# PART 2. SIGNS

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CHAPTER 2A. GENERAL

Section 2A.01 Function and Purpose of Signs

Support:

This Manual contains Standards, Guidance, and Options for the signing within the right-of-way of all types of highways open to public travel. The functions of signs are to provide regulations, warnings, and guidance 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 located in the following Chapters of Part 2:

Chapter 2B—Regulatory Signs
Chapter 2C—Warning Signs
Chapter 2D—Guide Signs (Conventional Roads)
Chapter 2E—Guide Signs (Freeways and Expressways)
Chapter 2F—Specific Service (Logo) Signs
Chapter 2G—Tourist-Oriented Direction Signs
Chapter 2H—Recreational and Cultural Interest Area Signs
Chapter 2I—Emergency Management Signs

Standard:

Because the requirements and standards for signs depend on the particular type of highway upon which they are to be used, the following definitions shall apply:

A. Freeway— a divided multi-lane highway for through traffic with all crossroads separated in grade and with full control of access. [4511.01(YY), O.R.C.];

B. Expressway— a divided arterial highway for through traffic with full or partial control of access with an excess of fifty per cent of all crossroads separated in grade [4511.01(ZZ), O.R.C.];

C. Conventional Road—a street or highway other than a low-volume road (as defined in Section 5A.01), a freeway, or an expressway; and

D. Special Purpose Road—a low-volume, low-speed road that serves recreational areas or resource development activities, or that provides local access.
Section 2A.02 Definitions

Support:

Definitions that are applicable to signs are given in Sections 1A.13 and 2A.01.

Section 2A.03 Standardization of Application

Support:

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 urban and rural conditions.

Guidance:

Signs should be used only where justified by engineering judgment or studies, as noted in Section 1A.09.

Results from traffic engineering studies of physical and traffic factors should indicate the locations where signs are deemed necessary or desirable.

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

Standard:

Each standard sign shall be displayed only for the specific purpose as prescribed 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 Part 2. 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.

Section 2A.04 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. If used, route signs and directional signs should be used frequently because they promote safe and efficient operations by keeping road users informed of their location.
Section 2A.05 Classification of Signs

Standard:

Signs shall be defined by their function as follows:

A. Regulatory signs give notice of traffic laws or regulations.

B. Warning signs give notice of a situation that might not be readily apparent.

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

Section 2A.06 Design of Signs

Support:

This Manual shows many typical standard signs approved for use on streets, highways, bikeways, and pedestrian crossings.

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.

Detailed drawings of standard signs and alphabets are shown in the “Sign Design Manual” (ODOT), and in the “Standard Alphabets for Highway Signs and Pavement Markings.” Section 1A.11 contains information regarding how to obtain these publications.

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:

A. High visibility by day and night; and

B. 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.
Uniformity in design shall include shape, color, dimensions, legends, borders, and illumination or retroreflectivity.

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 or orientation 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:

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.

Section 2A.07 Changeable Message Signs

Standard:

Changeable message signs, which are traffic control devices designed to display variable messages, shall conform to the principles established in this Manual, and to the extent practical, with the design and applications prescribed in Sections 6F.52 and 6F.55.

Guidance:

Changeable message signs should not be used to display information other than regulatory, warning, and guidance information related to traffic control.

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 (see Section 1A.10) with changeable message signs 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.02.
Section 2A.08  Retroreflectivity and Illumination

Support:

There are many materials currently available for retroreflection and various methods currently available for the illumination of signs. New materials and methods continue to emerge. New materials and methods can be used as long as the signs meet the standard requirements for color, both by day and by night.

Standard:

Regulatory, warning, and guide signs shall be retroreflective or illuminated to show the same shape and similar color by both day and night, unless specifically stated otherwise in the text discussion in this Manual 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:

Sign elements may be illuminated by the means shown in Table 2A-1.

Retroreflection of sign elements may be accomplished by the means shown in Table 2A-2.

Section 2A.09  Minimum Retroreflectivity Levels

Support:

(This section is reserved for future text based on FHWA rulemaking.)

Section 2A.10  Shapes

Standard:

Particular shapes, as shown in Table 2A-3, shall be used exclusively for specific signs or series of signs, unless specifically stated otherwise in the text discussion in this Manual for a particular sign or class of signs.
Section 2A.11  Sign Colors

Standard:

The colors to be used on standard signs and their specific use on these signs shall be as indicated in the specific Sections of Part 2. The color coordinates and values shall be as described in the "Standard Highway Signs" (FHWA) book.

Support:

As a quick reference, common uses of sign colors are shown in Table 2A-4. Color schemes on specific signs are shown in the illustrations located in each appropriate Section.

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

The colors purple, light blue, and coral are being reserved for uses that will be determined in the future by the Federal Highway Administration (FHWA).

Section 2A.12  Dimensions

Support:

Sign sizes for use on the different classes of highways are shown in Sections 2B.03 and 2C.04 and in the "Sign Design Manual" (ODOT).

Standard:

The standard sign dimensions prescribed in this Manual and in the “Sign Design Manual” (ODOT) shall be used unless engineering judgment determines that 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 this Manual and the “Sign Design Manual.” 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 sign dimensions should be increased in 150 mm (6 in) increments.
Section 2A.13 Symbols

Support:

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

Standard:

Symbol designs shall in all cases be unmistakably similar to those shown in this Manual. New symbol designs shall be adopted by the Federal Highway Administration based on research evaluations to determine road user comprehension, sign conspicuity, and sign legibility.

Guidance:

New warning or regulatory symbol signs not readily recognizable by the public should 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.

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

Section 2A.14 Word Messages

Standard:

Except as noted in Section 2A.06, all word messages shall use standard wording and letters as shown in this Manual, the “Sign Design Manual” (ODOT) and the “Standard Alphabets for Highway Signs and Pavement Markings.”
### Table 2A-1. Illumination of Sign Elements

<table>
<thead>
<tr>
<th>Means of Illumination</th>
<th>Sign Element To Be Illuminated</th>
</tr>
</thead>
</table>
| 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 onto the sign face | • Entire sign face |
| Other devices, or treatments that highlight the sign shape, color, or message 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 Sign Elements

<table>
<thead>
<tr>
<th>Means of Retroreflection</th>
<th>Sign Element</th>
</tr>
</thead>
</table>
| Reflector "buttons" or similar units | Symbol  
|                                      | Word Message  
|                                      | Border  |
| A material that has a smooth, sealed outer surface over a microstructure that reflects light | Symbol  
|                                      | Word Message  
|                                      | Border  
|                                      | Background |
Table 2A-3. Use of Sign Shapes

<table>
<thead>
<tr>
<th>Shape</th>
<th>Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octagon</td>
<td>* Stop</td>
</tr>
<tr>
<td>Equilateral Triangle (1 point down)</td>
<td>* Yield</td>
</tr>
<tr>
<td>Circle</td>
<td>Highway-Rail Grade Crossing (Advance Warning)</td>
</tr>
<tr>
<td></td>
<td>Emergency Evacuation Route Marker</td>
</tr>
<tr>
<td>Pennant Shape/ Isosceles Triangle</td>
<td>* No Passing</td>
</tr>
<tr>
<td>(longer axis horizontal)</td>
<td></td>
</tr>
<tr>
<td>Pentagon (pointed up)</td>
<td>* School Crossing Series</td>
</tr>
<tr>
<td></td>
<td>* County Route Sign</td>
</tr>
<tr>
<td>Crossbuck (two rectangles in an “X” config)</td>
<td>* Highway-Rail Crossing</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Diamond</td>
<td>Warning Series</td>
</tr>
<tr>
<td>Rectangle</td>
<td>Regulatory Series</td>
</tr>
<tr>
<td></td>
<td>** Guide Series</td>
</tr>
<tr>
<td></td>
<td>Warning Series</td>
</tr>
<tr>
<td>Trapezoid</td>
<td>* Recreational Series</td>
</tr>
</tbody>
</table>

* Indicates exclusive use

** Guide series includes general service, specific service, and recreation signs
### Table 2A-4. Common Uses of Sign Colors

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Legend</th>
<th>Background</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>Green</td>
</tr>
<tr>
<td>Regulatory</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Prohibitive</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Permissive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warning</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Pedestrian</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Guide</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Interstate Route</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>State Route</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>US Route</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>County Route</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Forest Route</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Evacuation Route</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Milepost Signs</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Road User Service</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Recreational</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Street Name</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Destination</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Temporary Traffic Control</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>School</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

* FYG is fluorescent yellow-green
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 (see Section 1A.14) 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), or JCT (for Junction).

Standard:

All sign lettering shall be in capital letters as provided in the "Standard Alphabets for Highway Signs and Pavement Markings," except as indicated in the Option below.

Option:

Word messages on street name signs and destinations on guide signs may be composed of a combination of lower-case letters with initial upper-case letters.

Section 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 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 to 19 mm (0.5 to 0.75 in) in width, 13 mm (0.5 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 1800 x 3000 mm (72 x 120 in) in size, the border should be 50 mm (2 in) wide, or on larger signs, 75 mm (3 in) wide. Where practicable, the corners of the sign should be rounded to fit the border, except for STOP signs.
Section 2A.16  Standardization of Location

Support:

Standardization of position cannot always be attained in practice. Examples of locations for a number of typical signs are illustrated in Figures 2A-1 to 2A-7.

Standard:

Signs requiring different decisions by the road user shall be spaced sufficiently far apart for the required decisions to be made safely. One of the factors considered when determining the appropriate spacing shall be the posted or 85th-percentile speed.

Guidance:

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 installed 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:

A. Are outside the clear zone unless placed on a breakaway or yielding support (see Section 2A.19);
B. Optimize nighttime visibility;
C. Minimize the effects of mud splatter and debris;
D. Do not obscure each other; and
E. Are not hidden from view.

Support:

The clear zone is the total roadside border area, starting at the edge of the traveled way, available for 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" (see the Preface for AASHTO’s address) and ODOT’s “Location and Design Manual, Volume One - Roadway Design” (see Section 1A.11).
Figure 2A-1. Heights and Lateral Locations of Signs for Typical Installations

- Roadside Sign (Rural District)
  - Not less than 1.8 m (6 ft)
- Roadside Sign (Rural District)
  - Not less than 1.8 m (6 ft)
- Roadside Sign (Business or Residence District)
  - Not less than 0.6 m (2 ft)
- Warning Sign (Rural District)
  - Not less than 1.8 m (6 ft)
- Roadside Assembly (Rural District)
  - Not less than 1.8 m (6 ft)
- Warning Sign on Island in the Line of Traffic
  - Not less than 1.8 m (6 ft)
- Overhead Mounting
  - Not less than 5.2 m (17 ft)

OMUTCD 2003 Edition (English units are preferred.)
Figure 2A-2. Typical Locations for Signs at Intersections

ACUTE ANGLE INTERSECTION

CHANNELIZED INTERSECTION

MINOR CROSSROAD

URBAN INTERSECTION

DIVISIONAL ISLAND

WIDE THROAT INTERSECTION

OMUTCD 2003 Edition (English units are preferred.)
Figure 2A-3. Typical ONE WAY Signing for Divided Highways with Medians Less Than 9 m (30 ft)

Note: All signs shown are optional except the STOP signs

Legend
→ Direction of travel

Typical Mounting
Figure 2A-4. Typical ONE WAY Signing for Divided Highways with Medians Greater Than 9 m (30 ft)
Figure 2A-5. Typical Locations of ONE WAY Signs

Legend

→ Direction of travel
* Optional

OMUTCD 2003 Edition (English units are preferred.)
Figure 2A-6. Typical Locations of ONE WAY Signs

Legend
- Direction of travel
* Optional

OMUTCD 2003 Edition (English units are preferred.)
Figure 2A-7. Typical Applications of Warning Signs
Guidance:

With the increase in traffic volumes and the desire to provide road users regulatory, warning, and guidance information, an order of priority for sign installation should be established.

Support:

An order of priority 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 is not desirable.

Guidance:

Because regulatory and warning information is more critical to the road user than guidance information, regulatory and warning signing whose location is critical should be displayed rather than guide signing in cases where conflicts occur. Information of a less critical nature should be moved to less critical locations or omitted.

Option:

Under some circumstances, such as on curves to the right, signs may be placed on median islands or on the left side of the road. A supplementary sign located on the left of the roadway may be used on a multilane road where traffic in the right lane might obstruct the view to the right.

Guidance:

In urban areas where crosswalks exist, signs should not be placed within 1.2 m (4 ft) in advance of the crosswalk.

Section 2A.17 Overhead Sign Installations

Guidance:

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

Support:

The operational requirements of the present highway system are such that overhead signs have value at many locations. The factors to be considered for the installation of overhead sign displays are not definable in specific numerical terms.
Option:

The following conditions (not in priority order) may be considered in an engineering study to determine if overhead signs should be used:

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. Multilane 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; and
M. Left exit ramps.

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.

Section 2A.18 Mounting Height

Standard:

Signs installed at the side of the road in rural districts shall be at least 1.5 m (5 ft), measured from the bottom of the sign to the near edge of the pavement. Where parking or pedestrian movements occur, the clearance to the bottom of the sign shall be at least 2.1 m (7 ft).
Directional signs on expressways and freeways shall be installed with a minimum height of 2.1 m (7 ft). If a secondary sign is mounted below another sign, the major sign shall be 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 and freeways 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.

Where signs are placed 9 m (30 ft) or more from the edge of the traveled way, the height to the bottom of such signs may be 1.5 m (5 ft) above the level of the pavement edge.

A route sign assembly consisting of a route sign and auxiliary signs (see Section 2D.27) may be treated as a single sign for the purposes of this Section.

The mounting height may be adjusted when supports are located near the edge of the right-of-way on a steep backslope.

Support:

Without this flexibility regarding steep backslopes, some agencies might decide to relocate the sign closer to the road, which might be less desirable.

Option:

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:

Figure 2A-1 illustrates some of the mounting height requirements contained in this Section.
Section 2A.19  Lateral Offset

Standard:

The minimum lateral offset from the edge of the shoulder (or if no shoulder exists, from the edge of the pavement) to the near edge of a roadside-mounted sign shall be 1.8 m (6 ft). Roadside-mounted sign supports shall be breakaway, yielding, or shielded with a longitudinal barrier or crash cushion if within the clear zone.

The minimum lateral offset from the edge of the shoulder (or if no shoulder exists, from the edge of the pavement) to the near edge of overhead sign supports (cantilever or sign bridges) shall be 1.8 m (6 ft). Overhead sign supports shall have a barrier or crash cushion to shield them if they are within the clear zone.

Support:

The minimum lateral offset is intended to keep trucks and cars that use the shoulders from striking the signs or supports. The minimum lateral offset is only a small portion of the clear zone available for the use of errant vehicles.

Guidance:

All supports should be located as far as practical from the edge of the shoulder. Advantage should be taken to place signs behind existing roadside barriers, on overcrossing structures, or other locations that minimize the exposure of the traffic to sign supports.

Option:

Where permitted, signs may be placed on existing supports used for other purposes, such as traffic signal supports, highway lighting supports, and utility poles.

Standard:

If signs are placed on existing supports, they shall meet other placement criteria contained in this Manual.

Option:

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

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

Support:

Figure 2A-1 illustrates some of the lateral offset requirements contained in this Section.

Section 2A.20 Position of Signs

Support:

Detailed specifications for sign locations are given in other Sections of this Manual dealing with an individual sign or class of signs.

Figures 2A-2 through 2A-7 show typical placements of signs.

Section 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 to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 m (30 ft) or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction 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.

Section 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:

The latest edition of AASHTO’s "Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" contains additional information regarding posts and mounting (see the Preface for AASHTO’s address).

**Section 2A.23  Maintenance**

Guidance:

All traffic signs should be kept properly positioned, clean, and legible, and should have adequate retroreflectivity. 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 highway agencies, police, and other public agencies whose duties require that they travel on the roadways should be encouraged to report any damaged, deteriorated, or obscured signs at the first opportunity.

Steps should be taken to see that weeds, trees, shrubbery, and construction, maintenance, and utility 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.

**Section 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:

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.

If used, DO NOT ENTER signs should be placed on divided highways at locations directly in view of a driver making a wrong-way entry from the crossroad, and WRONG WAY signs should be placed further from the crossroad than the DO NOT ENTER signs (see Figure 2A-3).
CHAPTER 2B. REGULATORY SIGNS

Section 2B.01  Application of Regulatory Signs

Standard:

Regulatory signs shall be used to inform road users of selected traffic laws or regulations and indicate the applicability of the legal requirements.

Regulatory signs shall be installed at or near where the regulations apply. The signs shall clearly indicate the requirements imposed by the regulations and shall be designed and installed to provide adequate visibility and legibility in order to obtain compliance.

Regulatory signs shall be retroreflective or illuminated to show the same shape and similar color by both day and night, unless specifically stated otherwise in the text discussion of a particular sign or group of signs (see Section 2A.08).

Regulatory sign designs contained in the “Sign Design Manual” (ODOT) are incorporated by reference into this Manual, and have the same legal applicability as if they had been included in this Manual.

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

Section 2B.02  Design of Regulatory Signs

Support:

Most regulatory signs are rectangular, with the longer dimension vertical. The shapes and colors of regulatory signs are listed in Tables 2A-3 and 2A-4, respectively. Exceptions are specifically noted in the following Sections.

The use of educational plaques to supplement symbol signs is described in Section 2A.13.

Section 2B.03  Size of Regulatory Signs

Support:

The "Sign Design Manual" (ODOT) contains sign sizes and letter heights for regulatory signs used on conventional roads, expressways, freeways, and low-volume roads, and under special conditions.
### Table 2B-1. Regulatory Sign Sizes

<table>
<thead>
<tr>
<th>Sign</th>
<th>Sign Code</th>
<th>Section</th>
<th>Conventional Roads</th>
<th>Expressways</th>
<th>Freeways</th>
<th>Minimum</th>
<th>Oversized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>R1-1</td>
<td>2B.04</td>
<td>750 x 750 (30 x 30)</td>
<td>900 x 900 (36 x 36)</td>
<td>—</td>
<td>600 x 600 (24 x 24)</td>
<td>1200 x 1200 (48 x 48)</td>
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<tr>
<td>Yield</td>
<td>R1-2</td>
<td>2B.08</td>
<td>900 x 900 x 900 (36 x 36 x 36)</td>
<td>1200 x 1200 x 1200 (48 x 48 x 48)</td>
<td>1500 x 1500 x 1500 (60 x 60 x 60)</td>
<td>750 x 750 x 750 (30 x 30 x 30)</td>
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<td>4-Way</td>
<td>R1-3</td>
<td>2B.04</td>
<td>300 x 150 (12 x 6)</td>
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<tr>
<td>All Way</td>
<td>R1-4</td>
<td>2B.04</td>
<td>450 x 150 (18 x 6)</td>
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<tr>
<td>Speed Limit</td>
<td>R2-1</td>
<td>2B.11</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<tr>
<td>Truck Speed Limit</td>
<td>R2-2</td>
<td>2B.12</td>
<td>600 x 600 (24 x 24)</td>
<td>900 x 900 (36 x 36)</td>
<td>1200 x 1200 (48 x 48)</td>
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<tr>
<td>Vehicles Over 4 Tons Empty Non Com Buses 55 MPH</td>
<td>R2-H2a</td>
<td>2B.12</td>
<td>—</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<td>Speed Limit XX Vehicles Over 4 Tons Empty Non Com Buses 55</td>
<td>R2-H2b</td>
<td>2B.12</td>
<td>—</td>
<td>900 x 1800 (36 x 72)</td>
<td>1200 x 2400 (48 x 96)</td>
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<td>Night Speed Limit</td>
<td>R2-3</td>
<td>2B.13</td>
<td>600 x 600 (24 x 24)</td>
<td>900 x 900 (36 x 36)</td>
<td>1200 x 1200 (48 x 48)</td>
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<td>Minimum Speed Limit</td>
<td>R2-4</td>
<td>2B.14</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
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<td>Combined Speed Limit</td>
<td>R2-4a</td>
<td>2B.14</td>
<td>600 x 1200 (24 x 48)</td>
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<td>Reduced Speed Ahead</td>
<td>R2-5 series</td>
<td>2B.16</td>
<td>600 x 750 (24 x 30)</td>
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<td>Reduced Speed XX Ahead</td>
<td>R2-H5d</td>
<td>2B.16</td>
<td>600 x 900 (24 x 36)</td>
<td>900 x 1350 (36 x 54)</td>
<td>1200 x 1650 (48 x 66)</td>
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<td>Turn Prohibition</td>
<td>R3-1, 2, 3, 4</td>
<td>2B.17</td>
<td>600 x 600 (24 x 24)</td>
<td>900 x 900 (36 x 36)</td>
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<td>—</td>
<td>1200 x 1200 (48 x 48)</td>
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<td>Mandatory Movement Lane Control</td>
<td>R3-5 series</td>
<td>2B.19</td>
<td>750 x 900 (30 x 36)</td>
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<td>Optional Movement Lane Control</td>
<td>R3-6</td>
<td>2B.20</td>
<td>750 x 900 (30 x 36)</td>
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<td>Mandatory Movement Lane Control</td>
<td>R3-7</td>
<td>2B.19</td>
<td>750 x 750 (30 x 30)</td>
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<td>Advance Intersection Lane Control</td>
<td>R3-8, 8a, 8b</td>
<td>2B.21</td>
<td>Variable x 750 (Variable x 30)</td>
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<tr>
<td>Two-Way Left Turn Only (overhead mounted)</td>
<td>R3-9a</td>
<td>2B.22</td>
<td>750 x 900 (30 x 36)</td>
<td>—</td>
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<td>Sign</td>
<td>Sign Code</td>
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<td>Conventional Roads</td>
<td>Expressways</td>
<td>Freeways</td>
<td>Minimum</td>
<td>Oversized</td>
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<tr>
<td>Two-Way Left Turn Only (ground mounted)</td>
<td>R3-9b</td>
<td>2B.22</td>
<td>600 x 900 (24 x 36)</td>
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<td>900 x 1200 (36 x 48)</td>
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<td>Reversible Lane Control (symbol)</td>
<td>R3-9c, 9d</td>
<td>2B.23</td>
<td>2700 x 1200 (108 x 48)</td>
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<td>Advance Reversible Lane Control Transition</td>
<td>R3-9g, 9h</td>
<td>2B.23</td>
<td>2700 x 900 (108 x 36)</td>
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<td>End Reverse Lane</td>
<td>R3-9i</td>
<td>2B.23</td>
<td>2700 x 1200 (108 x 48)</td>
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<td>HOV 2+ Lane Ahead (ground mounted)</td>
<td>R3-10 series</td>
<td>2B.48</td>
<td>750 x 1050 (30 x 42)</td>
<td>900 x 1500 (36 x 60)</td>
<td>1200 x 1100 (48 x 84)</td>
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<td>Center Lane HOV 2+ Only (post mounted)</td>
<td>R3-11 series</td>
<td>2B.48</td>
<td>750 x 1050 (30 x 42)</td>
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<td>1400 x 1100 (54 x 84)</td>
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<td>HOV 2+ Lane Ends (post mounted)</td>
<td>R3-12</td>
<td>2B.48</td>
<td>750 x 1050 (30 x 42)</td>
<td>900 x 1500 (36 x 60)</td>
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<td>HOV 2+ Lane Ahead (overhead mounted)</td>
<td>R3-14 series</td>
<td>2B.48</td>
<td>1800 x 1500 (72 x 60)</td>
<td>2400 x 1800 (96 x 72)</td>
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<td>HOV 2+ Only (overhead mounted)</td>
<td>R3-15</td>
<td>2B.48</td>
<td>1650 x 900 (66 x 36)</td>
<td>2100 x 1200 (84 x 48)</td>
<td>2550 x 1500 (102 x 60)</td>
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<td>Bicycle Lane Ahead (symbol)</td>
<td>R3-16</td>
<td>9B.04</td>
<td>600 x 750 (24 x 30)</td>
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<td>Bicycle Lane Ends (symbol)</td>
<td>R3-16a</td>
<td>9B.04</td>
<td>600 x 750 (24 x 30)</td>
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<td>Right Lane Bicycle Only (symbol)</td>
<td>R3-17</td>
<td>9B.04</td>
<td>600 x 750 (24 x 750)</td>
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<td>Bicycle Lane with Vehicle Parking (symbol)</td>
<td>R3-17a</td>
<td>9B.04</td>
<td>600 x 750 (24 x 750)</td>
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<tr>
<td>Do Not Pass</td>
<td>R4-1</td>
<td>2B.24</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<tr>
<td>Pass With Care</td>
<td>R4-2</td>
<td>2B.25</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
<td>450 x 600 (18 x 24)</td>
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<td>Slower Traffic Keep Right</td>
<td>R4-3</td>
<td>2B.26</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<td>Trucks Use right Lane</td>
<td>R4-5</td>
<td>2B.27</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<td>Truck Lane 500 Feet</td>
<td>R4-6</td>
<td>2B.27</td>
<td>600 x 750 (24 x 30)</td>
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<td>1200 x 1500 (48 x 60)</td>
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<tr>
<td>Keep Right</td>
<td>R4-7, 7a, 7b</td>
<td>2B.28</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<td>Keep Left</td>
<td>R4-8</td>
<td>2B.28</td>
<td>600 x 750 (24 x 30)</td>
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<td>1200 x 1500 (48 x 60)</td>
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<tr>
<td>Through Traffic Keep Right</td>
<td>R4-H11</td>
<td>2B.28</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
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<td>Conventional Roads</td>
<td>Expressways</td>
<td>Freeways</td>
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<td>Oversized</td>
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<td>Through Traffic Keep Left</td>
<td>R4-H12</td>
<td>2B.28</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
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<td>Do Not Enter</td>
<td>R5-1</td>
<td>2B.29</td>
<td>750 x 750 (30 x 30)</td>
<td>900 x 900 (36 x 36)</td>
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<td>Wrong Way</td>
<td>R5-1a</td>
<td>2B.30</td>
<td>900 x 600 (36 x 24)</td>
<td>900 x 600 (36 x 24)</td>
<td>1050 x 750 (42 x 30)</td>
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<tr>
<td>No Trucks</td>
<td>R5-2</td>
<td>2B.31</td>
<td>600 x 600 (24 x 24)</td>
<td>750 x 750 (30 x 30)</td>
<td>900 x 900 (36 x 36)</td>
<td>—</td>
<td>1200 x 1200 (48 x 48)</td>
</tr>
<tr>
<td>Through Trucks Prohibited</td>
<td>R5-H2b</td>
<td>2B.31</td>
<td>600 x 600 (24 x 24)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>900 x 900 (36 x 36)</td>
</tr>
<tr>
<td>Through Traffic Prohibited</td>
<td>R5-H2c</td>
<td>2B.31</td>
<td>600 x 600 (24 x 24)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>900 x 900 (36 x 36)</td>
</tr>
<tr>
<td>Motor Vehicle Prohibition</td>
<td>R5-3</td>
<td>2B.31</td>
<td>600 x 600 (24 x 24)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Commercial Vehicles Excluded</td>
<td>R5-4</td>
<td>2B.31</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Vehicles With Lugs Prohibited</td>
<td>R5-5</td>
<td>2B.31</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>No Bicycles</td>
<td>R5-6</td>
<td>2B.31</td>
<td>600 x 600 (24 x 24)</td>
<td>750 x 750 (30 x 30)</td>
<td>900 x 900 (36 x 36)</td>
<td>—</td>
<td>1200 x 1200 (48 x 48)</td>
</tr>
<tr>
<td>Nonmotorized Traffic Prohibited</td>
<td>R5-7</td>
<td>2B.31</td>
<td>750 x 600 (30 x 24)</td>
<td>1050 x 600 (42 x 24)</td>
<td>1200 x 750 (48 x 30)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Motor-Driven Cycles Prohibited</td>
<td>R5-8</td>
<td>2B.31</td>
<td>750 x 600 (30 x 24)</td>
<td>1050 x 600 (42 x 24)</td>
<td>1200 x 750 (48 x 30)</td>
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</tr>
<tr>
<td>Pedestrians, Bicycles, Motor-Driven Cycles Prohibited</td>
<td>R5-10a</td>
<td>2B.31</td>
<td>750 x 900 (30 x 36)</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Pedestrians and Bicycles Prohibited</td>
<td>R5-10b</td>
<td>2B.31</td>
<td>750 x 450 (30 x 18)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pedestrians Prohibited</td>
<td>R5-10c</td>
<td>2B.31</td>
<td>600 x 300 (24 x 12)</td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Prohibited Pedestrians Farm Machinery, Animals, Bicycles or Motorcycles (Less than 5 Brake HP)</td>
<td>R5-H10d</td>
<td>2B.31</td>
<td>—</td>
<td>—</td>
<td>900 x 900 (36 x 36)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Prohibited Pedestrians Bicycles Motorcycles (Less than 5 Brake HP)</td>
<td>R5-H10e</td>
<td>2B.31</td>
<td>—</td>
<td>—</td>
<td>750 x 750 (30 x 30)</td>
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<tr>
<td>Snowmobiles All Purpose Vehicles Prohibited</td>
<td>R5-H10f</td>
<td>2B.31</td>
<td>750 x 600 (30 x 24)</td>
<td>900 x 750 (36 x 30)</td>
<td>900 x 750 (36 x 30)</td>
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</tr>
<tr>
<td>One Way</td>
<td>R6-1</td>
<td>2B.32</td>
<td>900 x 300 (36 x 12)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sign</td>
<td>Sign Code</td>
<td>Section</td>
<td>Conventional Roads</td>
<td>Expressways</td>
<td>Freeways</td>
<td>Minimum</td>
<td>Oversized</td>
</tr>
<tr>
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<tr>
<td>One Way</td>
<td>R6-2</td>
<td>2B.32</td>
<td>450 x 600 (18 x 24)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>600 x 750</td>
</tr>
<tr>
<td>Divided Highway Crossing</td>
<td>R6-3, 3a</td>
<td>2B.33</td>
<td>600 x 450 (24 x 18)</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>No Parking</td>
<td>R7-1, 2, 2a, 3, 4, 5, 6, 7, 8, 8a, 9, 9a, 107, 108</td>
<td>2B.34</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
<td>—</td>
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<tr>
<td>$250 Fine Minimum</td>
<td>R7-H8b</td>
<td>2B.34</td>
<td>300 x 150 (12 x 6)</td>
<td>—</td>
<td>—</td>
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<tr>
<td>No Parking (with transit logo)</td>
<td>R7-107a</td>
<td>2B.34</td>
<td>300 x 750 (12 x 30)</td>
<td>—</td>
<td>—</td>
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<tr>
<td>No Parking/Restricted Parking (combined sign)</td>
<td>R7-200</td>
<td>2B.34</td>
<td>500 x 450 (20 x 18)</td>
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<tr>
<td>Tow-Away Zone</td>
<td>R7-201, 201a</td>
<td>2B.34</td>
<td>300 x 150 (12 x 6)</td>
<td>—</td>
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<tr>
<td>This Side of Sign</td>
<td>R7-202</td>
<td>2B.34</td>
<td>300 x 165 (12 x 6.5)</td>
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<tr>
<td>No Parking on Pavement</td>
<td>R8-1</td>
<td>2B.34</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200</td>
<td>1200 x 1500</td>
<td>1200 x 1500</td>
<td>450 x 600 (18 x 24)</td>
</tr>
<tr>
<td>No Parking Except on Shoulder</td>
<td>R8-2</td>
<td>2B.34</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200</td>
<td>1200 x 1500</td>
<td>1200 x 1500</td>
<td>—</td>
</tr>
<tr>
<td>No Parking</td>
<td>R8-3</td>
<td>2B.34</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 900</td>
<td>1200 x 1200</td>
<td>1200 x 1200</td>
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</tr>
<tr>
<td>No Parking (symbol)</td>
<td>R8-3a</td>
<td>2B.34</td>
<td>600 x 600 (24 x 600)</td>
<td>900 x 900</td>
<td>1200 x 1200</td>
<td>300 x 300 (12 x 12)</td>
<td>—</td>
</tr>
<tr>
<td>Emergency Parking Only</td>
<td>R8-4</td>
<td>2B.37</td>
<td>750 x 600 (30 x 24)</td>
<td>750 x 600</td>
<td>1200 x 900</td>
<td>1200 x 900</td>
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</tr>
<tr>
<td>No Stopping on Pavement</td>
<td>R8-5</td>
<td>2B.34</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200</td>
<td>1200 x 1500</td>
<td>1200 x 1500</td>
<td>—</td>
</tr>
<tr>
<td>No Stopping Except on Shoulder</td>
<td>R8-6</td>
<td>2B.34</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200</td>
<td>1200 x 1500</td>
<td>1200 x 1500</td>
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</tr>
<tr>
<td>Emergency Stopping Only</td>
<td>R8-7</td>
<td>2B.37</td>
<td>750 x 600 (30 x 24)</td>
<td>1200 x 900</td>
<td>1200 x 1500</td>
<td>1200 x 1500</td>
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</tr>
<tr>
<td>Do Not Stop on Tracks</td>
<td>R8-8</td>
<td>2B.37</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200</td>
<td>1200 x 1500</td>
<td>1200 x 1500</td>
<td>—</td>
</tr>
<tr>
<td>Walk on Left Facing Traffic</td>
<td>R9-1</td>
<td>2B.38</td>
<td>450 x 600 (18 x 24)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cross Only at Crosswalks</td>
<td>R9-2</td>
<td>2B.39</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pedestrians Prohibited</td>
<td>R9-3</td>
<td>2B.39</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pedestrian Prohibition (symbol)</td>
<td>R9-3a</td>
<td>2B.39</td>
<td>450 x 450 (18 x 18)</td>
<td>600 x 600</td>
<td>750 x 750</td>
<td>—</td>
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</tr>
<tr>
<td>Sign</td>
<td>Sign Code</td>
<td>Section</td>
<td>Conventional Roads</td>
<td>Expressways</td>
<td>Freeways</td>
<td>Minimum</td>
<td>Oversized</td>
</tr>
<tr>
<td>-------------------------------------------</td>
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</tr>
<tr>
<td>Use Crosswalk</td>
<td>R9-3b</td>
<td>2B.39</td>
<td>450 x 300 (18 x 12)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>No Hitch Hiking</td>
<td>R9-4</td>
<td>2B.38</td>
<td>450 x 600 (18 x 24)</td>
<td>—</td>
<td>—</td>
<td>450 x 450 (18 x 18)</td>
<td>—</td>
</tr>
<tr>
<td>Hitch Hiking Prohibition (symbol)</td>
<td>R9-4a</td>
<td>2B.38</td>
<td>450 x 450 (18 x 18)</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Bicyclists (symbol) Use Ped Signal</td>
<td>R9-5</td>
<td>9B.09</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Bicyclists (symbol) Yield to Peds</td>
<td>R9-6</td>
<td>9B.09</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Keep Left/Right to Pedestrians &amp; Bicyclists (symbols) – Travel-path Restriction</td>
<td>R9-7</td>
<td>9B.10</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
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<tr>
<td>Pedestrian Crosswalk</td>
<td>R9-8</td>
<td>6F.12</td>
<td>600 x 300 (24 x 12)</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Sidewalk Closed</td>
<td>R9-9</td>
<td>6F.13</td>
<td>600 x 300 (24 x 12)</td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Sidewalk Closed, Use Other Side</td>
<td>R9-10</td>
<td>6F.13</td>
<td>600 x 300 (24 x 12)</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Sidewalk Closed, Ahead, Cross Here</td>
<td>R9-11</td>
<td>6F.13</td>
<td>600 x 300 (24 x 12)</td>
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<tr>
<td>Pedestrian Traffic Signal Signs</td>
<td>R10-1</td>
<td>2B.40</td>
<td>300 x 450 (12 x 18)</td>
<td>—</td>
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<tr>
<td>Pedestrian Traffic Signal Signs</td>
<td>R10-2, 2a, 3a, 3b, 3c, 4a, 4b</td>
<td>2B.40</td>
<td>225 x 300 (9 x12)</td>
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<tr>
<td>Left on Green Arrow Only</td>
<td>R10-5</td>
<td>2B.40</td>
<td>600 x 750 (24 x 30)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1200 x 1500 (48 x 60)</td>
</tr>
<tr>
<td>Stop Here on Red</td>
<td>R10-6, 6a</td>
<td>2B.40</td>
<td>600 x 900 (24 x 36)</td>
<td>—</td>
<td>—</td>
<td>600 x 750 (24 x 30)</td>
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<tr>
<td>Do Not Block Intersection</td>
<td>R10-7</td>
<td>2B.40</td>
<td>600 x 750 (24 x 30)</td>
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<td>—</td>
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<td>—</td>
</tr>
<tr>
<td>Use Lane With Green Arrow</td>
<td>R10-8</td>
<td>2B.40</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1050 (36 x 42)</td>
<td>—</td>
<td>—</td>
<td>1500 x 1800 (60 x 72)</td>
</tr>
<tr>
<td>Left (Right) Turn Signal</td>
<td>R10-10</td>
<td>2B.40</td>
<td>600 x 750 (24 x 30)</td>
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<tr>
<td>No Turn on Red</td>
<td>R10-11a, 11c, 11d</td>
<td>2B.40</td>
<td>600 x 750 (24 x 30)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1200 x 1200 (48 x 48)</td>
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<tr>
<td>No Turn on Red</td>
<td>R10-11b</td>
<td>2B.40</td>
<td>600 x 600 (24 x 24)</td>
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<td>—</td>
<td>750 x 750 (30 x 30)</td>
</tr>
<tr>
<td>Left Turn Yield on (symbolic green ball)</td>
<td>R10-12</td>
<td>2B.40</td>
<td>600 x 750 (24 x 30)</td>
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<td>—</td>
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<tr>
<td>Sign</td>
<td>Sign Code</td>
<td>Section</td>
<td>Conventional Roads</td>
<td>Expressways</td>
<td>Freeways</td>
<td>Minimum</td>
<td>Oversized</td>
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<tr>
<td>Emergency Signal</td>
<td>R10-13</td>
<td>2B.40</td>
<td>900 x 600 (36 x 24)</td>
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<tr>
<td>Keep off Median</td>
<td>R11-1</td>
<td>2B.41</td>
<td>600 x 750 (24 x 30)</td>
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<tr>
<td>Road Closed</td>
<td>R11-2</td>
<td>2B.42</td>
<td>1200 x 750 (48 x 30)</td>
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<tr>
<td>Road Closed – Local Traffic Only</td>
<td>R11-3a, 3b, 4</td>
<td>2B.42</td>
<td>1500 x 750 (60 x 30)</td>
<td>—</td>
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<tr>
<td>Weight Limit</td>
<td>R12-1. 2</td>
<td>2B.43</td>
<td>600 x 750 (24 x 30)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>900 x 1200 (36 x 48)</td>
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<tr>
<td>Weight Limit</td>
<td>R12-3</td>
<td>2B.43</td>
<td>600 x 900 (24 x 36)</td>
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<tr>
<td>Weight Limit</td>
<td>R12-4</td>
<td>2B.43</td>
<td>750 x 600 (30 x 24)</td>
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<tr>
<td>Weight Limit</td>
<td>R12-5</td>
<td>2B.43</td>
<td>600 x 900 (24 x 36)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
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<tr>
<td>Weight Limit</td>
<td>R12-H5</td>
<td>2B.43</td>
<td>750 x 1050 (30 x 42)</td>
<td>900 x 1350 (36 x 54)</td>
<td>1200 x 1800 (48 x 72)</td>
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<tr>
<td>Weigh Station</td>
<td>R13-1</td>
<td>2B.44</td>
<td>1800 x 1200 (72 x 48)</td>
<td>2400 x 1650 (96 x 66)</td>
<td>3000 x 1100 (120 x 84)</td>
<td>—</td>
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<tr>
<td>All Trucks Enter Weigh Station</td>
<td>R13-H1</td>
<td>2B.44</td>
<td>1800 x 900 (72 x 36)</td>
<td>2400 x 1200 (96 x 48)</td>
<td>2400 x 1200 (96 x 48)</td>
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<tr>
<td>Truck Route</td>
<td>R14-1</td>
<td>2B.45</td>
<td>600 x 450 (24 x 18)</td>
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<tr>
<td>Hazardous Cargo</td>
<td>R14-2, 3</td>
<td>2B.46</td>
<td>600 x 600 (24 x 24)</td>
<td>750 x 750 (30 x 30)</td>
<td>900 x 900 (36 x 36)</td>
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<td>1050 x 1050 (42 x 42)</td>
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<tr>
<td>Seat Belt Symbol</td>
<td>R16-1</td>
<td>2B.51</td>
<td>375 x 500 (15 x 20)</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Stop for School Bus Loading or Unloading</td>
<td>R16-H2</td>
<td>2B.51</td>
<td>750 x 750 (30 x 30)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1050 x 1050 (42 x 42)</td>
</tr>
</tbody>
</table>

