

# COMMONWEALTH OF PENNSYLVANIA

## DEPARTMENT OF HIGHWAYS



### REGULATIONS

GOVERNING THE DESIGN, LOCATION AND  
OPERATION OF ALL OFFICIAL TRAFFIC SIGNS,  
SIGNALS AND MARKINGS ON AND ALONG  
HIGHWAYS WITHIN THE  
COMMONWEALTH OF PENNSYLVANIA

1967

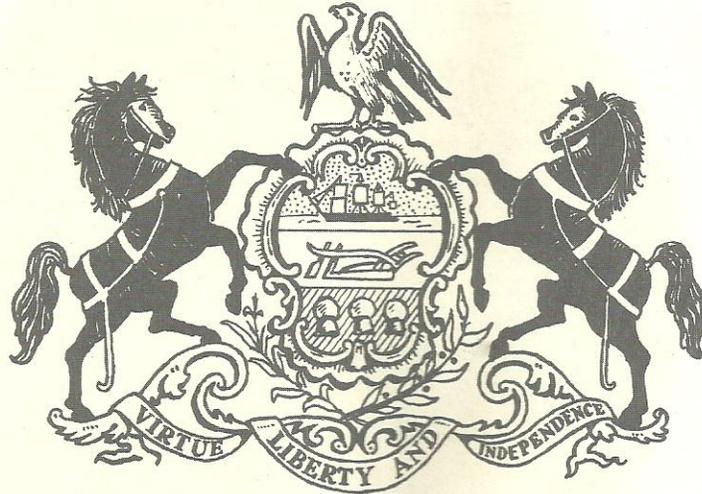
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# PENNSYLVANIA DEPARTMENT OF HIGHWAYS

## PROMULGATION OF RULES AND REGULATIONS GOVERNING THE DESIGN, LOCATION AND OPERATION OF ALL OFFICIAL TRAFFIC SIGNS, SIGNALS AND MARKINGS ON AND ALONG HIGHWAYS WITHIN THE COMMONWEALTH OF PENNSYLVANIA

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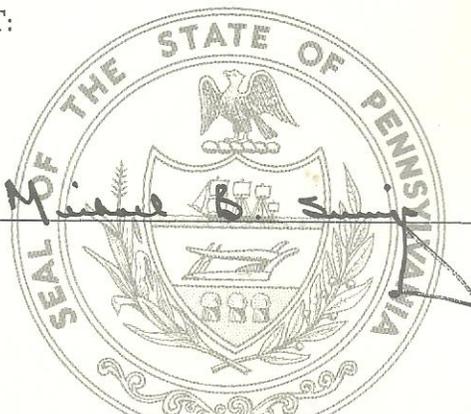
**BY THE SECRETARY OF HIGHWAYS, DECEMBER 1, 1967.**

The Rules and Regulations herein contained are hereby made and adopted pursuant to the provisions of the "State Highway Law" (Act of 1945, P.L. 1242; 36 P.S. sec. 670-101 et seq., espec. sec. 670-420), the Limited Access Highway Law (Act of 1945, P.L. 1108; 36 P.S. sec. 2391.1 et seq., espec. sec. 2391.9) and "The Vehicle Code" (Act of 1959, P.L. 58; 75 P.S. sec. 101 et seq., espec. sec. 1105) and promulgated in accordance with the "Administrative Agency Law" (Act of 1945, P.L. 1388; 71 P.S. sec. 1710.21).

PENNSYLVANIA DEPARTMENT OF HIGHWAYS

  
Secretary of Highways

ATTEST:

(SEAL) 

# PENNSYLVANIA DEPARTMENT OF HIGHWAYS

## REGULATIONS

Governing the design, location and operation of all official traffic signs, signals and markings in the Commonwealth of Pennsylvania, adopted pursuant to "The Vehicle Code" (Act of April 29, 1959, P. L. 58, as amended) and promulgated in accordance with the provisions of the "Administrative Agency Law" (Act of June 4, 1945, P. L. 1388, as amended).

### SECTION 701. DECLARATION OF OFFICIAL TRAFFIC SIGNS, SIGNALS AND MARKINGS; SAVING CLAUSE

The traffic signs, signals and markings hereinafter described in these regulations are hereby declared to be official and, except as authorized by Section 702(e) hereof, dealing with signs already in existence, no other shall be regarded as official, and are prohibited.

No traffic sign or its support shall bear any commercial advertising, provided, however, that this shall not be construed to prohibit the erection or maintenance of signs, markers or traffic signals bearing thereon the name of an organization authorized to erect the same by the Secretary of Highways or any proper local official.

Severability; It is the intent that these regulations shall be considered separately and that if any one or more shall be found unlawful or otherwise defective, the rest of the regulations shall remain in full force and effect.

Typical drawings of pavement markings, sign blank standards, sign numbering system and illustrated sign index are included in this book at the end of these regulations solely for the convenience of users of the regulations. They are not, and should not be construed as, a part of the body of the regulations.



## SECTION 702. PURPOSE, SCOPE AND APPLICATION OF REGULATIONS

### **(a) Uniformity.**

These regulations are promulgated by virtue of the authority of, and at the direction of, the provisions of Section 1105 of the Vehicle Code in order to secure uniformity in the design, location and operation of all official traffic signs, signals and markings in the Commonwealth of Pennsylvania.

In compliance with the intent of Section 1105 these regulations correlate with and, so far as practicable, conform with the Manual on Uniform Traffic Control Devices adopted by the American Association of State Highway Officials, published in June, 1961.

### **(b) Engineering Study Required.**

The decision to use a particular device at a particular location must be made on the basis of an engineering study at the location. Thus, while these regulations describe the application of the various devices, they are not intended as a substitute for engineering judgment.

### **(c) Application.**

These regulations shall apply to the location, operation and maintenance of all traffic signs, signals and markings, including the type and installation thereof, on all State highways in the Commonwealth and on all public ways or places or whatever nature in cities, boroughs, incorporated towns and townships.

### **(d) Local Traffic Signs.**

All signs, signals and markings erected by local authorities to give notice of legal parking and other local ordinances, rules and regulations shall conform to the requirements hereinafter set forth.

### **(e) Removal of other than Official Signs; Effect of Variations.**

As rapidly as is economically feasible, existing signs of non-standard design or application shall be replaced by new standard signs. Signs that are not dangerously inconsistent with the new standards or not clearly inadequate may remain in use for a reasonable period of normal service life. Signs of sub-standard size or design, if otherwise suitable, should be relegated to minor roads or secondary streets. Variations in the proportion of symbols, stroke-width and height of letters, width of borders, or layout of word messages shall be sufficient cause for the Secretary to order the removal of a sign but shall not be a defense in prosecutions for violations of the mandatory provision thereof.

### **(f) Interfering Lights, Removal.**

The Secretary of Highways and local officials, in their respective jurisdictions, have the authority to cause the removal of all colored or flashing light signs or other lights, signs, or markings so located as to interfere with traffic or to be confused with or to obstruct the view or effectiveness of official signs, traffic signals, or markings.

### **(g) Signs, Banners, etc., Across or Within Legal Limits of Highway.**

It shall be unlawful to place any sign, banner, or advertising matter of any kind whatsoever on or across any State highway or on or across any structure within the legal limits of any State highway without first having obtained the written consent of the Pennsylvania Department of Highways.

Any such sign, banner, or advertising matter placed without the consent of the Department is hereby declared to be a public nuisance, and may be abated by the Department with or without notice to the persons responsible for the placing thereof.

### **(h) Use, Test, Approval, and Sale of Traffic Signs, Signals and Regulatory Devices.**

It is unlawful for any manufacturer, jobber, retailer, or his agent, or for any person, to sell, lease, or offer for sale or hire, any sign, signal or any other traffic regulatory device, unless of a type for which a certificate of approval has been issued by the Secretary of Highways.

Any person desiring a certificate of approval of any traffic sign, signal or any other traffic regulatory device shall submit his request to the Bureau of Traffic Engineering, Pennsylvania Department of Highways, Harrisburg, Pennsylvania 17120. Certificates of approval will be issued in accordance with the current requirements of the Secretary of Highways in accordance with the Vehicle Code.

## SECTION 703. SIGNS, GENERAL PROVISIONS, INSTALLATION, CLASSIFICATION

### (a) Standardization of Application.

Each standard sign shall be displayed only for the specific purpose prescribed for it in these regulations. Before any new highway or any detour or temporary route is opened to traffic all necessary signs should be placed.

Signs required by road conditions or restrictions should be removed immediately when those conditions cease to exist or the restrictions are withdrawn. Guide signs directing traffic to and on temporary routes or detours should be removed when no longer applicable.

Important as is standardization with respect to design and placement, uniformity of application is at least equally important. Identical conditions should always be marked with the same type of sign, irrespective of where those particular conditions occur.

It is recognized that urban conditions differ from rural in such respects as speeds, frequency of intersections, traffic congestion, numbers of pedestrians, parking, and competing lights, and displays, and that in many instances signs must be differently applied.

For the purpose of these regulations, unless the context clearly indicates otherwise, the word "urban" shall mean any area that is contiguous to any street or roadway which is built up with structures devoted to business, industry, or dwelling houses situated at intervals of less than 100 feet for a distance of a quarter of a mile or more, and the word "rural" shall mean any area not included in an urban area, whether or not within the boundaries of a municipality.

### (b) Excessive Use of Signs.

Care should be taken not to install too many signs, especially those of the regulatory and warning types which, if used to excess, tend to lose their effectiveness. A conservative use of regulatory and warning signs is recommended.

### (c) Standardization of Signs.

All signs hereafter installed on all highways as described in Section 702(c) shall conform to the standards set forth in these regulations.

Standardization of these designs does not preclude further improvement by minor changes in the proportion of symbols, stroke width and height of letters, width of borders, or layout of word messages, but all shapes and colors shall be as indicated, all symbols shall be unmistakably similar to those shown, and where a word message is applicable the wording shall be as herein provided. Secondary messages shall not be placed on the face or back of any sign.

### (d) Colors.

Colors are noted on the standard drawing for each sign. Wherever white is specified as a sign color, it is understood to include silver-colored reflecting coatings or elements that reflect white light.

Color cards showing the correct colors for highway signs may be obtained from the U. S. Department of Commerce, Order Stock No. PB-169 553 Color Tolerance Charts from Acquisition Section, Clearing House, Springfield, Va. 22151. Price \$6.00.

### (e) Dimensions.

The sign dimensions prescribed in these Regulations shall be standard for application on public highways.

The standard dimensions shown herein have been designed to provide clear legibility of the signs during the time and throughout the distance necessary for approaching traffic to read and comprehend their messages under "normal" highway conditions. Increases above these standard sizes are authorized where greater legibility or emphasis is needed.

Permission is required from the Bureau of Traffic Engineering to erect enlarged signs.

### (f) Lettering.

Detailed drawings of the standard capital and lower-case alphabets for highway signs may be ob-

## SECTION 703 (Cont.)

tained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Price 30 cents.

### **(g) Reflectorization and Illumination.**

All signs that are to convey their messages during hours of darkness, other than urban parking signs, shall be reflectorized or illuminated. Much traffic moves after dark, and reflectorization or illumination may be necessary even on signs concerned primarily with daytime activities. Where the standards call for non-reflectorization, reflectorization is authorized where an engineering study shows a need.

Overhead signs may be illuminated where an engineering study shows that reflectorization will not give effective performance.

Reflectorization may be by means of reflector "buttons" or similar units set into the symbol or message, or by means of reflecting coatings, either on the sign background or, where a white legend is used on a black or colored background, in the symbol or message and border. Sign reflecting materials shall reflect white light, or if a reflecting coating is used as a background of a colored sign, the color of the background.

Illumination may be by means of light behind the sign face, illuminating the main message or symbol, or the sign background, or both, through a translucent material; or an attached or independently mounted light source designed to direct essentially uniform illumination over the entire face of the sign; or some other effective device, such as luminous tubing shaped to the letter or symbol, patterns of incandescent light bulbs, or luminescent panels that will make the sign clearly visible at night. All illumination shall show the same sign colors by night and day.

### **(h) Standardization of Position.**

Standardization of position cannot always be attained in practice, because signs must in all cases be placed in the most advantageous positions and must be accommodated to highway design and alignment. The general rule is to locate signs on the right-side of the roadway, where the driver is in the habit of looking for them.

Signs should be individually erected on separate posts or mountings, except where one sign supplements another. In rural areas two signs for different purposes should not be located closer together than 200 feet along the highway, though exceptions to this rule are sometimes necessary at intersections.

### **(i) Overhead Signs.**

Overhead signs are generally justified only (1) where the message is applicable to a particular lane, or to particular lanes, over which the sign is placed, or (2) where traffic or roadway conditions are such that an overhead mounting is necessary for adequate visibility.

### **(j) Installation of Signs.**

(1) **Height.** Signs erected at the side of the road in rural districts shall be mounted at a height of at least 5 feet above the level of the roadway edge, measured to the bottom of the sign. On expressways this height shall be at least 6 feet. On the Interstate System, and in business and residence districts, and in any case where parking is likely to occur or where there are other obstructions to view, the height shall be at least 7 feet.

The height to the bottom of a secondary sign mounted below another sign may be 1 foot less than the appropriate height specified above, and for a secondary sign below a large expressway directional sign the height may be as low as 4 feet to avoid excessive height for the top of the major sign.

The clear height of overhead signs, sign structures and sign lighting shall be not less than 17 feet over the entire roadway width, including the usable width of shoulders. Signs and sign lighting mounted on other highway structures shall have a clearance not less than one (1) foot greater than the structure on which they are mounted.

(2) **Lateral Clearance.** Roadside signs shall be placed at the edge of the road shoulder with the nearest edge of the sign not less than 6 feet from the edge of the pavement or traveled way, except where

## SECTION 703 (Cont.)

conditions do not permit or where other requirements are specified elsewhere in these Regulations with respect to particular signs.

Where a raised curb, guardrail, or paved shoulder is present a sign should ordinarily be placed with its nearest edge at least 2 feet outside such curb line, face of guardrail, or paved shoulder.

In urban areas a clearance of 1 foot from the curb line is permissible where sidewalk width is limited or existing poles are close to the curb.

The above standards for minimum lateral clearance shall apply also to structures for the support of overhead signs.

### **(k) Sign Materials.**

A variety of materials can be used effectively for permanent signs, and the choice among them will depend largely on local experience and the local availability of satisfactory materials.

The Pennsylvania Department of Highways and most of the larger cities have suitable specifications that can be obtained by smaller communities having limited facilities for the designing of signs.

It is recognized that technological progress may develop new and satisfactory or superior materials for highway signs particularly in the fields of illumination and reflectorization. Nothing in these regulations should be interpreted to exclude any new material that meets the standard requirements for color and visibility.

### **(l) Maintenance.**

All traffic control devices should be kept in proper position, clear and legible. Damaged signs should be replaced as soon as reasonably possible. The authority responsible for erection shall be responsible for the proper maintenance or replacement of traffic control devices.

### **(m) Classification of Signs.**

Official signs are divided into the following classifications and set forth herein in the following order:

- Regulatory signs (R Series)
- Warning signs (W Series)
- Guide Signs (G Series)
- Route Marker and Auxiliary Marker signs (M Series)
- Destination and Distance signs (D Series)
- Information signs (I Series)

## SECTION 704. REGULATORY SIGNS (R SERIES)

Regulatory signs shall be used to inform highway users of traffic laws or regulations that apply at given places or on given highways, disregard of which is punishable as an infraction, violation or misdemeanor.

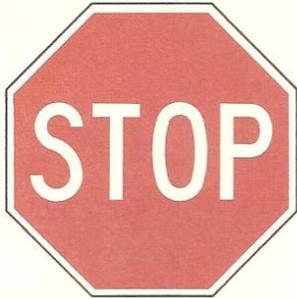
Regulatory signs shall normally be erected at those locations where the regulations apply, and shall be mounted so as to be easily visible and legible to the motorist whose actions they are to govern. The message on the sign shall clearly indicate the requirements imposed by the regulation.

All regulatory signs, unless definitely excepted in the regulations herein covering a particular sign or group of signs, shall be rectangular in shape and have black legend and border on a white reflectorized background. The principal exceptions are the Stop, Yield, and street parking signs.

The classification of regulatory signs, as numbered and illustrated in the following subsections, is further subdivided into the following categories:

1. Right-of-Way
2. Speed
3. Turning
4. Alignment
5. Exclusion
6. One-Way
7. Parking (Urban)
8. Parking (Rural)
9. Pedestrian
10. Restrictions
11. Littering
12. Roadsides
13. Miscellaneous

RI-1



24 x 24

30 x 30

36 x 36

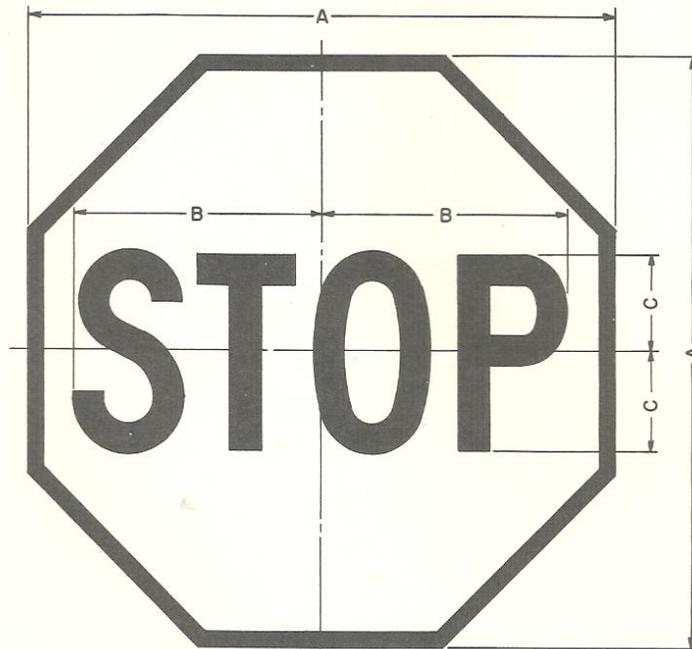
**SECTION 704-1. RIGHT-OF-WAY GROUP (R 1 SERIES)**

**(a) Stop Sign (R 1-1)**

(1) **Justification.** This sign is authorized for erection on those streets or highways which intersect a through highway or stop intersection so designated by the Secretary of Highways with reference to State Highways or local authorities with reference to highways under their jurisdiction.

Before local authorities shall designate any highway as a through highway or stop intersection, which will intersect or affect a State highway, approval of such designation must first be obtained from the Secretary of Highways.

(2) **Size.** The standard size is 30 inches by 30 inches. On minor roads and secondary streets, a sign 24 inches by 24 inches may be used. A 36 inches by 36 inches size is provided for use in locations where approach speeds or inaccessible placements may require a larger sign.



COLOR · LEGEND AND BORDER  
BACKGROUND

WHITE (REFLECTORIZED)  
RED (REFLECTORIZED)

SIGN SIZE	DIMENSIONS			SERIES LINE	BOR- DER	BLANK STD.
	A	B	C			
24 x 24	24	10 <sup>3</sup> / <sub>16</sub>	4	C	<sup>5</sup> / <sub>8</sub>	BI-24
30 x 30	30	12 <sup>5</sup> / <sub>8</sub>	5	C	<sup>3</sup> / <sub>4</sub>	BI-30
36 x 36	36	15 <sup>5</sup> / <sub>32</sub>	6	C	<sup>7</sup> / <sub>8</sub>	BI-36

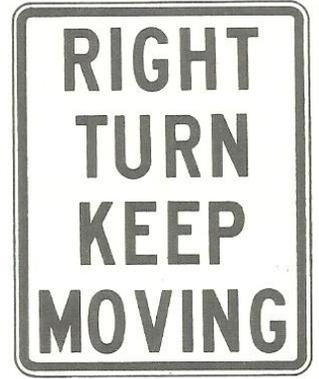
SECTION 704-1 (Cont.)

**(b) Right Turn Keep Moving Sign (R 1-1-1)**

(1) **Justification.** This sign is authorized for use to facilitate the movement of traffic at the particular type of intersection which has its main streams of traffic turning at right angles rather than proceeding straight through.

The use of this sign should be limited to locations where permitting the right turn to move without being subject to the stop regulation does not result in serious conflicts.

(2) **Placement.** This sign may be mounted directly below the Stop sign or in advance of the intersection.



24 x 30



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
24x30	24	30	2	5	$7\frac{9}{16}$	$7\frac{13}{16}$	$6\frac{15}{16}$	$6\frac{11}{16}$	$6\frac{3}{8}$	$6\frac{5}{8}$	$10\frac{3}{32}$

SIGN SIZE	SERIES				MAR- GIN	BOR- DER	BLANK STD.
	LINES						
	1	2	3	4			
24x30	C	C	C	C	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024

RI-2



36 x 36

48 x 48

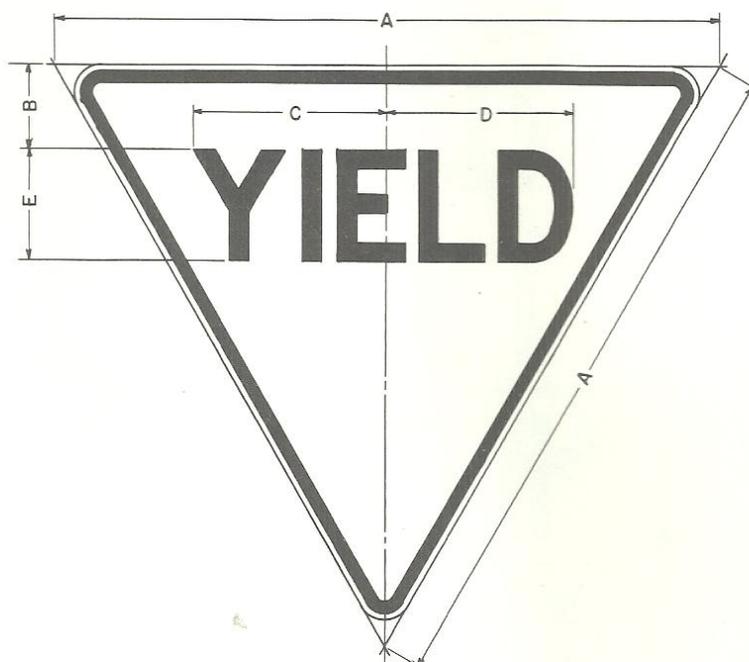
60 x 60

SECTION 704-1 (Cont.)

(c) Yield Sign (R 1-2)

(1) **Justification.** This sign is authorized for use by the Secretary of Highways and local authorities in accordance with Section 1112 of the Vehicle Code, where an engineering study indicates it is necessary to assign the right of way, but where a full stop is not necessary at all times.

(2) **Size.** The standard size is 36 inches per side. The minimum size for expressways shall be 48 inches per side. The minimum size for Interstate Highways shall be 60 inches per side.



COLOR LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 BACKGROUND      YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
	A	B	C	D	E				
36 x 36	36	4 1/2	10 1/2	10 1/8	6	D	3/8	5/8	B2-36
48 x 48	48	6	14	13 1/2	8	D	1/2	3/4	B2-48
60 x 60	60	7 1/2	17 1/2	16 7/8	10	D	3/4	7/8	B2-60





12 x 6

SECTION 704-1 (Cont.)

**(d) Multi-Way Sign (R 1-3)**

(1) **Justification.** This sign is authorized for use in accordance with Section 1112(e) of the Vehicle Code when any of the following conditions exist:

(a) Where traffic signals are warranted and urgently needed, the four-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the signal installation.

(b) An accident problem, as indicated by five or more reported accidents of a type susceptible of correction by a four-way stop installation in a 12-month period. Such accidents include right- and left-turn collisions as well as right-angle collisions.

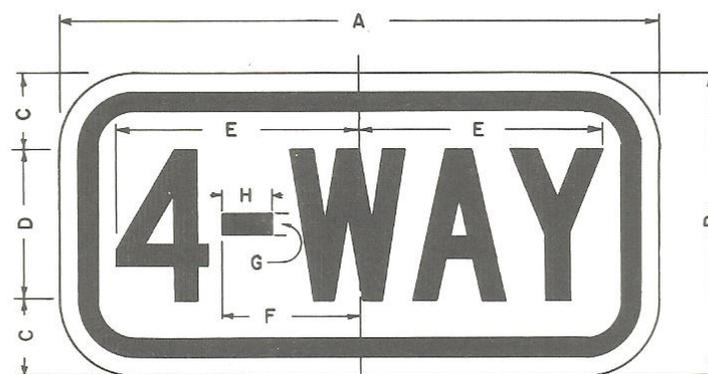
(c) Minimum traffic volumes:

1. The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any 8 hours of an average day, and

2. The combined vehicular and pedestrian volume from the minor street or highway must average 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 maximum hour, but

3. When the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum vehicular volume warrant is 70 percent of the above requirements.

(2) **Placement.** At a multi-way stop intersection each Stop sign must be supplemented by this sign mounted below indicating the number of stop approaches.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
12x6	12	6	1 1/2	3	4 7/8	2 3/4	27/64	1 3/32

SIGN SIZE	SERIES	MAR-GIN	BOR-DER	BLANK STD.
	LINE			
12x6	C	3/8	3/8	B5-1206

SECTION 704-1 (Cont.)

**(e) Location of Stop and Yield Signs**

The face of the sign should not be visible to traffic on the through highway.

At an intersection where a wide throat exists on the signed approach, observance of the sign may be improved by the erection of an additional sign on the left side of the approach road, and by the use of a Stop line. At certain channelized intersections the sign may be placed on a channelizing island where it will be more effective.

STOP or YIELD signs mounted overhead are desirable where added emphasis is needed and when a STOP or YIELD sign installed only at the standard near right position is not readily visible. The overhead signs should be considered as supplementary to the near right installation.

In the event the visibility of a STOP or YIELD sign at any location is restricted, the sign shall be located as specified, and a Stop Ahead sign or a Yield Ahead sign shall be erected in advance.

## SECTION 704-2. SPEED LIMIT GROUP (R 2 SERIES)

The numerical speed limit displayed on signs in the Speed Limit Group shall be the limits established under Section 1002 of the Vehicle Code.

**Local Authorities.** Local authorities are authorized by Section 1002(b) of the Vehicle Code to establish fifteen (15) or twenty (20) miles an hour speed limit on any street not a state highway, or not a through highway or main artery of traffic in a residence district; or twenty-five (25) or thirty-five (35) or forty (40) miles an hour speed limit within business or residence district, or public park areas.

Approval of the Secretary of Highways must be obtained before any speed limit can be established on a state highway.

When the speed limit has been reduced under this section, the speed limit signs shall be erected on both the right and left side of the roadway or street at the beginning of the reduction and on the right sides of the roadway or street at intervals not greater than one-eighth ( $\frac{1}{8}$ ) of a mile (660 feet). At the end of such limited zones a speed limit sign indicating the speed limit for the following section of roadway or street shall be erected on the right side of the roadway or street.

Speed limits under this section shall be referred to as "Limited Zones."

**The Secretary of Highways.** The Secretary of Highways is authorized by Section 1002 (b) (8) of the Vehicle Code, after due investigation, to establish any speed limit where conditions make it safe to operate vehicles at speeds other than as provided by the Code.

When the limit has been reduced under this section, the new speed limit shall be posted on both the right and left sides of the highway at the beginning of the reduction. If for any reason, however, it is not feasible or practical to place a sign on the left, additional notice of the reduction shall be given the motorist by placing a second sign on the right not more than 1000 feet beyond the first. At the end of the reduced zone a speed limit sign indicating the speed limit for the following section of highway shall be erected on the right side of the highway.

The speed limit sign shall be placed approximately 1000 feet beyond every major intersection (1500 feet beyond interchanges on Interstate Highways) so as to inform the motorist entering such highway of the established speed limit, and at reasonable intervals thereafter.

**Truck Speed Limits.** For the purpose of establishing speed limits for trucks under Section 1002 of the Vehicle Code, the term "Trucks" shall mean all commercial vehicles designed for carrying freight or merchandise and registered to carry over 5000 pounds gross weight. Thus, R Class commercial vehicles, motor buses and omnibuses shall be deemed passenger motor vehicles.

Section 1113.1 of the Vehicle Code states that the Secretary of Highways may establish restrictions on those grades on state highways which he determines to be hazardous, which restrictions shall require commercial vehicles having a gross weight of twenty-one thousand (21000) pounds or over to use a reduced gear and be limited to a maximum speed.

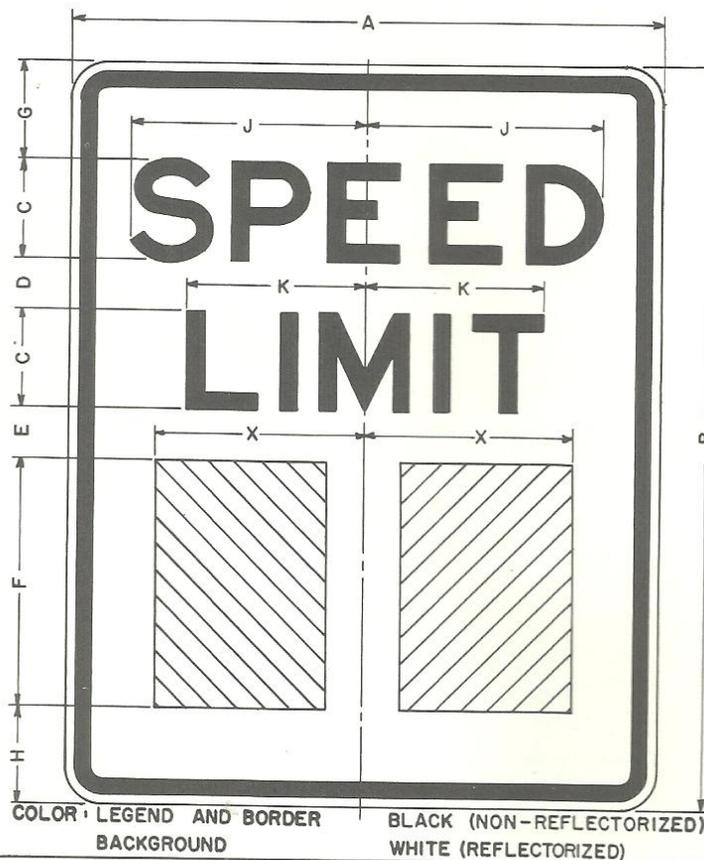


24 x 30  
30 x 36  
36 x 48  
48 x 60

SECTION 704-2 (Cont.)

(a) Speed Limit Sign (R 2-1)

(1) Size. The minimum sized signs for limited zones shall be 24 inches by 30 inches. The minimum sized signs for speed limits on two and three lane highways shall be 30 inches by 36 inches. The minimum sized signs for expressways shall be 36 inches by 48 inches. The minimum sized signs for Interstate Highways shall be 48 inches by 60 inches.



SIGN SIZE	DIMENSIONS										SERIES LINES			MARGIN	BORDER	BLANK STD.
	A	B	C	D	E	F	G	H	J	K	1	2	3			
24x30	24	30	4	2	2	10	4	4	9 <sup>5</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>4</sub>	E	E	E	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024
30x36	30	36	5	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	12	4 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>16</sub>	E	E	E	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-3630
36x48	36	48	6	5	5	15	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>	14 <sup>7</sup> / <sub>16</sub>	10 <sup>7</sup> / <sub>8</sub>	E	E	E	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836
48x60	48	60	8	4	4	20	8	8	19 <sup>1</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>2</sub>	E	E	E	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	B5-6048

SIGN SIZE	X												
	15	20	25	30	35	40	45	50	55	60	65	70	
24x30	6 <sup>3</sup> / <sub>4</sub>	9 <sup>3</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>4</sub>	9 <sup>3</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>4</sub>	9 <sup>13</sup> / <sub>16</sub>							
30x36					11 <sup>1</sup> / <sub>8</sub>	11 <sup>3</sup> / <sub>4</sub>	11 <sup>9</sup> / <sub>16</sub>	11	11 <sup>1</sup> / <sub>8</sub>				
36x48					13 <sup>7</sup> / <sub>8</sub>	14 <sup>11</sup> / <sub>16</sub>	14 <sup>7</sup> / <sub>16</sub>	13 <sup>3</sup> / <sub>4</sub>	13 <sup>7</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>4</sub>			
48x60							19 <sup>1</sup> / <sub>4</sub>	18 <sup>5</sup> / <sub>16</sub>	18 <sup>1</sup> / <sub>2</sub>	18 <sup>5</sup> / <sub>16</sub>	18 <sup>1</sup> / <sub>2</sub>	18 <sup>5</sup> / <sub>16</sub>	

SECTION 704-2 (Cont.)

**(b) Truck Speed Limit Sign (R 2-2)**

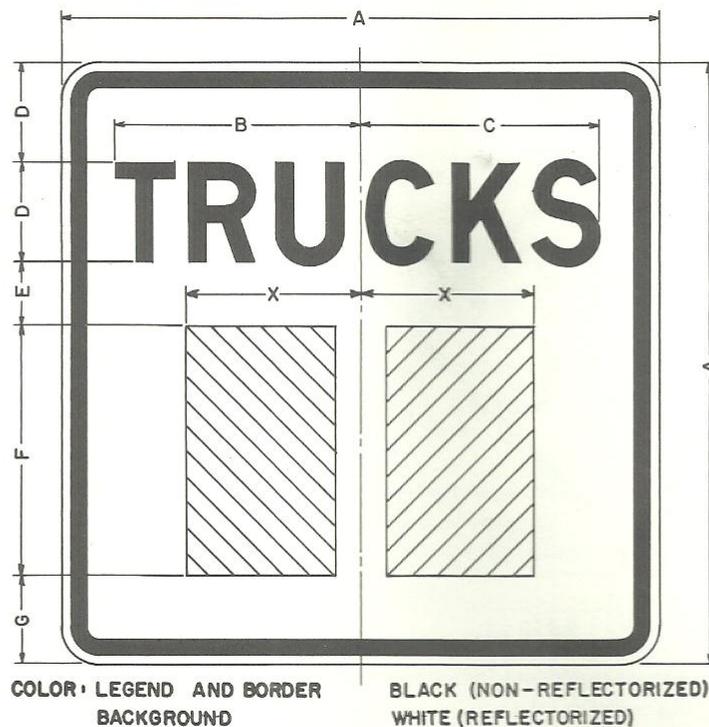
(1) **Justification.** This sign is authorized for use to indicate the established speed limit for all commercial motor vehicle or truck tractors and trailers or semi-trailers, (R class commercial vehicles shall be deemed passenger motor vehicles), when lower than the established speed limit for passenger motor vehicles, and shall be mounted directly below the Speed Limit Sign (R 2-1).

When used in conjunction with the Speed Limit—Trucks Reduce Gear sign (R 2-2-1), this sign may be erected alone and shall be placed at reasonable intervals.

(2) **Size.** The size shall be determined by and be in accordance with the size of the sign to which it is appended.



30 x 30  
36 x 36  
48 x 48



SIGN SIZE	DIMENSIONS							SERIES	
	A	B	C	D	E	F	G	1	2
30x30	30	11 <sup>15</sup> / <sub>16</sub>	11 <sup>1</sup> / <sub>2</sub>	5	3 <sup>3</sup> / <sub>8</sub>	12	4 <sup>5</sup> / <sub>8</sub>	D	E
36 x 36	36	14 <sup>5</sup> / <sub>16</sub>	13 <sup>13</sup> / <sub>16</sub>	6	3 <sup>3</sup> / <sub>4</sub>	15	5 <sup>1</sup> / <sub>4</sub>	D	E
48 x 48	48	19 <sup>1</sup> / <sub>8</sub>	18 <sup>3</sup> / <sub>8</sub>	8	5	20	7	D	E

SIGN SIZE	MAR-GIN	BOR- DER	BLANK STD.
30x30	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(S)
36 x 36	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-36(S)
48 x 48	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	B3-48(S)

SIGN SIZE	X							
	20	25	30	35	40	45	50	55
30x30	11	11 <sup>1</sup> / <sub>8</sub>	11	11 <sup>1</sup> / <sub>8</sub>	11 <sup>3</sup> / <sub>4</sub>			
36 x 36					14 <sup>11</sup> / <sub>16</sub>	14 <sup>7</sup> / <sub>16</sub>	13 <sup>3</sup> / <sub>4</sub>	13 <sup>7</sup> / <sub>8</sub>
48x48						19 <sup>1</sup> / <sub>4</sub>	18 <sup>5</sup> / <sub>16</sub>	18 <sup>1</sup> / <sub>2</sub>

R2-2-1(20)



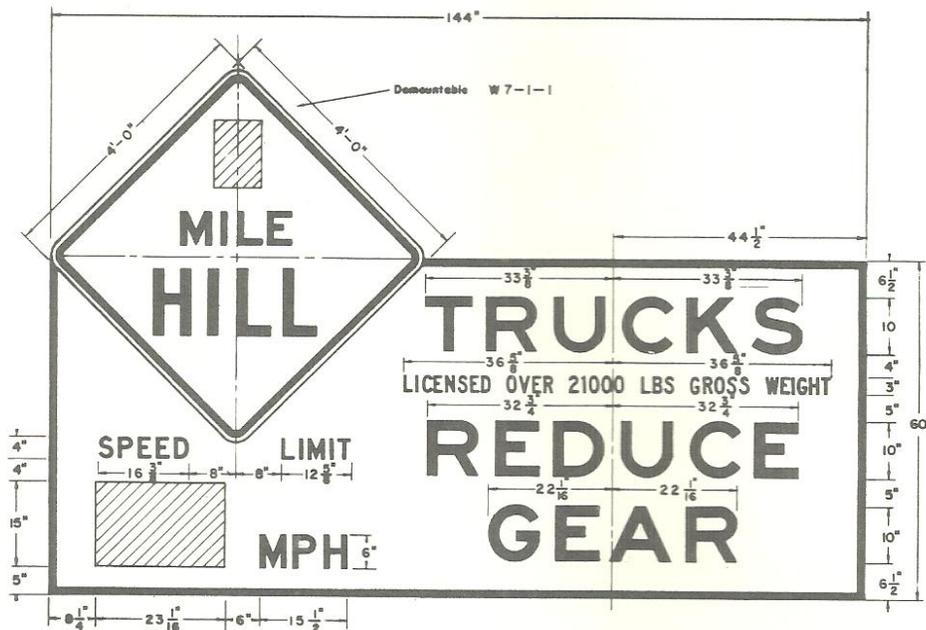
144 x 60

SECTION 704-2 (Cont.)

(c) Speed Limit—Trucks Reduce Gear Sign (R 2-2-1)

(1) **Justification.** On grades which have been determined by the Secretary of Highways to be hazardous, trucks having a gross weight of 21,000 pounds or over shall be required by this sign to use a reduced gear and observe the speed limit established by the Secretary. Where the grade terminates in a business or residence district, the speed limit shall not exceed 20 miles per hour.

(2) **Placement.** This sign shall be so placed that any truck passing it will have time to slow down and reduce gear before entering the down-grade.



COLOR · LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	SERIES LINES						BOR-DER	BLANK STD.
	1	2	3	4	5	6		
144x60	F	C	D	F	D	F	1 1/4	B5-14460

SECTION 704-2 (Cont.)

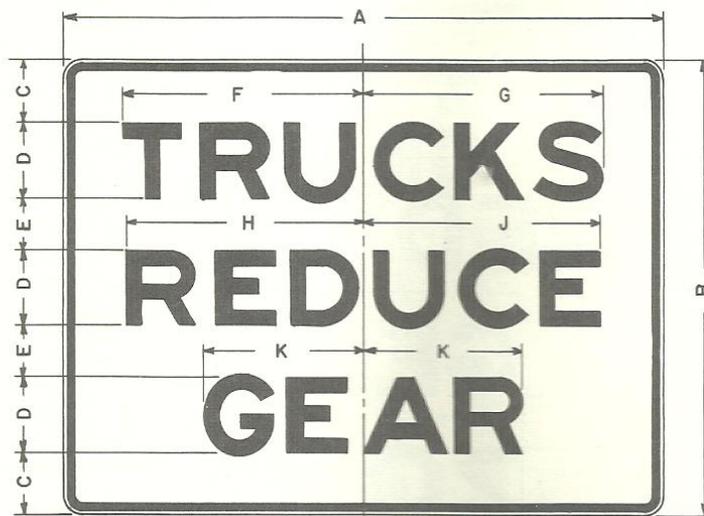
(d) Trucks Reduce Gear Sign (R 2-2-2)

(1) Justification. This sign is authorized for use in place of the Speed Limit-Trucks Reduce Gear sign (R 2-2-1) when approved by the Secretary of Highways.

(2) Placement. This sign where used may be placed beneath the ( ) Mile Hill sign (W 7-1-1) or alone as directed by the Secretary of Highways.



48 x 36



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
48x36	48	36	5	6	4	20 1/2	19 5/8	19 5/16	20 1/8	13 1/4

SIGN SIZE	SERIES			MARGIN	BORDER	BLANK STD.
	LINES					
	1	2	3			
48x36	F	F	F	1/2	3/4	B5-4836

R2-2-3



30 x 30  
48 x 48

SECTION 704-2 (Cont.)

(e) End Reduced Gear Zone Sign (R 2-2-3)

(1) Placement. This sign shall be posted at the bottom of all grades which have been posted with a Trucks Reduce Gear Sign at the top.

(2) Size. The standard size for this sign is 48 inches by 48 inches, but the smaller size (30 inches by 30 inches) may be used where mounting space is limited.



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
30 x 30	30	4	2	6 $\frac{3}{16}$	6 $\frac{7}{16}$	14	13 $\frac{3}{8}$	9	8 $\frac{11}{16}$	8 $\frac{3}{4}$	9 $\frac{1}{8}$
48 x 48	48	6	4	9 $\frac{1}{4}$	9 $\frac{5}{8}$	21	20 $\frac{1}{8}$	13 $\frac{1}{2}$	13	13 $\frac{1}{8}$	13 $\frac{5}{8}$

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	1	2	3	4			
30x30	F	E	F	F	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(S)
48x48	F	E	F	F	$\frac{3}{4}$	$1\frac{1}{4}$	B3-48(S)



SECTION 704-2 (Cont.)

(f) Minimum Speed Sign (R 2-4)

(1) **Justification.** This sign is authorized for use only on limited access highways where the posted speed limit is 60 miles per hour or greater.

(2) **Placement.** When used this sign shall be placed 300 to 500 feet beyond the speed limit signs, but not more than 3 miles apart.

(3) **Size.** The sign size shall be the same as the Speed Limit signs along the highway where it is used.



36 x 48  
48 x 60

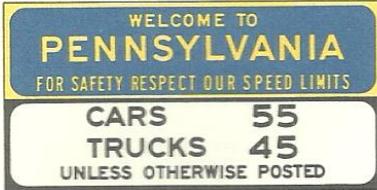


COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
36x48	36	48	7	6	3	16	13 <sup>3</sup> / <sub>4</sub>	10 <sup>3</sup> / <sub>8</sub>	10	12 <sup>1</sup> / <sub>4</sub>	12
48x60	48	60	8	8	4	20	19	13 <sup>7</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>8</sub>	16 <sup>5</sup> / <sub>16</sub>	16

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
36x48	C	C	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836
48x60	C	C	D	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	B5-6048

R2-5-1



120 x 60

SECTION 704-2 (Cont.)

(g) Welcome to Pennsylvania Sign (R 2-5-1)

(1) Justification. This sign is authorized for use on "US" and "PA" traffic routes near the point of entry into the Commonwealth.



SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
120x60	120	60	4	3	8	4 1/2	5	6	7	19 13/16	46 3/4	48 15/16	34 1/2	43 15/16	3

SIGN SIZE	SERIES LINES						MARGIN	BORDER	BLANK STD.
	1	2	3	4	5	6			
120x60	E	E	B	F	F	E	—	1 3/4	B5-12060

- |      |                              |                        |
|------|------------------------------|------------------------|
| NO.1 | LEGEND AND BORDER BACKGROUND | YELLOW (REFLECTIVE)    |
| NO.2 | LEGEND AND BORDER BACKGROUND | BLACK (NON-REFLECTIVE) |
|      |                              | WHITE (REFLECTIVE)     |

SECTION 704-2 (Cont.)

(h) Welcome to Pennsylvania (R 2-5-2)

(1) Justification. This sign is authorized for use on Interstate highways near the point of entry into the Commonwealth.



288 x 144



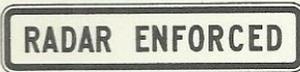
GREEN BACKGROUND WITH WHITE DEMOUNTABLE LEGEND AND BORDER. 2" BORDER WITH 12" RADIUS ON CORNERS.

R2-8



30 x 15

R2-8



36 x 8

48 x 8

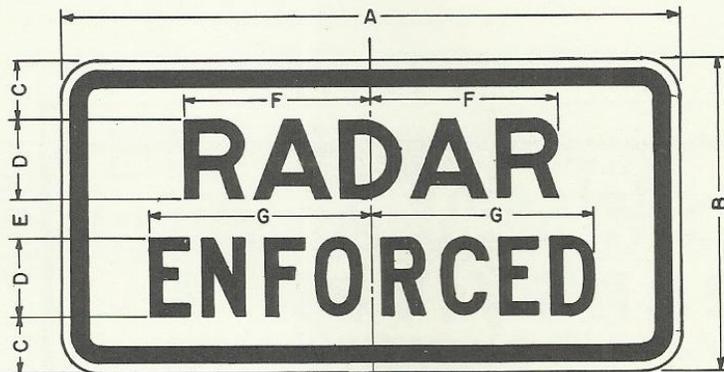
SECTION 704-2 (Cont.)

(i) Radar Enforced Signs (R 2-8)

(1) **Justification.** These signs are authorized for use to indicate that radar speed checks may be made.

(2) **Placement.** When used they shall be mounted below the Speed Limit Signs. They need not be placed on each Speed Limit Sign but shall be at intervals of not more than 10 miles.

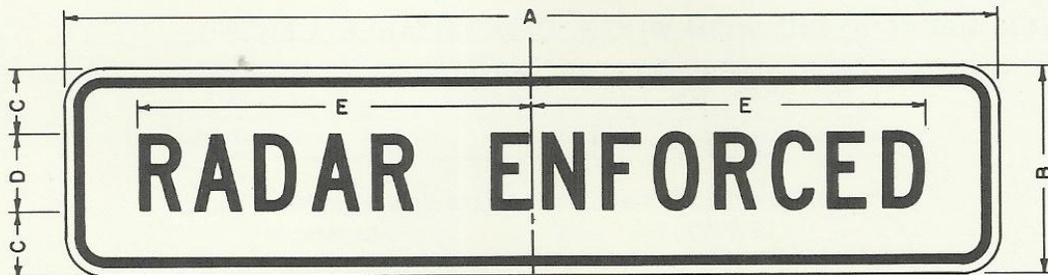
(3) **Size.** The size shall be determined by and be in accord with the size of the sign to which it is appended.



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	A	B	C	D	E	F	G	1	2			
30x15	30	15	2 1/2	4	2	10 7/16	11 1/16	E	C	3/8	3/8	B5-3015



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
	A	B	C	D	E				
36x8	36	8	2 1/2	3	15 1/8	C	3/8	3/8	B5-3608
48x8	48	8	2	4	20 3/16	C	3/8	3/8	B5-4808

## SECTION 704-3. TURNING GROUP (R 3 SERIES)

Signs in the Turning Group Series include Turn Prohibition signs, (R 3-1 to 4, inclusive), which control mandatory movements, and Lane-Use Control signs (R 3-5 to 8, inclusive), which control either mandatory movements or optional movements.

**Turn Prohibition Signs:** The requirements hereinafter set forth for Turn Prohibition signs are minimum requirements, and additional signs should be placed as necessary at or in advance of the intersection. Overhead signs are desirable, particularly in congested areas. Signs may be mounted just above, below, or alongside traffic signal faces governing the traffic to which they apply. If advance signs are used, care should be taken that no alley or public driveway exist between them and the intersection where the turning movement is prohibited. At an intersection with a one-way street, whether signalized or not, the One Way sign (sec. 704-6) should be used, and may be supplemented by the Turn Prohibition sign. A Turn Prohibition sign is not needed at a ramp entrance to an expressway where the design is such as to indicate clearly the one-way traffic movement on the ramp.

A Turn Prohibition sign mounted on a traffic signal installed directly over any roadway shall have a clearance of at least 15 feet above the roadway.

When the movement restriction applies during certain periods only, the use of Turn Prohibition signs calls for special treatment. The following alternatives are listed in order of preference:

1. Internally illuminated signs that are lighted and made legible only during the restricted hours, particularly desirable at signalized intersections.
2. Signs incorporating a supplementary legend showing the hours during which the prohibition is applicable.
3. Movable signs at each corner of the intersection where required, put in place under police supervision only when applicable and removed at other hours.

**Lane-Use Control Signs:** Lane-Use Control signs are authorized for use to indicate the types of movement that are permitted or required from specific lanes at an intersection.

Lane-Use controls permitting turns from two or more lanes are warranted whenever the turning volume exceeds the capacity of one turning lane, and when all movements can be accommodated in the lanes available to them.

When multiple-lane left turns are to be permitted at signalized intersections, special signal phasing should be used to allow the turning movements without interference from opposing or cross traffic.

Overhead Lane-Use Control signs are preferred because they can be placed over the lanes to which they apply.

R3-1



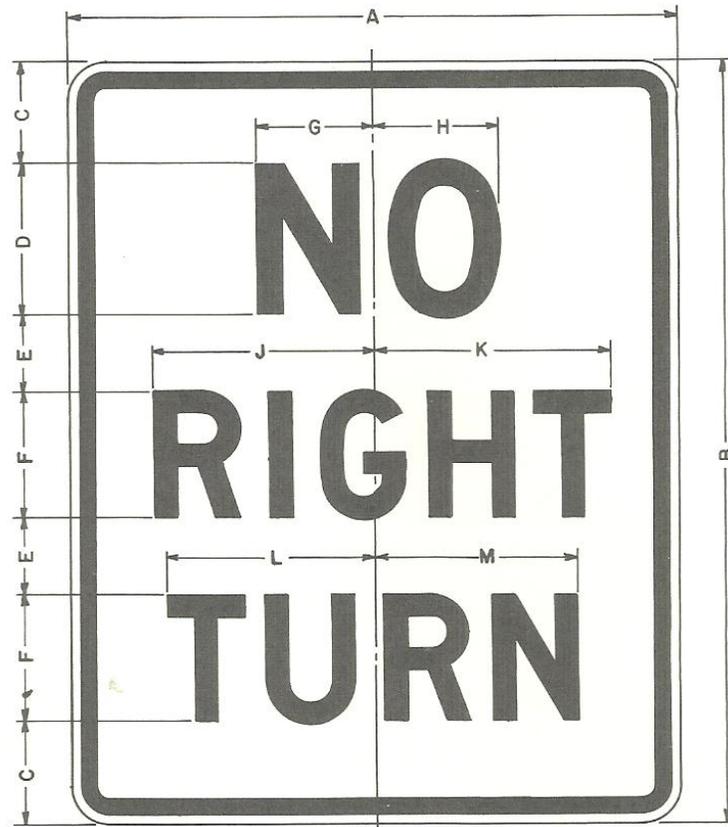
24 x 30  
30 x 36

SECTION 704-3 (Cont.)

(a) No Right Turn Sign (R 3-1)

(1) **Placement.** When this sign is used it should be placed at the near right-hand corner of the intersection unless there is a traffic signal on the far right-hand corner, in which case, it should be placed near the signal. An auxiliary sign with the same message may be used in advance of the intersection, or, in congested areas, an overhead sign may be used where desirable.

(2) **Size.** The standard size is 24 inches by 30 inches, while the overhead size is 30 inches by 36 inches.



COLOR, LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24x30	24	30	4	6	3	5	4 $\frac{5}{8}$	4 $\frac{15}{16}$	8 $\frac{11}{16}$	9 $\frac{5}{16}$	8 $\frac{1}{4}$	8
30x36	30	36	5	8	3	6	5 $\frac{13}{16}$	6 $\frac{3}{16}$	10 $\frac{7}{8}$	11 $\frac{5}{8}$	10 $\frac{5}{16}$	10

SIGN	SERIES			MAR-	BOR-	BLANK
	LINES					
	1	2	3			
24x30	D	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024
30x36	D	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B5-3630

SECTION 704-3 (Cont.)

(b) No Left Turn Sign (R 3-2)

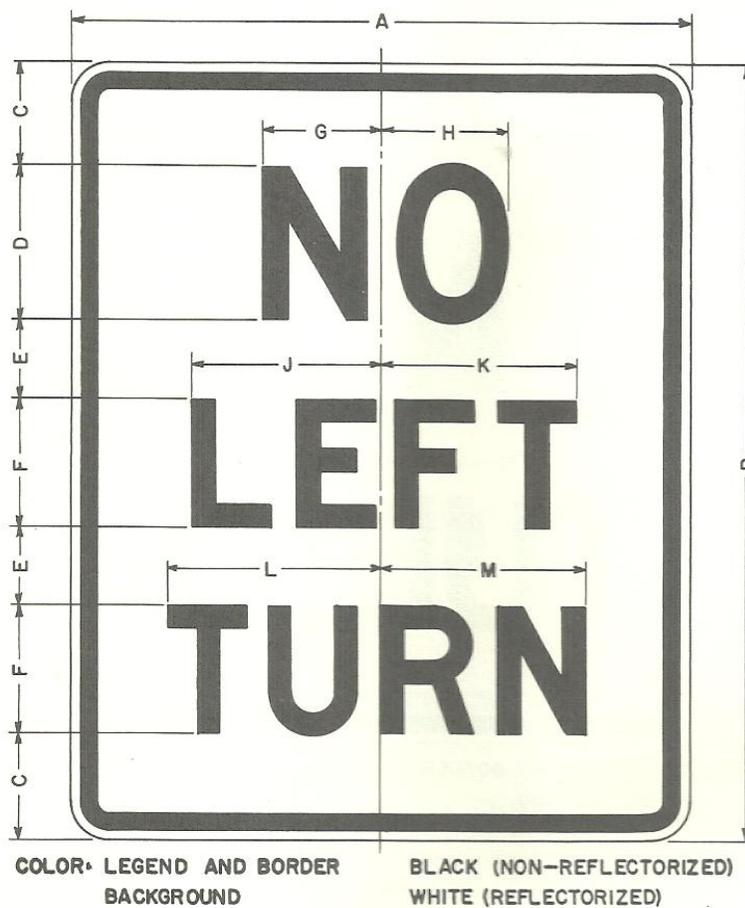
(1) **Placement.** When this sign is used, two should be erected; one at the near right-hand corner and one at the far left-hand corner, on two-way, two lane undivided streets. On divided streets or highways this sign should be placed on the near end and on the far end of the medians. An exception is made where there is a traffic signal on the far right-hand corner, in that case the sign on the right-hand side should be placed near that signal. An auxiliary sign with the same message may be used in advance of the intersection, or, in congested areas, an overhead sign may be used where desirable.

(2) **Size.** The standard size is 24 inches by 30 inches, and the overhead size is 30 inches by 36 inches.



24 x 30

30 x 36



SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	
24 x 30	24	30	4	6	3	5	4 <sup>5</sup> / <sub>8</sub>	4 <sup>15</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>4</sub>	7 <sup>5</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	8	
30 x 36	30	36	5	8	3	6	5 <sup>13</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>2</sub>	10 <sup>5</sup> / <sub>16</sub>	10	

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
24 x 30	D	D	D	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024
30 x 36	D	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-3630

R 3-3



24 x 24

30 x 30

SECTION 704-3 (Cont.)

(c) No Turns Sign (R 3-3)

(1) Placement. When this sign is used, two should be erected; one at the near right-hand corner and one at the far left-hand corner, on two-way, two lane undivided streets. On divided streets or highways this sign should be placed on the near end and on the far end of the medians. An exception is made where there is a traffic signal on the far right-hand corner, in that case the sign on the right-hand side should be placed near that signal. An auxiliary sign with the same message may be used in advance of the intersection, or, in congested areas, an overhead sign may be used where desirable.

(2) Size. The standard size is 24 inches by 24 inches, and the overhead size is 30 inches by 30 inches.



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
24 x 24	24	4 $\frac{1}{2}$	6	4	5	4 $\frac{3}{4}$	5 $\frac{1}{16}$	9 $\frac{13}{16}$	9 $\frac{5}{8}$	
30 x 30	30	5 $\frac{5}{8}$	8	4 $\frac{3}{4}$	6	5 $\frac{15}{16}$	6 $\frac{5}{16}$	12 $\frac{1}{4}$	12	

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD.
	1	2			
24x24	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B3-24(S)
30x30	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(S)

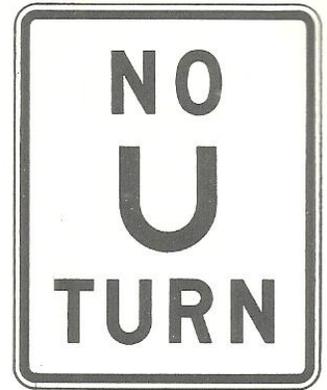


SECTION 704-3 (Cont.)

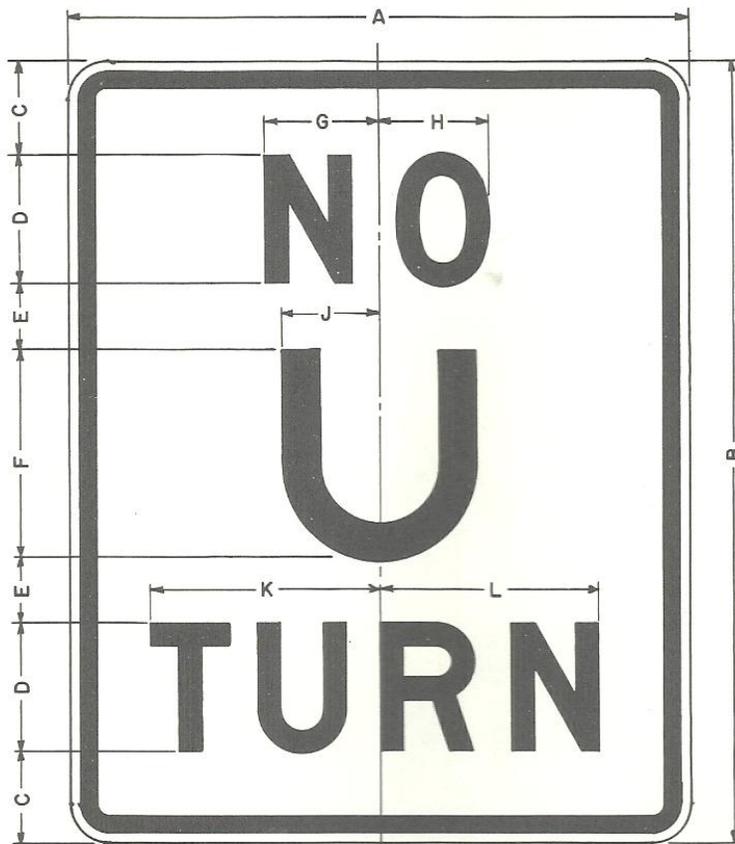
(d) No U-Turn Sign (R 3-4)

(1) **Placement.** This sign shall be used at or between intersections to indicate that U-Turns at the specific intersection or on the roadway so posted are prohibited.

(2) **Size.** The standard size is 24 inches by 30 inches. On Expressways, the sign shall be 36 inches by 48 inches in size.



24 x 30  
36 x 48



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
24 x 30	24	30	3 1/2	5	2 1/2	8	4 7/16	4 1/4	3 11/16	8 15/16	8 1/2
36 x 48	36	48	6	8	4	12	7	7	5 1/2	13 3/4	13 3/4

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
24 x 30	D	F	D	3/8	5/8	B5-3024
36 x 48	D	F	D	1/2	3/4	B5-4836

R3-5(R)

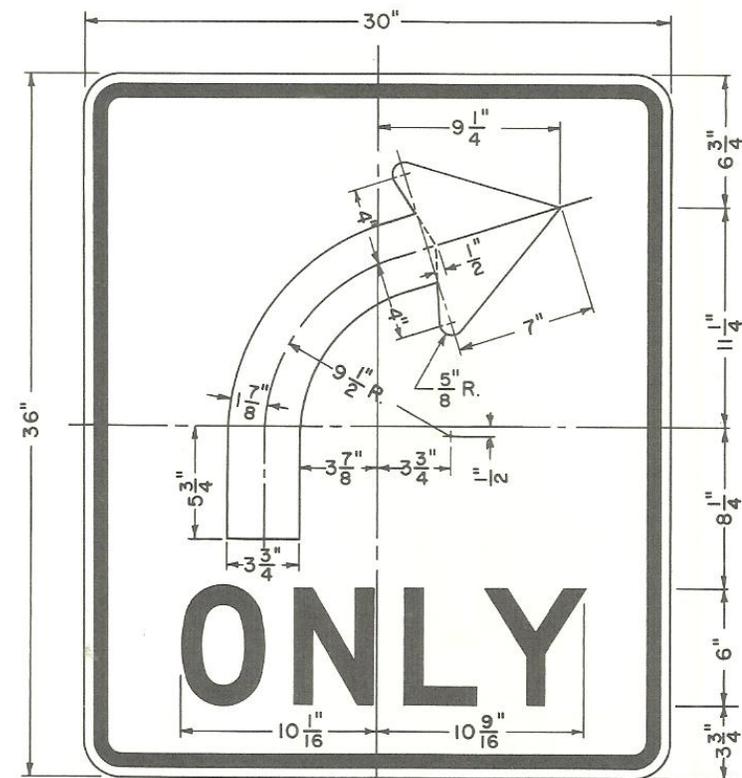


30 x 36

SECTION 704-3 (Cont.)

(e) Mandatory Right Turn Sign (R 3-5(R))

(1) Placement. This sign shall be mounted overhead, above the right lane or lanes of an approach to an intersection where traffic must turn to the right.



COLOR, LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	SERIES LINE	MAR- GIN	BOR- DER	BLANK STD.
30x36	D	1/2	3/4	B5-3630

R3-5(L)

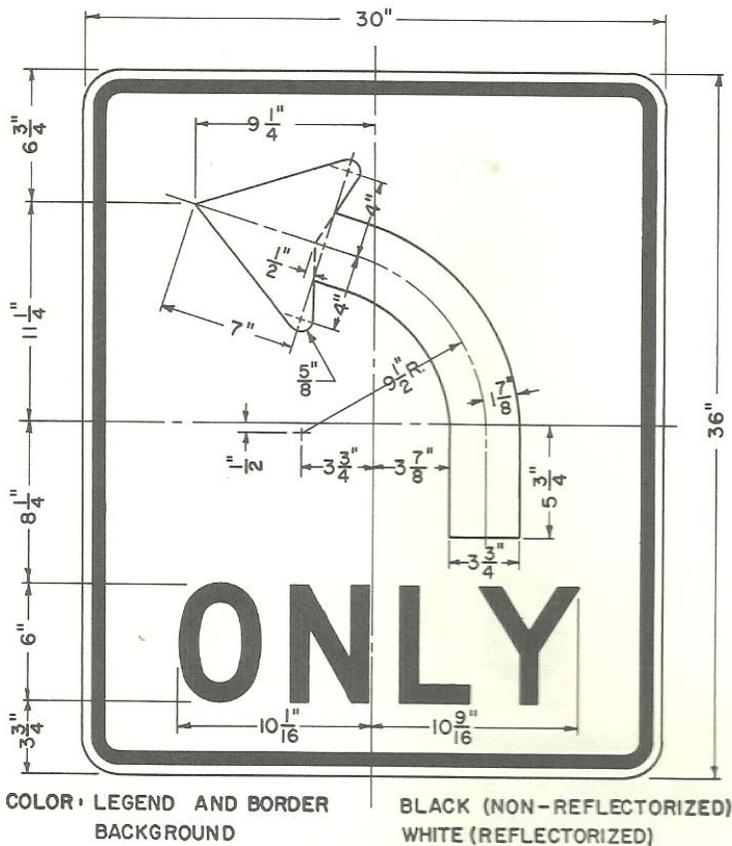
SECTION 704-3 (Cont.)

