U.S. Department
of Transportation
**Federal Highway
Administration**

Notice of Proposed Amendments to the Manual on Uniform Traffic Control Devices

FHWA Docket No. 98-3644

Parts 2A, 2D, 2E, 2F and 2I

Part 2A	General Provisions and Standards
Part 2D	Guide Signs-Conventional Roads
Part 2E	Guide Signs-Freeways and Expressways
Part 2F	Specific Service Signs
Part 2I	Signing for Civil Defense

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2A. GENERAL PROVISIONS AND STANDARDS

2A.1 Function and Purpose of Signs

SUPPORT:

This Manual contains standards, guidance, and options for the signing within the right-of-way of all classes of public highways. The functions of signs are to provide regulations, warnings, and information for road users. Both words and symbols are used to convey the messages. Signs are not typically used to confirm rules of the road.

Detailed sign requirements are found in the following Chapters of Part 2:

Sign Type	Chapter
Regulatory	2B
Warning	2C
Guide (Conventional Roads)	2D
Guide (Freeways and Expressways)	2E
Specific Service (Logo)	2F
Recreation and Cultural Interest	2G
Tourist Oriented Direction (TODS)	2H
Civil Defense Emergencies	2I

Table 2A.1

GUIDANCE:

Signs should be used only where justified by engineering studies, as noted in Section 1A.9.

Roadway geometric design and signing should be coordinated so that signing can be effectively placed to give the road user necessary regulatory, directional, and warning information.

STANDARD:

The requirements and standards for signs depend on the particular highway class on which they are to be used. For this purpose the following definitions shall apply:

a. Freeway - A divided highway with full control of access.
b. Expressway - A divided highway with partial control of access and some grade separated intersections.
c. Conventional Road - A street or highway other than a freeway or expressway.
d. Special Purpose Road - Low-volume, low-speed roads serving recreational areas, resource development activities, or providing local access to properties.

GUIDANCE:

Where any of the three distinctive features of expressways (divided roadways, controlled access, and grade separation) are lacking, prescribed expressway signs might not be fully applicable. Therefore, standard signs for conventional roads should be used, with such enlargement or other modification as is required to adapt them to existing conditions.

2A.2 Definitions

(See Section 1A.14)

2A.3 Standardization of Application

GUIDANCE:

It is recognized that urban traffic conditions differ from those in rural environments, and in many instances signs are applied and located differently. Where pertinent and practical, this Manual sets forth separate recommendations for rural and urban conditions.

The use of signs should be based on engineering judgment. Results from traffic engineering studies of physical and traffic factors should indicate the locations where signs are deemed necessary.

Option:

Traffic engineering studies may indicate that signs would be unnecessary at certain locations.

STANDARD:

Each standard sign shall be displayed only for the specific purpose prescribed for it in this Manual. Determination of the particular signs to be applied to a specific condition shall be made in accordance with

the criteria set forth in the following pages. Before any new highway, detour, or temporary route is opened to traffic, all necessary signs shall be in place. Signs required by road conditions or restrictions shall be removed when those conditions cease to exist or the restrictions are withdrawn.

2A.4 Excessive Use of Signs

GUIDANCE:

Regulatory and warning signs should be used conservatively because these signs, if used to excess, tend to lose their effectiveness. However, route signs and directional signs should be used frequently because they promote safe and efficient operations by keeping road users informed of their location.

2A.5 Classification of Signs

STANDARD:

Signs are classified by their function as follows:

- Regulatory signs give notice of traffic laws or regulations.
- Warnings signs call attention to existing or potential hazards on or adjacent to a highway that may not be readily apparent to road users.

- Guide signs show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information.

2A.6 Design of Signs

STANDARD:

Detailed drawings of these and other approved signs and alphabets are shown in the Standard Highway Signs, and the Standard Alphabets for Signs and Pavement Markings.

SUPPORT:

This Manual shows many typical standard signs approved for use on streets and highways.

In the specifications for individual signs, the legend, color, and size are shown in the accompanying tables and illustrations and are not always detailed in the text.

GUIDANCE:

The basic requirements of a highway sign are that it be legible to those for whom it is intended and that

it be understandable in time to permit a proper response. Desirable attributes include:

- high visibility by day and night,
- high legibility (adequately sized letters or symbols, and a short legend for quick comprehension by a road user approaching a sign).

Standardized colors and shapes are specified so that the several classes of traffic signs can be promptly recognized. Simplicity and uniformity in design, position, and application are important.

STANDARD:

The term "legend" shall include all word messages and symbol designs that are intended to convey specific meanings. For purposes of design, borders shall be included as part of the sign legend.

Uniformity in design shall include shape, color, dimensions, legends, and illumination or retroreflectivity. All symbols shall be unmistakably similar to those shown in the MUTCD or Standard Highway Signs Book. All symbols shall be approved for use by the Federal Highway Administration based on research evaluation of motorist comprehension and recognition values.

Where a word message is applicable, the wording shall be as herein provided. Standardization of these designs does not preclude further improvement by minor changes in the proportion of symbols, width of borders, or layout of word messages, but all shapes and colors shall be as indicated.

In situations where word messages are required other than those herein provided, the signs shall be of the same shape and color as standard signs of the same functional type.

Option:

State and local highway agencies may develop special word message signs in situations where roadway conditions make it necessary to provide road users with additional regulatory, warning, or guidance information.

Most standard symbols are oriented facing left; however, mirror images of these symbols may be used where the reverse orientation might better convey to road users a direction of movement.

2A.7 Changeable Message Signs

STANDARD:

Changeable message signs are traffic control devices designed to display various messages. They shall conform to the principles established in this Manual, and to the extent practical, with the design and applications prescribed in Section 6F.2.

SUPPORT:

Changeable message signs, with more sophisticated technologies, are gaining widespread use to inform road users of variable situations, particularly along congested traffic corridors. Highway and transportation organizations are encouraged to develop and experiment with changeable message signs (Section 1A.6) and to carefully evaluate such installations so that additional standards may be adopted in the future.

Information regarding the design and application of portable changeable message signs in temporary traffic control zones is contained in Section 6F.2.

2A.8 Ilumination and Retroreflectivity

SUPPORT:

Although a variety of existing materials can be used effectively, it is recognized that technological progress may develop new and satisfactory or superior materials for highway signs, particularly in the fields of illumination and retroreflection. This Manual is not intended to exclude any illumination method or material that meets the standard requirements for color and legibility, both by day and night.

STANDARD:

Regulatory, warning, and guide signs shall be retroreflective or illuminated to show the same shape and color by both day and night, unless specifically stated otherwise in the MUTCD text discussion of a particular sign or group of signs.

The requirements for sign illumination shall not be considered to be satisfied by street, highway, or strobe lighting.

GUIDANCE:

All overhead sign installations should be illuminated unless an engineering study shows that retroreflection will perform effectively without illumination.

Option:

Different sign elements may be illuminated by the means shown in Table 2A.2.

Means of Illumination	Sign Element to be Illuminated
Light behind the sign face	• **Symbol or message** • **Background** • **Symbol, message, and background (through a translucent material)**
Attached or independently mounted light source designed to direct essentially uniform illumination	**Entire sign face**
Other effective devices, which provide clear visibility at night: • **luminous tubing** • **fiber optics (shaped to the lettering or symbol)** • **patterns of incandescent** • **light bulbs** • **luminescent panels.**	• **Symbol or message** • **Entire sign face**

Table 2A.2

Retroreflection of different sign elements may be by the means shown in Table 2A.3.

Means of Retroreflection	Sign Element
Reflector "buttons" or similar units	Symbol Word message Border
A material that has a smooth, sealed outer surface	Symbol Word message Border Background

Table 2A.3

2A.9 Minimum Retroreflectivity Levels

GUIDANCE:

(Reserved)

2A.10 Shapes

STANDARD:

Particular shapes, as shown in Table 2A.4 shall be used exclusively for specific signs or series of signs, unless specifically exempted in the standard discussing a particular sign or class of signs.

Use of Shapes

Shape	Signs
Octagon	* Stop
Equilateral Triangle (1 Point Down)	* Yield
Circle	Highway-Rail Grade Crossing (Advance Warning) Civil Defense Evacuation Route Marker
Pennant Shape/ Isosceles Triangle (Longer Axis Horizontal)	* No Passing
Pentagon (Pointed Up)	* School Crossing Series
Crossbuck (Two Rectangles in an "X" Configuration)	* Highway-Rail Grade Crossing
Diamond	Warning Series
Rectangle (Long Side Vertical)	Regulatory Series
Rectangle (Long Side Horizontal)	Guide Series Warning Series
Trapezoid	* Recreational Series

Table 2A.4 *Indicates exclusive use

Specific shapes for other particular signs can be found in the individual sections.

2A.11 Sign Colors

STANDARD:

The colors to be used on standard signs and their specific use on these signs shall be as shown in Table 2A.5. The color coordinates and values shall be as described in the Standard Highway Signs (SHS)Book.

SUPPORT:

Whenever white is specified herein as a color, it is understood to include silver-colored retroreflective coatings or elements that reflect white light.

Uses of Sign Colors - Table 2A.5

Type of Sign	Legend					Background							
	Black	Green	Red	White	Yellow	Black	Blue	Brown	Green	Orange	Red	White	Yellow
Regulatory													
Right of Way Series			x	x							x	x	
Speed Series	x			x		x						x	
Movement Series	x		x	x		x					x	x	
Prohibitive or Yield			x									x	
Permissive		x										x	
Warning	x												x
Guide													
Route Signs													
Interstate				x			x				x		
State Route	x					x						x	
US Route	x					x						x	
County Route					x		x						
Forest Route				x				x					
Evacuation Route				x			x						
Information				x			x		x				
Milepost Signs				x					x				
Road User Service				x			x						
Recreational				x				x					
Temporary Traffic Control	x									x			
School	x												x

The colors purple, light blue, coral, and florescent yellow-green are being reserved for future use.
Color schemes on specific signs are shown in the graphics located at the end of each appropriate section.

2A.12 Dimensions

SUPPORT:

Sign sizes for use on the different classes of highways are shown in MUTCD Sections 2B.3 and 2C.5 and the Standard Highway Signs (SHS) Book.

STANDARD:

The standard sign dimensions prescribed in this Manual and the SHS book shall be used unless engineering judgment determines other sizes are appropriate. Where engineering judgment determines that sizes smaller than the standard dimensions are appropriate for use, the sign dimensions shall not be less than the minimum dimensions specified in the SHS book. Where engineering judgment determines that sizes larger than the standard dimensions are appropriate for use, standard shapes and colors shall be used and standard proportions shall be retained as much as practical.

GUIDANCE:

Increases above standard sizes should be used where greater legibility or emphasis is needed. Wherever practical, the overall dimensions of the sign plates should be increased in 150 mm (6 in) increments.

2A.13 Symbols

SUPPORT:

Sometimes a change from word messages to symbols requires significant time for public education and transition. Therefore, the MUTCD includes the practice of using educational plaques to accompany some new symbol signs.

STANDARD:

Symbol designs shall in all cases be essentially like those shown in this Manual and the Standard Highway Signs Book. New symbol designs shall be adopted by the FHWA based on research evaluations to determine road user comprehension, sign conspicuity, and sign legibility.

New warning or regulatory symbol signs not readily recognizable by the public shall be accompanied by an educational plaque.

Option:

State and/or local highway agencies may conduct research studies to determine road user comprehension, sign conspicuity, and sign legibility

Educational plaques may be left in place as long as they are in serviceable condition.

2A.14 Word Messages

STANDARD:

All word messages shall use standard wording and letters as shown in this Manual, the Standard Highway Signs Book and the Standard Alphabets for Highway Signs and Pavement Markings.

GUIDANCE:

Word messages should be as brief as possible and the lettering should be large enough to provide the necessary legibility distance. A specific ratio, such as 25 mm (1 in) of letter height per 12 m (40 ft) of legibility distance, should be used.

Abbreviations should be kept to a minimum, and should include only those that are commonly recognized and understood, such as Ave. (for Avenue), Blvd. (for Boulevard), N. (for North), R.R. (for Rural Route), or Jct (for Junction).

STANDARD:

All sign lettering shall be in uppercase letters as provided in the Standard Alphabets for Highway Signs and Pavement Markings.

Option:

Destination guide sign and street name sign messages may be in lowercase letters with an initial uppercase letter.

2A.15 Sign Borders

STANDARD:

Unless specifically stated otherwise, each sign illustrated herein shall have a border of the same color as the legend, at or just inside the edge.

The corners of the sign border shall be rounded, except for stop signs.

GUIDANCE:

A dark border on a light background should be set in from the edge, while a light border on a dark background should extend to the edge of the panel. A border for 750 mm (30 in) signs with a light background should be from 13 mm to 19 mm (½ to ¾ of an inch) in width, 13 mm (½ in) from the edge. For similar signs with a light border, a width of 25 mm
(1 in) should be used. For other sizes, the border width should be of similar proportions, but should not exceed the stroke-width of the major lettering of the sign. On signs exceeding 1.8 m (6 ft) by 3 m (10 ft) in size, the border should be 50 mm (2 in) wide, or on larger signs, 75 mm (3 in).

Where practical, the corners of the sign panels should be rounded to fit the border, except for stop signs.

2A.16 Standardization of Location

SUPPORT:

Locations for a number of typical signs are illustrated in Figures 2-1 to 2-7.

STANDARD:

Signs requiring different decisions by the road user shall be spaced sufficiently far apart for the required decisions to be made safely. The spacing shall be in units of time as determined by posted or 85th percentile speed.

GUIDANCE:

Standardization of position cannot always be attained in practice. However, signs should be located on the right side of the roadway where they are easily recognized and understood by road users. Signs in other locations should be considered only as supplementary to signs in the normal locations, except as otherwise indicated.

Signs should be individually erected on separate posts or mountings except where one sign supplements another or where route or directional signs must be grouped. Signs should be located so that they: 1) are not a hazardous fixed object; 2) optimize nighttime visibility; 3) minimize the effects of mud splatter and debris; 4) do not obscure each other; and 5) so that they are not hidden from view.

With the increase in traffic volumes and the desire to provide road users information in addition to regulatory, warning, and directional guidance, an order of priority for sign installation should be established. This is especially critical where space is limited for sign installation and there is a demand for several different types of signs. Overloading road users with too much information can cause improper driving and impair safety.

Some information is more critical to the road user than other information. In case of conflict, regulatory and warning signing whose location is critical should be displayed rather than guide signing. Information of a less critical nature should be moved to less critical locations or omitted.

Option:

Under some circumstances signs may be placed on channelizing islands or (as on sharp curves to the right) on the left-hand shoulder of the road, directly in front of approaching vehicles. A supplementary sign located on the left of the roadway may be used on a multi-lane road where traffic in the right lane may obstruct the view to the right.

GUIDANCE:

On wide expressways, or where some degree of lane-use control is desirable, or where space is not available at the roadside, overhead signs should be used.

In urban areas where crosswalks exist, signs should be placed 1.2 m (4 ft.) in advance of the crosswalk.

2A.17 Overhead Sign Installations

STANDARD:

Overhead signs shall provide a vertical clearance of not less than 5.1 m (17 ft.) to the sign, light fixture, or sign bridge, over the entire width of the pavement and shoulders except where a lesser vertical clearance is used for the design of other structures.

Option:

The operational requirements of the present highway system are such that overhead signs will have value at many locations. The factors justifying

the installation of overhead sign displays are not definable in specific numerical terms, but the following conditions may be considered.

a. Traffic volume at or near capacity
b. Complex interchange design
c. Three or more lanes in each direction
d. Restricted sight distance
e. Closely-spaced interchanges
f. Multi-lane exits
g. Large percentage of trucks
h. Street lighting background
i. High-speed traffic
j. Consistency of sign message location through a series of interchanges
k. Insufficient space for ground-mounted signs
l. Junction of two freeways
m. Left exit ramps

STANDARD:

The existence of one or more of the conditions listed shall not automatically justify the use of overhead signs.

Option:

Some of the elements listed above may be less critical based on close coordination between design and operation.

Over-crossing structures may serve for the support of overhead signs, and under some circumstances, may be the only practical solution that will provide adequate viewing distance. Use of such structures as sign supports may eliminate the need for the foundations and sign supports along the roadside.

On freeways and expressways, signs may be placed on bridges, where feasible, to enhance safety and economy.

2A.18 Mounting Height

STANDARD:

Signs installed at the side of the road shall be mounted at a height of at least 2.1 m (7 ft), measured from the bottom of the sign to the near edge of the pavement. Where parking or pedestrian movements occur, 2.1 m (7 ft) also applies. Supplemental plaques shall be mounted at a minimum height of 1.2 m (4 ft) measured from the bottom of the sign to the pavement.

Directional signs on expressways shall be installed with a minimum height of 2.1 m (7 ft) (from the level of the near edge of the pavement to the bottom of the sign). If a secondary sign is mounted below another sign, the major sign is installed at least 2.4 m (8 ft) and the secondary sign at least 1.5 m (5 ft) above the level of the pavement edge. All route signs, warning signs, and regulatory signs on expressways shall be at least 2.1 m (7 ft) above the level of the pavement edge.

Overhead signs shall provide a vertical clearance of not less than 5.1 m (17 ft) to the sign, light fixture, or sign bridge, over the entire width of the pavement and shoulders except where a lesser vertical clearance is used for the design of other structures. The vertical clearance to overhead sign structures or supports shall not be greater than 0.3 m (1 ft) in excess of the minimum clearance of other structures.

Option:

The height to the bottom of a secondary sign mounted below another sign may be 0.3 m (1 ft) less than the height specified above.

A route sign assembly consisting of a route sign with an auxiliary plate (Section 2D.10) may be treated as a single sign for the purposes of this section.

Some flexibility in sign mounting height is permitted when supports are located near the edge of the right-of-way on a steep backslope. Here the alternative is to relocate the sign closer to the road, which may be less desirable.

Where signs are placed outside of the clear zone, the height to the bottom of such signs may be 1.5 m (5 ft) above the level of the pavement edge.

In special cases it may be necessary to reduce the clearance to overhead signs because of substandard dimensions in tunnels and other major structures such as double-deck bridges.

SUPPORT:

The clear zone is the total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. The desired width is dependent upon traffic volumes, speeds, and roadside geometry. Additional information can be found in the AASHTO Roadside Design Guide.

2A.19 Lateral Offset

STANDARD:

The minimum lateral offset from the edge of the shoulder to the near edge of a roadside mounted sign shall be 1.8 m (6 ft.). Roadside mounted sign supports shall be breakaway or shielded with a longitudinal barrier or crash cushion if within the clear zone.

The minimum lateral offset from the edge of the shoulder to the near edge a support for overhead signs (cantilever or sign bridges) shall be 1.8 m (6 ft.). Overhead sign supports shall have a barrier to shield them if they are within the clear zone.

GUIDANCE:

All supports should be located as far as possible from the edge of the shoulder. Caution should be taken to avoid the placement of obstacles within the clear zone. The minimum lateral offset is intended to keep trucks and cars that use the shoulders from damaging the signs or supports. The minimum lateral offset is only a small portion of the "clear zone" necessary for the use of errant vehicles.

Advantage should be taken to place signs behind existing roadside barriers, on over-crossing structures, or other locations that minimize the exposure of sign supports to traffic. Otherwise, breakaway or yielding supports should be used.

Option:

Signs may be placed on existing supports used for other purposes, such as traffic signals, street lights, and public utility poles where permitted.

STANDARD:

When signs are placed on existing supports, they must meet other placement criteria contained in the MUTCD.

Option:

Lesser lateral offsets may be used on connecting roadways or ramps at interchanges, but not less than 1.8 m (6 ft) from edge of traveled way.

GUIDANCE:

In urban areas where lateral offsets are limited, a minimum lateral offset of 0.6 m (2 ft.) should be used.

Option:

A minimum offset of 0.3 m (1 ft) from the face of the curb may be used in urban areas where sidewalk width is limited or where existing poles are close to the curb.

2A.20 Position of Signs

SUPPORT:

Detailed specifications for sign locations are given in the sections of the Manual dealing with an individual sign or class of signs.

2A.21 Orientation

GUIDANCE:

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve.

Where mirror reflection from the sign face is encountered in such degree as to reduce legibility, the sign should be turned slightly away from the road. When signs are offset 9 m (30 ft) or more from the pavement edge, signs should be turned toward the road. At curved alignments, the angle of placement should be determined by the course of approaching traffic rather than by the roadway edge at the point where the sign is located.

Option:

On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

2A.22 Posts and Mountings

STANDARD:

Sign posts, foundations, and mountings shall be so constructed as to hold signs in a proper and permanent position and to resist swaying in the wind or displacement by vandalism.

SUPPORT:

See the latest edition of AASHTO's Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals for additional information.

2A.23 Maintenance

GUIDANCE:

All traffic signs should be kept in proper position, clean, legible, and with adequately maintained retroreflectivity (see Section 2A.9). Damaged or deteriorated signs should be replaced.

To assure adequate maintenance, a schedule for inspecting (both day and night), cleaning, and replacing signs should be established. Employees of street and highway organizations, police, and other governmental agencies whose duties require that they travel on the highways should be encouraged to report any damaged or obscured signs at the first opportunity.

Steps should be taken to see that weeds, trees, shrubbery, construction materials, and equipment do not obscure the face of any sign.

A regular schedule of replacement of lighting elements for illuminated signs should be maintained.

2A.24 Wrong-Way Traffic Control

STANDARD:

Where divided highways are separated by median widths of 9 m (30 ft) or more, the intersections with crossroads shall be signed as two separate intersections.

GUIDANCE:

Traffic engineering studies should be conducted to identify and suggest practical corrections at intersections on divided highways where wrong-way usage is being experienced or where a wide median, a rural unlighted environment, or other contributing factors indicate the likelihood of wrong-way movements.

Where divided highways are separated by median widths of 9 m (30 ft) or more, ONE WAY signs (Section 2B.30) should be placed and visible to each crossroad approach on the near right-hand and far left-hand corners of each intersection with the directional roadways as shown in Figure 2A-4.

If used, DO NOT ENTER and WRONG WAY signs should be placed on a divided highway at a location to be directly in view of a driver making a wrong-way entry from the crossroad.

Option:

ONE WAY signs are not ordinarily needed at divided highway intersections with median widths of less than 9 m (30 ft). In cases where they are needed, combinations of ONE WAY and/or Divided Highway Crossing (R6-3), DO NOT ENTER, or WRONG WAY signs may be used to improve operations at these intersections.

When an engineering study has demonstrated that placement of ONE WAY signs in the median area may create confusion, the near right-hand signs in the median may be omitted and ONE WAY signs may be placed in the far right quadrant of the intersection.

Turn prohibition, DO NOT ENTER, and WRONG WAY signs may also be used to supplement ONE WAY sign layouts in Figures 2A.4, 2A.5, or 2A.6.

At locations that are determined to have a special need, other standard warning or prohibitive methods and devices may be used as a deterrent to the wrong-way movement (See Section 2E.51).

Standard directional arrow pavement markings may also be placed in each approach lane of each roadway in advance of an at-grade intersection and at other selected locations to indicate the direction of traffic flow.

SUPPORT:

Figure 2A-5 shows an alternate scheme when ONE WAY signs in the median create confusion. The scheme replaces one pair of ONE WAY signs in the median with YIELD signs.

If signs placed directly in the driver's view are not sufficient, additional signs may be placed where the median width is 9 m (30 ft) or more.

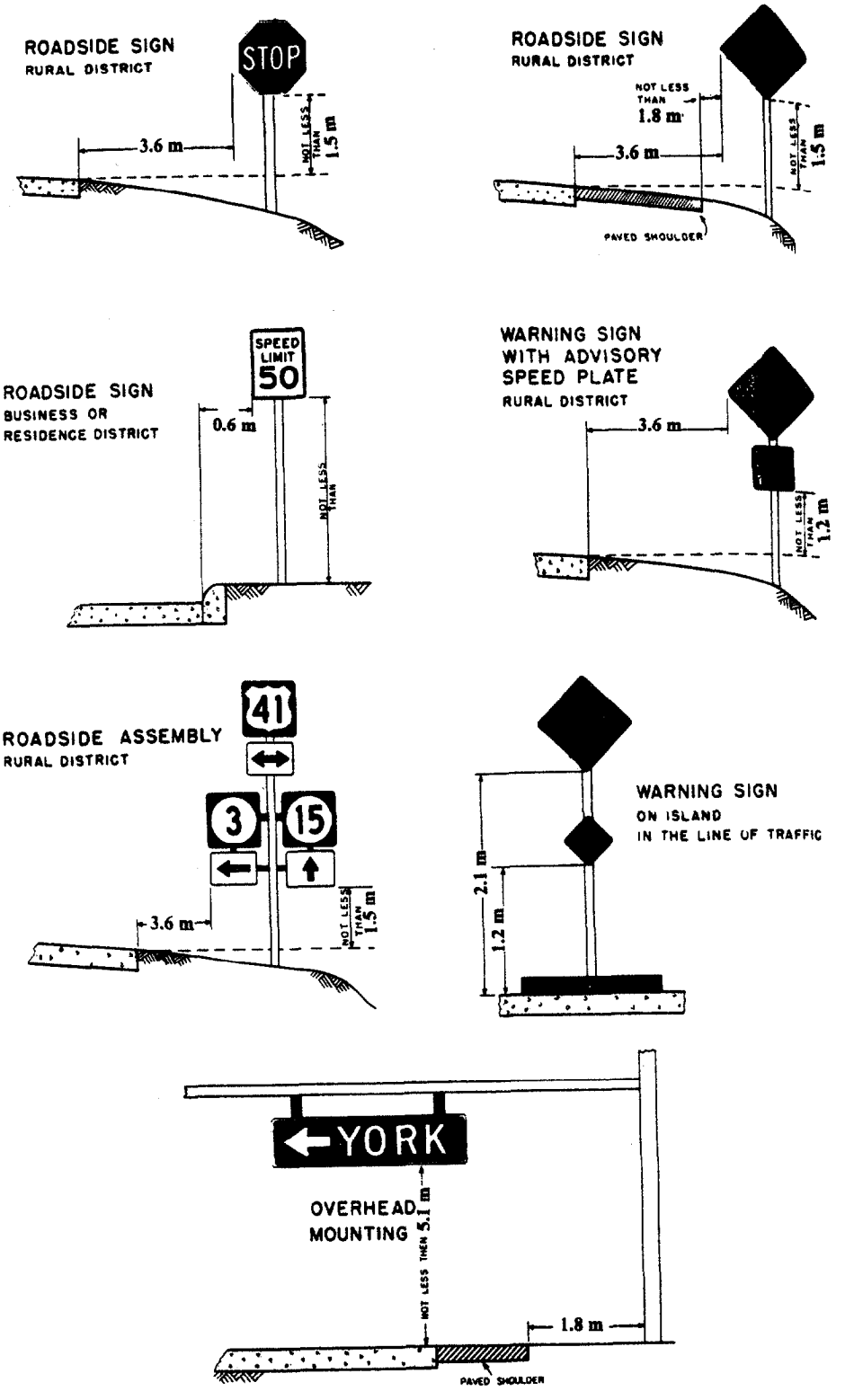

Figure 2-1. Height and Lateral Location of Signs - Typical Installations

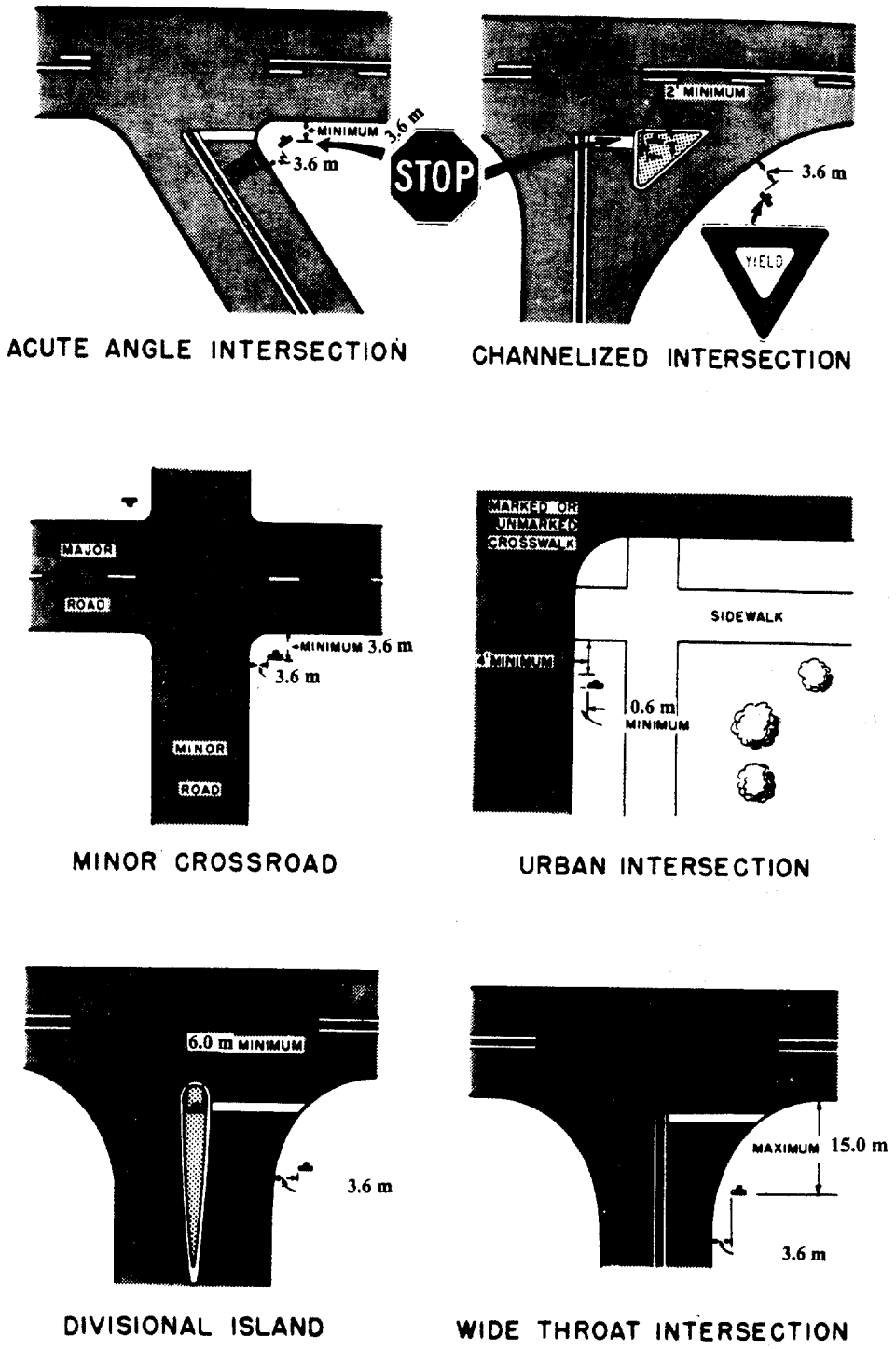

Figure 2-2. Typical Locations for STOP and YIELD Signs.

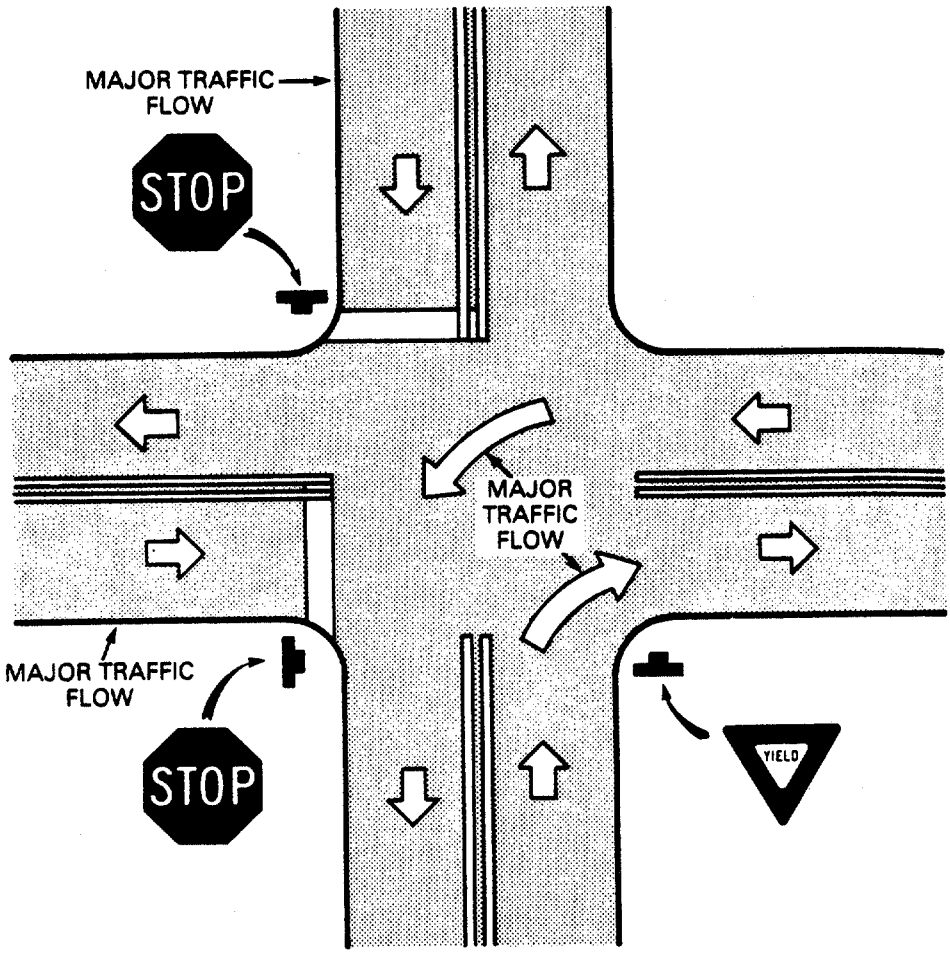

Figure 2-3. YIELD Signs in Conjunction with STOP Sign.