Notes:
1. Larger Signs may be used when appropriate.
2. Dimensions are shown in millimeters followed by inches in parentheses and are shown as width x height.
Standard:

The sizes for regulatory signs shall be as shown in Table 2B-1.

Guidance:

The Expressway and Freeway sizes should be used for higher-speed applications to provide larger signs for increased visibility and recognition.

Option:

The Minimum size may be used on low-speed roadways where reduced legend size would be adequate for the regulation or where physical conditions preclude the use of the other sizes.

The Oversized size may be used for those special applications that require increased emphasis, improved recognition, or increased legibility.

Section 2B.04 STOP Sign (R1-1)

Standard:

When a sign is used to indicate that traffic is always required to stop, a STOP (R1-1) sign shall be used.

The STOP sign shall be an octagon with a white legend and border on a red background. Secondary legends shall not be used on STOP sign faces. If appropriate, a supplemental plaque (R1-3 or R1-4) shall be used to display a secondary legend. Such plaques shall have a white legend and border on a red background. If the number of approach legs controlled by STOP signs at an intersection is three or more, the numeral on the supplemental plaque, if used, shall correspond to the actual number of legs controlled by STOP signs.

At intersections where all approaches are controlled by STOP signs (see Section 2B.07), a supplemental plaque (R1-3 or R1-4) shall be mounted below each STOP sign.

Option:

The ALL WAY (R1-4) supplemental plaque may be used instead of the 4-WAY (R1-3) supplemental plaque.

Support:

The design and application of Stop Beacons are described in Section 4K.05.
Option:

At an intersection, the higher classification street or highway may be used to determine the size of the STOP sign to be erected at that intersection. STOP signs on freeway and expressway ramps may be the 1200 mm (48 in) size.

Section 2B.05 STOP Sign Applications

Guidance:

STOP signs should not be used unless engineering judgment indicates that one or more of the following conditions exist:

A. Intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonably safe operation;

B. Street entering a through highway or street (O.R.C. Section 4511.65 provides information on through highways (see Appendix B2));

C. Unsignalized intersection in a signalized area; and/or

D. High speeds, restricted view, or crash records indicate that a need for control by the STOP sign.

Standard:

Because the potential for conflicting commands could create driver confusion, STOP signs shall not be installed at intersections where traffic control signals are installed and operating.

Portable or part-time STOP signs shall not be used except for emergency and temporary traffic control zone purposes.

Guidance:

STOP signs should not be used for speed control.

STOP signs should be installed in a manner that minimizes the numbers of vehicles having to stop. At intersections where a full stop is not necessary at all times, consideration should be given to using less restrictive measures such as YIELD signs (see Section 2B.08).
Once the decision has been made to install two-way stop control, the decision regarding the appropriate street to stop should be based on engineering judgment. In most cases, the street carrying the lowest volume of traffic should be stopped.

A STOP sign should not be installed on the major street unless justified by a traffic engineering study.

Support:

The following are considerations that might influence the decision regarding the appropriate street upon which to install a STOP sign where two streets with relatively equal volumes and/or characteristics intersect:

A. Stopping the direction that conflicts the most with established pedestrian crossing activity or school walking routes;

B. Stopping the direction that has obscured vision, dips, or bumps that already require drivers to use lower operating speeds;

C. Stopping the direction that has the longest distance of uninterrupted flow approaching the intersection; and

D. Stopping the direction that has the best sight distance to conflicting traffic.

The use of the STOP sign at highway-railroad grade crossings is described in Section 8B.07.

Section 2B.06  STOP Sign Placement

Standard:

The STOP sign shall be installed on the correct side of the traffic lane to which it applies. When the STOP sign is installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see Section 2C.26) shall be installed in advance of the STOP sign.

The STOP sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.

STOP signs and YIELD signs shall not be mounted on the same post.

Guidance:

Stop lines, when used to supplement a STOP sign, should be located at the point where the road user should stop (see Section 3B.16).
If only one STOP sign is installed on an approach, the STOP sign should not be placed on the far side of the intersection.

Where two roads intersect at an acute angle, the STOP sign should be positioned at an angle or else shielded so that the legend is out of view of traffic to which it does not apply.

Where there is a marked crosswalk at the intersection, the STOP sign should be installed in advance of the crosswalk line nearest to the approaching traffic.

Option:

At wide-throat intersections or where two or more approach lanes of traffic exist on the signed approach, observance of the stop control may be improved by the installation of an additional STOP sign on the left side of the road and/or the use of a stop line. At channelized intersections, the additional STOP sign may be effectively placed on a channelizing island.

Support:

Figure 2A-2 shows some typical placements of STOP signs.

Section 2B.07 Multiway Stop Applications

Support:

Multiway stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

The restrictions on the use of STOP signs described in Section 2B.05 also apply to multiway stop applications.

Guidance:

The decision to install multiway stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multiway STOP sign installation:

A. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
B. A crash problem, as indicated by 5 or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.

C. Minimum volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and

2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but

3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h (40 mph), the minimum vehicular volume warrants are 70 percent of the above values.

D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Option:

Other criteria that may be considered in an engineering study include:

A. The need to control left-turn conflicts;

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;

C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to safely negotiate the intersection unless conflicting cross traffic is also required to stop; and

D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.
Section 2B.08  YIELD Sign (R1-2)

Standard:

The YIELD (R1-2) sign shall be a downward-pointing equilateral triangle with a wide red border and the legend YIELD in red on a white background.

Support:

The YIELD sign assigns right-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a YIELD sign need to slow down or stop when necessary to avoid interfering with conflicting traffic.

Section 2B.09  YIELD Sign Applications

Option:

YIELD signs may be installed:

A. When the ability to see all potentially conflicting traffic is sufficient to allow a road user traveling at the posted speed, the 85th-percentile speed, or the statutory speed to pass through the intersection or to stop in a safe manner.

B. If controlling a merge-type movement on the entering roadway where acceleration geometry and/or sight distance is not adequate for merging traffic operation.

C. At the second crossroad of a divided highway, where the median width is 9 m (30 ft) or greater. A STOP sign may be installed at the entrance to the first roadway of a divided highway, and a YIELD sign may be installed at the entrance to the second roadway.

D. At an intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.

Section 2B.10  YIELD Sign Placement

Standard:

The YIELD sign shall be installed on the correct side of the traffic lane to which it applies. When the YIELD sign is installed at this required location and the sign visibility is restricted, a Yield Ahead sign (see Section 2C.26) shall be installed in advance of the YIELD sign.

The YIELD sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.
YIELD signs and STOP signs shall not be mounted on the same post.

Guidance:

YIELD lines, when used to supplement a YIELD sign, should be located at a point where the road user should yield (see Section 3B.16).

Where two roads intersect at an acute angle, the YIELD sign should be positioned at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.

Where there is a marked crosswalk at the intersection, the YIELD sign should be installed in advance of the crosswalk line nearest to the approaching traffic.

Section 2B.11 Speed Limit Sign (R2-1)

Support:

Section 4511.21 of the Ohio Revised Code establishes statutory speed limits, and prescribes how those speed limits may be altered where an engineering study determines that they do not fit the road and traffic conditions. The process by which an altered speed limit is established is typically referred to as speed zoning.

Standard:

Speed limits shall be as established by or in accordance with Section 4511.21 of the Ohio Revised Code (O.R.C.) (see Appendix B2).

The Speed Limit (R2-1) sign shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency. The speed limits shown shall be in multiples of 5 mph.

Guidance:

No more than three speed limits should be displayed on any one Speed Limit sign or assembly.

The procedures and forms described in Part 12 of the ODOT “Traffic Engineering Manual” (TEM) (see Section 1A.11) should be used to submit speed zoning requests that require the Director of Transportation’s approval.

Option:

Factors that may be considered when establishing speed limits include:
A. Road characteristics, shoulder condition, grade, alignment, and sight distance;

B. The pace speed;

C. Roadside development and environment;

D. Parking practices and pedestrian activity; and

E. Reported crash experience for at least a 12-month period.

Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

Support:

Information about the speed zoning process and copies of the related forms are also available by contacting the ODOT District Office.

Advisory Speed signs are discussed in Sections 2C.33 and 2C.42 and Temporary Traffic Control Zone Speed signs are discussed in Part 6.

Section 2B.12  Truck Speed Limit Sign (R2-2, R2-H2a, R2-H2b)

Standard:

Where a special speed limit applies to trucks or other vehicles, the legend TRUCKS XX or such similar legend shall be shown on the same panel as the Speed Limit sign or on a separate sign (R2-2) below the standard legend.

When used, the VEHICLES OVER 4 TONS EMPTY NON COM BUSES 55 MPH (R2-H2a) sign (see the “Sign Design Manual”) shall be erected adjacent to the Speed Limit sign.

Option:

A combination (R2-H2b) sign may be used (see the “Sign Design Manual”).

Section 2B.13  Night Speed Limit Sign (R2-3)

Standard:

Where different speed limits are prescribed for day and night, both limits shall be posted.
Guidance:

A Night Speed Limit (R2-3) sign should be reversed using a white retroreflectorsized border and legend on a black background.

Option:

A Night Speed Limit sign may be combined with or installed below the standard Speed Limit (R2-1) sign.

Section 2B.14  Minimum Speed Limit Sign (R2-4)

Standard:

A Minimum Speed Limit (R2-4) sign shall be displayed only in combination with a Speed Limit sign.

Minimum speed limits shall be established in accordance with Section 4511.22 of the O.R.C. (see Appendix B2).

Option:

Where engineering judgment determines that slow speeds on a highway might impede the normal and reasonable movement of traffic, the Minimum Speed Limit sign may be installed below a Speed Limit (R2-1) sign to indicate the minimum legal speed. If desired, these two signs may be combined on the R2-4a sign.

Section 2B.15  Location of Speed Limit Signs

Standard:

Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.

At the end of the section to which a speed limit applies, a Speed Limit sign showing the next speed limit shall be installed. Additional Speed Limit signs shall be installed beyond major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.

Speed Limit signs indicating the statutory speed limits shall be installed at entrances to the State and at jurisdictional boundaries of metropolitan areas.
Section 2B.16 Reduced Speed Ahead Signs (R2-5 Series)

Guidance:

The Reduced Speed Ahead (R2-5 series) signs should be used to inform road users of a reduced speed zone when engineering judgment indicates the need for advance notice to comply with the speed limit posted ahead.

This sign should not be used in urban areas where speeds are relatively low.

Standard:

The Reduced Speed Ahead (R2-5 series) signs shall be followed by a Speed Limit (R2-1) sign installed at the beginning of the zone where the speed limit applies.

Option:

The following methods may be used to provide road users with advance notice of a change in the speed limit:

A. Any of the R2-5 series of signs may be displayed.

B. An assembly consisting of the Speed Limit (R2-1) sign with a supplemental legend plaque BEGIN mounted above the R2-1 sign and a supplemental distance plaque, such as 1/4 mi, mounted below the R2-1 sign may be displayed.

Guidance:

When used with Speed Limit assemblies, the supplemental plaques should have a white background with a black legend and border.

Section 2B.17 Turn Prohibition Signs (R3-1 through R3-4)

Standard:

Except as noted in the Option, where turns are prohibited, Turn Prohibition signs shall be installed.

Guidance:

Turn Prohibition signs should be placed where they will be most easily seen by road users who might be intending to turn.

If No Right Turn (R3-1) signs are used, at least one should be placed either over the roadway or at a right corner of the intersection.
If No Left Turn (R3-2) signs are used, at least one should be placed either over the roadway, at a left corner of the intersection, on a median, or in conjunction with the STOP sign or YIELD sign located on the near right corner.

Except as noted in the Option, if NO TURNS (R3-3) signs are used, two signs should be used, one at a location specified for a No Right Turn sign and one at a location specified for a No Left Turn sign.

If No U-Turn (R3-4) signs are used, at least one should be used at a location specified for No Left Turn signs.

Option:

If signals are present:

A. The No Right Turn sign may be installed adjacent to a signal face viewed by road users in the right lane.

B. The No Left Turn (or No U-Turn) sign may be installed adjacent to a signal face viewed by road users in the left lane.

C. A NO TURNS sign may be placed adjacent to a signal face viewed by all road users on that approach, or two signs may be used.

If signals are present, an additional Turn Prohibition sign may be post mounted to supplement the sign mounted overhead.

Where ONE WAY signs are used, Turn Prohibition signs may be omitted (see Section 2B.32).

When the movement restriction applies during certain time periods only, the following Turn Prohibition signing alternatives may be used and are listed in order of preference:

A. Changeable message signs, especially at signalized intersections.

B. Permanently mounted signs incorporating a supplementary legend showing the hours and days during which the prohibition is applicable.

C. Portable signs, installed by proper authority, located off the roadway at each corner of the intersection. The portable signs are only to be used during the time that the turn prohibition is applicable.

Turn Prohibition signs may be omitted at a ramp entrance to an expressway or a channelized intersection where the design is such as to indicate clearly the one-way traffic movement on the ramp or turning lane.
Section 2B.18 Intersection Lane Control Signs (R3-5 through R3-8)

Standard:

Intersection Lane Control signs, if used, shall require road users in certain lanes to turn, shall permit turns from a lane where such turns would otherwise not be permitted, shall require a road user to stay in the same lane and proceed straight through an intersection, or shall indicate permitted movements from a lane.

Intersection Lane Control signs shall have three applications:

A. Mandatory Movement Lane Control (R3-5, R3-5a, and R3-7) signs;
B. Optional Movement Lane Control (R3-6) sign; and
C. Advance Intersection Lane Control (R3-8 series) signs.

Support:

Section 4511.36 of the Ohio Revised Code (O.R.C.) (see Appendix B2) addresses turns at intersections.

Guidance:

When used, Intersection Lane Control signs should be mounted overhead, and each sign should be placed over a projection of the lane to which it applies.

Standard:

Use of an overhead sign for one approach lane shall not require installation of overhead signs for the other lanes of that approach.

Option:

Where the number of through lanes on an approach is two or less, the Intersection Lane Control signs (R3-5, R3-6, or R3-8) may be overhead or ground mounted.

Intersection Lane Control signs may be omitted where:

A. Turning bays have been provided by physical construction or pavement markings, and
B. Only the road users using such turning bays are permitted to make a similar turn.
Section 2B.19  Mandatory Movement Lane Control Signs (R3-5, R3-5a, R3-7)

Standard:

If used, Mandatory Movement Lane Control signs (R3-5, R3-5a, and R3-7) shall indicate only those vehicle movements that are required from each lane and shall be located where the regulation applies. When the mandatory movement applies to lanes exclusively designated for HOV traffic, the R3-5c supplemental plaque shall be used. When the mandatory movement applies to lanes that are not HOV facilities, but are lanes exclusively designated for buses and/or taxis, the word message R3-5d supplemental plaque BUS (and/or TAXI) LANE shall be used. The R3-7 word message sign shall be for ground mounting only.

If the R3-5 sign is ground mounted on a multilane approach, a supplemental plaque, such as LEFT LANE (R3-5b), HOV 2+ (R3-5c), TAXI LANE (R3-5d), CENTER LANE, RIGHT LANE, or LEFT 2 LANES, indicating the lane with the appropriate movement shall be added below.

The Mandatory Movement Lane Control (R3-7) sign shall include the legend RIGHT (LEFT) LANE MUST TURN RIGHT (LEFT). The Mandatory Movement Lane Control symbol signs (R3-5 and R3-5a) shall include the legend ONLY.

Guidance:

If used, Mandatory Movement Lane Control signs should be accompanied by lane control pavement markings, especially where traffic volumes are high, where there is a high percentage of commercial vehicles, or where other distractions exist.

Option:

The Straight Through Only (R3-5a) sign may be used to require a road user in a particular lane to proceed straight through an intersection.

When the Mandatory Movement Lane Control sign for a left-turn lane is installed back-to-back with a Keep Right (R4-7) sign, the dimensions of the Mandatory Movement Lane Control (R3-5) sign may be the same as the Keep Right sign.

Except for the R3-7 sign, Mandatory Movement Lane Control signs may be overhead or ground mounted.

The diamond symbol may be used instead of the word message HOV on the R3-5c supplemental plaque.
R3-5  
ONLY

R3-5a  
ONLY

R3-6

R3-7  
LEFT LANE MUST TURN LEFT

R3-5b  
Supplemental Plaque

*R3-5c  
Supplemental Plaque

R3-5d  
Supplemental Plaque

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

R3-8

R3-8a

R3-8b
Section 2B.20  Optional Movement Lane Control Sign (R3-6)

Standard:

If used, the Optional Movement Lane Control (R3-6) sign shall be used for two or more movements from a specific lane or to emphasize permitted movements. If used, the Optional Movement Lane Control sign shall be located at the intersection.

If used, the Optional Movement Lane Control sign shall indicate all permissible movements from specific lanes.

Optional Movement Lane Control signs shall be used for two or more movements from a specific lane where a movement, not normally allowed, is permitted.

The Optional Movement Lane Control sign shall not be used alone to effect a turn prohibition.

Option:

The word message OK may be used within the border in combination with the arrow symbols of the R3-6 sign.

Section 2B.21  Advance Intersection Lane Control Signs (R3-8 Series)

Option:

Advance Intersection Lane Control (R3-8, R3-8a, and R3-8b) signs may be used to indicate the configuration of all lanes ahead.

The word messages ONLY, OK, THRU, ALL, or HOV 2+ may be used within the border in combination with the arrow symbols of the R3-8 sign series. The HOV 2+ (R3-5c) supplemental plaque may be installed at the top outside border of the R3-8 sign over the applicable lane. The diamond symbol may be used instead of the word message HOV. The minimum allowable vehicle occupancy requirement may vary based on the level established for a particular facility.

Guidance:

If used, an Advance Intersection Lane Control sign should be placed at an adequate distance in advance of the intersection so that road users can select the appropriate lane. If used, the Advance Intersection Lane Control sign should be installed either in advance of the tapers or at the beginning of the turn lane.
Section 2B.22  Two-Way Left Turn Only Signs (R3-9a, R3-9b)

Guidance:

Two-Way Left Turn Only (R3-9a or R3-9b) signs should be used in conjunction with the required pavement markings where a nonreversible lane is reserved for the exclusive use of left-turning vehicles in either direction and is not used for passing, overtaking, or through travel.

Option:

The ground-mounted R3-9b sign may be used as an alternate to or a supplement to the overhead-mounted R3-9a sign. The legend BEGIN or END may be used within the border of the main sign itself, or on a plaque mounted immediately above it.

Support:

Signing is especially helpful to drivers in areas where the two-way left turn only maneuver is new, in areas subject to environmental conditions that frequently obscure the pavement markings, and on peripheral streets with two-way left turn only lanes leading to an extensive system of routes with two-way left turn only lanes.

Section 2B.23  Reversible Lane Control Signs (R3-9c through R3-9i)

Option:

A reversible lane may be used for through traffic (with left turns either permitted or prohibited) in alternating directions during different periods of the day, and the lane may be used for exclusive left turns in one or both directions during other periods of the day as well. Reversible Lane Control (R3-9c through R3-9i) signs may either be static type or changeable message type. These signs may be either ground or overhead mounted.

Standard:

Ground-mounted Reversible Lane Control signs shall be used only as a supplement to overhead signs or signals. Ground-mounted signs shall be identical in design to the overhead signs and an additional legend such as CENTER LANE shall be added to the sign (R3-9f) to indicate which lane is controlled. For both word messages and symbols, this legend shall be at the top of the sign.

Where it is determined by an engineering study that lane-use control signals or barriers are not necessary, the lane shall be controlled by overhead Reversible Lane Control signs (see Figure 2B-1).
Option:

Reversing traffic flow may be controlled with pavement markings and Reversible Lane Control signs (without the use of lane control signals), when all of the following conditions are met:

A. Only one lane is being reversed.

B. An engineering study indicates that sign operation alone would result in a level of safety and efficiency that is acceptable.