(f) Mandatory Left Sign Turn (R 3-5(L))

(1) Placement. This sign shall be mounted overhead, above the left lane or lanes of an approach to an intersection where traffic must turn to the left.



30 x 36



SIGN SIZE	SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
30 x 36	D	1/2	3/4	B5-3630

R3-5(S)

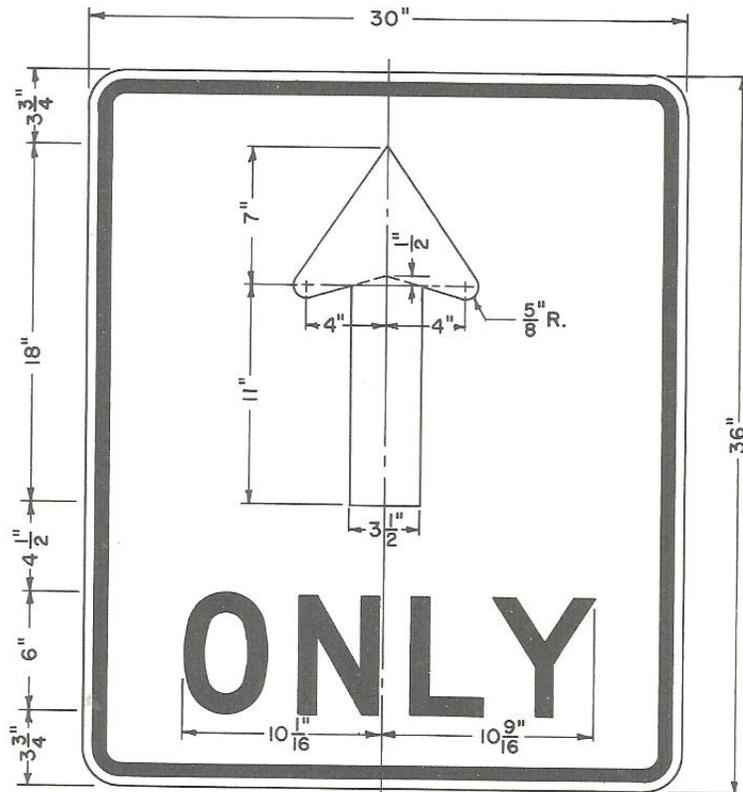


30 x 36

SECTION 704-3 (Cont.)

(g) Mandatory Straight-Through Sign (R 3-5(S))

(1) Placement. This sign shall be mounted overhead, above any lane of an approach to an intersection where traffic must proceed through the intersection without turning in any direction.



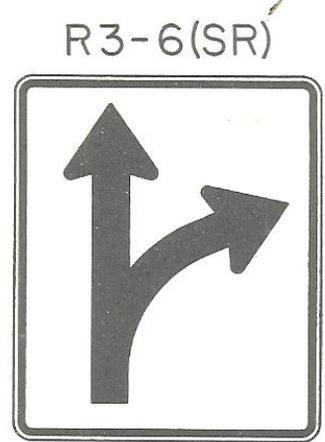
COLOR · LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
BACKGROUND                              WHITE (REFLECTORIZED)

SIGN SIZE	SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
30 x 36	D	1/2	3/4	B5-3630

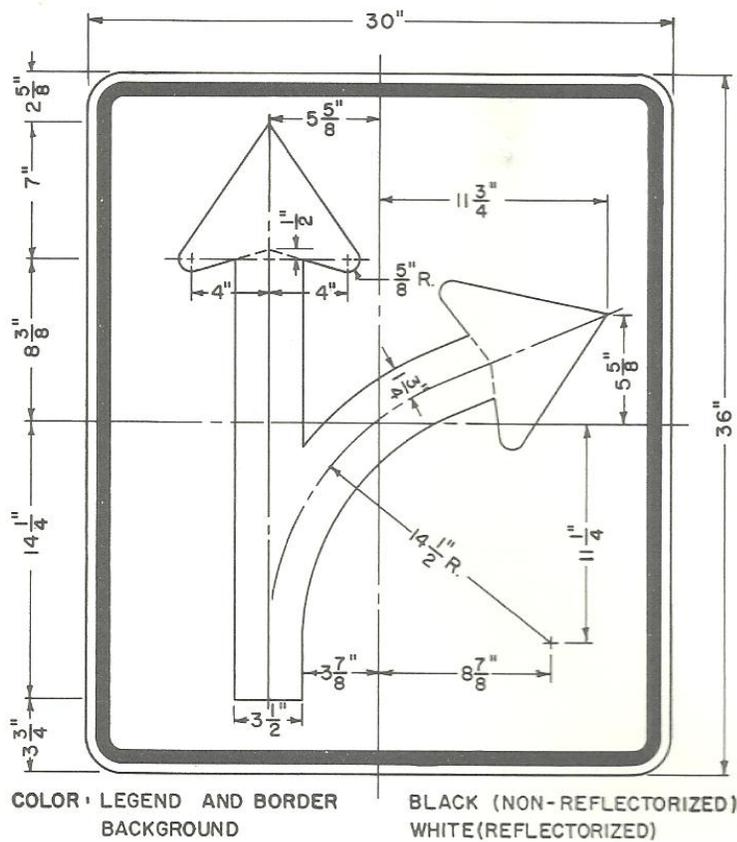
SECTION 704-3 (Cont.)

(h) Optional Right Turn Sign (R 3-6(SR))

(1) Placement. This sign shall be mounted overhead, above any lane of an approach to an intersection to indicate that traffic in the governed lane is permitted or required to make either of the movements symbolized.



30 x 36



SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30x36	$\frac{1}{2}$	$\frac{3}{4}$	B5-3630



SECTION 704-3 (Cont.)

**Right Lane Must Turn Right Sign (R 3-7 (R))**

(1) **Placement.** This sign is authorized for use to supplement the overhead Lane-Use Control signs (R3-5(R)) and (R3-6(SR)). It should be placed at an adequate distance in advance of the intersection so that the motorist can select the appropriate lane in advance of the intersection.

(2) **Size.** The standard size is 30 inches by 30 inches. The 48 inch by 48 inch size may be used where emphasis is needed.



30 x 30  
48 x 48



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
30 x 30	30	4 1/2	4	5	12 5/16	12 1/2	7 1/4	7 11/16	12 3/4	12 13/16
48 x 48	48	8 1/2	6	7	18 7/16	18 3/4	10 7/8	11 1/2	19 1/8	19 1/4

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
30x30	C	C	C	1/2	3/4	B3-30(S)
48x48	C	C	C	3/4	1 1/4	B3-48(S)

R3-7(L)



30 x 30  
48 x 48

SECTION 704-3 (Cont.)

(k) Left Lane Must Turn Left Sign (R 3-7 (L))

(1) Placement. This sign is authorized for use to supplement the overhead Lane-Use Control signs (R 3-5(L)) and (R 3-6 (LS)). It should be placed at an adequate distance in advance of the intersection so that the motorist can select the appropriate lane in advance of the intersection.

(2) Size. The standard size is 30 inches by 30 inches. The 48 inch by 48 inch size may be used where emphasis is needed.



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
30 x 30	30	4 1/2	4	5	11 9/16	12 1/8	7 1/4	7 11/16	12 1/4
48 x 48	48	8 1/2	6	7	17 3/8	18 3/16	10 7/8	11 1/2	18 3/8

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
30x30	C	C	C	1/2	3/4	B3-30(S)
48x48	C	C	C	3/4	1 1/4	B3-48(S)



SECTION 704-3 (Cont.)



24 x 30

(I) Center Lane—Left Turn Only Sign (R 3-7-1)

(1) Placement. This sign is authorized for use in conjunction with pavement markings and/or signs marking a No Passing Zone to indicate a section of three or five lane highway on which the center lane has been reserved for storage for left turning traffic only.



SIGN SIZE	SERIES					MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4	5			
24x30	D	D	D	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024

COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

R3-8(SRR)

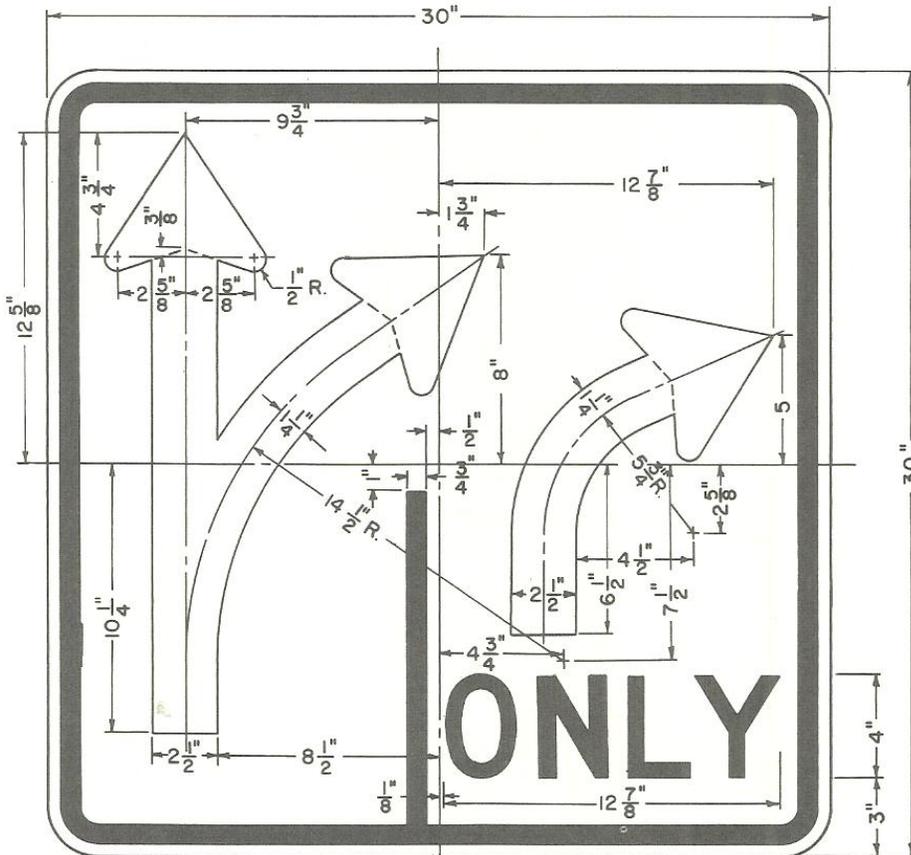


30 x 30

SECTION 704-3 (Cont.)

(m) Lane-Use Control Sign (R 3-8 (SRR))

(1) Placement. This sign is authorized for use to supplement the overhead Lane-Use Control signs (R3-6(SR)) and (R3-5(R)). It should be placed at an adequate distance in advance of the intersection so that the motorist can select the appropriate lane in advance of the intersection.



COLOR : LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
 BACKGROUND                              WHITE (REFLECTORIZED)

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
30x30	D	1/2	3/4	B3-30(S)

SECTION 704-3 (Cont.)

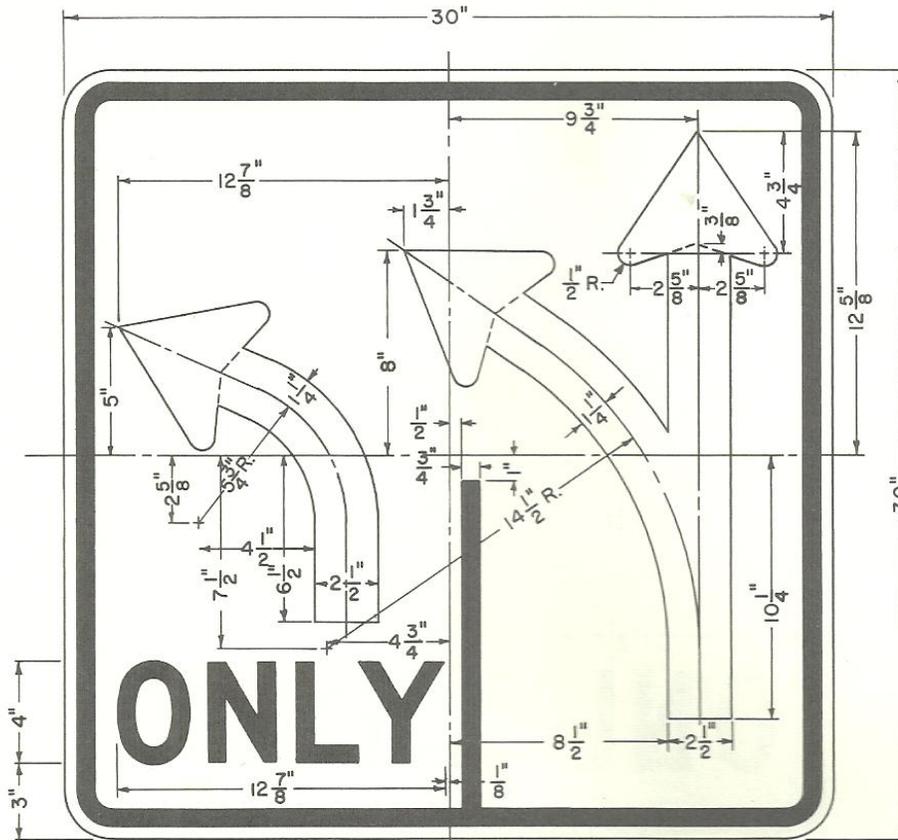
R3-8(LLS)



30 x 30

(n) Lane-Use Control Sign (R 3-8 (LLS))

(1) Placement. This sign is authorized for use to supplement the overhead Lane-Use Control signs (R3-5(L) and (R3-6(LS))) It should be placed at an adequate distance in advance of the intersection so that the motorist can select the appropriate lane in advance of the intersection.



COLOR, LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	SERIES LINE	MARGIN	BORDER	BLANK STD.
30x30	D	1/2	3/4	B3-30(S)



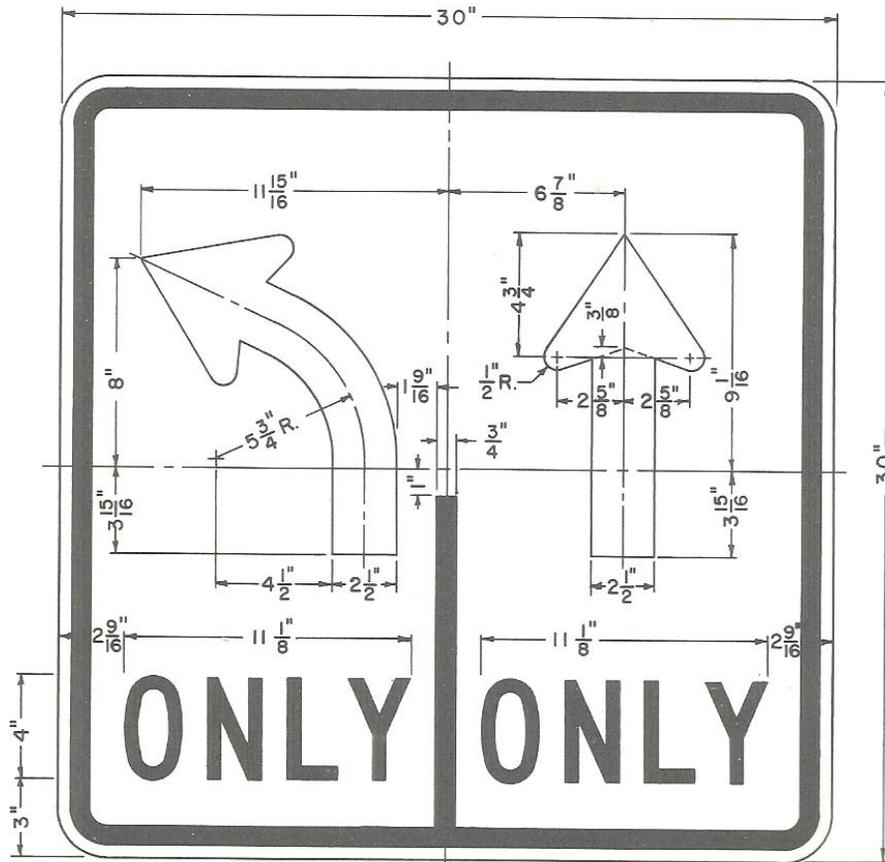
SECTION 704-3 (Cont.)

(p) Lane-Use Control Sign (R 3-8 (LS))

(1) Placement. This sign is authorized for use to supplement the overhead Lane-Use Control signs (R3-5(L)) and (R3-5(S)). It should be placed at an adequate distance in advance of the intersection so the motorist can select the appropriate lane in advance of the intersection.



30 x 30



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
30 x 30	C	1/2	3/4	B3-30(S)

R4-1



24 x 30  
36 x 48

SECTION 704-4. ALIGNMENT SIGNS (R 4 SERIES)

(a) Do Not Pass Sign (R 4-1)

(1) Placement. This sign is authorized for use on a two-or three-lane highway at the beginning of, and at intervals within, a zone through which restricted sight distance or other conditions makes overtaking and passing hazardous as designated by the Secretary of Highways. An additional sign on the left side of the highway is also authorized where desirable.

(2) Size. The standard size is 24 inches by 30 inches. The 36 inch by 48 inch size may be used where emphasis is needed.



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24x30	24	30	3 <sup>3</sup> / <sub>8</sub>	6	2 <sup>1</sup> / <sub>2</sub>	3 <sup>5</sup> / <sub>8</sub>	4 <sup>11</sup> / <sub>16</sub>	4 <sup>7</sup> / <sub>8</sub>	7	7 <sup>1</sup> / <sub>4</sub>	9 <sup>5</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>2</sub>
36x48	36	48	5 <sup>1</sup> / <sub>2</sub>	10	3 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>	7 <sup>7</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	11 <sup>1</sup> / <sub>2</sub>	11 <sup>3</sup> / <sub>4</sub>	14 <sup>3</sup> / <sub>4</sub>	14 <sup>3</sup> / <sub>4</sub>

SIGN SIZE	SERIES			MAR- GIN	BOR- DER	BLANK STD.
	LINES					
	1	2	3			
24x30	D	D	D	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024
36x48	D	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836

SECTION 704-4 (Cont.)

(b) No Passing Zone Sign (R 4-1-1)

(1) Placement. This sign shall be placed at the beginning of, and at intervals not greater than one-eighth mile within, any portion of a State highway which the Secretary of Highways has designated as a "No Passing Zone."

(2) Size. The standard size shall be 24 inches by 30 inches. The larger sizes may be used where emphasis is needed.



24 x 30  
30 x 36  
36 x 48



COLOR • LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
24x30	24	30	4	5	3 1/2	3 5/16	3 7/16	9 1/4	9 5/8	5 1/2
30x36	30	36	5	6	4	3 15/16	4 1/16	11 1/8	11 9/16	6 5/8
36x48	36	48	6 1/2	8	5 1/2	5 1/4	5 7/16	14 13/16	15 7/16	8 13/16

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
24x30	C	B	B	3/8	5/8	B5-3024
30x36	C	B	B	1/2	3/4	B5-3630
36x48	C	B	B	1/2	3/4	B5-4836



24 x 30  
36 x 48

SECTION 704-4 (Cont.)

(c) Pass With Care Sign (R 4-2)

(1) Placement. This sign is authorized for use to indicate that passing is permitted after a Do Not Pass sign (R 4-1).

(2) Size. The standard size shall be 24 inches by 30 inches. The 36 inch by 48 inch size may be used where emphasis is needed.



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24x30	24	30	3 1/2	6	2 1/2	3 1/2	8 3/16	8 7/16	8 3/4	8 5/16	8 5/8	8 7/8
36x48	36	48	5 1/2	10	3 1/2	5 1/2	12 1/2	12 3/4	12 1/2	12 3/8	13 1/4	13 1/8

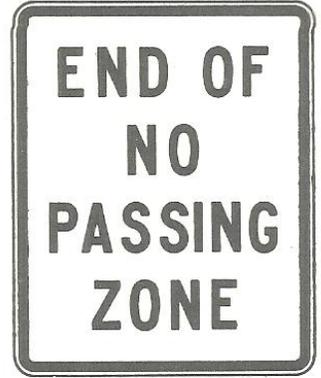
SIGN SIZE	SERIES			MARGIN	BORDER	BLANK STD.
	LINES					
	1	2	3			
24x30	C	C	C	3/8	5/8	B5-3024
36x48	C	C	C	1/2	3/4	B5-4836



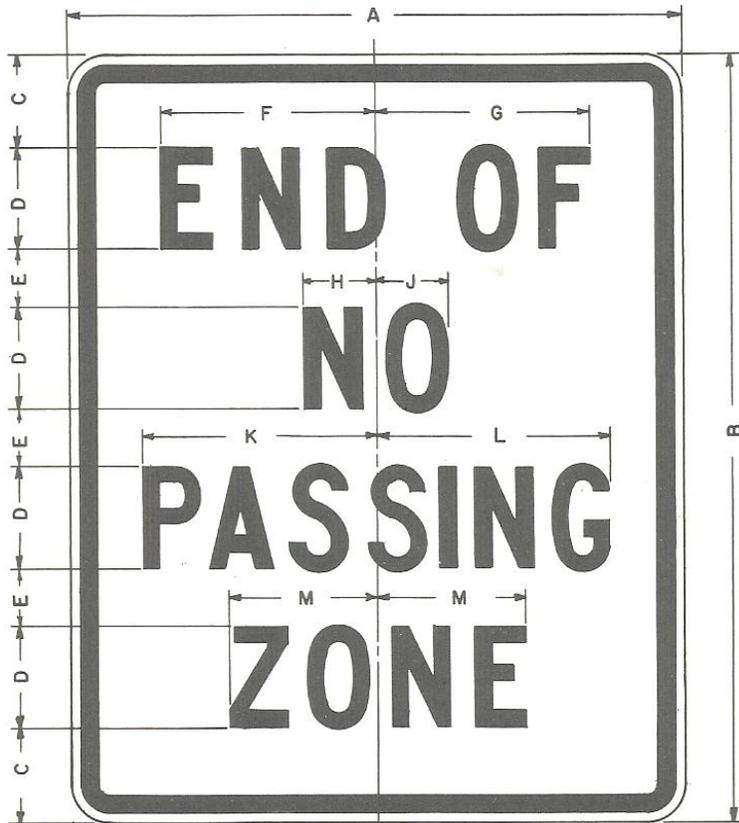
SECTION 704-4 (Cont.)

(d) End of No Passing Zone Sign (R 4-2-1)

(1) Placement. This sign shall be used to designate the end of a zone where passing has been prohibited by the erection of No Passing Zone Signs (R 4-1-1).



24 x 30

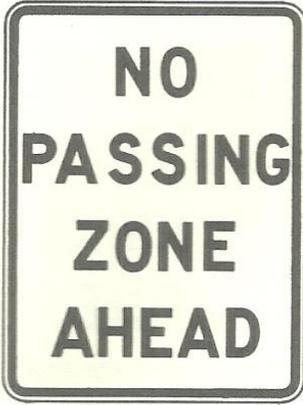


COLOR, LEGEND AND BORDER BACKGROUND

BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24x30	24	30	3 <sup>5</sup> / <sub>8</sub>	4	2 <sup>1</sup> / <sub>4</sub>	8 <sup>5</sup> / <sub>16</sub>	8 <sup>11</sup> / <sub>16</sub>	2 <sup>5</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>8</sub>	9 <sup>7</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	2	3	4				
24x30	C	C	C	C	3/8	5/8	B5-3024



24 x 30  
36 x 48

SECTION 704-4 (Cont.)

(e) No Passing Zone Ahead Sign (R 4-2-2)

(1) Placement. This sign is authorized for use in advance of the initial No Passing Zone Sign (R 4-1-1) to warn a motorist that he is approaching an area wherein he may not pass.

(2) Size. The standard size is 36 inches by 48 inches. The 24 inch by 30 inch size may be used on secondary roads and streets where speeds are not high.



SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24x30	24	30	3 $\frac{1}{4}$	4	2 $\frac{1}{2}$	2 $\frac{5}{8}$	2 $\frac{3}{4}$	9 $\frac{1}{8}$	9 $\frac{7}{16}$	5 $\frac{1}{2}$	7 $\frac{1}{8}$	6 $\frac{7}{8}$
36x48	36	48	5 $\frac{1}{4}$	6	4 $\frac{1}{2}$	3 $\frac{15}{16}$	4 $\frac{1}{8}$	13 $\frac{11}{16}$	14 $\frac{3}{16}$	8 $\frac{1}{4}$	10 $\frac{11}{16}$	10 $\frac{5}{16}$

SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4			
24x30	C	C	C	C	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024
36x48	C	C	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B5-4836

COLOR · LEGEND AND BORDER BACKGROUND

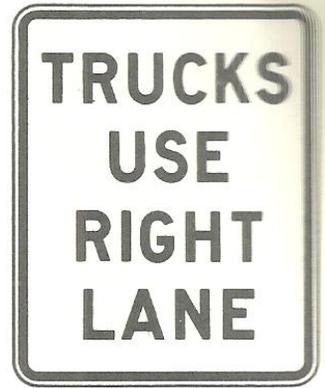
BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SECTION 704-4 (Cont.)

(f) Trucks Use Right Lane Sign (R 4-5)

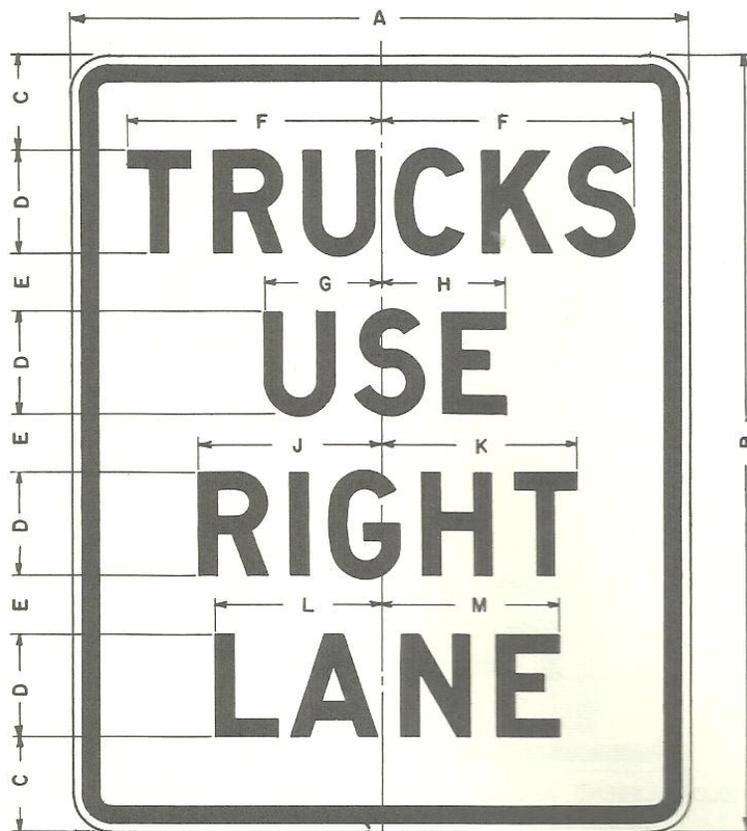
(1) **Placement.** This sign is authorized for use where an extra, or "climbing," lane has been provided for truck traffic. When used, a Pavement-width Transition sign (W 4-2) should be erected in advance of the end of the lane.

(2) **Size.** The standard size is 24 inches by 30 inches. The 48 inch by 60 inch size may be used where emphasis is needed.



24 x 30

48 x 60



COLOR: LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
BACKGROUND                      WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24x30	24	30	$3\frac{5}{8}$	4	$2\frac{1}{4}$	$9\frac{13}{16}$	$4\frac{9}{16}$	$4\frac{13}{16}$	$7\frac{1}{8}$	$7\frac{5}{8}$	$6\frac{1}{2}$	$6\frac{7}{8}$
48x60	48	60	$7\frac{1}{4}$	8	$4\frac{1}{2}$	$19\frac{5}{8}$	$9\frac{1}{8}$	$9\frac{5}{8}$	$14\frac{1}{4}$	$15\frac{1}{4}$	13	$13\frac{3}{4}$

SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4			
24x30	D	D	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024
48x60	D	D	D	D	$\frac{3}{4}$	$\frac{7}{8}$	B5-6048

R 4-7(L)



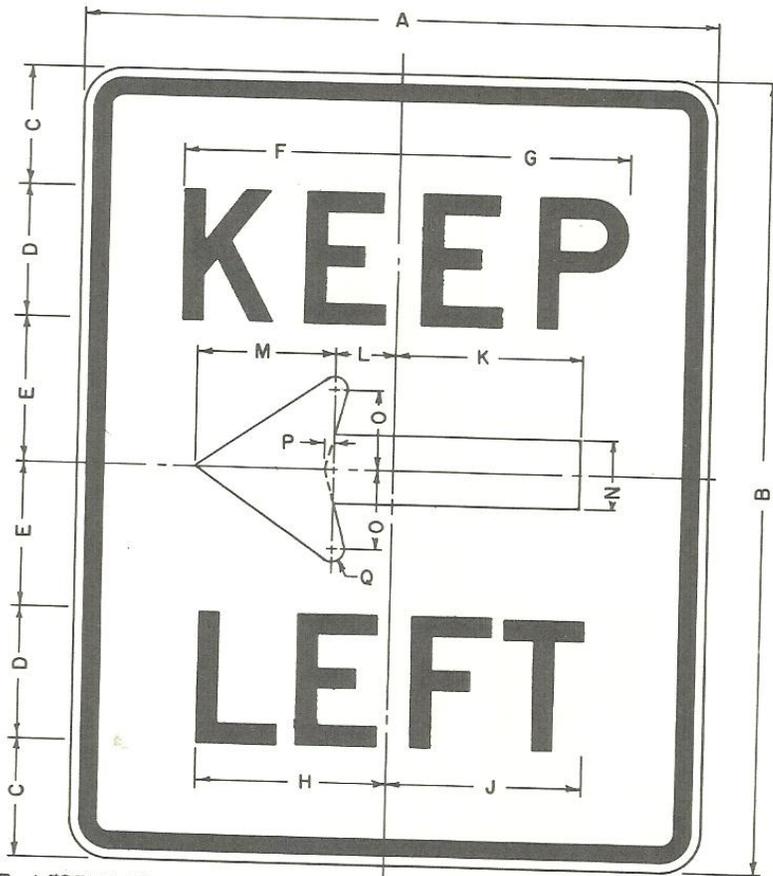
18 x 24  
24 x 30  
36 x 48

SECTION 704-4 (Cont.)

(i) Keep Left With Horizontal Arrow Sign (R 4-7 (L))

(1) Placement. This sign is authorized for use within and at the ends of medians, parkways, loading islands, and refuge islands, at traffic islands, and at underpass piers, where traffic is required to keep to the left of such obstructions. See also Keep Left With 30° Arrow Sign (R 4-8 (L)).

(2) Size. The standard size is 24 inches by 30 inches, but a smaller size of 18 inches by 24 inches may be used when an island is not of sufficient size to accommodate a larger size. On expressways and where emphasis is needed the sign shall be 36 inches by 48 inches.



COLOR : LEGEND, ARROW AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
18 x 24	18	24	3 <sup>3</sup> / <sub>4</sub>	4	4 <sup>1</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>4</sub>	6	6	1 <sup>1</sup> / <sub>2</sub>
24 x 30	24	30	4 <sup>1</sup> / <sub>2</sub>	5	5 <sup>1</sup> / <sub>2</sub>	8 <sup>1</sup> / <sub>16</sub>	8 <sup>3</sup> / <sub>4</sub>	7 <sup>3</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>2</sub>	7 <sup>1</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>4</sub>
36 x 48	36	48	7 <sup>1</sup> / <sub>2</sub>	8	8 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	12	12	3

SIGN SIZE	DIMENSIONS					SERIES		MAR-GIN	BOR-DER	BLANK STD
	M	N	O	P	Q	LINES	2			
18 x 24	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>8</sub>	D	D	3 <sup>3</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	B5-2418
24 x 30	5 <sup>1</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	3	3 <sup>3</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	D	D	3 <sup>3</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	B5-3024
36 x 48	9	4 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	D	D	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	B5-4836

SECTION 704-4 (Cont.)

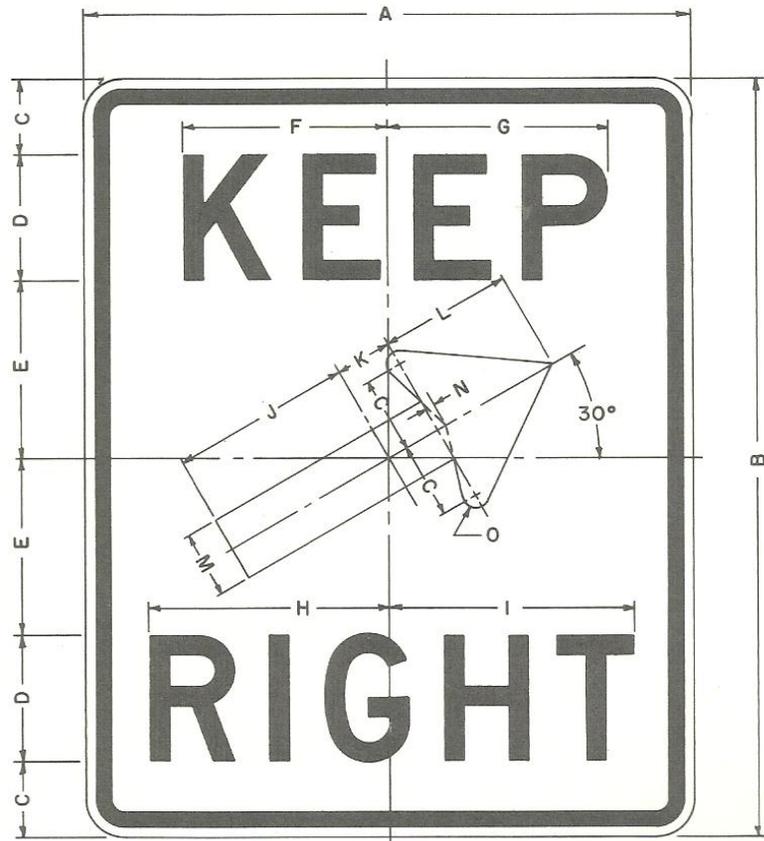
(j) Keep Right With 30° Arrow Sign (R 4-8 (R))

(1) Placement. This sign is authorized for use within and at the ends of medians, parkways, loading islands, and refuge islands, at traffic islands, and at underpass piers, where traffic is required to make an oblique turn to the right to avoid the obstruction. It may be used as a substitute for the Keep Right With Horizontal Arrow sign (R 4-7 (R)) where it is felt it will indicate more clearly a minor deviation from a straight course.

(2) Size. The standard size is 24 inches by 30 inches, but a smaller size of 18 inches by 24 inches may be used when an island is not of sufficient size to accommodate a larger size. On expressways and where emphasis is needed the sign shall be 36 inches by 48 inches.



18 x 24  
24 x 30  
36 x 48



COLOR - LEGEND, ARROWS AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
18 x 24	18	24	2 1/4	4	5 3/4	6 1/4	6 1/4	7	7	5 11/32	1 11/16	3 15/16	1 31/32	9 9/32	3 3/8
24 x 30	24	30	3	5	7	8 1/16	8 3/4	9 1/2	9 11/16	7 1/8	2 1/4	5 1/4	2 5/8	3 3/8	1 1/2
36 x 48	36	48	4 1/2	8	11 1/2	12 1/2	12 1/2	14	14	10 11/16	3 3/8	7 7/8	3 15/16	9 9/16	3 3/4

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
18 x 24	D	D	3/8	5/8	B5-2418
24 x 30	D	D	3/8	5/8	B5-3024
36 x 48	D	D	1/2	3/4	B5-4836

R 4-8(L)



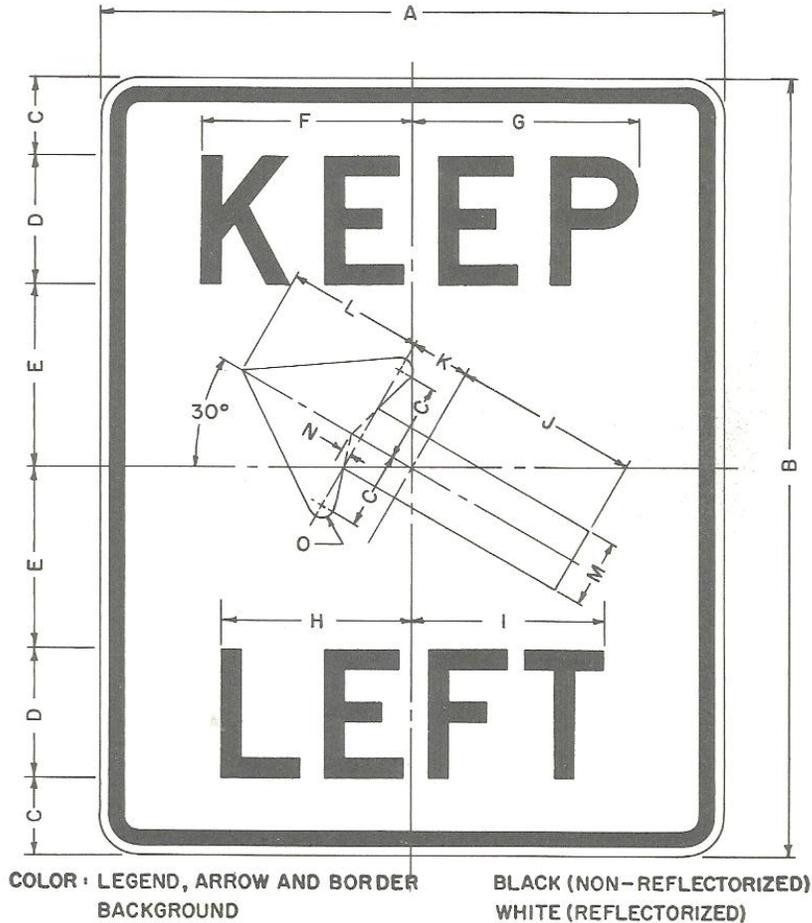
18 x 24  
24 x 30  
36 x 48

SECTION 704-4 (Cont.)

(k) Keep Left With 30° Arrow Sign (R 4-8 (L))

(1) **Placement.** This sign is authorized for use within and at the ends of medians, parkways, loading islands, and refuge islands, at traffic islands, and at underpass piers, where traffic is required to make an oblique turn to the left to avoid the obstruction. It may be used as a substitute for the Keep Left With Horizontal Arrow sign (R 4-7.(L)) where it is felt that it will indicate more clearly a minor deviation from a straight course.

(2) **Size.** The standard size is 24 inches by 24 inches by 30 inches, but a smaller size of 18 inches by 24 inches may be used when an island is not of sufficient size to accommodate a larger size. On expressways the sign shall be 36 inches by 48 inches.



SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
18 x 24	18	24	2 1/4	4	5 3/4	6 1/4	6 1/4	5 3/4	6	5 11/32	1 11/16	3 15/16	1 31/32	9 9/32	3 3/8
24 x 30	24	30	3	5	7	8 1/16	8 3/4	7 3/16	7 1/2	7 1/8	2 1/4	5 1/4	2 5/8	3 3/8	1 1/2
36 x 48	36	48	4 1/2	8	11 1/2	12 1/2	12 1/2	11 1/2	12	10 11/16	3 3/8	7 7/8	3 15/16	9 9/16	3 3/4

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
18 x 24	D	D	3/8	5/8	B5-2418
24 x 30	D	D	3/8	5/8	B5-3024
36 x 48	D	D	1/2	3/4	B5-4836

SECTION 704.4 (Cont.)

(1) Keep Right Sign (R 4-9 (R))

(1) Placement. This sign is authorized for use in advance of those locations where it is necessary for traffic to use the right lane only, because of road work or an obstruction ahead in the roadway.

(2) Size. The standard size is 24 inches by 30 inches, but a smaller size of 18 inches by 24 inches may be used when an island is not of sufficient size to accommodate a larger size. On expressways and where emphasis is needed the signs shall be 36 inches by 48 inches.



18 x 24  
24 x 30  
36 x 48



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
18 x 24	18	24	4 <sup>3</sup> / <sub>4</sub>	5	4 <sup>1</sup> / <sub>2</sub>	6 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	7 <sup>7</sup> / <sub>8</sub>
24 x 30	24	30	6	6	6	7 <sup>5</sup> / <sub>8</sub>	8	9 <sup>1</sup> / <sub>16</sub>	9 <sup>7</sup> / <sub>16</sub>
36 x 48	36	48	9 <sup>1</sup> / <sub>2</sub>	10	9	12 <sup>3</sup> / <sub>4</sub>	13 <sup>1</sup> / <sub>4</sub>	15 <sup>1</sup> / <sub>8</sub>	15 <sup>3</sup> / <sub>4</sub>

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
18 x 24	C	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-2418
24 x 30	C	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024
36 x 48	C	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836



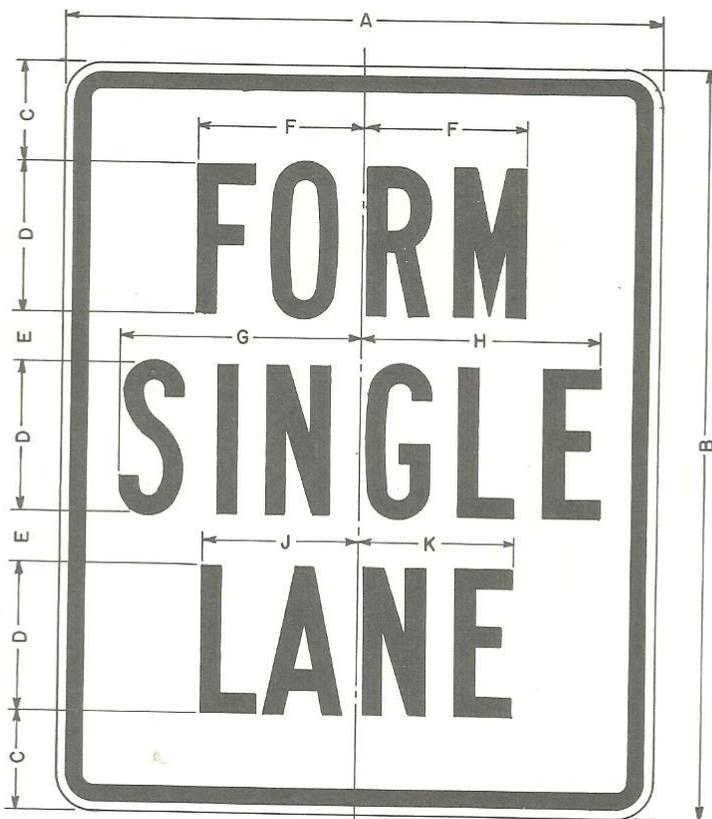
24 x 30  
36 x 48

SECTION 704-4 (Cont.)

(m) Form Single Lane Sign (R 4-10)

(1) **Placement.** This sign is authorized for use in conjunction with and in advance of the Center Lane, Left Turn Only (R3-7-1) and pavement markings to indicate the establishment of a left turn storage lane at an intersection. Its use is limited to three- or five-lane highways.

(2) **Size.** The standard size is 24 inches by 30 inches. The 36 inch by 48 inch size may be used where emphasis is needed.



COLOR : LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
BACKGROUND                              WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
24 x 30	24	30	4	6	2	6 <sup>13</sup> / <sub>16</sub>	9 <sup>5</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>15</sub>	6 <sup>1</sup> / <sub>8</sub>	6 <sup>7</sup> / <sub>16</sub>
36 x 48	36	48	6	9	4 <sup>1</sup> / <sub>2</sub>	10 <sup>3</sup> / <sub>16</sub>	14	13 <sup>7</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>4</sub>	9 <sup>5</sup> / <sub>8</sub>

SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
24 x 30	B	B	B	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024
36 x 48	B	B	B	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836



SECTION 704-5. EXCLUSION GROUP (R 5 SERIES)

(a) Do Not Enter Sign (R 5-1)

(1) Placement. This sign is authorized for use at the end of a one-way roadway or ramp to prohibit traffic from entering in the wrong direction. More than one sign may be justified.

(2) Size. The standard size is 24 inches by 24 inches. The 36 inch by 36 inch size may be used for emphasis where needed and shall be the minimum size for expressway ramps.



24 x 24  
36 x 36



COLOR : LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
BACKGROUND                              WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
24x24	24	4	6	10 $\frac{1}{8}$	9 $\frac{3}{8}$	7 $\frac{5}{16}$	2 $\frac{1}{4}$
36x36	36	6	9	15 $\frac{3}{16}$	14 $\frac{1}{16}$	10 $\frac{31}{32}$	3 $\frac{3}{8}$

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
24x24	C	C	$\frac{3}{8}$	$\frac{5}{8}$	B3-24(S)
36x36	C	C	$\frac{5}{8}$	$\frac{7}{8}$	B3-36(S)

R5-1-1



36 x 24

48 x 36

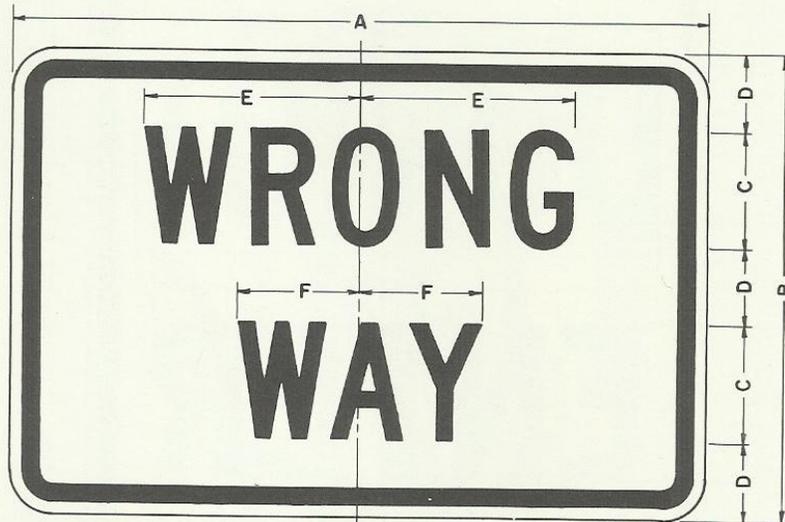
SECTION 704-5 (Cont.)

(b) Wrong Way Sign (R 5-1-1)

(1) **Justification.** This sign is authorized for use where an exit ramp intersects a crossroad or a crossroad intersects a divided highway in a manner that may invite a wrong way entry.

(2) **Placement.** This sign should be placed below the Do Not Enter sign (Section 704-5 (a)) or alone at locations along an exit ramp or a divided highway roadway farther from the crossroad.

(3) **Size.** The standard size is 36 inches by 24 inches. The 48 inch by 36 inch size may be used where emphasis is needed.



COLOR · LEGEND AND BORDER  
BACKGROUND

WHITE (REFLECTORIZED)  
RED (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
36x24	36	24	6	4	11 <sup>3</sup> / <sub>16</sub>	6 <sup>5</sup> / <sub>16</sub>
48x36	48	36	8	6 <sup>11</sup> / <sub>16</sub>	14 <sup>7</sup> / <sub>8</sub>	8 <sup>7</sup> / <sub>16</sub>

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
36x24	C	C	<sup>5</sup> / <sub>8</sub>	<sup>7</sup> / <sub>8</sub>	B5-3624
48x36	C	C	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B5-4836

SECTION 704-5 (Cont.)

(c) No Trucks Sign (R 5-2)

(1) Justification. This sign is authorized for use where it has been determined by the Secretary of Highways or local authorities, by ordinance or resolution or ruling to prohibit trucks in accordance with Section 1101 of the Vehicle Code.



24 x 24



COLOR, LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
24x24	24	4 1/2	5	4 1/8	5 3/8	3 13/16	4	10 1/8	10 1/16

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
24x24	D	C	3/8	3/8	B3-24(S)

R5-2-1



24 x 18

SECTION 704-5 (Cont.)

(d) Except Local Deliveries Sign (R 5-2-1)

(1) **Justification.** This sign is authorized for use where local authorities by ordinance, rule or regulation prohibit trucks except for local deliveries.

(2) **Placement.** When used this sign shall be mounted below the No Trucks sign (R 2-5).



COLOR: LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
 BACKGROUND                      WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
24x18	24	18	2 $\frac{1}{2}$	3	2	4 $\frac{7}{8}$	5 $\frac{1}{8}$	5 $\frac{3}{16}$	4 $\frac{15}{16}$	9 $\frac{1}{4}$

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
24x18	C	C	C	$\frac{3}{8}$	$\frac{5}{8}$	B5-2418

SECTION 704-5 (Cont.)



24 x 12

(e) Pedestrians Prohibited Sign (R 5-3)

(1) **Justification.** This sign is authorized for use where the Secretary of Highways, by resolution or ruling or State Law prohibits pedestrians from controlled access highways.

(2) **Placement.** This sign should be placed on entrance ramps or elsewhere where pedestrians can enter the controlled access highway and endanger themselves or others.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
24 x 12	24	12	2	3	10 <sup>1</sup> / <sub>16</sub>	10 <sup>3</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>16</sub>	9 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD
	1	2			
24 x 12	C	C	<sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>	B5-2412

R5-3-1



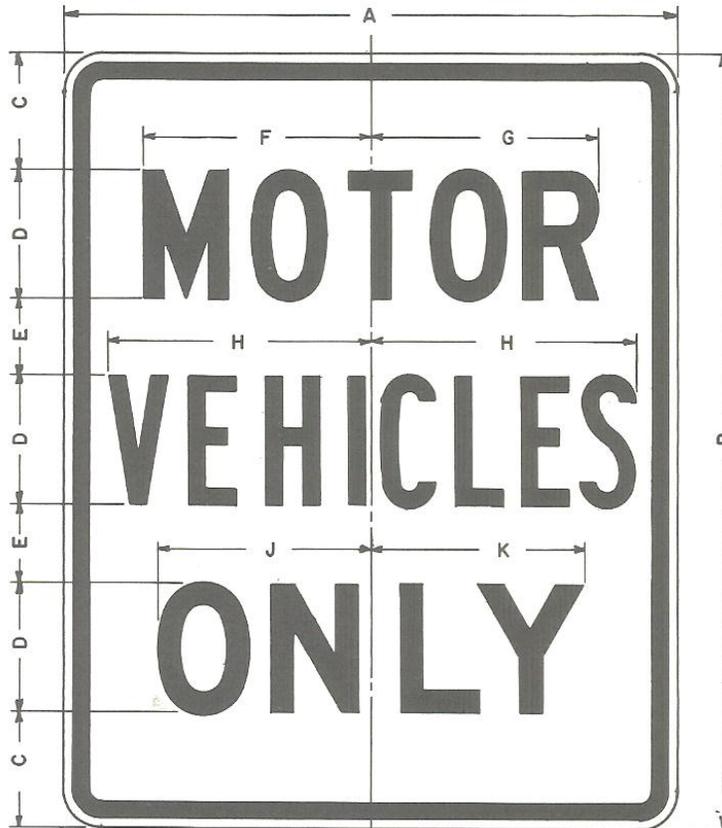
24 x 30

SECTION 704-5 (Cont.)

(f) Motor Vehicles Only Sign (R 5-3-1)

(1) **Justification.** This sign is authorized for use where the Secretary of Highways, by resolution or ruling or State Law prohibits pedestrians, bicycles and all other than motorized vehicular traffic from controlled access highways.

(2) **Placement.** This sign should be placed on entrance ramps or elsewhere where access is available.

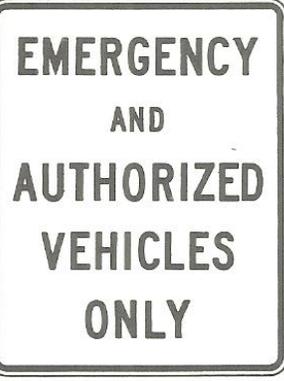


COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
24x30	24	30	4½	5	3	8 <sup>13</sup> / <sub>16</sub>	9 <sup>3</sup> / <sub>16</sub>	10¼	8 <sup>3</sup> / <sub>16</sub>	8 <sup>9</sup> / <sub>16</sub>

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
24x30	C	B	D	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024

SECTION 704-5 (Cont.)



36 x 48  
48 x 60

(g) Emergency and Authorized Vehicles Only Sign (R 5-4)

(1) Placement. This sign is authorized for use to mark crossovers for the use indicated on limited access highways. This sign should be placed on the far side of the crossover.

(2) Size. The standard size is 36 inches by 48 inches. The 48 inch by 60 inch may be used where emphasis is needed.

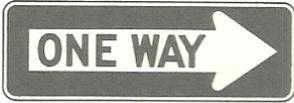


COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
36 x 48	36	48	4	5 1/4	3	12 3/4	3 3/16	13 7/16	10 5/16	5 7/16
48 x 60	48	60	6	5	4	19 1/8	4 3/16	20 1/8	15 7/16	8 3/8

SIGN SIZE	SERIES LINES					MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4	5			
36 x 48	C	C	C	C	C	1/2	3/4	B5-4836
48 x 60	C	C	C	C	C	3/4	7/8	B5-6048

R6-1(R)



36 x 12

SECTION 704-6. ONE-WAY GROUP (R 6 SERIES)

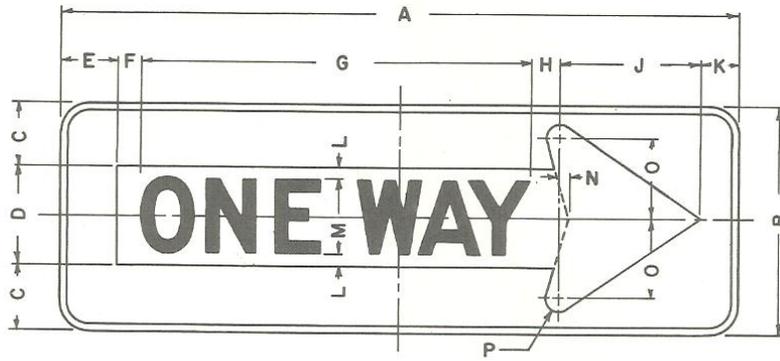
(a) Horizontal Right One-Way Sign (R 6-1 (R))

(1) Justification. This sign is authorized for use to indicate a street or roadway upon which vehicular traffic is permitted to travel in only one direction.

(2) Placement. Where used this sign should be placed on the near right-hand and the far left-hand corners of the intersection so as to face traffic entering or crossing the one-way street.

Where this sign is used a turn to the left is prohibited.

Signs of this shape and configuration shall not be used for any other purpose.



COLOR: ARROW AND BORDER WHITE (REFLECTIVE)  
 LEGEND AND BACKGROUND BLACK (NON-REFLECTIVE)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
36x12	36	12	$3\frac{3}{8}$	$5\frac{1}{4}$	3	$1\frac{1}{4}$	$20\frac{3}{4}$	$1\frac{1}{2}$	$7\frac{1}{2}$	2	$\frac{5}{8}$	4	$\frac{1}{2}$	$4\frac{1}{4}$	$\frac{11}{16}$

SIGN SIZE	SERIES LINE	BOR- DER	BLANK STD.
36x12	D	$\frac{3}{8}$	B5-3612





36 x 12

SECTION 704-6 (Cont.)

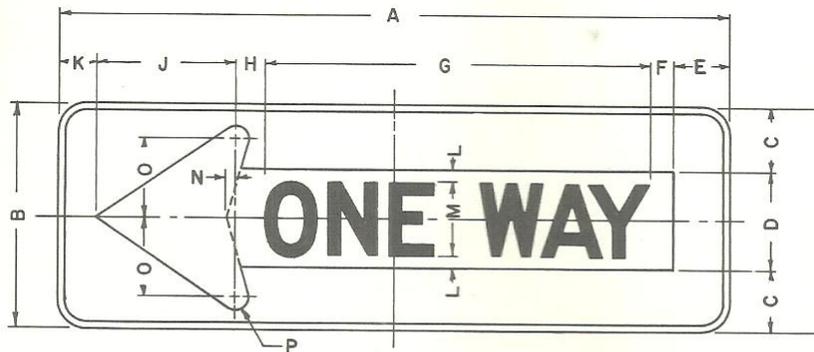
(b) Horizontal Left One-Way Sign (R 6-1 (L))

(1) Justification. This sign is authorized for use to indicate a street roadway upon which vehicular traffic is permitted to travel in only one direction.

(2) Placement. Where used this sign should be placed on the near right-hand and the far left-hand corners of the intersection so as to face traffic entering or crossing the one-way street.

Where this sign is used a turn to the right is prohibited.

Signs of this shape and configuration shall not be used for any other purpose.



COLOR: ARROW AND BORDER WHITE (REFLECTIVE)  
 LEGEND AND BACKGROUND BLACK (NON-REFLECTIVE)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
36x12	36	12	3 3/8	5 1/4	3	1 1/4	20 3/4	1 1/2	7 1/2	2	5/8	4	1/2	4 1/4	11/16

SIGN SIZE	SERIES	BOR- DER	BLANK STD.
	LINE		
36x12	D	3/8	B5-3612

R6-2(R)



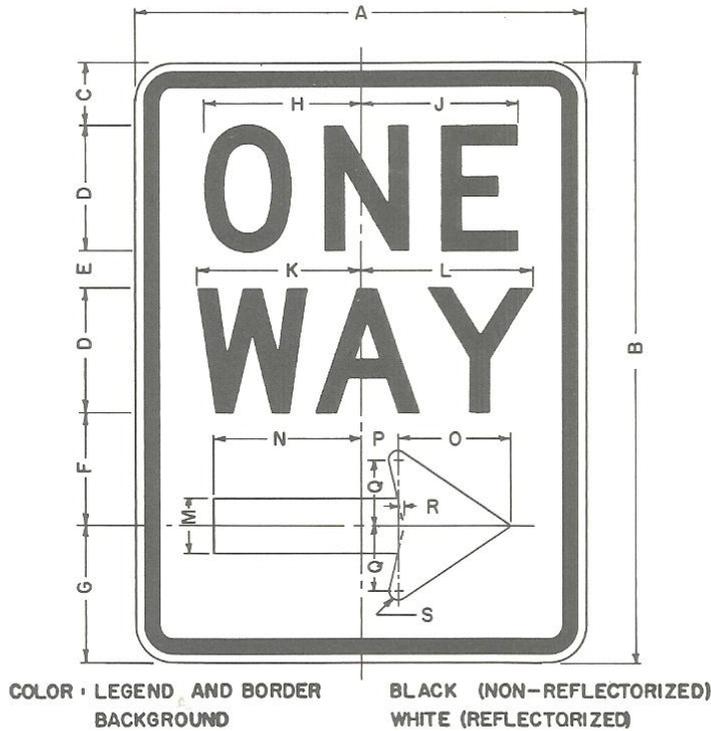
18 x 24  
24 x 30

SECTION 704-6 (Cont.)

(c) Vertical Right One-Way Sign (R 6-2 (R))

(1) Justification. This sign is authorized for use only where lateral space is limited, in lieu of the Horizontal Right One-Way sign (R 6-1 (R)).

(2) Size. The size shall be governed by the minimum lateral space available.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
18 x 24	18	24	2 1/2	5	1 1/2	4 1/2	5 1/2	6 1/4	6 5/16	6 9/16	6 7/8	2 1/4	5 7/8	4 1/2	1 1/2
24 x 30	24	30	3 1/8	6	1 7/8	5 5/8	7 3/8	7 1/4	7 1/2	7 7/8	8 1/4	2 13/16	7 11/32	5 5/8	1 7/8

SIGN SIZE	DIMENSIONS			SERIES		MARGIN	BORDER	BLANK STD
	Q	R	S	LINES				
				1	2			
18 x 24	2 5/8	1/4	3/8	D	D	3/8	5/8	B5-2418
24 x 30	3 9/32	5/16	15/32	D	D	3/8	5/8	B5-3024

R6-2(L)

SECTION 704-6 (Cont.)

(d) Vertical Left One-Way Sign (R 6-2 (L))

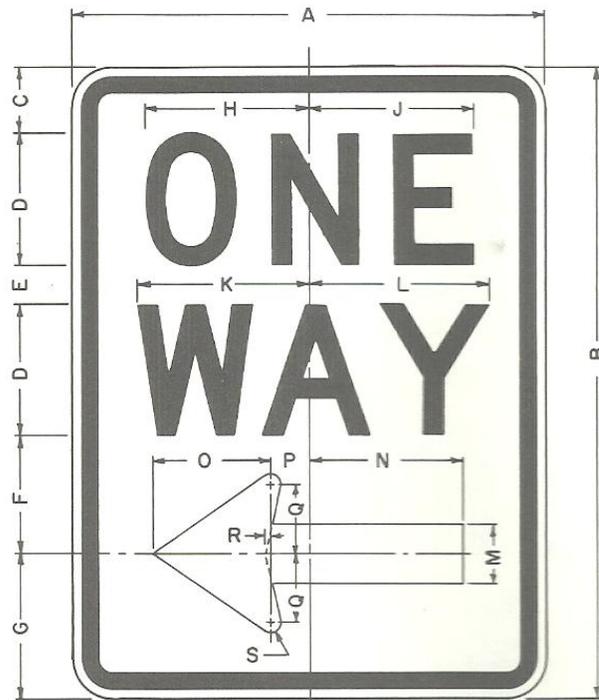
(1) Justification. This sign is authorized for use only where lateral space is limited, in lieu of the Horizontal Left One-Way sign (R 6-1 (L)).

(2) Size. The size shall be governed by the minimum lateral space available.



18 x 24

24 x 30

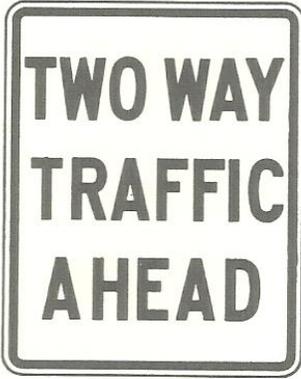


COLOR LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
18x24	18	24	2 1/2	5	1 1/2	4 1/2	5 1/2	6 1/4	6 5/16	6 9/16	6 7/8	2 1/4	5 7/8	4 1/2	1 1/2
24x30	24	30	3 1/8	6	1 7/8	5 5/8	7 3/8	7 1/4	7 1/2	7 7/8	8 1/4	2 13/16	7 11/32	5 5/8	1 7/8

SIGN SIZE	DIMENSIONS			SERIES		MAR- GIN	BOR- DER	BLANK STD.
	Q	R	S	LINES				
18x24	2 5/8	1/4	3/8	D	D	3/8	5/8	B5-2418
24x30	3 9/32	5/16	15/32	D	D	3/8	5/8	B5-3024



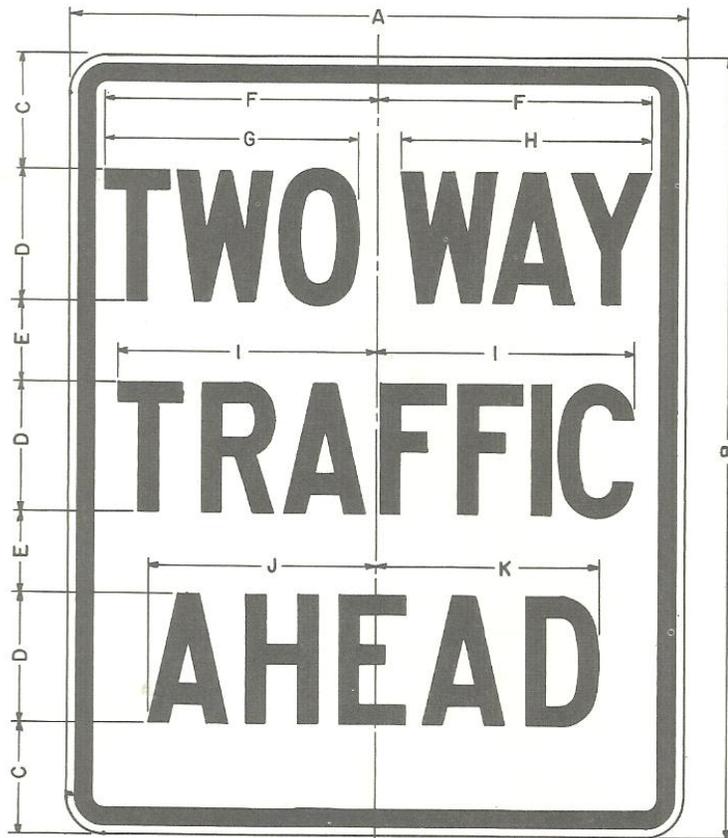
24 x 30  
36 x 48

SECTION 704-6 (Cont.)