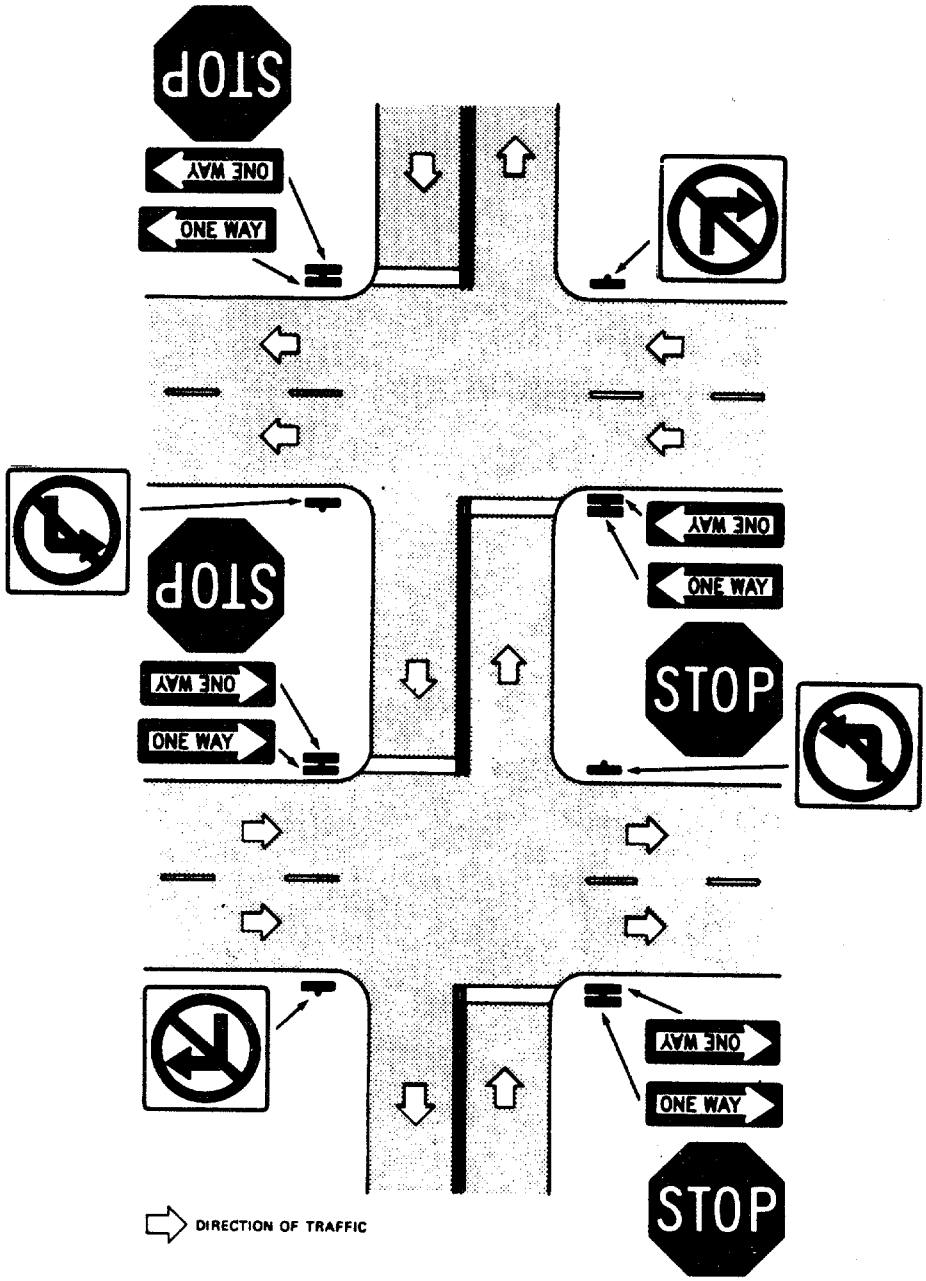

Figure 2-4. Location of ONE WAY and Turn Prohibition Signs

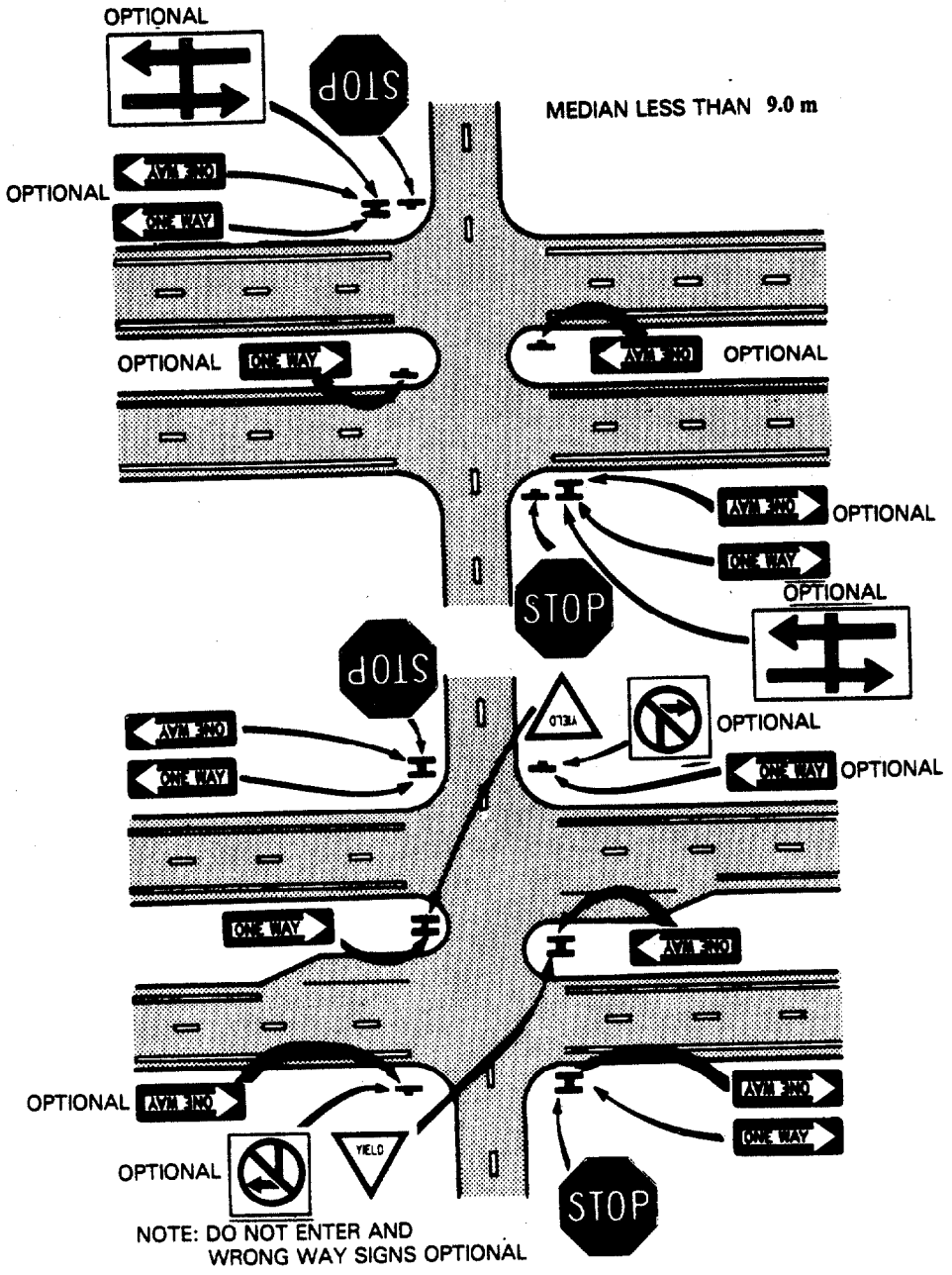

Figure 2-5. Alternate ONE-WAY Signing for Divided Highways.

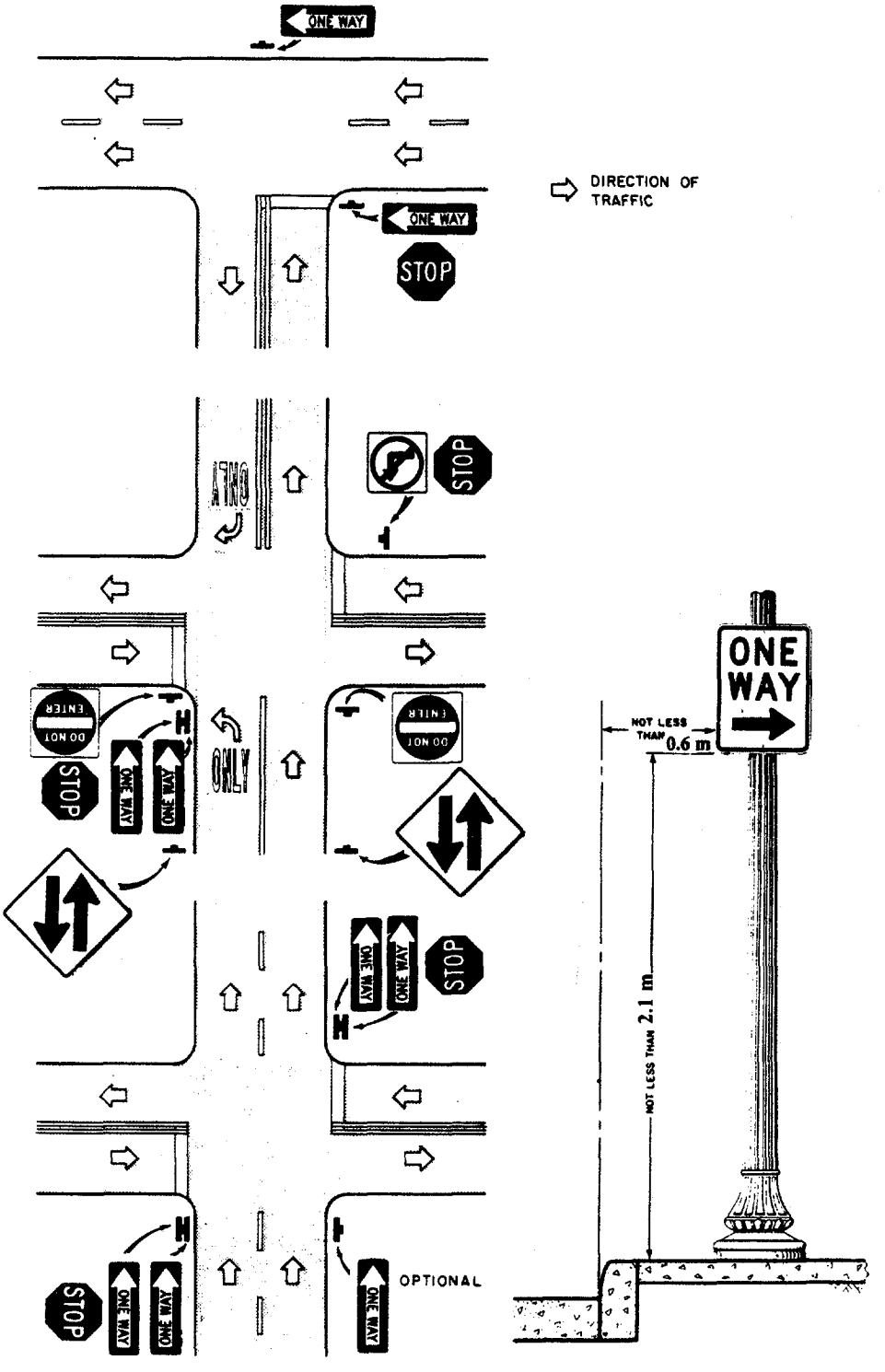

Figure 2-6. Typical Location of ONE-WAY Signs.

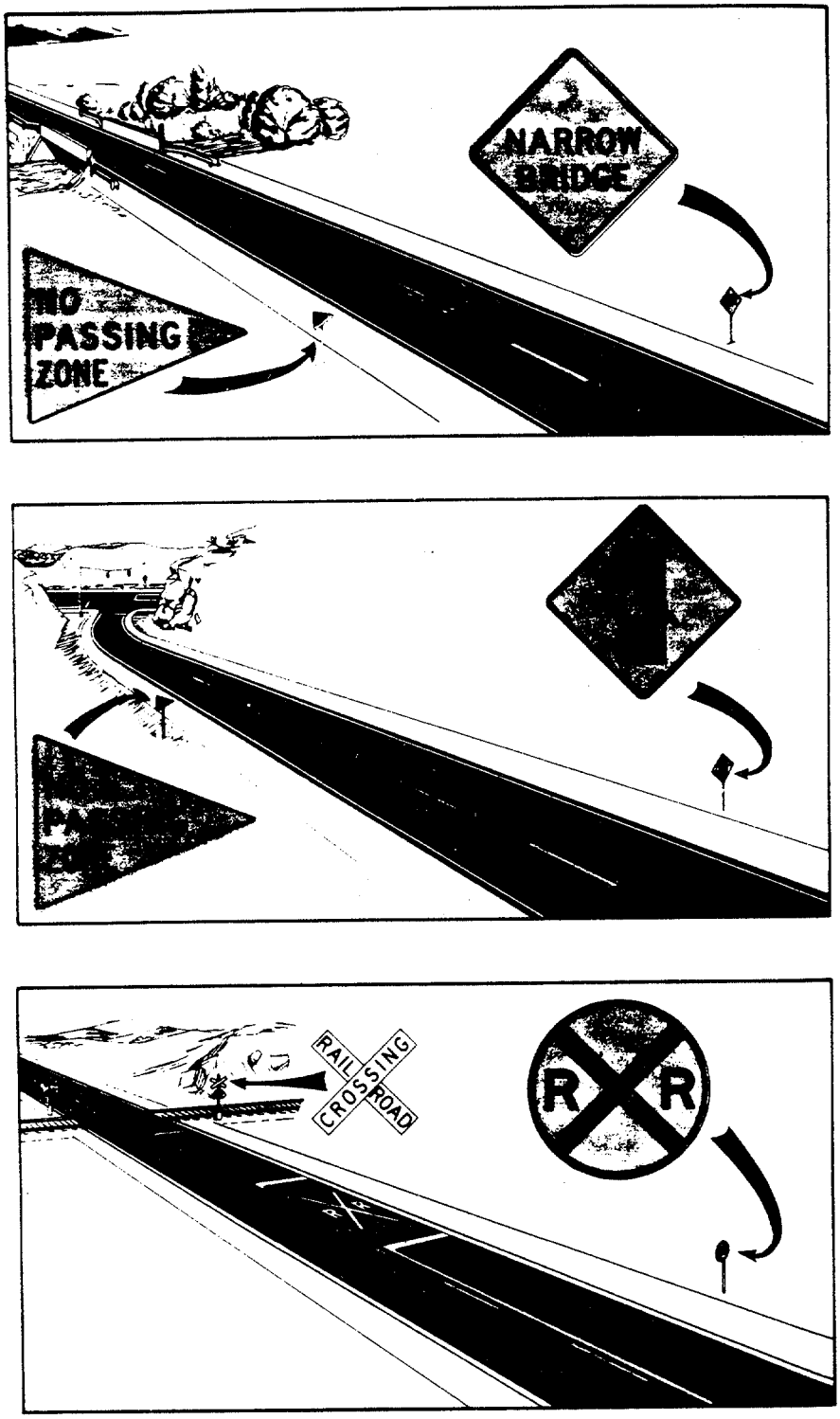

Figure 2-7. Typical Application of Warning Signs.

2D. GUIDE SIGNS-CONVENTIONAL ROADS

2D.1 Scope of Conventional Road Guide Sign Standards

STANDARD:

Standards for Conventional Road Guide Signs prescribed herein shall apply to any road or street other than expressways, freeways, and low-speed rural road.

Option:

Standards for Conventional Road Guide Signs may apply to low-volume rural roads.

2D.2 Application

SUPPORT:

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.

It is important to read section 2A for placement, location, and other general criteria for signs.

2D.3 Color, Retroreflection, and Illumination

SUPPORT:

Requirements for color, retroreflection and illumination are stated under the specific headings for individual guide signs or groups of signs. General provisions are given in Sections 2A.8 through 2A.11.

STANDARD:

Except where otherwise specified herein for individual signs or groups of signs, guide signs on streets and highways shall have a white message on a green background. All messages, borders, and legends shall be retroreflective and all backgrounds shall be retroreflective or illuminated.

2D.4 Size of Signs

SUPPORT:

For most guide signs, the legend is so variable that a set standardized 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. However, for signs with standardized designs, such as route signs, it is practical to use standard sizes which are given in the Standard Highway Signs (SHS) Book.

Option:

The size of overhead signs may be limited by factors such as lane width and vertical clearance. Reduced letter height, reduced interline spacing, and reduced edge spacing may be used

GUIDANCE:

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

2D.5 Lettering Style

STANDARD:

Design standards for upper-case letters, lower-case letters, numerals, and spacing shall be as provided in the Standard Alphabets for Highway Signs and Pavement Markings.

The standard lettering for conventional highway guide signs shall be all upper-case letters (Section 2A.14), or a combination of lower-case letters with an initial upper-case letter. Signs having 200 mm (8 in) or less letter size shall have all upper-case letters. The initial upper-case letters shall be approximately 1.33 times the "loop" height of the lowercase letters.

GUIDANCE:

When the letter height is greater than 200 mm (8 in), place names on guide signs should be composed of lower-case letters with an initial upper-case letter.

2D.6 Size of Lettering

SUPPORT:

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 the sign. Under optimum conditions, a guide sign message can be read and understood in a brief glance. The legibility distance includes a reasonable safety factor for inattention, blocking of view by other vehicles, unfavorable weather, inferior eyesight, or other causes for delayed or slow reading. Repetition of guide information on successive signs where conditions permit gives the road user more than one opportunity to obtain the information needed.

STANDARD:

Design layouts for conventional road guide signs showing interline spacing, edge spacing, and other specification details are contained in the Standard Highway Signs Book.

The principal legend on guide signs shall be in letters and numerals at least 150 mm (6 in) in height. On low-volume rural roads and on urban streets with speeds 25 mph or less, the principal legend shall be in letters at least 100 mm (4 in) high. Sign panels shall be large enough to accommodate the required legend without crowding.

GUIDANCE:

Though the available reading time for any given sign varies greatly with the approach speed, standard lettering sizes should be consistent on any particular class of highway.

The minimum sizes specified should be exceeded where conditions indicate a need for greater legibility.

2D.7 Amount of Legend

SUPPORT:

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

GUIDANCE:

Guide signs should be limited to three lines of principal legend. Where two or more signs are included in the same overhead display, the amount of legend should be minimized. Principal legend should include only place names, route numbers, and street names.

Option:

Symbols, action information, cardinal directions, and exit numbers may be used in addition to the principal legend where sign space is available.

2D.8 Arrows

SUPPORT:

Arrows are used for lane assignment and to indicate the direction toward designated routes or destinations. Figure 2-6 shows the two standard arrows approved for use on guide signs. Standard arrows for use on guide signs are also shown in the Standard Highway Signs Book.

STANDARD:

On overhead signs where it is desirable to indicate a lane to be followed, a down arrow shall point downward toward the center of that lane. Where a roadway is leaving the through lanes, an up arrow shall point upward at an angle representative of the alignment of the exit roadway.

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 pointed to each lane that can be used to reach the destination shown on the sign.

GUIDANCE:

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. An up arrow design, oriented horizontally, should be used at right-angle intersections.

On a ground-mounted sign, a directional arrow for a straight-through movement should point

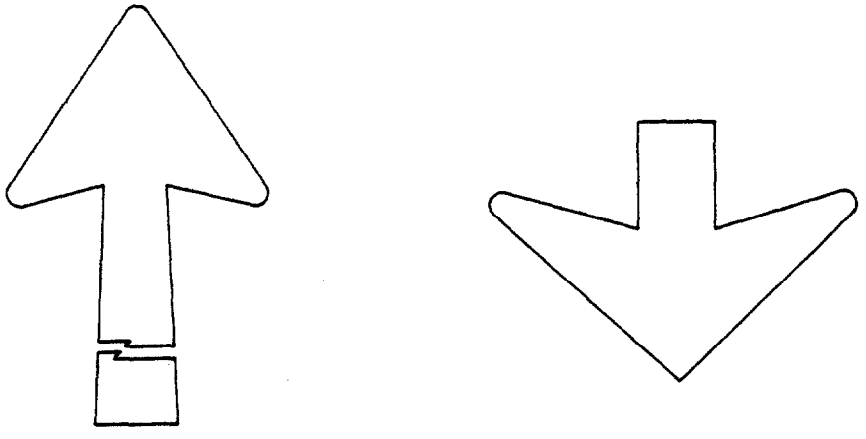

Figure 2-6. Standard arrows for use on guide signs.

Option:

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

GUIDANCE:

At an exit, an arrow should be placed at the side of the sign which will reinforce the movement of exiting traffic. The up arrow design should be used.

The width across the arrow head should be at least equal to the height of the largest letter on the sign; and for short downward pointing arrows on overhead signs, they should be 1.75 times the letter height.

Diagrammatic signing used on conventional roads should follow the principles set forth in Section 2E.17.

2D.9 Numbered Highway Systems

SUPPORT:

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

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. State and county road systems are numbered by the appropriate authorities.

The basic policy for numbering the U.S. and Interstate highway systems is contained in the following Purpose and Policy statements published by the AASHTO:

1. "Purpose and Policy--In the Establishment and Development of United States Numbered Highways," and

2. "Purpose and Policy--Establishment of a Marking System of the Routes Comprising the National System of Interstate and Defense Highways".

GUIDANCE:

The principles of this policy should be followed in establishing the above highway systems and any other systems, with effective coordination between adjacent jurisdictions. Care should be taken to avoid the use of numbers or other designations which 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:

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

2D.10 Route Signs and Auxiliary Signs

STANDARD:

All numbered highway routes shall be identified.

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.

SUPPORT:

Route signs and auxiliary signs are used to identify numbered highway routes.

STANDARD:

Route signs and any auxiliary signs which accompany them shall be retroreflective.

Option:

Route signs and auxiliary signs may be proportionally enlarged to any required size where greater legibility is needed.

SUPPORT:

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

2D.11 Design of Route Signs

STANDARD:

The design of standard route signs is detailed in the Standard Highway Signs Book. Other route sign

upward. For a turn, the arrow should point upward and at an angle related to the sharpness of the turn.

Option:

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

GUIDANCE:

At an exit, an arrow should be placed at the side of the sign which will reinforce the movement of exiting traffic. The up arrow design should be used.

The width across the arrow head should be at least equal to the height of the largest letter on the sign; and for short downward pointing arrows on overhead signs, they should be 1.75 times the letter height.

Diagrammatic signing used on conventional roads should follow the principles set forth in Sec. 2E.17.

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SUPPORT:

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

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2. "Purpose and Policy--Establishment of a Marking System of the Routes Comprising the National System of Interstate and Defense Highways".

GUIDANCE:

The principles of this policy should be followed in establishing the above highway systems and any other systems, with effective coordination between adjacent jurisdictions. Care should be taken to avoid the use of numbers or other designations which 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:

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

2D.10 Route Signs and Auxiliary Signs

STANDARD:

All numbered highway routes shall be identified.

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.

SUPPORT:

Route signs and auxiliary signs are used to identify numbered highway routes.

STANDARD:

Route signs and any auxiliary signs which accompany them shall be retroreflective.

Option:

Route signs and auxiliary signs may be proportionally enlarged to any required size where greater legibility is needed.

SUPPORT:

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

2D.11 Design of Route Signs

STANDARD:

The design of standard route signs is detailed in the Standard Highway Signs Book. Other route sign

Interstate
Route Sign
M1-1
600 mm x 600 mm (2-digit)
750 mm x 600 mm (3-digit)

Off-Interstate
Business Sign
M1-2
M1-3
600 mm x 600 mm (2-digit)
750 mm x 600 mm (3-digit)

U.S. Route Marker
M1-4

600 mm x 600 mm (2-digit)
750 mm x 600 mm (3-digit)

County
Route Marker
M1-6

600 mm x 600 mm

State Route Marker
M1-5
600 mm x 600 mm (2-digit)
750 mm x 600 mm (3-digit)

Forest Route Marker
M1-7
600 mm x 600 mm

M2-1
525 mm x 375 mm

designs shall be established by the authority having jurisdiction.

Interstate Route signs 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.

Option:

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

STANDARD:

A 600 mm x 600 mm (24 in x 24 in) minimum sign size shall be used for route numbers with one or two digits, and a 750 mm x 600 mm (30 in x 24 in) minimum sign size shall be used for route numbers having three digits.

Off-Interstate Business Route signs shall consist of a cutout shield carrying the number of the connecting Interstate route and the words BUSINESS (LOOP or SPUR) in upper-case letters. The legend and border shall be white on 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:

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. When used on a green guide sign, a white panel may be placed behind the shield to improve contrast.

STANDARD:

As a minimum, U.S. Route signs shall consist of a rectangular 600 mm x 600 mm (24 in x 24 in) or 750 mm x 600 mm (30 in x 24 in) plate, with black numerals on a white shield surrounded by a 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.

State Route signs shall be designed by the individual State transportation departments.

GUIDANCE:

State route signs should be rectangular plates of approximately the same size as the U.S. Route sign, and containing the same size black numerals on a white area surrounded by a 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.

Where U.S. or State Route signs are used as components of guide signs, only the outline of the shield or other distinctive shape should be used as shown in the illustration of the Combination Junction sign (Section 2D.14).

STANDARD:

If County road authorities elect to establish and identify a special system of important County roads, County road identification signs shall be designed and used as specified in the publication, "A Proposal for a Uniform County Route Marker Program on a National Scale" available from the National Association of Counties, Washington, DC. The Uniform County Route sign shall be a pentagonal shape and shall consist of a retroreflective yellow legend (County name, route letter, and number) and border on a retroreflective blue background. County Route signs displaying two digits or the equivalent (letter and numeral, or two letters) shall be a minimum size of 450 mm x 450 mm (18 in x 18 in); those carrying three digits or the equivalent shall be a minimum size of 600 mm x 600 mm (24 in x 24 in).

GUIDANCE:

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:

When used on a green guide sign, a yellow square or rectangle panel may be placed between the green guide sign and the County Route sign for improved contrast.

STANDARD:

Route signs 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.

2D.12 Design of Route Sign Auxiliaries

STANDARD:

Route sign auxiliaries carrying word legends, except the JCT sign, shall have a standard size of 600 mm x 300 mm (24 in x 12 in). Those carrying arrow symbols, or the JCT sign, shall have a standard size of 525 mm x 375 mm (21 in x 15 in). All route sign auxiliaries shall match the color combination of the sign that they supplement.

GUIDANCE:

Auxiliary signs carrying word messages and mounted with 750 mm x 600 mm (30 in x 24 in) Interstate Route signs should be 750 mm x 375 mm (30 in x 15 in.) With route signs of larger sizes, auxiliary signs should be suitably enlarged, but not to exceed width of route sign.

Option:

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

2D.13 Junction Auxiliary Sign

STANDARD:

The Junction auxiliary sign shall carry the abbreviated legend JCT and shall be mounted at the top of an assembly (Sec. 2D.27) either directly above the route sign or above a sign for an alternative route (Sec. 2D.16) which is part of the route designation. The minimum size of the Junction auxiliary sign shall be 525 mm x 375 mm (21 in x 15 in) for compatibility with auxiliary signs carrying arrow symbols.

2D.14 Combination Junction Sign

Option:

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

Other designs may be used to accommodate State and County Route signs.

STANDARD:

The sign shall have a green background with white border and lettering for the word JUNCTION.

GUIDANCE:

The size of the sign will depend on the number of routes involved. The numerals should be large enough for clear legibility, comparable with those in the individual route signs.

2D.15 Cardinal Direction Auxiliary Sign

GUIDANCE:

The Cardinal Direction auxiliary sign carrying the legend EAST, WEST, NORTH, or SOUTH should be used to indicate the general direction of the entire route.

STANDARD:

To improve the readability, the first letter of the cardinal direction words shall be 10 percent larger, rounded up to the nearest whole number size.

When used, the Cardinal Direction auxiliary sign shall be mounted directly above a route sign.

2D.16 Auxiliary Signs for Alternative Routes

Option:

Auxiliary signs, carrying the legend ALTERNATE, BYPASS, BUSINESS, or TRUCK may be used to indicate an alternate route of the same number between two points on that route.

STANDARD:

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

2D.17 Alternate Auxiliary Sign

Option:

The ALTERNATE (or ALT) auxiliary sign may be used to indicate an officially designated alternate

routing of a numbered route between two points on that route.

STANDARD:

When used, the ALTERNATE auxiliary sign shall be mounted directly above a route sign.

GUIDANCE:

The shorter or better constructed route should be given the regular number.

2D.18 Bypass Auxiliary Sign

Option:

The BYPASS auxiliary sign may be used to designate a route that branches from the regular numbered route through a city, bypasses a part of the city or congested area, and rejoins the regular numbered route beyond the city.

STANDARD:

When used, the BYPASS auxiliary sign shall be mounted directly above a route sign.

2D.19 Business Auxiliary Sign

Option:

The BUSINESS auxiliary sign may be used to designate an alternate route that branches from a regular numbered route, passes through the business portion of a city and rejoins the regularly numbered route beyond that area.

STANDARD:

When used, the BUSINESS auxiliary sign shall be mounted directly above a route sign.

2D.20 Truck Auxiliary Sign

Option:

The TRUCK auxiliary sign may be used to designate an alternate route that branches from a regular numbered route, when it is desirable to encourage or require commercial vehicles to use the alternate route.

STANDARD:

When used, the TRUCK auxiliary sign shall be mounted directly above a route sign.

2D.21 TO Auxiliary Sign

Option:

The TO auxiliary sign may be used to provide directional guidance to a particular road facility (Sec. 2D.32) from other highways in the vicinity.

STANDARD:

When used, the TO auxiliary sign shall be mounted directly above a route sign.

2D.22 End Auxiliary Sign

GUIDANCE:

The END auxiliary sign should be used where the route being traveled ends, usually at a junction with another route.

STANDARD:

When used, the auxiliary sign shall be mounted either directly above a route sign, or above a sign for an alternative route (Sec. 2D.16) which is part of the designation of the route being terminated.

2D.23 Temporary Auxiliary Sign

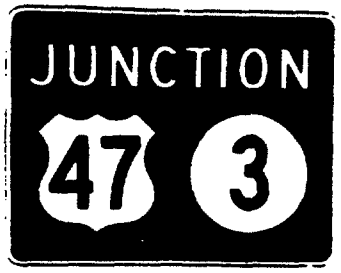
Option:

The TEMPORARY auxiliary sign may be used for an interim period to designate a section of highway connecting completed portions of a route that is not planned as a permanent part of a regular numbered route.

STANDARD:

When used, the TEMPORARY auxiliary sign shall be mounted either directly above the route sign, above a Cardinal Direction sign, or above a sign for an alternative route which is a part of the route designation.

TEMPORARY auxiliary signs shall be promptly removed when the temporary route is abandoned.



M2-2
Variable Size

M3-1
600 mm x 300 mm

M3-2
600 mm x 300 mm

M3-3
600 mm x 300 mm

M3-4
600 mm x 300 mm

M4-1
600 mm x 300 mm

M4-1a
600 mm x 300 mm

M4-2
600 mm x 300 mm

M4-3
600 mm x 300 mm

2D.24 Temporary Detour and Auxiliary Signs

For information on Temporary Detour and Auxiliary signs, refer to Section 6F.1 of the 1993 Edition for Part VI of the MUTCD.

2D.25 Advance Turn Arrow Auxiliary Sign

STANDARD:

The Advance Turn Arrow auxiliary sign 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 right angle or at a 45° angle.

2D.26 Directional Arrow Auxiliary Sign

STANDARD:

The Directional Arrow auxiliary sign shall be mounted below the route sign in directional assemblies, and displays a single- or double-headed arrow pointing in the general direction the route follows.

2D.27 Route Sign Assemblies

STANDARD:

A Route Sign assembly shall consist of a route sign and auxiliary signs which further identify the route and indicate direction. Route Sign assemblies shall be erected on all approaches to the intersection of numbered routes.

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.

Within groups of assemblies, information for routes intersecting from the left shall be mounted at the left in horizontal arrangements and at the 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 or top.

Route Sign assemblies shall be mounted in accordance with the general specifications for highway signs (Chapter 2A), with the lowest unit in the assembly at the height prescribed for single signs.

GUIDANCE:

Assemblies for two or more routes, or for different directions on the same route, should be mounted in groups on a common support.

Option:

Route sign assemblies may be erected on the approaches to numbered routes on unnumbered roads and streets which carry an appreciable amount of traffic destined for the numbered route.

If engineering studies indicate that groups of assemblies which include overlapping routes or multiple turns may be confusing, route signs or auxiliary signs may be omitted or combined, provided that clear directions are given to road users.

2D.28 Junction Assembly

STANDARD:

A Junction assembly shall consist of a Junction auxiliary sign and a route sign.

The Junction assembly shall be erected in advance of every intersection where a marked route is intersected or joined by another marked route. In urban areas it shall be erected in the block preceding the intersection, and in rural areas it shall be erected at least 120 m (400 ft) in advance of the intersection. In rural districts, the minimum distance between the Destination sign, the Route Turn assembly, and the Junction assembly shall be 60 m (200 ft). The route sign shall carry the number of the intersected or joined route.

[redacted]

In urban districts where speeds are low, the Junction assembly should not be erected more than 100 m (300 ft) in advance of the intersection. In both urban and rural districts greater spacings should be used where prevailing speeds are above 70 km/h (45 mph).

Option:

Where two or more routes are to be indicated, one Junction sign may be used for the assembly and all

M4-4

600 mm x 300 mm

M4-5

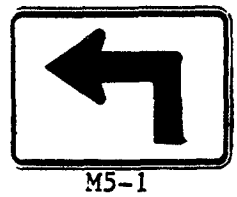
600 mm x 300 mm

M4-6

600 mm x 300 mm

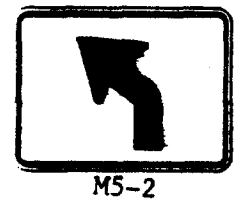
M4-7

600 mm x 300 mm



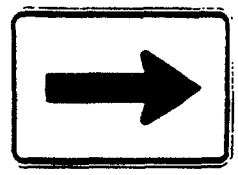
M5-1

525 mm x 375 mm



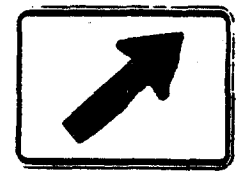
M5-2

525 mm x 375 mm



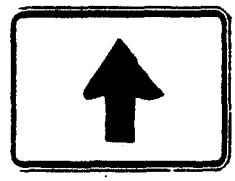
M6-1

525 mm x 375 mm



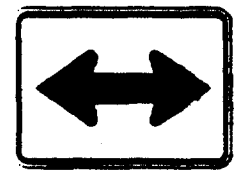
M6-2

525 mm x 375 mm



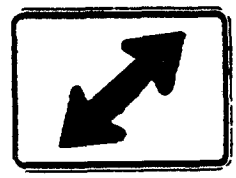
M6-3

525 mm x 375 mm



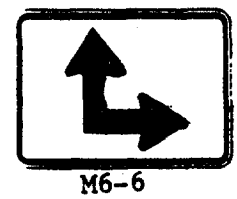
M6-4

525 mm x 375 mm



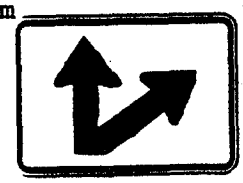
M6-5

525 mm x 375 mm



M6-6

525 mm x 375 mm



M6-7

525 mm x 375 mm

route signs grouped in a single mounting, or a Combination Junction sign (Sec. 2D.14) may be used.

2D.29 Advance Route Turn Assembly

STANDARD:

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 erected in advance of an intersection where a turn must be made to remain on the indicated route.

Option:

The Advance Route Turn assembly may be used to supplement the required Junction assembly in advance of intersecting routes.

GUIDANCE:

Where a multiple lane highway approaches an interchange or intersection with a numbered route, the Advance Route Turn assembly should be used to pre-position turning vehicles in the correct lanes from which to make their turn.

In rural districts, the Advance Route Turn assembly should be erected not less than 120 m (400 ft) in advance of the turn. In urban areas, the Route Turn assembly should be erected not less than 100 m (300 ft) in advance of the turn.

STANDARD:

An assembly which includes an Advance Turn Arrow auxiliary sign shall not be placed where there is an intersection between it and the designated turn.

GUIDANCE:

Sufficient distance should be allowed between the assembly and any preceding intersection that could be mistaken for the indicated turn.

2D.30 Directional Assembly

STANDARD:

A Directional assembly shall consist of a route sign, a Directional Arrow auxiliary sign, and a Cardinal Direction auxiliary sign, if needed. The various uses of Directional assemblies shall be as outlined below:

1. 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 pointed in the direction of the turn.

2. 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 pointed in the direction of the turn.

3. The end of a route shall be marked by a Directional assembly with an END auxiliary sign and a route sign displaying the number of that route.

4. An intersected route (indicated in advance by a Junction assembly) shall be designated by:

   a. Two Directional assemblies, each with a route sign displaying the number of the intersected route, Cardinal Direction auxiliary signs, and single-headed arrows pointed in the directions of movement on that route, or

   b. 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.

GUIDANCE:

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.

The following indicates the preferred locations for Directional assemblies:

1. Directional assemblies should be located on the near right-hand corner of the intersection.

2. At major intersections and at "Y" or offset intersections additional Directional assemblies should be installed on the far right-hand or left-hand corner to confirm the near-side assemblies.