C. There are no unusual or complex operations in the reversible lane pattern.

Standard:

Reversible Lane Control signs shall contain the legend or symbols designating the allowable uses of the lane and the time periods such uses are allowed. Where symbols and legend are used, their meanings shall be as shown in Table 2B-2.

Reversible Lane Control signs shall consist of a white background with a black legend and border, except for the R3-9c and R3-9d signs, where the color red is used.

Symbol signs, such as the R3-9c or R3-9d signs, shall consist of the appropriate symbol in the upper portion of the sign with the appropriate times of the day and days of the week below it. Where word message signs, such as R3-9e, are used, the times of the day and the days of the week, when appropriate, shall be on the right portion of the sign and the appropriate legend to the left. All times of the day and days of the week shall be accounted for on the sign to eliminate confusion to the road user.

In situations where more than one message is conveyed to the road user, such as on the R3-9d or R3-9e signs, the sign legend shall be arranged as follows:

A. The prohibition or restriction message is the primary legend and shall be on the top for word message signs and to the far left for symbol signs;

B. The permissive use message shall be shown as the second legend; and

C. The OTHER TIMES message shall be shown at the bottom for word message signs and to the far right for symbol signs.
Part 2. Signs

R3-9a

R3-9b

R3-9c

R3-9d

R3-9e

R3-9f

R3-9g

R3-9h

R3-9i

OMUTCD 2003 Edition (English units are preferred.)
Figure 2B-1. Location of Reversible Two-Way Left-Turn Signs
Option:

The symbol signs may also include a downward pointing arrow with the legend THIS LANE. The term OTHER TIMES may be used for either the symbol or word message sign.

Standard:

A Reversible Lane Control sign shall be mounted over the center of the lane that is being reversed and shall be perpendicular to the roadway alignment.

If the vertical or horizontal alignment is curved to the degree that a driver would be unable to see at least one sign, and preferably two signs, then additional overhead signs shall be installed. The placement of the signs shall be such that the driver will have a definite indication of the lanes specifically reserved for use at any given time. Special consideration shall be given to major generators introducing traffic between the normal sign placement.

Transitions at the entry to and exit from a section of roadway with reversible lanes shall be carefully reviewed, and advance signs shall be installed to notify or warn drivers of the boundaries of the reversible lane controls. The R3-9g or R3-9h signs shall be used for this purpose.

### Table 2B-2. Meanings of Symbols and Legends on Reversible Lane Control Signs

<table>
<thead>
<tr>
<th>Symbol / Word Message</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red X on white background or symbolic DO NO ENTER sign.</td>
<td>Lane Closed</td>
</tr>
<tr>
<td>Upward pointing black arrow on white background. If left turns are permitted, the arrow shall be modified to show left / through arrow.</td>
<td>Lane open for through travel and any turns not otherwise prohibited.</td>
</tr>
<tr>
<td>Black two-way left turn arrows on white background and legend ONLY.</td>
<td>Lane may be used only for left turns in either direction (i.e., as a two-way left turn lane).</td>
</tr>
<tr>
<td>Black single left turn arrow on white background and legend ONLY.</td>
<td>Lane may be used only for left turns in one direction (without opposing left turns in the same lane).</td>
</tr>
</tbody>
</table>
Option:

More than one sign may be used at the termination of the reversible lane to emphasize the importance of the message (R3-9i).

Standard:

Flashing beacons, if used to accentuate the overhead Reversible Lane Control signs, shall comply with the applicable requirements for flashing beacons in Chapter 4K.

When used in conjunction with Reversible Lane Control signs, the Turn Prohibition signs (R3-1 to R3-4) shall be mounted overhead and separate from the Reversible Lane Control signs. The Turn Prohibition signs shall be designed and installed in accordance with Section 2B.17.

Guidance:

For additional emphasis, a supplemental plaque stating the distance of the prohibition, such as NEXT 1 MILE, should be added to the Turn Prohibition signs that are used in conjunction with Reversible Lane Control signs.

If used, overhead signs should be located at intervals not greater than 0.4 km (0.25 mi). The bottom of the overhead Reversible Lane Control signs should not be more than 5.8 m (19 ft) above the pavement grade.

Where more than one sign is used at the termination of a reversible lane, they should be at least 75 m (250 ft) apart. Longer distances between signs are appropriate for streets with speeds over 60 km/h (35 mph), but the separation should not exceed 300 m (1,000 ft).

Left-turning vehicles have a significant impact on the safety and efficiency of a reversible lane operation. If an exclusive left-turn lane or two-way left-turn lane cannot be incorporated into the lane-use pattern for a particular peak or off-peak period, consideration should be given to prohibiting left turns and U-turns during that time period.

Section 2B.24 DO NOT PASS Sign (R4-1)

Option:

The DO NOT PASS (R4-1) sign may be used in addition to pavement markings (see Section 3B.02) to emphasize the restriction on passing. The DO NOT PASS sign may be used at the beginning of, and at intervals within, a zone through which sight distance is restricted or where other conditions make overtaking and passing inappropriate.
If signing is needed on the left side of the roadway for additional emphasis, NO PASSING ZONE (W14-3) signs may be used (see Section 2C.32).

Support:

Standards for determining the location and extent of no-passing zone pavement markings are set forth in Section 3B.02.

Section 2B.25  PASS WITH CARE Sign (R4-2)

Guidance:

The PASS WITH CARE (R4-2) sign should be installed at the end of a no-passing zone if a DO NOT PASS sign has been installed at the beginning of the zone.

Section 2B.26  SLOWER TRAFFIC KEEP RIGHT Sign (R4-3)

Option:

The SLOWER TRAFFIC KEEP RIGHT (R4-3) sign may be used on multilane roadways to reduce unnecessary lane changing.

Guidance:

If used, the SLOWER TRAFFIC KEEP RIGHT (R4-3) sign should be installed just beyond the beginning of a multilane pavement, and at selected locations where there is a tendency on the part of some road users to drive in the left lane (or lanes) below the normal speed of traffic. This sign should not be used on the approach to an interchange or through an interchange area.

Section 2B.27  Slow Moving Traffic Lane Signs (R4-5, R4-6)

Support:

The Slow Moving Traffic Lane signs are used to direct vehicles into an extra lane that has been provided for slow-moving vehicles.

If an extra lane has been provided for slow-moving traffic, a SLOWER TRAFFIC KEEP RIGHT (R4-3) sign, TRUCKS USE RIGHT LANE (R4-5) sign, or other appropriate sign should be installed at the beginning of the lane. A TRUCK LANE (R4-6) sign, with the appropriate distance shown, should be installed in advance of the lane.
Option:

The SLOWER TRAFFIC KEEP RIGHT sign may be used as a supplement or as an alternative to the TRUCKS USE RIGHT LANE (R4-5). Both signs may be used on multilane roadways to improve capacity and reduce lane changing.

Guidance:

If an extra lane has been provided for slow-moving traffic, a Lane Ends sign (see Section 2C.30) should be installed in advance of the point where the extra lane ends. Appropriate pavement markings should be installed at both the beginning and the end of the extra lane (see Section 3B.09 and Figure 3B-12).

Section 2B.28  Keep Right and Keep Left Signs (R4-7, R4-8, R4-H11, R4-12)

Option:

The Keep Right (R4-7) sign may be used at locations where it is necessary for traffic to pass only to the right of a roadway feature or obstruction.

Guidance:

If used, the Keep Right sign should be installed as close as practical to approach ends of raised medians, parkways, islands, underpass piers, and at other locations where it is not readily apparent that traffic is required to keep to the right. The sign should be mounted on the face of or just in front of a pier or other obstruction separating opposite directions of traffic in the center of the highway.

Where through traffic is required to keep right (left), the R4-H11 (R4-H12) sign should be used (see the “Sign Design Manual”).

Option:

The Keep Right sign may be omitted at intermediate ends of divisional islands and medians.

The word message KEEP RIGHT (LEFT) with an arrow (R4-7a or R4-7b) may be used instead of the R4-7 symbol sign.

Where appropriate, a Keep Left (R4-8) symbol sign may be used.

Where the obstruction obscures the Keep Right sign, the minimum placement height may be increased for better sign visibility.
Part 2. Signs

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Figure 2B-2. Typical Wrong-Way Signing for Divided Highways
Section 2B.29   DO NOT ENTER Sign (R5-1)

Standard:

The DO NOT ENTER (R5-1) sign shall be used where traffic is prohibited from entering a restricted roadway.

Guidance:

The DO NOT ENTER sign, if used, should be placed at the point where a road user could wrongly enter a one-way roadway or ramp. The sign should be mounted on the right side of the roadway, facing traffic that might enter the roadway or ramp in the wrong direction.

If the DO NOT ENTER sign would be visible to traffic to which it does not apply, the sign should be turned away from, or shielded from, the view of that traffic.

Option:

The DO NOT ENTER sign may be installed where it is necessary to emphasize the one-way traffic movement on a ramp or turning lane.

A second DO NOT ENTER sign on the left side of the roadway may be used, particularly where traffic approaches from an intersecting roadway (see Figures 2A-3 and 2B-2).

For DO NOT ENTER and STOP signs mounted back-to-back, the size of the STOP sign may be increased to enhance the octagonal outline of the STOP sign.

Section 2B.30   WRONG WAY Sign (R5-1a)

Option:

The WRONG WAY (R5-1a) sign may be used as a supplement to the DO NOT ENTER sign where an exit ramp intersects a crossroad or a crossroad intersects a one-way roadway in a manner that does not physically discourage or prevent wrong-way entry (see Figures 2A-3 and 2B-2).

Guidance:

If used, the WRONG WAY sign should be placed at a location along the exit ramp or the one-way roadway farther from the crossroad than the DO NOT ENTER sign (see Section 2E.50).
**Section 2B.31  Selective Exclusion Signs**

Support:

Selective Exclusion signs give notice to road users that State or local statutes or ordinances exclude designated types of traffic from using particular roadways or facilities.

Section 4511.07 of the Ohio Revised Code (O.R.C.) authorizes local municipalities to regulate the use of streets by vehicles; Section 4511.051 of the O.R.C. addresses prohibitions on the use of freeways; and Section 4519.40 addresses prohibitions pertaining to snowmobiles and all purpose vehicles. These O.R.C. sections have been reprinted in Appendix B2.

**Standard:**

*If used, Selective Exclusion signs shall clearly indicate the type of traffic that is excluded.*

Support:

Typical exclusion messages include:

A. No Trucks (R5-2);

B. NO MOTOR VEHICLES (R5-3);

C. COMMERCIAL VEHICLES EXCLUDED (R5-4);

D. TRUCKS (VEHICLES) WITH LUGS PROHIBITED (R5-5);

E. No Bicycles (R5-6);

F. NON-MOTORIZED TRAFFIC PROHIBITED (R5-7);

G. MOTOR-DRIVEN CYCLES PROHIBITED (R5-8); and

H. Hazardous Cargo Prohibited (R14-3).

Option:

Appropriate combinations or groupings of these legends into a single sign, such as PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES PROHIBITED (R5-10a), or PEDESTRIANS AND BICYCLES PROHIBITED (R5-10b) may be used.

**Guidance:**

If an exclusion is governed by vehicle weight, a Weight Limit sign (see Section 2B.43) should be used instead of a Selective Exclusion sign.
The Selective Exclusion sign should be placed on the right side of the roadway at an appropriate distance from the intersection so as to be clearly visible to all road users turning into the roadway that has the exclusion. The PEDESTRIANS PROHIBITED (R5-10c or R9-3a) sign should be installed so as to be clearly visible to pedestrians at a location where an alternative route is available.

Option:

The word message NO TRUCKS may be used as an alternate to the No Trucks (R5-2) symbol sign.

The PEDESTRIAN PROHIBITED (R5-10c or R9-3a) sign may also be used at underpasses or elsewhere where pedestrian facilities are not provided.

Section 2B.32 ONE WAY Signs (R6-1, R6-2)

Standard:

Except as noted in the Option, the ONE WAY (R6-1 or R6-2) sign shall be used to indicate streets or roadways upon which vehicular traffic is allowed to travel in one direction only.

ONE WAY signs shall be placed parallel to the one-way street at all alleys and roadways that intersect one-way roadways.

Guidance:

Where divided highways are separated by median widths of 9 m (30 ft) or more, ONE WAY signs (see Section 2B.32) should be placed, visible to each crossroad approach, on the near right and far left corners of each intersection with the directional roadways as shown in Figures 2A-4 and 2A-5.

Option:

ONE WAY signs may be omitted on the one-way roadways of divided highways, where the design of interchanges indicates the direction of traffic on the separate roadways.

ONE WAY signs may be omitted at intersections with divided highways that have median widths of less than 9 m (30 ft).

Support:

Figures 2A-3, 2A-4, 2A-5, and 2A-6 show examples of the application of ONE WAY signs.
Standard:

At unsignalized intersections, ONE WAY signs shall be placed on the near right and the far left corners of the intersection facing traffic entering or crossing the one-way street.

At signalized intersections, ONE WAY signs shall be placed either near the appropriate signal faces, on the poles holding the traffic signals, on the mast arm or span wire holding the signals, or at the locations specified for unsignalized intersections.
Section 2B.33  Divided Highway Crossing Signs (R6-3, R6-3a)

Option:

The Divided Highway Crossing (R6-3 or R6-3a) sign may be used to advise road users that they are approaching an intersection with a divided highway.

Standard:

When the Divided Highway Crossing sign is used at a four-legged intersection, the R6-3 sign shall be used. When used at a T-intersection, the R6-3a sign shall be used.

Option:

The Divided Highway Crossing sign may be located on the near right corner of the intersection and may be mounted beneath a STOP or YIELD sign or on a separate support.

Section 2B.34  Parking, Standing, and Stopping Signs (R7 and R8 Series)

Support:

Signs governing the parking, stopping, and standing of vehicles cover a wide variety of regulations, and only general guidance can be provided here. Typical examples of parking, stopping, and standing signs are as follows:

A. NO PARKING ANY TIME (R7-1);
B. NO PARKING 8:30 AM TO 5:30 PM (R7-2);
C. NO PARKING EXCEPT SUNDAYS AND HOLIDAYS (R7-3);
D. NO STANDING ANY TIME (R7-4);
E. ONE HOUR PARKING 9 AM-7 PM (R7-5);
F. NO PARKING LOADING ZONE (R7-6);
G. NO PARKING BUS STOP (R7-7, R7-107, R7-107a);
H. RESERVED PARKING for persons with disabilities (R7-8);
I. NO PARKING ON PAVEMENT (R8-1);
J. NO PARKING EXCEPT ON SHOULDER (R8-2);
K. NO PARKING (R8-3);
L. NO PARKING (R8-3a); and

M. NO STOPPING ON PAVEMENT (R8-5).

Section 4511.68 of the Ohio Revised Code (O.R.C.) (see Appendix B2) addresses parking prohibitions

**Standard:**

In accordance with O.R.C. Section 4511.69, the RESERVED PARKING for persons with disabilities (R7-8) sign shall be supplemented with the $250 FINE MINIMUM (R7-H8b) sign (see the “Sign Design Manual”). The R7-H8b shall be mounted directly below the R7-8.

**Section 2B.35  Design of Parking, Standing, and Stopping Signs**

**Support:**

Discussions of parking signs and parking regulations in this Section apply not only to parking, but also to standing and stopping.

**Standard:**

The legend on parking signs shall state applicable regulations. Parking signs shall conform to the standards of shape, color, and location.

Where parking is prohibited at all times or at specific times, the basic design for parking signs shall have a red legend and border on a white background (Parking Prohibition signs). Where only limited-time parking or parking in a particular manner are permitted, the signs shall have a green legend and border on a white background (Permissive Parking signs).

**Guidance:**

Parking signs should display the following information from top to bottom of the sign, in the order listed:

A. The restriction or prohibition;

B. The times of the day that it is applicable, if not at all hours; and

C. The days of the week that it is applicable, if not every day.
Part 2. Signs

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Part 2. Signs

R8-1
NO PARKING ON PAVEMENT

R8-2
NO PARKING EXCEPT ON SHOULDER

R8-3
NO PARKING

R8-3a

R8-4
EMERGENCY PARKING ONLY

R8-5
NO STOPPING ON PAVEMENT

R8-6
NO STOPPING EXCEPT ON SHOULDER

R8-7
EMERGENCY STOPPING ONLY

R8-3c
Supplemental Plaque

R8-3d
Supplemental Plaque

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If the parking restriction applies to a limited area or zone, the limits of the restriction should be shown by arrows or supplemental plaques.

If arrows are used and if the sign is at the end of a parking zone, there should be a single-headed arrow pointing in the direction that the regulation is in effect. If the sign is at an intermediate point in a zone, there should be a double-headed arrow pointing both ways.

When a single sign is used at the transition point between two parking zones, it should display a right and left arrow pointing in the direction that the respective restrictions apply.

Option:

To minimize the number of parking signs, blanket regulations that apply to a given district may, if legal, be posted at district boundary lines.

As an alternate to the use of arrows to show designated restriction zones, word messages such as BEGIN, END, HERE TO CORNER, HERE TO ALLEY, THIS SIDE OF SIGN, or BETWEEN SIGNS may be used.

Where parking is prohibited during certain hours and time-limited parking or parking in a particular manner is permitted during certain other time periods, the red Parking Prohibition and green Permissive Parking signs may be designed as follows:

A. Two 300 x 450 mm (12 x 18 in) parking signs may be used with the red Parking Prohibition sign installed above or to the left of the green Permissive Parking sign; or

B. The red Parking Prohibition sign and the green Permissive Parking sign may be combined on a single 600 x 450 mm (24 x 18 in) sign, or on a single 300 x 750 mm (12 x 30 in) sign.

At the transition point between two parking zones, a single sign or two signs mounted side by side may be used.

The words NO PARKING may be used as an alternative to the No Parking symbol. The supplemental educational plaque, NO PARKING, with a red legend and border on a white background, may be used above signs incorporating the No Parking symbol.

Alternate designs for the R7-107 sign may be developed such as the R7-107a sign. Alternate designs may include, on a single panel, a transit logo, an approved bus symbol, a parking prohibition, the words BUS STOP, and an arrow. The preferred bus symbol color is black, but other dark colors may be used. Additionally, the transit logo may be shown on the bus face in the appropriate colors instead of placing the logo separately. The reverse side of the sign may contain bus routing information.

To make the parking regulations more effective and to improve public relations by giving a definite warning, a sign reading TOW-AWAY ZONE (R7-201) may be appended to, or
incorporated in, any parking prohibition sign. The Tow-Away Zone (R7-201a) symbol sign may be used instead of the R7-201 word message sign. The R7-201a sign may have either a black or red legend and border on a white background.

In rural areas, the legend NO PARKING ON PAVEMENT (R8-1) is generally suitable and may be used. If a roadway has paved shoulders, the NO PARKING EXCEPT ON SHOULDER sign (R8-2) may be used as it is less likely to cause confusion. The R8-3a symbol sign or the word message NO PARKING (R8-3) sign may be used to prohibit any parking along a given highway. Word message supplemental plaques, such as ON PAVEMENT (R8-3c) or ON BRIDGE (R8-3d), may be mounted below the R8-3 or R8-3a sign.

Section 2B.36 Placement of Parking, Stopping, and Standing Signs

Guidance:

When signs with arrows are used to indicate the extent of the restricted zones, the signs should be set at an angle of not less than 30 degrees nor more than 45 degrees with the line of traffic flow in order to be visible to approaching traffic.

Spacing of signs should be based on legibility and sign orientation.

If the zone is unusually long, signs showing a double arrow should be used at intermediate points within the zone.

Standard:

If the signs are mounted at an angle of 90 degrees to the curb line, two signs shall be mounted back to back at the transition point between two parking zones, each with the appended message THIS SIDE OF SIGN.

Guidance:

At intermediate points within a zone, a single sign without any arrow or appended plaque should be used, facing in the direction of approaching traffic. Otherwise the standards of placement should be the same as for signs using directional arrows.

Section 2B.37 Emergency Restriction Signs (R8-4, R8-7, R8-8)

Option:

The EMERGENCY PARKING ONLY (R8-4) sign or the EMERGENCY STOPPING ONLY (R8-7) sign may be used to discourage or prohibit shoulder parking, particularly where scenic or other attractions create a tendency for road users to stop temporarily, even though turnout or rest areas have not been provided.
The DO NOT STOP ON TRACKS (R8-8) sign may be used to discourage or prohibit parking or stopping on railroad tracks (see Section 8B.06).

**Standard:**

Emergency Restriction signs shall be rectangular and shall have a red or black legend and border on a white background.

**Support:**

Section 4511.712 of the Ohio Revised Code (O.R.C.) (see Appendix B2) addresses the obstruction of railroad grade crossings.

**Section 2B.38 WALK ON LEFT FACING TRAFFIC and No Hitchhiking Signs (R9-1, R9-4, R9-4a)**

**Option:**

The WALK ON LEFT FACING TRAFFIC (R9-1) sign may be used on highways where no sidewalks are provided.

**Standard:**

If used, the WALK ON LEFT FACING TRAFFIC sign shall be installed on the right side of the road where pedestrians walk on the pavement or shoulder in the absence of pedestrian pathways or sidewalks.

**Option:**

The No Hitchhiking (R9-4a) sign may be used to prohibit standing in or adjacent to the roadway for the purpose of soliciting a ride. The R9-4 word message sign may be used as an alternate to the R9-4a symbol sign.

**Section 2B.39 Pedestrian Crossing Signs (R9-2, R9-3)**

**Option:**

Pedestrian Crossing signs may be used to limit pedestrian crossing to specific locations.

**Standard:**

If used, Pedestrian Crossing signs shall be installed to face pedestrian approaches.
Option:

Where crosswalks are clearly defined, the CROSS ONLY AT CROSSWALKS (R9-2) sign may be used to discourage jaywalking or unauthorized crossing.

The No Pedestrian Crossing (R9-3a) sign may be used to prohibit pedestrians from crossing a roadway at an undesirable location or in front of a school or other public building where a crossing is not designated.

The PEDESTRIANS PROHIBITED (R9-3) word message sign may be used as an alternate to the R9-3a symbol sign. The supplemental panel USE CROSSWALK (R9-3b), along with an arrow, may be installed below either sign to designate the direction of the crossing.

Support:

One of the most frequent uses of the Pedestrian Crossing signs is at signalized intersections that have three crossings that can be used and one leg that cannot be crossed.

Guidance:

The R9-3b sign should not be installed in combination with educational plaques.

Section 2B.40  Traffic Signal Signs (R10-1 through R10-13)

Option:

To supplement traffic signal control, Traffic Signal signs R10-1 through R10-13 may be used to regulate road users.

Guidance:

When used, Traffic Signal signs should be located adjacent to the signal face to which they apply.

Standard:

Traffic signal signs applicable to pedestrian actuation shall be mounted immediately above or incorporated in pedestrian pushbutton units (see Section 4E.07). Traffic Signal signs applicable to pedestrians include:

A. CROSS ON GREEN LIGHT ONLY (R10-1);
B. CROSS ON WALK SIGNAL ONLY (R10-2);
C. PUSH BUTTON FOR GREEN LIGHT (R10-3); and
D. PUSH BUTTON FOR WALK SIGNAL (R10-4).

Option:

The following signs may be used as an alternate for the R10-3 and R10-4 signs:

A. TO CROSS STREET (arrow), PUSH BUTTON WAIT FOR GREEN LIGHT (R10-3a); and

B. TO CROSS STREET (arrow), PUSH BUTTON WAIT FOR WALK SIGNAL (R10-4a).

The symbol sign R10-2a may be used as an alternate to sign R10-2. Where symbol-type pedestrian signal indications are used, an educational plaque (R10-3b) may be used to improve pedestrian understanding of pedestrian indications at signalized intersections. Where word-type pedestrian signal indications are being retained for the remainder of their useful service life, the legends WALK/DONT WALK may be substituted for the symbols on the educational plaque R10-3b, thus creating sign R10-3c. The diagrammatic sign R10-4b may also be used as an alternate to sign R10-4. At intersections where pedestrians cross in two stages using a median refuge island, the word message "CROSS TO MEDIAN" may be placed on the near corner of the refuge island along with the educational plaque.

Traffic Signal signs may be installed at certain locations to clarify signal control. Among the legends for this purpose are LEFT ON GREEN ARROW ONLY (R10-5), STOP HERE ON RED (R10-6 or R10-6a) for observance of stop lines, DO NOT BLOCK INTERSECTION (R10-7) for avoidance of traffic obstructions, USE LANE(S) WITH GREEN ARROW (R10-8) for obedience to Lane Control signals, and LEFT TURN YIELD ON GREEN (symbolic green ball) (R10-12).

Standard:

The NO TURN ON RED sign (R10-11a, R10-11b) shall be used to prohibit a right turn on red (or a left turn on red from a one-way street to a one-way street).

Guidance:

If used, the NO TURN ON RED sign should be installed near the appropriate signal head.

A NO TURN ON RED sign should be considered when an engineering study finds that one or more of the following conditions exists:

A. Inadequate sight distance to vehicles approaching from the left (or right, if applicable);

B. Geometrics or operational characteristics of the intersection that might result in unexpected conflicts;
Part 2. Signs

R10-6
STOP HERE ON RED

R10-7
DO NOT BLOCK INTERSECTION

R10-8
USE LANE WITH GREEN ARROW

R10-10
LEFT TURN SIGNAL

R10-11a
NO TURN ON RED

R10-11b
NO TURN ON RED

R10-11c
NO TURN ON RED

R10-11d
NO TURN ON RED

R10-12
LEFT TURN YIELD ON GREEN

R10-13
EMERGENCY SIGNAL

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C. An exclusive pedestrian phase;

D. An unacceptable number of pedestrian conflicts with right-turn-on-red maneuvers, especially involving children, older pedestrians, or persons with disabilities; and

E. More than three right-turn-on-red accidents reported in a 12-month period for the particular approach.

When right turn on red is permitted and pedestrian crosswalks are marked, the word message TURNING TRAFFIC MUST YIELD TO PEDESTRIANS should be used.

Option:

A symbolic NO TURN ON RED sign (R10-11c or R10-11d) may be used as an alternate to the R10-11a and R10-11b signs.

In situations where traffic signals are coordinated for progressive timing, the Traffic Signal Speed sign (I1-1) may be used (see Section 2D.46).

Standard:

The EMERGENCY SIGNAL (R10-13) sign shall be used in conjunction with emergency-vehicle traffic control signals (see Section 4F.02).

Section 2B.41 KEEP OFF MEDIAN Sign (R11-1)

Option:

The KEEP OFF MEDIAN (R11-1) sign may be used to prohibit driving into or parking on the median.

Guidance:

The KEEP OFF MEDIAN sign should be installed on the left of the roadway within the median at random intervals as needed wherever there is a tendency for encroachment.

Section 2B.42 ROAD CLOSED Sign (R11-2) and LOCAL TRAFFIC ONLY Signs (R11-3 Series, R11-4)

Guidance:

The ROAD CLOSED (R11-2) sign should be installed where roads have been closed to all traffic (except authorized vehicles).
Part 2. Signs

OMUTCD 2003 Edition (English units are preferred.)
ROAD CLOSED—LOCAL TRAFFIC ONLY (R11-3) and ROAD CLOSED TO THRU TRAFFIC (R11-4) signs should be used where through traffic is not permitted, or for a closure some distance beyond the sign, but where the highway is open for local traffic up to the point of closure.

**Standard:**

The Road Closed (R11-2, R11-3, and R11-4) signs shall be designed as horizontal rectangles. These signs shall be preceded by the applicable Advance Road Closed warning sign with the secondary legend AHEAD and, if applicable, an Advance Detour warning sign (see Section 6F.19).

**Option:**

The word message BRIDGE OUT may be substituted for the ROAD CLOSED message where applicable.

Section 2B.43 **Weight Limit Signs (R12-1 through R12-5)**

**Option:**

The Weight Limit (R12-1) sign carrying the legend WEIGHT LIMIT XX TONS may be used to indicate vehicle weight restrictions including load.

Where the restriction applies to axle weight rather than gross load, the legend may be AXLE WEIGHT LIMIT XX TONS or AXLE WEIGHT LIMIT XXXX LBS (R12-2).

To restrict trucks of certain sizes by reference to empty weight in residential districts, the legend may be NO TRUCKS OVER XX TONS EMPTY WT or NO TRUCKS OVER XXXX LBS EMPTY WT (R12-3).

In areas where multiple regulations of the type described above are applicable, a sign combining the necessary messages on a single panel may be used, such as WEIGHT LIMIT XX TONS PER AXLE, XX TONS GROSS (R12-4).

Posting of specific load limits may be accomplished by use of the Weight Limit symbol sign (R12-5). A sign containing the legend WEIGHT LIMIT on the top two lines, and showing three different truck symbols and their respective weight limits for which restrictions apply may be used, with the weight limits shown to the right of each symbol as XX T. A bottom line of legend stating GROSS WT may be included if needed for enforcement purposes.

**Standard:**

If used, the Weight Limit sign shall be located in advance of the applicable section of highway or structure.
Guidance:

If used, the Weight Limit sign with an advisory distance ahead legend should be placed at approach road intersections or other points where prohibited vehicles can detour or turn around.

Support:

Section 5591.42 of the Ohio Revised Code (O.R.C.) (see Appendix B2) authorizes reductions in bridge weight limits.

Option:

The R12-H5 sign (with four truck symbols) may be used in lieu of the R12-5 sign.

Section 2B.44  Weigh Station Signs (R13 Series)

Guidance:

An ALL TRUCKS/COMMERCIAL VEHICLES NEXT RIGHT (R13-1) sign should be used to direct appropriate traffic into a weigh station.

The R13-1 sign should be supplemented by the D8 series of guide signs (see Section 2D.43).

Option:

The reverse color combination, a white legend and border on a black background, may be used for the R13-1 sign.

The ALL TRUCKS ENTER WEIGH STATION (R13-H1) sign (see the “Sign Design Manual”) may be used in lieu of the R13-1 sign.

Section 2B.45  Truck Route Sign (R14-1)

Guidance:

The TRUCK ROUTE (R14-1) sign should be used to mark a route that has been designated to allow truck traffic.