(e) Two-Way Traffic Ahead Sign (R 6-3)

(1) **Placement.** This sign is authorized for use on a one-way street or roadway in advance of an intersection or the end of a divided roadway beyond which the one-way traffic regulation does not apply. It should be placed on both the right-hand and left-hand sides of the street or roadway at an appropriate distance, depending on approach speeds and type of facility, in advance of the intersection where two-way traffic is resumed.

(2) **Size.** The standard size is 24 inches by 30 inches. The 36 inch by 48 inch size may be used where emphasis is needed.



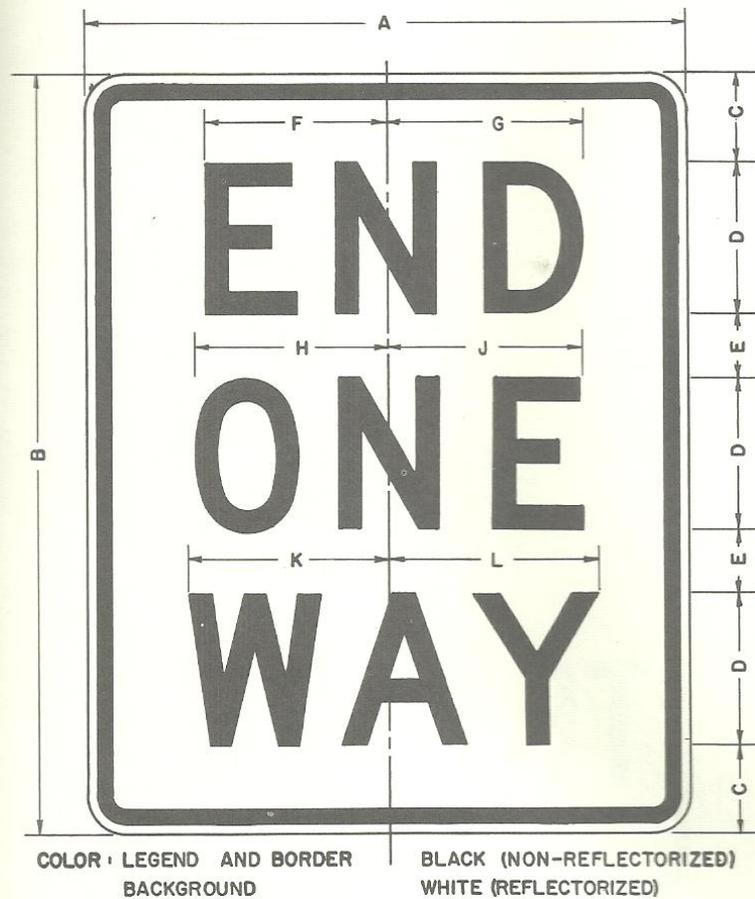
COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	I	J	K
24 x 30	24	30	4 $\frac{3}{8}$	5	3 $\frac{1}{8}$	10 $\frac{5}{8}$	9 $\frac{13}{16}$	9 $\frac{3}{4}$	10	8 $\frac{13}{16}$	8 $\frac{11}{16}$
36 x 48	36	48	6 $\frac{9}{16}$	7	6 $\frac{15}{16}$	15 $\frac{15}{16}$	14 $\frac{23}{32}$	14 $\frac{5}{8}$	15	13 $\frac{7}{32}$	13 $\frac{1}{32}$

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
24 x 30	C	C	C	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024
36 x 48	C	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B5-4836



24 x 30  
36 x 48



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
24x30	24	30	3½	6	2½	7¼	7⅞	7⅙	7¾	8	8⅜
36x48	36	48	5½	10	3½	11⅝	12⅛	12	12½	13⅛	13⅝

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
24x30	D	D	D	⅜	⅝	B5-3024
36x48	D	D	D	½	¾	B5-4836

R6-5



24 x 30  
36 x 48

SECTION 704-6 (Cont.)

(g) Two Way Traffic Sign (R 6-5)

(1) **Placement.** This sign is authorized for use where a roadway designed or normally used for one-way traffic is temporarily being used for traffic in both directions, or where under any other circumstances it may be necessary to remind drivers that they are traveling on a two-way roadway. This sign should be placed at intervals of about one-half mile, but not exceeding one mile. Special care must be taken to place it at or just beyond any important access point.

(2) **Size.** The standard size is 24 inches by 30 inches. The 36 inch by 48 inch size may be used where emphasis is needed.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
24x30	24	30	4	5	3 $\frac{1}{4}$	4 $\frac{1}{2}$	5 $\frac{11}{16}$	5 $\frac{5}{16}$	5 $\frac{3}{4}$	5 $\frac{1}{2}$	10
36x48	36	48	6 $\frac{1}{4}$	8	5 $\frac{1}{4}$	7 $\frac{1}{4}$	8 $\frac{5}{8}$	8 $\frac{1}{4}$	8 $\frac{1}{2}$	8 $\frac{3}{16}$	17 $\frac{5}{8}$

SIGN SIZE	SERIES LINES			MAR- GIN	BOR- DER	BLANK STD.
	1	2	3			
24x30	C	C	C	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024
36x48	C	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B5-4836

## SECTION 704-7. PARKING AND STOPPING SIGNS, URBAN GROUP (R 7 SERIES)

### Justification and Description

Section 1103 of the Vehicle Code gives local authorities authority to regulate or prohibit by ordinance parking, stopping or loading of vehicles, and Section 1115 of the Vehicle Code authorizes the Secretary of Highways to designate certain sections of State Highways as "No Parking Areas."

It is the intent of this section of these regulations to illustrate signs appropriate to various parking controls and to authorize local authorities to select the appropriate legend.

The legend on parking and stopping signs in urban areas shall, in the interest of uniformity, state whatever regulations apply, but the signs shall conform to the standards of shape, color, location, minimum sizes and use as hereinafter set forth.

Identical parking regulations should always be marked with the same type of sign, irrespective of where they occur.

Generally, these signs should display such of the following information as is appropriate, from top to bottom of the sign, in the order listed:

1. Restriction or prohibition.
2. Time of day it is applicable, if not at all hours.
3. Days of week applicable, if not every day.

In addition, there should be a single-headed arrow pointing in the direction of the regulation in effect if the sign is at the end of a zone, or a double-headed arrow pointing both ways if the sign is at an intermediate point in a zone.

The arrow is preferred but as an alternate to the arrow, if the signs are posted facing traffic at an angle of 90 degrees to the curb line, there may be included on the sign, or on a separate plate below the sign, such legend as, "Here to Corner," or "This Side of Sign."

Where parking is prohibited at all times or at specific times, parking signs shall have red letters and border on a white background (Parking Prohibition signs).

Where only limited-time parking is permitted, or where parking is permitted only in a particular manner the sign shall have green letters and borders on a white background (Parking Restriction signs).

Where parking is prohibited during certain hours and permitted under a time limit at other periods of the day, two parking signs should ordinarily be used, the red above the green. As an alternative, both messages, in different colors, may be used on a single plate.

These signs should be reflectorized if they have nighttime significance and there is insufficient street lighting to make them readable.

**Size.** These signs shall have a standard, and minimum size of 12 inches by 18 inches.

At the transition point between two parking zones it may be advantageous to use, instead of two signs a single sign 24 inches by 18 inches. This is in effect two standard signs mounted side by side. Such a sign should display a right and a left arrow pointing in the direction that the respective restrictions apply.

**Placement.** Parking signs in residence and business districts should be mounted with the bottom of the sign not less than 7 feet nor more than 10 feet above the top of the curb, and with no part of the sign less than 2 feet back from the face of the curb. Where space is limited, or existing poles are close to the curb, a lesser lateral clearance is permissible. If 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 a line parallel to the flow of traffic so as to be visible to approaching traffic.

Care should be exercised to see that the single arrows point in the proper direction to indicate the regulated zone. Where the zone is longer than 200 feet, signs showing a double arrow will be needed at intermediate points within the zone, at intervals not exceeding 200 feet.

If the signs are mounted at an angle of 90 degrees to the curb, two signs must be mounted back to back at the transition point between two parking zones, each with the appended plate reading "This Side of Sign." At intermediate points within a zone a single sign without any arrow or appended plate 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.

R7-1

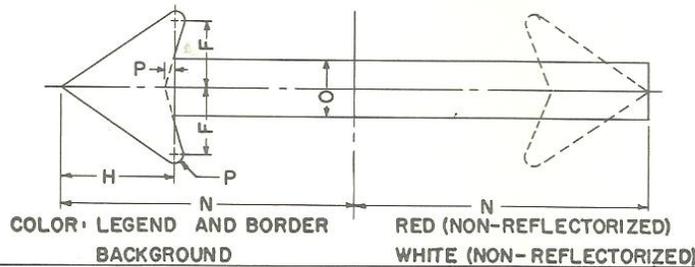


12 x 18

SECTION 704-7 (Cont.)

(a) No Parking Any Time Sign (R 7-1)

(1) Justification. This sign is authorized for use where a parking prohibition is in effect at all times. The words ANY TIME may be omitted.



SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
12 x 18	12	18	17/8	3	2	7/8	5/8	1 1/2	2 1/2	4 7/8	2 3/16	2 5/8	3 7/8	3/4	1/8

SIGN SIZE	MARGIN	BORDER	SERIES LINES				BLANK STD.
			1	2	3	4	
12 x 18	3/8	3/8	C	B	C	C	B5-1812



SECTION 704-7 (Cont.)

(b) No Parking (—) AM to (—) PM Sign (R 7-2)

(1) Justification. This sign, and other signs with similar messages, are authorized for use to prohibit parking at certain times within a given



12 x 18



SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
12 x 18	12	18	1 7/8	3	2	7/8	5/8	1 1/2	2 1/2	4 7/8	3 3/16	4 3/8	3 7/8	3/4	1/8

SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4			
12 x 18	C	B	B	B	3/8	3/8	B5-1812

R7-4

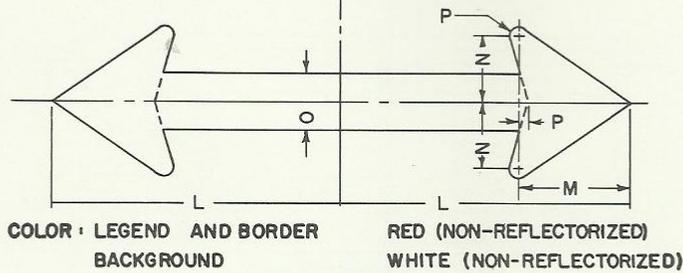
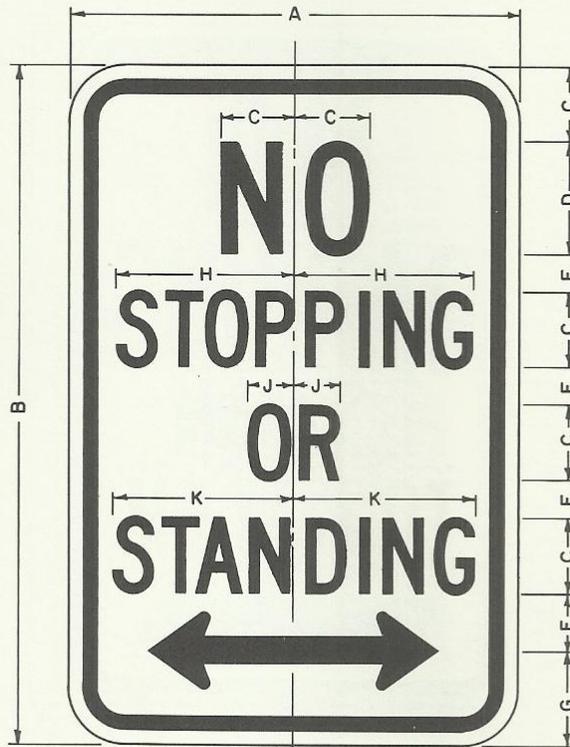


12 x 18

SECTION 704-7 (Cont.)

(c) No Stopping or Standing (R 7-4)

(1) Justification. This sign is authorized for use where stopping or standing is prohibited at all times.



SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
12 x 18	12	18	2	3	1	1 1/2	2 1/2	4 13/16	1 1/4	4 7/8	3 7/8	1 1/2	7/8	3/4	1/8

SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4			
12 x 18	C	C	C	C	3/8	3/8	B5-1812

SECTION 704-7 (Cont.)

(2) One Hour Parking (—) AM—(—) PM Sign (R 7-5)

(1) Justification. This sign, and similar signs, are authorized for use where there is a necessity for limiting the duration of parking. It is frequently used in conjunction with meter parking.



12 x 18



SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
12 x 18	12	18	2 1/4	2	1 1/4	1 1/2	2 1/2	2 3/4	4 3/16	4 1/8	3 7/8	3/4	7/8	1/8

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	1	2	3	4			
12 x 18	C	C	C	B	3/8	3/8	B5-1812

R7-6



12 x 18

SECTION 704-7 (Cont.)

(e) No Parking Loading Zone Sign (R 7-6)

(1) Justification. This sign is authorized for use where it is deemed necessary to reserve curb space for loading and unloading of commercial vehicles.



SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	
12 x 18	12	18	1 7/8	3	2	7/8	1	1/2	1/4	2 1/2	4 7/8	4 5/16	4 7/16	2 5/8	

SIGN SIZE	DIMENSIONS				SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	P	Q	R	S	1	2	3	4			
					C	B	C	C			
12 x 18	3 7/8	1 1/2	3/4	1/8	C	B	C	C	3/8	3/8	B5-1812

SECTION 704-7 (Cont.)

(f) No Parking Bus Stop Sign (R 7-7)

(1) Justification. This sign is authorized for use to prohibit parking at all times and thus reserve curb space for regularly scheduled buses.



12 x 18



SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
12 x 18	12	18	1 7/8	3	2	7/8	5/8	1 1/2	2 1/2	4 7/8	2 5/8	3 7/8	3/4	1/8

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	1	2	3	4			
12 x 18	C	B	C	C	3/8	3/8	B5-1812

R7-8



12 x 18

SECTION 704-7 (Cont.)

(g) No Parking Here to Corner Sign (R 7-8)

(1) Justification. This sign is authorized for use where poor observance of Section 1021 of the Vehicle Code is noted.



COLOR - LEGEND AND BORDER BACKGROUND RED (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
12 x 18	12	18	1 $\frac{7}{8}$	3	2	$\frac{5}{8}$	$\frac{1}{2}$	4 $\frac{7}{8}$	2 $\frac{11}{16}$	1 $\frac{1}{4}$	4 $\frac{1}{4}$

SIGN SIZE	SERIES LINES					MARGIN	BORDER	BLANK STD.
	1	2	3	4	5			
12 x 18	C	B	C	C	C	$\frac{3}{8}$	$\frac{3}{8}$	B5-1812

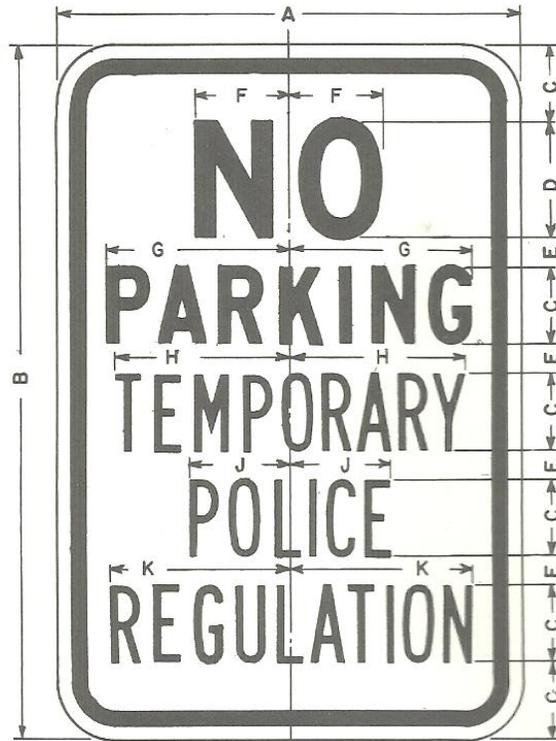
SECTION 704-7 (Cont.)

(h) Temporary No Parking Sign (R 7-10)

(1) Justification. This sign is authorized for use by local police departments when it becomes necessary to prohibit parking for a short time on any given road, street or highway. Care must be taken to see that the signs are removed when their need no longer exists. Since the use of this sign is temporary it may be made of cardboard and attached to poles, trees or other existing supports at convenient heights and locations.



12 x 18



COLOR: LEGEND AND BORDER BACKGROUND RED (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
12x18	12	18	2	3	$\frac{3}{4}$	$2\frac{7}{16}$	$4\frac{3}{4}$	$4\frac{9}{16}$	$2\frac{5}{8}$	$4\frac{11}{16}$

SIGN SIZE	SERIES LINES					MARGIN	BORDER	BLANK STD.
	1	2	3	4	5			
12x18	D	C	A	A	A	$\frac{3}{8}$	$\frac{3}{8}$	B5-1812

R7-201



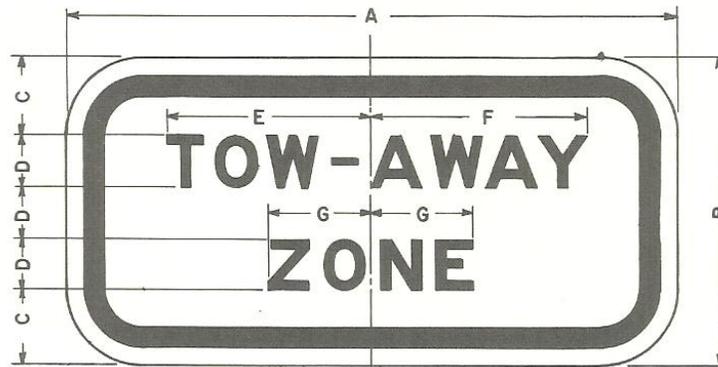
12 x 6

SECTION 704-7 (Cont.)

(i) Tow-Away Zone Sign (R 7-201)

(1) **Justification.** This sign is authorized for use **only** where local authorities have a local ordinance in accordance with Section 1103 of the Vehicle Code.

(2) **Placement.** When used this sign shall be mounted below the Parking restriction sign.



COLOR · LEGEND AND BORDER BACKGROUND RED (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
12 x 6	12	6	1½	1	4	4¼	2

SIGN SIZE	SERIES		MAR-GIN	BOR-DER	BLANK STD.
	LINES				
	1	2			
12 x 6	E	E	⅜	⅜	B5-1206



## SECTION 704-8. PARKING AND STOPPING SIGNS, RURAL GROUP (R 8 SERIES)

### Justification and Description

Section 1103 of the Vehicle Code gives local authorities authority to regulate or prohibit by ordinance parking, stopping or loading of vehicles, and Section 1115 of the Vehicle Code authorizes the Secretary of Highways to designate certain sections of State Highways as "No Parking Areas."

The legend on parking and stopping signs in rural areas, as more particularly defined in Section 704(a) of these regulations shall conform to the standards of shape, color, location, minimum sizes and use as hereinafter set forth.

In rural districts special parking prohibition signs may be necessary to emphasize the provisions of Section 1020 of the Vehicle Code that no person shall park or leave standing any vehicle upon the paved or improved or main travel of any highway, outside of a business or residence district, when it is practical to park or leave such vehicle standing off the paved or improved or main traveled portion of such highway.

R8-1



18 x 24  
24 x 30

SECTION 704-8 (Cont.)

(a) No Parking On Pavement Sign (R 8-1)

(1) **Justification.** This sign is authorized for use where parking is permissible off the pavement but prohibited on the pavement.

(2) **Size.** The standard size is 24 inches by 30 inches, but a smaller size of 18 inches by 24 inches may be used on secondary rural roads.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
18 x 24	18	24	$3\frac{1}{16}$	3	$2\frac{5}{8}$	2	$2\frac{3}{8}$	$6\frac{15}{16}$	$1\frac{5}{8}$	$6\frac{13}{16}$	$6\frac{15}{16}$
24 x 30	24	30	$3\frac{5}{8}$	5	$2\frac{1}{4}$	3	$4\frac{3}{16}$	10	$2\frac{3}{8}$	$9\frac{5}{8}$	$9\frac{3}{4}$

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	1	2	3	4			
18x24	D	C	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B5-2418
24x30	D	C	D	D	$\frac{3}{8}$	$\frac{3}{8}$	B5-3024

SECTION 704-8 (Cont.)

(b) No Parking Sign (R 8-3)

(1) **Justification.** This sign is authorized for use to prohibit parking along a given highway. However if the restriction applies to a limited area or zone, arrows or supplemental plates are authorized to show the limits of the restriction.

If necessary the word STOPPING may be substituted for PARKING.

(2) **Size.** The standard size is 24 inches by 30 inches, but a smaller size of 18 inches by 24 inches may be used on secondary rural roads.



18 x 24  
24 x 30



COLOR · LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
18 x 24	18	24	6 <sup>1</sup> / <sub>4</sub>	3	3 <sup>11</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>16</sub>	6 <sup>13</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>16</sub>
24 x 30	24	30	7	5	4 <sup>1</sup> / <sub>4</sub>	8 <sup>3</sup> / <sub>4</sub>	3 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>16</sub>	10 <sup>1</sup> / <sub>16</sub>	10 <sup>5</sup> / <sub>16</sub>

SIGN SIZE	SERIES		MAR-GIN	BOR-DER	BLANK STD.
	LINES				
	1	2			
18 x 24	D	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-2418
24 x 30	D	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024

R8-4



48 x 36

SECTION 704-8 (Cont.)

(c) Emergency Parking Only Sign (R 8-4)

(1) **Justification.** This sign is authorized for use where adequate paved turnouts are provided for emergency use by vehicles that must leave the roadway to stop because of mechanical breakdown, tire trouble, lack of fuel, or other emergencies involving the vehicles or their occupants.

(2) **Placement.** This sign should be placed at the beginning of the turnout.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
48 x 36	48	36	5	6	4	21	21 $\frac{3}{4}$	15 $\frac{5}{8}$	16 $\frac{1}{4}$	9 $\frac{3}{16}$	10

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
48x36	D	D	D	$\frac{1}{2}$	$\frac{3}{4}$	85-4836



48 x 36

SECTION 704-8 (Cont.)

(4) Emergency Stopping Only Sign (R 8-5)

(1) Justification. This sign is authorized for use on limited access highways where shoulders are reserved for emergency use by vehicles that cannot leave the roadway to stop because of mechanical breakdown, tire trouble, lack of fuel or other emergencies involving the vehicles and their occupants.

(2) Placement. This sign should be placed a short distance beyond the point where such road has been entered and at random intervals where needed, particularly where scenic or other attractions create a tendency to stop temporarily.

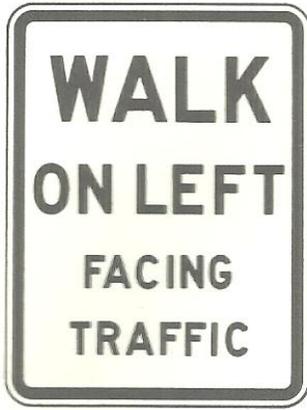


COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
48 x 36	48	36	5	6	4	21	21 <sup>3</sup> / <sub>4</sub>	19 <sup>1</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>16</sub>	10

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
48x36	D	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836

R9-1



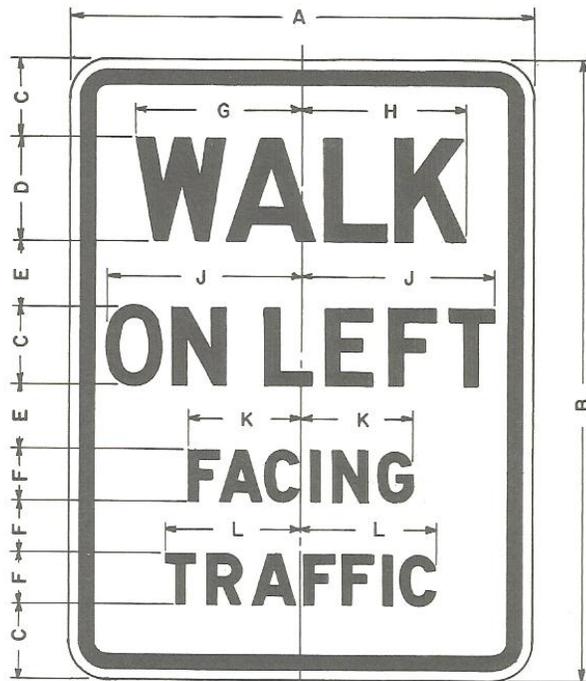
18 x 24

SECTION 704-9. PEDESTRIAN GROUP (R 9 SERIES)

(a) Walk On Left Facing Traffic Sign (R 9-1)

(1) **Justification.** This sign is authorized for use to encourage safer pedestrian habits on rural highways where no sidewalks are provided.

(2) **Placement.** It should be erected on the right-hand side of the road where pedestrians may walk on the pavement or road shoulder in the absence of pedestrian pathways or sidewalks.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
18x24	18	24	3	4	2 1/2	2	6 7/16	6 11/16	7 1/2	4 3/8	5 1/4	5 3/8

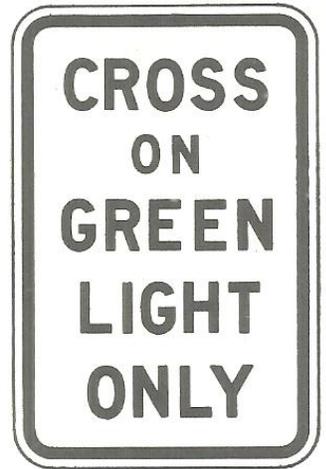
SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4			
18x24	D	D	D	D	3/8	5/8	B5-2418

SECTION 704-9 (Cont.)

(b) Cross On Green Light Only Sign (R 9-2)

(1) Justification. This sign is authorized for use to supplement traffic signal control, or to aid in limiting pedestrian crossing to safe locations.

(2) Placement. It shall be used only at signalized intersections, and shall be erected to face pedestrians about to cross the roadway.



12 x 18



SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
12x18	12	18	2	1	1 1/2	1 1/4	4	1 5/16	4 3/16	4 1/16	3 7/16	3 5/8	3 1/8	3 3/8

SIGN SIZE	SERIES LINES					MARGIN	BORDER	BLANK STD.
	1	2	3	4	5			
12x18	D	D	D	D	D	3/8	3/8	B5-1812

R9-6



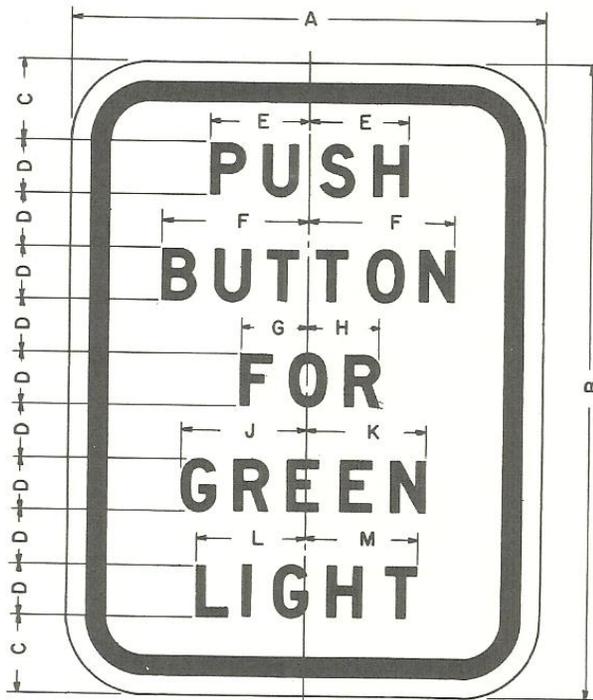
9 x 12

SECTION 704-9 (Cont.)

(c) Push Button For Green Light Sign (R 9-6)

(1) Justification. This sign is authorized for use where it is desired to permit pedestrians to register a demand for the Green signal.

(2) Placement. This sign should be mounted at right angles to the desired crossing, immediately above the push button.



COLOR: LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
9x12	9	12	1/2	1	7/8	2 13/16	1 1/4	1 3/8	2 3/8	2 5/16	2 1/16	2 1/8

SIGN SIZE	SERIES LINES					MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4	5			
9x12	D	D	D	D	D	3/8	3/8	B5-1209



SECTION 704-9 (Cont.)

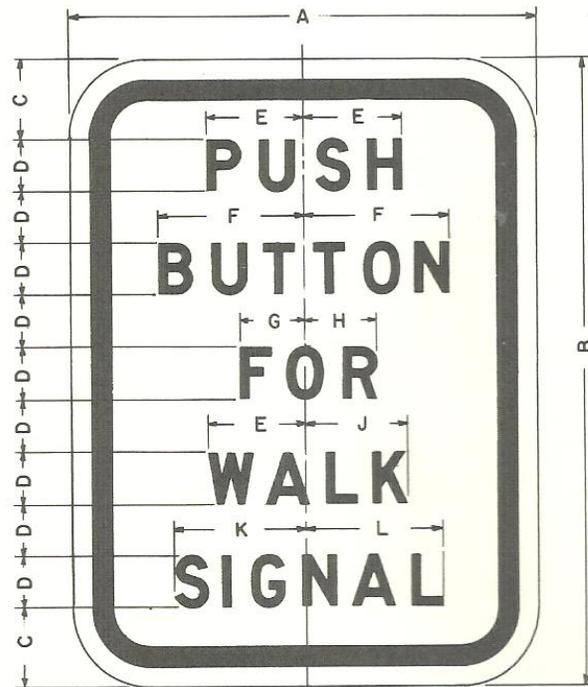
(d) Push Button For Walk Signal Sign (R 9-7)

(1) Justification. This sign is authorized for use where it is desired to permit pedestrians to register a demand for the WALK signal.

(2) Placement. This sign should be mounted at right angles to the road crossing, immediately above the push button.



9 x 12



COLOR · LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
9x12	9	12	1 1/2	1	1 7/8	2 13/16	1 1/4	1 3/8	1 15/16	2 9/16	2 5/8

SIGN SIZE	SERIES LINES					MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4	5			
9x12	D	D	D	D	D	3/8	3/8	B5-1209

R10-1



24 x 30  
36 x 48  
48 x 60

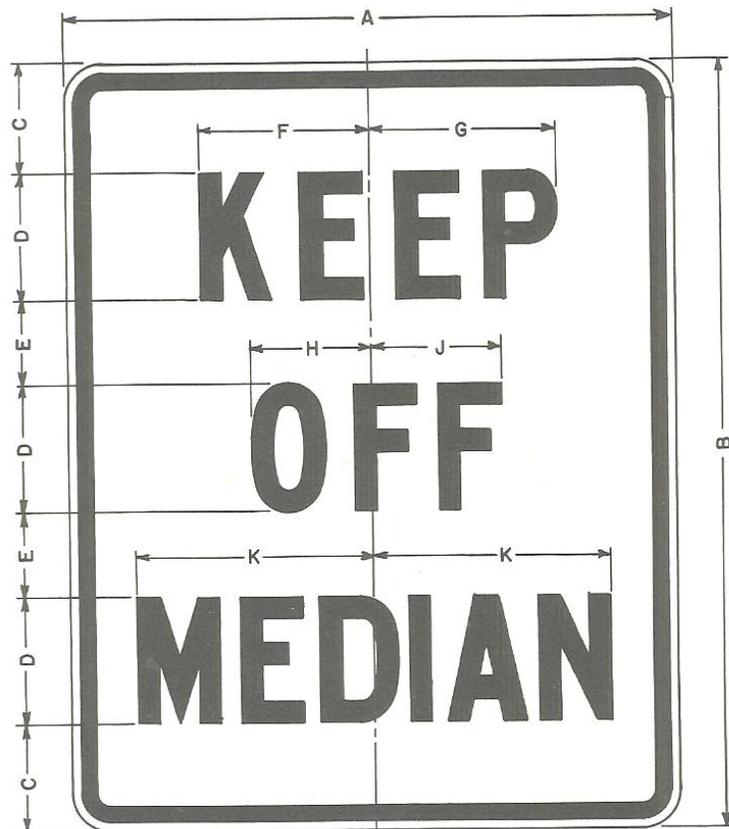
SECTION 704-10. RESTRICTIONS GROUP (R 10 SERIES)

(a) Keep Off Median Sign (R 10-1)

(1) **Justification.** By virtue of authority granted under Section 9 of the Act of 1945, P. L. 1108, it is hereby declared unlawful to crossover, or enter upon or park upon any median on any divided highway, whether or not a physical barrier has been erected.

(2) **Placement.** This sign should be erected on the left of the roadway within the median wherever there is a tendency for drivers to enter upon or cross it, and at random intervals as needed. Where space within the median is limited, however, the sign may be erected on the right of the roadway.

(3) **Size.** The minimum size for expressways shall be 36 inches by 48 inches. The minimum size for Interstate Highways shall be 48 inch by 60 inch.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
24 x 30	24	30	4 <sup>1</sup> / <sub>4</sub>	5	3 <sup>1</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub>	7 <sup>3</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>16</sub>	9 <sup>3</sup> / <sub>8</sub>
36 x 48	36	48	6 <sup>3</sup> / <sub>8</sub>	7	7 <sup>1</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>	11 <sup>1</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>8</sub>	7 <sup>3</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>16</sub>
48 x 60	48	60	8 <sup>1</sup> / <sub>2</sub>	10	6 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	14 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>2</sub>	10 <sup>3</sup> / <sub>8</sub>	18 <sup>3</sup> / <sub>4</sub>

SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
24 x 30	C	C	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024
36 x 48	C	C	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4836
48 x 60	C	C	C	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	B5-6048

SECTION 704-10 (Cont.)



48 x 30

**(b) Road Closed Sign (R 10-2)**

(1) **Justification.** This sign is authorized for use to mark roads that have been closed to all traffic (except contractor's equipment and other authorized vehicles) either because of construction or maintenance operations or because of a temporary emergency such as high water or a landslide.

(2) **Placement.** It should be mounted on a Class 1 barricade (Section 705-17) in or near the center of the closed roadway, at a height of 5 feet to the bottom of the sign.

Where the sign faces through traffic, it should be preceded by an Advance Road Closed Warning sign (Section 705-17 (c)) and, if applicable, an Advance Detour Warning sign (Section 705-17 (b)).

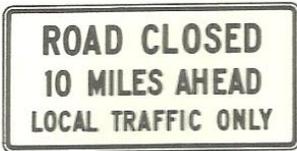


COLOR LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
48x30	48	30	5	8	4	13 1/4	13 1/2	19

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
	48x30	D			

R10-3



60 x 30

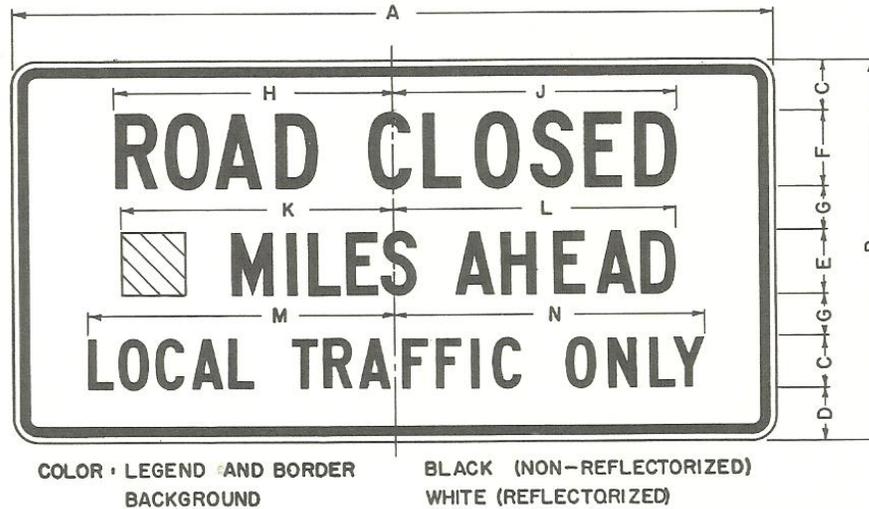
SECTION 704-10 (Cont.)

(c) Road Closed—Local Traffic Only Sign (R 10-3)

(1) **Justification.** This sign is authorized for use where through traffic must detour to avoid a closing of the highway some distance beyond, but where the road is open for traffic up to the point of closure. The words "Open To (Name of Community)" may be used in place of "Local Traffic Only."

(2) **Placement.** It should be erected on a narrow barricade in the center of the roadway, or, if pavement width does not permit, at the right of the roadway.

Where the sign faces through traffic, it should be preceded by a Road Closed Ahead Warning sign (Section 705-17 (c)), and, if applicable, an Advance Detour Warning sign (Section 705-17 (b)).



SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
60x30	60	30	4	4 1/4	5	6	3 3/8	21 5/16	22 3/8	21 3/8	22 1/4	24 1/8	24 1/2

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
	60x30	C	C			

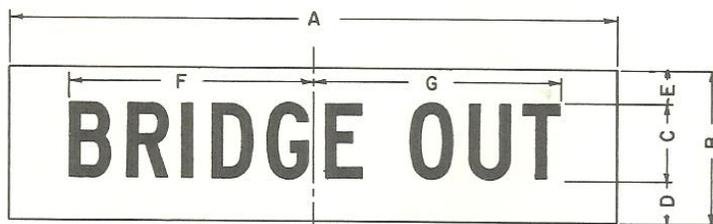
**BRIDGE OUT**

48 x 12

SECTION 704-10 (Cont.)

**(d) Bridge Out—Local Traffic Only Sign (R 10-3-1)**

(1) **Justification.** This sign is authorized for use where through traffic must detour to avoid a crossing at which the bridge is out some distance beyond, but where the road is open for traffic up to the bridge. It should be placed over the words "Road Closed" on the Road Closed—Local Traffic Only sign (R 10-3).



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
48x12	48	12	6	3 1/4	2 3/4	19 1/4	19 5/8

SIGN SIZE	SERIES	BLANK STD.
	LINE	
48x12	C	B5-4812



24 x 30  
36 x 48

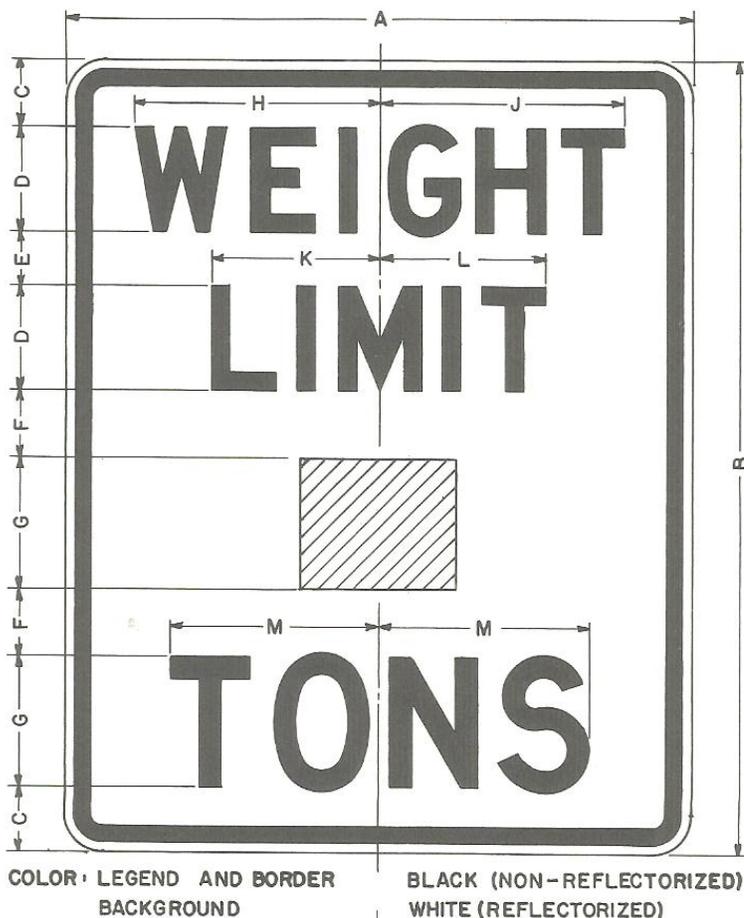
SECTION 704-10 (Cont.)

(e) Weight Limit (—) Tons Sign (R 10-4)

(1) **Justification.** Due to seasonal weakening of the road surface, or other impairment of roadways or bridges, it is sometimes necessary to limit the load permitted on a roadway. The Weight Limit (—) Tons sign is authorized for use to indicate such restrictions.

(2) **Placement.** It should be located immediately in advance of the section of highway or the structure to which it applies. In the case of an extended length of restricted road, it should be placed on the right-hand side of the restricted roadway not more than 25 feet beyond any intersected road on which the restriction does not apply, so as to be clearly visible from all vehicles about to enter the restricted roadway. A supplementary sign may be necessary on the left-hand side of the roadway.

(3) **Size.** The standard size is 24 inches by 30 inches. The 36 inch by 48 inch size may be used where emphasis is needed.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24 x 30	24	30	3 1/8	4	1 7/8	2 3/16	5	8 5/8	9 5/16	6 3/16	6 5/8	9
36 x 48	36	48	5	6	3	3 1/2	8	13	14	9 1/4	10	13 1/2

SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD.
	1	2	3	4			
24 x 30	D	D	E	D	3/8	5/8	B5-3024
36 x 48	D	D	E	D	1/2	3/4	B5-4836

SECTION 704-10 (Cont.)



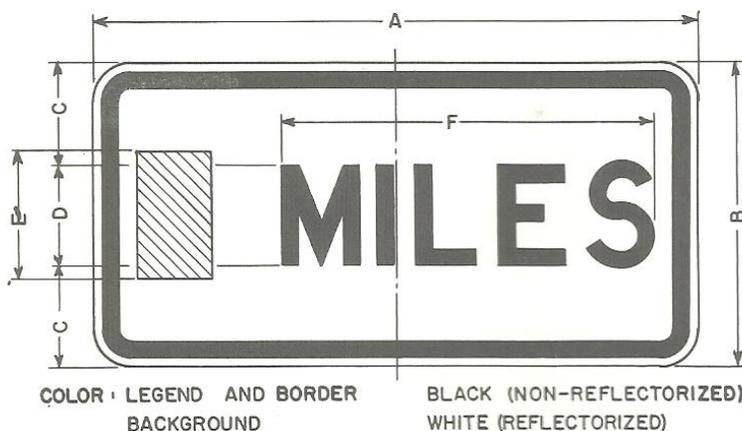
24 x 12

36 x 12

(f) (—) Mile(s) Sign (R 10-4-1)

(1) **Placement.** This sign shall be mounted below the Weight Limit sign (R 10-4) when the sign is used as an advance warning of a weight limitation. As an advance warning of a bridge limitation it shall be used in further conjunction with the Bridge sign (R 10-4-2). It shall be placed at the last intersected roadway and indicate the distance to the restriction.

(2) **Size.** The size shall be determined by and be in accord with the size of the sign to which it is appended.



SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24 x 12	24	12	4	4	5	14 <sup>11</sup> / <sub>16</sub>
36 x 12	36	12	3	6	7	22

SIGN SIZE	SERIES LINE	MARGIN	BORDER	BLANK STD.
24 x 12	D	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412
36 x 12	D	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412

**BRIDGE**

24 x 12

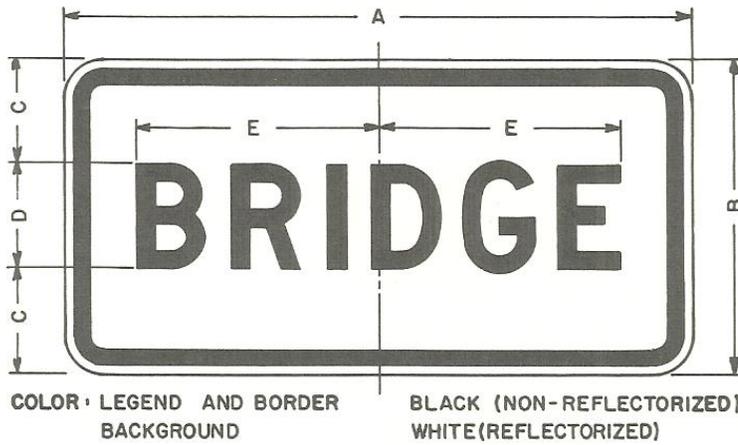
36 x 12

SECTION 704-10 (Cont.)

(g) Bridge Sign (R 10-4-2)

(1) Placement. This sign shall be mounted above the Weight Limit sign (R 10-4) and posted in a conspicuous place at the entrance to the bridge. As an advance warning it shall be used in further conjunction with the Mile sign (R 10-4-1).

(2) Size. The size shall be determined by and be in accord with the size of the sign to which it is appended.



SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
24 x 12	24	12	4	4	9 <sup>3</sup> / <sub>16</sub>
36 x 12	36	12	3	6	13 <sup>3</sup> / <sub>4</sub>

SIGN SIZE	SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
24 x 12	D	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-2412
36 x 12	D	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3612



SECTION 704-11. LITTERING GROUP (R 11 SERIES)



30 x 24

(a) Littering Sign (R 11-1)

(1) Justification. This sign is authorized for use to give notice that it is unlawful to throw or dump from a vehicle any material, as described in Section 1025 of the Vehicle Code.

(2) Placement. This sign should be placed at those locations where this problem exists.

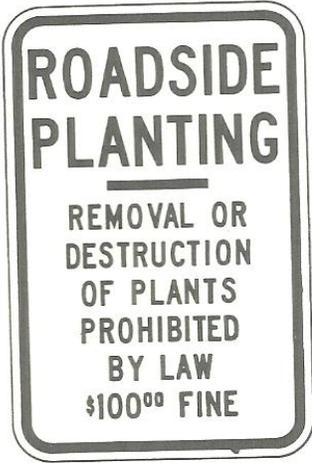


SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
30x24	30	24	7 <sup>7</sup> / <sub>8</sub>	2	4	1	5	5 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	14 <sup>5</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>4</sub>	26 <sup>3</sup> / <sub>8</sub>

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
30x24	C	C	C	—	—	B5-3024

NO.1 SHALL HAVE WHITE REFLECTIVE LETTERS ON A GREEN REFLECTIVE BACKGROUND.

NO.2 SHALL HAVE GREEN REFLECTIVE LETTERS ON A WHITE REFLECTIVE BACKGROUND.



12 x 18

SECTION 704-12. ROADSIDES GROUP (R 12 SERIES)

(a) Roadside Planting Sign (R 12-1)

(1) Justification. This sign is authorized by Section 410 of the "State Highway Law."

(2) Placement. It may be erected in parks, roadside rests and similar areas, on shoulders along the highway, or in medial strips, at locations which have been landscaped. At least five (5) signs shall be erected in each county for every one hundred (100) miles of State highway located within the county.



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS															
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
12 x 18	12	18	1 <sup>5</sup> / <sub>8</sub>	2	3/4	1 <sup>1</sup> / <sub>2</sub>	1	1/2	5	4 <sup>7</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	3 <sup>11</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	3

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINES ALL			
12 x 18	C	3/8	3/8	B5-1812

SECTION 704-12 (Cont.)



18 x 12

**(b) Keep Off—Seeded Sign (R 12-2)**

(1) **Justification.** This sign is authorized by Section 410 of the "State Highway Law."

(2) **Placement.** This sign may be used in parks, roadside rests and similar areas on shoulders along the highway, or in medial strips, at locations which have been seeded. This sign should be removed when sod is fully established.



COLOR, LEGEND AND BORDER BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
18x12	18	12	2	4	1	$7\frac{5}{16}$	$7\frac{5}{16}$

SIGN SIZE	SERIES		MARGIN	BORDER	BLANK STD.
	LINES				
	1	2			
18x12	B	D	$\frac{3}{8}$	$\frac{3}{8}$	B5-1812

R13-1



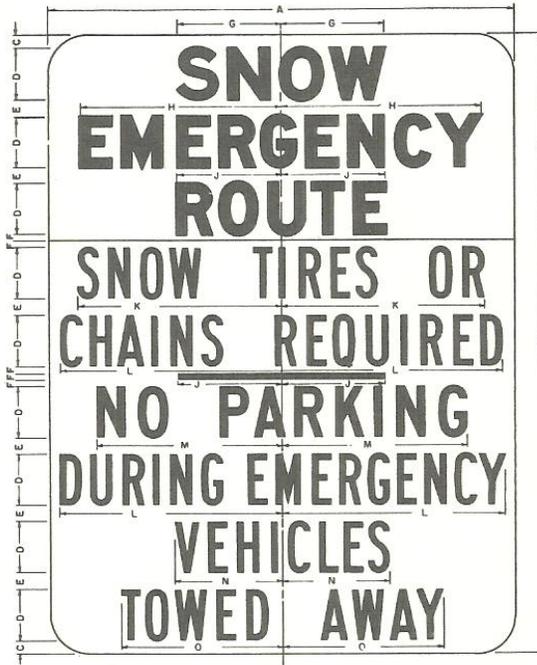
18 x 24

SECTION 704-13. MISCELLANEOUS GROUP

(a) Snow Emergency Route Sign (R 13-1)

(1) **Justification.** This sign is authorized for use by the Secretary of Highways or local authorities, by ordinance or resolution or ruling when special parking restrictions are required during heavy snowfall. The legend on the lower half of the sign may vary according to the regulations.

(2) **Placement.** Where used this sign should be placed so that all motorists are aware of the regulation.



SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
18 x 24	18	24	$\frac{1}{2}$	2	$\frac{5}{8}$	$\frac{1}{4}$	$4\frac{1}{16}$	$7\frac{3}{4}$	4	$7\frac{7}{8}$	$8\frac{5}{8}$	$7\frac{3}{16}$	$4\frac{3}{16}$	$6\frac{1}{4}$

SIGN SIZE	SERIES									BLANK STD.
	LINES									
18 x 24	E	D	D	B	B	C	B	B	B	B5-2418

TOP OF SIGN SHALL HAVE A RED REFLECTIVE BACKGROUND WITH WHITE REFLECTIVE LETTERS.  
 BOTTOM OF SIGN SHALL HAVE A WHITE REFLECTIVE BACKGROUND WITH BLACK LETTERS AND SPACING BAR.

SECTION 704-13 (Cont.)

(b) Play Street Sign (R 14-1)

(1) Placement. This sign shall be used to post any officially designated street, or section of street as a "Play Street." The sign shall specify the hour or hours such highway or section of highway is closed to traffic. It shall be erected at each end of such restricted section of highway not over 25 feet inside the restricted zone, and at all intersections within the zone.



18 x 24



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
18 x 24	18	24	2	3	1	5	7 <sup>1</sup> / <sub>16</sub>	4 <sup>15</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	

SIGN SIZE	SERIES LINES ALL	MARGIN	BORDER	BLANK
				STD.
18 x 24	D	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-2418

R15-1(R)



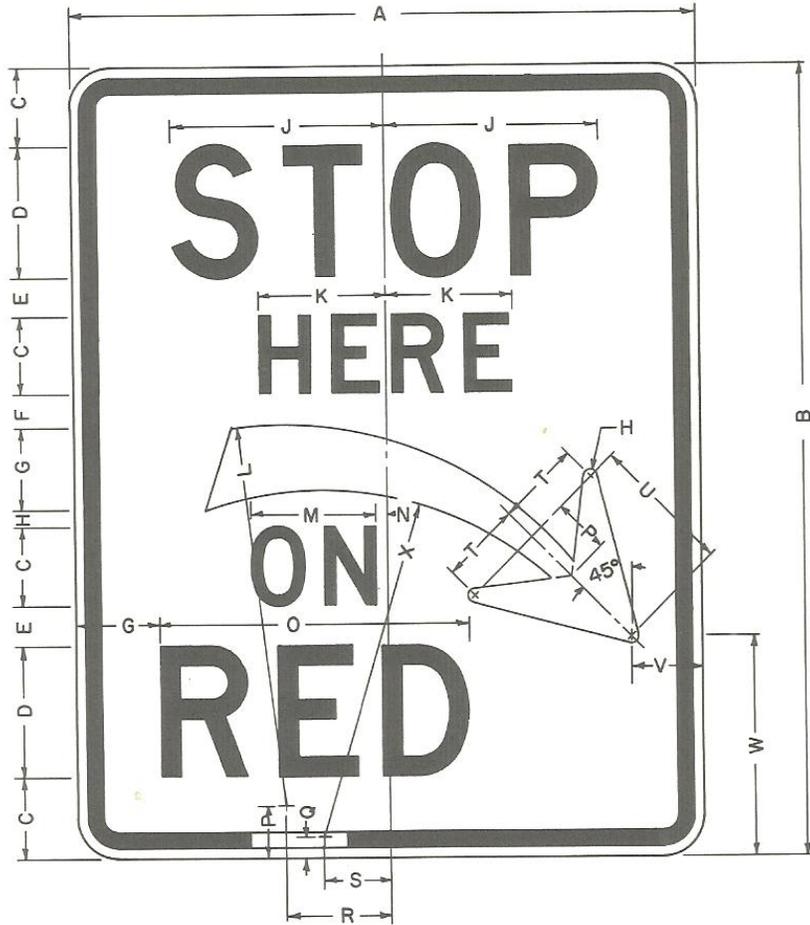
24 x 30

SECTION 704-13 (Cont.)

(c) Stop Here On Red Sign (R 15-1 (R))

(1) **Justification.** This sign is authorized for use on divided streets at signalized intersections to indicate the stopping point for vehicles when the stopping location must be placed further than normal from the intersection.

(2) **Placement.** This sign should be erected in the median on the left and must be supplemented by a Stop Line (Section 712-1 (j)). The word RED may be red instead of black.



COLOR / LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	
24 x 30	24	30	3	5	1 1/2	1 1/4	3 1/4	1/2	8 3/16	4 7/8	14 7/16	4 7/8	

SIGN SIZE	DIMENSIONS												
	N	O	P	Q	R	S	T	U	V	W	X		
24 x 30	3/8	11 7/8	2 1/8	3/4	4	2 1/2	3 3/16	5 3/8	2 5/8	8 1/2	13 1/8		

SIGN SIZE	SERIES LINES				MAR-GIN	BOR-DER	BLANK STD
	1	2	3	4			
24 x 30	D	D	D	D	3/8	5/8	B5-3024

R15-1(L)

SECTION 704-13 (Cont.)

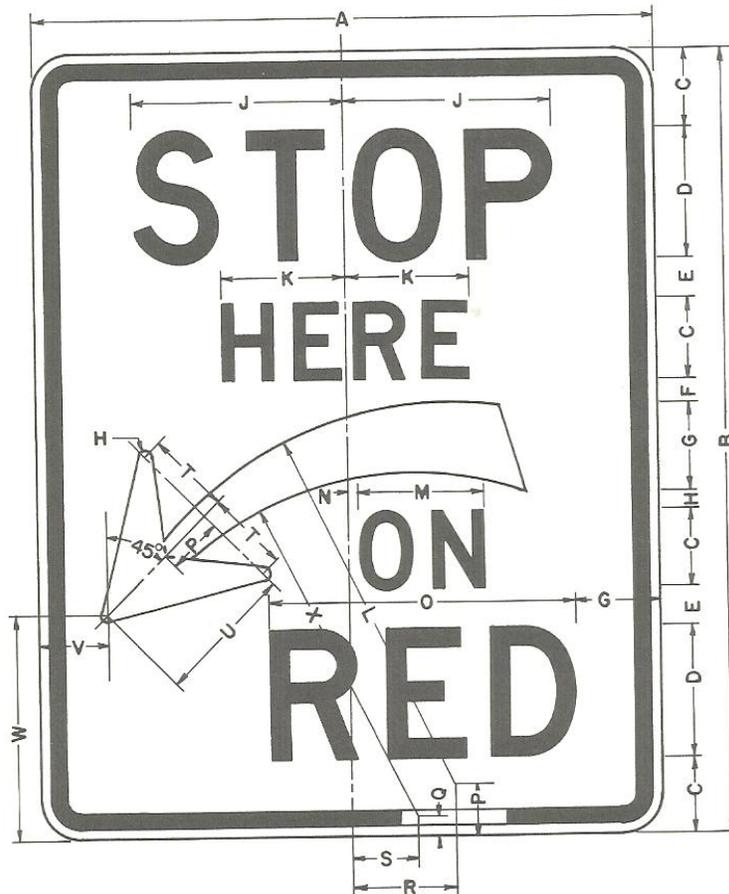


24 x 30

(d) Stop Here On Red (R 15-1 (L))

(1) **Justification.** This sign is authorized for use at signalized intersections to indicate the stopping point for vehicles when the stopping locations must be placed further than normal from the intersection.

(2) **Placement.** This sign should be erected on the right and must be supplemented by a Stop Line (Section 712-1 (j)).  
The word RED may be red instead of black.



COLOR LEGEND AND BORDER  
BACKGROUND

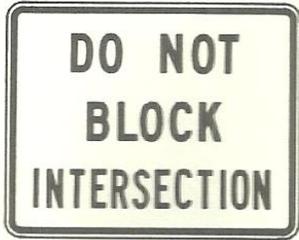
BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
24 x 30	24	30	3	5	1 1/2	1 1/4	3 1/4	1/2	8 3/16	4 7/8	14 7/16	4 7/8

SIGN SIZE	DIMENSIONS										
	N	O	P	Q	R	S	T	U	V	W	X
24 x 30	3/8	1 7/8	2 1/8	3/4	4	2 1/2	3 3/16	5 3/8	2 5/8	8 1/2	13 1/8

SIGN SIZE	SERIES				MAR-GIN	BOR-DER	BLANK STD.
	LINES						
	1	2	3	4			
24 x 30	D	D	D	D	3/8	5/8	B5-3024

R15-2

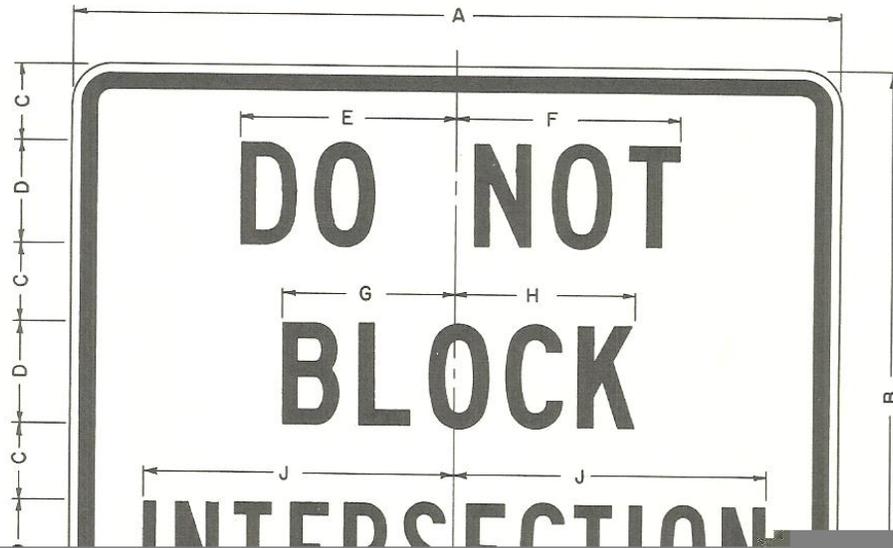


30 x 24

SECTION 704-13 (Cont.)

(e) Do Not Block Intersection Sign (R 15-2)

(1) **Justification.** This sign is authorized for use where traffic stopped by a traffic signal ahead frequently blocks vehicles attempting to enter the intersection from a cross street. It shall be placed immediately in advance of the street which must be kept open.





R16-1



36 x 36

SECTION 704-13 (Cont.)

(f) School Bus Law Sign (R 16-1)

(1) Justification. This sign is authorized for use in accordance with Section 1018 of the Vehicle Code.

(2) Placement. This sign shall be placed at all major vehicular entrance points into the Commonwealth from adjoining states.



COLOR · LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
36 x 36	36	4	3	2	10 <sup>15</sup> / <sub>16</sub>	14 <sup>1</sup> / <sub>16</sub>	10 <sup>1</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>4</sub>	9	9 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>4</sub>

SIGN SIZE	SERIES LINES ALL	MAR-GIN	BOR-DER	BLANK STD.
36 x 36	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-36(S)

R17-1



24 x 30  
36 x 48

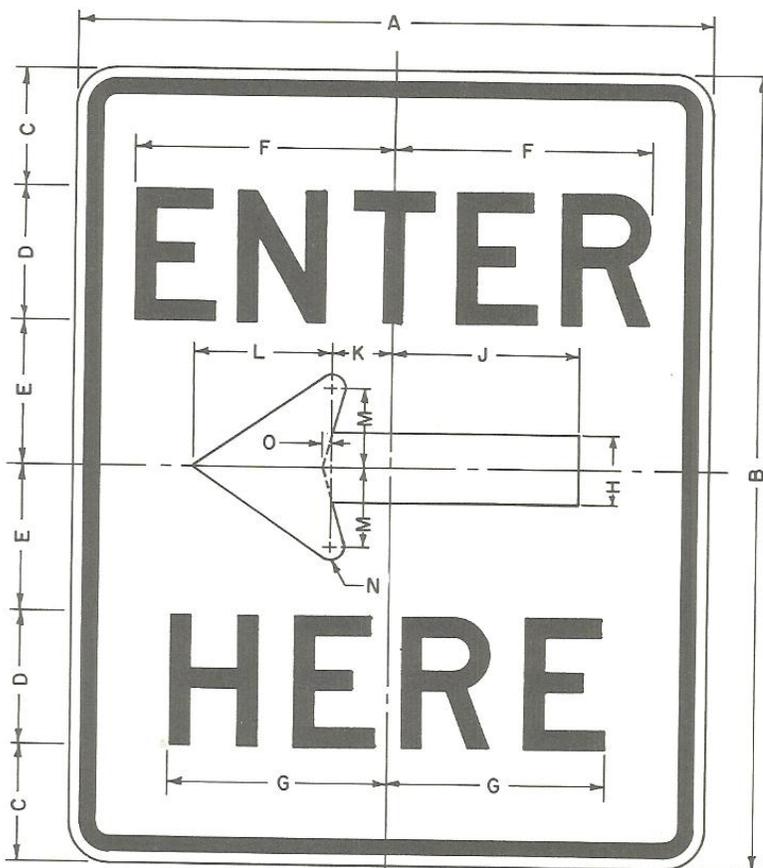
SECTION 704-13 (Cont.)

(g) Enter Here Sign (R 17-1)

(1) Justification. This sign is authorized for use at ramp entrances at interchanges where the entrance and exit ramps are adjacent and left turning traffic may enter the off ramp lane by mistake.

(2) Placement. This sign shall be erected on the far side of the ramp.

(3) Size. The standard size is 24 inches by 30 inches. The 36 inch by 48 inch may be used where emphasis is needed.



COLOR : LEGEND, ARROW AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
24 x 30	24	30	4 1/2	5	5 1/2	9 13/16	8 1/16	2 5/8	7 1/8	2 1/4	5 1/4	3	1/2	3/8
36 x 48	36	48	6 3/4	7	10 1/4	13 3/4	11 5/16	4 1/2	12	3	9	5 1/4	3/4	1/2

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
24 x 30	D	D	3/8	5/8	B5-3024
36 x 48	D	D	1/2	3/4	B5-4836

SECTION 704-13 (Cont.)

(h) Wait For Green Sign (R 18-1)

(1) **Justification.** This sign is authorized for use at traffic signal installations where a tendency is noted on the part of the motorist to start his vehicle moving before his green light is lit. This occurs where opposing traffic has a leading green, and this is allowed to move before the motorist in question.

(2) **Placement.** This sign should be placed on the signal post or pedestal supporting the signals to which it applies. It may also be placed in an overhead position on a signal mast arm or span wire.