3. When the near-corner position is not practical for Directional assemblies, the far right-hand corner should be the preferred alternative, with oversized signs, if necessary, for legibility.

4. Where unusual conditions exist, the location of a Directional assembly determined by engineering judgment should provide for the best combination of view and safety attainable.

SUPPORT:

It is more important that guide signs be readable at the right time and place than to be located with absolute uniformity.

See Figures 2-7a, b, and c for typical illustrations of Directional assemblies and other route signs.

2D.31 Confirming or Reassurance Assemblies

STANDARD:

When used, Confirming or Reassurance assemblies shall consist of a Cardinal Direction auxiliary sign and a route sign.

When used, the Confirming assembly shall be installed just beyond intersections of numbered routes.

G[redacted]

In rural areas when the Confirming assembly is used, it should be placed no more than 60 m (200 ft) beyond the far shoulder or curb line of the intersected highway. In urban areas, this distance should be no more than 30 m (100 ft).

When used, reassurance assemblies should be installed between intersections in urban districts as needed and beyond the built-up area of any incorporated city or town.

Route signs for either confirming or reassurance purposes should be spaced at such intervals as necessary to keep road users informed of their routes.

2D.32 Trailblazer Assembly

SUPPORT:

Traffic authorities have found it desirable to provide directional guidance to a particular road facility from other highways in the vicinity. This is accomplished by means of Trailblazer assemblies erected at strategic locations, usually along major urban arterials, 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:

A Trailblazer assembly shall consist of a TO auxiliary sign, a Cardinal Direction auxiliary sign, a route sign or a special road facility symbol, if needed, and a single-headed Directional Arrow pointed along the route leading to the facility.

G[redacted]

The TO auxiliary sign, Cardinal Direction auxiliary sign, and Directional Arrow auxiliary sign should be of the standard size specified for auxiliary signs of their respective type. The route sign should be the size specified in Section 2E.13, Table 2E-1.

Option:

Trailblazer assemblies may be erected with other Route Sign assemblies, or alone, in the immediate vicinity of designated facilities.

2D.33 Destination Signs and Distance Signs

SUPPORT:

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.

Option:

Route markers and cardinal directions may be included in the Destination sign panel with the destinations and arrows.

GUIDANCE:

The size of the route markers and cardinal directions should be large enough for clear legibility. The minimum size for route signs and Cardinal Direction auxiliary signs should be used.

Destination names should be in lower-case letters with an initial upper-case letter when letter heights exceed 200 mm (8 in).

2D.34 Destination Signs

STANDARD:

Except where special interchange signing is prescribed, the Destination sign shall be a horizontal rectangle carrying the name of a city, town, village, or other traffic generator, and a directional arrow.

Option:

The distance to the place named may also be shown. If several destinations are to be shown at a single point, the several names may be placed on a single panel 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:

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 panel, or separate panels.

STANDARD:

An arrow pointing to the right shall be at the extreme right of the sign, and an arrow pointing left or vertically shall be at the extreme left for signs mounted on the right side of the roadway. The distance figures, if used, shall follow after the destination name.

GUIDANCE:

The directional arrows should be horizontal or vertical, but at an irregular intersection a sloping arrow will sometimes convey a clearer indication of the direction to be followed.

If several individual name panels are assembled into a group, all panels in the assembly should be of the same length.

Destination signs should be used:

1. At the intersections of U.S. or State numbered routes with Interstate, U.S., or State numbered routes.

2. 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:

Where a total of three or less destinations are provided on the Advance Guide (Section 2E.31) and Supplemental Guide (Section 2E.33) signs, not 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, not more than four destination names shall be used on a Destination sign.

[illegible]

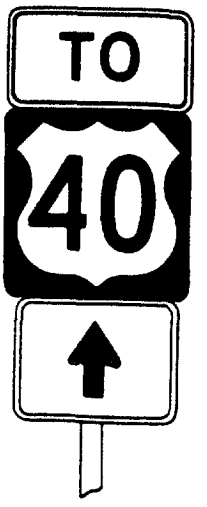
Where space permits, four-name destination signing should consist of two separately mounted sign panels, one on the left and one on the right.

Option:

Where spacing is critical or all four destinations are in one direction, a single sign assembly may be used.

STANDARD:

Where a single four-name sign assembly is used, a heavy line entirely across the panel or separated



Trailblazer Assembly

Destination Signs and Distance Signs

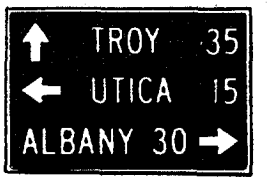
D1-1
Variable Size

D1-2
Variable Size

D1-3
Variable Size

D1-1a
Variable Size

D1-2a
Variable Size

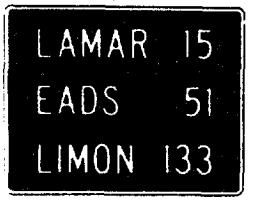


D1-3a
Variable Size

Destination Signs

D2-1
Variable Size

D2-2
Variable Size



D2-3
Variable Size

Distance Signs

sign panels shall be used to separate destinations by direction.

GUIDANCE:

The next 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 shown 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, there should be shown only one destination in each direction for each route.

STANDARD:

If there is more than one destination shown in the same direction, the name of the nearest city or town shall appear above that of any farther away destination.

2D.35 Location of Destination Signs

GUIDANCE:

When used in rural areas, Destination signs should be located 60 m (200 ft) or more in advance of the intersection, and following any Junction or Advance Route Turn assemblies that may be required.

Option:

In urban areas shorter advance distances may be used.

The Destination sign is of lesser importance than the Junction, Advance Route Turn, or Directional assemblies; therefore, when sign spacing is critical the Destination sign may be eliminated.

SUPPORT:

Figures 2D-7a, b and c show the use of Destination signs at rural intersections.

2D.36 Distance Sign

STANDARD:

The Distance sign shall be a horizontal rectangle of a size appropriate to the required legend, carrying the names of not more than three cities, towns, junctions, or other traffic generators, and the distance [to the nearest kilometer] to those places.

GUIDANCE:

The uppermost name 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 lowermost name should be that of the next major destination or control city. If three destinations are shown, the middle line should be used to indicate communities of general interest along the route or important route junctions.

Option:

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:

The control city should remain the same on all successive Distance signs throughout the length of the route until that destination is reached.

Option:

There are circumstances, however, under which more than one distant point may properly be designated. An example is where the route divides at some distance ahead to serve two destinations of similar importance. If these two destinations cannot appear on the same sign, the two names may be alternated on successive signs.

GUIDANCE:

On a route continuing into another state, destination(s) in the adjacent state may be shown.

2D.37 Location of Distance Signs

GUIDANCE:

When used, distance signs should be erected on important routes leaving municipalities, and just beyond intersections of numbered routes in rural areas. They should be placed just outside the municipal limits, or at the edge of the built-up district if it extends beyond the limits.

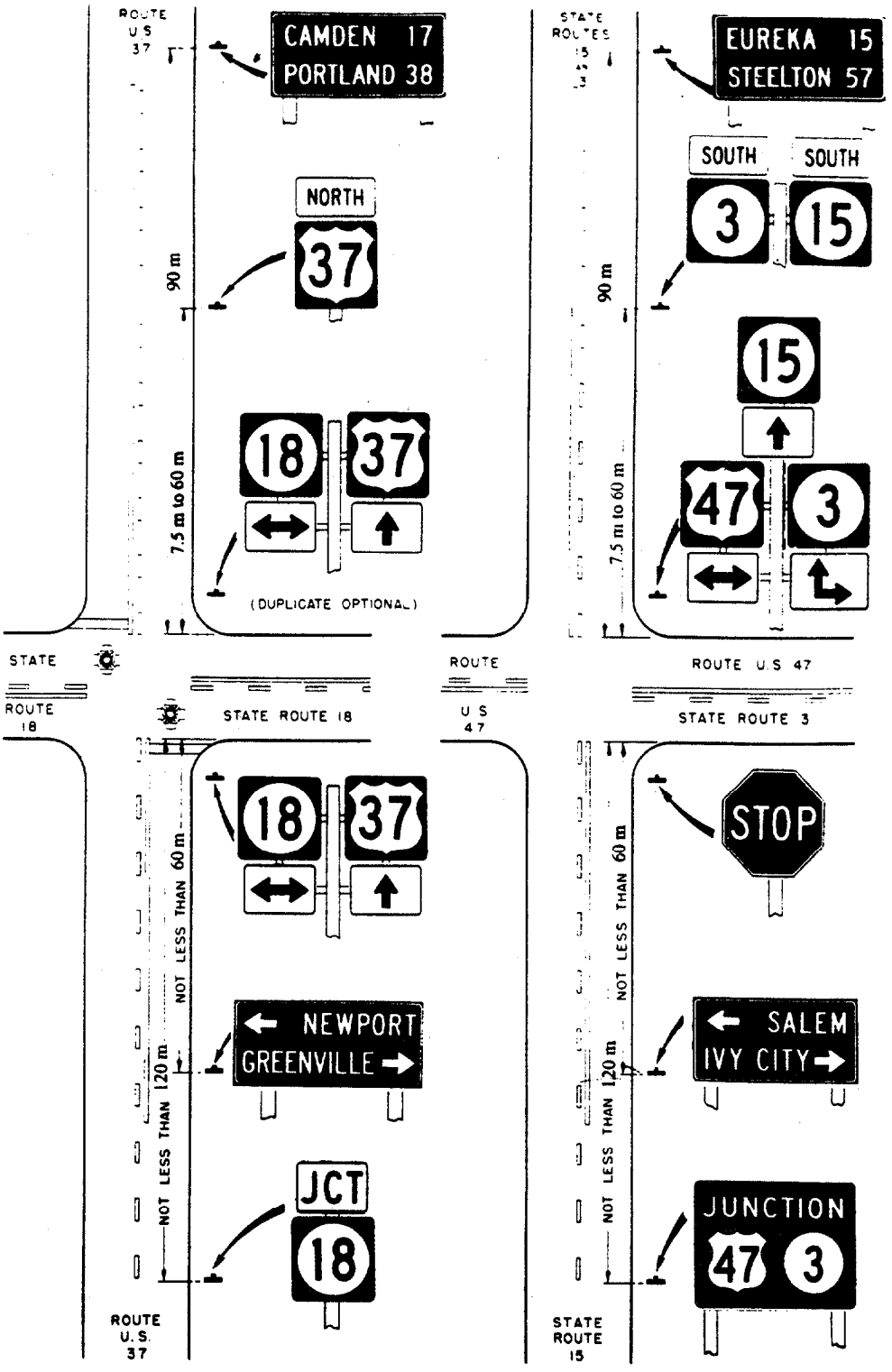


Figure 2-7a. Typical route markings at rural intersections (for one direction of travel only).

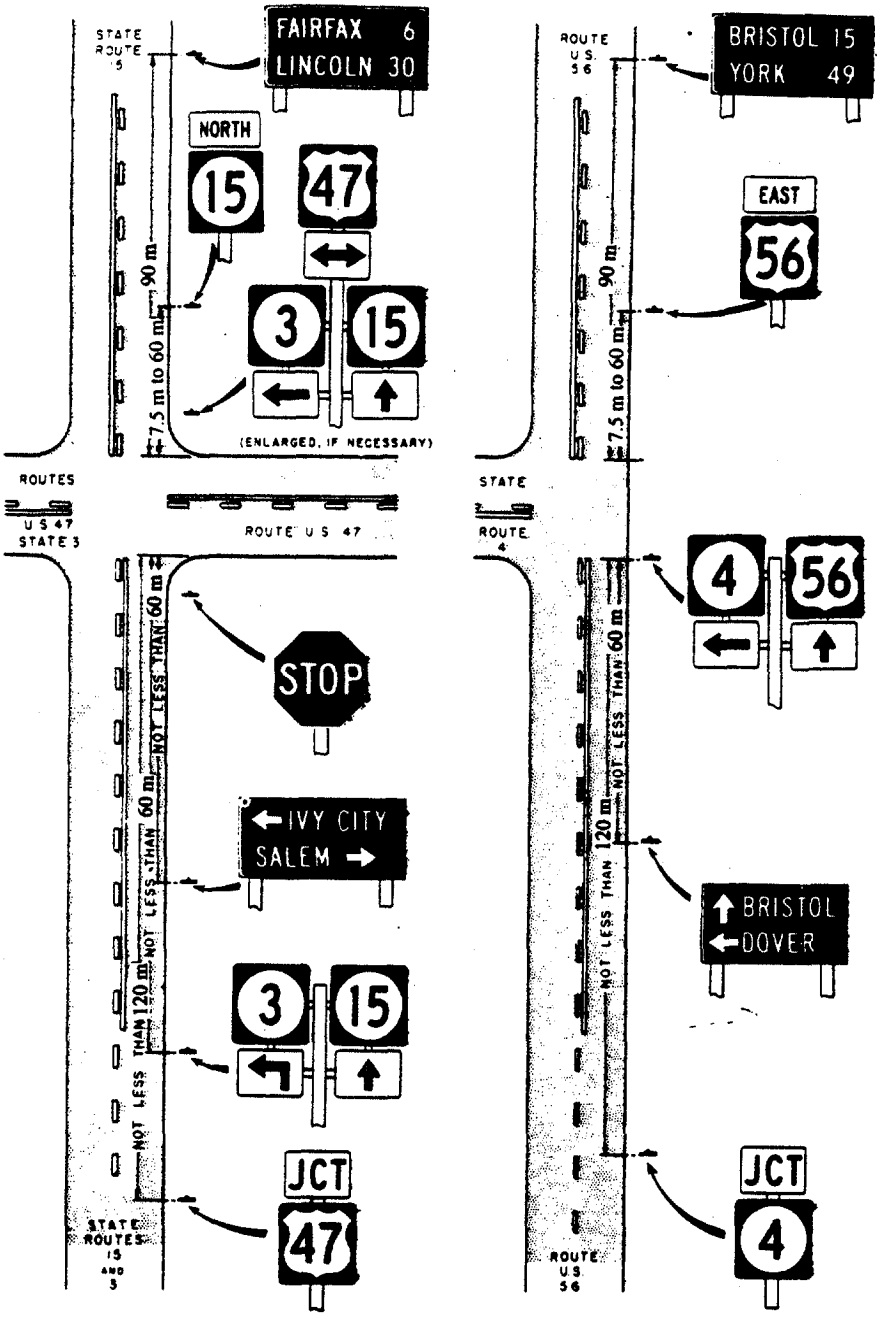


Figure 2-7b. Typical route markings at rural intersectons (for one direction of travel only).

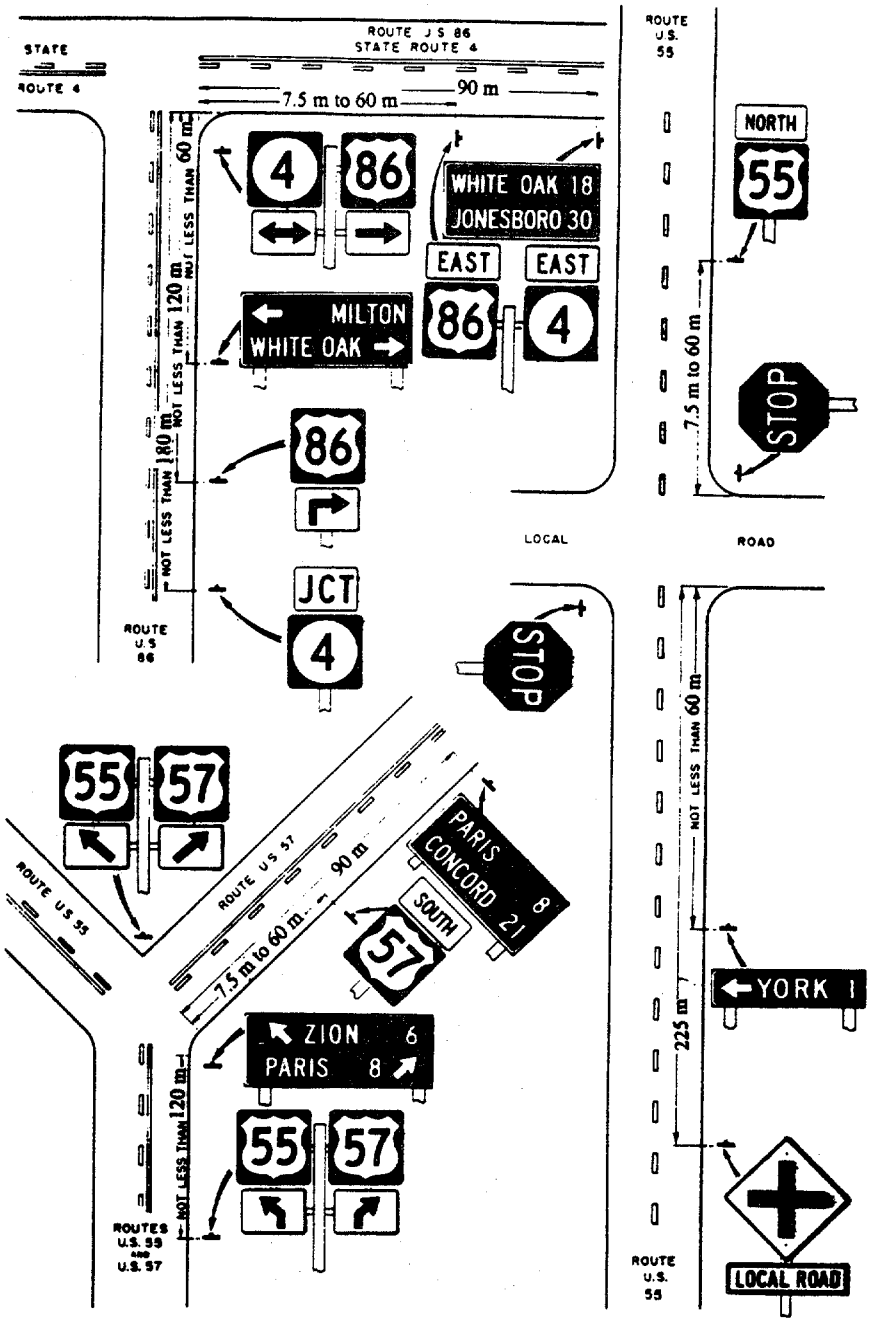


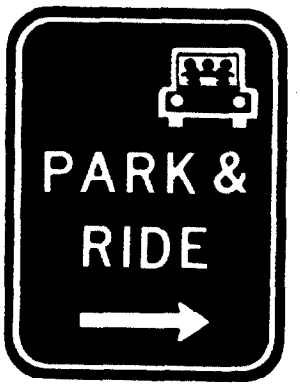
Figure 2-7c. Typical route markings at rural intersections (for one direction of travel only).

D3
Variable Size

Street Name Sign

D4-1
750 mm x 600 mm

Parking Area Sign



D4-2
750 mm x 900 mm

Park & Ride Sign

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 erected approximately 90 m (300 ft) beyond the separation of the two routes.

Where, just outside of an incorporated municipality, two routes are concurrent and continue concurrently to the next incorporated municipality, the top name on the sign placed at such a point should be that of the place where the routes separate; the lower name should be that of the city in which the greater part of the through traffic is destined.

SUPPORT:

Figures 2D-7a, b and c show the use of Distance signs at rural intersections.

2D.38 Street Name Sign

GUIDANCE:

Street Name signs should be erected in urban areas at all street intersections regardless of other route signs that may be present and should be erected in rural areas to identify important roads not otherwise signed.

Lettering on Street Name signs should be at least 150 mm (6 in) high in upper-case letters or 150 mm (6 in) upper-case letters with 110 mm (4.5 in) lower-case letters. Larger letter heights should be used for street name signs mounted overhead.

Option:

For local roads with speed limits 25 mph or less, the lettering may be a minimum of 100mm (4 in).

Supplementary lettering to indicate the type of street (e.g., Street, Avenue, Road, etc.) or section of city (e.g., N.W.) may be in smaller lettering, at least 75 mm (3 in) high. Conventional abbreviations may be used except for the street name itself.

A symbol or letter designation may be used to identify the governmental jurisdiction.

STANDARD:

If a symbol or letter designation is used, the width of the symbol or letter designation shall not exceed the letter height of the sign.

GUIDANCE:

The symbol or letter designation should be positioned to the left of the street name.

STANDARD:

The Street Name sign shall be retroreflective or illuminated to show the same shape and color day and night. The legend and background shall be of contrasting colors.

GUIDANCE:

Street Name signs should have a white legend on a green background. A border, if used, should be the same color as the legend.

In business districts and on principal arterials, Street Name signs should be placed at least on diagonally opposite corners so that they will be on the far right-hand side of the intersection for traffic on the major street. In residential areas at least one Street Name sign should be mounted at each intersection. Signs naming both streets should be erected at each intersection. They should be mounted with their faces parallel to the streets they name.

Option:

On intersection approaches a supplemental Street Name sign may be erected separately or below an intersection-related warning sign.

GUIDANCE:

When combined with a warning sign, the color of the supplemental street name sign should be a black message on a yellow background.

2D.39 Parking Area Sign

Option:

The Parking Area sign may be used to show the direction to a nearby public parking area.

STANDARD:

The sign shall be a horizontal rectangle of a standard size of 750 mm x 600 mm (30 x 24 in) with a smaller size of 450 mm x 375 mm (18 x 15 in) 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:

If used, the Parking Area sign should be erected on major thoroughfares at the nearest point of access to the parking facility and where it can help relieve the local streets of traffic seeking a place to park. The sign should not be used more than three or four blocks from the parking area.

2D.40 Park & Ride Signs

Option:

PARK & RIDE signs may be used to direct road users to park and ride facilities.

STANDARD:

The signs shall contain the word message PARK & RIDE and direction information (arrow or word message).

Option:

They may contain the local transit logo and/or carpool symbol within the sign border.

STANDARD:

If used, the local transit logo 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 logo and/or carpool symbol exceed 900 mm (36 in).

GUIDANCE:

If the function of the parking facility is to provide parking for persons using public transportation, the local transit logo symbol 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 logo and carpool symbol should be used.

STANDARD:

These signs shall have a retroreflective white legend and border on a rectangular green background. The carpool symbol shall be as shown in Figure D4-2. The color of the transit logo shall be selected by the local transit authority.

Option:

To increase target value and contrast for the transit logo it may be included within a white border or used with a white background. The important item is that the local transit logo retain its distinctive color and shape.

2D.41 Rest Area Signs

STANDARD:

The REST AREA sign shall be used only where parking and restroom toilets are available. Signs for this purpose shall have retroreflective white letters, symbols and border on a blue background.

GUIDANCE:

REST AREA signs should be erected in advance of roadside parks or rest areas to permit the driver to reduce speed and leave the highway safely.

Option:

Messages such as REST AREA (X) km [(X) (MILE)] (D5-1), PARKING AREA (X) km [(X) (MILE)] (D5-3), ROADSIDE TABLE (X) km [MILE] (D5-5), ROADSIDE PARK (X) km [(X) (MILE)], and PICNIC TABLE (X) km [(X) (MILE)] may be used, as well as other appropriate messages.

2D.42 Scenic Area Signs

Option:

Scenic areas may be marked by signs carrying the message SCENIC AREA, SCENIC VIEW, or the equivalent, together with appropriate directional information.

GUIDANCE:

The design of the signs should be consistent with that specified for rest areas (Section 2D.41) and should be white letters, symbols, and border on a blue background. An advance sign and an additional sign at the turnoff point should be used for this kind of attraction.

2D.43 Weigh Station Signing

SUPPORT:

The general concept for Weigh Station signing is similar to Rest Area signing because in both cases traffic using either area remains within the right-of-way.

STANDARD:

The standard installation for Weigh Station signs shall include three basic signs:

1. Advance sign (D8-1)
2. Exit Direction sign (D8-2)
3. Gore sign (D8-3)

SUPPORT:

The location of these signs is shown in Figure 2D.8.

Option:

Where State law requires a regulatory sign in advance of the Weigh Station, a fourth sign (Sec. 2B.42) may be located following the Advance sign.

GUIDANCE:

The Exit Direction sign (D8-2) or the Advance sign (D8-1) should display, either within the sign border or on a supplemental panel, the changeable message OPEN or CLOSED.

2D.44 General Service Signs

SUPPORT:

On conventional highways, commercial services such as fuel, food, and lodging generally are within sight and are available to the road user at reasonably frequent intervals along the route. Consequently, on this class of road there usually is no need for special signs calling attention to these services. Moreover, service signing is usually not required in urban areas except for hospitals, police assistance, tourist information centers, and camping.

Option:

General service signs may be used where such services are infrequent and are found only on an intersecting highway or crossroad.

GUIDANCE:

States that elect to provide general service signing should establish a statewide policy or warrant for its use, and criteria for the availability of services. Local jurisdictions electing to use such signing should follow State policy for the sake of uniformity.

Option:

Individual States may sign for whatever alternative fuels are available at appropriate locations.

STANDARD:

General service signs, if used at intersections, shall carry a legend for one or more of the following services: Food, Gas, Diesel, LP-Gas, Lodging, Camping, Phone, Hospital, Tourist Information, Police or Truck Parking along with a directional message.

Option:

The service legends may be either symbols or word messages.

STANDARD:

Symbols and word messages shall not be intermixed on the same sign.

GUIDANCE:

If used, the word message TRUCK PARKING should be placed on a separate panel below the other general motorist services.

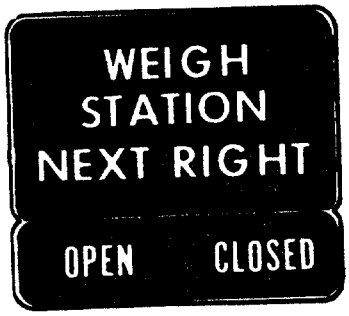
SUPPORT:

Formats for displaying different combinations of these services are presented in Section 2E.51.

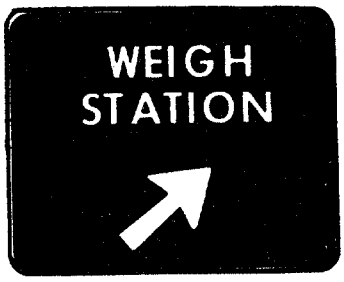
Option:

The International Symbol for Access for the Handicapped sign (D9-6) may be used beneath general service signs where paved ramps and rest

D 8-1



D 8-2



D 8-3

Weigh Station Signing

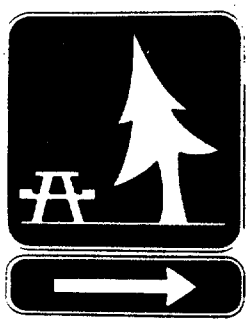
D5-1

D5-2

D5-3

D5-4

D5-5



D5-5a

600 mm x 600 mm
600 mm x 150 mm

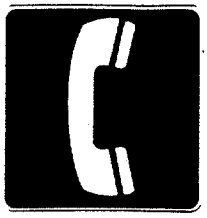
Rest Area Signs

D6-1

D6-2

D6-3

Scenic Area Signs



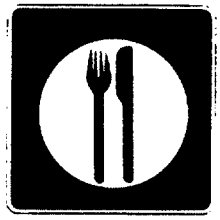
D9-1
600 mm x 600 mm

D9-2
600 mm x 600 mm

D9-3
600 mm x 600 mm

D9-3a
600 mm x 600 mm

D9-6
600 mm x 600 mm



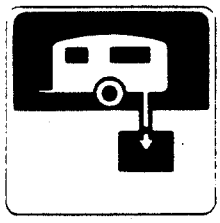
D9-8
600 mm x 600 mm

D9-7
600 mm x 600 mm

D9-9
600 mm x 600 mm

D9-10
600 mm x 600 mm

D9-11
600 mm x 600 mm



D9-12
600 mm x 600 mm

D9-13
600 mm x 600 mm

D9-14
300 mm x 600 mm

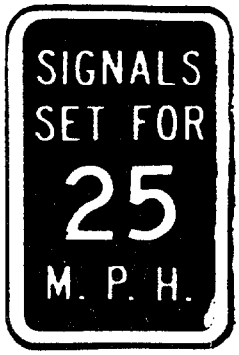
D9-15
600 mm x 600 mm

General Service Signs

D10-1 D10-2 D10-3

250 mm x 450 mm 250 mm x 675 mm 250 mm x 800 mm

Kilometer Posts (Mileposts)



I1-1

300 mm x 450 mm

Traffic Signal Speed Sign

room facilities accessible to, and useable by, the physically handicapped are provided.

Where the distance to the next point at which services are available is 16 kilometers (10 miles) or more, a sign NEXT SERVICES (XX) km [(XX) MILES] may be used as a separate panel mounted under the General Service signs.

The Recreational Vehicle Sanitary Station sign (D9-12) may be used as needed to indicate the availability of facilities designed for the use of dumping wastes from recreational vehicle holding tanks.

The Trash Receptacle Symbol sign (D9-4) may be placed in advance of roadside turnouts or rest areas unless it distracts from other more important regulatory, warning, and directional signs.

A Channel 9 Monitored sign (D12-3) may be installed as needed. Official government agencies or their designees may be shown as the monitoring agency on the sign (Section 2E.56). An "Emergency Dial ---" sign (D12-4) along with the appropriate number to dial, may be used for cellular phone information.

STANDARD:

All general service signs and supplemental panels shall have white letters, symbols and borders on a blue background.

GUIDANCE:

They should be erected at a suitable distance in advance of the turn-off point or intersecting highway.

Option:

The Emergency Medical Services (EMS) symbol sign (D9-13) may be used to identify medical service facilities that have been included in the EMS system under a signing policy developed by the State and/or local highway agency.

STANDARD:

The EMS symbol sign shall not be used to identify services other than qualified hospitals, ambulance stations, and qualified free-standing emergency medical treatment centers. When used, the EMS symbol shall be supplemented by a sign identifying the type of service provided.

Option:

The EMS symbol sign may be used above the HOSPITAL or H symbol sign or above a panel with either the legend AMBULANCE STATION or EMERGENCY MEDICAL CARE. The EMS symbol may also be used to supplement telephone, CB monitoring, or POLICE signs.

STANDARD:

The legend EMERGENCY MEDICAL CARE shall not be used for services other than qualified free-standing emergency medical treatment centers.

GUIDANCE:

Each State should develop guidelines for the implementation of the EMS symbol sign.

The State should consider the following guidelines in the preparation of its policy:

AMBULANCE

- 24-hour service, 7 days per week
- Staffed by two State-certified persons trained at least to the basic level
- Vehicular communications with a hospital emergency department
- Operator should have successfully completed an Emergency Vehicle Operator Training Course

HOSPITAL

- 24 hour service, 7 days per week
- Emergency department facilities with a Physician (or Emergency Care Nurse on duty within the Emergency department with a
- physician on-call) trained in Emergency Medical procedures on duty
- Licensed or approved for definitive medical care by an appropriate State authority
- Equipped for radio voice communications with ambulances and other hospitals

CB 9 Monitored

- Provided by either professional or volunteer monitors
- Available 24 hours per day, 7 days a week
- The service should be endorsed, sponsored, or controlled by an appropriate government authority to guarantee the level of monitoring

2D.45 Kilometer Posts (Mileposts)

Option:

Kilometer posts (mileposts) may be installed along any section of a highway route to assist road users in estimating their progress, to provide a means for identifying the location of emergency incidents and traffic accidents, and to aid in highway maintenance and servicing.

STANDARD:

The distance numbering shall be continuous for each route within a state, except where overlaps occur. With overlapped routes, continuity shall be established for only one of the routes.

Kilometer Posts (mileposts) shall be vertical panels having a green background with 150 mm (6 in) white numerals, border and the legend km (MILE) in 100 mm (4 in) white letters. The design details are shown in the Standard Highway Signs Book.

GUIDANCE:

Zero distance should begin at the south and west state lines and at the south and west terminus points where routes begin.

On the route without kilometer post (milepost) continuity, the first kilometer post (milepost) beyond the overlap should indicate the total distance traveled on the route so that road users will have a means of correlating their travel distance between kilometer posts (mileposts) with that shown on their odometer.

Option:

Kilometer posts (mileposts) may be placed up to 9 m (30 ft) from the edge of the pavement.

STANDARD:

Kilometer Posts (mileposts) located in line with delineator posts shall have the bottom of the sign at the same height as the delineator (See Section 3D.5).

For divided highways, distance measurement shall be made on northbound and eastbound roadways. The kilometer posts (mileposts) for southbound and westbound roadways shall be set at locations directly opposite.

Option:

When a kilometer post (milepost) cannot be installed in its correct location, it may be moved in either direction as much as 15 m (50 ft).

GUIDANCE:

When a kilometer post (milepost) cannot be placed within 15 m (50 ft) of its correct location, it should be omitted.

Option:

To enhance the kilometer (milepost) numbering system, delineators may be spaced at 1/10 or 1/20 of a mile. They may be marked in fractions of a kilometer (mile) by stencil on the back of the delineator or the post, or by a small plate installed on the back of the delineator post.

STANDARD:

The small plate installed on the delineator post shall not be considered as a milepost and shall not be green and white in color. The numbers shall be small and the plate shall be installed on the back side of the post or delineator.

2D.46 Traffic Signal Speed Sign

Option:

The Traffic Signal Speed sign, reading SIGNALS SET FOR (XX) km/hr [(XX) MPH], may be used to indicate a section of street or highway on which the traffic signals are coordinated into a progressive system timed for a specified speed at all hours during which they are operated in this mode.

GUIDANCE:

When used, the sign should be mounted as near as practical to each intersection where the timed speed changes, and at intervals of several blocks throughout any section where the timed speed remains constant.

STANDARD:

This sign shall be a minimum of 300 mm x 450 mm (12 in x 18 in) with the longer dimension vertical. It shall have a white message and border on a green background.

2D.47 General Information Signs (I Series)

SUPPORT:

Of interest to the traveler, though not directly necessary for guidance, are numerous kinds of information that can properly be conveyed by general information signs. They include such items as state lines, city limits, other political boundaries, time zones, stream names, elevations, landmarks, and similar items of geographical interest.

GUIDANCE:

General information signs should not be installed within a series of guide signs or at other equally critical locations, unless there are specific reasons for orienting the road user or identifying control points for activities that are clearly in the public interest. On all such signs the designs should be simple and dignified, devoid of any advertising, and in general conformance with other guide signing.

Option:

An information symbol sign (I-5 to I-11) may be used to identify a route leading to a transportation or general information facility, or to provide additional guidance to the facility. The symbol sign may be supplemented by an educational plaque where necessary; also, the name of the facility may be used if needed to distinguish between similar facilities.

Guide signs for commercial service airports and non-carrier airports may be provided from the nearest Interstate, other freeway, or conventional highway intersection directly to the airport, normally not to exceed 25km (15 miles). The Airport symbol sign (I-5) along with a supplemental plaque may be used to indicate the specific name of the airport. An Airport symbol sign with or without a supplemental name plaque, or the word AIRPORT and an arrow may be used as a trailblazer.

STANDARD:

Adequate trailblazer signs shall be in place prior to installing the airport guide signs. Location and placement of all airport guide signs depends upon the availability of longitudinal spacing on highways.

Option:

Political jurisdiction logos may be placed on the political boundary general information signs. The logo may have different colors and shapes but should be simple, dignified, and devoid of any advertising.

STANDARD:

Except for political jurisdiction logos and adopt-a-highway signs, general information signs shall have white legends on green rectangular-shaped backgrounds.

Option:

The Recycling Collection Center symbol (I-11) may be used to direct road users to recycling collection centers.

GUIDANCE:

The Recycling Collection Center symbol should not be used on freeways and expressways.

STANDARD:

If used on freeways and expressways, the Recycling Collection Center sign shall be considered one of the supplemental sign destinations.

SUPPORT:

Adopt-a-Highway signs provide travelers with information about organizations that take responsibility for picking up litter along a section of highway.