Option:

On a numbered highway, the auxiliary TRUCK marker may be used (see Section 2D.20).
Section 2B.46  Hazardous Cargo Signs (R14-2, R14-3)

Option:

The Hazardous Cargo Route (R14-2) sign may be used to identify routes that have been designated by proper authority for vehicles transporting hazardous cargo.

On routes where the transporting of hazardous cargo is prohibited, the Hazardous Cargo Prohibition (R14-3) sign may be used.

Guidance:

If used, the Hazardous Cargo Prohibition sign should be installed on a street or roadway at a point where vehicles transporting hazardous cargo have the opportunity to take an alternate route.
Section 2B.47 National Network Signs

Support:

All state highways in Ohio have been designated as part of the National Network. Therefore, these special truck routing signs are not used.

Section 2B.48 Preferential Lane Signs (R3-10 through R3-17)

Support:

Preferential lanes are lanes designated for special traffic uses such as high-occupancy vehicles (HOV), light rail, buses, taxis, or bicycles. Preferential lane treatments might be as simple as restricting a turning lane to a certain class of vehicles during peak periods, or as sophisticated as providing a separate roadway system within a highway corridor for certain vehicles.

Option:

Preferential lane assignments may be made on a full-time or part-time basis.

Guidance:

Preferential Lane sign spacing should be determined by engineering judgment based on prevailing speed, block length, distances from adjacent intersections, and other considerations.

Support:

The symbol and word message that appears on a particular Preferential Lane sign will vary based on the specific type of allowed traffic and on other related operational constraints that have been established for a particular lane, such as an HOV lane, a bus lane, or a taxi lane.

Standard:

When a preferential lane is established, the Preferential Lane signs and pavement markings (see Section 3B.23) for these lanes shall be used to advise road users.

At the end of a preferential lane, a Lane Ends (R3-12a, R3-15a, or R3-16a) sign shall be used.

Guidance:

The R3-11 and R3-11a (ground-mounted) and R3-14 (overhead) signs should be used exclusively with preferential lanes for high-occupancy vehicles to indicate the particular
GROUND-MOUNTED PREFERENTIAL LANE SIGNS

R3-10
HOV 2+ ONLY
2 OR MORE PERSONS PER VEHICLE

R3-10a
BUS LANE AHEAD

R3-11a
CENTER LANE
HOV 2+ ONLY
6AM - 9AM
MON-FRI

R3-11b
CENTER LANE
BUSES ONLY
6AM - 9AM
MON-FRI

R3-12
HOV LANE AHEAD

R3-12a
HOV LANE ENDS

Note:
- The diamond symbol may be used instead of the word message HOV.
- The minimum vehicle occupancy requirement may vary for each facility (such as 2+, 3+, 4+).
- The occupancy requirement may be added to the first line of the R3-12, R3-12a, and R3-15a signs.

OVERHEAD PREFERENTIAL LANE SIGNS

R3-11
HOV 2+ ONLY
2 OR MORE PERSONS PER VEHICLE
6AM-9AM MON-FRI

R3-13
HOV 2+ ONLY
6AM-9AM MON-FRI

R3-14

R3-14a
BUS & TAXI ONLY
6AM-9AM MON-FRI

R3-15
HOV LANE AHEAD

R3-15a
HOV LANE ENDS

GROUND-MOUNTED BICYCLE LANE SIGNS

R3-16
LANE AHEAD

R3-16a
LANE ENDS

R3-17
RIGHT LANE ONLY

R3-17a
LEFT | RIGHT ONLY

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vehicle occupancy requirement and time restrictions applying to that lane. The R3-11b (ground mounted) or R3-14a (overhead) word message signs should be used in situations where a preferential lane is not an HOV lane, but is designated exclusively for bus and/or taxi use.

When used, the R3-11, R3-11a, and R3-11b signs should be located adjacent to the preferential lane, and the R3-14 and R3-14a signs should be mounted directly over the lane.

The legend format of the ground-mounted High-Occupancy Vehicle Only (R3-11 series) signs should have the following sequence:

A. Top Lines: Lanes applicable (for example, CENTER LANE, CURB LANE, RIGHT 2 LANES, THIS LANE)

B. Middle Lines: HOV 2+ ONLY (lane occupancy requirement such as 2+, 3+, or 4+, or other applicable turning movements)

C. Bottom Lines: Applicable time and day (for example, 7-9 AM, 4-6 PM, MON-FRI)

The legend format of the overhead High-Occupancy Vehicle Only (R3-14) sign should have this sequence:

A. Top Line: HOV 2+ (lane occupancy requirement such as 2+, 3+, or 4+, or other applicable turning movements)

B. Bottom Lines: Applicable time and day, with the time and day separated by a down arrow (for example, 7-9 AM, 4-6 PM, MON-FRI)

Option:

The diamond symbol may be used instead of the word message HOV.

Guidance:

The diamond symbol on the HOV preferential lane signs (R3-11, R3-13, and R3-14) should appear in the top left quadrant. The diamond symbol should not be used on the bus, taxi, or bicycle preferential lane signs.

The Lane Ahead signs, R3-10, R3-10a, R3-12, R3-13, R3-15 and R3-16 should be used for advance notification of preferential lanes.

The R3-10 and R3-13 signs should be used in situations where agencies determine it is appropriate to provide a sign that defines the minimum occupancy requirement for a vehicle to use an HOV lane.
The legend format of the R3-10 and R3-13 signs should have this sequence:

A. Top Line: HOV 2+ ONLY

B. Bottom Lines: 2 OR MORE PERSONS PER VEHICLE

Changeable message signs serving as HOV signs should be the required sign size and should display the required letter height and legend format that corresponds to the type of facility and design speed (see Section 2A.07).

Option:

Signs R3-11, R3-11a, R3-14, and R3-14a may be used to supplement overhead lane control signals or changeable message signs that are used to convey preferential lane restrictions.

Where additional movements are permitted from an HOV lane on an approach to an intersection, the middle line legend format may be modified to accommodate the permitted movements (for example, RIGHT TURNS ONLY) on the R3-11 and R3-14 signs.

Section 2B.49 High-Occupancy Vehicle (HOV) Lanes

Standard:

The agencies that own and operate High-Occupancy Vehicle (HOV) lanes shall have the authority and responsibility to determine how they are operated and the occupancy requirements for vehicles operating in HOV lanes. The minimum occupancy requirement shall be two occupants per vehicle.

The HOV signs shall display the minimum allowable vehicle occupancy requirement established for each HOV lane.

The vehicle occupancy requirement established for an HOV lane shall be referenced immediately after the word message HOV or the diamond symbol. The diamond symbol shall be restricted for use with HOV lanes only.

Motorcycles shall be eligible to use HOV lanes that received Federal-aid highway program funding.

The Federal Highway Administration (FHWA) shall be consulted if a significant operational change is proposed to specific HOV lane segments or to the entire HOV system, when it can be reasonably expected that the proposed change could affect HOV lane segments or portions of the HOV system that were funded or approved by FHWA. This shall include portions of the local, regional, or Federal-aid highway system, where operational changes might significantly impact the operation of one HOV lane or portions of the regional HOV system. To assure consistency with the
provisions of Titles 23 and 49 of the United States Code (USC), the important issues and possible impacts of any significant changes shall be reviewed to determine if any Federal approval is required.

Support:

FHWA Division Offices, with input from the Federal Transit Administration (FTA), are responsible for reviewing proposals to significantly change the operation of HOV lanes. Federal interests in this review include commitments made during the National Environmental Policy Act process as described in Title 23 C.F.R., Part 771, in project agreements, transportation planning requirements, and transportation conformity requirements under the Clean Air Act (40 C.F.R., Part 51).

Proposals to adjust only the HOV lane hours of operation during the day (for example, minor changes in hours during peak travel periods) or the occupancy requirements (for example, HOV 3+ to HOV 2+) are not considered significant operational changes and do not require an explicit Federal review or approval.

Any proposal to significantly adjust the hours of operation or to convert an HOV lane to a general purpose lane is considered a significant change in the original project design concept or scope and does require a Federal review. Similarly, if the HOV lane is operational only during one peak travel period, any significant reduction in the hours of operation would be considered a significant change to the original project design concept or scope. Also, if an HOV lane is being managed and operated in a manner that renders it functionally inoperable or obsolete (for example, if no enforcement of occupancy requirement is provided), FHWA will consider that significant changes to the original project design concept or scope have occurred.

Guidance:

An engineering study based on the current and estimated future travel demand for a corridor and facility should be the basis for determining when, during a typical day, there should be a minimum occupancy requirement for a vehicle to use an HOV lane.

Option:

HOV lanes may be operated on a 24-hour basis for extended periods of the day, during peak travel periods only, during special events, or during other activities.

HOV lanes may take many forms depending on the level of usage and the design of the facility. They may be physically separated from the other travel lanes by a barrier or median, or they may be concurrent with other travel lanes and be separated only by longitudinal pavement markings. Physically separated HOV lanes may be operated in a constant direction or may be operated as reversible lanes.

Agencies may select from either the HOV abbreviation or the diamond symbol to reference the HOV lane designation.
Section 2B.50 High-Occupancy Vehicle Sign Applications and Placement

Standard:

Overhead HOV signs shall be located in advance of and at all entry points to barrier-separated HOV lanes. The overhead advance regulatory sign (R3-13 or R3-15) shall be used in advance of all barrier-separated HOV lanes. The overhead HOV sign (R3-14) shall be used at the beginning or entry point to all barrier-separated HOV lanes. Ground-mounted HOV regulatory signs (R3-10, R3-11, and R3-12) shall be used only as a supplement to overhead HOV signs (R3-13 and R3-14) in advance of and at the entry to barrier-separated HOV lanes.

For barrier-separated HOV lanes, the overhead HOV sign (R3-14) shall be used at all intermediate entry points or gaps in the barrier where vehicles are allowed to legally access the HOV lane. Ground-mounted HOV signs (R3-11) shall be located at intervals not greater than 400 m (0.25 mi) when intermediate entry points or gaps in the barrier exist to allow ingress or egress to the HOV lane.

For buffer-separated HOV lanes (painted buffer of 1.2 m (4 ft) or more), the overhead HOV sign (R3-14) shall be used at the initial and intermediate entry points or gaps in the buffer, where vehicles are allowed to legally access the HOV lane. Ground-mounted HOV signs (R3-11) shall be located at intervals not greater than 400 m (0.25 mi) between entry points. Overhead signs (R3-14) shall be used to supplement the ground-mounted HOV signs (R3-11) at intervals based on an engineering study.

For concurrent-flow HOV lanes, ground-mounted HOV signs (R3-11) shall be located at intervals not greater than 400 m (0.25 mi). Overhead HOV signs (R3-14) shall be used to supplement the ground-mounted HOV signs (R3-11) at intervals based on an engineering study.

For direct access ramps to HOV lanes, overhead HOV signs (R3-14) shall be used at the entry point to the ramp. Ground-mounted HOV signs (R3-11) shall be used only as a supplement to overhead HOV signs at direct access ramps.

Guidance:

For barrier-separated reversible-flow HOV lanes, HOV signs may be either static or changeable message type.
Section 2B.51  Other Regulatory Signs

Option:

Regulatory word message signs other than those classified and specified in this Manual and the “Sign Design Manual” (ODOT) (see Section 1A.11) may be developed to aid the enforcement of other laws or regulations.

Except for symbols on regulatory signs, minor modifications in the design may be permitted provided that the essential appearance characteristics are met.

Standard:

When a seat belt symbol is used, the R16-1 symbol shall be used.

Guidance:

The seat belt symbol should not be used alone but in connection with mandatory seat belt regulatory messages.

Section 2B.51.1  STOP FOR SCHOOL BUS LOADING OR UNLOADING Sign (R16-H2)

Option:

The STOP FOR SCHOOL BUS LOADING OR UNLOADING (R16-H2) sign (see the “Sign Design Manual”) may be used to remind road users of the provisions of Section 4511.75 of the Ohio Revised Code (see Appendix B2) prohibiting passing of school buses in either direction on undivided highways when loading or unloading school children.
CHAPTER 2C. WARNING SIGNS

Section 2C.01 Function of Warning Signs

Support:

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

Section 2C.02 Application of Warning Signs

Standard:

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

Guidance:

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

Support:

The application of warning signs can be classified into the categories shown in Table 2C-1. Warning signs specified herein cover most of the conditions that are likely to be encountered. Special warning signs for low-volume roads (as defined in Section 5A.01), temporary traffic control zones, school areas, highway-rail grade crossings, bicycle facilities, and highway-light rail transit grade crossings are discussed in Parts 5 through 10, respectively.

Option:

Word message warning signs other than those specified in this Manual may be developed and installed by highway agencies.

Section 2C.03 Design of Warning Signs

Standard:

All warning signs shall be diamond-shaped (square with one diagonal vertical) with a black legend and border on a yellow background unless specifically designated.
### Table 2C-1. Application of Warning Signs

<table>
<thead>
<tr>
<th>Category</th>
<th>Group</th>
<th>Section</th>
<th>Signs</th>
<th>OMUTCD Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Related</td>
<td>Changes in Horizontal Alignment</td>
<td>2C.06</td>
<td>Turn, Curve, Reverse Turn, Reverse Curve, Winding Road</td>
<td>W1-1 through W1-5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.07</td>
<td>Combination Horizontal Alignment/Advisory Speed</td>
<td>W1-9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.08</td>
<td>Combination Horizontal Alignment/Intersection</td>
<td>W1-10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.09</td>
<td>Large Arrow (one direction)</td>
<td>W1-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.10</td>
<td>Chevron</td>
<td>W1-8</td>
</tr>
<tr>
<td></td>
<td>Vertical Alignment</td>
<td>2C.11</td>
<td>Hill</td>
<td>W7-1, W7-1a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.12</td>
<td>Truck Escape Ramp</td>
<td>W7-4, W7-4a</td>
</tr>
<tr>
<td></td>
<td>Cross Section</td>
<td>2C.13</td>
<td>Road Narrows</td>
<td>W5-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.14-15</td>
<td>Narrow Bridge, One Lane Bridge</td>
<td>W5-2, W5-2a, W5-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.16-18</td>
<td>Divided Road, Divided Road Ends, Double Arrow</td>
<td>W6-1, W6-2, W12-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.19</td>
<td>Dead End, No Outlet</td>
<td>W14-1, W14-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.20</td>
<td>Low Clearance</td>
<td>W12-2, W12-2P</td>
</tr>
<tr>
<td></td>
<td>Roadway Surface Conditions</td>
<td>2C.21-22</td>
<td>Bump, Dip, Speed Hump</td>
<td>W8-1, W8-2, W17-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.23</td>
<td>Pavement Ends</td>
<td>W8-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.24</td>
<td>Shoulder</td>
<td>W8-4, W8-9, W8-11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.25</td>
<td>Slippery When Wet</td>
<td>W8-5</td>
</tr>
<tr>
<td></td>
<td>Advance Traffic Control</td>
<td>2C.26</td>
<td>Stop Ahead, Yield Ahead, Signal Ahead</td>
<td>W3-1a, W3-2a, W3-3</td>
</tr>
<tr>
<td></td>
<td>Traffic Flow</td>
<td>2C.27</td>
<td>Merge, Lane Reduction, Added Lane, right Lane Ends, Lane Ends Merge Left, Two-Way Traffic, No Passing Zone</td>
<td>W4-1, W4-2, W4-3, W6-3, W9-1, W9-2, W14-3</td>
</tr>
<tr>
<td></td>
<td>Intersections</td>
<td>2C.34</td>
<td>Cross Road, Side Roads, T, Y, and Circular Intersection</td>
<td>W2-1 through W2-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.35</td>
<td>Large Arrow (two directions)</td>
<td>W1-7</td>
</tr>
<tr>
<td></td>
<td>Motorized Traffic</td>
<td>2C.36</td>
<td>Trucks Crossing, Truck (symbol), Emergency Vehicle, Tractor</td>
<td>W8-6, W11-5, W11-8, W11-10</td>
</tr>
<tr>
<td></td>
<td>Distance</td>
<td>2C.41</td>
<td>XX Feet, XX Miles, Next XX Feet, Next XX MI</td>
<td>W16-2, W16-3, W16-4, W7-3a</td>
</tr>
<tr>
<td></td>
<td>Speed</td>
<td>2C.42</td>
<td>Advisory Speed</td>
<td>W13-1</td>
</tr>
<tr>
<td></td>
<td>Arrow</td>
<td>2C.43</td>
<td>Advance Arrow, Directional Arrow</td>
<td>W16-5P, W16-6P</td>
</tr>
<tr>
<td></td>
<td>Hill Related</td>
<td>2C.44</td>
<td>X% Grade, Trucks Use Low Gear</td>
<td>W7-2, W7-3</td>
</tr>
<tr>
<td></td>
<td>Street Name Plaque</td>
<td>2C.45</td>
<td>Advance Street Name</td>
<td>W16-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2C.46</td>
<td>Dead End/ No Outlet</td>
<td>W14-1P, W14-2P</td>
</tr>
<tr>
<td></td>
<td>Share the Road</td>
<td>2C.47</td>
<td>Share the Road</td>
<td>W16-1</td>
</tr>
</tbody>
</table>

OMUTCD 2003 Edition (English units are preferred.)
otherwise. Warning signs shall be designed in accordance with the sizes, shapes, colors, and legends in the “Sign Design Manual” (see Section 1A.11).

Option:

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

Section 2C.04 Size of Warning Signs

Support:

Table 2C-2 is a listing of the sizes for warning signs.

Guidance:

The Conventional Road size should be used on conventional roads.

The Expressway and Freeway sizes should be used for higher-speed applications for increased recognition.

Option:

The minimum size may be used on low-speed roadways where the reduced legend size would be adequate.

Oversized signs and larger sizes may be used where speed, volume, or other factors result in conditions where greater visibility or emphasis would be desirable.

Standard:

The minimum size for supplemental warning plaques shall be as shown in Table 2C-3.

Section 2C.05 Placement of Warning Signs

Standard:

Warning signs shall be installed in accordance with the general requirements for sign placement as described in Sections 2A.16 to 2A.21.
### Table 2C-2. Warning Sign Sizes

<table>
<thead>
<tr>
<th>Description</th>
<th>Conventional Roads</th>
<th>Expressways</th>
<th>Freeways</th>
<th>Minimum</th>
<th>Oversized</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diamond</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W1, W2, W7, W8, W9, W11, W14, W15-1, W17-1</td>
<td>750 x 750 (30 x 30)</td>
<td>900 x 900 (36 x 36)</td>
<td>900 x 900 (36 x 36)</td>
<td>600 x 600 (24 x 24)</td>
<td>1200 x1200 (48 x 48)</td>
</tr>
<tr>
<td>W3, W4, W5, W6, W8-3, W10, W12</td>
<td>900 x 900 (36 x 36)</td>
<td>1200 x 1200 (48 x 48)</td>
<td>1200 x 1200 (48 x 48)</td>
<td>750 x 750 (30 x 30)</td>
<td>--</td>
</tr>
<tr>
<td><strong>Rectangular</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W1- Arrows</td>
<td>1200 x 600 (48 x 24)</td>
<td>--</td>
<td>--</td>
<td>900 x 450 (18 x 18)</td>
<td>1500 x 750 (60 x 30)</td>
</tr>
<tr>
<td>W1- Chevron</td>
<td>450 x 600 (18 x 24)</td>
<td>750 x 900 (30 x 36)</td>
<td>900 x 1200 (36 x 48)</td>
<td>300 x 450 (12 x 18)</td>
<td>--</td>
</tr>
<tr>
<td>W7-4</td>
<td>1950 x 1200 (78 x 24)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>W7-4a</td>
<td>1950 x 1500 (78 x 60)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>W12-2P</td>
<td>2100 x 600 (84 x 24)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>W13</td>
<td>600 x 750 (24 x 30)</td>
<td>900 x 1200 (36 x 48)</td>
<td>1200 x 1500 (48 x 60)</td>
<td>600 x 750 (24 x 30)</td>
<td>1200 x 1500 (48 x 60)</td>
</tr>
<tr>
<td><strong>Pennant</strong></td>
<td>W14-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>900 x 1200 x 1200 (36 x 48 x 48)</td>
<td>--</td>
<td>--</td>
<td>750 x 1000 x 1600 (30 x 40 x 64)</td>
<td>1200 x1600 x 1600 (48 x 64 x 64)</td>
</tr>
<tr>
<td><strong>Circular</strong></td>
<td>W10-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>450 (18) Dia.</td>
<td>--</td>
<td>--</td>
<td>375 (15) Dia.</td>
<td>600 (24) Dia.</td>
</tr>
</tbody>
</table>

Notes: 1. Larger signs may be used when appropriate.
2. Dimensions are shown in millimeters followed by inches in parentheses and are shown as width x height.

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

<table>
<thead>
<tr>
<th>Size of Warning Sign</th>
<th>Size of Supplemental Plaque</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Line</td>
</tr>
<tr>
<td>600 x 600 (24 x 24)</td>
<td>600 x 300 (24 x 12)</td>
</tr>
<tr>
<td>750 x 750 (30 x 30)</td>
<td>750 x 450 (30 x 18)</td>
</tr>
<tr>
<td>900 x 900 (36 x 36)</td>
<td></td>
</tr>
<tr>
<td>1200 x 1200 (48 x 48)</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Larger supplemental plaques may be used when appropriate.
2. Dimensions are shown in millimeters followed by inches in parentheses and are shown as width x height.
Support:

The total time needed to perceive and complete a reaction to a sign is the sum of the times necessary for Perception, Identification (understanding), Emotion (decision making), and Volition (execution of decision), and is called the PIEV time. The PIEV time can vary from several seconds for general warning signs to 6 seconds or more for warning signs requiring high road user judgment.

Table 2C-4 lists suggested sign placement distances for three conditions. This table is provided as an aid for determining warning sign location.

Guidance:

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

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

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

Option:

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

Section 2C.06  **Horizontal Alignment Signs (W1-1 through W1-5)**

Option:

The horizontal alignment Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), or Winding Road (W1-5) signs may be used in advance of situations where the horizontal roadway alignment changes. A Large Arrow (W1-6) sign (see Section 2C.09) may be used on the outside of the turn or curve.

Guidance:

The application of these signs should conform to Table 2C-5.
### Table 2C-4. Guidelines for Advance Placement of Warning Signs (English Units)

<table>
<thead>
<tr>
<th>Posted or 85th-Percentile Speed</th>
<th>Advance Placement Distance&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Condition A: High judgment required&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>20 mph</td>
<td>175 ft</td>
</tr>
<tr>
<td>25 mph</td>
<td>250 ft</td>
</tr>
<tr>
<td>30 mph</td>
<td>325 ft</td>
</tr>
<tr>
<td>35 mph</td>
<td>400 ft</td>
</tr>
<tr>
<td>40 mph</td>
<td>475 ft</td>
</tr>
<tr>
<td>45 mph</td>
<td>550 ft</td>
</tr>
<tr>
<td>50 mph</td>
<td>625 ft</td>
</tr>
<tr>
<td>55 mph</td>
<td>700 ft</td>
</tr>
<tr>
<td>60 mph</td>
<td>775 ft</td>
</tr>
<tr>
<td>65 mph</td>
<td>850 ft</td>
</tr>
</tbody>
</table>

**Notes:**

1. The distances are adjusted for a sign legibility distance of 50 m (175 ft) which is the appropriate legibility distance for a 125 mm (5 in) Series D word legend. The distances may be adjusted by deducting another 30 m (100 ft) if symbol signs are used. Adjustments may be made for grades if appropriate.

2. Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge, Right Lane Ends, etc. The distances are determined by providing the driver a PIEV time of 6.7 to 10.0 seconds plus 4.5 seconds for vehicle maneuvers minus the legibility distance of 50 m (175 ft) for the appropriate sign.

3. Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, or Signal Ahead. The distances are based on the 1990 AASHTO Policy for stopping sight distance (page 120) providing a PIEV time of 2.5 seconds, friction factor of 0.30 to 0.40, minus the sign legibility distance of 50 m (175 ft).

4. Typical Conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, or Cross Road. The distance is determined by providing a 1.6 second PIEV time (1990 AASHTO, page 119), a vehicle deceleration rate of 3 m/second<sup>2</sup> (10 ft/second<sup>2</sup>), minus the sign legibility distance of 50 m (175 ft).

5. No suggested minimum distances are provided for these speeds, as placement location is dependent on site conditions and other signing to provide an adequate advance warning for the driver.
Option:

An Advisory Speed plaque (see Section 2C.42) may be used to indicate the speed for the change in horizontal alignment. The supplemental distance plaque NEXT XX MILES may be installed below the Winding Road sign where continuous roadway curves exist (see Section 2C.41). The combination Horizontal Alignment/Advisory Speed sign (see Section 2C.07) or combination Horizontal Alignment/Intersection sign (see Section 2C.08) may also be used.

Standard:

When engineering judgment determines the need for a horizontal alignment sign, one of the W1-1 through W1-5 signs shall be used.

Section 2C.07 Combination Horizontal Alignment/Advisory Speed Sign (W1-9)

Option:

The Turn (W1-1) sign or the Curve (W1-2) sign may be combined with the Advisory Speed (W13-1) plaque to create a combination Horizontal Alignment/Advisory Speed (W1-9) sign.

Standard:

When used, the combination Horizontal Alignment/Advisory Speed sign shall supplement other advance warning signs and shall be installed at the beginning of the turn or curve. The minimum size of the W1-9 sign shall be 1200 x 1200 mm (48 x 48 in) for high-speed facilities, and 900 x 900 mm (36 x 36 in) for low-speed facilities.

Section 2C.08 Combination Horizontal Alignment/Intersection Sign (W1-10)

Option:

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

Guidance:

Elements of the combination Horizontal Alignment/Intersection sign related to horizontal alignment should conform to Section 2C.06, and elements related to intersection configuration should conform to Section 2C.34. No more than one Cross Road or two Side Road symbols should be shown on any one combination Horizontal Alignment/Intersection sign.
OMUTCD 2003 Edition (English units are preferred.)
Table 2C-5. Horizontal Alignment Sign Usage

<table>
<thead>
<tr>
<th>Number of Alignment Changes</th>
<th>Advisory Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 30 MPH</td>
</tr>
<tr>
<td>1</td>
<td>Turn (W1-1)¹</td>
</tr>
<tr>
<td>2²</td>
<td>Reverse Turn³ (W1-3)</td>
</tr>
<tr>
<td>3 or more³</td>
<td>Winding Road³ (W1-5)</td>
</tr>
</tbody>
</table>

Notes:
¹ Engineering judgment should be used to determine whether the Turn or Curve sign should be used.
² Alignment changes are in opposite directions and are separated by a tangent distance of 180 m (600 ft) or less.
³ A Right Reverse Turn (W1-3R), Right Reverse Curve (W1-4R), or Right Winding Road (W1-5R) sign is used if the first change in alignment is to the right; a Left Reverse Turn W1-3L, Left Reverse Curve (W1-4L), or Left Winding Road (W1-5L) sign is used if the first change in alignment is to the left.

Section 2C.09 One-Direction Large Arrow Sign (W1-6)

Option:

A One-Direction Large Arrow (W1-6) sign may be used to delineate a change in horizontal alignment.

Standard:

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

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

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

Guidance:

The One-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.
Section 2C.10  Chevron Alignment Sign (W1-8)

Option:

The Chevron Alignment (W1-8) sign may be used to provide additional emphasis and guidance for a change in horizontal alignment. A Chevron Alignment sign may be used as an alternate or supplement to standard delineators on curves or to the Large Arrow (W1-6) sign.

Standard:

**The Chevron Alignment sign shall be a vertical rectangle.**

If used, Chevron Alignment signs shall be installed on the outside of a turn or curve, in line with and at approximately a right angle to approaching traffic.

Option:

A Chevron Alignment sign may be used on the far side of an intersection to inform drivers of a change of horizontal alignment through the intersection.

Guidance:

Spacing of Chevron Alignment signs should be such that the road user always has at least two in view, until the change in alignment eliminates the need for the signs.

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

Section 2C.11  Hill Signs (W7-1, W7-1a, W7-1b)

Guidance:

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

The Hill sign and supplemental grade (W7-3) plaque (see Section 2C.45) used in combination, or the W7-1b sign used alone, should be installed in advance of downgrades for the following conditions:

A.  5% grade that is more than 900 m (3,000 ft) in length;

B.  6% grade that is more than 600 m (2,000 ft) in length;

C.  7% grade that is more than 300 m (1,000 ft) in length;
D. 8% grade that is more than 225 m (750 ft) in length; or

E. 9% grade that is more than 150 m (500 ft) in length.

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

Supplemental plaques (see Section 2C.44) and larger signs should be used for emphasis or where special hill characteristics exist. On longer grades, the use of the distance (W7-3a) plaque or the combination distance/grade (W7-3b) plaque at periodic intervals of approximately 1.6 km (1 mi) spacing should be considered.

**Standard:**

> When the percent grade is shown, the message X% plaque shall be placed below the inclined ramp/truck symbol (W7-1) or the word message HILL (W7-1a) sign.

**Option:**

The word message HILL (W7-1a) sign may be used as an alternate to the symbol (W7-1) sign. The percent grade message may be included within these signs.

**Section 2C.12 Truck Escape Ramp Signs (W7-4 Series)**

**Guidance:**

Where applicable, truck escape (or runaway truck) ramp advance warning signs should be located approximately 1.6 km (1 mi), and 0.8 km (0.5 mi) in advance of the grade, and of the ramp. A sign also should be placed at the gore. A regulatory sign with the legend RUNAWAY VEHICLES ONLY should be installed near the ramp entrance to discourage other road users from entering. No Parking (R8-3) signs should be placed near the ramp entrance.

**Standard:**

> When truck escape ramps are installed, one of the W7-4 series signs shall be used.

**Option:**

A supplemental plaque may be used with the words SAND, GRAVEL, or PAVED to describe the ramp surface. Highway agencies may develop appropriate word message signs for the specific situation.
Section 2C.13 ROAD NARROWS Sign (W5-1)

Guidance:

A ROAD NARROWS (W5-1) sign should be used in advance of a transition on two-lane roads where the pavement width is reduced abruptly to a width such that vehicles might not be able to pass without reducing speed.

Option:

Additional emphasis may be provided by the use of object markers and delineators (see Chapters 3C and 3D). The Advisory Speed (W13-1) plaque (see Section 2C.42) may be used to indicate the recommended speed.

