48	Oncoming Extended Green	W25-1,2
	Vehicular Traffic	2C.49	Truck Crossing, Truck (symbol), Emergency Vehicle, Tractor, Bicycle, Golf Cart, Horse-Drawn Vehicle, Trail Crossing	W8-6; W11-1,5,5a,8,10,11,12P,14,15,15P,15a; W16-13P
	Non-Vehicular	2C.50,51	Pedestrian, Deer, Cattle, Snowmobile, Equestrian, Wheelchair, Large Animals, Playground	W11-2,3,4,6,7,9,16,17,18,19,20,21,22; W15-1; W16-13P
New	2C.52	New Traffic Pattern Ahead	W23-2	
Other Supplemental Plaques	Location	2C.53	Downward Diagonal Arrow, Ahead	W16-7P,9P
	HOV	2C.53	High-Occupancy Vehicle	W16-11P
	Distance	2C.55	XX Feet, XX Miles, Next XX Feet, Next XX Miles	W7-3aP; W16-2P,2aP,3P,3aP,4P
	Arrow	2C.56	Advance Arrow, Directional Arrow	W16-5P,6P
	Street Name Plaque	2C.58	Advance Street Name	W16-8P,8aP
	Intersection	2C.59	Cross Traffic Does Not Stop	W4-4P,4aP,4bP
	Share The Road	2C.60	Share The Road	W16-1P
	Photo Enforced	2C.61	Photo Enforced	W16-10P,10aP
New	2C.62	New	W16-15P	

Table 2C-2. Warning Sign and Plaque Sizes (Sheet 1 of 3)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Horizontal Alignment	W1-1,2,3,4,5	2C.07	30 x 30*	36 x 36	36 x 36	36 x 36	—	48 x 48
Combination Horizontal Alignment/Advisory Speed	W1-1a,2a	2C.10	36 x 36	36 x 36	48 x 48	48 x 48	—	48 x 48
One-Direction Large Arrow	W1-6	2C.12	48 x 24	48 x 24	60 x 30	60 x 30	—	60 x 30
Two-Direction Large Arrow	W1-7	2C.47	48 x 24	48 x 24	—	—	—	60 x 30
Chevron Alignment	W1-8	2C.09	18 x 24	18 x 24	30 x 36	36 x 48	—	24 x 30
Combination Horizontal Alignment/Intersection	W1-10,10a,10b,10c,10d,10e	2C.11	36 x 36	36 x 36	36 x 36	48 x 48	—	—
Hairpin Curve	W1-11	2C.07	30 x 30	30 x 30	36 x 36	48 x 48	—	48 x 48
Truck Rollover	W1-13	2C.13	36 x 36	36 x 36	36 x 36	48 x 48	—	36 x 36
270-degree Loop	W1-15	2C.07	30 x 30	30 x 30	36 x 36	48 x 48	—	48 x 48
Intersection Warning	W2-1,2,3,4,5,6,7,8	2C.46	30 x 30	30 x 30	36 x 36	—	24 x 24	48 x 48
Advanced Traffic Control	W3-1,2,3	2C.36	30 x 30	30 x 30	48 x 48	48 x 48	30 x 30	—
Be Prepared to Stop	W3-4	2C.36	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30	—
Reduced Speed Limit Ahead	W3-5	2C.38	36 x 36	36 x 36	48 x 48	48 x 48	—	—
XX MPH Speed Zone Ahead	W3-5a	2C.38	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Draw Bridge	W3-6	2C.39	36 x 36	36 x 36	48 x 48	—	—	60 x 60
Ramp Meter Ahead	W3-7	2C.37	36 x 36	36 x 36	—	—	—	—
Ramp Metered When Flashing	W3-8	2C.37	36 x 36	36 x 36	—	—	—	—
Merge	W4-1	2C.40	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Lane Ends	W4-2	2C.42	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Added Lane	W4-3	2C.41	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Cross Traffic Does Not Stop (plaque)	W4-4P	2C.59	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Traffic From Left (Right) Does Not Stop (plaque)	W4-4aP	2C.59	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Oncoming Traffic Does Not Stop (plaque)	W4-4bP	2C.59	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Entering Roadway Merge	W4-5	2C.40	36 x 36	36 x 36	48 x 48	—	—	—
No Merge Area (plaque)	W4-5P	2C.40	18 x 24	18 x 24	24 x 30	—	—	—
Entering Roadway Added Lane	W4-6	2C.41	36 x 36	36 x 36	48 x 48	—	—	—
Road Narrows	W5-1	2C.19	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Narrow Bridge	W5-2	2C.20	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
One Lane Bridge	W5-3	2C.21	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Divided Highway	W6-1	2C.22	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Divided Highway Ends	W6-2	2C.23	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Two-Way Traffic	W6-3	2C.44	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Hill	W7-1	2C.16	30 x 30*	36 x 36	36 x 36	36 x 36	24 x 24*	48 x 48
Hill with Grade	W7-1a	2C.16	30 x 30*	36 x 36	36 x 36	36 x 36	24 x 24*	48 x 48
Use Low Gear (plaque)	W7-2P	2C.57	24 x 18	24 x 18	—	—	—	—
Trucks Use Lower Gear (plaque)	W7-2bP	2C.57	24 x 18	24 x 18	—	—	—	—
XX% Grade (plaque)	W7-3P	2C.57	24 x 18	24 x 18	—	—	—	—
Next XX Miles (plaque)	W7-3aP	2C.55	24 x 18	24 x 18	—	—	—	—
XX% Grade, XX Miles (plaque)	W7-3bP	2C.57	24 x 18	24 x 18	—	—	—	—
Runaway Truck Ramp XX Miles	W7-4	2C.17	78 x 48	78 x 48	78 x 48	78 x 48	—	—
Runaway Truck Ramp (with arrow)	W7-4b	2C.17	78 x 60	78 x 60	78 x 60	78 x 60	—	—
Truck Escape Ramp	W7-4c	2C.17	78 x 60	78 x 60	78 x 60	78 x 60	—	—
Sand, Gravel, Paved (plaques)	W7-4dP,4eP,4fP	2C.17	24 x 12	24 x 12	24 x 12	24 x 12	—	—
Hill Blocks View	W7-6	2C.18	30 x 30*	36 x 36	36 x 36	—	—	48 x 48
Bump or Dip	W8-1,2	2C.28	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48

Table 2C-2. Warning Sign and Plaque Sizes (Sheet 2 of 3)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Pavement Ends	W8-3	2C.30	36 x 36	36 x 36	48 x 48	—	30 x 30*	—
Soft Shoulder	W8-4	2C.31	36 x 36	36 x 36	48 x 48	48 x 48	24 x 24*	48 x 48
Slippery When Wet	W8-5	2C.32	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Road Condition (plaques)	W8-5P,5bP,5cP	2C.32	24 x 18	24 x 18	30 x 24	36 x 30	—	36 x 30
Ice	W8-5aP	2C.32	24 x 12	24 x 12	30 x 18	30 x 18	—	—
Truck Crossing	W8-6	2C.49	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Loose Gravel	W8-7	2C.32	36 x 36	36 x 36	36 x 36	—	24 x 24*	48 x 48
Rough Road	W8-8	2C.32	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Low Shoulder	W8-9	2C.31	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Uneven Lanes	W8-11	2C.32	36 x 36	36 x 36	36 x 36	48 x 48	—	48 x 48
No Center Line	W8-12	2C.34	36 x 36	36 x 36	36 x 36	48 x 48	—	—
Bridge Ices Before Road	W8-13	2C.32	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Fallen Rocks	W8-14	2C.32	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Grooved Pavement	W8-15	2C.33	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Motorcycle (plaque)	W8-15P	2C.33	24 x 18	24 x 18	30 x 24	36 x 30	—	36 x 30
Metal Bridge Deck	W8-16	2C.33	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Shoulder Drop Off (symbol)	W8-17	2C.31	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Shoulder Drop-Off (plaque)	W8-17P	2C.31	24 x 18	24 x 18	30 x 24	36 x 30	—	36 x 30
Road May Flood	W8-18	2C.35	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Flood Gauge	W8-19	2C.35	12 x 72	12 x 72	—	—	—	—
Gusty Winds Area	W8-21	2C.35	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Fog Area	W8-22	2C.35	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
No Shoulder	W8-23	2C.31	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Shoulder Ends	W8-25	2C.31	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Left (Right) Lane Ends	W9-1	2C.42	36 x 36	36 x 36	36 x 36	48 x 48	30 x 30*	48 x 48
Lane Ends Merge Left (Right)	W9-2	2C.42	36 x 36	36 x 36	36 x 36	48 x 48	30 x 30*	48 x 48
Right (Left) Lane Exit Only Ahead	W9-7	2C.43	132 x 72	132 x 72	132 x 72	132 x 72	—	—
Bicycle	W11-1	2C.49	30 x 30	30 x 30	36 x 36	—	24 x 24*	48 x 48
Pedestrian	W11-2	2C.50	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Large Animals	W11-3,4,16,17,18,19,20,21,22	2C.50	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Farm Vehicle	W11-5,5a	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Snowmobile	W11-6	2C.50	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Equestrian	W11-7	2C.50	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Emergency Vehicle	W11-8	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Handicapped	W11-9	2C.50	30 x 30*	36 x 36	36 x 36	—	—	48 x 48
Truck	W11-10	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Golf Cart	W11-11	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Emergency Signal Ahead (plaque)	W11-12P	2C.49	36 x 30	36 x 30	36 x 30	—	—	—
Horse-Drawn Vehicle	W11-14	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Bicycle / Pedestrian	W11-15	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Trail Crossing	W11-15a	2C.49	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Trail X-ing (plaque)	W11-15P	2C.49	24 x 18	24 x 18	30 x 24	—	—	36 x 30
Double Arrow	W12-1	2C.25	30 x 30*	36 x 36	36 x 36	—	—	—
Low Clearance (with arrows)	W12-2	2C.27	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Low Clearance	W12-2a	2C.27	78 x 24	78 x 24	—	—	—	—
Advisory Speed (plaque)	W13-1P	2C.08	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
Advisory Exit or Ramp Speed	W13-2,3	2C.14	24 x 30	24 x 30	36 x 48	36 x 48	—	48 x 60
Combination Horizontal Alignment/Advisory Exit or Ramp Speed	W13-6,7	2C.15	24 x 42	24 x 42	36 x 60	36 x 60	—	48 x 84
Dead End, No Outlet	W14-1,2	2C.26	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48

Table 2C-2. Warning Sign and Plaque Sizes (Sheet 3 of 3)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Dead End, No Outlet (with arrow)	W14-1a,2a	2C.26	36 x 8	36 x 8	—	—	—	—
No Passing Zone (pennant)	W14-3	2C.45	48 x 48 x 36	48 x 48 x 36	—	—	40 x 40 x 30	64 x 64 x 48
Playground	W15-1	2C.51	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Share the Road (plaque)	W16-1P	2C.60	18 x 24	18 x 24	24 x 30	—	—	24 x 30
XX Feet	W16-2P	2C.55	24 x 18	24 x 18	—	—	—	30 x 24
XX Ft	W16-2aP	2C.55	24 x 12	24 x 12	—	—	—	30 x 18
XX Miles (2-line plaque)	W16-3P	2C.55	30 x 24	30 x 24	—	—	—	—
XX Miles (1-line plaque)	W16-3aP	2C.55	30 x 12	30 x 12	—	—	—	—
Next XX Feet (plaque)	W16-4P	2C.55	30 x 24	30 x 24	—	—	—	—
Supplemental Arrow (plaque)	W16-5P,6P	2C.56	24 x 18	24 x 18	—	—	—	—
Downward Diagonal Arrow (plaque)	W16-7P	2C.50	24 x 12	24 x 12	—	—	—	30 x 18
Advance Street Name (1-line plaque)	W16-8P	2C.58	Varies x 8	Varies x 8	—	—	—	—
Advance Street Name (2-line plaque)	W16-8aP	2C.58	Varies x 15	Varies x 15	—	—	—	—
Ahead (plaque)	W16-9P	2C.50	24 x 12	24 x 12	30 x 18	—	—	—
Photo Enforced (symbol plaque)	W16-10P	2C.61	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Photo Enforced (plaque)	W16-10aP	2C.61	24 x 18	24 x 18	36 x 30	—	—	48 x 36
HOV (plaque)	W16-11P	2G.09	24 x 12	24 x 12	30 x 18	—	—	30 x 18
Traffic Circle (plaque)	W16-12P	2C.46	24 x 18	24 x 18	—	—	—	—
When Flashing (plaque)	W16-13P	2C.50	24 x 18	24 x 18				
New (plaque)	W16-15P	2C.62	24 x 12	24 x 12	—	—	—	—
Roundabout (plaque)	W16-17P	2C.46	24 x 12	24 x 12	—	—	—	—
NOTICE	W16-18P	2A.15	24 x 12	24 x 12	—	—	—	—
Speed Hump	W17-1	2C.29	30 x 30*	36 x 36	—	—	24 x 24*	48 x 48
Freeway Ends XX Miles	W19-1	2C.24	—	—	—	144 x 48	—	—
Expressway Ends XX Miles	W19-2	2C.24	—	—	144 x 48	—	—	—
Freeway Ends	W19-3	2C.24	—	—	—	48 x 48	—	—
Expressway Ends	W19-4	2C.24	—	—	48 x 48	—	—	—
All Traffic Must Exit	W19-5	2C.24	—	—	90 x 48	90 x 48	—	—
New Traffic Pattern Ahead	W23-2	2C.52	36 x 36	36 x 36	—	—	—	—
Traffic Signal Extended Green	W25-1,2	2C.48	24 x 30	24 x 30				

Table 2C-2(CA). California Warning Sign and Plaque Sizes (Sheet 1 of 2)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Combination Reverse Turn/Advisory Speed	W4-1(CA)	2C.07, 2C.10	48X48	48X48	60X60	60X60	---	72X72 96X96
Combination Hairpin Curve/Advisory Speed	W4-10(CA)	2C.07, 2C.10	48X48	48X48	60X60	60X60	---	72X72 96X96
Combination 270-degree Loop/Advisory Speed	W4-14(CA)	2C.07	48X48	48X48	60X60	60X60	---	72X72 96X96
Combination Reverse Curve/Advisory Speed	W4-18(CA)	2C.07, 2C.10	48X48	48X48	60X60	60X60	---	72X72 96X96
Combination Truck Rollover Warning/Advisory Speed	W4-22(CA)	2C.07, 2C.10	72X72	72X72	72X72	72X72	---	96X96
Weight Limit	W20(CA)	2B.59	30X36	30X36	36X48	36X48	---	---
Weight Limit	W20A(CA)	2B.59	30X30	30X30	36X40	36X40	---	---
DEEP GRAVEL	W30B(CA)	2C.17	36X36	36X36	36X36	36X36	---	---
RIGHT(LEFT) EXIT	W30C(CA)	2C.17	---	---	114X24	114X24	78X18	---
END	W31(CA)	2C.26, 2C.66	30X30	30X30	30X30	30X30	24X24	---
ROAD ENDS ___ FT	W31A(CA)	2C.26	30X30	30X30	36X36	36X36	24X24	---
Distance Ahead plaque	W34A(CA)	2C.27, 2C.55	36X30	36X30	48X36	48X36	---	60X48
CAUTION VERTICAL CLEARANCE ___' ___" Arrow	W34C(CA)	2C.27	36X54	36X54	48X72	48X72	---	---
SLIDE AREA	W38(CA)	2C.32	30X30	30X30	48X48	48X48	---	---
TWO WAY TRAFFIC plaque	W44A(CA)	2C.44	36X24	36X24	---	---	---	---
Rock Slide Area	W50-1(CA)	2C.32	36X36	36X36	48X48	48X48	---	---
SLOW TRUCKS	W51(CA)	2C.16	48X48	48X48	48X48	48X48	---	72X72
FLOODED	W55(CA)	2C.35	30X30	30X30	36X36	36X36	---	---
END FREEWAY _____ MI	W69(CA)	2C.46	---	---	---	60X60	---	---
CROSS TRAFFIC AHEAD	W70(CA)	2C.46	---	---	60X60	---	---	---
RIGHT(LEFT) LANE EXITS AHEAD	W73(CA)	2C.42	---	---	48X48	48X48	36X36	60X60
RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD	W73A(CA)	2C.40, 2C.42	36X36	36X36	48X48	---	---	60X60
THRU TRAFFIC MERGE LEFT (RIGHT)	W74(CA)	2B.20, 2C.40, 2C.42	36X36	36X36	48X48	48X48	---	60X60
PASS WITH CARE	W83(CA)	2C.44	24X30	24X30	36X45	36X45	---	---
WATCH DOWNHILL SPEED	SW4-1(CA)	2C.57	72X72	72X72	72X72	72X72	---	---
TRAILERS-CAMPERS-GUSTY WIND AREA NEXT _____ MILES	SW17-1(CA)	2C.38	132X48	132X48	132X48	132X48	---	---
WINDING LEVEE ROAD	SW22-1(CA)	2C.07	42X42	42X42	---	---	---	---
Speed/Distance plaque	SW22-1A(CA)	2C.07	30X18	30X18	30X18	30X18	---	---
SIGNAL/STOP AHEAD Arrow	SW26(CA)	2C.36	60X60	72X72	72X72	72X72 (ramps)	---	96X96
DRIFTING SAND	SW32(CA)	2C.32	36X36	36X36	48X48	48X48	30X30	---
FLASH FLOOD AREA	SW35(CA)	2C.35	36X36	36X36	36X36	36X36	---	---
END FREEWAY	SW36(CA)	2C.46	48X48	48X48	48X48	48X48	---	---
TUNNEL	SW37(CA)	2C.20	30X30	30X30	30X30	30X30	---	---
DEAF CHILDREN NEAR	SW38(CA)	2C.50	30X30	30X30	30X30	---	24X24	---
SNOW SLIDE AREA	SW41(CA)	2C.32	36X36	36X36	48X48	48X48	30X30	---
Downward Arrow	SW44(CA)	2C.19	36X36	36X36	48X48	48X48	30X30	---

Table 2C-2(CA). California Warning Sign and Plaque Sizes (Sheet 2 of 2)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
WATCH FOR SNOW SLIPPERY	SW46(CA)	2C.32	36X36	36X36	48X48	48X48	---	---
OFF HIGHWAY VEHICLES	SW47(CA)	2C.49	36X36	36X36	36X36	---	30X30	---
TRACTOR-SEMIS OVER ___ FEET KINGPIN TO REAR AXLE NOT ADVISED	SW48(CA)	2C.07	48X36	48X36	72X54	72X54	---	---
NEXT RIGHT	SW48-1(CA)	2C.07	48X12	48X12	72X18	72X18	---	---
PLAYGROUND	SW49(CA)	2C.51	36X12	36X12	36X12	---	---	---
SENIOR CITIZEN FACILITY	SW50(CA)	2C.50	36X24	36X24	36X24	---	---	---
EMERGENCY VEHICLES	SW52(CA)	2C.49	42X42	42X42	48X48	48X48	30X30	---
WATCH FOR SNOW REMOVAL EQUIPMENT	SW58(CA)	2C.49	36X36	36X36	54X48	54X48	---	---
Migrating Bears	SW59(CA)	2C.50	36X36	36X36	48X48	48X48	30X30	---
WATCH FOR STOPPED VEHICLES	SW60(CA)	2C.36	36X36	36X36	48X48	48X48	---	---

Table 2C-3. Minimum Size of Supplemental Warning Plaques

Size of Warning Sign	Size of Supplemental Plaque			
	Rectangular			Square
	1 Line	2 Lines	Arrow	
24 x 24	24 x 12	24 x 18	24 x 12	18 x 18
30 x 30				
36 x 36	30 x 18	30 x 24	30 x 18	24 x 24
48 x 48				

Notes: 1. Larger supplemental plaques may be used when appropriate
 2. Dimensions in inches are shown as width x height

Table 2C-4. Guidelines for Advance Placement of Warning Signs

Posted or 85th-Percentile Speed	Advance Placement Distance ¹								
	Condition A: Speed reduction and lane changing in heavy traffic ²	Condition B: Deceleration to the listed advisory speed (mph) for the condition							
		0 ³	10 ⁴	20 ⁴	30 ⁴	40 ⁴	50 ⁴	60 ⁴	70 ⁴
20 mph	225 ft	100 ft ⁶	N/A ⁵	—	—	—	—	—	—
25 mph	325 ft	100 ft ⁶	N/A ⁵	N/A ⁵	—	—	—	—	—
30 mph	460 ft	100 ft ⁶	N/A ⁵	N/A ⁵	—	—	—	—	—
35 mph	565 ft	100 ft ⁶	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—
40 mph	670 ft	125 ft	100 ft ⁶	100 ft ⁶	N/A ⁵	—	—	—	—
45 mph	775 ft	175 ft	125 ft	100 ft ⁶	100 ft ⁶	N/A ⁵	—	—	—
50 mph	885 ft	250 ft	200 ft	175 ft	125 ft	100 ft ⁶	—	—	—
55 mph	990 ft	325 ft	275 ft	225 ft	200 ft	125 ft	N/A ⁵	—	—
60 mph	1,100 ft	400 ft	350 ft	325 ft	275 ft	200 ft	100 ft ⁶	—	—
65 mph	1,200 ft	475 ft	450 ft	400 ft	350 ft	275 ft	200 ft	100 ft ⁶	—
70 mph	1,250 ft	550 ft	525 ft	500 ft	450 ft	375 ft	275 ft	150 ft	—
75 mph	1,350 ft	650 ft	625 ft	600 ft	550 ft	475 ft	375 ft	250 ft	100 ft ⁶

¹ The distances are adjusted for a sign legibility distance of 180 feet for Condition A. The distances for Condition B have been adjusted for a sign legibility distance of 250 feet, which is appropriate for an alignment warning symbol sign. For Conditions A and B, warning signs with less than 6-inch legend or more than four words, a minimum of 100 feet should be added to the advance placement distance to provide adequate legibility of the warning sign.

² Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PRT of 14.0 to 14.5 seconds for vehicle maneuvers (2005 AASHTO Policy, Exhibit 3-3, Decision Sight Distance, Avoidance Maneuver E) minus the legibility distance of 180 feet for the appropriate sign.

³ Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2005 AASHTO Policy, Exhibit 3-1, Stopping Sight Distance, providing a PRT of 2.5 seconds, a deceleration rate of 11.2 feet/second², minus the sign legibility distance of 180 feet.

⁴ Typical conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance is determined by providing a 2.5 second PRT, a vehicle deceleration rate of 10 feet/second², minus the sign legibility distance of 250 feet.

⁵ No suggested distances are provided for these speeds, as the placement location is dependent on site conditions and other signing. An alignment warning sign may be placed anywhere from the point of curvature up to 100 feet in advance of the curve. However, the alignment warning sign should be installed in advance of the curve and at least 100 feet from any other signs.

⁶ The minimum advance placement distance is listed as 100 feet to provide adequate spacing between signs.

Table 2C-5. Horizontal Alignment Sign Selection

Type of Horizontal Alignment Sign	Difference Between Speed Limit and Advisory Speed				
	5 mph	10 mph	15 mph	20 mph	25 mph or more
Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), and Combination Horizontal Alignment/Intersection (W1-6) (W1-10) (see Section 2C.07 to determine which sign to use)	Recommended	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Recommended	Required	Required	Required	Required
Chevrons (W1-8) and/or One Direction Large Arrow (W1-6)	Optional	Recommended	Required	Required	Required
Exit Speed (W13-2) and Ramp Speed (W13-3) on exit ramp	Optional	Optional	Recommended	Required	Required

Table 2C-6. Typical Spacing of Chevron Alignment Signs on Horizontal Curves

Advisory Speed	Curve Radius	Sign Spacing
15 mph or less	Less than 200 feet	40 feet
20 to 30 mph	200 to 400 feet	80 feet
35 to 45 mph	401 to 700 feet	120 feet
50 to 60 mph	701 to 1,250 feet	160 feet
More than 60 mph	More than 1,250 feet	200 feet

Note: The relationship between the curve radius and the advisory speed shown in this table should not be used to determine the advisory speed.

Table 2C-101(CA). California Object Markers

Object Marker	California Designation	MUTCD Designation	Section
Typical CA Type K Object Marker	K-1(CA)	OM2-2H	2C.63, 2C.65
Typical CA Type K Object Marker	K-2(CA)	OM2-2V	2C.63, 2C.65
Typical CA Type L Object Marker	L-1(CA)	OM2-2V	2C.63, 2C.65
Typical CA Type L Object Marker	L-2(CA)	OM2-2V	2C.63, 2C.65
Typical CA Type N Object Marker	N-1(CA)	OM1-3	2C.12, 2C.47, 2C.63, 2C.64, 2C.65, 6F.105(CA)
Typical End-of-Roadway Marker	N-2(CA)	OM4-3	2C.26, 2C.66
Typical CA Type P Object Marker	P(CA)	OM-3L and OM-3R	2C.63, 2C.64, 6F.105(CA)
Typical CA Type Q Object Marker	Q(CA)	None	2C.63, 2C.64
Typical CA Type R Object Marker	R(CA)	OM-3C	2C.63, 2C.64
Typical CA Type L Object Marker	Utility Pole	None	2C.63, 2C.65

CHAPTER 2D. GUIDE SIGNS—CONVENTIONAL ROADS

Section 2D.01 Scope of Conventional Road Guide Sign Standards

Standard:

01 **The provisions of this Chapter shall apply to [expressways, freeways](#), any road or street other than low-volume roads (as defined in Section 5A.01), ~~expressways, and freeways~~ and [except as provided for under Chapter 2E](#).**

Section 2D.02 Application

Support:

01 Guide signs are essential to direct road users along streets and highways, to inform them of intersecting routes, to direct them to cities, towns, villages, or other important destinations, to identify nearby rivers and streams, parks, forests, and historical sites, and generally to give such information as will help them along their way in the most simple, direct manner possible.

02 Chapter 2A addresses placement, location, and other general criteria for signs.

03 [Guide signs are not intended to replace maps or substitute for adequate trip planning by road users.](#)

Section 2D.03 Color, Retroreflection, and Illumination

Support:

01 Requirements for illumination, retroreflection, and color are stated under the specific headings for individual guide signs or groups of signs. General provisions are given in Sections 2A.07, 2A.08, and 2A.10.

Standard:

02 **Except where otherwise provided in this Manual for individual signs or groups of signs, guide signs on streets and highways shall have a white message and border on a green background. All messages, borders, and legends shall be retroreflective and all backgrounds shall be retroreflective or illuminated.**

Support:

03 Color coding is sometimes used to help road users distinguish between multiple potentially confusing destinations. Examples of valuable uses of color coding include guide signs for roadways approaching or inside an airport property with multiple terminals serving multiple airlines, and community wayfinding guide signs for various traffic generator destinations within a community or area.

Standard:

04 **Except where otherwise provided in this Manual, different color sign backgrounds shall not be used to provide color coding of destinations. The color coding shall be accomplished by the use of different colored square or rectangular sign panels on the face of the guide signs.**

Option:

05 The different colored sign panels may include a black or white (whichever provides the better contrast with the panel color) letter, numeral, or other appropriate designation to identify an airport terminal or other destination.

Support:

06 Two examples of color-coded sign assemblies are shown in Figure 2D-1. Section 2D.50 contains specific provisions regarding Community Wayfinding guide signs.

[Overhead Guide Sign Illumination Policy](#)

Guidance:

07 *Fixed-lighting should be used to illuminate signs unless retroreflective luminance from headlights provides effective nighttime legibility. The type of fixed-lighting chosen should provide effective and reasonably uniform illumination of the sign face and message.*

Standard:

08 **In conjunction with the requirement for retroreflective backgrounds, the [Overhead Guide Sign Illumination policy](#) shall apply to all existing and new overhead guide signs.**

Support:

09 In all applications of the policy, engineering judgment must be exercised. The purpose of the policy is to provide for uniform application of signs statewide. The intent is to make signs conspicuous (target value) and legible to motorists. The policy is consistent with federal requirements.

Existing Overhead Signs

Guidance:

10 *Currently lighted signs with opaque backgrounds should remain lighted.*

Option:

11 *Currently unlighted opaque signs may be lighted. Retrofit-walkways for fixed –lighting systems need to be checked for proper clearance to the roadway.*

Standard:

12 **Signs with opaque backgrounds shall be replaced with new signs with retroreflective backgrounds, legends and borders when the old signs have reached the end of their useful life or are replaced for other reasons.**

Guidance:

13 *Fixed-lighting should be used to illuminate signs with retroreflective backgrounds, legends and borders unless retroreflective luminance from headlights provides effective nighttime legibility*

New Overhead Signs

Standard:

14 **Signs shall have retroreflective backgrounds, legends and borders.**

Guidance:

15 *Fixed-lighting should be used to illuminate signs unless retroreflective luminance from headlights provides effective nighttime legibility.*

Standard:

16 **Basic components for fixed-lighting systems shall be provided even if lights are not planned initially.**

Guidance:

17 *Signs should be designed and mounted as if lights were installed, as it could be necessary to provide fixed-lighting for the sign at some future date.*

Fixed-lighting Systems

Guidance:

18 *Energy conservation systems should be considered for fixed-lighting.*

Engineering Considerations

Guidance:

19 *The following criteria should be considered in determining which signs should be lighted:*

- A. *Signs skewed or otherwise positioned relative to traffic so as to render retroreflective luminance from headlights ineffective.*
- B. *Signs that for some other reason are not legible when illuminated by vehicle headlights.*
- C. *Signs adjacent to other signs requiring or having fixed-lighting.*
- D. *Signs in advance of ramps in urban areas with heavy traffic during the evening peak period.*

Energy Conservation Measures for Guide Signs

Guidance:

20 *All non-action guide sign lighting (Interchange Sequence (G23(CA) Series) signs) should be turned off, except in special situations where motorist safety could be affected.*

21 *Following are some situations where engineering judgment should be used to determine if illumination should be maintained:*

- A. *Locations prone to heavy fog or poor visibility.*
- B. *Signs in work zones or in the proximity of work zones.*
- C. *Non-action guide signs adjacent to other signs that must be lighted.*

22 *All G21(CA) Series, G24(CA) Series, G83(CA) Series, G85(CA) Series and G86(CA) Series and other action guide signs should remain lighted on highways.*

23 *When illuminated, lights should be replaced with energy efficient fixtures on highways.*

Standard:

²⁴ New overhead guide sign structure designs shall include appropriate conduit, pull boxes, and fixture attachment points for the future installation of sign lighting, if and when needed.

Section 2D.04 Size of Signs

Standard:

⁰¹ Except as provided in Section 2A.11, the sizes of conventional road guide signs that have standardized designs shall be as shown in Table 2D-1 and 2D-1(CA).

Support:

⁰² Section 2A.11 contains information regarding the applicability of the various columns in Table 2D-1 and 2D-1(CA).

Option:

⁰³ Signs larger than those shown in Table 2D-1 and 2D-1(CA) may be used (see Section 2A.11).

Support:

⁰⁴ For other guide signs, the legends are so variable that a standardized design or size is not appropriate. The sign size is determined primarily by the length of the message, and the size of lettering and spacing necessary for proper legibility.

Option:

⁰⁵ Reduced letter height, reduced interline spacing, and reduced edge spacing may be used on guide signs if sign size must be limited by factors such as lane width or vertical or lateral clearance.

Guidance:

⁰⁶ *Reduced spacing between the letters or words on a line of legend should not be used as a means of reducing the overall size of a guide sign, except where determined necessary by engineering judgment to meet unusual lateral space constraints. In such cases, the legibility distance of the sign legend should be the primary consideration in determining whether to reduce the spacing between the letters or the words or between the words and the sign border, or to reduce the letter height.*

⁰⁷ *When a reduction in the prescribed size is necessary, the design used should be as similar as possible to the design for the standard size.*

Support:

⁰⁸ Sign design details are contained in FHWA's "Standard Highway Signs and Markings" book and Department of Transportation's California Sign Specifications. See Section 1A.11 for information regarding these publications.

Section 2D.05 Lettering Style

Standard:

⁰¹ The design of upper-case letters, lower-case letters, numerals, route shields, and spacing shall be as provided in the "Standard Highway Signs and Markings" book (see Section 1A.11).

⁰² The lettering for names of places, streets, and highways on conventional road guide signs shall be a combination of lower-case letters with initial upper-case letters (see Section 2A.13). The nominal loop height of the lower-case letters shall be 3/4 the height of the initial upper-case letter. When a mixed-case legend letter height is specified referring only to the initial upper-case letter, the height of the lower-case letters that follow shall be determined by this proportion. When the height of a lower-case letter is referenced, the reference is made to the nominal loop height and the height of the initial upper-case letter shall also be determined by this proportion.

⁰³ All other word legends on conventional road guide signs shall be in upper-case letters.

⁰⁴ The unique letter forms for each of the Standard Alphabet series shall not be stretched, compressed, warped, or otherwise manipulated. Modifications to the length of a word for a given letter height and series shall be accomplished only by the methods described in Section 2D.04.

Section 2D.06 Size of Lettering

Support:

⁰¹ Sign legibility is a direct function of letter size and spacing. Legibility distance has to be sufficient to give road users enough time to read and comprehend the sign. Under optimum conditions, a guide sign message can

be read and understood in a brief glance. The legibility distance takes into account factors such as inattention, blocking of view by other vehicles, unfavorable weather, inferior eyesight, or other causes for delayed or slow reading. Where conditions permit, repetition of guide information on successive signs gives the road user more than one opportunity to obtain the information needed.

Standard:

02 Design layouts for conventional road guide signs showing interline spacing, edge spacing, and other specification details shall be as shown in the “Standard Highway Signs and Markings” book (see Section 1A.11).

03 The principal legend on guide signs shall be in letters and numerals at least 6 inches in height for all upper-case letters, or a combination of 6 inches in height for upper-case letters and 4.5 inches in height for lower-case letters. On low-volume roads (as defined in Section 5A.01) with speeds of 25 mph or less, and on urban streets with speeds of 25 mph or less, the principal legend shall be in letters at least 4 inches in height for all upper-case letters, or a combination of 4 inches in height for upper-case letters and 3 inches in height for lower-case letters.

Guidance:

04 Lettering sizes should be consistent on any particular class of highway.

05 The minimum lettering sizes provided in this Manual should be exceeded where conditions indicate a need for greater legibility.

Standard:

06 Design layouts for conventional road guide signs showing interline spacing, edge spacing, and other specification details shall be as shown in FHWA's “Standard Highway Signs and Markings” book and Department of Transportation's California Sign Specifications. See Section 1A.11 for information regarding these publications.

Section 2D.07 Amount of Legend

Support:

01 The longer the legend on a guide sign, the longer it will take road users to comprehend it, regardless of letter size.

Guidance:

02 Except where otherwise provided in this Manual, guide signs should be limited to no more than three lines of destinations, which include place names, route numbers, street names, and cardinal directions. Where two or more signs are included in the same overhead display, the amount of legend should be further minimized. Where appropriate, a distance message or action information, such as an exit number, NEXT RIGHT, or directional arrows, should be provided on guide signs in addition to the destinations.

Section 2D.08 Arrows

Support:

01 Arrows are used for lane assignment and to indicate the direction toward designated routes or destinations. Figure 2D-2 and 2D-2(CA) shows the various standard arrow designs that have been approved for use on guide signs. Detailed drawings and standardized sizes based on ranges of letter heights are shown for these arrows in the “Standard Highway Signs and Markings” book (see Section 1A.11) and in Figure 2D-2(CA).

Standard:

02 On overhead signs where it is desirable to indicate a lane to be followed, a down arrow shall be positioned approximately over the center of the lane and shall point vertically downward toward the approximate center of that lane. Down arrows shall be used only on overhead guide signs that restrict the use of specific lanes to traffic bound for the destination(s) and/or route(s) indicated by these arrows. Down arrows shall not be used unless an arrow can be located over and pointed to the approximate center of each lane that can be used to reach the destination displayed on the sign.

03 If down arrows are used, having more than one down arrow pointing to the same lane on a single overhead sign (or on multiple signs on the same overhead sign structure) shall not be permitted. 04 Where a roadway is leaving the through lanes, a directional arrow shall point upward at an angle that approximates the alignment of the exit roadway.

Option:

⁰⁵ Curved-stem arrows (see Figure 2D-8) that represent the intended driver paths to destinations involving left-turn movements may be used on guide signs on approaches to circular intersections.

Standard:

⁰⁶ **Curved-stem arrows shall not be used on any sign that is not associated with a circular intersection.**

Guidance:

⁰⁷ *If curved-stem arrows are used, the principles set forth in Sections 2D.26 through 2D.29 should be followed.*

⁰⁸ *The Type A directional arrow should be used on guide signs on freeways, expressways, and conventional roads to indicate the direction to a specific destination or group of destinations, except as otherwise provided in this Section and in Section 2E.19.*

⁰⁹ *When a directional arrow in a vertical, upward-pointing orientation is placed to the side of a group of destinations to indicate a through movement, the Type A directional arrow should be used. When a directional arrow in a vertical, upward-pointing orientation is placed to the side of a single destination or under a destination or group of destinations, the Type B directional arrow should be used.*

¹⁰ *The Type B directional arrow should be used on guide signs on conventional roads when placed at any angle to the side of a single destination or when placed in a horizontal orientation to the side of a group of destinations.*

¹¹ *The Type C advance turn directional arrow should be used on conventional road guide signs placed in advance of an intersection where a turn must be made to reach a posted destination or group of destinations.*

¹² *The Type D directional arrow should be used primarily for sign applications other than guide signs, except as provided in Paragraph ~~15~~ 16.*

Option:

¹³ The Type A-Extended directional arrow may be used on guide signs where additional emphasis regarding the direction is needed relative to the amount of legend on the sign.

¹⁴ The Type C directional arrow may be used to the side of the legend of an overhead guide sign to accentuate a sharp turn exit maneuver from a mainline roadway (see Section 2E.36 for additional information regarding Exit Direction signs for low advisory ramp speeds).

¹⁵ On conventional roads on the approach to an intersection where the Combination Lane-Use/Destination overhead guide sign (see Section 2D.33) is not used, the Type C advance turn directional arrow may be used beneath the legend of an overhead guide sign to indicate the fact that a turn must be made from a mandatory movement lane over which the sign is placed to reach the destination or destinations displayed on the sign.

¹⁶ The Type D directional arrow may be used on post-mounted guide signs on conventional roads with lower operating speeds if the height of the text on the sign is 8 inches or less.

¹⁷ The directional and down arrows shown in Figure 2D-2 and 2D-2(CA) may be used on signs other than guide signs for the purposes of providing directional guidance and lane assignment.

Guidance:

¹⁸ *Arrows used on guide signs to indicate the directions toward designated routes or destinations should be pointed at the appropriate angle to clearly convey the direction to be taken. A horizontally oriented directional arrow design should be used at right-angle intersections.*

¹⁹ *On a post-mounted guide sign, a directional arrow for a straight-through movement should point upward. Except as provided in Section 2D.46, for a turn, the arrow on a guide sign should point horizontally or at an upward angle that approximates the sharpness of the turn.*

²⁰ *At an exit, an arrow should be placed at the side of the sign that will reinforce the movement of exiting traffic. The directional arrow design should be used.*

Option:

²¹ Arrows may be placed below the principal sign legend or on the appropriate side of the legend.

²² On a post-mounted sign at an exit where placement of the arrow to the side of the legend farthest from the roadway would create an unusually wide sign that limits the road user's view of the arrow, the directional arrow may be placed at the bottom portion of the sign, centered under the legend.

Guidance:

²³ *The width across the arrowhead for the Types A, B, and C directional arrows should be between 1.5 and 1.75 times the height of the upper-case letters of the principal legend on the sign. The width across the arrowhead for the Type D directional arrow should be at least equal to the height of the upper-case letters of the principal*

legend on the sign. For down arrows used on overhead signs, the width across the arrowhead should be approximately two times the height of the upper-case letters of the principal legend on the sign.

²⁴ Arrows used in Overhead Arrow-per-Lane and Diagrammatic guide signing, if used on conventional roads, except for signs on approaches to roundabouts, should follow the principles set forth in Section 2E.19. Arrows used in Diagrammatic guide signing on approaches to roundabouts should follow the principles set forth in Section 2D.38.

Support:

²⁵ The “Standard Highway Signs and Markings” book (see Section 1A.11) contains design details and standardized sizes of the various arrows based on ranges of letter heights of principal legends.

Section 2D.09 Numbered Highway Systems

Support:

⁰¹ The purpose of numbering and signing highway systems is to identify routes and facilitate travel.

⁰² The Interstate and United States (U.S.) highway systems are numbered by the American Association of State Highway and Transportation Officials (AASHTO) upon recommendations of the State highway organizations because the respective States own these systems. State and county road systems are numbered by the appropriate authorities.

⁰³ The basic policy for numbering the Interstate and U.S. highway systems is contained in the following Purpose and Policy statements published by AASHTO (see Page i for AASHTO's address):

A. “Establishment and Development of United States Numbered Highways,” and

B. “Establishment of a Marking System of the Routes Comprising the National System of Interstate and Defense Highways.”

Guidance:

⁰⁴ *The principles of these policies should be followed in establishing the highway systems described in Paragraph 2 and any other systems, with effective coordination between adjacent jurisdictions. Care should be taken to avoid the use of numbers or other designations that have been assigned to Interstate, U.S., or State routes in the same geographic area. Overlapping numbered routes should be kept to a minimum.*

Standard:

⁰⁵ **Route systems shall be given preference in this order: Interstate, United States, State, and county. The preference shall be given by installing the highest-priority legend on the top or the left of the sign.**

Support:

⁰⁶ Section 2D.53 contains information regarding the signing of unnumbered highways to enhance route guidance and facilitate travel.

Support:

⁰⁷ The California Legislature designates all State highway routes and assigns route numbers. General descriptions and route numbers are listed in Chapter 2, Article 3, of the California Streets and Highways Code. The route numbers are used for all administrative purposes.

⁰⁸ It is the intent of the Legislature that the numbers on the route guide signs is the same as the designated route number. The routes are described with a general directional convention from south to north and from west to east. The direction and Legislative Route number are used in the State Highway Log, which is distributed annually by the Department of Transportation's Division of Traffic Operations.

⁰⁹ A specific location on any State highway is described by Post Mile designation. Post Miles information is available in the State Highway Log and is shown on Post Mile Maps distributed by the Department of Transportation's Division of Transportation System Information. Note that California has adopted a policy of metrication of all engineering plans and specifications. However, a decision has not yet been made to use metric kilometer posts in the Highway Log.

¹⁰ California has three route sign systems on State highways. Each system uses distinctive route signs and shields to inform motorists and to facilitate public travel. These route sign systems are shown on the State Highway Map published by the Department of Transportation. Route numbers in one system will not be duplicated on another system. However, to inform the traveling public, route signs from the State Sign system are posted on the other sign route systems to provide guidance when a break occurs in the State Sign Route.

- A. Interstate System: A network of planned Interstate freeways of national importance are owned and operated by the State. The American Association of State Highway and Transportation Officials (AASHTO) developed the numbering of Interstate routes with the concurrence of the states. Renumbering of a route requires the approval of AASHTO, which assures conformity with established numbering procedures. Renumbering is a system action that must be approved by the Federal Highway Administrator.
- B. United States Numbered Highway Routes: A network of highways of national importance that was created in 1926. These State highways are not necessarily freeways. An U. S. Numbered Route has no connection with Federal control. However, the U. S. Routes are eligible for federal-aid funding according to the route's functional classification. The AASHTO Special Committee on U. S. Route Numbering has full authority for numbering U. S. Routes, with the concurrence of the states.
- C. State Sign Routes: State maintained highways, other than the above-signed routes, are distinctively signed to serve intra-State and interstate travel.

¹¹ State Business Routes and Interstate Loops are established by Department of Transportation's District Directors.

¹² A Business Route generally is a local street or road in a city or urban area, designated by the same route number as the through Interstate, U.S., or State highway to which it is connected, with the words "Business Route" attached to the identifying route shields. The Business Route designation provides guidance for the traveling public to leave the main highway at one end of a city or urban area, patronize local businesses, and continue on to rejoin the main route at the opposite end of the city or urban area. The Department of Transportation's Division of Transportation System Information is responsible for approval of Business Route designations.

¹³ U.S. and Interstate Business Routes require AASHTO approval.

Option:

¹⁴ Applications may be made by memorandum.

Standard:

¹⁵ **Applications for Business Route designation and signing shall be made by written request from the local government agency to the Department of Transportation's Division of Transportation System Information. Applications shall include a written request for the route from those local agencies within and whose boundaries the route traverses.**

Guidance:

¹⁶ *A sketch, preferably on letter size stationary, showing the highway relocation and the business route or loop, should be included.*

Standard:

¹⁷ **Submission for AASHTO approval shall be made by Department of Transportation, Headquarters. Continuous business route signing shall be provided through the bypassed area and back to the highway. If a business route is approved prior to relinquishment, Department of Transportation shall install BUSINESS (M4-3) auxiliary signs or Off-Interstate Business Loop (M1-2) markers. After relinquishment, they shall be installed by the local agency involved.**

Section 2D.10 Route Signs and Auxiliary Signs

Standard:

⁰¹ **All numbered highway routes shall be identified by route signs and auxiliary signs.**

⁰² **The signs for each system of numbered highways, which are distinctive in shape and color, shall be used only on that system and the approaches thereto.**

Option:

⁰³ Route signs and auxiliary signs may be proportionally enlarged where greater legibility is needed.

Support:

⁰⁴ Route signs are typically mounted in assemblies with auxiliary signs.

⁰⁵ Section 2D.55 contains information regarding the signing for National Scenic Byways.

⁰⁶ Section 2H.07 contains information regarding the signing for Auto Tour Routes.

Section 2D.11 Design of Route Signs

Standard:

⁰¹ The “Standard Highway Signs and Markings” book (see Section 1A.11) shall be used for designing route signs. Other route sign designs shall be established by the authority having jurisdiction.

⁰² Interstate Route signs (see Figure 2D-3) shall consist of a cutout shield, with the route number in white letters on a blue background, the word INTERSTATE in white upper-case letters on a red background, and a white border. This sign shall be used on all Interstate routes and in connection with route sign assemblies on intersecting highways.

Guidance:

⁰³ A 24 x 24-inch minimum sign size ~~shall~~ *should* be used for Interstate route numbers with one or two digits, and a 30 x 24-inch minimum sign size ~~shall~~ *should* be used for Interstate route numbers having three digits.

Support:

^{03a} Route shield sizes shown in Table 2D-101(CA) are lower than the above sizes.

Option:

⁰⁴ Interstate Route signs may contain the State name in white upper-case letters on a blue background.

Standard:

⁰⁵ Off-Interstate Business Route signs (see Figure 2D-3) shall consist of a cutout shield carrying the number of the connecting Interstate route and the words BUSINESS and either LOOP or SPUR in upper-case letters. The legend and border shall be white on a green background, and the shield shall be the same shape and dimensions as the Interstate Route sign. In no instance shall the word INTERSTATE appear on the Off-Interstate Business Route sign.

Option:

⁰⁶ The Off-Interstate Business Route sign may be used on a major highway that is not a part of the Interstate system, but one that serves the business area of a city from an interchange on the system.

⁰⁷ When used on a green guide sign, a white square or rectangle may be placed behind the shield to improve contrast.

Standard:

~~⁰⁸ U.S. Route signs (see Figure 2D-3) shall consist of black numerals on a white shield surrounded by a rectangular black background without a border. This sign shall be used on all U.S. routes and in connection with route sign assemblies on intersecting highways.~~

~~⁰⁹ A 24 x 24-inch minimum sign size shall be used for U.S. route numbers with one or two digits, and a 30 x 24-inch minimum sign size shall be used for U.S. route numbers having three digits.~~

^{09a} The U. S. Route Shield (G26-1(CA)) or U. S. Route Marker (G26-2(CA)) shall be used instead with sizes as shown in Table 2D-101(CA).

¹⁰ State Route signs shall be designed by the individual State highway agencies.

Guidance:

~~¹¹ State Route signs (see Figure 2D-3) should be rectangular and should be approximately the same size as the U.S. Route sign. State Route signs should also be similar to the U.S. Route sign by containing approximately the same size black numerals on a white area surrounded by a rectangular black background without a border. The shape of the white area should be circular in the absence of any determination to the contrary by the individual State concerned.~~

^{11a} The State Route Shield (G28-1(CA)) or State Route Marker (G28-2(CA)) shall be used instead with sizes as shown in Table 2D-101(CA).

¹² Where U.S. or State Route signs are used as components of guide signs, only the distinctive shape of the shield itself and the route numerals within should be used. The rectangular background upon which the distinctive shape of the shield is mounted, such as the black area around the outside of the shields on the M1-4 and standard M1-5 signs, should not be included on the guide sign. Where U.S. or State Route signs are used as components of other signs of non-contrasting background colors, the rectangular background should be used so that recognition of the distinctive shape of the shield can be maintained.

Standard:

13 If county road authorities elect to establish and identify a special system of important county roads, a statewide policy for such signing shall be established that includes a uniform numbering system to uniquely identify each route. The County Route (M1-6) sign (see Figure 2D-3) shall consist of a pentagon shape with a yellow county name and route number and border on a blue background. County Route signs displaying two digits or the equivalent (letter and numeral, or two letters) shall be a minimum size of 18 x 18 inches; those carrying three digits or the equivalent shall be a minimum size of 24 x 24 inches.

14 If a jurisdiction uses letters instead of numbers to identify routes, all references to numbered routes in this Chapter shall be interpreted to also include lettered routes.

Guidance:

15 If used with other route signs in common assemblies, the County Route sign should be of a size compatible with that of the other route signs.

Option:

16 When used on a green guide sign, a yellow square or rectangle may be placed behind the County Route sign to improve contrast.

Standard:

17 Route signs (see Figure 2D-3) for park and forest roads shall be designed with adequate distinctiveness and legibility and of a size compatible with other route signs used in common assemblies.

Support:

18 The Route Shields are used on the face of guide signs. The Route Markers are used as stand-alone installations.

Guidance:

19 The U. S. Route Shield (G26-1(CA)), Interstate Route Shield (M1-1 or G27-1(CA)) or the State Route Shield (G28-1(CA)) should be used when they are placed on the face of a guide sign. These Route Shields should not be used for stand-alone installations.

20 The U. S. Route Marker (G26-2(CA)), Interstate CALIFORNIA Route Marker (G27-2(CA)) or the State Route Marker (G28-2(CA)) should be used for stand-alone installations as route markers. These Route Markers should not be used on the face of guide signs.

Support:

21 For Route Shield sizes, see Table 2D-101(CA).

22 For Route Shield and Marker sketches, see Figure 2D-3(CA).

23 The design details for Route Shields and Markers are contained in Department of Transportation's California Sign Specifications. See Section 1A.11 for information regarding these publications.

Option:

24 The EISENHOWER INTERSTATE SYSTEM (M1-10) sign may be placed on Interstate Highways on the right near the State boundary facing traffic entering the State and at rest areas and vista points on the Interstate Highway System.

Section 2D.12 Design of Route Sign Auxiliaries

Standard:

01 Route sign auxiliaries carrying word legends, except the JCT sign, shall have a standard size of 24 x 12 inches. Those carrying arrow symbols, or the JCT sign, shall have a standard size of 21 x 15 inches. All route sign auxiliaries shall match the color combination of the route sign that they supplement.

Guidance:

02 With route signs of larger heights, auxiliary signs should be suitably enlarged, but not such that they exceed the width of the route sign.

03 The background, legend, and border of a route sign auxiliary should have the same colors as those of the route sign with which the auxiliary is mounted in a route sign assembly (see Section 2D.29). For a route sign design that uses multiple background colors, such as the Interstate route sign, the background color of the corresponding auxiliary should be that of the background area on which the route number is placed on the route sign.

Option:

04 A route sign and any auxiliary signs used with it may be combined on a single sign as a guide sign.

Guidance:

05 If a route sign and its auxiliary signs are combined to form a single guide sign, the background color of the sign should be green and the design should comply with the basic principles for the design of guide signs.

Standard:

06 If a route sign and its auxiliary signs are combined on a single sign with a green background, the auxiliary messages shall be white legends placed directly on the green background. Auxiliary signs shall not be mounted directly to a guide sign or other type of sign.

Support:

07 Chapter 2F contains information regarding auxiliary signs for toll highways.

Option:

08 The NEXT RIGHT/LEFT (G58(CA)) Auxiliary sign may be used on freeways, expressways or conventional highways in conjunction with, and placed below a route sign.

Section 2D.13 Junction Auxiliary Sign (M2-1)

Standard:

01 The Junction (M2-1) auxiliary sign (see Figure 2D-4) shall carry the abbreviated legend JCT and shall be mounted at the top of an assembly (see Section 2D.30) directly above the route sign, the sign for an alternative route (see Section 2D.17) that is part of the route designation, or the Cardinal Direction auxiliary sign where access is available only to one direction of the intersected route. The minimum size of the Junction auxiliary sign shall be 21 x 15 inches for compatibility with auxiliary signs carrying arrow symbols.

Section 2D.14 Combination Junction Sign (M2-2)

Option:

01 As an alternative to the standard Junction assembly where more than one route is to be intersected or joined, a rectangular guide sign may be used carrying the word JUNCTION above the route numbers.

Standard:

02 The Combination Junction (M2-2) sign (see Figure 2D-4) shall have a green background with white border and lettering for the word JUNCTION.

Guidance:

03 The Combination Junction sign should comply with the specific provisions of Section 2D.11 regarding the incorporation of the route signs as components of guide signs.

04 Although the size of the Combination Junction sign will depend on the number of routes involved, the numerals should be large enough for clear legibility and should be of a size comparable with those in the individual route signs.

Section 2D.15 Cardinal Direction Auxiliary Signs (M3-1 through M3-4)

Guidance:

01 Cardinal Direction auxiliary signs (see Figure 2D-4) carrying the legend NORTH, EAST, SOUTH, or WEST should be used to indicate the general direction of the entire route.

Standard:

02 To improve the readability and recognition of the cardinal directions, the first letter of the cardinal direction words shall be ten percent larger, rounded up to the nearest whole number size.

03 If used, the Cardinal Direction auxiliary sign shall be mounted directly above a route sign or, if used, an auxiliary sign for an alternative route.

Option:

04 Cardinal Direction auxiliary signs may be placed to the right of the route shield, if used on the face of a guide sign.

Support:

05 For application of Cardinal Direction auxiliary signs in freeway entrance sign packages, refer to Section 2E.53.

Section 2D.16 Auxiliary Signs for Alternative Routes (M4 Series)

Option:

01 Auxiliary signs, carrying legends such as ALTERNATE, BY-PASS, BUSINESS, or TRUCK, may be used to indicate an alternate route of the same number between two points on that route.

Standard:

02 **If used, the auxiliary signs for alternative routes shall be mounted directly above a route sign.**

Section 2D.17 ALTERNATE Auxiliary Signs (M4-1, M4-1a)

Option:

01 The ALTERNATE (M4-1) or the ALT (M4-1a) auxiliary sign (see Figure 2D-4) may be used to indicate an officially designated alternate routing of a numbered route between two points on that route.

Standard:

02 **If used, the ALTERNATE or ALT auxiliary sign shall be mounted directly above a route sign.**

Guidance:

03 *The shorter (time or distance) or better-constructed route should retain the regular route number, and the longer or worse-constructed route should be designated as the alternate route.*

Section 2D.18 BY-PASS Auxiliary Sign (M4-2)

Option:

01 The BY-PASS (M4-2) auxiliary sign (see Figure 2D-4) may be used to designate a route that branches from the numbered route through a city, bypasses a part of the city or congested area, and rejoins the numbered route beyond the city.

Standard:

02 **If used, the BY-PASS auxiliary sign shall be mounted directly above a route sign.**

Section 2D.19 BUSINESS Auxiliary Sign (M4-3)

Option:

01 The BUSINESS (M4-3) auxiliary sign (see Figure 2D-4) may be used to designate an alternate route that branches from a numbered route, passes through the business portion of a city or unincorporated area, and rejoins the numbered route beyond that area.

Standard:

02 **If used, the BUSINESS auxiliary sign shall be mounted directly above a route sign.**

Option:

03 The ROUTE ___ BUSINESS (G76(CA)) sign (see Figure 2D-4(CA)) may be used to direct motorists to an established U. S. or State numbered business route or an interstate business loop from a State highway.

Guidance:

04 *The G76(CA) sign should be installed below an advance ground-mounted directional sign.*

Option:

05 The G76(CA) sign may be placed separately in advance of the business route if it is necessary. A NEXT RIGHT/LEFT message may be used. Refer to Section 2D.09 for establishing business routes.

Section 2D.20 TRUCK Auxiliary Sign (M4-4)

Option:

01 The TRUCK (M4-4) auxiliary sign (see Figure 2D-4) may be used to designate an alternate route that branches from a numbered route, when it is desirable to encourage or require commercial vehicles to use the alternate route.

Standard:

02 **If used, the TRUCK auxiliary sign shall be mounted directly above a route sign.**

Section 2D.21 TO Auxiliary Sign (M4-5)

Option:

01 The TO (M4-5) auxiliary sign (see Figure 2D-4) may be used to provide directional guidance to a particular road facility from other highways in the vicinity (see Section 2D.35).

Standard:

02 **If used, the TO auxiliary sign shall be mounted directly above a route sign or an auxiliary sign for an alternative route. If a Cardinal Direction auxiliary sign is also included in the assembly, the TO auxiliary sign shall be mounted directly above the Cardinal Direction auxiliary sign.**

Section 2D.22 END Auxiliary Sign (M4-6)

Guidance:

01 *The END (M4-6) auxiliary sign (see Figure 2D-4) should be used where the route being traveled ends, usually at a junction with another route.*

Standard:

02 **If used, the END auxiliary sign shall be mounted either directly above a route sign or above a sign for an alternative route that is part of the designation of the route being terminated.**

Section 2D.23 BEGIN Auxiliary Sign (M4-14)

Option:

01 The BEGIN (M4-14) auxiliary sign (see Figure 2D-4) may be used where a route begins, usually at a junction with another route.

Standard:

02 **If used, the BEGIN auxiliary sign shall be mounted at the top of the first Confirming assembly (see Section 2D.34) for the route that is beginning.**

Guidance:

03 *If a BEGIN auxiliary sign is included in the first Confirming assembly, a Cardinal Direction auxiliary sign should also be included in the assembly.*

Standard:

04 **If a Cardinal Direction auxiliary sign is also included in the assembly, the BEGIN auxiliary sign shall be mounted directly above the Cardinal Direction auxiliary sign.**

Section 2D.24 TEMPORARY Auxiliary Signs (M4-7, M4-7a)

Option:

01 The TEMPORARY (M4-7) or the TEMP (M4-7a) auxiliary sign (see Figure 2D-4) may be used for an interim period to designate a section of highway that is not planned as a permanent part of a numbered route, but that connects completed portions of that route.

Standard:

02 **If used, the TEMPORARY or TEMP auxiliary sign shall be mounted directly above the route sign, above a Cardinal Direction sign, or above a sign for an alternate route that is a part of the route designation.**

03 **TEMPORARY or TEMP auxiliary signs shall be promptly removed when the temporary route is abandoned.**

Section 2D.25 Temporary Detour and Auxiliary Signs

Support:

01 Chapter 6F contains information regarding Temporary Detour and Auxiliary signs.

Section 2D.26 Advance Turn Arrow Auxiliary Signs (M5-1, M5-2, and M5-3)

Standard:

01 **If used, the Advance Turn Arrow auxiliary sign (see Figure 2D-5) shall be mounted directly below the route sign in Advance Route Turn assemblies, and displays a right or left arrow, the shaft of which is bent at a 90-degree angle (M5-1) or at a 45-degree angle (M5-2).**

02 If used, the curved-stem Advance Turn Arrow auxiliary (M5-3) sign shall be used only on the approach to a circular intersection to depict a movement along the circulatory roadway around the central island and to the left, relative to the approach roadway and entry into the intersection.

Guidance:

03 If the M5-3 sign is used, then this arrow type should also be used consistently on any regulatory lane-use signs (see Chapter 2B), Destination signs (see Section 2D.37), and pavement markings (see Part 3) for a particular destination or movement.

Option:

04 The Advance Turn (G22(CA)) sign (see Figure 2D-5(CA)) may be used to give advance notice of a turnoff on expressways and high speed two-lane roads.

Guidance:

05 The G22(CA) sign should not be used on freeways. The G22(CA) sign should be placed on the right approximately 0.25 to 0.5 mile in advance of the turnoff.

Option:

06 A route shield may be used on the G22(CA) sign.

Section 2D.27 Lane Designation Auxiliary Signs (M5-4, M5-5, and M5-6)

Option:

01 A Lane Designation (M5-4, M5-5, or M5-6) auxiliary sign (see Figure 2D-5) may be mounted directly below the route sign in an Advance Route Turn assembly on multi-lane roadways to allow road users to move into the appropriate lane prior to reaching the intersection or interchange.

Standard:

02 If used, the Lane Designation auxiliary signs shall be used only where the designated lane is a mandatory movement lane and shall be located adjacent to the full-width portion of the mandatory movement lane. The Lane Designation auxiliary signs shall not be installed adjacent to a through lane in advance of a lane that is being added or along the taper for a lane that is being added.

Section 2D.28 Directional Arrow Auxiliary Signs (M6 Series)

Standard:

01 If used, the Directional Arrow auxiliary sign (see Figure 2D-5) shall be mounted below the route sign and any other auxiliary signs in Directional assemblies (see Section 2D.32), and displays a single- or double-headed arrow pointing in the general direction that the route follows.

02 A Directional Arrow auxiliary sign that displays a double-headed arrow shall not be mounted in any Directional assembly in advance of or at a circular intersection.

Option:

03 The downward pointing diagonal arrow auxiliary (M6-2a) sign may be used in a Directional assembly at the far corner of an intersection to indicate the immediate entry point to a freeway or expressway entrance ramp (see Section 2D.46).

Standard:

04 The M6-2a sign shall not be used on the approach to or on the near side of an intersection, such as to designate an approach lane.

Option:

05 The Directional Arrow auxiliary (G33-1(CA)) sign (see Figure 2D-5(CA)) may be used in lieu of the Directional Arrow auxiliary (M6 Series) signs.

Section 2D.29 Route Sign Assemblies

Standard:

01 A Route Sign assembly shall consist of a route sign and auxiliary signs that further identify the route and indicate the direction. Route Sign assemblies shall be installed on all approaches to numbered routes that intersect with other numbered routes.

02 Where two or more routes follow the same section of highway, the route signs for Interstate, U.S., State, and county routes shall be mounted in that order from the left in horizontal arrangements and from the top in vertical arrangements. Subject to this order of precedence, route signs for lower-numbered routes shall be placed at the left or top.