STANDARD:

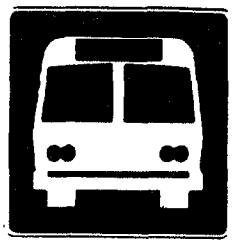
Messages, symbols, and trademarks which resemble any official traffic control device shall not be used on Adopt-a-Highway signs.

I-2
Variable Size

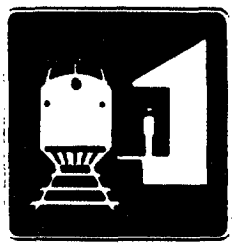
I-3
Variable Size

I-4
600 mm x 600 mm

I-5
600 mm x 600 mm

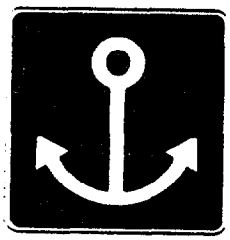


I-6
600 mm x 600 mm

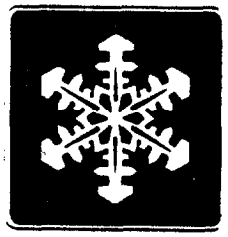


I-7
600 mm x 600 mm

I-8
600 mm x 600 mm

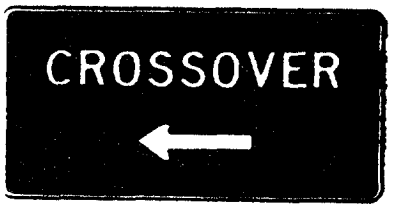


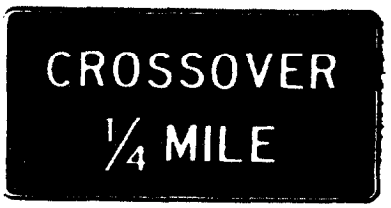
I-9
600 mm x 600 mm



I-10
600 mm x 600 mm

General Information Signs





Crossover Signs

GUIDANCE:

Each agency with highway jurisdiction that elects to use Adopt-a-Highway signs should establish a signing policy which includes the following:

1. Eligible organizations must comply with State laws prohibiting discrimination based on race, religion, color, age, sex, or national origin, and laws.

2. The use of legends conforming to the requirements of State agencies.

3. Provision for the removal of inappropriate signs.

4. Provision for State to charge fees to cover the cost of installing, maintaining, and removing the signs.

5. The use of standard highway alphabets on all word message type signs.

6. Provision for limiting the number of signs.

2D.48 Signing of Named Highways

SUPPORT:

Legislative bodies will occasionally adopt an act or resolution memorializing a highway, bridge, or other component of the highway.

GUIDANCE:

Such memorial names should not appear on or along a highway, or be placed on bridges or other highway components. The requirement for signing should be carried out by placing memorial plaques in rest areas, scenic overlooks, or other appropriate locations where parking is provided with the signing inconspicuously located relative to vehicle operations along the highway.

Option:

If installation of the memorial plaque off the main roadway is not practical, memorial signs may be installed on the mainline provided that they are independent of other guide and directional signing, and they do not adversely compromise the safety or efficiency of traffic flow.

STANDARD:

When the memorial signs are erected on the mainline in lieu of off-highway memorial plaques, the signing shall be limited to one sign at an appropriate location in each route direction.

Option:

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:

Highway names shall not replace official numeral designations. Memorial names shall not appear on supplemental signs or on any other information sign either on or along the highway or its intersecting routes.

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 which applies to Interstate and U.S. numbered routes.

Option:

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:

Only one name should be used to identify any highway whether numbered or unnumbered.

2D.49 Trail Signs

SUPPORT:

Trail signs are informational signs, plaques, or shields designed to provide road users with route guidance in following a trail of particular cultural, historical, or educational significance.

GUIDANCE:

Primary guidance should be in the form of printed literature and strip maps rather than Trail signing.

Option:

Trail signs may be erected on a highway if they have been approved by the appropriate transportation agency.

2D.50 Crossover Signs

Option:

The CROSSOVER sign may be installed on divided highways to identify median openings not otherwise identified by warning or other guide signs.

STANDARD:

CROSSOVER signs shall not be used to identify median openings that are restricted to the use of official or authorized vehicles. 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 on a green background.

GUIDANCE:

If used, the CROSSOVER sign should be erected immediately beyond the median opening either on the right side of the roadway or in the median.

Option:

The Advance Crossover sign may be erected in advance of the CROSSOVER sign to provide advance information of the crossover.

STANDARD:

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 on a green background.

GUIDANCE:

The distance shown on the Advance Crossover sign should be either 2 or 1 km, or 500 m (1, 1/2, or 1/4 MILE), unless unusual conditions require some other distance. If used, the sign should be installed on the right side of the roadway at approximately the distance shown.

2E. Guide Signs - Freeways and Expressways

2E.1 Scope of Freeway and Expressway Guide Sign Standards

SUPPORT:

These standards provide a uniform and effective system of highway signing that will be fully adequate for high-volume, high-speed motor vehicle traffic on freeways and expressways. The requirements and specifications for expressway signing exceed those for conventional roadway segments (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. See Section 2A.1 for definitions of "freeway" and "expressway".

STANDARD:

The standards prescribed herein for freeway or expressway guide signing shall apply to any highway that meets the definition of such facilities.

2E.2 Freeway and Expressway Signing Principles

SUPPORT:

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 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.

Freeway and expressway signing is to be considered and developed as a planned system of installations. Engineering study is necessary for proper solution of the problems of many individual locations, but, in addition, consideration of an entire route is necessary.

GUIDANCE:

Road users should be guided with consistent signing on the approaches to interchanges, as 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.

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.

g. Provide other information of value to the road user.

2E.3 General Standards

SUPPORT:

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 and symbols, and (c) short legends for quick comprehension.

STANDARD:

Standard shapes and colors shall be used so that traffic signs can be promptly recognized by road users.

2E.4 Color of Guide Signs

STANDARD:

Guide signs on freeways and expressways, except as noted herein, shall have white letters, symbols, and borders on a green background.

SUPPORT:

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 specified in the individual sections dealing with the particular sign or sign group.

2E.5 Retroreflectorization or Illumination

STANDARD:

Letters, numerals, symbols, and borders of all guide signs shall be retroreflectorized. The background of all signs that are not independently illuminated shall be retroreflectorized.

GUIDANCE:

Where there is no serious interference from extraneous light sources, retroreflectorized signs should provide adequate nighttime visibility.

SUPPORT:

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:

Overhead sign installations should be illuminated if an engineering study shows that retroreflectorization alone will not perform effectively. The type of illumination chosen should provide effective and reasonably uniform illumination of the sign face and message.

2E.6 Characteristics of Urban Signing

SUPPORT:

Urban conditions are characterized not so much by city limits or other arbitrary boundaries but by the following features:

a. Mainline roadways with more than 2 lanes.

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.

h. Visual clutter from roadside development.

Operating conditions and road geometrics on urban freeways and expressways usually make special sign treatments desirable, including:

a. Use of Interchange Sequence signs (Section 2E.38).

b. Use of sign spreading to the maximum extent possible (Section 2E.11).

c. Elimination of service signing (Section 2E.52).

d. Reduction to a minimum of post-interchange signs (Section 2E.36).

e. Display of advance signs at distances closer to the interchange, with appropriate adjustments in the legend (Section 2E.31).

f. Use of overhead signs on roadway structures and independent sign supports (Section 2E.23).

g. Use of diagrammatic signs in advance of intersections and interchanges (Section 2E.19).

h. Frequent use of street names as the principal message in guide signs.

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 legend is, therefore, just as necessary as on rural highways.

STANDARD:

Standards for letter size on freeway and expressway signs shall be the same for both urban and rural areas.

2E.7 Characteristics of Rural Signing

SUPPORT:

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 to rural driving. This increases the importance of signs that call for decisions or actions.

GUIDANCE:

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 sign 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.

2E.8 Memorial Highway Signing

GUIDANCE:

Freeways and expressways should not be signed as memorial highways. If a route, bridge, or highway component is officially designated as a memorial, and if notification of the memorial is to be made on the highway right-of-way, such notification should consist of erecting a memorial plaque in a rest area, scenic overlook, recreational area, or other appropriate location where parking is provided with the signing inconspicuously located relative to vehicle operations along the highway.

Option:

If the installation of a memorial plaque off the main roadway is not practical, a memorial sign may be installed on the mainline.

STANDARD:

Where such memorial signs are erected on the mainline, (1) memorial names shall not appear on directional guide signs, (2) memorial signs shall not interfere with the placement of any other necessary highway signing, and (3) memorial signs shall not compromise the safety or efficiency of traffic flow. The memorial signing shall be limited to one sign at an appropriate location in each route direction.

2E.9 Amount of Legend on Guide Signs

GUIDANCE:

Not more than two destination names or street names should be shown 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.

Option:

Sign legends may include symbols, route numbers, arrows, cardinal directions, and exit instructions.

2E.10 Number of Signs at an Overhead Installation

GUIDANCE:

When overhead signs are warranted, as is set forth in Section 2A.22, 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 panel 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:

At overhead locations, more than one sign may be erected to advise of a multiple exit condition at an interchange. If the roadway ramp or crossing roadway have complex or unusual geometrics, additional panels with confirmatory messages may be provided to properly guide the road user.

2E.11 Sign Spreading and Pull Thru Signs

SUPPORT:

Sign spreading is a concept where major overhead signs are spaced so that road users are not overloaded with a group of signs at one location. Figure 2E-1 illustrates an example of sign spreading. Pull Thru signs (Figure 2E-2) are overhead lane use signs intended for "thru traffic".

GUIDANCE:

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 is accomplished by use of the following:

a. The Exit Direction sign which is the only sign used in the vicinity of the gore (other than the Gore sign). It is 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. It 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.

c. Pull Thru signs should be used only when 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 Thru signs with down arrows, as illustrated in Figure 2E-28, should be used when the alignment and number of through lanes is not readily evident.

2E.12 Designation of Destinations

STANDARD:

The direction of a freeway and the major destinations or "control cities" (Section 2D.37) along it shall be clearly identified through the use of appropriate destination legends. 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:

Control city legends should be used in the following situations along a freeway:

a. Interchanges between freeways.

b. Separation points of overlapping freeway routes.

c. On directional signs on intersecting routes, to guide traffic entering the freeway.

d. On Pull Thru signs.

e. On the bottom line of post-interchange distance signs.

Option:

Continuity of destination names may also be useful on expressways serving long-distance or intrastate travel.

SUPPORT:

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 "List of Control Cities for Use in Guide Signs on Interstate Highways," published and available from American Association of State and Highway Transportation Officials (AASHTO).

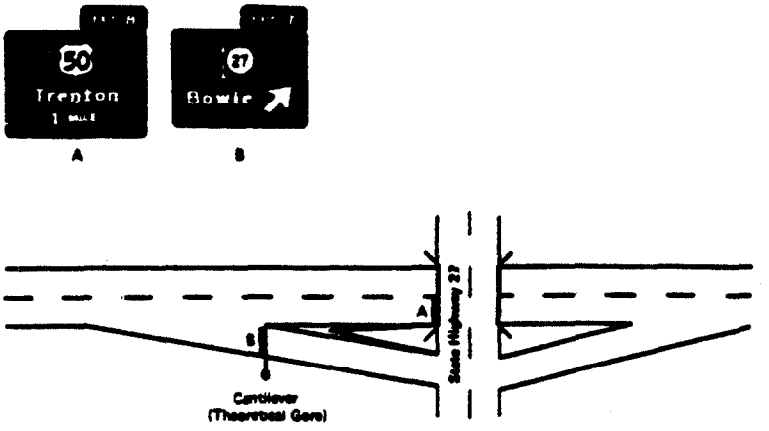


Figure 2E-1. Spreading of guide sign information (Navigational information).

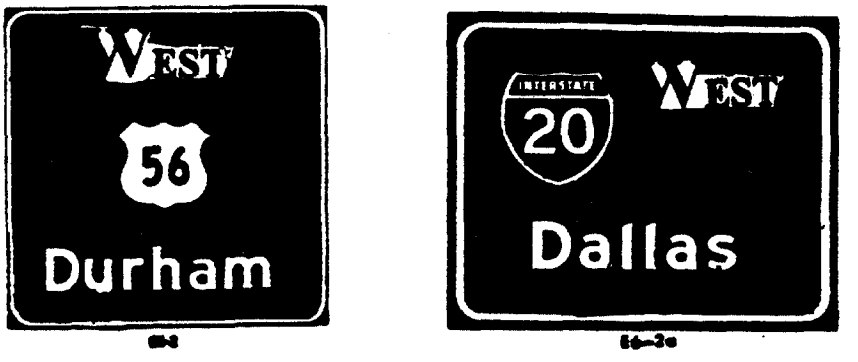


Figure 2E-2. Pull-thru signs.

2E.13 Size and Style of Letters and Signs

STANDARD:

Sign size must be fixed 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. With all freeway and expressway signs, 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 200 mm (8 in) high. Larger lettering shall be used for major guide signs (see Section 2E.28) 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 are shown in Table 2E-1. Minimum numeral and letter sizes for freeway guide signs, according to interchange classification and component of sign legend, appear in Table 2E-2. All names of places, streets, and highways on freeway and expressway guide signs shall be composed of lower-case letters with initial upper-case Series E (M) letters. Other word legends shall be in upper-case letters. Designs for upper-case and lower-case alphabets together with tables of recommended letter spacing, are shown in the Standard Alphabets. The initial letters and the numerals used shall be Series E(M) of the Standard Alphabets for Highway Signs. Interline and edge spacing shall be as specified in Section 2E.14.

Lettering size on freeway and expressway signs shall be the same for both rural and urban conditions.

GUIDANCE:

Where upper and lower case lettering is used, the initial upper-case letters should be 1⅓ times the "loop" height of the lower-case letters. Freeway lettering sizes (Table 2E-2) should be used when expressway geometric design is comparable to freeway standards.

Other sign letter size requirements not specifically identified elsewhere in this Manual should be guided by these specifications. Abbreviations should be kept to a minimum.

Option:

A sign mounted over a particular roadway lane to which it applies may have to be limited in horizontal dimension to the width of the lane, so that another sign may be placed over an adjacent lane. The necessity to maintain proper vertical clearance may place a further limitation on the size of the overhead sign and the legend that can be accommodated.

Table 2E-1 Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Interchange Classification (sizes shown in millimeters)

	Major*		Intermediate*	Minor*	Overhead
	Category a	Category b			
A. Advance Guide, Exit Direction, and Overhead Guide Signs					
Exit Panel					
Word	250	250	250	200	250
Numeral	375	375	375	300	375
Letter	375	375	375	300	375
Interstate Route Sign					
Numeral	450				450
Shield (1, 2 Digit) (3 Digit)	900 x 900 1125 x 900				900 x 900 1125 x 900
U.S. or State Route Sign					
Numeral	450	450	450	300	450
Shield (1, 2 Digit) (3 Digit)	900 x 900 1125 x 900	900 x 900 1125 x 900	900 x 900 1125 x 900	600 x 600 750 x 600	900 x 900 1125 x 900
or Alternate (Example: U.S. 56)					
Alphabets	375	300	300	250	300
Numeral	450	375	375	300	375
Cardinal Direction					
First Letter	450	375	300	250	375
Word	375	300	250	200	300
Name of Place, Street, or Highway					
Word	500/375	400/300	330/250	265/200	400/300
Distance Numeral Fraction Word	 450 300 300	 375 250 250	 300 250 250	 250 200 200	 375 250 250
Action Message Word	250	250	250	200	250

B. Gore Signs					
Word	250	250	250	200	
Numeral & Letter	300	300	300	250	

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*See Section 2E.30 for definitions of major, intermediate, and minor.

Table 2E.2 Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Sign Type (sizes shown in millimeters)

Sign Type and Components	Minimum Sizes (in millimeters)
C. Pull Thru Signs	
Destination Message Word	330/250
Route Sign as Message Cardinal Direction Route Shield 1, 2 Digit 3 Digit	 250 900 x 900 1125 x 900
D. Supplemental Guide Signs	
Exit Number Word Numeral Letter	 200 300 300
Place Name	265/200
Action Message	200
E. Changeable Message Signs*	450|265
F. Interchange Sequence Signs	
Word	265/200
Numeral	250
Fraction	200
G. "Next X Exit" Signs	
Place Name	265/200
NEXT X EXITS	200
H. Distance Signs	
Word	200/150
Numeral	200
I. General Road User Services Signs	
Exit Number Word Numeral Letter	 200 300 300
Services	200

J. Rest Area and Scenic Area Signs	
Word	250
Distance Numeral Fraction Word	 300 200 250
Action Message Word	 250
K. Kilometerposts	
Word	100
Numeral	250
L. Boundary and Orientation Signs	
Word	200/150
M. "Next Exit" and "Next Services" Signs	
Word	200
Numeral	200
N. "Exit Only" Signs	
Word	300

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*Changeable Message Signs may often require larger sizes than the minimum. The sizes shown here are the desirable and minimum sizes. Desirable sizes should be used where traffic speeds re high (>55mph), in areas of persistent inclement weather, or where complex driving tasks are involved.

Table 2E-1 Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Interchange Classification (sizes shown in inches)

	Major*		Intermediate*	Minor*	Overhead
	Category a	Category b			
A. Advance Guide, Exit Direction, and Overhead Guide Signs					
Exit Panel					
Word	10"	10"	10"	8"	10"
Numeral	15"	15"	15"	12"	15"
Letter	15"	15"	15"	12"	15"
Interstate Route Sign					
Numeral	18"				18"
Shield (1-2 Digit) (3 Digit)	36" x 36" 45" x 36"				36" x 36" 45" x 36"
U.S. or State Route Sign					
Numeral	18"	18"	18"	12"	18"
Shield (1, 2 Digit) (3 Digit)	36" x 36" 45" x 36"	36" x 36" 45" x 36"	36" x 36" 45" x 36"	24" x 24" 30" x 24"	36" x 36" 45" x 36"
or Alternate (Example: U.S. 56)					
Alphabets	15"	12"	12"	10"	12"
Numeral	18"	15"	15"	12"	15"
Cardinal Direction					
First Letter	18"	15"	12"	10"	15"
Word	15"	12"	10"	8"	12"
Name of Place, Street, or Highway					
Word	20"/15"	16"/12"	13.3"/10"	10.6"/8"	16"/12"
Distance Numeral Fraction Word	 18" 12" 12"	 15" 10" 10"	 12" 10" 10"	 10" 8" 8"	 15" 10" 10"
Action Message Word	10"	10"	10"	8"	10"
B. Gore Signs					
Word	10"	10"	10"	8"	
Numeral & Letter	12"	12"	12"	10"	

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*See Section 2E.30 for definitions of major, intermediate, and minor.

Table 2E.2 Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Sign Type (Sizes shown in inches)

Sign Type and Components	Minimum Sizes (in inches)
A. Pull Thru Signs	
Destination Message Word	13.3"/10"
Route Sign as Message Cardinal Direction Route Shield 1, 2 Digit 3 Digit	 10" 36" x 36" 45" x 36"
B. Supplemental Guide Signs	
Exit Number Word Numeral Letter	 8" 12" 12"
Place Name	10.6"/8"
Action Message	8"
C. Changeable Message Signs*	18"|10.6"
D. Interchange Sequence Signs	
Word	10.6"/8"
Numeral	10"
Fraction	8"
E. "Next X Exit" Signs	
Place Name	10.6"/8"
NEXT X EXITS	8"
F. Distance Signs	
Word	8"/6"
Numeral	8"
G. General Road User Services Signs	
Exit Number Word Numeral Letter	 8" 12" 12"
Services	8"

H. Rest Area and Scenic Area Signs	
Word	10"
Distance Numeral Fraction Word	 12" 8" 10"
Action Message Word	 10"
I. Kilometerposts	
Word	4"
Numeral	10"
J. Boundary and Orientation Signs	
Word	8"/6"
K. "Next Exit" and "Next Services" Signs	
Word	8"
Numeral	8"
L. "Exit Only" Signs	
Word	12"

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*Changeable Message Signs may often require larger sizes than the minimum. The sizes shown here are the desirable and minimum sizes. Desirable sizes should be used where traffic speeds re high (>55mph), in areas of persistent inclement weather, or where complex driving tasks are involved.

Table 2E-3 Minimum Letter and Numeral Sizes for Freeway Guide Signs According to Interchange Classification (sizes shown in millimeters)

	Major*		Intermediate*	Minor*	Overhead
	Category a	Category b			
A. Advance Guide, Exit Direction, and Overhead Guide Signs					
Exit Panel					
Word	250	250	250	250	250
Numeral	375	375	375	375	375
Letter	375	375	375	375	375
Interstate Route Sign					
Numeral	600|450				450
Shield (1,2 Digit) (3 Digit)	 1200 x 1200|900 x 900 1500 x 1200|1125 x 900				 900 x 900 1125 x 900
U.S. or State Route Sign					
Numeral	600|450	450	450	300	450
Shield (1-2 Digit) (3 Digit)	 1200 x 1200|900 x 900 1500 x 1200|1125 x 900	 900 x 900 1125 x 900	 900 x 900 1125 x 900	 600 x 600 750 x 600	 900 x 900 1125 x 900
or Alternate (Example: U.S. 56)					
Alphabets	375	375|300	300	250	300
Numeral	450	450|375	375	300	375
Cardinal Direction					
First Letter	450	375	375	250	375
Word	375	300	300	200	300
Name of Place, Street, or Highway					
Word	500/375	500/375	400/300	330/250	400/300
Distance Numeral Fraction Word	 450 300 300	 450|375 300|250 300|250	 375 250 250	 300 200 200	 375 250 250
B. Gore Signs					
Word	300	300	300	200	
Numeral & Letter	375	375	375	250	

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*See Section 2E.30 for definitions of major, intermediate, and minor.

Table 2E.4 Minimum Letter and Numeral Sizes for Freeway Guide Signs According to Sign Type (sizes shown in millimeters)

Sign Type and Components	Minimum Sizes (in millimeters)
A. Pull Thru Signs	
Destination Message Word	400/300
Route Sign as Message Cardinal Direction Route Shield 1, 2 Digit 3 Digit	 300 900 x 900 1125 x 900
B. Supplemental Guide Signs	
Exit Number Word Numeral Letter	 250 375 375
Place Name	330/250
Action Message	250
C. Changeable Message Signs*	450|265
D. Interchange Sequence Signs	
Word	330/250
Distance Numeral	330
Fraction	250
E. "Next X Exit" Signs	
Place Name	330/250
NEXT X EXITS	250
F. Distance Signs	
Word	200/150
Numeral	200
G. General Road User Services Signs	
Exit Number Word Numeral Letter	 250 375 375
Services	250

H. Rest Area and Scenic Area Signs	
Word	300
Distance Numeral Fraction Word	 375 300 250
Action Message Word	 300
I. Kilometerposts	
Word	100
Numeral	250
J. Boundary and Orientation Signs	
Word	200/150
K. "Next Exit" and "Next Services" Signs	
Word	200
Numeral	200
L. "Exit Only" Signs	
Word	300
M. Diagrammatic Signs	
Lane Widths	125
Lane Lines	25 x 150
Vertical space between lane lines	150
Stem height (up to the upper point of departure)	750
Arrowhead (standard "up" arrow)	200
Space between arrowhead and route shield	300

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*Changeable Message Signs may often require larger sizes than the minimum. The sizes shown here are the desirable and minimum sizes. Desirable sizes should be used where traffic speeds re high (>55mph), in areas of persistent inclement weather, or where complex driving tasks are involved.

Table 2E-3 Minimum Letter and Numeral Sizes for Freeway Guide Signs According to Interchange Classification (sizes shown in inches)

	Major*		Intermediate*	Minor*	Overhead
	Category a	Category b			
A. Advance Guide, Exit Direction, and Overhead Guide Signs					
Exit Panel					
Word	10"	10"	10"	10"	10"
Numeral	15"	15"	15"	15"	15"
Letter	15"	15"	15"	15"	15"
Interstate Route Sign					
Numeral	24"|18"				18"
Shield (1, 2 Digit) (3 Digit)	 48" x 48"|36" x 36" 60" x 48"|45" x 36"				 36" x 36" 45" x 36"
U.S. or State Route Sign					
Numeral	24"|18"	18"	18"	12"	18"
Shield (1, 2 Digit) (3 Digit)	 48" x 48"|36" x 36" 60" x 48"|45" x 36"	 36" x 36" 45" x 36"	 36" x 36" 45" x 36"	 24" x 24" 30" x 24"	 36" x 36" 45" x 36"
or Alternate (Example: U.S. 56)					
Alphabets	15"	15"|12"	12"	10"	12"
Numeral	18"	18"|15"	15"	12"	15"
Cardinal Direction					
First Letter	18"	15"	15"	10"	15"
Word	15"	12"	12"	8"	12"
Name of Place, Street, or Highway					
Word	20"/15"	20"/15"	16"/12"	13.3"/10"	16"/12"
Distance Numeral Fraction Word	 18" 12" 12"	 18"|15" 12"|10" 12"|10"	 15" 10" 10"	 12" 8" 8"	 15" 10" 10"
B. Gore Signs					
Word	12"	12"	12"	8"	
Numeral & Letter	15"	15"	15"	10"	

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*See Section 2E.30 for definitions of major, intermediate, and minor.

Table 2E.4 Mininum Letter and Numeral Sizes for Freeway Guide Signs According to Sign Type (sizes shown in inches)

Sign Type and Components	Minimum Sizes (in inches)
A. Pull Thru Signs	
Destination Message Word	16"/12"
Route Sign as Message Cardinal Direction Route Shield 1, 2 Digit 3 Digit	 12" 36" x 36" 45" x 36"
B. Supplemental Guide Signs	
Exit Number Word Numeral Letter	 10" 15" 15"
Place Name	13.3"/10"
Action Message	10"
C. Changeable Message Signs*	18"|10.6"
D. Interchange Sequence Signs	
Word	13.3"/10"
Distance Numeral	13.3"
Fraction	10"
E. "Next X Exit" Signs	
Place Name	13.3"/10"
NEXT X EXITS	10"
F. Distance Signs	
Word	8"/6"
Numeral	8"
G. General Road User Services Signs	
Exit Number Word Numeral Letter	 10" 15" 15"
Services	10"

H. Rest Area and Scenic Area Signs	
Word	12"
Distance Numeral Fraction Word	 15" 12" 10"
Action Message Word	 12"
I. Kilometerposts	
Word	4"
Numeral	10"
J. Boundary and Orientation Signs	
Word	8"/6"
K. "Next Exit" and "Next Services" Signs	
Word	8"
Numeral	8"
L. "Exit Only" Signs	
Word	12"
M. Diagrammatic Signs	
Lane Widths	5"
Lane Lines	1" x 6"
Vertical space between lane lines	6"
Stem height (up to the upper point of departure)	30"
Arrowhead (standard "up" arrow)	8"
Space between arrowhead and route shield	12"

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.
Note: (/) Slanted bar signifies separation of upper-case and lower-case alphabets.
*Changeable Message Signs may often require larger sizes than the minimum. The sizes shown here are the desirable and minimum sizes. Desirable sizes should be used where traffic speeds re high (>55mph), in areas of persistent inclement weather, or where complex driving tasks are involved.

2E.14 Interline and Edge Spacing

GUIDANCE:

Interline spacing of upper-case letters should be approximately three-fourths the average of upper-case letter heights in adjacent lines of letters.

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.

2E.15 Sign Borders

STANDARD:

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:

For guide signs larger than 3m (10 ft) by 2 m (6 ft), the border should have a width of 50 mm (2 in). For smaller guide signs, a border width of 30 mm (1¼ in) should be used, but the width should not exceed the stroke width of the major lettering on the sign.

Corner radii of sign borders should be one-eighth of the minimum sign dimension on guide signs, except that the radii should not exceed 300 mm (12 in) on any sign.

Option:

The sign material in the area outside the corner radius may be trimmed.

2E.16 Abbreviations

GUIDANCE:

Abbreviations should be kept to a minimum; however, they are useful when complete destination messages produce excessively long signs. When used, abbreviations should be unmistakably recognized by road users.

Periods should not be used. The exception is when a cardinal direction is abbreviated as part of a destination name.

STANDARD:

The words NORTH, SOUTH, EAST, and WEST shall not be abbreviated when used with route signs to indicate cardinal directions on guide signs.

2E.17 Symbols

STANDARD:

Symbol designs shall be essentially like those shown in this Manual.

GUIDANCE:

A special effort should be made to balance legend components for maximum legibility of the symbol with the rest of the sign.

Option:

Educational plaques may be used below symbol signs where needed.

2E.18 Arrows for Interchange Guide Signs

STANDARD:

On all Exit Direction signs, both overhead and ground mounted, arrows shall be upward slanting and shall be located on the side of the sign consistent with the direction of the exiting movement.

Downward pointing arrows shall be used only for overhead guide signs to prescribe lane assignment for traffic bound for a destination or route that can be reached only by being in the designated lane(s).

Option:

Downward pointing arrows may be tilted where it is desired to emphasize the separation of roadways.

SUPPORT:

Examples of arrows for use on guide signs are shown in Figure 2.6 in Chapter 2D. Detailed dimensions of arrows are provided in the Standard Highway Signs Book.

2E.19 Diagrammatic Signs

SUPPORT:

Diagrammatic signs are guide signs that show a graphic view of the exit arrangement in relationship to the main highway. Use of such guide signs has

been shown to be superior to conventional guide signs for some interchanges.

STANDARD:

Diagrammatic signs shall be designed in accordance with the following criteria:

a. The graphic legend shall be of a plan view showing a simplified off-ramp arrangement.

b. No more than one destination shall be shown for each arrowhead, with a maximum of two destinations per sign.

c. No other symbols or route shields shall be used as a substitute for arrow heads.

d. They shall not be installed at the exit direction location (Section 2E.34).

e. The EXIT ONLY panel shall not be used on diagrammatic signs at any major bifurcation or split (Section 2E.20).

GUIDANCE:

Diagrammatic signs should be designed in accordance with the following additional criteria:

a. The graphic should not depict deceleration lanes.

b. A black on yellow "EXIT ONLY" panel should be used to supplement a lane drop graphic.

c. The shaft for the exit ramp movement should be shorter than, but not separated from, the through movement graphic.

d. Arrow shafts should contain lane lines where appropriate.

e. Route shields, cardinal directions, and destinations should be clearly related to the arrowhead, and the arrowhead should point toward the route shield for the off movement.

f. The cardinal direction should be placed adjacent to the route shield, and the destination should be placed below and justified with the route shield.

Diagrammatic signs should be used at the following locations:

a. At the Advance Guide sign locations for left exits (Figure 2E-3).

b. At bifurcation splits where the off-route movement is to the left (Figure 2E-4).

c. At optional lane splits for non-overlapping routes (Figure 2E-5).

d. At the Advance Guide sign location where a two-lane exit has an optional lane that carries the through route (Figure 2E-7). These interchanges create serious expectancy problems for drivers who are unfamiliar with the interchange and diagrammatic signs (Figure 2E-6) should be used at the advance guide sign locations for this type of interchange.

e. At left exit interchange lane drop situations. In this situation, the EXIT ONLY panel (E11-1c) should be used without a down arrow for advance guide signs (Figure 2E-10).

STANDARD:

Diagrammatic signs shall not be used at cloverleaf interchanges. Diagrammatic signs have been shown to be inferior to conventional signs at these locations.

SUPPORT:

Specific guidelines for more detailed design of diagrammatic signs are contained in the Standard Highway Signs Book.

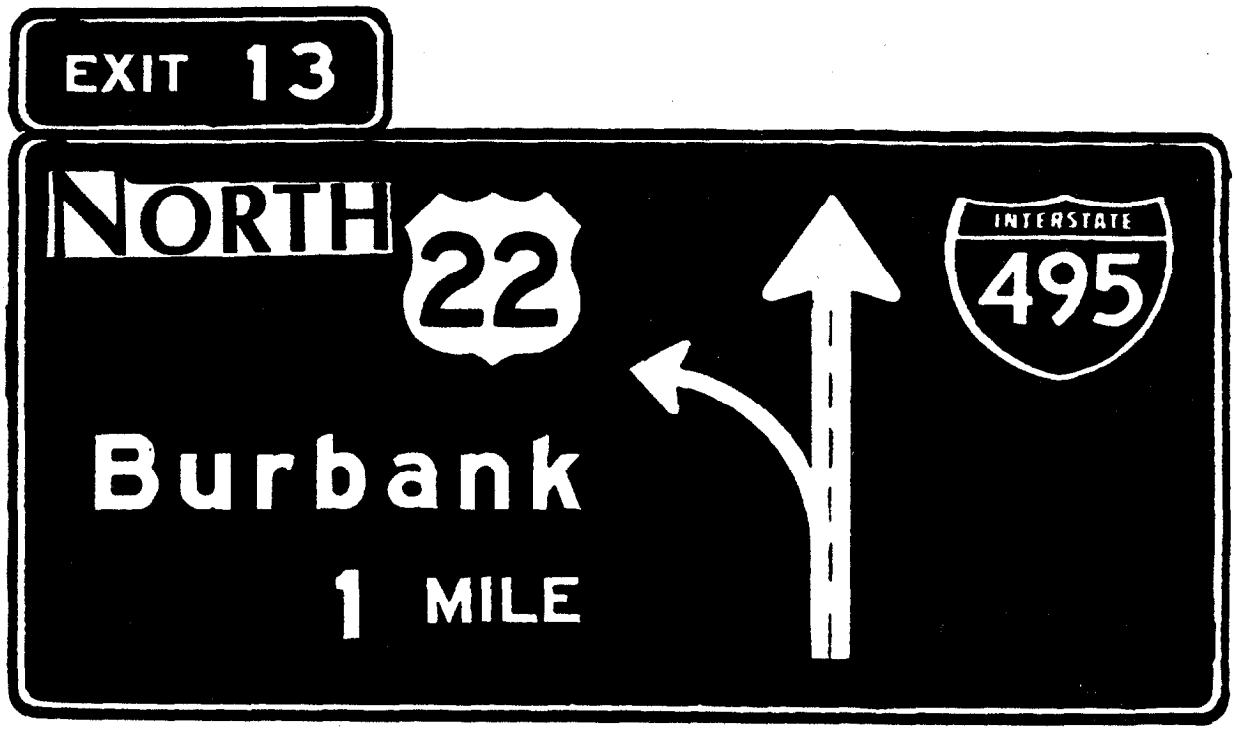


Figure 2E-3. Diagrammatic sign for single lane left exit.