Section 2C.14 NARROW BRIDGE Sign (W5-2)

Guidance:

A NARROW BRIDGE (W5-2) sign should be used in advance of any bridge or culvert having a two-way roadway clearance width of 4.9 to 5.5 m (16 to 18 ft), or any bridge or culvert having a roadway clearance less than the width of the approach travel lanes.

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

Option:

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

Section 2C.15 ONE LANE BRIDGE Sign (W5-3)

Guidance:

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

A. Having a clear roadway width of less than 4.9 m (16 ft), or

B. Having a clear roadway width of less than 5.5 m (18 ft) when commercial vehicles constitute a high proportion of the traffic, or
C. Having a clear roadway width of 5.5 m (18 ft) or less, where the sight distance is limited on the approach to the structure.

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

Section 2C.16 Divided Highway (Road) Sign (W6-1)

Guidance:

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

Option:

The word message DIVIDED HIGHWAY (W6-1a) or DIVIDED ROAD (W6-1b) sign may be used as an alternate to the symbol sign.

Section 2C.17 Divided Highway (Road) Ends Sign (W6-2)

Guidance:

A Divided Highway Ends (W6-2) symbol sign should be used at the end of a section of physically divided highway (not an intersection or junction) as a warning of two-way traffic ahead.

Option:

The TWO-WAY TRAFFIC (W6-3) sign (see Section 2C.31) may be used to give warning and notice of the transition to a two-lane, two-way section.

The word message DIVIDED HIGHWAY ENDS (W6-2a) or DIVIDED ROAD ENDS (W6-2b) sign may be used as an alternate to the symbol sign.

Section 2C.18 Double Arrow Sign (W12-1)

Option:

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

OMUTCD 2003 Edition (English units are preferred.)
Guidance:

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

If used in front of a pier or obstruction, the Double Arrow sign should be mounted on the face of, or just in front of, the obstruction. Where stripe markings are used on the obstruction, they should be discontinued to leave a 75 mm (3 in) space around the outside of the sign.

Section 2C.19  DEAD END/NO OUTLET Signs (W14-1, W14-2)

Option:

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

The DEAD END or NO OUTLET plaques (see Section 2C.46) may be used in combination with the Street Name (D3) sign (see Section 2D.38) at intersections instead of or in addition to the W14-1 or W14-2 signs.

Standard:

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

Section 2C.20  Low Clearance Signs (W12-2, W12-2P)

Standard:

The Low Clearance (W12-2) sign shall be used to warn road users of clearances less than 300 mm (12 in) above the statutory maximum vehicle height or minimum structure height.

Guidance:

The actual clearance should be shown on the Low Clearance sign to the nearest 1 in not exceeding the actual clearance. However, in areas that experience changes in temperature causing frost action, a reduction, not exceeding 3 in, should be used for this condition.
Where the clearance is less than the legal limit, a sign to that effect should be placed at the nearest intersecting road or wide point in the road at which a vehicle can detour or turn around.

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

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

Option:

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

Section 2C.21  BUMP and DIP Signs (W8-1, W8-2)

Guidance:

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

Option:

These signs may be supplemented with an Advisory Speed plaque (see Section 2C.42).

Standard:

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

Guidance:

A short stretch of depressed alignment that may momentarily hide a vehicle should be treated as a no-passing zone (see Section 3B.02).

Section 2C.22  SPEED HUMP Sign (W17-1)

Guidance:

The SPEED HUMP (W17-1) sign should be used to give warning of a vertical deflection in the roadway that is designed to limit the speed of traffic.
If used, the SPEED HUMP sign should be supplemented by an Advisory Speed plaque (see Section 2C.42).

Option:

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

Section 2C.23 PAVEMENT ENDS Sign (W8-3)

Guidance:

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

Option:

An Advisory Speed plaque (see Section 2C.42) may be used when the change in roadway condition requires a reduced speed.

Section 2C.24 Shoulder Signs (W8-4, W8-9, W8-9a, W8-11)

Support:

The signs discussed in this Section are appropriate for use in temporary traffic control zones (see Part 6).

Standard:

When used in temporary traffic control zones, the sign legend and border shall be black on an orange background.

Option:

The SOFT SHOULDER (W8-4) word message sign may be used to warn of a soft shoulder condition.

The LOW SHOULDER (W8-9) word message sign may be used to warn of a shoulder condition where there is an elevation difference of less than 75 mm (3 in) between the shoulder and the travel lane.

Guidance:

The SHOULDER DROP-OFF (W8-9a) sign should be used during construction and maintenance when a shoulder drop-off exceeds 75 mm (3 in) in height.
The UNEVEN LANES (W8-11) word message sign should be used during construction and maintenance operations that create a substantial difference in elevation between adjacent lanes.

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

**Standard:**

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

**Section 2C.25 Slippery When Wet Sign (W8-5)**

**Option:**

The Slippery When Wet (W8-5) sign may be used to warn that a slippery condition may exist.

**Guidance:**

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

**Section 2C.26 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)**

**Standard:**

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

**Support:**

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

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

Option:

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

Word messages (W3-1, W3-2, W3-3a) may be used as alternates to the Advance Traffic Control symbol signs.

A supplemental street name plaque (see Section 2C.45) may be installed above or below an Advance Traffic Control sign.

A warning beacon may be used with a Signal Ahead (W3-3) sign.

A BE PREPARED TO STOP (W3-4) sign may be used to warn of stopped traffic caused by traffic control signals or in areas that regularly experience traffic congestion.

Standard:

When a BE PREPARED TO STOP sign is used in advance of traffic signals, it shall be used in addition to a Signal Ahead sign.

Option:

The BE PREPARED TO STOP sign may be supplemented with beacons.

Guidance:

When the beacon is interconnected with a traffic control signal or queue detection system, the BE PREPARED TO STOP sign should be supplemented with a WHEN FLASHING plaque.

Section 2C.27 CROSS TRAFFIC DOES NOT STOP Plaque (W4-4P)

Option:

The CROSS TRAFFIC DOES NOT STOP (W4-4P) plaque may be used in advance of a STOP sign on approaches to two-way stop-controlled intersections to warn road users who might misinterpret the intersection as a four-way (or all-way) stop intersection. The W4-4P plaque may also be used in advance of a STOP sign on a one-way stop-controlled T-intersection.

In situations where this plaque is used to regulate traffic, the W4-4P plaque may be installed on the same post with the STOP sign.
Guidance:

If the W4-4P plaque is installed on the same post as the STOP sign, then the color of the plaque should be a black legend and border on a white background.

Option:

The arrow on the W4-4P plaque may point to the left, to the right, or in both directions.

Standard:

If the arrow points in a single direction, the arrow shall point in the direction from which the nonstopping traffic is approaching, and not in the direction that the nonstopping traffic is moving.
Section 2C.28  **Merge Sign (W4-1)**

Option:

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

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

Guidance:

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

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

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

The Merge sign should not be used in place of a Lane Ends (W4-2) sign where lanes of traffic moving on a single roadway must merge because of a reduction in the actual or usable pavement width (see Section 2C.30).

Section 2C.29  **Added Lane Sign (W4-3)**

Guidance:

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

Section 2C.30  **Lane Ends Signs (W4-2, W9-1, W9-2)**

Guidance:

The LANE ENDS MERGE LEFT (RIGHT) sign (W9-2) should be used to warn of the reduction in the number of traffic lanes in the direction of travel on a multilane highway.
Option:

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

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

The reduction in traffic lanes may also be delineated with roadway edge lines (see Section 3B.09) and/or roadway delineation (see Chapter 3D).

Guidance:

Where an extra lane has been provided for slower moving traffic (see Section 2B.27), a Lane Ends sign should be installed in advance of the end of the extra lane.

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

Section 2C.31 Two-Way Traffic Sign (W6-3)

Guidance:

A Two-Way Traffic (W6-3) sign should be used to warn road users of a transition from a multilane divided section of roadway to a two-lane, two-way section of roadway.

Option:

The Two-Way Traffic sign may be used at intervals along a two-way roadway and may be used to supplement the Divided Highway (Road) Ends (W6-2) sign discussed in Section 2C.17.

Section 2C.32 NO PASSING ZONE Sign (W14-3)

Standard:

The NO PASSING ZONE (W14-3) sign shall be a pennant-shaped isosceles triangle with its longer axis horizontal and pointing to the right. When used, the NO PASSING ZONE sign shall be installed on the left side of the roadway at the beginning of no-passing zones identified by either pavement markings or DO NOT PASS signs or both (see Sections 2B.24 and 3B.02).
Section 2C.33  Advisory Exit, Ramp, and Curve Speed Signs (W13-2, W13-3, W13-5)

Standard:

Advisory Exit, Ramp, and Curve Speed signs shall be vertical rectangles.

The Exit Speed (W13-2), Ramp Speed (W13-3), or Curve Speed (W13-5) signs shall be used where engineering judgment indicates the need to advise road users of the recommended speed on an exit, a ramp, or a curve.

Guidance:

The Exit Speed sign should be used along the deceleration lane and the Ramp Speed sign should be used along the actual ramp since in some cases the ramp speed may be different from the deceleration exit speed.

The Exit Speed sign should be visible in time for the road user to make a safe slowing and exiting maneuver.

The Ramp Speed sign should be visible in time for the road user to reduce to the recommended speed.

Option:

Additional Ramp Speed signs may be used beyond the gore and along the ramp where the recommended speed changes because of a change in curvature or when there is a need to remind road users of the recommended speed. Based on engineering judgment, the Ramp Speed sign may be installed on the inside or outside of the curve to enhance its visibility.
A Curve Speed sign may be used beyond the beginning of a curve following a Horizontal Alignment and Advisory Speed sign combination where the recommended speed changes because of a change in curvature or when there is a need to remind road users of the recommended speed.

**Section 2C.34 Intersection Warning Signs (W2-1 through W2-6)**

**Option:**

A Cross Road (W2-1), Side Road (W2-2 or W2-3), T-Symbol (W2-4), or Y-Symbol (W2-5) sign may be used on a roadway, street, or shared-use path in advance of an intersection to indicate the presence of an intersection and the possibility of turning or entering traffic. The Circular Intersection (W2-6) sign accompanied by an educational word message plaque may be installed in advance of a circular intersection.

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

An advance street name plaque (see Section 2C.45) may be installed below an Intersection sign.

**Guidance:**

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

Intersection signs should not be used on approaches controlled by STOP signs, YIELD signs, signals, or where Junction signing (see Sections 2D.13 and 2D.28) or advance route turn assembly signs (see Section 2D.29) are present.

Where the side roads are not opposite of each other, the symbol for the intersection should indicate a slight offset.

**Section 2C.35 Two-Direction Large Arrow Sign (W1-7)**

**Standard:**

The Two-Direction Large Arrow (W1-7) sign shall be a horizontal rectangle.
Part 2. Signs

W2-1  W2-2  W2-3  W2-4

W2-5  W2-6  W1-7

OMUTCD 2003 Edition (English units are preferred.)
If used, it shall be installed on the far side of a T-intersection in line with, and at approximately a right angle to, approaching traffic.

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

Guidance:

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

Section 2C.36 Motorized Traffic Signs (W8-6, W11-5, W11-8, W11-10)

Option:

Motorized Traffic (W8-6, W11-5, W11-8, or W11-10) signs may be used to alert road users to locations where unexpected entries into the roadway by trucks, farm vehicles, emergency vehicles, or other vehicles might occur.

Support:

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

Guidance:

Motorized Traffic signs should be used only at locations where the road user’s sight distance is restricted, or the condition, activity, or entering traffic would be unexpected.

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

Option:

Supplemental plaques (see Section 2C.39) with the legend AHEAD, XX FEET, or NEXT XX MILES may be mounted below Motorized Traffic signs to provide advance notice to road users of unexpected entries.

Standard:

The Emergency Vehicle (W11-8) sign with the EMERGENCY SIGNAL AHEAD (W11-12P) supplemental plaque shall be placed in advance of all emergency-vehicle traffic control signals (see Chapter 4F).
Option:

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

Section 2C.37 Crossing Signs (W11-1, W11-2, W11-3, W11-4, W16-7P)

Option:

Crossing (W11-1 through W11-4) signs may be used to alert road users to locations where unexpected entries into the roadway by pedestrians, bicyclists, animals, and other crossing activities might occur.

Support:

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

Option:

Crossing signs may be supplemented with supplemental plaques (see Section 2C.39) with the legend AHEAD, XX FEET, or NEXT XX MILES to provide advance notice to road users of crossing activity.

Standard:

Crossing signs shall be used adjacent to the crossing location. If the crossing location is not delineated by crosswalk pavement markings, the Crossing sign shall be supplemented with a diagonal downward pointing arrow plaque (W16-7P) showing the location of the crossing. If the crossing location is delineated by crosswalk pavement markings, the diagonal downward pointing arrow plaque shall not be required.

Option:

The crossing location may be defined with pavement markings (see Section 3B.17).

Pedestrian, Bicycle, School Advance Crossing, and School Crossing signs may have a fluorescent yellow-green background with a black legend and border.
Guidance:

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

Crossing signs should be used only at locations where the crossing activity is unexpected or at locations not readily apparent.

Section 2C.38  Playground Sign (W15-1)

Option:

The Playground (W15-1) sign may be used to give advance warning of a designated children’s playground that is located adjacent to the road. The Playground sign may have a fluorescent yellow-green background with a black legend and border.

Guidance:

If the access to the playground area requires a roadway crossing, the application of crosswalk pavement markings (see Section 3B.17) and Crossing signs (see Section 2C.37) should be considered.

Section 2C.39  Use of Supplemental Plaques

Option:

A supplemental plaque may be displayed with a warning sign when engineering judgment indicates that road users require additional information beyond that contained in the main message of the warning sign.

Standard:

Supplemental plaques shall be used only in combination with warning or regulatory signs. They shall not be mounted alone or displayed alone. If used, a supplemental plaque shall be installed on the same post(s) as the warning sign.
Section 2C.40  Design of Supplemental Plaques

Standard:

A supplemental plaque shall have the same color legend, border, and background as the warning sign with which it is displayed. Supplemental plaques shall be square or rectangular.

Section 2C.41  Distance Plaques (W16-2, W16-3, W16-4, W7-3a)

Option:

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

The Next Distance (W16-4 and W7-3a) plaques may be used to inform road users of the length of roadway over which the condition indicated by the warning sign exists.

Section 2C.42  Advisory Speed Plaque (W13-1)

Option:

The Advisory Speed (W13-1) plaque may be used to indicate the recommended speed for a condition.

Standard:

The Advisory Speed plaque shall carry the message XX M.P.H. The speed shown shall be a multiple of 5 mph.

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

Guidance:

Because changes in conditions, such as roadway geometrics, surface characteristics, or sight distance, might affect the recommended speed, each location should be periodically evaluated and the Advisory Speed plaque changed if necessary.
Section 2C.43 Supplemental Arrow Plaques (W16-5P, W16-6P)

Guidance:

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

Standard:

Supplemental Arrow plaques shall have the same legend design as the Advance Turn and Direction Arrow markers (see Sections 2D.25 and 2D.26) except that they shall have a black legend and border on a yellow or fluorescent yellow-green background, as appropriate.

Section 2C.44 Hill-Related Plaques (W7-2, W7-3)

Guidance:

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

On longer grades, the use of the distance plaque (W7-3a or W7-3b) at periodic intervals of approximately 1.6 km (1 mi) spacing should be considered.

Section 2C.45 Advance Street Name Plaque (W16-8)

Option:

An Advance Street Name (W16-8) plaque may be used with any Intersection sign (W2 series) or Advance Traffic Control (W3 series) sign to identify the name of the intersecting street.

Section 2C.46 DEAD END/NO OUTLET Plaques (W14-1P, W14-2P)

Option:

DEAD END (W14-1P) or NO OUTLET (W14-2P) plaques may be used in combination with Street Name (D3) signs (see Section 2D.38) at intersections instead of or in addition to the W14-1 or W14-2 signs.
Standard:

The DEAD END or the NO OUTLET plaque, as appropriate, shall be used where traffic can proceed straight through the intersection to the dead end or no outlet street.

Section 2C.47  SHARE THE ROAD Plaque (W16-1)

Option:

In situations where there is a need to warn drivers to watch for other slower forms of transportation traveling along the highway, such as bicycles, golf carts, or farm machinery, a SHARE THE ROAD (W16-1) plaque may be used.
OMUTCD 2003 Edition (English units are preferred.)
CHAPTER 2D. GUIDE SIGNS—CONVENTIONAL ROADS

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

Standard:

Standards for conventional road guide signs shall apply to any road or street other than low-volume roads (as defined in Section 5A.01), expressways, and freeways.

Section 2D.02  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.

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

Section 2D.03  Color, Retroreflection, and Illumination

Support:

Requirements for illumination, retroreflection, and color are stated under the specific headings for individual guide signs or groups of signs. General provisions are given in Sections 2A.08, 2A.09, and 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 and border on a green background. All messages, borders, and legends shall be retroreflective and all backgrounds shall be retroreflective or illuminated.

Section 2D.04  Size of Signs

Support:

For most guide signs, the legends are so variable that a 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 the standard sizes that are given in the “Sign Design Manual” (see Section 1A.11).

Option:

Because the size of overhead signs are sometimes 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 design for the standard size.

Section 2D.05 Lettering Style

Standard:

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

The standard lettering for conventional road guide signs shall be all capital letters (Section 2A.14), or a combination of lower-case letters with initial upper-case letters. When a combination of upper- and lower-case letters are used, the initial upper-case letters shall be approximately 1.33 times the "loop" height of the lower-case letters.

Section 2D.06 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 and comprehend 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. Where conditions permit, repetition of guide information on successive signs 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 shall be as shown in the “Sign Design Manual” (ODOT) (see Section 1A.11).
The principal legend on guide signs shall be in letters and numerals at least 150 mm (6 in) in height for all capital letters, or a combination of 150 mm (6 in) in height for upper-case letters with 113 mm (4.5 in) in height for lower-case letters. On low-volume roads (as defined in Section 5A.01), and on urban streets with speeds of 40 km/h (25 mph) or less, the principal legend shall be in letters at least 100 mm (4 in) in height.

Sign panels shall be large enough to accommodate the required legend without crowding.

Guidance:

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

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

**Section 2D.07 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. The 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.

**Section 2D.08 Arrows**

Support:

Arrows are used for lane assignment and to indicate the direction toward designated routes or destinations. Figure 2D-1 shows the up-arrow and the down-arrow designs that have been
Figure 2D-1. Arrows for Use on Guide Signs

![Up Arrow](image1)

![Down Arrow](image2)

approved for use on guide signs. Detailed drawings of these standard arrows are shown in the "Sign Design Manual" (see Section 1A.11).

**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. 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.

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.

**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. A horizontally oriented up-arrow design should be used at right-angle intersections.
On a ground-mounted guide sign, a directional arrow for a straight-through movement should point upward. For a turn, the arrow on a guide sign 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. 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.19.

Section 2D.09 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 because the respective States own these systems. 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 AASHTO (see the Preface for AASHTO’s address):

A. "Establishment and Development of United States Numbered Highways"; and

B. "Establishment of a Marking System of the Routes Comprising the National System of Interstate and Defense Highways."
Guidance:

The principles of these policies 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 that have been assigned to Interstate, U.S., or State routes in the same geographic area. Overlapping numbered routes should be kept to a minimum.

Standard:

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

Section 2D.10  Route Signs and Auxiliary Signs

Standard:

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

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.

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

Option:

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

Support:

Route signs are typically mounted in assemblies with auxiliary signs.

Section 2D.11  Design of Route Signs

Standard:

The “Sign Design Manual” (see Section 1A.11) shall be used for designing route signs. Other route sign 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 capital letters on a red background, and a white border. This sign shall be used on all Interstate routes and in connection with route sign assemblies on intersecting highways.

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

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

Option:

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 square or rectangle may be placed behind the shield to improve contrast.

Standard:

U.S. Route signs shall consist of 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.

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

State Route signs shall consist of black numerals on a white representation of the State of Ohio surrounded by a black background without a border. (A design detail is provided in the “Sign Design Manual” (ODOT)) This sign shall be used on all state routes and in connection with route sign assemblies on intersecting highways.

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

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, 440 First Street, NW, Washington, DC 20001. County Route signs displaying two digits or the equivalent (letter and numeral, or two letters) shall be a minimum size of 450 x 450 mm (18 x 18 in); those carrying three digits or the equivalent shall be a minimum size of 600 x 600 mm (24 x 24 in).
If a jurisdiction uses letters instead of numbers to identify routes, all references to numbered routes in this Chapter shall be interpreted to also include lettered routes.

Guidance:

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 may be placed behind the County Route sign to improve contrast.

The alternate design County Route (M1-H6a) sign may be used on county roads. The Township Route (M1-H6b) sign may be used on township roads. These signs have a minimum size of 450 x 450 mm (18 x 18 in) for two and three digit routes (see the “Sign Design Manual” (ODOT)).

Guidance:

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

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.

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

Guidance:

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

Option:

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

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

Standard:

The Junction (M2-1) auxiliary sign shall carry the abbreviated legend JCT and shall be mounted at the top of an assembly (see Section 2D.27) either directly above the route sign or above a sign for an alternative route (see Section 2D.16) that is part of the route designation. The minimum size of the Junction auxiliary sign shall be 525 x 375 mm (21 x 15 in) for compatibility with auxiliary signs carrying arrow symbols.

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

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 Combination Junction (M2-2) sign shall have a green background with white border and lettering for the word JUNCTION.

Guidance:

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.

Although the size of the Combination Junction sign will depend on the number of routes involved, the numerals should be large enough for clear legibility and should be of a size comparable with those in the individual route signs.
Section 2D.15  **Cardinal Direction Auxiliary Signs (M3-1 through M3-4)**

**Guidance:**

Cardinal Direction auxiliary signs carrying the legend NORTH, EAST, SOUTH, or WEST 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 ten percent larger, rounded up to the nearest whole number size.

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

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

**Option:**

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

**Standard:**

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

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

**Option:**

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

**Standard:**

If used, the ALTERNATE or ALT auxiliary sign shall be mounted directly above a route sign.
M2-1
M2-2
M3-1
M3-2
M3-3
M3-4
M4-1
M4-1a
M4-2
M4-3
M4-4
M4-5
M4-6
M4-7
Guidance:

The shorter or better-constructed route should retain the regular route number, and the longer or worse-constructed route should be designated as the alternate route.

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

Option:

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

**Standard:**

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

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

Option:

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

**Standard:**

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

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

Option:

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

**Standard:**

If used, the TRUCK auxiliary sign shall be mounted directly above a route sign.
Section 2D.21  TO Auxiliary Sign (M4-5)

Option:

The TO (M4-5) auxiliary sign may be used to provide directional guidance to a particular road facility from other highways in the vicinity (see Section 2D.32).

Standard:

If used, the TO auxiliary sign shall be mounted directly above a route sign or an auxiliary sign for an alternative route.

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

Guidance:

The END (M4-6) auxiliary sign should be used where the route being traveled ends, usually at a junction with another route.

Standard:

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

Section 2D.23  TEMPORARY Auxiliary Sign (M4-7)

Option:

The TEMPORARY (M4-7) auxiliary sign may be used for an interim period to designate a section of highway that is not planned as a permanent part of a numbered route, but that connects completed portions of that route.

Standard:

If 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 alternate route that is a part of the route designation.

TEMPORARY auxiliary signs shall be promptly removed when the temporary route is abandoned.
Section 2D.24  Temporary Detour and Auxiliary Signs

Support:

Chapter 6F contains information regarding Temporary Detour and Auxiliary signs.

Section 2D.25  Advance Turn Arrow Auxiliary Signs (M5-1, M5-2)

Standard:

If used, 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 90-degree angle (M5-1) or at a 45-degree angle (M5-2).

Section 2D.26  Directional Arrow Auxiliary Signs (M6 Series)

Standard:

If used, 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 that the route follows.

Section 2D.27  Route Sign Assemblies

Standard:

A Route Sign assembly shall consist of a route sign and auxiliary signs that further identify the route and indicate the direction. Route Sign assemblies shall be installed on all approaches to numbered routes that intersect with other numbered routes.

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 top or center of vertical arrangements. Similarly, information for routes intersecting from the right shall be at the right or bottom, and for straight-through routes at the center in horizontal arrangements or top in vertical arrangements.
Route Sign assemblies shall be mounted in accordance with the general specifications for highway signs (Chapter 2A), with the lowest sign 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 installed on the approaches to numbered routes on unnumbered roads and streets that carry an appreciable amount of traffic destined for the numbered route.

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

Support:

Figure 2D-2 shows typical placements of route signs.

Section 2D.28  Junction Assembly

Standard:

A Junction assembly shall consist of a Junction auxiliary sign and a route sign. The route sign shall carry the number of the intersected or joined route.

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

Guidance:

In urban areas where speeds are low, the Junction assembly should not be installed more than 90 m (300 ft) in advance of the intersection.

Where prevailing speeds are high, greater spacings should be used.
Option:

Where two or more routes are to be indicated, a single Junction auxiliary sign may be used for the assembly and all route signs grouped in a single mounting, or a Combination Junction sign (see Section 2D.14) may be used.

Section 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 installed 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 low-speed areas, the Advance Route Turn assembly should be installed not less than 60 m (200 ft) in advance of the turn. In high-speed areas, the Route Turn assembly should be installed not less than 90 m (300 ft) in advance of the turn.

Standard:

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

Guidance:

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

A. Turn movements (indicated in advance by an Advance Route Turn assembly) shall be marked by a Directional assembly with a route sign displaying the number of the turning route and a single-headed arrow pointing in the direction of the turn.

B. The beginning of a route (indicated in advance by a Junction assembly) shall be marked by a Directional assembly with a route sign displaying the number of that route and a single-headed arrow pointing in the direction of the route.

C. 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.

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

1. Two Directional assemblies, each with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary sign, and a single-headed arrow pointing in the direction of movement on that route; or

2. A Directional assembly with a route sign displaying the number of the intersected route and a double-headed arrow, pointing at appropriate angles to the left, right, or ahead.

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.

Directional assemblies should be located on the near right corner of the intersection. At major intersections and at Y or offset intersections, additional Directional assemblies should be installed on the far right or left corner to confirm the near-side assemblies. When the near-corner position is not practical for Directional assemblies, the far right corner should be the preferred alternative, with oversized signs, if necessary, for
Figure 2D-2. Illustration of Directional Assemblies and Other Route Signs
(For One Direction of Travel Only) (Sheet 1 of 3)
Figure 2D-2. Illustration of Directional Assemblies and Other Route Signs (For One Direction of Travel Only) (Sheet 3 of 3)
legibility. Where unusual conditions exist, the location of a Directional assembly should be determined by engineering judgment with the goal being to provide the best possible combination of view and safety.

Support:

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

Figure 2D-2 shows typical placements of Directional assemblies.

**Section 2D.31 Confirming or Reassurance Assemblies**

**Standard:**

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

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

**Guidance:**

If the Confirming assembly is used, it should be placed 7.6 to 60 m (25 to 200 ft) beyond the far shoulder or curb line of the intersected highway.

If 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.

**Section 2D.32 Trailblazer Assembly**

Support:

Trailblazer assemblies provide directional guidance to a particular road facility from other highways in the vicinity. This is accomplished by installing Trailblazer assemblies at strategic locations to indicate the direction to the nearest or most convenient point of access. The use of the word TO indicates that the road or street where the sign is posted is not a part of the indicated route, and that a road user is merely being directed progressively to the route.
Standard:

A Trailblazer assembly shall consist of a TO auxiliary sign, a route sign (or a special road facility symbol), and a single-headed Directional Arrow auxiliary sign pointing in the direction leading to the route.

Option:

A Cardinal Direction auxiliary sign may be used with a Trailblazer assembly.

Guidance:

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 2D.11.

Option:

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

Section 2D.33 Destination 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 and Cardinal Direction auxiliary signs may be included on the Destination sign panel with the destinations and arrows.

Guidance:

The size of the route signs and Cardinal Direction auxiliary signs should be at least the minimum size specified for these signs.
Section 2D.34  Destination Signs

Standard:

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

Support:

Traffic generators, other than cities, towns and villages, are generally places of recreational or cultural interest determined to be a significant destination.

Guidance:

In order to control proliferation of these guide signs, each responsible jurisdiction should establish a traffic generator policy similar to that established by the Ohio Department of Transportation (ODOT) in Part 2 of ODOT’s “Traffic Engineering Manual” (see Section 1A.11).

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 up shall be at the extreme left. The distance figures, if used, shall be placed to the right of the destination names.

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:

A. At the intersections of U.S. or State numbered routes with Interstate, U.S., or State numbered routes; and

B. At points where they serve to direct traffic from U.S. or State numbered routes to the business section of towns, or to other destinations reached by unnumbered routes.

**Standard:**

*Where a total of three or less destinations are provided on the Advance Guide (see Section 2E.30) and Supplemental Guide (see Section 2E.32) 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.*

**Guidance:**

If space permits, four destinations should be displayed as two separate sign panels.

**Option:**

Where space does not permit, or where 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 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.
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Standard:

If there is more than one destination shown in the same direction, the name of the nearest destination shall appear above the names of any destinations that are further away.

Option:

The D1-H4 and D1-H4a signs (see the “Sign Design Manual” (ODOT)) may be used in lieu of the D1-1 and D1-1a signs, respectively.

Guidance:

For recreational destinations, the white on brown D7-H4 and D7-H4a signs (see the “Sign Design Manual”) should be used.

Section 2D.35 Location of Destination Signs

Guidance:

When used in high-speed 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.

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

Support:

Figure 2D-2 shows typical placements of Destination signs.

Section 2D.36 Distance Signs

Standard:

If used, the Distance sign shall be a horizontal rectangle of a size appropriate for the required legend, carrying the names of not more than three cities, towns, junctions, or other traffic generators, and the distance (to the nearest mile) to those places.
Guidance:

The top name on the Distance sign should be that of the next place on the route having a post office or a railroad station, a route number or name of an intersected highway, or any other significant geographical identity. The bottom name on the sign should be that of the next major destination or control city (see Section 2E.12 for more information about control cities). 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 (see Section 2E.12) should remain the same on all successive Distance signs throughout the length of the route until that city is reached.

Option:

If more than one distant point may properly be designated, such as where the route divides at some distance ahead to serve two destinations of similar importance, and if these two destinations cannot appear on the same sign, the two names may be alternated on successive signs.