03 Within groups of assemblies, information for routes intersecting from the left shall be mounted at the left in horizontal arrangements and at the top or center of vertical arrangements. Similarly, information for routes intersecting from the right shall be at the right or bottom, and for straight-through routes at the center in horizontal arrangements or top in vertical arrangements.

04 Route Sign assemblies shall be mounted in accordance with the general specifications for signs (Chapter 2A), with the lowest sign in the assembly at the height prescribed for single signs.

Guidance:

05 Assemblies for two or more routes, or for different directions on the same route, should be mounted in groups on a common support.

Option:

06 Route Sign assemblies may be installed on the approaches to numbered routes on unnumbered roads and streets that carry an appreciable amount of traffic destined for the numbered route.

07 The diagrammatic route guide sign format, such as the D1-5 and D1-5a signs shown in Figure 2D-8, may be used on approaches to roundabouts.

08 If engineering judgment indicates that groups of assemblies that include overlapping routes or multiple turns might be confusing, route signs or auxiliary signs may be omitted or combined, provided that clear directions are given to road users.

Support:

09 Figure 2D-6 shows typical placements of route signs.

Standard:

10 The larger shields shall be used on freeways and expressways.

Option:

11 The smaller shields may be used on conventional highways, in interchange areas, at entrances to State highways and for all trailblazer assemblies.

Guidance:

12 The sign assemblies should be placed on the right.

Standard:

13 On freeways, shields shall be installed beyond the end of the acceleration lane of all entrances to freeway to freeway interchanges and at intermediate locations at 3 to 5 mile intervals.

Guidance:

14 On conventional highways, they should be installed at important urban and rural intersections and at intermediate locations at 3 to 5 mile intervals in rural areas.

15 The Off-Interstate Business Loop Marker (M1-2) should not be placed on the interstate route itself. The ROUTE ____ BUSINESS (G76(CA)) plaque should be used for advance signing on the interstate route.

Section 2D.30 Junction Assembly

Standard:

01 A Junction assembly shall consist of a Junction auxiliary sign and a route sign. The route sign shall carry the number of the intersected or joined route.

02 The Junction assembly shall be installed in advance of every intersection where a numbered route is intersected or joined by another numbered route.

Guidance:

03 In urban areas, the Junction assembly should be installed in the block preceding the intersection. In urban areas where speeds are low, the Junction assembly should not be installed more than 300 feet in advance of the intersection.

04 In rural areas, the Junction assembly should be installed at least 400 feet in advance of the intersection. In rural areas, the minimum distance between a Junction assembly and either a Destination sign or an Advance Route Turn assembly should be 200 feet.

05 Where speeds are high, greater spacings should be used.

Option:

06 Where two or more routes are to be indicated, a single Junction auxiliary sign may be used for the assembly and all route signs grouped in a single mounting, or a Combination Junction (M2-2) sign (see Section 2D.14) may be used.

Section 2D.31 Advance Route Turn Assembly

Standard:

01 An Advance Route Turn assembly shall consist of a route sign, an Advance Turn Arrow or word message auxiliary sign, and a Cardinal Direction auxiliary sign, if needed. It shall be installed in advance of an intersection where a turn must be made to remain on the indicated route.

Option:

02 The Advance Route Turn assembly may be used to supplement the required Junction assembly in advance of intersecting routes.

Guidance:

Standard:

03 Where a multiple-lane highway approaches an interchange or intersection with a numbered route, the Advance Route Turn assembly ~~should~~ shall be used to pre-position turning vehicles in the correct lanes from which to make their turn.

Option:

04 Lane Designation auxiliary signs (see Section 2D.27) may be used in Advance Route Turn Assemblies in place of the Advance Turn Arrow auxiliary signs where engineering judgment indicates that specific lane information associated with each route is needed and overhead signing is not practical and the designated lane is a mandatory movement lane. An assembly with the Lane Designation auxiliary signs may supplement or substitute for an assembly with Advance Turn Arrow auxiliary signs.

Guidance:

05 In low-speed areas, the Advance Route Turn assembly should be installed not less than 200 feet in advance of the turn. In high-speed areas, the Advance Route Turn assembly should be installed not less than 300 feet in advance of the turn. In rural areas, the minimum distance between an Advance Route Turn assembly and either a Destination sign or a Junction assembly should be 200 feet.

Standard:

06 An assembly that includes an Advance Turn Arrow auxiliary sign shall not be placed where there is an intersection between it and the designated turn.

Guidance:

07 Sufficient distance should be allowed between the assembly and any preceding intersection that could be mistaken for the indicated turn.

Support:

08 See Figures 2E-34(CA) through 2E-40(CA) in Chapter 2E for typical freeway signing.

Standard:

09 The Advance Lane Assignment (G20(CA) Series or G21(CA) Series) or Interchange Guide (G77(CA) Series) signs (see Figure 2D-5(CA)) shall be used on multilane cross streets approaching a freeway interchange to indicate the proper lane for the desired freeway entrance. The principal message shall be route and cardinal direction.

Option:

10 Names of major or control cities may be used in addition to cardinal directions.

Support:

11 The Advance Lane Assignment (G21(CA) Series) signs are available in a stacked format for use where space is limited.

Guidance:

12 When stacked format is used, the top message should indicate the first freeway entrance.

13 The Interchange Guide (G77(CA)) sign should be used on two-lane cross streets at interchange areas to direct motorists from the cross street to the freeway ramp entrances.

Option:

¹⁴ The G77(CA) sign may also be used at an exit ramp split to direct motorists to the cross street.

¹⁵ The Interchange Guide (G78(CA) Series) signs (see Figure 2D-5(CA)) may be used to direct motorists to a single cardinal direction or destination.

Support:

¹⁶ The G78 Series(CA) signs are ordinarily used as a follow-up to the G77(CA) sign.

¹⁷ The FREEWAY with Arrow (G82(CA)) sign (see Figure 2D-5(CA)) may be used to direct motorists to a freeway from a business route or from a community served by a single freeway.

¹⁸ The G82(CA) sign is available with the freeway name and with vertical, diagonal, or horizontal arrows on either side of the message.

Option:

¹⁹ The G82(CA) signs may be placed at appropriate locations to guide traffic to the freeway.

Section 2D.32 Directional Assembly

Standard:

⁰¹ **A Directional assembly shall consist of a Cardinal Direction auxiliary sign, if needed; a route sign; and a Directional Arrow auxiliary sign. The various uses of Directional assemblies shall be as provided in Items A through D:**

A. Turn movements (indicated in advance by an Advance Route Turn assembly) shall be marked by a Directional assembly with a route sign displaying the number of the turning route and a single-headed arrow pointing in the direction of the turn.

B. The beginning of a route (indicated in advance by a Junction assembly) shall be marked by a Directional assembly with a route sign displaying the number of that route and a single-headed arrow pointing in the direction of the route.

C. An intersected route (indicated in advance by a Junction assembly) on a crossroad where the route is designated on both legs shall be designated by:

1. Two Directional assemblies, each with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary sign, and a single-headed arrow pointing in the direction of movement on that route; or

2. A Directional assembly with a route sign displaying the number of the intersected route and a double-headed arrow, pointing at appropriate angles to the left, right, or ahead.

D. An intersected route (indicated in advance by a Junction assembly) on a side road or on a crossroad where the route is designated only on one of the legs shall be designated by a Directional assembly with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary sign, and a single-headed arrow pointing in the direction of movement on that route.

Guidance:

⁰² *Straight-through movements should be indicated by a Directional assembly with a route sign displaying the number of the continuing route and a vertical arrow. A Directional assembly should not be used for a straight-through movement in the absence of other assemblies indicating right or left turns, as the Confirming assembly sign beyond the intersection normally provides adequate guidance.*

⁰³ *Directional assemblies should be located on the near right corner of the intersection. At major intersections and at Y or offset intersections, additional Directional assemblies should be installed on the far right or left corner to confirm the near-side assemblies. When the near-corner position is not practical for Directional assemblies, the far right corner should be the preferred alternative, with oversized signs, if necessary, for legibility. Where unusual conditions exist, the location of a Directional assembly should be determined by engineering judgment with the goal being to provide the best possible combination of view and safety.*

Support:

⁰⁴ It is more important that guide signs be readable, and that the information and direction displayed thereon be readily understood, at the appropriate time and place than to be located with absolute uniformity.

⁰⁵ Figure 2D-6 shows typical placements of Directional assemblies.

Section 2D.33 Combination Lane-Use/Destination Overhead Guide Sign (D15-1)

Option:

01 At complex intersection approaches involving multiple turn lanes and destinations, a Combination Lane-Use/Destination (D15-1) overhead guide sign that combines a lane-use regulatory sign with destination information such as a cardinal direction, a route number, a street name, and/or a place name may be used.

Support:

02 At such locations, the combined information on the D15-1 signs can be even more effective than separate lane-use and guide signs for conveying to unfamiliar drivers which lane or lanes to use for a particular destination.

03 Figure 2D-7 shows an example of a D15-1 sign that combines lane-use and route number information and an example of a D15-1 sign that combines lane-use and street name information.

Standard:

04 **The Combination Lane-Use/Destination (D15-1) overhead guide sign shall be used only where the designated lane is a mandatory movement lane. The D15-1 sign shall not be used for lanes with optional movements.**

05 **The D15-1 sign shall have a green background with a white border. As shown in Figure 2D-7, the lane-use sign (see Chapter 2B) shall be placed near the bottom of the sign and the destination information shall be placed near the top of the sign. The D15-1 sign shall be located approximately over the center of the lane to which it applies.**

Section 2D.34 Confirming or Reassurance Assemblies

Standard:

01 **If used, Confirming or Reassurance assemblies shall consist of a Cardinal Direction auxiliary sign and a route sign. Where the Confirming or Reassurance assembly is for an alternative route, the appropriate auxiliary sign for an alternative route (see Section 2D.16) shall also be included in the assembly.**

Guidance:

02 *A Confirming assembly should be installed just beyond intersections of numbered routes. It should be placed 25 to 200 feet beyond the far shoulder or curb line of the intersected highway.*

03 *If used, Reassurance assemblies should be installed between intersections in urban areas as needed, and beyond the built-up area of any incorporated city or town.*

04 *Route signs for either confirming or reassurance purposes should be spaced at such intervals as necessary to keep road users informed of their routes.*

Section 2D.35 Trailblazer Assembly

Support:

01 Trailblazer assemblies provide directional guidance to a particular road facility from other highways in the vicinity. This guidance is accomplished by installing Trailblazer assemblies at strategic locations to indicate the direction to the nearest or most convenient point of access. The use of the word TO indicates that the road or street where the sign is posted is not a part of the indicated route, and that a road user is merely being directed progressively to the route.

Standard:

02 **A Trailblazer assembly shall consist of a TO auxiliary sign, a route sign for a numbered or named highway (see Section 2D.53) or an Auto Tour Route sign (see Section 2H.07), and a single-headed Directional Arrow auxiliary sign pointing in the direction leading to the route. Where the Trailblazer assembly is for an alternative route, the appropriate auxiliary sign for an alternative route (see Section 2D.16) shall also be included in the assembly.**

Option:

03 A Cardinal Direction auxiliary sign may be used with a Trailblazer assembly.

Guidance:

04 *The TO auxiliary sign, Cardinal Direction auxiliary sign, and Directional Arrow auxiliary sign should be of the standard size provided for auxiliary signs of their respective type. The route sign should be the size provided in Section 2D.11.*

Option:

⁰⁵ Trailblazer assemblies may be installed with other Route Sign assemblies, or alone, in the immediate vicinity of the designated facilities.

⁰⁶ CVC 21350 provides that the State may, with the consent of the local authorities, place and maintain along city streets and county roads, appropriate signs directing traffic to State highways.

Guidance:

⁰⁷ *Cooperation with local authorities should be sought in placing trailblazer signs.*

Standard:

⁰⁸ **Permission shall be obtained from the appropriate local agency for all signs placed outside the State highway right-of-way.**

Support:

⁰⁹ For all signs placed outside of the State right of way refer to Section 2A.101(CA).

Option:

¹⁰ In metropolitan areas, the freeway name may be used only if it is well known, in common use, and its deletion would be confusing to motorists.

Standard:

¹¹ **The format shall include the appropriate route shield.**

Section 2D.36 Destination and Distance Signs

Support:

⁰¹ In addition to guidance by route numbers, it is desirable to supply the road user information concerning the destinations that can be reached by way of numbered or unnumbered routes. This is done by means of Destination signs and Distance signs.

^{01a} See Figure 2D-7(CA) for G1(CA) Series, G8(CA) Series and G86(CA) Series California Destination and Distance Signs.

Option:

⁰² Route shields and cardinal directions may be included on the Destination sign with the destinations and arrows.

Guidance:

⁰³ *If Route shields and cardinal directions are included on a Destination sign, the height of the route shields should be at least two times the height of the upper-case letters of the principal legend and not less than 18 inches, and the cardinal directions should be in all upper-case letters that are at least the minimum height specified for these signs.*

Section 2D.37 Destination Signs (D1 Series)

Standard:

⁰¹ **Except on approaches to interchanges (see Section 2D.45), the Destination (D1-1 through D1-3) sign (see Figure 2D-7), if used, shall be a horizontal rectangle displaying the name of a city, town, village, or other traffic generator, and a directional arrow.**

Option:

⁰² The distance (see Section 2D.41) to the place named may also be displayed on the Destination (D1-1a through D1-3a) sign (see Figure 2D-7). If several destinations are to be displayed at a single point, the several names may be placed on a single sign with an arrow (and the distance, if desired) for each name. If more than one destination lies in the same direction, a single arrow may be used for such a group of destinations.

Guidance:

⁰³ *Adequate separation should be made between any destinations or group of destinations in one direction and those in other directions by suitable design of the arrow, spacing of lines of legend, heavy lines entirely across the sign, or separate signs.*

Support:

⁰⁴ Separation of destinations by direction by the use of a horizontal separator line can enhance the readability of a Destination sign by relating an arrow and its corresponding destination(s) and by eliminating the need for multiple arrows that point in the same direction and excessive space between lines of legend.

Standard:

05 Except as otherwise provided in this Manual, an arrow pointing to the right shall be at the extreme right of the sign, and an arrow pointing left or up shall be at the extreme left. The distance numerals, if used, shall be placed to the right of the destination names.

Option:

06 An arrow pointing up may be placed at the extreme right of the sign when the sign is mounted to the left of the traffic to which it applies.

Guidance:

07 *Unless a sloping arrow will convey a clearer indication of the direction to be followed, the directional arrows should be horizontal or vertical.*

08 *If several individual name signs are assembled into a group, all signs in the assembly should be of the same horizontal width.*

09 *Destination signs should be used:*

A. *At the intersections of U.S. or State numbered routes with Interstate, U.S., or State numbered routes; and*

B. *At points where they serve to direct traffic from U.S. or State numbered routes to the business section of towns, or to other destinations reached by unnumbered routes.*

Standard:

10 Where a total of three or less destinations are provided on the Advance Guide (see Section 2E.33) and Supplemental Guide (see Section 2E.35) signs, no more than three destination names shall be used on a Destination sign. Where four destinations are provided by the Advance Guide and Supplemental Guide signs, no more than four destination names shall be used on a Destination sign.

Guidance:

11 *If space permits, four destinations should be displayed as two separate signs at two separate locations.*

Option:

12 Where space does not permit, or where all four destinations are in one direction, a single sign may be used. Where a single sign is used and all destinations are in the same direction, the arrow may be placed below the destinations for the purpose of enhancing the conspicuity of the arrow.

Standard:

13 Where a single four-name sign assembly is used, a heavy line entirely across the sign or separate signs shall be used to separate destinations by direction.

Guidance:

14 *The closest destination lying straight ahead should be at the top of the sign or assembly, and below it the closest destinations to the left and to the right, in that order. The destination displayed for each direction should ordinarily be the next county seat or the next principal city, rather than a more distant destination. In the case of overlapping routes, only one destination should be displayed in each direction for each route.*

Standard:

15 If more than one destination is displayed in the same direction, the name of a nearer destination shall be displayed above the name of a destination that is further away.

Support:

16 Refer to Section 2E.13 for the designation of destinations and control cities.

Standard:

17 If there are more eligible destinations at a given intersection than can be accommodated (under the limitations mentioned in this section) they shall compete for signs on the basis of traffic volumes to these destinations.

Guidance:

18 *Destinations should be signed to by the route requiring the least amount of time to travel from the nearest State highway.*

Standard:

19 **Criteria for supplemental destination signs shall be as shown in Table 2D-102(CA).**

20 **Signs shall not be provided for privately owned, profit making enterprises regardless of their size.**

Option:

21 **If unusual operational or safety issues become apparent that would be mitigated by signing to the private enterprise, signs on State highways may be used with the approval of the Department of Transportation's Division of Traffic Operations.**

Standard:

²² **Signs to shopping centers shall not be allowed.**

²³ **When a street or facility name change is made on an existing sign on a State highway primarily for the benefit of the requestor, with no, or only minor, improvement of traffic flow, the costs of materials and labor for said change, plus the current overhead assessment rate as determined by the Accounting Service Center to cover administrative overhead, shall be paid by the requestor. Such changes shall require approval of the Department of Transportation's District Director.**

Option:

²⁴ Street name changes on signs on State highways which are clearly in the best interest of the motorists and the State may also be approved by the Department of Transportation's District Director.

Standard:

²⁵ **New signs, if warranted, shall be installed at State expense.**

Option:

²⁶ Signs to a public or nonprofit facility may be installed and maintained on conventional State highways in a "city street" configuration, by local governmental bodies under an encroachment permit.

Standard:

²⁷ **Deviations from the signing policies shall not be allowed unless a documented engineering study describes a substantial traffic problem that would be alleviated by increased signing.**

Option:

²⁸ The Veterans National Cemetery (G86-14(CA)) Signs may be placed, one in each direction of travel from and on the nearest State highway, based upon a request from the Federal Department of Veterans Affairs.

Supplemental Signing for City Civic Center Areas

Option:

²⁹ Signs to City Civic Center areas may be installed on state highways for incorporated cities.

Standard:

³⁰ **The city shall be incorporated and contiguous with the State highway right-of-way.**

³¹ **The city shall adopt a resolution requesting installation of signs on specific State highways for the purpose of guiding motorists to the city's civic center area, otherwise commonly referred to as downtown, central business district, city center, or city hall. The resolution shall include the appropriate wording for the legend on the sign.**

³² **The route from State highways to City hall shall not be more than 3 mile.**

Option:

³³ When requested by resolution, signs may be placed on all State highways, which are within 3 mile of City hall.

Standard:

³⁴ **Only one sign shall be installed in each direction of travel for each State highway so requested. If any portion of the route from a State highway to the Civic Center area is under the jurisdiction of another city, both cities shall agree (in writing) that signs can be installed on the State highway.**

Guidance:

³⁵ *Trailblazer signs should be in place on local streets and roads prior to installation of signs on State highways.*

Option:

³⁶ The legend may be "(city name) Civic Center," "Downtown (city name)," "(city name) Central Business District," "(city name) City Center," "(city name) City Hall," or a very similar message.

Standard:

³⁷ **Only one legend shall be selected and used on all corresponding State highways for a particular Civic Center area.**

Guidance:

³⁸ *Signs should be roadside signs. Where possible, signs should be supplemental plaques mounted on existing roadside Supplemental Destination (G86(CA) Series) signs and NEXT X EXITS (E9) signs.*

Option:

³⁹ When this is not reasonable, signs may be separate roadside signs.

⁴⁰ Signs may be mounted overhead if there is no reasonable roadside alternative.

Standard:

41 The city shall have the signs installed under an encroachment permit and shall pay all costs for fabrication, and installation of the signs. The Department of Transportation shall maintain these signs.

42 Signs shall comply with applicable Department of Transportation policies, specifications and standards.

Bypassed Communities

43 Section 100.9 of the Streets and Highways Code provides that appropriate directional signs shall be installed directing to bypassed cities and business districts. This law requires that all signs, except route shields, be left in place on the old highway, regardless of its status as a business route.

Guidance:

44 When relinquishing any bypassed highway, the city or county concerned should be advised regarding continued maintenance of such signs by the local agencies.

Signing for Indian Reservations and Rancherias

Standard:

45 Indian Reservations and Rancherias shall be signed in a like manner as cities and unincorporated communities for supplemental destination and miscellaneous guide signs. Only the official name of the federally recognized Indian Tribe, Reservation, or Rancheria shall be used on signs. The signs shall be white with retroreflective legend and border on green retroreflective background.

46 The signs and sign messages shall conform to the requirements of the California Outdoor Advertising Act, which prohibits advertising displays within the right-of-way of any State highway.

Section 2D.38 Destination Signs at Circular Intersections

Standard:

01 Destination signs that are used at circular intersections shall comply with the provisions of Section 2D.37, except as provided in this Section.

Option:

02 Exit destination (D1-1d, D1-1e) signs (see Figure 2D-8) with diagonal upward-pointing arrows or Directional assemblies (see Section 2D.32) may be used to designate a particular exit from a circular intersection.

03 Exit destination (D1-2d, D1-3d) signs (see Figure 2D-8) with curved-stem arrows may be used on approaches to circular intersections to represent the left-turn movements.

04 Curved-stem arrows on circular intersection destination signs may point in diagonal directions to depict the location of an exit relative to the approach roadway and entry into the intersection.

05 Exit destination (D1-5 or D1-5a) signs (see Figure 2D-8) with a diagram of the circular intersection may be used on approaches to circular intersections.

Guidance:

06 If curved-stem arrows are used on destination signs, then this arrow type should also be used consistently on any regulatory lane-use signs (see Chapter 2B), Directional assemblies (see Section 2D.32), and pavement markings (see Part 3) for a particular destination or movement.

Support:

07 Figure 2D-9 illustrates two examples of guide signing for circular intersections.

08 Diagrammatic guide signs might be preferable where space is available and where the geometry of the circular intersection is non-typical, such as where more than four legs are present or where the legs are not at approximately 90-degree angles to each other.

Standard:

09 If used, diagrammatic guide signs for circular intersections shall not depict the number of lanes within the intersection circulatory roadway, or on its approaches or exits, through the use of lane lines, multiple arrow shafts for the same movement, or other methods.

Support:

10 Chapter 2B contains information regarding regulatory signs at circular intersections, Chapter 2C contains information regarding warning signs at circular intersections, and Chapter 3C contains information regarding pavement markings at circular intersections.

Section 2D.39 Destination Signs at Jughandles

Standard:

01 Destination signs that are used at jughandles shall comply with the provisions of Section 2D.37, except as provided in this Section.

Option:

02 If engineering judgment indicates that standard destination signs alone are insufficient to direct road users to their destinations at a jughandle, a diagrammatic guide sign depicting the appropriate geometry may be used to supplement the normal destination signs.

Support:

03 Section 2B.27 contains information regarding regulatory signs for jughandle turns. Figure 2B-9 shows examples of regulatory and destination guide signing for various types of jughandle turns.

Section 2D.40 Location of Destination Signs

Guidance:

01 *When used in high-speed areas, Destination signs should be located 200 feet or more in advance of the intersection, and following any Junction or Advance Route Turn assemblies that might be required. In rural areas, the minimum distance between a Destination sign and either an Advance Route Turn assembly or a Junction assembly should be 200 feet.*

Option:

02 In urban areas, shorter advance distances may be used.

03 Because the Destination sign is of lesser importance than the Junction, Advance Route Turn, or Directional assemblies, the Destination sign may be eliminated when sign spacing is critical.

Support:

04 Figure 2D-6 shows typical placements of Destination signs.

Section 2D.41 Distance Signs (D2 Series)

Standard:

01 If used, the Distance (D2-1 through D2-3) sign (see Figure 2D-7) shall be a horizontal rectangle of a size appropriate for the required legend, carrying the names of no more than three cities, towns, junctions, or other traffic generators, and the distance (to the nearest mile) to those places.

02 The distance numerals shall be placed to the right of the destination names as shown in Figure 2D-7.

Guidance:

03 *The distance displayed should be selected on a case-by-case basis by the jurisdiction that owns the road or by statewide policy. A well-defined central area or central business district should be used where one exists. In other cases, the layout of the community should be considered in relation to the highway being signed and the decision based on where it appears that most drivers would feel that they are in the center of the community in question.*

04 *The top name on the Distance sign should be that of the next place on the route having a post office or a railroad station, a route number or name of an intersected highway, or any other significant geographical identity. The bottom name on the sign should be that of the next major destination or control city. If three destinations are displayed, the middle line should be used to indicate communities of general interest along the route or important route junctions.*

Option:

05 The choice of names for the middle line may be varied on successive Distance signs to give road users additional information concerning communities served by the route.

Guidance:

06 *The control city should remain the same on all successive Distance signs throughout the length of the route until that city is reached.*

Option:

07 If more than one distant point may properly be designated, such as where the route divides at some distance ahead to serve two destinations of similar importance, and if these two destinations cannot appear on the same sign, the two names may be alternated on successive signs.

Guidance:

08 On a route continuing into another State, destinations in the adjacent State ~~may~~ should be displayed.

Support:

09 Refer to Section 2E.13 for the designation of destinations and control cities.

Section 2D.42 Location of Distance Signs

Guidance:

01 If used, Distance signs should be installed on important routes leaving municipalities and just beyond intersections of numbered routes in rural areas. If used, they should be placed just outside the municipal limits or at the edge of the built-up area if it extends beyond the limits.

02 Where overlapping routes separate a short distance from the municipal limits, the Distance sign at the municipal limits should be omitted. The Distance sign should be installed approximately 300 feet beyond the separation of the two routes.

03 Where, just outside of an incorporated municipality, two routes are concurrent and continue concurrently to the next incorporated municipality, the top name on the Distance sign should be that of the place where the routes separate; the bottom name should be that of the city to which the greater part of the through traffic is destined.

Support:

04 Figure 2D-6 shows typical placements of Distance signs.

Guidance:

05 The Distance (G5(CA) Series) signs should be placed at approximate 10 mile intervals, unless the destinations have changed. Distances to the same destinations should not be shown more frequently than at 5 mile intervals.

Option:

06 The Destination and Street Name with Arrow (G8(CA) Series) signs may be used in advance of conventional highway intersections.

Section 2D.43 Street Name Signs (D3-1 or D3-1a)

Guidance:

01 Street Name (D3-1 or D3-1a or G7-1(CA)) signs (see Figure 2D-10 and 2D-10(CA)) should be installed in urban areas at all street intersections regardless of other route signs that might be present and should be installed in rural areas to identify important roads that are not otherwise signed.

Option:

02 For streets that are part of a U.S., State, or county numbered route, a D3-1a Street Name sign (see Figure 2D-10) that incorporates a route shield may be used to assist road users who might not otherwise be able to associate the name of the street with the route number.

Standard:

03 The lettering for names of streets and highways on Street Name signs shall be composed of a combination of lower-case letters with initial upper-case letters (see Section 2A.13).

Guidance:

04 Lettering on post-mounted Street Name signs should be composed of initial upper-case letters at least 6 inches in height and lower-case letters at least 4.5 inches in height.

05 On multi-lane streets with speed limits greater than 40 mph, the lettering on post-mounted Street Name signs should be composed of initial upper-case letters at least 8 inches in height and lower-case letters at least 6 inches in height.

Option:

06 For local roads with speed limits of 25 mph or less, the lettering on post-mounted Street Name signs may be composed of initial upper-case letters at least 4 inches in height and lower-case letters at least 3 inches in height.

Guidance:

07 If overhead Street Name signs are used, the lettering should be composed of initial upper-case letters at least 12 inches in height and lower-case letters at least 9 inches in height.

Support:

08 The recommended minimum letter heights for Street Name signs are summarized in Table 2D-2.

Option:

⁰⁹ Supplementary lettering to indicate the type of street (such as Street, Avenue, or Road) or the section of the city (such as NW) on the D3-1 and D3-1a signs may be in smaller lettering, composed of initial upper-case letters at least 3 inches in height and lower-case letters at least 2.25 inches in height. Conventional abbreviations (see Section 1A.15) may be used except for the street name itself.

¹⁰ A pictograph (see definition in Section 1A.13) may be used on a D3-1 sign.

Standard:

¹¹ **Pictographs shall not be displayed on D3-1a or Advance Street Name (D3-2) signs (see Section 2D.44).**

¹² **If a pictograph is used on a D3-1 sign, the height and width of the pictograph shall not exceed the upper-case letter height of the principal legend of the sign.**

Guidance:

¹³ *The pictograph should be positioned to the left of the street name.*

Standard:

¹⁴ **The Street Name sign shall be retroreflective or illuminated to show the same shape and similar color both day and night. The color of the legend (and border, if used) shall contrast with the background color of the sign.**

Option:

¹⁵ The border may be omitted from a Street Name sign.

¹⁶ An alternative background color other than the normal guide sign color of green may be used for Street Name (D3-1 or D3-1a) signs where the highway agency determines this is necessary to assist road users in determining jurisdictional authority for roads.

Standard:

¹⁷ **Alternative background colors shall not be used for Advance Street Name (D3-2) signs (see Section 2D.44).**

¹⁸ **The only acceptable alternative background colors for Street Name (D3-1 or D3-1a) signs shall be blue, brown, or white. Regardless of whether green, blue, or brown is used as the background color for Street Name (D3-1 or D3-1a) signs, the legend (and border, if used) shall be white. For Street Name signs that use a white background, the legend (and border, if used) shall be black.**

Guidance:

¹⁹ *An alternative background color for Street Name signs, if used, should be applied to the Street Name (D3-1 or D3-1a) signs on all roadways under the jurisdiction of a particular highway agency.*

²⁰ *In business or commercial areas and on principal arterials, Street Name signs should be placed at least on diagonally opposite corners. In residential areas, at least one Street Name sign should be mounted at each intersection. Signs naming both streets should be installed at each intersection.*

Standard:

They ~~should~~ shall be mounted with their faces parallel to the streets they name.

Option:

²¹ To optimize visibility, Street Name signs may be mounted overhead. Street Name signs may also be placed above a regulatory or STOP or YIELD sign with no required vertical separation.

Guidance:

²² *In urban or suburban areas, especially where Advance Street Name signs for signalized and other major intersections are not used, the use of overhead Street Name signs should be strongly considered.*

Option:

²³ At intersection crossroads where the same road has two different street names for each direction of travel, both street names may be displayed on the same sign along with directional arrows.

Support:

²⁴ Information regarding the use of street names on supplemental plaques for use with intersection-related warning signs is contained in Section 2C.58.

Standard:

²⁵ **Street Name signs shall be placed, clearly visible to traffic approaching from all directions, at all signalized intersections. Refer to CVC 21366.**

Option:

²⁶ If structurally adequate luminaire poles are available, the street name signs may be mounted on them at a height of approximately 15 feet. Refer to Department of Transportation's Standard Plans publication. See Section 1A.11 for information regarding this publication.

Section 2D.44 Advance Street Name Signs (D3-2)

Support:

⁰¹ Advance Street Name (D3-2) signs (see Figure 2D-10) identify an upcoming intersection. Although this is often the next intersection, it could also be several intersections away in cases where the next signalized intersection is referenced.

Standard:

⁰² **Advance Street Name (D3-2) signs, if used, shall supplement rather than be used instead of the Street Name (D3-1) signs at the intersection.**

Option:

⁰³ Advance Street Name (D3-2) signs may be installed in advance of signalized or unsignalized intersections to provide road users with advance information to identify the name(s) of the next intersecting street to prepare for crossing traffic and to facilitate timely deceleration and/or lane changing in preparation for a turn.

~~Guidance:~~

Standard:

⁰⁴ **On arterial highways in rural areas, Advance Street Name signs ~~should~~ shall be used in advance of all signalized intersections and in advance of all intersections with exclusive turn lanes.**

Guidance:

⁰⁵ *In urban areas, Advance Street Name signs should be used in advance of all signalized intersections on major arterial streets, except where signalized intersections are so closely spaced that advance placement of the signs is impractical.*

⁰⁶ *The heights of the letters on Advance Street Name signs should be the same as those used for Street Name signs (see Section 2D.43).*

Standard:

⁰⁷ **If used, Advance Street Name signs shall have a white legend and border on a green background.**

⁰⁸ **If used, Advance Street Name signs shall provide the name(s) of the intersecting street(s) on the top line(s) of the legend and the distance to the intersecting streets or messages such as NEXT SIGNAL, NEXT INTERSECTION, NEXT ROUNDABOUT, or directional arrow(s) on the bottom line of the legend.**

⁰⁹ **Pictographs shall not be displayed on Advance Street Name signs.**

Option:

¹⁰ Directional arrow(s) may be placed to the right or left of the street name or message such as NEXT SIGNAL, as appropriate, rather than on the bottom line of the legend. Curved-stem arrows may be used on Advance Street Name signs on approaches to circular intersections.

¹¹ For intersecting crossroads where the same road has a different street name for each direction of travel, the different street names may be displayed on the same Advance Street Name sign along with directional arrows.

¹² In advance of two closely-spaced intersections where it is not practical to install separate Advance Street Name signs, the Advance Street Name sign may include the street names for both intersections along with appropriate supplemental legends for both street names, such as NEXT INTERSECTION, 2ND INTERSECTION, or NEXT LEFT and NEXT RIGHT, or directional arrows.

Guidance:

¹³ *If two street names are used on the Advance Street Name sign, the street names should be displayed in the following order:*

A. For a single intersection where the same road has a different street name for each direction of travel, the name of the street to the left should be displayed above the name of the street to the right; or

B. For two closely-spaced intersections, the name of the first street encountered should be displayed above the name of the second street encountered, and the arrow associated with the second street encountered should be an advance arrow, such as the arrow shown on the W16-6P arrow plaque (see Figure 2C-12).

Option:

¹⁴ An Advance Street Name (W16-8P or W16-8aP) plaque (see Section 2C.58) with black legend on a yellow background, installed supplemental to an Intersection (W2 series) or Advance Traffic Control (W3 series) warning sign may be used instead of an Advance Street Name guide sign.

¹⁵ [The Destination and Street Name with Arrow \(G8\(CA\) Series\) signs may be used in advance of conventional highway intersections.](#)

Section 2D.45 Signing on Conventional Roads on Approaches to Interchanges

Support:

⁰¹ Because there are a number of different ramp configurations that are commonly used at interchanges with conventional roads, drivers on the conventional road cannot reliably predict whether they will be required to turn left or right in order to enter the correct ramp to access the freeway or expressway in the desired direction of travel. Consistently applied signing for conventional road approaches to freeway or expressway interchanges is highly desirable.

Standard:

⁰² **On multi-lane conventional roads approaching an interchange, guide signs shall be provided to identify which direction of turn is to be made and/or which specific lane to use for ramp access to each direction of the freeway or expressway.**

Guidance:

⁰³ *The signing of conventional roads with one lane of traffic approaching an interchange should consist of a sequence containing the following signs (see Figure 2D-11):*

- A. Junction Assembly
- B. Destination sign
- C. Directional Assembly or Entrance Direction sign for the first ramp
- D. Advance Route Turn Assembly or Advance Entrance Direction sign with an advance turn arrow
- E. Directional Assembly or Entrance Direction sign for the second ramp

Standard:

⁰⁴ **If used, the Entrance Direction sign shall consist of a white legend and border on a green background. It shall contain the freeway or expressway route shield(s), cardinal direction, and directional arrow(s).**

Option:

⁰⁵ The Entrance Direction sign may contain a destination(s) and/or an action message such as NEXT RIGHT.

⁰⁶ At minor interchanges, the following sequence of signs may be used (see Figure 2D-12):

- A. Junction Assembly
- B. Directional Assembly for the first ramp
- C. Directional Assembly for the second ramp

Guidance:

⁰⁷ *On multi-lane conventional roads approaching an interchange, the sign sequence should contain the following signs (see Figures 2D-13 through 2D-15):*

- A. Junction Assembly
- B. Advance Entrance Direction sign(s) for both directions (if applicable) of travel on the freeway or expressway
- C. Entrance Direction sign for first ramp
- D. Advance Turn Assembly
- E. Entrance Direction sign for the second ramp

Support:

⁰⁸ Advance Entrance Direction signs are used to direct road users to the appropriate lane(s).

Standard:

⁰⁹ **The Advance Entrance Direction sign shall consist of a white legend and border on a green background. It shall contain the freeway or expressway route shield(s) and cardinal direction(s).**

Option:

¹⁰ The Advance Entrance Direction sign may have destinations, directional arrows, and/or an action message such as KEEP LEFT, NEXT LEFT, or SECOND RIGHT. Signs in this sequence may be mounted overhead to improve visibility as shown in Figures 2D-13 through 2D-15.

^{10a} [Contact Department of Transportation's Division of Traffic Operations for further guidance regarding Figures 2D-11 through 2D-15.](#)

Support:

¹¹ A post-mounted Advance Entrance Direction diagrammatic guide sign (see Figure 2D-16), within the sequence of approach guide signing described in Paragraphs 3, 6, and 7, might be helpful in depicting the location of a freeway or expressway entrance ramp that is in close proximity to an intervening intersection on the same side of the approach roadway and where signing for only the ramp might cause confusion to road users.

Standard:

¹² **If used, the post-mounted Advance Entrance Direction diagrammatic guide sign shall display only the two successive turns from the same side of the roadway, one of which shall be the entrance ramp. The post-mounted Advance Entrance Direction sign shall depict only the successive turns and shall not depict lane use with lane lines, multiple arrow shafts for the approach roadway, action messages, or other representations.**

Support:

¹³ Section 2D.46 contains information regarding the use of a Directional assembly or a FREEWAY ENTRANCE sign to mark the entrance to a freeway or expressway at the far corner of an intersection.

Section 2D.46 Freeway Entrance Signs (D13-3 and D13-3a)

Option:

⁰¹ FREEWAY ENTRANCE (D13-3) signs or FREEWAY ENTRANCE with downward pointing diagonal arrow (D13-3a) signs (see Figure 2D-14) may be used on entrance ramps near the crossroad to inform road users of the freeway or expressway entrance, as appropriate.

⁰² The D13-3 and D13-3a signs may display an alternate legend in place of FREEWAY, such as EXPRESSWAY or PARKWAY, as appropriate, or may display the name of an unnumbered highway.

⁰³ A Directional assembly (see Section 2D.32) with a downward pointing diagonal arrow auxiliary (M6-2a) sign (see Section 2D.28) may be used at the far left-hand corner of an intersection with a freeway or expressway entrance ramp as an alternative to the D13-3a sign, facing left-turning traffic on the conventional road approach to indicate the immediate point of entry to the freeway or expressway and distinguish the entrance ramp from an adjoining exit ramp terminal at the same intersection with the conventional road (see Figure 2D-14). A similar Directional assembly may be used at the far right-hand corner of an intersection with a freeway or expressway entrance ramp where the entrance ramp and a crossroad or side road follow one another in close succession on the conventional road approach and the point of entry to the freeway or expressway might be difficult for the road user to distinguish from the crossroad or side road on the conventional road approach (see Figure 2D-14).

Support:

⁰⁴ Section 2B.41 contains information regarding the use of regulatory signs to deter wrong-way movements at intersections of freeway or expressway ramps with conventional roads, and in the area where entrance ramps intersect with the mainline lanes.

Section 2D.47 Parking Area Guide Sign (D4-1)

Option:

⁰¹ The Parking Area (D4-1) guide sign (see Figure 2D-10) may be used to show the direction to a nearby public parking area or parking facility.

Standard:

⁰² **If used, the Parking Area (D4-1) guide sign shall be a horizontal rectangle with a standard size of 30 x 24 inches, or with a smaller size of 18 x 15 inches for minor, low-speed streets. It shall carry the word PARKING, with the letter P five times the height of the remaining letters, and a directional arrow. The legend and border shall be green on a retroreflectorized white background.**

Guidance:

03 If used, the Parking Area guide sign should be installed on major thoroughfares at the nearest point of access to the parking facility and where it can advise drivers of a place to park. The sign should not be used more than four blocks from the parking area.

Section 2D.48 PARK - RIDE Sign (D4-2)

Option:

01 PARK - RIDE (D4-2) signs (see Figure 2D-10) may be used to direct road users to park - ride facilities.

Standard:

02 The signs shall contain the word message PARK - RIDE and direction information (arrow or word message).

Option:

03 PARK - RIDE signs may contain the local transit pictograph and/or carpool symbol on the sign.

Standard:

04 If used, the local transit pictograph and/or carpool symbol shall be located in the top part of the sign above the message PARK - RIDE. In no case shall the vertical dimension of the local transit pictograph and/or carpool symbol exceed 18 inches.

Guidance:

05 If the function of the parking facility is to provide parking for persons using public transportation, the local transit pictograph should be used on the guide sign. If the function of the parking facility is to serve carpool riders, the carpool symbol should be used on the guide sign. If the parking facility serves both functions, both the pictograph and carpool symbol should be used.

Standard:

06 These signs shall have a retroreflective white legend and border on a rectangular green background. The carpool symbol shall be as shown for the D4-2 sign. The color of the local transit pictograph shall be selected by the local transit authority.

Option:

07 To increase the target value and contrast of the local transit pictograph, and to allow the local transit pictograph to retain its distinctive color and shape, the pictograph may be included within a white border or placed on a white background.

08 The PARK - RIDE (G95A(CA)) sign (see Figure 2D-10(CA)) may be used below the Advance Guide (G83(CA) Series) signs on freeways and expressways for directions to ride sharing parking lots.

09 The PARK - RIDE NEXT RIGHT (G95B(CA)) sign (see Figure 2D-10(CA)) may be used as a separate installation on freeways and expressways where it is not possible to use the G95A(CA) sign.

Guidance:

10 The Park - Ride Courtesy Plaque (G95B-1(CA)) (see Figure 2D-10(CA)) when used, should be used in conjunction with, and mounted below the PARK - RIDE NEXT RIGHT (G95B(CA)) sign.

Standard:

11 The following criteria shall be met in order for a private concern to qualify for this type of signing:

- A. The parking area must have reasonably convenient access to the major transportation facility that it is intended to serve.**
- B. The Park and Ride Facility must be accessible 24 hours a day, 7 days a week.**
- C. A minimum of 50 spaces must be contributed.**
- D. If needed, "Follow-Up" signing shall be provided between the exit point of the major transportation system and the Park and Ride Facility by placing a PARK - RIDE (D4-2) sign at the appropriate locations prior to the installation of the G95B(CA) and G95B-1(CA) signs on the major transportation system.**

Option:

12 The BUS SERVICE (G95D(CA)) Plaque (see Figure 2D-10(CA)) may be placed below the G95A(CA) or G95B(CA) signs at locations where bus service is available at a particular Park and Ride Facility.

13 The Park - Ride (G95E(CA)) Plaque (see Figure 2D-10(CA)) may be used below the existing Advance Guide (G83(CA) Series) signs on freeways and expressways for direction to ridesharing parking lots.

Guidance:

¹⁴ If both transit and carpool parking are available, the local transit logo or symbol should be used to the left of the standard carpool symbol shown. If transit parking only, the local transit symbol or logo should be used in lieu of the carpool symbol.

Option:

¹⁵ The NO LOITERING, CAMPING, VENDING OR PARKING OF VEHICLES 30 FEET OR LONGER (S22(CA)) sign (see Figure 2D-10(CA)) may be placed at fringe and transportation corridor parking facilities constructed, maintained, or operated by Department of Transportation for the purpose of ridesharing. Refer to CVC Section 22518.

Section 2D.49 Weigh Station Signing (D8 Series)

Support:

⁰¹ The general concept for Weigh Station signing is similar to Rest Area signing (see Section 2I.05) because in both cases traffic using either area remains within the right-of-way.

Standard:

⁰² **The standard installation for Weigh Station signing shall include three basic signs:**

- A. Advance sign (D8-1),**
- B. Exit Direction sign (D8-2), and**
- C. Exit Gore sign (D8-3).**

Support:

⁰³ Example locations of these signs are shown in Figure 2D-17 and 2D-17(CA).

Option:

⁰⁴ Where State law requires a regulatory sign (~~R13-1~~) in advance of the Weigh Station, a fourth sign (see Section 2B.60) may be located following the Advance sign.

Guidance:

⁰⁵ *The Exit Direction sign (D8-2) or the Advance sign (D8-1) should display, either within the sign border or on a supplemental plaque or sign panel, the changeable message OPEN or CLOSED.*

Option:

⁰⁶ The NO PICKUPS (SG8(CA)) sign may be used at problem locations to warn motorists that pickups are not allowed at weigh stations.

⁰⁷ The ALL TRUCKS – 2 AXLE AND MORE – STOP AT SCALE (SR57(CA)) sign may be placed in combination, below the Weigh Station Exit Direction (D8-2) sign to inform operators of small trucks to stop at the weigh station.

⁰⁸ On State highways, an extinguishable message sign may be used in lieu of the OPEN/CLOSED supplemental panel.

⁰⁹ The VEHICLE INSPECTION ONLY NO LOITERING OR CAMPING (S22-1(CA)) sign may be placed at problem locations in the area designated for brake check or safety inspection at weigh stations.

Section 2D.50 Community Wayfinding Signs

Support:

⁰¹ Community wayfinding guide signs are part of a coordinated and continuous system of signs that direct tourists and other road users to key civic, cultural, visitor, and recreational attractions and other destinations within a city or a local urbanized or downtown area.

⁰² Community wayfinding guide signs are a type of destination guide sign for conventional roads with a common color and/or identification enhancement marker for destinations within an overall wayfinding guide sign plan for an area.

⁰³ Figures 2D-18 through 2D-20 illustrate various examples of the design and application of community wayfinding guide signs.

Standard:

⁰⁴ **The use of community wayfinding guide signs shall be limited to conventional roads. Community wayfinding guide signs shall not be installed on freeway or expressway mainlines or ramps. Direction to community wayfinding destinations from a freeway or expressway shall be limited to the use of a Supplemental Guide sign (see Section 2E.35) on the mainline and a Destination sign (see Section 2D.37) on the ramp to direct road users to the area or areas within which community wayfinding guide signs are used. The individual wayfinding destinations shall not be displayed on the Supplemental Guide and**

Destination signs except where the destinations are in accordance with the State or agency policy on Supplemental Guide signs.

05 Community wayfinding guide signs shall not be used to provide direction to primary destinations or highway routes or streets. Destination or other guide signs shall be used for this purpose as described elsewhere in this Chapter and shall have priority over any community wayfinding sign in placement, prominence, and conspicuity.

06 Because regulatory, warning, and other guide signs have a higher priority, community wayfinding guide signs shall not be installed where adequate spacing cannot be provided between the community wayfinding guide sign and other higher priority signs. Community wayfinding guide signs shall not be installed in a position where they would obscure the road users' view of other traffic control devices.

07 Community wayfinding guide signs shall not be mounted overhead.

Guidance:

08 If used, a community wayfinding guide sign system should be established on a local municipal or equivalent jurisdictional level or for an urbanized area of adjoining municipalities or equivalent that form an identifiable geographic entity that is conducive to a cohesive and continuous system of signs. Community wayfinding guide signs should not be used on a regional or statewide basis where infrequent or sparse placement does not contribute to a continuous or coordinated system of signing that is readily identifiable as such to the road user. In such cases, Destination or other guide signs detailed in this Chapter should be used to direct road users to an identifiable area in which the type of eligible destination described in Paragraph 1 is located.

08a On State highways, community wayfinding guide signs should be placed under an encroachment permit from the Department of Transportation.

Standard:

08b Placement of the community wayfinding guide signs shall be by the jurisdiction or agency making the request through the normal permit process as a fee exempt permit.

08c These signs shall be installed in accordance with the Department of Transportation's Standard Plans publication. See Section 1A.11 for more information regarding this publication.

Guidance:

08d These signs should be limited to areas where they do not block or interfere with other signs necessary for safe and efficient operation of the highway. The sign panels should be clearly marked as to the ownership.

Support:

09 The specific provisions of this Section regarding the design of community wayfinding sign legends apply to vehicular community wayfinding signs and do not apply to those signs that are intended only to provide information or direction to pedestrians or other users of a sidewalk or roadside area.

Guidance:

10 Because pedestrian wayfinding signs typically use smaller legends that are inadequately sized for viewing by vehicular traffic and because they can provide direction to pedestrians that might conflict with that appropriate for vehicular traffic, wayfinding signs designed for and intended to provide direction to pedestrians or other users of a sidewalk or other roadside area should be located to minimize their conspicuity to vehicular traffic. Such signs should be located as far as practical from the street, such as at the far edge of the sidewalk. Where locating such signs farther from the roadway is not practical, the pedestrian wayfinding signs should have their conspicuity to vehicular traffic minimized by employing one or a combination of the following methods:

A. Locating signs away from intersections where high-priority traffic control devices are present.

B. Facing the pedestrian message toward the sidewalk and away from the street.

C. Cantilevering the sign over the sidewalk if the pedestrian wayfinding sign is mounted at a height consistent with vehicular traffic signs, removing the pedestrian wayfinding signs from the line of sight in a sequence of vehicular signs.

11 To further minimize their conspicuity to vehicular traffic during nighttime conditions, pedestrian wayfinding signs should not be retroreflective.

Support:

12 Color coding is sometimes used on community wayfinding guide signs to help road users distinguish between multiple potentially confusing traffic generator destinations located in different neighborhoods or subareas within a community or area.

Option:

13 At the boundaries of the geographical area within which community wayfinding guide signing is used, an informational guide sign (see Figures 2D-18 and 2D-20) may be posted to inform road users about the presence of wayfinding signing and to identify the meanings of the various color codes or pictographs that are being used.

Standard:

14 **These informational guide signs shall have a white legend and border on a green background and shall have a design similar to that illustrated in Figures 2D-1 and 2D-18 and shall be consistent with the basic design principles for guide signs. These informational guide signs shall not be installed on freeway or expressway mainlines or ramps.**

15 **The color coding or a pictograph of the identification enhancement markers of the community wayfinding guide signing system shall be included on the informational guide sign posted at the boundary of the community wayfinding guide signing area. The color coding or pictographs shall apply to a specific, identifiable neighborhood or geographical subarea within the overall area covered by the community wayfinding guide signing. Color coding or pictographs shall not be used to distinguish between different types of destinations that are within the same designated neighborhood or subarea. The color coding shall be accomplished by the use of different colored square or rectangular panels on the face of the informational guide sign, each positioned to the left of the neighborhood or named geographic area to which the color-coding panel applies. The height of the colored square or rectangular panels shall not exceed two times the height of the upper-case letters of the principal legend on the sign.**

Option:

16 The different colored square or rectangular panels may include either a black or a white (whichever provides the better contrast with the color of the panel) letter, numeral, or other appropriate designation to identify the destination.

17 Except for the informational guide sign posted at the boundary of the wayfinding guide sign area, community wayfinding guide signs may use background colors other than green in order to provide a color identification for the wayfinding destinations by geographical area within the overall wayfinding guide signing system. Color-coded community wayfinding guide signs may be used with or without the boundary informational guide sign displaying corresponding color-coding panels described in Paragraphs 13 through 16. Except as provided in Paragraphs 18 and 19, in addition to the colors that are approved in this Manual for use on official traffic control signs (see Section 2A.10), other background colors may also be used for the color coding of community wayfinding guide signs.

Standard:

18 **The standard colors of red, orange, yellow, purple, or the fluorescent versions thereof, fluorescent yellow-green, and fluorescent pink shall not be used as background colors for community wayfinding guide signs, in order to minimize possible confusion with critical, higher-priority regulatory and warning sign color meanings readily understood by road users.**

19 **The minimum luminance ratio of legend to background for community wayfinding guide signs shall be 3:1.**

20 **All messages, borders, legends, and backgrounds of community wayfinding guide signs and any identification enhancement markers shall be retroreflective (see Sections 2A.07 and 2A.08).**

Guidance:

21 *Community wayfinding guide signs, exclusive of any identification enhancement marker used, should be rectangular in shape. Simplicity and uniformity in design, position, and application as described in Section 2A.06 are important and should be incorporated into the community wayfinding guide sign design and location plans for the area.*

22 *Community wayfinding guide signs should be limited to three destinations per sign (see Section 2D.07).*

23 *Abbreviations (see Section 1A.15) should be kept to a minimum, and should include only those that are commonly recognized and understood.*

24 *Horizontal lines of a color that contrasts with the sign background color should be used to separate groups of destinations by direction from each other.*

Support:

25 The basic requirement for all highway signs, including community wayfinding signs, is that they be legible to those for whom they are intended and that they be understandable in time to permit a proper response. Section 2A.06 contains additional information on the design of signs, including desirable attributes of effective designs.

Guidance:

26 *Word messages should be as brief as practical and the lettering should be large enough to provide the necessary legibility distance.*

Standard:

27 **The minimum specific ratio of letter height to legibility distance shall comply with the provisions of Section 2A.13. The size of lettering used for destination and directional legends on community wayfinding signs shall comply with the provisions of minimum letter heights as provided in Section 2D.06.**

28 **Interline and edge spacing shall comply with the provisions of Section 2D.06.**

29 **Except as provided in Paragraph 31, the lettering style used for destination and directional legends on community wayfinding guide signs shall comply with the provisions of Section 2D.05.**

30 **The lettering for destinations on community wayfinding guide signs shall be a combination of lower-case letters with initial upper-case letters (see Section 2D.05). All other word messages on community wayfinding guide signs shall be in all upper-case letters.**

Option:

31 A lettering style other than the Standard Alphabets provided in the "Standard Highway Signs and Markings" book may be used on community wayfinding guide signs if an engineering study determines that the legibility and recognition values for the chosen lettering style meet or exceed the values for the Standard Alphabets for the same legend height and stroke width.

Standard:

32 **Except for signs that are intended to be viewed only by pedestrians, bicyclists stopped out of the flow of traffic, or occupants of parked vehicles, Internet and e-mail addresses, including domain names and uniform resource locators (URL), shall not be displayed on any community wayfinding guide sign or sign assembly.**

33 **The arrow location and priority order of destinations shall follow the provisions described in Sections 2D.08 and 2D.37. Arrows shall be of the designs provided in Section 2D.08.**

Option:

34 Pictographs (see definition in Section 1A.13) may be used on community wayfinding guide signs.

Standard:

35 **If a pictograph is used, its height shall not exceed two times the height of the upper-case letters of the principal legend on the sign.**

36 **Except for pictographs, symbols that are not approved in this Manual for use on guide signs shall not be used on community wayfinding guide signs.**

37 **Business logos, commercial graphics, or other forms of advertising (see Section 1A.01) shall not be used on community wayfinding guide signs or sign assemblies.**

Option:

38 Other graphics that specifically identify the wayfinding system, including identification enhancement markers, may be used on the overall sign assembly and sign supports.

Support:

39 An enhancement marker consists of a shape, color, and/or pictograph that is used as a visual identifier for the community wayfinding guide signing system for an area. Figure 2D-18 shows examples of identification enhancement marker designs that can be used with community wayfinding guide signs.

Option:

40 An identification enhancement marker may be used in a community wayfinding guide sign assembly, or may be incorporated into the overall design of a community wayfinding guide sign, as a means of visually identifying the sign as part of an overall system of community wayfinding signs and destinations.

Standard:

41 **The sizes and shapes of identification enhancement markers shall be smaller than the community wayfinding guide signs themselves. Identification enhancement markers shall not be designed to have an appearance that could be mistaken by road users as being a traffic control device.**

Guidance:

02 The area of the identification enhancement marker should not exceed 1/5 of the area of the community wayfinding guide sign with which it is mounted in the same sign assembly.

Section 2D.51 Truck, Passing, or Climbing Lane Signs (D17-1 and D17-2)

Guidance:

01 If an extra lane has been provided for trucks and other slow-moving traffic, a NEXT TRUCK LANE XX MILES (D17-1) sign and/or a TRUCK LANE XX MILES (D17-2) sign (see Figure 2D-21) should be installed in advance of the lane.

Option:

- 02 Alternative legends such as PASSING LANE or CLIMBING LANE may be used instead of TRUCK LANE.
- 03 Section 2B.31 contains information regarding regulatory signs for these types of lanes.

Option:

04 The DIVIDED ROAD (X MILES) AHEAD (G68(CA)) sign (see Figure 2D-101(CA)) may be used to indicate the distance to the next section of divided highway.

Guidance:

- 05 *The mileage shown should be to the nearest one-fourth mile, and to the nearest mile for distances over one mile.*

Option:

- 06 The G68(CA) sign may be used on a two-lane highway in advance of a divided section of highway to encourage passing in the divided section.
- 07 The PASSING LANE (X MILES) or AHEAD (G69(CA)) sign (see Figure 2D-21(CA)) may be used to inform motorists on a two-lane highway that an additional lane is available ahead for passing slower traffic.

Support:

- 08 See Section 3B.05 for signing and marking of passing and truck lanes.

Section 2D.52 Slow Vehicle Turn-Out Sign (D17-7)

Guidance:

01 If a slow vehicle turn-out area has been provided for slow-moving traffic, a SLOW VEHICLE TURN-OUT XX MILES (D17-7) sign (see Figure 2D-21) should be installed in advance of the turn-out area.

Option:

- 02 Section 2B.35 contains information regarding regulatory signs for slow vehicle turn-out areas.

Section 2D.53 Signing of Named Highways

Option:

01 Guide signs may contain street or highway names if the purpose is to enhance driver communication and guidance; however, they are to be considered as supplemental information to route numbers.

Standard:

- 02 **Highway names shall not replace official numeral designations.**
- 03 **Memorial names (see Section 2M.10) shall not appear on supplemental signs or on any other information sign on or along the highway or its intersecting routes.**
- 04 **The use of route signs shall be restricted to signs officially used for guidance of traffic in accordance with this Manual and the "Purpose and Policy" statement of the American Association of State Highway and Transportation Officials that applies to Interstate and U.S. numbered routes (see Page i for AASHTO's address).**

Option:

05 Unnumbered routes having major importance to proper guidance of traffic may be signed if carried out in accordance with the aforementioned policies. For unnumbered highways, a name to enhance route guidance may be used where the name is applied consistently throughout its length.

Guidance:

- 06 *Only one name should be used to identify any highway, whether numbered or unnumbered.*

Section 2D.54 Crossover Signs (D13-1 and D13-2)

Option:

⁰¹ Crossover signs may be installed on divided highways to identify median openings not otherwise identified by warning or other guide signs.

Standard:

⁰² **A CROSSOVER (D13-1) sign (see Figure 2D-21) shall not be used to identify a median opening that is permitted to be used only by official or authorized vehicles. If used, the sign shall be a horizontal rectangle of appropriate size to carry the word CROSSOVER and a horizontal directional arrow. The CROSSOVER sign shall have a white legend and border on a green background.**

Guidance:

⁰³ *If used, the CROSSOVER sign should be installed immediately beyond the median opening, either on the right-hand side of the roadway or in the median.*

Option:

⁰⁴ The Advance Crossover (D13-2) sign (see Figure 2D-21) may be installed in advance of the CROSSOVER sign to provide advance notice of the crossover.

Standard:

⁰⁵ **If used, the Advance Crossover sign shall be a horizontal rectangle of appropriate size to carry the word CROSSOVER and the distance to the median opening. The sign shall have white legend and border on a green background.**

Guidance:

⁰⁶ *The distance displayed on the Advance Crossover sign should be 1 MILE, 1/2 MILE, or 1/4 MILE, unless unusual conditions require some other distance. If used, the sign should be installed either on the right-hand side of the roadway or in the median at approximately the distance displayed on the sign.*

Section 2D.55 National Scenic Byways Signs (D6-4, D6-4a)

Support:

⁰¹ Certain roads have been designated by the U.S. Secretary of Transportation as National Scenic Byways or All-American Roads based on their archeological, cultural, historic, natural, recreational, or scenic qualities.

Option:

⁰² State and local highway agencies may install the National Scenic Byways (D6-4 or D6-4a) signs at entrance points to a route that has been recognized by the U.S. Secretary of Transportation as a National Scenic Byway or an All-American Road. The D6-4 or D6-4a sign may be installed on route sign assemblies (see Figure 2D-22) or as part of larger roadside structures. National Scenic Byways signs may also be installed at periodic intervals along the designated route and at intersections where the designated route turns or follows a different numbered highway. At locations where roadside features have been developed to enhance the traveler's experience such as rest areas, historic sites, interpretive facilities, or scenic overlooks, the National Scenic Byways sign may be placed on the associated sign assembly to inform travelers that the site contributes to the byway travel experience.

Standard:

⁰³ **When a National Scenic Byways sign is installed on a National Scenic Byway or an All-American Road, the design shown for the D6-4 or D6-4a sign in Figure 2D-22 shall be used. Use of this design shall be limited to routes that have been designated as a National Scenic Byway or All-American Road by the U.S. Secretary of Transportation.**

⁰⁴ **If used, the D6-4 or D6-4a sign shall be placed such that the roadway route signs have primary visibility for the road user.**

Scenic Route Signs (G30(CA) Series)

Support:

⁰⁵ **A scenic route is defined as an officially designated portion of the State Highway System traversing areas of outstanding scenic beauty, which together with the adjacent scenic corridors requires special scenic conservation treatment. Refer to California Streets and Highway Codes 260 through 263.8.**

Standard:

⁰⁶ **The Scenic Route (G30(CA)) sign shall be used to identify routes, which have been designated as official State Scenic Highways. The G30(CA) sign shall be installed on the right at the beginning of the scenic route.**

Guidance:

07 The Scenic Route (G30A(CA) and G30B(CA)) signs, when used, should be used on State and county routes, respectively, and placed below and on the same post with the route shield signs.

Option:

08 The Begin plate (G30C(CA)) may be placed above the Scenic Route sign, and the End plate (G30D(CA)) may be placed below the scenic route signs.

Support:

09 See Figure 2D-101(CA) for G30(CA) series signs.

Section 2D.101(CA) Inventory Markers

Option:

01 The Inventory Markers (G11-1(CA), G11-2(CA), G11-4(CA) and G11-5(CA)) may be used at major rivers or creeks to identify bridges or structures.

02 The Inventory Markers (G11-6(CA)) may be used to identify bridges or structures at locations where the official name and number is not needed for motorist orientation.

03 The Inventory Markers (G11-10(CA)) may be used to mark the limits of an environmentally sensitive area within the State highway right of way.

04 The Memorial Bridge and Inventory Marker (G11-8(CA) and G11-9(CA)) combination signs may be placed when an appropriate authority has requested that a highway facility be designated as a memorial facility.

Support:

05 See Figure 2D-101(CA) for G11(CA) series signs.

Guidance:

06 The Inventory Markers should be placed at each end of a structure, with the bottom of the sign even with the top of the bridge rail.

Support:

07 The official name and number of structures on State highways are determined by the Department of Transportation's Office of Structures Design.