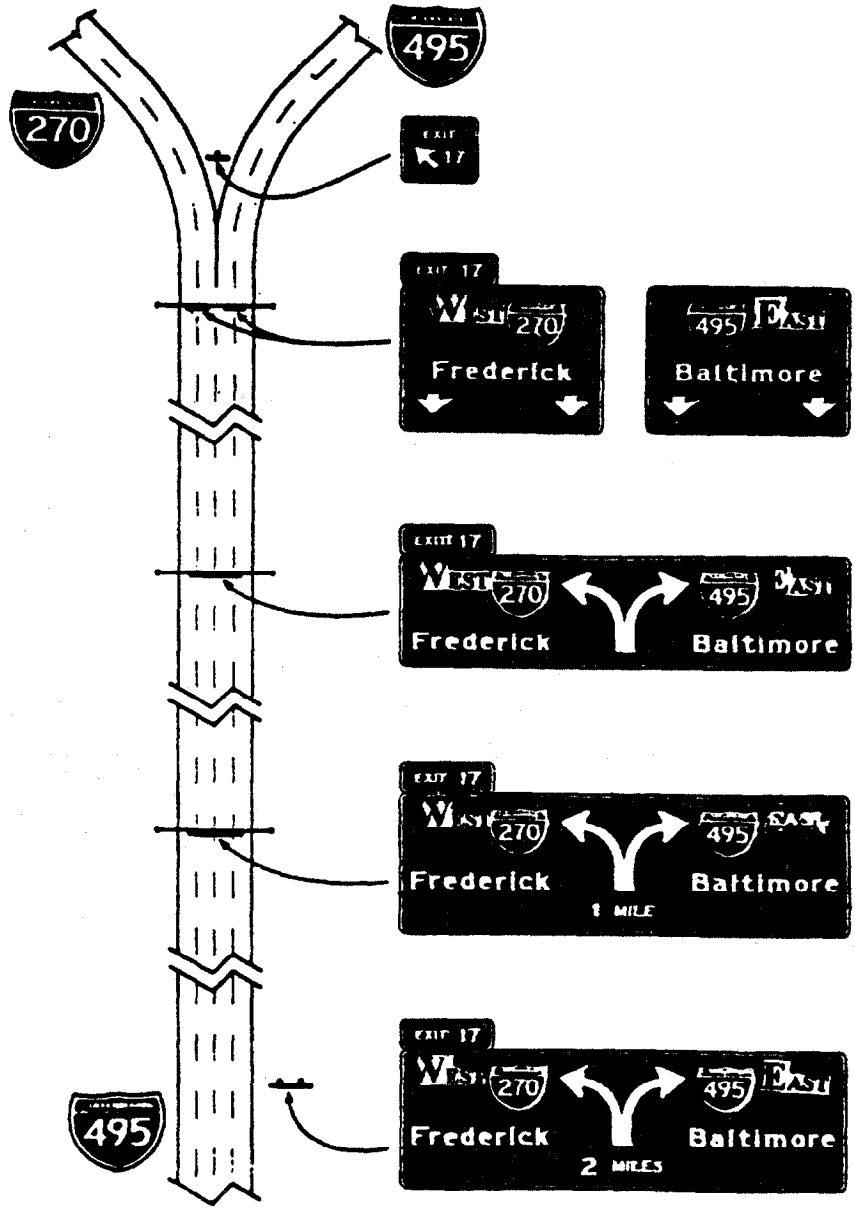


Figure 2E-4. Split without optional lane having off route to left.

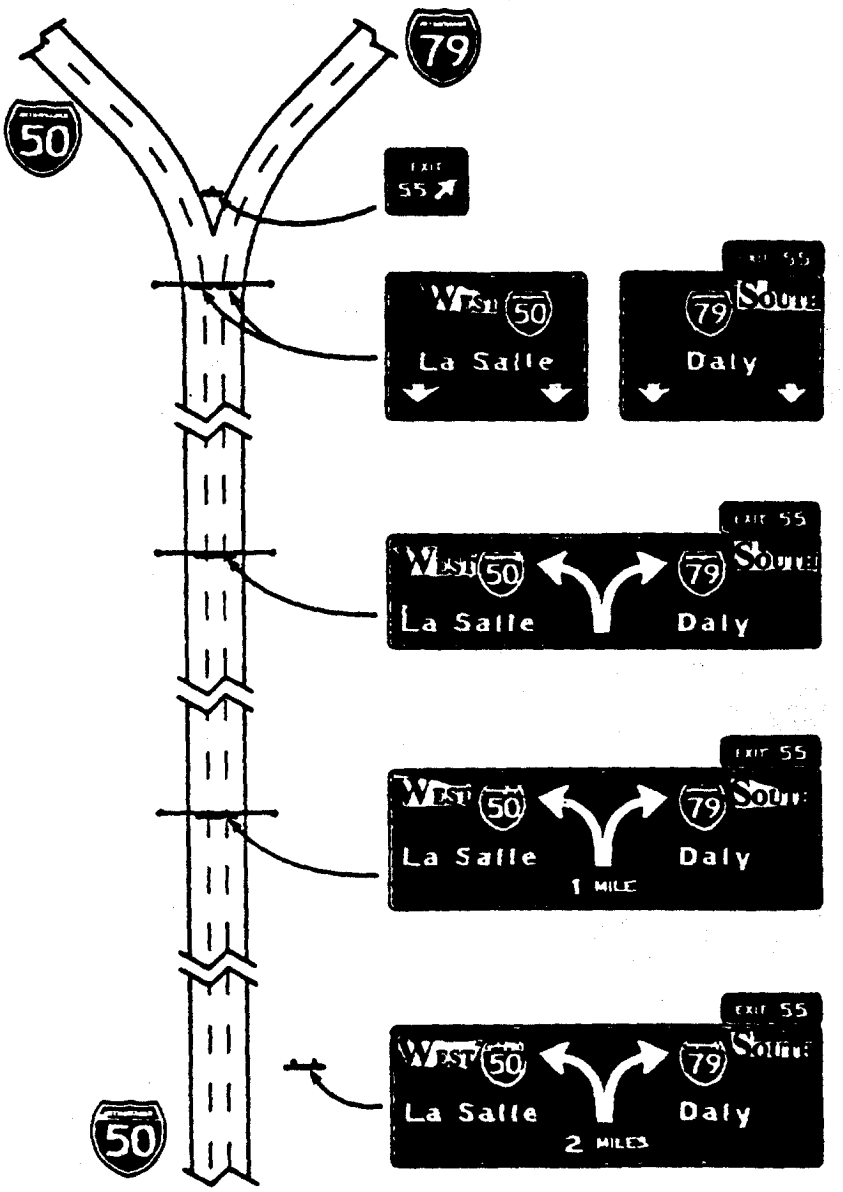


Figure 2E-5. Optional lane split (Not overlapping routes).

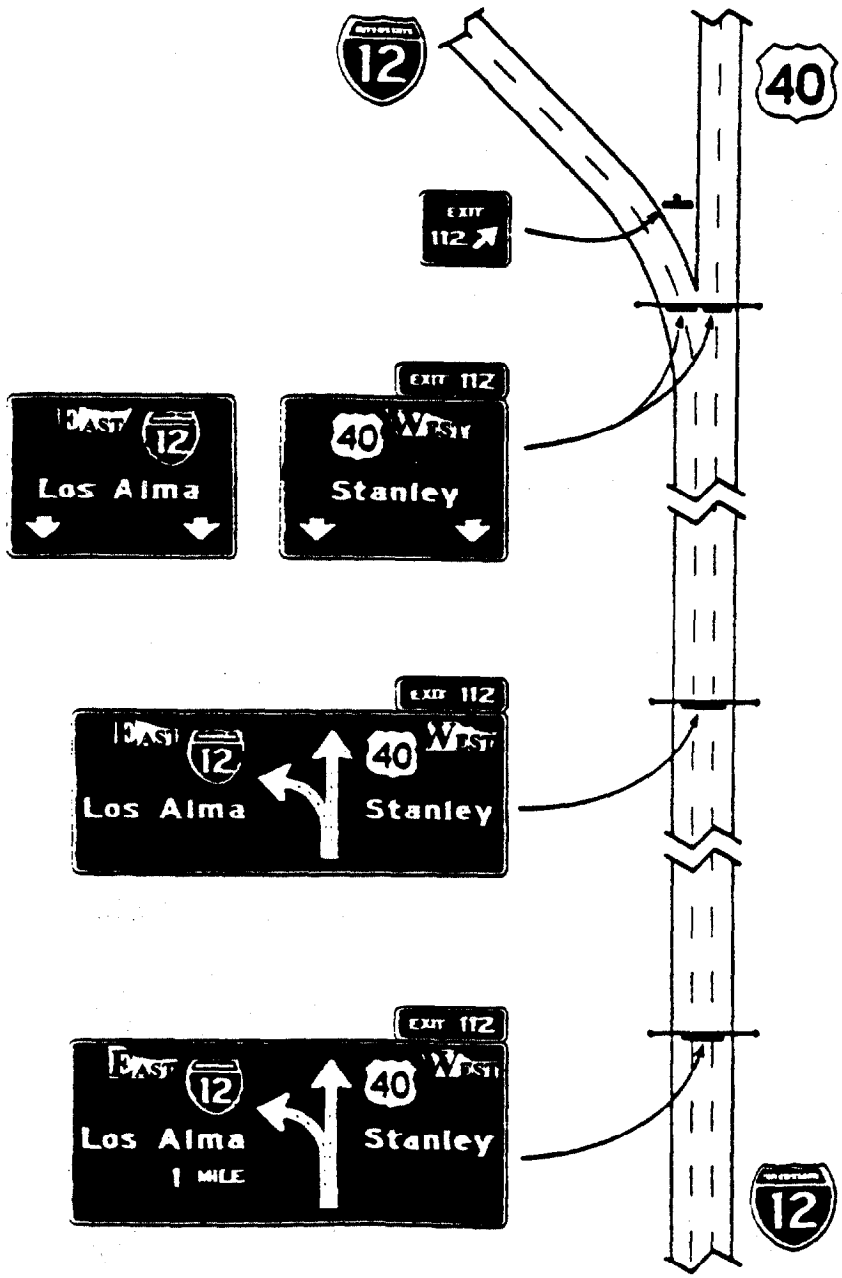


Figure 2E-6. Two-lane exit with optional lane and route discontinuity.

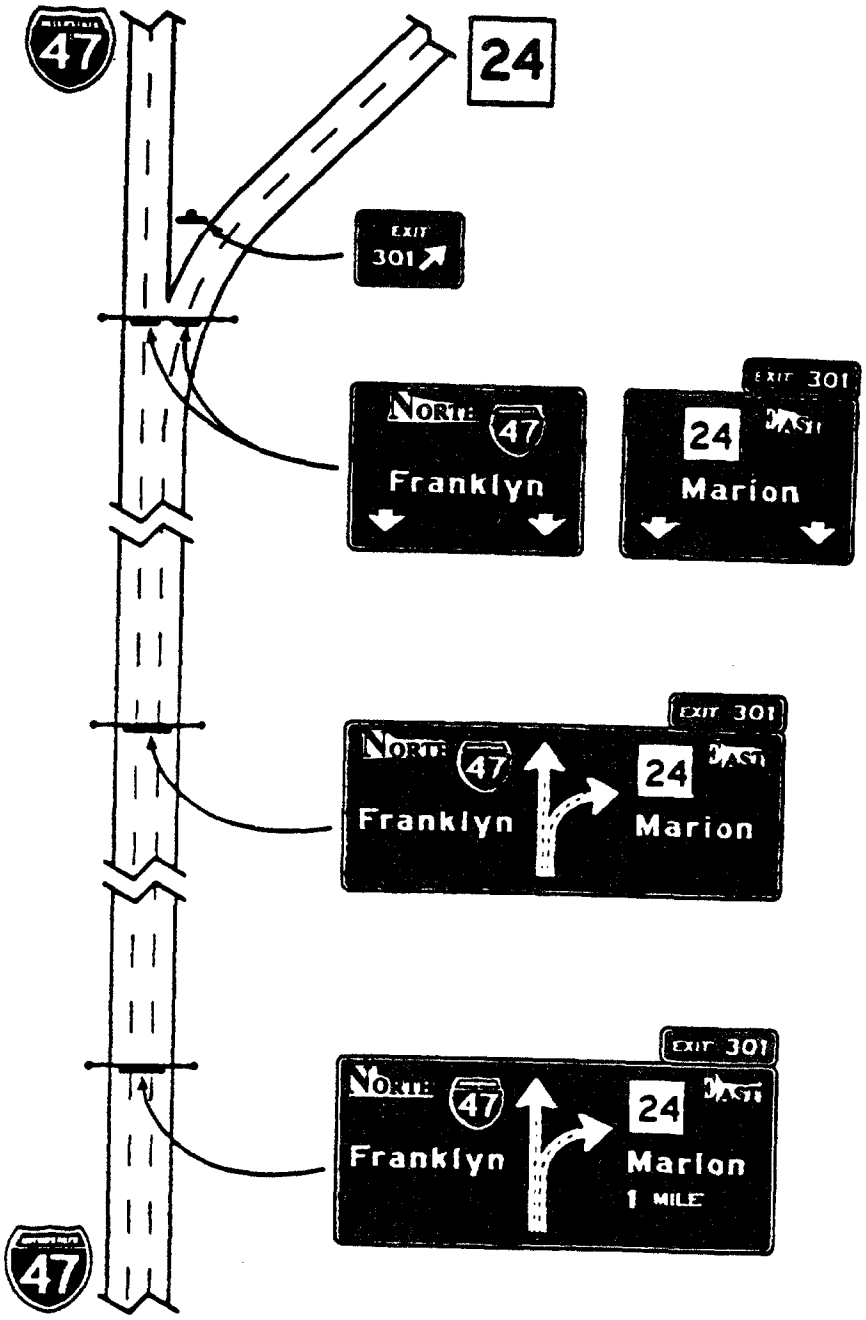


Figure 2E-7. Two-lane exit with optional lane.

2E.20 Signing for Interchange Lane Drops

STANDARD:

Major guide signs for all lane drops at interchanges shall be mounted overhead. The EXIT ONLY panel(s) (Figure 2E-8) shall be used for all interchange lane drops at which the through route is carried on the mainline. The EXIT ONLY panel shall not be used on diagrammatic signs at any major bifurcation or split.

GUIDANCE:

The EXIT ONLY panel (E11-1) should be used on all signing of lane drops on all Advance Guide signs for right-hand exits (Figure 2E-9). For lane drops on the left side, diagrammatic signing with the EXIT ONLY panel (E11-1c) should be used without a down arrow for Advance Guide signs (Figure 2E-10).

STANDARD:

The Exit Direction sign (E11-1a) for all lane drops shall be of the format shown in Figure 2E-8. The standard slanted up arrow (left or right side) shall be used with the EXIT ONLY panel (E11-1) at the Exit Direction sign location.

Option:

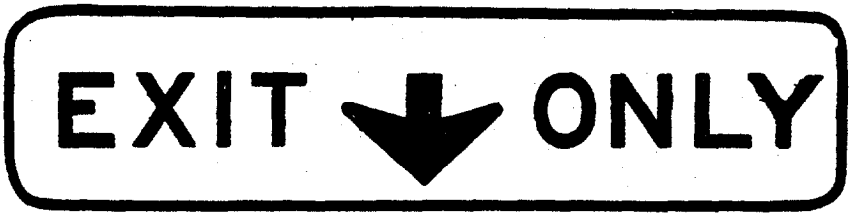
EXIT ONLY messages of either E11-1b or E11-1c formats may be used to retrofit existing signing to warn of a lane drop situation ahead.

STANDARD:

If used on an existing sign, the E11-1b panel shall be placed on either side of a white down arrow. The E11-1c panel, if used on an existing nondiagrammatic sign, shall be placed between the lower destination message and the white down arrow.

GUIDANCE:

Advance Guide signs for lane drops within 2 km (1 mi) of the interchange should not contain the distance message. Wherever the dropped lane carries the through route, diagrammatic signs should be used without the EXIT ONLY panel.



E11-1

E11-1a

E11-1b

E11-1c

Figure 2E-8. EXIT ONLY panels.

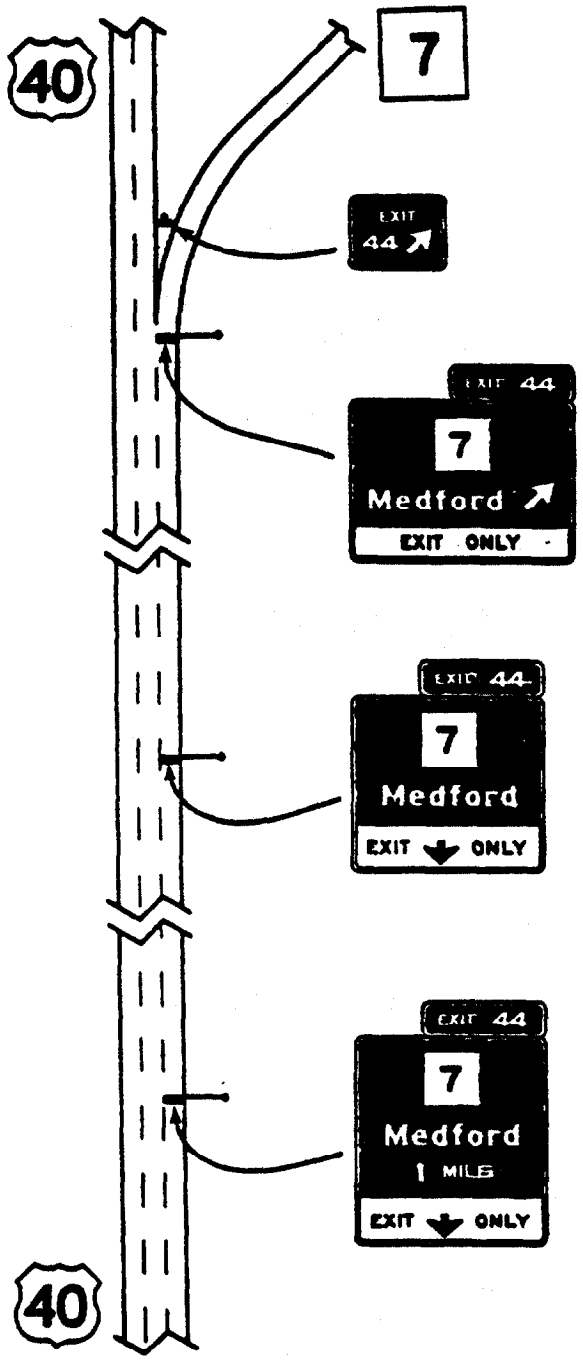


Figure 2E-9. EXIT ONLY panels on right (right-hand interchange lane drop).

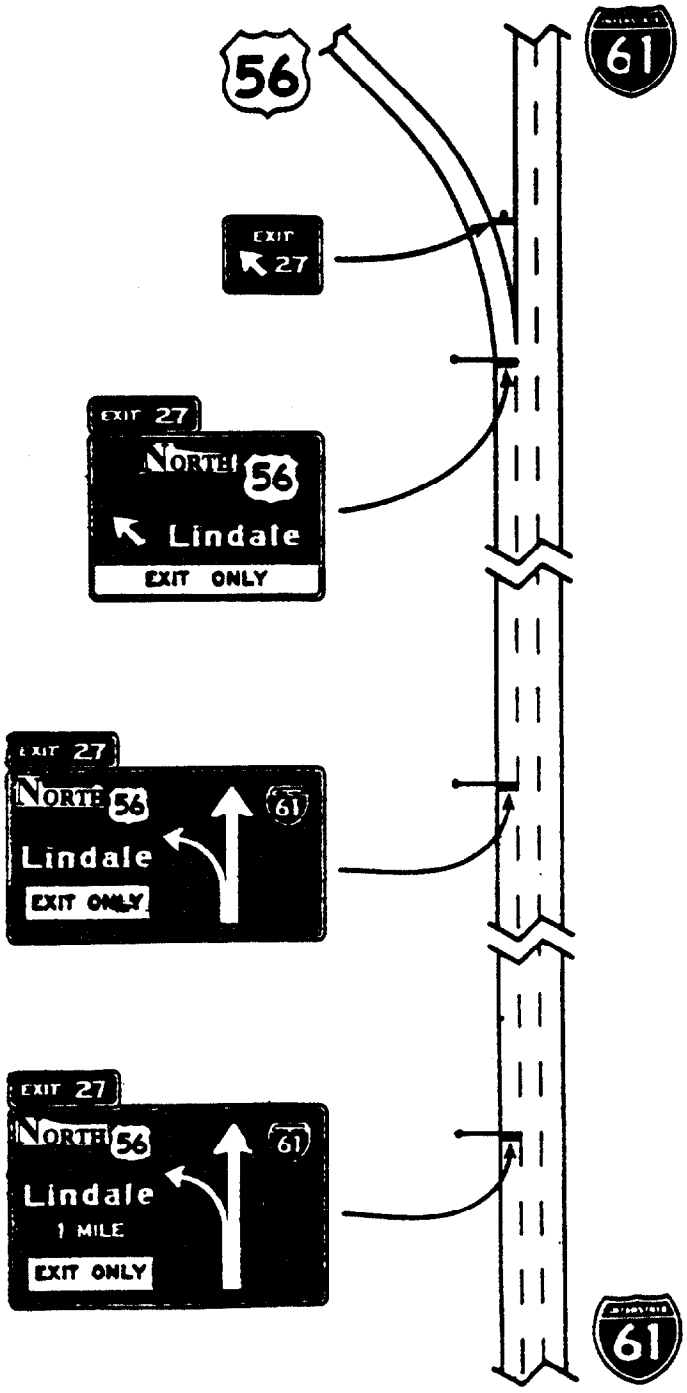


Figure 2E-10. EXIT ONLY on left with diagrammatic left-hand interchange lane drop.

2E.21 Changeable Message Signs

STANDARD:

Changeable message signs shall be capable of displaying several messages in a sequence. Such messages shall be changed manually, by remote control, or by automatic controls. Changeable message signs shall display pertinent traffic operational and guidance information only, not advertising.

SUPPORT:

Because technology for changeable message signs continues to advance, a specific standard for changeable message signs is not possible. Considerations that influence the selection of the best sign for a particular application include conspicuity, legibility, operation, and maintenance of the changeable message sign. This section applies to signs for use on freeway and expressway mainlines. It is recognized that similar signs might be used on ramps and at ramp terminals where smaller letter heights and the number of messages might differ from the provisions of this section.

GUIDANCE:

To the extent practical, the design and application of changeable message signs should conform to the general principles of this Manual. Within the context of Section 2A.7, these practices should be followed for mainline freeway and expressway applications:

a. Changeable message signs should be upper-case and have a minimum character height of 265 mm (10.6 in). Signs should be limited to not more than 3 lines with not more than 20 characters per line.

b. No more than 2 displays should be used within any message cycle.

c. Each display should convey a single thought.

d. The entire message cycle should be readable at least twice by drivers travelling at the posted speed, the off-peak 85th percentile speed, or the operating speed.

STANDARD:

Messages shall be centered within each line of legend. If more than one changeable message sign is visible to road users, then not more than one such sign shall display a sequential message at any given time.

A 3-line changeable message sign shall be limited to not more than two messages. Techniques of message display such as fading, exploding, dissolving, or moving messages shall not be used.

2E.22 Vertical Clearance of Ground Mounted Signs

Sections 2A.18 and 2A.19 contain information regarding vertical clearance of ground-mounted signs.

2E.23 Overhead Sign Installations

SUPPORT:

Specifications for the design and construction of structural supports for highway 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. For other overhead sign supports such as Butterfly-type signs, seethe discussion contained in Section 2A.19.

2E.24 Horizontal Clearance

STANDARD:

The minimum clearance outside the usable roadway shoulder for expressway signs mounted at the roadside or for overhead sign supports, either to the right or left side of the roadway, shall be 1.8 m (6 ft). This minimum clearance shall also apply outside of a barrier curb. If located less than the clear zone distance, the signs shall be mounted on crash-worthy supports or shielded by appropriate crash-worthy barriers.

GUIDANCE:

Where practical, a sign should not be less than 3 m (10 ft) from the edge of the nearest traffic lane. Large guide signs especially should be farther

removed, preferably 9 m (30 ft) or more from the nearest traffic lane.

Where an expressway median is 3.6 m (12 ft) or less in width, consideration should be given to spanning both roadways without a center support.

Where overhead sign supports cannot be placed a safe distance 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 physical barrier or guardrail of suitable design.

STANDARD:

Butterfly-type sign supports and other overhead sign supports shall not be erected in gores or other unprotected locations within the clear zone.

Option:

Lesser clearances, but not generally less than 1.8 m (6 ft), may be used on connecting roadways or ramps at interchanges.

2E.25 Guide Sign Classification

SUPPORT:

Freeway and expressway guide signs are classified and treated in the following categories:

a. Route signs and Trailblazers (Section 2E.26).

b. At-grade Intersection signs (Section 2E.27).

c. Interchange signs (Sections 2E.28 through 2E.37).

d. Interchange Sequence Series signs (Section 2E.38).

e. Community Interchanges Identification signs (Section 2E.39).

f. Next (X) Exits Area signs (Section 2E.40).

g. General Road User Services signs (Section 2E.52).

h. Rest Area and Scenic Area signs (Section 2E.53).

i. Tourist Information and Welcome Center signs (Section 2E.54).

j. Kilometerpost signs (Section 2E.55).

k. Miscellaneous guide signs (Section 2E.56).

l. Radio Information signs (Section 2E.57).

m. Carpool Information signs (Section 2E.58).

n. Weigh Station signs (Section 2E.59).

o. Specific Service Signs (Chapter 2F)

p. Recreation and Cultural Interest signs (Chapter 2G)

2E.26 Route Signs and Trailblazer Assemblies

STANDARD:

The official Route sign for the Interstate Highway System shall be red, white, and blue retroreflective distinctive shield adopted by AASHTO.

GUIDANCE:

Route signs should be incorporated as cut-out shields or other distinctive shapes in large directional guide signs (Figures 2E-11, 2E-12, and 2E-13). 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 as shown in Figures 2E-29 through 2E-34.

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 as shown in the Standard Highway Signs. When independently mounted Route signs are used in place of Pull Thru signs, they should be located just beyond the exit.

Option:

The standard Trailblazer Assembly (Section 2D.32) may be used on roads leading to the freeway or expressway. Component parts of the Trailblazer

Assembly may be included on a single sign panel. Independently-mounted Route signs may be used instead of Pull Thru signs as confirmation information (see Section 2E.11). The commonly used name or trailblazer symbol for a toll facility 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 facility, whether or not the toll facility is a part of the Interstate Highway System; and

c. Other locations within a reasonable approach distance of toll facilities when the name or trailblazer symbol for the toll facility would provide better guidance to road users unfamiliar with the area than would place names and route numbers.

The toll facility name or symbol 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 Highway. Where needed for the proper direction of traffic, a trailblazer for a toll facility that is part of the Interstate Highway System may be displayed with the Interstate Trailblazer Assembly.

Figure 2E-11. Interstate and Off-interstate Shields

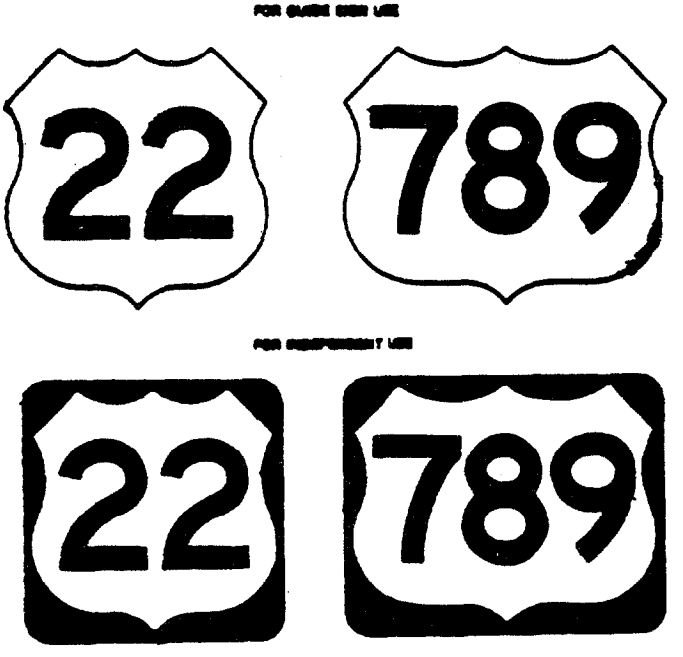


Figure 2E-12. Typical U.S. Shields

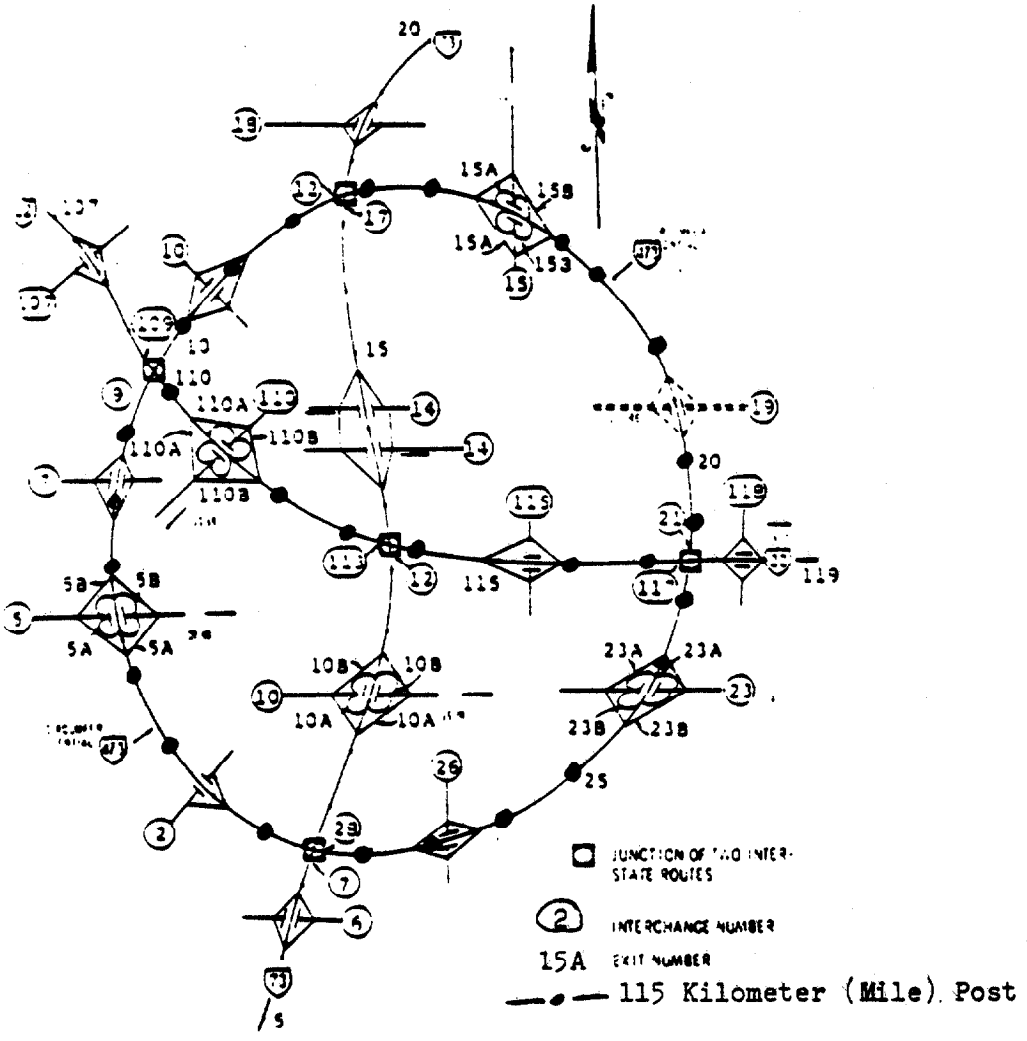


Figure 2E-13. Typical interchange numbering for mainline and circumferential routes.

2E.27 Signs for Intersections At Grade

GUIDANCE:

If there are intersections at grade within the limits of an expressway, sign types specified 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:

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.

2E.28 Interchange Guide Signs

STANDARD:

The major signs at interchanges and on their approaches shall consist of Advance Guide signs and Exit Direction signs. Consistent destination messages shall be displayed on these signs.

GUIDANCE:

New destination information should not be introduced into the major sign sequence for one interchange, nor should destination information be dropped.

Reference should be made to Sections 2E.11 and 2E.31 through 2E.39 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 250 m (800 ft) apart.

If Interchange Sequence Series signs (Section 2E.38) are used, they should be used over the entire length of a route in an urban area. They should not be used on a single interchange basis.

GUIDANCE:

Supplemental guide signing should be used sparingly as provided in Section 2E.33.

STANDARD:

Guide signs directing motorist to Park & Ride facilities shall be considered as supplemental signs. (Section 2E.33)

2E.29 Interchange Exit Numbering

SUPPORT:

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:

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 Gore sign. The exit number shall be displayed on a separate panel at the top of the Advance Guide or Exit Direction sign. The standard exit number legend shall include the word EXIT, the appropriate exit number, and the suffix letter A or B (on multi-exit interchanges) in a single-line format on a panel 750 mm (30 in) in vertical dimension. Minimum numeral and letter sizes are given in Tables 2E-1 through 2E-4. Where used for expressways, the interchange numbering system for expressways shall conform to the provisions prescribed for freeways.

Option:

There are two approaches to interchange exit numbering that the State and location transportation agencies may use: (1) milepost numbering or (2) consecutive numbering. Milepost numbering is preferred for two reasons: (1) If new interchanges are added to a route, the transportation departments do not have to change the numbering sequence; and (2) Milepost numbering assists road users in determining their destination distances and travel mileage.

Exit numbers may also be used with Supplemental Guide signs and Road User Service signs.

GUIDANCE:

Exit number panels should be located toward the top left edge of the sign for a left exit and toward the top right edge for right exits.

SUPPORT:

Details of typical panel designs are shown in Figures 2E-16 and 2E-20 through 2E-22 and, as incorporated on guide signs, in Figures 2E-28 through 2E-34. The general plan for numbering interchange exits is shown in Figures 2E-13 through 2E-15.

STANDARD:

Where a route originates within a state, the southernmost or westernmost terminus shall be the beginning point for numbering. If a loop, spur, or circumferential route crosses state boundaries, the sequence of numbering shall be coordinated by the states to provide continuous numbering.

For circumferential routes, the numbering of interchanges 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-13.) The interchange numbers on loop routes shall begin at the loop interchange nearest the south or west main line junction and increase in magnitude toward the north or east main line junction (See Figure 2E-14). Spur route interchanges shall be numbered in ascending order starting at the interchange where the spur leaves the main line of the principal route. (See Figure 2E-14).

Where numbered routes overlap, continuity of interchange numbering shall be established for only one of the routes (see Figure 2E-15). If one route is an Interstate, that route shall maintain continuity of interchange numbering.

GUIDANCE:

The route chosen for continuity of interchange numbering should also have continuity in kilometerposting (See Figure 2E-15).

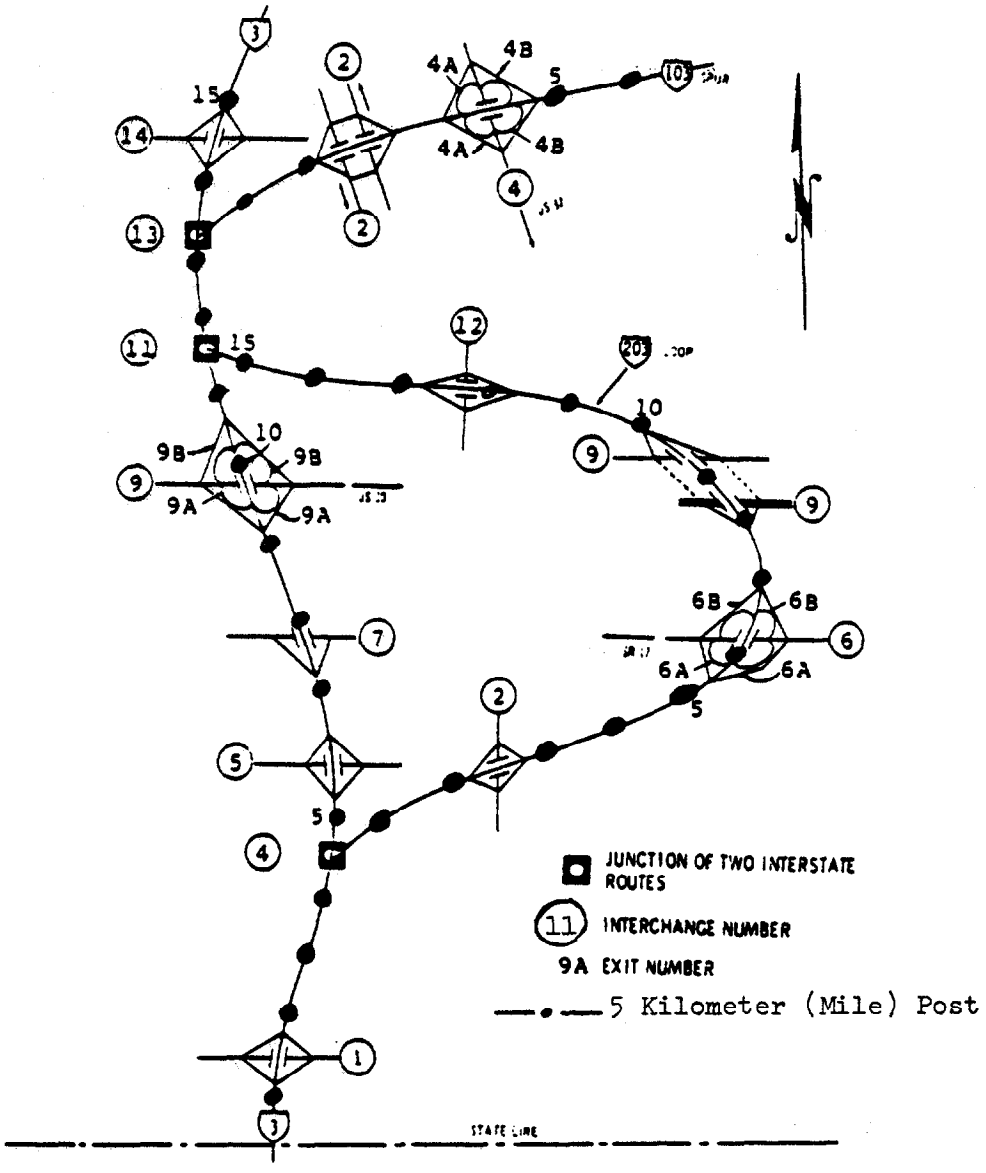


Figure 2E-14. Typical interchange numbering for mainline, loop and spur routes.