24 x 30

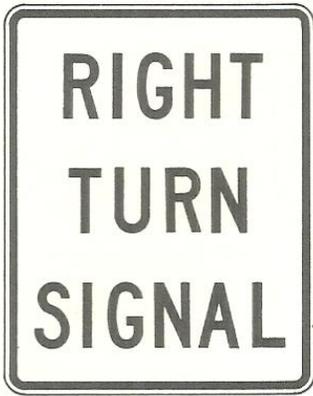


COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
24 x 30	24	30	4 $\frac{3}{8}$	5	3 $\frac{1}{8}$	7 $\frac{3}{16}$	7 $\frac{7}{16}$	5 $\frac{7}{8}$	6 $\frac{1}{8}$	10 $\frac{3}{8}$	10

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD
	1	2	3			
24 x 30	D	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024

R18-2(R)

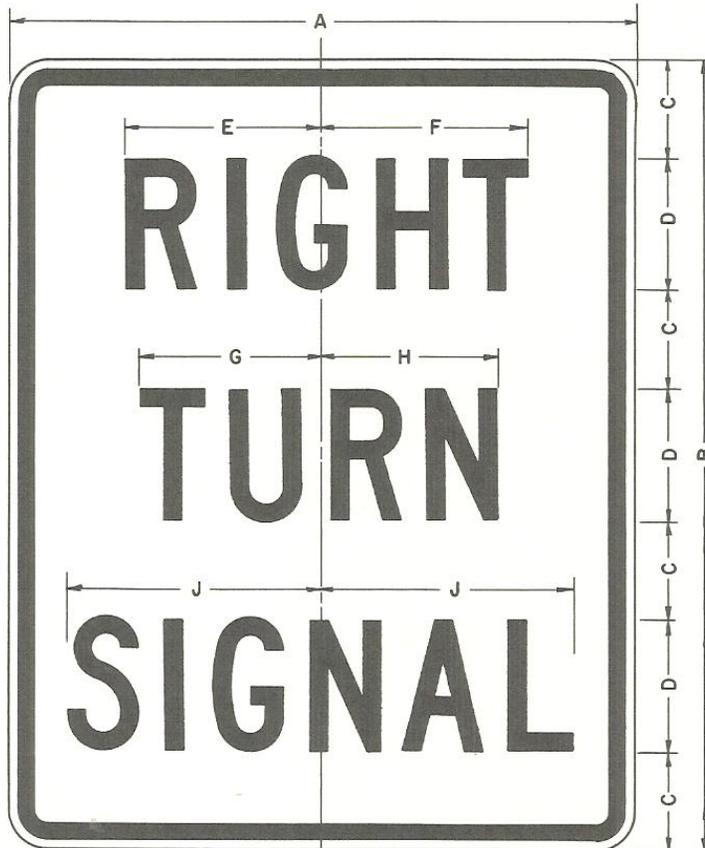


24 x 30

SECTION 704-13 (Cont.)

(i) Right Turn Signal Sign (R 18-2 (R))

(1) Justification. This sign is authorized for use with and is to be located close to a specific signal controlling a right turning movement.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

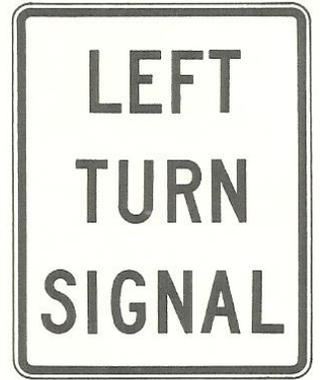
SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
24x30	24	30	3 $\frac{3}{4}$	5	7 $\frac{1}{2}$	7 $\frac{7}{8}$	6 $\frac{15}{16}$	6 $\frac{11}{16}$	9 $\frac{11}{16}$

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
	24x30	C	C			

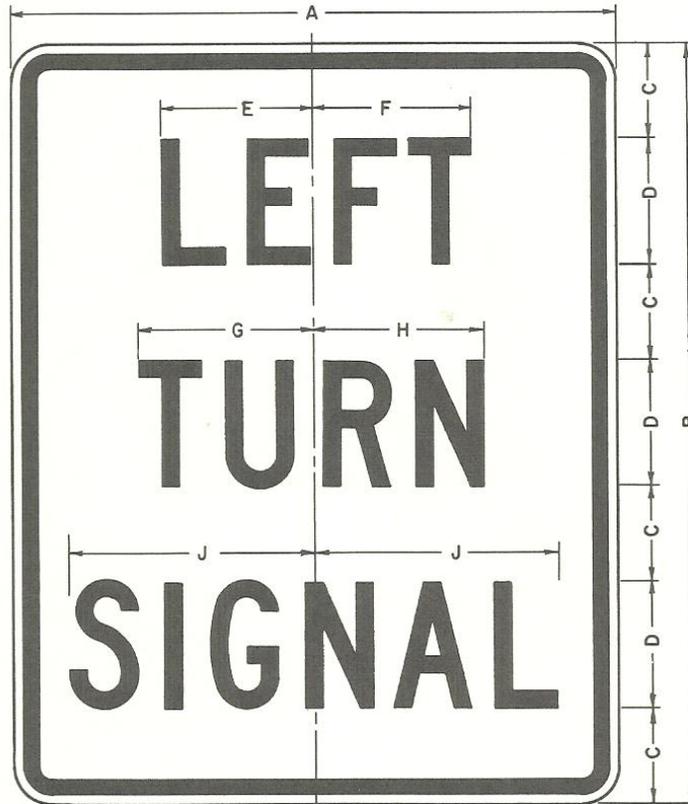
SECTION 704-13 (Cont.)

⑦ Left Turn Signal Sign (R 18-2 (L))

(1) Justification. This sign is authorized for use with and is to be located close to a specific signal controlling a left turning movement.



24 x 30



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
24x30	24	30	3 <sup>3</sup> / <sub>4</sub>	5	6	6 <sup>1</sup> / <sub>4</sub>	6 <sup>15</sup> / <sub>16</sub>	6 <sup>11</sup> / <sub>16</sub>	9 <sup>11</sup> / <sub>16</sub>

SIGN SIZE	SERIES			MAR- GIN	BOR- DER	BLANK STD.
	LINES					
	1	2	3			
24x30	C	C	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-3024

R19-1



24 x 24

SECTION 704-13 (Cont.)

(k) Wet Paint Sign (R 19-1)

(1) **Justification.** This sign is authorized for use by pavement marking crews to inform motorists that lines are newly laid and that they may not drive over them.

(2) **Placement.** It should be placed beyond intersections along the route being marked.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (NON- REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
24 x 24	24	3	4	2	1 $\frac{3}{4}$	$\frac{1}{2}$	10 $\frac{1}{4}$	7 $\frac{1}{4}$	7 $\frac{3}{8}$	10 $\frac{15}{16}$	11 $\frac{3}{8}$

SIGN SIZE	SERIES			MAR- GIN	BOR- DER	BLANK STD
	LINES					
	1	2	3			
24 x 24	B	B	B	$\frac{3}{8}$	$\frac{5}{8}$	B3-24

## SECTION 705. WARNING SIGNS (W SERIES)

Warning signs are authorized for use for the purpose of warning the motorist of existing or potentially hazardous conditions either on or adjacent to the roadway. Warning signs require caution on the part of the motorist and may call for reduction of speed or other maneuvers in the interest of his own safety and that of other motorists and pedestrians. Adequate warnings are of great assistance to the motorist and are valuable in safeguarding and expediting traffic. However, the use of warning signs should be kept to a minimum. Too frequent use of them or their unnecessary use to warn of conditions which are apparent tends to breed disrespect for all signs.

Determination of the sign to be erected must be made on the basis of engineering judgment and in accordance with the criteria set forth in these regulations.

The standard size for warning signs, except where otherwise specified, shall be 30 inches by 30 inches. On expressways and on the Interstate System, the 48 inch by 48 inch size should be used.

Warning signs shall be erected in accordance with the general requirements for sign position. (Section 703)

Since warning signs are primarily for the protection of the motorist who is unacquainted with the road, it is very important that care be given to their locations.

Warning signs shall be erected in advance of the hazard or condition warned of. The actual advance warning distance will be determined by two factors, the prevailing speed and the condition warned against. These bear respectively on the time available to the motorist to comprehend and react to the message, and the time needed by him to perform any necessary maneuver.

The classification of warning signs, as numbered and illustrated in the following subsections, is further subdivided into the following groups:

1. Changes in Horizontal Alignment
2. Intersections
3. Advance Warning of Control Devices
4. Converging Traffic Lanes
5. Narrow Roadways
6. Changes in Highway Design
7. Grades
8. Roadway Surface Conditions
9. Schools
10. Railroad Crossings
11. Entrances and Crossings
12. Obstructions
13. Speed (Advisory)
14. Institutions
15. Miscellaneous Warning
16. Hazard and Clearance Marker
17. Construction and Maintenance Warning
18. Construction and Maintenance Guide

W1-1(R)



30 x 30

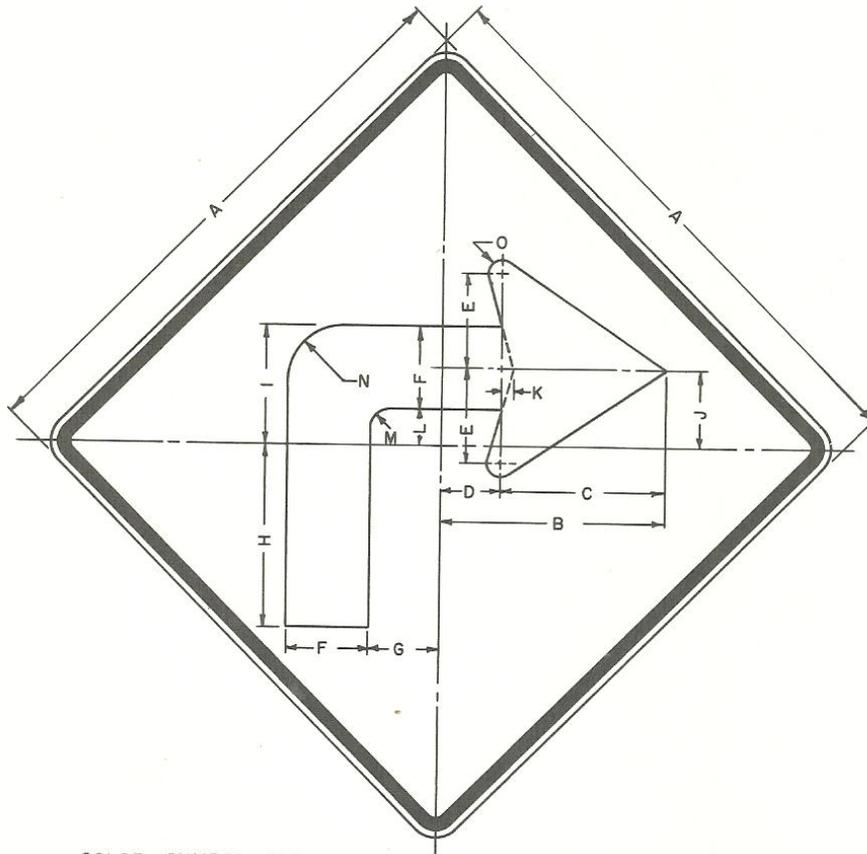
48 x 48

**SECTION 705-1. CHANGES IN HORIZONTAL ALIGNMENT  
GROUP (W 1 SERIES)**

**(a) Right Turn Sign (W 1-1 (R))**

(1) **Justification.** This sign is authorized for use to mark curves bearing to the right on which a ball-bank indicator shows banks of 10 degrees or more at any speed up to 30 miles per hour. Where a Right Turn sign is warranted, a Large Single Arrow sign (W 1-6) may be used on the outside of the turn.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



COLOR SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30 x 30	30	11 <sup>7</sup> / <sub>8</sub>	8 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>8</sub>	5	4 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	9 <sup>11</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>16</sub>	<sup>5</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	1	3	<sup>3</sup> / <sub>4</sub>
48 x 48	48	19	14	5	8	7	6	15 <sup>1</sup> / <sub>2</sub>	10	6 <sup>1</sup> / <sub>2</sub>	1	3	1 <sup>5</sup> / <sub>8</sub>	4 <sup>13</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30 x 30	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)
48 x 48	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)



W1-1(L)

SECTION 705-1 (Cont.)

(b) Left Turn Sign (W 1-1 (L))

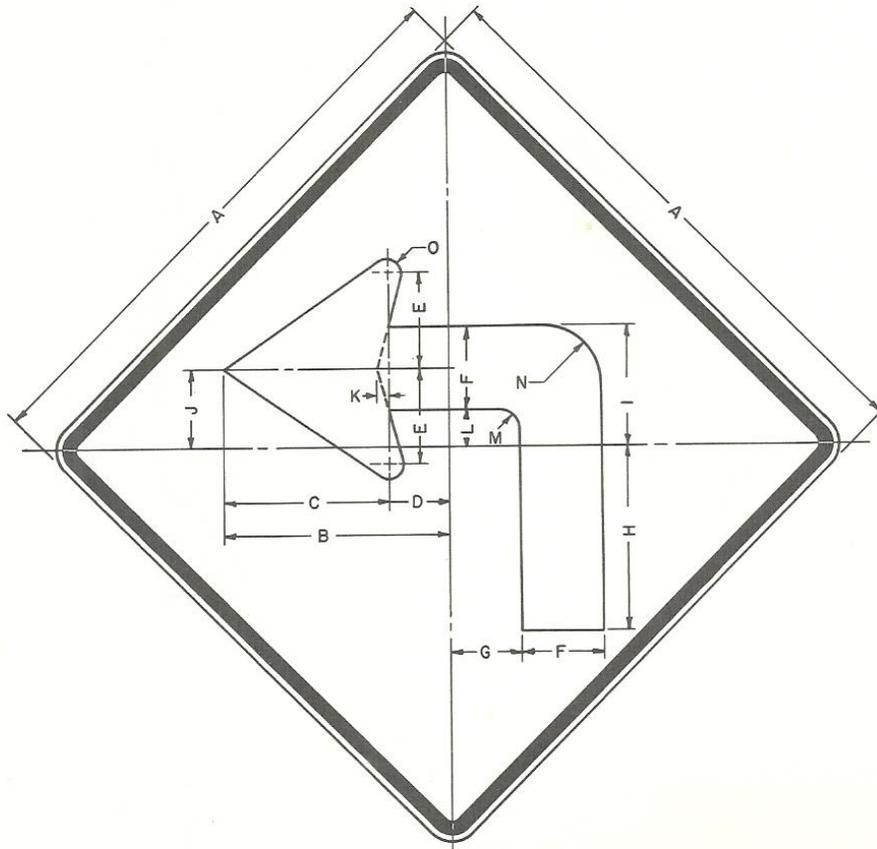
(1) **Justification.** This sign is authorized for use to mark curves bearing to the left on which a ball-bank indicator shows banks of 10 degrees or more at any speed up to 30 miles per hour. Where a Left Turn sign is warranted, a Large Single Arrow (W 1-6) may be used on the outside of the turn.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



30 x 30

48 x 48



COLOR · SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30 x 30	30	11 <sup>7</sup> / <sub>8</sub>	8 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>8</sub>	5	4 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	9 <sup>11</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>16</sub>	<sup>5</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	1	3	3 <sup>3</sup> / <sub>4</sub>
48 x 48	48	19	14	5	8	7	6	15 <sup>1</sup> / <sub>2</sub>	10	6 <sup>1</sup> / <sub>2</sub>	1	3	1 <sup>5</sup> / <sub>8</sub>	4 <sup>13</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD
30 x 30	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30 (D)
48 x 48	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48 (D)

W1-2(R)



30 x 30

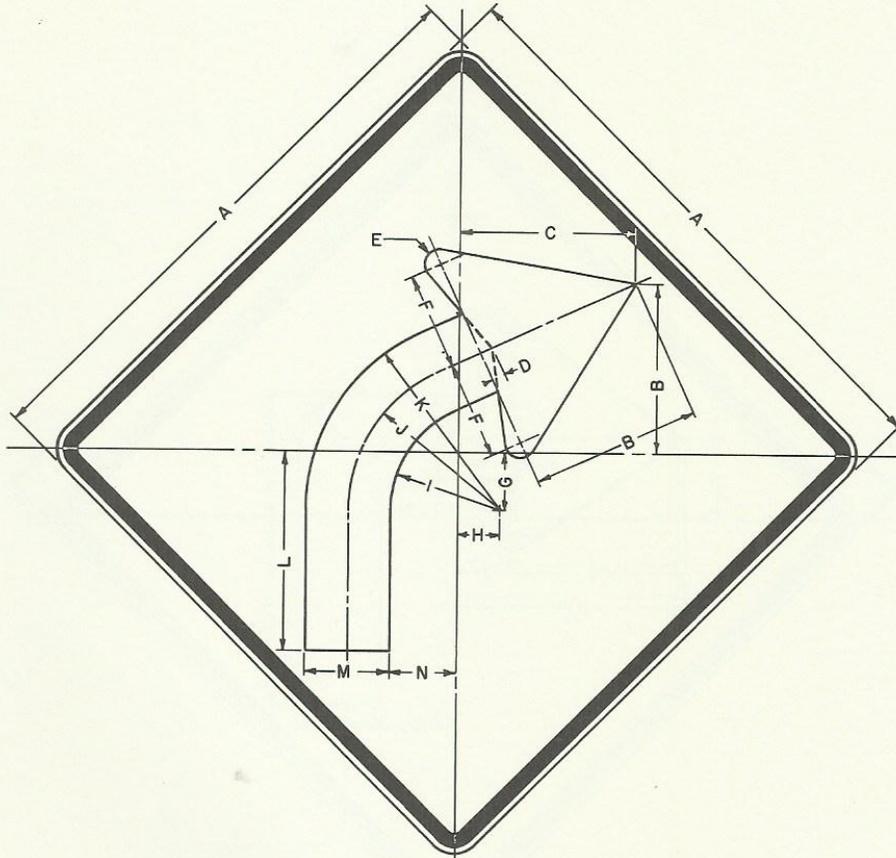
48 x 48

SECTION 705-1 (Cont.)

(c) Right Curve Sign (W 1-2 (R))

(1) **Justification.** This sign is authorized for use to mark a curve to the right where a test with a ball-bank indicator gives readings of 10 degrees or more at speeds between 30 and 60 miles per hour.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



COLOR · SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
30 x 30	30	8 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	5	2 <sup>15</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>8</sub>	7 <sup>13</sup> / <sub>16</sub>	10	10 <sup>5</sup> / <sub>16</sub>	4 <sup>3</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>16</sub>
48 x 48	48	14	14 <sup>1</sup> / <sub>2</sub>	1	1 <sup>3</sup> / <sub>16</sub>	8	4 <sup>11</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>2</sub>	9	12 <sup>1</sup> / <sub>2</sub>	16	16 <sup>1</sup> / <sub>2</sub>	7	5 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30 x 30	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	B3-30 (D)
48 x 48	3 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48 (D)

SECTION 705-1 (Cont.)

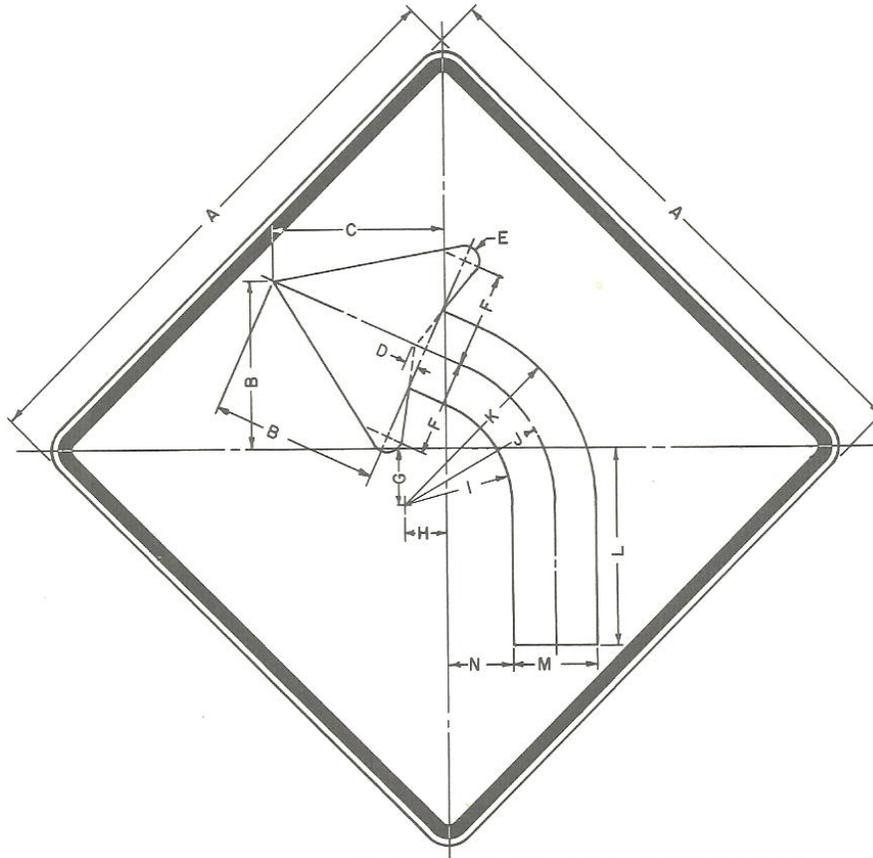
(d) Left Curve Sign (W 1-2 (L))

(1) Justification. This sign is authorized for use to mark a curve to the left where a test with a ball-bank indicator gives readings of 10 degrees or more at speeds between 30 and 60 miles per hour.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



30 x 30  
48 x 48



COLOR SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
30 x 30	30	8 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	5	2 <sup>15</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>8</sub>	7 <sup>13</sup> / <sub>16</sub>	10	10 <sup>5</sup> / <sub>16</sub>	4 <sup>3</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>16</sub>
48 x 48	48	14	14 <sup>1</sup> / <sub>2</sub>	1	1 <sup>3</sup> / <sub>16</sub>	8	4 <sup>11</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>2</sub>	9	12 <sup>1</sup> / <sub>2</sub>	16	16 <sup>1</sup> / <sub>2</sub>	7	5 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	MARGIN	BORDER	BLANK STD.
30 x 30	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	B3-30(D)
48 x 48	3 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)

W1-3(R)



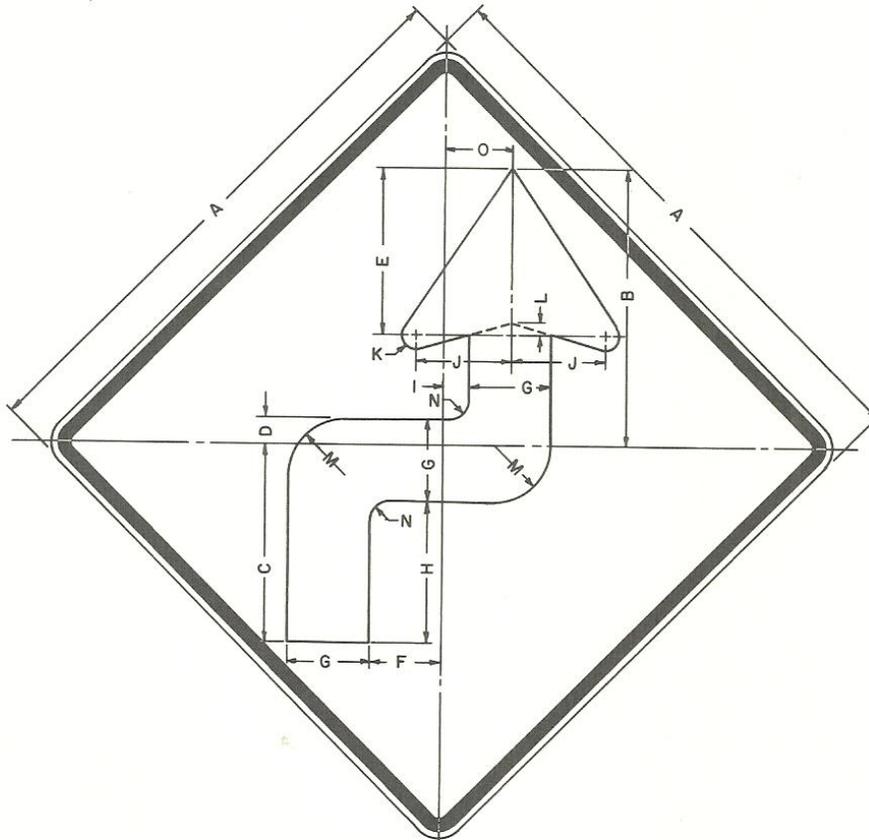
30 x 30  
48 x 48

SECTION 705-1 (Cont.)

(e) Right Reverse Turn Sign (W 1-3 (R))

(1) Justification. This sign is authorized for use where two turns or a curve and a turn in opposite directions as defined in the warrants for Turn (W 1-1) and Curve (W 1-2) signs are separated by a tangent of less than 400 feet. It shall be used when the first turn or curve is to the right.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



COLOR, SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30 x 30	30	14 1/2	10 3/8	1 3/8	8 3/4	3 3/4	4 3/8	7 3/8	1 5/16	5	3/4	5/8	3	1	3 1/2
48 x 48	48	23 3/16	16 5/8	2 3/16	14	6	7	11 13/16	2 1/8	8	1 3/16	1	4 13/16	1 5/8	5 5/8

SIGN SIZE	MARGIN	BORDER	BLANK STD.
30 x 30	1/2	3/4	B3-30(D)
48 x 48	3/4	1 1/4	B3-48(D)

SECTION 705-1 (Cont.)

(f) Left Reverse Turn Sign (W 1-3 (L))

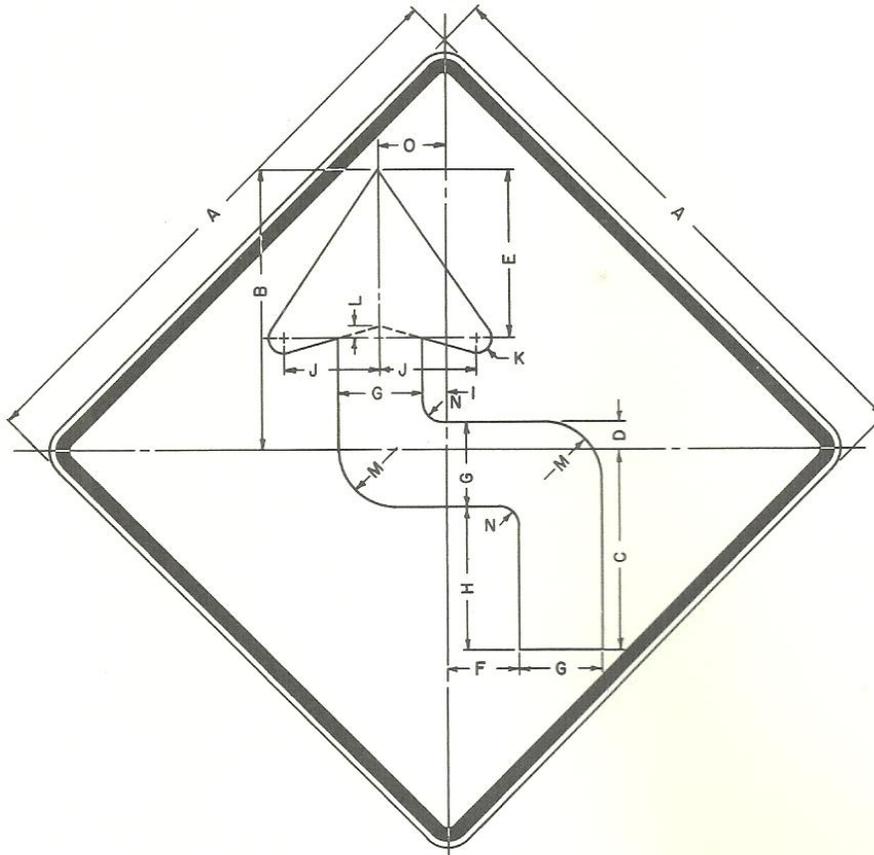
(1) Justification. This sign is authorized for use where two turns or a curve and a turn in opposite directions as defined in the warrants for Turn (W 1-1) and Curve (W 1-2) signs are separated by a tangent of less than 400 feet. It shall be used when the first turn or curve is to the left.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



30 x 30

48 x 48



COLOR, SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30 x 30	30	14 1/2	10 3/8	1 3/8	8 3/4	3 3/4	4 3/8	7 3/8	1 5/16	5	3/4	5/8	3	1	3 1/2
48 x 48	48	23 3/16	16 5/8	2 3/16	14	6	7	11 13/16	2 1/8	8	1 3/16	1	4 13/16	1 5/8	5 5/8

SIGN SIZE	MARGIN	BORDER	BLANK STD
30 x 30	1/2	3/4	B3-30 (D)
48 x 48	3/4	1 1/4	B3-48 (D)

W1-5(R)



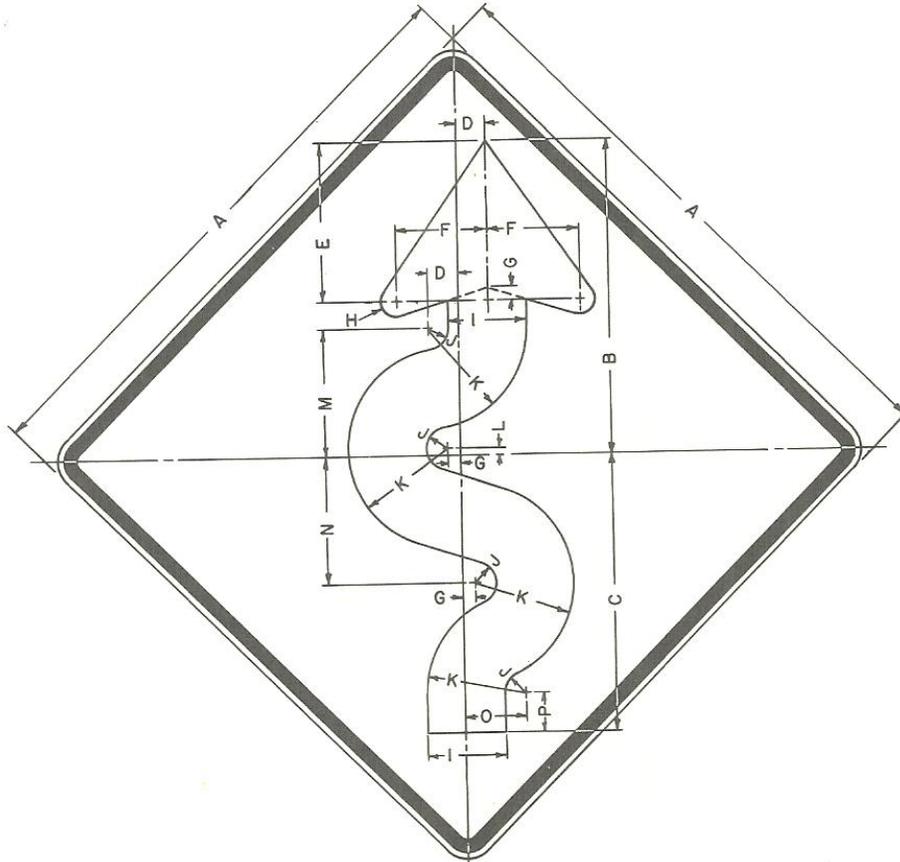
30 x 30  
48 x 48

SECTION 705-1 (Cont.)

(i) Right Winding Road Sign (W 1-5 (R))

(1) Justification. This sign is authorized for use where there is a series of turns or curves as defined in the warrants for Turn (W 1-1) and Curve (W 1-2) signs when the first turn or curve is to the right.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



COLOR · SYMBOL AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
30 x 30	30	15 <sup>15</sup> / <sub>16</sub>	14 <sup>7</sup> / <sub>32</sub>	1 <sup>9</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>8</sub>	4 <sup>11</sup> / <sub>16</sub>	<sup>5</sup> / <sub>8</sub>	<sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>32</sub>	<sup>5</sup> / <sub>16</sub>	6 <sup>31</sup> / <sub>64</sub>	6 <sup>9</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2
48 x 48	48	25 <sup>1</sup> / <sub>2</sub>	22 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	13	7 <sup>1</sup> / <sub>2</sub>	1	1 <sup>3</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>2</sub>	1 <sup>3</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>4</sub>	<sup>1</sup> / <sub>2</sub>	10 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	5	3 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	MARGIN	BORDER	BLANK STD.
30 x 30	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)
48 x 48	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)

W1-5(L)

SECTION 705-1 (Cont.)

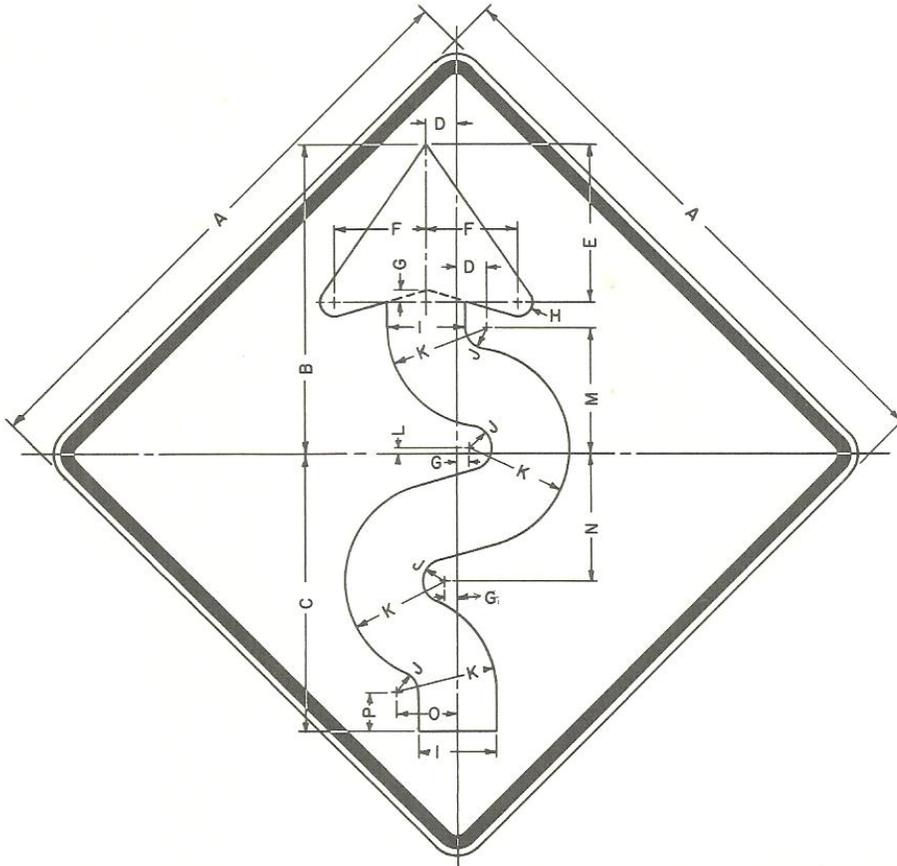


30 x 30  
48 x 48

**Left Winding Road Sign (W 1-5 (L))**

(1) **Justification.** This sign is authorized for use where there is a series of turns or curves as defined in the warrants for Turn (W 1-1) and Curve (W 1-2) signs when the first turn or curve is to the left.

Additional protection may be provided by the use of the Advisory speed plate (W 13-1) and by the installation of Delineators.



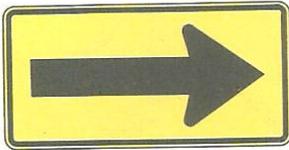
COLOR · SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
30 x 30	30	15 <sup>15</sup> / <sub>16</sub>	14 <sup>7</sup> / <sub>32</sub>	1 <sup>9</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>8</sub>	4 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>16</sub>	6 <sup>31</sup> / <sub>64</sub>	6 <sup>9</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2
48 x 48	48	25 <sup>1</sup> / <sub>2</sub>	22 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	13	7 <sup>1</sup> / <sub>2</sub>	1	1 <sup>3</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>2</sub>	1 <sup>3</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	10 <sup>3</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	5	3 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	MAR- GIN	BOR- DER	BLANK STD.
30 x 30	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	B3-30(D)
48 x 48	3 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)

W1-6



48 x 24  
96 x 48  
120 x 60

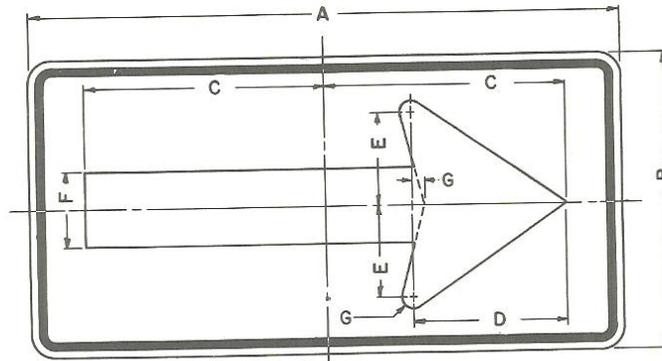
SECTION 705-1 (Cont.)

(k) Large Single Arrow Sign (W 1-6)

(1) **Justification.** This sign is authorized for use on the outside of a curve or on a turn, in line with, and at right angles to, approaching traffic.

This sign shall not be used to mark the ends of median strips, center piers, etc., where there is no change in the direction of traffic.

(2) **Size.** The standard size shall be 48 inches by 24 inches. Because of the especially hazardous locations where the sign may be needed, two larger sizes are provided, 96 inches by 48 inches and 120 inches by 60 inches.

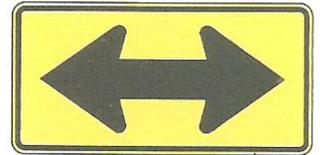


COLOR SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
48x24	48	24	19 1/2	12 1/2	7 1/2	6 1/4	7/8
96x48	96	48	39	25	15	12 1/2	1 3/4
120x60	120	60	48 3/4	31 1/4	18 3/4	15 5/8	2 3/16

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
48 x 24	1/2	3/4	B5-4824
96 x 48	3/4	1 1/4	B5-9648(P)
120 x 60	1	1 1/4	B5-12060





48 x 24  
96 x 48  
120 x 60

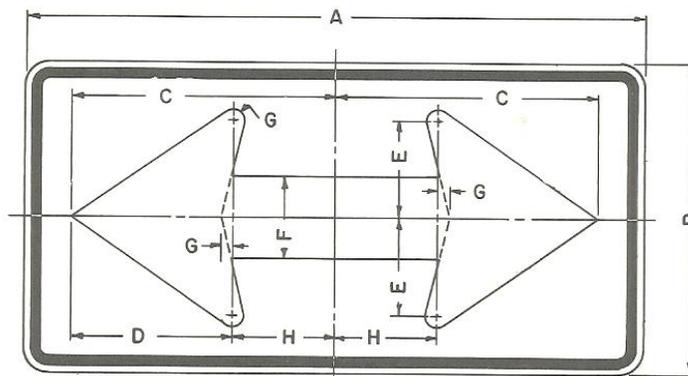
SECTION 705-1 (Cont.)

(A) Large Double Arrow Sign (W 1-7)

(1) Justification. This sign is authorized for use on the far side of a T intersection, in line with, and at right angles to, approaching traffic.

This sign shall not be used to mark the ends of median strips, center lines, etc., where there is no change in the direction of traffic.

(2) Size. The standard size shall be 48 inches by 24 inches. Because of the especially hazardous locations where the sign may be needed, two larger sizes, 96 inch by 48 inch and 120 inch by 60 inch, are authorized.



COLOR · SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
48x24	48	24	20 1/2	12 1/2	7 1/2	6 1/4	7/8	8
96x48	96	48	41	25	15	12 1/2	1 3/4	16
120x60	120	60	51 1/4	31 1/4	18 3/4	15 5/8	2 3/16	20

SIGN SIZE	MARGIN	BORDER	BLANK STD.
48 x 24	1/2	3/4	B5-4824
96 x 48	3/4	1 1/4	B5-9648(P)
120 x 60	1	1 1/4	B5-12060

W1-8(R)



30 x 30

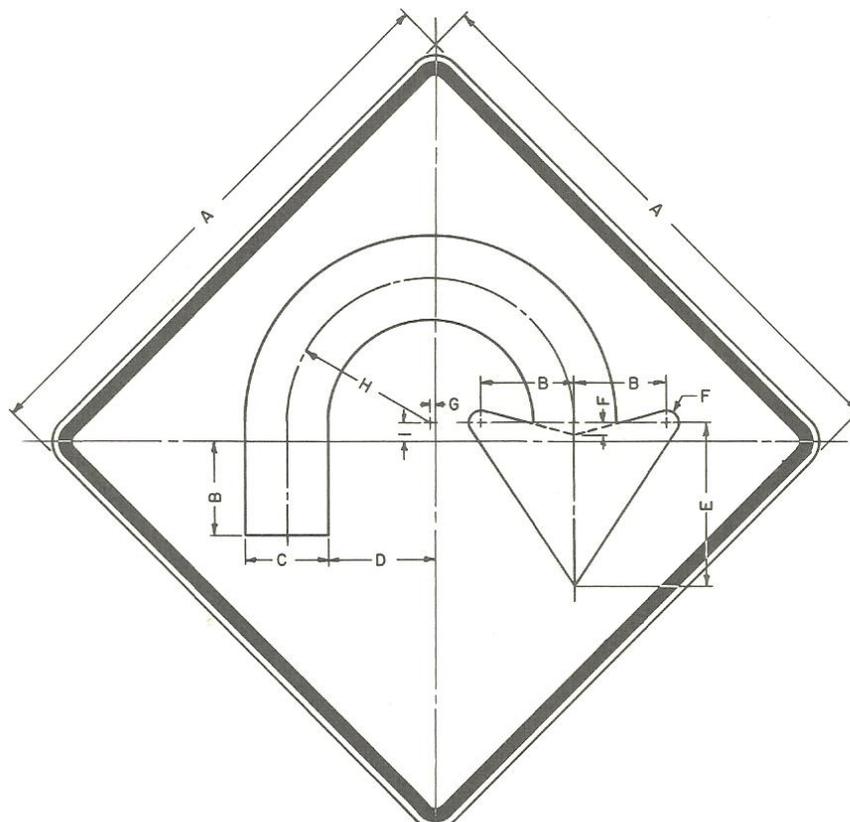
48 x 48

SECTION 705-1 (Cont.)

(m) Right Horseshoe Curve Sign (W 1-8 (R))

(1) **Justification.** This sign is authorized for use in mountainous terrain to mark a curve bearing to the right which produces a central angle of 135° or more. This sign may also be used where a combination of curves bearing to the right are separated by tangents of less than 400 feet produce a total central angle of 135° or more. If the horseshoe curve can be negotiated safely at a speed over 30 miles per hour, the Curve sign (W 1-2 (R)) should be used. The Large Arrow sign (W 1-6) may be used on the outside of the curve.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



COLOR SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	I
30x30	30	5	4 1/2	5 3/4	8 3/4	5/8	1/4	7 3/4	1
48x48	48	8	7 3/16	9 3/16	14	1	3/8	12 3/8	1 5/8

SIGN SIZE	MARGIN	BORDER	BLANK STD.
30x30	1/2	3/4	B3-30(D)
48x48	3/4	1 1/4	B3-48(D)

SECTION 705-1 (Cont.)

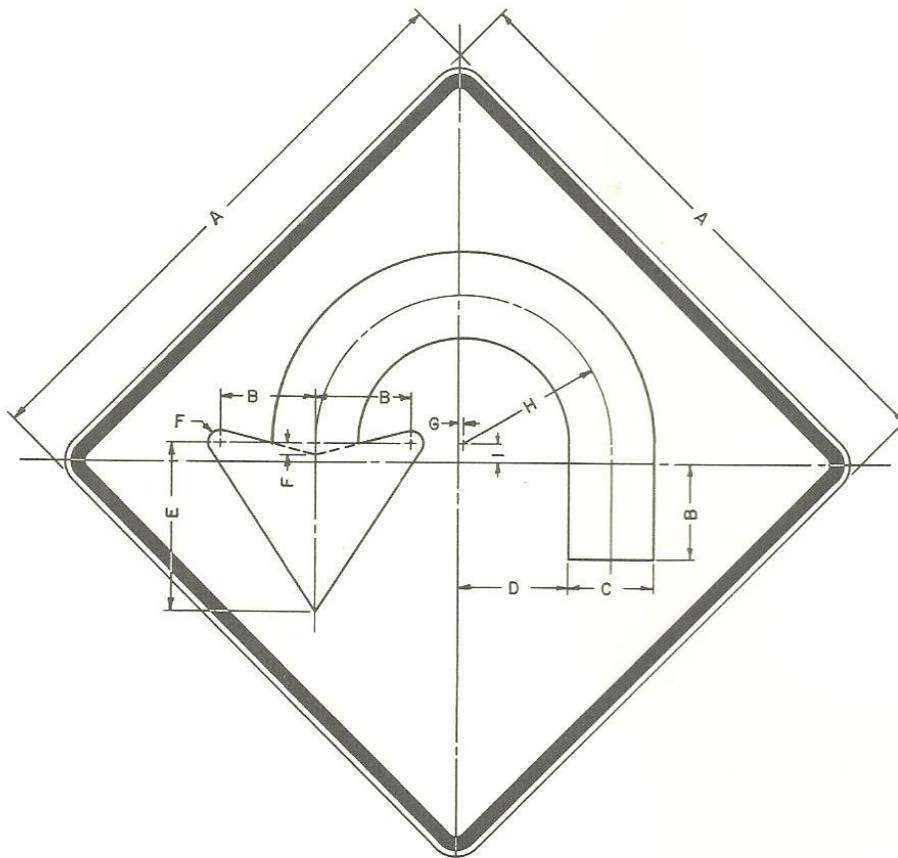
(n) Left Horseshoe Curve Sign (W 1-8 (L))

(1) **Justification.** This sign is authorized for use in mountainous terrain to mark a curve bearing to the left which produces a central angle of 135° or more. This sign may also be used where a combination of curves bearing to the left are separated by tangents of less than 400 feet produce a total central angle of 135° or more. If the horseshoe curve can be negotiated safely at a speed over 30 miles per hour, the Curve sign (W 1-2 (L)) should be used. The Large Arrow sign (W 1-6) may be used on the outside of the curve.

Additional protection may be provided by the use of the Advisory Speed plate (W 13-1) and by the installation of Delineators.



30 x 30  
48 x 48



COLOR · SYMBOL AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	I
30x30	30	5	4 1/2	5 3/4	8 3/4	5/8	1/4	7 3/4	1
48x48	48	8	7 3/16	9 3/16	14	1	3/8	12 3/8	1 5/8

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD
30x30	1/2	3/4	B3-30(D)
48x48	3/4	1 1/4	B3-48(D)

W2-1



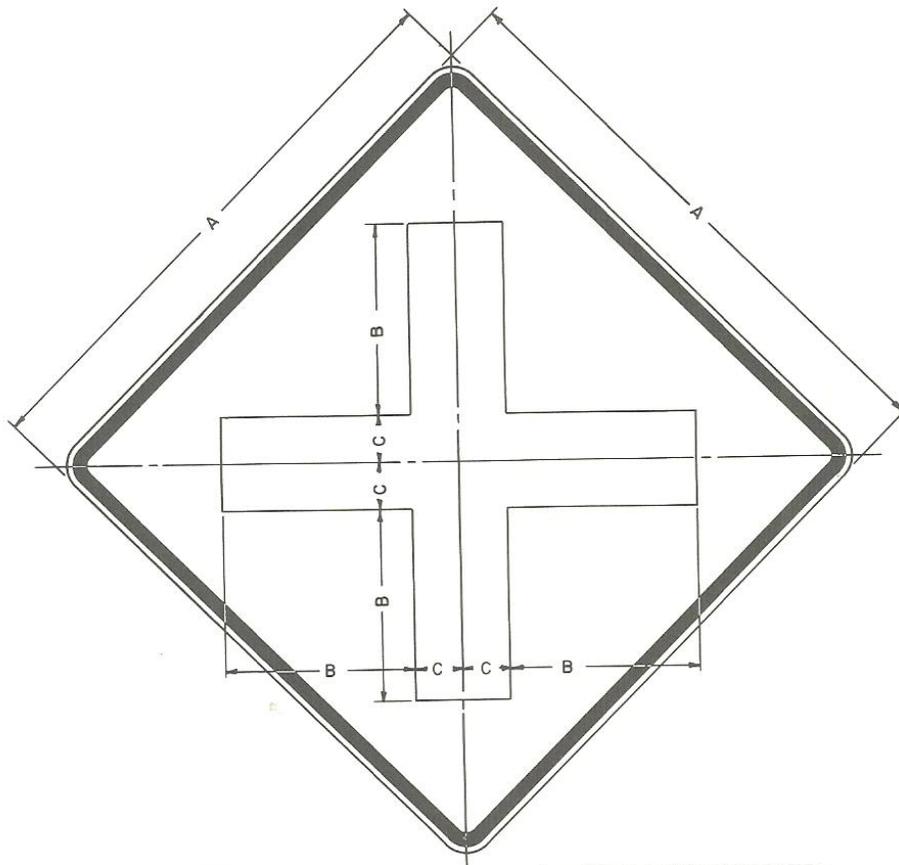
30 x 30  
48 x 48

SECTION 705-2. INTERSECTIONS GROUP (W 2 SERIES)

(a) Cross Road Sign (W 2-1)

(1) Justification. This sign is authorized for use on a through highway to indicate the presence of a cross road. Its use should be restricted to intersections with roads that are improved to such an extent that there is likely to be a fairly large volume of traffic entering or crossing the through route and where poor sight distance or obscured entrances make it advisable that the intersection be called to the motorists attention.

Too frequent use should be avoided. This sign may be used as advance warning of two side roads which are offset from each other by not more than 50 feet.



COLOR : SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS		
	A	B	C
30x30	30	10	2 1/2
48x48	48	16	4

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD
30x30	1/2	3/4	B3-30 (D)
48x48	3/4	1 1/4	B3-48 (D)

SECTION 705-2 (Cont.)

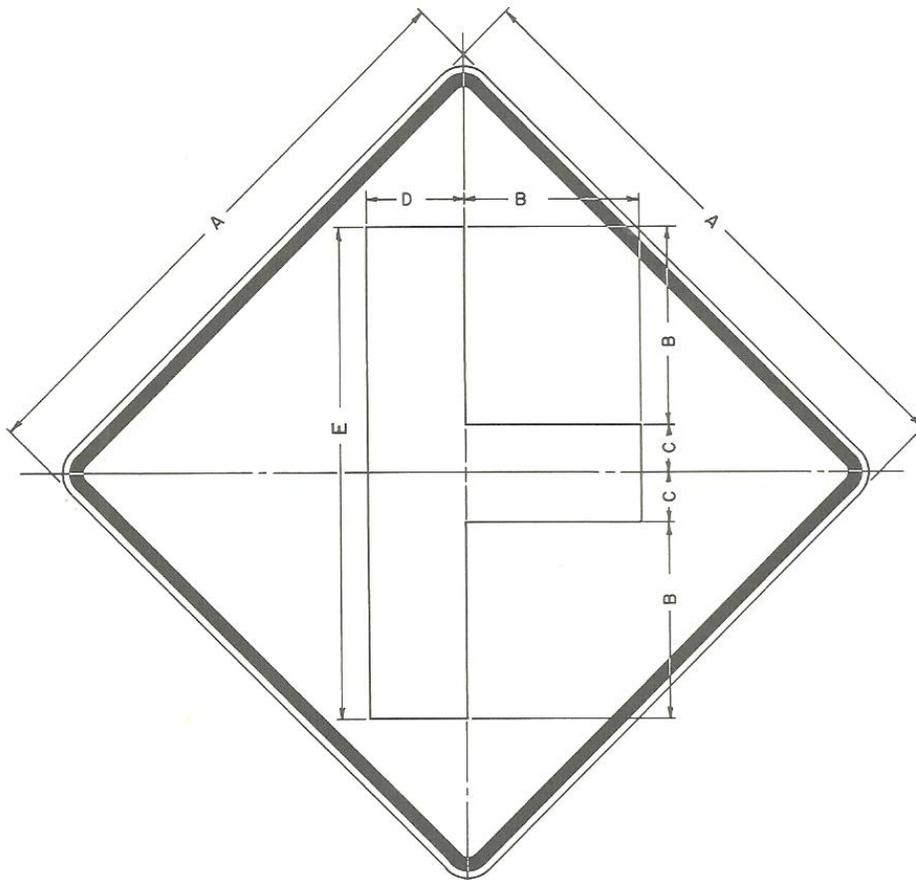


30 x 30  
48 x 48

**(b) Side Road Sign (W 2-2)**

(1) This sign is authorized for use in advance of a side road intersection. Its use should be restricted to intersections with roads that are improved to such an extent that there is likely to be a fairly large volume of traffic entering the through route and where poor sight distance or obscured entrances make it advisable that the intersection be called to the motorists attention.

Too frequent use should be avoided. Where an offset of two intersecting roads is more than 50 feet, two Side Road signs should be used.



COLOR SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	10	2½	5	25
48x48	48	16	4	8	40

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30x30	½	¾	B3-30(D)
48x48	¾	1¼	B3-48(D)

W2-3(R)



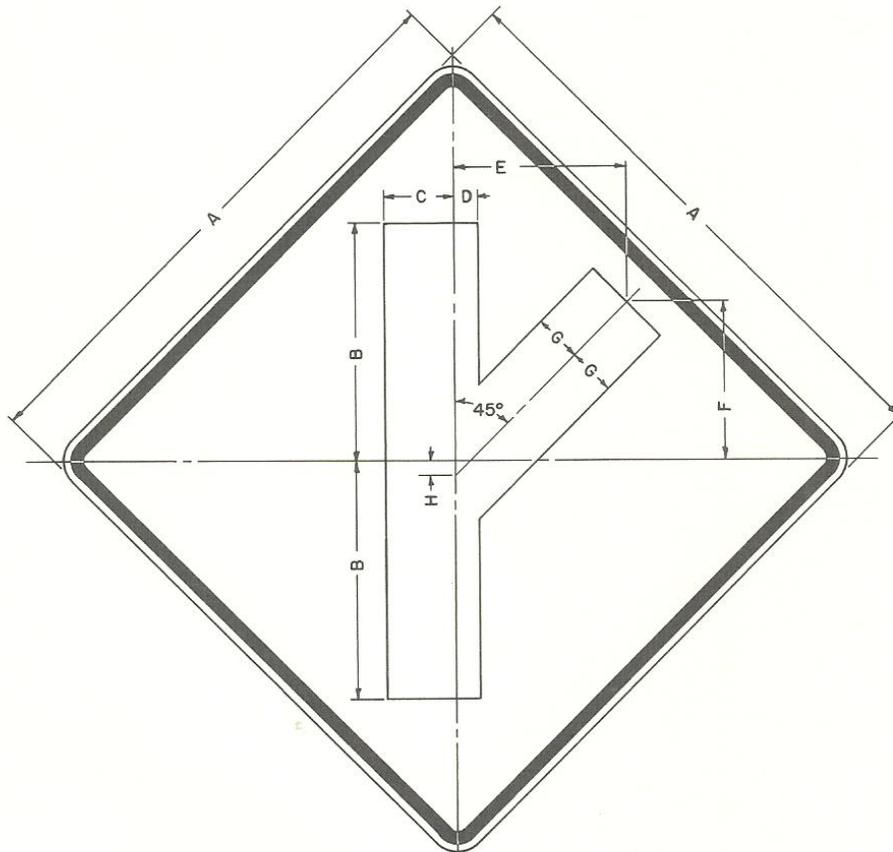
30 x 30  
48 x 48

SECTION 705-2 (Cont.)

(c) 45° Side Road Right Sign (W 2-3 (R))

(1) Justification. This sign is authorized for use in advance of a side road intersecting at an acute angle on the right. Its use should be restricted to intersections with roads that are improved to such an extent that there is likely to be a fairly large volume of traffic entering or crossing the through route and where poor sight distance or obscured entrances make it advisable that the intersection be called to the motorists attention.

The sign may be inverted to denote a sideroad intersecting at an obtuse angle on the left.



COLOR · SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	12 1/2	3 3/4	1 1/4	9	8 5/16	2 1/2	11/16
48x48	48	20	6	2	14 3/8	13 5/16	4	1 1/8

SIGN SIZE	MARGIN	BORDER	BLANK STD.
30x30	1/2	3/4	B3-30(D)
48x48	3/4	1 1/4	B3-48(D)

W2-3(L)

SECTION 705-2 (Cont.)

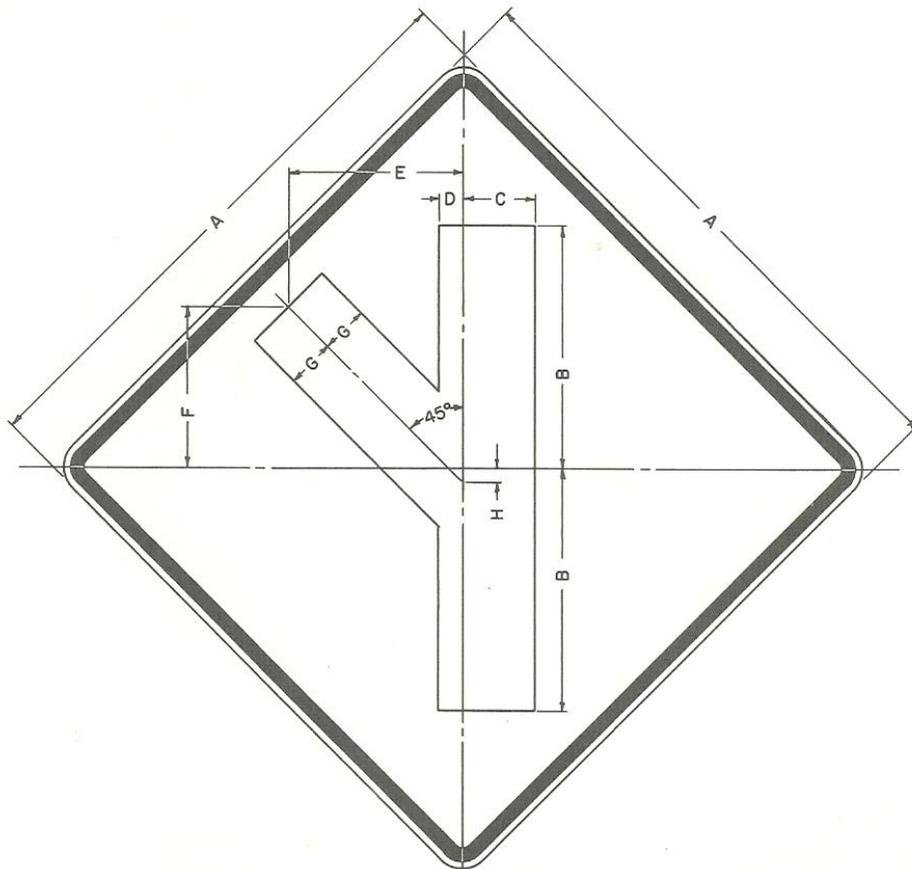
(d) 45° Side Road Left Sign (W 2-3 (L))

(1) **Justification.** This sign is authorized for use in advance of a side road intersecting at an acute angle on the left. Its use should be restricted to intersections with roads that are improved to such an extent that there is likely to be a fairly large volume of traffic entering the through route and where poor sight distance or obscured entrances make it advisable that the intersection be called to the motorists attention.

The sign may be inverted to denote a side road intersecting at an obtuse angle on the right.



30 x 30  
48 x 48



COLOR · SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30 x 30	30	12 $\frac{1}{2}$	3 $\frac{3}{4}$	1 $\frac{1}{4}$	9	8 $\frac{5}{16}$	2 $\frac{1}{2}$	1 $\frac{11}{16}$
48 x 48	48	20	6	2	14 $\frac{3}{8}$	13 $\frac{5}{16}$	4	1 $\frac{1}{8}$

SIGN SIZE	MAR- GIN	BOR- DER	BLANK STD.
30 x 30	$\frac{1}{2}$	$\frac{3}{4}$	B3-30 (D)
48 x 48	$\frac{3}{4}$	1 $\frac{1}{4}$	B3-48 (D)

W2-3-1(R)



30 x 30

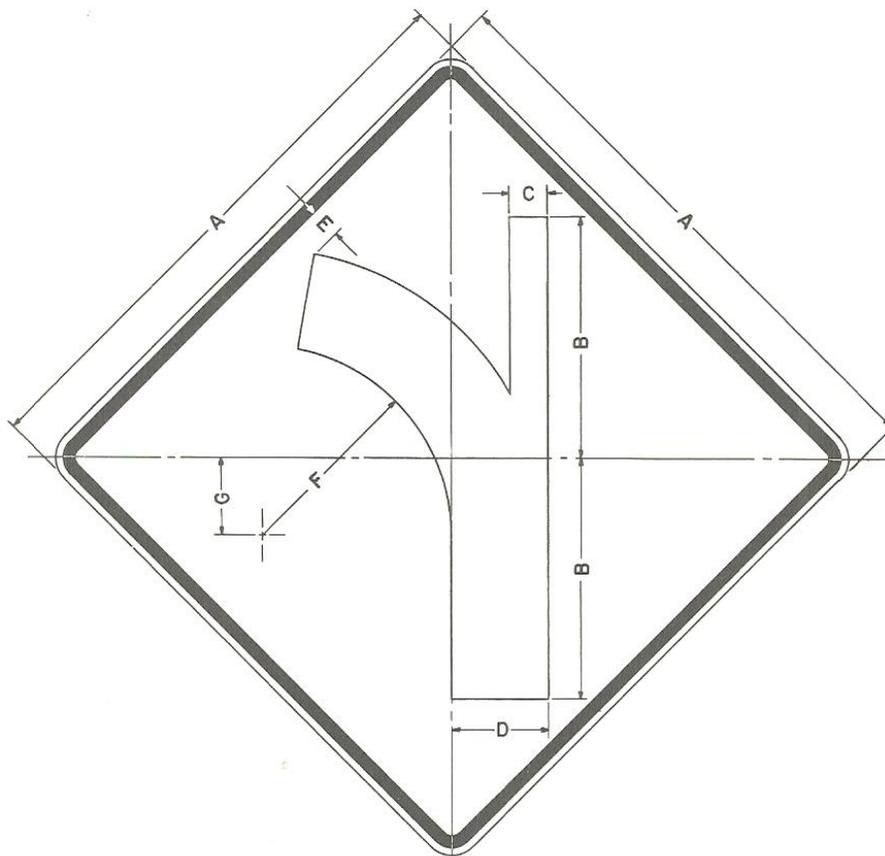
48 x 48

SECTION 705-2 (Cont.)

(e) Curve-Side Road Right Sign (W 2-3-1 (R))

(1) **Justification.** This sign is authorized for use in advance of an intersection where the main highway curves to the left and the minor road is straight ahead.

It may be used on any of the three legs of the depicted intersection by rotating it 90 or 180 degrees.



COLOR · SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	12 1/2	2	5	1 1/2	9 3/4	4
48x48	48	20	3 3/16	8	2 3/8	15 5/8	6 3/8

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30x30	1/2	3/4	B3-30(D)
48x48	3/4	1 1/4	B3-48(D)



SECTION 705-2 (Cont.)