Option:

08 The Inventory Marker (Survey) (S2(CA)) may be used as an accessory or witness marker to aid in the protection, location and identification of Department of transportation's survey monuments that are to be perpetuated.

Support:

09 The S2(CA) marker is to be placed on a metal guide post, which is driven 12 to 18 inches away from the monument.

Mile Post Markers (G11-7(CA)) on State Highways:

Support:

10 Refer to Department of Transportation's TASAS Manual for more details on this topic. See Section 1A.11 for information regarding this publication.

11 This section, regarding Mile Post Markers (identified as "highway post markers" in Department's Standard Plans), is for future application. It will apply after the field conversion of existing markers and conversion of the Highway Data Base.

12 The existing markers in the field are in English units (miles). Installation of new markers, replacement of missing markers and correction (relocation) of existing markers will be done in English units (miles). The previous policies of calculation, lateral placement, and spacing for two lane roads and divided roads and rural and urban will remain effective until such time as a full field conversion program is applied.

13 The mile post markers in the field are used by traffic officers, maintenance forces and others to locate specific incidents or features with reference to the mile post marker system. The mile post marker is integral to the mile post marker system and shall not be used for additional marker functions. Other types of markers shall not be used as mile post markers.

Standard:

14 The mile post marker shall indicate the route, county, and mile post marker of the installation; only mile post markers shall contain the route and county designation.

Placement

Support:

A - Rural Areas.

1. Two-Lane Roads - Markers are placed 1 mile apart on both sides of the highway, staggered by 0.5 mile.
2. Divided Roads - Markers are placed 1 mile apart on both sides of the highway at the same mile post marker location.

B - Urban Areas.

1. Two-Lane Roads - Markers are placed 0.5 mile apart on each side of the highway, staggered by 0.25 mile.
2. Divided Roads - Markers are placed 0.5 mile apart on each side of the highway at the same mile post marker location.
3. See sub-heading 'D' below.

Option:

C - Maximum Spacing.

When a regular marker falls within 0.25 mile of a landmark (bridge, etc.), the 1 mile or 0.5 mile marker may be omitted. The intent is to have mile post markers spaced no farther apart than 1 mile on rural highways, or 0.5 mile on urban highways. This is a maximum spacing. Additional markers may be placed in areas where it is desired to have additional highway reference points.

D - Incorporated or Suburban Areas.

Mile post markers may be omitted in communities with city-street characteristics of curb, gutter, sidewalks and local development. In these areas, intersecting streets would be used as reference points in lieu of markers.

Support:

E - Mile Post Marker at County Lines.

At county lines, the county names and mile post marker information are delineated on separate markers and mounted side-by-side on separate posts, facing both directions of traffic.

F - Mile Post Marker Equation.

1. Mile post marker equation with a difference in value of 0.02 mile or more shall be posted on the highway.
2. Each side of the equation is shown on separate markers and mounted side-by-side on separate posts, both facing the direction of traffic.
3. Current mile post marker letter prefix and suffix codes are listed in the State Highway Log. They are also defined in the TASAS Manuals. All prefix letters shall be shown on the mile post markers. The suffix letter E identifies a mile post marker equation. In the field, the letter E is replaced with BK (Back) and AH (Ahead) on separate markers, placed side-by-side.

Mile Post Markers for Structures

1. Mile Post Markers.

Standard:

Mile post marker or G11(CA) signs shall be mounted on, or placed at bridge abutments and at the beginning of bridge rails.

Support:

On skewed structures the mile post marker will not necessarily be identical on each side of the highway. The mile post marker on each side of the highway is the mile point of the centerline opposite the marker location.

2. Highway Log Mile Post Marker Values.

a. Overcrossing and Underpass.

The Highway Log mile post marker for an overcrossing or underpass is measured from the structure centerline where it intersects the highway centerline. The Post Marker will reflect that value, plus or minus the structure width, and direction of travel. This rule applies to all structures crossing over the highway regardless of the skew.

b. Undercrossings, Overheads and Bridges.

Single Structure: The Highway Log mile post marker value is measured along the highway centerline. A post marker value is assigned to the paving notch at the end of the structure and the paved roadbed in each direction of travel.

¹⁵ Divided or Separated Structures on Divided Highways: The Highway Log mile post marker value is measured along the centerline of each roadbed. The post marker value is assigned to the paving notch at the end of the structure and the paved

roadbed in each direction of travel. Depending on the width of the median and the skew, two mile post marker values may be assigned to each end.

Placement

Standard:

16 The preparation of plans for placement of Mile post markers on State highways shall be the responsibility of the Department of Transportation's District Traffic Branch.

Support:

17 Dimensions, lettering and positioning standards are included in the Department of Transportation's Standard Plans and California Sign Specifications publications. See Section 1A.11 for information regarding these publications.

Standard:

18 Mile post markers shall not be reflectorized. If a mile post marker should fall within a line of guide markers, it shall be placed in a manner that will not interfere with the guide marker pattern. Mile post markers shall not be used as guide markers, clearance markers, culvert markers, etc.

Installation and Verification

Standard:

19 Mile post markers shall be placed a minimum of 2 feet and not more than 12 feet beyond the edge of shoulder on the right side of the highway facing traffic.

Guidance:

20 Generally, they should be placed in such a position as to minimize interference with maintenance.

Standard:

21 When installed behind guardrail, the marker shall be placed so that the entire legend is legible from the road.

Option:

22 Stenciling of the mile post marker on concrete median barriers may be in addition to, but not in place of the regular mile post markers. This is an additional aid for maintenance and collision investigation.

Standard:

23 All markers shall be located to an accuracy of 50 foot on the ground. The value shown on the marker shall be to the nearest 0.001 mile or 50 feet, and shall reflect the mile point of the centerline opposite the marker location.

24 The Department of Transportation's District Traffic Branch shall have the responsibility to verify the accuracy of the placement of mile post markers on State highways. Any markers found to be more than 50 feet from the intended location shall be relocated.

Section 2D.102(CA) Intersection Number (G98(CA)) Sign

Option:

01 The Intersection Number (G98(CA)) Sign (see Figure 2D-101(CA)) may be installed on any section of a highway route to number an intersection to assist road users in estimating their progress, and to provide a means for identifying the location on the highway.

02 The intersection numbering may be reference location numbering or consecutive numbering.

Support:

Reference location numbering is preferred over consecutive numbering for two reasons:

- A. if new intersections are added on a route, the highway agencies do not have to change the numbering sequence; and
- B. reference location numbering assists road users in determining their destination distances and travel mileage.

03 The G98(CA) signs are used to provide a simple method for tourists to find their way safely and efficiently along the highway route upon which a great number of tourist destinations are located on or in close proximity.

Guidance:

04 If used, the G98(CA) signs should be ground-mounted or placed on the traffic signal poles at signalized intersections.

Standard:

05 The G98(CA) signs shall not be installed on a highway unless the intersection numbers are published in a tourist map.

Section 2D.103(CA) State Property Signs (SG26(CA), S1-1(CA), and S27(CA))

Option:

⁰¹ The Caltrans Facility Entrance (SG26(CA)) sign (see Figure 2D-101(CA)) may be placed at Department of Transportation's facilities where necessary to identify the facility and serve a public need.

⁰² The STATE PROPERTY (S1-1(CA)) (see Figure 2D-101(CA)) sign may be used to identify materials placed on or near the Department of Transportation's right-of-way for maintenance or construction purposes.

Standard:

⁰³ **The Department of Transportation's CONSTRUCTION FIELD OFFICE (S27(CA)) (see Figure 2D-101(CA)) sign shall be placed to identify a facility where offices are provided for the construction projects resident engineer and staff. Refer to Department of Transportation's Construction Manual, Chapter 1, Section 402. See Section 1A.11 for information regarding this publication.**

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

A - Freeway or Expressway – Airport Terminals



B - Conventional Road or Street – Urban Areas

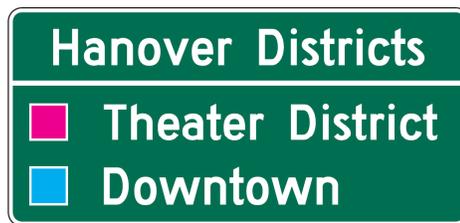
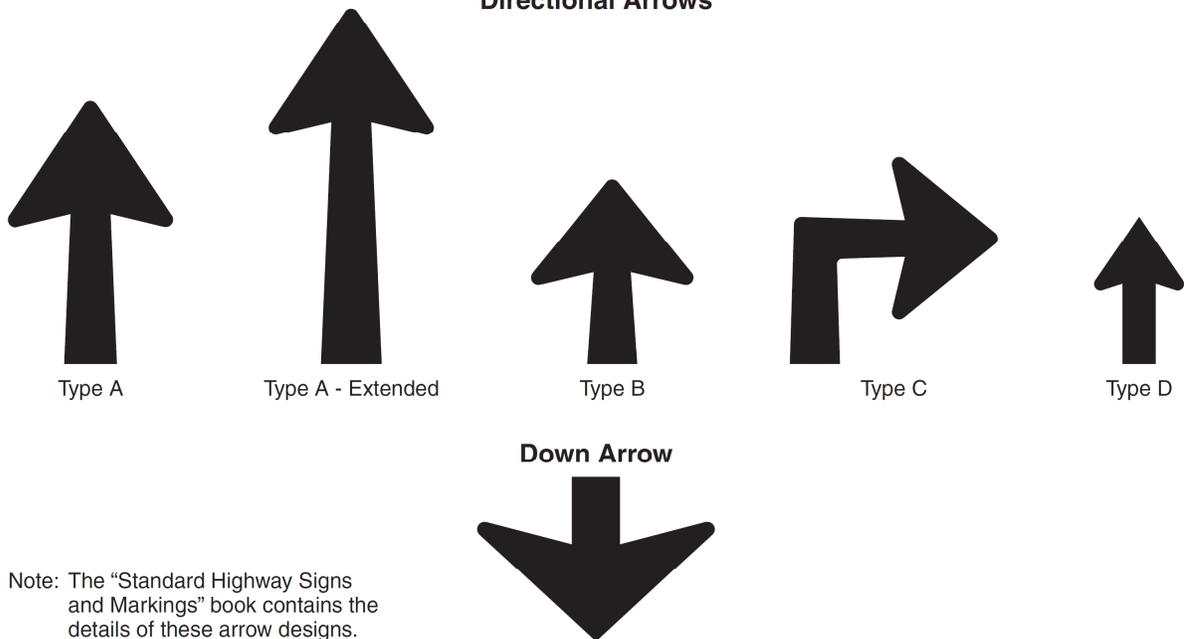


Figure 2D-2. Arrows for Use on Guide Signs

Directional Arrows

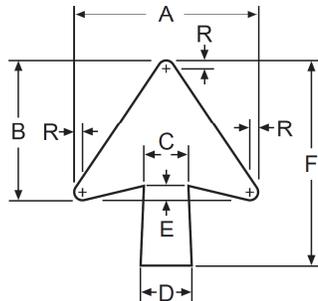


Note: The "Standard Highway Signs and Markings" book contains the details of these arrow designs.

Figure 2D-2 (CA). Arrows for Use on Guide Signs (Sheet 1 of 2)

Standard Arrows for Directional Signs

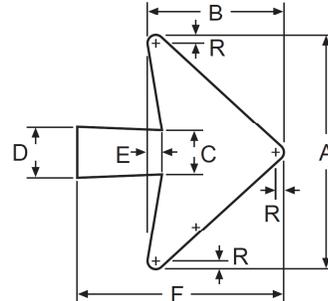
1 Line Horizontal, Vertical, or Diagonal Arrow



ENGLISH UNITS

Letter Sizes	A	B	C	D	E	F	R
4UC(EM), 4UC(E)	5-5/8	3-5/8	1-9/16	1-15/16	7/16	6-3/8	5/16
5UC(E)	7-1/16	4-9/16	1-15/16	2-7/16	9/16	8-1/16	3/8
6UC(EM)	8-7/16	5-7/16	2-5/16	2-15/16	5/8	9-9/16	1/2
6UC(E), 8UC(EM)	11-1/4	7-1/4	3-1/8	3-7/8	7/8	12-3/4	5/8
8UC(E), 10.67UC(EM)	14-1/4	9-13/16	3-3/8	4-1/2	1-5/16	17-1/4	3/4
10UC(E)	14	9	4	5	7/8	16	7/8
12UC(E), 13.3UC(EM)	17-1/2	11-3/4	4-3/8	5-5/8	1-1/2	20-1/4	7/8
15UC(E), 16UC(EM)	21-7/8	14-1/4	5	6-3/4	1-3/4	25	1

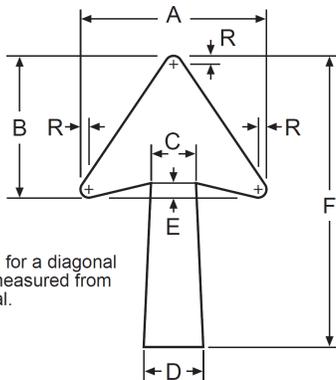
2 (or more) Line Horizontal Arrow



ENGLISH UNITS

Letter Sizes	A	B	C	D	E	F	R
4UC(EM), 4UC(E)	7-1/8	4-1/8	1-9/16	1-15/16	7/16	6-3/8	5/16
5UC(E)	9	5-3/16	1-15/16	2-7/16	9/16	8-1/16	3/8
6UC(EM)	10-11/16	6-3/16	2-5/16	2-15/16	5/8	9-9/16	1/2
6UC(E), 8UC(EM)	14-1/4	8-1/4	3-1/8	3-7/8	7/8	12-3/4	5/8
8UC(E), 10.67UC(EM)	18-3/4	10-7/8	3-3/4	5	1-5/16	17-1/4	13/16
10 or 12UC(E), 13.3UC(EM)	23-13/16	13-13/16	4-1/2	6	1-1/2	20-1/4	3/4
15UC(E), 16UC(EM)	28-1/2	16-1/2	5-3/8	7-1/8	1-3/4	25	1

2 (or more) Line Vertical or Diagonal Arrow

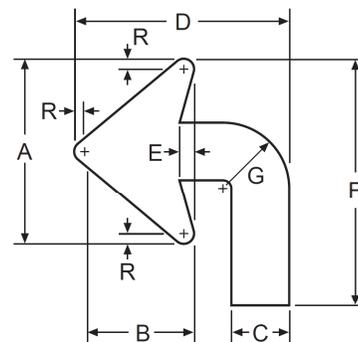


NOTE:
 The angle for a diagonal arrow is measured from the vertical.

ENGLISH UNITS

Letter Sizes	A	B	C	D	E	F	R
4UC(EM), 4UC(E)	5-5/8	4-3/8	1-9/16	1-15/16	7/16	9-1/8	5/16
5UC(E)	7-1/16	5-1/2	1-15/16	2-7/16	9/16	11-1/2	3/8
6UC(EM)	8-7/16	6-9/16	2-5/16	2-15/16	5/8	13-11/16	1/2
6UC(E), 8UC(EM)	11-1/4	8-3/4	3-1/8	3-7/8	7/8	18-1/4	5/8
8UC(E), 10.67UC(EM)	15-1/8	11-9/16	3-3/4	5	1-5/16	24-1/4	13/16
10 or 12UC(E), 13.3UC(EM)	18-1/4	14	4-1/2	6	1-1/2	29-1/4	3/4
15UC(E), 16UC(EM)	22-1/4	17	5-3/8	7-1/8	1-3/4	35-5/8	1

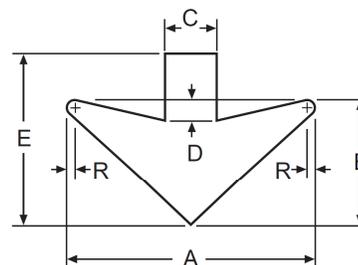
Advance Arrow (Left or Right Turn)



ENGLISH UNITS

Letter Sizes	A	B	C	D	E	F	G	R
6UC(EM)	8-7/16	5-7/16	2-5/8	9-3/4	5/8	11-1/4	3R	1/2
6UC(E), 8UC(EM)	11-1/4	7-1/4	3-1/2	13	7/8	15	4R	5/8

Vertical Down Arrow



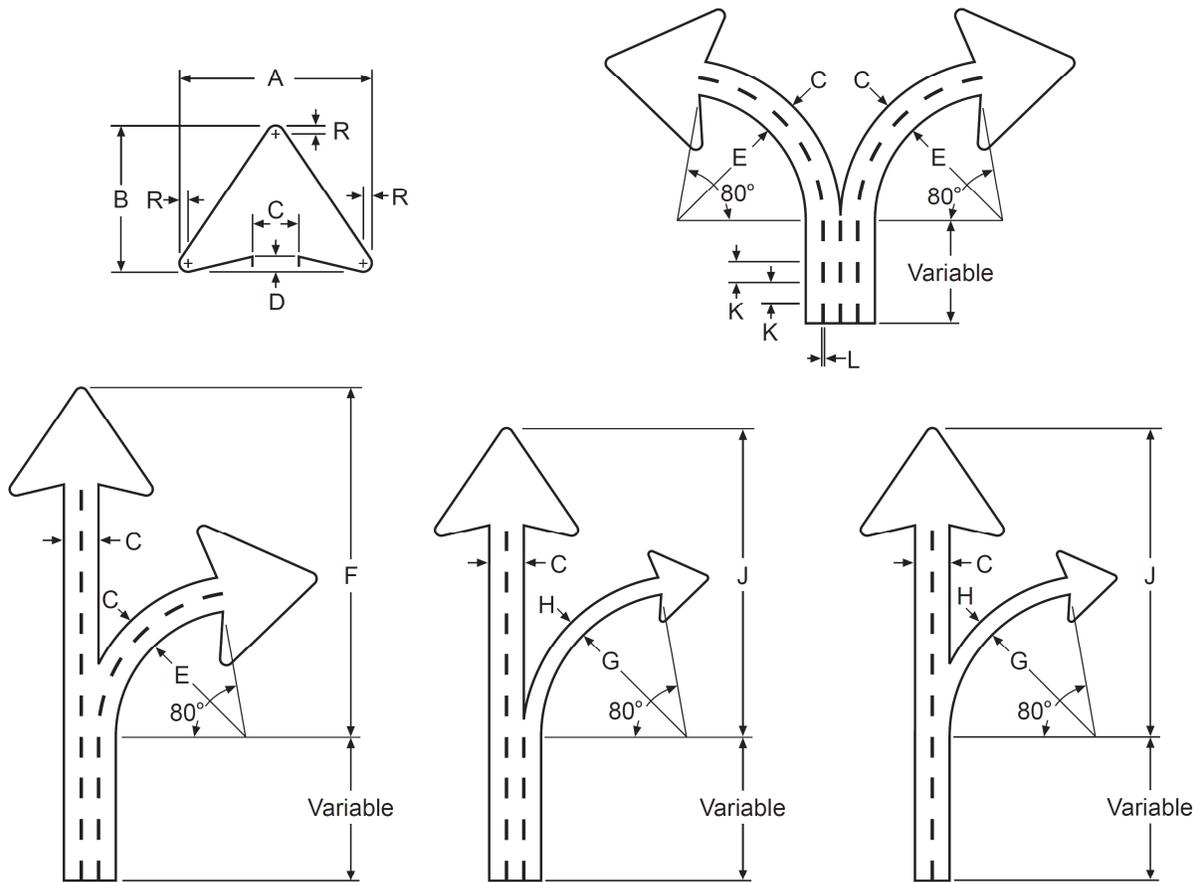
ENGLISH UNITS

A	B	C	D	E	R
24	12	5	2	16-1/2	3/4
32	16	6-1/2	3	22	1

2/28/08

Figure 2D-2 (CA). Arrows for Use on Guide Signs (Sheet 2 of 2)

Standard Arrows for Diagrammatic Signs



ENGLISH UNITS

Letter Sizes	A	B	C	D	E	F	G	H	J	K	L	R
13.3UC(EM)	29	19	6.5	2.25	24	66	27.5	3.25	60	4	.625	1.375
16UC(EM)	35	22.75	8	2.75	29.5	84	33.5	4	72	4.75	.75	1.625
20UC(EM)	43.75	28.5	10	3.5	37	102	42	5	90	6	1	2

2/20/08

Figure 2D-3. Route Signs



Figure 2D-3 (CA). California Route Signs



Figure 2D-4. Route Sign Auxiliaries

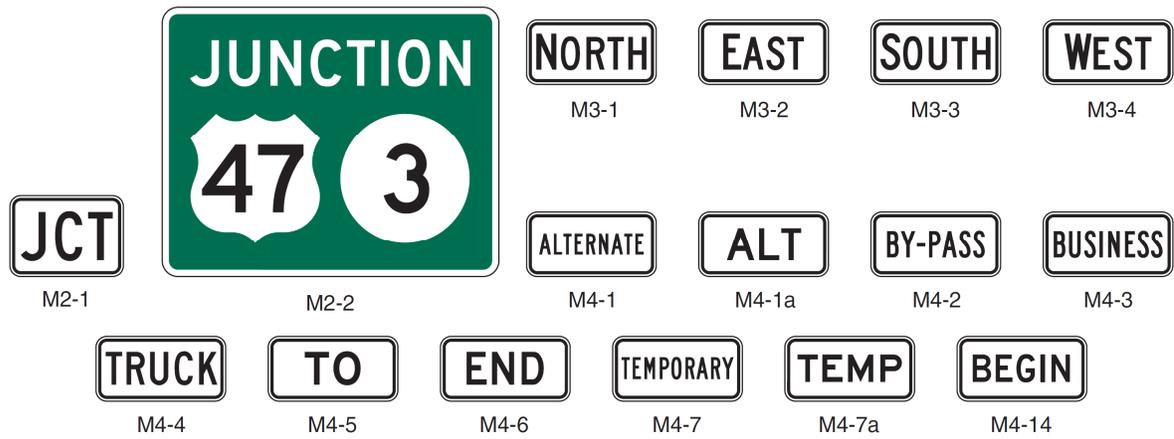


Figure 2D-4 (CA). California Route Sign Auxiliaries



G76 (CA)

Figure 2D-5. Advance Turn and Directional Arrow Auxiliary Signs

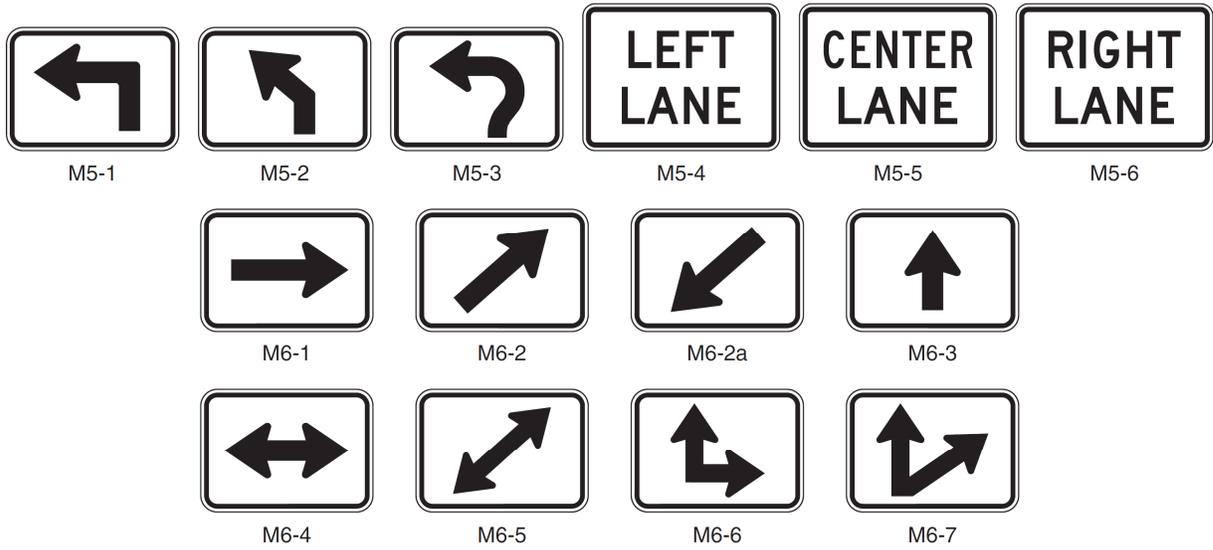
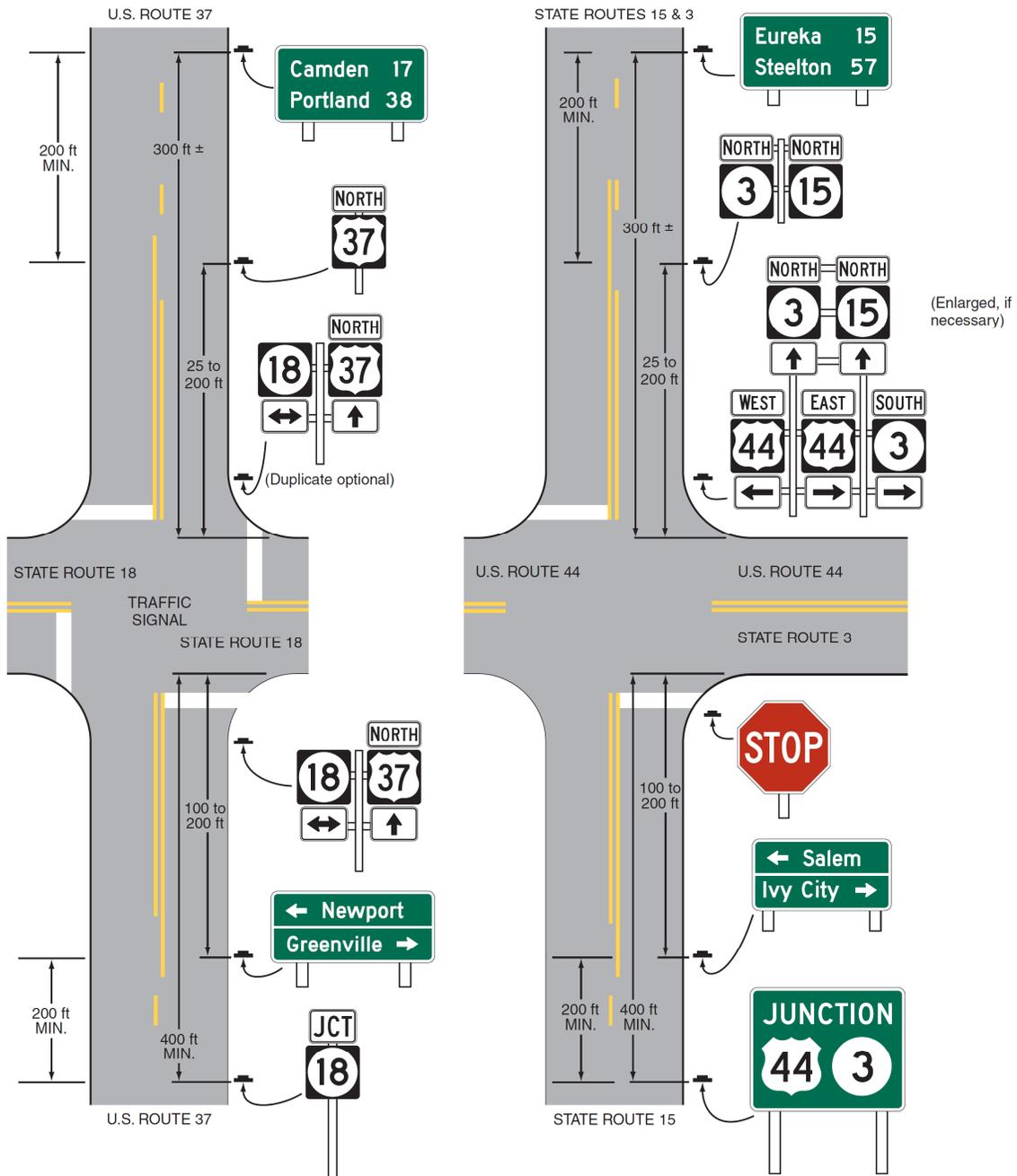


Figure 2D-5 (CA). Advance Turn and Directional Arrow Auxiliary Signs

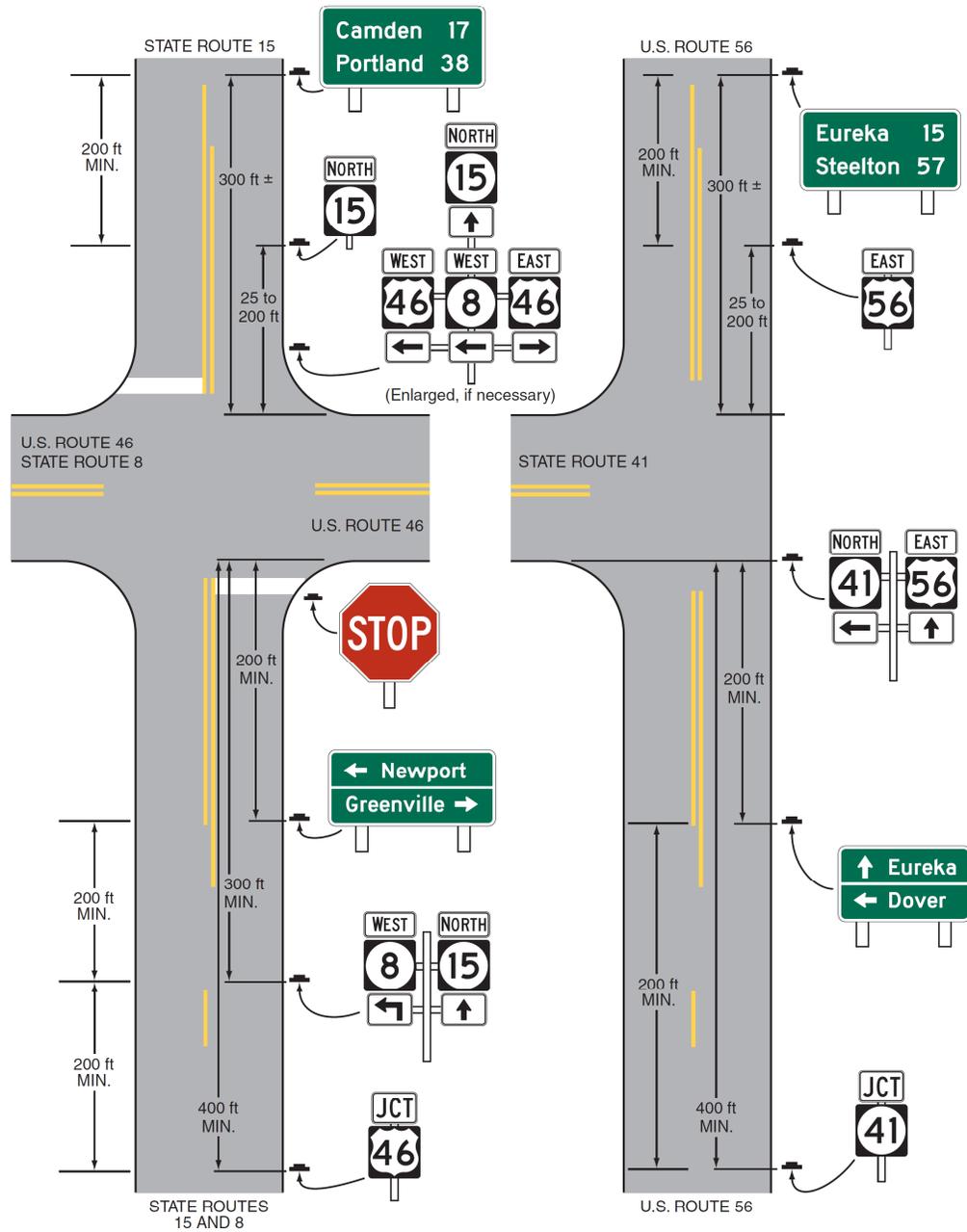


**Figure 2D-6. Illustration of Directional Assemblies and Other Route Signs
 (for One Direction of Travel Only) (Sheet 1 of 4)**



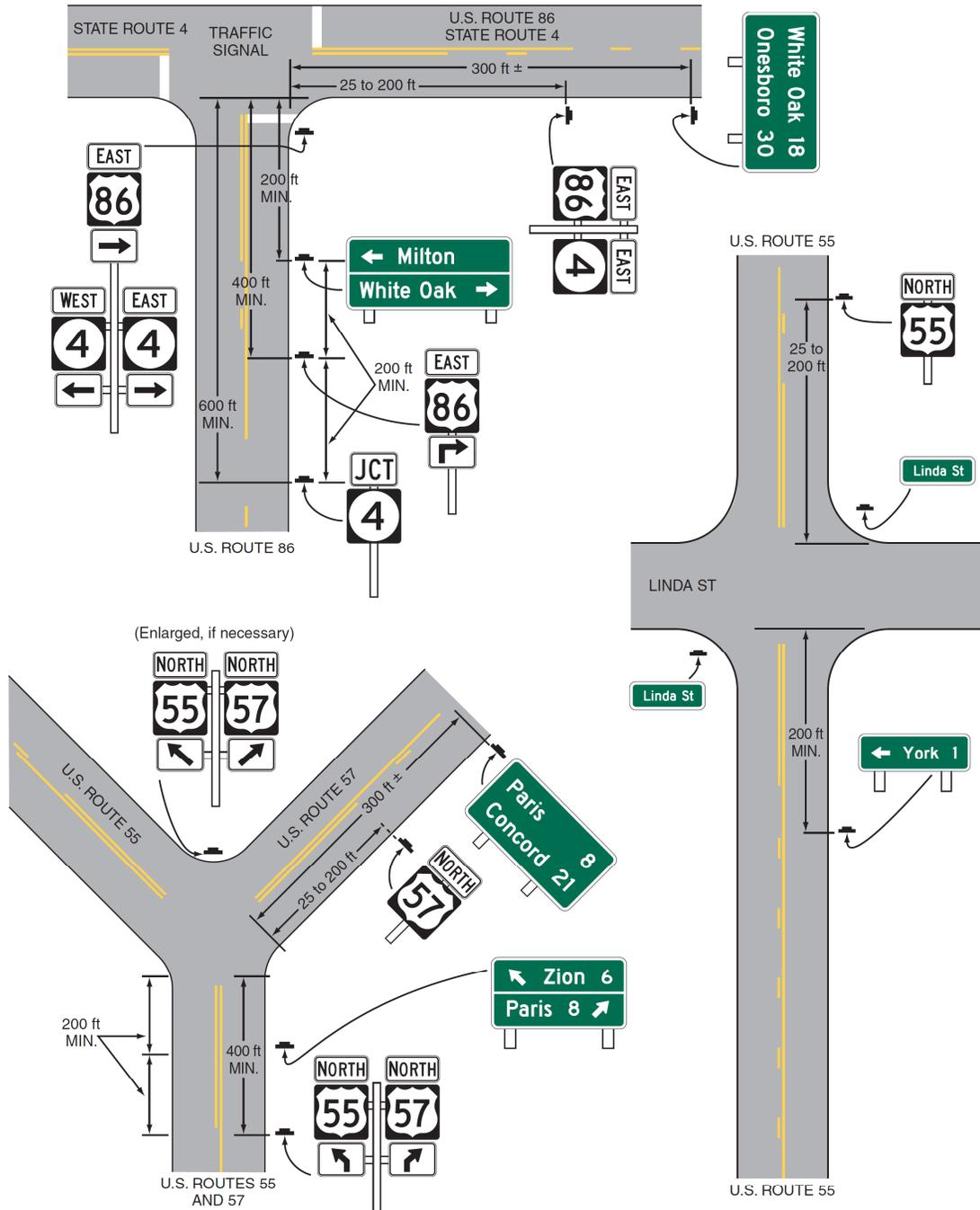
Note: The spacings shown on this figure are for rural intersections.
 See Sections 2D.29, 2D.30, 2D.32, 2D.34, 2D.40, and 2D.42 for low-speed and/or urban conditions.

Figure 2D-6. 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.29, 2D.30, 2D.32, 2D.34, 2D.40, and 2D.42 for low-speed and/or urban conditions.

Figure 2D-6. 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.29, 2D.30, 2D.32, 2D.34, 2D.40, and 2D.42 for low-speed and/or urban conditions.

Figure 2D-6. Illustration of Directional Assemblies and Other Route Signs (for One Direction of Travel Only) (Sheet 4 of 4)

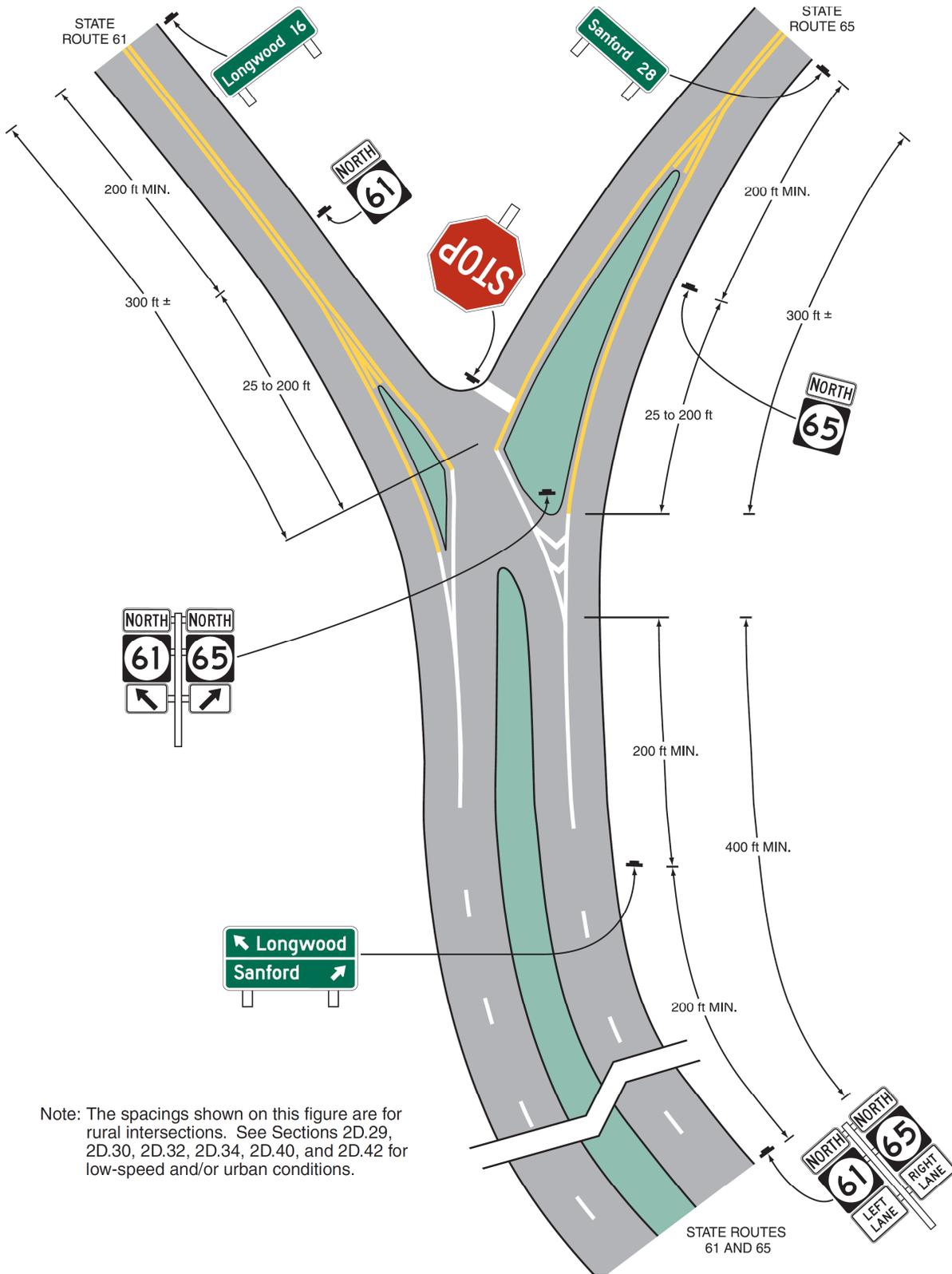


Figure 2D-7. Destination and Distance Signs

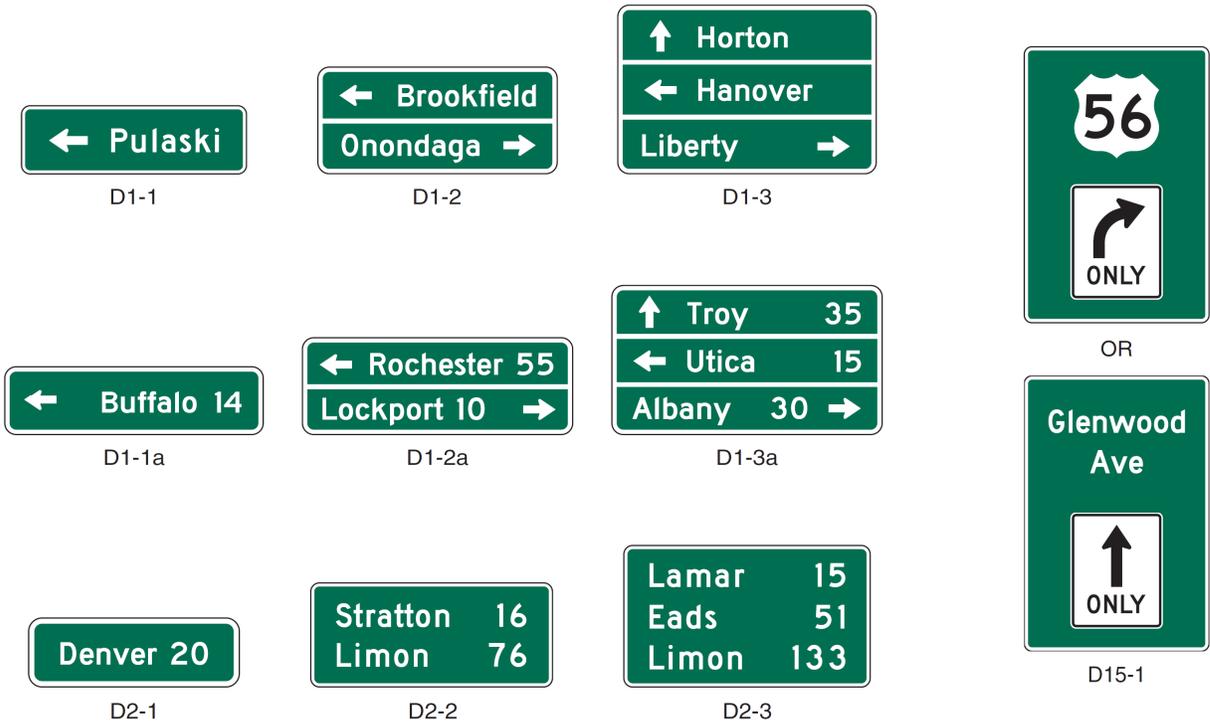


Figure 2D-7 (CA). California Destination and Distance Signs



Figure 2D-8. Destination Signs for Roundabouts

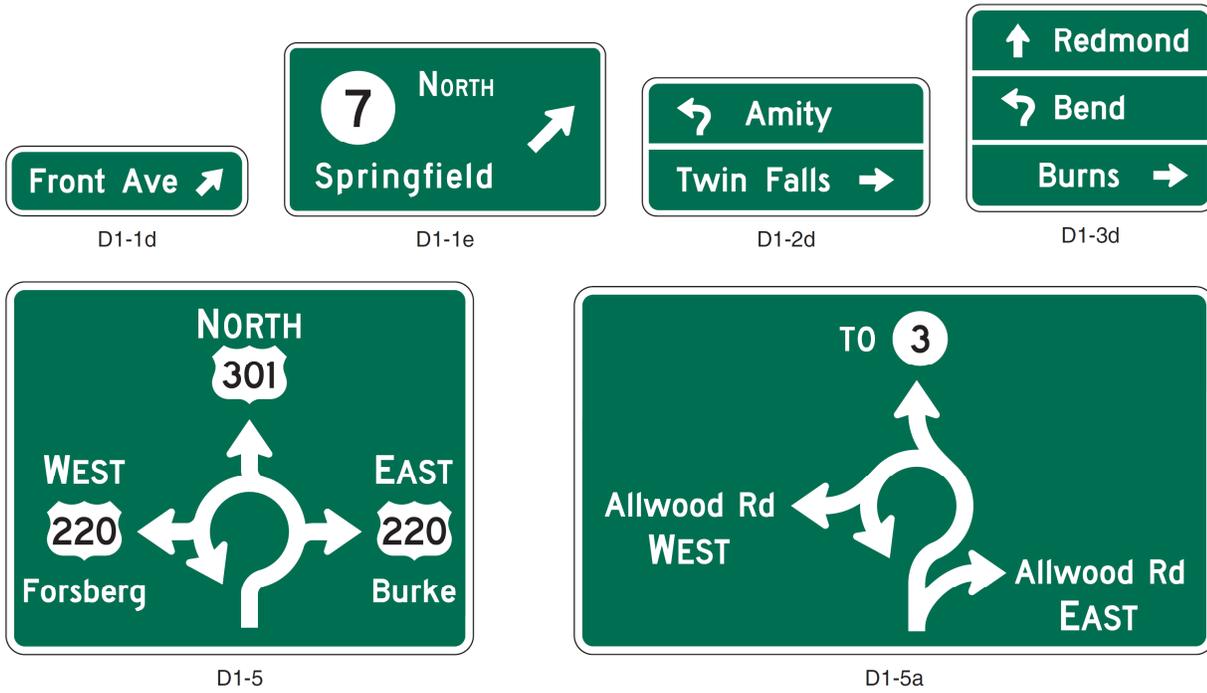
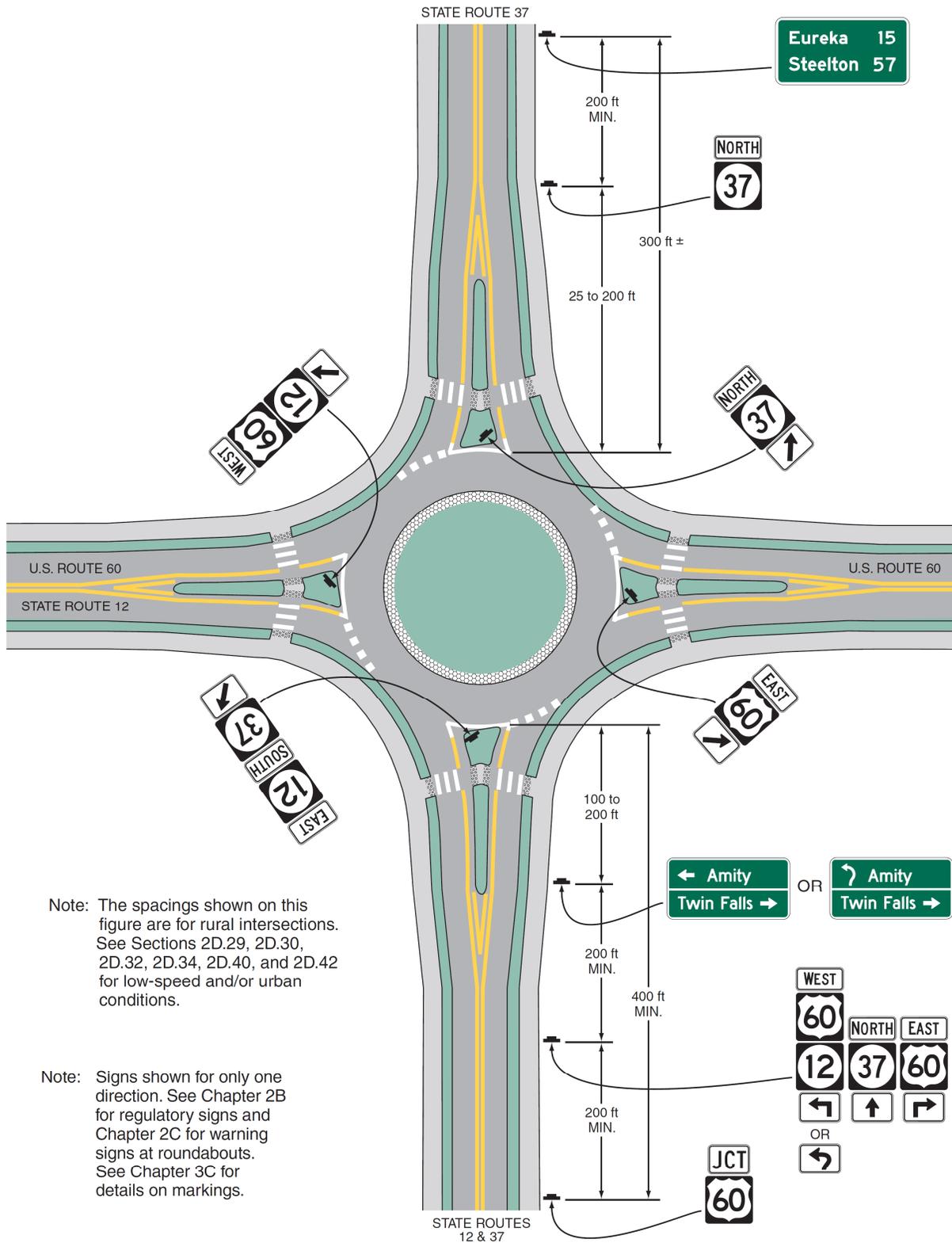


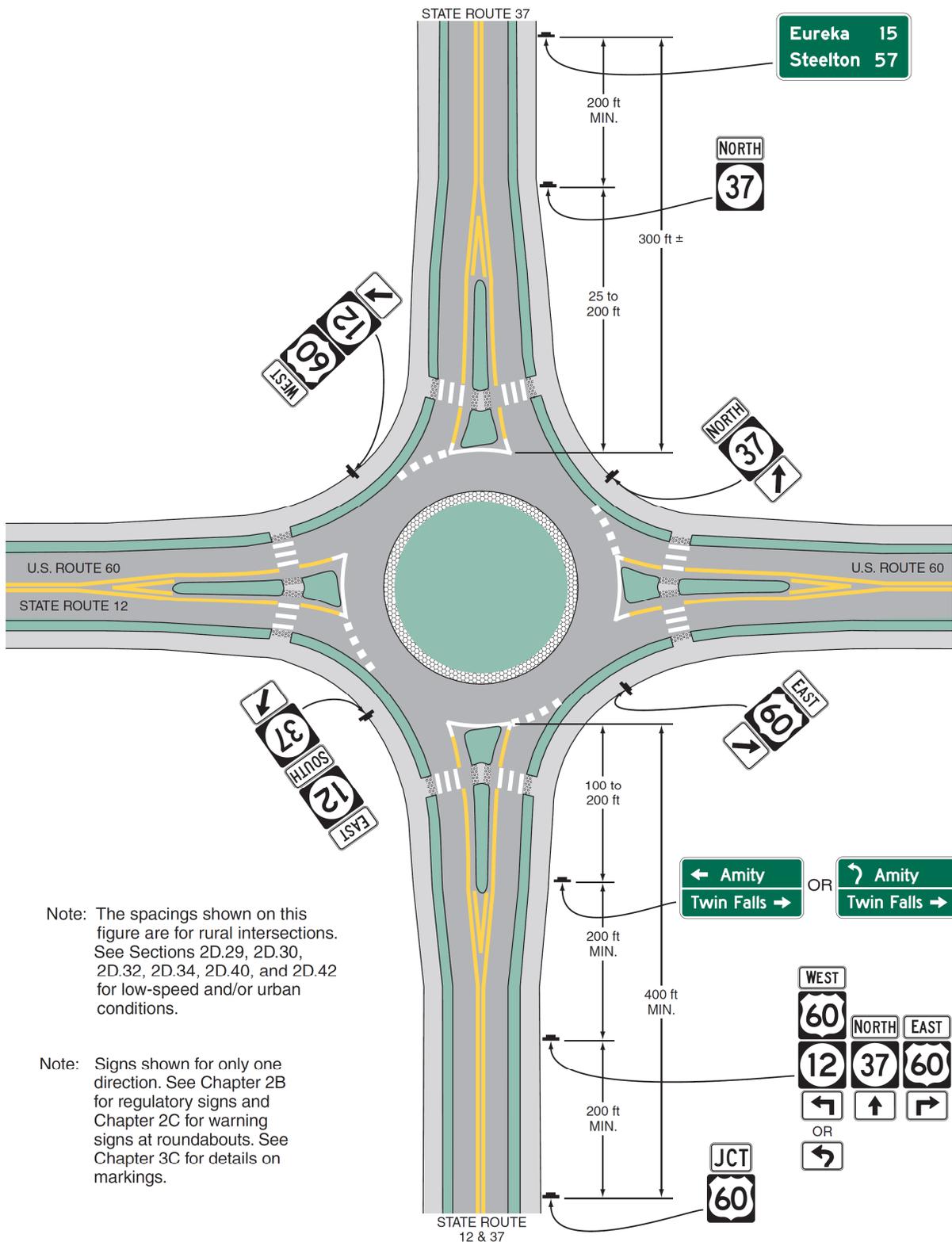
Figure 2D-9. Examples of Guide Signs for Roundabouts (Sheet 1 of 2)



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.32, 2D.34, 2D.40, 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-9. Examples of Guide Signs for Roundabouts (Sheet 2 of 2)



Note: The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.32, 2D.34, 2D.40, 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. Street Name and Parking Signs



Figure 2D-10 (CA). Street Name and Parking Signs



Figure 2D-11. Example of Interchange Crossroad Signing for a One-Lane Approach

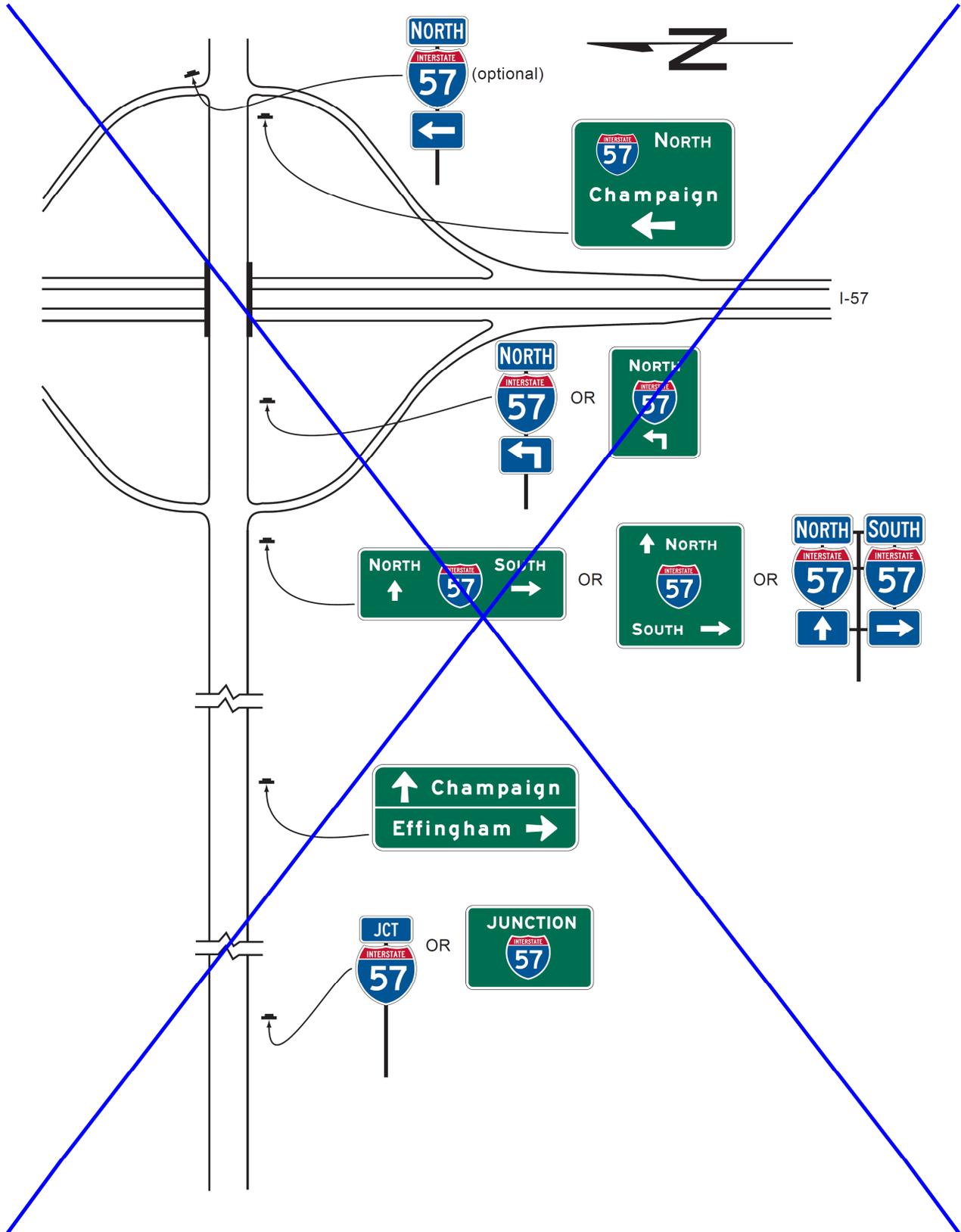


Figure 2D-12. Example of Minor Interchange Crossroad Signing

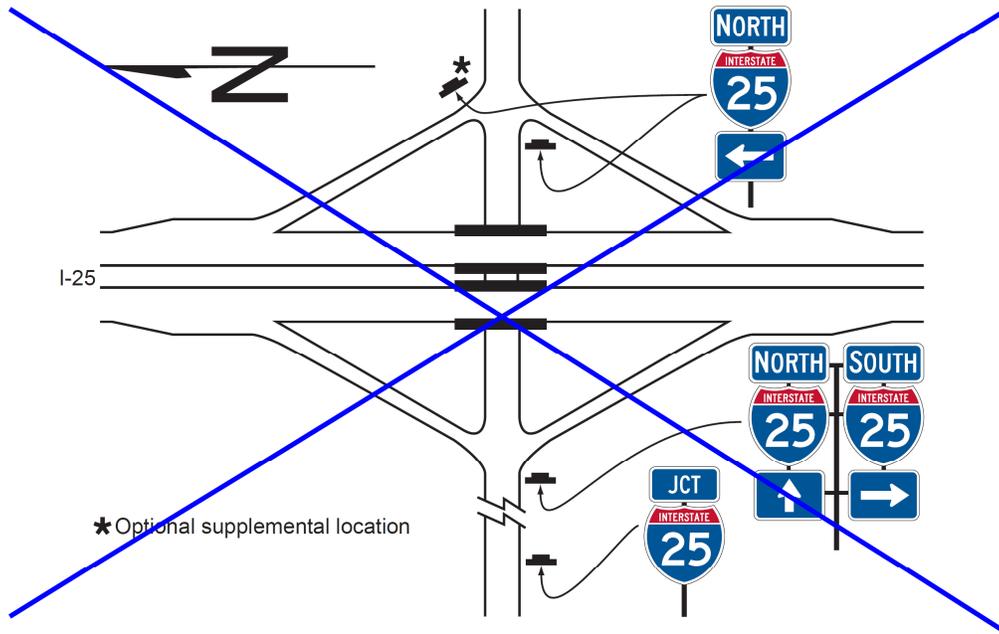


Figure 2D-13. Examples of Multi-Lane Crossroad Signing for a Diamond Interchange

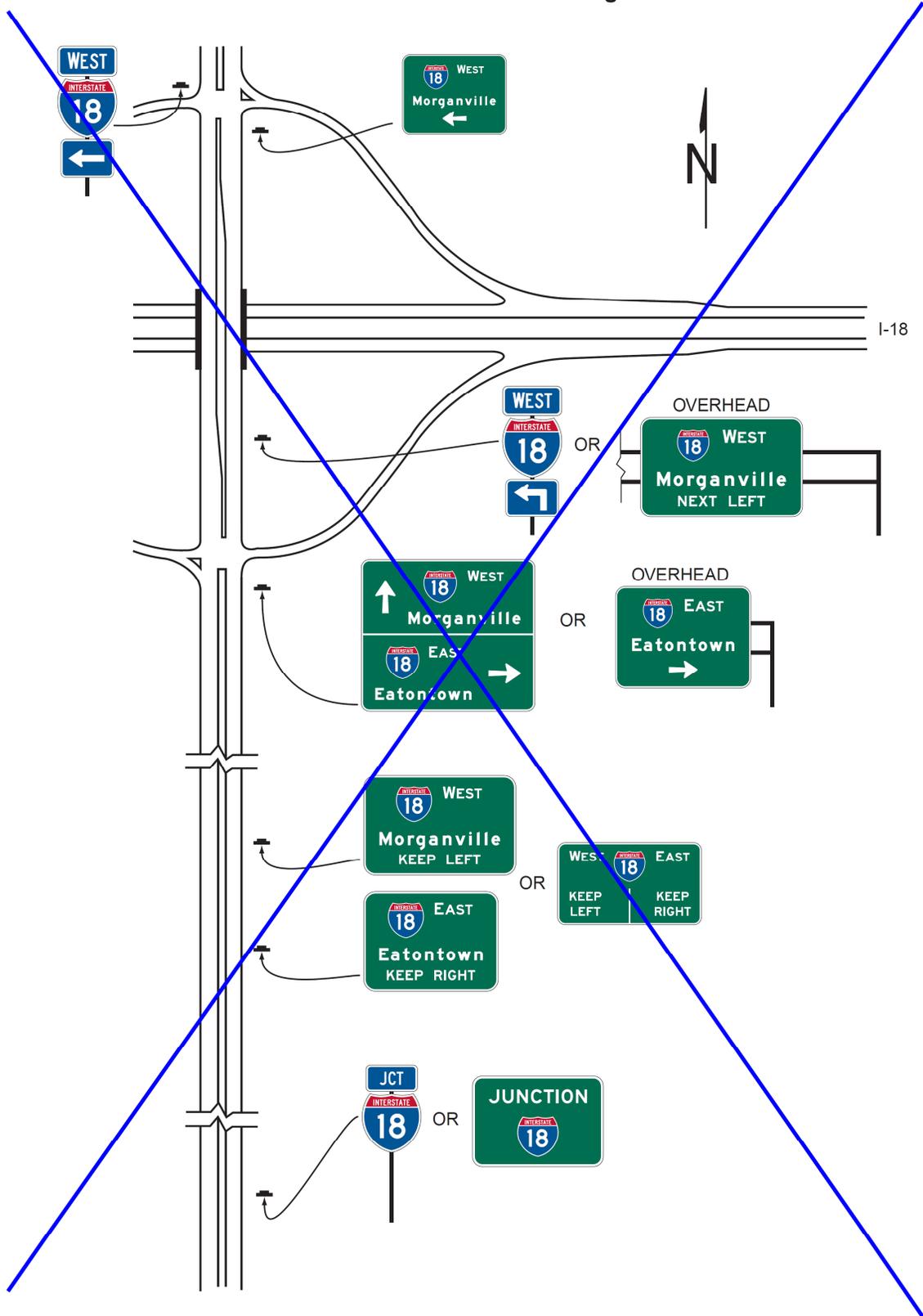


Figure 2D-14. Examples of Multi-Lane Crossroad Signing for a Partial Cloverleaf Interchange