On a route continuing into another State, destinations in the adjacent State may be shown.

Section 2D.37  Location of Distance Signs

Guidance:

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

Where overlapping routes separate a short distance from the municipal limits, the Distance sign at the municipal limits should be omitted. The Distance sign should be installed approximately 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 Distance
sign should be that of the place where the routes separate; the bottom name should be that of the city to which the greater part of the through traffic is destined.

Support:

Figure 2D-2 shows typical placements of Distance signs.

Section 2D.38 Street Name Sign (D3)

Guidance:

Street Name (D3) signs should be installed in urban areas at all street intersections regardless of other route signs that may be present and should be installed in rural areas to identify important roads that are not otherwise signed.

Lettering on Street Name signs should be at least 150 mm (6 in) high in capital 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 of 40 km/h (25 mph) or less, the lettering height may be a minimum of 100 mm (4 in).

Supplementary lettering to indicate the type of street (such as Street, Avenue, or Road) or the section of the city (such as NW) may be in smaller lettering, at least 75 mm (3 in) high. Conventional abbreviations (see Section 1A.14) 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 similar color both 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 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 installed at each intersection. They should be mounted with their faces parallel to the streets they name.

Option:

Street name signs may be installed at both midblock and intersection locations. To optimize visibility, Street Name signs may be mounted overhead. On intersection approaches, a supplemental Street Name sign (see Section 2C.45) may be installed separately or below an intersection-related warning sign. Street Name signs may also be placed above a regulatory or STOP sign with no required vertical separation.

At intersection crossroads where the same road has two different street names for each direction of travel, both street names may be shown on the same sign along with directional arrows.

Guidance:

When combined with a warning sign, the color of the supplemental Street Name sign should be a black message and border on a yellow background.

Section 2D.39 Parking Area Sign (D4-1)

Option:

The Parking Area (D4-1) sign may be used to show the direction to a nearby public parking area.

Standard:

If used, the sign shall be a horizontal rectangle with a standard size of 750 x 600 mm (30 x 24 in), or with a smaller size of 450 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 installed on major thoroughfares at the nearest point of access to the parking facility and where it can advise drivers of a place to park. The sign should not be used more than four blocks from the parking area.

Section 2D.40 PARK & RIDE Sign (D4-2)

Option:

PARK & RIDE (D4-2) 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:

PARK & RIDE signs 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 450 mm (18 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 for sign D4-2. The color of the transit logo shall be selected by the local transit authority.
D3

D4-1

D4-2
Option:

To increase the target value and contrast of the transit logo, and to ensure that the local transit logo retains its distinctive color and shape, the logo may be included within a white border or placed on a white background.

**Section 2D.41  Rest Area Signs (D5 Series)**

**Standard:**

Rest Area signs shall be used only where parking and restroom facilities are available. Signs for this purpose shall have retroreflective white letters, symbols, and border on a blue background.

**Guidance:**

If used, Rest Area signs should be installed 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 MILE (D5-1), REST AREA (D5-2), PARKING AREA X MILE (D5-3), PARKING AREA (D5-4), ROADSIDE TABLE X MILE (D5-5), ROADSIDE PARK X MILE, and PICNIC TABLE X MILE may be used, as well as other appropriate messages.

**Section 2D.42  Scenic Area Signs (D6 Series)**

**Option:**

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

**Guidance:**

The design of the signs should be consistent with that specified for rest areas in 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.
Section 2D.43  Weigh Station Signing (D8 Series)

Support:

The general concept for Weigh Station signing is similar to Rest Area signing (see Section 2D.41) because in both cases traffic using either area remains within the right-of-way.

Standard:

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

A. Advance sign (D8-1);

B. Exit Direction sign (D8-2); and

C. Gore sign (D8-3).

Support:

The typical locations of these signs are shown in Figure 2D-3.

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.

The R13-1 or R13-H1 regulatory sign (see the “Sign Design Manual” (ODOT)) should be used in advance of the Weigh Station following the Advance sign (see Figure 2D-3).

Section 2D.44  General Service Signs (D9 Series)

Support:

On conventional roads, commercial services such as gas, 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, General Service signing is usually not required in urban areas except for hospitals, police assistance, tourist information centers, and camping.

Additional standards and guidelines established by the Ohio Department of Transportation (ODOT) for General Service signing on state highways are located in Part 2 of the ODOT “Traffic Engineering Manual” (see Section 1A.11).
Figure 2D-3. Typical Weigh Station Signing

Legend

- Direction of travel

- Black on white or white on black

WEIGH STATION

D8-3

WEIGH STATION NEXT RIGHT

D8-2

ALL TRUCKS COMMERCIAL VEHICLES NEXT RIGHT

R13-1

WEIGH STATION 1 MILE

D8-1

1.6 km (1 mile)

1.2 km (4,000 ft) Approx.

150 m (500 ft) MIN.
Option:

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

Standard:

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

Guidance:

General Service signs should be installed at a suitable distance in advance of the turn-off point or intersecting highway.

For the sake of uniformity, in addition to the information in this Manual, local jurisdictions electing to use General Service signing should follow the related standards and guidelines established in Part 2 of the ODOT “Traffic Engineering Manual” (see Section 1A.11).

Option:

Signs may be installed 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 General Service legends may be either symbols or word messages.

Standard:

Symbols and word message General Service legends 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.
OMUTCD 2003 Edition (English units are preferred.)
Support:

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

Option:

If the distance to the next point at which services are available is 16 km (10 mi) or more, a sign NEXT SERVICES XX MILES may be used as a separate panel installed below the General Service sign (see Figure 2E-35).

The International Symbol of Accessibility for the Handicapped (D9-5) sign may be used beneath General Service signs where paved ramps and rest room facilities accessible to, and usable by, the physically handicapped are provided.

The Recreational Vehicle Sanitary Station (D9-12) sign 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 (D9-4) sign may be placed in advance of roadside turnouts or rest areas, unless it distracts the driver’s attention from other more important regulatory, warning, or directional signs.

A Channel 9 Monitored (D12-3) sign may be installed as needed. Official public agencies or their designees may be shown as the monitoring agency on the sign (see Section 2E.56). An Emergency Dial XXX (D12-4) sign along with the appropriate number to dial, may be used for cellular phone communications. A Road Conditions Dial 511 sign may be installed if a 511 number is available to road users for obtaining road condition information.

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

Standard:

The Emergency Medical Services symbol sign shall not be used to identify services other than qualified hospitals, ambulance stations, and qualified freestanding emergency medical treatment centers. If used, the Emergency Medical Services symbol sign shall be supplemented by a sign identifying the type of service provided.

Option:

The Emergency Medical Services symbol sign may be used above the HOSPITAL or H (D9-2) symbol sign or above a panel with either the legend AMBULANCE STATION or EMERGENCY MEDICAL CARE. The Emergency Medical Services symbol sign may also be used to supplement Telephone (D9-1), CB Monitoring, or POLICE (D9-14) signs.
Standard:

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

Guidance:

Each highway agency electing to use the Emergency Medical Service symbol sign should develop guidelines for its implementation.

The following guidelines should be considered in the preparation of such a policy:

A. AMBULANCE

1. 24-hour service, 7 days per week.

2. Staffed by two State-certified persons trained at least to the basic level.

3. Vehicular communications with a hospital emergency department.

4. Operator should have successfully completed an emergency vehicle operator training course.

B. HOSPITAL

1. 24-hour service, 7 days per week.

2. 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.

3. Licensed or approved for definitive medical care by an appropriate State authority.

4. Equipped for radio voice communications with ambulances and other hospitals.

C. CB 9 Monitored

1. Provided by either professional or volunteer monitors.

2. Available 24 hours per day, 7 days per week.

3. The service should be endorsed, sponsored, or controlled by an appropriate government authority to guarantee the level of monitoring.
Section 2D.45  Reference Posts (D10-1 through D10-3)

Option:

Reference posts (D10-1 to D10-3) 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:

If reference posts are used, the distance numbering shall be continuous for each route within a State, except where overlaps occur. With overlapped routes, reference post continuity shall be established for only one of the routes.

If used, reference posts shall be vertical panels having a green background with 150 mm (6 in) white numerals, border, and the legend MILE in 100 mm (4 in) white letters. The design details for reference posts shall be as shown in the “Sign Design Manual” (ODOT) (see Section 1A.11).

Guidance:

Zero distance should begin at the south and west State lines, or at the south and west terminus points where routes begin within a State.

On a route without reference post continuity, the first reference post 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 reference posts with that shown on their odometer.

Option:

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

Standard:

Reference posts located in line with delineator posts shall have the bottom of the sign at the same height as the delineator (see Section 3D.04).

For divided highways, distance measurement shall be made on northbound and eastbound roadways. The reference posts for southbound and westbound roadways shall be set at locations directly opposite the posts for the northbound or eastbound roadways.

Option:

If a reference post cannot be installed in the correct location, it may be moved in either direction as much as 15 m (50 ft).
Guidance:

If a reference post cannot be placed within 15 m (50 ft) of the correct location, it should be omitted.

Option:

To enhance the reference post numbering system, reference posts may be spaced at one, two, or five tenths of a mile.

Section 2D.46  Traffic Signal Speed Sign (I1-1)

Option:

The Traffic Signal Speed (I1-1) sign, reading SIGNALS SET FOR 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 a coordinated mode.

Guidance:

If 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:

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

Section 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.

Option:

The Ohio Welcomes You State Line (I-H2) sign may be used in lieu of the State Line (I-2) sign.
Guidance:

A State Line (I-2 or I-H2) sign should be erected where a route enters the State of Ohio from another state.

The Corporation Limit (I-H2a) sign should be installed where a route enters a municipality.

Option:

Where a route leaves a municipality and subsequently re-enters the same municipality within a relatively short distance, the ENTER CORP (I-H2b) sign may be used at the re-entry location.

The LEAVE CORP (I-H2c) sign may be used at a location where a route leaves a municipality.

The Unincorporated Community (I-H2d) sign may be used to identify unincorporated communities of regional significance.

Guidance:

When used, the Unincorporated Community sign should be placed near the edge of the community.

Option:

The Township Limit (I-H2e) sign may be used to identify the boundaries of a township located outside municipal corporation limits.

Standard:

The Township Limit sign shall be placed where a route enters a township. The Township Limit sign shall be erected by ODOT when requested by a township in accordance with the provisions of Section 503.061 of the Ohio Revised Code.

Guidance:

The Internal County Line (I-H2f) sign should be installed where a route leaves one Ohio county and enters another Ohio county.

Option:

The External County Line (I-H2g) sign may be installed where a route enters an Ohio county from another state.
Guidance:

When used, the External County Line sign should be erected beneath a State Line sign.

Standard:

The Ohio Welcomes You State Line (I-H2) sign shall have a standard size of 1500 x 750 mm (60 x 30 in). The Corporation Limit (I-H2a) sign, Unincorporated Community (I-H2d) sign, Township Limit (I-H2e) sign, and Internal County Line (I-H2f) sign shall have a standard size of 1000 x 500 mm (40 x 20 in). The Enter Corp (I-H2b) sign and Leave Corp (I-H2c) sign shall have a standard size of 600 x 450 mm (24 x 18 in). The External County Line (I-H2g) sign shall have a standard size of 1500 x 300 mm (60 x 12 in).

Support:

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

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-4 through 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 noncarrier airports may be provided from the nearest Interstate, other freeway, or conventional highway intersection directly to the airport, normally not to exceed 25 km (15 mi). The Airport (I-5) symbol sign 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.

OMUTCD 2003 Edition (English units are preferred.)
Support:

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, scenic by-way logos, and Adopt-a-Highway signs, general information signs shall have white legends and borders on green rectangular-shaped backgrounds.

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

Option:

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

Guidance:

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

Standard:

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

Guidance:

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

A. Compliance by eligible organizations with State laws prohibiting discrimination based on race, religion, color, age, sex, national origin, and other applicable laws;

B. The use of legends conforming to the requirements of State agencies;

C. Provision for the removal of inappropriate signs;
D. Provision for the agency to charge fees to cover the cost of installing, maintaining, and removing the signs;

E. The use of standard highway alphabets on all word message type signs; and

F. Provision for limiting the number of signs.

Section 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. The methods by which memorial highways and bridges can be designated in Ohio are outlined in Part 2 of ODOT’s “Traffic Engineering Manual” (see Section 1A.11).

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, at scenic overlooks, or at 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 installed on the mainline instead of off-highway memorial plaques, the signing shall be limited to one sign at an appropriate location in each route direction. The sign design, when installed on the mainline, shall be similar to that shown for state highways in Part 2 of ODOT’s “Traffic Engineering Manual” (see Section 1A.11).

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 that applies to Interstate and U.S. numbered routes (see the Preface for AASHTO’s address).

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.

Section 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 installed on a highway if they have been approved by the appropriate transportation agency.
Section 2D.50  Crossover Signs (D13 Series)

Option:

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

Standard:

A CROSSOVER (D13-1) sign shall not be used to identify a median opening that is permitted to be used only by official or authorized vehicles. If used, the sign shall be a horizontal rectangle of appropriate size to carry the word CROSSOVER and a horizontal directional arrow. The CROSSOVER sign shall have a white legend and border on a green background.

Guidance:

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

Option:

The Advance Crossover (D13-2) sign may be installed in advance of the CROSSOVER sign to provide advance notice of the crossover.

Standard:

If used, the Advance Crossover sign shall be a horizontal rectangle of appropriate size to carry the word CROSSOVER and the distance to the median opening. The sign shall have white legend and border on a green background.

Guidance:

The distance shown on the Advance Crossover sign should be 1, 1/2, or 1/4 MILE, unless unusual conditions require some other distance. If used, the sign should be installed either on the right side of the roadway or in the median at approximately the distance shown.
CHAPTER 2E. GUIDE SIGNS—FREEWAYS AND EXPRESSWAYS

Section 2E.01 Scope of Freeway and Expressway Guide Sign Standards

Support:

These standards provide a uniform and effective system of highway signing for high-volume, high-speed motor vehicle traffic on freeways and expressways. The requirements and specifications for expressway signing exceed those for conventional roads (Chapter 2D), but are less than those for freeway signing. Since there are many geometric design variables to be found in existing roads, a signing concept commensurate with prevailing conditions is the primary consideration. Section 2A.01 includes 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.

Option:

The “Sign Design Manual” (SDM) (see Section 1A.11) contains detailed information on the design of freeway and expressway guide signs and entrance ramp approach signs on intersecting roads using a method based on Level of Signing (i.e., Levels 0, I, II, III and IV). The SDM contains extensive information on sizes and placement of shields, cardinal directions, legend, arrows and borders. The element sizes specified in the SDM may be used in lieu of the sizes contained in this Manual. Also, the element spacings specified in the SDM may be used in lieu of the spacings contained in this Manual.

Section 2E.02 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 are correlated as final design is developed. The excessive signing found on many major highways usually is the result of using a multitude of signs that are too small and that are poorly designed and placed to accomplish the intended purpose.

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

Road users should be guided with consistent signing on the approaches to interchanges, when they drive from one State to another, and when driving through rural or urban areas. Because geographical, geometric, and operating factors regularly create significant differences between urban and rural conditions, the signing should take these conditions into account.

Guide signs on freeways and expressways should serve distinct functions as follows:

A. Give directions to destinations, or to streets or highway routes, at intersections or interchanges;

B. Furnish advance notice of the approach to intersections or interchanges;

C. Direct road users into appropriate lanes in advance of diverging or merging movements;

D. Identify routes and directions on those routes;

E. Show distances to destinations;

F. Indicate access to general motorist services, rest, scenic, and recreational areas; and

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

Section 2E.03 General

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.
Section 2E.04  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.

Section 2E.05  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.

Support:

Where there is no serious interference from extraneous light sources, retroreflectorized ground-mounted signs usually provide adequate nighttime visibility.

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 unless an engineering study shows that retroreflectorization alone will perform effectively. The type of illumination chosen should provide effective and reasonably uniform illumination of the sign face and message.

Section 2E.06  Characteristics of Urban Signing

Support:

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

A. Mainline roadways with more than two lanes in each direction;
B. High traffic volumes on the through roadways;
C. High volumes of traffic entering and leaving interchanges;
D. Interchanges closely spaced;
E. Roadway and interchange lighting;
F. Three or more interchanges serving the major city;
G. A loop, circumferential, or spur serving a sizable portion of the urban population; and
H. Visual clutter from roadside development.

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

A. Use of Interchange Sequence signs (see Section 2E.37);
B. Use of sign spreading to the maximum extent possible (see Section 2E.11);
C. Elimination of service signing (see Section 2E.51);
D. Reduction to a minimum of post-interchange signs (see Section 2E.35);
E. Display of advance signs at distances closer to the interchange, with appropriate adjustments in the legend (see Section 2E.30);
F. Use of overhead signs on roadway structures and independent sign supports (see Section 2E.22);
G. Use of diagrammatic signs in advance of intersections and interchanges (see Section 2E.19); and
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 legends are, therefore, just as necessary as on rural highways.

Section 2E.07 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 or inattention 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.

Section 2E.08  Memorial Highway Signing

Support:

See Section 2D.48 for background information on memorializing highways or bridges.

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 installing 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 installed 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.

Guidance:

If used on the mainline, the design of memorial signs should be similar to those established in ODOT’s “Traffic Engineering Manual” (see Section 1A.11).
Section 2E.09 Amount of Legend on Guide Signs

Guidance:

The route and destination information on Advance Guide signs and Exit Direction signs should be limited to a total of three lines. This is in addition to the distance information on the Advance Guide sign and the directional arrow on the Exit Direction signs.

The legend sequence from top to bottom should be route shield information, street name(s), and the community (city or village) name(s). This sequence should remain the same even when one or more of these components is not included.

Route shields, when used, should be included on the first line. When appropriate, cardinal direction information should be included either above or beside the shield(s). Regardless of the number of route shields used, and the presence or absence of cardinal direction information, the route shield component of the sign is considered as one line.

No more than two street names or community names should be shown on any Advance Guide or Exit Direction sign. When used, a second street name or community name should be shown on the line below the first one.

Option:

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

Community names may be included on signs which contain street names, or on signs which contain route shield information and a street name. One or two street names or community names may be included on the Advance Guide and Exit Direction signs, provided the total number of lines of legend does not exceed three.

Where insufficient space exists, community names may be included on a Supplemental Guide sign.

Section 2E.10 Number of Signs at an Overhead Installation

Guidance:

If overhead signs are warranted, as set forth in Section 2A.17, the number of signs at these locations should be limited to only those essential in communicating pertinent destination information to the road user. Exit Direction signs for a single exit and the Advance Guide signs should have only one 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 installed to advise of a multiple exit condition at an interchange. If the roadway ramp or crossing roadway has complex or unusual geometrics, additional signs with confirming messages may be provided to properly guide the road user.

Section 2E.11 Sign Spreading and Pull-Through 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 a single location. Figure 2E-1 illustrates an example of sign spreading. Pull-Through signs (see Figure 2E-2) are overhead lane use signs intended for through traffic.

Guidance:

Where overhead signing is used, sign spreading should be used at all single exit interchanges and to the extent possible at multiexit interchanges. Sign spreading should be accomplished by use of the following:

A. The Exit Direction sign should be the only sign used in the vicinity of the gore (other than the Gore sign). It should be located overhead near the theoretical gore and generally on an overhead sign support structure.

B. The Advance Guide sign to indicate the next interchange exit should be placed near the crossroad location. If the crossroad goes over the mainline, the Advance Guide sign should be placed on the overcrossing structure.

C. Pull-Through 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-Through signs with down arrows should be used when the alignment and number of through lanes is not readily evident.
Figure 2E-1. Example of Guide Sign Spreading

Figure 2E-2. Pull-Through Signs
Section 2E.12  Designation of Destinations

Standard:

The direction of a freeway and the major destinations or control cities (see Section 2D.34) 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. At interchanges between freeways;
B. At separation points of overlapping freeway routes;
C. On directional signs on intersecting routes, to guide traffic entering the freeway;
D. On Pull-Through signs; and
E. On the bottom line of post-interchange distance signs.

Support:

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

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 (see the Preface for AASHTO’s address). Additional information, including a list of the control cities identified for Ohio’s Interstate Highway System are also provided in Part 2 of ODOT’s “Traffic Engineering Manual” (see Section 1A.11).

Section 2E.13  Size and Style of Letters and Signs

Standard:

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 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 Tables 2E-1 and 2E-2. Minimum numeral and letter sizes for freeway guide signs, according to interchange classification, type of sign, and component of sign legend, appear in Tables 2E-3 and 2E-4. All names of places, streets, and highways on freeway and expressway guide signs shall be composed of lower-case letters with initial upper-case letters. Other word legends shall be in capital letters. The initial letters and the numerals used shall be Series E(M) of the "Standard Alphabets for Highway Signs" book. 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.

Option:

As noted in Section 2E.01, the letter sizes specified in the “Sign Design Manual” (SDM) (see Section 1A.11) may be used in lieu of the sizes contained in this Manual. The overall sign sizes determined by following the process detailed in the SDM may be used in lieu of the size which would be obtained by following the process in this Manual.

Support:

Sign size is determined primarily in terms of the length of the message and the size of the lettering necessary for proper legibility. Letter style and height, and arrow design have been standardized for freeway and expressway signs to assure uniform and effective application. Designs for upper-case, lower-case, and capital alphabets together with tables of recommended letter spacing, are shown in the “Standard Alphabets for Highway Signs” (see Section 1A.11).

Guidance:

Where upper- and lower-case lettering is used, the initial upper-case letters should be approximately 1.33 times the "loop" height of the lower-case letters. Freeway lettering sizes (see Tables 2E-3 and 2E-4) 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.

Support:

A sign mounted over a particular roadway lane to which it applies might have to be limited in horizontal dimension to the width of the lane, so that another sign can be placed over an adjacent lane. The necessity to maintain proper vertical clearance might also place a further limitation on the size of the overhead sign and the legend that can be accommodated.
**Table 2E-1. Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Interchange Classification (sizes shown in inches)**

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Type of Interchange (see Section 2E.29)</th>
<th>Major</th>
<th>Intermediate</th>
<th>Minor</th>
<th>Overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Category a</td>
<td>Category b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Advance Guide, Exit Direction, and Overhead Guide Signs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Plaque</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Numeral &amp; Letter</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Interstate Route Shield</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numeral</td>
<td>18</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>18</td>
</tr>
<tr>
<td>1 or 2 Digit Shield</td>
<td>36 x 36</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>36 x 36</td>
</tr>
<tr>
<td>3 Digit Shield</td>
<td>45 x 36</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>45 x 36</td>
</tr>
<tr>
<td>U.S. or State Route Sign</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numeral</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>1 or 2 Digit Shield</td>
<td>36 x 36</td>
<td>36 x 36</td>
<td>36 x 36</td>
<td>24 x 24</td>
<td>36 x 36</td>
</tr>
<tr>
<td>3 Digit Shield</td>
<td>45 x 36</td>
<td>45 x 36</td>
<td>45 x 36</td>
<td>30 x 24</td>
<td>45 x 36</td>
</tr>
<tr>
<td>Alternate (example: U.S. Alt. 56)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td>15</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Numeral</td>
<td>18</td>
<td>15</td>
<td>15</td>
<td>12</td>
<td>15</td>
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<tr>
<td>Cardinal Direction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Letter</td>
<td>18</td>
<td>15</td>
<td>12</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Rest of Word</td>
<td>15</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Name of Destination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-Case Letters</td>
<td>20</td>
<td>16</td>
<td>13.3</td>
<td>10.6</td>
<td>16</td>
</tr>
<tr>
<td>Lower-Case Letters</td>
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<td>12</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Distance Number</td>
<td>18</td>
<td>15</td>
<td>12</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Distance Fraction</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Distance Word</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Action Message Word</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>B. Gore Signs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>---</td>
</tr>
<tr>
<td>Numeral &amp; Letter</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>---</td>
</tr>
</tbody>
</table>
**Table 2E-2. Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Sign Type**

*(Sheet 1 of 2)*

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Minimum Size (mm)</th>
<th>Minimum Size (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Pull-Through Signs</strong></td>
<td></td>
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</tr>
<tr>
<td>Destination – Upper-Case Letters</td>
<td>330</td>
<td>13.3</td>
</tr>
<tr>
<td>Destination- Lower-Case Letters</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Route Shield as Message</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardinal Direction</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>1 or 2 Digit Shield</td>
<td>900 x 900</td>
<td>36 x 36</td>
</tr>
<tr>
<td>3 Digit Shield</td>
<td>1125 x 900</td>
<td>45 x 36</td>
</tr>
<tr>
<td><strong>B. Supplemental Guide Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Number Word</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Exit Number Numeral and Letter</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>Place Name- Upper-Case Letters</td>
<td>265</td>
<td>10.6</td>
</tr>
<tr>
<td>Place Name- Lower-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Action Message</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>C. Changeable Message Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Characters</td>
<td>265*</td>
<td>10.6*</td>
</tr>
<tr>
<td><strong>D. Interchange Sequence Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word- Upper-Case Letters</td>
<td>265</td>
<td>10.6</td>
</tr>
<tr>
<td>Word- Lower-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Numeral</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Fraction</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>E. Next X Exits Sign</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place Name- Upper-Case Letters</td>
<td>265</td>
<td>10.6</td>
</tr>
<tr>
<td>Place Name- Lower-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>NEXT X EXITS</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>F. Distance Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word- Upper-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Word- Lower-Case Letters</td>
<td>150</td>
<td>6</td>
</tr>
<tr>
<td>Numerals</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>G. General Service Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Number Word</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Exit Number Numeral and Letter</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>Services</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>H. Rest Area and Scenic Area Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Distance Numeral</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>Distance Fraction</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Distance Word</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Action Message Word</td>
<td>250</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 2E-2. Minimum Letter and Numeral Sizes for Expressway Guide Signs According to Sign Type (Sheet 2 of 2)

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Minimum Size (mm)</th>
<th>Minimum Size (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Reference Posts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Numeral</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td><strong>J. Boundary and Orientation Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word- Upper-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Word- Lower-Case Letters</td>
<td>150</td>
<td>6</td>
</tr>
<tr>
<td><strong>K. Next Exit and Next Services Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word and Numeral</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>L. Exit Only Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>300</td>
<td>12</td>
</tr>
</tbody>
</table>

* Changeable Message Signs may often require larger sizes than the minimum. A size of 450 m (18 in) should be used where traffic speeds are greater than 90 km/h (55 mph), 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)*

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Type of Interchange (see Section 2E.29)</th>
<th>Major</th>
<th>Intermediate</th>
<th>Minor</th>
<th>Overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Category a</td>
<td>Category b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Advance Guide, Exit Direction, and Overhead Guide Signs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Plaque</td>
<td>Exit Plaque</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td></td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Numeral &amp; Letter</td>
<td></td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Interstate Route Shield</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numeral</td>
<td></td>
<td>24/18</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 or 2 Digit Shield</td>
<td></td>
<td>48 x 48/36 x 36</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3 Digit Shield</td>
<td></td>
<td>60 x 48/45 x 36</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>U.S. or State Route Sign</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numeral</td>
<td></td>
<td>24/18</td>
<td>18</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>1 or 2 Digit Shield</td>
<td></td>
<td>48 x 48/36 x 36</td>
<td>36 x 36</td>
<td>36 x 36</td>
<td>24 x 24</td>
</tr>
<tr>
<td>3 Digit Shield</td>
<td></td>
<td>60 x 48/45 x 36</td>
<td>45 x 36</td>
<td>45 x 36</td>
<td>30 x 24</td>
</tr>
<tr>
<td>Alternate (example: U.S. Alt. 56)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td></td>
<td>15</td>
<td>15/12</td>
<td>12</td>
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<td>Numeral</td>
<td></td>
<td>18</td>
<td>18/15</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Cardinal Direction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Letter</td>
<td></td>
<td>18</td>
<td>15</td>
<td>15</td>
<td>10</td>
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<tr>
<td>Rest of Word</td>
<td></td>
<td>15</td>
<td>12</td>
<td>12</td>
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</tr>
<tr>
<td>Name of Destination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-Case Letters</td>
<td></td>
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<td>20</td>
<td>16</td>
<td>13.3</td>
</tr>
<tr>
<td>Lower-Case Letters</td>
<td></td>
<td>15</td>
<td>12</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Distance Number</td>
<td></td>
<td>18</td>
<td>18/15</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Distance Fraction</td>
<td></td>
<td>12</td>
<td>12/10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Distance Word</td>
<td></td>
<td>12</td>
<td>12/10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Action Message Word</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Gore Signs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Numeral &amp; Letter</td>
<td></td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: (/) Slanted bar signifies separation of desirable and minimum sizes.
### Table 2E-4. Minimum Letter and Numeral Sizes for Freeway Guide Signs

**According to Sign Type**

**Sheet 1 of 2**

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Minimum Size (mm)</th>
<th>Minimum Size (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Pull-Through Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destination – Upper-Case Letters</td>
<td>400</td>
<td>16</td>
</tr>
<tr>
<td>Destination- Lower-Case Letters</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>Route Shield as Message</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardinal Direction</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>1 or 2 Digit Shield</td>
<td>900 x 900</td>
<td>36 x 36</td>
</tr>
<tr>
<td>3 Digit Shield</td>
<td>1125 x 900</td>
<td>45 x 36</td>
</tr>
<tr>
<td><strong>B. Supplemental Guide Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Number Word</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Exit Number Numeral and Letter</td>
<td>375</td>
<td>15</td>
</tr>
<tr>
<td>Place Name- Upper-Case Letters</td>
<td>330</td>
<td>13.3</td>
</tr>
<tr>
<td>Place Name- Lower-Case Letters</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Action Message</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td><strong>C. Changeable Message Signs</strong></td>
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<td></td>
</tr>
<tr>
<td>Characters</td>
<td>265*</td>
<td>10.6*</td>
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<td><strong>D. Interchange Sequence Signs</strong></td>
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<td></td>
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<td>Word- Upper-Case Letters</td>
<td>330</td>
<td>13.3</td>
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<tr>
<td>Word- Lower-Case Letters</td>
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<td>Numeral</td>
<td>330</td>
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<td>Fraction</td>
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<td><strong>E. Next X Exits Sign</strong></td>
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<td></td>
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<tr>
<td>Place Name- Upper-Case Letters</td>
<td>330</td>
<td>13.3</td>
</tr>
<tr>
<td>Place Name- Lower-Case Letters</td>
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<td>10</td>
</tr>
<tr>
<td>NEXT X EXITS</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td><strong>F. Distance Signs</strong></td>
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<td></td>
</tr>
<tr>
<td>Word- Upper-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Word- Lower-Case Letters</td>
<td>150</td>
<td>6</td>
</tr>
<tr>
<td>Numerals</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td><strong>G. General Service Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Number Word</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Exit Number Numeral and Letter</td>
<td>375</td>
<td>15</td>
</tr>
<tr>
<td>Services</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td><strong>H. Rest Area and Scenic Area Signs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>Distance Numeral</td>
<td>375</td>
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<tr>
<td>Distance Fraction</td>
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<td>12</td>
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<tr>
<td>Distance Word</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>Action Message Word</td>
<td>300</td>
<td>12</td>
</tr>
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</table>
Table 2E-4. Minimum Letter and Numeral Sizes for Freeway Guide Signs According to Sign Type (Sheet 2 of 2)

<table>
<thead>
<tr>
<th>Type of Sign</th>
<th>Minimum Size (mm)</th>
<th>Minimum Size (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Reference Posts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Numeral</td>
<td>250</td>
<td>10</td>
</tr>
<tr>
<td>J. Boundary and Orientation Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word- Upper-Case Letters</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Word- Lower-Case Letters</td>
<td>150</td>
<td>6</td>
</tr>
<tr>
<td>K. Next Exit and Next Services Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word and Numeral</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>L. Exit Only Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>M. Diagrammatic Signs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Widths</td>
<td>125</td>
<td>5</td>
</tr>
<tr>
<td>Lane Line Segments</td>
<td>25 x 150</td>
<td>1 x 6</td>
</tr>
<tr>
<td>Gap Between Lane Lines</td>
<td>150</td>
<td>6</td>
</tr>
<tr>
<td>Stem Height (up to upper point of Departure)</td>
<td>750</td>
<td>30</td>
</tr>
<tr>
<td>Arrowhead (standard &quot;up&quot; arrow)</td>
<td>200</td>
<td>8</td>
</tr>
<tr>
<td>Space Between Arrowhead and Route Shield</td>
<td>300</td>
<td>12</td>
</tr>
</tbody>
</table>

* Changeable Message Signs may often require larger sizes than the minimum. A size of 450 m (18 in) should be used where traffic speeds are greater than 90 km/h (55 mph), in areas of persistent inclement weather, or where complex driving tasks are involved.
Section 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.