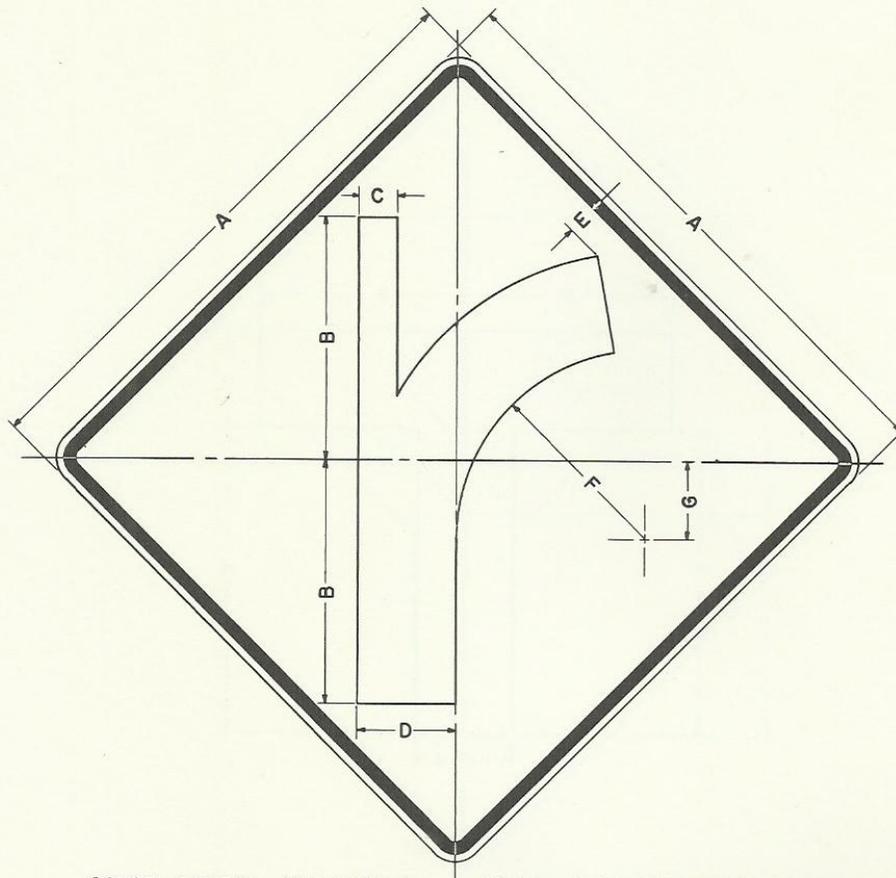


30 x 30  
48 x 48

(f) Curve-Side Road Left Sign (W 2-3-1 (L))

(1) Justification. This sign is authorized for use in advance of an intersection where the main highway curves to the right and the minor road is straight ahead.

It may be used on any of the three legs of the depicted intersection by rotating it 90 or 180 degrees.



COLOR · SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	12 1/2	2	5	1 1/2	9 3/4	4
48x48	48	20	3 3/16	8	2 3/8	15 5/8	6 3/8

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30 x 30	1/2	3/4	B3-30(D)
48 x 48	3/4	1 1/4	B3-48(D)

W2-4



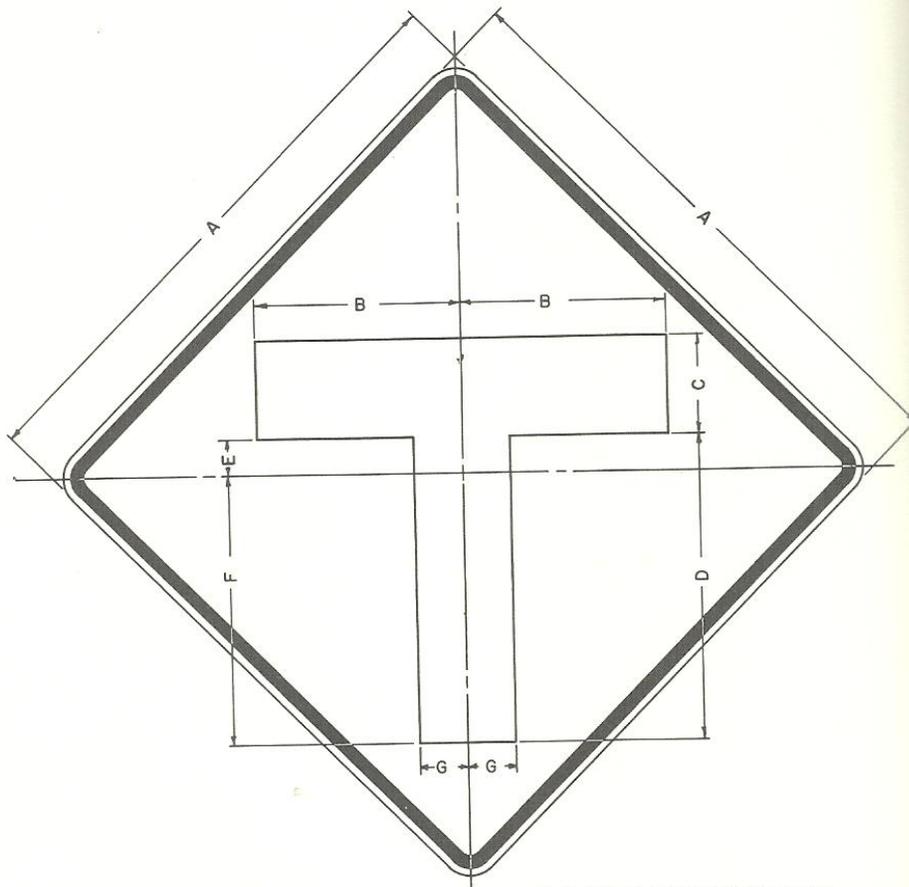
30 x 30  
48 x 48

SECTION 705-2 (Cont.)

(g) "T" Symbol Sign (W 2-4)

(1) **Justification.** This sign is authorized for use to warn traffic approaching a "T" intersection on the road that forms the stem of the T, i.e., where traffic must make a turn either to the right or to the left.

A Large Double Arrow sign (W 1-7) may be used at the head of the "T" directly in line with approaching traffic.



COLOR SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	10 <sup>5</sup> / <sub>8</sub>	5	15 <sup>5</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>
48x48	48	17	8	25	3	22	4

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD
30x30	1/2	3/4	B3-30(D)
48x48	3/4	1 1/4	B3-48(D)

W2-5

SECTION 705-2 (Cont.)

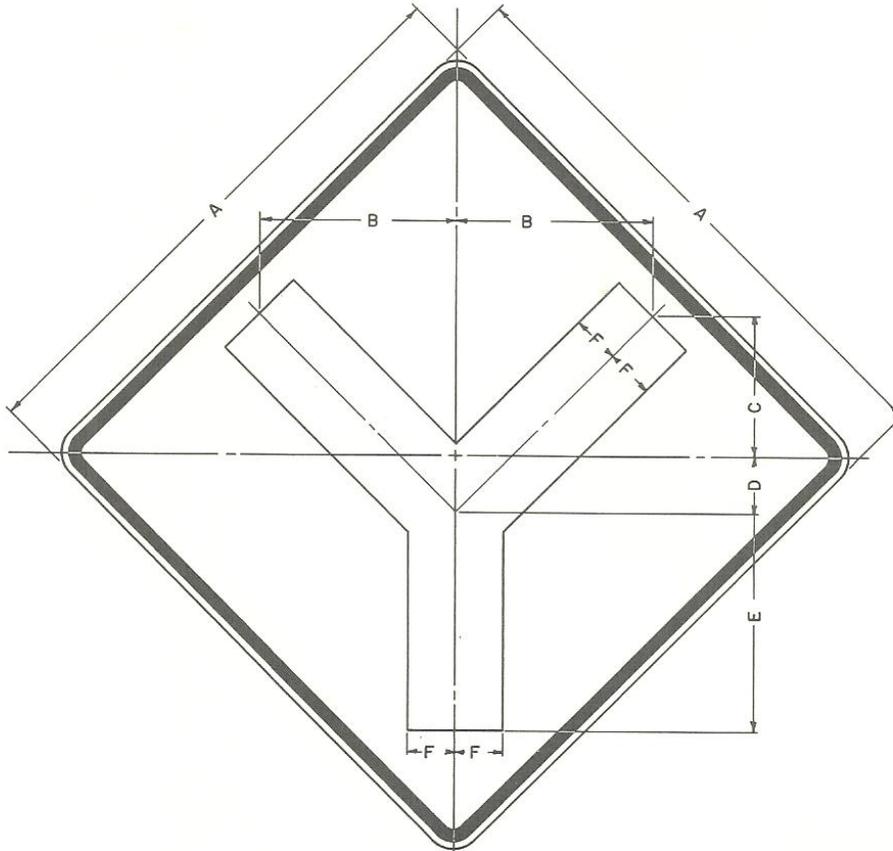
(h) "Y" Symbol Sign (W 2-5)

(1) Justification. This sign is authorized for use to warn motorists approaching a "Y" intersection on the road that forms the stem of the "Y." It should not be used at a "Y" intersection that is channelized by a traffic island.

A Large Double Arrow sign (W 1-7) may be used at the fork of the "Y" directly in line with approaching traffic.



30 x 30  
48 x 48



COLOR · SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	$10\frac{5}{16}$	$7\frac{3}{8}$	3	$11\frac{3}{8}$	$2\frac{1}{2}$
48x48	48	$16\frac{1}{2}$	$11\frac{13}{16}$	$4\frac{13}{16}$	$18\frac{3}{16}$	4

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD
30x30	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)
48x48	$\frac{3}{4}$	$1\frac{1}{4}$	B3-48(D)

W2-5-1(R)

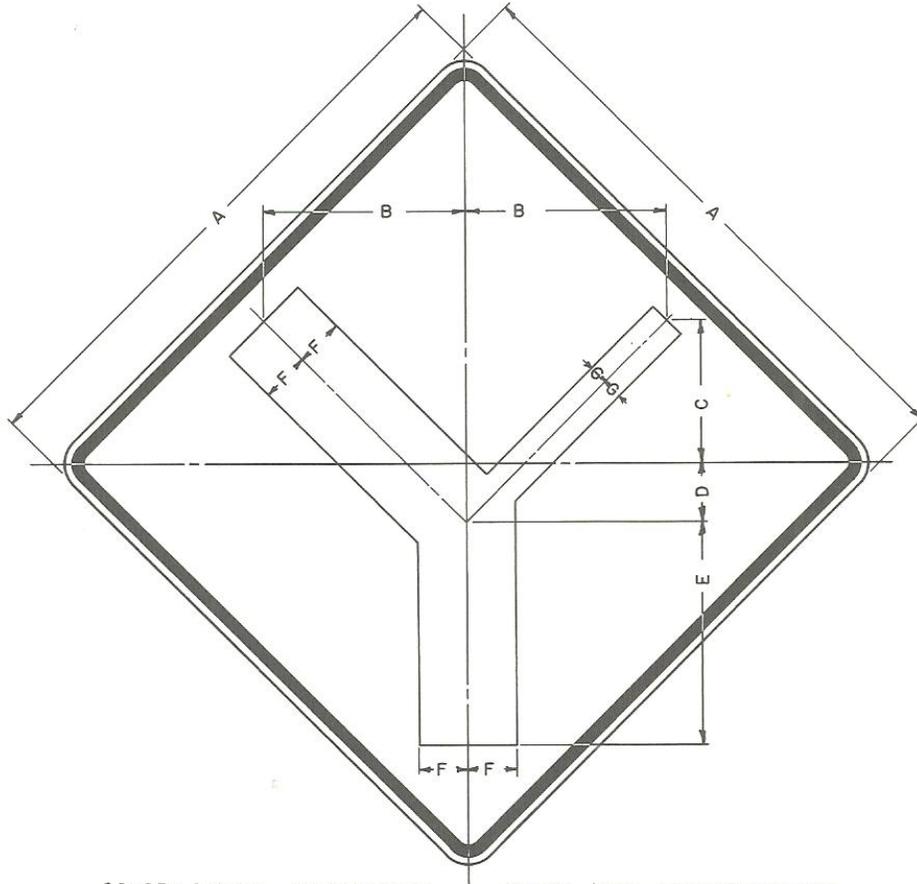


30 x 30  
48 x 48

SECTION 705-2 (Cont.)

(i) "Y" Symbol Secondary Right Sign (W 2-5-1 (R))

(1) **Justification.** This sign is authorized for use to warn motorists approaching a "Y" intersection where the main highway bears to the left and the intersecting branch, bearing to the right, is a minor road. It should not be used if there is any channelization present.



COLOR · SYMBOL AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	$10\frac{5}{16}$	$7\frac{3}{8}$	3	$11\frac{3}{8}$	$2\frac{1}{2}$	1
48x48	48	$16\frac{1}{2}$	$11\frac{13}{16}$	$4\frac{13}{16}$	$8\frac{3}{16}$	4	$1\frac{5}{8}$

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30x30	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)
48x48	$\frac{3}{4}$	$1\frac{1}{4}$	B3-48(D)

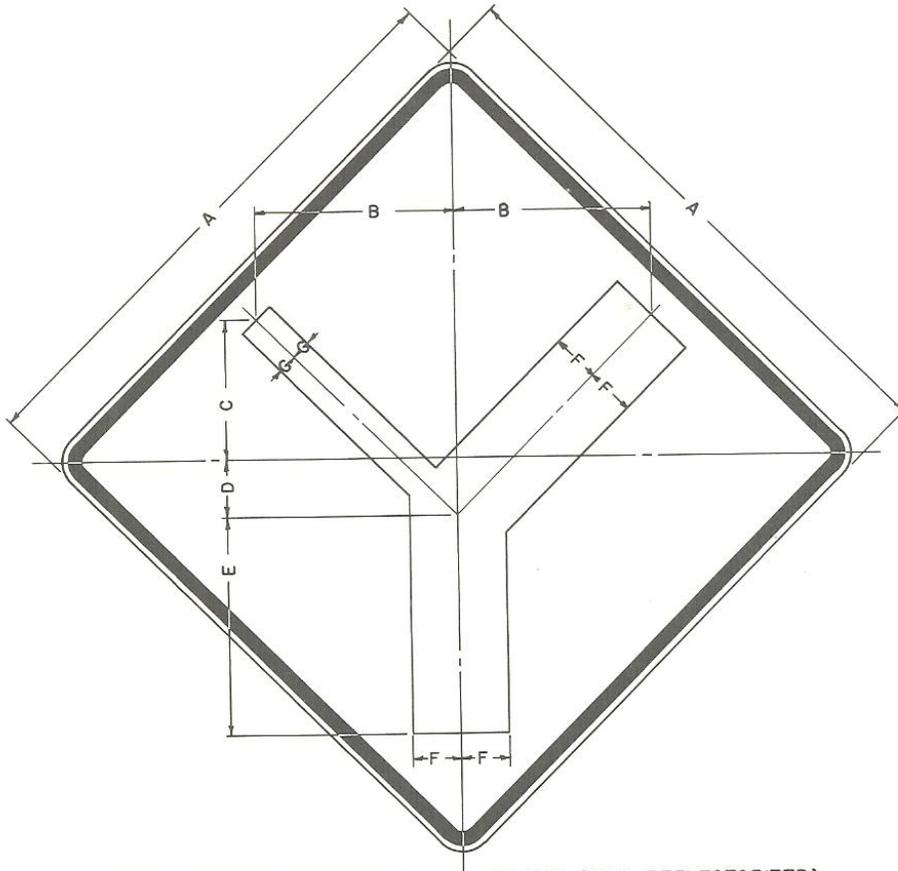
SECTION 705-2 (Cont.)

(1) "Y" Symbol Secondary Left Sign (W 2-5-1 (L))

(1) **Justification.** This sign is authorized for use to warn motorists approaching a "Y" intersection where the main highway bears to the right and the intersecting branch, bearing to the left, is a sideroad. It should not be used if there is any channelization present.



30 x 30  
48 x 48



COLOR SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	10 $\frac{5}{16}$	7 $\frac{3}{8}$	3	11 $\frac{3}{8}$	2 $\frac{1}{2}$	1
48x48	48	16 $\frac{1}{2}$	11 $\frac{13}{16}$	4 $\frac{13}{16}$	8 $\frac{3}{16}$	4	1 $\frac{5}{8}$

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30x30	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)
48x48	$\frac{3}{4}$	1 $\frac{1}{4}$	B3-48 (D)

W3-1

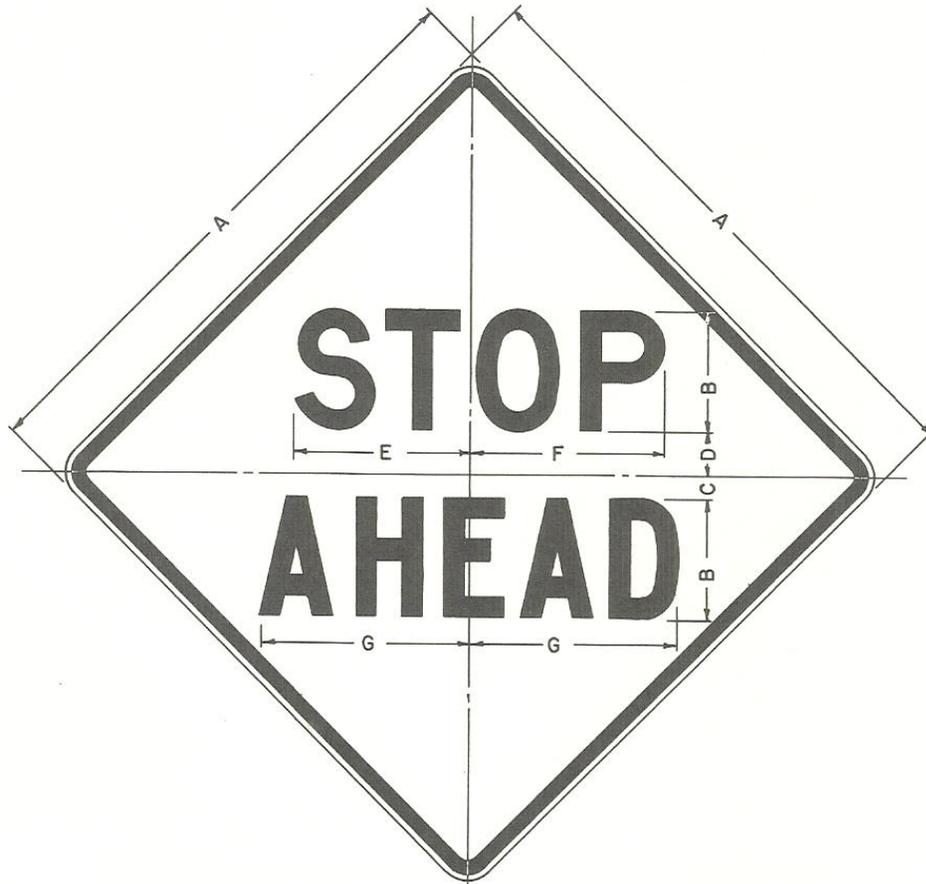


30 x 30  
48 x 48

SECTION 705-3. ADVANCE WARNING OF CONTROL DEVICES  
GROUP (W 3 SERIES)

(a) Stop Ahead Sign (W 3-1)

(1) Justification. This sign is authorized for use in advance of a Stop sign that is not visible for a sufficient distance to permit the driver to bring his vehicle to a comfortable stop at a Stop sign. Obstructions of view due to horizontal or vertical curves, parked vehicles, or foliage, and high approach speeds, should be considered in determining the need for the erection of this sign. In some cases it may be used for emphasis when there is poor observance of the Stop sign.



COLOR · LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	6	1 1/4	2 1/4	9	9 7/8	10 5/8
48x48	48	10	2	3 5/8	13 13/16	15 3/16	15 9/16

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
30x30	D	C	1/2	3/4	B3-30(D)
48x48	D	C	3/4	1 1/4	B3-48(D)

SECTION 705-3 (Cont.)

(b) Yield Ahead Sign (W 3-2)

(1) **Justification.** This sign is authorized for use in advance of a Yield sign that is not visible for a sufficient distance to permit the driver to bring his vehicle to a comfortable stop at the Yield sign if stopping becomes necessary. Obstructions of view due to horizontal or vertical curves, parked vehicles, or foliage, and high approach speeds, should be considered in determining the need for the erection of this sign. In some cases it may be used for emphasis where there is poor observance of the Yield sign.



30 x 30  
48 x 48



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	6	1/4	1 3/4	9 1/8	10 5/8
48x48	48	10	2	2 13/16	15 3/16	15 9/16

SIGN SIZE	SERIES		MARGIN	BORDER	BLANK STD
	LINES				
	1	2			
30x30	C	C	1/2	3/4	B3-30 (D)
48x48	C	C	3/4	1 1/4	B3-48 (D)

W3-3



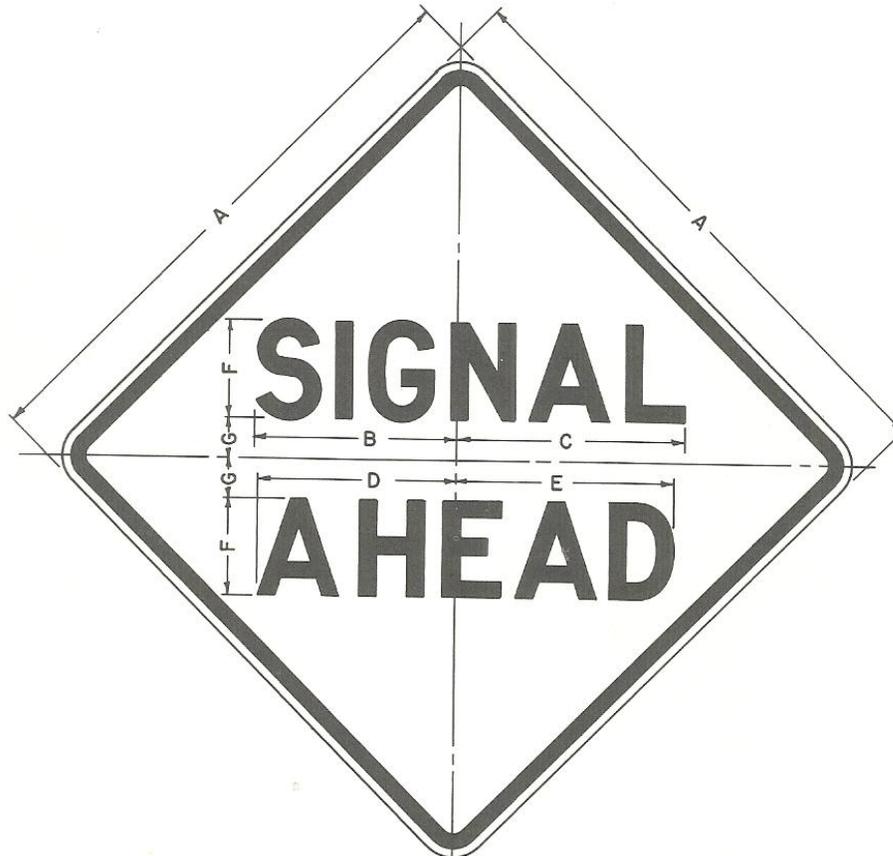
36 x 36

48 x 48

SECTION 705-3 (Cont.)

(c) Signal Ahead Sign (W 3-3)

(1) Justification. This sign is authorized for use in advance of any rural signalized intersection where the signal is not visible for a distance of 600 feet in advance of the intersection, or in advance of any signalized intersection where the prevailing approach speeds or conditions of visibility are such as to justify an advance warning.



COLOR • LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
36 x 36	36	$12\frac{5}{8}$	$14\frac{1}{4}$	$12\frac{5}{16}$	$13\frac{5}{8}$	6	$2\frac{1}{2}$
48 x 48	48	$17\frac{5}{8}$	20	$16\frac{9}{16}$	$18\frac{5}{16}$	8	$3\frac{1}{4}$

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
36 x 36	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-36 (D)
48 x 48	D	D	$\frac{3}{4}$	$1\frac{1}{4}$	B3-48 (D)



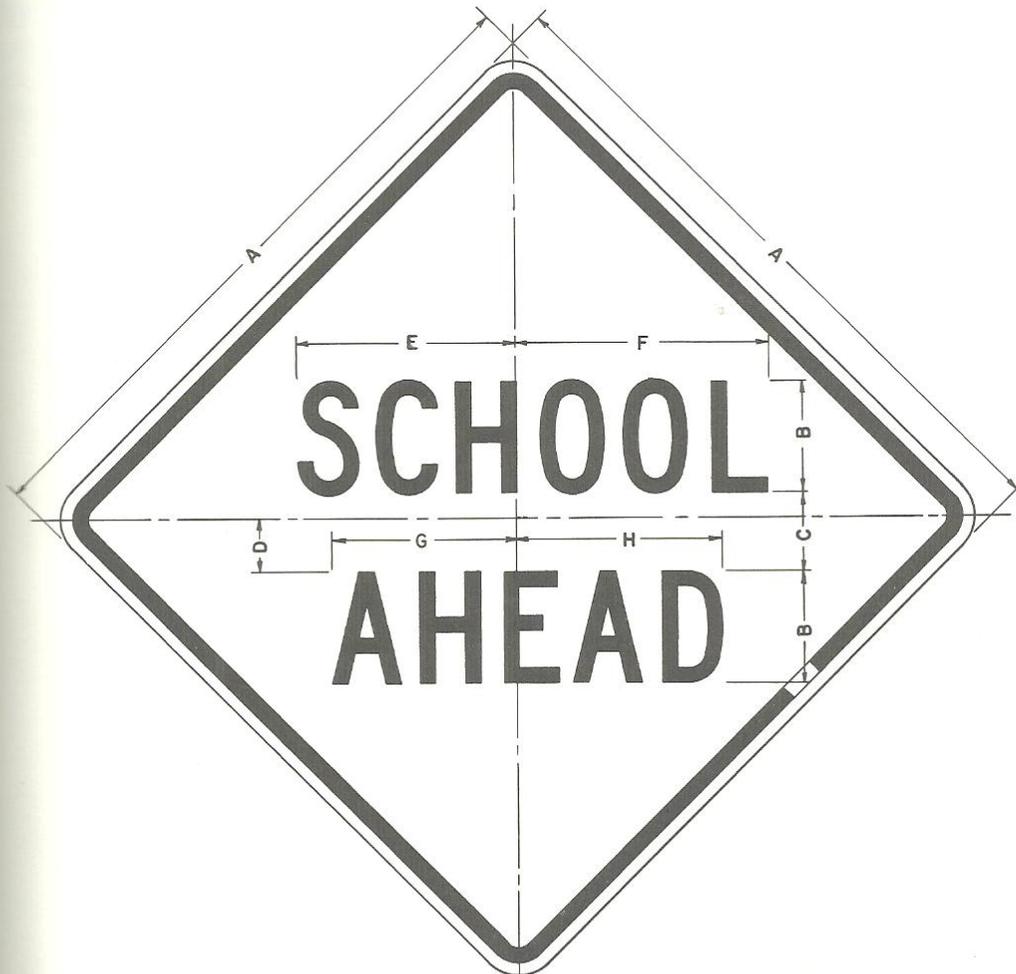


36 x 36  
48 x 48

SECTION 705-3 (Cont.)

(a) School Ahead Sign (W 3-4)

(1) Justification. This sign is authorized for use in advance of a school sign (W 9-1), (W 9-1 (F)), or (W 9-1 (S)) that is not visible for a sufficient distance to permit the driver to reduce his speed comfortably. Obstruction of view due to horizontal or vertical curves, parked vehicles, or obstructions and high approach speeds should be considered in determining the need for the erection of this sign.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
36x36	36	6	4 <sup>1</sup> / <sub>4</sub>	2 <sup>7</sup> / <sub>8</sub>	12 <sup>7</sup> / <sub>16</sub>	12 <sup>15</sup> / <sub>16</sub>	10	11
48x48	48	8	5 <sup>11</sup> / <sub>16</sub>	3 <sup>13</sup> / <sub>16</sub>	16 <sup>9</sup> / <sub>16</sub>	17 <sup>3</sup> / <sub>16</sub>	13 <sup>1</sup> / <sub>4</sub>	14 <sup>11</sup> / <sub>16</sub>

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
36x36	C	C	<sup>5</sup> / <sub>8</sub>	<sup>7</sup> / <sub>8</sub>	B3-36(D)
48x48	C	C	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)

W 4-1



30 x 30  
48 x 48

SECTION 705-4. CONVERGING TRAFFIC LANES GROUP  
(W 4 SERIES)

(a) Merging Traffic Sign (W 4-1)

(1) Justification. This sign is authorized for use just in advance of a point where two roadways converge at a flat angle and no turning conflict occurs, to warn motorists that merging movements may be encountered. It should be erected on the side of the major roadway on which merging traffic will be encountered. Where two roadways of approximately equal importance converge, a sign may be placed on each roadway.



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	11 <sup>3</sup> / <sub>8</sub>	11 <sup>7</sup> / <sub>8</sub>	10 <sup>3</sup> / <sub>4</sub>	5	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>
48x48	48	18 <sup>1</sup> / <sub>4</sub>	19	17 <sup>5</sup> / <sub>8</sub>	8	3 <sup>5</sup> / <sub>8</sub>	2

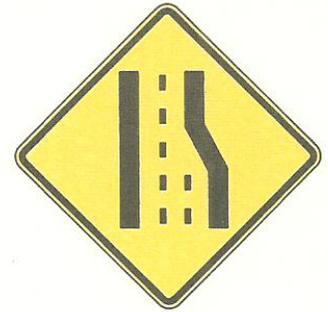
SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
30x30	C	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)
48x48	C	C	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)

**(b) Pavement-Width Transition Signs (W 4-2)**

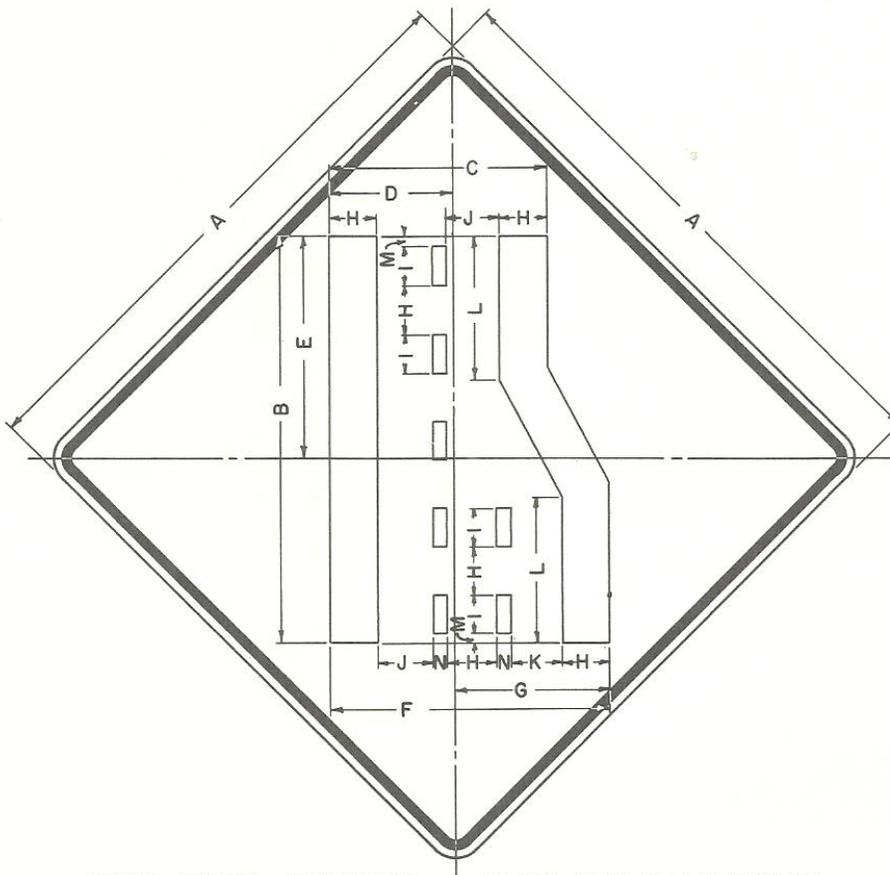
**(1) Justification.** These signs are authorized for use to give advance notice of a reduction in the number of lanes of pavement, as from three lanes to two lanes, or from four lanes to two lanes.

The symbol shall show the number of lanes in advance of, through, and beyond the transition. A broad line shall show the general configuration of each side of the roadway, and the lane lines shall be represented by short line segments. A no-passing line applying to traffic facing the sign shall be represented by a single solid line.

On divided highways, where the width of the median will permit two such signs should be used, one on the left. In advance of the termination of a truck climbing lane this sign should be used. It shall not be used in advance of the end of an acceleration lane.



30 x 30  
48 x 48



COLOR · SYMBOL AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
30 x 30	30	21	11 <sup>1</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>2</sub>	11 <sup>7</sup> / <sub>16</sub>	14 <sup>3</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	2	2 <sup>3</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>
48 x 48	48	33 <sup>5</sup> / <sub>8</sub>	17 <sup>15</sup> / <sub>16</sub>	10 <sup>3</sup> / <sub>8</sub>	18 <sup>5</sup> / <sub>16</sub>	22 <sup>15</sup> / <sub>16</sub>	12 <sup>5</sup> / <sub>8</sub>	4	3 <sup>3</sup> / <sub>16</sub>	4 <sup>3</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>16</sub>	12	13 <sup>13</sup> / <sub>16</sub>	13 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
30 x 30	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	B3-30(D)
48 x 48	3 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	B3-48(D)

W5-1

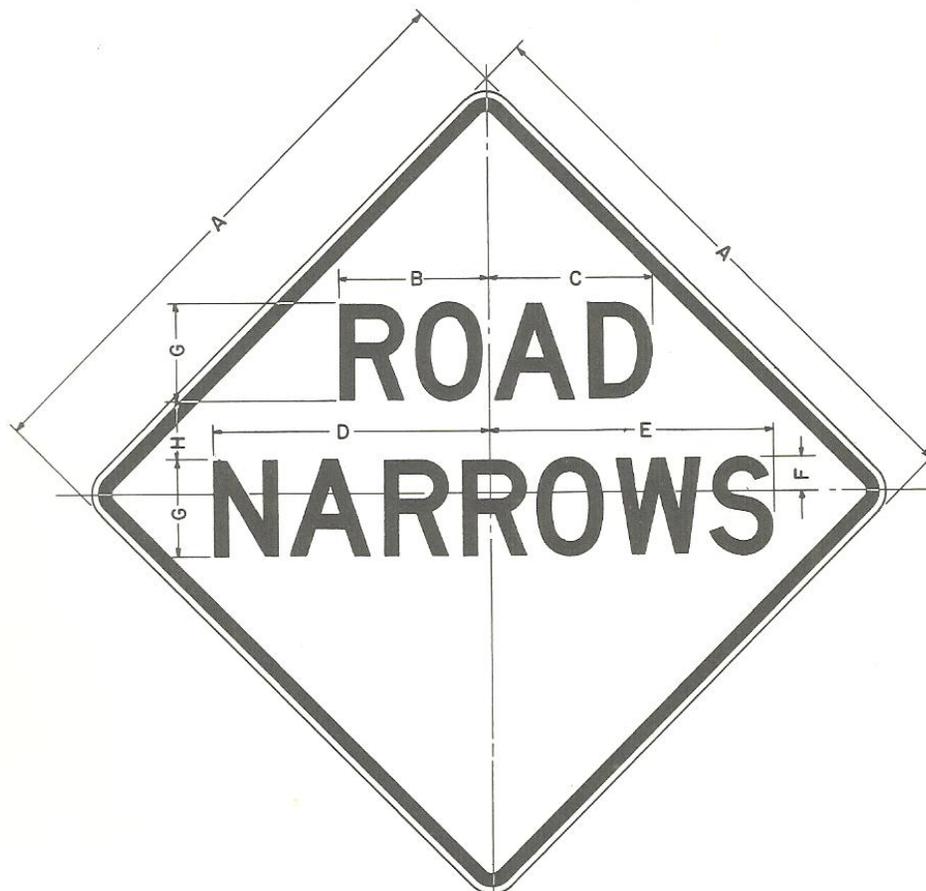


30 x 30

SECTION 705-5. NARROW ROADWAYS GROUP (W 5 SERIES)

(a) Road Narrows Sign (W 5-1)

(1) Justification. This sign is authorized for use on two-lane roads where the pavement width is reduced abruptly.



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	$7\frac{3}{4}$	$8\frac{1}{2}$	$14\frac{3}{8}$	$14\frac{11}{16}$	$1\frac{3}{4}$	5	3

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
30x30	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

SECTION 705-5 (Cont.)



30 x 30

(b) **Narrow Bridge Sign (W 5-2)**

(1) **Justification.** This sign is authorized for use to indicate a bridge having a clear two-way roadway width of 16 to 18 feet, inclusive, or any bridge having a roadway clearance less than the width of the approach pavement.

Additional protection may be provided by the use of reflector mark- and paint markings.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	13	13 <sup>3</sup> / <sub>16</sub>	10 <sup>7</sup> / <sub>8</sub>	11	3 <sup>3</sup> / <sub>16</sub>	5	2 <sup>3</sup> / <sub>8</sub>

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD
	1	2			
	30 x 30	D	D	1/2	3/4

W5-3



30 x 30

SECTION 705-5 (Cont.)

(c) One Lane Bridge Sign (W 5-3)

(1) **Justification.** This sign is authorized for use to mark all two-lane bridges having a clear roadway width of less than 16 feet. It may also be used on bridges having roadway widths of less than 18 feet when commercial vehicles constitute a high proportion of the traffic using the structure or when the alignment approaching the structure is poor.

Additional protection may be provided by the erection of reflector markers.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	$13\frac{3}{16}$	$12\frac{3}{8}$	$8\frac{3}{4}$	$9\frac{1}{16}$	5	$3\frac{3}{16}$

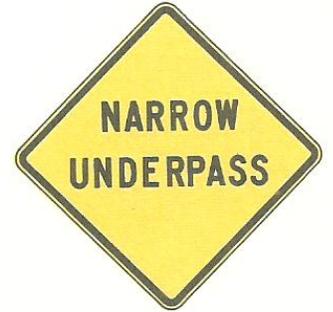
SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD
	1	2			
	30x30	C			

SECTION 705-5 (Cont.)

(d) **Narrow Underpass Sign (W 5-4)**

(1) **Justification.** This sign is authorized for use to indicate an underpass having a clear two-way roadway width of 16 to 18 feet, inclusive, or any underpass having a roadway clearance less than the width of the approach pavement.

Additional protection may be provided by the use of reflector mark-



30 x 30



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	4	$3\frac{3}{8}$	$8\frac{3}{4}$	$9\frac{1}{8}$	$12\frac{5}{16}$

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD
	1	2			
	30x30	C			

W5-5



30 x 30

SECTION 705-5 (Cont.)

(e) One Lane Underpass Sign (W 5-5)

(1) Justification. This sign is authorized for use wherever there is insufficient width under a viaduct, railroad bridge, or grade separation to permit a safe movement for opposing traffic.



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	11 <sup>5</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>4</sub>	12 <sup>15</sup> / <sub>16</sub>	4	1	2

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
30x30	C	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)



W 6-1

**SECTION 705-6. CHANGE IN HIGHWAY DESIGN GROUP  
(W 6 SERIES)**



**(a) Divided Road Sign (W 6-1)**

(1) **Justification.** This sign is authorized for use on the approaches to a section of highway where the opposing flows of traffic are separated by a physical barrier.

36 x 36

48 x 48



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
36 x 36	36	6	3 1/4	1	14 9/16	15 3/16	10 1/8	10 9/16
48 x 48	48	8	4 5/16	1 5/16	20 3/16	19 3/8	13 1/2	14 1/16

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
36 x 36	D	D	5/8	7/8	B3-36(D)
48 x 48	D	D	3/4	1 1/4	B3-48(D)

W6-2



36 x 36

48 x 48

SECTION 705-6 (Cont.)

(b) End Divided Road Sign (W 6-2)

(1) Justification. This sign is authorized for use at the end of a section of divided road as a warning of two-way traffic ahead. The Two-Way Traffic Ahead sign (R 6-3) should be used to give additional warning and notice just in advance of the transition to the two-way section.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	I	J
36 x 36	36	6	3 1/4	1 3/4	7	7 1/4	15 3/16	14 9/16	10 1/8	10 9/16
48 x 48	48	8	4 5/16	2 5/16	9 5/16	9 11/16	20 3/16	19 3/8	13 1/2	14 1/16

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD
	1	2	3			
36 x 36	D	D	D	5/8	7/8	B3-36 (D)
48 x 48	D	D	D	3/4	1 1/4	B3-48 (D)

SECTION 705-7. GRADES GROUP (W 7 SERIES)

(a) Hill Sign (W 7-1)

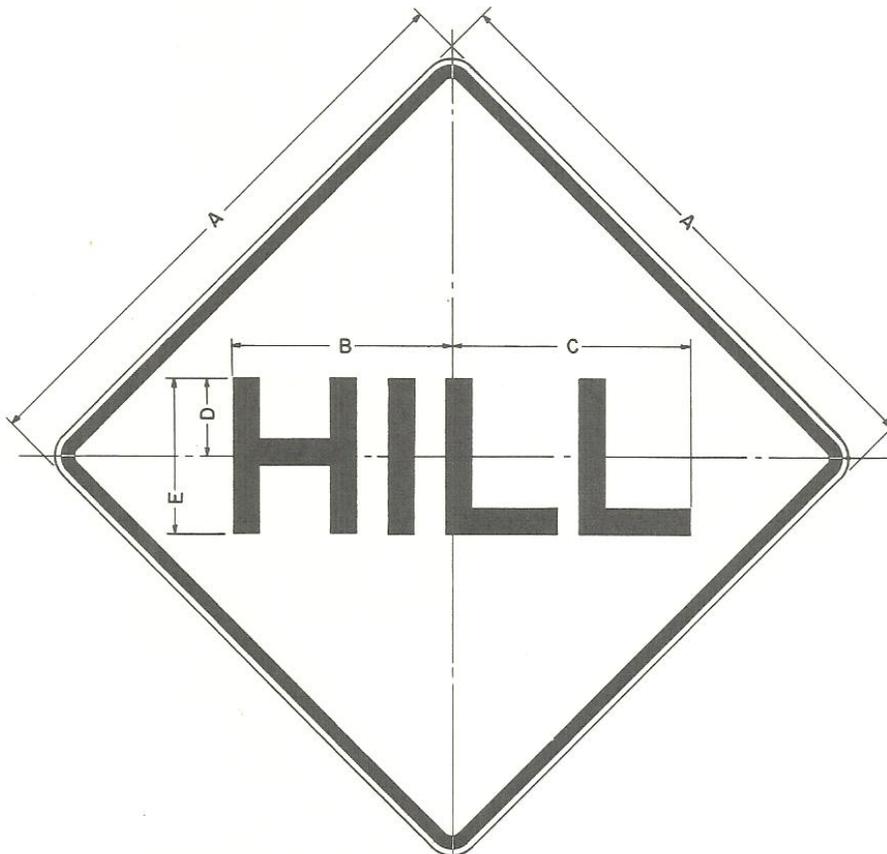
(1) **Justification.** This sign is authorized for use in advance of that part of a downgrade where the length, percent of grade, horizontal curvature, or combination thereof, is such as to require special precautions on the part of drivers of any or all vehicles.

This sign shall not be used if the Trucks Reduce Gear signs are deemed necessary.



30 x 30

48 x 48



COLOR : LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
 BACKGROUND                              YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	$12\frac{3}{8}$	$12\frac{7}{8}$	4	8
48x48	48	$18\frac{3}{16}$	$19\frac{13}{16}$	6	12

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD
	LINE			
30x30	E	$\frac{1}{2}$	$\frac{3}{4}$	B3-30 (D)
48x48	E	$\frac{3}{4}$	$1\frac{1}{4}$	B3-30 (D)

W7-1-1(2)



48 x 48

SECTION 705-7 (Cont.)

(b) (—) Mile Hill Sign (W 7-1-1)

(1) **Justification.** This sign is authorized to be mounted on and be a part of the Speed Limit-Trucks Reduce Gear Sign (R 2-2-1) as shown in Sec. 704-2 (c) hereof.

It is also authorized to be used alone to provide warning of a particularly long hill which may appear short because of one or more level places between downgrade sections.



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	I
48x48	48	12	4	6	2	$10\frac{1}{16}$	$9\frac{11}{16}$	$13\frac{3}{8}$	$13\frac{15}{16}$

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
	48x48	D	E			

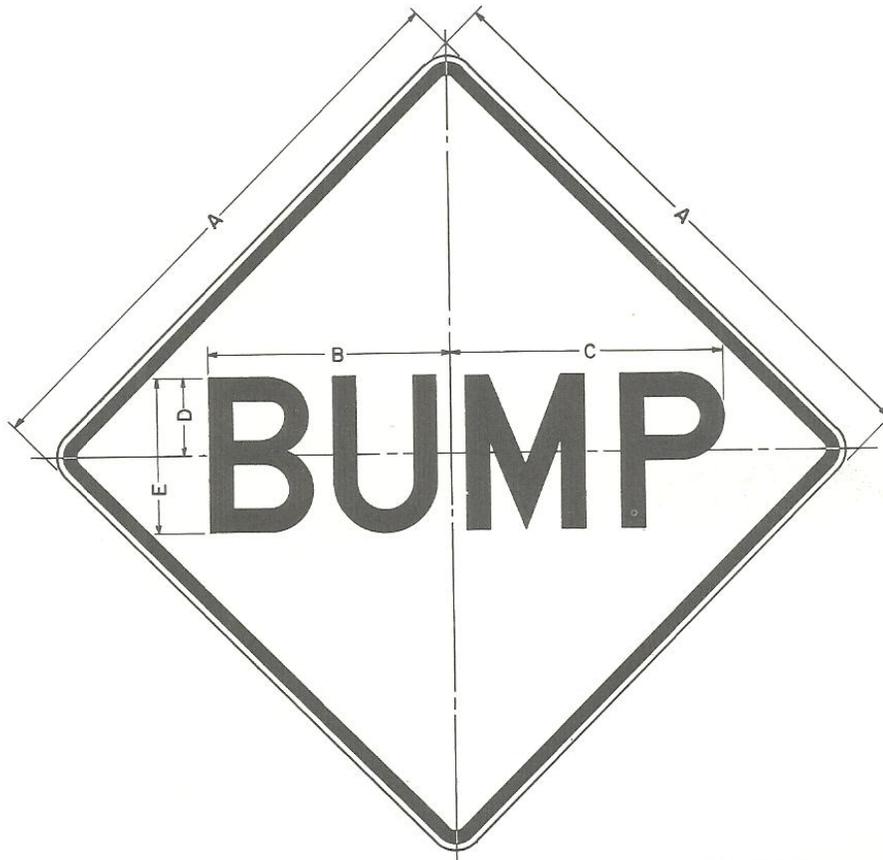
SECTION 705-8. ROADWAY SURFACE GROUP (W 8 SERIES)

(a) Bump Sign (W 8-1)

(1) **Justification.** This sign is authorized for use to give warning of a sharp rise in the profile of the road that is sufficiently abrupt to create a hazardous condition, to cause considerable discomfort to passengers, to cause a shifting of the cargo, or to deflect a vehicle from its true course. The sign shall be removed when the condition has been corrected.



30 x 30



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	12 <sup>5</sup> / <sub>8</sub>	14 <sup>3</sup> / <sub>16</sub>	4	8

SIGN SIZE	SERIES	MAR-	BOR-	BLANK STD
	LINE	GIN	DER	
30x30	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30 (D)

W8-2

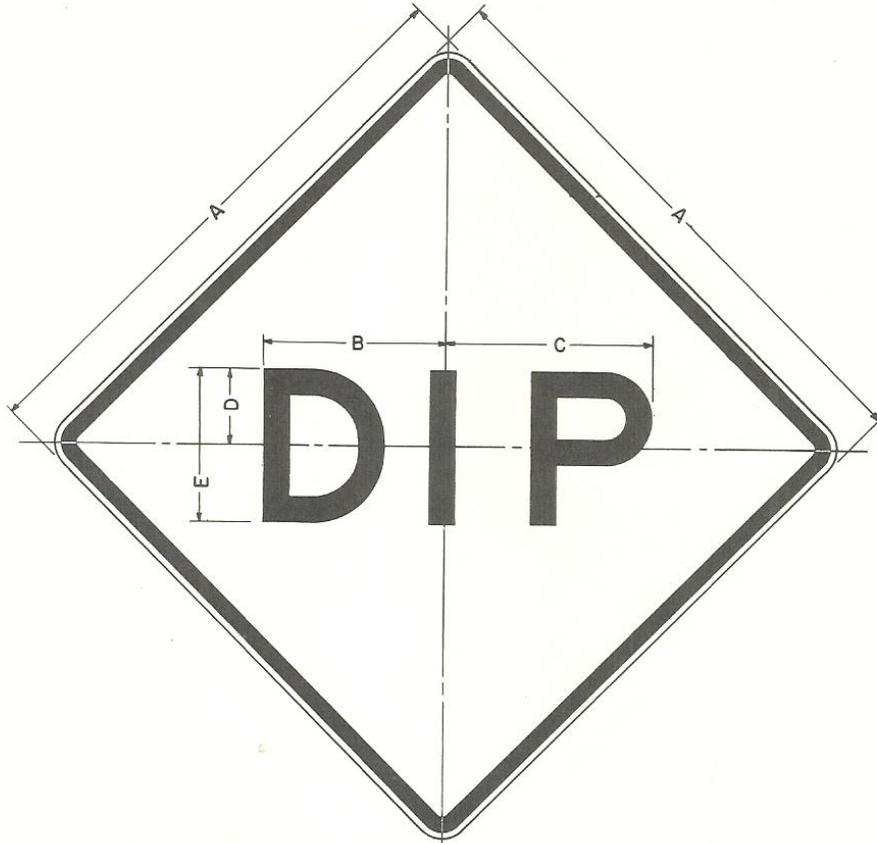


30 x 30

SECTION 705-8 (Cont.)

(b) Dip Sign (W 8-2)

(1) **Justification.** This sign is authorized for use to give warning of a depression in profile of the road that is sufficiently abrupt to create a hazardous condition, to cause considerable discomfort to passengers, to cause a shifting of the cargo, or to deflect a vehicle from its true course. The sign shall be removed when the condition has been corrected.



COLOR : LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	9 1/2	11	4	8

SIGN SIZE	SERIES	MAR-GIN	BOR-DER	BLANK STD
	LINE			
30x30	E	1/2	3/4	B3-30 (D)

SECTION 705-8 (Cont.)

(c) Pavement Ends Sign (W 8-3)

(1) Justification. This sign is authorized for use where a pavement surface changes from a hard surfaced pavement to a lower type surface or an earth road.



30 x 30



COLOR : LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	13 <sup>11</sup> / <sub>16</sub>	13 <sup>3</sup> / <sub>4</sub>	6 <sup>5</sup> / <sub>8</sub>	6 <sup>7</sup> / <sub>8</sub>	11 <sup>11</sup> / <sub>16</sub>	5	2 <sup>5</sup> / <sub>8</sub>

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
30x30	C	C	1/2	3/4	B3-30(D)

W8-4



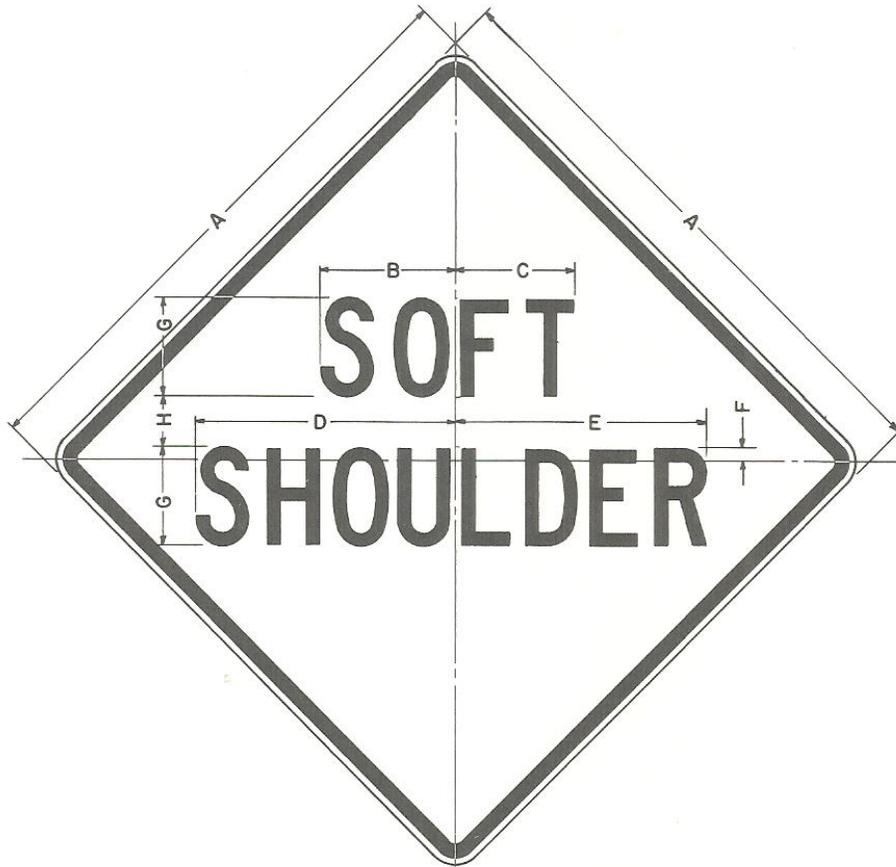
30 x 30

SECTION 705-8 (Cont.)

(d) Soft Shoulder Sign (W 8-4)

(1) Justification. This sign is authorized for use where a soft shoulder presents a hazard to vehicles that may get off the pavement. This sign may be warranted on new shoulders or on roadways where shoulders are soft due to weather conditions. The sign shall be removed when the hazard no longer exists.

One sign should be placed at or near the beginning of the soft shoulder condition, and other signs should be placed at intervals throughout the length of the road where the condition exists.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	7	6 $\frac{1}{8}$	13 $\frac{3}{8}$	12 $\frac{15}{16}$	$\frac{11}{16}$	5	2 $\frac{1}{2}$

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD
	1	2			
30x30	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)



SECTION 705-8 (Cont.)

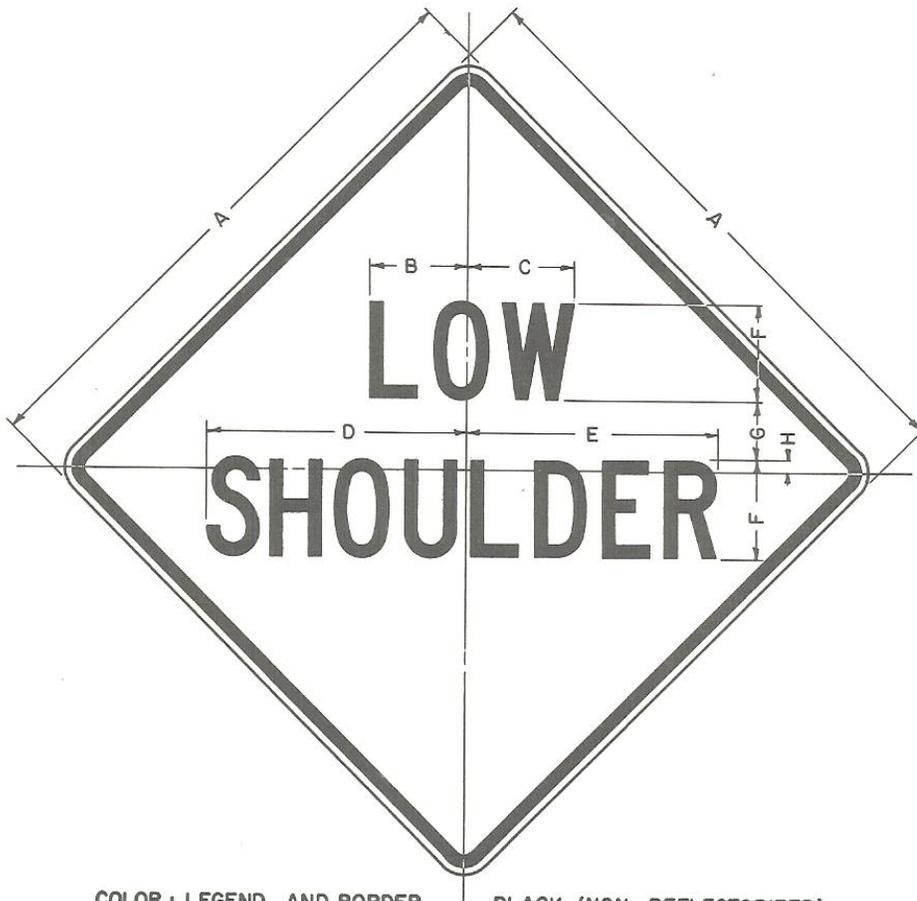


30 x 30

(e) Low Shoulder Sign (W 8-4-1)

(1) **Justification.** This sign is authorized for use during resurfacing operations to denote sections of shoulder which are depressed from the pavement surface. The sign should be removed when the condition no longer exists.

(2) **Placement.** One sign should be placed at or near the beginning of the low shoulder condition, and other signs should be placed at intervals throughout the length of the highway where the condition exists.



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	5	5 1/2	13 5/16	12 15/16	5	3	5/8

SIGN SIZE	SERIES		MAR-GIN	BOR-DER	BLANK STD
	LINES				
	1	2			
30 x 30	C	C	1/2	3/4	B3-30(D)

W 8-5



30 x 30

SECTION 705-8 (Cont.)

(f) Slippery When Wet Sign (W 8-5)

(1) **Justification.** This sign is authorized for use to warn traffic of an extraordinarily slippery condition when the pavement is wet. The use of this sign should be kept to a minimum and upon correction of the slippery condition the sign should be removed.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	$11\frac{13}{16}$	$11\frac{9}{16}$	$11\frac{3}{4}$	5	$1\frac{9}{16}$

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD
	LINES				
	1	2			
30x30	C	B	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

SECTION 705-8 (Cont.)

(g) Rough Road Sign (W 8-6)

(1) Justification. This sign is authorized for use wherever weather conditions have caused a breakup of the road surface. It shall be removed as soon as the surface has been restored.



30 x 30



COLOR: LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	10 <sup>7</sup> / <sub>16</sub>	8	8 <sup>7</sup> / <sub>16</sub>	5	4 <sup>1</sup> / <sub>8</sub>	<sup>7</sup> / <sub>8</sub>

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD
	1	2			
30x30	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

W9-1



30 x 30

SECTION 705-9. SCHOOL GROUP (W 9 SERIES)

(a) School Sign (W 9-1)

(1) **Justification.** This sign is authorized for use on a road or street adjacent to school buildings or grounds and from which children have direct access to the school. This sign gives notice of the fifteen (15) miles an hour speed limit established by Section 1002 (b) (2) of the Vehicle Code. No auxiliary speed limit sign or plate may be attached to this sign.

(2) **Location.** This sign shall be placed not less than 300 feet in advance of the access point to the school building. The roadway alignment and prevailing speed may warrant a greater distance.

When an intersection is located between these signs an additional sign may be placed on the intersecting road or street.

Portable school signs shall not be placed within the roadway at any time.



COLOR · LEGEND AND BORDER BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	14 <sup>3</sup> / <sub>16</sub>	14 <sup>9</sup> / <sub>16</sub>	7	3 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	SERIES	MAR-GIN	BOR-DER	BLANK STD.
	LINE			
30 x 30	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

SECTION 705-9 (Cont.)

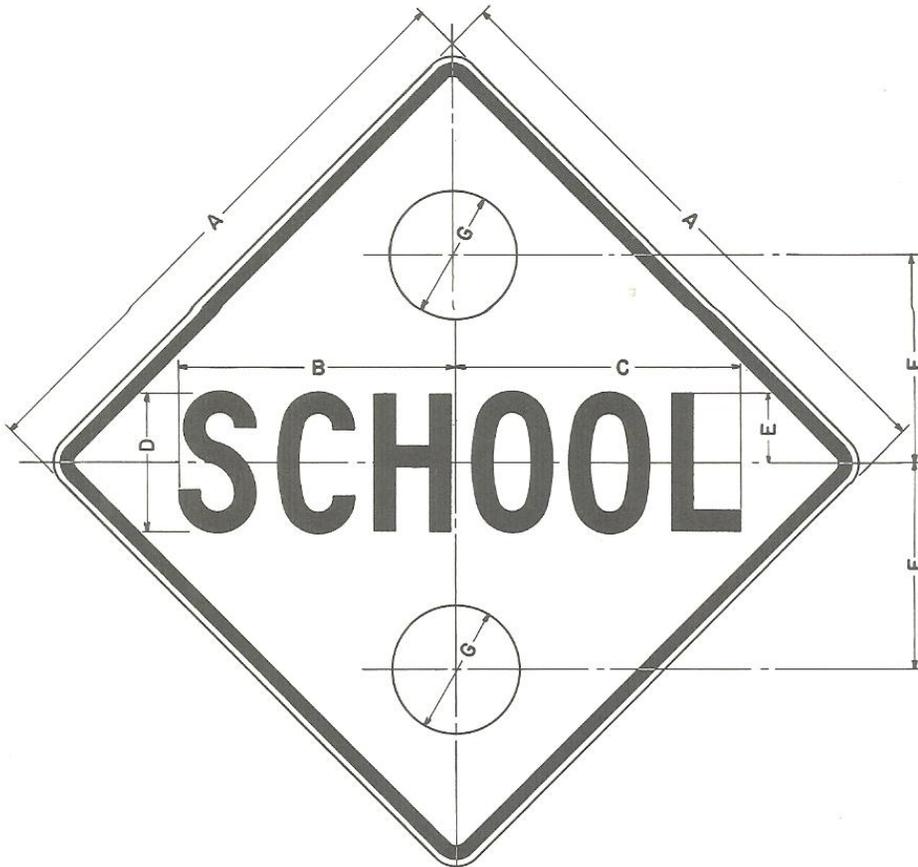
(b) School Sign with Flashers (W 9-1 (F))

(1) **Justification.** This sign is authorized for use in place of the School sign (W 9-1) where the flashing feature is considered necessary for emphasis.

(2) **Permit.** For the reason that this sign is a power-operated traffic device local authorities must secure a permit as provided for in Section 711-3 (b).



30 x 30



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	14 <sup>3</sup> / <sub>16</sub>	14 <sup>9</sup> / <sub>16</sub>	7	3 <sup>1</sup> / <sub>2</sub>	10 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
30x30	C	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

W 9 -1(S)



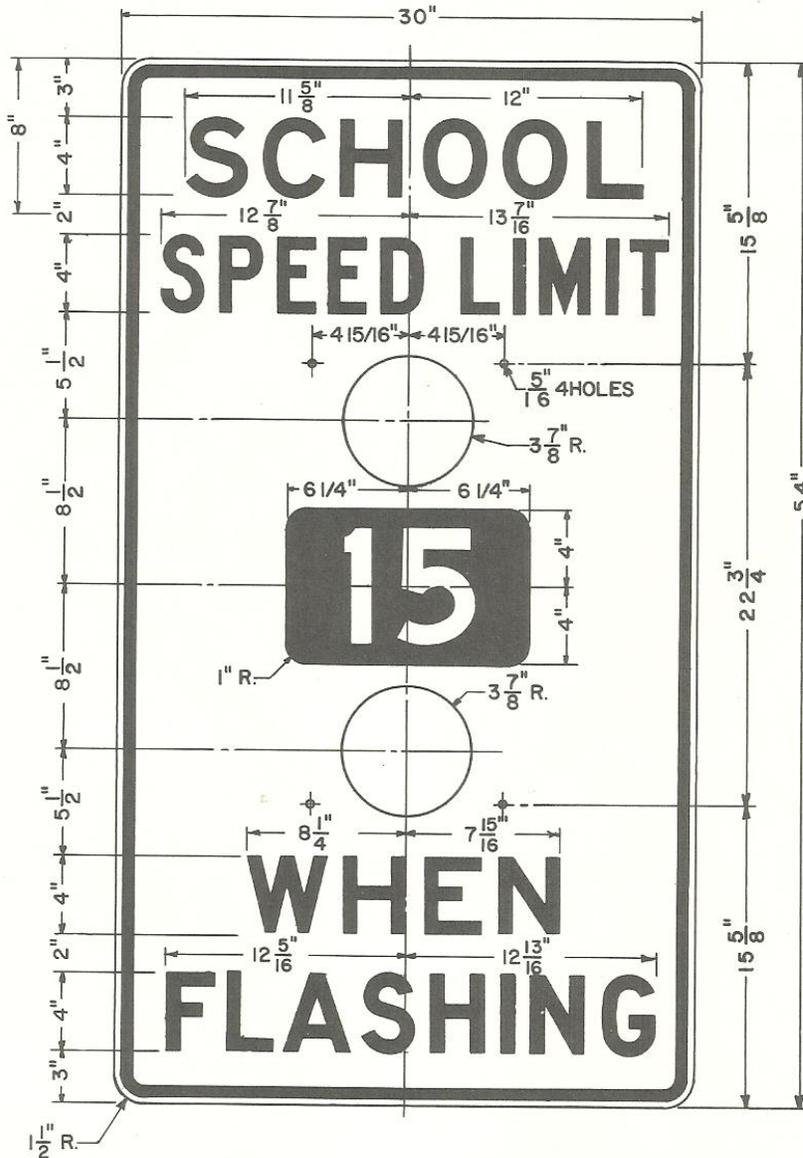
30 x 54

SECTION 705-9 (Cont.)