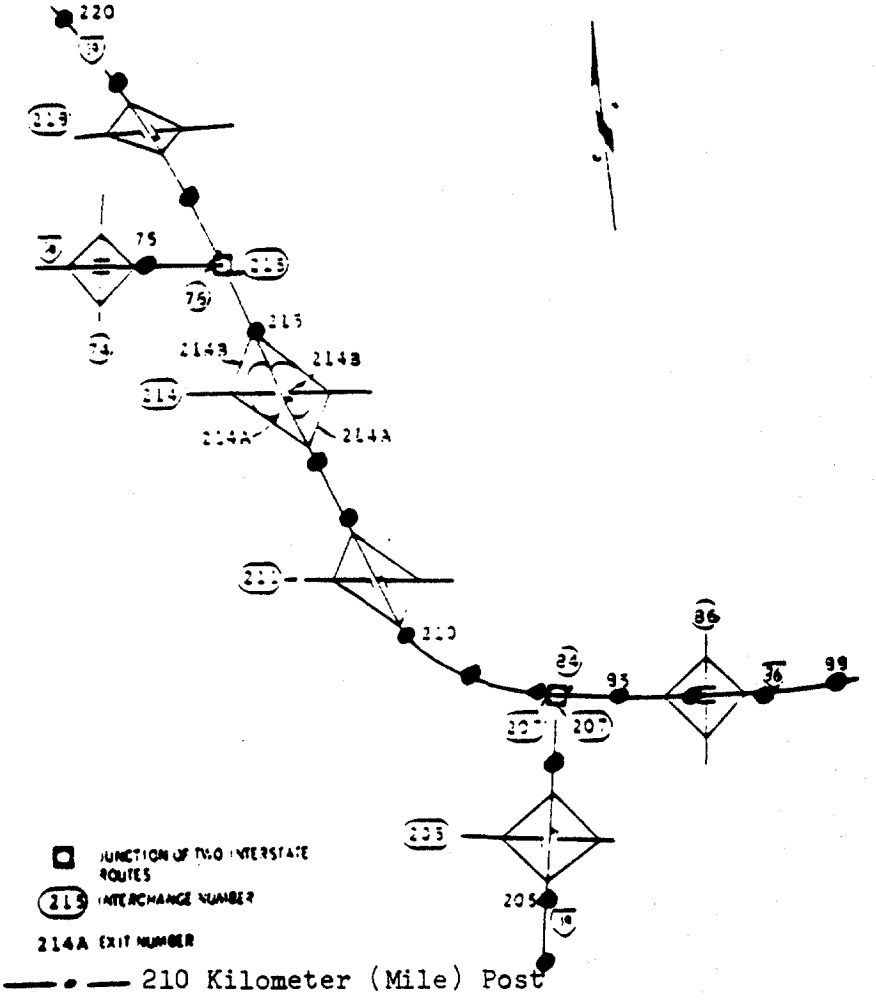


Figure 2E-15. Typical interchange numbering if routes overlap.

2E.30 Interchange Classification

SUPPORT:

For signing purposes, interchanges are classified as major, intermediate and minor. The minimum alphabet sizes contained in Tables 2E-1 and 2E-3 are based on this classification. Descriptions of these classifications are as follows:

1. Major interchanges are subdivided into two categories: (a) interchanges with other expressways or freeways, or (b) interchanges, other than those named in (a), with high-volume multi-lane highways, principal urban arterials, and major rural routes where the volumes of interchanging traffic is heavy or includes many roadway users unfamiliar with the area.

2. Intermediate interchanges are those with urban and rural routes not in the category of major or minor interchanges, as defined herein.

3. Minor interchanges include those where traffic is local and very light, such as the 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.

2E.31 Advance Guide Signs

SUPPORT:

The Advance Guide sign gives notice well in advance of the exit point of the principal destinations served by the next interchange and the distance to that interchange (See Figure 2E-16).

GUIDANCE:

For major and intermediate interchanges (See Section 2E.30), two and preferably three Advance Guide signs should be used. Placement should be 1 km (1/2 mi), 2 km (1 mi), and 4 km (2 mi) in advance of the exit. At minor interchanges, only one Advance Guide sign should be used. It should be located 1 to 2 km (1/2 to 1 mile) from the exit gore. If the sign is located less than 1 km (1/2 mi) from the exit, the distance shown should be to the nearest 400 m (¼ mi). Fractions of kilometers or decimals of kilometers should not be used. Fractions of a mile, rather than decimals, should be shown in all cases.

Where Advance Guide signs are for a left exit, diagrammatic signs should be used.

STANDARD:

When used, the one and two mile Advance Guide sign shall contain the distance message. 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 X KM (EXIT 1 MILE or EXIT 2 MILES as the case may be). If the interchange has two or more exit roadways, the bottom line shall read EXITS X KM (EXITS X MILE(S)).

Option:

Where interchange exit numbers are used, the word EXIT may be omitted from the bottom line. Where the distance between interchanges is more than 2 km (1 mi), but less than 4 km (2 mi), the first Advance Guide sign may be closer than 4 km (2 mi), 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:

Where there is less than 250 m (800 ft) between interchanges, Interchange Sequence Series signs should be used in lieu of Advance Guide signs for the affected interchanges.

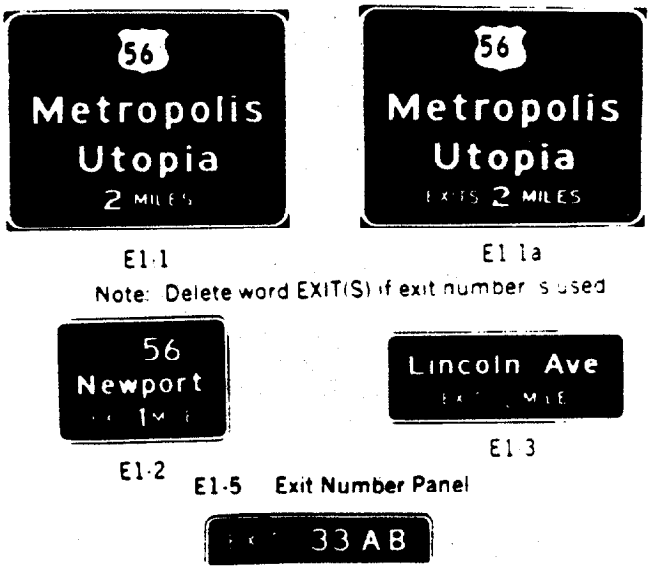


Figure 2E-16. Typical interchange Advance Guide signs.

2E.32 Next Exit Supplemental Sign

Option:

Where the distance to the next interchange is unusually long, Next Exit Supplemental signs may be installed to inform road users of the distance to the next interchange (Figure 2E-17).

GUIDANCE:

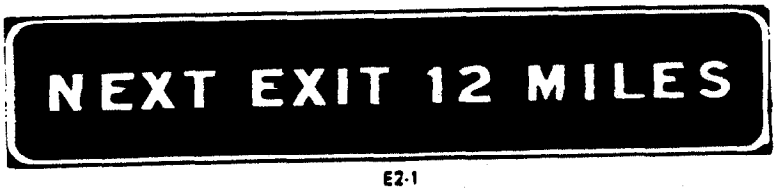
The Next Exit sign should not be used unless the distance between successive interchanges is more than 8 km (5 mi).

STANDARD:

The Next Exit Supplemental Sign shall carry the legend NEXT EXIT X KM (NEXT EXIT X MILES). Where the Next Exit Supplemental sign 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:

The legend for the Next Exit Supplemental sign may be displayed in either one or two lines. The one-line message is the more desirable choice unless the message causes the sign to have a horizontal dimension greater than that of the Advance Guide sign.



E2-1

E2-1A

Figure 2E-17. NEXT EXIT Supplemental Advance Guide sign.

2E.33 Other Supplemental Guide Signs

SUPPORT:

Supplemental Guide signs can be used to provide information regarding destinations accessible from an interchange, other than places shown 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.

GUIDANCE:

A Supplemental Guide sign 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. No more than one Supplemental Guide sign should be used on each interchange approach. The Supplemental Guide sign should be installed as an independent guide sign assembly.

Where two or more Advance Guide signs are used, the Supplemental Guide sign should be erected 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 250 m (800 feet). If the interchanges are numbered, the interchange number should be used for the action message.

States and other agencies should adopt an appropriate policy for installing supplemental signs using the "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. Figure 2E-18 shows a typical sign.

STANDARD:

Guide signs directing motorists to park and ride facilities shall be considered as Supplemental Guide signs (Figures 2E-19 and 2E-20).

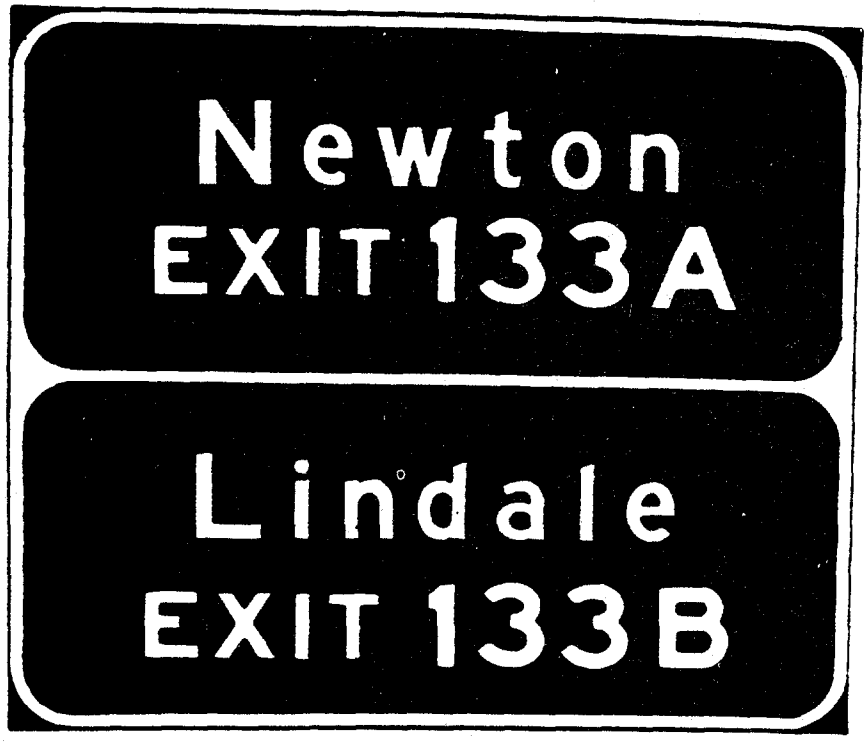


Figure 2E-18. Supplemental Guide signs for multi-exit interchanges.

Figure 2E-19. Supplemental Guide sign for a park and ride facility (route without exit numbering).

Figure 2E-20. Supplemental Guide sign for a park and ride facility (route with exit numbering).

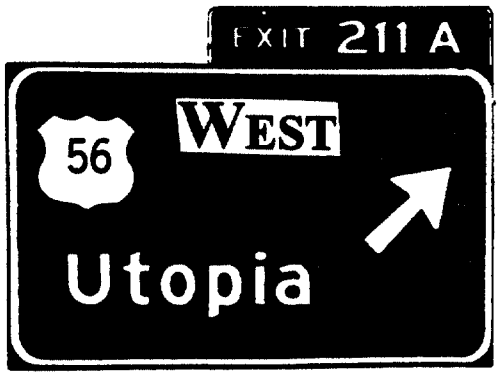


Figure 2E-21. Interchange Exit Direction sign.

2E.34 Exit Direction Signs

SUPPORT:

The Exit Direction sign repeats the route and destination information that was shown 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 the left for that destination.

STANDARD:

Exit Direction signs shall be used at major and intermediate interchanges. Population figures or other similar information shall not be used on Exit Direction signs.

GUIDANCE:

Exit Direction signs should be used at minor interchanges.

Ground-mounted Exit Direction signs should be installed at the beginning of the deceleration lane. If there is less than 100 m (300 ft) from the beginning of the deceleration lane to the theoretical gore (see Figure 3-11 in Chapter 3B), the Exit Direction sign should be erected overhead over the exiting lane in the vicinity of the theoretical gore.

STANDARD:

Where a through lane is being terminated at an exit (a "lane drop"), the Exit Direction sign shall be placed overhead at the theoretical gore (see Figures 2E-9 and 2E-10).

The following provisions shall govern the design and application of the overhead Exit Direction sign:

a. The sign shall carry the exit number (if used), the route number, cardinal direction, and destination with an appropriate upward slanting arrow (Figure 2E-21 on previous page).

b. The message "EXIT ONLY" in black on a yellow panel shall be used on the overhead Exit Direction sign to advise road users of a lane drop situation. The sign shall conform to the provisions of Section 2E.20.

c. Diagrammatic signs shall not be employed at the exit direction location.

GUIDANCE:

Exit number panels should be located toward the left edge of the sign for a left exit and toward the right edge for right exits.

Option:

In some cases, principally in urban areas, restricted sight distance because of structures or unusual alignment may make it impossible to locate the Exit Direction sign without violating the required minimum spacing between major guide signs. In such circumstances, Interchange Sequence signs (Section 2E.38) may be substituted for an Advance Guide sign.

STANDARD:

Interchange Sequence signs shall not be substituted for the Exit Direction sign.

GUIDANCE:

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 Thru sign, Figure 2E-2) be used over the left lane(s) to guide road users travelling through an interchange. In the interest of sign spreading, three signs on one structure should not be used. If the second exit is beyond an underpass, the Exit Direction sign should be mounted on the face of the overhead structure. 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.

2E.35 Gore Signs

SUPPORT:

The Gore sign indicates the place of departure from the main roadway. Consistent application of this sign at each exit is important. The basic need is for a sign to indicate the exiting point.

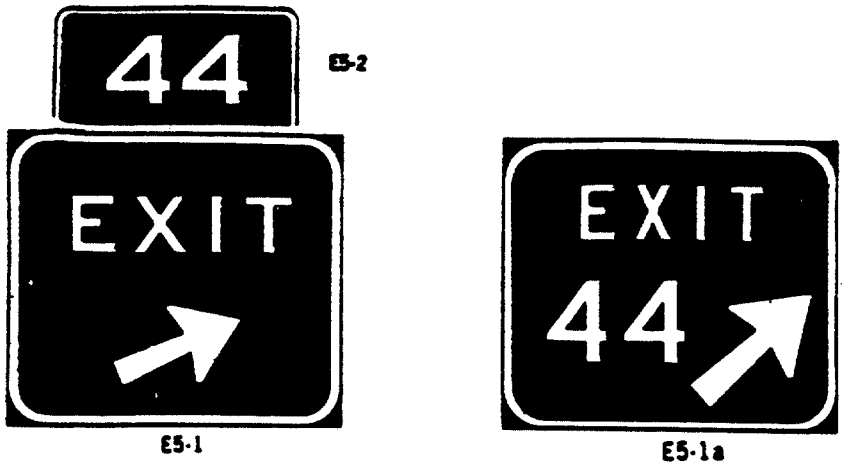


Figure 2E-22. Gore signs

GUIDANCE:

Each gore should be treated similarly, whether the interchange has one exit roadway or multiple exits.

STANDARD:

The Gore sign shall be located in the area between the main roadway and the ramp at all exits. The sign shall carry the word EXIT or EXIT XX (if interchange numbering is used) and an appropriate upward slanting arrow (Figure 2E-22). Breakaway or yielding supports shall be used.

GUIDANCE:

The arrow should be aligned to approximate the angle of departure.

2E.36 Post-Interchange Signs

GUIDANCE:

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 150 m (500 ft) beyond the 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 300 m (1,000 ft)

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:

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.

2E.37 Distance Signs

STANDARD:

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-23.)

GUIDANCE:

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:

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:

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:

Distances to the same destinations should not be shown more frequently than at 8 km (5 mi) 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.

2E.38 Interchange Sequence Signs

Option:

If interchanges are closely spaced, particularly through large urban areas, so that major guide signs cannot be adequately spaced, Interchange Sequence signs identifying the next two or three interchanges may be used.

SUPPORT:

Interchange Sequence signs are generally supplemental to Advance Guide signs. Signing of this type is illustrated in Figures 2E-24 and 2E-25, and is compatible with the sign spreading concept.

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 400 m (¼ mile).

GUIDANCE:

If there is less than 250 m (800 ft) between interchanges, Interchange Sequence signs should be used in lieu of the Advance Guide signs for the affected interchanges. If used, Interchange Sequence signs should be used over the entire length of a route in an urban area. They should not be used on a single interchange basis.

STANDARD:

If used, the first sign in the series shall be located in advance of the first Advance Guide sign for the first interchange.

Where the exit direction is to the left, interchange names or route numbers shown on such signs shall be followed by the legend LEFT or LEFT EXIT in black letters on a yellow rectangular background.

Interchange Sequence signs shall not be substituted for Exit Direction signs.

GUIDANCE:

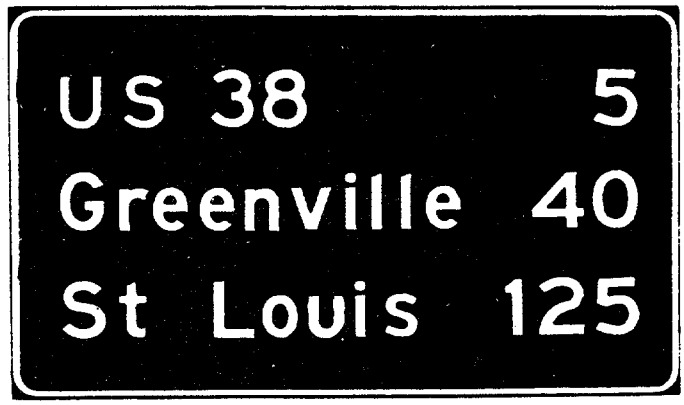
Interchange Sequence signs should be located in the median. After the first of the series, Interchange Sequence signs should be placed approximately midway between interchanges.

STANDARD:

Interchange Sequence series signs located in the median shall be installed at overhead sign height.

Option:

Interchange numbers may be shown to the left of the interchange name or route number.



E7

Figure 2E-23. Post-Interchange Distance sign.

2E.39 Community Interchanges Identification Sign

SUPPORT:

For suburban or rural communities served by two or three interchanges, Community Interchange Identification signs are useful (Figure 2E-26).

GUIDANCE:

In these cases the name of the community followed by the word "Exits" should be shown on the top line; the lines below should display the destination, road name or route number, and the corresponding distances to the nearest 400 m (¼ mile).

The sign should be located in advance of the first Advance Guide sign for the first interchange within the community.

Option:

If interchanges are not conveniently identifiable or if there are more than three interchanges to be identified, the NEXT X EXITS sign (Section 2E.40) may be used.

2E.40 NEXT (X) EXITS Sign

SUPPORT:

Many freeways or expressways pass through historical or recreational regions, or urban areas served by a succession of several interchanges.

Option:

Such regions or areas may be indicated by a NEXT (X) EXITS sign (Figure 2E-27) located in advance of the Advance Guide sign or signs for the first interchange.

GUIDANCE:

The sign legend should identify the region or area followed by the words NEXT (X) EXITS.

Figure 2E-24. Interchange Sequence sign.

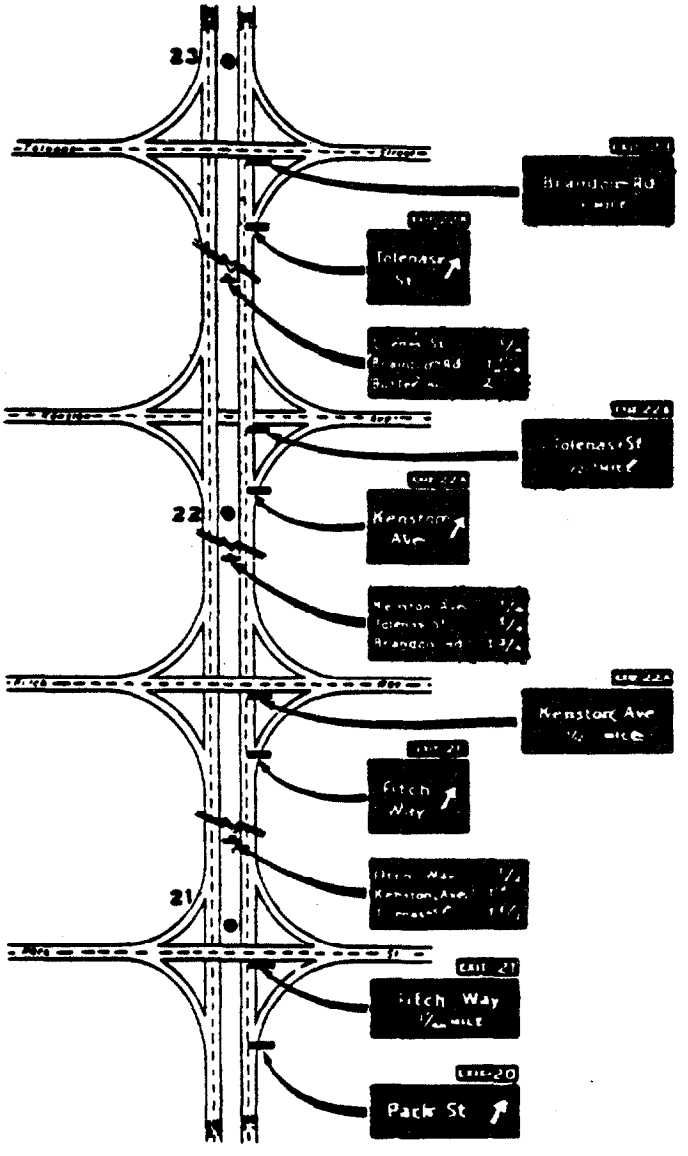


Figure 2E-25. Signing of closely spaced interchanges using Interchange Sequence signs.

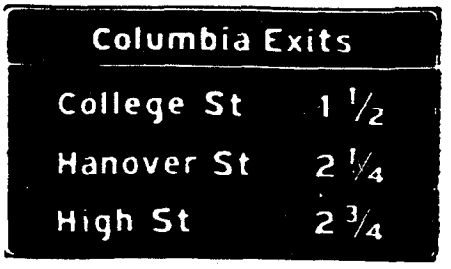


Figure 2E-26. Community Interchanges Identification sign.

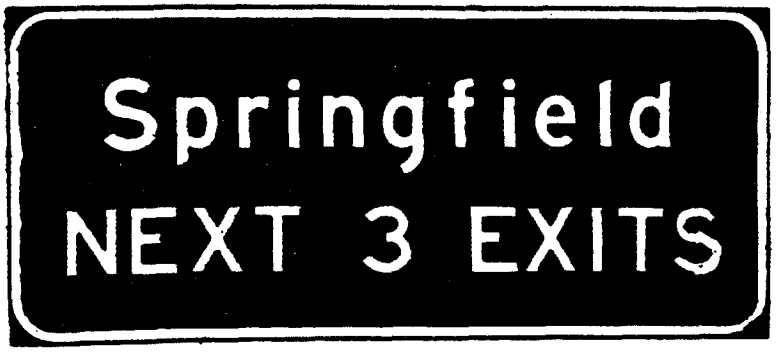


Figure 2E-27. NEXT X EXITS sign.

2E.41 Signing by Type of Interchange

SUPPORT:

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-28 through 2E-34 show applications 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 through road and on the crossroad.

STANDARD:

Interchange guide signing shall be consistent for each type of interchange along a route.

GUIDANCE:

The signing layout for all interchanges having only one exit ramp in the direction of travel should be similar, regardless of the interchange type (see Figures 2E-9, 2E-10, and Figures 2E-31 through 2E-34). 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-28 through 2E-34) should be followed as closely as possible. Even when unusual geometric features exist, variations in signing layout should be held to a minimum.

2E.42 Freeway-to-Freeway Interchange

SUPPORT:

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-28 shows typical applications of guide signs at a freeway-to-freeway interchange.

GUIDANCE:

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.8, unless a diagrammatic representation of the interchange layout requires otherwise. At bifurcations where the off-route movement is to the left or where there is an optional lane split, expectancy problems usually result, and diagrammatic signs should be used at the Advance Guide sign location. Diagrammatic signs (Section 2E.19) also should be used at the Advance Guide sign locations for interchanges where two-lane exits with an optional lane carry the through route on the exiting lanes.

STANDARD:

Overhead signs shall be used at a distance of 2 km (1 mi) and at the theoretical gore of each connecting ramp. When diagrammatic signs are used they shall conform to the provisions of Section 2E.19

Option:

Overhead signs may also be used at the 1 km (1/2 mi) and 4 km (2 mi) points.

The name of the control city and/or arrow may be omitted on signs that indicate the straight-ahead continuation of a route.

Warning signs with the message EXIT (XX) MPH sign (W13-2) may be used where an engineering study shows that it is neccesary to display a speed reduction message for ramp signing.

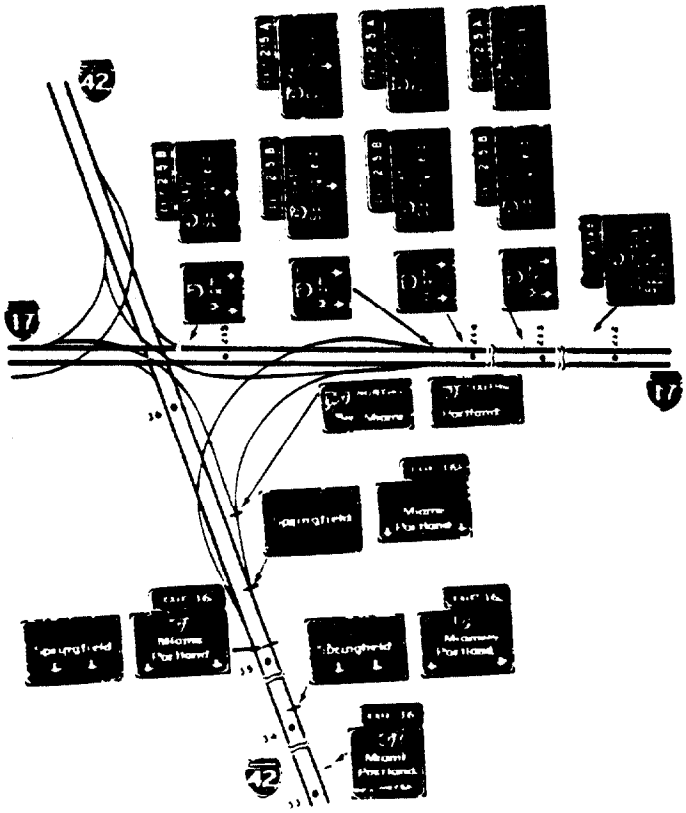


Figure 2E-28. Typical Freeway-to-Freeway Interchange Guide Signs (with split without optional lane having off route to right)

2E.43 Cloverleaf Interchange

SUPPORT:

This type of interchange has two exits for each direction of travel. The exits are closely spaced and have common Advance Guide signs. Typical application of guide signs for cloverleaf interchanges is shown in Figure 2E-29.

GUIDANCE:

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:

An Overhead Guide sign shall be placed at the theoretical gore point of the first exit ramp, with an upward slanting arrow on the exit direction sign for that exit and the message "XX miles" on the Advance Guide sign for the second exit, as shown in Figure 2E-29. The second exit shall be indicated by an overhead Exit Direction sign over the auxiliary lane. A Gore sign shall also be used at each exit.

Interchanges with more than one exit from the main line shall be numbered as described in Section 2E.29 with an appropriate suffix. Exit numbers shall not include the cardinal initials corresponding to the directions of the cross route.

Diagrammatic signs shall not be used for cloverleaf interchanges.

As shown in Figure 2E-29, the overhead Exit Direction sign for the second exit shall be mounted on the structure if the mainline passes under the crossroad and the exit roadway is located beyond the structure.

2E.44 Cloverleaf Interchange with Collector-Distributor Roadway

SUPPORT:

Typical application of guide signs for cloverleaf interchanges with collector-distributor roadways is shown in Figure 2E-30.

GUIDANCE:

Signing on the collector-distributor roadway should be the same as the signing on the mainline of a cloverleaf interchange.

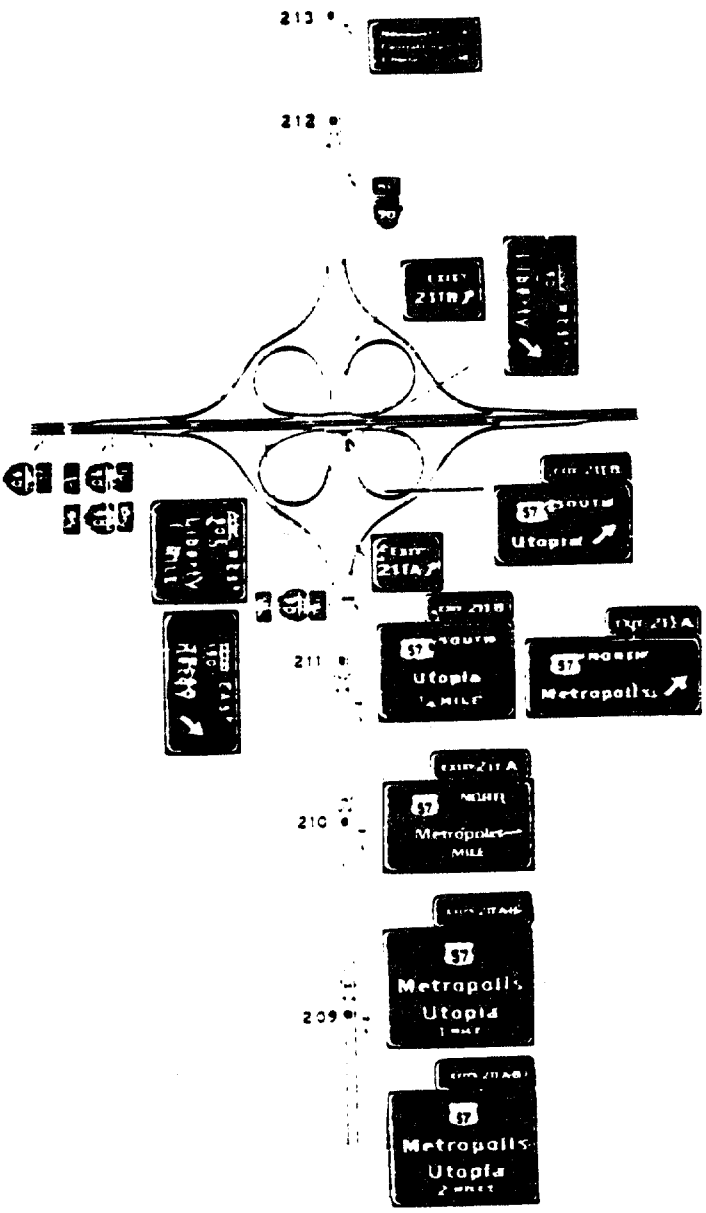


Figure 2E-29. Typical Cloverleaf Interchange Guide Signs.

STANDARD:

Guide signs at exits from the collector-distributor road shall be overhead and located at the theoretical gore of the collector-distributor roadway and the exit ramp.

Option:

Exits from the collector-distributor road may be numbered with an appropriate suffix. The Advance Guide signs may include two place names and their corresponding exit numbers or may use the singular EXIT as shown in Figure 2E-30.

2E.45 Partial Cloverleaf Interchange

SUPPORT:

Typical application of guide signs for partial cloverleaf interchanges is shown in Figure 2E-31.

GUIDANCE:

As shown in Figure 2E-31, the overhead Exit Direction sign should be placed on the structure if the mainline passes under the crossroad and the exit roadway is located beyond the structure.

STANDARD:

A ground mounted exit sign shall also be installed in the ramp gore.

2E.46 Diamond Interchange

SUPPORT:

Typical application of guide signs for diamond interchanges is shown in Figure 2E-32.

STANDARD:

The singular message EXIT shall be used on the Advance Guide and Exit Direction signs. Exit numbers shall not include the cardinal initials corresponding to the direction of the cross route.

SUPPORT:

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 safely negotiate an exit maneuver from the mainline onto the ramp roadway.

GUIDANCE:

When a speed reduction is not necessary, an exit speed sign should not be used.

Option:

When a ramp departs from the mainline and when there is a curve present that will cause a significant speed reduction, an Exit Speed sign may be posted based on an engineering study.

GUIDANCE:

The 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 so that a safe slowing and exiting maneuver can be made.

Option:

A Stop Ahead or Signal Ahead warning sign may be placed where an engineering study indicates a need, along the ramp in advance of the cross street to give notice to the driver so that a safe stop may be made.

GUIDANCE:

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.

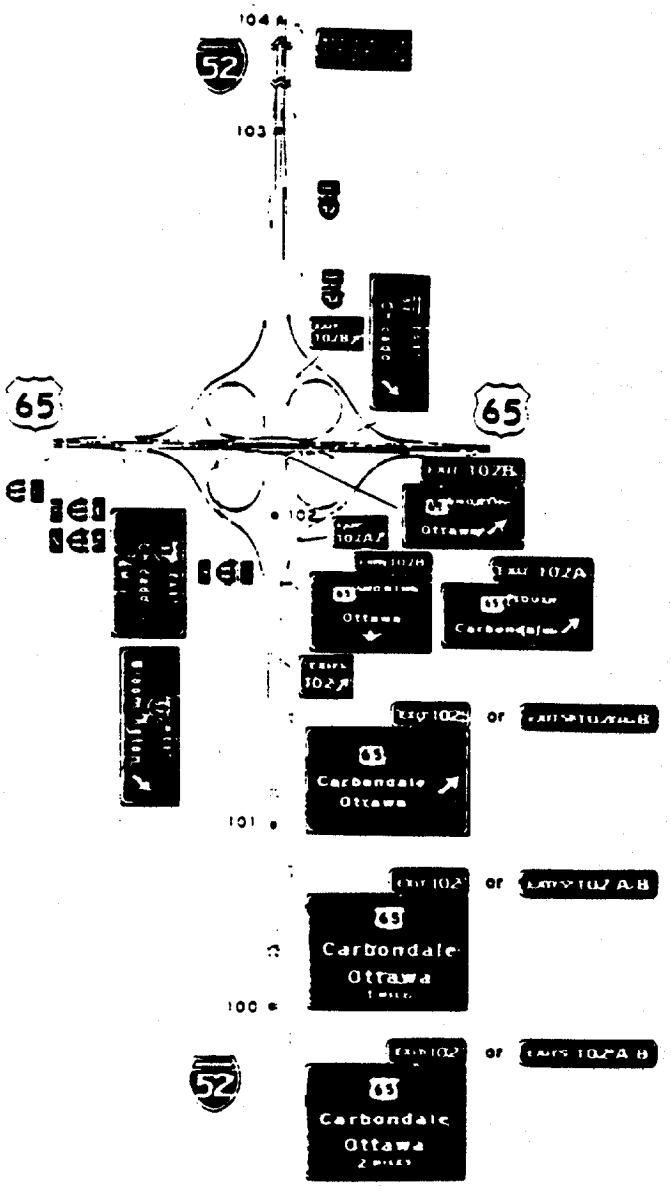


Figure 2E-30. Typical Guide Signs for Full Cloverleaf Interchange with Collector-Distributor Roadways.