Option:

The interline and edge spacings specified in the “Sign Design Manual” (see Section 1A.11) may be used.

Section 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 3,000 x 1,000 mm (120 x 72 in), the border should have a width of 50 mm (2 in). For smaller guide signs, a border width of 30 mm (1.25 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 of the corner radius may be trimmed.

The border color, border widths and corner radii specified in the “Sign Design Manual” (see Section 1A.11) may be used.
Section 2E.16  Abbreviations

Guidance:

Abbreviations should be kept to a minimum; however, they are useful when complete destination messages produce excessively long signs. If used, abbreviations should be unmistakably recognized by road users (see Section 1A.14).

Periods should not be used, except 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.

Section 2E.17  Symbols

Standard:

Symbol designs shall be essentially like those shown in this Manual and the “Sign Design Manual” (see Section 1A.11).

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.

Section 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 2D-1. Detailed dimensions of arrows are provided in the “Sign Design Manual” (see Section 1A.11).

Section 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 other symbols or route shields shall be used as a substitute for arrowheads.

C. They shall not be installed at the exit direction location (see Section 2E.33).

D. The EXIT ONLY panel shall not be used on diagrammatic signs at any major split.

Guidance:

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

A. The graphic should not depict deceleration lanes.

B. No more than one destination should be shown for each arrowhead, and no more than two destinations should be shown per sign.

C. A black on yellow EXIT ONLY panel should be used to supplement a lane drop graphic.
D. The shaft for the exit ramp movement should be shorter than, but not separated from, the through movement graphic.

E. Arrow shafts should contain lane lines where appropriate.

F. 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.

G. 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 Advance Guide sign location(s) for the following:

A. Left exits (see Figure 2E-3).

B. Splits where the off-route movement is to the left (see Figure 2E-4).

C. Optional lane splits for non-overlapping routes (see Figure 2E-5).

D. Where a two-lane exit has an optional lane that carries the through route (see Figures 2E-6 and 2E-7). These interchanges create serious expectancy problems for drivers who are unfamiliar with the interchange.

E. Left exit interchange lane drop situations. In this situation, an EXIT ONLY (E11-1c) panel should be used without a down arrow for advance guide signs (see Figure 2E-8).

**Standard:**

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

**Support:**

Specific guidelines for more detailed design of diagrammatic signs are contained in the “Sign Design Manual” (see Section 1A.11).
Figure 2E-3. Diagrammatic Sign for Single-Lane Left Exit
Section 2E.20  Signing for Interchange Lane Drops

Standard:

Major guide signs for all lane drops at interchanges shall be mounted overhead. An EXIT ONLY panel shall be used for all interchange lane drops at which the through route is carried on the mainline.

Guidance:

The EXIT ONLY (E11-1) panel should be used on all signing of lane drops on all Advance Guide signs for right exits (see Figure 2E-9). For lane drops on the left side, diagrammatic signing with the EXIT ONLY (E11-1c) panel should be used without a down arrow for Advance Guide signs (see Figure 2E-8).

Standard:

The Exit Direction (E11-1a) sign 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 (E11-1) panel 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.
Figure 2E-4. Diagrammatic Signs for Split with Dedicated Lanes
Figure 2E-5. Diagrammatic Signs for Split with Optional Lane
Figure 2E-6. Diagrammatic Signs for Two-Lane Exit with Optional Lane
Figure 2E-7. Diagrammatic Signs for Two-Lane Exit with Optional Lane
Figure 2E-8. EXIT ONLY on Left with Diagrammatic Sign for Left Lane Dropped at Interchange
Figure 2E-9. EXIT ONLY Panels for Right Lane Dropped at an Interchange

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Section 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 practical. 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.07, these practices should be followed for mainline freeway and expressway applications:

A. Changeable message signs should be capital letters and have a desirable letter size of 450 mm (18 in) or a minimum letter size 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 two 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 traveling 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 only one such sign shall display a sequential message at any given time.

A three-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.
Section 2E.22  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.

Section 2E.23  Lateral Clearance

Standard:

The minimum lateral clearance outside the usable roadway shoulder for expressway and freeway 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 within the clear zone, the signs shall be mounted on crashworthy supports or shielded by appropriate crashworthy 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 3.7 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 noncrashworthy sign supports shall not be installed 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.

**Section 2E.24 Guide Sign Classification**

Support:

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

A. Route signs and Trailblazer Assemblies (see Section 2E.25);
B. At-Grade Intersection signs (see Section 2E.26);
C. Interchange signs (see Sections 2E.27 through 2E.36);
D. Interchange Sequence signs (see Section 2E.37);
E. Community Interchanges Identification signs (see Section 2E.38);
F. NEXT X EXITS signs (see Section 2E.39);
G. General Service signs (see Section 2E.51);
H. Rest and Scenic Area signs (see Section 2E.52);
I. Tourist Information and Welcome Center signs (see Section 2E.53);
J. Reference Posts (see Section 2E.54);
K. Miscellaneous guide signs (see Section 2E.55);
L. Radio Information signs (see Section 2E.56);
M. Carpool Information signs (see Section 2E.57);
N. Weigh Station signs (see Section 2E.58);
O. Specific Service signs (see Chapter 2F); and
P. Recreation and Cultural Interest signs (see Chapter 2H).
Section 2E.25  Route Signs and Trailblazer Assemblies

Standard:

The official Route sign for the Interstate Highway System shall be the red, white, and blue retroreflective distinctive shield adopted by the American Association of State Highway and Transportation Officials (see Section 2D.11).

Guidance:

Route signs should be incorporated as cut-out shields or other distinctive shapes on large directional guide signs. Where the Interstate shield is displayed in an assembly or on the face of a guide sign with U.S. or State Route signs, the Interstate numeral should be at least equal in size to the numerals on the other Route signs. The use of independent Route signs should be limited primarily to route confirmation assemblies.

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 “Sign Design Manual” (see Section 1A.11). When independently mounted Route signs are used in place of Pull-Through signs, they should be located just beyond the exit.

Option:

The standard Trailblazer Assembly (see 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-Through signs as confirmation information (see Section 2E.11). The commonly used name or trailblazer symbol for a toll facility may be displayed on nontoll 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 route. 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.
Section 2E.26 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.

Section 2E.27 Interchange Guide Signs

Standard:

The signs at interchanges and on their approaches shall include 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 Section 2E.11 and Sections 2E.30 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 240 m (800 ft) apart.

Supplemental guide signing should be used sparingly as provided in Section 2E.32.

Section 2E.28 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 plaque at the top of the Advance Guide or Exit Direction sign. The standard exit number plaque shall include the word EXIT, the appropriate exit number, and the suffix letter A or B (on multieixt interchanges) in a single-line format on a plaque 750 mm (30 in) in height. Minimum numeral and letter sizes are given in Tables 2E-1 through 2E-4. If used, the interchange numbering system for expressways shall conform to the provisions prescribed for freeways.

The reference post numbering system shall be used in designating exit numbers.

Support:

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

Guidance:

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

Option:

The word LEFT may be added to the exit number plaque (see Figure 2E-3).

Support:

The general plan for numbering interchange exits is shown in Figures 2E-10 through 2E-12.

Details of typical exit number plaque designs are shown in Figures 2E-3 and 2E-13. Figures 2E-1, 2E-18, 2E-21, 2E-25 through 2E-30, and 2E-34 illustrate the incorporation of exit number plaques on guide signs.

Standard:

Where a route originates within Ohio, 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-10). The interchange numbers on loop routes shall begin at the loop interchange nearest the south or west mainline junction and increase in magnitude toward the north or east mainline junction (see Figure 2E-11). Spur route interchanges shall be numbered in ascending order starting at the interchange where the spur leaves the mainline of the principal route (see Figure 2E-11).

Where numbered routes overlap, continuity of interchange numbering shall be established for only one of the routes (see Figure 2E-12). If one of the routes is an Interstate, the Interstate route shall maintain continuity of interchange numbering.

Guidance:

The route chosen for continuity of interchange numbering should also have reference post continuity (see Figure 2E-12).

Section 2E.29  **Interchange Classification**

Support:

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

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

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

C. Minor interchanges include those where traffic is local and very light, such as interchanges with land service access roads. Where the sum of exit volumes is estimated to be lower than 100 vehicles per day in the design year, the interchange is classified as minor.
Figure 2E-10. Typical Interchange Numbering for Mainline and Circumferential Routes
Figure 2E-11. Typical Interchange Numbering for Mainline, Loop, and Spur Routes

Legend
- JUNCTION OF TWO INTERSTATE ROUTES
- INTERCHANGE NUMBER
- EXIT NUMBER
- REFERENCE POST

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Figure 2E-12. Typical Interchange Numbering if Routes Overlap

Legend

- JUNCTION OF TWO INTERSTATE ROUTES
- INTERCHANGE NUMBER
- EXIT NUMBER
- REFERENCE POST

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Section 2E.30  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-13).

Guidance:

For major and intermediate interchanges (see Section 2E.29), two and preferably three Advance Guide signs should be used. Placement should be 1 km (0.5 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 (0.5 to 1 mi) from the exit gore. If the sign is located less than 1 km (0.5 mi) from the exit, the distance shown should be to the nearest 0.25 mi. 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 (see Figure 2E-3).

Standard:

When used, the 2 km (1 mi) and 4 km (2 mi) Advance Guide signs 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 MILES. If the interchange has two or more exit roadways, the bottom line shall read EXITS X MILES.

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 240 m (800 ft) between interchanges, Interchange Sequence Series signs should be used instead of Advance Guide signs for the affected interchanges.
**Figure 2E-13. Typical Interchange Advance Guide Signs**

Note: Delete word EXIT(S) if exit number is used.
Section 2E.31  Next Exit Supplemental Signs

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 (see Figure 2E-14).

Guidance:

The Next Exit supplemental 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 MILES. If 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.

Section 2E.32 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.

Guidelines used to identify destinations that qualify as traffic generators for which guide signs may be erected on freeways and expressways are addressed in “The AASHTO Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways” (see the Preface for AASTHO’s address) and Part 2 of ODOT’s “Traffic Engineering Manual” (see Section 1A.11).

Guidance:

No more than one Supplemental Guide sign should be used on each interchange approach.

A Supplemental Guide sign (see Figure 2E-15) should not list more than two destinations. Destination names should be followed by the interchange number (and suffix), or if interchanges are not numbered, by the legend NEXT RIGHT or SECOND RIGHT or both, as appropriate. The Supplemental Guide sign should be installed as an independent guide sign assembly.

Where two or more Advance Guide signs are used, the Supplemental Guide sign should be installed approximately midway between two of the Advance Guide signs. If only one Advance Guide sign is used, the Supplemental Guide sign should follow it by at least 240 m (800 feet). If the interchanges are numbered, the interchange number should be used for the action message.

To control proliferation of these signs, and to aid in uniformity, each highway agency should develop an appropriate policy similar to ODOT’s for installing supplemental signs. In developing policies for such signing, such items as population, amount of traffic generated, distance from the route, and the significance of the destination should be taken into account.
Standard:

Guide signs directing drivers to park and ride facilities shall be considered as Supplemental Guide signs (see Figures 2E-16 and 2E-17).

Section 2E.33 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 90 m (300 ft) from the beginning of the deceleration lane to the theoretical gore (see Figure 3B-8), the Exit Direction sign should be installed overhead over the exiting lane in the vicinity of the theoretical gore.

Standard:

Where a through lane is being terminated (dropped) at an exit, the Exit Direction sign shall be placed overhead at the theoretical gore (see Figures 2E-8 and 2E-9).

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 (see Figure 2E-18).

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 plaques 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, where restricted sight distance because of structures or unusual alignment make it impossible to locate the Exit Direction sign without violating the required minimum spacing (see Section 2E.30) between major guide signs, Interchange Sequence signs (see Section 2E.37) may be substituted for an Advance Guide sign.

Guidance:

At multiexit 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 through lane, an Advance Guide sign for the second exit should be located. Only for those conditions where the through movement is not evident should a confirmatory message (Pull-Through sign as shown in Figure 2E-2) be used over the left lane(s) to guide road users traveling through an interchange. In the interest of sign spreading, three signs on one structure should not be used. When the freeway or expressway is on an overpass, the Exit Direction sign should be installed on an overhead support over the exit lane in advance of the gore point.

Option:

If the second exit is beyond an underpass, the Exit Direction sign may be mounted on the face of the overhead structure.

Section 2E.34 Exit Gore Signs

Support:

The Exit sign in the gore 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.

Guidance:

Each gore should be treated similarly, whether the interchange has one exit roadway or multiple exits.
Figure 2E-15. Supplemental Guide Signs for Multiexit Interchanges

Figure 2E-16. Supplemental Guide Sign for a Park and Ride Facility (Route without Exit Numbering)
**Figure 2E-17. Supplemental Guide Sign for a Park and Ride Facility**  
(Route with Exit Numbering)

![Supplemental Guide Sign for a Park and Ride Facility](image)

**Figure 2E-18. Interchange Exit Direction Sign**

![Interchange Exit Direction Sign](image)

OMUTCD 2003 Edition (English units are preferred.)
Standard:

The Exit sign in the gore 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 (see Figure 2E-19). Breakaway or yielding supports shall be used.

Guidance:

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

Section 2E.35 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.

Section 2E.36 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-20).
Figure 2E-19. Exit Gore Signs
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.

Section 2E.37 Interchange Sequence Signs

Guidance:

If there is less than 240 m (800 ft) between interchanges, Interchange Sequence signs should be used instead 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.

Option:

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

Support:

Interchange Sequence signs are generally supplemental to Advance Guide signs. Signing of this type is illustrated in Figures 2E-21 and 2E-22, 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 0.25 mile.
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 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.
Section 2E.38  **Community Interchanges Identification Signs**

Support:

For suburban or rural communities served by two or three interchanges, Community Interchanges Identification signs are useful (see Figure 2E-23).

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 0.25 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 (see Section 2E.39) may be used.

Section 2E.39  **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 (see Figure 2E-24) 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-21. Signing of Closely Spaced Interchanges Using Interchange Sequence Signs

OMUTCD 2003 Edition (English units are preferred.)
Figure 2E-22. Interchange Sequence Sign

Santa Barbara Ave  3/4
Vernon St          1 1/2
51st Street        2 1/4

Figure 2E-23. Community Interchanges Identification Sign

Columbia Exits
College St        1 1/2
Hanover St        2 1/4
High St           2 3/4

Figure 2E-24. NEXT EXITS Sign

Springfield
NEXT 3 EXITS
Section 2E.40  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-25 through 2E-30 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-8, 2E-9, and Figures 2E-25 through 2E-30). 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-25 through 2E-30) should be followed as closely as possible. Even when unusual geometric features exist, variations in signing layout should be held to a minimum.

Section 2E.41  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-25 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.08, unless a diagrammatic representation of the interchange layout requires otherwise.

At splits 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 (see 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 (0.5 mi) and 4 km (2 mi) points.

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

An Exit Speed sign may be used where an engineering study shows that it is necessary to display a speed reduction message for ramp signing (see Section 2C.33).

**Section 2E.42 Cloverleaf Interchange**

Support:

A cloverleaf 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-26.

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 MILE on the Advance Guide sign for the second exit, as shown in Figure 2E-26. The second exit shall be indicated by an overhead Exit Direction sign over the auxiliary lane. An Exit sign shall also be used at each gore (see Section 2E.34).**

Interchanges with more than one exit from the main line shall be numbered as described in Section 2E.28 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.
**Figure 2E-25. Typical Freeway-to-Freeway Interchange Guide Signs**
Option:

As shown in Figure 2E-26, the overhead Exit Direction sign for the second exit may be mounted on the structure if the mainline passes under the crossroad and the exit roadway is located beyond the structure.

Section 2E.43  **Cloverleaf Interchange with Collector-Distributor Roadways**

Guidance:

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

Standard:

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

Option:

Exits from the collector-distributor roadways 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.

Section 2E.44  **Partial Cloverleaf Interchange**

Support:

Typical application of guide signs for partial cloverleaf interchanges is shown in Figure 2E-27.

Guidance:

As shown in Figure 2E-27, 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.

Support:

Typical application of guide signs for diamond interchanges is shown in Figure 2E-28.
Figure 2E-26. Typical Guide Signs for Full Cloverleaf Interchange
Figure 2E-27. Typical Partial Cloverleaf Interchange Guide Signs
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:

An Exit Speed sign may be used where an engineering study shows that it is necessary to display a speed reduction message for ramp signing (see Section 2C.33).

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 engineering judgment indicates a need, along the ramp in advance of the cross street, to give notice to the driver (see Section 2C.26).

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.

Section 2E.46 Urban Diamond Interchange

Support:

A typical application of guide signs for diamond interchanges in an urban area is shown in Figure 2E-29. This example includes the use of the Community Interchanges Identification sign (see Section 2E.38) which might be useful if two or more interchanges...
Figure 2E-28. Typical Diamond Interchange Guide Signs
Figure 2E-29. Typical Urban Diamond Interchange Signs
serve the same community. In urban areas, street names are often shown as the principal message in destination signs.

Option:
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.

Section 2E.47  Closely Spaced Interchanges

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

Guidance:
Interchange Sequence signs should be used at closely spaced interchanges. When used, they should identify and show street names and distances for the next two or three exits as shown in Figure 2E-21.

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

Section 2E.48  Minor Interchange

Option:
Less 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-30.

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

Guidance:
An Exit Direction sign should also be used.
Figure 2E-30. Typical Minor Interchange Guide Signs
Section 2E.49  Approaches and Connecting Roadways

Guidance:

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

Guide signing for frontage roads should be consistent with the requirements for freeways and expressways.

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.

Section 2E.50  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-31):

A. At least one ONE WAY sign for each direction of travel on the crossroad shall be placed where the exit ramp intersects the crossroad.

C. At least one DO NOT ENTER sign 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.

D. At least one WRONG WAY sign shall be placed on the exit ramp facing a road user traveling 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.
Figure 2E-31. Typical Regulatory Signing and Pavement Markings at Exit Ramp Termination to Deter Wrong-Way Entry

Figure 2E-32. Typical Regulatory Signing and Pavement Markings at Entrance Ramp Terminal Where Design Does Not Clearly Indicate the Direction of Flow
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 Figure 2E-31.)

Option:

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

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

B. Additional WRONG WAY signs may be used.

C. Slender, elongated wrong-way arrow pavement markings (see Figure 3B-20) intended primarily to warn wrong-way road users that they are going in the wrong direction may be placed upstream from the ramp terminus, as shown in Figure 2E-31, to indicate the correct direction of traffic flow. 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.

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 near the entrance ramp merging point as illustrated in Figure 2E-32.

Option:

At locations where engineering judgment determines that a special need exists, other standard warning or prohibitive methods and devices may be used as a deterrent to the wrong-way movement.
Support:

Sections 2A.24 and 2B.30 contain further information on signing to avoid wrong-way movements at at-grade intersections on expressways.

Section 2E.51 General Service Signs

Support:

General Service signs are generally not appropriate at major interchanges (see Section 2E.29 for definition) and in urban areas.

Additional guidelines and standards for the use of General Service signs on state highways are located in Part 2 of the ODOT “Traffic Engineering Manual” (see Section 1A.11).

Option:

If interchanges are not numbered, an action message such as NEXT RIGHT or SECOND RIGHT may be used (see Figure 2E-33).

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 service messages shall not be intermixed. If the 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 use arrows to indicate the direction to the services.

Guidance:

Distance to services should be shown on General Service signs where distances are more than 2 km (1 mi).

General 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 on General Service signs. Each highway agency that elects to provide General Service signing should establish a policy for such signing, similar to that published by ODOT in the “Traffic Engineering Manual” (see Section 1A.11).
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, if any, as illustrated in Figure 2E-34.

Option:

If the distance to the next point where services are available is greater than 16 km (10 miles), a sign NEXT SERVICES XX MILES, shown in Figure 2E-35, may be used as a separate panel installed below the Exit Direction sign.

Standard:

Signs for services shall conform to the format for General Service signs (see Section 2D.44) and as specified herein. Letter and numeral sizes shall be as shown in Tables 2E-1 through 2E-4 or the “Sign Design Manual” (see Sections 1A.11 and 2E.01).

No more than six general road user services shall be displayed on one sign, which includes any appended panels. 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.

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

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. If used, HOSPITAL and CAMPING should be on separate lines (see Figure 2E-34).
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 Accessibility for the Handicapped (D9-5) sign 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:
   1. Top row—GAS, FOOD, and LODGING
   2. Bottom row—PHONE, HOSPITAL, and CAMPING

B. Four services:
   1. Top row—GAS and FOOD
   2. Bottom row—LODGING and PHONE

C. Three services:
   1. 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 (D9-11) symbol or the LP-Gas (D9-15) symbol may be substituted for the symbol representing fuel or appended to such assemblies. The information (D9-10) symbol 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 more than three services become available at rural interchange areas where limited road user services were anticipated, any appended sign panel shall be removed and replaced with an independently mounted General Service sign as described in this Section.
Option:

A separate Telephone Service sign (D9-1) may be installed if telephone facilities are located adjacent to the route at places where public telephones would not normally be expected.

The Recreational Vehicle Sanitary Station (D9-12) sign 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 (D9-16) sign may be used on a separate panel below the other general road user services to direct truck drivers to designated parking areas.

Section 2E.52  Rest and Scenic Area Signs

Guidance:

Signing for rest areas and 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 facilities 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.53.

Scenic area signing should be consistent with that specified for rest areas. Standard messages should read SCENIC AREA, SCENIC VIEW, SCENIC OVERLOOK, 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, a REST AREA advance guide sign shall be placed 2 km (1 mi) and/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-36.

Option:

If the rest area has facilities for the physically impaired (see Section 2D.44), the International Symbol of Accessibility for the Handicapped (D9-5) sign may be placed with or beneath the REST AREA advance guide sign.
Figure 2E-33. Typical General Service Signs (without Exit Numbering)

Figure 2E-34. Typical General Service Signs (with Exit Numbering)

Figure 2E-36. Typical Rest Area Gore Sign

Figure 2E-35. Typical Next Service Signs
Between the REST AREA advance guide sign and the gore of the rest area exit, there may be a sign reading REST AREA. The words NEXT RIGHT or an arrow may be included 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 MILES may be installed independently or as a supplemental panel mounted below one of the REST AREA advance guide signs.

**Section 2E.53  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:**

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.

**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 Tourist Information or Welcome Center signs shall be removed or covered during the off seasons.

**Guidance:**

For freeway or expressway rest area locations that also serve as tourist information or welcome centers, the following signing criteria should be used:

A. The locations for the Advance Guide, Exit Direction, and Exit Gore signs should meet the General Service signing requirements described in Section 2E.51.

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, XX MILES or REST AREA, WELCOME CENTER XX MILES. On the Exit Direction sign the message should be REST AREA, TOURIST INFO CENTER with an upward sloping arrow (or NEXT RIGHT), or REST AREA, WELCOME CENTER with an 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 should not be supplemented with any legend pertaining to the tourist information center or welcome center.

Option:

An alternative to the supplemental TOURIST INFO CENTER legend is the Information Symbol (D9-10) sign, which may be appended beneath the REST AREA advance guide sign. The name of the State or local jurisdiction may appear on tourist information/welcome center signs if the jurisdiction controls the operation of the tourist information or welcome center and the center meets the operating criteria set forth herein and is consistent with State policies. The State name may be used on the Advance Guide and the Exit Direction signs.

Guidance:

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

A. The tourist information center should be located a maximum of 1.6 km (1 mi) 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 Service signing (see Section 2E.51).

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

Option:

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

Section 2E.54 Reference Posts

Standard:

Reference posts shall be placed on all freeway facilities. Reference posts shall also be placed on expressway facilities that are located on a route where there is reference post continuity. Reference posts shall conform to the general provisions for reference 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 shall contain the word MILE.

Reference posts 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 the State except where overlaps occur (see Section 2E.28). With overlapped routes, continuity shall be established for one of the routes. If one of the overlapping routes is an Interstate route, that route shall be selected for continuity of distance numbering.

Guidance:

The route selected for continuity of distance numbering should also have continuity in interchange exit numbering (see Section 2E.28). On a route without reference post continuity, the first marker beyond the overlap should indicate the total distance traveled on the route.

Option:

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

Section 2E.55  Miscellaneous Guide Signs

Support:

Miscellaneous Guide signs are used to point out geographical features, such as rivers and summits, and other jurisdictional boundaries (see Section 2D.47).

Option:

Miscellaneous Guide signs 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.
A State Line (E8-H1) sign should be erected where a route enters the State of Ohio from another state.

The Corporation Limit (E8-H2) sign should be installed where a route enters a municipality.

Option:

Where a route leaves a municipality and subsequently re-enters the same municipality within a relatively short distance, the ENTER CORP (I-H2b) sign may be used at the re-entry location.

The LEAVE CORP (I-H2c) sign may be used at a location where a route leaves a municipality.

Guidance:

The County Line (E8-H3) sign should be installed where a route enters an Ohio county from another Ohio county or another state.

Standard:

The State Line (E8-H1) sign shall have a standard size of 6900 x 2100 mm (276 x 84 in). The Corporation Limit (E8-H2) sign shall have a standard height of 900 mm (36 in) with a variable width. The Enter Corp (I-H2b) sign and Leave Corp (I-H2c) sign shall have a standard size of 900 x 600 mm (36 x 24 in). The County Line (E8-H3) sign shall have a standard height of 1200 mm (48 in) with a variable width.

Section 2E.56 Radio Information Signing

Option:

Radio-Weather Information (D12-1) signs may be used in areas where difficult driving conditions commonly result from weather systems. Radio-Traffic Information signs 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. Only radio stations whose signal will be of value to the road user and who agree to broadcast either of 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; or

B. Driving condition information (affecting the roadway being traveled) at a rate of at least once every 15 minutes, or when required, during periods of adverse traffic conditions, and when 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 as needed for each direction of travel at distances determined by an engineering study. 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:

In 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 installed in rest areas shall be positioned such that they are not visible from the main roadway.

Option:

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

Standard:

Only official public agencies or their designee shall be shown as the monitoring agency on the Channel 9 Monitored sign.
Section 2E.57  Carpool Information Signing

Option:

In areas having carpool matching services, Carpool Information (D12-2) signs may be provided adjacent to highways with preferential lanes or along any other highway.

Guidance:

Because 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 900 mm (36 in).

Section 2E.58  Weigh Station Signing

Standard:

Weigh Station signing on freeways and expressways shall be the same as that specified in Section 2D.43, except for lettering size and the advance posting distance for the Exit Direction sign, which shall be located a minimum of 450 m (1,500 ft) in advance of the gore.

Support:

Weigh Station sign layouts for expressway and freeway applications are shown in the “Sign Design Manual” (see Section 1A.11)
CHAPTER 2F. SPECIFIC SERVICE SIGNS

Section 2F.01 Eligibility

Support:

Pursuant to Section 4511.101 of the Ohio Revised Code (O.R.C.), and based on the standards and guidelines noted herein, the Ohio Department of Transportation (ODOT) has established “a program for placement of business logos for identification purposes on state directional signs within the rights-of-way of divided, multi-lane, limited access highways in both rural and urban areas.” This is commonly referred to as the Logo Program.

Standard:

Specific Service signs shall be defined as guide signs that provide road users with business identification and directional information for services (i.e., gas, food, lodging, and camping) and for eligible attractions.

Specific Service signs shall not be installed at an interchange where the road user cannot conveniently reenter the freeway or expressway and continue in the same direction of travel.

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:

Except as noted in the Option, eligible services shall be located within 5 km (3 mi) of the nearest ramp terminus.

Option:

If, within the 5 km (3 mi) limit, no campgrounds are available, the limit of eligibility may be extended in 5 km (3 mi) increments until one or more campgrounds or 25 km (15 mi) is reached, whichever comes first.