(c) School Sign with Flashers and Speed Limit (W 9-1 (S))

(1) Justification. This sign is authorized for use in place of the School sign (W 9-1) where the flashing feature and the indicated speed limit are considered necessary for emphasis and compliance.

(2) Permit. For the reason that this sign is a power-operated traffic device local authorities must secure a permit as provided for in Section 711-3 (b).



SIGN SIZE	SERIES LINES				MARGIN	BORDER
	1	2	3	4		
30x54	E	C	E	D	$\frac{3}{8}$	$\frac{5}{8}$

COLOR: LEGEND AND BORDER BACKGROUND TOP 8" BLACK (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED) YELLOW (NON-REFLECTORIZED)

SECTION 705-9 (Cont.)

(d) School Crossing Sign (W 9-2)

(1) **Justification.** This sign is authorized for use at locations where a substantial number of school children cross a highway going to and from school, but not within the area between School signs. This sign is also authorized for use where school buses cross a major highway under unusual hazardous conditions. The crossing should be marked with cross-walk lines.



30 x 30



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	10	10 1/2	12 1/2	5	3/8	2 1/2

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	LINES				
	1	2			
30x30	C	C	1/2	3/4	B3-30(D)

W 9-3



30 x 30

SECTION 705-9 (Cont.)

(e) Playground Sign (W 9-3)

(1) Justification. This sign is authorized for use to mark playgrounds which are located adjacent to highways.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30 x 30	30	8 <sup>1</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>	13	5	4

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
30x30	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)



SECTION 705-9 (Cont.)

(f) Watch Children Sign (W 9-4)

(1) Justification. This sign is authorized for use along roads where there are no sidewalks and where a number of children normally play or walk beside the highway.



30 x 30



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	$8\frac{11}{16}$	$8\frac{3}{8}$	$12\frac{3}{4}$	$13\frac{5}{16}$	5	3	$\frac{5}{8}$

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD.
	1	2			
30x30	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

W10-1



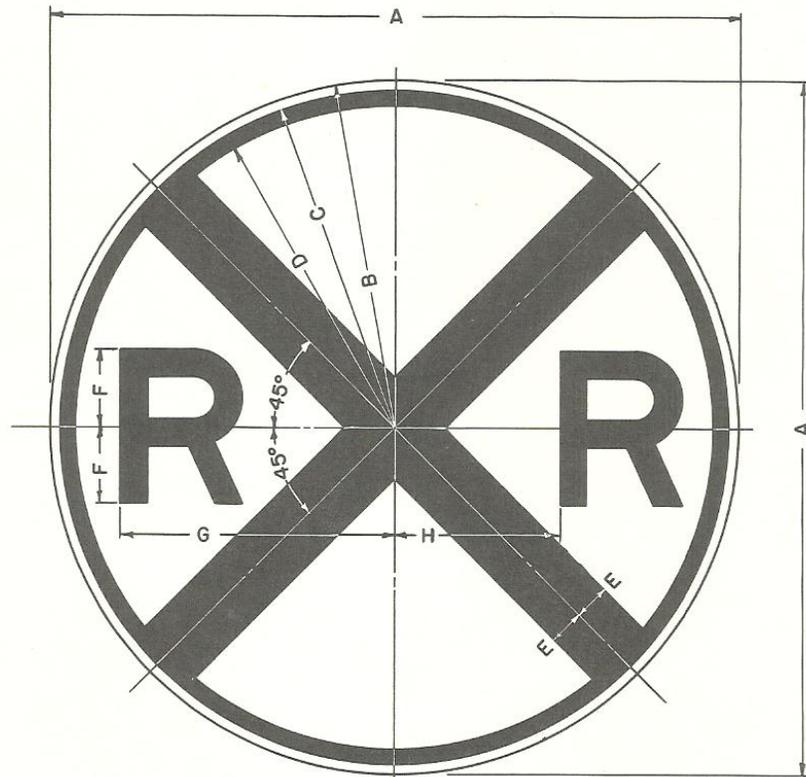
36 Dia.

SECTION 705-10. RAILROAD CROSSINGS GROUP (W 10 SERIES)

(a) Railroad Advance Warning Sign (W 10-1)

(1) Justification. This sign is authorized for use in advance of railroad crossings.

(2) Placement. In residence or business districts where low speeds are prevalent, the sign may be placed a minimum distance of 100 feet from the crossing. If there is a street intersection within 100 feet, an additional sign or signs should be placed as to warn traffic approaching the crossing from each intersected street.



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								SERIES LINE	BLANK STD
	A	B	C	D	E	F	G	H		
36	36	18	17 1/2	16 3/4	17 7/8	4	14 3/8	8 5/8	E	B 4-36

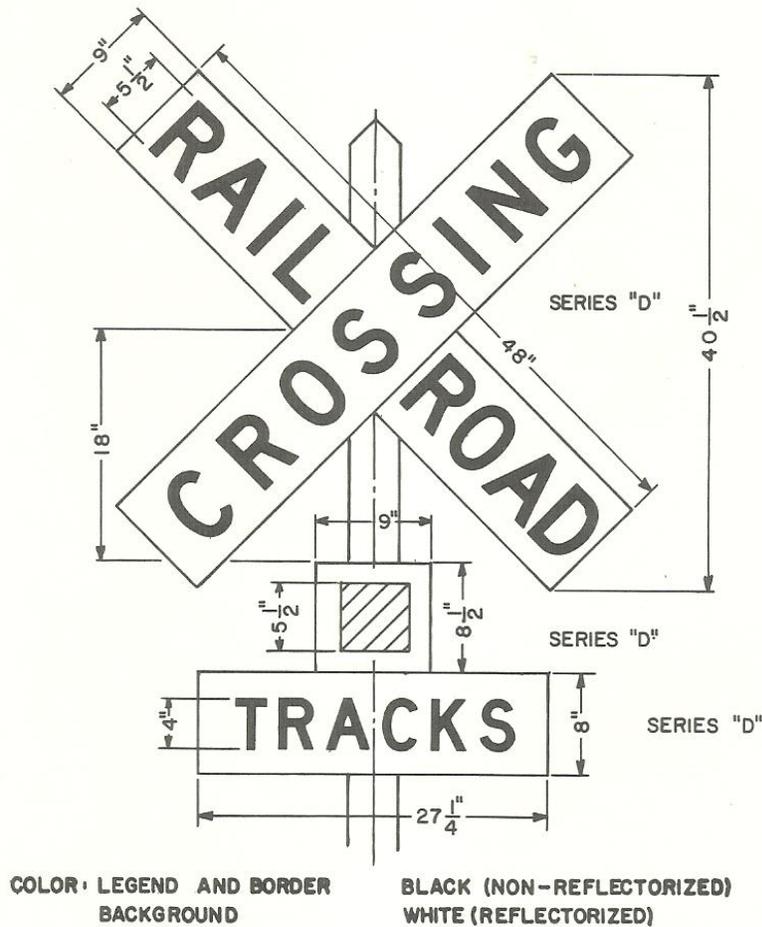
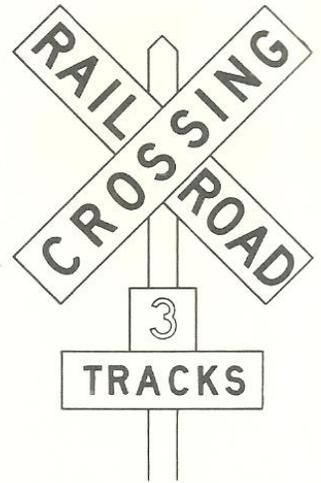
SECTION 705-10 (Cont.)

(b) Railroad Crossbuck Sign (W 10-2)

(1) **Justification.** The sign is authorized for use on the right-hand side of the roadway on each approach to the crossing, not more than 15 feet from the centerline of the nearest track. It shall not be less than 6 feet or more than 12 feet from the edge of the pavement, or less than 2 feet outside a paved shoulder or curb.

If there are two or more tracks, including sidings, the number of tracks shall be indicated on an auxiliary sign of inverted T shape mounted below the crossbuck.

It is furnished and installed by the railroad company and is usually located on the railroad right-of-way.



W11-1



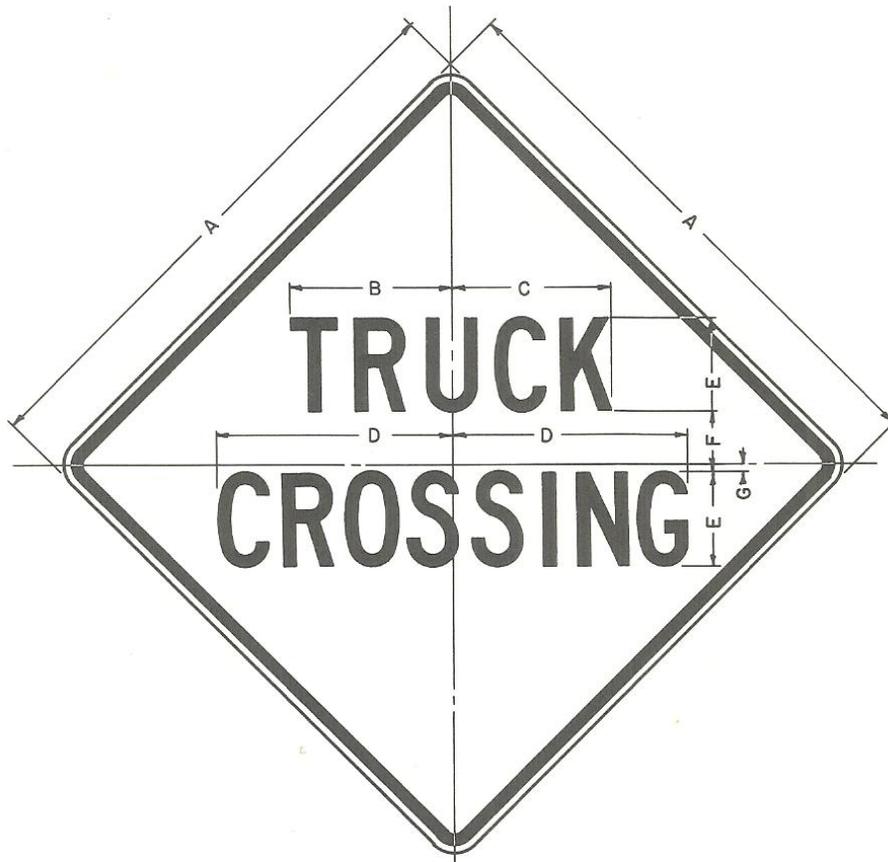
30 x 30

48 x 48

SECTION 705-11. ENTRANCES AND CROSSING GROUP  
(W 11 SERIES)

(a) Truck Crossing Sign (W 11-1)

(1) Justification. This sign is authorized for use to warn motorists of hazardous crossings caused by heavy truck traffic in connection with mining, construction, or similar operations. This sign should be removed when the operation is terminated.



COLOR · LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	$8\frac{1}{2}$	$8\frac{7}{16}$	$12\frac{1}{2}$	5	$3\frac{1}{4}$	$\frac{3}{8}$
48x48	48	$13\frac{5}{8}$	$13\frac{1}{2}$	20	8	$5\frac{3}{16}$	$\frac{5}{8}$

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD.
	1	2			
30x30	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)
48x48	C	C	$\frac{3}{4}$	$1\frac{1}{4}$	B3-48(D)

SECTION 705-11 (Cont.)



30 x 30

(b) Cross Walk Sign (W 11-2)

(1) Justification. This sign is authorized for use at locations other than those at regular street intersections where pedestrians cross a street or highway due to large pedestrian traffic generators such as a civic auditorium, sports arena, factory, etc. Crosswalk lines shall be painted on the pavement to indicate the crosswalk.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30 x 30	30	10	9 <sup>7</sup> / <sub>8</sub>	8 <sup>5</sup> / <sub>16</sub>	8 <sup>3</sup> / <sub>8</sub>	5	2 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
30 x 30	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

W11-4

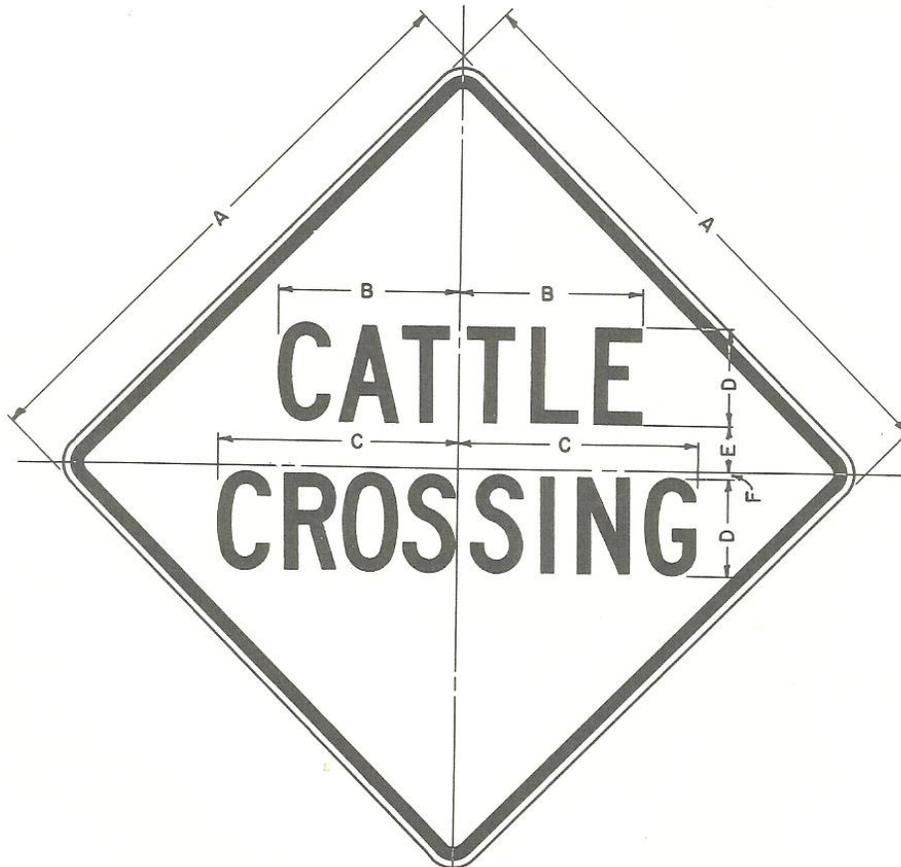


30 x 30

SECTION 705-11 (Cont.)

(c) Cattle Crossing Sign (W 11-4)

(1) Justification. This sign is authorized for use to warn motorists of locations where cattle regularly cross the roadway. Its use should be kept to a minimum indicating only those crossings which are definitely hazardous by reason of poor sight distance.



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	9 1/2	12 1/2	5	2 3/8	3/8

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	LINES				
	1	2			
30x30	C	C	1/2	3/4	B3-30(D)

SECTION 705-11 (Cont.)

(d) Deer Crossing Area Sign (W 11-5)

(1) Justification. This sign is authorized for use to denote those areas which the Game Commission representatives designate as stretches of roadway which are frequently crossed by deer.

This sign should be removed if the habit of the animals change so that they no longer cross in that area.



30 x 30



COLOR : LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30 x 30	30	6 <sup>5</sup> / <sub>8</sub>	13 <sup>1</sup> / <sub>4</sub>	7	2 <sup>1</sup> / <sub>2</sub>	5	3

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD
	1	2	3			
	30 x 30	C	C			



30 x 30

SECTION 705-11 (Cont.)

(e) Plant Entrance Sign (W 11-6)

(1) Justification. This sign is authorized for use to denote a factory which is adjacent to the highway, but only outside of built-up industrial areas.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	5	3	$8\frac{5}{16}$	$13\frac{13}{16}$	$\frac{1}{2}$

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
30x30	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)



SECTION 705-11 (Cont.)

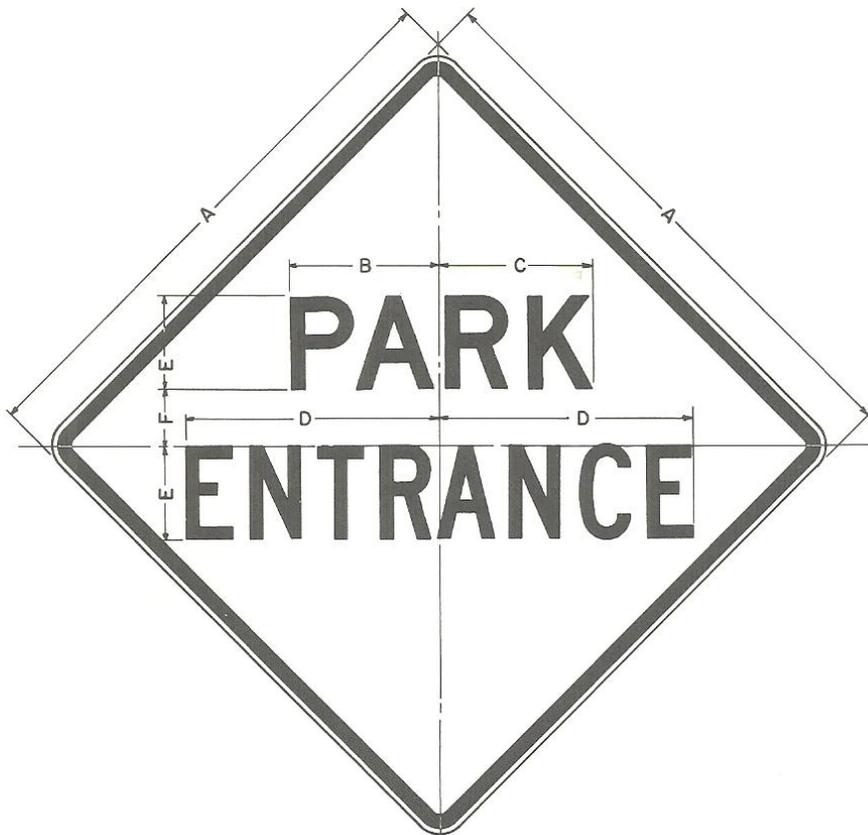
(f) Park Entrance Sign (W 11-7)

(1) **Justification.** This sign is authorized for use to denote a driveway to a park which is adjacent to the highway.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



30 x 30



COLOR : LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30 x 30	30	8 1/2	8 7/8	13 13/16	5	3

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD
	1	2			
30 x 30	D	C	1/2	3/4	B3-30(D)

W11-8



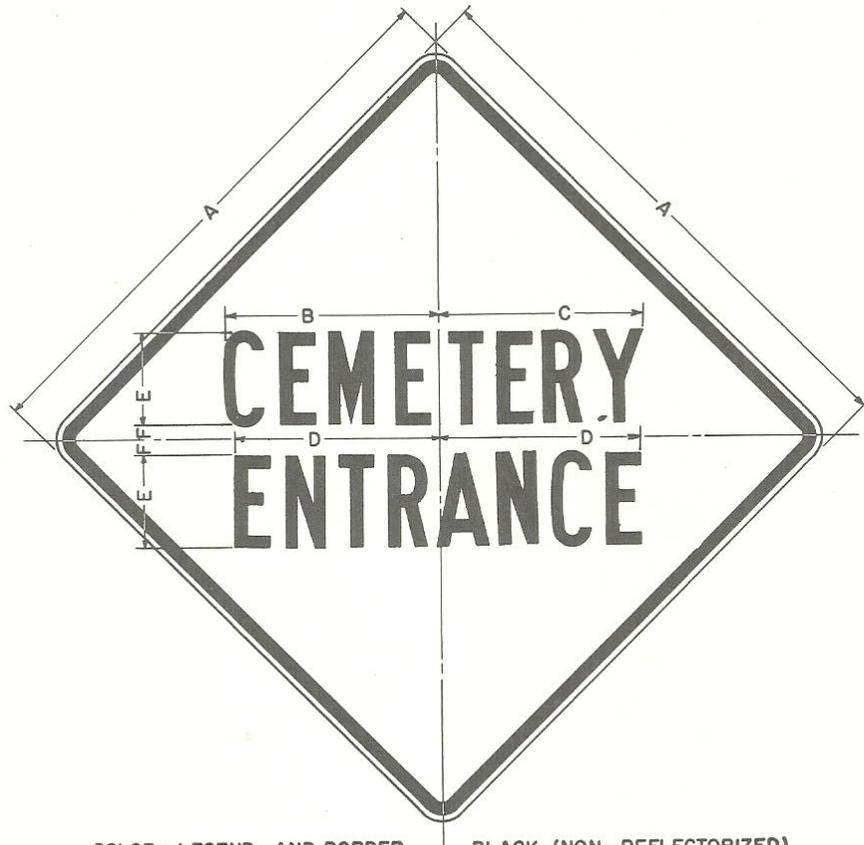
30 x 30

SECTION 705-11 (Cont.)

(g) Cemetery Entrance Sign (W 11-8)

(1) Justification. This sign is authorized for use to warn motorists of entrances to cemeteries which are located adjacent to the highway.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30 x 30	30	$12\frac{5}{16}$	$12\frac{13}{16}$	$11\frac{1}{8}$	5	$\frac{3}{4}$

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
30x30	B	B	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

W12-1

SECTION 705-12. OBSTRUCTIONS GROUP (W 12 SERIES)

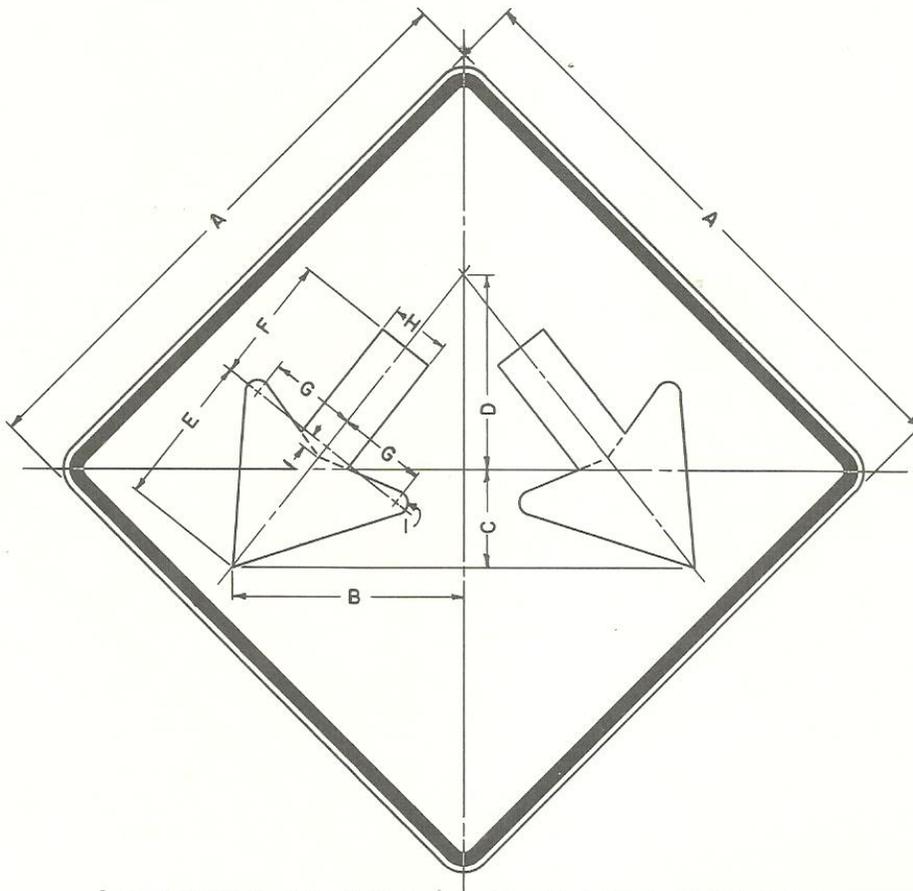
(a) Double Arrow Sign (W 12-1)

(1) **Justification.** This sign, showing two arrows pointing downward to right and left is authorized for use at loading and refuge islands, traffic islands, and other obstructions in the roadway, where traffic is permitted to pass on either side of the island or obstruction.

It should normally be mounted at a height of 7 feet to the bottom of the sign in order that it will be visible over preceding vehicles.



24 x 24



COLOR: SYMBOL AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	I
24 x 24	24	9 1/2	4	8	6 1/4	5 1/4	3 5/8	2 3/8	1/2

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
24 x 24	3/8	5/8	B3-24



SECTION 705-12 (Cont.)

(c) Clearance Sign (W 12-3)

(1) **Justification.** This sign is authorized for use on bridges, underpasses and other overhead structures where the vertical clearance is less than 14 feet 6 inches.

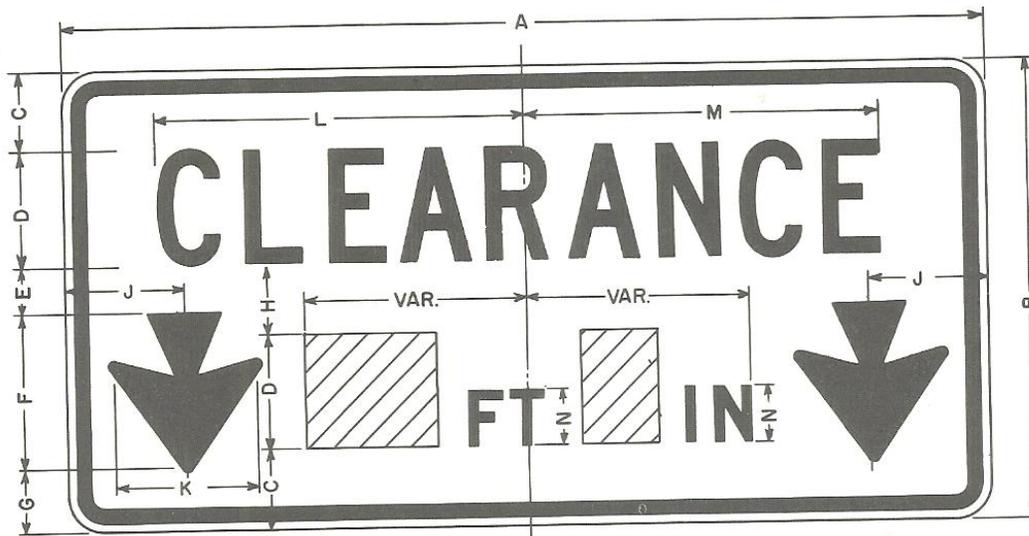
The clearance shown on the sign shall be to the nearest inch lesser than the clearance.

(2) **Placement.** Where used, this sign shall be mounted overhead, directly above the roadway.

This sign should be used in conjunction with the Low Clearance sign (W 12-2).



48 x 24  
96 x 48



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	
48x24	48	24	4 1/4	6	2 3/8	8 1/8	3 1/4	3 1/2	6 1/4	7 1/2	18 3/4	18 1/2	3	
96x48	96	48	8 1/2	12	4 3/4	16 1/4	6 1/2	7	12 1/2	15	37 1/2	37	6	

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
48x24	C	D	1/2	3/4	B5-4824
96x48	C	D	3/4	1 1/4	B5-9648



18 x 18  
24 x 24

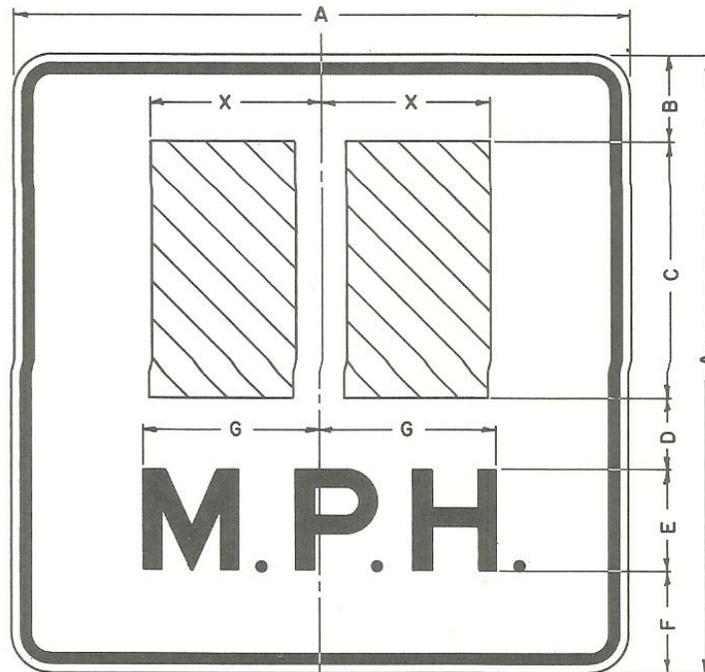
SECTION 705-13. SPEED (ADVISORY) GROUP (W 13 SERIES)

(a) Advisory Speed Plate (W 13-1)

(1) **Justification.** This sign is authorized for use in conjunction with any standard yellow warning sign to indicate the maximum safe speed around a curve. It shall not be used in conjunction with any sign other than a warning sign, nor shall it be used alone. When used, it shall be mounted below the standard warning sign:

The speed shown shall be a multiple of 5 miles per hour, to be determined by accepted traffic engineering procedures.

(2) **Size.** The 18 inch by 18 inch size should be used with a warning sign up to and including 36 inch signs. The 24 inch by 24 inch size should be used with 48 inch warning signs.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
18x18	18	2 1/4	8	2	3	2 3/4	5 3/16
24x24	24	3 1/4	10	2 3/4	4	4	6 7/8

SIGN SIZE	X						
	10	15	20	25	30	35	40
18x18	4 3/4	4 1/2	6 3/16	5 15/16	6 1/4	6 1/16	6 5/8
24x24	5 15/16	5 5/8	7 11/16	7 3/8	7 7/16	7 5/16	8 5/16

SIGN SIZE	SERIES		MAR-GIN	BOR-DER	BLANK STD.
	LINES				
	1	2			
18x18	D	E	3/8	3/8	B3-18
24x24	D	E	3/8	5/8	B3-24

SECTION 705-13 (Cont.)

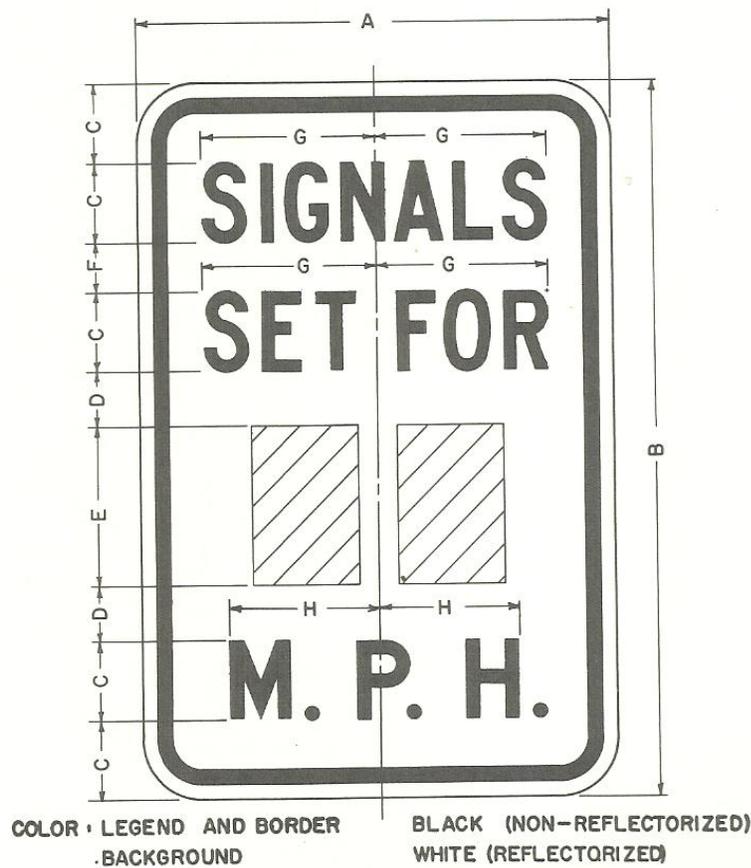
(b) Traffic Signal Speed Sign (W 13-2)

(1) **Justification.** This sign is authorized for use to indicate the beginning of a section of highway on which the traffic control signals are coordinated into a pretimed progressive system and timed for a specific speed at all hours during which they are operated on a stop and go basis. Where used, the signs should be mounted as near as possible to each signal face where timed speed changes, and at intervals of several blocks throughout any section where the times speed remains constant.

The legend should show the speed to the nearest mile.



12 x 18



SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
12x18	12	18	2	1 $\frac{3}{8}$	4	1 $\frac{1}{4}$	4 $\frac{3}{8}$	3 $\frac{9}{16}$

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	1	2	3	4			
12x18	C	C	D	D	$\frac{3}{8}$	$\frac{3}{8}$	B5-1812

W13-3(30)



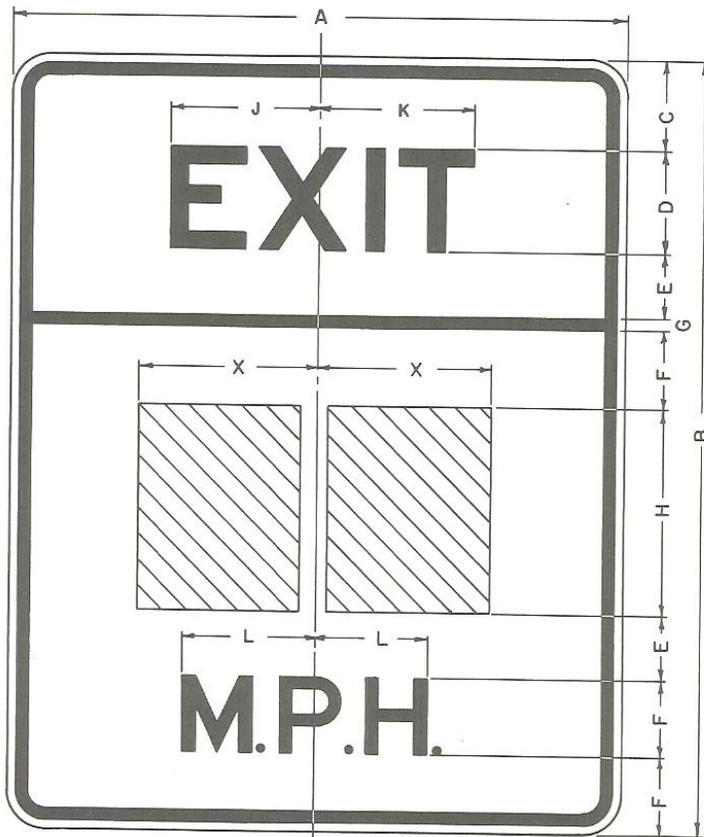
48 x 60

SECTION 705-13 (Cont.)

(c) Advisory Exit Speed Sign (W 13-3)

(1) **Justification.** This sign is authorized for use where it is necessary to indicate a lower speed on an exit ramp.

(2) **Placement.** When used it shall be placed on the right side of the ramp and just beyond the gore. If this location does not allow adequate viewing distance for any reason, it may be placed on the left or slightly in advance of the gore.



COLOR LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 BACKGROUND      YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
48x60	48	60	7	8	5	6	1	16	12 $\frac{3}{4}$	12 $\frac{1}{4}$	9 $\frac{1}{8}$

SIGN SIZE	X							
	15	20	25	30	35	40	45	50
48x60	10 $\frac{13}{16}$	14 $\frac{5}{8}$	14 $\frac{13}{16}$	14 $\frac{5}{8}$	14 $\frac{13}{16}$	15 $\frac{5}{8}$	15 $\frac{7}{16}$	14 $\frac{5}{8}$

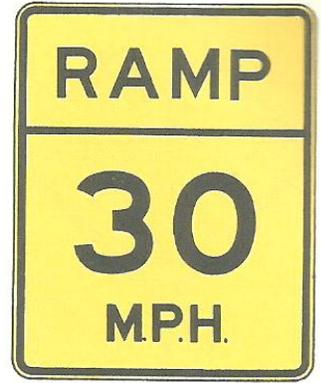
SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
48 x 60	E	E	E	$\frac{3}{4}$	$\frac{7}{8}$	B5-6048



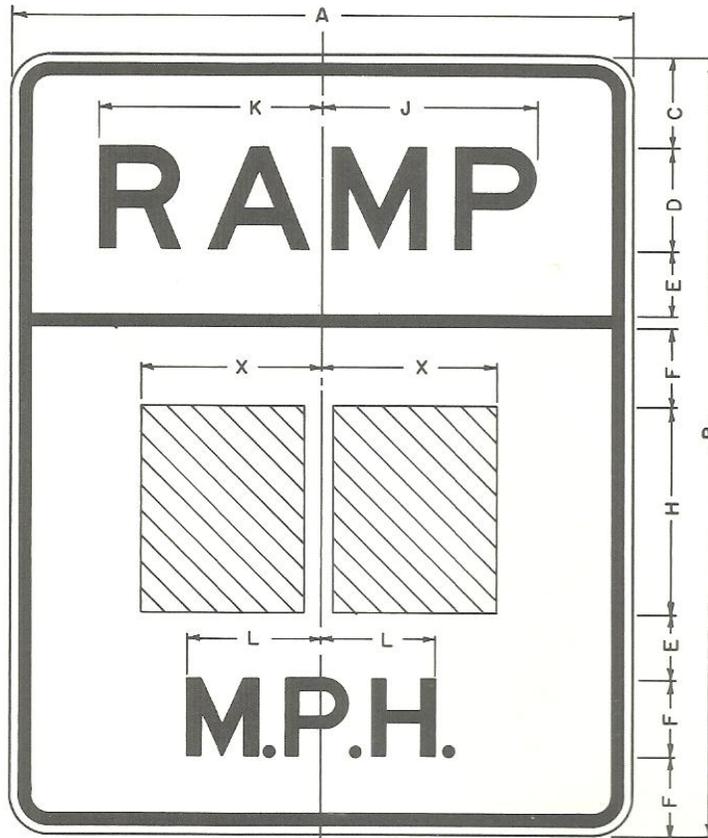
SECTION 705-13 (Cont.)

(d) Advisory Ramp Speed Sign (W 13-4)

- (1) Justification. This sign is authorized for use where it is necessary to indicate a lower speed on a ramp connecting to an expressway.
- (2) Placement. When used it shall be placed on the right side of the ramp just beyond the entrance point. If this location does not allow adequate viewing distance for any reasons, an additional sign may be placed on the left.



48 x 60



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	L
48x60	48	60	7	8	5	6	1	16	17 <sup>1</sup> / <sub>16</sub>	16 <sup>7</sup> / <sub>16</sub>	9 <sup>1</sup> / <sub>8</sub>

SIGN SIZE	X								
	15	20	25	30	35	40	45	50	
48x60	10 <sup>13</sup> / <sub>16</sub>	14 <sup>5</sup> / <sub>8</sub>	14 <sup>13</sup> / <sub>16</sub>	14 <sup>5</sup> / <sub>8</sub>	14 <sup>13</sup> / <sub>16</sub>	15 <sup>5</sup> / <sub>8</sub>	15 <sup>7</sup> / <sub>16</sub>	14 <sup>5</sup> / <sub>8</sub>	

SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
48x60	E	E	E	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>8</sub>	B5-6048

W14-1



30 x 30

SECTION 705-14. INSTITUTIONS GROUP (W 14 SERIES)

(a) County Home Sign (W 14-1)

(1) Justification. This sign is authorized for use at locations where the county home, or grounds are adjacent to the highway.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	13 $\frac{1}{8}$	12 $\frac{9}{16}$	8 $\frac{13}{16}$	5	2	$\frac{7}{8}$

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
30x30	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

SECTION 705-14 (Cont.)

(b) Hospital Sign (W 14-2)

(1) **Justification.** This sign is authorized for use to indicate an access point to a hospital.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



30 x 30



COLOR - LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30 x 30	30	16	15 $\frac{5}{16}$	5	2 $\frac{1}{2}$

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD
	LINE			
30 x 30	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

W14-3



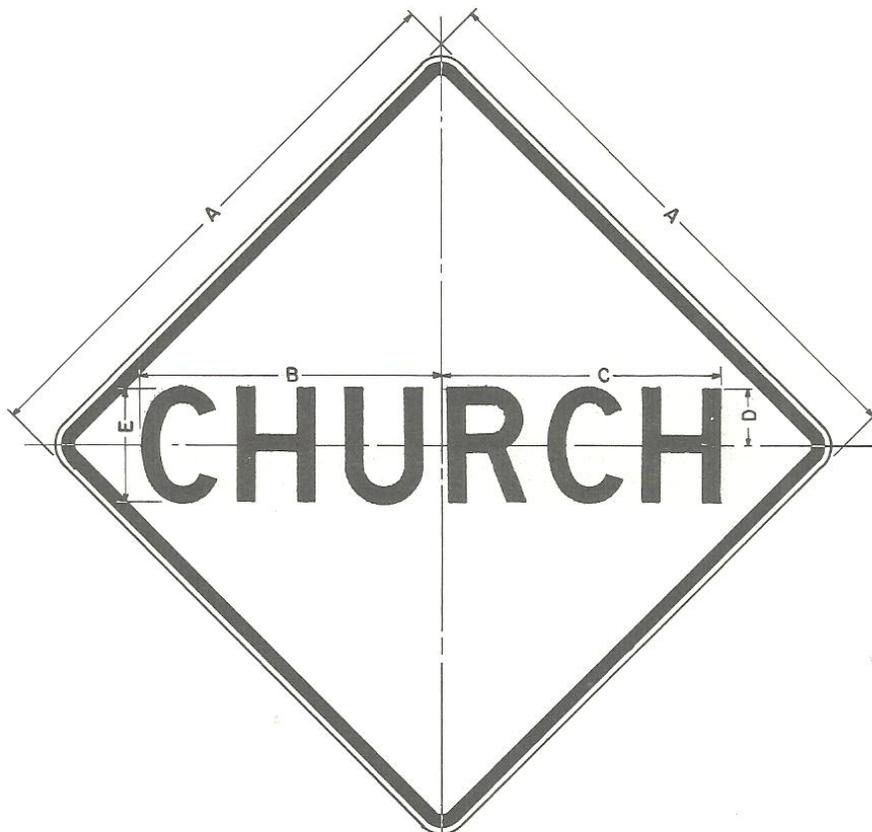
30 x 30

SECTION 705-14 (Cont.)

(c) Church Sign (W 14-3)

(1) **Justification.** This sign is authorized for use to indicate an access point to a church.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	15 $\frac{1}{2}$	14 $\frac{7}{8}$	3	6

SIGN SIZE	SERIES LINE	MAR- GIN	BOR- DER	BLANK STD.
30x30	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

SECTION 705-14 (Cont.)

(d) Fire House Sign (W 14-4)

(1) Justification. This sign is authorized for use to indicate the presence of a fire house which is adjacent to the highway.

Its use should be limited to locations where traffic conditions such as approach speeds, visibility and conflicts are such that special warning is desirable.



30 x 30



COLOR - LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	6	3	$\frac{1}{2}$	$6\frac{11}{16}$	$6\frac{15}{16}$	$10\frac{1}{2}$	$10\frac{7}{8}$

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
30x30	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

W15-1



30 x 30

SECTION 705-15. MISCELLANEOUS WARNING GROUP  
(W 15 SERIES)

(a) No Outlet Sign (W 15-1)

(1) Justification. This sign is authorized for use just beyond the last intersected street, facing traffic entering a street which has no connection with any other street beyond that point.



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	4 <sup>7</sup> / <sub>8</sub>	13 <sup>15</sup> / <sub>16</sub>	14 <sup>1</sup> / <sub>2</sub>	6	4	<sup>1</sup> / <sub>2</sub>

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	LINES				
	1	2			
30x30	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

SECTION 705-15 (Cont.)

(b) Falling Rock Sign (W 15-2)

(1) Justification. This sign is authorized for use to denote those areas where repeated occurrences of rock falling on to the roadway.



30 x 30  
48 x 48



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	11 1/2	12 1/2	8	8 1/2	5	2 1/2	3 3/8
48x48	48	18 3/8	20	12 13/16	13 5/8	8	4	3 3/8

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
30x30	D	D	1/2	3/4	B3-30
48x48	D	D	3/4	1 1/4	B3-48





SECTION 705-15 (Cont.)

(d) Fog Area Sign (W 15-4)

(1) **Justification.** This sign is authorized for use to warn motorists of the areas where small "pockets" of fog frequently present a hazard.

It may also be used to warn of areas where smog, steam or smoke frequently present a hazard.



30 x 30



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30 x 30	30	6 <sup>13</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>16</sub>	10 <sup>3</sup> / <sub>8</sub>	5	3	<sup>1</sup> / <sub>4</sub>

SIGN SIZE	SERIES LINES		MARGIN	BORDER	BLANK STD
	1	2			
30 x 30	E	E	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

W15-6



30 x 30

SECTION 705-15 (Cont.)

(e) Driveway Sign (W 15-6)

(1) Justification. This sign is authorized for use to denote the presence of a driveway or alley at which the sight distance is severely restricted.



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	5	13 $\frac{1}{16}$	13 $\frac{9}{16}$	2 $\frac{1}{2}$

SIGN SIZE	SERIES LINE	MARGIN	BORDER	BLANK STD
30 x 30	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

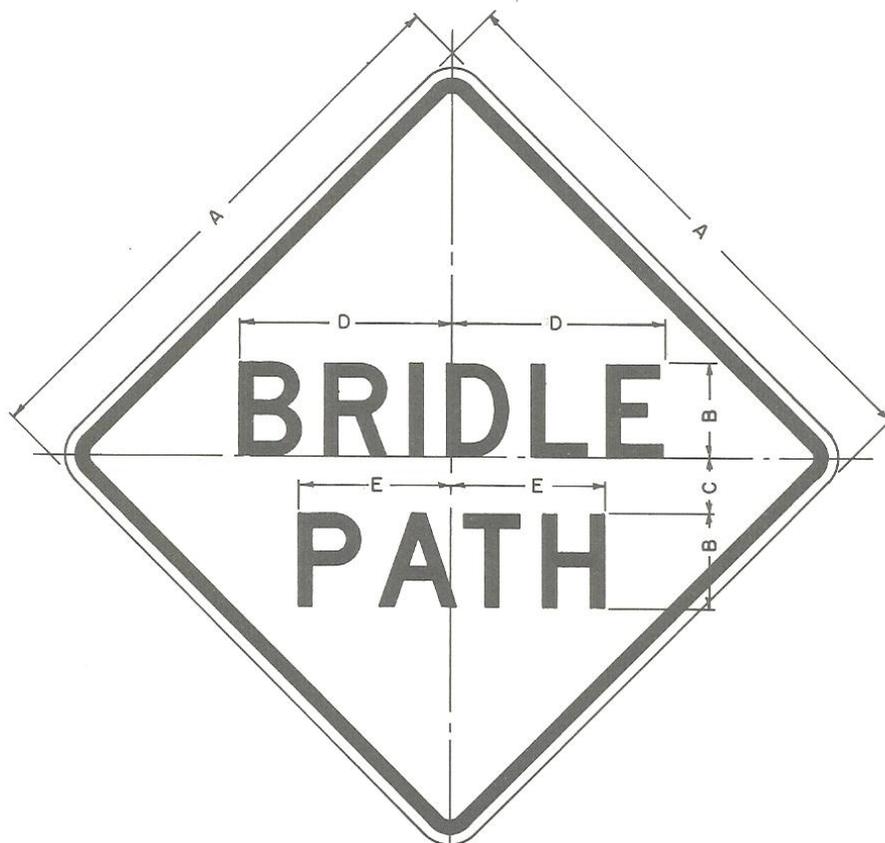
SECTION 705-15 (Cont.)

(f) Bridle Path Sign (W 15-7)

(1) Justification. This sign is authorized for use along roads where a number of horses normally walk beside or cross the roadway.



30 x 30



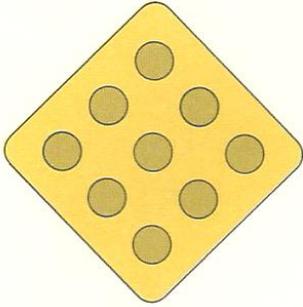
COLOR LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	5	4	$11\frac{5}{16}$	$8\frac{3}{16}$

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	LINES				
	1	2			
30x30	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(S)

W16-1



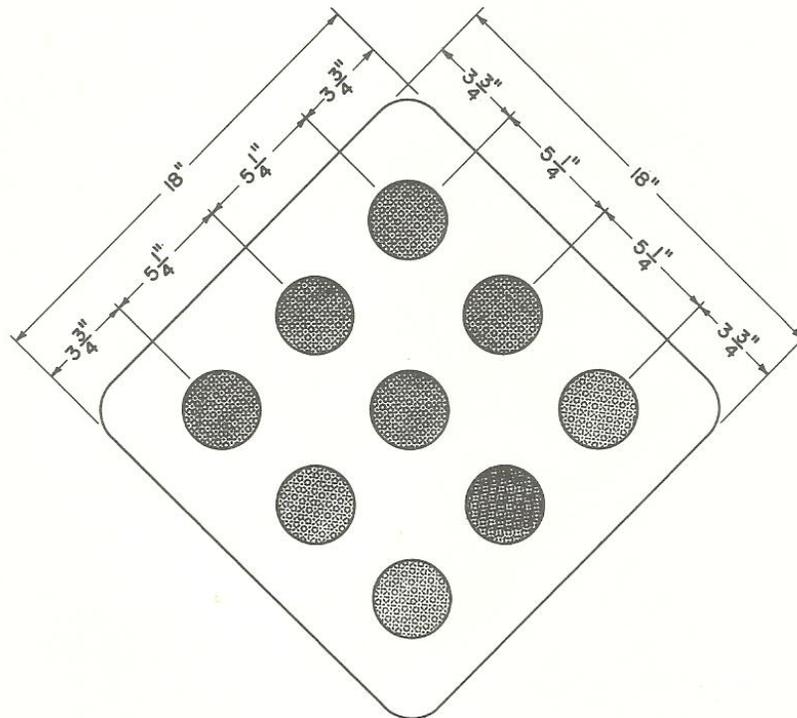
18 x 18

**SECTION 705-16. HAZARD AND CLEARANCE MARKER GROUP  
(W 16 SERIES)**

**(a) Hazard Marker (W 16-1)**

(1) **Justification.** This marker is authorized for use to mark obstructions located **within** the roadway such as bridge piers, and the approach end of islands. This marker may be posted with other signs where appropriate.

(2) **Design.** This marker is an 18 inch by 18 inch yellow blank on which 9 yellow delineators (W 16-3 (Y)) are attached.



COLOR : BACKGROUND

YELLOW (REFLECTORIZED)

SECTION 705-16 (Cont.)

**(b) Left Clearance Marker (W 16-2 (L))**

(1) **Justification.** This marker is authorized for use to delineate bridge ends, underpass abutments and other obstructions within three feet of the left edge of the pavement.

The right edge of the marker shall be in line with the right edge of the obstruction.

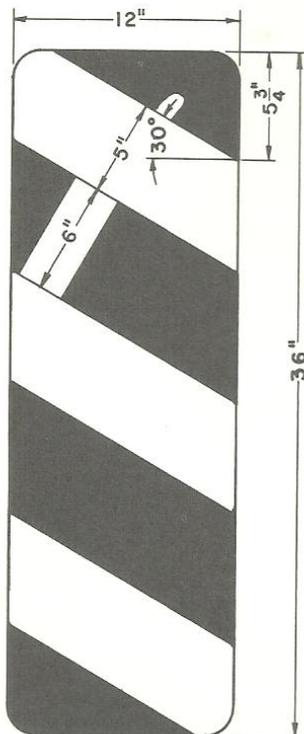
This marker may also be used when roadway clearance between bridge parapets is less than the width of the pavement on the approach to the bridge.

It is normally used in conjunction with Right Clearance marker (W 16-2(R)).

This marker should be mounted at a height of 3 to 5 feet.



12 x 36



COLOR:	STRIPES	BLACK (NON-REFLECTORIZED)
	BACKGROUND	WHITE (REFLECTORIZED)

# W16-2(R)



12 x 36

## SECTION 705-16 (Cont.)

### (c) Right Clearance Marker (W 16-2 (R))

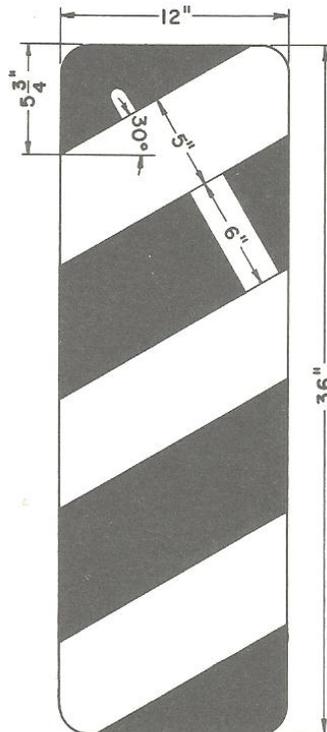
(1) **Justification.** This marker is authorized for use to delineate bridge ends, underpass abutments and all other obstructions within three feet of the right edge of the pavement.

The left edge of the marker shall be in line with the left edge of the obstruction.

This marker may also be used when roadway clearance between bridge parapets is less than the width of pavement on the approach to the bridge.

It is normally used in conjunction with Left Clearance marker (W 16-2(L)).

This marker should be mounted at a height of 3 to 5 feet.



COLOR:	STRIPES	BLACK (NON-REFLECTORIZED)
	BACKGROUND	WHITE (REFLECTORIZED)

**(d) Delineators (W 16-3 (—))**

(1) **Description.** Delineators shall consist of white (W 16-3(W)) or yellow (W 16-3 (Y)) reflector units approximately three inches in diameter.

(2) **Justification.** White reflector units are authorized for use on long continuous sections of highway or through short stretches where there are changes in horizontal alignment, particularly where the alignment might be confusing, or at pavement-width transitions.

Two yellow reflector units, mounted vertically, are authorized for use on interchange ramps and speed change lanes.

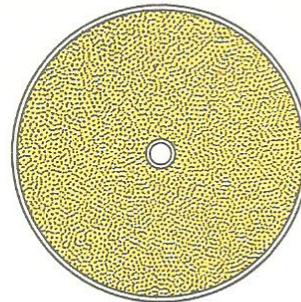
(3) **Placement.** Delineators shall be mounted on suitable supports at a height such that the top of the reflecting head is 4 feet above the near pavement or roadway edge. They shall in no case be more than 12 feet nor less than 2 feet outside the roadway or pavement edge. On roadways with shoulders, delineators, if used, shall be installed 2 feet beyond the outer shoulder edge. Along curbed sections of roadway, delineators, if used, shall be placed 2 feet from the curb face.

Normally, delineators should be spaced 200 to 400 feet apart. Where normal spacing is interrupted by driveways, crossroads, etc., and where, under the normal spacing, a delineator would fall within such an area, that delineator may be moved in either direction a distance not exceeding one quarter of the normal spacing. If such delineator still falls within that area, it should be eliminated.

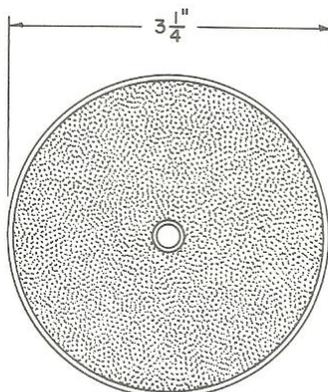
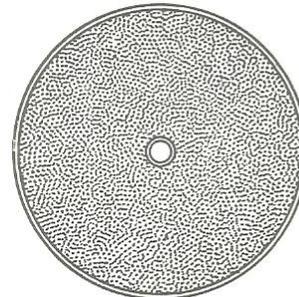
On the approaches to and throughout horizontal curves, the spacing should be such as to make several delineators always visible along the curve, ahead of the driver.

Where delineators are used on expressway-type facilities, delineator spacing shall be 200 feet along the through roadways. The yellow delineators shall be spaced at 100 feet at acceleration and deceleration lanes and along relatively straight portions of the interchange ramps.

W16-3(Y)



W16-3(W)



**SECTION 705-17. CONSTRUCTION AND MAINTENANCE WARNING GROUP  
(W 20, W 21 SERIES)**

This section sets forth basic principles and prescribes standards for signs required for road construction and maintenance operations. These standards are aimed at the protection of the public and workmen, the minimizing both of inconvenience to the public and of economic losses, and maintaining of public good will, in accordance with Section 1114 of the Vehicle Code.

Although these signs are basically applicable to both rural and urban situations, the specific standards deal primarily with the problems normally found on rural highways. They are, however, equally suitable to high speed controlled-access urban facilities, and with some modifications to other urban facilities and to secondary highways.

**Responsibility.** The standards for public protection established herein are for application by (1) Pennsylvania Department of Highways, county and municipal forces performing construction or maintenance operations on highways and streets, (2) contractors employed in road construction or maintenance under contract to any governmental authority, and (3) all others, including employees of public utility companies, performing any work on highways or so closely adjacent as to create hazards for the public or for themselves.

**General requirements.** Traffic control devices shall be set up prior to the start of construction or maintenance operations, and shall be properly maintained during the time such special conditions exist. They shall remain in place only as long as they are needed and shall be immediately removed thereafter. Where operations are performed in stages, there shall be in place only those devices that apply to the conditions present during the stage in progress. Signs such as MEN WORKING or FLAGMAN AHEAD shall be covered or set aside out of the view of traffic at times when they do not apply.

**Flags.** Flags, when used for warning of a hazardous condition, shall be yellow-orange in color. Red flags shall be used only when a vehicle is intended to be stopped, as at a reversible one-way traffic lane.

**Maintenance.** Signs shall be kept in proper position, clean, and legible at all times. Damaged, defaced, or dirty signs shall be cleaned, repaired, or replaced.

Barricades and sign supports shall be neatly constructed and shall not appear makeshift or hastily thrown together. They shall be repaired and cleaned or repainted as needed to keep up their appearance.

Oil-burning torches and lanterns shall not be placed so close to signs or barricades as to scorch them or deposit soot on them. Special care shall be taken to see that weeds, shrubbery, construction materials or equipment, are not allowed to obscure any sign, light, or barricade.

**Design of signs.** The dimensions of signs shown herein are for standard sizes which can be increased wherever necessary for adequate control and safety. All signs that are to convey their messages during hours of darkness shall be reflectorized. The use of yellow-orange warning flags, cones, and flashing lights are authorized when used in conjunction with signs.

**Position of signs.** Signs must always be placed in positions where they will convey their messages most effectively without restricting lateral clearance or sight distance. Placement must, therefore, be accommodated to highway design and alignment. Signs must be so placed that the driver will have sufficient time to absorb the message before having to act.

As a general rule signs shall be located on the right-hand side of the roadway, with the near edge of the sign from 6 to 12 feet from the edge of the traveled way or at least 2 feet outside an unmountable curb. Where construction or maintenance operations are underway, however, it is often necessary to place signs on barricades within the roadway, or a supplementary sign may be placed on the left of the roadway. Roadside signs should be mounted so that the bottom of the sign is approximately 5 feet above the pavement. Where construction equipment or materials, or other obstructions, may be present this height should be increased to 7 feet. Signs in the roadway, may be at lower heights as dictated by circumstances.

Where normal open highway speeds prevail on the approach to the work site, advance warning signs should be placed at least 750 feet in advance of the condition to which they are calling attention.



## SECTION 705-17 (Cont.)

Where a series of advance warning signs are used, the warning sign nearest the work site should be placed 500 feet from the point of restriction with additional signs at 500-foot intervals. Where prevailing speeds are low in the approach to the restriction, signs may be placed at 300-foot spacing, and at even closer spacings in urban areas. On high-speed express-type facilities the advance warning distance should be increased to one-half mile or more.

**Erection of signs.** Signs are usually mounted on a single post, although those wider than 48 inches or larger than 10 square feet in area should generally be mounted on two posts. For maximum mobility they may be mounted on movable wooden or steel frames, or on certain types of maintenance operations, a large sign may sometimes be effectively mounted on a vehicle stationed in advance of the work or moving along with it.

**Barricades.** The standard barricade shall be of either of two types, Class I or Class II, as here described. A Class I barricade shall consist of three horizontal rails of nominal 8 or 10 inch width spaced vertically at approximately 20 inches, center to center, with the upper edge of the top rail at a height of approximately 5 feet above the roadway level. Barricades may be of variable length as required, and long barricades may be assembled from units of any convenient size. The Class I barricade is the type normally required for major operations, where the barricade must remain in place for extended periods.

A Class II barricade shall consist of a single horizontal rail of nominal 8 or 10 inch width, and length required, with its top edge 36 to 42 inches above the roadway. It may be made of metal. This type is intended for use where the hazard is relatively small as, for example, on city streets, or for the more or less continuous delimiting of a restricted roadway, or for temporary day time use.

Where paint striping is employed, each barricade rail shall be marked with alternate black and white (or yellow) stripes of 4 to 6 inch width at an angle of 45 degrees with the vertical, slanting downward toward the side on which traffic is to pass. The direction of slope of the stripes cannot always follow the rule set forth above, as many barricades must not be passed on either side. Where a barricade extends entirely across a roadway, it is suggested that the stripes slope downward in the direction toward which traffic must turn in detouring. Where both right and left turns are provided for, the stripes should slope downward in both directions from the center.

All barricades used at night shall be effectively reflectorized. For increased emphasis at night flashers may be mounted on barricades. Yellow-orange warning flags may similarly be used during daylight hours.

**Cones and drums.** Where traffic volumes, speeds, and visibility are such as not to require the more substantial Class I or Class II barricades, effective use can be made of cones or drums. Cones may vary from 18 inches to 30 inches in height and shall be yellow or yellow-orange in color and may have black bases and red peaks. Yellow or yellow-orange shall be the predominate color. They shall be made of rubber or other material to withstand impact without damage to themselves or to striking vehicles. Drums are normally metal, of 55 gallon capacity, set on end. To be consistent with the standard for obstruction markings, they should be conspicuously painted with at least two horizontal, circumferential white or yellow stripes, 4 to 6 inches wide, alternate with black. The white or yellow areas shall be reflectorized on drums used at night.

**Taper rates for lane closure.** Cones, drums or barricades shall be used to funnel traffic into the appropriate lane. Normally, barricades should be spaced at approximately 60 foot intervals; the smaller cones or drums should be more closely spaced.

Under relatively normal conditions of speeds and volumes, and where adequate warning of a lane obstruction has been provided, a taper rate of 1:20 should be sufficient to permit traffic to shift safely from one lane to another. Where speeds or volumes are high the taper rate should be 1:40; expressways may require even longer tapers. Where traffic is stopped or considerably slowed in advance of the transition, as by flagmen, and where the lane change does not involve a merging of traffic streams, the taper may be very short, just long enough for traffic to turn comfortably into the appropriate lane.

