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A photograph of a rectangular sign that reads 'RIGHT LANE CONTINUOUS GREEN SIGNAL' with an arrow pointing to the right.

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A photograph showing two signs: a 'DO NOT STOP ON TRACKS' rectangular sign on the left and a 'TURNING VEHICLES YIELD TO PEDESTRIANS' rectangular sign on the right. The background shows a street scene with a bridge and cars.

### GENERAL STANDARDS

- All necessary signs shall be in place before a facility is opened
- Signs required by road conditions or restrictions shall be removed immediately when those conditions cease to exist or the restrictions are withdrawn
- Identical conditions should be marked with the same type of sign
- Engineering judgment is essential as a supplement to MUTCD

### ORDER OF PRIORITY

- Regulatory and warning signing whose location is critical should be displayed rather than guide signing.
- Less important information should be moved to less critical locations or removed.

### VARIABLE MESSAGE SIGNS

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- One or more messages that may be displayed or deleted as required.
- Detailed standards are not specified
- It is essential that variable message signs ascribe to the extent practicable, with the MUTCD design principles and applications

### VARIABLE MESSAGE SIGNS

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### EXCESSIVE USE OF SIGNS

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- Care should be taken not to install too many signs
- Frequent display of route markers and directional signs is encouraged

### SIGN CLASSIFICATIONS

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- Regulatory Signs
- Warning Signs
- Guide Signs

### REGULATORY SIGNS ...

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- Inform roadway users of traffic laws or regulations and indicate the applicability of legal requirements that would not otherwise be apparent.

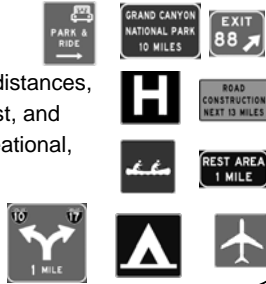
### WARNING SIGNS...

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- Used to call attention to conditions on, or adjacent to, a highway or street that are potentially hazardous to traffic operations.

### GUIDE SIGNS ...

- Show route designation, destinations, directions, distances, services, points of interest, and other geographical, recreational, and cultural information.



### POSITION OF SIGNS

- A regulatory sign normally is placed where its mandate or prohibition applies
- A warning sign is placed in advance of the condition to which it calls attention
- Guide signs are placed to keep drivers informed on the route to their destination

### Typical Locations and Hazards for Warning Signs

- Changes in horizontal alignment
- Intersections
- Advance warning or control devices
- Converging traffic lanes
- Narrow roadways
- Changes in highway design
- Grades
- Roadway surface conditions
- Railroad crossings
- Entrances and crossings
- Miscellaneous

### DESIGN

- Shape
- Color
- Message Content and Format
- Dimensions
- Illumination and Reflectorization

### SHAPES

- Octagon
- Triangle
- Round
- Pennant
- Diamond
- Shield



### SHAPES (cont.)

- Rectangle (portrait)
- Rectangle (landscape)
- Trapezoid
- Pentagon (point up)
- Crossbuck



### SIGN COLORS


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- Red
- Green
- Yellow
- Blue
- Brown
- Orange
- Black
- White

### RED ...

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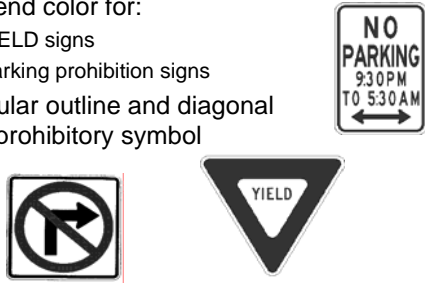
- Background color for:
  - STOP signs
  - Multi-way supplemental plates
  - DO-NOT-ENTER messages
  - WRONG WAY signs
  - Interstate route markers



### RED ...

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- Legend color for:
  - YIELD signs
  - Parking prohibition signs
- Circular outline and diagonal bar prohibitory symbol



### BLACK ...

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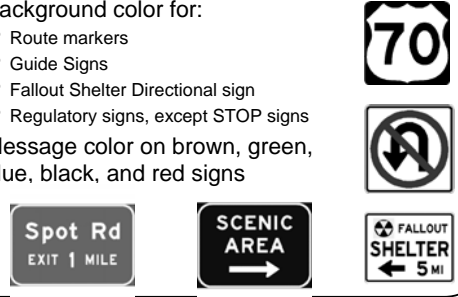
- Background color on:
  - ONE WAY signs
  - Certain truck signs
  - Night speed limit signs
- Message color on white, yellow and orange signs



### WHITE ...

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- Background color for:
  - Route markers
  - Guide Signs
  - Fallout Shelter Directional sign
  - Regulatory signs, except STOP signs
- Message color on brown, green, blue, black, and red signs



### WHITE ...

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

ORANGE ...