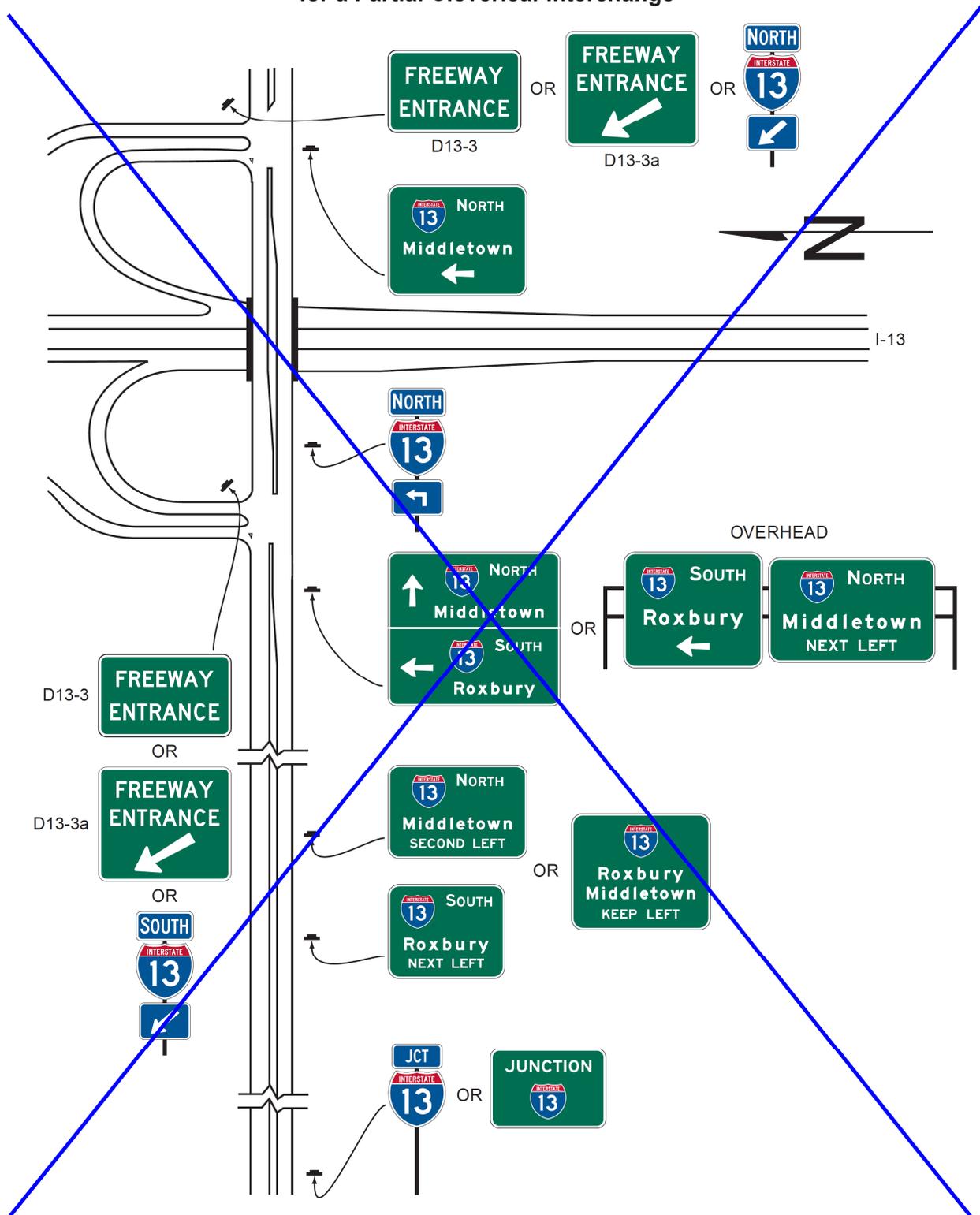


Figure 2D-15. Examples of Multi-Lane Crossroad Signing for a Cloverleaf Interchange

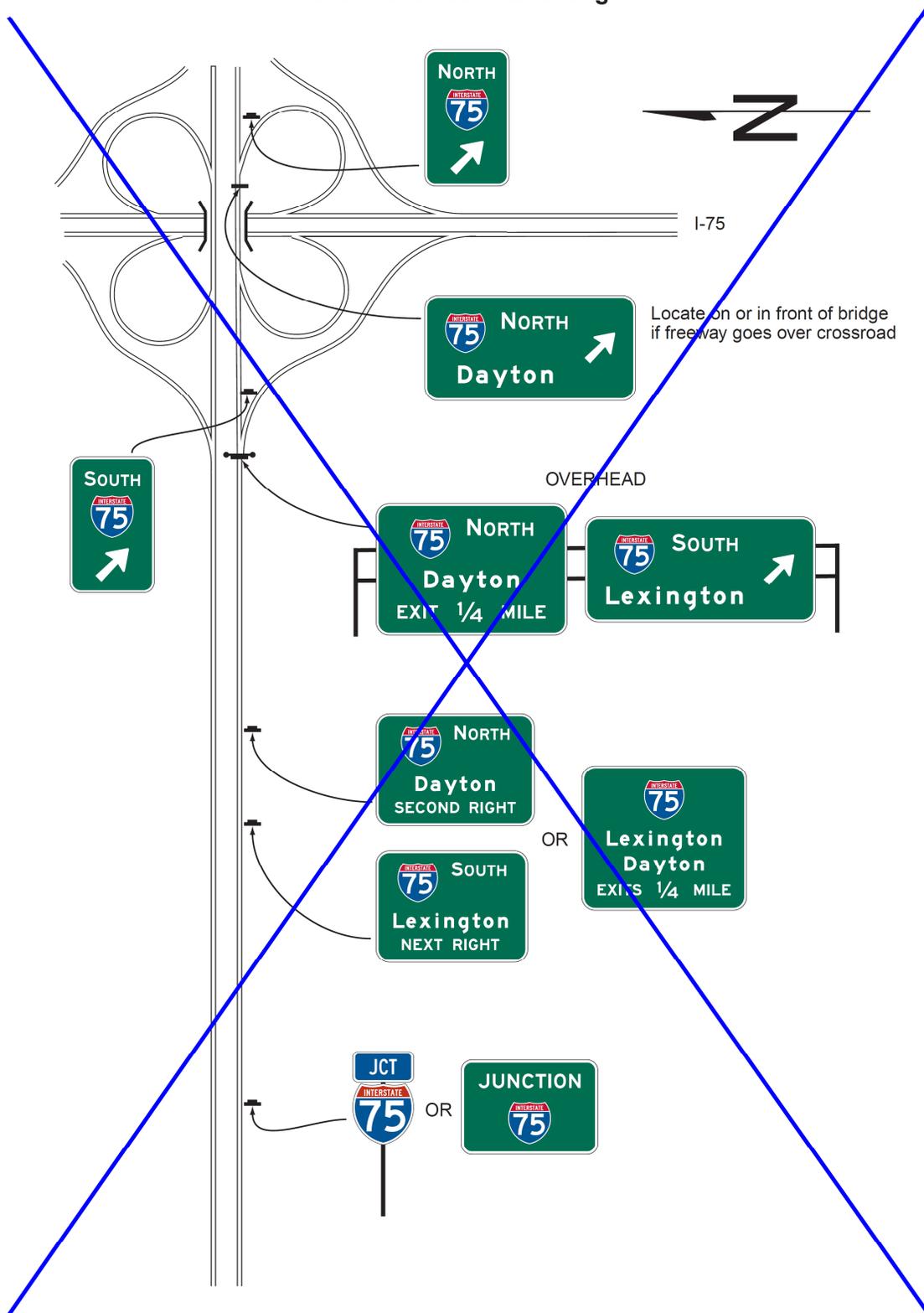


Figure 2D-17. Example of Weigh Station Signing

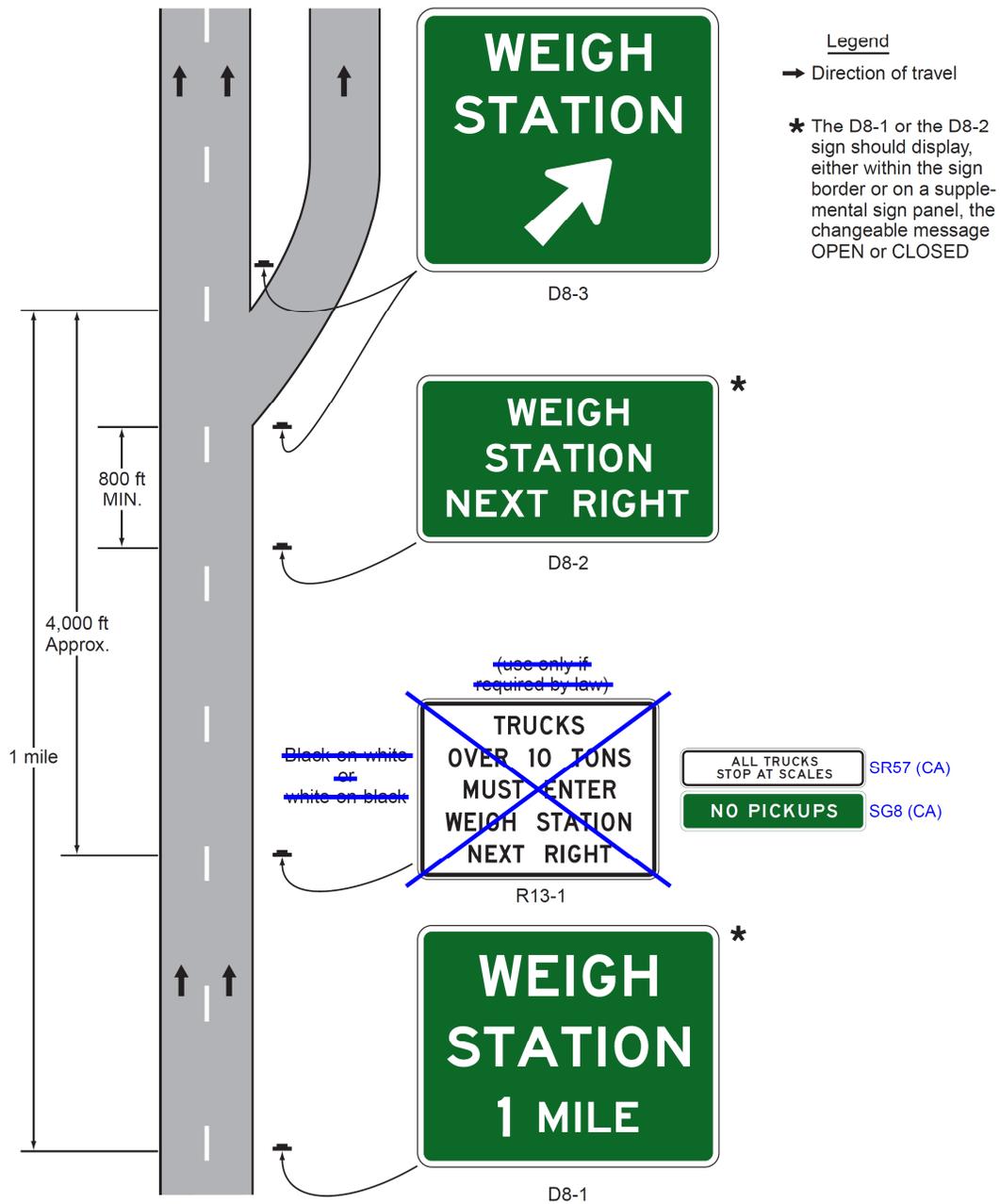


Figure 2D-17 (CA). Example of Weigh Station Signing



Figure 2D-18. Examples of Community Wayfinding Guide Signs

A - Community Wayfinding Guide Signs with Enhancement Markers



B - Destination Guide Signs for Color-Coded Community Wayfinding System



Figure 2D-19. Example of a Community Wayfinding Guide Sign System Showing Direction from a Freeway or Expressway

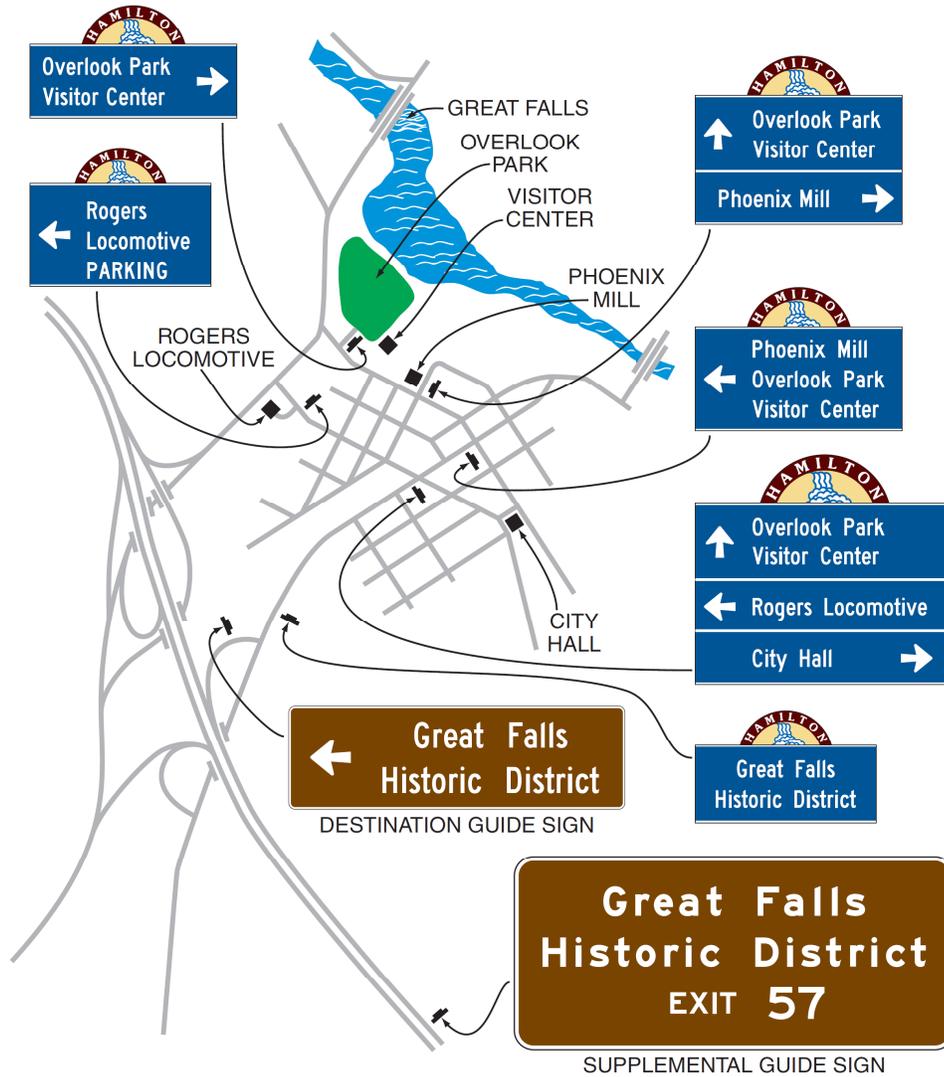


Figure 2D-20. Example of a Color-Coded Community Wayfinding Guide Sign System

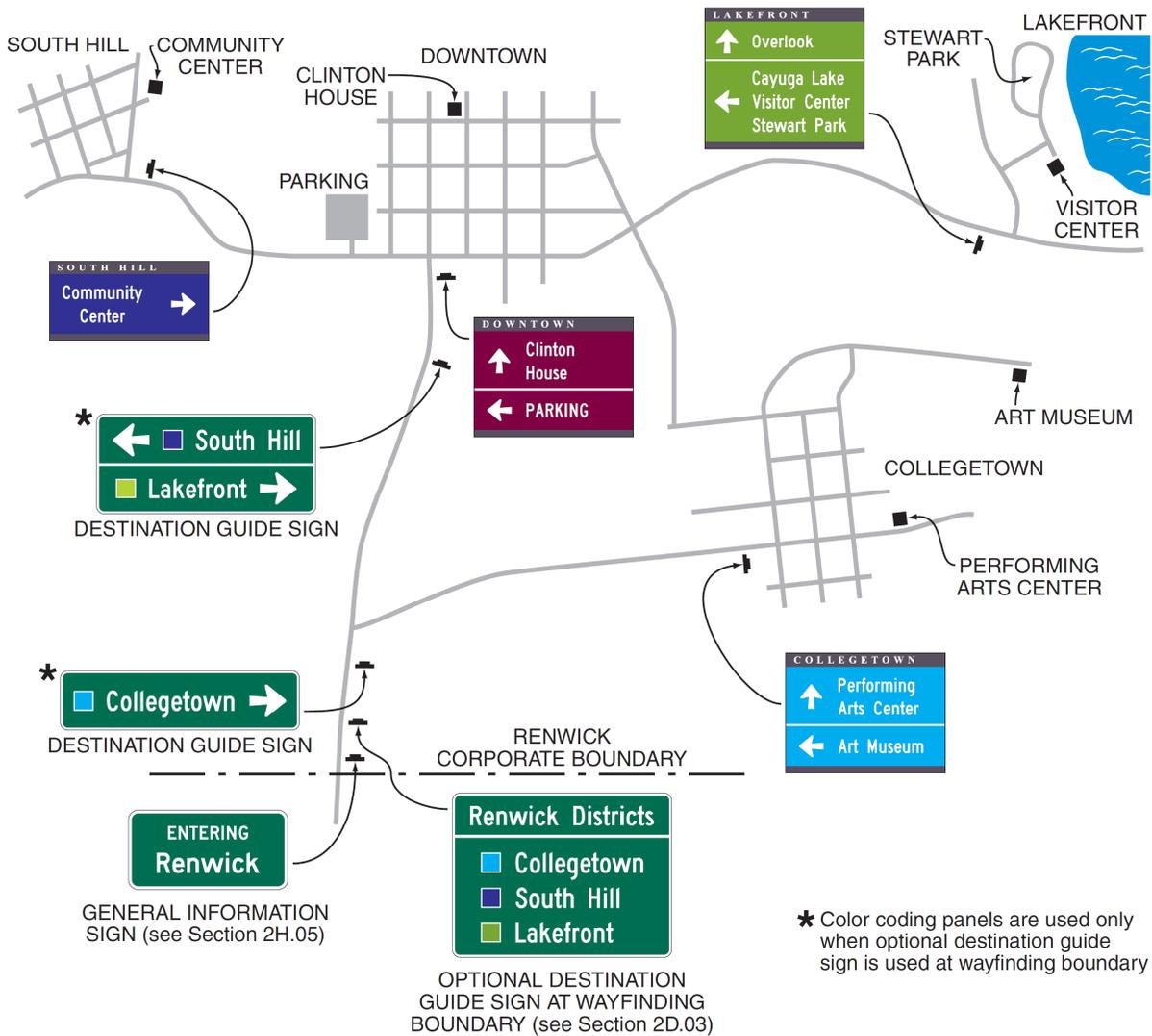
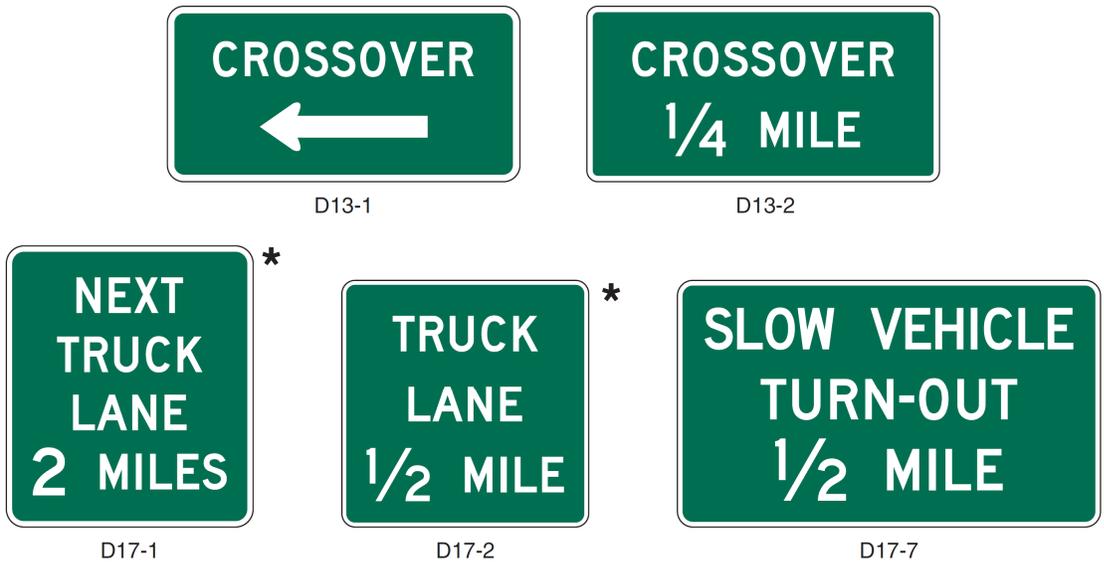


Figure 2D-21. Crossover, Truck Lane, and Slow Vehicle Signs



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

Figure 2D-21 (CA). Crossover, Truck Lane, and Slow Vehicle Signs



Figure 2D-22. Examples of Use of the National Scenic Byways Sign



Figure 2D-101 (CA). California Miscellaneous Guide Signs

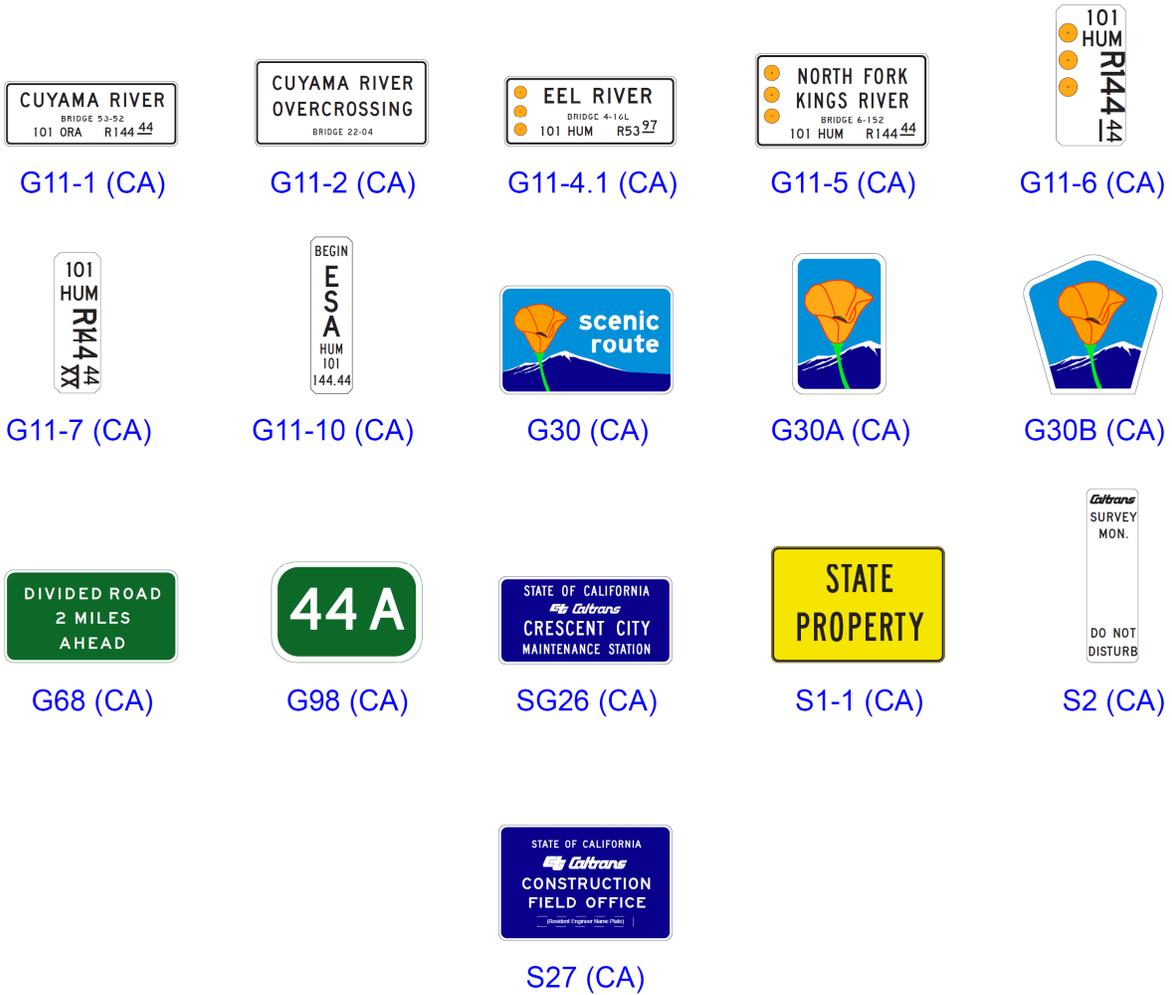


Table 2D-1. Conventional Road Guide Sign Sizes

Sign	Sign Designation	Section	Conventional Road	Minimum	Oversized
Interstate Route Sign (1 or 2 digits)	M1-1	2D.11	24 x 24	24 x 24	36 x 36
Interstate Route Sign (3 digits)	M1-1	2D.11	30 x 24	30 x 24	45 x 36
Off-Interstate Route Sign (1 or 2 digits)	M1-2,3	2D.11	24 x 24	24 x 24	36 x 36
Off-Interstate Route Sign (3 digits)	M1-2,3	2D.11	30 x 24	30 x 24	45 x 36
U.S. Route Sign (1 or 2 digits)	M1-4	2D.11	24 x 24	24 x 24	36 x 36
U.S. Route Sign (3 digits)	M1-4	2D.11	30 x 24	30 x 24	45 x 36
State Route Sign (1 or 2 digits)	M1-5	2D.11	24 x 24	24 x 24	36 x 36
State Route Sign (3 digits)	M1-5	2D.11	30 x 24	30 x 24	45 x 36
County Route Sign (1, 2, or 3 digits)	M1-6	2D.11	24 x 24	24 x 24	36 x 36
Forest Route (1, 2, or 3 digits)	M1-7	2D.11	24 x 24	18 x 18	36 x 36
Junction	M2-1	2D.13	21 x 15	21 x 15	30 x 21
Combination Junction (2 route signs)	M2-2	2D.14	60 x 48*	—	—
Cardinal Direction	M3-1,2,3,4	2D.15	24 x 12	24 x 12	36 x 18
Alternate	M4-1,1a	2D.17	24 x 12	24 x 12	36 x 18
By-Pass	M4-2	2D.18	24 x 12	24 x 12	36 x 18
Business	M4-3	2D.19	24 x 12	24 x 12	36 x 18
Truck	M4-4	2D.20	24 x 12	24 x 12	36 x 18
To	M4-5	2D.21	24 x 12	24 x 12	36 x 18
End	M4-6	2D.22	24 x 12	24 x 12	36 x 18
Temporary	M4-7,7a	2D.24	24 x 12	24 x 12	36 x 18
Begin	M4-14	2D.23	24 x 12	24 x 12	36 x 18
Advance Turn Arrow	M5-1,2,3	2D.28	21 x 15	21 x 15	—
Lane Designation	M5-4,5,6	2D.33	24 x 18	24 x 18	36 x 24
Directional Arrow	M6-1,2,2a,3,4,5,6,7	2D.29	21 x 15	21 x 15	30 x 21
Destination (1 line)	D1-1	2D.39	Varies x 18	Varies x 18	—
Destination and Distance (1 line)	D1-1a	2D.39	Varies x 18	Varies x 18	—
Circular Intersection Destination (1 line)	D1-1d	2D.40	Varies x 18	Varies x 18	—
Circular Intersection Departure Guide	D1-1e	2D.40	Varies x 42*	—	—
Destination (2 lines)	D1-2	2D.39	Varies x 30	Varies x 30	—
Destination and Distance (2 lines)	D1-2a	2D.39	Varies x 30	Varies x 30	—
Circular Intersection Destination (2 lines)	D1-2d	2D.40	Varies x 30	Varies x 30	—
Destination (3 lines)	D1-3	2D.39	Varies x 42	Varies x 42	—
Destination and Distance (3 lines)	D1-3a	2D.39	Varies x 42	Varies x 42	—
Circular Intersection Destination (3 lines)	D1-3d	2D.40	Varies x 42	Varies x 42	—
Distance (1 line)	D2-1	2D.43	Varies x 18	Varies x 18	—
Distance (2 lines)	D2-2	2D.43	Varies x 30	Varies x 30	—
Distance (3 lines)	D2-3	2D.43	Varies x 42	Varies x 42	—
Street Name (1 line)	D3-1,1a	2D.45	Varies x 12	Varies x 8	Varies x 18
Advance Street Name (2 lines)	D3-2	2D.46	Varies x 30*	—	—
Advance Street Name (3 lines)	D3-2	2D.46	Varies x 42*	—	—
Advance Street Name (4 lines)	D3-2	2D.46	Varies x 60*	—	—
Parking Area	D4-1	2D.49	30 x 24	18 x 15	—
Park - Ride	D4-2	2D.50	30 x 36	24 x 30	36 x 48
National Scenic Byways	D6-4	2D.56	24 x 24	24 x 24	—
National Scenic Byways	D6-4a	2D.56	24 x 12	24 x 12	—
Weigh Station XX Miles	D8-1	2D.51	78 x 60	60 x 48	96 x 72
Weigh Station Next Right	D8-2	2D.51	84 x 72	66 x 54	108 x 90
Weigh Station (with arrow)	D8-3	2D.51	66 x 60	48 x 42	84 x 78
Crossover	D13-1,2	2D.55	60 x 30	60 x 30	78 x 42
Freeway Entrance	D13-3	2D.48	48 x 30	48 x 30	—
Freeway Entrance (with arrow)	D13-3a	2D.48	48 x 42	48 x 42	—
Combination Lane Use / Destination	D15-1	2D.35	Varies x 96	Varies x 96	—
Next Truck Lane XX Miles	D17-1	2D.53	42 x 48	42 x 48	60 x 66
Truck Lane XX Miles	D17-2	2D.53	42 x 42	42 x 42	60 x 54
Slow Vehicle Turn-Out XX Miles	D17-7	2D.54	72 x 42	72 x 42	96 x 54

*The size shown is for a typical sign. The size should be appropriately based on the amount of legend required for the sign.

- Notes: 1. Larger signs may be used when appropriate
2. Dimensions in inches are shown as width x height

Table 2D-1(CA). California Conventional Road Guide Sign Sizes (Sheet 1 of 2)

Sign or Plaque	Sign Designation	Section	Conventional Road	Minimum	Oversized
Destination	G1-1(CA)	2D.36	VAR x 18	VAR x 12	VAR x 24
Destination	G1-4(CA)	2D.36	VAR x 30	VAR x 18	VAR x 42
Destination	G1-7(CA)	2D.36	VAR x 36	VAR x 24	VAR x 48
Destination	G1-10(CA)	2D.36	VAR x 48	VAR x 30	VAR x 60
Destination	G1-13(CA)	2D.36	VAR x 48	VAR x 30	VAR x 60
Destination	G1-16(CA)	2D.36	VAR x 48	VAR x 36	VAR x 72
Destination	G1-19(CA)	2D.36	VAR x 42	VAR x 30	VAR x 54
Distance	G5(CA)	2D.42	VAR x 42	VAR x 30	VAR x 54
Street Name	G7-1(CA)	2D.43	VAR x 18	VAR x 6	VAR x 24
Advance Street Name plaque	G7-2(CA)	2D.44	VAR x 18	VAR x 12	VAR x 24
Destination and Street Name with Arrow	G8-1(CA)	2D.42	VAR x 18	VAR x 12	VAR x 24
Destination and Street Name with Arrow	G8-4(CA)	2D.42	VAR x 30	VAR x 18	VAR x 42
Destination and Street Name with Arrow	G8-7(CA)	2D.42	VAR x 36	VAR x 24	VAR x 48
Destination and Street Name with Arrow	G8-10(CA)	2D.42	VAR x 48	VAR x 30	VAR x 60
Destination and Street Name with Arrow	G8-13(CA)	2D.42	VAR x 48	VAR x 30	VAR x 60
Destination and Street Name with Arrow	G8-16(CA)	2D.42	VAR x 48	VAR x 36	VAR x 72
Destination and Street Name with Arrow	G8-19(CA)	2D.42	VAR x 42	VAR x 30	VAR x 54
Destination and Street Name with Arrow	G8-22(CA)	2D.42	VAR x 30	VAR x 18	VAR x 42
Inventory Marker	G11-1(CA)	2D.101(CA)	36 x 18	---	---
Inventory Marker	G11-2(CA)	2D.101(CA)	36 x 21	---	---
Inventory Marker	G11-4(CA)	2D.101(CA)	44 x 18	---	---
Inventory Marker	G11-4A(CA)	2D.101(CA)	44 x 18	---	---
Inventory Marker	G11-4B(CA)	2D.101(CA)	44 x 24	---	---
Inventory Marker	G11-5(CA)	2D.101(CA)	44 x 24	---	---
Inventory Marker	G11-6(CA)	2D.101(CA)	12 x 24	---	---
Inventory Marker	G11-7(CA)	2D.101(CA)	8 x 24	---	---
Inventory Marker	G11-10(CA)	2D.101(CA)	8 x 30	---	---
Advance Lane Assignment	G21-1(CA)	2D.31	VAR x 60	VAR x 60	VAR x 72
Advance Lane Assignment	G21-3(CA)	2D.31	VAR x 90	VAR x 90	VAR x 108
Advance Turn	G22(CA)	2D.26	VAR x 48	---	---
U.S. Route Shield	G26-1(CA)	2D.11	11.625 x 10	11.625 x 10	35 x 30
U.S. Route Marker	G26-2(CA)	2D.11	21 x 18	21 x 18	35 x 30
Interstate Route Shield	G27-1(CA)	2D.11	14 x 12	14 x 12	36 x 36
Interstate Route Marker	G27-2(CA)	2D.11	21 x 18	21 x 18	36 x 36
State Route Shield	G28-1(CA)	2D.11	10.5 x 9	10.5 x 9	35 x 32
State Route Marker	G28-2(CA)	2D.11	21 x 18	21 x 18	35 x 32
Scenic Route	G30(CA)	2D.55	48 x 26	---	---
Scenic Route	G30A(CA)	2D.55	12 x 18	12 x 18	18 x 27
Scenic Route	G30B(CA)	2D.55	18 x 18	18 x 18	24 x 24
Directional Arrow Auxiliary	G33-1(CA)	2D.28	24 x 6	18 x 5	30 x 8
DIVIDED ROAD (X MILES AHEAD)	G68(CA)	2D.51	114 x 60	---	---
PASSING LANE (X MILES) or AHEAD	G69(CA)	2D.51	48 x 36	---	---
ROUTE ____ BUSINESS	G76(CA)	2D.19	VAR x 30	---	---
Interchange Guide	G77-1(CA)	2D.31	VAR x 48	VAR x 48	VAR x 72
Interchange Guide	G77-4(CA)	2D.31	VAR x 54	VAR x 54	VAR x 72
Interchange Guide	G77-7(CA)	2D.31	VAR x 54	VAR x 54	VAR x 72
Interchange Guide	G77A(CA)	2D.31	VAR x 66	VAR x 66	VAR x 90
Interchange Guide	G78-1(CA)	2D.31	VAR x 42	VAR x 42	VAR x 54
Interchange Guide	G78-4(CA)	2D.31	VAR x 42	VAR x 42	VAR x 48
FREEWAY with Arrow	G82(CA)	2D.31	42 x 12	42 x 12	54 x 15
Supplemental Destination	G86-1(CA)	2D.37	VAR x 54	VAR x 54	VAR x 66
Supplemental Destination	G86-3(CA)	2D.37	VAR x 96	VAR x 96	VAR x 110
Supplemental Destination	G86-5(CA)	2D.37	VAR x 90	VAR x 90	VAR x 108
Supplemental Destination	G86-7(CA)	2D.37	VAR x 90	VAR x 90	VAR x 96

Table 2D-1(CA). California Conventional Road Guide Sign Sizes (Sheet 2 of 2)

Sign or Plaque	Sign Designation	Section	Conventional Road	Minimum	Oversized
Exit Numbered Supplemental Destination	G86-12(CA)	2D.37	VAR x 84	VAR x 84	VAR x 100
Exit Numbered Supplemental Destination	G86-13(CA)	2D.37	VAR x 78	VAR x 78	VAR x 90
Veterans National Cemetery Sign	G86-14(CA)	2D.37	VAR x 72	---	---
PARK - RIDE	G95A(CA)	2D.48	96 x 42	96 x 42	108 x 48
PARK - RIDE NEXT RIGHT	G95B(CA)	2D.48	96 x 60	96 x 60	108 x 72
Park - Ride Courtesy Plaque	G95B-1(CA)	2D.48	96 x 18	96 x 18	108 x 24
BUS SERVICE Plaque	G95D(CA)	2D.48	96 x 24	96 x 24	108 x 30
Park - Ride Plaque	G95E(CA)	2D.48	96 x 18	96 x 18	120 x 24
Intersection Number	G98(CA)	2D.102(CA)	18 x 12	---	---
NO PICKUPS	SG8(CA)	2D.49	84 x 18	84 x 18	120 x 24
Caltrans Facility Entrance	SG26(CA)	2D.103(CA)	72 x 36	---	---
STATE PROPERTY	S1-1(CA)	2D.103(CA)	21 x 15	---	---
Inventory Marker (Survey)	S2(CA)	2D.101(CA)	3.5 x 12	---	---
NO LOITERING, CAMPING, VENDING OR PARKING OF VEHICLES 30 FEET OR LONGER	S22(CA)	2D.48	24x24	24x24	---
VEHICLE INSPECTION ONLY, NO LOITERING OR CAMPING	S22-1(CA)	2D.49	48 x 15	---	---
Department of Transportation's CONSTRUCTION FIELD OFFICE	S27(CA)	2D.103(CA)	36 x 24	---	---

Table 2D-2. Recommended Minimum Letter Heights on Street Name Signs

Type of Mounting	Type of Street or Highway	Speed Limit	Recommended Minimum Letter Height	
			Initial Upper-Case	Lower-Case
Overhead	All types	All speed limits	12 inches	9 inches
Post-mounted	Multi-lane	More than 40 mph	8 inches	6 inches
Post-mounted	Multi-lane	40 mph or less	6 inches	4.5 inches
Post-mounted	2-lane	All speed limits	6 inches*	4.5 inches*

* On local two-lane streets with speed limits of 25 mph or less, 4-inch initial upper-case letters with 3-inch lower-case letters may be used.

Table 2D-101 (CA). Route Shield Sizes for Guide Signs

Guide Sign Letter Size	State Route Shield Size	Interstate Route Shield Size	U.S. Route Shield Size	Quantity of Numerals	Shield Numeral Size
4" & 5" Caps	10-1/2" x 9"			1 or 2	4"
4" & 5" Caps	15" x 11"			3	4"
4" & 5" Caps		14" x 12"		1 or 2	4"
4" & 5" Caps		16" x 14"		3	4"
4" & 5" Caps			11-1/2" x 10"	1 or 2	4"
4" & 5" Caps			14-1/2" x 10"	3	4"
8" U.C. & 6" L.C. or 6" U.C. & 4-1/2" L.C.	21" x 18"	21" x 18"	21" x 18"	1 or 2	8"
8" U.C. & 6" L.C. or 6" U.C. & 4-1/2" L.C.	24" x 18"			3	6" without the numeral 1
8" U.C. & 6" L.C. or 6" U.C. & 4-1/2" L.C.	24" x 18"			3	8" with the numeral 1
8" U.C. & 6" L.C. or 6" U.C. & 4-1/2" L.C.		21" x 18"		3	6" with the numeral 1
8" U.C. & 6" L.C. or 6" U.C. & 4-1/2" L.C.		24" x 24"		3	6" without the numeral 1
8" U.C. & 6" L.C. or 6" U.C. & 4-1/2" L.C.			27" x 18"	3	8"
10.67" U.C. & 8" L.C.	28" x 25"			1 or 2	10"
10.67" U.C. & 8" L.C.	32" x 25"			3	10"
10.67" U.C. & 8" L.C.		24" x 24"		1 or 2	10"
10.67" U.C. & 8" L.C.		30" x 25"		3	8" without the numeral 1
10.67" U.C. & 8" L.C.		30" x 25"		3	10" with the numeral 1
10.67" U.C. & 8" L.C.			28" x 24"	1 or 2	10"
10.67" U.C. & 8" L.C.			36" x 24"	3	10"
13.3" U.C. & 10" L.C.	35" x 32"			1 or 2	12"
13.3" U.C. & 10" L.C.	40" x 32"			3	12"
13.3" U.C. & 10" L.C.		36" x 36"		1 or 2	12"
13.3" U.C. & 10" L.C.		36" x 36"		3	12" with the numeral 1
13.3" U.C. & 10" L.C.		45" x 38"		3	12" without the numeral 1
13.3" U.C. & 10" L.C.			35" x 30"	1 or 2	12"
13.3" U.C. & 10" L.C.			45" x 30"	3	12"
16" U.C. & 12" L.C.	36" x 36"	36" x 36"		1 or 2	15"
16" U.C. & 12" L.C.	45" x 36"			3	12" without the numeral 1
16" U.C. & 12" L.C.	45" x 36"			3	15" with the numeral 1
16" U.C. & 12" L.C.		45" x 38"		3	12" without the numeral 1
16" U.C. & 12" L.C.		45" x 38"		3	15" with the numeral 1
16" U.C. & 12" L.C.			42" x 36"	1 or 2	15"
16" U.C. & 12" L.C.			54" x 36"	3	15"
20" U.C. & 15" L.C.	42" x 42"			1 or 2	18"
20" U.C. & 15" L.C.	54" x 42"			3	18"
20" U.C. & 15" L.C.		48" x 48"		1 or 2	18"
20" U.C. & 15" L.C.		58" x 51"		3	18"
20" U.C. & 15" L.C.			49" x 42"	1 or 2	18"
20" U.C. & 15" L.C.			63" x 42"	3	18"

Exceptions:

1. For **G23 Signs**, use the 10" Numeral Size Shields.
2. For **G77 & G78 signs**, use the 10" Numeral Size Shields. However, when the shield is in line with the word message, the shield's numeral size should match the lower case letter height.

Table 2D-102 (CA). Criteria for Supplemental Destination Signs

Type of Destination	Specific Criteria	Major Metropolitan Areas	Urbanized Areas	Rural Areas
Post Secondary School, Public or Private	Minimum Enrollment (Single Campus Locations, See Note 5). Maximum Miles from a Freeway (See Note 6).	1,000 2	1,000 4	1,000 5
Museum, Zoo, Stadium or Sports Arena	Public Owned and Non-Profit. Minimum Annual Attendance. Maximum Miles from Highway (See Note 2).	1,000,000 2	500,000 2	200,000 3
Convention Center	Public Owned and Non-Pofit. Minimum Annual Attendance. Maximum Miles from Highway (See Note 2).	500,000 3	250,000	--
Military Base	Number of Employees and Permanent Garrison. Maximum Miles from Highway.	5,000 2	5,000 4	5,000 7
National Guard Armory	Only Emergency Center in the Area. Easy Access to Primary Evacuation Route. (See Note 2).	--	--	--
Fairgrounds	Publicly Owned and Operated. Temporary Sign Only, Unless There are Year Round Activities. Minimum Annual Attendance. Maximum Miles from Highway (See Note 2).	500,000 2	200,000 4	200,000 5
Federal or State Hospitals, Prisons, and National Cemeteries	Maximum Miles from Highway (See Note 2).	1	3	5
Government Centers	Number of Employees. Maximum Miles from Highway (See Note 2).	5,000 2	2,000 3	1,000 5
California Welcome Centers	Easy Access from Nearest State Highway. (See Notes 2 and 7)	--	--	--
Airports	Maximum Miles from Highway (See Note 2).	1	3	5
Rail and Light Rail Stations	Easy Access from Nearest State Highway. (See Note 2).	--	--	--

NOTES: 1. Meeting the above criteria does not guarantee placement of a sign. Limitations on the spacing between sign and the number of messages permitted, specified in Sections 2A.16, 2D.07 and 2D.40, shall be observed and eligible destinations must compete for signing on the basis of traffic service.

2. Follow-up signing, if necessary, shall be installed by local agencies before signs are placed on the State Highway.
3. If a stadium is located at a school campus for which signs are already provided, separate stadium sign will not be placed.
4. Definitions of Area Classifications:
 - A. MAJOR METROPOLITAN AREA - An urbanized area, population density of at least 1,000 inhabitants per 2.6 km² (1 mi²), not necessarily related to county boundaries, with a total population of at least 1,000,000 and an included central city with a population of at least 250,000.
 - B. URBANIZED AREA - An urbanized area with a total population of at least 50,000 and an included central city with no minimum population.
 - C. RURAL AREA - All areas outside of an urbanized area.
5. Public or private postsecondary education institution shall have an enrollment of either 1,000 or more full-time students or an equivalent in part-time students. Refer to CVC Section 21375.
6. No signs to school will be erected until funds from private sources covering the cost of the signs and their installation. If a school, which previously had signs, relocates to contribute to the improvement of the school (as determined by the California Department of Transportation), signs will be erected at the new location at no cost to the school.
7. The California Department of Transportation will charge the Welcome Center directly for the cost of the signs and their installation on the State highway. Cost for sign installation on local roads is the responsibility of the Welcome Center and the local agency.

CHAPTER 2E. GUIDE SIGNS – FREEWAYS AND EXPRESSWAYS

Section 2E.01 Scope of Freeway and Expressway Guide Sign Standards

Support:

01 The provisions of this Chapter provide a uniform and effective system of signing for high-volume, high-speed motor vehicle traffic on freeways and expressways. The requirements and specifications for expressway signing exceed those for conventional roads (see Chapter 2D), but are less than those for freeway signing. Since there are many geometric design variables to be found in existing roads, a signing concept commensurate with prevailing conditions is the primary consideration. Section 1A.13 includes definitions of freeway and expressway.

02 Guide signs for freeways and expressways are primarily identified by the name of the sign rather than by an assigned sign designation. Guidelines for the design of guide signs for freeways and expressways are provided in the “Standard Highway Signs and Markings” book (see Section 1A.11).

Standard:

03 **The provisions of this Chapter shall apply to any highway that meets the definition of freeway or expressway facilities.**

Section 2E.02 Freeway and Expressway Signing Principles

Support:

01 The development of a signing system for freeways and expressways is approached on the premise that the signing is primarily for the benefit and direction of road users who are not familiar with the route or area. The signing furnishes road users with clear instructions for orderly progress to their destinations. Sign installations are an integral part of the facility and, as such, are best planned concurrently with the development of highway location and geometric design. For optimal results, plans for signing are analyzed during the earliest stages of preliminary design, and details are correlated as final design is developed. The excessive signing found on many major highways usually is the result of using a multitude of signs that are too small and that are poorly designed and placed to accomplish the intended purpose.

02 Freeway and expressway signing is to be considered and developed as a planned system of installations. An engineering study is sometimes necessary for proper solution of the problems of many individual locations, but, in addition, consideration of an entire route is necessary.

Guidance

03 *Road users should be guided with consistent signing on the approaches to interchanges, when they drive from one State to another, and when driving through rural or urban areas. Because geographical, geometric, and operating factors regularly create significant differences between urban and rural conditions, the signing should take these conditions into account.*

04 *Guide signs on freeways and expressways should serve distinct functions as follows:*

- A. Give directions to destinations, or to streets or highway routes, at intersections or interchanges;*
- B. Furnish advance notice of the approach to intersections or interchanges;*
- C. Direct road users into appropriate lanes in advance of diverging or merging movements;*
- D. Identify routes and directions on those routes;*
- E. Show distances to destinations;*
- F. Indicate access to general motorist services, rest, scenic, and recreational areas; and*
- G. Provide other information of value to the road user.*

Section 2E.03 Guide Sign Classification

Support:

01 Freeway and expressway guide signs are classified and treated in the following categories:

- A. Route signs and Trailblazer Assemblies (see Section 2E.27),
- B. At-Grade Intersection signs (see Section 2E.29),
- C. Interchange signs (see Sections 2E.30 through 2E.39),
- D. Interchange Sequence signs (see Section 2E.40),

- E. Community Interchanges Identification signs (see Section 2E.41),
- F. NEXT XX EXITS signs (see Section 2E.42),
- G. Weigh Station signing (see Section 2E.54),
- H. Miscellaneous Information signs (see Section 2H.04)
- I. Reference Location signs (see Section 2H.05),
- J. General Service signs (see Chapter 2I),
- K. Rest and Scenic Area signs (see Section 2I.05),
- L. Tourist Information and Welcome Center signs (see Section 2I.08),
- M. Radio Information signing (see Section 2I.09)
- N. Carpool and Ridesharing signing (see Section 2I.11),
- O. Specific Service signs (see Chapter 2J), and
- P. Recreational and Cultural Interest Area signs (see Chapter 2M).

Section 2E.04 General

Support:

01 Signs are designed so that they are legible to road users approaching them and readable in time to permit proper responses. Desired design characteristics include: (a) long visibility distances, (b) large lettering, symbols, and arrows, and (c) short legends for quick comprehension.

Standard:

02 **Standard shapes and colors shall be used so that traffic signs can be promptly recognized by road users.**

Section 2E.05 Color of Guide Signs

Standard:

01 **Guide signs on freeways and expressways, except as otherwise provided in this Manual, shall have white letters, symbols, arrows, and borders on a green background.**

Support:

02 Color requirements for route signs and trailblazers, signs with blank-out or changeable messages, signs for services, rest areas, park and recreational areas, and for certain miscellaneous signs are provided in the individual Sections dealing with the particular sign or sign group.

Section 2E.06 Retroreflection or Illumination

Standard:

01 **Letters, numerals, symbols, arrows, and borders of all guide signs shall be retroreflectorized. The background of all guide signs that are not independently illuminated shall be retroreflective.**

Support:

02 Where there is no serious interference from extraneous light sources, retroreflectorized post-mounted signs usually provide adequate nighttime visibility.

03 On freeways and expressways where much driving at night is done with low-beam headlights, the amount of headlight illumination incident to an overhead sign display is relatively small.

Guidance:

04 *Overhead sign installations should be illuminated unless an engineering study shows that retroreflectorization alone will perform effectively. The type of illumination chosen should provide effective and reasonably uniform illumination of the sign face and message.*

Section 2E.07 Characteristics of Urban Signing

Support:

01 Urban conditions are characterized not so much by city limits or other arbitrary boundaries, as by the following features:

- A. Mainline roadways with more than two lanes in each direction;
- B. High traffic volumes on the through roadways;
- C. High volumes of traffic entering and leaving interchanges;

- D. Interchanges closely spaced;
- E. Roadway and interchange lighting;
- F. Three or more interchanges serving the major city;
- G. A loop, circumferential, or spur serving a sizable portion of the urban population; and
- H. Visual clutter from roadside development.

⁰² Operating conditions and road geometrics on urban freeways and expressways usually make special sign treatments desirable, including:

- A. Use of Interchange Sequence signs (see Section 2E.40);
- B. Use of sign spreading to the maximum extent possible (see Section 2E.11);
- C. Elimination of General or Specific Service signing (see Chapters 2I and 2J);
- D. Reduction to a minimum of post-interchange signs (see Section 2E.38);
- E. Display of advance signs at distances closer to the interchange, with appropriate adjustments in the legend (see Section 2E.33);
- F. Use of overhead signs on roadway structures and independent sign supports (see Section 2E.25);
- G. Use of Overhead Arrow-per-Lane or Diagrammatic guide signs in advance of intersections and interchanges (see Sections 2E.21 and 2E.22); and
- H. Frequent use of street names as the principal message in guide signs.

⁰³ Lower speeds which are often characteristic of urban operations do not justify lower signing standards. Typical traffic patterns are more complex for the road user to negotiate, and large, easy-to-read legends are, therefore, just as necessary as on rural highways.

Section 2E.08 Characteristics of Rural Signing

Support:

⁰¹ Rural areas ordinarily have greater distances between interchanges, which permits adequate spacing for the sequences of signs on the approach to and departure from each interchange. However, the absence of traffic in adjoining lanes and on entering or exiting ramps often adds monotony or inattention to rural driving. This increases the importance of signs that call for decisions or actions.

Guidance:

⁰² *Where there are long distances between interchanges and the alignment is relatively unchanging, signs should be positioned for their best effect on road users. The tendency to group all signing in the immediate vicinity of rural interchanges should be avoided by considering the entire route in the development of signing plans. Extra effort should be given to the placement of signs at natural target locations to command the attention of the road user, particularly when the message requires an action by the road user.*

Section 2E.09 Signing of Named Highways

Support:

⁰¹ Section 2D.53 contains information, which is also applicable to freeways and expressways, regarding the use of highway names on the signing for unnumbered highways to enhance route guidance and facilitate travel.

⁰² Section 2M.10 contains information regarding memorial signing of routes, bridges, or highway components.

Section 2E.10 Amount of Legend on Guide Signs

Guidance:

⁰¹ *No more than two destination names or street names should be displayed on any Advance Guide sign or Exit Direction sign. A city name and street name on the same sign should be avoided. Where two or three signs are placed on the same supports, destinations or names should be limited to one per sign, or to a total of three in the display. Sign legends should not exceed three lines of copy, exclusive of the exit number and action or distance information.*

Section 2E.11 Number of Signs at an Overhead Installation and Sign Spreading

Guidance:

⁰¹ *If overhead signs are warranted, as set forth in Section 2A.17, the number of signs at these locations should be limited to only those essential in communicating pertinent destination information to the road user. Exit*

Direction signs for a single exit and the Advance Guide signs should have only one sign with one or two destinations. Regulatory signs, such as speed limits, should not be used in conjunction with overhead guide sign installations. Because road users have limited time to read and comprehend sign messages, there should not be more than three guide signs displayed at any one location either on the overhead structure or its support.

Option:

02 At overhead locations, more than one sign may be installed to advise of a multiple exit condition at an interchange. If the roadway ramp or crossing roadway has complex or unusual geometrics, additional signs with confirming messages may be provided to properly guide the road user.

Support:

03 Sign spreading is a concept where major overhead signs are spaced so that road users are not overloaded with a group of signs at a single location. Figure 2E-1 illustrates an example of sign spreading.

Guidance:

04 *Where overhead signing is used, sign spreading should be used at all single exit interchanges and to the extent possible at multi-exit interchanges. Sign spreading should be accomplished by use of the following:*

- A. *The Exit Direction sign should be the only sign used in the vicinity of the gore (other than the Exit Gore sign). It should be located overhead near the theoretical gore and generally on an overhead sign support structure.*
- B. *The Advance Guide sign to indicate the next interchange exit should be placed near the crossroad location. If the crossroad goes over the mainline, the Advance Guide sign should be placed on the overcrossing structure or on a separate structure immediately in front of the overcrossing structure.*

Section 2E.12 Pull-Through Signs (E6-2, E6-2a)

Support:

01 Pull-Through (E6-2, E6-2a) signs (see Figure 2E-2 and 2E-2(CA)) are overhead guide signs intended for through traffic.

01a See Figures 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA) for typical freeway signing and use of the Pull-Through (G24(CA) Series) signs.

Guidance:

02 *Pull-Through signs should be used where the geometrics of a given interchange are such that it is not clear to the road user as to which is the through roadway, or where additional route guidance is desired. Pull-Through signs with down arrows should be used where the alignment of the through lanes is curved and the exit direction is straight ahead, where the number of through lanes is not readily evident, and at multi-lane exits where there is a reduction in the number of through lanes.*

Support:

03 Sections 2E.20 through 2E.24 contain information regarding the use of Overhead Arrow-per-Lane or Diagrammatic guide signs at multi-lane exits where there is a reduction in the number of through lanes and a through lane becomes an interior option lane for through or exiting traffic.

Section 2E.13 Designation of Destinations

Standard:

01 **The direction of a freeway and the major destinations or control cities along it shall be clearly identified through the use of appropriate destination legends (see Section 2D.37). Successive freeway guide signs shall provide continuity in destination names and consistency with available map information. At any decision point, a given destination shall be indicated by way of only one route.**

Guidance:

- 02 *Control city legends should be used in the following situations along a freeway:*
 - A. *At interchanges between freeways;*
 - B. *At separation points of overlapping freeway routes;*
 - C. *On directional signs on intersecting routes, to guide traffic entering the freeway;*
 - D. *On Pull-Through signs; and*
 - E. *On the bottom line of post-interchange distance signs.*

Support:

03 Continuity of destination names is also useful on expressways serving long-distance or intrastate travel.

04 The determination of major destinations or control cities is important to the quality of service provided by the freeway. Control cities on freeway guide signs are selected by the States and are contained in the "Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways, 4th Edition/Guide Signs, Part II: Guidelines for Airport Guide Signing/Guide Signs, Part III: List of Control Cities for Use in Guide Signs on Interstate Highways," published by and available from the American Association of State and Highway Transportation Officials (see Section 1A.11).

Guidance:

05 *Each Department of Transportation District should determine its list of control cities in cooperation with adjacent districts and states to achieve continuity of signing for through traffic on State highways. Any given route should have the same control cities (in both directions of travel).*

Section 2E.14 Size and Style of Letters and Signs

Standard:

01 **Except as provided in Section 2A.11, the sizes of freeway and expressway guide signs that have standardized designs shall be as shown in Table 2E-1.**

Support:

02 Section 2A.11 contains information regarding the applicability of the various columns in Table 2E-1.

Option:

03 Signs larger than those shown in Table 2E-1 may be used (see Section 2A.11).

Standard:

04 **For all freeway and expressway signs that do not have a standardized design, the message dimensions shall be determined first, and the outside sign dimensions secondarily. Word messages in the legend of expressway guide signs shall be in letters at least 8 inches high. Larger lettering shall be used for major guide signs at or in advance of interchanges and for all overhead signs. Minimum numeral and letter sizes for expressway guide signs according to interchange classification, type of sign, and component of sign legend shall be as shown in Tables 2E-2 and 2E-3. Minimum numeral and letter sizes for freeway guide signs according to interchange classification, type of sign, and component of sign legend shall be as shown in Tables 2E-4 and 2E-5. All names of places, streets, and highways on freeway and expressway guide signs shall be composed of lower-case letters with initial upper-case letters. The letters and the numerals used shall be Series E(M) of the "Standard Highway Signs and Markings" book (see Section 1A.11). The nominal loop height of the lower-case letters shall be 3/4 of the height of the initial upper-case letter (see Paragraph 2 of Section 2D.05 for additional information on the specification of letter heights). Other word legends shall be composed of upper-case letters. Interline and edge spacing shall be as provided in Section 2E.15.**

05 **Lettering size on freeway and expressway signs shall be the same for both rural and urban conditions.**

Support:

06 Sign size is determined primarily in terms of the length of the message and the size of the lettering necessary for proper legibility. Letter style and height, and arrow design have been standardized for freeway and expressway signs to assure uniform and effective application.

07 Designs for upper-case and lower-case alphabets together with Tables of recommended letter spacing, are shown in the "Standard Highway Signs and Markings" book (see Section 1A.11).

Guidance:

08 *Freeway lettering sizes (see Tables 2E-4 and 2E-5) should be used when expressway geometric design is comparable to freeway standards.*

09 *Other sign letter size requirements not specifically identified elsewhere in this Manual should be guided by these specifications. Abbreviations (see Section 2E.17) should be kept to a minimum.*

Support:

10 A sign mounted over a particular roadway lane to which it applies might have to be limited in horizontal dimension to the width of the lane, so that another sign can be placed over an adjacent lane. The necessity to

maintain proper vertical clearance might also place a further limitation on the size of the overhead sign and the legend that can be accommodated.

Standard:

¹¹ All capital letters shall be Standard Alphabet Series D 2000.

Support:

¹² Standard Alphabets for traffic control devices are contained in FHWA's "Standard Highway Signs and Markings" book. See Section 1A.11 for information regarding this publication.

¹³ Sections 2D.04, 2D.05 and 2D.06 also apply to freeways and expressways.

Section 2E.15 Interline and Edge Spacing

Guidance:

⁰¹ *Interline spacing of upper-case letters should be approximately three-fourths the average of upper-case letter heights in adjacent lines of letters.*

⁰² *The spacings to the top and bottom borders should be equal to the average of the letter height of the adjacent line of letters. The lateral spacing to the vertical borders should be essentially the same as the height of the largest letter.*

Section 2E.16 Sign Borders

Standard:

⁰¹ Signs shall have a border of the same color as the legend in order to outline their distinctive shape and thereby give them easy recognition and a finished appearance.

Guidance:

⁰² *For guide signs larger than 120 x 72 inches, the border should have a width of 2 inches. For smaller guide signs, a border width of 1.25 inches should be used, but the width should not exceed the stroke width of the lettering of the principal legend on the sign.*

⁰³ *Corner radii of sign borders should be 1/8 of the minimum sign dimension on guide signs, except that the radii should not exceed 12 inches on any sign.*

Option:

⁰⁴ The sign material in the area outside of the corner radius may be trimmed.

Support:

⁰⁵ Sign border details are contained in FHWA's "Standard Highway Signs and Markings" book and Department of Transportation's California Sign Specifications. See Section 1A.11 for information regarding these publications.

Section 2E.17 Abbreviations

Guidance:

⁰¹ *Abbreviations should be kept to a minimum; however, they are useful when complete destination messages produce excessively long signs. If used, abbreviations should be unmistakably recognized by road users (see Section 1A.15). Longer commonly used words that are not part of a proper name and are readily recognizable, such as Street, Boulevard, and Avenue, should be abbreviated to expedite recognition of the sign legend by reducing the amount and complexity of the legend.*

⁰² *Periods, apostrophes, question marks, ampersands, or other punctuation or characters that are not letters, numerals, or hyphens should not be used in abbreviations, unless necessary to avoid confusion.*

⁰³ *The solidus (slanted line or forward slash) is intended to be used for fractions only and should not be used to separate words on the same line of legend. Instead, a hyphen should be used for this purpose, such as "CARS – TRUCKS."*

Standard:

⁰⁴ The words NORTH, SOUTH, EAST, and WEST shall not be abbreviated when used with route signs to indicate cardinal directions on guide signs.