W20-1(A)



48 x 48

W20-1 (B)



48 x 48

W20-1(C)



48 x 48

W20-1(D)

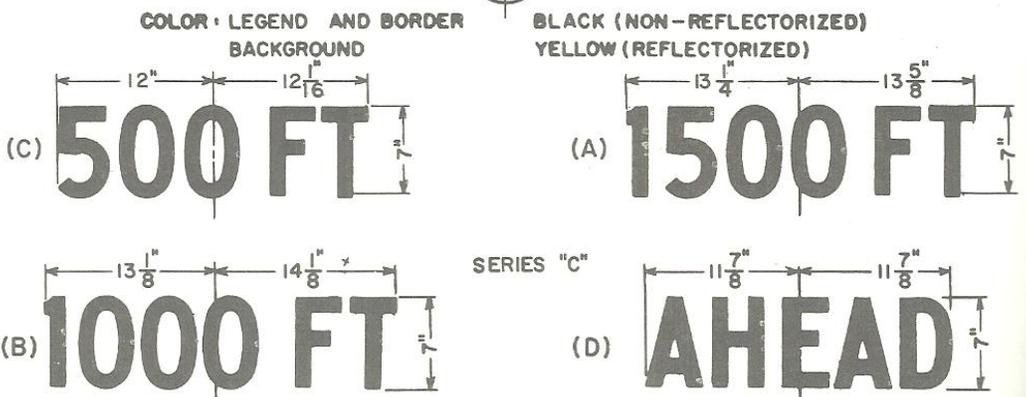


48 x 48

SECTION 705-17 (Cont.)

(a) Advance Road Construction Signs (W 20-1 (—))

(1) Justification. These signs are authorized for use in advance of road construction projects as a general warning of possible obstructions or restrictions due to such work. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.



SECTION 705-17 (Cont.)

(b) Advance Detour Signs (W 20-2 (—))

(1) Justification. These signs are authorized for use in advance of a point at which traffic is diverted over a temporary roadway or route. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.

W20-2(A)



48 x 48

W20-2(B)



48 x 48

W20-2(C)

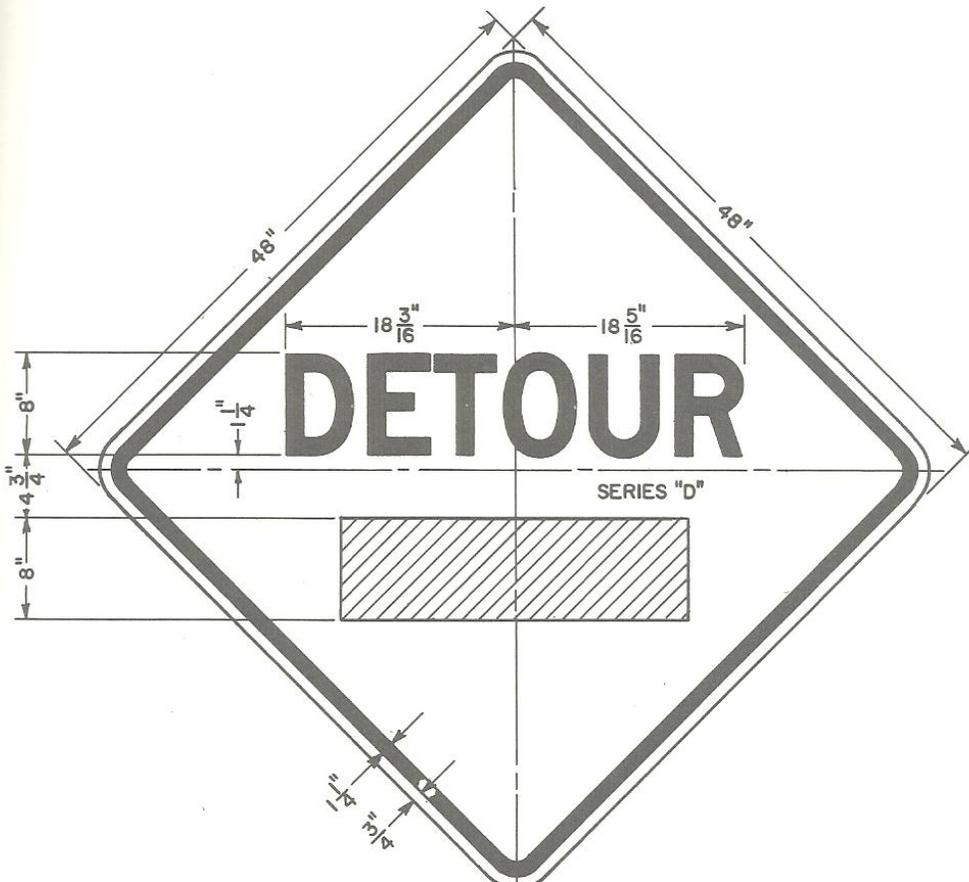


48 x 48

W20-2(D)

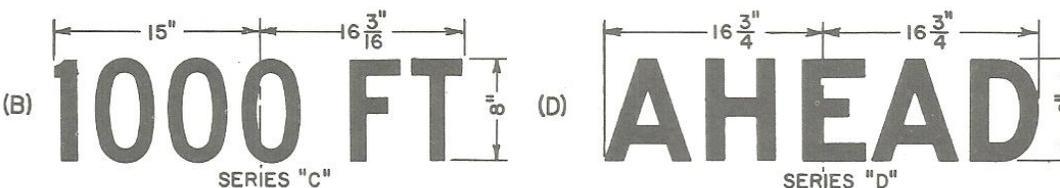
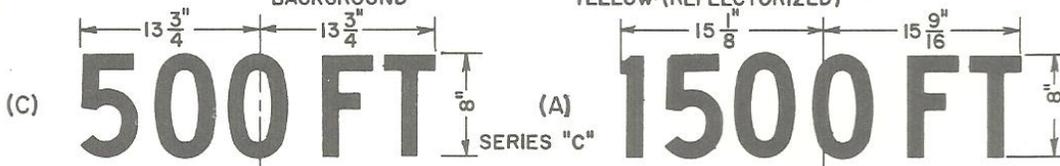


48 x 48



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)



W20-3(A)



48 x 48

W20-3(B)



48 x 48

W20-3(C)



48 x 48

W20-3(D)

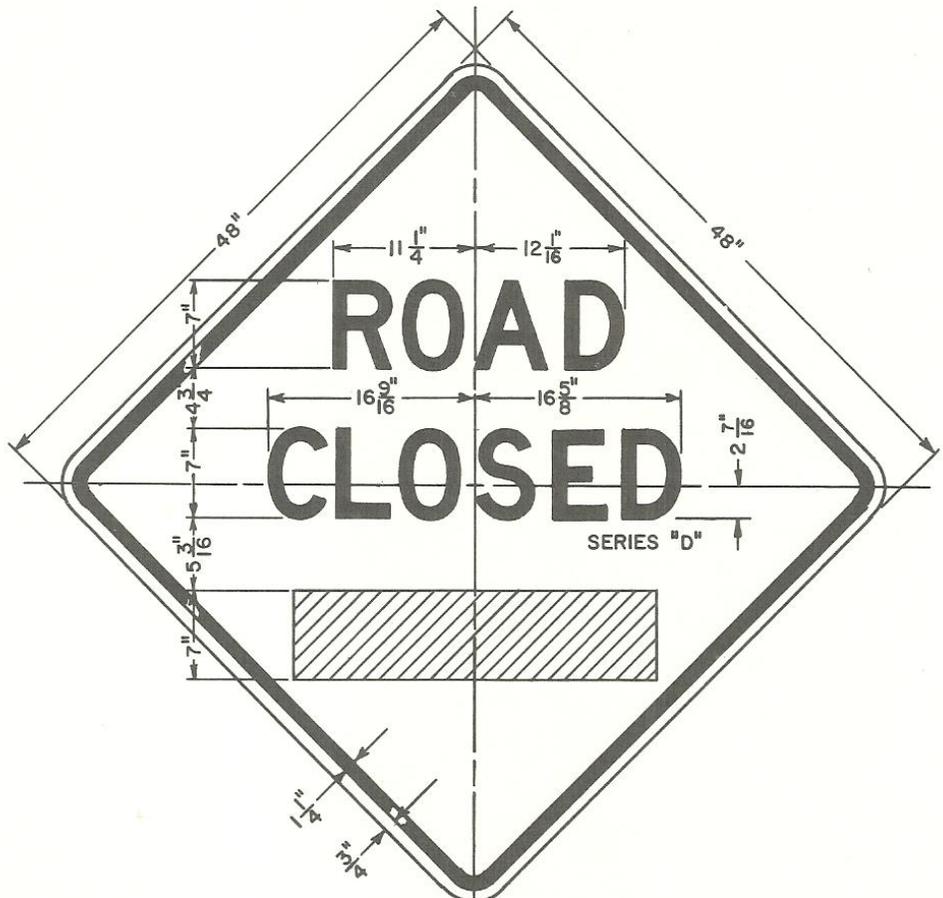


48 x 48

SECTION 705-17 (Cont.)

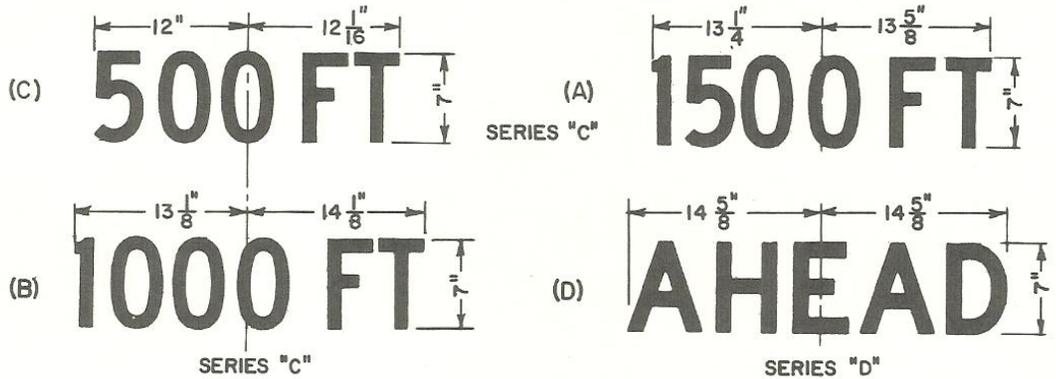
(c) Advance Road Closed Signs (W 20-3 (—))

(1) Justification. These signs are authorized for use in advance of a point at which a roadway is closed to all traffic, or to all but local traffic. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)



SECTION 705-17 (Cont.)

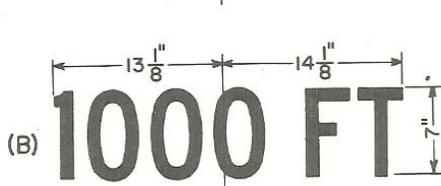
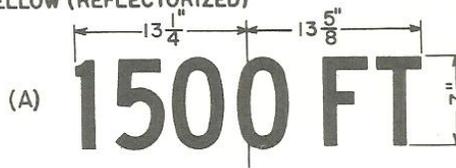
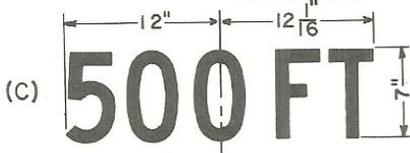
(d) Advance One Lane Road Signs (W 20-4 (—))

(1) **Justification.** These signs are authorized for use only in advance of a point where traffic in both directions must use a single lane. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.

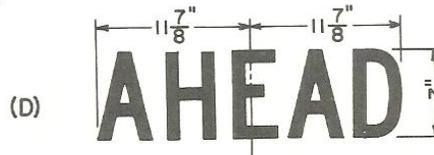


COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)



SERIES "C"



W 20-4(A)



48 x 48

W 20-4(B)



48 x 48

W 20-4(C)



48 x 48

W 20-4(D)



48 x 48

W20-5(RA)



48 x 48

W20-5(RB)



48 x 48

W20-5(RC)



48 x 48

W20-5(RD)

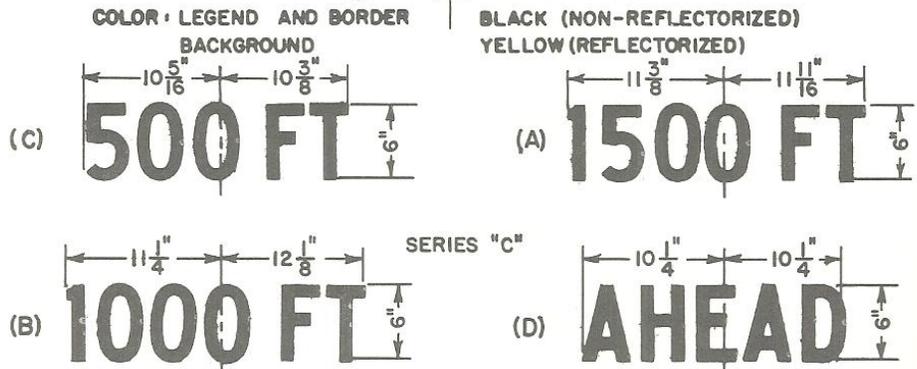
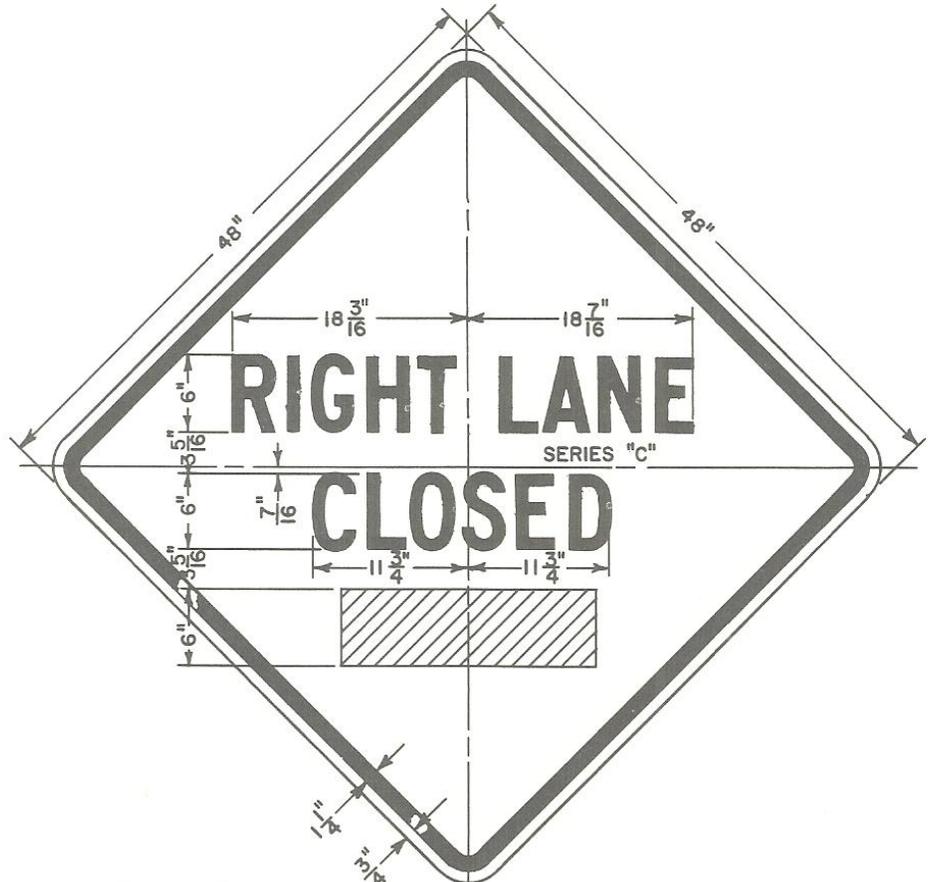


48 x 48

SECTION 705-17 (Cont.)

(e) Advance Right Lane Closed Signs (W 20-5 (R\_\_))

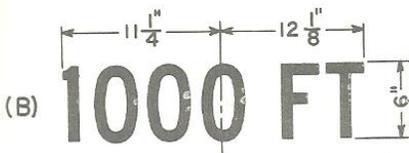
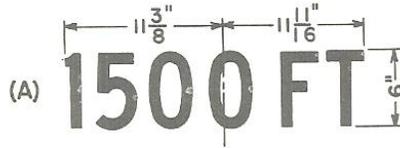
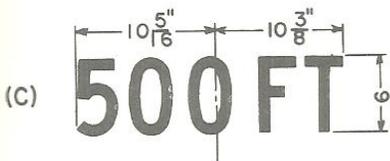
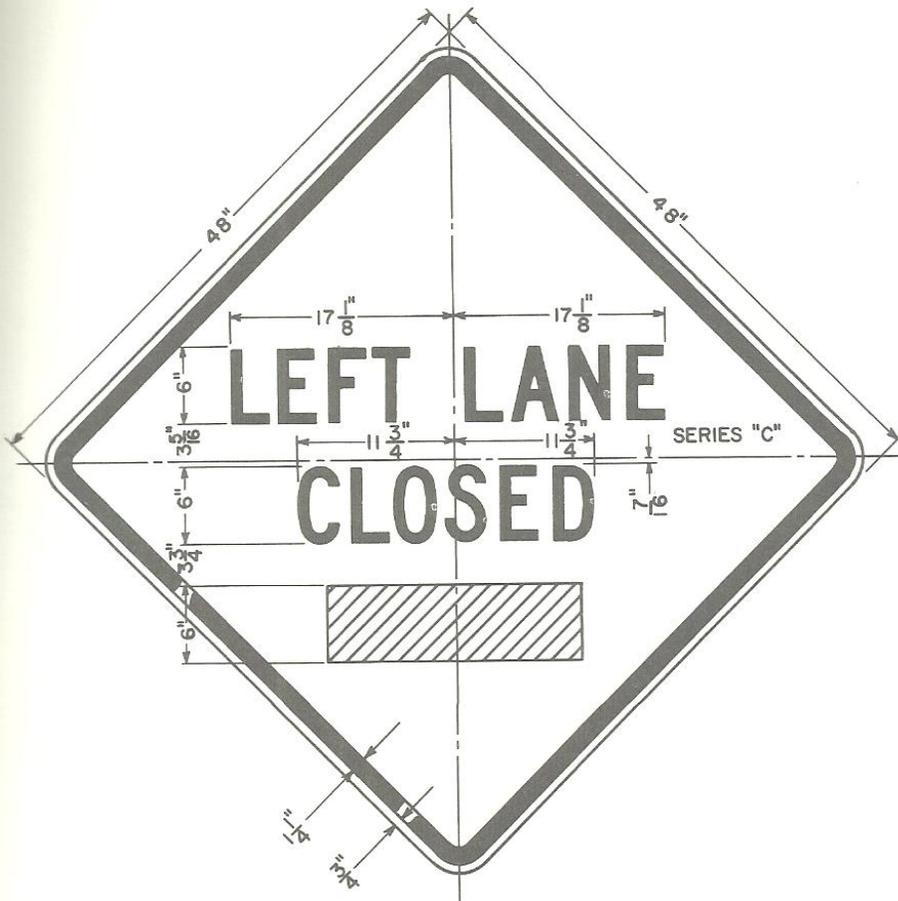
(1) Justification. These signs are authorized for use, where applicable, in advance of a point where the right lane of a multiple-lane roadway is closed. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.



SECTION 705-17 (Cont.)

(F) Advance Left Lane Closed Signs (W 20-5 (L—))

(1) Justification. These signs are authorized for use, where applicable, in advance of a point where the left lane of a multiple-lane roadway is closed. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

W20-5(LA)



48 x 48

W20-5(LB)



48 x 48

W20-5(LC)



48 x 48

W20-5(LD)



48 x 48

W20-5 (CA)



48 x 48

W20-5 (CB)



48 x 48

W20-5 (CC)



48 x 48

W20-5 (CD)

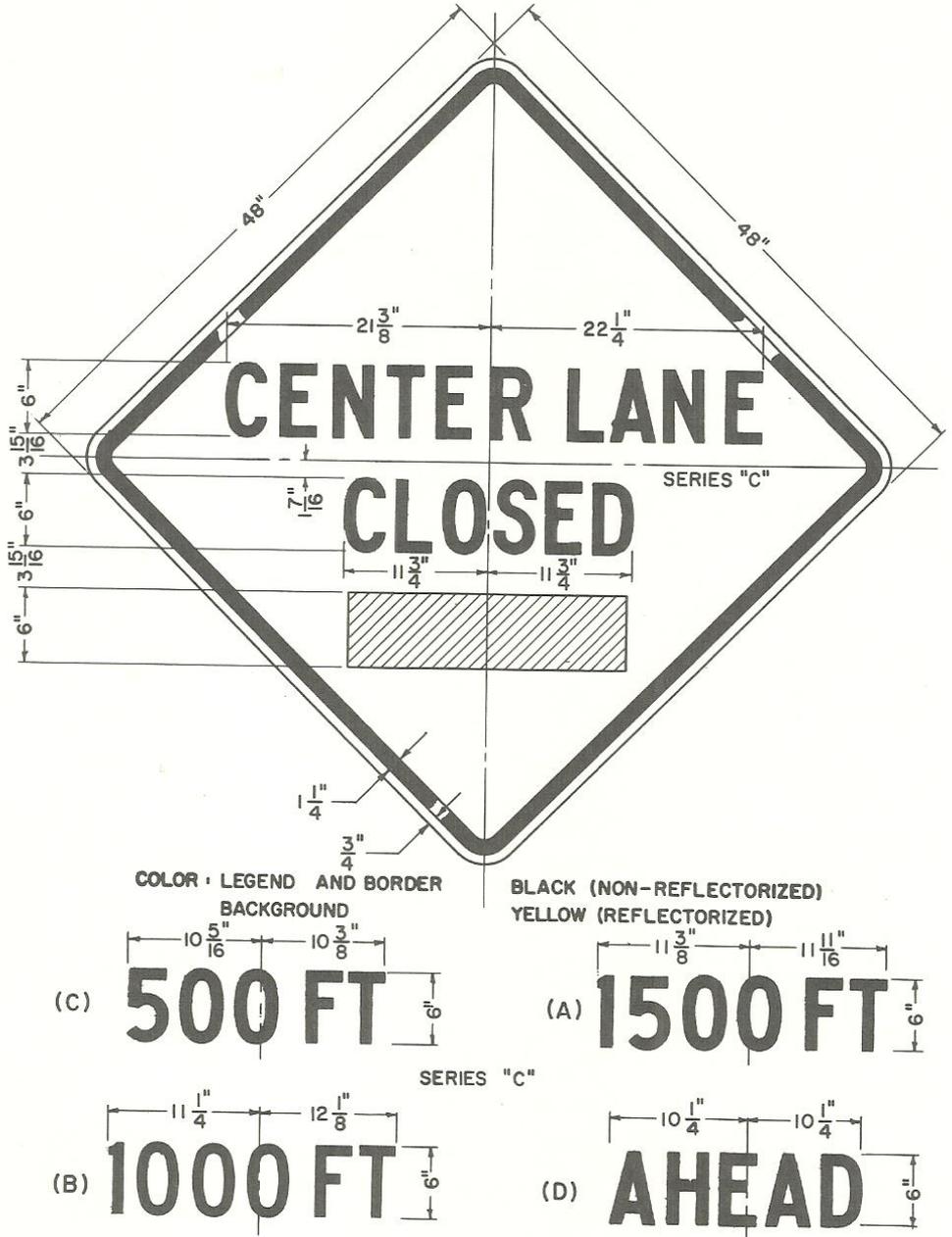


48 x 48

SECTION 705-17 (Cont.)

(g) Advance Center Lane Closed Signs (W 20-5 (C\_\_))

(1) Justification. These signs are authorized for use, where applicable, in advance of a point where the center lane of a multiple-lane roadway is closed. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.

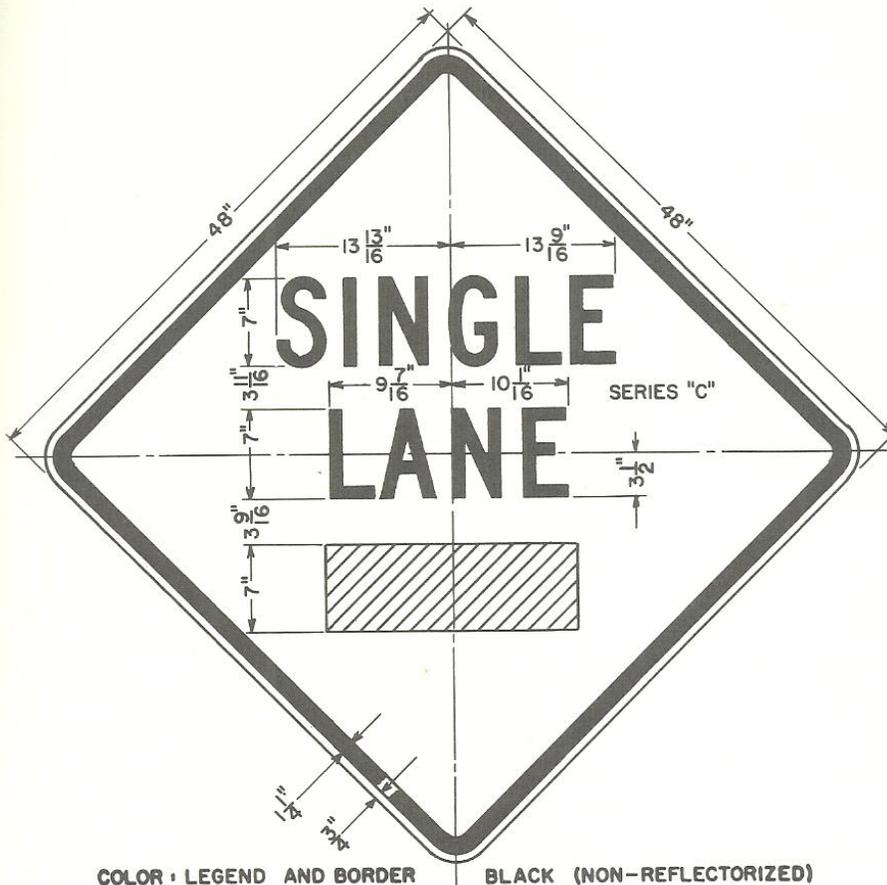




SECTION 705-17 (Cont.)

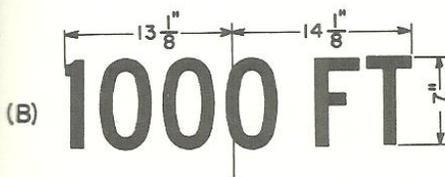
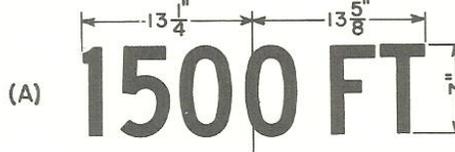
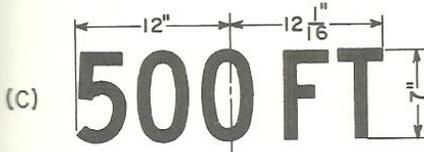
(h) Advance Single Lane Sign (W 20-6 (—))

(1) **Justification.** These signs are authorized for use in advance of a point where traffic moving in one direction must use a single lane. They shall not be used where traffic in both directions must use the one lane that is open. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.

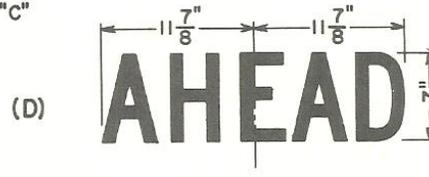


COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)



SERIES "C"



W 20-6(A)



48 x 48

W 20-6(B)



48 x 48

W 20-6(C)



48 x 48

W 20-6(D)



48 x 48

W 20-7(A)



48 x 48

SECTION 705-17 (Cont.)

(i) Advance Flagman Signs (W 20-7 (—))

(1) Justification. These signs are authorized for use in advance of any point at which a flagman has been stationed to control traffic through a construction or maintenance project. Panels may be used to indicate the different distances. Where it is impractical to indicate exact distances, the secondary legend AHEAD may be used.

These signs shall be promptly removed, covered or turned to face away from the roadway whenever the flagman is not at his station.

W 20-7(B)



48 x 48

W 20-7(C)

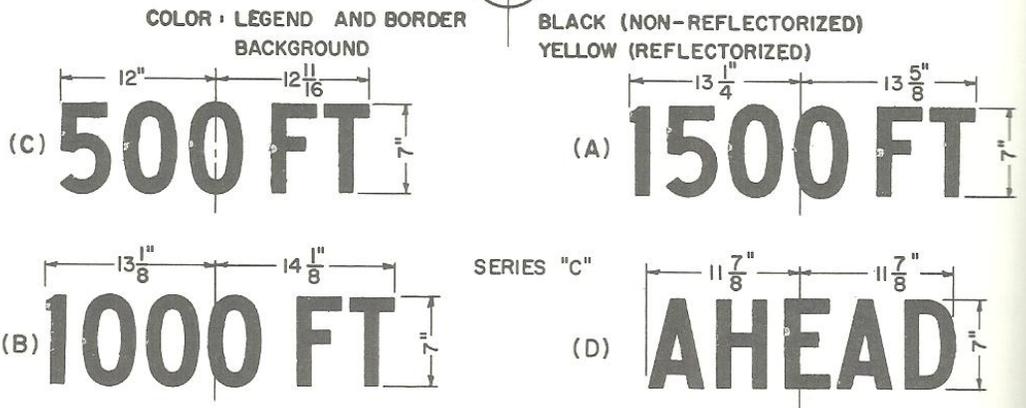
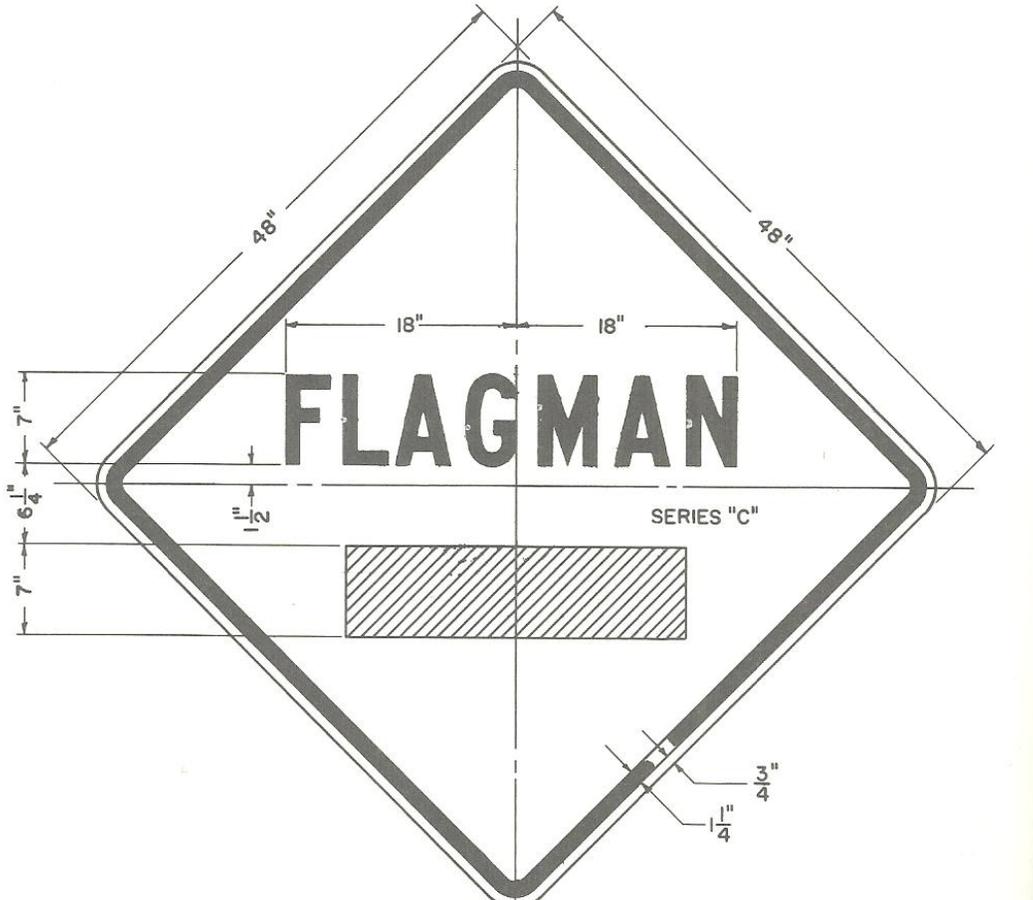


48 x 48

W 20-7(D)



48 x 48



W20-8

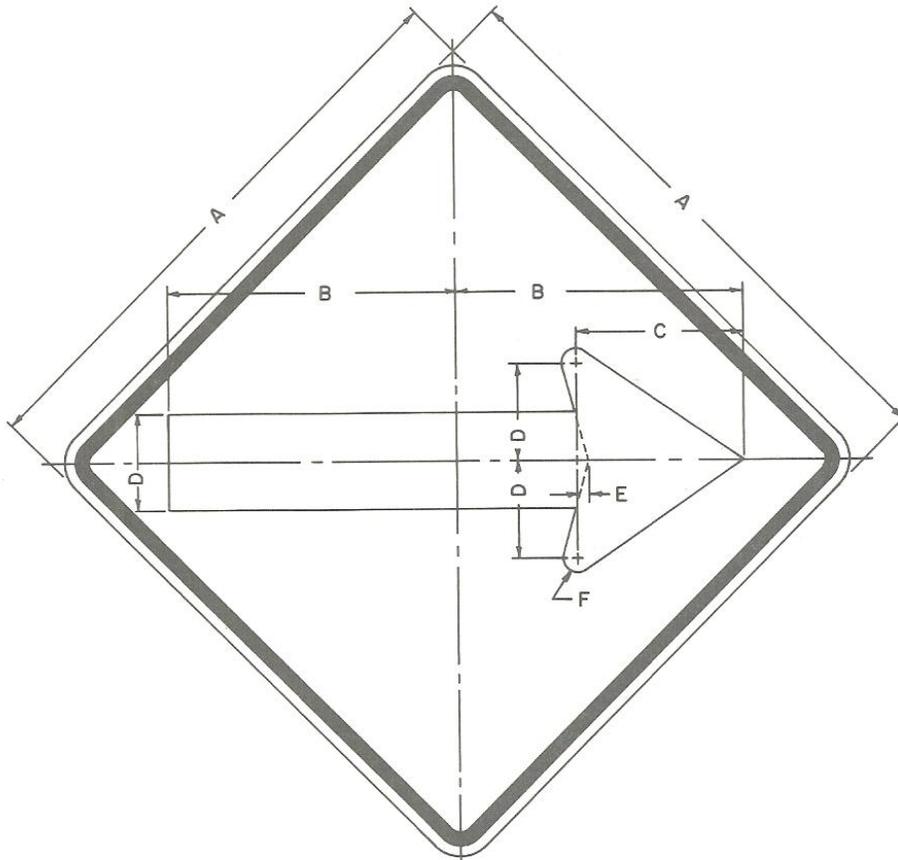
SECTION 705-17 (Cont.)

(j) Arrow Sign (W 20-8)

(1) Justification. This sign is authorized for use within construction projects to channelize traffic.



30 x 30



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
30x30	30	15	$8\frac{3}{4}$	5	$\frac{5}{8}$	$\frac{3}{4}$

SIGN SIZE	MAR- GIN	BOR- DER	BLANK STD.
30x30	$\frac{1}{2}$	$\frac{3}{4}$	B3-30 (D)

W21-1

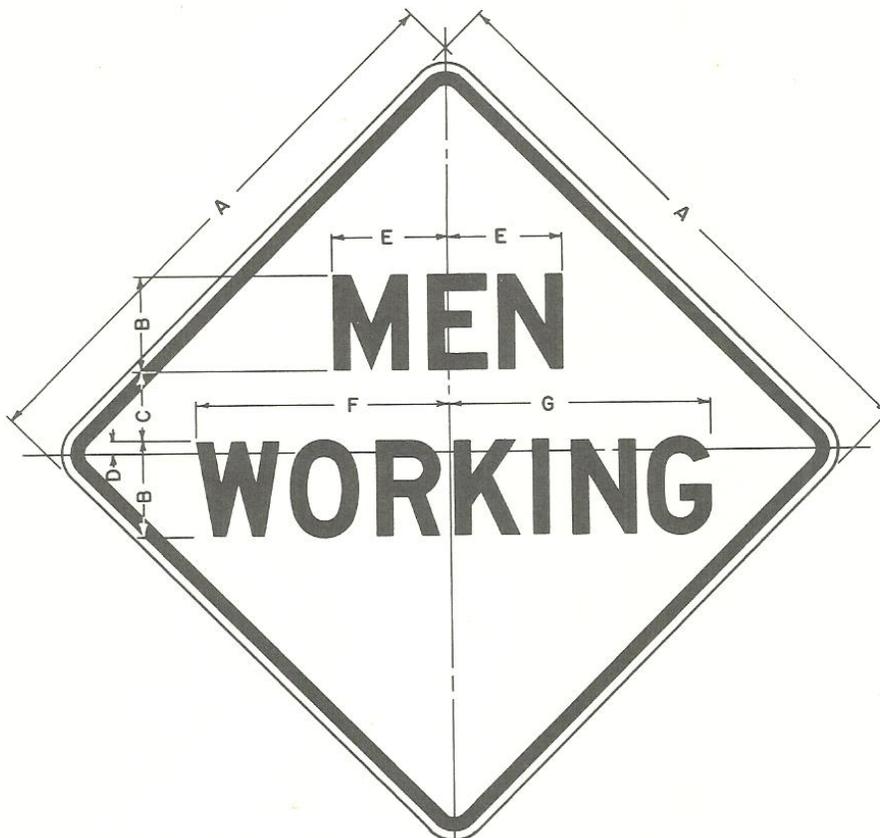


30 x 30

SECTION 705-17 (Cont.)

(k) Men Working Sign (W 21-1)

(1) Justification. This sign is authorized for use in conjunction with minor maintenance and public utility operations for the protection of men working in or near the roadway.



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30 x 30	30	5	$3\frac{11}{16}$	$\frac{5}{8}$	$6\frac{1}{16}$	$13\frac{5}{16}$	$13\frac{3}{4}$

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
30x30	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

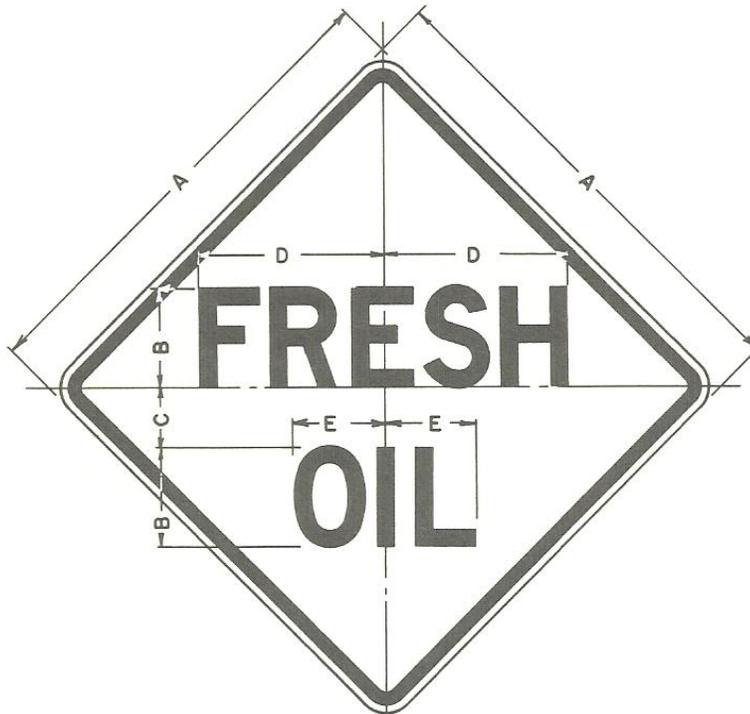
SECTION 705-17 (Cont.)

(I) Fresh Oil Sign (W 21-2)

(1) **Justification.** This sign is authorized for use to warn motorists that resurfacing operations have rendered the surface of the roadway temporarily hazardous, and that objectionable splashing on vehicles may occur.



24 x 24



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 BACKGROUND      YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
24 x 24	24	5	3	$9\frac{5}{16}$	$4\frac{5}{8}$

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD.
	LINES				
	1	2			
24 x 24	D	D	$\frac{3}{8}$	$\frac{5}{8}$	B3-24

W21-3

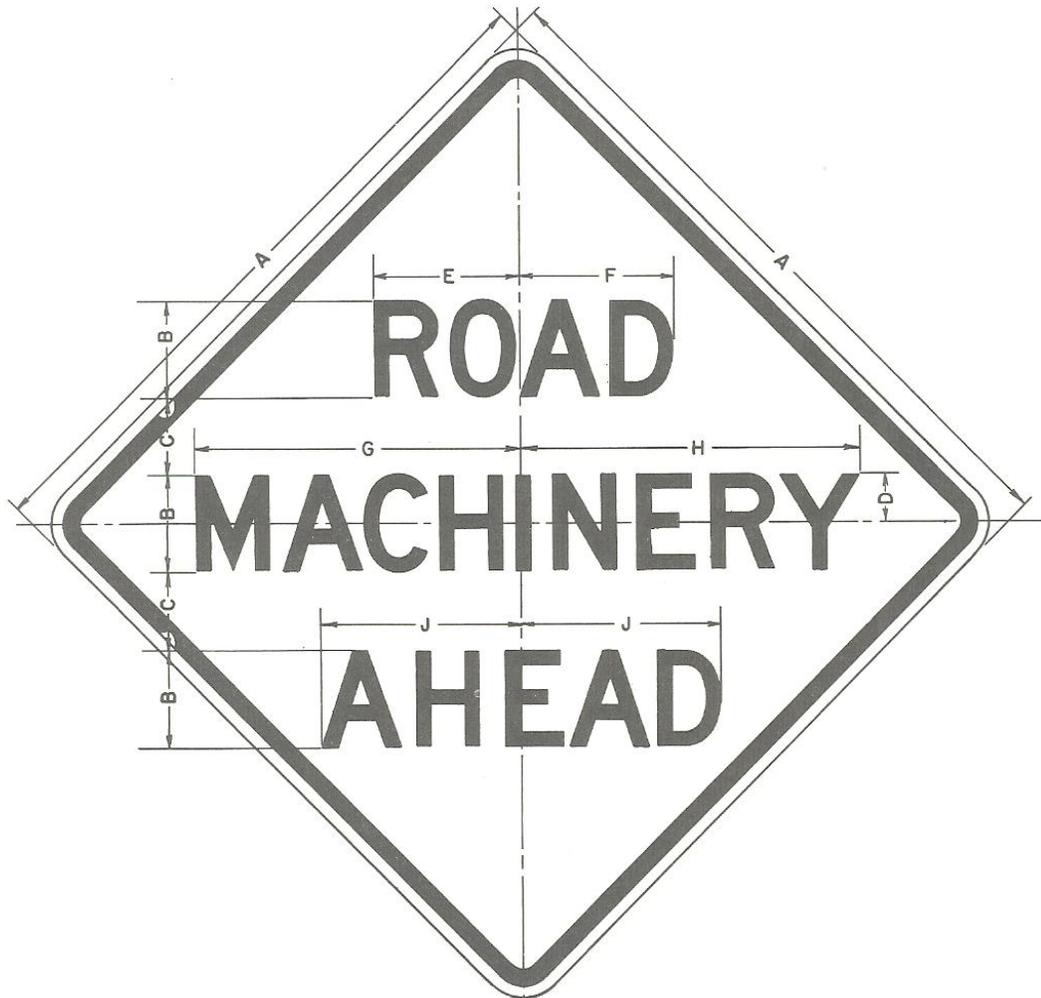


36 x 36

SECTION 705-17 (Cont.)

(m) Road Machinery Ahead Sign (W 21-3)

(1) Justification. This sign is authorized for use in advance of areas where heavy road equipment, such as a grader, is operating in or closely adjacent to the roadway.



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
36x36	36	5	4	2 1/2	7 5/8	8 1/16	17	17 3/4	10 5/16	

SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
36 x 36	D	D	D	5/8	7/8	B3-36(D)

SECTION 705-17 (Cont.)

(n) Road Work Ahead Sign (W 21-4)

(1) Justification. This sign is authorized for use in advance of maintenance or minor construction operations in the roadway.



30 x 30



COLOR • LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	5	2 <sup>5</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>8</sub>	6 <sup>9</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>4</sub>	8 <sup>5</sup> / <sub>16</sub>

SIGN SIZE	SERIES LINES			MAR- GIN	BOR- DER	BLANK STD.
	1	2	3			
30x30	C	C	C	1/2	3/4	B3-30(D)

W21-5

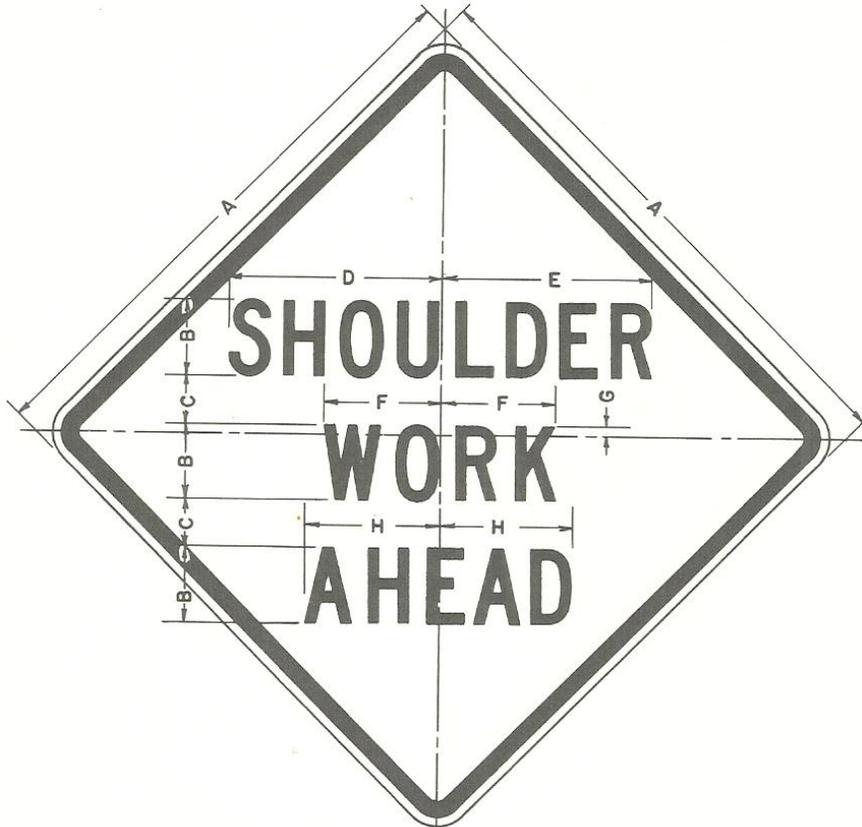


30 x 30

SECTION 705-17 (Cont.)

(o) Shoulder Work Ahead Sign (W 21-5)

(1) Justification. This sign is authorized for use in advance of maintenance or minor reconstruction operations involving the shoulder, where caution should be exercised even though the traveled roadway may remain unobstructed.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	4	2½	11¼	11⅛	6⅛	½	7⅙

SIGN SIZE	SERIES LINES			MAR- GIN	BOR- DER	BLANK STD.
	1	2	3			
	30x30	C	C			



SECTION 705-17 (Cont.)

(p) Survey Party Sign (W 21-6)

(1) Justification. This sign is authorized for use in advance of a point where a surveying party is working in or closely adjacent to the roadway.



30 x 30



COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30 x 30	30	5	2 1/2	12 1/2	12 5/8	9 3/4	10 1/2

SIGN SIZE	SERIES LINES		MAR- GIN	BOR- DER	BLANK STD.
	1	2			
30 x 30	D	D	1/2	3/4	B3-30(D)

W 21-7



30 x 30

SECTION 705-17 (Cont.)

(q) Work Area Ahead Sign (W 21-7)

(1) **Justification.** This sign is authorized for use 200 feet to 300 feet in advance of minor maintenance and public utility operations for the protection of men working in or near the roadway.

The reverse side of this sign may be used for the End Work Area sign (G 20-3-2) when used as a duplex installation.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
30x30	30	5	$2\frac{5}{16}$	$7\frac{1}{2}$	7	$8\frac{3}{4}$	$1\frac{3}{4}$

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD
	1	2	3			
30 x 30	C	C	C	$\frac{1}{2}$	$\frac{3}{4}$	B3-30(D)

SECTION 705-17 (Cont.)



30 x 30

(f) Work Area Sign (W 21-8)

(1) Justification. This sign is authorized for use to indicate the beginning of the work area and every 300 feet thereafter for the protection of men working in or near the roadway.

This sign may be a duplex.



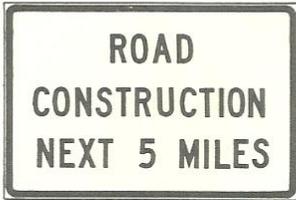
COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
30x30	30	5	1 3/4	9	8 3/4

SIGN SIZE	SERIES		MAR- GIN	BOR- DER	BLANK STD
	LINES				
	1	2			
30x30	D	D	1/2	3/4	B3-30 (D)

G20-1



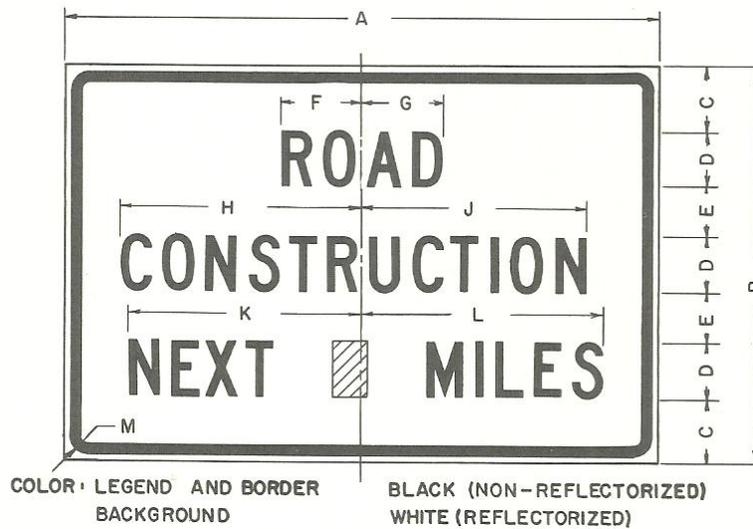
72 x 48

**SECTION 705-18. CONSTRUCTION AND MAINTENANCE GUIDE GROUP (G 20 SERIES)**

Guide signs required at constructions and maintenance operations include (1) normal directional signs and route markings, to the extent that temporary route changes are necessitated by road closings and detours, and (2) special informational signs relating to the work being done. The signs described in the following sections should be used where applicable.

**(a) Length of Construction Sign (G 20-1)**

(1) **Justification.** This sign is authorized for use at the beginning of any major road construction or maintenance job of more than 2 miles in extent, where traffic is maintained through the job.



SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
72 x 48	72	48	$7\frac{3}{4}$	7	$5\frac{3}{4}$	$9\frac{5}{8}$	10	$29\frac{1}{8}$	28	$28\frac{3}{8}$	$29\frac{1}{2}$	3

SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
72 x 48	C	C	C	$\frac{3}{4}$	$\frac{1}{4}$	B5-7248(P)

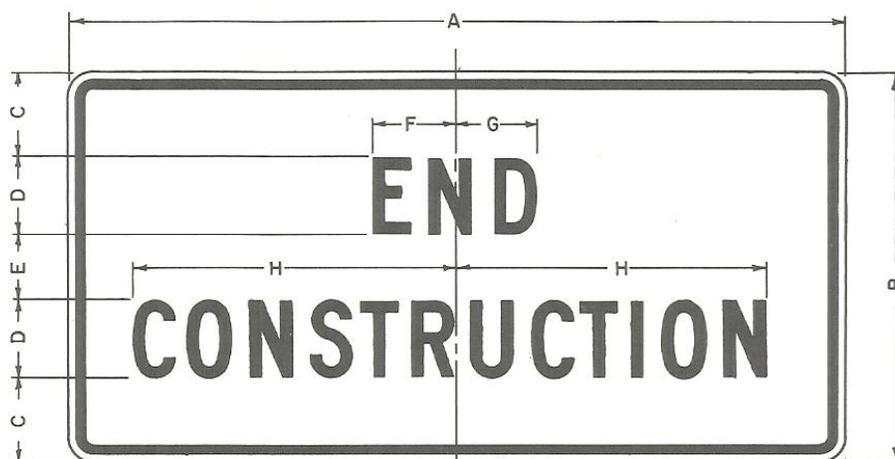
**END  
CONSTRUCTION**

60 x 30

SECTION 705-18 (Cont.)

**(b) End Construction Sign (G 20-2)**

(1) **Justification.** This sign is authorized for use approximately 500 feet beyond the end of a major construction or maintenance job to indicate the limit of any restrictions or special precautions that have been imposed.



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
60x30	60	30	6 1/2	6	5	5 3/4	6	25	24	

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
60x30	C	C	1/2	3/4	B5-6030

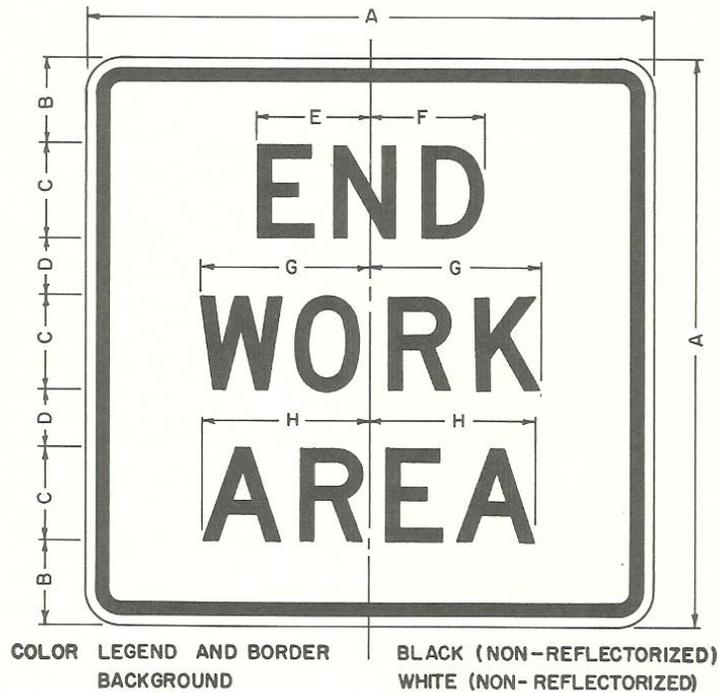


30 x 30

SECTION 705-18 (Cont.)

(c) End Work Area Sign (G 20-3-1)

(1) Justification. This sign is authorized for use approximately 200 feet to 300 feet beyond the end of a minor maintenance operation marked by Work Area signs (W 21-7-1).



SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	4 1/2	5	3	5 13/16	6 1/16	9	8 3/4

SIGN SIZE	SERIES			MAR- GIN	BOR- DER	BLANK STD.
	LINES					
	1	2	3			
30x30	D	D	D	1/2	3/4	B3-30(S)

SECTION 705-18 (Cont.)



30 x 30

(d) End Work Area Sign (G 20-3-2)

(1) Justification. This sign is authorized for use approximately 200 feet to 300 feet beyond the end of a minor maintenance operation marked by Work Area signs (W 21-7-1).

This sign may be used only with the Work Area Ahead sign (W 21-7) as a duplex installation.



COLOR - LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) YELLOW (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
30x30	30	5	2 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	5 <sup>13</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9	8 <sup>3</sup> / <sub>4</sub>

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
30x30	D	D	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B3-30(D)

G20-5(R)



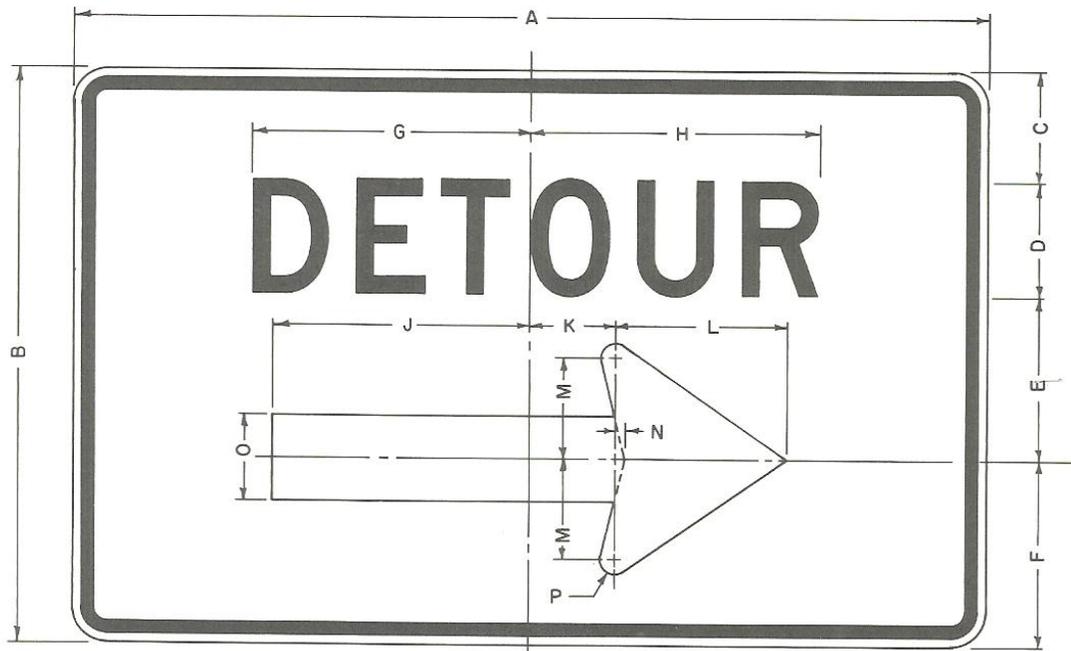
48 x 30

SECTION 705-18 (Cont.)

(e) Detour Arrow Sign, Right (G 20-5 (R))

(1) Justification. This sign is authorized for use at a point where a detour to the right has been established on a numbered route.

(2) Placement. This sign when used should normally be mounted below the Road Closed sign (R 10-2) or the Local Traffic Only sign (R 10-3).



COLOR: LEGEND ARROW AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
48x30	48	30	5 <sup>3</sup> / <sub>4</sub>	6	8 <sup>1</sup> / <sub>2</sub>	9 <sup>3</sup> / <sub>4</sub>	14 <sup>9</sup> / <sub>16</sub>	15 <sup>3</sup> / <sub>16</sub>	13 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	9	5 <sup>1</sup> / <sub>4</sub>	<sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINES			
48x30	D	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4830



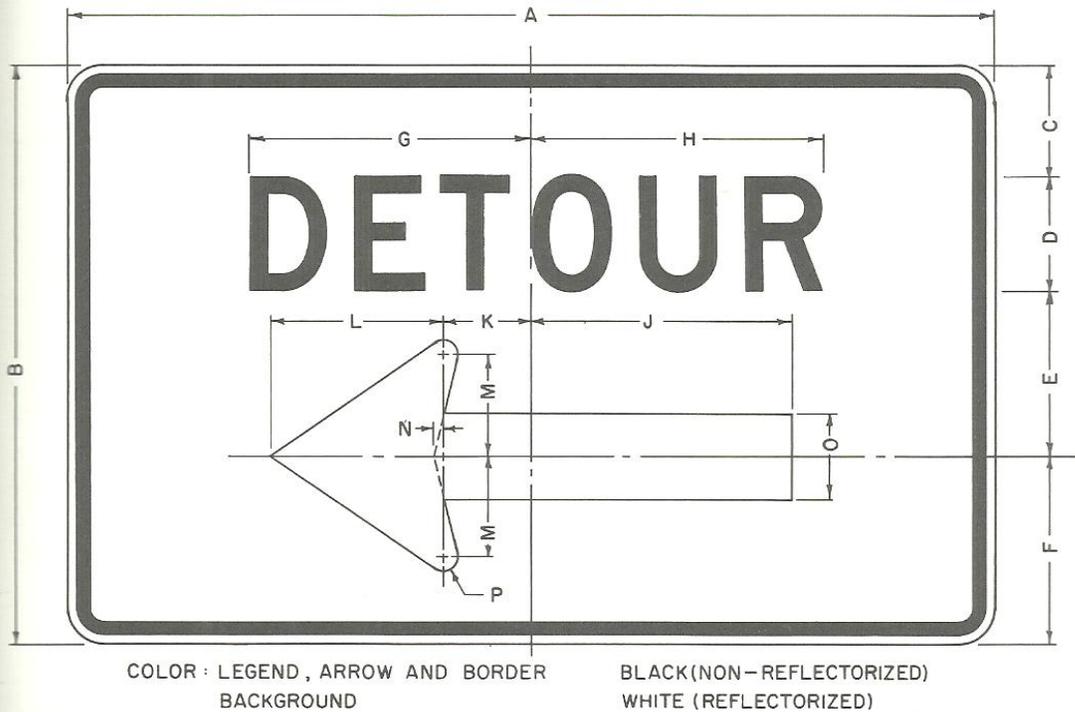
SECTION 705-18 (Cont.)



48 x 30

(f) Detour Arrow Sign, Left (G 20-5 (L))

- (1) Justification. This sign is authorized for use at a point where a detour to the left has been established on a numbered route.
- (2) Placement. This sign when used should normally be mounted below the Road Closed sign (R 10-2) or the local Traffic Only sign (R 10-3).



COLOR: LEGEND, ARROW AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
48x30	48	30	5 3/4	6	8 1/2	9 3/4	14 9/16	15 3/16	13 1/2	4 1/2	9	5 1/4	1/2	4 1/2	3/4

SIGN SIZE	SERIES LINE I	MAR-GIN	BOR-DER	BLANK STD.
48x30	D	1/2	3/4	B5-4830

G20-6



48 x 30

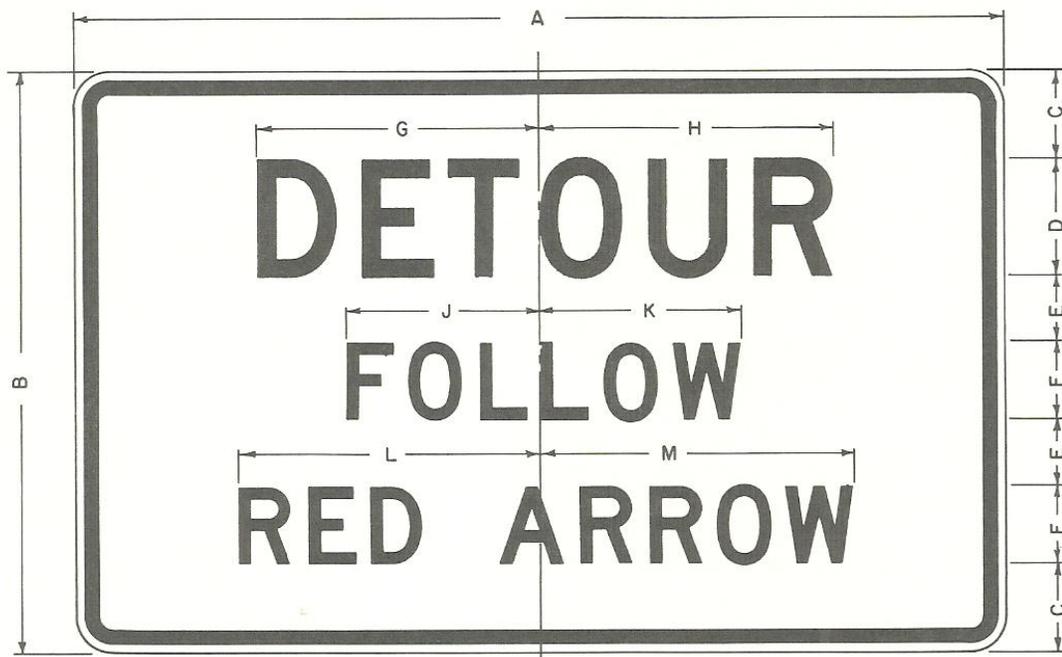
SECTION 705-18 (Cont.)

(g) Detour Follow Red Arrow Sign (G 20-6)

(1) **Justification.** This sign is authorized for use at a point where a detour has been established on an unnumbered highway and the Red Arrow (G 20-6-1) is used to mark the detour. The Red Arrow (G 20-6-1) shall be mounted next to the word FOLLOW to indicate the direction of the detour.

Another color is authorized for use where two or more detours overlap.

(2) **Placement.** This sign when used should normally be mounted below the Road Closed sign (R 10-2) or the local Traffic Only sign (R 10-3).