- Background color for construction and maintenance signs and shall not be used for any other purpose.



YELLOW ...

- Background color for warning signs, except where orange is specified, and for school signs (Part VII).



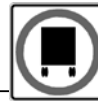
BROWN ...

- Background color for guide and information signs related to points of recreational or cultural interest.



GREEN ...

- Background color for:
  - Guide and informational signs, other than those using brown or white
  - Mileposts
- Legend color with a white background for permissive parking regulations
- Circular outline permissive symbol.



BLUE ...

- Background color for information signs related to motorist services
- Evacuation Route Marker.




MESSAGE FORMATS

- Legend
- Symbolic
- Diagrammatic


MESSAGE FORMATS

- Legend
- Symbolic
- Diagrammatic



MESSAGE FORMATS


- Legend
- Symbolic
- Diagrammatic



MESSAGE FORMATS

- Legend
- Symbolic
- Diagrammatic


Figure 2-32 Diagrammatic sign for single left exit.



SYMBOLS

- *Symbol designs shall in all cases be unmistakably similar to those shown in this Manual and the "Standard Highway Signs" book. (2A-13)*

Example ...



SYMBOLS

- Most symbols are oriented facing left but mirror images are OK
- OK to make minor changes in the proportion of symbols, width of borders, or layout of word messages, but all shapes and colors *shall* be as indicated.

## SYMBOLS

- All symbol signs which are readily recognizable by the public *may* be erected without educational plaques.
- New warning or regulatory symbol signs not readily recognizable by the public, *shall* be accompanied by an educational plaque which *is to* remain in place for at least 3 years after initial installation.

## WORD MESSAGES

- Standard wordings as shown in this Manual *shall* be used for sign legends.
- Word messages *should* be as brief as possible
- Lettering *should* be large enough to provide the necessary legibility distance.

## WORD MESSAGES



## WORD MESSAGES

- Abbreviations *should* be kept to a minimum
- *Should* include only those that are commonly recognized and understood, such as Ave., Blvd., N. (for north), R. R., or Jct.
- *It is sometimes permissible* to put long names in slightly smaller lettering than would otherwise be required.

## LETTERING

- Sign lettering shall be in upper-case letters of the type approved by FHWA
- Destination names may be in lower-case lettering, with initial upper-case.



## STANDARD ALPHABETS

**SLOW**

SLOW

Use of the Series B alphabet *is restricted to street-name signs, parking signs, and other similar signs where limited breadth and stroke widths are required for design purposes.*

SMALLER LETTERS



DIMENSIONS

- Prescribed dimensions shall be standard for application on public highways
- Increased sizes are desirable where greater legibility or emphasis is needed
- Wherever practical the overall dimensions of the sign plates should be increased in 6-inch increments

ILLUMINATION AND REFLECTORIZATION

- Regulatory and warning signs, unless excepted, *shall* be reflectorized or illuminated to show the same shape and color both by day and night.
- All overhead sign installations *should* be illuminated where an engineering study shows that reflectorization will not perform effectively.

MEANS OF ILLUMINATION

- A light behind a translucent sign face
- An external light source
- Luminous tubing, fiber optics or incandescent lamps shaped to the lettering or symbol
- Luminescent panels

MEANS OF ILLUMINATION

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

- Luminescent panels

MEANS OF REFLECTORIZATION

- Reflector "buttons" or similar units set into the message and border; or
- Retroreflective sheeting material
- Where a white message is used on a colored background, reflectorization *may* be used for the message and border only

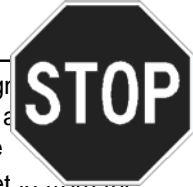


### SIGN BORDERS

- With few exceptions, all signs *shall* have a border of the same color as the legend, at or just inside the edge.
- A dark border should be set in from the edge, while a white border should extend to the edge of the panel

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### SIGN BORDERS

- For 30-inch signs with a light background: 1/2 to 3/4 wide, 1/2 inch from the edge
- White border (should be) 1 inch
- For other sizes, the border widths *should* be of similar proportions, but not to exceed the stroke-width of the letters

### SIGN BORDERS

- The corners of the sign border *shall* be rounded.
- Where practicable, the corners of the sign panels *should* also be rounded to fit the border

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### SUPPLEMENTAL BEACONS

- A hazard identification beacon *may be used only* to supplement an appropriate warning or regulatory sign.