Section 2E.18 Symbols

Standard:

01 Symbol designs shall be unmistakably like those shown in this Manual and in the “Standard Highway Signs and Markings” book (see Section 1A.11).

Guidance:

02 A special effort should be made to balance legend components for maximum legibility of the symbol with the rest of the sign.

Option:

03 Educational plaques may be used below symbol signs where needed.

Section 2E.19 Arrows for Interchange Guide Signs

Standard:

01 Arrows used on interchange guide signs shall be of the types shown in Figure 2D-2 and 2D-2(CA) and shall comply with the provisions of this Section and Section 2D.08.

02 Except on Overhead Arrow-per-Lane guide signs (see Section 2E.21) and on Exit Direction signs for lane drops (see Section 2E.24), and except as provided in Paragraphs 3 and 4, directional arrows on all overhead and post-mounted Exit Direction signs shall point diagonally upward and shall be located on the side of the sign consistent with the direction of the exiting movement.

Option:

03 On post-mounted Exit Direction signs that are located where a directional arrow to the side of the legend farthest from the roadway might create an unusually wide sign that limits the road user's view of the arrow, the directional arrow may be placed at the bottom portion of the sign, centered under the legend.

Standard:

04 Directional arrows on guide signs for multi-lane exits shall be positioned below the legend approximately over the center of each lane to which the arrow applies (see Figures 2E-4 and 2E-8).

05 On overhead signs where down arrows are used to indicate a lane to be followed, a down arrow shall be positioned approximately over the center of each lane and shall point vertically downward toward the use of specific lanes to traffic bound for the destination(s) and/or route(s) indicated by these arrows. Down arrows shall not be used unless an arrow can be located over and pointed to the approximate center of each lane that can be used to reach the destination displayed on the sign.

06 If down arrows are used, having more than one down arrow pointing to the same lane on a single overhead sign (or on multiple signs on the same overhead sign structure) shall not be permitted.

Support:

07 Directional and down arrows for use on guide signs are shown in Figure 2D-2. Detailed drawings and standardized sizes based on ranges of letter heights for these arrows are provided in the “Standard Highway Signs and Markings” book (see Section 1A.11). Information on the dimensions for arrows used in Overhead Arrow-per-Lane and Diagrammatic guide signing is also provided in the “Standard Highway Signs and Markings” book.

Section 2E.20 Signing for Option Lanes at Splits and Multi-Lane Exits

Support:

01 Some freeway and expressway splits or multi-lane exit interchanges contain an interior option lane serving both movements in which traffic can either leave the route or remain on the route, or choose either destination at a split, from the same lane.

Standard:

02 On freeways and expressways, either the Overhead Arrow-per-Lane or Diagrammatic guide sign designs as provided in Sections 2E.21 and 2E.22 shall be used for all multi-lane exits at major interchanges (see Section 2E.32) that have an optional exit lane that also carries the through route (see Figures 2E-4, 2E-5, 2E-8, and 2E-9) and for all splits that include an option lane (see Figures 2E-6 and 2E-10). Overhead Arrow-per-Lane or Diagrammatic guide signs shall not be used on freeways and expressways for any other types of exits or splits, including single-lane exits and splits that do not have an option lane.

Guidance:

03 The Overhead Arrow-per-Lane guide sign design (see Section 2E.21) should also be considered for multi-lane exits with an option lane at intermediate interchanges (see Section 2E.32) based on such factors as the extent of the need to optimize the mainline operation by maximizing the usage of the option lane, the extent of the period(s) of the day during which the exiting volumes warrant the multi-lane exit arrangement, and the nature of the traffic that primarily uses the option lane during the high-volume periods.

04 Signing for multi-lane exits at minor interchanges (see Section 2E.32) that have an optional exit lane or at intermediate interchanges that have an optional exit lane at which it has been determined that the Overhead Arrow-per-Lane guide sign design is not warranted should use a combination of conventional guide signing and regulatory lane-use signing, in accordance with the provisions of Section 2E.23.

Section 2E.21 Design of Overhead Arrow-per-Lane Guide Signs for Option Lanes

Support:

01 Overhead Arrow-per-Lane guide signs (see Figure 2E-3) are used where an option lane is present at freeway and expressway multi-lane exit interchanges and splits. They display an upward-pointing arrow above each lane that conveys the direction(s) of travel that the lane serves at the point of departure. At locations where an option lane is present at a multi-lane exit or split, Overhead Arrow-per-Lane guide signs have been shown to be superior to either conventional guide signs or Diagrammatic guide signs because they convey positive direction about which destination and direction each approach lane serves, particularly for the option lane, which is otherwise difficult to clearly sign.

Standard:

02 Overhead Arrow-per-Lane guide signs shall be used on all new or reconstructed freeways and expressways as described in Section 2E.20.

03 Where used, the Overhead Arrow-per-Lane guide sign at the exit or split shall be located at or in the immediate vicinity of the point where the exiting lanes begin to diverge from the through lanes or, for a split, at the point where the approach lanes begin to diverge from one another, preserving the relation of the arrows displayed on the sign to their respective lanes. The Overhead Arrow-per-Lane guide sign at the exit shall not be located at or near the theoretical gore.

Option:

04 At existing or non-reconstructed locations where Exit Direction and Pull-Through signs exist at the theoretical gore, the existing sign support structure may remain in place, continuing to use Exit Direction and Pull-Through signs, in conjunction with a replacement of the advance signs using the Overhead Arrow-per-Lane guide sign design.

Standard:

05 If existing Exit Direction and Pull-Through signs are being retained at an interchange as provided in Paragraph 4, an Overhead Arrow-per-Lane guide sign shall not be used at the location of the Exit Direction and Pull-Through signs at or in the vicinity of the theoretical gore. New installations of Exit Direction and Pull-Through signs shall not be permitted in conjunction with Overhead Arrow-per-Lane guide signs on new or reconstructed facilities.

Guidance:

06 Overhead Arrow-per-Lane guide signs should be located at approximately 1/2 mile and 1 mile in advance of the exit or split, and at approximately 2 miles in advance of the exit or split where space is available and conditions allow.

Standard:

07 Overhead Arrow-per-Lane guide signs used on freeways and expressways shall include one arrow above each lane and shall be designed in accordance with the following criteria:

- A. The sign shall include an upward-pointing arrow for each lane of the approach to the split or exit, and the shaft of each arrow shall be located approximately over the center of the lane to which it applies.**
- B. Arrows for continuing through lanes shall be vertically upward pointing (see Figure 2E-4) unless those lanes are on a significantly curved alignment beyond the theoretical gore, in which case the arrows for the continuing through lanes shall indicate the approximate degree of curvature (see Figure 2E-5).**

- C. The arrow for a lane that must exit shall be curved in the direction of the exit and shall be accompanied by black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels adjacent to the lower end of the arrow shaft. The E11-1a and E11-1b sign panels shall not be used for a split of two overlapping routes where neither of the diverging routes is designated as an exit. Where the through lanes curve and the exit continues on a straight alignment, upward-pointing vertical arrows shall be used for the exiting movement and curved arrows for the through movement.
- D. The arrow for an optional exit lane that also carries the through route shall have a single shaft that bifurcates into a vertically upward-pointing arrow and a curving arrow corresponding to the configuration of the through and exit lanes.
- E. For splits with an option lane, the arrow for the lane from which either direction of the split can be accessed shall have a single shaft that bifurcates into two upward-pointing curving arrows showing the approximate degrees of curvature of the two roadways beyond the theoretical gore (see Figure 2E-6).
- F. A vertical white line shall be used to separate the route shields and destinations for the two diverging movements from each other.
- G. The distance to the exit or split shall be displayed below the off-movement destination on the advance signs at the 1-mile and 2-mile locations.
- H. The number of lanes displayed on a sign shall correspond to the number of lanes at the location of that sign. An advance sign shall not depict lanes that are added downstream of a sign location.
- I. For numbered exits, the Exit Number (E1-5P) or Left Exit Number (E1-5bP) plaque shall be used at the top of the sign in accordance with Section 2E.31. For unnumbered left exits, the LEFT (E1-5aP) plaque shall be used at the top left edge of the sign.

Guidance:

⁰⁸ *Overhead Arrow-per-Lane guide signs used on freeways and expressways should be designed in accordance with the following additional criteria:*

- A. *No more than one destination should be displayed for each movement, and no more than two destinations should be displayed per sign.*
- B. *The arrowhead(s) for the diverging movement should be positioned lower on the sign than the arrowhead(s) for the movement that continues straight ahead, independent of which movement carries the through route. Where the movements are freeway or expressway splits rather than exits, the arrowheads should be positioned at approximately the same height on the sign.*
- C. *Route shields, cardinal directions, and destinations should be positioned on the sign such that they are clearly related to the arrowhead(s) for the movement to which they apply.*
- D. *The cardinal direction should be placed adjacent to the route shield for exits or splits leading in a single cardinal direction.*
- E. *The vertical white line that is used to separate the route shields and destinations for the two diverging movements from each other should not descend below the top of the arrowheads for the through lanes, and should be positioned approximately halfway between the diverging arrowheads for the optional movement lane (see Figure 2E-3).*

Standard:

⁰⁹ **Overhead Arrow-per-Lane guide signs shall not be used to depict a downstream split of an exit ramp on a sign located on the mainline.**

Support:

¹⁰ Specific guidelines for more detailed design of Overhead Arrow-per-Lane guide signs are contained in the "Standard Highway Signs and Markings" book (see Section 1A.11).

Option:

¹¹ Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel (see Figure 2E-27) may be placed below the applicable destination legend to supplement, but not to replace, the exit or ramp advisory speed warning signs.

Section 2E.22 Design of Freeway and Expressway Diagrammatic Guide Signs for Option Lanes

Support:

⁰¹ Diagrammatic guide signs (see ~~Figure 2E-7~~) are guide signs that show a simplified graphic view of the exit arrangement in relationship to the main highway. While the use of such guide signs might be helpful for the purpose of conveying relative direction of each movement, Diagrammatic guide signs have been shown to be less effective than conventional or Overhead Arrow-per-Lane guide signs at conveying the destination or direction(s) that each approach lane serves, regardless of whether dedicated or option lanes are present.

Standard:

⁰² **Diagrammatic guide signs used where an option lane is present at a freeway or expressway split or multi-lane exit shall be designed in accordance with the following criteria:**

- A. The graphic legend shall be of a plan view showing the off-ramp arrangement.**
- B. No other symbols or route shields shall be used as a substitute for arrowheads.**
- C. They shall not be installed at the Exit Direction sign location (see Section 2E.36).**
- D. The EXIT ONLY sign panel shall not be used on diagrammatic guide signs in advance of the interchange.**
- E. For numbered exits, the Exit Number (E1-5P) or Left Exit Number (E1-5bP) plaque shall be used at the top of the sign in accordance with Section 2E.31. For unnumbered left exits, the LEFT (E1-5aP) plaque shall be used at the top left edge of the sign.**
- F. The EXIT ONLY (E11-1e or E11-1f) sign panels shall be used on the Exit Direction sign at the theoretical gore, except at splits of two overlapping routes where neither of the routes is designated as an exit.**

Guidance:

⁰³ *Diagrammatic guide signs used on freeways and expressways should be designed in accordance with the following additional criteria:*

- A. The graphic should not depict deceleration lanes.*
- B. No more than one destination should be displayed for each movement, and no more than two destinations should be displayed per sign.*
- C. The arrowhead for the diverging movement should be positioned lower on the sign than the arrowhead for the movement that continues straight ahead, independent of which movement carries the through route (see ~~Figures 2E-8 and 2E-9~~). Where the movements are freeway or expressway splits rather than exits, the arrowheads should be positioned at approximately the same height on the sign (see ~~Figure 2E-10~~).*
- D. ~~Arrow shafts should contain lane lines.~~ Arrow shafts should match the number of lanes.*
- E. Route shields, cardinal directions, and destinations should be positioned on the sign such that they are clearly related to the arrowhead(s), and the arrowhead for the off movement should point toward the route shield for the off movement.*
- F. For exits or splits leading in a single direction, the cardinal direction should be placed adjacent to the route shield, and the destination should be placed below the route shield and cardinal direction.*

Standard:

⁰⁴ **Diagrammatic guide signs shall not be used at cloverleaf interchanges for the purpose of depicting successive departures from the mainline or separate downstream departures from a collector-distributor roadway. The use of Diagrammatic guide signs at cloverleaf interchanges shall be limited to the following cases:**

- A. Where the outer (non-loop) exit ramp of the cloverleaf is a multi-lane exit having an optional exit lane that also carries the through route; and**
- B. At cloverleaf interchanges that include collector-distributor roadways, ~~such as those illustrated in Figure 2E-36~~, that are accessed from the mainline by a multi-lane exit having an optional exit lane that also carries the through route. In this case, the Diagrammatic guide sign shall only show the configuration of the lanes at the exit point to the collector-distributor roadway and not the entire interchange configuration.**

Support:

⁰⁵ Specific guidelines for more detailed design of Diagrammatic guide signs are contained in the "Standard Highway Signs and Markings" book (see Section 1A.11).

^{05a} Refer to Section 3B.05 for lane drop markings.

Option:

⁰⁶ Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel (see Figure 2E-27) may be placed below the applicable destination legend to supplement, but not to replace, the exit or ramp advisory speed warning signs.

Section 2E.23 Signing for Intermediate and Minor Interchange Multi-Lane Exits with an Option Lane

Support:

⁰¹ Intermediate and minor multi-lane exits might have an operational need for the presence of an option lane for only the peak period during which excessive queues might otherwise develop if the option lane were not available. In such cases, the Overhead Arrow-per-Lane or Diagrammatic guide signing described for option lanes in Sections 2E.21 and 2E.22 might not be practical, depending on the level of use of the option lane and the spacing of nearby interchanges, particularly in non-rural areas.

Guidance:

⁰² *Signing for an intermediate or minor interchange that has a multi-lane exit with an option lane that also carries the through route should use the same basic principles as those for a conventional exit. In such cases, the option lane is not signed on the Advance Guide signs. For such exits that involve the addition of an auxiliary lane that is not present at the Advance Guide sign locations, but do not involve a lane drop (see Figure 2E-12), a sequence of post-mounted or overhead-mounted Advance Guide signs should be used, located in accordance with the interchange classification (see Section 2E.32). The Exit Direction sign should be located at the theoretical gore and display a diagonally upward-pointing directional arrow above each lane that departs from the mainline alignment. The Exit Direction sign should not contain the EXIT ONLY legend.*

⁰³ *For such interchanges that also have a lane drop (see Figure 2E-11), the Advance Guide and Exit Direction signs should follow the provisions of Section 2E.24. The Exit Direction sign should be located at the theoretical gore and should contain the EXIT ONLY (E11-1e) sign panel.*

⁰⁴ *The presence of the option lane should be conveyed by the use of post-mounted lane-use (R3-8 Series) signs (see Section 2B.22). When used, the R3-8 signs should be of an appropriate size for their application to optimize their conspicuity. The signs should be located in succession with the Advance Guide signs, where the option and exit lanes have developed (see Figure 2E-11). In cases where the exiting lane or lanes have not developed and the option lane is created by the addition of an auxiliary lane that exits, the R3-8 signs should be located only adjacent to where the lanes have been fully developed and not in advance of the lane or along its transition (see Figure 2E-12).*

Support:

⁰⁵ The use of a down arrow on overhead freeway or expressway guide signs has been shown to be misinterpreted by road users as an indication of a dedicated lane.

Standard:

⁰⁶ **Advance Guide signs that are mounted overhead shall not display a down arrow over an option lane.**

Section 2E.24 Signing for Interchange Lane Drops

Standard:

⁰¹ **The provisions of this Section shall only apply to lane drops at exits that do not have an optional exit lane. At exits that have an optional exit lane in addition to the dropped lane, the provisions of Sections 2E.20 through 2E.23 shall apply.**

⁰² **Major guide signs for all lane drops at interchanges shall be mounted overhead. An EXIT ONLY sign panel shall be used for all interchange lane drops at which the through route is carried on the mainline.**

⁰³ **Except on Overhead Arrow-per-Lane and Diagrammatic guide signs (See Sections 2E.20 through 2E.22), the EXIT ONLY (down arrow) (E11-1 or E11-1f) sign panel (see Figure 2E-13 and 2E-13(CA)) shall be used on all signing of lane drops on all overhead Advance Guide signs (see Figures 2E-14 through 2E-16). The number of arrows on each sign shall correspond to the number of dropped lanes at the location of each sign. Placement of the down arrow shall comply with the provisions of Section 2E.19.**

Guidance:

04 For lane drops, the Exit Direction sign (see Section 2E.36 and Figure 2E-26 and 2E-26(CA)) ~~shall~~ should be of the format shown in Figures 2E-15 and 2E-16.

Standard:

04 The bottom portion of the Exit Direction sign shall be yellow with a black border and shall include a diagonally upward-pointing black directional arrow (left or right) for each lane dropped at the exit, with the sign designed and placed so that each arrow is located over the approximate center of each lane being dropped. The words EXIT and ONLY shall be positioned to the left and right, respectively, of the arrow on the E11-1d sign panel for a single-lane drop. For a two-lane drop, the words EXIT ONLY shall be located between the two arrows on the E11-1e sign panel. The number of arrows on the sign shall correspond to the number of dropped lanes at the location of the sign.

Guidance:

04a Separate Exit Only or Only (E11-1 Series or W61(CA) Series) panels (see Figures 2E-13 and 2E-13(CA)) should be used instead of making these panels part of the sign face at the bottom as shown in Figures 2E-15 and 2E-16.

Option:

05 EXIT ONLY messages of either the combination of E11-1a and E11-1b, or E11-1c formats may be used to retrofit existing signing to warn of a lane drop situation ahead.

Standard:

06 If used to retrofit an existing Advance Guide sign, the E11-1a and E11-1b sign panels (see Figure 2E-13 and 2E-13(CA)) shall be placed on either side of a white down arrow. The E11-1c sign panel, if used to retrofit an existing sign, shall be placed between the lower destination message and the white down arrow.

Guidance:

07 Except as provided in Paragraph 8 for an auxiliary lane, Advance Guide signs for lane drops within 1 mile of the interchange should not contain the distance message.

08 Where the dropped lane is an auxiliary lane that is provided between successive entrance and exit ramps of two separate interchanges and the distance between the two ramps is less than 1 mile, the first Advance Guide sign in the sequence downstream from the entrance ramp should contain the distance message.

09 Wherever the dropped lane carries the through route, signs should be used without the EXIT ONLY sign panel.

Support:

10 Sections 2E.20 through 2E.23 contain information on the signing of lane drops at exits that also have an option lane.

11 Section 2B.23 contains information regarding regulatory signs that can also be used for freeway lane drop situations and Section ~~2C.42~~ 2C.43 contains information regarding warning signs that can also be used for freeway lane drop situations.

Standard:

12 The Exit Only (W61A(CA), W61B(CA), W61C(CA), W61D(CA), W61E(CA) and W61H(CA)) panels shall be used on overhead directional signs to identify lane/lanes that enter or exit a freeway.

13 The Only (W61F(CA), W61G(CA) and W61H(CA)) panels shall be used on overhead directional signs to identify lane/lanes that become a freeway to freeway connector.

Support:

14 Typical examples are shown in Figures 3B-8(CA) and 3B-10(CA).

Section 2E.25 Overhead Sign Installations

Support:

01 Specifications for the design and construction of structural supports for signs have been standardized by the American Association of State Highway and Transportation Officials (AASHTO). Overcrossing structures can often serve for the support of overhead signs, and might in some cases be the only practical location that will provide adequate viewing distance. Use of these structures as sign supports will eliminate the need for additional sign supports along the roadside. Factors justifying the installation of overhead signs are given in Section 2A.17. Vertical clearance of overhead signs is discussed in Section 2A.18.

Section 2E.26 Lateral Offset

Standard:

01 The minimum lateral offset outside the usable roadway shoulder for post-mounted freeway and expressway signs or for overhead sign supports, either to the right-hand or left-hand side of the roadway, shall be 6 feet. This minimum clearance shall also apply outside of a curb. If located within the clear zone, the signs shall be mounted on crashworthy supports or shielded by appropriate crashworthy barriers.

Guidance:

02 Where practical, a sign should not be less than ~~10~~ 12 feet from the edge of the nearest traffic lane. Large guide signs especially should be farther removed, preferably 30 feet or more from the nearest traffic lane.

03 Where an expressway median is 12 feet or less in width, consideration should be given to spanning both roadways without a center support.

04 Where overhead sign supports cannot be placed sufficiently far away from the line of traffic or in an otherwise protected site, they should either be designed to minimize the impact forces, or be adequately shielded by a traffic barrier of suitable design.

Standard:

05 Butterfly-type sign supports and other overhead non-crashworthy sign supports shall not be installed in gores or other unshielded locations within the clear zone.

Option:

06 Lesser clearances, but not generally less than 6 feet, may be used on connecting roadways or ramps at interchanges.

Support:

07 Also refer to Section 2A.19 for more information on this topic.

Section 2E.27 Route Signs and Trailblazer Assemblies

Standard:

01 The official Route sign for the Interstate Highway System shall be the red, white, and blue retroreflective distinctive shield adopted by the American Association of State Highway and Transportation Officials (see Section 2D.11).

Guidance:

02 Route signs (see Figure 2E-17) should be incorporated as cut-out shields or other distinctive shapes on large directional guide signs. Where the Interstate shield is displayed in an assembly or on the face of a guide sign with U.S. or State Route signs, the Interstate numeral should be at least equal in size to the numerals on the other Route signs. The use of independent Route signs should be limited primarily to route confirmation assemblies.

03 Route signs and auxiliary signs showing junctions and turns should be used for guidance on approach roads, for route confirmation just beyond entrances and exits, and for reassurance along the freeway or expressway. When used along the freeway or expressway, the Route signs should be enlarged to a 36 x 36-inch minimum size for routes with one or two digits and to a 45 x 36-inch minimum size for routes with three digits as shown in the "Standard Highway Signs and Markings" book (see Section 1A.11). When independently mounted Route signs are used in place of Pull-Through signs, they should be located just beyond the exit.

Option:

04 The standard Trailblazer Assembly (see Section 2D.35) may be used on roads leading to the freeway or expressway. Component messages of the Trailblazer Assembly may be included on a single sign in accordance with the provisions of Section 2D.12. Independently mounted Route signs may be used instead of Pull-Through signs (see Section 2E.12) as confirmation information.

Support:

05 Section 2H.07 contains information regarding the design of signs for Auto Tour Routes.

Option:

06 The commonly used name or trailblazer route sign for a toll highway (see Chapter 2F) may be displayed on non-toll sections of the Interstate Highway System at:

- A. The last exit before entering a toll Section of the Interstate Highway System;
- B. The interchange or connection with a toll highway, whether or not the toll highway is a part of the Interstate Highway System; and

C. Other locations within a reasonable approach distance of toll highways when the name or trailblazer symbol for the toll highway would provide better guidance to road users unfamiliar with the area than would place names and route numbers.

07 The toll highway name or route sign may be included as a part of the guide sign installations on intersecting highways and approach roads to indicate the interchange with a toll Section of an Interstate route. Where needed for the proper direction of traffic, a trailblazer for a toll highway that is part of the Interstate Highway System may be displayed with the Interstate Trailblazer Assembly.

Support:

08 Chapter 2F contains additional information regarding signing for toll highways.

Section 2E.28 Eisenhower Interstate System Signs (M1-10, M1-10a)

Option:

01 The Eisenhower Interstate System (M1-10 and M1-10a) signs (see Figure 2E-18) may be used on Interstate highways at periodic intervals and in rest areas, scenic overlooks, or other similar roadside facilities on the Interstate Highway System.

Guidance:

02 *If used, the M1-10a sign should be used only in rest areas or other similar facilities where the sign can be viewed by occupants of parked vehicles or by pedestrians. The M1-10a sign should not be installed on Interstate highway mainlines, ramps, or other roadways where it can be viewed by vehicular traffic.*

Standard:

03 **The M1-10 and M1-10a signs shall not be used as part of a Junction, Advance Route Turn, Directional, or Trailblazer Assembly or as part of a guide sign or similar assembly providing direction to a route or destination.**

Section 2E.29 Signs for Intersections at Grade

Guidance:

01 *If there are intersections at grade within the limits of an expressway, guide sign types provided in Chapter 2D should be used. However, such signs should be of a size compatible with the size of other signing on the expressway.*

Option:

02 Advance Guide signs for intersections at grade may take the form of diagrammatic layouts depicting the geometrics of the intersection along with essential directional information.

Section 2E.30 Interchange Guide Signs

Standard:

Guidance:

01 *The signs at interchanges and on their approaches shall should include Advance Guide signs and Exit Direction signs.*

Standard:

Consistent destination messages shall be displayed on these signs.

Guidance:

02 *New destination information should not be introduced into the major sign sequence for one interchange, nor should destination information be dropped.*

03 *Reference should be made to Section 2E.11 and Sections 2E.33 through 2E.42 for a detailed description of the signs in the order that they should appear at the approach to and beyond each interchange. Guide signs placed in advance of an interchange deceleration lane should be spaced at least 800 feet apart.*

04 *Supplemental guide signing should be used sparingly as provided in Section 2E.35.*

Support:

05 [Also refer to Section 2D.31.](#)

Guidance:

06 The exits should be identified on signs by street names and/or route markers.

07 Community names should not be included on street name exit signs. If the interchange provides more than one exit to the street, cardinal directions should be included on the sign.

Option:

08 The Destination and Street Name with Arrow (G8(CA) Series) signs may be used in freeway interchange areas.

Support:

09 Typical use of the G8 Series (CA) signs in freeway interchange areas is shown in Figures 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA) for typical freeway signing.

Section 2E.31 Interchange Exit Numbering

Support:

01 Interchange exit numbering provides valuable orientation for the road user on a freeway or expressway. The feasibility of numbering interchanges or exits on an expressway will depend largely on the extent to which grade separations are provided. Where there is appreciable continuity of interchange facilities, interrupted only by an occasional intersection at grade, the numbering will be helpful to the expressway user.

Standard:

02 Interchange numbering shall be used in signing each freeway interchange exit. Interchange exit numbers shall be displayed with each Advance Guide sign, Exit Direction sign, and Exit Gore sign. The exit number shall be displayed on a separate plaque at the top of the Advance Guide or Exit Direction sign. The exit number (E1-5P) plaque (see Figure 2E-22) shall be 30 inches in height and shall include the word EXIT and the appropriate exit number in a single-line format. Suffix letters shall be used for exit numbering at a multi-exit interchange. The suffix letter shall also be included on the exit number plaque and shall be separated from the exit number by a space having a width of between 1/2 and 3/4 of the height of the suffix letter. Exit numbers shall not include the cardinal initials corresponding to the directions of the cross route. Minimum numeral and letter sizes are given in Tables 2E-2 through 2E-5. If used, the interchange numbering system for expressways shall comply with the provisions prescribed for freeways.

03 At a multi-exit interchange where suffix letters are used for exit numbering, an exit of the same number without a suffix letter shall not be used on the same route in the same direction. For example, if an exit is designated as EXIT 256 A, then there shall not be an exit designated as EXIT 256 on the same route in the same direction.

04 Interchange exit numbering shall use the reference location sign exit numbering method. The consecutive exit numbering method shall not be used.

Support:

05 Reference location sign exit numbering assists road users in determining their destination distances and travel mileage, and assists highway agencies because the exit numbering sequence does not have to be changed if new interchanges are added to a route.

Option:

06 Exit numbers may also be used with Supplemental Guide signs and Motorist Service signs.

Guidance:

07 Exit number (E1-5P) plaques should be added to the top right-hand edge of the sign for an exit to the right.

Standard:

08 Because road users might not expect an exit to the left and might have difficulty in maneuvering to the left, a left exit number (E1-5bP) plaque (see Figure 2E-22) shall be added to the top left-hand edge of the sign for all left-hand exits (see Figures 2E-14 and 2E-15). The word LEFT on the E1-5bP plaque shall be a black legend on a yellow rectangular sign panel and shall be centered above the word EXIT.

Support:

09 Example exit number plaque designs are shown in Figure 2E-22 and 2E-22(CA). Figures 2E-3, 2E-7, 2E-22, 2E-22(CA), 2E-26, 2E-26(CA) and 2E-27 illustrate the incorporation of exit number plaques on guide signs.

10 The general plan for numbering interchange exits is shown in Figures 2E-19 through 2E-21. Figure 2E-19 shows a circumferential route, which is a route that makes a complete circle around a city or town and usually has two interchanges (one on each side of the city or town) with each of the mainline routes that travel through the

city or town. Figure 2E-20 shows a loop route, which is a route that departs from a mainline route and then rejoins the same mainline route at a subsequent point downstream, and a spur route, which is a route that departs from a mainline route and never rejoins the same mainline route. Figure 2E-21 shows two mainline routes that overlap each other.

Standard:

11 Regardless of whether a mainline route originates within a State or crosses into a State from another State, the southernmost or westernmost terminus within that State shall be the beginning point for interchange numbering.

12 For circumferential routes, interchange numbering shall be in a clockwise direction. The numbering shall begin with the first interchange west of the south end of an imaginary north-south line bisecting the circumferential route, at a radial freeway or other Interstate route, or some other conspicuous landmark in the circumferential route near a south polar location (see Figure 2E-19).

13 The interchange numbers on loop routes shall begin at the loop interchange nearest the south or west mainline junction and increase in magnitude toward the north or east mainline junction (see Figure 2E-20).

14 Spur route interchanges shall be numbered in ascending order starting at the interchange where the spur leaves the mainline route (see Figure 2E-20).

15 If a circumferential, loop, or spur route crosses State boundaries, the numbering sequence shall be coordinated by the States to provide continuous interchange numbering.

16 Where numbered routes overlap, continuity of interchange numbering shall be established for only one of the routes (see Figure 2E-21). If one of the routes is an Interstate and the other route is not an Interstate, the Interstate route shall maintain continuity of interchange numbering.

Guidance:

17 The route chosen for continuity of interchange numbering should also have reference location sign continuity (see Figure 2E-21).

Standard:

18 The Department of Transportation shall utilize mileage based interchange exit numbering to identify the location of each interchange exit on the California Freeway System. The following web site shall provide the statewide listing of freeway exit numbers indexed by route and direction:

<http://www.dot.ca.gov/hq/traffops/signtech/calnexus/index.htm>

19 The placement and location of interchange exit numbering on State highways shall conform to the database maintained by Department of Transportation's Division of Traffic Operations for reference posts. This database is different from the TASAS Highway database.

20 Interchange numbering shall be used in signing each freeway interchange exit. Each freeway interchange exit shall include a minimum of two numbered exit signs:

- 1. One Advance Guide (G83(CA) Series) sign with exit number.**
- 2. One Exit Gore (E5-1 or G84-2(CA) or G84-3(CA)) sign with exit number and arrow or, if not available, an exit number shall be installed on an adjacent Exit Direction (G85-10(CA) or G85-11(CA)) sign at the gore.**

21 To the extent practical, interchange exit numbers shall be displayed with each Advance Guide sign, Exit Direction sign, and Gore sign on freeways.

22 Exit numbers shall not include the cardinal initials corresponding to the directions of the cross route.

Guidance:

23 The exit number signs should take advantage of existing roadside and overhead signs. Where possible, add-on plaques or panels should be used. In areas where maximum wind loads or existing legends do not permit placement of an add-on plaque or panel, a new sign should be installed.

Support:

24 For new sign installations or if the existing sign is due for replacement, consider ordering a new sign with the exit number included as part of the sign.

Standard:

25 Rest areas, vista points, weigh stations, HOV facility exits or HOV to HOV system connector ramps are not considered interchange exits and shall not be signed with exit numbers.

Support:

²⁶ Where one or more lanes of traffic diverge from the main line at a single exit, the exit is numbered and signed at the main line diverge as one exit. Generally, there is adequate information displayed on guide signs downstream of the main line diverge to direct a road user to the desired destination, route or street.

Option:

²⁷ A multiple exit number add-on sign (such as E1-5 with message EXITS 33 A-B in Figure 2E-22) may be placed at the mainline diverge.

Guidance:

²⁸ *The multiple exit number add-on sign should only be placed when further clarification is needed to guide road users to the desired destination.*

Standard:

²⁹ **If multiple exit number add-on sign is used, exit numbers with the appropriate suffix letters shall be placed on guide signs downstream of the mainline diverge.**

Support:

³⁰ Exit numbers are not required for exits from auxiliary lanes, connectors or collector-distributors.

Option:

³¹ The single line EXIT XX panel (G70-2(CA)) may be attached to an existing Advance Guide sign, Exit Direction sign, or Supplemental Guide sign that identifies an interchange that has been assigned a one or two digit exit number/suffix.

³² The single line EXIT XXXX panel (G70-3(CA)) may be attached to an existing Advance Guide sign, Exit Direction sign, or Supplemental Guide sign that identifies an interchange that has been assigned a three or four digit exit number/suffix.

³³ The two line EXIT XX panel (G70-4(CA)) may be used as an alternate to the single line EXIT XX panel (G70-2(CA)) when an existing sign cannot accommodate the single line format. It may be attached to an existing Advance Guide sign, Exit Direction sign, or Supplemental Guide sign that identifies an interchange that has been assigned a one or two digit exit number/suffix.

³⁴ The two line EXIT XXXX panel (G70-5(CA)) may be used as an alternate to the single line EXIT XXXX panel (G70-3(CA)) when an existing sign cannot accommodate the single line format. It may be attached to an existing Advance Guide sign, Exit Direction sign, or Supplemental Guide sign that identifies an interchange that has been assigned a three or four digit exit number/suffix.

Guidance:

³⁵ *The EXIT panels (G70-2(CA), G70-3(CA), G70-4(CA) and G70-5(CA)) should be located toward the top left edge of the sign for a left exit and toward the top right edge for right exits.*

Option:

³⁶ The Exit Numbered Advance Guide (G83-4(CA)) sign with separate borders may be used for new sign installations or as an alternate to retrofitting an existing Advance Guide sign when the existing Advance Guide sign cannot accommodate an add-on plaque or panel.

³⁷ The Exit Numbered Advance Guide (G83-5(CA)) sign with a single border may be used as an alternate to the G83-4(CA) when the sign message requires additional space on the sign.

Standard:

³⁸ **If used, the G83-4(CA) and G83-5(CA) signs shall be placed on freeways to give motorists advance notice of the exit point to the principal destination served by the next interchange that has been assigned an exit number/suffix, and the distance to that interchange.**

³⁹ **The Exit Gore (E5-1) sign shall be used at exit ramp gores from expressways, from freeway to freeway connectors, and from collector distributors to identify the exiting point.**

⁴⁰ **The EXIT XX with Arrow Gore (G84-2(CA)) sign shall be used at exit ramp gores on freeways to identify the exiting point at an interchange that has been assigned a one or two digit exit number/suffix.**

⁴¹ **The EXIT XXXX with Arrow Gore (G84-3(CA)) sign shall be used at exit ramp gores on freeways to identify the exiting point at an interchange that has been assigned a three or four digit exit number/suffix.**

Guidance:

⁴² *On the Exit Gore (E5-1 and G84-2(CA) and G84-3(CA)) signs, the arrow should be aligned to approximate the angle of departure.*

Standard:

43 The Exit Gore (E5-1 and G84-2(CA) and G84-3(CA)) signs shall be placed in the area between the main roadway and the exit ramp.

Option:

44 The Exit Numbered Exit Direction (G85-10(CA)) sign with separate borders may be used for new sign installations or as an alternate to retrofitting an existing Exit Direction sign when the existing Exit Direction sign cannot accommodate an add-on plaque or panel.

45 The Exit Numbered Exit Direction (G85-11(CA)) sign with a single border may be used as an alternate to the G85-10(CA) sign when the sign message requires additional space on the sign.

Standard:

46 If used, the G85-10(CA) and G85-11(CA) signs shall be placed on freeways to direct motorists to the exit ramp of an interchange that has been assigned an exit number/suffix.

Guidance:

47 *The G85-10(CA) and G85-11(CA) signs should be placed in the area at the beginning of the deceleration lane of the exit ramp.*

Option:

48 The Exit Numbered Supplemental Guide (G86-12(CA)) sign with separate borders may be used for new sign installations or as an alternate to retrofitting an existing Supplemental Guide sign (G86(CA) Series) when the existing Supplemental Guide sign cannot accommodate an add-on plaque or panel.

49 The Exit Numbered Supplemental Guide (G86-13(CA)) sign with a single border may be used as an alternate to the G86-12(CA) sign when the sign message requires additional space on the sign.

50 The G86-12(CA) and G86-13(CA) signs may be placed on freeways to give motorists advance notice of the exit point to the principal destination served by the next interchange that has been assigned an exit number/suffix.

Section 2E.32 Interchange Classification

Support:

01 For signing purposes, interchanges are classified as major, intermediate, and minor. The minimum alphabet sizes contained in Tables 2E-2 and 2E-4 are based on this classification. Descriptions of these classifications are as follows:

A. Major interchanges are subdivided into two categories: (a) interchanges with other expressways or freeways, or (b) interchanges with high-volume multi-lane highways, principal urban arterials, or major rural routes where the volume of interchanging traffic is heavy or includes many road users unfamiliar with the area.

B. Intermediate interchanges are those with urban and rural routes not in the category of major or minor interchanges.

C. Minor interchanges include those where traffic is local and very light, such as interchanges with land service access roads. Where the sum of exit volumes is estimated to be lower than 100 vehicles per day in the design year, the interchange is classified as minor.

Section 2E.33 Advance Guide Signs

Support:

01 An Advance Guide sign (see Figure 2E-22 and 2E-22(CA)) gives notice well in advance of the exit point of the principal destinations served by the next interchange and the distance to that interchange.

Guidance:

02 *For major and intermediate interchanges (see Section 2E.32), Advance Guide signs should be placed at 1/2 mile and at 1 mile in advance of the exit with a third Advance Guide sign placed at 2 miles in advance of the exit if spacing permits. At minor interchanges, only one Advance Guide sign should be used. It should be located 1/2 to 1 mile from the exit gore. If the sign is located less than 1/2 mile from the exit, the distance displayed should be to the nearest 1/4 mile. Fractions of a mile, rather than decimals, should be displayed in all cases.*

Standard:

03 For numbered exits to the left, a left exit number (E1-5bP) plaque (see Figure 2E-22) shall be added to the top left-hand edge of the sign.

04 For non-numbered exits to the left, a LEFT (E1-5aP) plaque (see Figure 2E-22) shall be added to the top left-hand edge of the sign.

Support:

05 Section 2E.31 contains additional information regarding exit numbering.

Standard:

06 Advance Guide signs for multi-lane exits having an optional exit lane that also carries the through route (see Figures 2E-4, 2E-5, 2E-8, and 2E-9) and for splits with an option lane (see Figures 2E-6 and 2E-10) shall be Overhead Arrow-per-Lane or diagrammatic signs designed in accordance with Sections 2E.20 through 2E.22.

07 Except as provided in Section 2E.24, Advance Guide signs, if used, shall contain the distance message. ~~Except as provided in Paragraph 8 of this Section, the legend on the Advance Guide signs shall be the same as the legend on the Exit Direction sign, except that the last line shall read EXIT XX MILES. If the interchange has two or more exit roadways, the bottom line shall read EXITS XX MILES.~~

Guidance:

~~08 Where interchange exit numbers are used, the word EXIT(S) should be omitted from the bottom line.~~

Option:

09 Where the distance between interchanges is more than 1 mile, but less than 2 miles, the first Advance Guide sign may be closer than 2 miles, but not placed so as to overlap the signing for the previous exit. Duplicate Advance Guide signs or Interchange Sequence Series signs may be placed in the median on the opposite side of the roadway and are not included in the minimum requirements of interchange signing.

Guidance:

10 *Where there is less than 800 feet between interchanges, Interchange Sequence Series signs (see Section 2E.40) should be used instead of Advance Guide signs for the affected interchanges.*

11 *The Advance Guide signs for the last exit from a highway before it becomes a facility on which toll payments are required should include the LAST EXIT BEFORE TOLL (W16-16P) plaque (see Section 2F.10 and Figure 2F-3). The plaque should be installed above the Advance Guide signs.*

Option:

12 If there is insufficient space above the Advance Guide sign because of the presence of an exit number plaque, the W16-16P plaque may be installed below the Advance Guide sign.

Standard:

13 Where the distance between interchanges is less than 2 mile, the Advance Guide (G83(CA) Series) sign shall be placed at the first available location with the mileage adjusted to the nearest 1/4 mile. The word EXIT (with distance) on the bottom line shall be used if the sign is the advance notice for an interchange with distance destinations.

Guidance:

14 *In all other cases, the word EXIT should be omitted.*

15 *For major and intermediate interchanges (see Section 2E.32), two and preferably three Advance Guide signs should be used. At minor interchanges, only one Advance Guide sign should be used.*

16 *If only one Advance Guide sign is used, it should be placed 1 mile in advance of the exit.*

17 *If two Advance Guide signs are used, they should be placed 1 mile and 2 mile in advance of the exit.*

18 *If three Advance Guide signs are used, they should be placed 0.5 mile, 1 mile and 2 mile in advance of the exit.*

Support:

19 See in Figures 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA) for typical freeway signing.

Section 2E.34 Next Exit Plaques

Option:

01 Where the distance to the next interchange is unusually long, a Next Exit plaque (see Figure 2E-23) may be installed to inform road users of the distance to the next interchange.

Guidance:

02 *The Next Exit plaque should not be used unless the distance between successive interchanges is more than 5 miles.*

Standard:

03 The Next Exit plaque shall carry the legend NEXT EXIT XX MILES. If the Next Exit plaque is used, it shall be placed below the Advance Guide sign nearest the interchange. It shall be mounted so as to not adversely affect the breakaway feature of the sign support structure.

Option:

04 The legend for the Next Exit plaque may be displayed in either one or two lines as shown in Figure 2E-23.

Support:

05 The one-line message on the Next Exit plaque is the more desirable choice unless the message causes the sign to have a horizontal dimension greater than that of the Advance Guide sign.

Section 2E.35 Other Supplemental Guide Signs

Support:

01 Supplemental Guide signs can be used to provide information regarding destinations accessible from an interchange, other than places displayed on the standard interchange signing. However, such Supplemental Guide signing can reduce the effectiveness of other more important guide signing because of the possibility of overloading the road user's capacity to receive visual messages and make appropriate decisions. "The AASHTO Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways" is incorporated by reference in this Section (see Page i for AASHTO's address).

Guidance:

02 *No more than one Supplemental Guide sign should be used on each interchange approach.*

03 *A Supplemental Guide sign (see Figure 2E-24) should not list more than two destinations. Destination names should be followed by the interchange number (and suffix), or if interchanges are not numbered, by the legend NEXT RIGHT or SECOND RIGHT or both, as appropriate. The Supplemental Guide sign should be installed as an independent guide sign assembly.*

04 *Where two or more Advance Guide signs are used, the Supplemental Guide sign should be installed approximately midway between two of the Advance Guide signs. If only one Advance Guide sign is used, the Supplemental Guide sign should follow it by at least 800 feet. If the interchanges are numbered, the interchange number should be used for the action message.*

05 *States and other agencies should adopt an appropriate policy for installing supplemental signs using "The AASHTO Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways." In developing policies for such signing, such items as population, amount of traffic generated, distance from the route, and the significance of the destination should be taken into account.*

Standard:

06 Guide signs directing drivers to park - ride facilities shall be considered as Supplemental Guide signs (see Figure 2E-25).

Option:

07 A pictograph (see definition in Section 1A.13) may be used on a Supplemental Guide sign in conjunction with a destination that is associated with governmental agencies, military bases, universities, or other government-approved institutions.

Standard:

08 The maximum dimension (height or width) of a pictograph shall not exceed two times the upper-case letter height of the destination legend and shall not exceed the size of a route shield on the guide sign. If used, the pictograph shall be located to the left of the destination legend it represents, except as provided in Paragraph 9 for the park-ride Supplemental Guide sign.

09 When a transit pictograph is displayed on the park-ride Supplemental Guide sign, it shall be located on the same line as the carpool symbol, if used, above the word legend.

10 A pictograph representing a State, county, or municipal corporation or other incorporated or unincorporated community shall not be displayed on a Supplemental Guide sign.

11 Pictographs shall otherwise comply with the provisions of Section 2A.06.

Support:

12 *Section 2D.37 also applies to freeways and expressways.*

Option:

¹³ The Supplemental Destination (G86(CA) Series) signs may be omitted at low traffic volume interchanges or at major interchanges that are spaced 0.5 mile or less apart. They may also be omitted where interchanges are 1 mile or less apart and Interchange Sequence (G23(CA) Series) signs are used.

Section 2E.36 Exit Direction Signs

Support:

⁰¹ The Exit Direction sign (see Figure 2E-26 and 2E-26(CA)) repeats the route and destination information that was displayed on the Advance Guide sign(s) for the next exit, and thereby assures road users of the destination served and indicates whether they exit to the right or left for that destination.

Standard:

⁰² **Exit Direction signs shall be used at major and intermediate interchanges. Populations or other similar information shall not be displayed on Exit Direction signs.**

Guidance:

⁰³ *Exit Direction signs should be used at minor interchanges.*

⁰⁴ *post-mounted Exit Direction signs should be installed at the beginning of the deceleration lane. If there is less than 300 feet from the upstream end of the deceleration lane to the theoretical gore (see Figure ~~3B-8~~ 3B-8(CA)), the Exit Direction sign should be installed overhead over the exiting lane in the vicinity of the theoretical gore.*

Standard:

⁰⁵ **Except where Overhead Arrow-per-Lane guide signs are used (see Section 2E.21 and Paragraph 6 of this Section), where a through lane is being terminated (dropped) at an exit, the Exit Direction sign shall be placed overhead at the theoretical gore (see Figures ~~2E-8 through 2E-11~~, and 2E-14 through 2E-16).**

⁰⁶ **Except as provided in Paragraph 4 in Section 2E.21, where Overhead Arrow-per-Lane guide signs are used for the Advance Guide sign(s) for a multi-lane exit having an optional exit lane that also carries the through route or for a split with an option lane (see Section 2E.21), an Overhead Arrow-per-Lane guide sign shall also be used instead of the Exit Direction sign. This Overhead Arrow-per-Lane guide sign shall include the appropriate exit number (E1-5P or E1-5bP) plaque (if a numbered exit) and it shall be located near, but not downstream from, the point where the outside edge of the dropped lane begins to diverge from the mainline (see Figures 2E-4 through 2E-6).**

⁰⁷ **The following provisions shall govern the design and application of overhead Exit Direction signs: A. The sign shall carry the exit number (if exit numbering is used), the route number, cardinal direction, and destination, as applicable, with a diagonally upward-pointing directional arrow (see Figure 2E-26 and 2E-22(CA)).**

B. The message EXIT ONLY in black on a yellow sign panel (E11-1d or E11-1e) shall be used on the overhead Exit Direction sign to advise road users of a lane drop situation (see Figures ~~2E-8 through 2E-11~~). The sign shall comply with the provisions of Section 2E.24.

Guidance:

⁰⁸ *For numbered exits to the right, an exit number (E1-5P) plaque (see Figure 2E-22) should be added to the top right-hand edge of the sign.*

Standard:

⁰⁹ **For numbered exits to the left, a left exit number (E1-5bP) plaque (see Figure 2E-22) shall be added to the top left-hand edge of the sign.**

¹⁰ **For non-numbered exits to the left, a LEFT (E1-5aP) plaque (see Figure 2E-22) shall be added to the top left-hand edge of the sign.**

Support:

¹¹ Section 2E.31 contains additional information regarding exit numbering.

Option:

¹² In some cases, principally in urban areas, where restricted sight distance because of structures or unusual alignment make it impossible to locate the Exit Direction sign without violating the required minimum spacing (see Section 2E.33) between major guide signs, Interchange Sequence signs (see Section 2E.40) may be substituted for an Advance Guide sign.

Guidance:

13 At multi-exit interchanges, the Exit Direction sign should be located directly over the exiting lane for the first exit. At the same location, and normally over the right-hand through lane, an Advance Guide sign for the second exit should be located. Only for those conditions where the through movement is not evident should a confirmatory message (Pull-Through sign as shown in Figure 2E-2) be used over the left lane(s) to guide road users traveling through an interchange. In the interest of sign spreading, three signs on one structure should not be used. When the freeway or expressway is on an overpass, the Exit Direction sign should be installed on an overhead support over the exit lane in advance of the gore point.

Option:

14 If the second exit is beyond an underpass, the Exit Direction sign may be mounted on the face of the overhead structure.

15 Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel (see Figure 2E-27) may be placed at the bottom of the Exit Direction sign to supplement, but not to replace, the exit or ramp advisory speed warning signs.

Guidance:

16 At the last exit from a highway before it becomes a facility on which toll payments are required, the LAST EXIT BEFORE TOLL (W16-16P) plaque (see Section 2F.10 and Figure 2F-3) should be installed above the Exit Direction sign.

Option:

17 If there is insufficient space above the Exit Direction sign because of the presence of an Exit Number (E1-5P) plaque, the W16-16P plaque may be mounted below the Exit Direction sign.

Support:

18 See in Figures 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA) for typical freeway signing.

Section 2E.37 Exit Gore Signs (E5-1 Series)

Support:

01 The Exit Gore (E5-1 or E5-1a) sign (see Figure 2E-28 and 2E-28(CA)) in the gore indicates the exiting point or the place of departure from the main roadway. Consistent application of this sign at each exit is important.

Standard:

02 The gore shall be defined as the area located between the main roadway and the ramp just beyond where the ramp branches from the main roadway. The Exit Gore sign shall be located in the gore and shall carry the word EXIT or EXIT XX (if interchange numbering is used) and an appropriate upward slanting arrow. If suffix letters are used for exit numbering at a multi-exit interchange, the suffix letter shall also be included on the Exit Gore sign and shall be separated from the exit number by a space having a width of between 1/2 and 3/4 of the height of the suffix letter. Breakaway or yielding supports shall be used.

Guidance:

03 The arrow should be aligned to approximate the angle of departure. Each gore should be treated similarly, whether the interchange has one exit roadway or multiple exits.

Option:

04 Where extra emphasis of an especially low advisory ramp speed is needed, an E13-1P plaque indicating the advisory speed may be mounted below the Exit Gore sign (see Figure 2E-28 and 2E-28(CA)) to supplement, but not to replace, the exit or ramp advisory speed warning signs.

05 To improve the visibility of the gore for exiting drivers, a Type 1 object marker (see Chapter 2C) may be installed on each sign support below the Exit Gore sign.

~~*06 An Exit Number (E5-1bP) plaque (see Figure 2E-22) may be installed above an existing Exit Gore (E5-1) sign when a non-numbered exit is converted to a numbered exit.*~~

Standard:

07 An Exit Gore (E5-1a) sign shall be used when the replacement of an existing assembly of an E5-1 sign and an E5-1bP plaque becomes necessary.

Option:

08 The Narrow Exit Gore (E5-1c) sign may be used in gore areas of limited width where the width of the Exit Gore (E5-1a) sign would not permit sufficient lateral offset (see Section 2A.19), such as for ramp departures that

are nearly parallel to the mainline roadway where the Exit Gore sign would be mounted on a narrow island or barrier. Where the E5-1c sign is mounted at a height of 14 feet or more from the roadway, the directional arrow may point diagonally downward.

Guidance:

09 The E5-1c should not be used in gore areas where an E5-1a sign could be installed with sufficient lateral offset.

Section 2E.38 Post-Interchange Signs

Guidance:

01 If space between interchanges permits, as in rural areas, and where undue repetition of messages will not occur, a fixed sequence of signs should be displayed beginning 500 feet beyond the downstream end of the acceleration lane. At this point a Route sign assembly should be installed followed by a Speed Limit sign and a Distance sign, each at a spacing of 1,000 feet.

02 If space between interchanges does not permit placement of these three post-interchange signs without encroaching on or overlapping the Advance Guide signs necessary for the next interchange, or in rural areas where the interchanging traffic is primarily local, one or more of the post-interchange signs should be omitted.

Option:

03 Usually the Distance sign will be of less importance than the other two signs and may be omitted, especially if Interchange Sequence signs are used. If the sign for through traffic on an overhead assembly already contains the route sign, the post-interchange route sign assembly may also be omitted.

Section 2E.39 Post-Interchange Distance Signs

Standard:

01 If used, the Post-Interchange Distance sign shall consist of a two- or three-line sign carrying the names of significant destination points and the distances to those points. The top line of the sign shall identify the next meaningful interchange with the name of the community ~~near or~~ through which the route passes, or if there is no community, the route number or name of the intersected highway (see Figure 2E-29).

Support:

02 The minimum sizes of the route shields identifying a significant destination point are prescribed in Tables 2E-3 and 2E-5.

Option:

03 The text identification of a route may be displayed instead of a route shield, such as "US XX," "State Route XX," or "County Route XX."

Guidance:

04 If a second line is used, it should be reserved for communities of general interest that are located on or immediately adjacent to the route or for major traffic generators along the route.

Option:

05 The choice of names for the second line, if it is used, may be varied on successive Distance signs to give road users maximum information concerning communities served by the route.

Standard:

06 The third, or bottom line, shall contain the name and distance to a control city (if any) that has national significance for travelers using the route.

Guidance:

07 Distances to the same destinations should not be shown more frequently than at 5-mile intervals. The distances displayed on these signs should be the actual distance to the destination points and not to the exit from the freeway or expressway. The distance displayed for each community should comply with the provisions of Section 2D.41.

08 The Distance (G5(CA) Series) signs should be placed at approximate 10 mile intervals, unless the destinations have changed.

Section 2E.40 Interchange Sequence Signs

Option:

01 If interchanges are closely spaced, particularly through large urban areas, so that guide signs cannot be adequately spaced, Interchange Sequence signs identifying the next two or three interchanges may be used.

Guidance:

02 *If used, Interchange Sequence signs should be used over the entire length of a route in an urban area. Except as provided in Paragraph 3, they should not be used on a single interchange basis.*

03 *If there is less than 800 feet between interchanges, Interchange Sequence signs should be used instead of the Advance Guide signs for the affected interchanges.*

Support:

04 Interchange Sequence signs are generally supplemental to Advance Guide signs. Signing of this type is illustrated in Figures 2E-30 and 2E-31 and 2E-31(CA), and is compatible with the sign spreading concept described in Paragraph 3 of Section 2E.11.

05 These signs are installed in a series and display the next two or three interchanges by name or route number with distances to the nearest 1/4 mile.

Standard:

06 **If used, the first sign in the series shall be located in advance of the first Advance Guide sign for the first interchange.**

07 **Where the exit direction is to the left, a LEFT (E11-2) sign panel (see Figure 2E-13 and 2E-13(CA)) shall be displayed on the same line immediately to the right of the interchange name or route number.**

08 **Interchange Sequence signs shall not be substituted for Exit Direction signs.**

Guidance:

09 *Interchange Sequence signs should be located in the median. After the first of the series, Interchange Sequence signs should be placed approximately midway between interchanges.*

Standard:

10 **Interchange Sequence signs located in the median shall be installed at overhead sign height (see Section 2A.18).**

Option:

~~11 Interchange numbers may be displayed to the left of the interchange name or route number.~~

Support:

12 See in Figures 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA) for typical freeway signing.

Standard:

13 **If a destination name is used, it shall be followed by the word EXIT (for instance, SACRAMENTO EXIT).**

Option:

14 ~~When two exit names are required at an interchange with a cross street named differently on opposite sides of a freeway, both names may be shown with a single distance; and, four messages may be used on the sign at these locations.~~

15 ~~The Interchange Sequence (G23(CA) Series) signs may include four lines where two exit names are required for a single interchange.~~

Section 2E.41 Community Interchanges Identification Signs

Support:

~~01 For suburban or rural communities served by two or three interchanges, Community Interchanges Identification signs are useful (see Figure 2E-32).~~

Guidance:

~~02 In these cases, the name of the community followed by the word Exits should be displayed on the top line; the lines below should display the destination, road name or route number, and the corresponding distances to the nearest 1/4 mile.~~

~~03 The sign should be located in advance of the first Advance Guide sign for the first interchange within the community.~~

Option:

~~04 If interchanges are not conveniently identifiable or if there are more than three interchanges to be identified, the NEXT XX EXITS sign (see Section 2E.42) may be used.~~

Support:

05 Use Interchange Sequence (Section 2E.40 and Figures 2E-31 and 2E-31(CA)) and NEXT X EXITS (Section 2E.42 and Figure 2E-33) signs, instead.

Section 2E.42 NEXT XX EXITS Sign

Support:

01 Many freeways or expressways pass through historical or recreational regions, or urban areas served by a succession of several interchanges.

Option:

02 Such regions or areas may be indicated by a NEXT XX EXITS (G87(CA)) sign (see Figure 2E-33 and 2E-33(CA)) located in advance of the Advance Guide sign or signs for the first interchange.

Guidance:

03 *The sign legend should identify the region or area followed by the words NEXT XX EXITS.*

Section 2E.43 Signing by Type of Interchange

Support:

01 Road users need signs to help identify the location of the exit, as well as to obtain route, direction, and destination information for specific exit ramps. Figures ~~2E-34 through 2E-40~~ 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA) show examples of guide signs for common types of interchanges. The interchange layouts shown in most of the figures illustrate only the major guide signs for one direction of traffic on the freeway and on the exit ramps. Section 2D.45 contains information regarding the signing of the crossroad approaches and connecting roadways to freeways and expressways.

Standard:

02 **Interchange guide signing shall be consistent for each type of interchange along a route.**

Guidance:

03 *The signing layout for all interchanges having only one exit ramp in the direction of travel should be similar, regardless of the interchange type. For the sake of uniform application, the significant features of the signing plan for each of the more frequent kinds of interchanges (illustrated in Figures ~~2E-34 through 2E-40~~ 2E-34(CA), 2E-35(CA) and 2E-37(CA) through 2E-40(CA)) should be followed as closely as possible. Even when unusual geometric features exist, variations in signing layout should be held to a minimum.*

Section 2E.44 Freeway-to-Freeway Interchange

Support:

01 Freeway-to-freeway interchanges are major decision points where the effect of taking a wrong ramp cannot be easily corrected. Reversing direction on the connecting freeway or reentering to continue on the intended course is usually not possible. Figure ~~2E-34~~ 2E-34(CA) shows examples of guide signs at a freeway-to-freeway interchange.

Guidance:

02 *The sign messages should contain only the route shield, cardinal direction, and the name of the next control city on the route. Arrows should point as indicated in Section 2D.08, except where Overhead Arrow-per-Lane or Diagrammatic signs are used in accordance with the provisions of Sections 2E.20 through 2E.22.*

Support:

03 At splits where the off-route movement is to the left or where there is an optional lane split, expectancy problems usually result.

Standard:

04 **At splits where the off-route movement is to the left, the Left Exit Number (E1-5bP) plaque shall be added at the top left-hand edge of the guide sign (see Section 2E.31). Overhead Arrow-per-Lane or Diagrammatic guide signs (see Sections 2E.21 and 2E.22) shall be used for freeway splits with an option lane and for multi-lane freeway-to-freeway exits having an option lane.**

05 Overhead signs shall be used at a distance of 1 mile and at the theoretical gore of each connecting ramp. When Overhead Arrow-per-Lane or Diagrammatic guide signs are used, they shall comply with the provisions of Sections 2E.21 and 2E.22.

Option:

06 Overhead signs may also be used at the 1/2-mile and 2-mile locations.

07 The arrow and/or the name of the control city may be omitted on signs that indicate the straight-ahead continuation of a route on a Pull-Through sign (see Section 2E.12).

08 An Advisory Exit Speed sign may be used where an engineering study shows that it is necessary to display a speed reduction message for ramp signing (see Section 2C.14).

09 Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel (see Figure 2E-27) may be placed at the bottom of the Exit Direction sign to supplement, but not to replace, the exit or ramp advisory speed warning signs.

Section 2E.45 Cloverleaf Interchange

Support:

01 A cloverleaf interchange has two exits for each direction of travel. The exits are closely spaced and have common Advance Guide signs. Examples of guide signs for cloverleaf interchanges are shown in Figure ~~2E-35~~ 2E-35(CA).

Guidance:

02 *The Advance Guide signs should include two place names, one corresponding to each exit ramp, with the name of the place served by the first exit on the upper line.*

Standard:

03 **An overhead guide sign shall be placed at the theoretical gore of the first exit ramp, with a diagonally upward-pointing directional arrow on the Exit Direction sign for that exit and the message XX MILES, or EXIT XX MILES if interchange numbering is not used, on the Advance Guide sign for the second exit, as shown in Figure ~~2E-35~~ 2E-35(CA). The second exit shall be indicated by an overhead Exit Direction sign over the auxiliary lane. An Exit Gore sign shall also be used at each gore (see Section 2E.37).**

04 **Interchanges with more than one exit from the main line shall be numbered as described in Section 2E.31 with an appropriate suffix.**

05 **Diagrammatic signs shall not be used for cloverleaf interchanges except as otherwise provided in Section 2E.22.**

Guidance:

06 *Where the mainline passes under the crossroad and the exit roadway is located beyond the overcrossing structure, the overhead Exit Direction sign for the second exit should be placed either on the overcrossing structure (see Figure ~~2E-35~~ 2E-35(CA)) or on a separate structure located immediately in front of the overcrossing structure.*

Section 2E.46 Cloverleaf Interchange with Collector-Distributor Roadways

Support:

01 ~~Examples of guide signs for full cloverleaf interchanges with collector-distributor roadways are shown in Figure 2E-36. Contact Department of Transportation's Division of Traffic Operations for further guidance regarding this figure.~~

Guidance:

02 *Signing on the collector-distributor roadways should be the same as the signing on the mainline of a cloverleaf interchange.*

Standard:

03 **Guide signs at exits from the collector-distributor roadways shall be overhead and located at the theoretical gore of the collector-distributor roadway and the exit ramp.**

Option:

04 ~~Exits from the collector-distributor roadways may be numbered with an appropriate suffix. If the exits from a collector-distributor roadway are numbered with suffixes, the Advance Guide signs on the mainline may include two place names and their corresponding exit numbers with the plural EXITS. If only the exit from the mainline~~

~~is numbered or if interchange numbering is not used, the Advance Guide signs on the mainline may use the singular EXIT. Refer to Sections 2E.31 and 2E.33.~~

~~05 The Advance Guide signs may include two place names and their corresponding exit numbers.~~

Section 2E.47 Partial Cloverleaf Interchange

Support:

01 Examples of guide signs for partial cloverleaf interchanges are shown in Figure ~~2E-37~~ 2E-37(CA).

Guidance:

02 *Where the mainline passes under the crossroad and the exit roadway is located beyond the overcrossing structure, the overhead Exit Direction sign should be placed either on the overcrossing structure (see Figure ~~2E-37~~ 2E-37(CA)) or on a separate structure located immediately in front of the overcrossing structure.*

Standard:

03 **A post-mounted Exit Gore sign shall also be installed in the ramp gore.**

Support:

04 Partial cloverleaf interchanges with successive exit ramps from the same direction of travel are signed the same as cloverleaf interchanges for that direction of travel (see Section 2E.45).