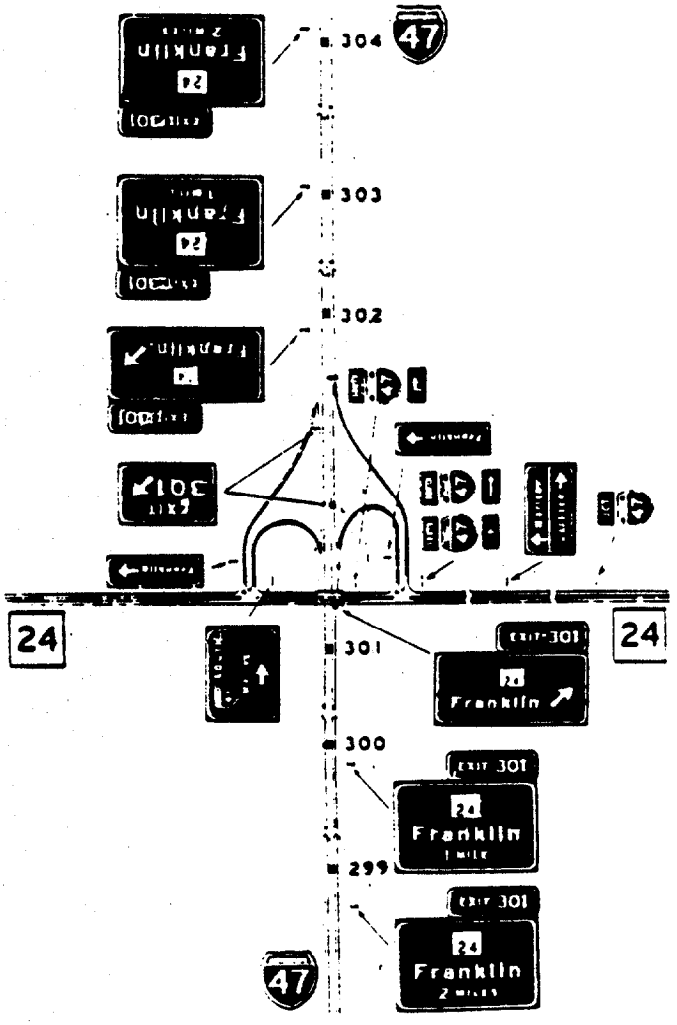


Figure 2E-31. Typical Partial Cloverleaf Interchange Guide Signs.

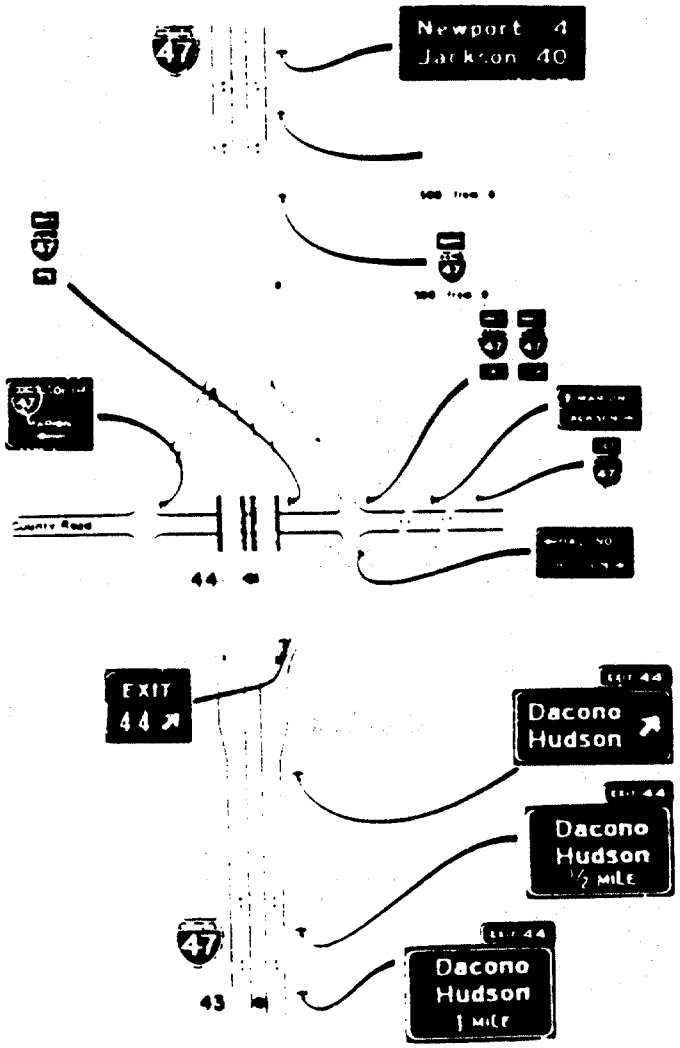


Figure 2E-32. Typical Diamond Interchange Guide Signs.

2E.47 Urban Diamond Interchange

SUPPORT:

A typical application of guide signs for diamond interchanges in an urban area is shown in Figure 2E-33. This example includes the use of the Community Interchanges Identification sign (Section 2E.39) which may be useful if two or more interchanges serve the same community.

Option:

In urban areas, street names are often shown as the principal message in destination signs. If interchanges are too closely spaced to properly locate the Advance Guide signs, they may be placed closer to the exit, and the distance figures adjusted accordingly.

2E.48 Closely Spaced Interchanges

GUIDANCE:

When a series of interchanges is closely spaced, the advance guide sign for the next interchange should be mounted on an overhead structure located downstream from the gore of the preceding interchange.

Interchange Sequence signs should be used at closely-spaced interchanges. When used, they should identify and show street names and distances for the next three exits as shown in Figure 2E-25.

STANDARD:

Advance Guide signs for closely-spaced interchanges shall show information for only one interchange.

2E.49 Minor Interchange

Option:

A lower standard of signing may be used for minor interchanges because such interchanges customarily serve low volumes of local traffic.

SUPPORT:

A typical application of guide signs for minor interchanges is shown in Figure 2E-34.

STANDARD:

At least one Advance Guide sign and a Gore sign shall be placed at a minor interchange.

GUIDANCE:

An Exit Direction sign should also be used.

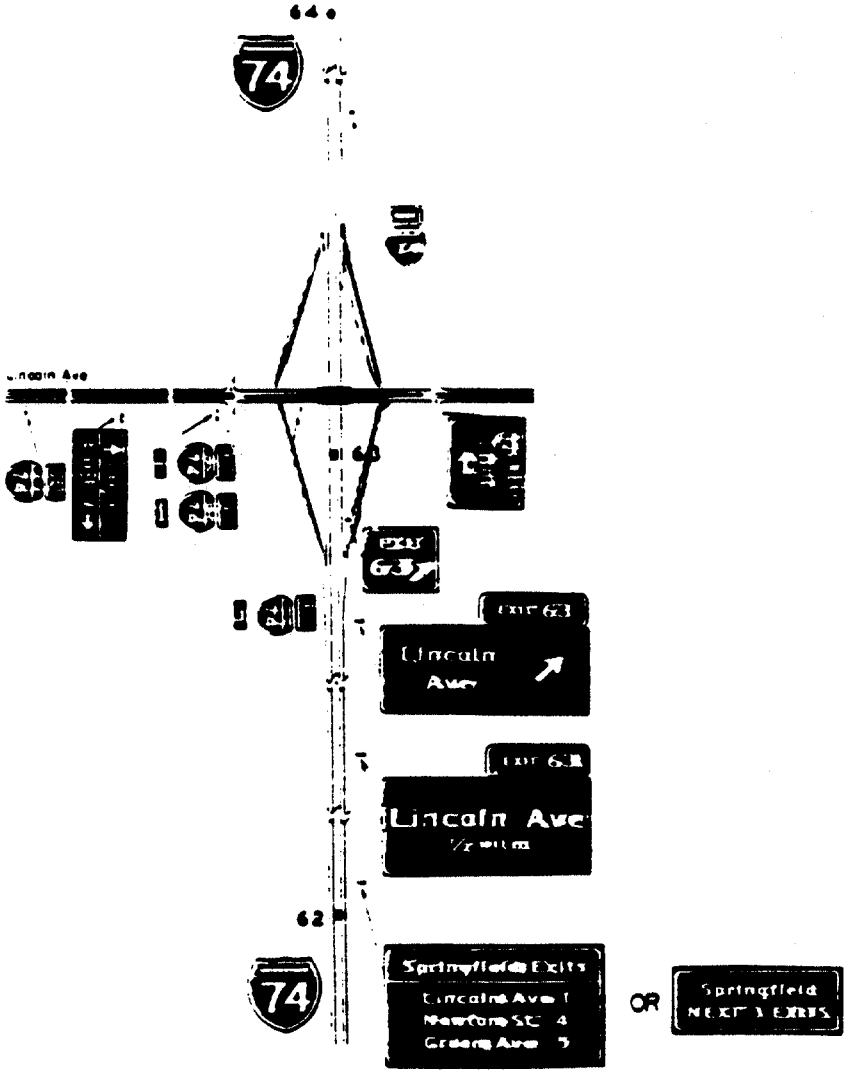


Figure 2E-33. Typical Urban Diamond Interchange Guide Signs

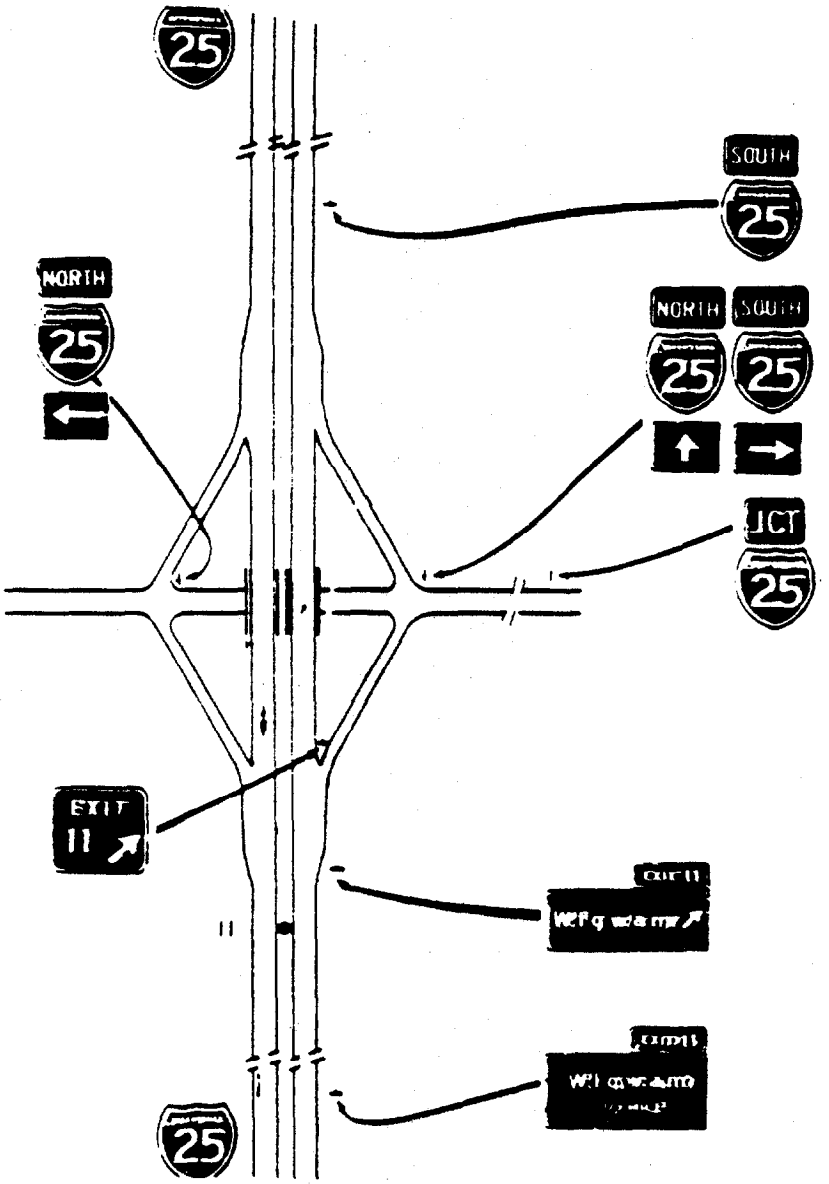


Figure 2E-34. Typical Minor Interchange Guide Signs.

2E.50 Approaches and Connecting Roadways

GUIDANCE:

The identification of entrances to freeways and expressways from roads of lower classification should be given adequate attention. Conventional signing on the approach roads, as prescribed in Chapter 2D, might in some cases be ineffective for some of the more important interchanges. Under such conditions, the freeway or expressway signing standards should be extended to the approach roadways.

Signing for frontage roads need not be to the same standard as is used on the through-traffic roadways of the freeway or expressway, but otherwise should be consistent with the requirements for roadways of this class.

Engineering judgment should be used for signing ramp terminals to provide guidance to entrance ramps and to avoid giving road users confusing or conflicting information, or creating sight obstructions.

2E.51 Wrong-Way Traffic Control At Interchange Ramps

STANDARD:

At interchange exit ramp terminals where the ramp intersects a crossroad in such a manner that wrong-way entry could inadvertently be made, the following signs shall be used (see Figure 2E-35):

a. ONE WAY sign(s) shall be placed where the exit ramp intersects the crossroad.

b. DO NOT ENTER sign(s) shall be conspicuously placed near the end of the exit ramp in positions appropriate for full view of a road user starting to enter wrongly.

c. At least one WRONG WAY sign shall be placed on the exit ramp facing a road user travelling in the wrong direction.

GUIDANCE:

In addition, the following pavement markings should be used:

a. On two-lane paved crossroads at interchanges, double solid yellow lines should be used as a centerline for an adequate distance on both sides approaching the ramp intersections.

b. Where crossroad channelization or ramp geometrics do not make wrong-way movements difficult, a lane-use arrow should be placed in each lane of an exit ramp near the crossroad terminal where it will be clearly visible to a potential wrong-way road user (see Figures 2E-35 and 2E-36.)

Option:

The following traffic control devices may be used to supplement the above signs and pavement markings:

a. Turn prohibition signs may be placed, especially on two-lane rural crossroads, appropriately in advance of the ramp intersection to supplement the ONE WAY sign(s).

b. Additional WRONG WAY signs may be used where the ramp geometrics justify their installation.

c. Slender, elongated pavement marking arrows may be placed upstream from the ramp terminus, as shown in Figure 2E-37, to indicate the correct direction of traffic flow. These arrows are intended primarily to warn wrong-way road users that they are going in the wrong direction and are known as wrong-way arrows. The markings may consist of pavement markings or bidirectional red-and-white raised pavement markers, or other units that show red to wrong-way road users and white to other road users. The general shape of lane-use and wrong-way arrows are shown in Figure 3-18 in Chapter 3B.

d. Wrong-way arrow pavement markings may be placed on the exit ramp at appropriate locations near the crossroad junction to indicate wrong-way movement. Lane-use arrow pavement markings may be placed on the exit ramp and crossroad near their intersection to indicate the permissive direction of flow.

e. Guide signs may be used on entrance ramps near the crossroad to inform road users of the freeway or expressway entrance, as appropriate.

GUIDANCE:

On interchange entrance ramps where the ramp merges with the through roadway and the design of the interchange does not clearly make evident the direction of traffic on the separate roadways or ramps, a ONE WAY sign visible to traffic on the entrance ramp and through roadway should be placed on each side of the through roadway opposite to the entrance ramp as illustrated in Figure 2E-36.

Option:

A NO LEFT TURN sign also may be placed along the right-hand side of the ramp just in advance of the entrance ramp terminal. Wrong-way and lane-use arrow pavement markings may be placed at appropriate locations on the entrance ramp and major road through lanes respectively, to indicate the permissive direction of traffic flow. At locations where engineering study determines a special need exists, other standard warning or prohibitive methods and devices may be used as a deterrent to the wrong-way movement.

SUPPORT:

Refer to Chapter 2B for information on signing to avoid wrong-way movements at at-grade intersections on expressways.

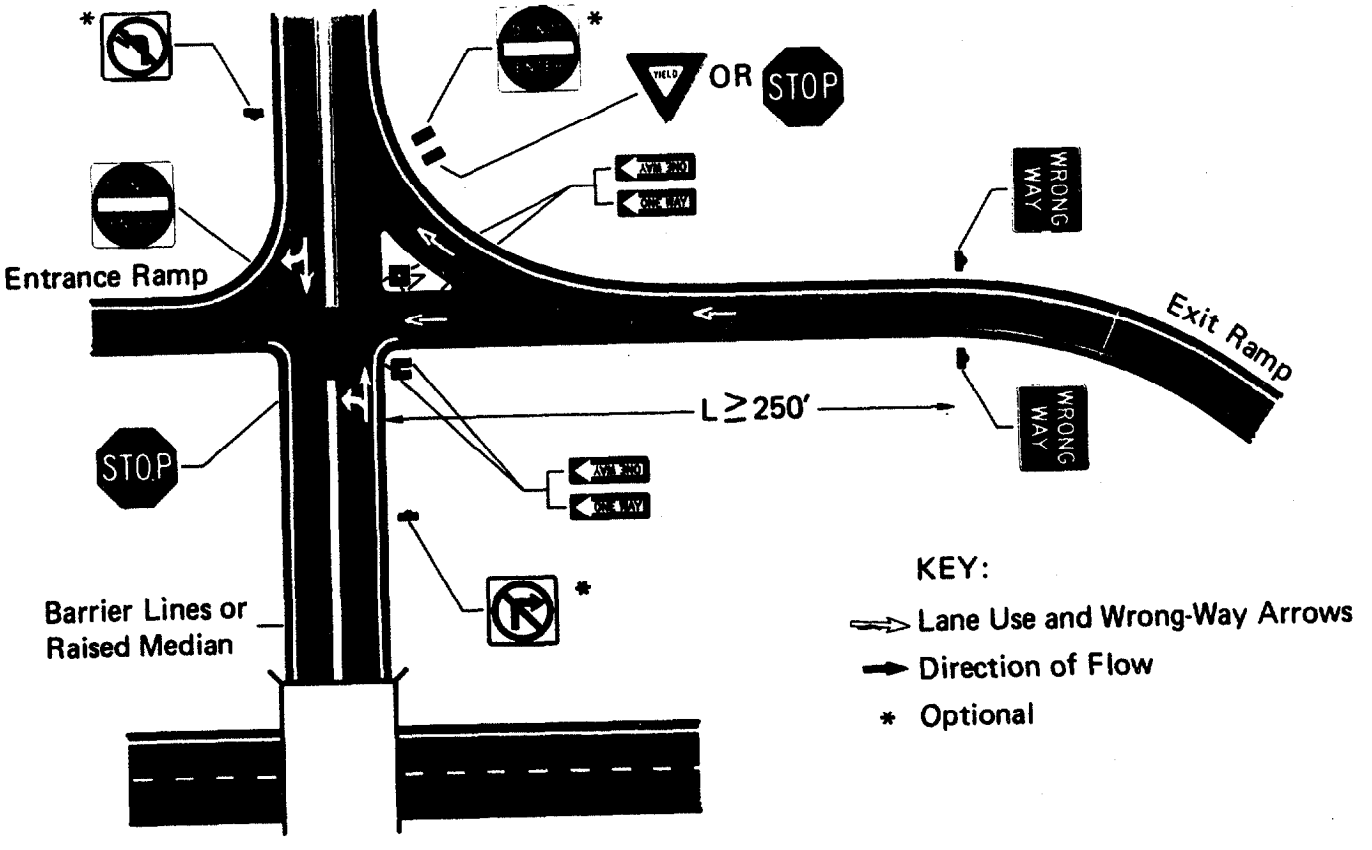


Figure 2E-35. Regulatory signing, and pavement markings at exit ramp terminals to deter wrong-way entry. (Modify as appropriate for 4-lane crossroads.)

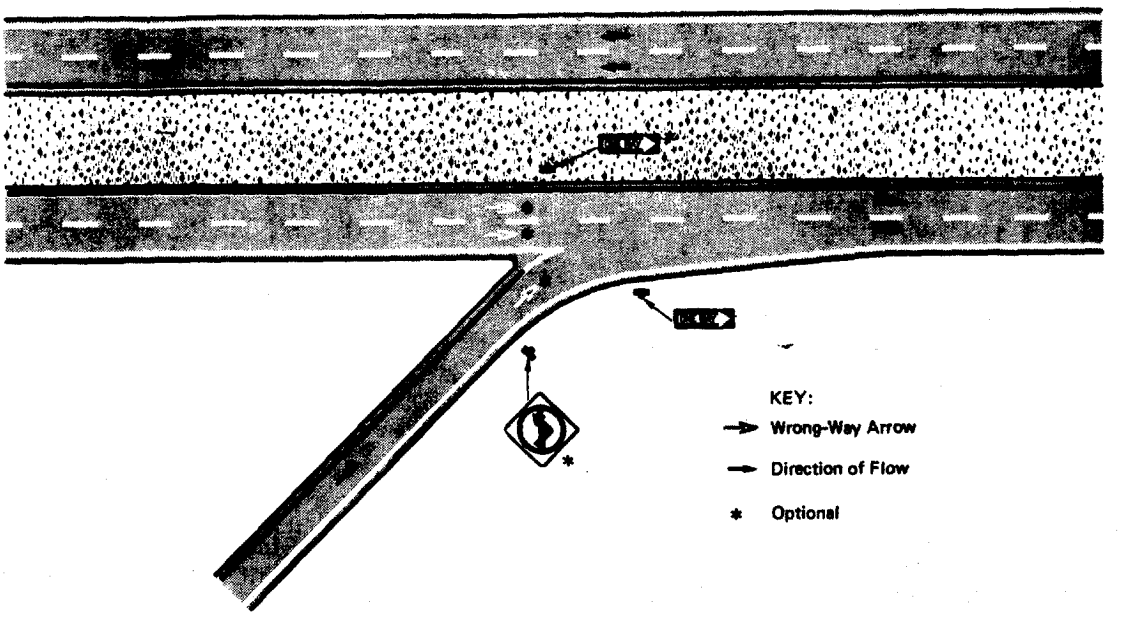


Figure 2E-36. Regulatory signing and pavement markings at entrance ramp terminal where design does not clearly indicate the direction of flow.

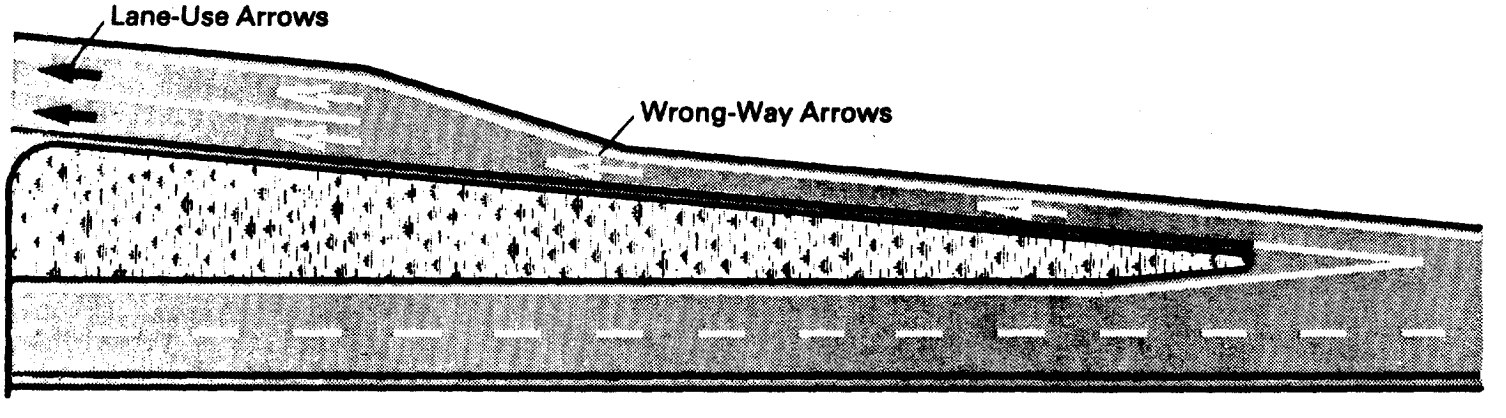


Figure 2E-37. Lane-use and wrong-way pavement marking arrows to deter wrong-way entry.

2E.52 Signing for General Road User Services

SUPPORT:

Signing for road user services is generally not appropriate at major interchanges (refer to Section 2E.30 for definition) and in urban areas.

Option:

If interchanges are not numbered, an action message such as NEXT RIGHT or SECOND RIGHT may be used (see Figure 2E-38). On rural sections, general service signs may be used (see Section 2F).

STANDARD:

General service signs shall have white letters, symbols, and borders on a blue background. Letter and numeral sizes shall conform to the minimum requirements of Tables 2E.1 through 2E.4. All approved symbols shall be permitted as alternatives to word messages, but symbols and word legends shall not be intermixed. If services are not visible from the ramp of a single-exit interchange, the service signing shall be repeated in smaller size at the intersection of the exit ramp and the crossroad. Such service signs shall indicate the direction to services with arrows.

GUIDANCE:

Distance to services should be shown where distances are more than 2 km (1 mi). Service signing should only be provided at locations where the road user can return to the freeway or expressway and continue in the same direction of travel. Only services that fulfill the needs of the road user should be shown. If road authorities elect to provide service signing, there should be a statewide policy for such signing and criteria for the availability of the various types of services. The criteria should include the following:

a. Gas, Diesel, LP Gas, EV Charging, and/or other alternative fuels
   (1) Vehicle services such as gas, oil, tire repair, and water;
   (2) Modern sanitary facilities and drinking water;
   (3) Continuous operations at least 16 hours per day, 7 days per week; and
   (4) Public telephone.

b. Food
   (1) Licensing or approval, where required;
   (2) Continuous operation to serve 3 meals per day, 6 or 7 days per week;
   (3) Public telephone; and
   (4) Modern sanitary facilities.

c. Lodging
   (1) Licensing or approval, where required;
   (2) Adequate sleeping accommodations;
   (3) Telephone; and
   (4) Modern sanitary facilities.

d. Public Telephone
   (1) Continuous operation, 7 days per week.

e. Hospital
   Continuous emergency care capability, with a physician on duty 24 hours per day, 7 days per week. A physician on duty would include the following criteria and should be signed in accordance with the priority as follows:

   (1) Physician on duty within the emergency department;
   (2) Registered nurse on duty within the emergency department, with a physician in the hospital on call; and
   (3) Registered nurse on duty within the emergency department, with a physician on call from office or home.

f. Camping
   (1) Licensing or approval, where required;
   (2) Adequate parking accommodations; and
   (3) Modern sanitary facilities and drinking water.

STANDARD:

For any service that is operated on a seasonal basis only, the general service signs shall be removed or covered during periods when the service is not available.

The general service signs shall be mounted in an effective location, between the Advance Guide sign and the Exit Direction sign, in advance of the exit leading to the available services.

GUIDANCE:

The general service sign should contain the interchange number.

Option:

If the distance to the next point where services are available is greater than 16 km (10 miles), a sign "NEXT SERVICES (XX) KM (Miles)," shown in Figure 2E-40, may be used as a separate panel mounted under the Exit Direction sign.

STANDARD:

Signs for services shall conform to the format for general service signs (covered in Section 2D.44) and as specified herein. Letter and numeral sizes are given in Tables 2E-1 through 2E-4. No more than six general road user services shall be displayed on one sign (including appended panel). General service signs shall carry the legends for one or more of the following services: Food, Gas, Lodging, Camping, Phone, Hospital, or Tourist Information.

The qualified services available shall be shown at specific locations on the sign.

The sign space normally reserved for a given service symbol or word shall be left blank when that service is not present to provide flexibility for the future when the service may become available.

GUIDANCE:

The standard display of word messages should be FOOD and PHONE in that order on the top line, and GAS and LODGING on the second line. Where used, HOSPITAL and CAMPING should be on separate lines. (See Figure 2E-39).

Option:

Signing for DIESEL, LP-Gas, or other alternative fuel services may be substituted for any of the general services or appended to such signs. The International Symbol of Access for the Handicapped sign (D9-6) may be used for facilities that qualify.

GUIDANCE:

When symbols are used for the road user services, they should be displayed as follows:

a. Six Services:
   Top Row - GAS, FOOD, and LODGING
   Bottom Row - PHONE, HOSPITAL, and CAMPING

b. Four Services:
   Top Row - GAS and FOOD
   Bottom Row - LODGING and PHONE

c. Three Services:
   Top Row - GAS, FOOD, and LODGING

Option:

Substitutions of other services for any of the services shown above may be made by placing the substitution in the lower right (four services) or extreme right (three services) portion of the panel. An action message or an interchange number may be used for symbol signs in the same manner as they are used for word message signs. The Diesel Fuel symbol (D9-11) or the LP-Gas symbol (D9-15) may be substituted for the symbol representing fuel or appended to such assemblies. The information symbol (D9-10) may be substituted on any of the above configurations.

At rural interchange areas where limited road user services are available and where it is unlikely that additional services will be provided within the near future, a panel having one to three services (words or symbols) may be appended to ground-mounted interchange guide signs.

STANDARD:

If in the future, more than three services become available at locations described in the preceding paragraph , any appended sign panel shall be removed and replaced with an independently mounted general service sign as described above.

Option:

A separate Telephone Service sign (Section 2D.45) may be erected when telephone facilities are located adjacent to the route at places where public telephones would not normally be expected.

The Recreational Vehicle Sanitary Station sign (D9-12) may be used as needed to indicate the availability of facilities designed for dumping wastes from recreational vehicle holding tanks.

In some locations, signs may be used to indicate that services are not available.

A "Truck Parking" sign (D9-16) may be used on a separate panel below the other general motorist services to direct truck drivers to designated parking areas.

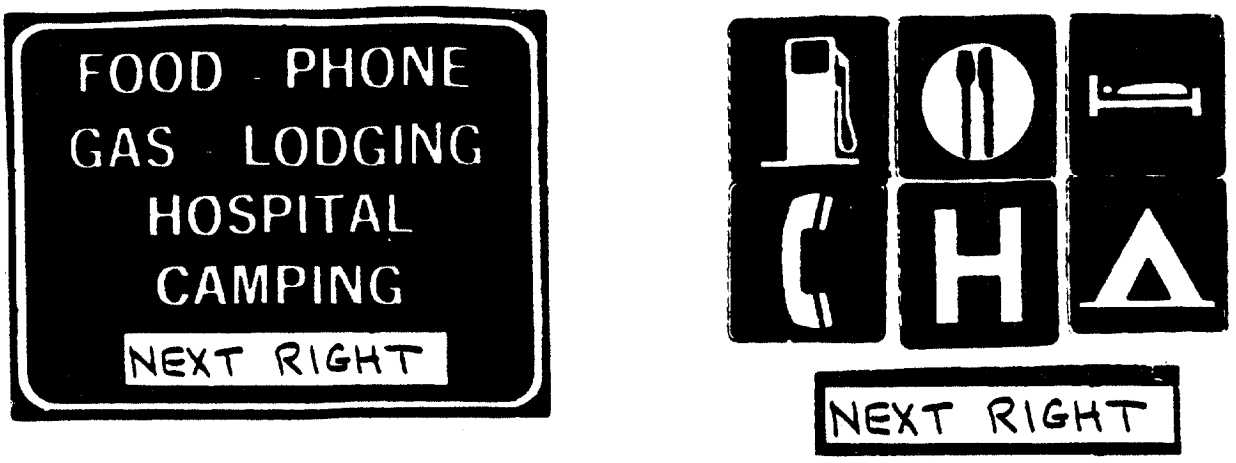


Figure 2E-38. General Service Sign (without exit numbering).

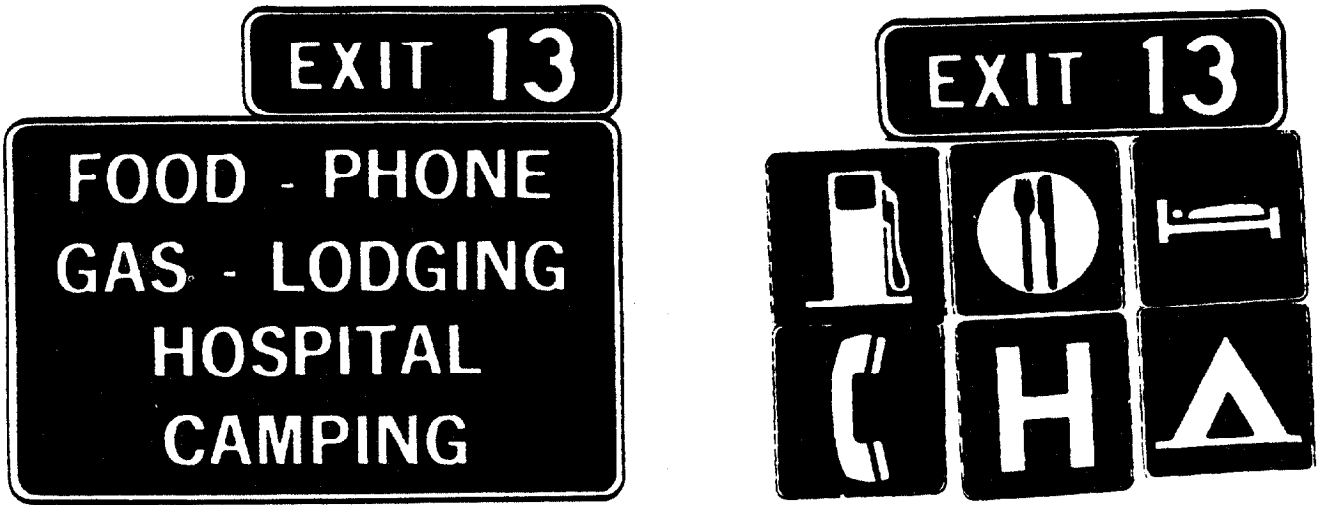


Figure 2E-39. General Service Sign (with exit numbering).

Figure 2E-40. NEXT SERVICES XX (MILES) sign.

2E.53 Rest and Scenic Area Signs

GUIDANCE:

Signing for safety rest areas and for scenic areas should conform to the provisions set forth in Sections 2D.41 and 2D.42. However, the signs should be suitably enlarged for freeway or expressway application. A roadside area that does not contain restroom/toilets should be signed to indicate the major road user service that is provided. For example, an area with only parking should be signed PARKING AREA. An area with picnic tables and parking should be signed PICNIC AREA.

Rest areas that have tourist information and welcome centers should be signed as discussed in Section 2E.54.

Scenic area signing should be consistent with that specified for rest areas. Standard messages should read SCENIC AREA or SCENIC VIEW or the equivalent.