Standard:

If local agencies elect to provide Specific Service signing, the ODOT policy for such signing and criteria for the availability of the various types of services shall be used.
Support:

Additional information about ODOT’s Logo Program is in Part 2 of the ODOT “Traffic Engineering Manual” (TEM) (see Section 1A.11). Information about the rules and specifications for ODOT’s Logo Program is available by contacting the ODOT Office of Traffic Engineering at the address noted in the front of this Manual.

Section 2F.02 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 three types of services shall be represented on any sign or sign assembly. If three types of services are shown on one sign, then the logo panels shall be limited to two for each service (for a total of six logo panels). The legend and logo panels applicable to a service type shall be displayed such 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 upper-case 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.

Option:

General Service signs (see Sections 2D.44 and 2E.51) may be used in conjunction with Specific Service signs for eligible types of 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.
Section 2F.03 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 supplemental legends DIESEL, DIESEL ONLY, OPEN 24 HOURS and/or alternative fuels (see Section 2E.51), when appropriate. A portion at the bottom of a FOOD logo panel may be used to display the word CLOSED and the day of the week when the facility is closed.

Standard:

The minimum height of these supplemental legends on mainline logo panels shall be 7 inches, and 3 inches on ramp logo sign panels.

Section 2F.04 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 four logo panels for one of the two service types on the same sign or sign assembly.
Figure 2F-1. Typical Specific Service Signs

Note: Design information for these signs, as well as for ramp and trailblazer signs, are available from ODOT, Office of Traffic Engineering upon request.
Figure 2F-2. Typical Specific Service Sign Locations

*Specific service ramp sign(s) (as needed) spacing should be at least 30 m (100 ft) from the exit gore sign, from each other, and from the ramp terminal.

The travel distance to be shown on signs should be measured from this point.

If a loop is to be signed, the travel distance to be shown on signs should be measured from here.

Travel distance for sign priority should always be measured from this point.
Support:

Section 2F.08 contains information regarding Specific Service signs for double-exit interchanges.

Standard:

Each logo panel attached to a Specific Service sign shall have a rectangular shape with a width longer than the height. A logo panel on signs for freeways and expressways shall not exceed 1200 mm (48 in) in width and 900 mm (36 in) in height. A logo panel on signs for ramps shall not exceed 600 mm (24 in) in width and 450 mm (18 in) in height. The vertical and horizontal spacing between logo panels shall not exceed 200 mm (8 in) and 300 mm (12 in), respectively.

Support:

Sections 2A.15, 2E.14, and 2E.15 contain information regarding borders, interline spacing, and edge spacing.

Section 2F.05 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 ramps.

Guidance:

Any legend on a symbol/trademark should be proportional to the size of the symbol/trademark.

Section 2F.06 Signs at Interchanges

Standard:

The Specific Service signs shall be installed 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.

**Standard:**

Specific Service ramp signs shall be spaced at least 60 m (200 ft) from the exit gore sign, from each other, and from the ramp terminal.

Option:

Specific Service ramp signs may be placed on alternating sides of the ramp at 30 m (100 ft) spacing.

**Section 2F.07 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 logo panels. 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 that have logo panels 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. Logo panels 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.

Specific Service ramp signs shall include distances to the service facilities.

**Section 2F.08 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 logo panels for the first exit and the bottom section shall display the logo panels for the second exit.
The name of the service type and the exit number shall be displayed above the logo panels 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 logo panels 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.

Section 2F.09  Signs at Intersections

Standard:

Specific Service signs shall not be used at intersections.

Support:

See Chapter 2G for information about tourist-oriented directional signs (TODS). These signs are used to display the business identification of and directional information to business, service, and activity facilities on conventional roads.

Section 2F.10  Signing Policy

Support:

As noted in Section 2F.01, Section 4511.101 of the O.R.C. requires ODOT to establish a Specific Service signing program. ODOT has established a policy for such signing, criteria for the availability of the various types of services, sign specifications and program rules.

Standard:

Each highway agency that elects to use Specific Service signs shall use the Specific Service signing guidelines, criteria and sign specifications established by ODOT.
CHAPTER 2G. TOURIST-ORIENTED DIRECTIONAL SIGNS

Section 2G.01 Purpose and Application

Support:

Tourist-oriented directional signs (TODS) are guide signs with one or more panels that display the business identification of and directional information for business, service, and activity facilities.

Pursuant to Sections 4511.102 through 4511.105 of the Ohio Revised Code (O.R.C.), the Ohio Department of Transportation (ODOT) has, in conformance with the federal “Manual on Uniform Traffic Control Devices,” established the provisions noted in this chapter to carry out “a program for the placement of tourist-oriented directional signs and trailblazer markers within the rights-of-way of those portions of rural state highways that are not on the interstate system.”

O.R.C. Section 4511.106 requires that any local authority electing to establish a TODS program conform to the rules and specifications contained in the program established by ODOT.

Standard:

A facility shall be eligible for tourist-oriented directional signs only if it derives its major portion of income or visitors during the normal business season from road users not residing with 10 miles of the facility and attendance at which is no less than 2,000 in any consecutive twelve month period.

Also, to be eligible for tourist-oriented directional signing, facilities shall comply with applicable State or Federal 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.

Option:

Tourist-oriented directional signs may include businesses involved with seasonal agricultural products.

Standard:

When used, tourist-oriented directional signs shall be used only in advance of intersections on rural state highways and shall not be used at interchanges on expressways or freeways.

Option:

Tourist-oriented directional signs may be used in conjunction with General Service signs (see Section 2D.44).
Section 2G.02  Design

Standard:

Tourist-oriented directional signs shall have one or more panels for the purpose of displaying the business identification of and directional information for eligible facilities. Each panel shall be rectangular in shape and shall have a white legend and border on a blue background.

The content of the legend on each panel shall be limited to the business identification and directional information for not more than one eligible business, service, or activity facility. The legends shall not include promotional advertising.

Guidance:

Each panel should have a maximum of two lines of legend including not more than one symbol, a separate directional arrow, and the distance to the facility shown beneath the arrow. Arrows pointing to the left or up should be at the extreme left of the sign. Arrows pointing to the right should be at the extreme right of the sign. Symbols, when used, should be to the left of the word legend or logo.

Standard:

The tourist-oriented directional sign shall have the word message TOURIST ACTIVITIES at the top of the sign.

The TOURIST ACTIVITIES word message shall be a white legend and border on a blue background. It shall be placed above and in addition to the panels.

Option:

The General Service sign symbols (see Section 2D.44) and the symbols for recreational and cultural interest area signs (see Chapter 2H) may be used.

Logos for specific businesses, services, and activities may also be used. Based on engineering judgment, the hours of operation may be added on the panels.

Standard:

When used, symbols and logos shall be an appropriate size (see Section 2G.04). Logos resembling official traffic control devices shall not be permitted.

Support:

Typical tourist-oriented directional signs are shown in Figure 2G-1.
Section 2G.03  **Style and Size of Lettering**

Guidance:

All letters and numbers on tourist-oriented directional signs, except on the logos, should be upper-case and at least 150 mm (6 in) in height. Any legend on a logo should be proportional to the size of the logo.

**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."

Section 2G.04  **Arrangement and Size of Signs**

**Standard:**

The size of a tourist-oriented directional sign shall be limited to a maximum height of 2.4 m (8 ft).

The number of intersection approach signs (one sign for tourist-oriented destinations to the left, one for destinations to the right, and one for destinations straight ahead) installed at an intersection shall not exceed three. The left and right assemblies shall be located in advance of the intersection, the ahead assembly on the far side.

The number of panels installed on each sign shall not exceed four.

Guidance:

The panels for right-turn, left-turn, and straight-ahead destinations should be on separate signs. The left-turn destination sign should be located farthest from the intersection, then the right-turn destination sign, with the straight-ahead destination sign located closest to the intersection (see Figure 2G-2).

**Standard:**

Signs for facilities in the straight-ahead direction shall be considered only when there are signs for similar facilities in either the left or right direction.
Figure 2G-1. Typical Tourist-Oriented Directional Signs

Note: Series of lettering depends upon length of legend. Maximum length of business name per line is 1.6 m (5 ft - 4 in). Reflectized white legend on reflectized blue background.
Figure 2G-2. Typical Intersection Approach Signs and Advance Signs for Tourist-Oriented Directional Signs

(1) Use if there is an intervening road
Guidance:

When it is appropriate to combine the left-turn and right-turn destination panels on a single sign, the left-turn destination panels should be above the right-turn destination panels (see Figure 2G-1). When there are multiple destinations in the same direction, they should be in order based on their distance from the intersection.

A straight-ahead panel should not be combined with a sign displaying left- and/or right-turn facilities.

The panels should not exceed the size necessary to accommodate two lines of legend without crowding. Symbols and logos on a panel should not exceed the height of two lines of word legends.

Standard:

All panels and other parts of the sign shall be the same width, which shall not exceed 1.8 m (6 ft).

Section 2G.05  Advance Signs

Guidance:

Advance signs should be limited to those situations where sight distance, intersection vehicle maneuvers, or other vehicle operating characteristics require advance notification of the services.

The design of the advance sign should be identical to the design of the intersection approach sign. However, the directional arrows and distances to the facilities should be omitted. The directional word messages NEXT RIGHT, NEXT LEFT, or AHEAD should be placed on the sign above the business identification panels. The directional word messages should have the same letter height as the other word messages on the panels (see Figures 2G-1 and 2G-2).

Standard:

The directional word messages shall be a white legend and border on a blue background.

Option:

The legend RIGHT 1/2 MILE or LEFT 1/2 MILE may be used on advance signs when there are intervening minor roads.
The height required to add the directional word messages recommended for the advance sign may be added to the maximum sign height of 2.4 m (8 ft).

Section 2G.06  Sign Locations

Standard:

If used, the intersection approach signs shall be located at least 60 m (200 ft) in advance of the intersection. Signs shall be spaced at least 60 m (200 ft) apart and at least 60 m (200 ft) from other traffic control devices.

If used, advance signs shall be located approximately 1 km (0.5 mi) from the intersection with 240 m (800 ft) between these signs.

Guidance:

In the direction of travel, the order of advance sign placement should be to show the facilities to the left first, then facilities to the right, and last, the facilities straight ahead.

Position, height, and lateral clearance of signs should be governed by Chapters 2A and 2D except as permitted in this Section.

Option:

Tourist-oriented directional signs may be placed further from the edge of the road than other traffic control signs.

Standard:

The location of other traffic control devices shall take precedence over the location of tourist-oriented directional signs.

Section 2G.07  State Policy

Support:

As noted in Section 2G.01, pursuant to Sections 4511.102 through 4511.105 of the Ohio Revised Code (O.R.C.) (see Appendix B2), the Ohio Department of Transportation (ODOT) established a State policy regarding tourist-oriented directional signs. That policy is reflected in this chapter. Additional information specific to ODOT’s application of this policy is located in Part 2 of ODOT’s “Traffic Engineering Manual” (see Section 1A.11).
O.R.C. Section 4511.106 requires that any local authority electing to establish a TODS program conform to the rules and specifications contained in the program established by ODOT.
CHAPTER 2H. RECREATIONAL AND CULTURAL INTEREST AREA SIGNS

Section 2H.01 Scope

Support:

Recreational or cultural interest areas are attractions or traffic generators that are open to the general public for the purpose of play, amusement, or relaxation. Recreational attractions include such facilities as parks, campgrounds, gaming facilities, and ski areas, while examples of cultural attractions include museums, art galleries, and historical buildings or sites.

The purpose of recreation and cultural interest area signs is to guide road users to a general area and then to specific facilities or activities within the area.

Option:

Recreational and cultural interest area signs that depict significant traffic generators may be used on expressway and freeways where there is direct access to these areas as discussed in Section 2H.09.

Recreational and cultural interest area signs may be used off the road network, as appropriate.

Section 2H.02 Application of Recreational and Cultural Interest Area Signs

Support:

Standards for signing recreational or cultural interest areas are subdivided into two different types of signs: (1) symbol signs and (2) destination guide signs.

Guidance:

When highway agencies decide to provide recreational and cultural interest area signing, these agencies should have a policy for such signing. The policy should establish signing criteria for the eligibility of the various types of services, accommodations, and facilities. These signs should not be used where they might be confused with other traffic control signs.

Option:

Recreational and cultural interest area signs may be used on any road to direct persons to facilities, structures, and places, and to identify various services available to the general public. These signs may also be used in recreational or cultural interest areas for signing nonvehicular events and amenities such as trails, structures, and facilities.
Section 2H.03 Regulatory and Warning Signs

Standard:

All regulatory and warning signs installed on public roads and streets within recreational and cultural interest areas shall conform to the requirements of Chapters 2A, 2B, and 2C.

Section 2H.04 General Design Requirements for Recreational and Cultural Interest Area Symbol Signs

Standard:

Recreational and cultural interest area symbol signs shall be square or rectangular in shape and shall have a white symbol or message and white border on a brown background. The symbols shall be grouped into the following usage and series categories (see the “Sign Design Manual” (SDM) for design details):

A. General Information (RG Series)
B. Motorist Services (RM Series)
C. Accommodation Services (RA Series)
D. Land Recreation (RL series)
E. Water Recreation (RW Series), and
F. Winter Recreation (RS Series)

Support:

Table 2H-1 contains a listing of the symbols within each series category. Drawings for these symbols are found in the SDM (see Section 1A.11).

Option:

Mirror images of symbols may be used where the reverse image will better convey the message.
Table 2H-1. Category Chart for Symbols

<table>
<thead>
<tr>
<th>General Information</th>
<th>Accommodation Services</th>
<th>Water Recreation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile</td>
<td>Airport</td>
<td>Boat Tours</td>
</tr>
<tr>
<td>Bear Viewing Area</td>
<td>Bus Stop</td>
<td>Canoeing</td>
</tr>
<tr>
<td>Dam</td>
<td>Campfire</td>
<td>Diving</td>
</tr>
<tr>
<td>Deer Viewing Area</td>
<td>Elevator *</td>
<td>Diving (Scuba)</td>
</tr>
<tr>
<td>Drinking Water</td>
<td>Kennel</td>
<td>Fishing</td>
</tr>
<tr>
<td>Environmental Study Area</td>
<td>Laundry</td>
<td>Marine Recreation</td>
</tr>
<tr>
<td>Falling Rocks *</td>
<td>Locker *</td>
<td>Area</td>
</tr>
<tr>
<td>Firearms</td>
<td>Parking</td>
<td>Motorboating</td>
</tr>
<tr>
<td>Fish Hatchery</td>
<td>Rest Room (Men) *</td>
<td>Ramp (Launch)</td>
</tr>
<tr>
<td>Information</td>
<td>Rest Room (Women) *</td>
<td>Rowboating</td>
</tr>
<tr>
<td>Leashed Pets *</td>
<td>Shelter (Sleeping) *</td>
<td>Sailboating</td>
</tr>
<tr>
<td>Lighthouse</td>
<td>Shelter (Trail) *</td>
<td>Skiing (water)</td>
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<td>Litter Container</td>
<td>Showers *</td>
<td>Surfing</td>
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<tr>
<td>Lookout Tower</td>
<td>Family Rest Room *</td>
<td>Swimming</td>
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<td>Ped Xing *</td>
<td>Helmets (Trail) *</td>
<td>Wading</td>
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<td>Point of Interest</td>
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<td>Fishing Pier</td>
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<tr>
<td>Ranger Station</td>
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<td>Hand Launch</td>
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<td>Smoking *</td>
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<td>Kayak</td>
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<td>Truck</td>
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<td>Wind Surf</td>
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<tr>
<td>Tunnel</td>
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<td>Winter Recreation</td>
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<td>Dog</td>
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<td>Seaplane</td>
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<th>Land Recreation</th>
<th>Winter Recreation</th>
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<td>Camping (tent)</td>
<td>Amphitheater</td>
<td>Skating (Ice)</td>
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<td>Camping (trailer)</td>
<td>Climbing</td>
<td>Ski Jumping</td>
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<tr>
<td>Ferry</td>
<td>Climbing (Rock)</td>
<td>Skiing (Bobbing)</td>
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<td>First Aid</td>
<td>Hunting</td>
<td>Skiing (Cross Country)</td>
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<td>Food</td>
<td>Playground</td>
<td>Skiing (Downhill)</td>
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<td>Gas</td>
<td>Rock Collecting</td>
<td>Sledding</td>
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<td>Grocery Store</td>
<td>Spelunking</td>
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<td>Stable</td>
<td>Snowshoeing</td>
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<td>Lodging</td>
<td>Trail (Bicycle)</td>
<td>Winter Recreation Area</td>
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<tr>
<td>Mechanical</td>
<td>Trail (Hiking)</td>
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<td>Post Office</td>
<td>Trail (Horse)</td>
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<td>Picnic Area</td>
<td>Trail (Interpretive, Auto)</td>
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<td>Picnic Shelter</td>
<td>Trail (Interpretive, Ped.)</td>
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<td>Rest Room</td>
<td>Trail/Road (4 WD Veh.)</td>
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<td>Telephone</td>
<td>Trail (Trail Bike)</td>
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<td>Trailer Sanitary Station</td>
<td>Tramway</td>
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<tr>
<td>Viewing Area</td>
<td>All-Terrain Vehicle</td>
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<td>Motor Home</td>
<td>Archer</td>
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<tr>
<td>Group Camping</td>
<td>Hang Glider</td>
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<td>Group Picnicking</td>
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* For Non-Road Use
Section 2H.05  Symbol Sign Sizes

Guidance:

Recreational and cultural interest area symbol signs should be 600 x 600 mm (24 x 24 in). Where greater visibility or emphasis is needed, larger sizes should be used. Symbol sign enlargements should be in 150 mm (6 in) increments.

Recreational and cultural interest area symbol signs should be 750 x 750 mm (30 x 30 in) when used on expressways or freeways.

Option:

A smaller size of 450 x 450 mm (18 x 18 in) may be used on low-speed, low-volume roadways and on nonroad applications.

Section 2H.06  Use of Educational Plaques

Guidance:

Educational plaques should accompany all initial installations of recreational and cultural interest area symbol signs. The educational plaque should remain in place for at least 3 years after the initial installation. If used, the educational plaque should be the same width as the symbol sign.

Option:

Symbol signs that are readily recognizable by the public may be installed without educational plaques.

Support:

Figure 2H-1 illustrates some typical uses of educational plaques.

Section 2H.07  Use of Prohibitive Slash

Standard:

The red diagonal slash, if used on a recreational and cultural interest area sign, shall be placed from the upper left corner to the lower right corner of the sign face. Requirements for retroreflection of the red slash shall be the same as those requirements for legends, symbols, and borders.
Figure 2H-1. Typical Use of Educational Plaques, Prohibitory Slashes, and Arrows

a) Directional sign with arrow

b) Directional signs with arrow

c) Directional signs with arrows

d) Directional sign with secondary symbol

e) Management symbols with prohibitive slashes and educational plaques

f) Directional sign with educational plaque and arrow

OMUTCD 2003 Edition (English units are preferred.)
Option:

Where it is necessary to indicate a restriction within a recreational or cultural interest area, a red diagonal slash may be used to indicate that the activity is prohibited.

Support:

Figure 2H-1 illustrates some typical uses of prohibitive slashes.

Section 2H.08 Placement of Recreational and Cultural Interest Area Symbol Signs

Standard:

If used, recreational and cultural interest area symbol signs shall be placed in accordance with the general requirements contained in Chapter 2A. The symbol(s) shall be placed in the uppermost part of the sign assembly and the directional information shall be placed below the symbol(s).

Where the name of the recreational or cultural interest area facility or activity is shown on a general directional guide sign and a symbol is used, the symbol shall be placed below the name (see Figure 2H-2).

Recreational and cultural interest area symbols installed for nonroad use shall be placed in accordance with the general sign position requirements of the authority having jurisdiction.

Support:

Figure 2H-3 illustrates typical height and lateral mounting positions. Figure 2H-4 illustrates typical placement of symbol signs within a recreational or cultural interest area. Figures 2H-5 and 2H-6 illustrate some of the symbols that can be used.

Guidance:

The number of symbols used in a single sign assembly should not exceed four.

Option:

Symbols for recreational or cultural interest areas may be used as legend components for a directional sign assembly. The symbols may be used singularly, or in groups of two, three, or four on a single sign assembly (see Figures 2H-1, 2H-3, and 2H-4). Smaller-size secondary symbols (see Figure 2H-1) may be placed beneath the primary symbols, where needed.
Figure 2H-2. Typical General Directional Guide Signs for Conventional Roads

- **BLUE SPRINGS**
- **CEDAR CREEK**
- **YELLOWSTONE NATIONAL PARK 2 MILES**
- **WINTER SPORTS**
- **GREAT SMOKY MTS NATIONAL PARK**
Figure 2H-3. Height and Lateral Position of Signs Located Within Recreational and Cultural Interest Areas

- Roadside Sign: Business or Residence District
  - Not less than 0.6 m (2 ft)

- Paved shoulder
  - Not less than 1.8 m (6 ft)
  - Not less than 1.5 m (5 ft)

- Roadside Signs: Rural District
  - Not less than 2.1 m (7 ft)

- Roadside Assembly: Business or Residence District
  - Not less than 0.6 m (2 ft)
  - Not less than 1.8 m (6 ft)

- Paved shoulder
  - Not less than 1.5 m (5 ft)
Figure 2H-4. Typical Symbol Signing Layout
Figure 2H-5. Modifications to Existing Symbols

- **RG-130**: Litter Container
- **RG-170**: Ranger Station
- **RM-120**: Picnic Area
- **RA-060**: Laundry
- **RA-110**: Sleeping Shelter
- **RL-130**: Interpretive Trail (recommended for use with educational plaque)
Figure 2H-6. New Recreational and Cultural Interest Area Symbols

- RM-200 Motor Home
- RM-210 Group Camping
- RM-220 Group Picnicking
- RG-240 Dog
- RG-260 Seaplane
- RA-150 Family Restroom
- RA-160 Helicopter
- RL-170 All-Terrain Vehicle
- RL-190 Archer
- RL-210 Hang Glider
- RW-160 Fishing Pier
- RW-170 Hand Launch
- RW-190 Kayak
- RW-210 Wind Surf
- RS-100 Chairlift
Section 2H.09  Destination Guide Signs

Guidance:

When recreational or cultural interest area destinations are shown on supplemental guide signs, the sign should be rectangular or trapezoidal in shape. The order of preference for use of shapes and colors should be as follows: (1) rectangular with a white legend and border on a green background; (2) rectangular with a white legend and border on a brown background; or (3) trapezoidal with a white legend and border on a brown background.

Standard:

Whenever the trapezoidal shape is used, the color combination shall be a white legend and border on a brown background.

Option:

White-on-brown destination guide signs may be posted at the first point where an access or crossroad intersects a highway where recreational or cultural interest areas are a significant destination along conventional roads, expressways, or freeways. White-on-brown supplemental guide signs may be used along conventional roads, expressways, or freeways to direct road users to recreational or cultural interest areas. Where access or crossroads lead exclusively to the recreational or cultural interest area, the advance guide sign and the exit direction sign may be white-on-brown.

Standard:

Linear parkway-type highways that merely function as arterial connectors without providing access to recreational or cultural interest areas shall not qualify for the use of white-on-brown destination guide signs. Directional guide signs used on these highways shall conform to Chapter 2D.

All gore signs shall have a white legend and border on a green background. The background color of the interchange exit number panel shall match the background color of the guide sign. Design characteristics of conventional road, expressway, or freeway guide signs shall conform to Chapter 2D or 2E except as specified in this Section for color combination.

The advance guide sign and the Exit Direction sign shall retain the white-on-green color combination where the crossroad leads to a destination other than a recreational or cultural interest area.
Support:

Figure 2H-2 illustrates destination guide signs commonly used for identifying recreational or cultural interest areas or facilities.
CHAPTER 2I. EMERGENCY MANAGEMENT SIGNING

Section 2I.01 Emergency Management

Guidance:

Contingency planning for an emergency evacuation should be considered by all State and local jurisdictions and should consider the use of all applicable roadways.

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 operations for the expediting of essential traffic, and the provision of emergency centers for civilian aid.

Section 2I.02 Design of Emergency Management Signs

Standard:

Emergency Management signs shall be used to guide and control highway traffic during an emergency.

Emergency Management signs shall not permanently displace any of the standard signs that are normally applicable.

Advance planning for transportation operations’ emergencies shall be the responsibility of State and local authorities. The Federal Government shall provide guidance to the States as necessitated by changing circumstances.

Guidance:

As conditions permit, the Emergency Management signs should be replaced or augmented by standard signs.

The background of Emergency Management signs should be retroreflective.

Because Emergency Management signs might be needed in large numbers for temporary use during an emergency, consideration should be given to their fabrication from any light and economical material that can serve through the emergency period.

Option:

Any Emergency Management sign may be accompanied by a standard triangular plaque for marking areas contaminated by biological and chemical warfare agents and radioactive fallout.
Section 2I.03 EVACUATION ROUTE Sign (EM-1)

Standard:

The EVACUATION ROUTE (EM-1) sign shall be circular, having a minimum outside diameter of 450 mm (18 in), carrying a directional arrow and the legend EVACUATION ROUTE.

Option:

An approved Emergency Management symbol may appear near the bottom of the sign with a diameter of 87 mm (3.5 in).

Standard:

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.

If used, the EVACUATION ROUTE sign, with the appropriate arrow, shall be installed 45 to 90 m (150 to 300 ft) in advance of, and at, any turn in an approved evacuation route. The sign shall also be installed elsewhere for straight-ahead confirmation where needed.

If used in urban areas, the EVACUATION ROUTE sign 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. If used in rural areas, it shall be not less than 2.1 m (7 ft) above the pavement and 1.8 to 3 m (6 to 10 ft) to the right side of the roadway edge.

EVACUATION ROUTE signs shall not be placed where they will conflict with other signs. Where conflict in placement would occur between the EVACUATION ROUTE sign and a standard regulatory sign, the regulatory sign shall take precedence.

Option:

In case of conflict with guide or warning signs, the Emergency Management sign may take precedence.
Part 2. Signs

OMUTCD 2003 Edition (English units are preferred.)
Guidance:

Placement of EVACUATION ROUTE signs should be made under the supervision of the officials having jurisdiction over the placement of other traffic signs. Coordination with Emergency Management authorities and agreement between contiguous political entities should occur to assure continuity of routes.

Option:

The arrow may be a separate panel attached to the face of the sign.

**Section 21.04 AREA CLOSED Sign (EM-2)**

**Standard:**

The AREA CLOSED (EM-2) sign shall be used to close a roadway in order to prohibit traffic from entering the area. It shall be installed on the shoulder as near as practical to the right edge of the roadway, or preferably, on a portable mounting or barricade partly or entirely in the roadway.

**Guidance:**

For best visibility, particularly at night, the sign height should not 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.

**Section 21.05 TRAFFIC CONTROL POINT Sign (EM-3)**

**Standard:**

The TRAFFIC CONTROL POINT (EM-3) sign shall be used to designate a location where an official traffic control point 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 (see Section 21.04), and at the point where traffic must stop to be checked.

The standard STOP (R1-1) sign shall be used in conjunction with the TRAFFIC CONTROL POINT sign. The TRAFFIC CONTROL POINT sign shall consist of a black legend and border on a retroreflectorized white background.
Guidance:

The TRAFFIC CONTROL POINT sign should be mounted directly below the STOP sign.

Section 21.06  MAINTAIN TOP SAFE SPEED Sign (EM-4)

Option:

The MAINTAIN TOP SAFE SPEED (EM-4) sign may be used on highways where conditions are such that it is prudent to evacuate or traverse an area as quickly as possible.

Where an existing Speed Limit (R2-1) sign 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 MAINTAIN TOP SAFE SPEED sign in numerical terms. Where traffic is supervised by a traffic control point, 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 as needed, in the same manner as other standard speed signs.

Standard:

If used in rural areas, the MAINTAIN TOP SAFE SPEED sign shall be mounted on the right side of the road with its lower edge not less than 1.5 m (5 ft) above the pavement, 1.8 to 3 m (6 to 10 ft) from the roadway edge. If used 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.

Section 21.07  ROAD (AREA) USE PERMIT REQUIRED FOR THRU TRAFFIC Sign (EM-5)

Support:

The intent of the ROAD (AREA) USE PERMIT REQUIRED FOR THRU TRAFFIC sign is to notify road users of the presence of the traffic control point 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 control post.

**Standard:**

If used, the ROAD (AREA) USE PERMIT REQUIRED FOR THRU TRAFFIC (EM-5) sign shall be used at an intersection that is an entrance to a route on which a traffic control point is located.

If used, the sign shall be installed in a manner similar to that of the MAINTAIN TOP SAFE SPEED sign (see Section 2I.06).

**Section 2I.08 Emergency Aid Center Signs (EM-6 Series)**

**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.

Emergency Aid Center (EM-6 series) signs 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 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 to 3 m (6 to 10 ft) from the roadway edge.

Emergency Aid Center signs shall carry one of the following legends, as appropriate, or others designating similar emergency facilities:

A. MEDICAL CENTER (EM-6a)

B. WELFARE CENTER (EM-6b)

C. REGISTRATION CENTER (EM-6c)

D. DECONTAMINATION CENTER (EM-6d)
Section 2I.09  Shelter Directional Signs (EM-7 Series)

Standard:

Shelter Directional (EM-7 Series) signs shall be used to direct the public to selected shelters that have been licensed and marked for emergency use.

The installation of Shelter Directional 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 Shelter Directional sign shall be a horizontal rectangle, 750 x 600 mm (30 x 24 in). The identifying word and the word SHELTER, the directional arrow, the distance to the shelter, and the border shall be black on a white background.

Option:

The distance to the shelter may be omitted from the sign when appropriate.

Shelter Directional signs may carry one of the following legends, or others designating similar emergency facilities:

A.  EMERGENCY (EM-7a)
B.  HURRICANE (EM-7b)
C.  FALLOUT (EM-7c)
D.  CHEMICAL (EM-7d)

If appropriate, the name of the facility may be used.

The Shelter Directional signs may be installed on the Interstate Highway System or any other major highway system when it has been determined that a need exists for such signs as part of a State or local shelter plan.

The Shelter signs may be used to identify different routes to a shelter to provide for rapid movement of large numbers of persons.

Guidance:

The Shelter Directional sign should be used sparingly and only in conjunction with approved plans of State and local authorities.

As a general rule, the Shelter sign should not be posted more than 8 km (5 mi) from a shelter.