Section 2E.48 Diamond Interchange

Support:

01 Examples of guide signs for diamond interchanges are shown in Figure ~~2E-38~~ 2E-38(CA).

Standard:

02 **For numbered exits, the singular message EXIT shall be used on the Exit Number plaques (see Section 2E.31) with the Advance Guide and Exit Direction signs. For non-numbered exits, the singular message EXIT shall be used as part of the distance message on the Advance Guide signs.**

Support:

03 The typical diamond interchange ramp departs from the mainline roadway such that a speed reduction generally is not necessary in order for a driver to negotiate an exit maneuver from the mainline onto the ramp roadway.

Guidance:

04 *When a speed reduction is not necessary, an exit speed sign should not be used.*

Option:

05 An Advisory Exit Speed sign may be used where an engineering study shows that it is necessary to display a speed reduction message for ramp signing (see Section 2C.14).

Guidance:

06 *The Advisory Exit Speed sign should be located along the deceleration lane or along the ramp such that it is visible to the driver far enough in advance to allow the driver to decelerate before reaching the curve associated with the exiting maneuver.*

Option:

07 A Stop Ahead or Signal Ahead warning sign may be placed, where engineering judgment indicates a need, along the ramp in advance of the cross street, to give notice to the driver (see Section 2C.36).

Guidance:

08 *When used on two-lane ramps, Stop Ahead or Signal Ahead signs should be used in pairs with one sign on each side of the ramp.*

Section 2E.49 Diamond Interchange in Urban Area

Support:

01 Examples of guide signs for diamond interchanges in an urban area are shown in Figure ~~2E-39~~ 2E-39(CA). This example includes the use of the Community Interchanges Identification sign (see Section 2E.41), which might be useful if two or more interchanges serve the same community.

02 In urban areas, street names are often displayed as the principal message in destination signs.

Option:

03 If interchanges are too closely spaced to properly locate the Advance Guide signs, they may be placed closer to the exit with the distances displayed adjusted accordingly.

Section 2E.50 Closely-Spaced Interchanges

Support:

01 Section 2E.11 contains information regarding sign spreading where the Exit Direction sign and the Advance Guide sign for the next interchange are mounted overhead. Sign spreading is particularly beneficial where interchanges are closely spaced and overhead signing is used in conjunction with Interchange Sequence signs as provided in Paragraph 2.

Guidance:

02 *Interchange Sequence signs (see Section 2E.40) should be used at closely-spaced interchanges. When used, they should identify and show street names and distances for the next two or three exits as shown in Figure 2E-30.*

Standard:

03 **Advance Guide signs for closely-spaced interchanges shall show information for only one interchange.**

Section 2E.51 Minor Interchange

Option:

01 Less signing may be used for minor interchanges because such interchanges customarily serve low volumes of local traffic.

Support:

02 Examples of guide signs for minor interchanges are shown in Figure ~~2E-40~~ 2E-40(CA).

Standard:

03 **At least one Advance Guide sign and an Exit Gore sign shall be used at a minor interchange.**

Guidance:

04 *An Exit Direction sign should also be used.*

Section 2E.52 Signing on Conventional Road Approaches and Connecting Roadways

Support:

01 Section 2D.45 contains information regarding the signing on conventional roads on the approaches to interchanges and the signing on connecting roadways.

Section 2E.53 Wrong-Way Traffic Control at Interchange Ramps

Support:

01 Section 2B.41 contains information regarding the use of regulatory signs to deter wrong-way movements at intersections of freeway or expressway ramps with conventional roads, and in the area where entrance ramps intersect with the mainline lanes.

02 Section 2D.46 contains information regarding the use of a Directional assembly or a guide sign to mark the entrance to a freeway or expressway from a conventional road.

Section 2E.54 Weigh Station Signing

Standard:

01 **Weigh Station signing on freeways and expressways shall be the same as that provided in Section 2D.49, except for lettering size and the advance posting distance for the Exit Direction sign, which shall be located a minimum of 1,500 feet in advance of the gore.**

Support:

02 Weigh Station sign layouts for freeway and expressway applications are shown in the "Standard Highway Signs and Markings" book (see Section 1A.11).

Figure 2E-1. Example of Guide Sign Spreading

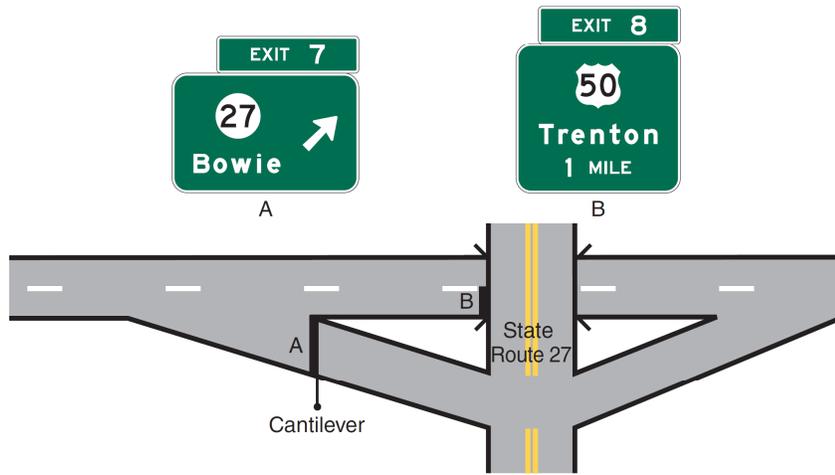


Figure 2E-2. Pull-Through Signs



Figure 2E-2 (CA). California Pull-Through Signs

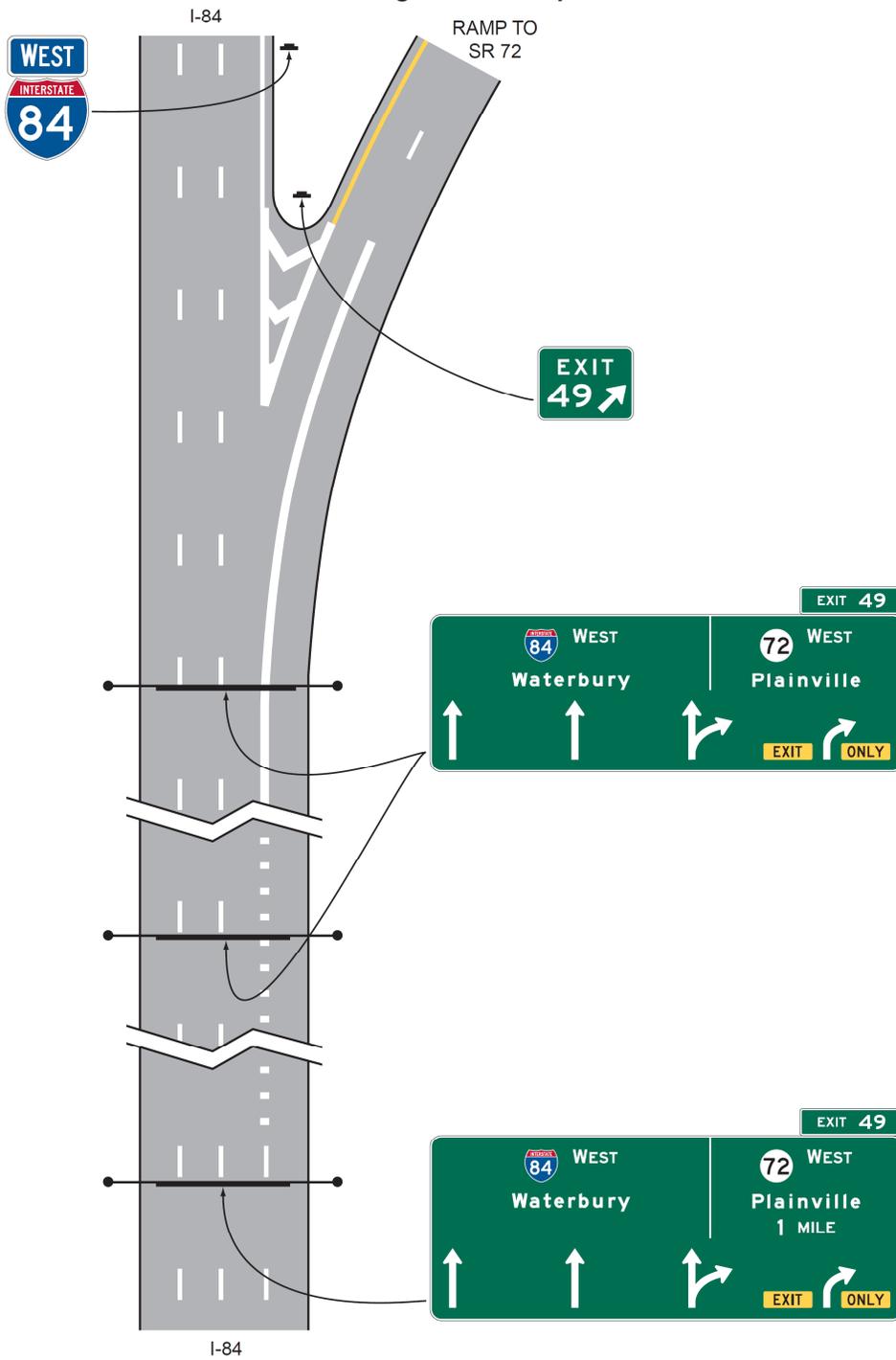


Figure 2E-3. Overhead Arrow-per-Lane Guide Sign for a Multi-Lane Exit with an Option Lane



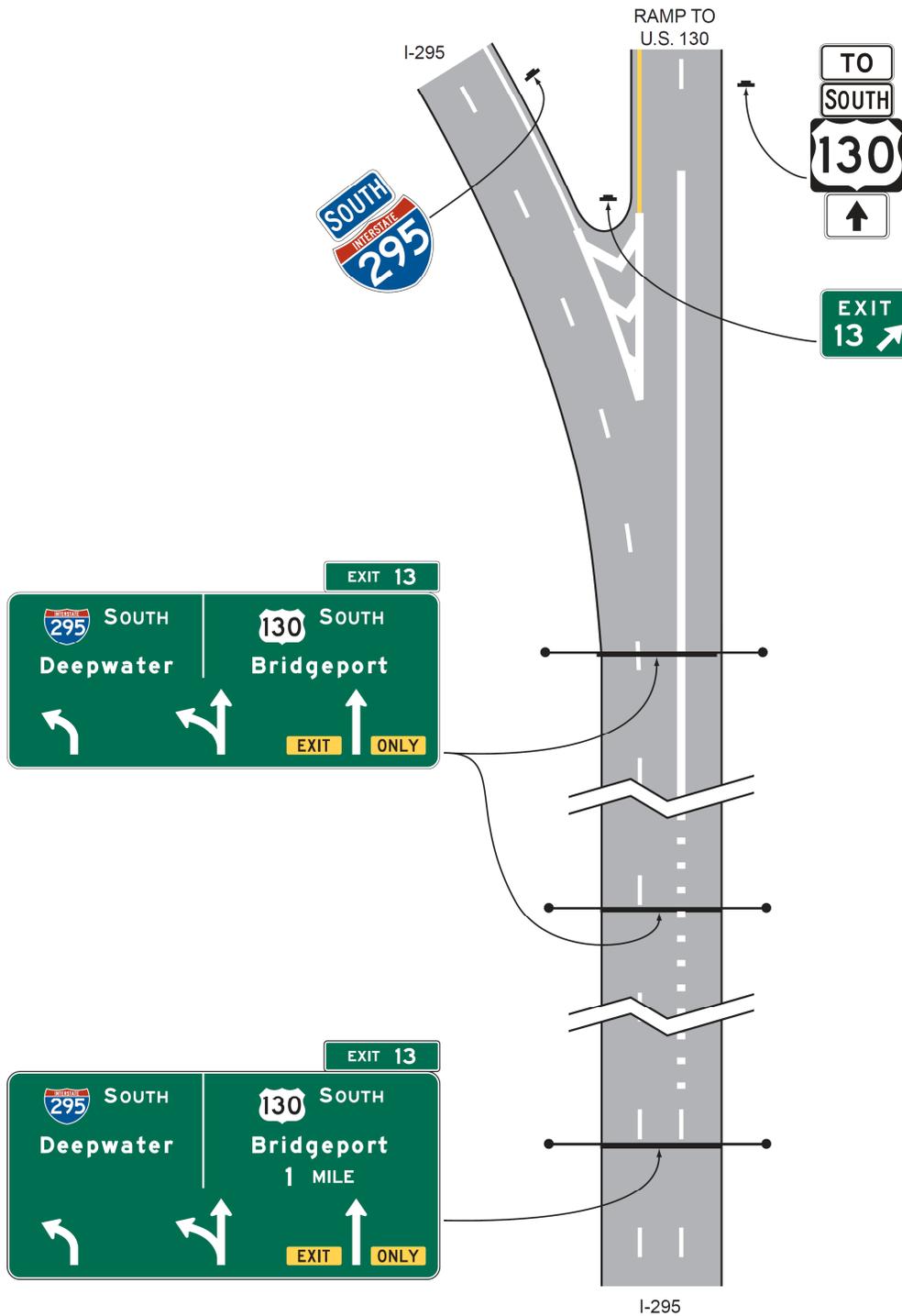
NOTE: The black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels are used to retrofit existing signs. See Section 2E.24.

Figure 2E-4. Overhead Arrow-per-Lane Guide Signs for a Two-Lane Exit to the Right with an Option Lane



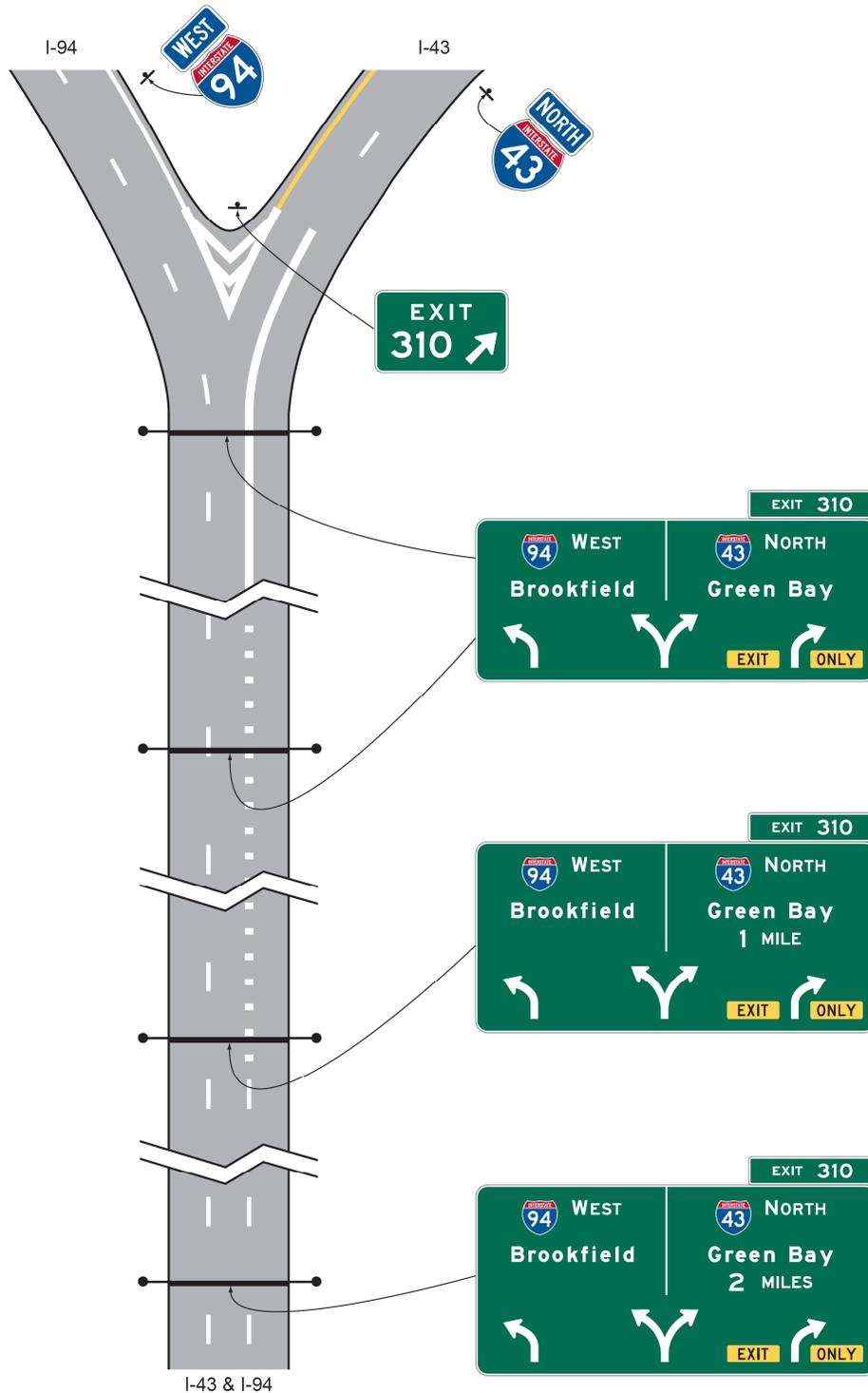
NOTE: The black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels are used to retrofit existing signs. See Section 2E.24.

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



NOTE: The black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels are used to retrofit existing signs. See Section 2E.24.

Figure 2E-6. Overhead Arrow-per-Lane Guide Signs for a Split with an Option Lane



NOTE: The black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels are used to retrofit existing signs. See Section 2E.24.

Figure 2E-7. Diagrammatic Guide Sign for a Multi-Lane Exit with an Option Lane

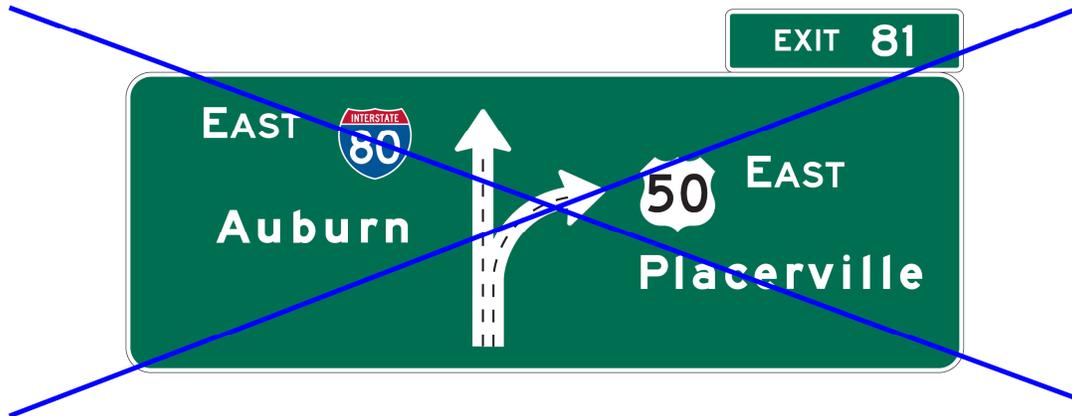


Figure 2E-8. Diagrammatic Guide Signs for a Two-Lane Exit to the Right with an Option Lane

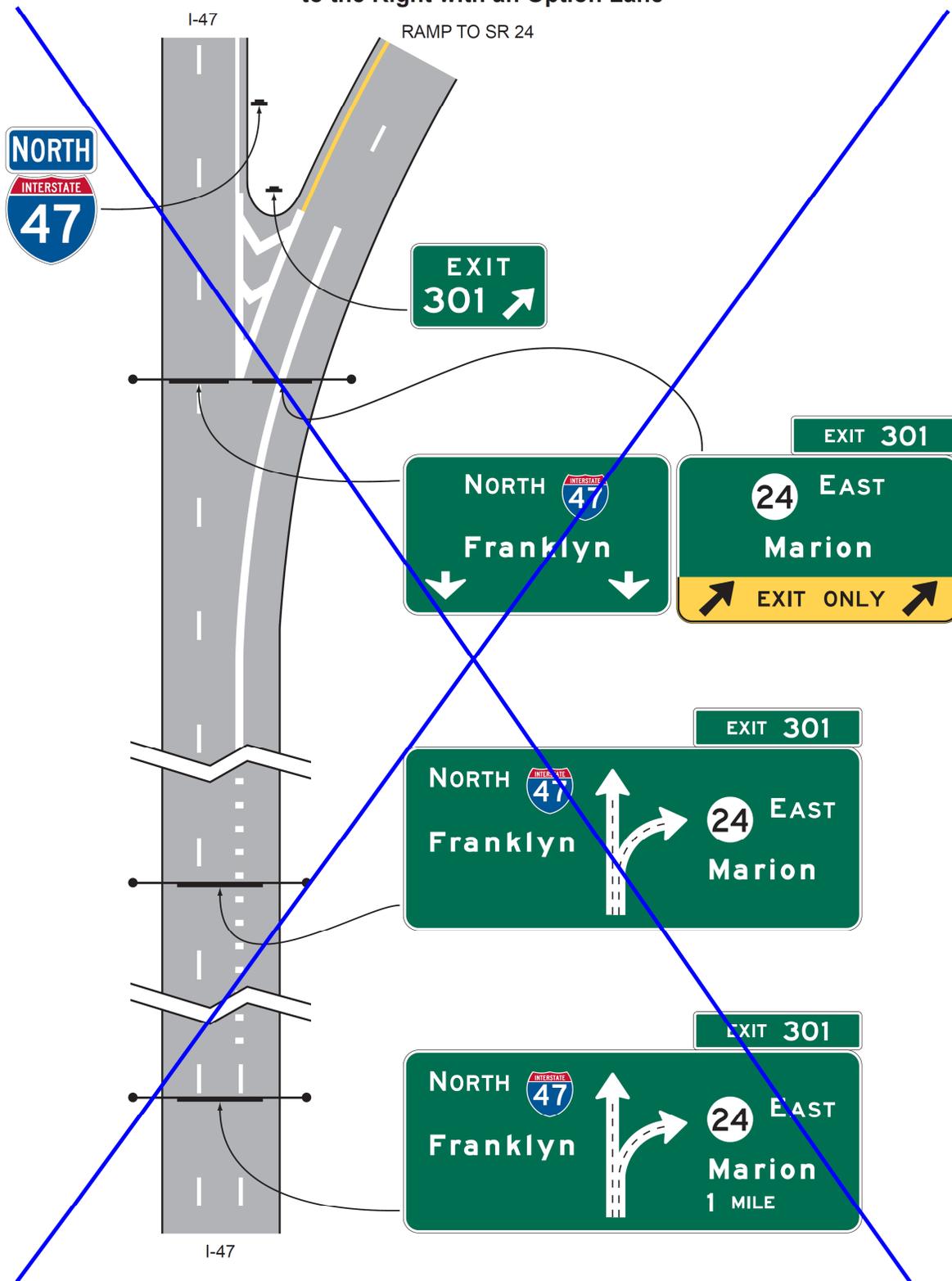


Figure 2E-9. Diagrammatic Guide Signs for a Two-Lane Exit to the Right with an Option Lane (Through Lanes Curve to the Left)

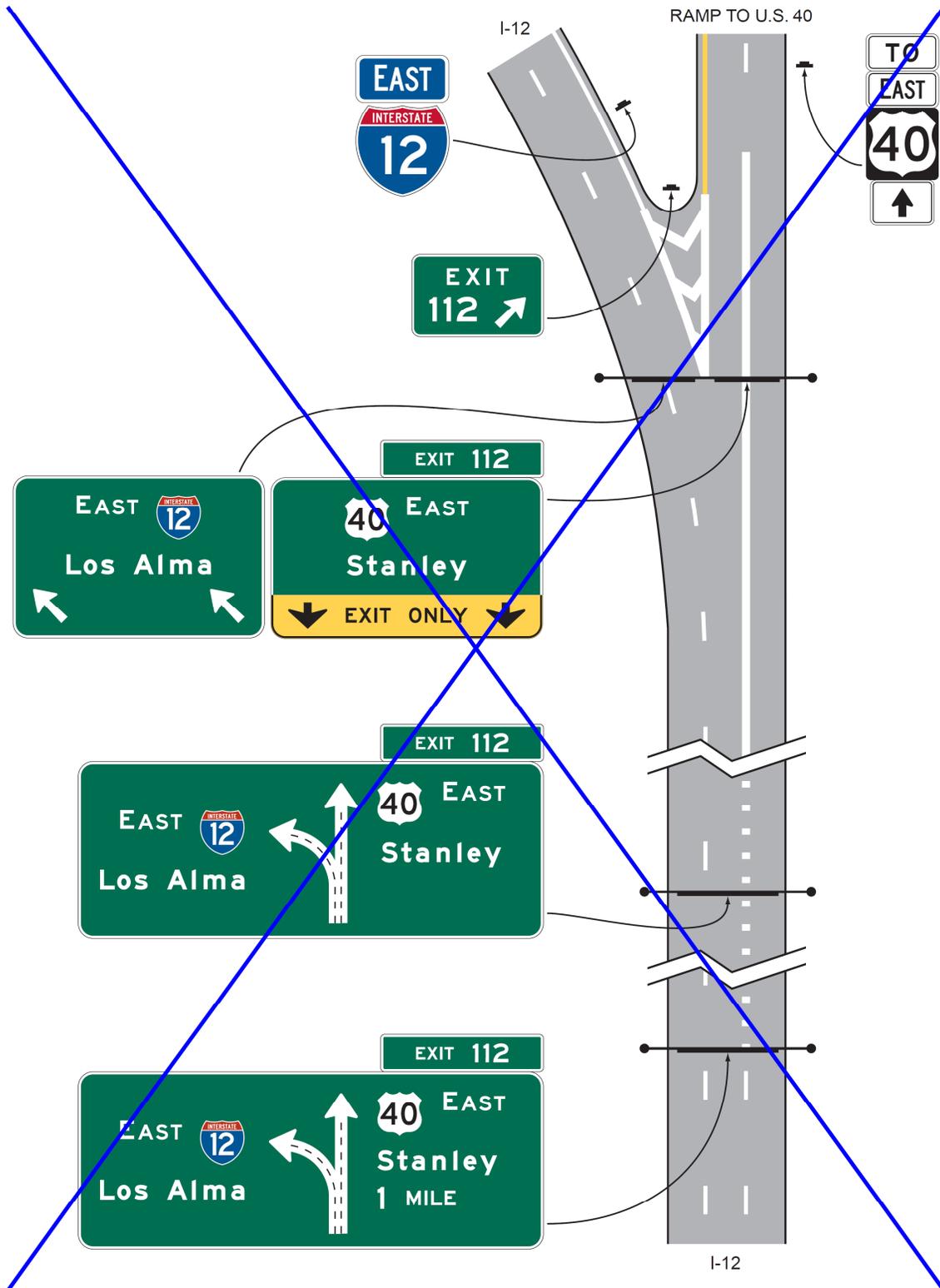


Figure 2E-10. Diagrammatic Guide Signs for a Split with an Option Lane

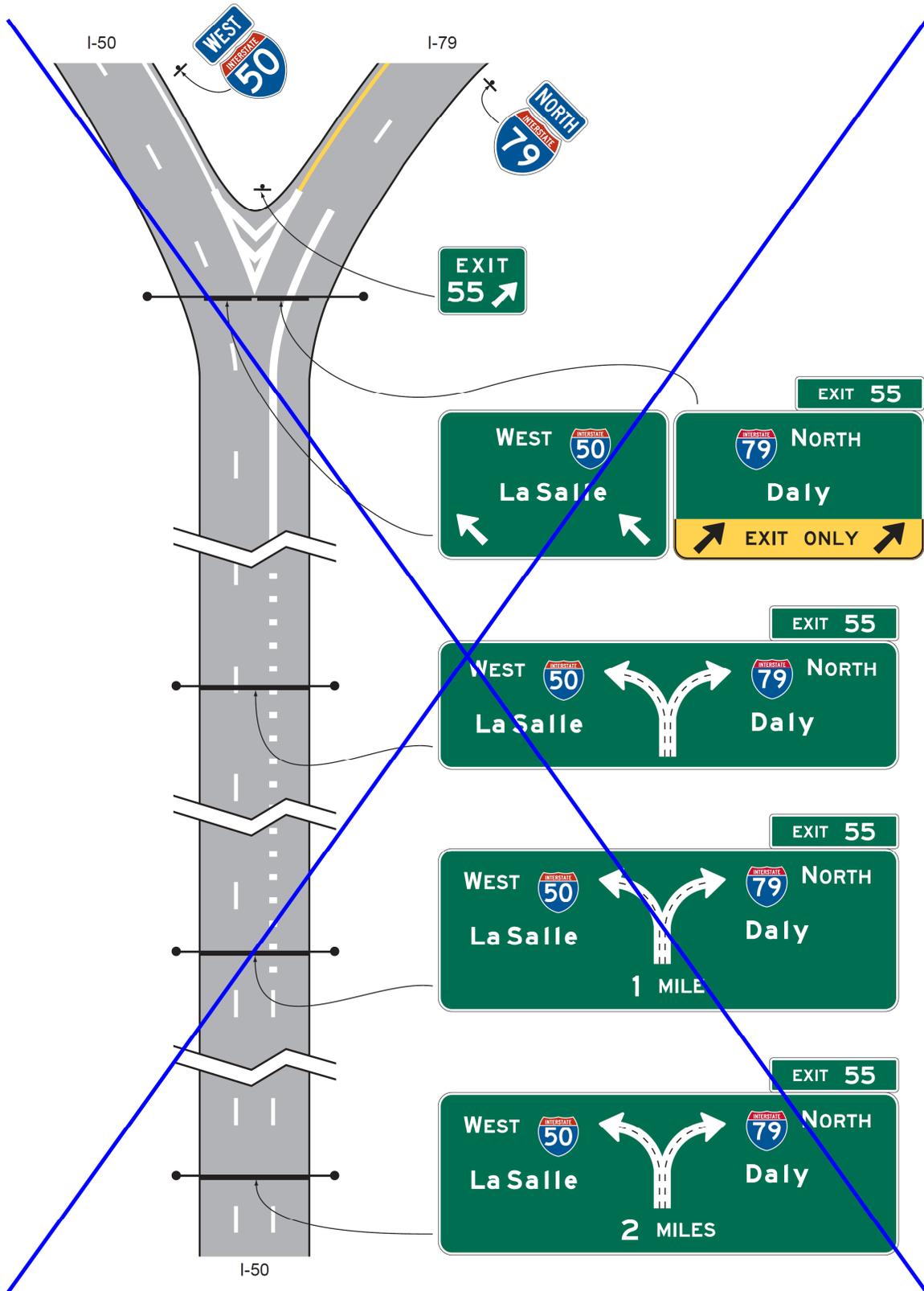


Figure 2E-11. Example of Signing for a Two-Lane Intermediate or Minor Interchange Exit with an Option Lane and a Dropped Lane

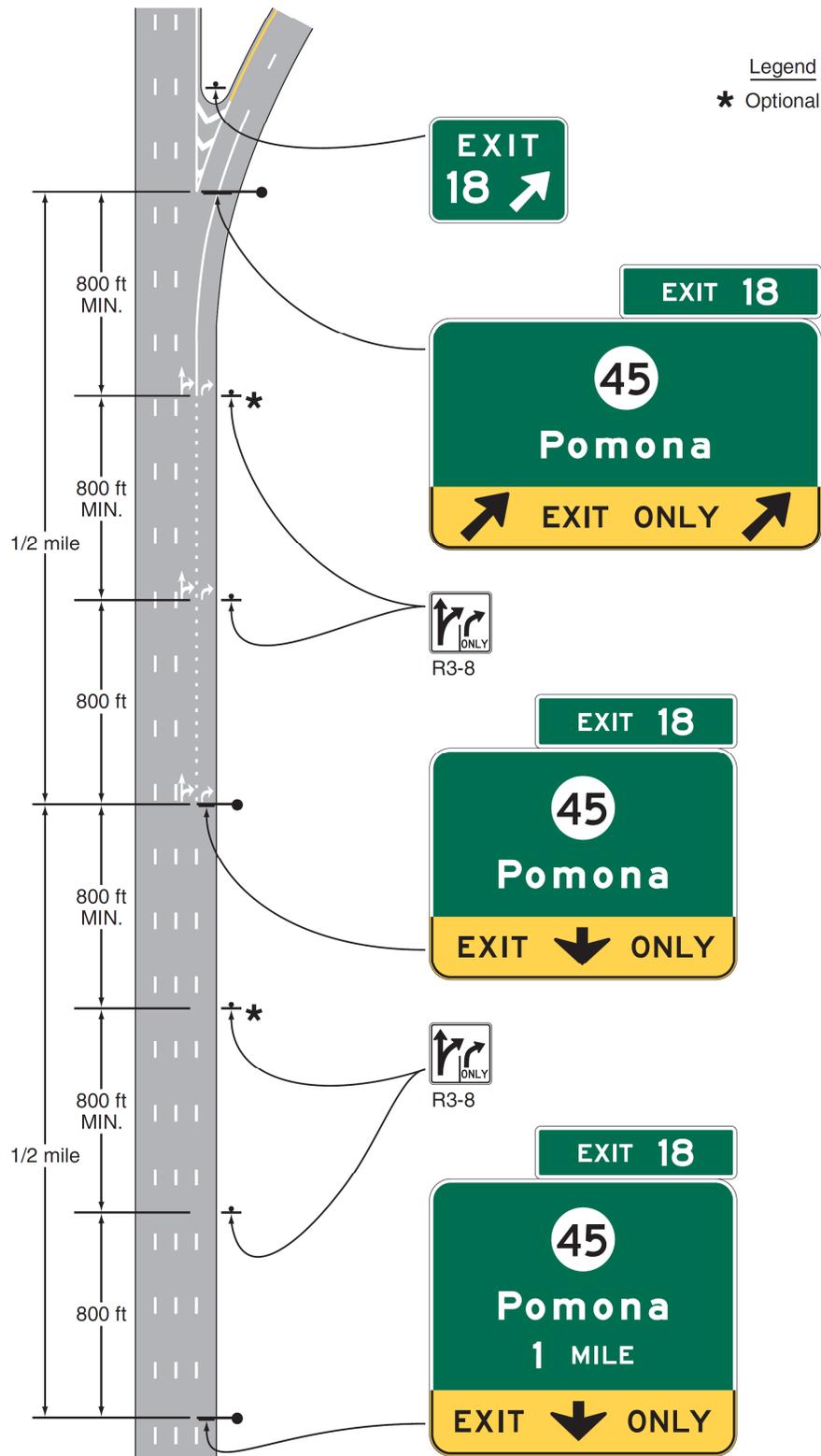


Figure 2E-12. Example of Signing for a Two-Lane Intermediate or Minor Interchange Exit with Option and Auxiliary Lanes

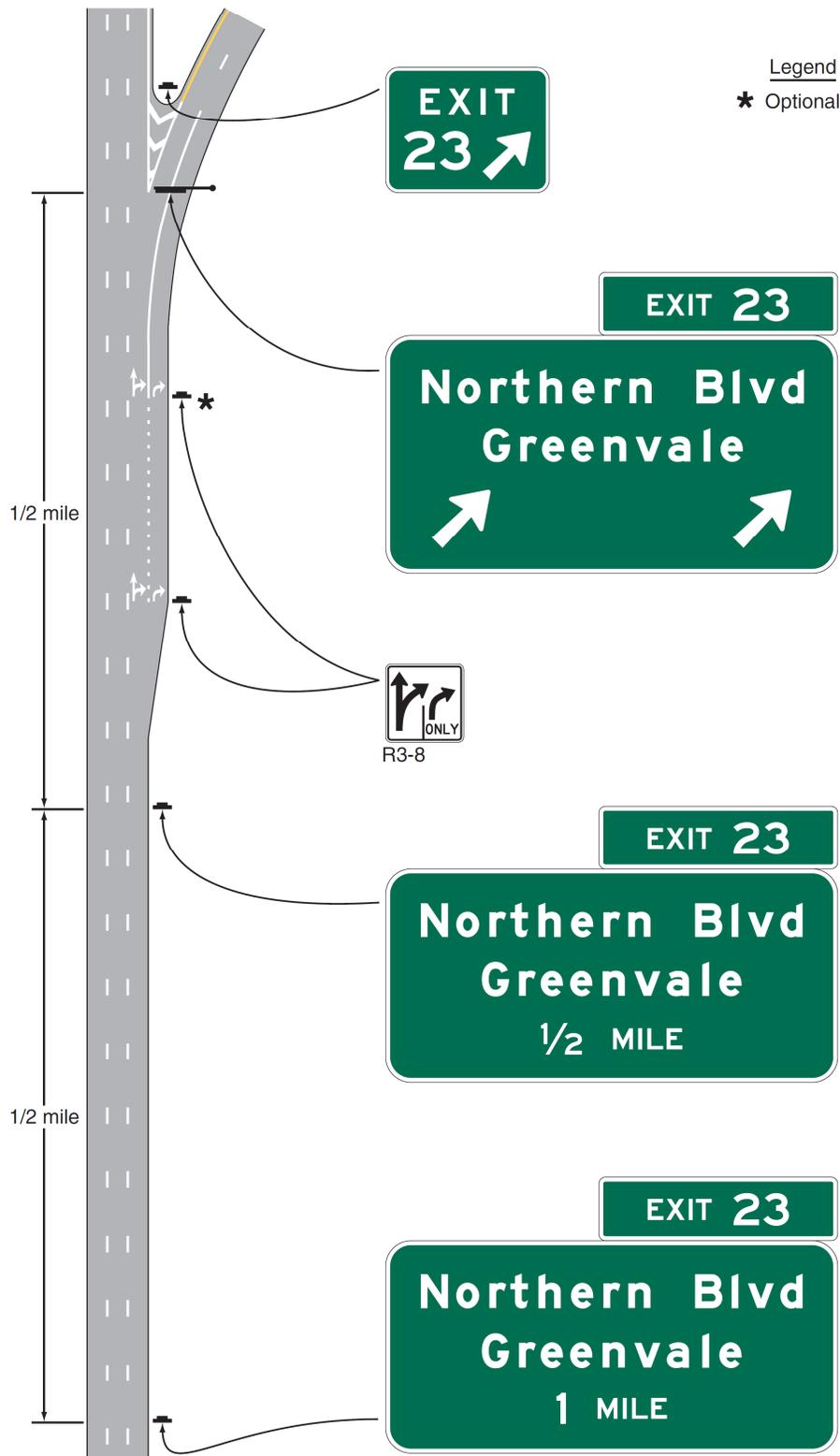
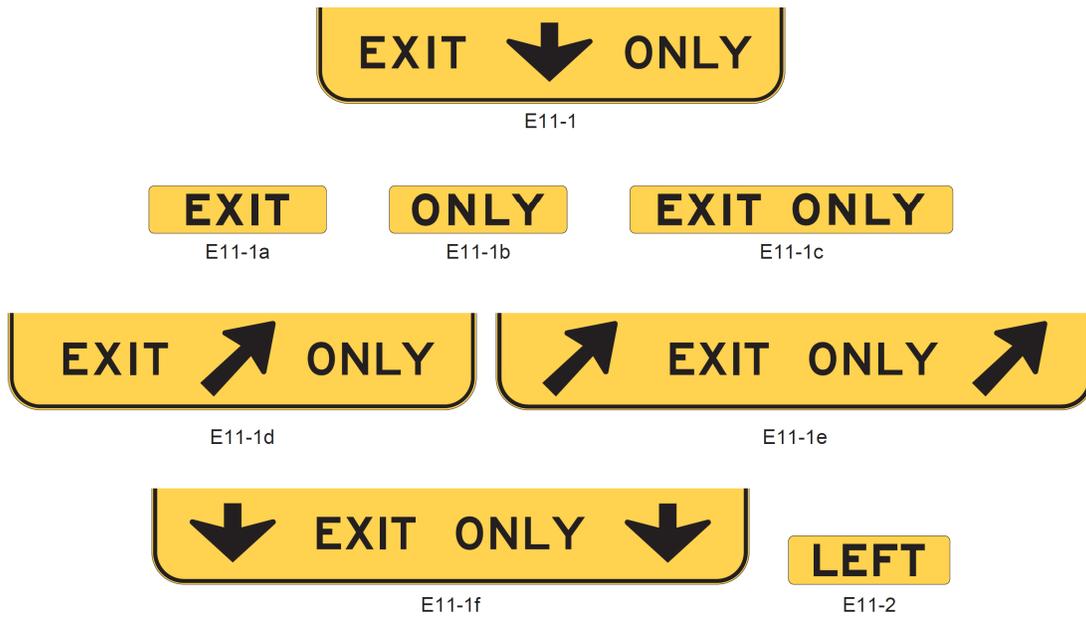


Figure 2E-13. EXIT ONLY and LEFT Sign Panels



NOTE: The black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels are used to retrofit existing signs. See Section 2E.24.

Figure 2E-13 (CA). EXIT ONLY and LEFT Sign Panels



Figure 2E-14. Guide Signs for a Split with Dedicated Lanes

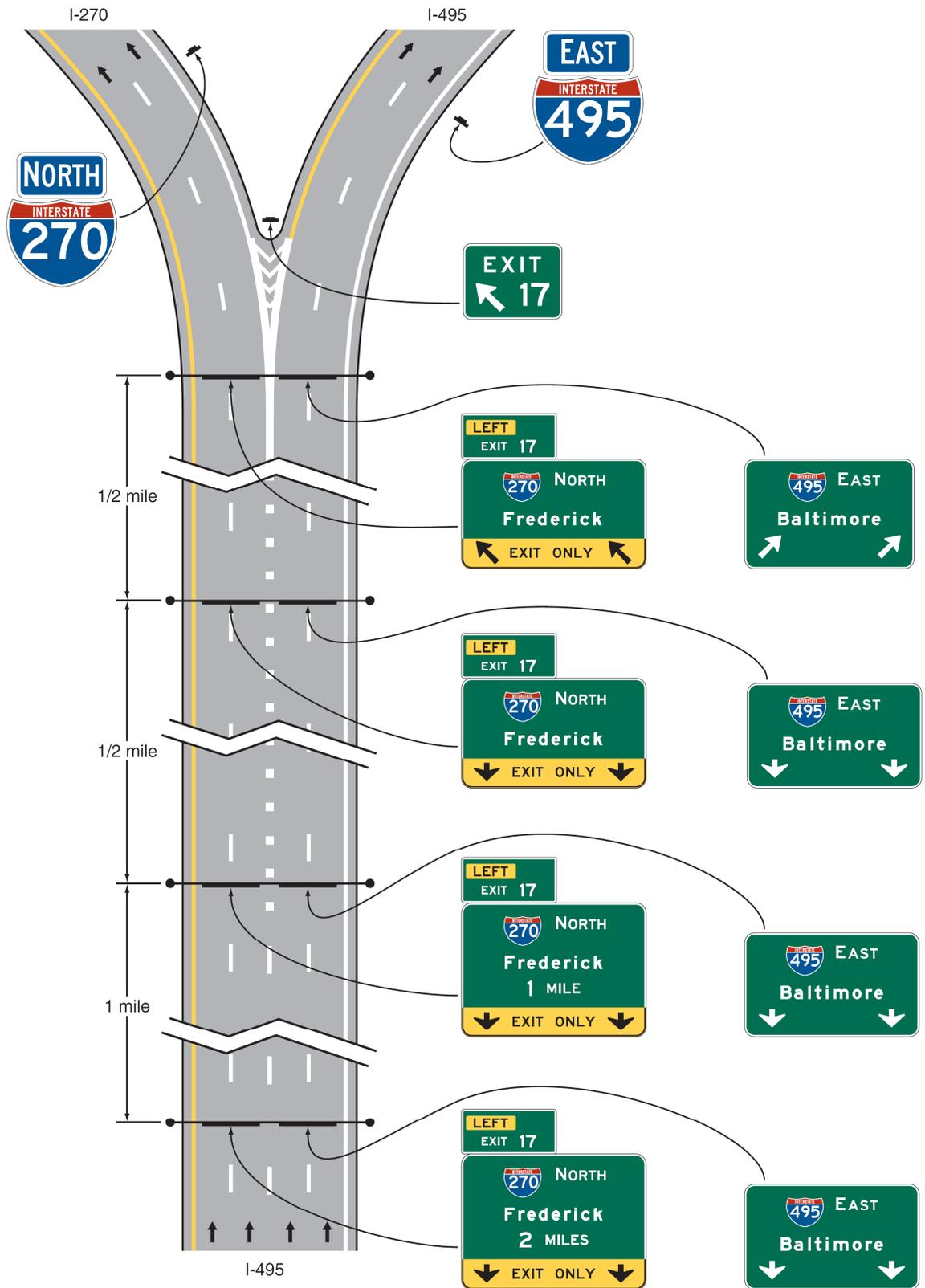


Figure 2E-15. Guide Signs for a Single-Lane Exit to the Left with a Dropped Lane

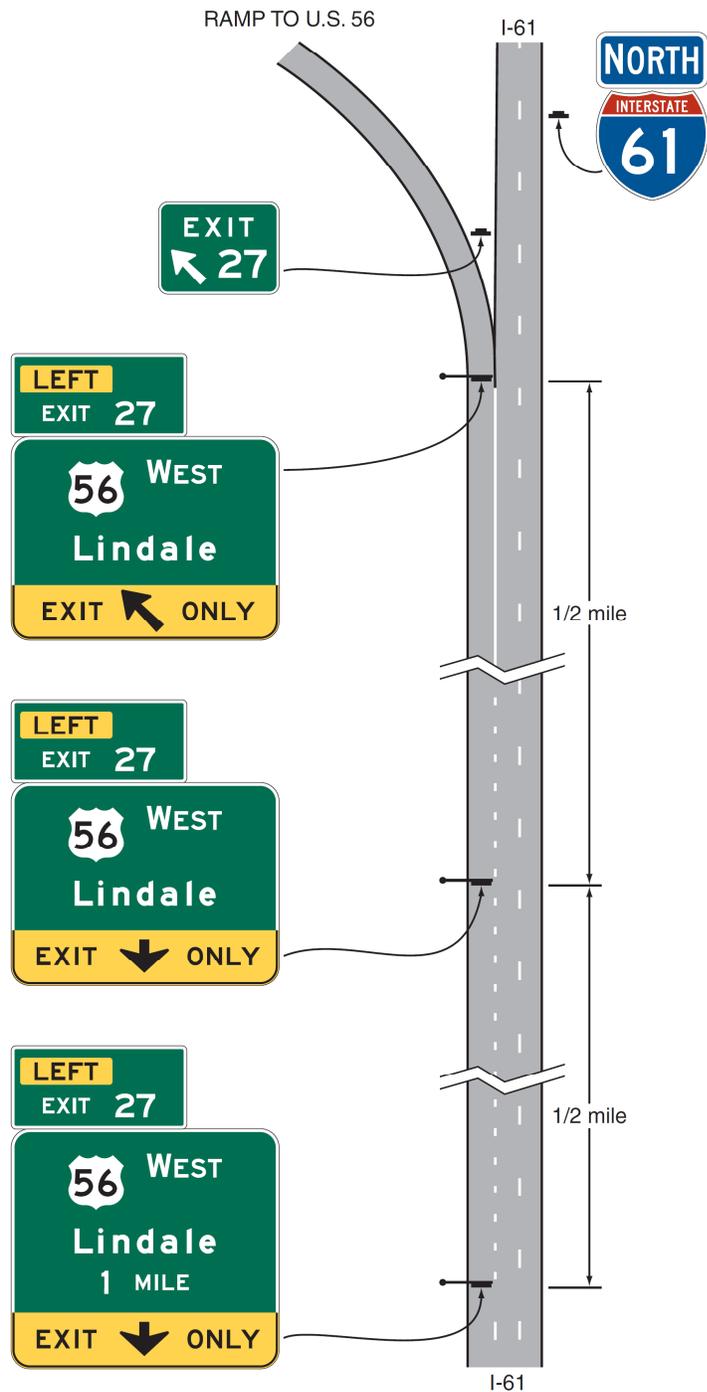


Figure 2E-16. Guide Signs for a Single-Lane Exit to the Right with a Dropped Lane

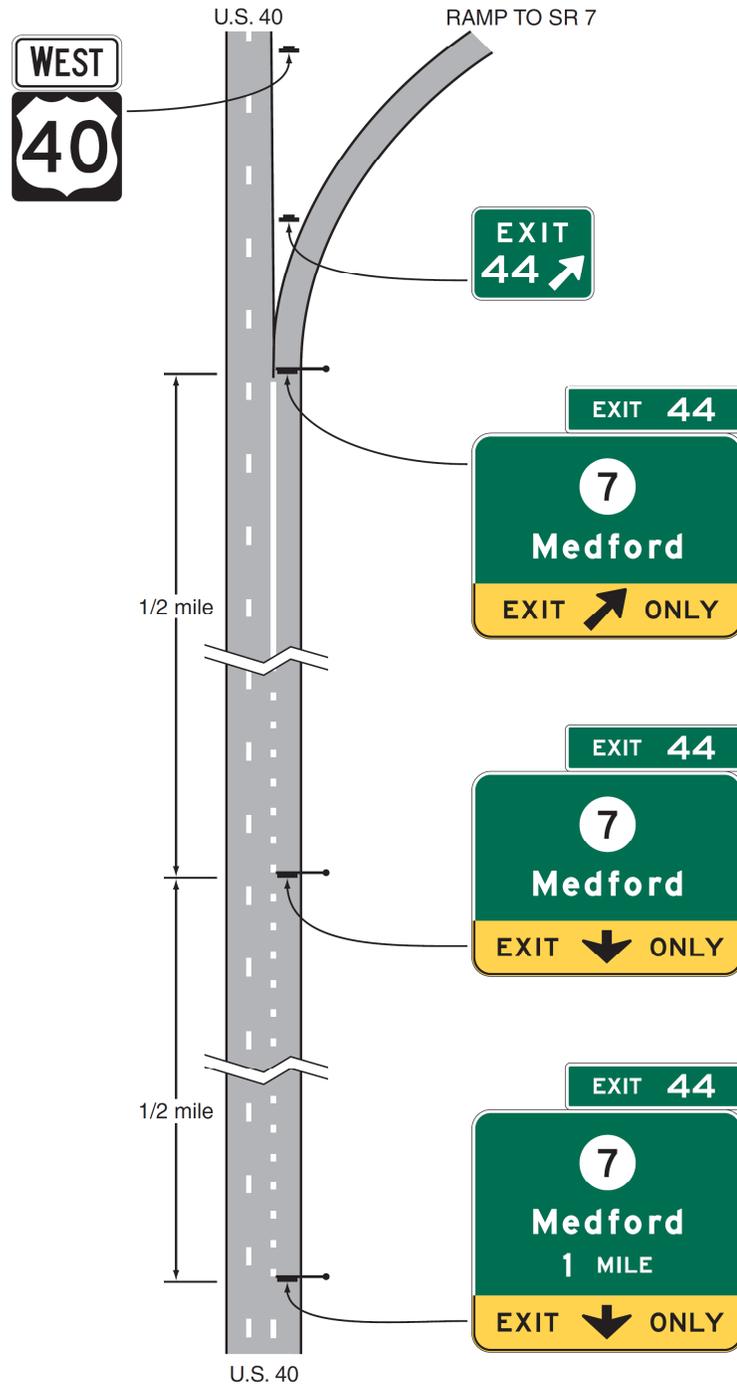


Figure 2E-17. Interstate, Off-Interstate, and U.S. Route Signs

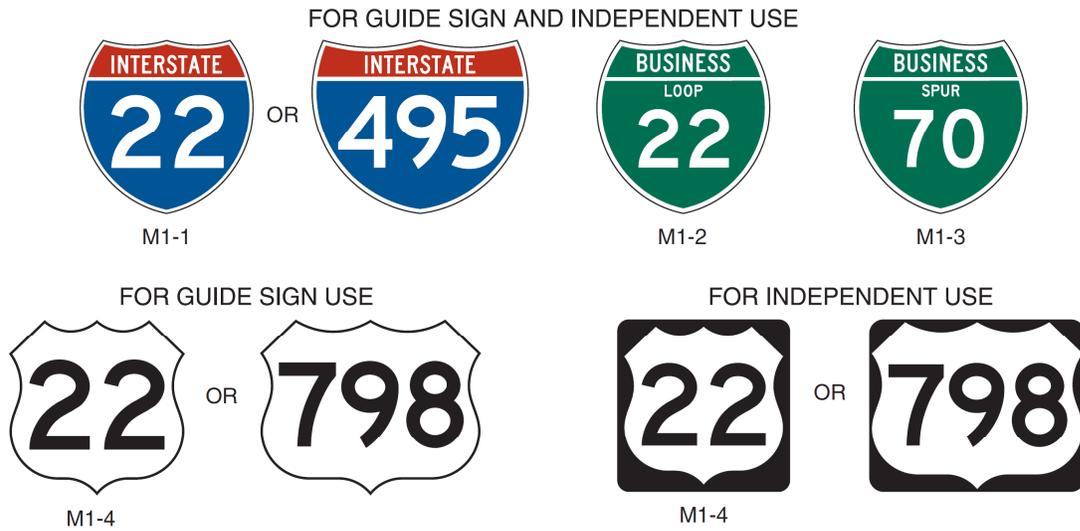


Figure 2E-18. Eisenhower Interstate System Signs



Figure 2E-19. Example of Interchange Numbering for Mainline and Circumferential Routes

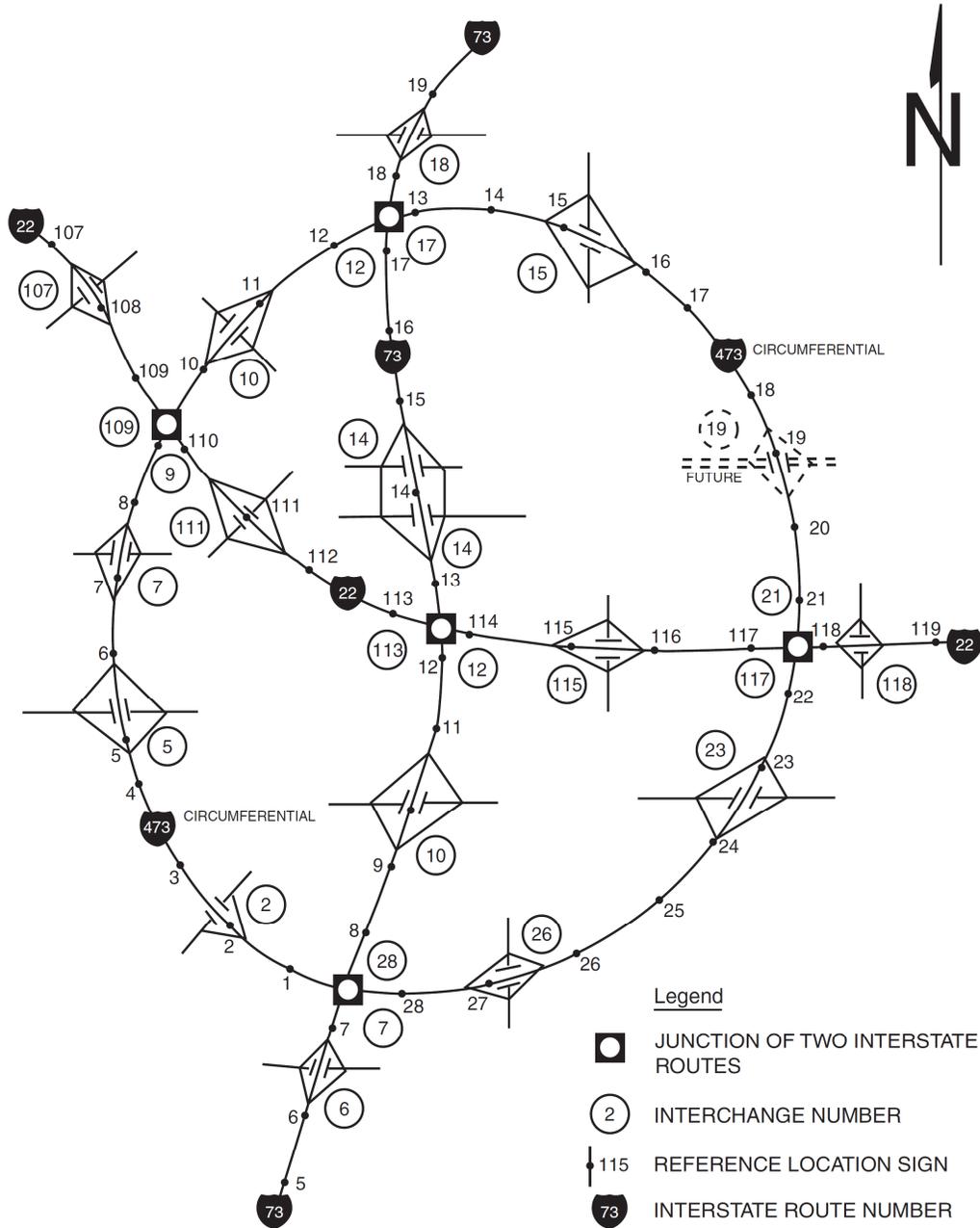
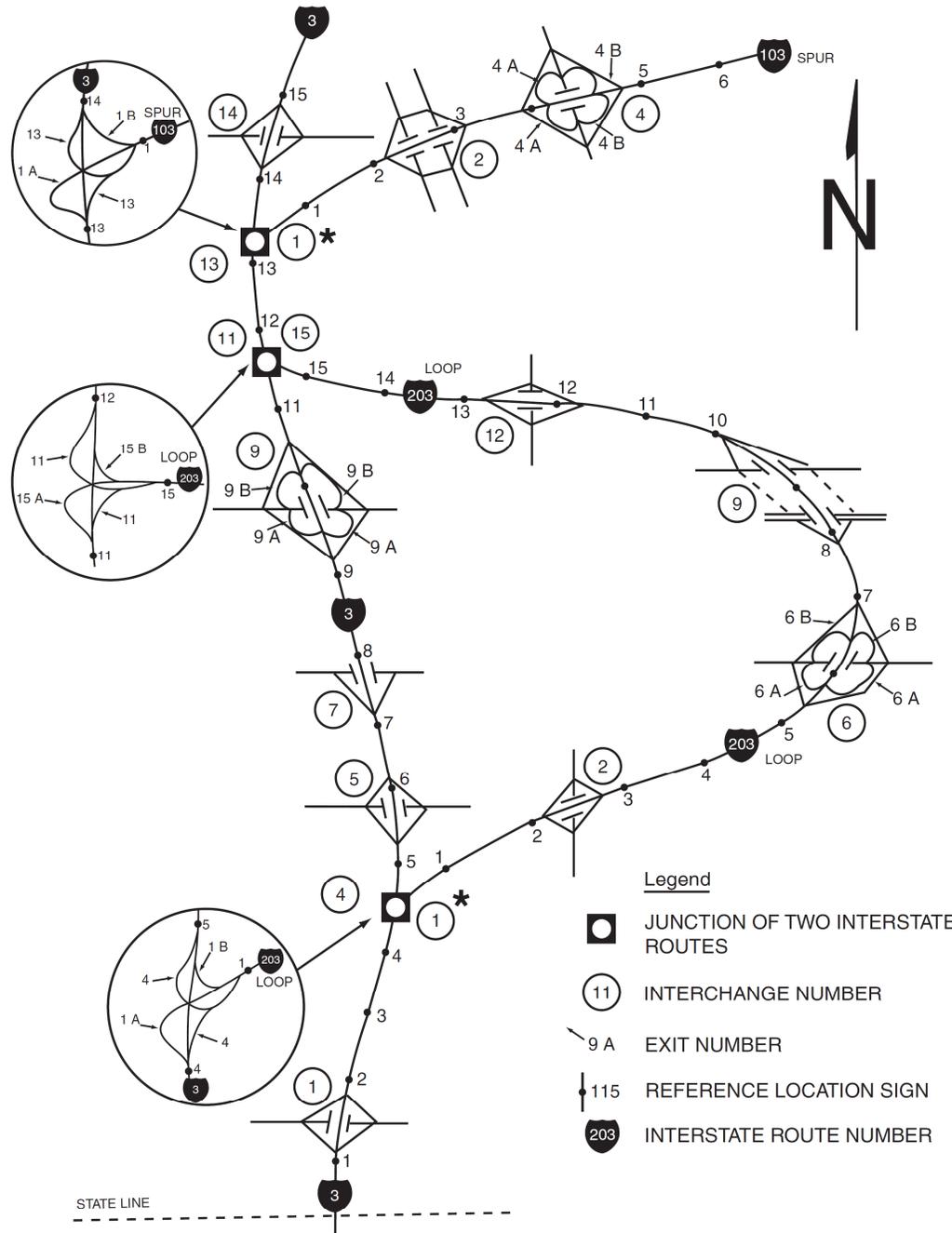


Figure 2E-20. Example of Interchange Numbering for Mainline, Loop, and Spur Routes



* 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-21. Example of Interchange Numbering for Overlapping Routes