### Standardization Of Location

- *The general rule is to locate signs on the right-hand side of the roadway*
- *Overhead signs are often necessary*
- *Signs in other locations ordinarily should be considered only as supplementary*
- *Other general guidelines are given in Section 2A-21*

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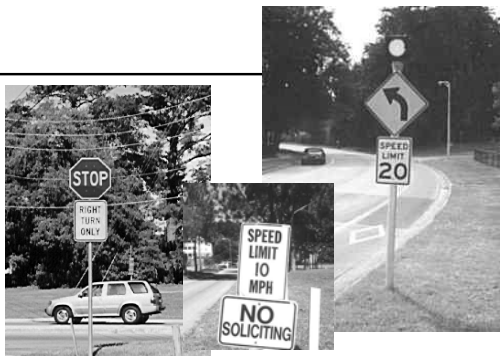


### Standardization of Location

- *Signs should be individually erected on separate posts or mountings except*
  - *where one sign supplements another*
  - *where route or directional signs must be grouped.*

### MULTIPLE SIGNS

- *Signs requiring different decisions by the vehicle operator must be spaced sufficiently far apart for the required decisions to be made safely*
- *The spacing shall be determined in units of time as determined by the expected vehicle approach speed.*



### Signs *Should* be Located...

- *To optimize nighttime visibility*
- *To minimize the effects of mud spatter*
- *In conformance with safety factors related to fixed obstacles near the roadway*
- *So that they do not obscure each other*
- *So that they are not hidden from view by other roadside objects.*

### Overhead Sign Justification

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- 1. Traffic volume at or near capacity
- 2. Complex interchange design
- 3. Three or more lanes in each direction
- 4. Restricted sight distance
- 5. Closely spaced interchanges
- 6. Multi-lane exits
- 7. Large percentage of trucks

### Overhead Sign Justification

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- 8. Street lighting background
- 9. High speed traffic
- 10. Consistency of sign message location
- 11. Insufficient space for ground mounting
- 12. Junction of two freeways
- 13. Left exit ramps

### Overhead Sign Justification

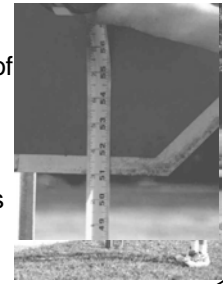
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- The existence of any one or more of the conditions listed does not automatically justify the use of overhead signs.

### HEIGHT SPECIFICATIONS

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- Min 5 feet, measured from the bottom of the sign to the near edge of the pavement.
- Increase to 7 ft in business, commercial and residential districts



### HEIGHT SPECIFICATIONS

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- The height to the bottom of a secondary sign mounted below another sign *may* be 1 foot less than the height specified above.



### LATERAL CLEARANCE

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- Normally, signs should not be closer than 6 feet from the edge of the shoulder, but
  - 12 feet from the edge of the traveled way with no shoulder
  - 2 feet *is recommended* as a working urban minimum
  - 1 foot from the curb face *is permissible* where necessary

### LATERAL CLEARANCE

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- More detailed requirements are prescribed for freeway and expressway signs

### SIGN ORIENTATION

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- Normally at right angles to the direction of, and facing traffic
- Turn slightly away where mirror reflection from the sign face is encountered.
- Turn toward the road when offset 30 feet or more from the pavement edge

### SIGN ORIENTATION

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- At curved alignments, the angle should be determined by the course of approaching traffic
- Sign faces normally are vertical, but may be tilted on grades to improve the viewing angle.

### SIGN MATERIALS

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- A variety of materials can be used effectively
- *Nothing in this Manual should be interpreted to exclude any new material that meets the standard requirements for color and legibility, both by day and by night.*

### MAINTENANCE

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- All signs should be kept in proper position, clean and legible at all times.
- Damaged signs should be replaced without undue delay
- A schedule for inspection, cleaning and replacement should be established.

### MAINTENANCE

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- (Your) employees *should* be encouraged to report any damaged or obscured signs.
- (Ensure that) weeds, trees, shrubbery and construction materials do not obscure the face of any sign.
- A regular schedule of replacement of lighting elements for illuminated signs *should* be maintained