STANDARD:

All signs for rest and scenic areas shall have white letters, symbols, and borders on a blue background. Letter and numeral sizes shall conform to the minimum requirements of Tables 2E-1 through 2E-4. On the approach to rest areas, an advance guide (REST AREA) sign shall be placed 2 km (1 mi) or 4 km (2 mi) in advance of the rest area. At the rest area exit gore, there shall be a sign with a message REST AREA together with an arrow indicating the appropriate turn as shown in Figure 2E-41.

Option:

If the rest area has facilities for the physically impaired (Section 2D.45), the International Symbol of Access for the Handicapped Sign (D9-6) may be placed with or beneath the advance guide (REST AREA) sign. Between the advance guide (REST AREA) sign and the gore of the rest area exit, there may be a sign reading REST AREA. The REST AREA sign may carry the words NEXT RIGHT or an arrow as part of the message.

To provide the road user with information on the location of succeeding rest areas, a sign with the word message NEXT REST AREA XX KM (MILES) may be installed independently or as a supplemental panel mounted below one of the rest area advance guide (REST AREA) signs.

Figure 2E-41. Rest area Gore sign.

2E.54 Tourist Information and Welcome Centers

SUPPORT:

Tourist information and welcome centers have been constructed within rest areas on freeways and expressways and are operated by either a state or a private organization. Others have been located within close proximity to these facilities and operated by civic clubs, chambers of commerce, or private enterprise.

GUIDANCE:

The following criteria for signing should be used regardless of the location of the tourist information or welcome center:

(1) An excessive number of supplemental panels should not be installed with Tourist Information or Welcome Center signs so as not to overload the road user; and

(2) Welcome centers should be located only at or near state boundaries.

Option:

The name of the state or local jurisdiction may appear on highway signs if the jurisdiction controls the operation of the information or welcome center and the center meets the operating criteria set forth herein and is consistent with state policies.

STANDARD:

Tourist information or welcome center signs shall have a white legend and border on a blue background. Continuously-staffed or unstaffed operation at least 8 hours per day, 7 days per week shall be required.

If operated only on a seasonal basis, the signs indicating tourist Information or welcome centers shall be removed or covered during the off-seasons.

GUIDANCE:

For freeway or expressway rest area locations, the following signing criteria should be used:

a. The locations for Advance Guide, Exit Direction, and Gore signs should meet General Road User Service signing requirements (Section 2E.52).

b. If the signing for the tourist information or welcome center is to be accomplished in conjunction with the initial signing for the rest areas, the message on the Advance Guide sign should be "REST AREA, TOURIST INFO CENTER, X (MILE)(S)" or "REST AREA, WELCOME CENTER X (MILE)(S)." On the Exit Direction sign the message should be "REST AREA, TOURIST INFO CENTER" with upward sloping arrow or "NEXT RIGHT"; or "REST AREA, WELCOME CENTER" with upward sloping arrow or "NEXT RIGHT."

c. If the initial rest area Advance Guide and Exit Direction signing is in place, these signs should include, on supplemental panels, the legend "TOURIST INFO CENTER" or "STATE NAME (optional), WELCOME CENTER."

d. The Gore sign should contain only the legend "REST AREA" with the arrow and not be supplemented with any legend pertaining to the tourist information center or welcome center.

Option:

An alternative to the supplemental "TOURIST INFO" legend is the Information Symbol sign (D9-10) which may be appended beneath the advance Rest Area sign. The STATE NAME may be used on the Advance Guide and the Exit Direction signs.

GUIDANCE:

For information centers located off the freeway or expressway facility, additional signing criteria are as follows:

a. Each state should adopt a policy establishing the maximum distance the information center can be located from the interchange in order to be included on official signs.

b. The location of signing should be in accordance with requirements pertaining to General Road User Service signing (Section 2E.52).

c. Signing along the crossroad should be installed to guide the road user from the interchange to the information center and back to the interchange.

Option:

As an alternative, the Information Symbol sign (D9-10) may be appended to the guide signs for the exit providing access to the information center. As a second alternative, the Information Symbol sign may be combined with General Road User Services signing.

2E.55 Kilometer (Mile)post Signs

STANDARD:

Kilometer (mile)post signs shall be placed on all freeway facilities. Kilometer (mile)post signs shall also be placed on expressway facilities that are located on a route where there is kilometer(mile)post continuity. Kilometer (mile)post signs shall conform to the general provisions for kilometer(mile)posts contained in Section 2D.45. These signs shall contain 250 mm (10 in) white numerals on 300 mm (12 in) wide vertical green panels with a white border. Panels shall be 600, 900, or 1200 mm (24, 36, or 48 in) in length for one, two, or three digits, respectively, and contain the abbreviation KM (MILE).

Kilometer (mile)post signs located in line with delineator posts shall have the bottom of the sign at the same height as the delineator.

The distance numbering shall be continuous for each route within any state except where overlaps occur (see Section 2E.29). With overlapped routes, continuity shall be established for one of the routes. If one of the overlapping routes is an Interstate Highway, that route shall be selected for continuity of distance numbering.

GUIDANCE:

The selected route should also have continuity in the interchange exit numbering (Section 2E.29). On the route without kilometer (mile)post continuity, the first marker beyond the overlap should indicate the total distance traveled on the route.

Option:

Kilometerpost (milepost) signs may be placed up to 9 m (30 ft) from the edge of the pavement.

2E.56 Miscellaneous Guide Signs

Option:

Miscellaneous Guide signs, such as those pointing out geographical features or rivers, summits, and other jurisdictional boundaries (Section 2D.48), may be used if they do not interfere with signing for interchanges or other critical points.

GUIDANCE:

Miscellaneous Guide signs should not be installed unless there are specific reasons for orienting the road users or identifying control points for activities that are clearly in the public interest. If Miscellaneous Guide signs are to be of value to the road user, they should be consistent with other freeway or expressway guide signs in design and legibility. On all such signs the design should be simple and dignified, devoid of any tendency toward flamboyant advertising, and in general conformance with other freeway and expressway signing.

2E.57 Radio Information Signing

Option:

Radio-Weather Information signs (D12-1) may be used in areas where difficult driving conditions commonly result from weather systems. Radio-Traffic Information signs (D12-4) also may be used in conjunction with traffic management systems.

STANDARD:

Radio-Weather and Radio-Traffic Information signs shall have a white legend and border on a blue background. Only the numerical indication of the radio frequency shall be used to identify a station broadcasting travel-related weather or traffic information. No more than three frequencies shall be shown on each sign. A particular radio frequency shall not be shown more than twice in one direction along the main line. Only radio stations whose signal will be of value to the road user and who agree to broadcast the two items below shall be identified on Radio-Weather and Radio-Traffic Information signs:

a. Periodic weather warnings at no more than 15-minute intervals during periods of adverse weather.

b. Traffic condition information (affecting the roadway being traveled) at a rate of at least once every 15 minutes when required, supplied by an official agency having jurisdiction.

If a station to be considered operates only on a seasonal basis, its signs shall be removed or covered during the off season.

GUIDANCE:

The radio station should have a signal strength to adequately broadcast 100 km (70 mi) along the route. Signs should be spaced according to needs, but ordinarily not closer than 50 km (30 mi) apart for each direction of travel. The stations to be included on the signs should be selected in cooperation with the association(s) representing major broadcasting stations in the area to provide: (1) maximum coverage to all road users on both AM and FM frequencies and (2) consideration of 24 hours per day, 7 days per week broadcast capability.

Option:

For roadway rest area locations, a smaller sign using a greater number of radio frequencies, but of the same general design, may be used.

STANDARD:

Radio-Weather and Radio-Traffic Information signs erected in rest areas shall not be visible from the main roadway.

Option:

A Channel 9 Monitored sign (D12-3) may be installed as needed.

STANDARD:

Only official government agencies or their designee shall be shown as the monitoring agency on the sign.

2E.58 Carpool Information Signing

Option:

In areas having carpool matching services, Carpool Information signs (D12-2) may be provided not only adjacent to preferential lanes but also along any highway.

GUIDANCE:

As this is an information sign related to road user services, the Carpool Information sign should have a white legend and border on a blue background.

STANDARD:

If a local transit logo or carpool symbol is incorporated into the Carpool Information sign, the maximum vertical dimension of the logo or symbol shall not exceed 1 m (36 in).

2E.59 Weigh Station Signing

STANDARD:

Weigh Station signing on freeways and expressways shall be the same as that specified in Section 2D.42, except for lettering size and the advance posting distance for the Exit Direction sign, which shall be located a minimum of 500 m (1500 ft) in advance of the gore.

SUPPORT:

The recommended Weigh Station sign layouts for freeway and expressway application are shown in the Standard Highway Signs booklet.

2F. SPECIFIC SERVICE SIGNS

2F.1 Eligibility

STANDARD:

Specific service signs shall be defined as guide signs that provide road users with business identification and directional information for road user services and for eligible attractions.

GUIDANCE:

The use of specific service signs should be based on a determination of road user need for this type of signing. The use of specific service signs should be limited to areas primarily rural in character or to areas where adequate sign spacing can be maintained.

Option:

Where engineering study determines a need, specific service signs may be used on any class of highways.

STANDARD:

Eligible service facilities shall comply with laws concerning the provisions of public accommodations without regard to race, religion, color, age, sex, or national origin, and laws concerning the licensing and approval of service facilities.

The attraction services shall include only facilities which have the primary purpose of providing amusement, historical, cultural, or leisure activities to the public.

GUIDANCE:

Distances to eligible services should not exceed 5 km (3 mi) in either direction.

Option:

If, within the 5 km (3 mi) limit, facilities for the services being considered are not available, the limit of eligibility may be extended in 5 km (3 mi) increments until one or more facilities for the services being considered, or 25 km (15 mi), whichever comes first, are reached.

[redacted]

To qualify for a GAS sign, a business should have:

1. Vehicle services including gas and/or alternative fuels, oil, water, and tire repair;
2. Modern sanitary facilities and drinking water;
3. Continuous operation at least 16 hours per day, 7 days per week, for freeways and expressways, and continuous operation at least 12 hours per day, 7 days per week, for conventional roads; and
4. Public telephone.

To qualify for a FOOD sign, a business should have:

1. Licensing or approval, where required.
2. Continuous operations to serve three meals per day, 6 or 7 days per week;
3. Public telephone; and
4. Modern sanitary facilities.

To qualify for a LODGING sign, a business should have:

1. Licensing or approval, where required.
2. Adequate sleeping accommodations;
3. telephone; and
4. Modern sanitary facilities.

To qualify for a CAMPING sign, a business should have:

1. Licensing or approval, where required.
2. Adequate parking accommodations;
3. Modern sanitary facilities and drinking water.

To qualify for an ATTRACTION sign, a facility should have:

1. Regional significance; and
2. Adequate parking accommodations.

2F.2 Application

STANDARD:

The number of specific service signs along an approach to an interchange or intersection, regardless of the number of service types displayed, shall be limited to a maximum of four. In the direction of traffic, successive specific service signs shall be for

attraction, camping, lodging, food, and gas services, in that order.

A specific service sign shall display the word message GAS, FOOD, LODGING, CAMPING, or ATTRACTION, an appropriate directional legend such as the word message EXIT XX, NEXT RIGHT, SECOND RIGHT, or directional arrows, and the related logo sign panels. No more than two types of services shall be represented on any sign or sign assembly. The legend and logo panels applicable to a service type shall be displayed so that the road user will not associate them with another service type on the same sign. No service type shall appear on more than one sign. The signs shall have a blue background, a white border, and white legends of uppercase letters, numbers, and arrows.

GUIDANCE:

The specific service signs should be located to take advantage of natural terrain, to have the least impact on the scenic environment, and to avoid visual conflict with other signs within the highway right-of-way.

The use of ATTRACTION signs should be limited to freeways and expressways.

Option:

GAS, FOOD, LODGING, and CAMPING signs may be used on any class of highway.

General service signs (Sections 2D.44 and 2E.52) may be used in conjunction with specific service signs for eligible services that are not represented by a specific service sign

SUPPORT:

Typical specific service signs are shown in Figure 2F-1. Typical sign locations are shown in Figure 2F-2.

2F.3 Logos and Logo Panels

STANDARD:

A logo shall be either an identification symbol/trademark or a word message. Each logo shall be placed on a separate logo panel which shall be attached to the specific service sign. Symbols or trademarks used alone for a logo shall be reproduced in the colors and general shape consistent with customary use, and any integral legend shall be in proportionate size. A logo that resembles an official traffic control device shall not be used.

GUIDANCE:

A word message logo, not using a symbol or trademark, should have a blue background with white legend and border.

Option:

Where business identification symbols or trademarks are used alone for a logo, the border may be omitted from the logo panel.

A portion at the bottom of a GAS logo panel may be used to display the legends for alternative fuels (Section 2E.52) available at the facility. A portion at the bottom of a FOOD logo panel may be used to display a day of the week when the facility is closed.

2F.4 Number and Size of Logos and Signs

GUIDANCE:

Sign sizes should be determined by the amount and height of legend and the number and size of logo panels attached to the sign. All logo panels on a sign should be the same size.

STANDARD:

Each specific service sign or sign assembly shall be limited to no more than six logo panels. There shall be no more than three logo panels for each of the two service types on the same sign or sign assembly. Also, see Section 2F.8 for signs for double-exit interchanges.

Each logo panel attached to a specific service sign shall be a rectangular shape with a width longer than the height. A logo panel on signs for freeways and expressways shall not exceed a 1500 mm (60 in) width and a 900 mm (36 in) height. A logo panel on signs for conventional roads and ramps shall not exceed a 660 mm (24 in) width and a 450 mm (36 in)

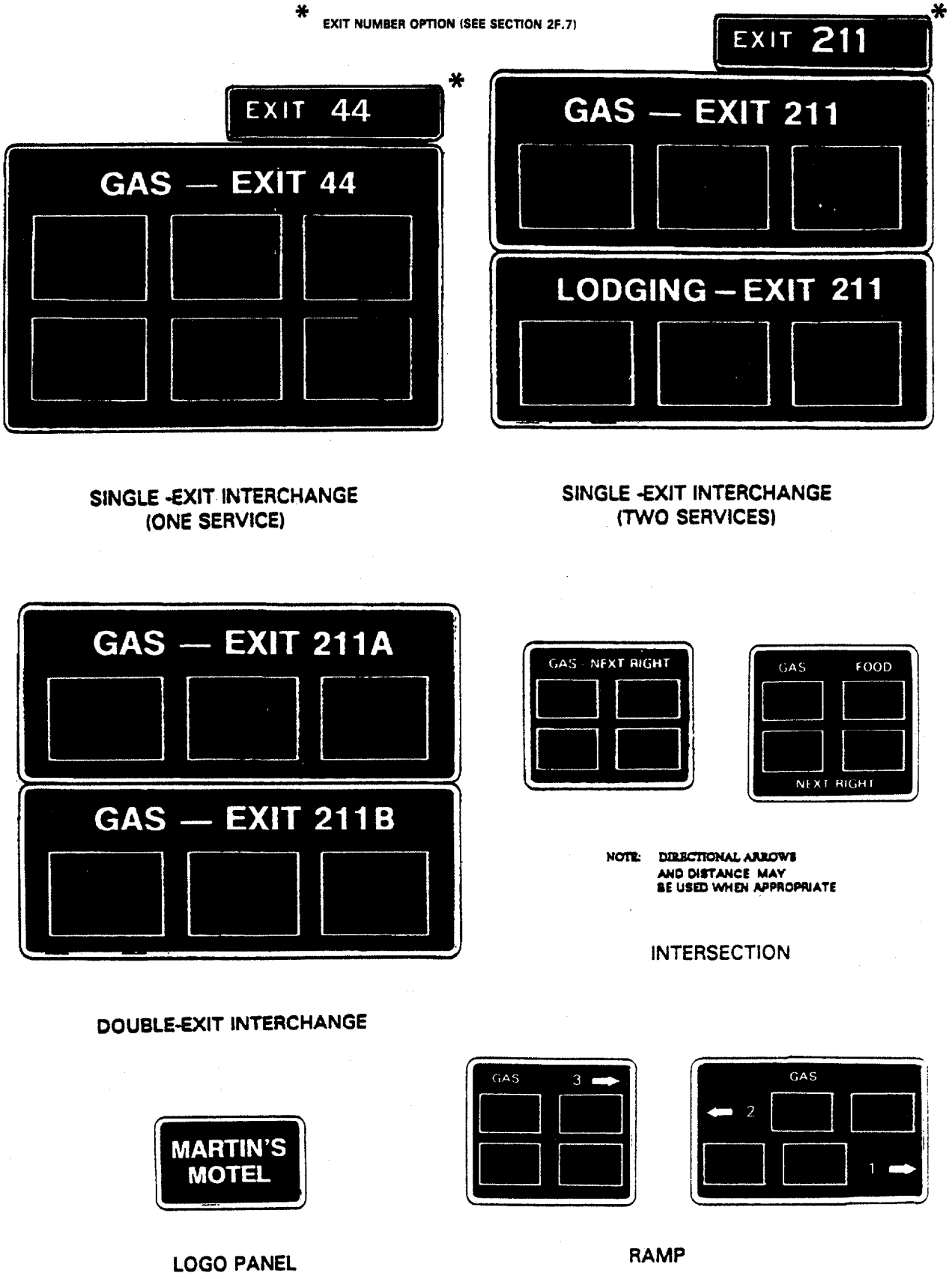


Figure 2F-1. Typical specific service signs

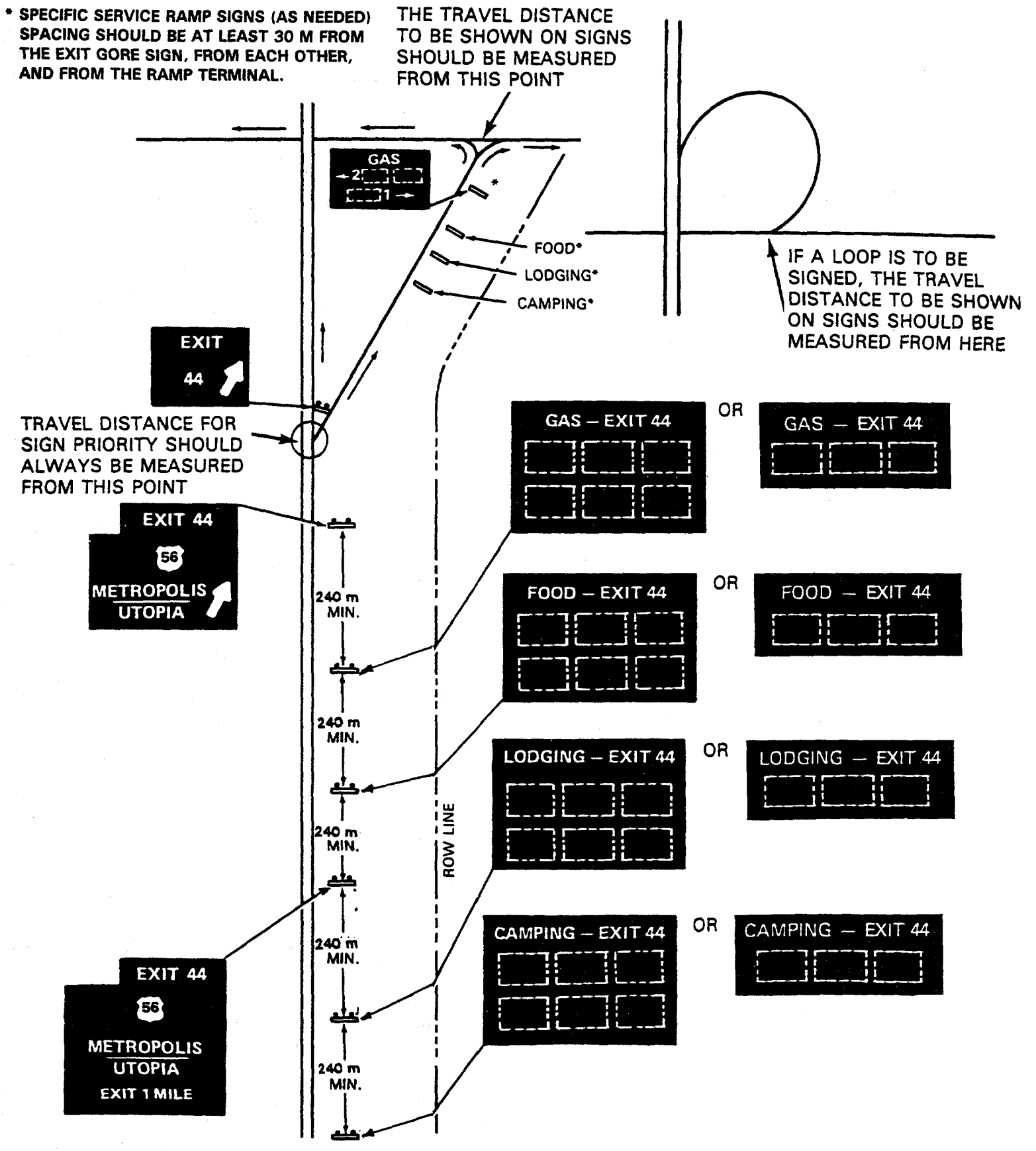


Figure 2F-2. Typical specific service signs for interchange

height. The vertical and horizontal spacing between logo panels shall not exceed 200 mm (8 in) and 300 mm (12 in), respectively.

SUPPORT:

Refer to Sections 2A.15, 2E.14, and 2E.15 for information on borders and on interline and edge spacing.

2F.5 Size of Lettering

STANDARD:

All letters and numerals on specific service signs, except on the logo panels, shall be a minimum height of 250 mm (10 in) for signs on freeways and expressways, and 150 mm (6 in) for signs on conventional roads and ramps.

GUIDANCE:

Any legend on a symbol/trademark should be proportional to the size of the symbol/trademark.

2F.6 Signs at Interchanges

STANDARD:

The specific service signs shall be erected between the previous interchange and at least 240 m (800 ft) in advance of the exit direction sign at the interchange from which the services are available (See Figure 2F-2).

GUIDANCE:

There should be at least a 240 m (800 ft) spacing between the specific service signs, except for specific service ramp signs. However, excessive spacing is not desirable. Specific service ramp signs should be spaced at least 30 m (100 ft) from the exit gore sign, from each other, and from the ramp terminal.

Specific service signs should not be erected at an interchange where the road user cannot conveniently re-enter the freeway or expressway and continue in the same direction of travel.

2F.7 Single-Exit Interchanges

STANDARD:

At single-exit interchanges, the name of the service type followed by the exit number shall be displayed on one line above the logos. At unnumbered interchanges, the directional legend NEXT RIGHT (LEFT) shall be used.

At single-exit interchanges, specific service ramp signs shall be installed along the ramp or at the ramp terminal for facilities which have logos displayed along the main roadway if the facilities are not readily visible from the ramp terminal. Directions to the service facilities shall be indicated by arrows on the ramp signs. Logos on specific service ramp signs shall be duplicates of those displayed on the specific service signs located in advance of the interchange, but shall be reduced in size.

GUIDANCE:

Specific service ramp signs should include distances to the service facilities.

Option:

An exit number panel as discussed in Section 2E.29 may be used instead of the exit number on the signs located in advance of an interchange.

The reduced size logos and signs also may be installed along the crossroad.

2F.8 Double-Exit Interchanges

GUIDANCE:

At double-exit interchanges, the specific service signs should consist of two sections, one for each exit (See Figure 2F-1).

STANDARD:

At a double-exit interchange, the top section shall display the logos for the first exit and the bottom section shall display the logos for the second exit. The name of the service type and the exit number shall be displayed above the logos in each section. At unnumbered interchanges, the word message NEXT RIGHT (LEFT) and SECOND RIGHT (LEFT) shall be used in place of the exit number.

The number of logos on the sign (total of both sections) or the sign assembly shall be limited to six.

Option:

At a double-exit interchange, where a service is to be signed for only one exit, one section of the specific service sign may be omitted, or a single exit interchange sign may be used. Signs on ramps and crossroads may be used at a double-exit interchange as described in Section 2F.7.

2F.9 Signs at Intersections

STANDARD:

Where both the tourist oriented directional signs (Chapter 2H) and the specific service signs would be needed at the same intersection, the tourist oriented directional signs shall incorporate the needed information from, and be used in place of, the specific service signs.

GUIDANCE:

When specific service signs are used on conventional roads and at intersections on expressways, they should be installed between the previous interchange or intersection and at least 90 m (300 ft) in advance of the intersection from which the services are available. The spacing between signs should be determined on the basis of an engineering study.

Logos should not be displayed for a type of service for which a qualified facility is readily visible.

STANDARD:

The name of each type of service shall be displayed above its logo(s), together with an appropriate legend such as NEXT RIGHT (LEFT) or a directional arrow on the same line.

Option:

The NEXT RIGHT (LEFT) or other applicable directional legend or action message may be displayed below instead of above the logos.

Signs similar to specific service ramp signs as described in Section 2F.7 may be provided on the crossroad.

2F.10 Signing Policy

GUIDANCE:

Each agency with highway jurisdiction that elects to use specific service signs should establish a signing policy that includes as a minimum, the guidelines of Section 2F.1 and the following criteria:

1. Selection of eligible businesses.
2. Distances to eligible services.
3. The use of logos, legends, and signs conforming with the MUTCD and State design requirements.
4. Removal or covering of logos during off seasons for operating on a seasonal basis.
5. The circumstances, if any, in which specific service signs may be used in non-rural areas.
6. Determination of the costs to businesses for initial permits, installations, annual maintenance, and removal of logos.

2I. SIGNING FOR CIVIL DEFENSE

2I.1 Civil Defense Emergencies

STANDARD:

Advance planning of local action in response to warning of an attack shall be the responsibility of State and local authorities. The Federal Government shall provide guidance to the States as necessitated by changing circumstances.

First emphasis shall be given to planning the use of the best shelter available at any time. The fallout shelter is the core of civil defense.

GUIDANCE:

Contingency planning for post-attack evacuation should be considered by all communities.

In the event of a disaster where highways that cannot be used will be closed, a successful contingency plan should account for the following elements: a controlled operation of certain designated highways, the establishment of traffic regulation posts for the expediting of essential traffic, and the provision of emergency centers for civilian aid.

SUPPORT:

Civil defense signing is a tool of contingency planning. It is not possible to determine in advance where hazardous conditions will occur.

Mass evacuation is not a fruitful planning contingency by itself. Evacuation planning without shelter planning is self-defeating. Signing for pre-attack evacuation to distant shelters may be desirable as an alternative for some communities.

Plans have been developed for the control of highway traffic under emergency conditions as a result of accidental disaster or enemy attack. Particularly, these plans are concerned with possibilities of nuclear warfare.

The nature, scope, and operation of emergency highway traffic regulation in times of emergency brought about by an enemy nuclear attack are discussed in "A Guide for Highway Traffic Regulation in an Emergency," published by the Federal Highway Administration, Washington, D.C. 20590.

STANDARD:

To guide and control highway traffic in an emergency, special highway signs shall be used. The signs have been approved for use when and where applicable in the civil defense program.

These emergency signs shall not permanently displace any of the standard signs that are normally applicable.

GUIDANCE:

As conditions permit the emergency signs should be replaced or augmented by standard signs.

2I.2 Design of Civil Defense Signs

STANDARD:

For economy in stockpiling and in emergency fabrication, all of the civil defense signs, with the exception of the EVACUATION ROUTE Plaque (CD-1), shall be a single size measuring 600 mm x 750 mm (24 x 30 in), and shall have a black legend and border on a white background.

Signs such as "In Case of Enemy Attack this Highway Will be Closed", "Civil Defense Highway" or "Emergency Route for Civil Defense" shall not be used.

GUIDANCE:

The background of civil defense signs should be retroreflective.

In an emergency, civil defense signs may be needed in large numbers for temporary use. Consideration should accordingly be given to their fabrication from any light and economical material that can serve through the emergency period.

Option:

Any of these signs may be accompanied by a standard triangular plaque for marking areas contaminated by biological and chemical warfare agents and radioactive fallout.

2I.3 Evacuation Route Plaque

STANDARD:

The EVACUATION ROUTE plaque (CD-1) shall be circular, having a minimum outside diameter of 450 mm (18 in), carrying a directional arrow and the legend EVACUATION ROUTE. The standard Civil Defense Symbol "CD" inscribed in a triangle within a ring, shall appear near the bottom of the sign, with a diameter of 1.05 m (3-1/2 in).

The legend, arrow, symbol, and border shall be white on a blue background. At least the arrow and border shall be retroreflective. The arrow designs shall include a straight vertical arrow pointing upward, a straight horizontal arrow pointing to the left or right, or a bent arrow pointing to the left or right for advance warning of a turn.

The EVACUATION ROUTE plaque, with the appropriate arrow, shall be installed 45 m to 90 m (150 to 300 ft) in advance of, and at, any turn in an approved evacuation route. The plaque shall also be installed elsewhere for straight-ahead confirmation where needed.

In urban areas, it shall be mounted at the right-hand side of the roadway, not less than 2.1 m (7 ft) above the top of the curb, and at least 0.3 m (1 ft) back from the face of the curb. In rural areas, it shall be not less than 2.1 m (7 ft) above the pavement and 1.8 m to 3 m (6 to 10 ft) to the right-hand side of the roadway edge.

EVACUATION ROUTE plaques shall not be placed where they will conflict with other signs. Where conflict in placement would occur between the EVACUATION ROUTE plaque and a standard regulatory sign, the latter shall take precedence.

GUIDANCE:

Placement of EVACUATION ROUTE plaques should be made under the supervision of the officials having jurisdiction over the placement of other traffic signs. Coordination with Civil Defense authorities and agreement between contiguous political entities should occure to assure continuity of routes.

Option:

The arrow may be a separate unit attached to the face of the sign. The marker sign format may also be used on a non-retroreflective, white, square plaques.

In case of conflict with guide or warning signs, the civil defense sign may take precedence.

CD-1
18" diameter (blue)
450 mm diameter

2I.4 Area Closed Sign

STANDARD:

The AREA CLOSED sign (CD-2) shall be used to close a roadway to prohibit traffic from entering into the area because of dangerous radiological or biological contamination. It shall be installed on the shoulder as near as practical to the right-hand edge of the roadway, or preferably, on a portable mounting or barricade partly or wholly in the roadway.

GUIDANCE:

For best visibility, particularly at night, the sign height should not normally exceed 1.2 m (4 ft) from the pavement to the bottom of the sign. Unless adequate advance warning signs are used, it should not be placed to create a complete and unavoidable blocked route. Where feasible, the sign should be located at an intersection that provides a detour route.

CD-2
30" x 24"
750 mm x 600 mm

2I.5 Traffic Regulation Post Sign

STANDARD:

The STOP-TRAFFIC REGULATION POST sign (CD-3) shall be used to designate a point where an official traffic regulation post has been set up to impose such controls as are necessary to limit

congestion, expedite emergency traffic, exclude unauthorized vehicles, or protect the public.

The sign shall be installed in the same manner as the AREA CLOSED sign (Section 2I.4), and at the point where traffic must stop to be checked.

The standard STOP sign (R1-1) shall be used for this mandatory stop restriction. The supplemental plaque TRAFFIC REGULATION POST shall consist of a black legend on a retroreflectorized white background.

GUIDANCE:

The supplemental plaque TRAFFIC REGULATION POST should be mounted directly below the STOP sign.

CD–3
30" x 30"
750 mm x 750 mm
30" x 24"
750 mm x 600 mm

2I.6 Maintain Top Safe Speed Sign

Option:

The MAINTAIN TOP SAFE SPEED sign (CD-4) may be used on highways where radiological contamination is such that it may be prudent to limit the permissible exposure time for occupants of vehicles passing through the area.

Where an existing Speed Limit sign (R2-1) is in a suitable location, the MAINTAIN TOP SAFE SPEED sign may conveniently be mounted directly over the face of the speed limit sign that it supersedes.

SUPPORT:

Since any speed zoning would be impractical under such emergency conditions, no minimum speed limit can be prescribed by the sign in numerical terms. Where traffic is supervised by a traffic regulation post, official instructions will usually be given verbally, and the sign will serve as an occasional reminder of the urgent need for maintaining the proper safe speed.

GUIDANCE:

The sign should be installed at random intervals as needed, in the same manner as other standard speed signs.

STANDARD:

In rural areas, the MAINTAIN TOP SAFE SPEED sign shall be mounted on the right-hand side of the road with its lower edge not less than 2.1 m (7 ft) above the pavement, 1.8 m to 3 m (6 to 10 ft) from the roadway edge. In urban areas, the height shall be not less than 2.1 m (7 ft), and the nearest edge of the sign shall be not less than 0.3 m (1 ft) back from the face of the curb.

CD–4
24" x 30"
600 mm x 750 mm

2I.7 Road Use Permit Required For Thru Traffic Sign

STANDARD:

The ROAD USE PERMIT REQUIRED FOR THRU TRAFFIC sign (CD-5) shall be used at an

intersection that is an entrance to a route on which a traffic regulation post is located.

The sign shall be installed in a manner similar to that of the MAINTAIN TOP SAFE SPEED sign (Section 2I.6).

SUPPORT:

The intent of the ROAD USE PERMIT REQUIRED FOR THRU TRAFFIC sign is to notify road users of the presence of the traffic regulation post so that those who do not have priority permits issued by designated authorities can take another route, or turn back, without making a needless trip and without adding to the screening load at the post. Local traffic, without permits, can proceed as far as the traffic regulation post.

CD-5
24" x 30"
600 mm x 750 mm

2I.8 Emergency Aid Center Signs

STANDARD:

In the event of emergency, State and local authorities shall establish various centers for civilian relief, communication, medical service, and similar purposes. To guide the public to such centers a series of directional signs shall be used.

These signs (CD-6) shall carry the designation of the center and an arrow indicating the direction to the center. They shall be installed as needed, at intersections and elsewhere, on the right-hand side of the roadway, at a height in urban areas of at least 2.1 m (7 ft), and not less than 0.3 m (1 ft) back from the face of the curb, and in rural areas at a height of 1.5 m (5 ft), 1.8 m to 3 m (6 to 10 ft) from the roadway edge.

These signs shall carry one of the following legends, as appropriate, or others designating similar emergency facilities:

DECONTAMINATION CENTER
REGISTRATION CENTER
WELFARE CENTER
MEDICAL CENTER

CD-6
30" x 24"
750 mm x 600 mm

2I.9 Fallout Shelter Directional Sign

STANDARD:

The FALLOUT SHELTER directional sign (CD-7) shall be used to direct the public to selected fallout shelters that have been licensed and marked for emergency use.

The installation of these signs shall conform to established highway signing standards. Where used, the signs shall not be installed in competition with other necessary highway guide, warning, and regulatory signs.

The FALLOUT SHELTER directional sign shall be a horizontal rectangle, 750 mm x 600 mm (30" x 24") , containing the identifying "public fallout shelter" symbol in the upper left part of the sign. The colors of the symbol shall be yellow triangles inscribed in a black circle placed on a yellow square. The words "FALL-OUT SHELTER", the directional arrow, the distance to shelter, and the border shall be black against a white background.

Option:

The distance to the fallout shelter may be omitted from the sign when appropriate.

The FALLOUT SHELTER directional signs may be installed on the Interstate System. The FALLOUT SHELTER directional signs may be installed on all

other highways, when it has been determined that a need exists for such signs upon completion of an approved community shelter planning study.

These guide signs may be used to direct people to fallout shelters in rural areas and the environs of a metropolitan area where shelters have a larger capacity than is required to accommodate the local inhabitants of the surrounding area.

The signs may also be used to identify different routes to a shelter to provide for rapid movement of large numbers of persons.

GUIDANCE:

As a general rule, the FALLOUT SHELTER signs should not be posted more than five miles from the shelter.

The fallout shelter directional sign should be used sparingly and only in conjunction with approved plans of State and local civil defense directors.

CD-7
30" x 24"
750 mm x 600 mm

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