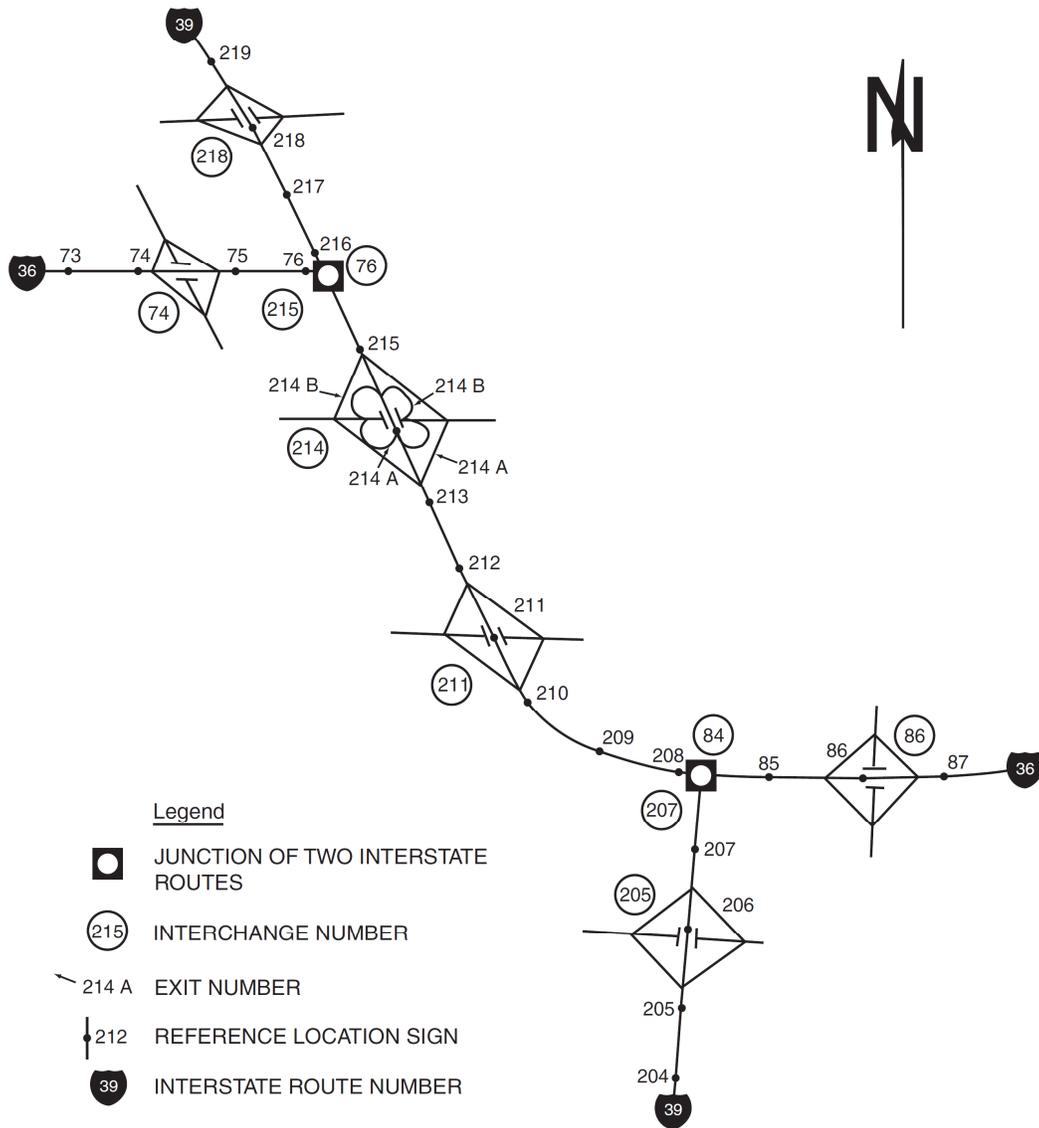


Figure 2E-22. Examples of Interchange Advance Guide Signs, Exit Number Plaques, and LEFT Plaque



Figure 2E-22 (CA). Examples of Interchange Advance Guide Signs, Exit Number Plaques, and LEFT Plaque



Figure 2E-23. Next Exit Plaques



Figure 2E-24. Supplemental Guide Sign for a Multi-Exit Interchange



Figure 2E-25. Supplemental Guide Sign for a Park – Ride Facility

A – ROUTE WITHOUT EXIT NUMBERING



B – ROUTE WITH EXIT NUMBERING



Figure 2E-26. Examples of Interchange Exit Direction Signs

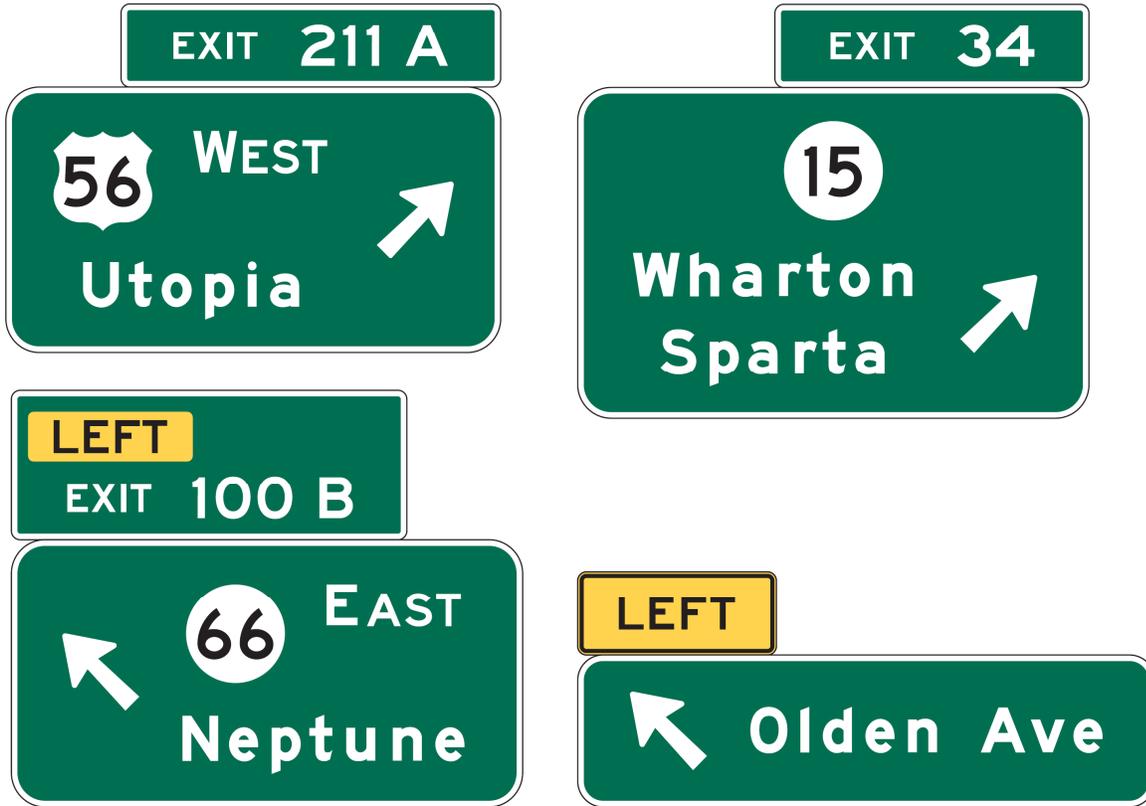


Figure 2E-26 (CA). Examples of Interchange Exit Direction Signs



Figure 2E-27. Interchange Exit Direction Sign with an Advisory Speed Panel



Figure 2E-28. Exit Gore Signs



Figure 2E-28 (CA). Exit Gore Signs

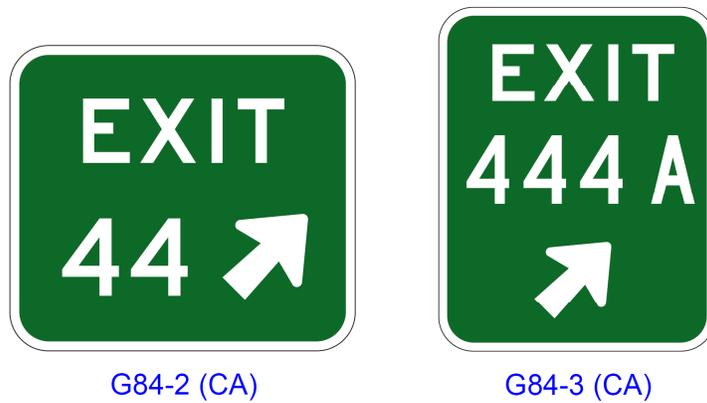


Figure 2E-29. Post-Interchange Distance Sign

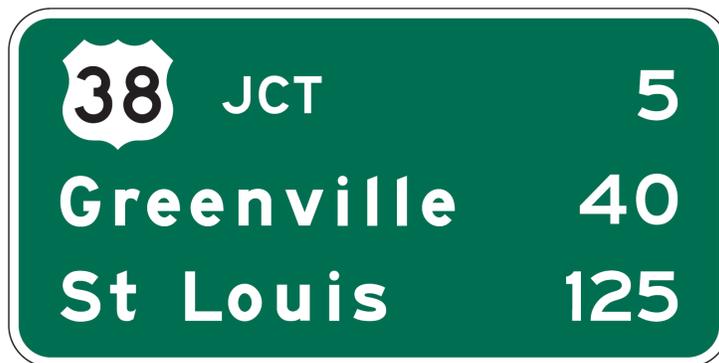


Figure 2E-30. Example of Using an Interchange Sequence Sign for Closely-Spaced Interchanges

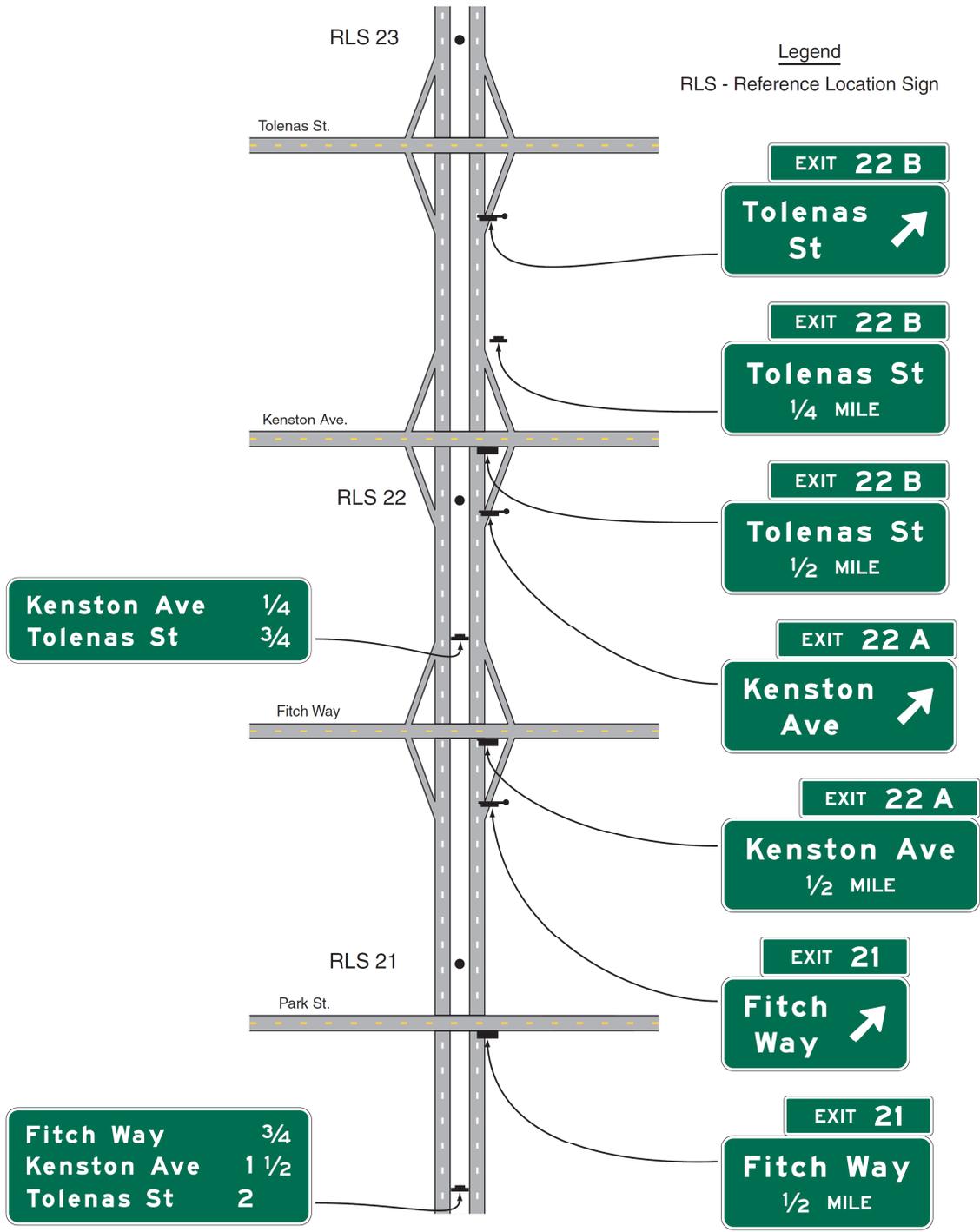


Figure 2E-31. Interchange Sequence Sign



Figure 2E-31 (CA). Interchange Sequence Signs



G23-1 (CA)



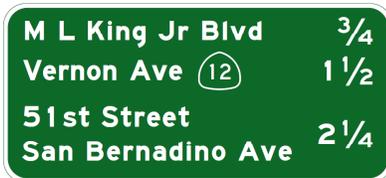
G23-2 (CA)



G23-3 (CA)



G23-4 (CA)



G23-5 (CA)



G23-6 (CA)

Figure 2E-32. Community Interchanges Identification Sign

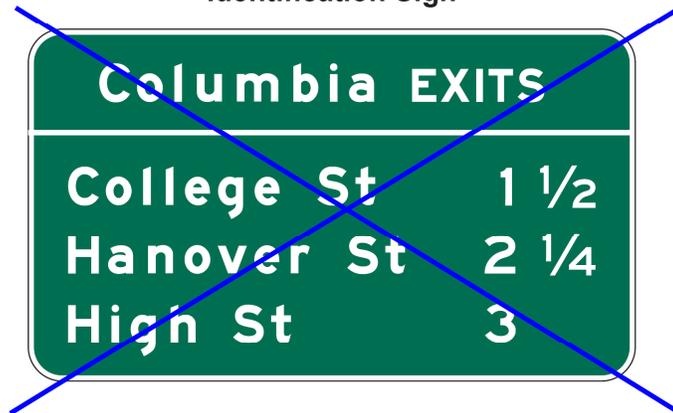


Figure 2E-33. NEXT EXITS Sign



Figure 2E-33 (CA). NEXT EXITS Sign



G87 (CA)

Figure 2E-34. Examples of Guide Signs for a Freeway-to-Freeway Interchange
 (Sheet 1 of 2)

A - Example of Signing for a Two-Lane Exit Ramp with Two Dropped Lanes and a Bifurcation Beyond the Mainline Gore

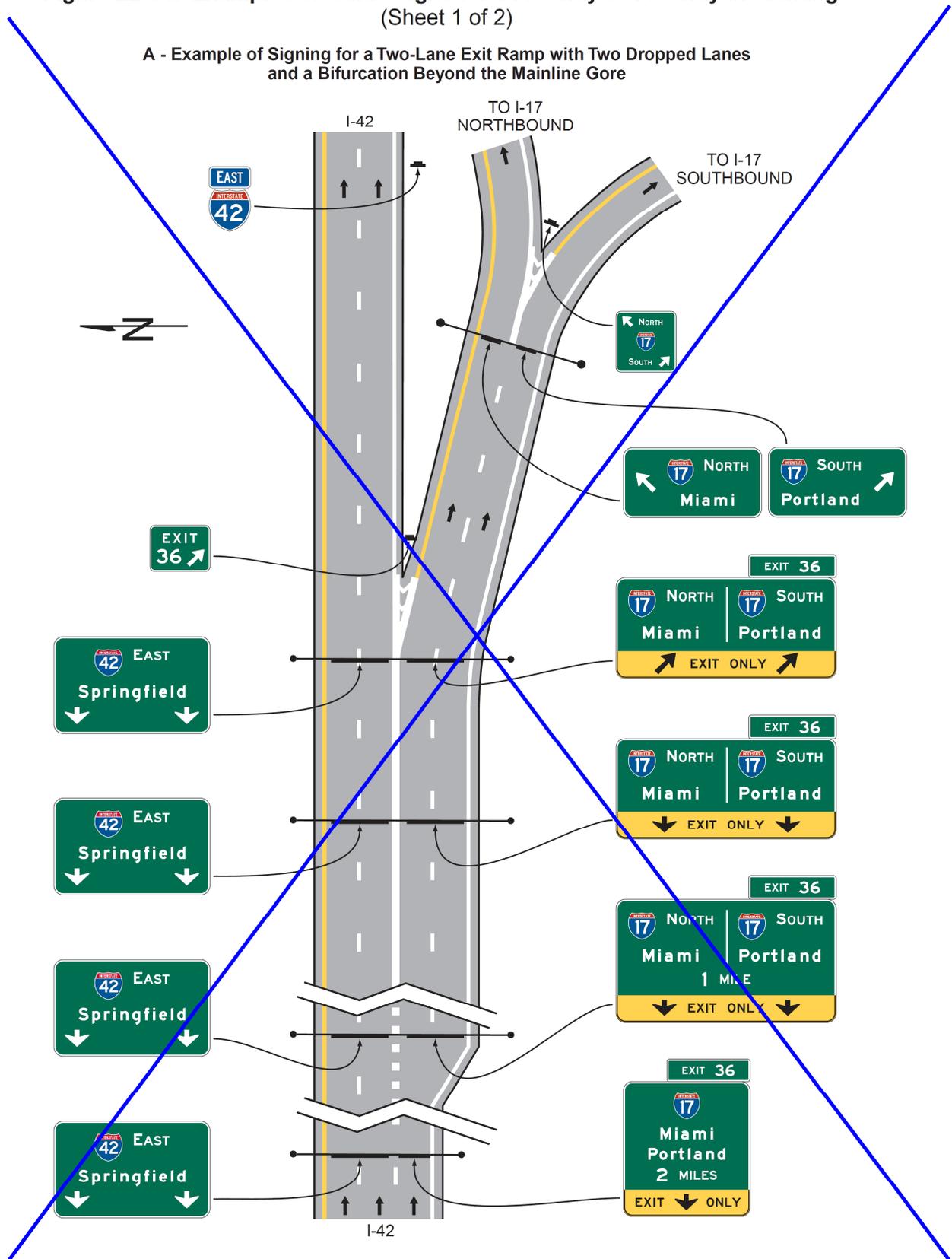


Figure 2E-34. Examples of Guide Signs for a Freeway-to-Freeway Interchange
 (Sheet 2 of 2)

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

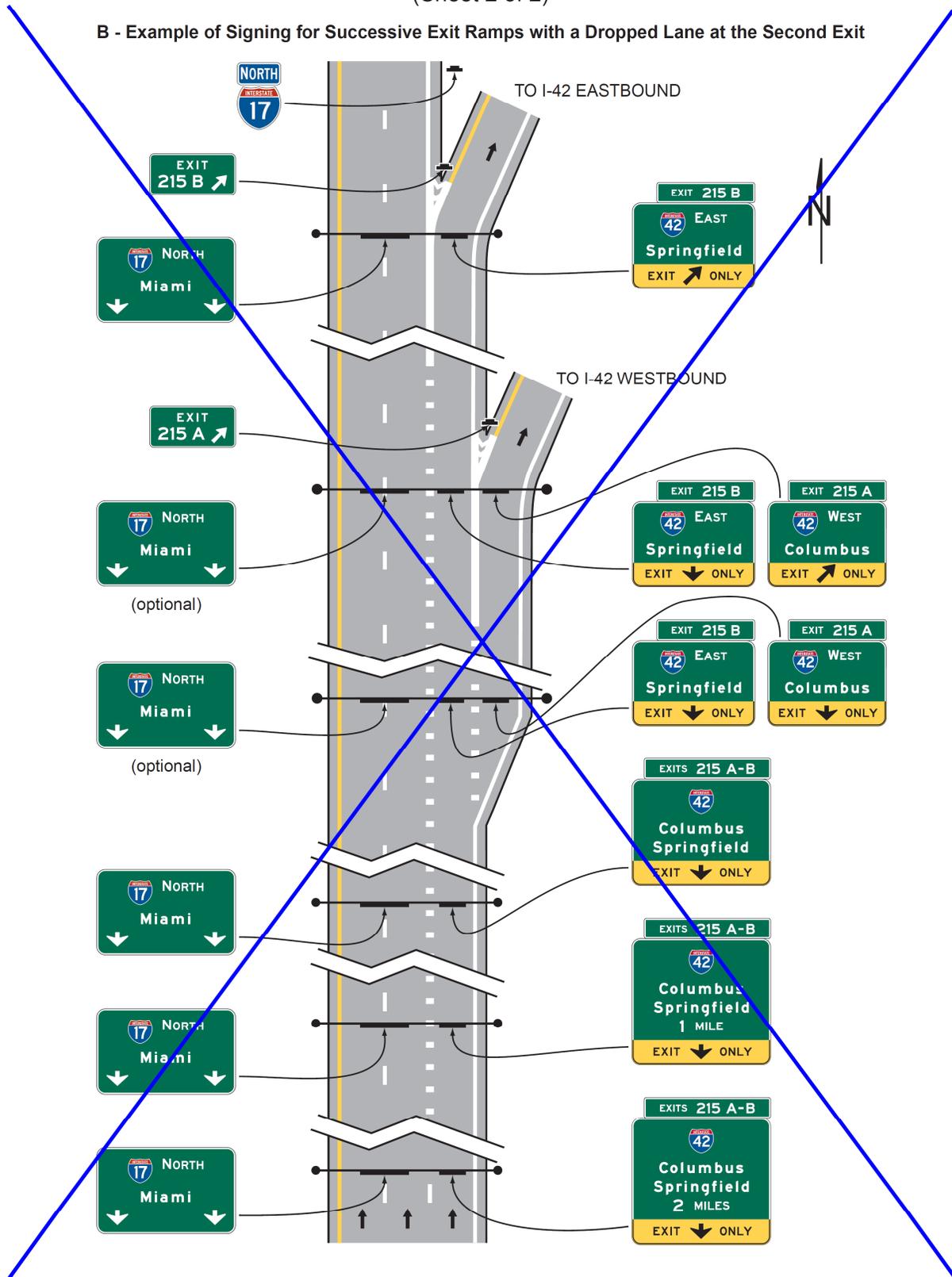


Figure 2E-34 (CA). Examples of Guide Signs for a Freeway-to-Freeway Interchange

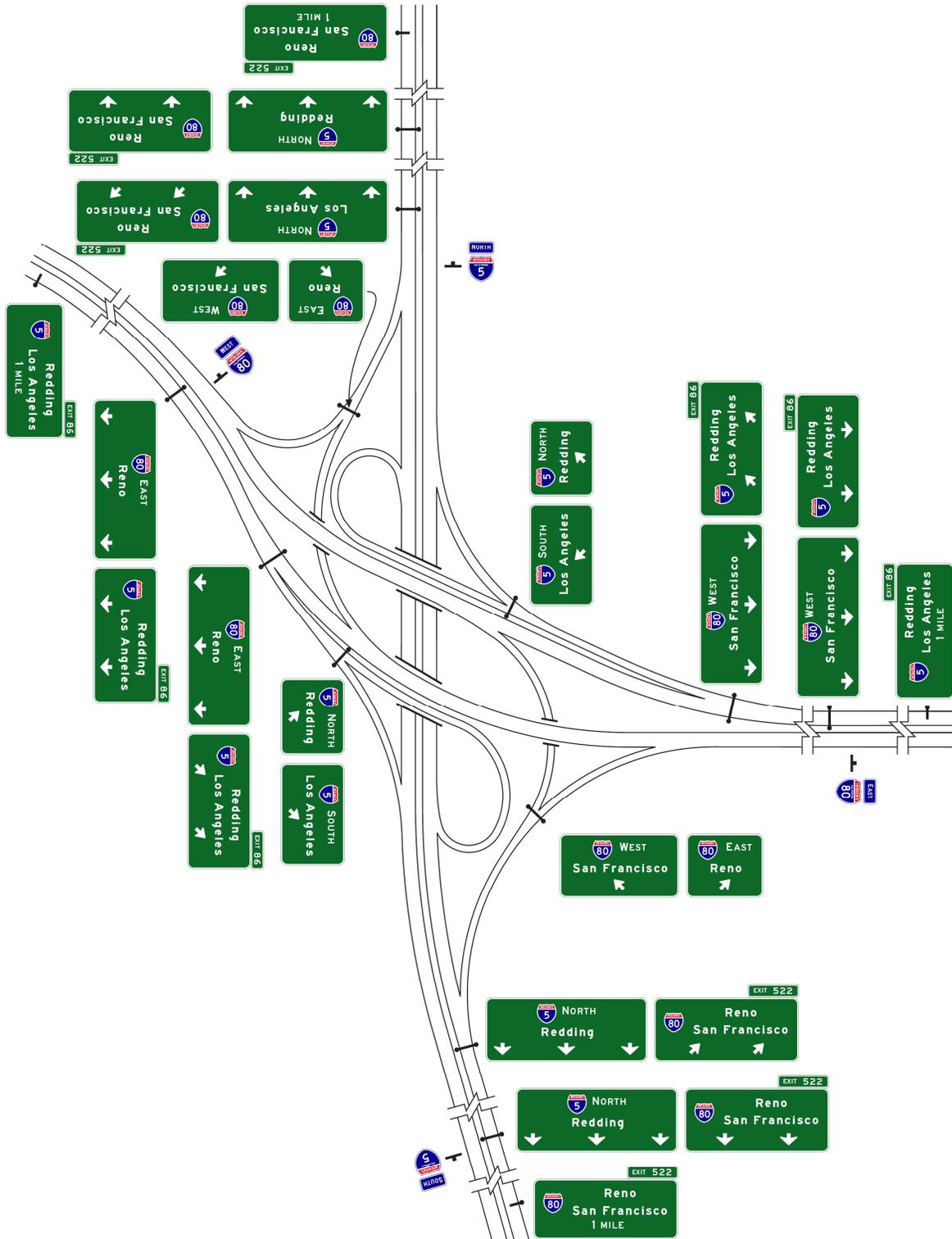


Figure 2E-35. Examples of Guide Signs for a Full Cloverleaf Interchange

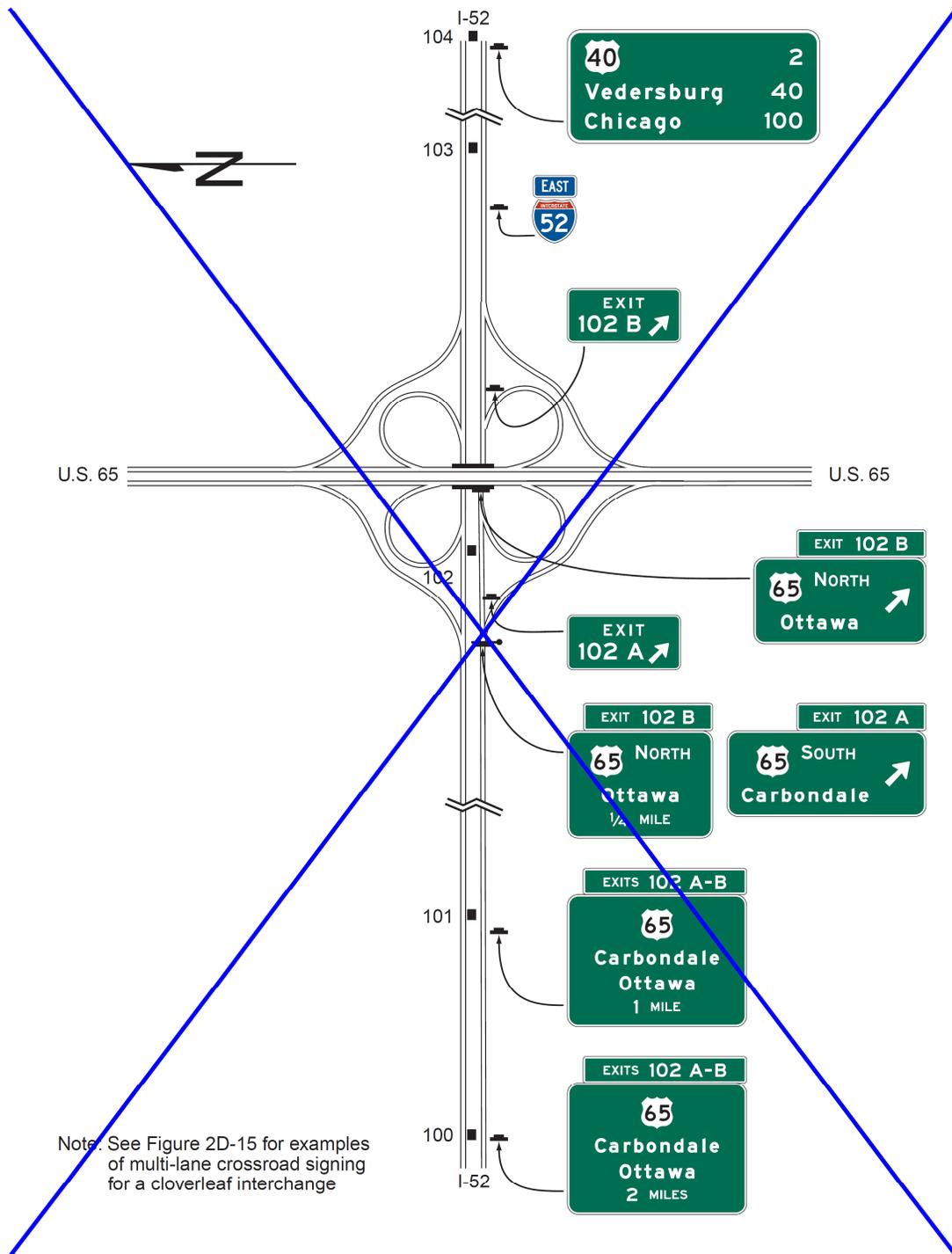
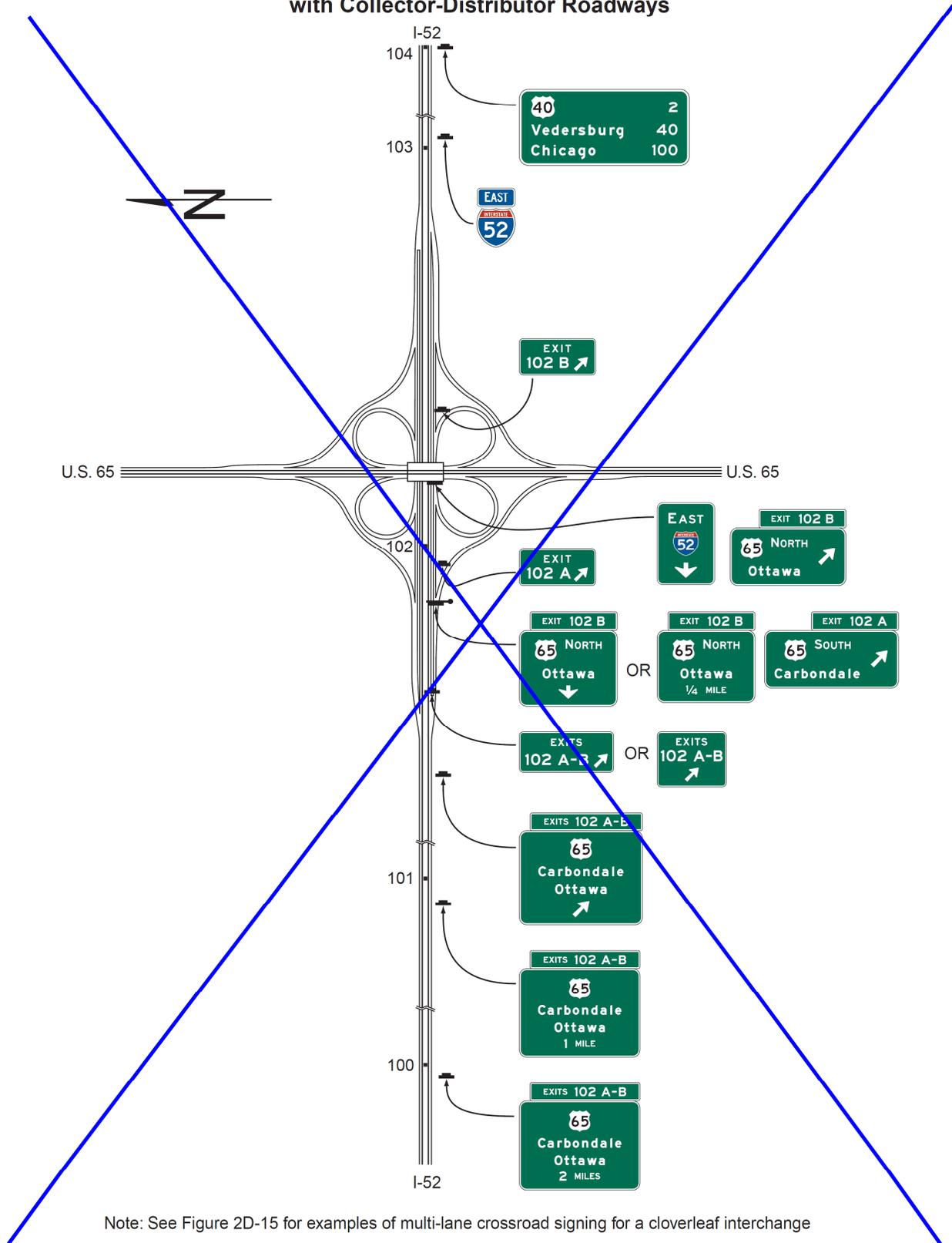


Figure 2E-36. Examples of Guide Signs for a Full Cloverleaf Interchange with Collector-Distributor Roadways



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

Figure 2E-37. Examples of Guide Signs for a Partial Cloverleaf Interchange

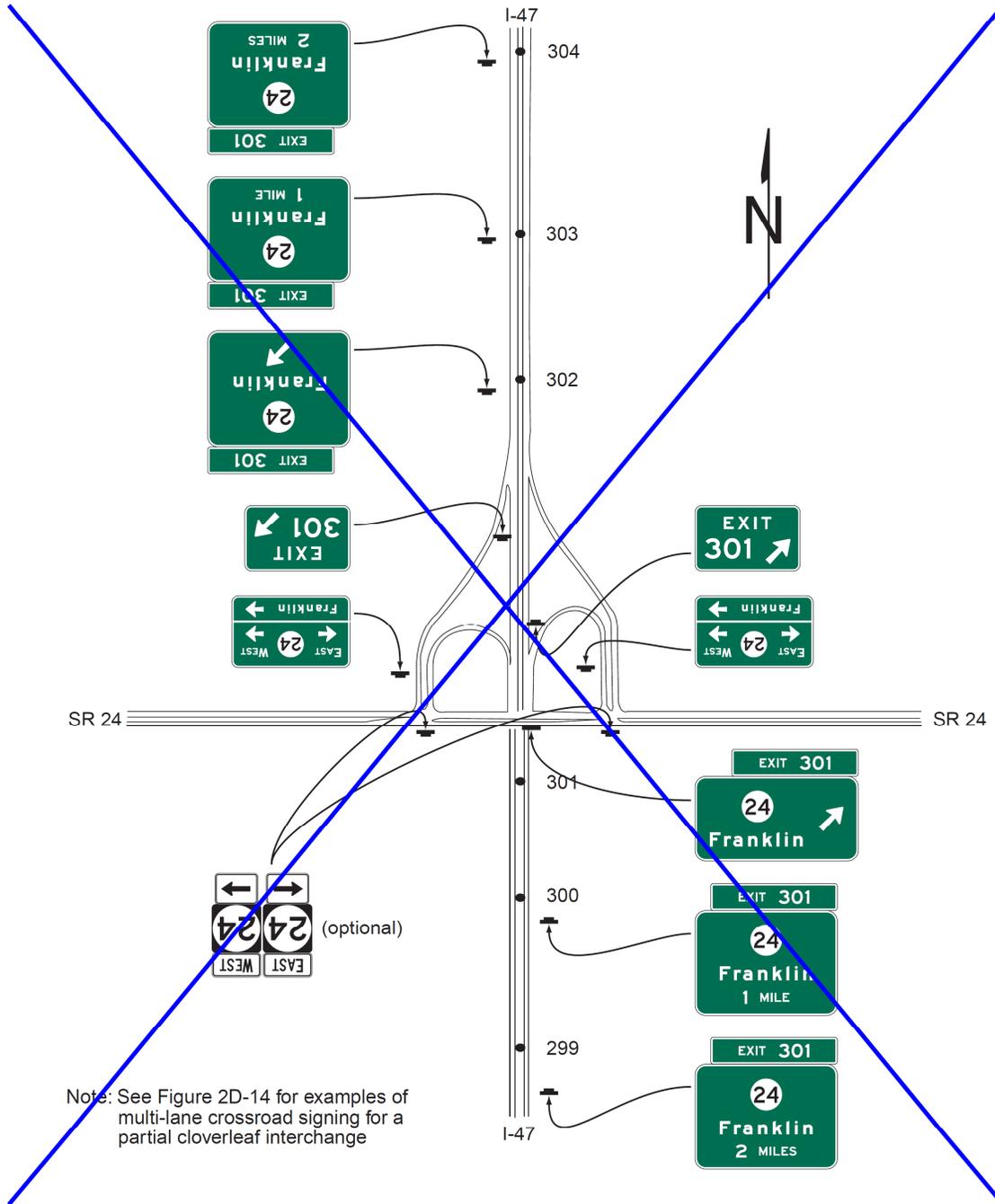
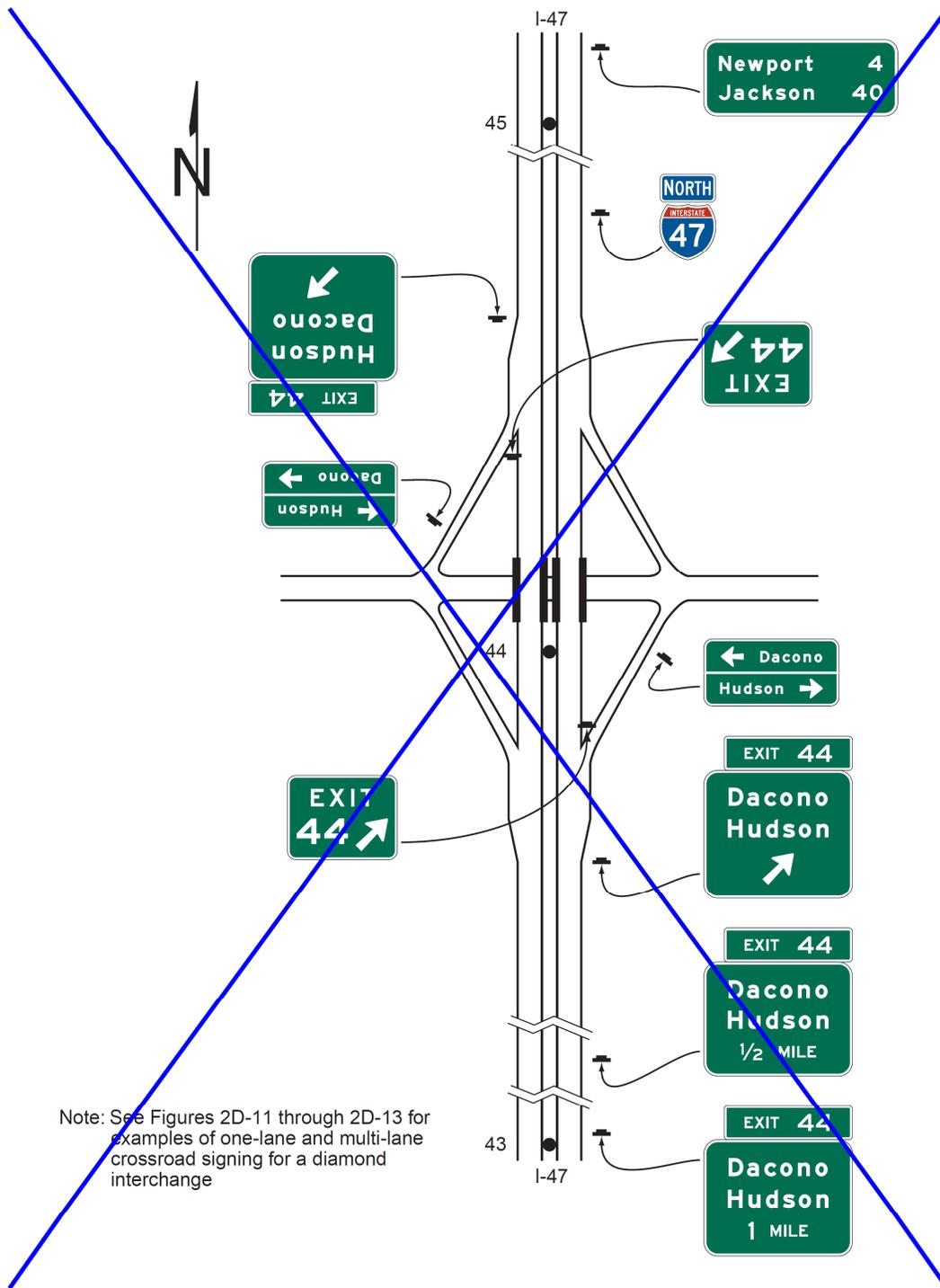


Figure 2E-38. Examples of Guide Signs for a Diamond Interchange



Note: See Figures 2D-11 through 2D-13 for examples of one-lane and multi-lane crossroad signing for a diamond interchange

Figure 2E-38 (CA). Examples of Guide Signs for a Diamond Interchange

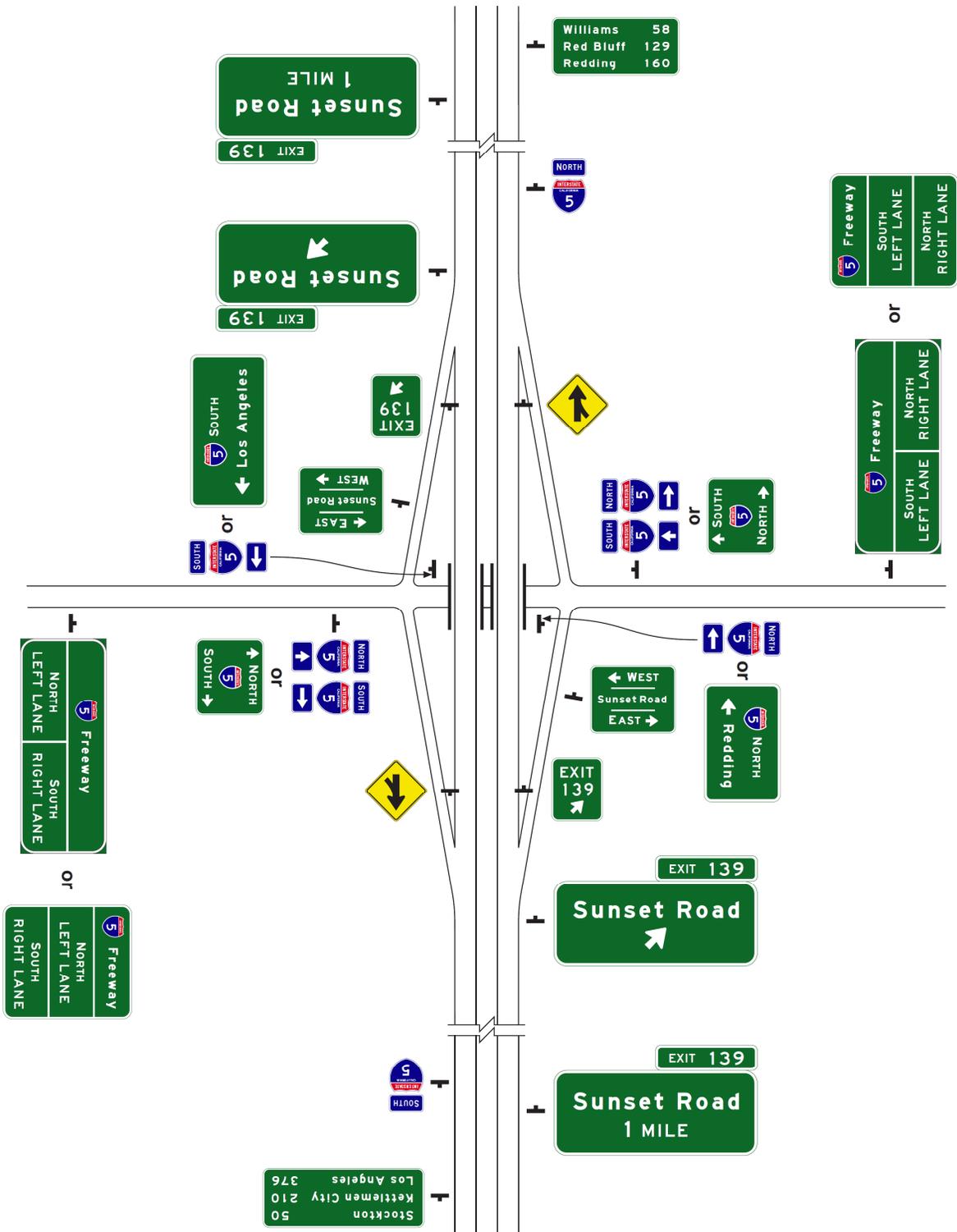


Figure 2E-39. Examples of Guide Signs for a Diamond Interchange in an Urban Area

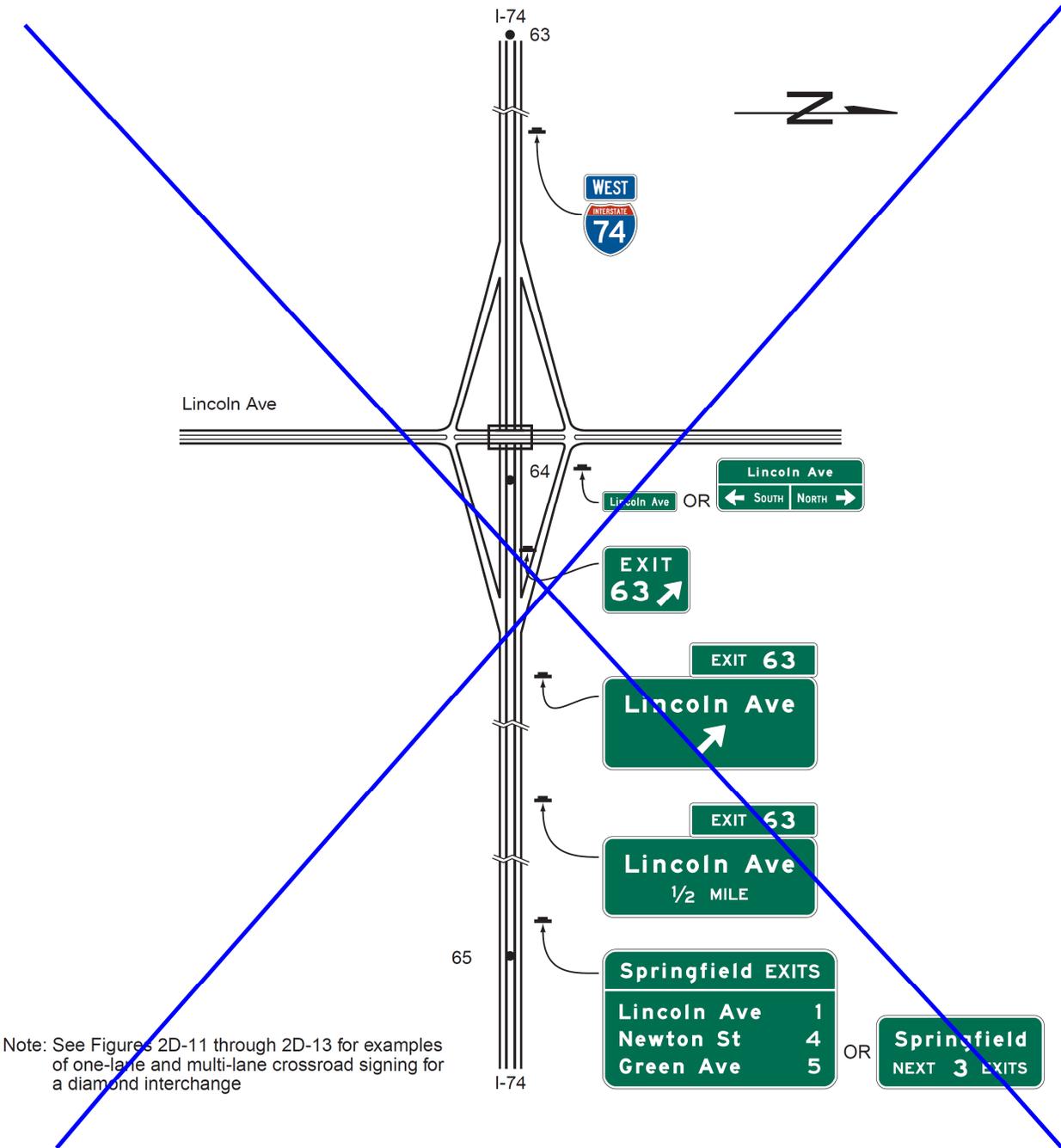


Figure 2E-39 (CA). Examples of Guide Signs for a Diamond Interchange in an Urban Area

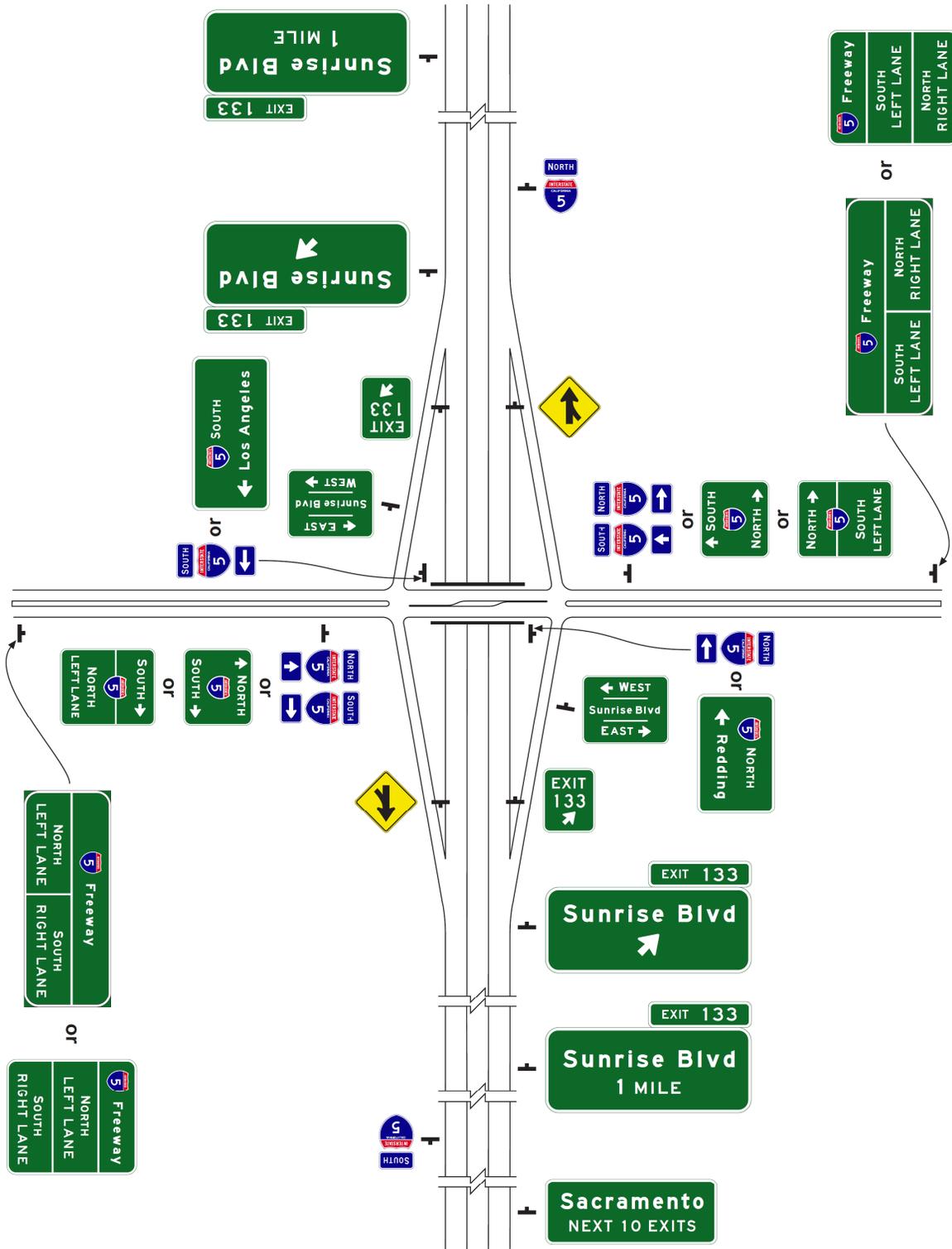


Figure 2E-40. Examples of Guide Signs for a Minor Interchange

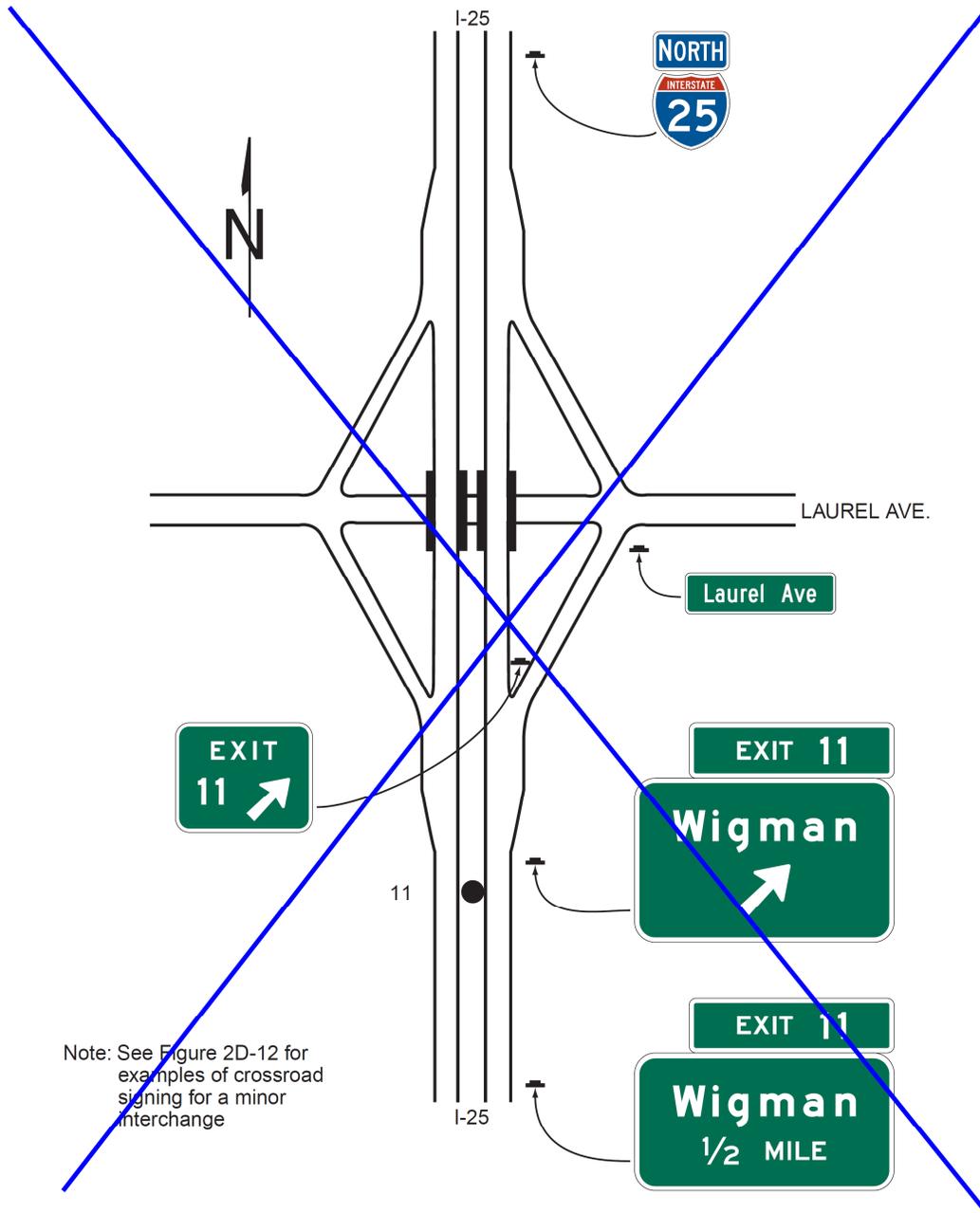


Table 2E-1. Freeway or Expressway Guide Sign and Plaque Sizes (Sheet 1 of 2)

Sign or Plaque	Sign Designation	Section	Minimum Size
Exit Number (plaque)			
1-, 2-Digit Exit Number	E1-5P	2E.31	114 x 30
3-Digit Exit Number	E1-5P	2E.31	132 x 30
1-, 2-Digit Exit Number (with single letter suffix)	E1-5P	2E.31	138 x 30
3-Digit Exit Number (with single letter suffix)	E1-5P	2E.31	156 x 30
1-, 2-Digit Exit Number (with dual letter suffix)	E1-5P	2E.31	168 x 30
3-Digit Exit Number (with dual letter suffix)	E1-5P	2E.31	186 x 30
Left (plaque)	E1-5aP	2E.33	72 x 30
Left Exit Number (plaque)			
1-, 2-Digit Exit Number	E1-5bP	2E.31	114 x 54
3-Digit Exit Number	E1-5bP	2E.31	132 x 54
1-, 2-Digit Exit Number (with single letter suffix)	E1-5bP	2E.31	138 x 54
3-Digit Exit Number (with single letter suffix)	E1-5bP	2E.31	156 x 54
1-, 2-Digit Exit Number (with dual letter suffix)	E1-5bP	2E.31	168 x 54
3-Digit Exit Number (with dual letter suffix)	E1-5bP	2E.31	186 x 54
Next Exit XX Miles (1 line)	—	2E.34	Varies x 24
Next Exit XX Miles (2 lines)	—	2E.34	Varies x 36
Exit Gore (no exit number)	E5-1	2E.37	72 x 60
Exit Gore (with exit number)			
1-, 2-Digit Exit Number	E5-1a	2E.37	78 x 60
3-Digit Exit Number	E5-1a	2E.37	96 x 60
1-Digit Exit Number (with single letter suffix)	E5-1a	2E.37	90 x 60
2-Digit Exit Number (with single letter suffix)	E5-1a	2E.37	108 x 60
3-Digit Exit Number (with single letter suffix)	E5-1a	2E.37	126 x 60
1-Digit Exit Number (with dual letter suffix)	E5-1a	2E.37	120 x 60
2-Digit Exit Number (with dual letter suffix)	E5-1a	2E.37	138 x 60
3-Digit Exit Number (with dual letter suffix)	E5-1a	2E.37	156 x 60
Exit Number (plaque)			
1-, 2-Digit Exit Number	E5-1bP	2E.37	42 x 30
3-Digit Exit Number	E5-1bP	2E.37	60 x 30
1-Digit Exit Number (with single letter suffix)	E5-1bP	2E.37	48 x 30
1-Digit Exit Number (with dual letter suffix)	E5-1bP	2E.37	72 x 30
2-Digit Exit Number (with single or dual letter suffix)	E5-1bP	2E.37	72 x 30
3-Digit Exit Number (with single or dual letter suffix)	E5-1bP	2E.37	72 x 30
Narrow Exit Gore	E5-1c	2E.37	60 x 90*
Pull-Through	E6-2	2E.12	Varies x 120*
Pull-Through	E6-2a	2E.12	Varies x 90*
Exit Only (with arrow)	E11-1,1d	2E.24	174** x 36
Exit	E11-1a	2E.24	66 x 18
Only	E11-1b	2E.24	66 x 18
Exit Only	E11-1c	2E.24	120 x 18
Exit Only (with two arrows)	E11-1e,1f	2E.24	222** x 36
Left	E11-2	2E.40	60 x 18
Exit Gore Advisory Speed (plaque)	E13-1P	2E.37	72 x 24
Exit Direction Advisory Speed	E13-2	2E.36	162 x 24
Interstate Route Sign (1 or 2 digits)	M1-1	2E.27	36 x 36
Interstate Route Sign (3 digits)	M1-1	2E.27	45 x 36
Off-Interstate Route Sign (1 or 2 digits)	M1-2,3	2E.27	36 x 36
Off-Interstate Route Sign (3 digits)	M1-2,3	2E.27	45 x 36
U.S. Route Sign (1 or 2 digits)	M1-4	2E.27	36 x 36
U.S. Route Sign (3 digits)	M1-4	2E.27	45 x 36
State Route Sign (1 or 2 digits)	M1-5	2D.11	36 x 36

Table 2E-1. Freeway or Expressway Guide Sign and Plaque Sizes (Sheet 2 of 2)

Sign or Plaque	Sign Designation	Section	Minimum Size
State Route Sign (3 digits)	M1-5	2D.11	45 x 36
County Route Sign (1, 2, or 3 digits)	M1-6	2D.11	36 x 36
Forest Route (1, 2, or 3 digits)	M1-7	2D.11	36 x 36
Eisenhower Interstate System	M1-10,10a	2E.28	36 x 36
Junction	M2-1	2D.13	30 x 21
Combination Junction (2 route signs)	M2-2	2D.14	60 x 48*
Cardinal Direction	M3-1,2,3,4	2D.15	36 x 18
Alternate	M4-1,1a	2D.17	36 x 18
By-Pass	M4-2	2D.18	36 x 18
Business	M4-3	2D.19	36 x 18
Truck	M4-4	2D.20	36 x 18
To	M4-5	2D.21	36 x 18
End	M4-6	2D.22	36 x 18
Temporary	M4-7,7a	2D.24	36 x 18
Begin	M4-14	2D.23	36 x 18
Advance Turn Arrow	M5-1,2,3	2D.26	30 x 21
Lane Designation	M5-4,5,6	2D.27	36 x 24
Directional Arrow	M6-1,2,2a,3,4,5,6,7	2D.28	30 x 21
Destination (1 line)	D1-1	2D.37	Varies x 30
Destination and Distance (1 line)	D1-1a	2D.37	Varies x 30
Destination (2 lines)	D1-2	2D.37	Varies x 54
Destination and Distance (2 lines)	D1-2a	2D.37	Varies x 54
Destination (3 lines)	D1-3	2D.37	Varies x 72
Destination and Distance (3 lines)	D1-3a	2D.37	Varies x 72
Distance (1 line)	D2-1	2D.41	Varies x 30
Distance (2 lines)	D2-2	2D.41	Varies x 54
Distance (3 lines)	D2-3	2D.41	Varies x 72
Street Name	D3-1,1a	2D.43	Varies x 18
Advance Street Name (2 lines)	D3-2	2D.44	Varies x 42*
Advance Street Name (3 lines)	D3-2	2D.44	Varies x 66*
Advance Street Name (4 lines)	D3-2	2D.44	Varies x 84*
Park - Ride	D4-2	2D.48	36 x 48
National Scenic Byways	D6-4	2D.55	24 x 24
National Scenic Byways	D6-4a	2D.55	24 x 12
Weigh Station XX Miles	D8-1	2E.54	96 x 72 (F) 78 x 60 (E)
Weigh Station Next Right	D8-2	2E.54	108 x 90 (F) 84 x 72 (E)
Weigh Station (with arrow)	D8-3	2E.54	84 x 78 (F) 66 x 60 (E)
Crossover	D13-1,2	2D.54	78 x 42
Freeway Entrance	D13-3	2D.46	48 x 30
Freeway Entrance (with arrow)	D13-3a	2D.46	48 x 42
Combination Lane Use / Destination	D15-1	2D.33	Varies x 96
Next Truck Lane XX Miles	D17-1	2D.51	60 x 66
Truck Lane XX Miles	D17-2	2D.51	60 x 54
Slow Vehicle Turn-Out XX Miles	D17-7	2D.52	96 x 54

* The size shown is for a typical sign as illustrated in the figures in Chapters 2D and 2E. The size should be determined based on the amount of legend required for the sign.

** The width shown represents the minimum dimension. The width shall be increased as appropriate to match the width of the guide sign.

- Notes: 1. Larger signs may be used when appropriate
2. Dimensions in inches are shown as width x height
3. Where two sizes are shown, the larger size is for freeways (F) and the smaller size is for expressways (E)

Table 2E-1(CA). California Freeway or Expressway Guide Sign and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Minimum
Advance Lane Assignment	G20-1(CA)	2D.31	VAR x 30
Advance Lane Assignment	G20-3(CA)	2D.31	VAR x 42
Advance Lane Assignment	G20-5(CA)	2D.31	VAR x 54
Advance Lane Assignment	G20-7(CA)	2D.31	VAR x 60
Interchange Sequence	G23-1(CA)	2E.35, 2E.40	VAR x 90
Interchange Sequence	G23-2(CA)	2E.35, 2E.40	VAR x 100
Interchange Sequence	G23-3(CA)	2E.35, 2E.40	VAR x 100
Interchange Sequence	G23-4(CA)	2E.35, 2E.40	VAR x 100
Interchange Sequence	G23-5(CA)	2E.35, 2E.40	VAR x 120
Interchange Sequence	G23-6(CA)	2E.35, 2E.40	VAR x 90
Pull-Through	G24-1(CA)	2D.03, 2E.12	VAR x 80
Pull-Through	G24-3(CA)	2D.03, 2E.12	VAR x 110
Pull-Through	G24-4(CA)	2D.03, 2E.12	VAR x 120
Pull-Through	G24-5(CA)	2D.03, 2E.12	VAR x 110
Pull-Through	G24-6(GA)	2D.03, 2E.12	VAR x 110
Single Line EXIT XX	G70-2(CA)	2E.31	36 x 12
Single Line EXIT XXXX	G70-3(CA)	2E.31	48 x 12
Two Line EXIT XX	G70-4(CA)	2E.31	24 x 24
Two Line EXIT XXXX	G70-5(CA)	2E.31	36 x 24
Advance Guide	G83-1(CA)	2E.33	VAR x 78
Advance Guide	G83-2(CA)	2E.33	VAR x 110
Exit Numbered Advance Guide	G83-4(CA)	2E.31, 2E.33	VAR x 84
Exit Numbered Advance Guide	G83-5(CA)	2E.31, 2E.33	VAR x 78
EXIT (XX) with Arrow	G84-2(CA)	2E.31, 2E.33	54 x 48
EXIT (XXX) with Arrow	G84-3(CA)	2E.31, 2E.33	48 x 60
Exit Direction	G85-1(CA)	2D.03, 2E.36	VAR x 78
Exit Direction	G85-2(CA)	2D.03, 2E.36	VAR x 48
Exit Direction	G85-3(CA)	2D.03, 2E.36	VAR x 114
Exit Direction	G85-4(CA)	2D.03, 2E.36	VAR x 138
Exit Direction	G85-5(CA)	2D.03, 2E.36	VAR x 80
Exit Direction	G85-6(CA)	2D.03, 2E.36	VAR x 80
Exit Numbered Exit Direction	G85-10(CA)	2D.03, 2E31	VAR x 84
Exit Numbered Exit Direction	G85-11(CA)	2D.03, 2E31	VAR x 84
NEXT XX EXITS	G87(CA)	2E.42	VAR x 54
Exit Only	W61A(CA)	2E.24	44 x 20
Exit Only	W61B(CA)	2E.24	44 x 20
Exit Only	W61C(CA)	2E.24	84 x 20
Exit Only	W61D(CA)	2E.24	126 x 20
Exit Only	W61E(CA)	2E.24	174 x 20
Only	W61F(CA)	2E.24	84 x 20
Only	W61G(CA)	2E.24	174 x 20
Exit Only	W61H(CA)	2E.24	44 x 20

Table 2E-2. Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Interchange Classification

Type of Sign	Type of Interchange (see Section 2E.32)				Overhead
	Major		Intermediate	Minor	
	Category a	Category b			
A. Advance Guide, Exit Direction, and Overhead Guide Signs					
Exit Number Plaques					
Words	10	10	10	8	10
Numerals & Letters	15	15	15	12	15
Interstate Route Signs					
Numerals	18	—	—	—	18
1- or 2-Digit Shields	36 x 36	—	—	—	36 x 36
3-Digit Shields	45 x 36	—	—	—	45 x 36
U.S. or State Route Signs					
Numerals	18	18	18	12	18
1- or 2-Digit Shields	36 x 36	36 x 36	36 x 36	24 x 24	36 x 36
3-Digit Shields	45 x 36	45 x 36	45 x 36	30 x 24	45 x 36
U.S. or State Route Text Identification (Example: US 56)					
Numerals & Letters	18	15	15	12	15
Cardinal Directions					
First Letters	18	15	12	10	15
Rest of Words	15	12	10	8	12
Auxiliary and Alternative Route Legends (Examples: JCT, TO, ALT, BUSINESS)					
Words	15	12	10	8	12
Names of Destinations					
Upper-Case Letters	20	16	13.33	10.67	16
Lower-Case Letters	15	12	10	8	12
Distance Numbers	18	15	12	10	15
Distance Fraction Numerals	12	10	10	8	10
Distance Words	12	10	10	8	10
Action Message Words	10	10	10	8	10
B. Gore Signs					
Words	10	10	10	8	—
Numerals & Letters	12	12	12	10	—

Note: Sizes are shown in inches and where applicable are shown as width x height

Table 2E-3. Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Sign Type

Type of Sign	Minimum Size
A. Pull-Through Signs	
Destinations — Upper-Case Letters	13.33
Destinations — Lower-Case Letters	10
Route Signs	
1- or 2-Digit Shields	36 x 36
3-Digit Shields	45 x 36
Cardinal Directions — First Letters	12
Cardinal Directions — Rest of Word	10
B. Supplemental Guide Signs	
Exit Number — Words	8
Exit Number — Numerals and Letters	12
Place Names — Upper-Case Letters	10.67
Place Names — Lower-Case Letters	8
Action Messages	8
Route Signs	
Numerals	12
1- or 2-Digit Shield	24 x 24
3-Digit Shield	30 x 24
C. Interchange Sequence or Community Interchanges Identification Signs	
Words — Upper-Case Letters	10.67
Words — Lower-Case Letters	8
Numerals	10.67
Fraction Numerals	8
Route Signs	
Numerals	12
1- or 2-Digit Shield	24 x 24
3-Digit Shield	30 x 24
D. Next XX Exits Sign	
Place Names — Upper-Case Letters	10.67
Place Names — Lower-Case Letters	8
NEXT XX EXITS — Words	8
NEXT XX EXITS — Number	12

Type of Sign	Minimum Size
E. Distance Signs	
Words — Upper-Case Letters	8
Words — Lower-Case Letters	6
Numerals	8
Route Signs	
Numerals	9
1- or 2-Digit Shield	18 x 18
3-Digit Shield	22.5 x 18
F. General Services Signs (see Chapter 2I)	
Exit Number — Words	8
Exit Number — Numerals and Letters	12
Services	8
G. Rest Area, Scenic Area, and Roadside Area Signs (see Chapter 2I)	
Words	10
Distance Numerals	12
Distance Fraction Numerals	8
Distance Words	8
Action Message Words	10
H. Reference Location Signs (see Chapter 2H)	
Words	4
Numerals	10
I. Boundary and Orientation Signs (see Chapter 2H)	
Words — Upper-Case Letters	8
Words — Lower-Case Letters	6
J. Next Exit and Next Services Signs	
Words and Numerals	8
K. Exit Only Signs	
Words	12
L. Overhead Arrow-Per-Lane and Diagrammatic Signs	
See Table 2E-5	

Note: Sizes are shown in inches and where applicable are shown as width x height

Table 2E-4. Minimum Letter and Numeral Sizes for Freeway Guide Signs According to Interchange Classification

Type of Sign	Type of Interchange (see Section 2E.32)				Overhead
	Major		Intermediate	Minor	
	Category a	Category b			
A. Advance Guide, Exit Direction, and Overhead Guide Signs					
Exit Number Plaques					
Words	10	10	10	10	10
Numerals & Letters	15	15	15	15	15
Interstate Route Signs					
Numerals	24/18	—	—	—	18
1- or 2-Digit Shields	48 x 48/ 36 x 36	—	—	—	36 x 36
3-Digit Shields	60 x 48/ 45 x 36	—	—	—	45 x 36
U.S. or State Route Signs					
Numerals	24/18	18	18	12	18
1- or 2-Digit Shields	48 x 48/ 36 x 36	36 x 36	36 x 36	24 x 24	36 x 36
3-Digit Shields	60 x 48/ 45 x 36	45 x 36	45 x 36	30 x 24	45 x 36
U.S. or State Route Text Identification (Example: US 56)					
Numerals & Letters	18	18/15	15	12	15
Cardinal Directions					
First Letters	18	15	15	10	15
Rest of Words	15	12	12	8	12
Auxiliary and Alternative Route Legends (Examples: JCT, TO, ALT, BUSINESS)					
Words	15	12	12	8	12
Names of Destinations					
Upper-Case Letters	20	20	16	13.33	16
Lower-Case Letters	15	15	12	10	12
Distance Numbers	18	18/15	15	12	15
Distance Fraction Numerals	12	12/10	10	8	10
Distance Words	12	12/10	10	8	10
Action Message Words	12	12/10	10	8	10
B. Gore Signs					
Words	12	12	12	8	—
Numeral & Letters	18	18	18	12	—

Notes: 1. Sizes are shown in inches and where applicable are shown as width x height
 2. Slanted line (/) signifies separation of desirable and minimum sizes

Table 2E-5. Minimum Letter and Numeral Sizes for Freeway Guide Signs According to Sign Type

Type of Sign	Minimum Size
A. Pull-Through Signs	
Destinations — Upper-Case Letters	16
Destinations — Lower-Case Letters	12
Route Signs	
1- or 2-Digit Shields	36 x 36
3-Digit Shields	45 x 36
Cardinal Directions — First Letter	15
Cardinal Directions — Rest of Word	12
B. Supplemental Guide Signs	
Exit Number Words	10
Exit Number Numerals and Letters	15
Place Names — Upper-Case Letters	13.33
Place Names — Lower-Case Letters	10
Action Messages	8
Route Signs	
Numerals	12
1- or 2-Digit Shield	24 x 24
3-Digit Shield	30 x 24
C. Interchange Sequence or Community Interchanges Identification Signs	
Words — Upper-Case Letters	13.33
Words — Lower-Case Letters	10
Numerals	13.33
Fraction Numerals	10
Route Signs	
Numerals	12
1- or 2-Digit Shield	24 x 24
3-Digit Shield	30 x 24
D. Next XX Exits Sign	
Place Names — Upper-Case Letters	13.33
Place Names — Lower-Case Letters	10
NEXT XX EXITS — Words	10
NEXT XX EXITS — Number	15
E. Distance Signs	
Words — Upper-Case Letters	8
Words — Lower-Case Letters	6
Numerals	8
Route Signs	
Numerals	9
1- or 2-Digit Shield	18 x 18
3-Digit Shield	22.5 x 18
F. General Services Signs (see Chapter 2I)	
Exit Number Words	10
Exit Number Numerals and Letters	15
Services	10

Type of Sign	Minimum Size
G. Rest Area, Scenic Area, and Roadside Area Signs (see Chapter 2I)	
Words	12
Distance Numerals	15
Distance Fraction Numerals	10
Distance Words	10
Action Message Words	12
H. Reference Location Signs (see Chapter 2H)	
Words	4
Numerals	10
I. Boundary and Orientation Signs (see Chapter 2H)	
Words — Upper-Case Letters	8
Words — Lower-Case Letters	6
J. Next Exit and Next Services Signs	
Words and Numerals	8
K. Exit Only Signs	
Words	12
L. Overhead Arrow-Per-Lane Signs	
Arrowhead (Type D Directional Arrow)	21.625
Arrow Shaft Width	8
Arrow Height	
Through	72
Left Only	48
Right Only	48
Optional-Diverge (Through with Left or Right)	72
Optional-Split (Left and Right)	66
Vertical Separator Width	2
Vertical Space between Vertical Separator and Top of Nearest Arrow	8
Horizontal Space between Vertical Separator and Top of Nearest Through Arrow	15
Horizontal Space between Arrow Shaft and EXIT and ONLY plaques	10
EXIT and ONLY Panels	60 x 18
M. Diagrammatic Signs	
Arrowhead (Type D Directional Arrow)	13.5*
Lane Widths	5
Lane Line Segments	1 x 6
Spacing between Lane Line Segments	6
Stem Height to Upper Point of Departure	30
Horizontal Space between Arrowhead and Route Shield or Destination	12

* The size shown is the arrowhead width per lane depicted on the corresponding arrow shaft

Note: Sizes are shown in inches and where applicable are shown as width x height

CHAPTER 2F. TOLL ROAD SIGNS

Section 2F.01 Scope

Support:

⁰¹ Toll highways are typically limited-access freeway or expressway facilities. A portion of or an entire route might be a toll highway, or a bridge, tunnel, or other crossing point might be the only toll portion of a highway. A toll highway might be a conventional road. The general signing requirements for toll roads will depend on the type of facility and access (freeway, expressway, or conventional road). The provisions of Chapters 2D and 2E will generally apply for guide signs along the toll facility that direct road users within and off the facility where exit points and geometric configurations are not dependent specifically on the collection of tolls. The aspect of tolling and the presence of toll plazas or collection points necessitate additional considerations in the typical signing needs. The notification of the collection of tolls in advance of and at entry points to the toll highway also necessitate additional modifications to the typical signing.

⁰² The scope of this Section applies to a route or facility on which all lanes are tolled. Chapter 2G contains provisions for the signing of managed lanes within an otherwise non-toll facility that employ tolling or pricing as an operational strategy to manage congestion levels.

Standard:

⁰³ **Except where specifically provided in this Chapter, the provisions of other Chapters in Part 2 shall apply to toll roads.**

Section 2F.02 Sizes of Toll Road Signs

Standard:

⁰¹ **Except as provided in Section 2A.11, the sizes of toll road signs that have standardized designs shall be as shown in Table 2F-1.**

Support:

⁰² Section 2A.11 contains information regarding the applicability of the various columns in Table 2F-1.

Option:

⁰³ Signs larger than those shown in Table 2F-1 may be used (see Section 2A.11).

Section 2F.03 Use of Purple Backgrounds and Underlay Panels with ETC Account Pictographs

Standard:

⁰¹ **Use of the color purple on any sign shall comply with the provisions of Sections 1A.12 and 2A.10. Except as provided in Sections 2F.12 and 2F.16, purple as a background color shall be used only when the information associated with the appropriate ETC account is displayed on that portion of the sign. The background color of the remaining portion of such signs shall comply with the provisions of Sections 1A.12 and 2A.10 as appropriate for a regulatory, warning, or guide sign. Purple shall not be used as a background color to display a destination, action message, or other legend that is not a display of the requirement for all vehicles to have a registered ETC account.**

⁰² **If only vehicles with registered ETC accounts are allowed to use a highway lane, a toll plaza lane, an open-road tolling lane, or all lanes of a toll highway or connection, the signs for such lanes or highways shall incorporate the pictograph (see Chapter 2A) adopted by the toll facility's ETC payment system and the regulatory message ONLY. Except for ETC pictographs whose predominant background color is purple, if incorporated within the green background of a guide sign, the ETC pictograph shall be on a white rectangular or square panel set on a purple underlay panel with a white border. For rectangular ETC pictographs whose predominant background color is purple, a white border shall be used at the outer edges of the purple rectangle to provide contrast between the pictograph and the sign background color.**

⁰³ **If an ETC pictograph is used on a separate plaque with a guide sign or on a header panel within a guide sign, the plaque or the header panel shall have a purple background with a white border and the ETC pictograph shall have a white border to provide contrast between the pictograph and the background of the plaque or header panel.**

04 Purple underlay panels for ETC pictographs or purple backgrounds for plaques and header panels shall only be used in the manner described in Paragraphs 1 through 3 to convey the requirement of a registered ETC account on signs for lanes reserved exclusively for vehicles with such an account and on directional signs to an ETC account-only facility from a non-toll facility or from a toll facility that accepts multiple payment forms.

Support:

05 Figure 2F-1 shows examples of ETC account pictographs, their use with various background colors, and modifications involving underlay panels.

06 Section 2F.04 contains provisions regarding the size of pictographs for ETC accounts.

Section 2F.04 Size of ETC Pictographs

Standard:

01 The ETC pictograph (see Chapter 2A) shall be of a size that makes it a prominent feature of the sign legend as necessary for conspicuity for those road users with registered ETC accounts seeking such direction, as well as for those road users who do not have ETC accounts so that it is clear to them to avoid such direction when applicable.

Guidance:

02 *An ETC pictograph that is in the shape of a horizontal rectangle should have a minimum height between approximately 1.5 and 2 times the upper-case letter height of the principal legend on the sign. The width of an ETC pictograph in the shape of a horizontal rectangle should be between approximately two and three times the height of the pictograph. When the pictograph is the principal legend on the sign, such as for advance guide signs for open-road tolling lanes (see Section 2F.15), the minimum height of a horizontal rectangular ETC pictograph should be consistent with that of a route shield prescribed for the particular application and type of sign.*

03 *For ETC pictographs whose shape is square, circular, or otherwise similar in height and width, or is a vertical rectangle, the same basic principles for conspicuity and placement should be followed. ETC pictographs whose shape is not in that of a horizontal rectangle should be suitably sized to facilitate conspicuity as described in Paragraph 1 and should be of a similar approximate area as the horizontal rectangular pictographs designed in accordance with the height and width as provided in Paragraph 2.*

Section 2F.05 Regulatory Signs for Toll Plazas

Support:

01 Toll plaza operations often include lane-specific restrictions on vehicle type, forms of payment accepted, and speed limits or required stops. Vehicles are typically required to come to a stop to pay the toll or receive a toll ticket in the attended and exact change or automatic lanes. Electronic toll collection (ETC) lanes with favorable geometrics typically allow vehicles to move through the toll plaza without stopping, but usually within a set regulatory speed limit or advisory speed. In some ETC lanes and in most lanes that accommodate non-ETC vehicles, a stop might be required while the ETC payment is processed because of geometric or other conditions.

Guidance:

02 *Regulatory signs applicable only to a particular lane or lanes should be located in a position that makes their applicability clear to road users approaching the toll plaza.*

03 *Regulatory signs, or regulatory panels within guide signs, indicating restrictions on vehicle type and forms of toll payment accepted at a specific toll plaza lane should be installed over the applicable lane either on the toll plaza canopy or on a separate structure immediately in advance of the canopy located in a manner such that each sign is clearly related to an individual toll lane.*

Support:

04 Section 2F.13 contains information regarding the incorporation of regulatory messages into guide signs for toll plazas.

05 Section 2F.16 contains information regarding the design and use of toll plaza canopy signs.

Guidance:

06 *One or more Speed Limit (R2-1) signs (see Section 2B.13) should be installed in the locations provided in Paragraph 8 for an ETC-Only lane at a toll plaza in which an enforceable regulatory speed limit is established for a lane in which it is intended that vehicles move through the toll plaza without stopping while toll payments*

requiring stops occur in other lanes at the toll plaza. The speed limit displayed on the signs should be based on an engineering study taking into account the geometry of the plaza and the lanes and other appropriate safety and operational factors.

07 A Speed Limit (R2-1) sign should not be installed for a toll plaza lane that is controlled by a STOP (R1-1) sign or where a stop is required.

Option:

08 Speed limit signs may be installed over the applicable lane on the toll plaza canopy, on the approach end of the toll booth island, on the toll booth itself, or on a vertical element of the canopy structure. Down arrows or diagonally downward-pointing directional arrows may be used to supplement the speed limit signs if an engineering study or engineering judgment indicates that the arrow is needed to clarify the applicability of a sign to a specific lane or to improve compliance.

Standard:

09 A STOP (R1-1) sign shall not be installed for a toll plaza lane that is operated as an ETC-Only lane and that is designed for tolls to be collected while vehicles continue moving.

Option:

10 A STOP (R1-1) sign may be installed to require vehicles to come to a complete stop to pay a toll in an attended or exact change lane, even if that lane is also available for optional use by vehicles with registered ETC accounts. A PAY TOLL (R3-29P) or TAKE TICKET (R3-30P) plaque (see Figure 2F-2), as appropriate to the operation, may be installed directly under the STOP (R1-1) sign for a toll plaza lane, if needed.

11 The mounting height of the STOP sign and any supplemental plaque may be less than the normal mounting height requirements if constrained by the physical features of the toll island or toll plaza.

12 The lateral offset of a STOP or other regulatory sign located within a toll plaza island may be reduced to a minimum of 1 foot from the face of the toll island or raised barrier to the nearest edge of the sign.

Guidance:

13 If used, a STOP (R1-1) sign for a toll plaza cash payment lane should be located in a longitudinal position as near as practical to the point where a vehicle is expected to stop to pay the toll or take a ticket.

Option:

14 A Toll Rate (R3-28) sign (see Figure 2F-2) may be installed in advance of the toll plaza to indicate the toll applicable to the various vehicle types.

Guidance:

15 If used, the Toll Rate (R3-28) sign should be located between the toll plaza and the first advance sign informing road users of the toll plaza.

16 The R3-28 sign should not contain more than three lines of legend. Each line that shows a toll amount should display only a single toll amount.

Option:

17 Additional toll rate information exceeding three lines of legend may be displayed on the toll booth adjacent to the payment window of an attended lane or the payment receptacle of an exact change or automatic lane where it is visible to a road user who has stopped to pay the toll, but is not visible to approaching road users who have not yet entered the toll lane.

Section 2F.06 Pay Toll Advance Warning Sign (W9-6)

Standard:

01 The Pay Toll Advance Warning (W9-6) sign shall be a horizontal rectangle with a black legend and border on a yellow background. The legend shall include the distance to the toll plaza and, except for toll-ticket facilities, the toll for passenger or 2-axle vehicles (see Figure 2F-3). Where the toll for passenger or 2-axle vehicles is variable by time of day, a changeable message element shall be incorporated into the W9-6 sign to display the toll in effect. For toll plazas where road users entering a toll-ticket facility are issued a toll ticket, the legend PAY TOLL shall be replaced with a suitable legend such as TAKE TICKET.

Guidance:

02 The Pay Toll Advance Warning sign should be installed overhead at approximately 1 mile and 1/2 mile in advance of mainline toll plazas at which some or all lanes are required to come to a stop to pay a toll (see Sections 2F.14 and 2F.15).

Option:

⁰³ If there is insufficient space for the W9-6 sign at the 1-mile or 1/2-mile advance locations, the Pay Toll Advance Warning (W9-6P) plaque (see Section 2F.07) may be installed at those advance locations above the appropriate guide sign(s) that relate to toll payment types.

⁰⁴ An additional W9-6 sign may be installed approximately 2 miles in advance of a mainline toll plaza. This sign may be either overhead or post-mounted.

⁰⁵ If the visibility of a ramp toll plaza at which some or all lanes are required to come to a stop to pay a toll is limited, the W9-6 sign may also be installed in advance of the ramp toll plaza.

Section 2F.07 Pay Toll Advance Warning Plaque (W9-6P)

Option:

⁰¹ The Pay Toll Advance Warning (W9-6P) plaque (see Figure 2F-3) may be installed above the appropriate guide sign(s) relating to toll payment types at the 1-mile and/or 1/2-mile advance locations on the approach to a toll plaza if there is insufficient space for the W9-6 sign (see Section 2F.06) at those advance locations.

Standard:

⁰² **The W9-6P plaque shall be a horizontal rectangle with black legend and border on a yellow background. The legend shall include the distance to the toll plaza and, except for toll-ticket facilities, the toll for passenger or 2-axle vehicles. Where the toll for passenger or 2-axle vehicles is variable by time of day, a changeable message element shall be incorporated into the W9-6P plaque to display the toll in effect. For toll plazas where road users entering a toll-ticket facility are issued a toll ticket, the legend PAY TOLL shall be replaced with a suitable legend such as TAKE TICKET.**

Option:

⁰³ The distance to the toll plaza may be omitted from the W9-6P plaque if the distance is displayed on the guide sign that the plaque accompanies.

⁰⁴ The toll for passenger or 2-axle vehicles may be omitted from the W9-6P plaque if the toll information is displayed on the guide sign that the plaque accompanies.

Section 2F.08 Stop Ahead Pay Toll Warning Sign (W9-6a)

Standard:

⁰¹ **The Stop Ahead Pay Toll (W9-6a) sign shall be a horizontal rectangle with a black legend and border on a yellow background. The legend shall include STOP AHEAD PAY TOLL and, except for toll-ticket facilities, the toll for passenger or 2-axle vehicles (see Figure 2F-3). Where the toll for passenger or 2-axle vehicles is variable by time of day, a changeable message element shall be incorporated into the W9-6a sign to display the toll in effect. For toll plazas where road users entering a toll-ticket facility are issued a toll ticket, the legend PAY TOLL shall be replaced with a suitable legend such as TAKE TICKET.**

Guidance:

⁰² *The Stop Ahead Pay Toll sign should be installed overhead downstream from the W9-6 sign that is 1/2 mile in advance of a mainline toll plaza where some or all of the lanes are required to come to a stop to pay a toll (see Sections 2F.14 and 2F.15). The location of the overhead sign should coincide with the approximate location where the mainline lanes begin to widen on the approach to the toll plaza lanes.*

⁰³ *Where open-road tolling is used in addition to a toll plaza at a particular location, the W9-6a sign should be located such that the message is clearly related to the lanes that access the toll plaza and not to the open-road tolling lanes.*

Option:

⁰⁴ If there is insufficient space for the W9-6a sign at the recommended location, the Stop Ahead Pay Toll (W9-6aP) plaque (see Section 2F.09) may be installed at that location above the appropriate guide sign that relates to toll payment types.

⁰⁵ If the visibility of a ramp toll plaza at which some or all lanes are required to come to a stop to pay a toll is limited, the W9-6a sign may also be installed in advance of the ramp toll plaza.

Section 2F.09 Stop Ahead Pay Toll Warning Plaque (W9-6aP)

Option:

01 The Stop Ahead Pay Toll (W9-6aP) plaque (see Figure 2F-3) may be installed above the appropriate guide sign at the location specified for the Stop Ahead Pay Toll (W9-6a) sign (see Section 2F.08) if there is insufficient space for the W9-6a sign at that location.

Standard:

02 **The W9-6aP plaque shall be a horizontal rectangle with black legend and border on a yellow background. The legend shall include STOP AHEAD PAY TOLL and, except for toll-ticket facilities, the toll for passenger or 2-axle vehicles. Where the toll for passenger or 2-axle vehicles is variable by time of day, a changeable message element shall be incorporated into the W9-6aP plaque to display the toll in effect. For toll plazas where road users entering a toll-ticket facility are issued a toll ticket, the legend PAY TOLL shall be replaced with a suitable legend such as TAKE TICKET.**

Option:

03 The toll for passenger or 2-axle vehicles may be omitted from the W9-6aP plaque if the toll information is displayed on the guide sign that the plaque accompanies.

Section 2F.10 LAST EXIT BEFORE TOLL Warning Plaque (W16-16P)

Guidance:

01 *The LAST EXIT BEFORE TOLL (W16-16P) plaque (see Figure 2F-3) should be used to notify road users of the last exit from a highway before it becomes a facility on which toll payments are required. The plaque should be installed above or below the appropriate guide signs for the exit (see Sections ~~2E.30~~ 2E.33 and ~~2E.33~~ 2E.36).*

Standard:

02 **The W16-16P plaque shall have a black legend and border on a yellow background.**

Section 2F.11 TOLL Auxiliary Sign (M4-15)

Standard:

01 **The TOLL (M4-15) auxiliary sign (see Figure 2F-4) shall have a black legend and border on a yellow background and shall be mounted directly above the route sign of a numbered toll highway or, if used, above the cardinal direction and alternative route auxiliary signs, in any route sign assembly providing directions from a non-toll highway to the toll highway or to a segment of a highway on which the payment of a toll is required.**

Section 2F.12 Electronic Toll Collection (ETC) Account-Only Auxiliary Signs (M4-16 and M4-20)

Standard:

01 **In any route sign assembly providing directions from a non-toll highway to a toll facility, or to a tolled segment of a highway, where electronic toll collection (ETC) is the only payment method accepted and all vehicles are required to have a registered ETC account, the ETC Account-Only (M4-20) auxiliary sign (see Figure 2F-4) shall be mounted directly below the route sign of the numbered or named toll facility. The M4-20 auxiliary sign shall have a white border and purple background and incorporate the pictograph adopted by the toll facility's ETC payment system and the word ONLY in black letters on a white panel set on the purple background of the sign.**

Option:

02 The NO CASH (M4-16) auxiliary sign (see Figure 2F-4) with a black legend and border on a white background may be used in a route sign assembly directly below the M4-20 auxiliary sign.

Section 2F.13 Toll Facility and Toll Plaza Guide Signs – General

Support:

01 Toll plazas are used on many toll highways, bridges, and tunnels for collection of tolls from road users. Electronic toll collection and/or open-road tolling might also be used on such facilities, either in addition to or in place of collecting toll payments at toll plazas.

02 Chapter 2G contains information regarding signs for preferential and managed lanes that are applicable to toll roads.

⁰³ Chapter 3E contains information regarding pavement markings for certain toll plaza applications.

Standard:

⁰⁴ **Directional assemblies for entrances to a toll highway or to a road leading directly to a toll highway with no opportunity to exit before paying or being charged a toll, shall clearly indicate that the facility is a toll facility. The TOLL (M4-15) auxiliary sign (see Section 2F.11) shall be used above the route sign of a numbered toll facility in any route sign assembly that provides directions to the toll route from another highway.**

⁰⁵ **A rectangular panel with the black legend TOLL on a yellow background shall be incorporated into the guide signs leading road users to a toll highway (see Figure 2F-5).**

⁰⁶ **Guide signs for toll highways, toll plazas, and tolled or priced managed lanes (see Chapter 2G) shall have white legends and borders on green backgrounds, except as specifically provided by Sections 2F.13 through 2F.16.**

Option:

⁰⁷ Where conditions do not permit separate signs, or where it is important to associate a particular regulatory or warning message with specific guidance information, regulatory and/or warning messages may be combined with guide signs for toll plazas using plaques, header panels, or rectangular regulatory or warning panels incorporated within the guide signs, as long as the proper legend and background colors are preserved.

Standard:

⁰⁸ **When regulatory messages are incorporated within a guide sign, they shall be on a rectangular panel with black legend on a white background. When warning messages are incorporated within a guide sign, they shall be on a rectangular panel with black legend on a yellow background.**

Support:

⁰⁹ Figure 2F-5 shows examples of guide signs for entrances to various types of toll highways and for ETC account-only entrances to non-toll highways.

Standard:

¹⁰ **Signing for entrances to toll highways where ETC is employed only through license plate character recognition such that road users are not required to establish a toll account or register their vehicle equipment shall comply with the provisions of Paragraphs 4 and 5 (see Figure 2F-6).**

¹¹ **If only vehicles with registered ETC accounts are allowed to use a toll highway, the guide signs for entrances to such facilities shall incorporate the pictograph adopted by the toll facility's ETC payment system and the regulatory message ONLY (see Figures 2F-1, 2F-5, and 2F-6). The use, size, and placement of the ETC pictograph shall comply with the provisions of Sections 2F.03 and 2F.04.**

Support:

¹² Sections 2F.11, 2F.12, and 2F.17 contain additional provisions regarding signs for toll highways that only accept ETC payments.

¹³ Sections 2G.16 through 2G.18 contain additional provisions regarding signs for priced managed lanes that only accept ETC payments.

Option:

¹⁴ Where a toll highway on which tolls are collected only electronically also accepts payments from registered toll account users and those road users not registered in a toll account program are assessed a nominal surcharge in addition to the toll, or registered toll account users are assessed a discounted toll, such information may be displayed on a separate information sign near the entrance to such a facility (see Figure 2F-6).

Support:

¹⁵ Figure 2F-7 shows an example of guide signs for alternative toll and non-toll ramp connections to a non-toll highway.

¹⁶ Many different ETC payment systems are used by the various toll facility operators. Some of these systems accept payment from other systems' accounts.

Option:

¹⁷ Where a facility will accept payments from other systems' accounts in addition to its primary ETC-account payment system, such information may be displayed on a separate information sign near the entrances to such a facility or in advance of a toll plaza or open-road tolling lanes, as space allows between primary signs.

Guidance:

¹⁸ *Guide signs for toll plazas should be designed in accordance with the general principles of guide signs and the specific provisions of Chapter 2E.*

¹⁹ *Signs for toll plazas should systematically provide road users with advance and toll plaza lane-specific information regarding:*

- A. The amount of the toll, the types of payment accepted, and the type(s) of registered ETC accounts accepted for payment;*
- B. Which lane or lanes are required or allowed to be used for each available payment type; and*
- C. Restrictions on the use of a toll plaza lane or lanes by certain types of vehicles (such as cars only or no trucks).*

Standard:

²⁰ **Signs for attended lanes at toll plazas shall include word messages such as FULL SERVICE, CASH, CHANGE, or RECEIPTS (see Figures 2F-8 through 2F-11).**

Option:

²¹ Signs for Attended lanes at toll plazas may incorporate the Toll Taker (M4-17) symbol (see Figures 2F-8 and 2F-9), in a size that makes the symbol the predominant feature of the sign, to supplement the required word message.

Standard:

²² **Signs for Exact Change lanes at toll plazas shall incorporate an appropriate word message, such as EXACT CHANGE and the amount of the toll for passenger vehicles (see Figures 2F-8 through 2F-11).**

Option:

²³ Signs for Exact Change lanes at toll plazas may include the Exact Change (M4-18) symbol (see Figures 2F-8 and 2F-9), in a size that makes the symbol the predominant feature of the sign, to supplement the required word message.

Standard:

²⁴ **If used, the M4-17 and M4-18 symbols shall be used only as panels within guide signs that accompany the required word messages. The M4-17 and M4-18 symbols shall not be used as an independent sign or within a sign assembly.**

²⁵ **If only vehicles with registered ETC accounts are allowed to use a toll plaza lane, the signs for such lanes shall incorporate the pictograph adopted by the toll facility's ETC payment system and the regulatory message ONLY (see Figures 2F-1, 2F-8, 2F-9, and 2F-11). The use, size, and placement of the ETC pictograph shall comply with the provisions of Sections 2F.03 and 2F.04.**

Option:

²⁶ The ETC payment system's pictograph, without a purple underlay or purple header panel, may be used on signs for Exact Change or attended lanes at toll plazas to indicate that vehicles with registered ETC accounts may also use those lanes (see Figure 2F-9).

Section 2F.14 Advance Signs for Conventional Toll Plazas

Guidance:

⁰¹ *For conventional toll plazas (those without a divergence onto a separate alignment from mainline-aligned open-road tolling or ETC-Only lanes), one or more sets of overhead advance guide signs complying with the provisions of this Section should be provided. The advance guide signs for multi-lane toll plazas should provide information regarding which lanes to use for all of the toll payment methods accepted at the toll plaza. These signs should include toll plaza lane numbers (if used), or action messages or lane-use information such as LEFT LANE(S), CENTER LANE(S), RIGHT LANE(S), or down arrows over the approximate center of each applicable lane. These signs should also incorporate regulatory messages indicating any restrictions or prohibitions on the use of the lanes associated with the various types of payment methods by certain types of vehicles. For mainline toll plazas, these signs should be at least 1/2 mile in advance of the toll plaza, and farther if practical.*

⁰² *Additional guide signs with lane information for the toll payment types should be provided between approximately 1/4 mile and 800 feet in advance of the toll plaza at a location that avoids or minimizes obstruction of toll plaza canopy signs (see Section 2F.16) and lane-use control signals.*

03 The number, mounting, and/or spacing of sets of advance signs for approaches to toll plazas on ramps, toll bridges, or tunnels, to accommodate a limited distance to the plaza from an intersection or from the start of the approach road to the bridge or tunnel, should be based on an engineering study or engineering judgment.

Support:

04 Figure 2F-10 shows examples of advance signs for a conventional toll plaza.

Section 2F.15 Advance Signs for Toll Plazas on Diverging Alignments from Open-Road ETC Account-Only Lanes

Support:

01 Open-Road ETC lanes are sometimes located on the normal mainline alignment while the lanes for other toll payment methods are located at a toll plaza on a separate alignment (see Figure 2F-11). Since road users paying cash tolls must diverge from the mainline alignment, similar to a movement for an exit, it is important that the guide signs in advance of and at the point of divergence clearly indicate the required lane use and/or movements.

Guidance:

02 For toll plazas located on a separate alignment that diverges from mainline-aligned Open-Road ETC lanes where vehicles are required to have a registered ETC account to use the Open-Road Tolling lanes, overhead advance signs should be provided at approximately 1 mile and 1/2 mile in advance of the divergence point. Both the 1-mile and 1/2-mile advance signs should include:

- A. The ETC (pictograph) Account-Only guide sign (see Figures 2F-8 and 2F-11) with a down arrow over the center of each lane that will become an Open-Road ETC lane;*
- B. For the lane or lanes which will diverge to a toll plaza, guide signs conforming to the provisions of Section 2F.13, indicating which lane or lanes will diverge to the toll plaza for the various cash toll payment methods; and*
- C. Regulatory signs, plaques, or panels within the guide signs, indicating any restrictions or prohibitions of certain types of vehicles from toll plaza lanes associated with the various types of payment methods.*

03 At or near the theoretical gore of the divergence point, an additional set of overhead guide signs should be provided and should include:

- A. The ETC (pictograph) Account-Only guide sign (see Figures 2F-8 and 2F-11) with a down arrow over the center of each Open-Road ETC lane;*
- B. Guide signs conforming to the provisions of Section 2F.13, with diagonally upward-pointing directional arrow(s) over the approximate center of each lane indicating the direction of the divergence, and providing lane information for all types of payment methods accepted at the toll plaza; and*
- C. Regulatory signs, plaques, or panels within the guide signs, indicating any restrictions or prohibitions on the use of the toll plaza lanes associated with the various types of payment methods by certain types of vehicles.*

04 Approximately 800 feet in advance of the toll plaza at a location that avoids or minimizes any obstruction of the toll plaza canopy signs (see Section 2F.16) and lane-use control signals, an additional set of overhead advance signs with lane information for the toll payment types should be provided.

Standard:

05 The use of down and directional arrows on the signs at the locations described in Paragraphs 2 through 4 shall comply with the provisions of Section 2D.08.

Support:

06 Figure 2F-11 shows an example of advance signs for toll plazas on a diverging alignment from Open-Road ETC Account-Only Lanes.

07 Section 4K.02 contains information regarding the use of lane-use control signals for Open-Road ETC lanes for temporary lane closure purposes.

Section 2F.16 Toll Plaza Canopy Signs

Standard:

01 A sign complying with the provisions of Section 2F.13 shall be provided above the center of each lane that is not an Open-Road ETC lane, mounted on or suspended from the toll plaza canopy, or on a separate structure immediately in advance of the plaza located such that each sign is clearly related to an individual toll lane, indicating the payment type(s) accepted in the lane and any restrictions or prohibitions of certain

types of vehicles that apply to the lane. Except for toll-ticket systems, the toll for passenger or 2-axle vehicles shall be included on the canopy sign or on a separate sign mounted on the upstream side of the tollbooth.

02 The background color of a canopy sign for an ETC Account-Only toll plaza lane shall be purple (see Figure 2F-9).

Option:

03 Where vehicles are required to have a registered ETC account to use the lane, one or two flashing yellow beacons (see Section 4K.04) may supplement a canopy sign over an ETC Account-Only lane to call special attention to the location of the ETC Account-Only lane within the plaza.

04 The canopy sign for an ETC-Only toll plaza lane in which a regulatory speed limit is not posted and in which vehicles are not required to stop may display an advisory speed within a horizontal rectangular panel with a black legend and yellow background within the bottom portion of the canopy sign.

Standard:

05 Flashing beacons supplementing a canopy sign over an ETC Account-Only lane shall be mounted directly above or alongside the sign in a manner that is separated from any lane-use control signals for that lane (see Figure 2F-9).

06 For multi-lane toll plazas, lane-use control signals (see Section 4K.02) shall be provided above the center of each toll plaza lane that is not an Open-Road ETC lane to indicate the open or closed status of each lane. Lane-use control signals shall not be used to call attention to a lane for a specific toll payment type such as ETC Account-Only lanes.

Support:

07 Part 6 contains information regarding the closing of a lane for temporary traffic control purposes.

08 Figure 2F-9 shows examples of toll plaza canopy signs.

Section 2F.17 Guide Signs for Entrances to ETC Account-Only Facilities

Support:

01 Some toll highways, bridges, and tunnels are restricted to use only by vehicles with a specific registered ETC account.

Standard:

02 Where vehicles are required to have a registered ETC account to use an ETC Account-Only facility, guide signs for the facility shall comply with the applicable provisions of Chapter 2E and specifically with the applicable provisions of Section 2F.13.

03 Guide signs for the entrance ramps to such ETC Account-Only facilities shall incorporate the pictograph of the toll facility's ETC payment system and the word ONLY in a header panel or plaque designed in accordance with the provisions of Section 2F.13 (see Figure 2F-5).

Support:

04 Section 2F.12 contains information regarding ETC-Only auxiliary signs for use with route signs in route sign assemblies.

Section 2F.18 ETC Program Information Signs

Standard:

01 Except as provided in Paragraph 2, signs that inform road users of telephone numbers, Internet addresses, including domain names and uniform resource locators (URLs), or e-mail addresses for enrolling in an ETC program of a toll facility or managed lane, obtaining an ETC transponder, and/or obtaining ETC program information shall only be installed in rest areas, parking areas, or similar roadside facilities where the signs are viewed only by pedestrians or occupants of parked vehicles.

Option:

02 ETC program information signs displaying telephone numbers that have no more than four characters may be installed on roadways in locations where they will not obscure the road user's view of higher priority traffic control devices and that are removed from key decision points where the road user's view is more appropriately focused on other traffic control devices, roadway geometry, or traffic conditions, including exit and entrance ramps, intersections, toll plazas, temporary traffic control zones, and areas of limited sight distance.

Figure 2F-1. Examples of ETC Account Pictographs and Use of Purple Backgrounds and Underlay Panels

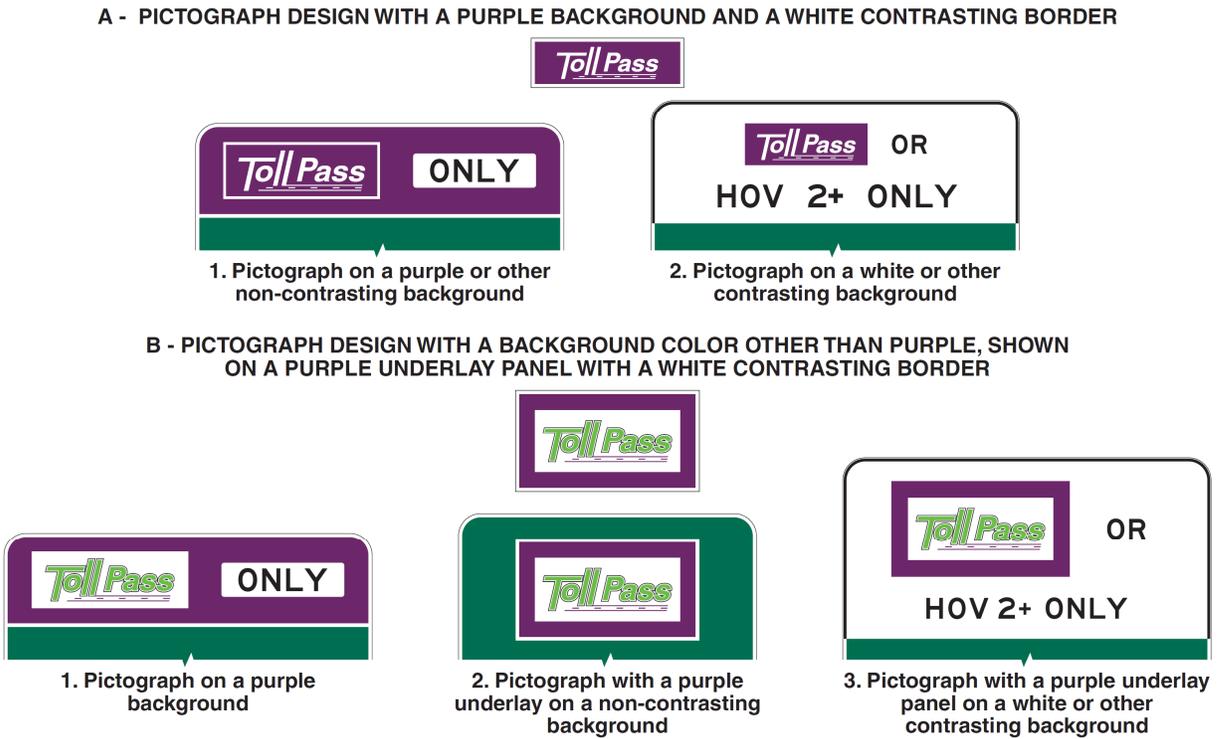


Figure 2F-2. Toll Plaza Regulatory Signs and Plaques



Figure 2F-3. Toll Plaza Warning Signs and Plaques



W9-6



W9-6a



W9-6P



W9-6aP



W16-16P

Figure 2F-4. ETC Account-Only Auxiliary Signs for Use in Route Sign Assemblies



M4-20



M4-16



M4-15



M3-2



M1-4



M4-20



M5-1

Example Route Sign Assembly

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

Figure 2F-5. Examples of Guide Signs for Entrances to Toll Highways or Ramps

A - ENTRANCE TO A TOLL HIGHWAY ON WHICH
REGISTRATION IN A TOLL ACCOUNT PROGRAM IS NOT REQUIRED



B - ENTRANCE TO AN ETC ACCOUNT-ONLY TOLL HIGHWAY
OR ENTRANCE TO A TOLL HIGHWAY VIA AN ETC ACCOUNT-ONLY RAMP



C - ENTRANCE TO A NON-TOLL HIGHWAY VIA
AN ETC ACCOUNT-ONLY TOLL ENTRANCE RAMP



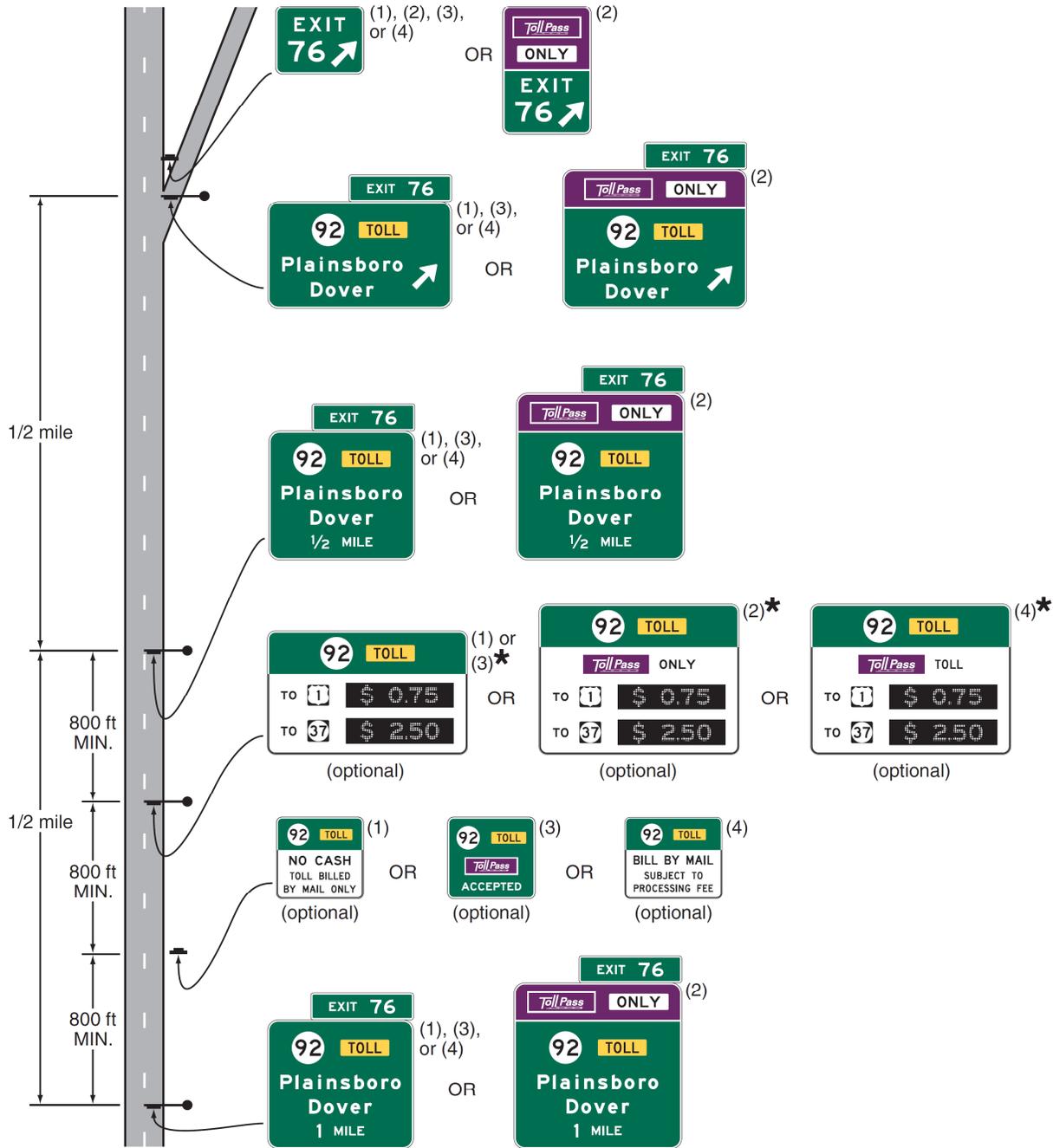
(the toll entrance is the only
connection provided in the vicinity)



(an alternate non-toll entrance is
provided in the vicinity)

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

Figure 2F-6. Examples of Guide Signs for the Entrance to a Toll Highway on which Tolls are Collected Electronically Only



- (1) All tolls are billed through license plate recognition only. A registered toll account or ETC device is not needed.
- (2) All tolls are billed through registered toll accounts only. All vehicles must be registered in an ETC account program.
- (3) Tolls are billed through license plate recognition in which registration in a toll account program is not required. Toll payments are also accepted from registered toll accounts. Registered toll accounts might receive a discount from the toll amount displayed on the signs.
- (4) Tolls are billed through license plate character recognition or registered toll accounts. Vehicles not registered in a toll account program are assessed a nominal processing fee in addition to the toll amount displayed on the signs.
- * For managed toll highways only (see Chapter 2G)

Figure 2F-8. Examples of Conventional Toll Plaza Advance Signs



Notes:

1. The M4-17 symbol is optional for an attended lane.
2. The M4-18 symbol is optional 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 2F-9. Examples of Toll Plaza Canopy Signs



Attended Lane with an
Optional M4-17 Toll
Collector Symbol

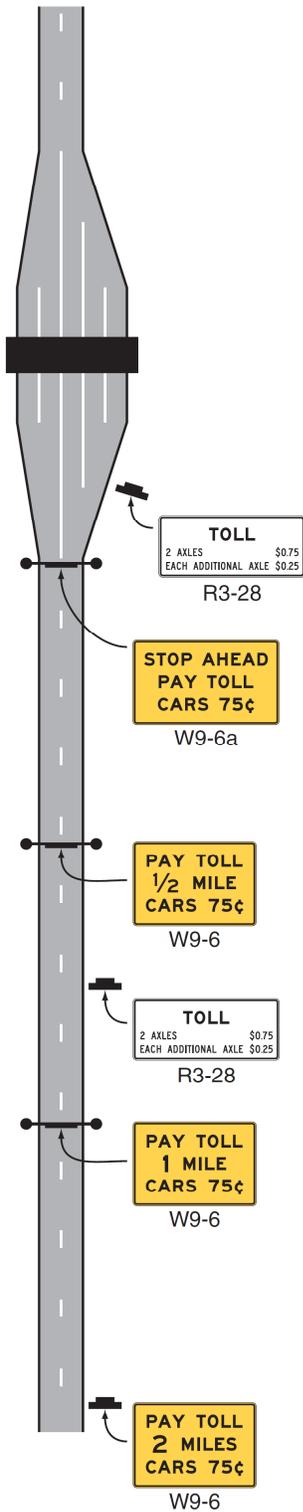
Exact Change or ETC Account Lane with an
Optional M4-18 Exact Change Symbol

ETC Account-Only Lane

- * Optional flashing yellow beacons that are separated from any lane-use control signals for the lane (see Section 2F.16)
- ** The ETC pictographs that are shown are only examples. The pictograph for the toll facility's adopted ETC system shall be used.

Figure 2F-10. Examples of Mainline Toll Plaza Approach and Canopy Signing

**A - ALL TOLL PLAZA LANES ATTENDED
 (NO AUTOMATIC OR ELECTRONIC
 COLLECTION EQUIPMENT)**



B - EXACT CHANGE AND ATTENDED TOLL LANES

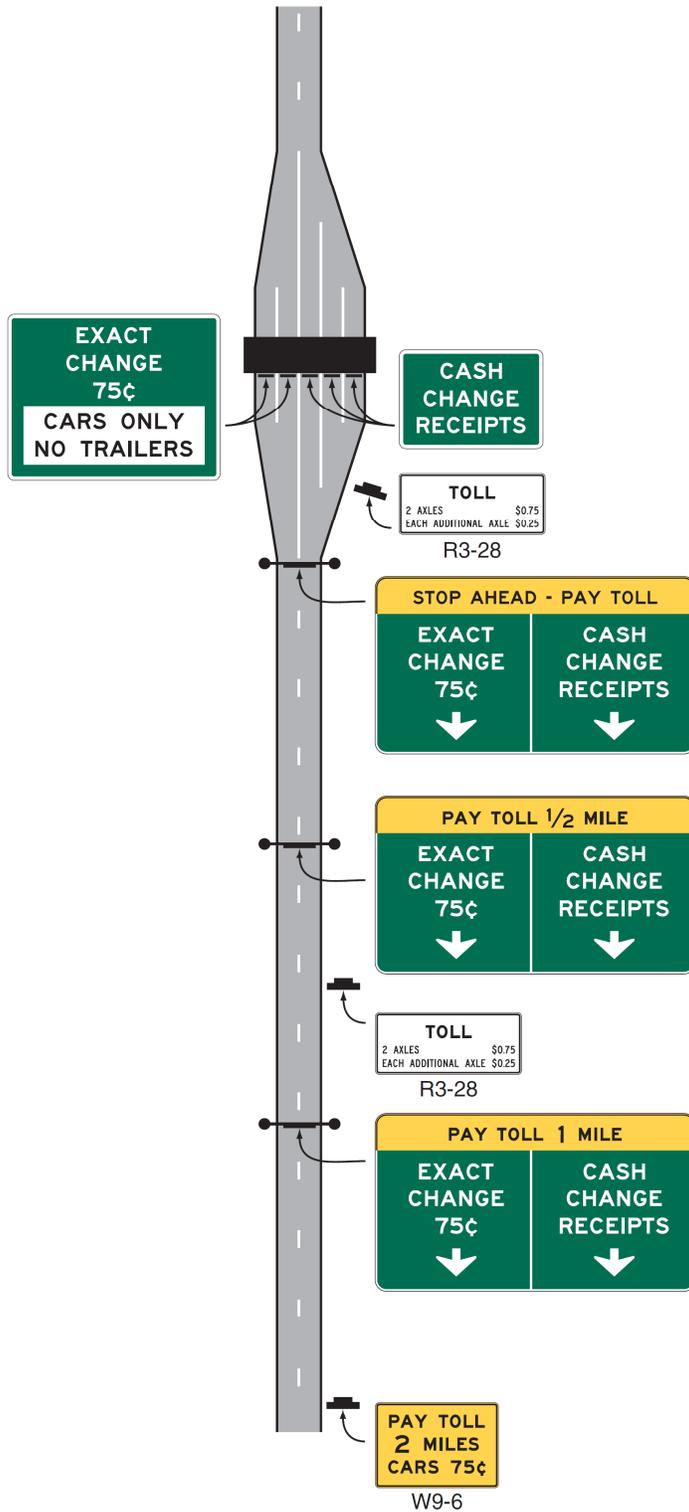


Figure 2F-11. Examples of Guide Signs for a Mainline Toll Plaza on a Diverging Alignment from Open-Road ETC Lanes

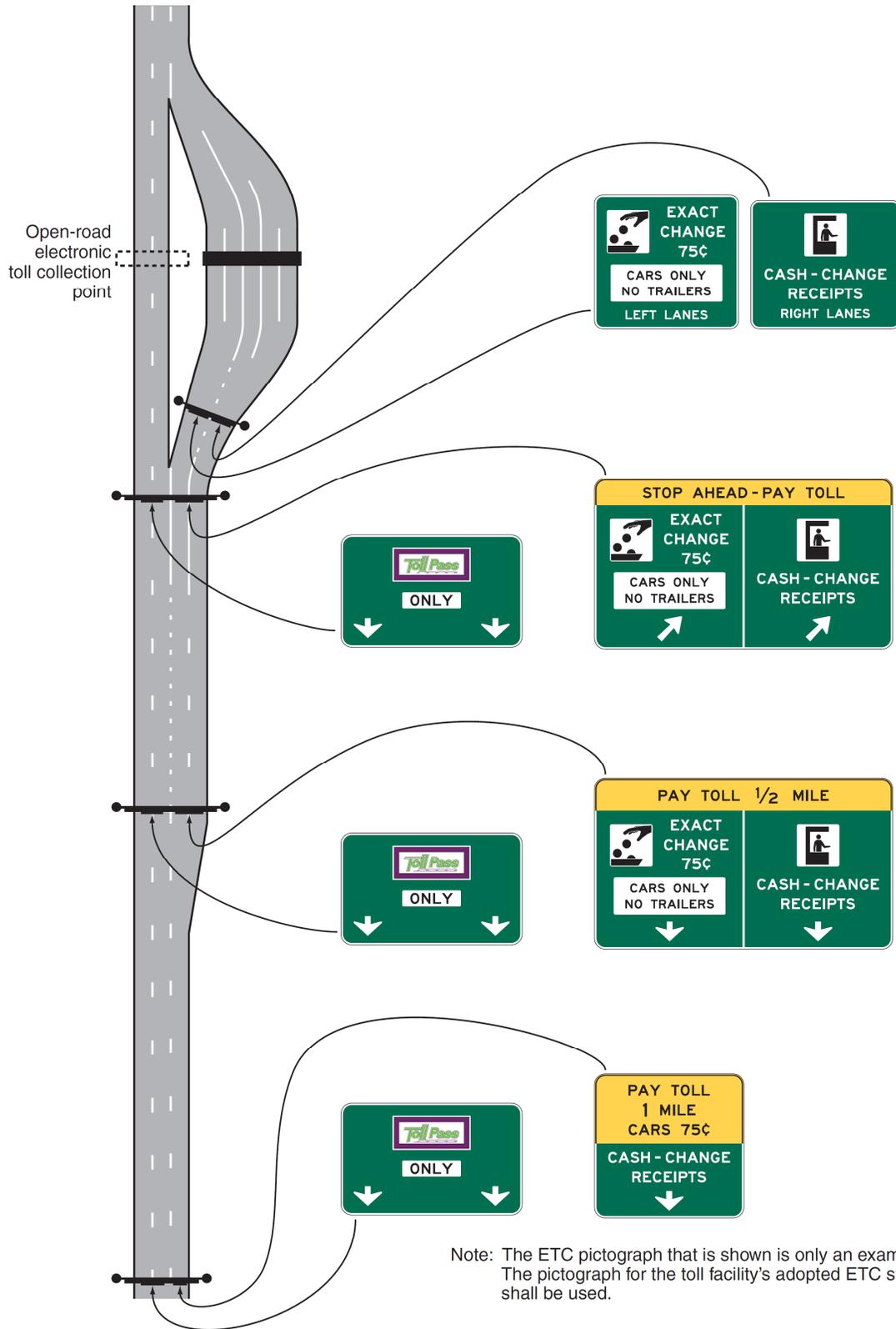


Table 2F-1. Toll Road Sign and Plaque Minimum Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Toll Rate	R3-28	2F.05	—	—	114 x 48	114 x 48	—	—
Pay Toll (plaque)	R3-29P	2F.05	—	—	24 x 18	24 x 18	—	—
Take Ticket (plaque)	R3-30P	2F.05	—	—	24 x 18	24 x 18	—	—
Pay Toll XX Miles Cars (price)	W9-6	2F.06	96 x 66	96 x 66	96 x 66	96 x 66	—	—
Pay Toll XX Miles Cars (price) (plaque)	W9-6P	2F.07	288* x 36	288* x 36	288* x 36	288* x 36	—	—
Stop Ahead Pay Toll Cars (price)	W9-6a	2F.08	114 x 66	114 x 66	114 x 66	114 x 66	—	—
Stop Ahead Pay Toll (plaque)	W9-6aP	2F.09	252* x 36	252* x 36	252* x 36	252* x 36	—	—
Last Exit Before Toll (plaque)	W16-16P	2F.10	—	—	252* x 36	252* x 36	—	—
Toll	M4-15	2F.11	24 x 12	24 x 12	36 x 18	36 x 18	24 x 12	36 x 18
No Cash	M4-16	2F.12	24 x 12	24 x 12	36 x 18	36 x 18	24 x 12	36 x 18
Toll Collector Symbol	M4-17	2F.13	—	—	48 x 48	48 x 48	—	—
Exact Change Symbol	M4-18	2F.13	—	—	48 x 48	48 x 48	—	—
ETC Only	M4-20	2F.12	24 x 24	24 x 24	36 x 36	36 x 36	24 x 24	36 x 36

* The width shown represents the minimum dimension. The width shall be increased as appropriate to match the width of the guide sign.

- Notes: 1. Larger signs may be used when appropriate
2. Dimensions in inches are shown as width x height