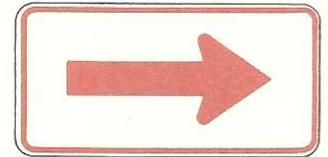
COLOR : LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
48 x 30	48	30	4 $\frac{5}{8}$	6	3 $\frac{3}{8}$	4	14 $\frac{9}{16}$	15 $\frac{3}{16}$	10	10 $\frac{3}{8}$	15 $\frac{9}{16}$	16 $\frac{3}{16}$

SIGN SIZE	SERIES			MAR-GIN	BOR-DER	BLANK STD.
	LINES					
	1	2	3			
48 x 30	D	D	D	$\frac{1}{2}$	$\frac{3}{4}$	B5-4830

SECTION 705-18 (Cont.)

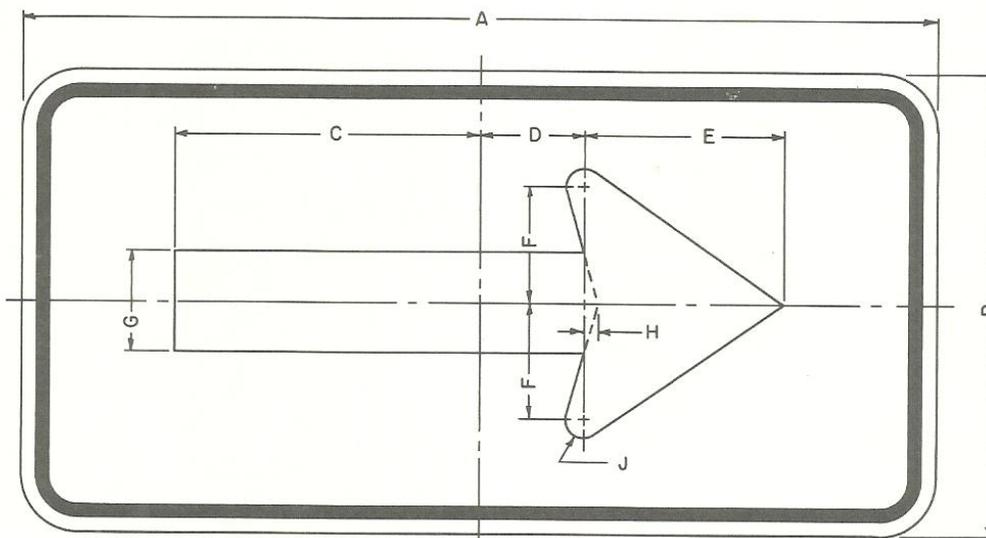


24 x 12

(h) Red Arrow (G 20-6-1)

(1) **Justification.** This sign is authorized for use to mark a detour where the Detour Follow Red Arrow sign (G 20-6) is used. Another color is authorized where two or more detours overlap.

(2) **Placement.** This sign shall be mounted next to the word FOLLOW and indicate the direction of the detour.



COLOR: ARROW AND BORDER RED (REFLECTIVE)  
BACKGROUND WHITE (REFLECTIVE)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
24 x 12	24	12	8	2 <sup>3</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>4</sub>	3	2 <sup>5</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>	<sup>1</sup> / <sub>2</sub>

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
24 x 12	<sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>	B5-2412

G20-7

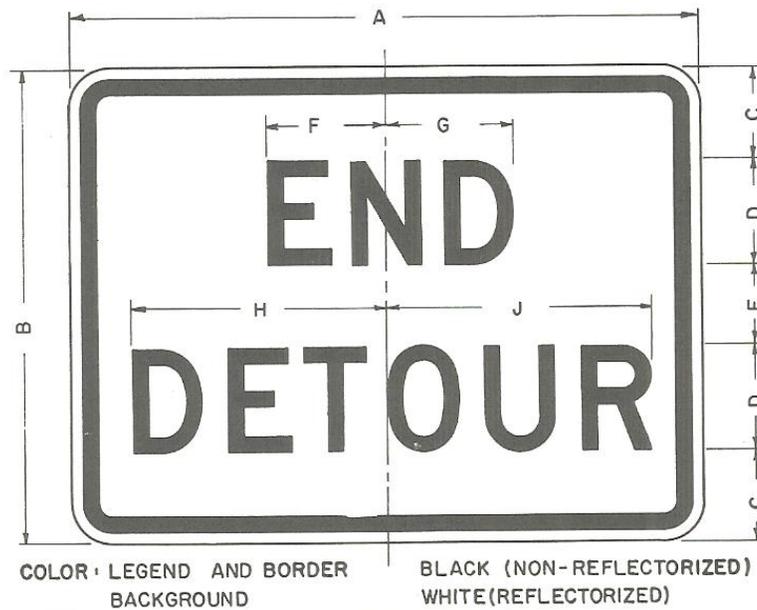


24 x 18

SECTION 705-18 (Cont.)

(i) End Detour Sign (G 20-5)

(1) Justification. This sign is authorized for use at the end of a signed detour. If route markers are used, this sign may be placed at top of last route marker of detour.



COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
24 x 18	24	18	3 1/2	4	3	4 5/8	4 7/8	9 3/4	10 1/8	

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD
	1	2			
24 x 18	D	D	3/8	5/8	B5-2418

## SECTION 706. ROUTE MARKERS AND AUXILIARY MARKERS (M SERIES)

Route Markers shall be used to identify and mark numbered highway routes. Markers for each system of numbered highways shall be used only on routes of that respective system and the approaches thereto. Where two or more numbered routes follow the same section of highway, however, whether or not they are part of the same system, all of the applicable Route Markers, of whatever class, shall be displayed in combined mountings.

Route Markers are important to identify numbered highway routes, but to accomplish their purpose they are usually supplemented by various types of auxiliary markers to indicate junctions, turns, and route directions, as well as truck, by-pass, and business routes, and detours.

Route markers, except confirmation or reassurance, shall not be used at locations where large expressway-type advance or exit directional signs are installed.

The U. S. Route Marker shall consist of a square or rectangular plate carrying a reflectorized white shield, as illustrated, with the route number in black. The area of the plate outside the shield shall be black, without a border.

The Pennsylvania Route Marker shall consist of a square or rectangular plate carrying a reflectorized white keystone, as illustrated, with the route number in black. The area of the plate outside the Keystone shall be black, without a border.

The Interstate Route Marker shall consist of a cut-out reflectorized shield, with the route number and legend in white on a red and blue background, as illustrated.

The classification of Route Markers and Auxiliary Markers, as numbered and illustrated in the following subsections, is further subdivided into the following groups:

1. Route Markers
2. Junction Markers
3. Advance Turn Arrow Markers
4. Directional Arrow Markers
5. Alternate Route Markers
6. Cardinal Direction Markers
7. Trailblazer Markers
8. Memorial Markers

MI-2

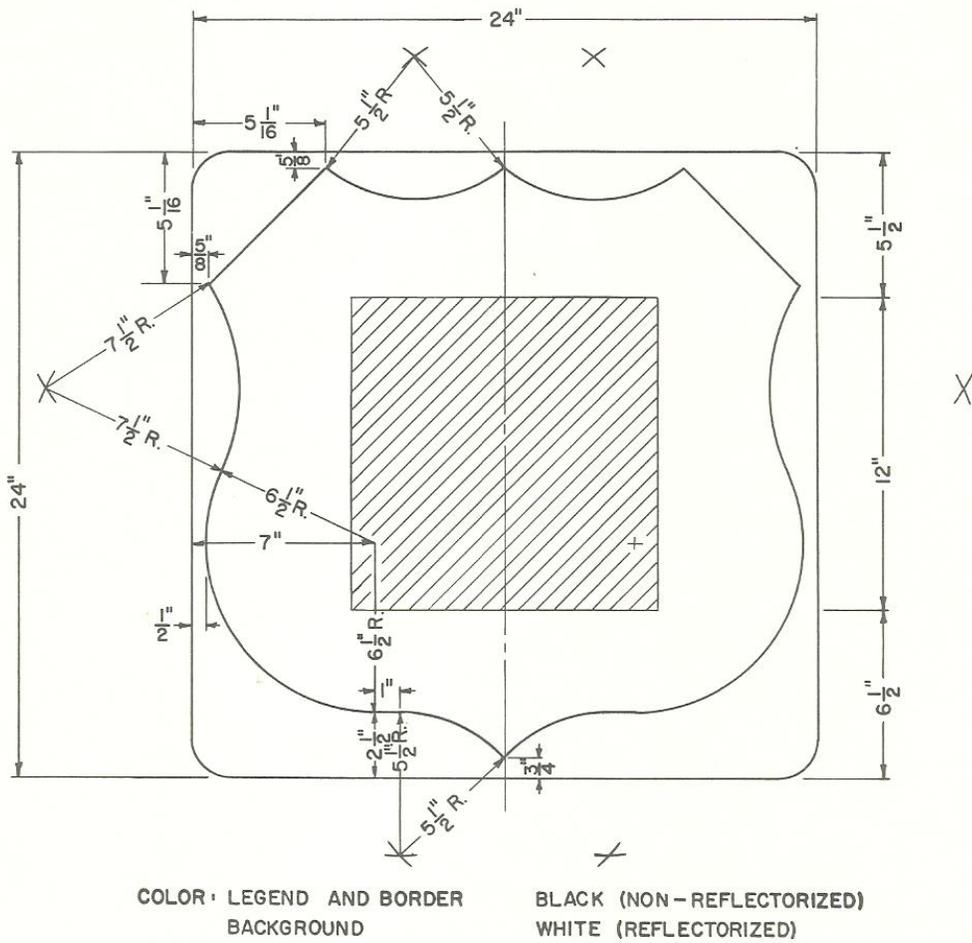


24 x 24

SECTION 706-1 ROUTE MARKER GROUP (M 1 SERIES)

(a) U. S. Route Marker (M 1-2 (—))

(1) Justification. This marker is authorized for use to mark all one and two digit U. S. Routes.



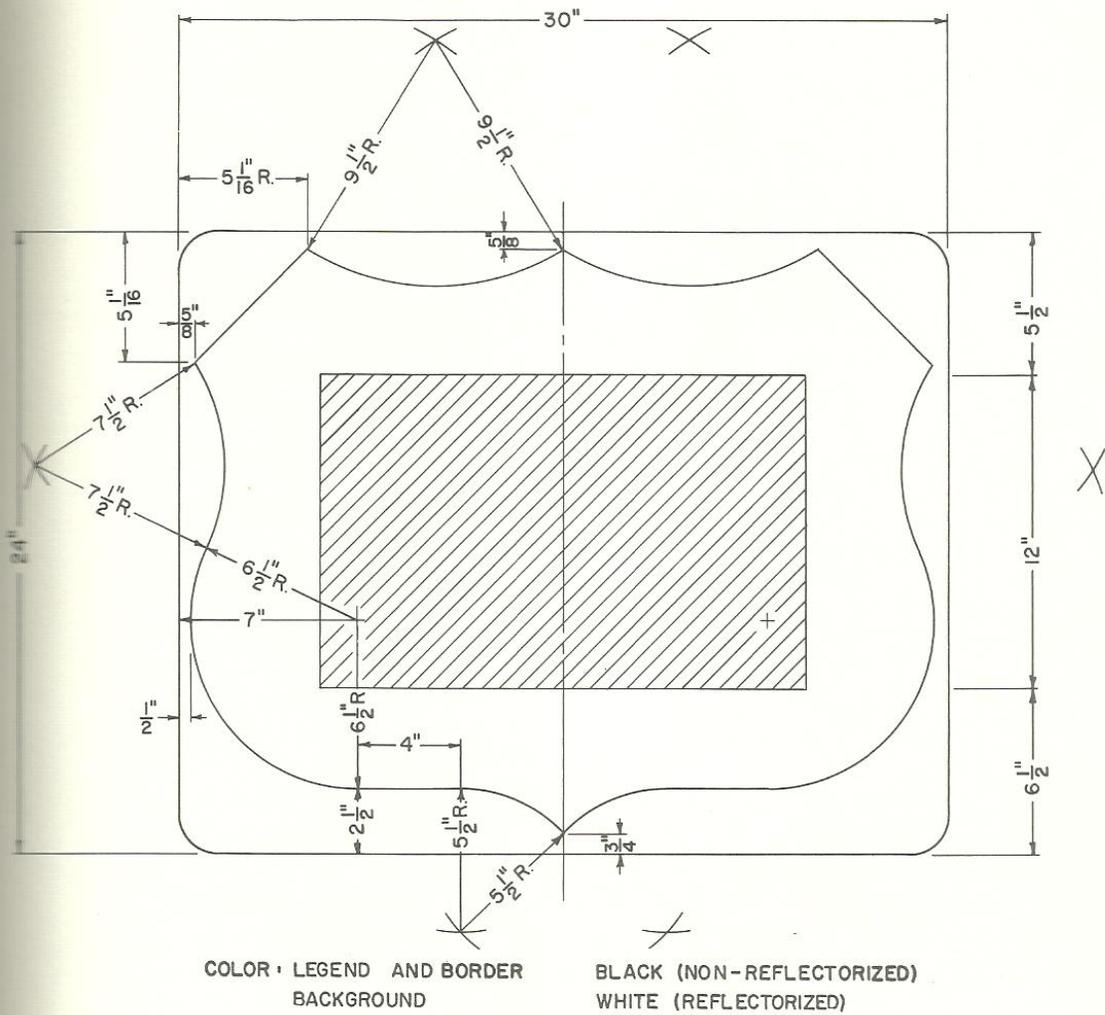
SECTION 706-1 (Cont.)

(B) U. S. Route Marker (M 1-3 (—))

(1) Justification. This marker is authorized for use to mark all three U. S. Routes.



30 x 24







MI-5

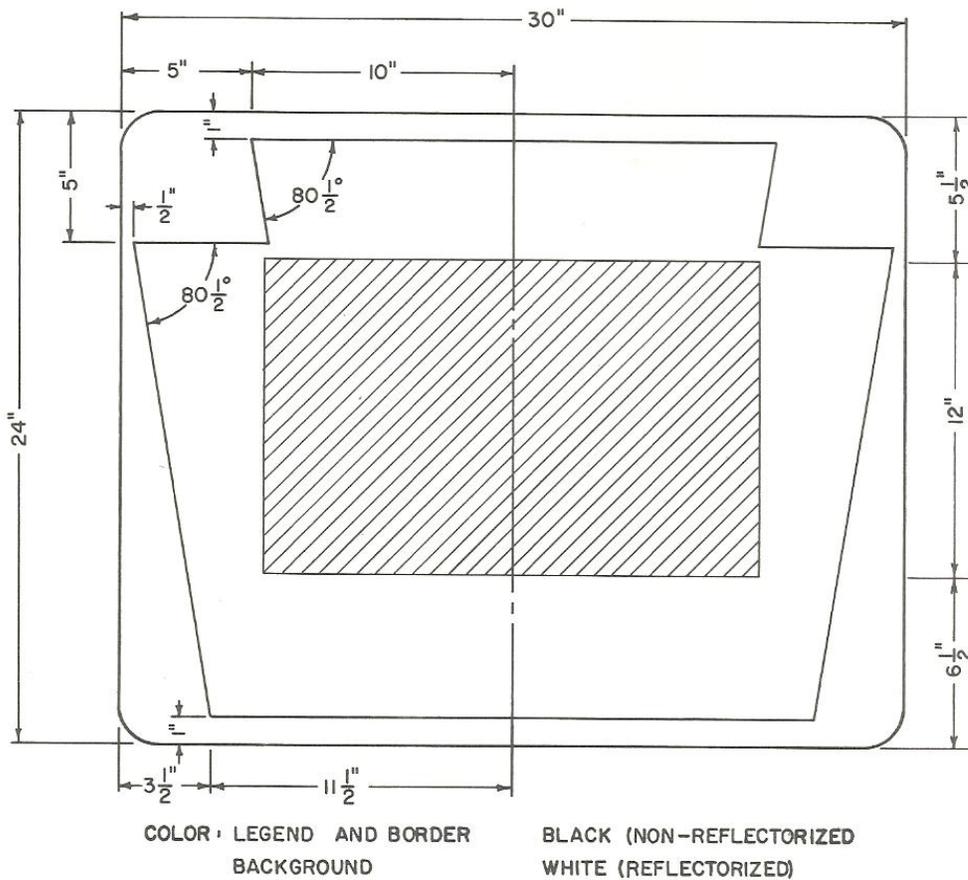
SECTION 706-1 (Cont.)

(d) Pennsylvania Route Marker (M 1-5 (—))

(1) Justification. This marker is authorized for use to mark all three light Pennsylvania Routes.



30 x 24



MI-6

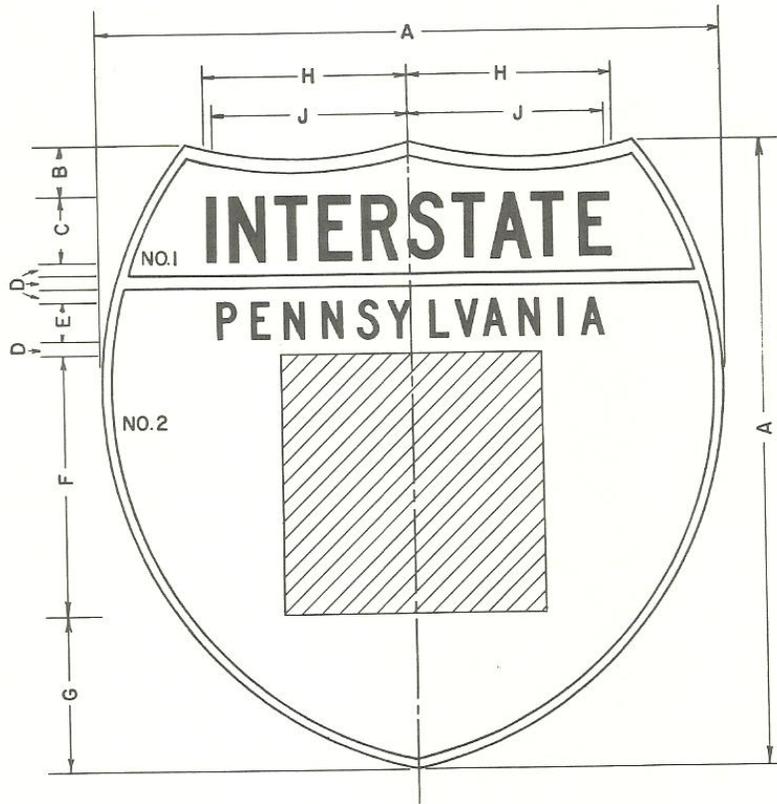


24 x 24  
36 x 36

SECTION 706-1 (Cont.)

(e) Interstate Route Marker (M 1-6 (—))

(1) **Justification.** This marker is authorized for use in connection with Interstate Routes. The 36 inch size shall be used to mark all two digit Interstate Routes. The 24 inch size shall be used on intersecting highways and approach roads to indicate an interchange with an Interstate Route.



SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
24 x 24	24	2	2 1/2	1/2	1 1/2	10	6	7 13/16	7 1/2
36 x 36	36	3	3 3/4	3/4	2 1/4	15	9	11 1/16	11 1/4

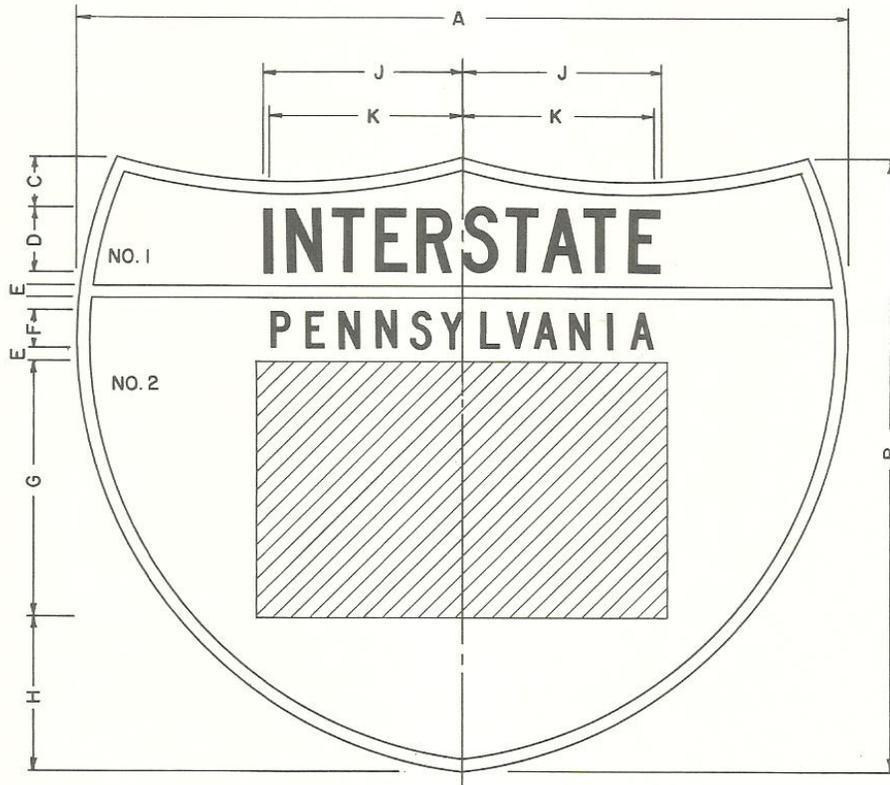
SIGN SIZE	SERIES			BOR- DER	BLANK STD.
	LINES				
	1	2	3		
24 x 24	C	D	D	1/2	B6-24
36 x 36	C	D	D	3/4	B6-36

- NO.1 SHALL HAVE WHITE REFLECTIVE LETTERS AND BORDER WITH RED REFLECTIVE BACKGROUND.
- NO.2 SHALL HAVE WHITE REFLECTIVE LETTERS, NUMERALS AND BORDER WITH BLUE REFLECTIVE BACKGROUND

SECTION 706-1 (Cont.)



30 x 24  
45 x 36



SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
30x24	30	24	2	2 1/2	1/2	1 1/2	10	6	7 13/16	7 1/2
45x36	45	36	3	3 3/4	3/4	2 1/4	15	9	11 11/16	11 1/4

SIGN SIZE	SERIES			BOR- DER	BLANK STD
	LINES				
	1	2	3		
30x24	C	D	D	1/2	B6-3024
45x36	C	D	D	3/4	B6-4536

- NO. 1 SHALL HAVE WHITE REFLECTIVE LETTERS AND BORDER WITH RED REFLECTIVE BACKGROUND.
- NO. 2 SHALL HAVE WHITE REFLECTIVE LETTERS, NUMERALS AND BORDER WITH BLUE REFLECTIVE BACKGROUND

M2-1



24 x 12

M2-1-1

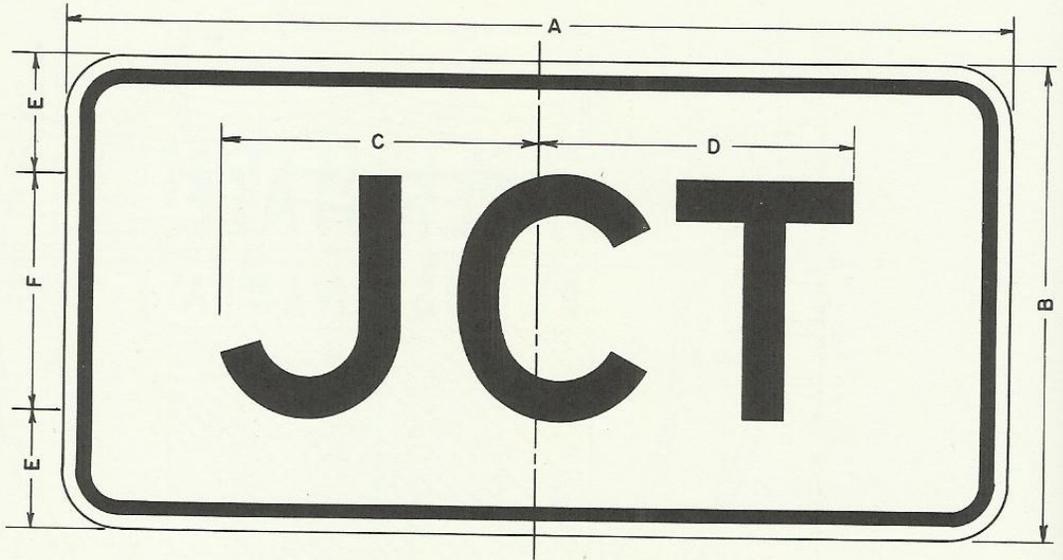


24 x 12

SECTION 706-2. JUNCTION MARKER GROUP (M 2 SERIES)

(a) Junction Marker (M 2-1) and (M 2-1-1)

(1) Justification. This marker, with black legend on a white background for U. S. and Pennsylvania Routes and white legend on a blue background for Interstate Routes, shall be mounted immediately above a Route Marker, and is authorized for use in advance of an intersection where a marked route is intersected or joined by a route.



M2-1

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24 x 12	24	12	$8\frac{3}{16}$	$7\frac{7}{8}$	3	6

SIGN SIZE	SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.

COLOR: LEGEND AND BORDER BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

M2-1-1

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24 x 12	24	12	$8\frac{3}{16}$	$7\frac{7}{8}$	3	6

SIGN SIZE	SERIES LINE	BOR-DER	BLANK STD.

COLOR: LEGEND AND BORDER BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

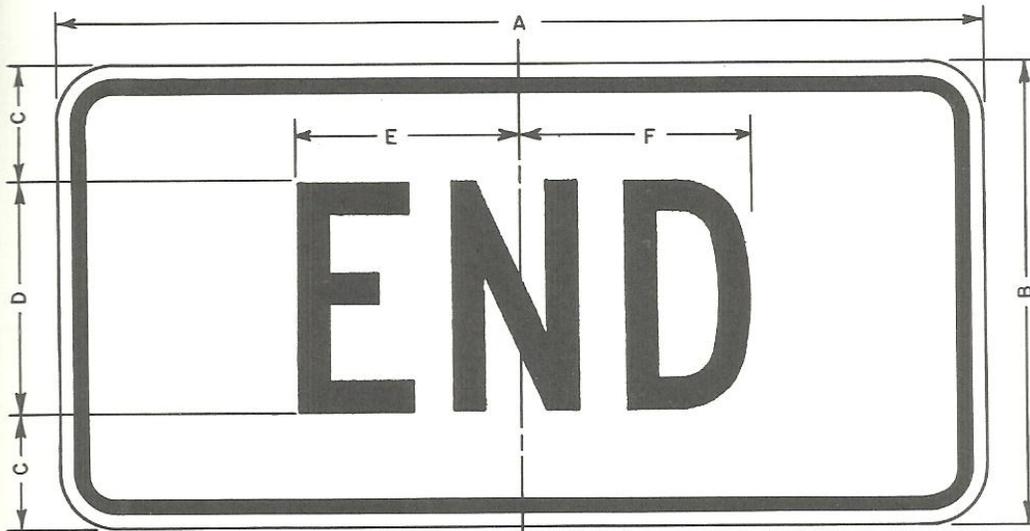
SECTION 706-2 (Cont.)



24 x 12

(b) End Marker (M 2-2)

(1) Justification. When a junction is the terminus of the route being traveled, this marker shall be mounted above a Route Marker and is authorized for use in advance of the intersection.

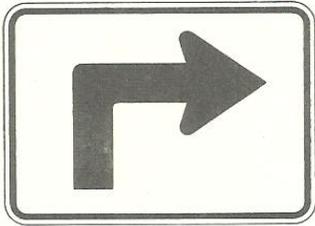


COLOR: LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
 BACKGROUND                      WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24 x 12	24	12	3	6	5 <sup>3</sup> / <sub>4</sub>	6

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24 x 12	C	<sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>	B5-2412

M3-1(R)



21 x 15

**SECTION 706-3. ADVANCE TURN ARROW MARKER GROUP (M 3 SERIES)**

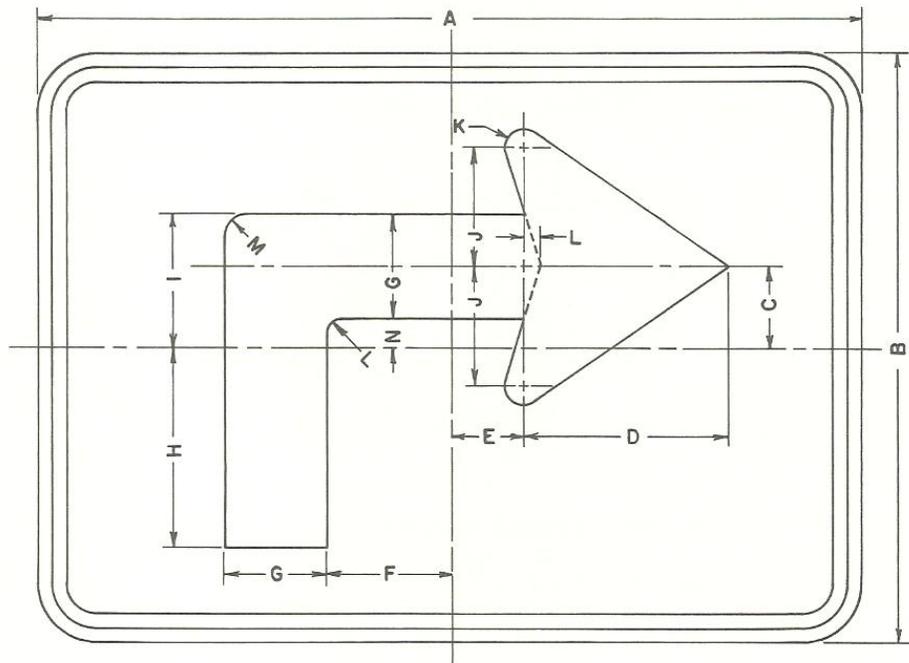
(1) **Justification.** These markers, with black symbol on white background for U. S. and Pennsylvania Routes and white symbol on a blue background for Interstate Routes, are authorized to be mounted below a Route Marker in advance of the turn which must be made to follow the indicated route.

M3-1-1(R)



21 x 15

(a) Advance 90° Right Turn Arrow Marker (M 3-1 (R)), (M 3-1-1 (R))



M3-1(R)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
21 x 15	21	15	2 1/16	5 1/4	1 7/8	3 3/16	2 5/8	5 1/16	3 3/8	3	1/2	3/8	9/16	3/4

SIGN SIZE	MARGIN	BORDER	BLANK STD.
21 x 15	3/8	3/8	B5-2115

COLOR: LEGEND AND BORDER BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

M3-1-1(R)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
21 x 15	21	15	2 1/16	5 1/4	1 7/8	3 3/16	2 5/8	5 1/16	3 3/8	3	1/2	3/8	9/16	3/4

SIGN SIZE	BORDER	BLANK STD.
21 x 15	3/8	B5-2115

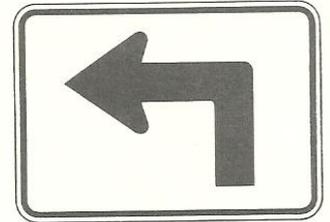
COLOR: LEGEND AND BORDER BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

SECTION 706-3 (Cont.)

(b) Advance 90° Left Turn Arrow Marker (M 3-1 (L)), (M 3-1-1 (L))

M3-1(L)

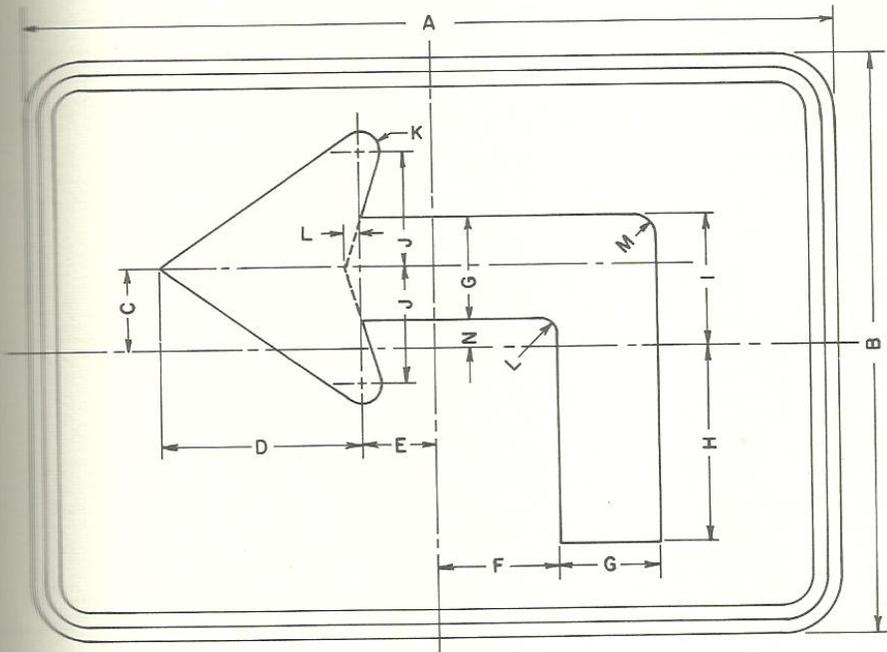


21 x 15

M3-1-1(L)



21 x 15



M3-1(L)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
21 x 15	21	15	2 1/16	5 1/4	1 7/8	3 3/16	2 5/8	5 1/16	3 3/8	3	1/2	3/8	9/16	3/4

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
21 x 15	3/8	3/8	B5-2115

COLOR: LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

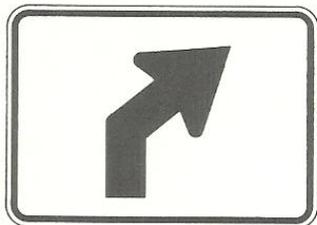
M3-1-1(L)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
21 x 15	21	15	2 1/16	5 1/4	1 7/8	3 3/16	2 5/8	5 1/16	3 3/8	3	1/2	3/8	9/16	3/4

SIGN SIZE	BOR-DER	BLANK STD.
21 x 15	3/8	B5-2115

COLOR: LEGEND AND BORDER BACKGROUND WHITE (REFLECTORIZED) BLUE (REFLECTORIZED)

M3-2(R)

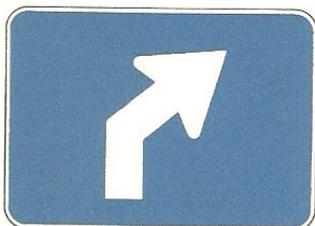


21 x 15

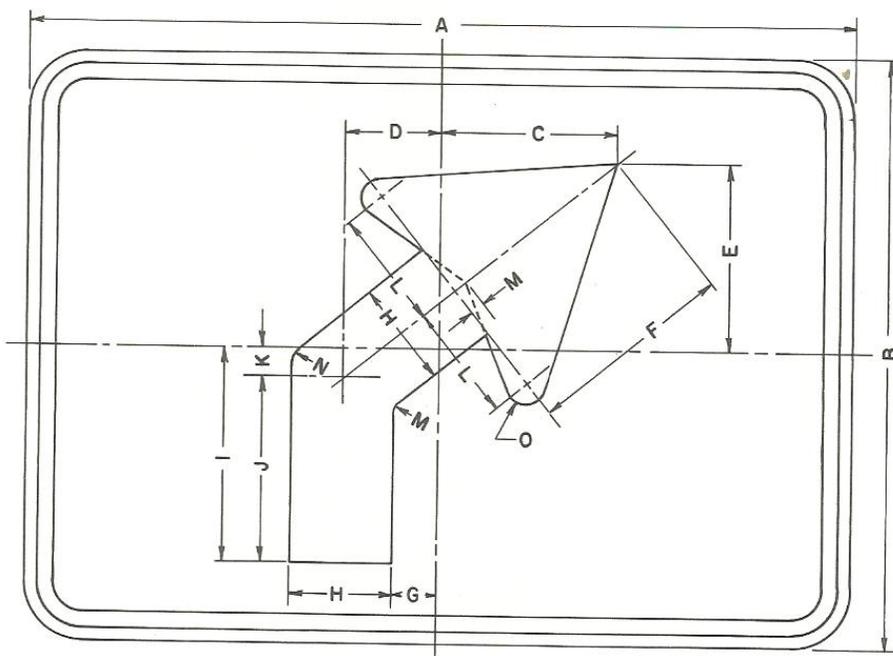
SECTION 706-3 (Cont.)

(c) Advance 45° Right Turn Arrow Marker (M 3-2 (R)), (M 3-2-1 (R))

M3-2-1(R)



21 x 15



M3-2(R)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
21 x 15	21	15	4 1/2	2 7/16	4 3/4	5 1/4	1 1/8	2 5/8	5 7/16	4 11/16	3/4	3	3/8	9/16	1/2

SIGN SIZE	MARGIN	BORDER	BLANK STD.
21 x 15	3/8	3/8	B5-2115

COLOR · LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

M3-2-1(R)

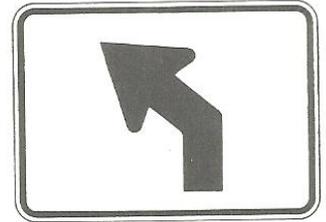
SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
21 x 15	21	15	4 1/2	2 7/16	4 3/4	5 1/4	1 1/8	2 5/8	5 7/16	4 11/16	3/4	3	3/8	9/16	1/2

SIGN SIZE	BORDER	BLANK STD.
21 x 15	3/8	B5-2115

COLOR · LEGEND AND BORDER BACKGROUND      WHITE (REFLECTORIZED) BLUE (REFLECTORIZED)

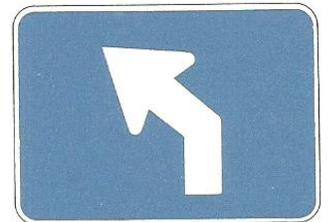


M3-2(L)

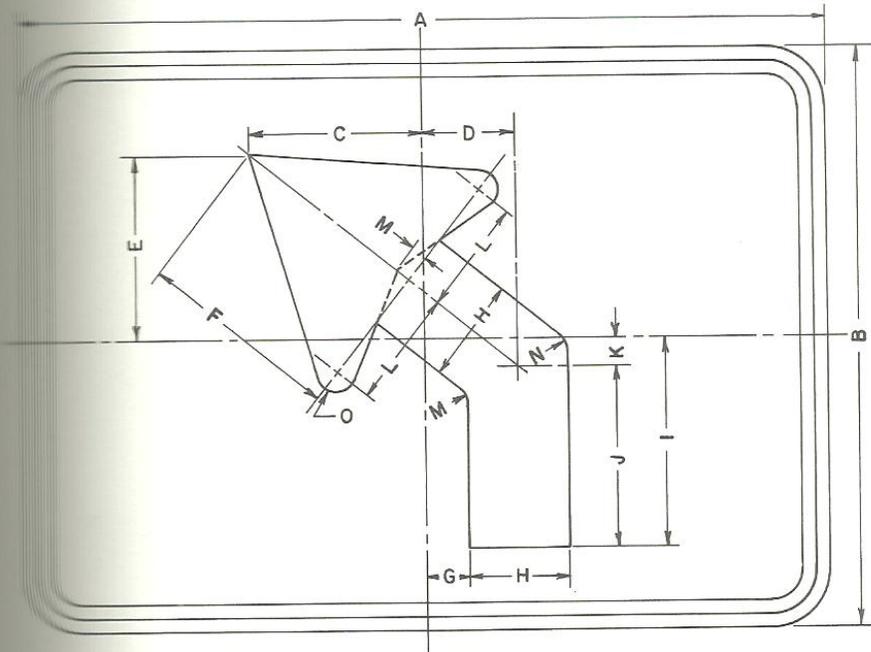


21 x 15

M3-2-1(L)



21 x 15



DIMENSIONS

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
21	15	4 1/2	2 7/16	4 3/4	5 1/4	1 1/8	2 5/8	5 7/16	4 11/16	3/4	3	3/8	9/16	1/2

SIGN SIZE	MARGIN	BORDER	BLANK STD.
21 x 15	3/8	3/8	B5-2115

COLOR : LEGEND AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

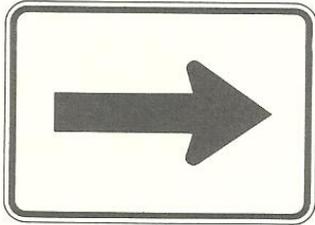
DIMENSIONS

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
21	15	4 1/2	2 7/16	4 3/4	5 1/4	1 1/8	2 5/8	5 7/16	4 11/16	3/4	3	3/8	9/16	1/2

SIGN SIZE	BORDER	BLANK STD.
21 x 15	3/8	B5-2115

COLOR : LEGEND AND BORDER BACKGROUND WHITE (REFLECTORIZED) BLUE (REFLECTORIZED)

M4-1

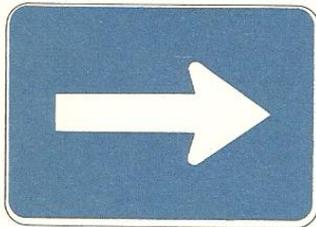


21 x 15

**SECTION 706-4. DIRECTIONAL ARROW MARKER GROUP  
(M 4 SERIES)**

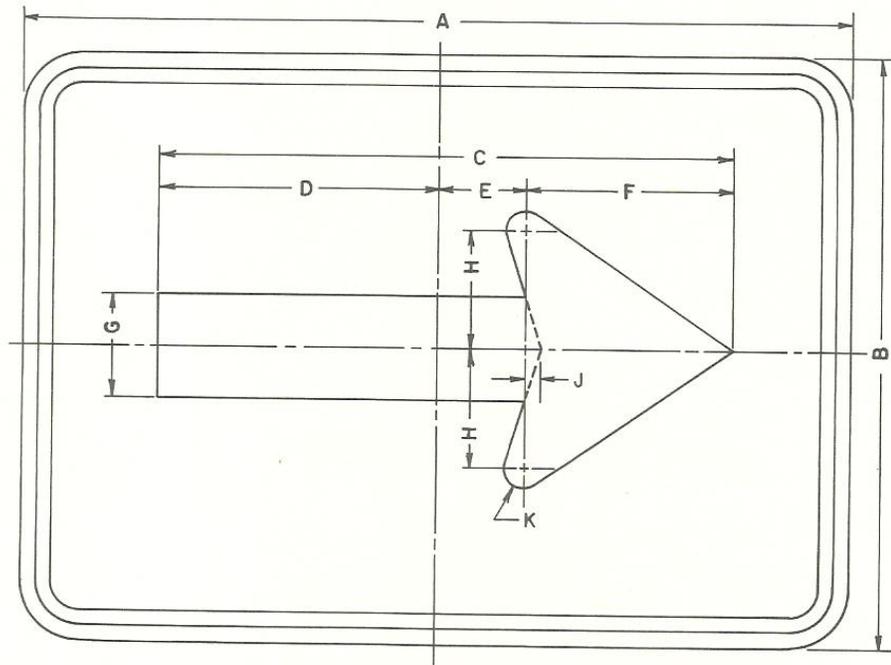
These markers, with black symbol on a white background for U. S. and Pennsylvania Routes and white symbol on a blue background for Interstate Routes, are authorized to be mounted below a Route Marker at an intersection where a turn must be made to follow the indicated route.

M4-1-1



21 x 15

**(a) 90° Angle Directional Arrow Marker, Right or Left (M 4-1),  
(M 4-1-1)**



M4-1

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
21 x 15	21	15	14 $\frac{5}{8}$	7 $\frac{1}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	2 $\frac{5}{8}$	3	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	MARGIN	BORDER	BLANK STD.
21 x 15	$\frac{3}{8}$	$\frac{3}{8}$	B5-2115

COLOR: LEGEND AND BORDER BLACK (NON-REFLECTORIZED)  
BACKGROUND WHITE (REFLECTORIZED)

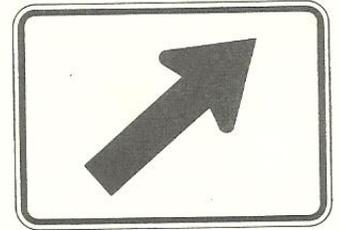
M4-1-1

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
21 x 15	21	15	14 $\frac{5}{8}$	7 $\frac{1}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$	2 $\frac{5}{8}$	3	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	BORDER	BLANK STD.
21 x 15	$\frac{3}{8}$	B5-2115

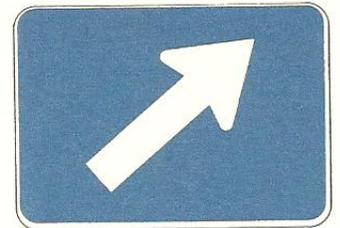
COLOR: LEGEND AND BORDER WHITE (REFLECTORIZED)  
BACKGROUND BLUE (REFLECTORIZED)

M4-2(R)

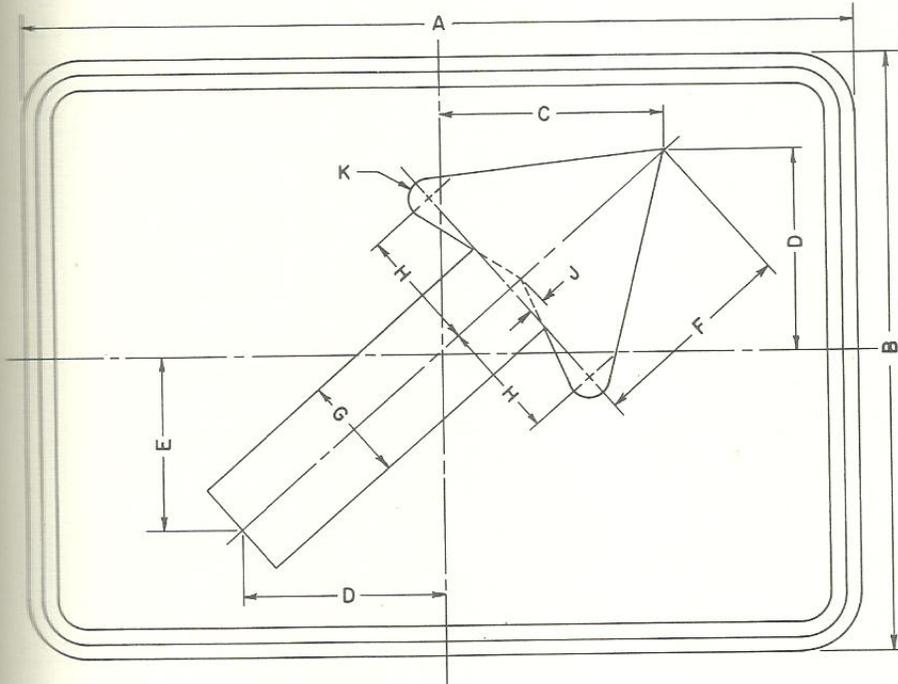


21 x 15

M4-2-1(R)



21 x 15



M4-2(R)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
21 x 15	21	15	$5\frac{5}{8}$	$5\frac{1}{16}$	$4\frac{5}{16}$	$5\frac{1}{4}$	$2\frac{5}{8}$	3	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	MARGIN	BORDER	BLANK STD.
21 x 15	$\frac{3}{8}$	$\frac{3}{8}$	B5-2115

COLOR: LEGEND AND BORDER BLACK (NON-REFLECTORIZED)  
BACKGROUND WHITE (REFLECTORIZED)

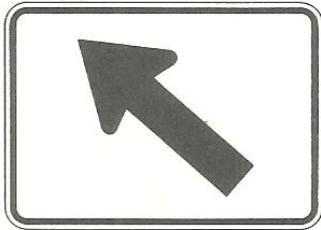
M4-2-1(R)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
21 x 15	21	15	$5\frac{5}{8}$	$5\frac{1}{16}$	$4\frac{5}{16}$	$5\frac{1}{4}$	$2\frac{5}{8}$	3	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	BORDER	BLANK STD.
21 x 15	$\frac{3}{8}$	B5-2115

COLOR: LEGEND AND BORDER WHITE (REFLECTORIZED)  
BACKGROUND BLUE (REFLECTORIZED)

M4-2(L)

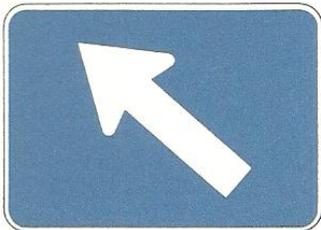


21 x 15

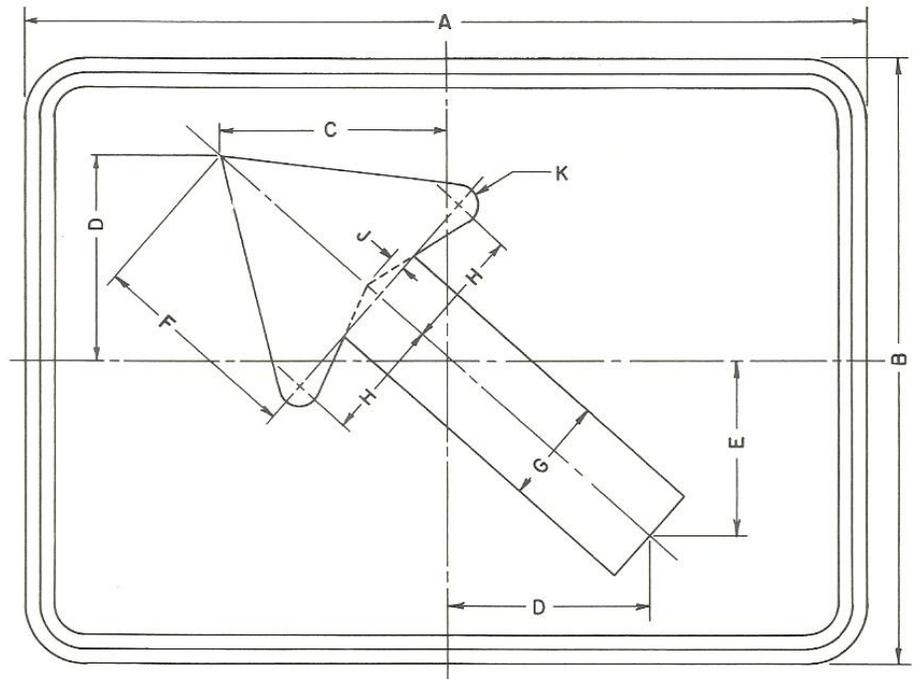
SECTION 706-4 (Cont.)

(c) 45° Angle Directional Arrow Marker, Left (M 4-2 (L)),  
(M 4-2-1 (L))

M4-2-1(L)



21 x 15



M4-2(L)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
21 x 15	21	15	5 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>16</sub>	4 <sup>5</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	3	3 <sup>3</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD.
21 x 15	3 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	B5-2115

COLOR: LEGEND AND BORDER BLACK (NON-REFLECTORIZED)  
BACKGROUND WHITE (REFLECTORIZED)

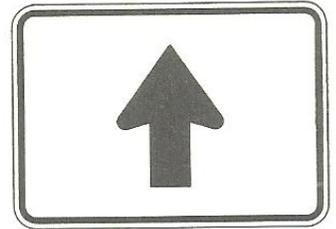
M4-2-1(L)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
21 x 15	21	15	5 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>16</sub>	4 <sup>5</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>8</sub>	3	3 <sup>3</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>

SIGN SIZE	BOR-DER	BLANK STD.
21 x 15	3 <sup>3</sup> / <sub>8</sub>	B5-2115

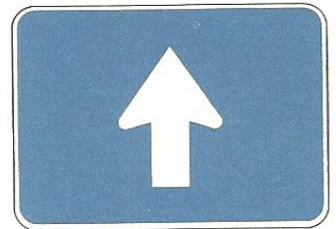
COLOR: LEGEND AND BORDER WHITE (REFLECTORIZED)  
BACKGROUND BLUE (REFLECTORIZED)

M4-3

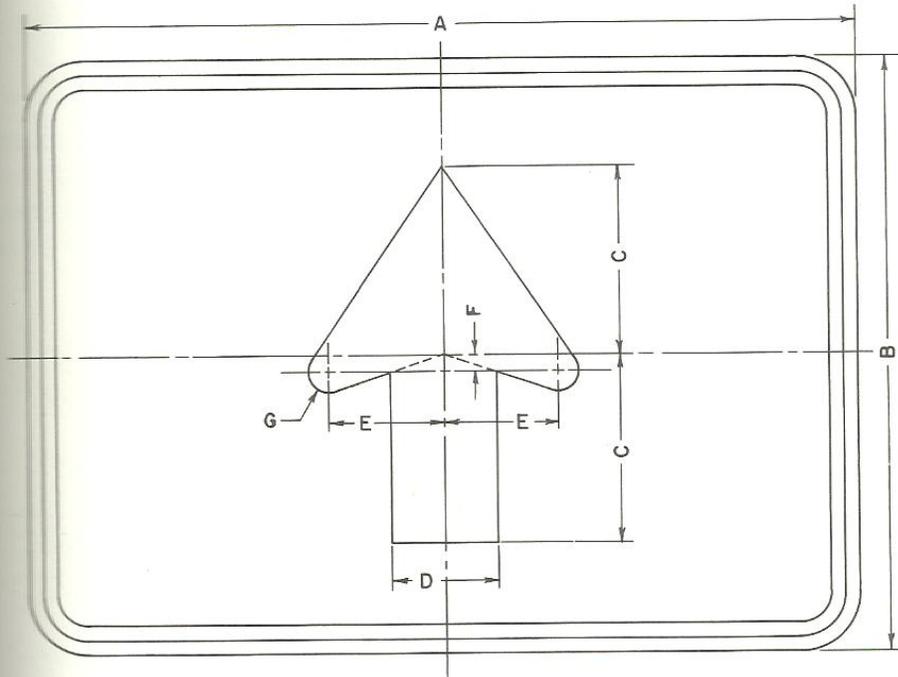


21 x 15

M4-3-1



21 x 15



M4-3

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
21 x 15	21	15	4 $\frac{3}{4}$	2 $\frac{5}{8}$	2 $\frac{7}{8}$	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	MAR-GIN	BOR-DER	BLANK STD
21 x 15	$\frac{3}{8}$	$\frac{3}{8}$	B5-2115

COLOR · LEGEND AND BORDER      BLACK (NON-REFLECTORIZED)  
 BACKGROUND      WHITE (REFLECTORIZED)

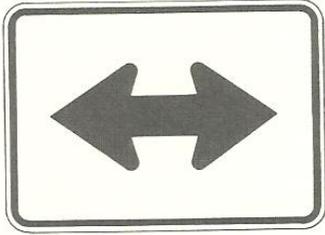
M4-3-1

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
21 x 15	21	15	4 $\frac{3}{4}$	2 $\frac{5}{8}$	2 $\frac{7}{8}$	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	BOR-DER	BLANK STD
21 x 15	$\frac{3}{8}$	B5-2115

COLOR · LEGEND AND BORDER      WHITE (REFLECTORIZED)  
 BACKGROUND      BLUE (REFLECTORIZED)

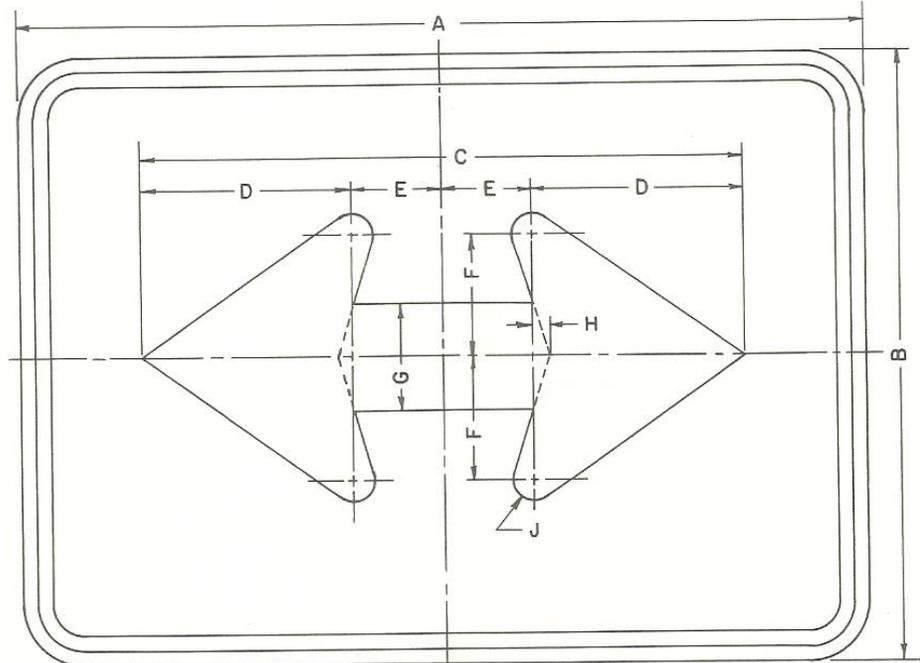
M4-4



21 x 15

SECTION 706-4 (Cont.)

(e) Directional Arrow Marker, Right and Left (M 4-4)



COLOR · LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	
21 x 15	21	15	15	$5 \frac{1}{4}$	$2 \frac{1}{4}$	3	$2 \frac{5}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	

SIGN SIZE	MAR- GIN	BOR- DER	BLANK STD.
21 x 15	$\frac{3}{8}$	$\frac{3}{8}$	B5-2115



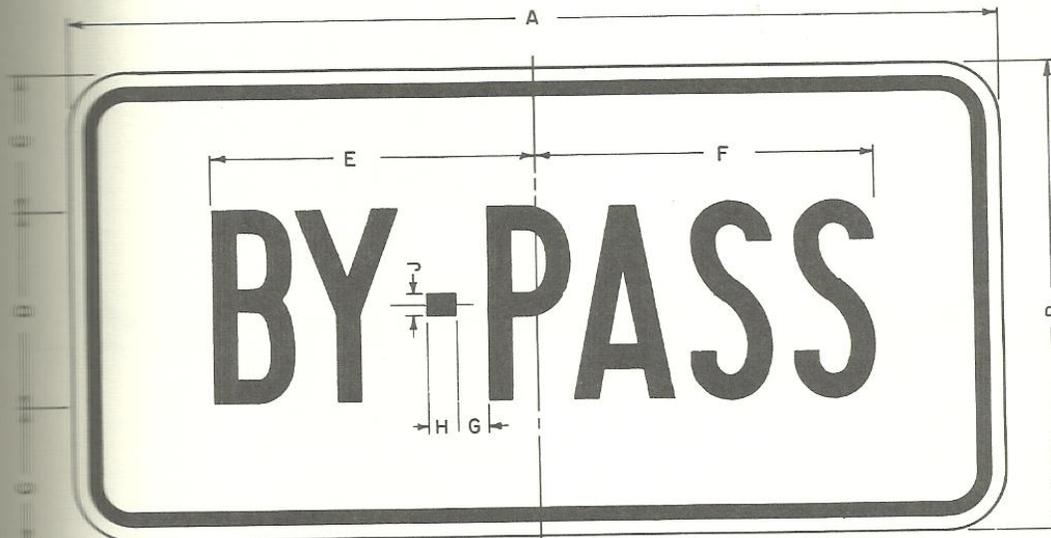
24 x 12

**SECTION 706-5. ALTERNATE ROUTE MARKER GROUP  
(M 5 SERIES)**

**Justification.** These markers, with a black legend on a white background, are authorized for U. S. and Pennsylvania Routes, to be used above a Route Marker on a route designated as an alternate to a route of the same number between two points on that route.

**By-Pass Marker (M 5-3)**

**Justification.** This marker is authorized for use to designate an alternate route that branches from the regularly numbered route through a congested area, bypasses a part of the city or congested area, and rejoins the regularly numbered route beyond the area.



COLOR • LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
24 x 12	24	12	3 1/2	5	9 5/16	9 11/16	13 1/16	3/4	9/16

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24 x 12	B	3/8	3/8	B5-2412

M5-5

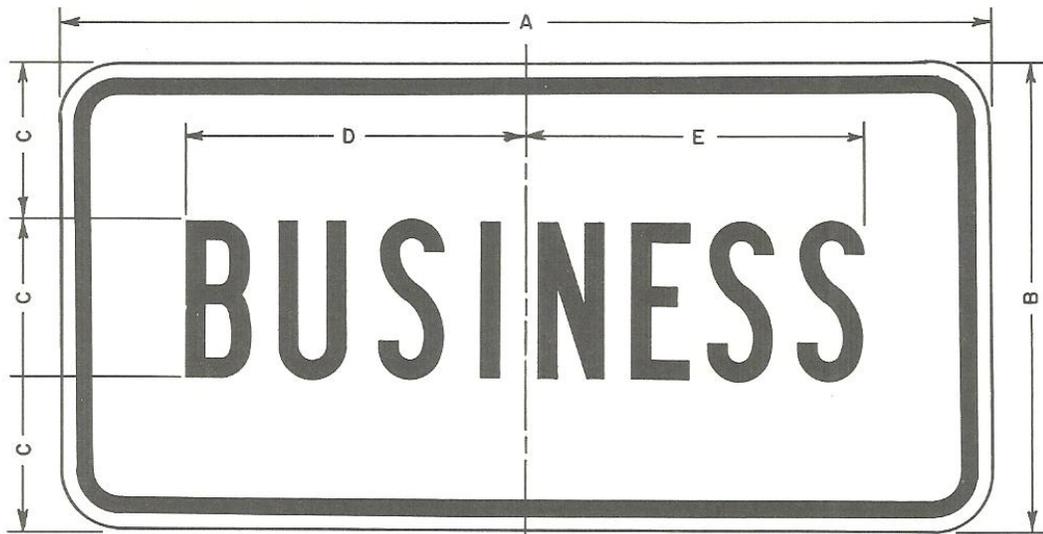


24 x 12

SECTION 706-5 (Cont.)

(b) Business Marker (M 5-5)

(1) Justification. This marker is authorized for use to designate an alternate route that branches from a regularly numbered route, passes through the business portion of the city and rejoins the regularly numbered route beyond the city.



COLOR, LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
24 x 12	24	12	4	$8\frac{3}{8}$	$8\frac{3}{4}$

SIGN SIZE	SERIES LINE	MAR- GIN	BOR- DER	BLANK STD.
24 x 12	B	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412



M5-6

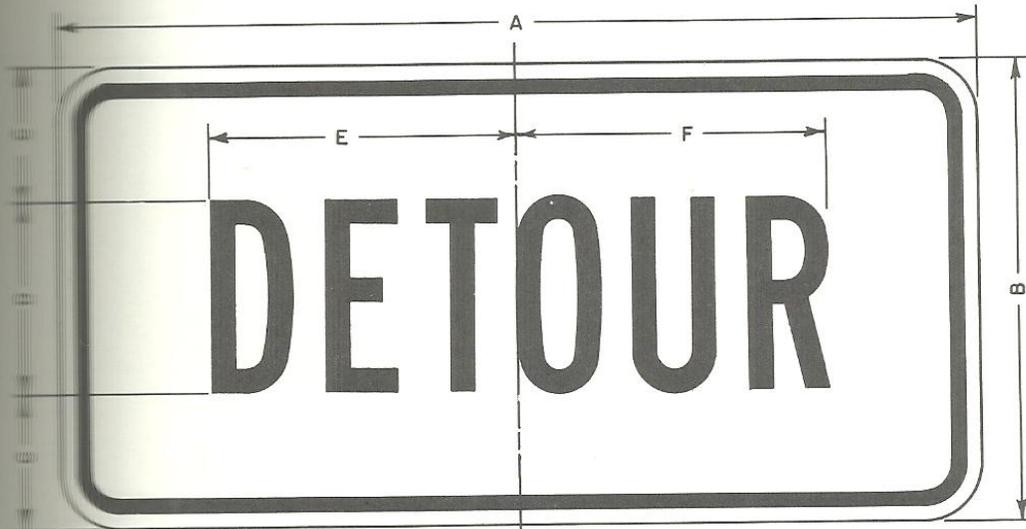


24 x 12

7065 (Cont.)

**Detour Marker (M 5-6)**

**Justification.** This marker is authorized for use to designate temporary routing of traffic due to a temporary closing or blocking of a normally marked route.



COLOR : LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24 x 12	24	12	3 1/2	5	8 1/16	8 3/8

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24 x 12	B	3/8	3/8	B5-2412

M5-8

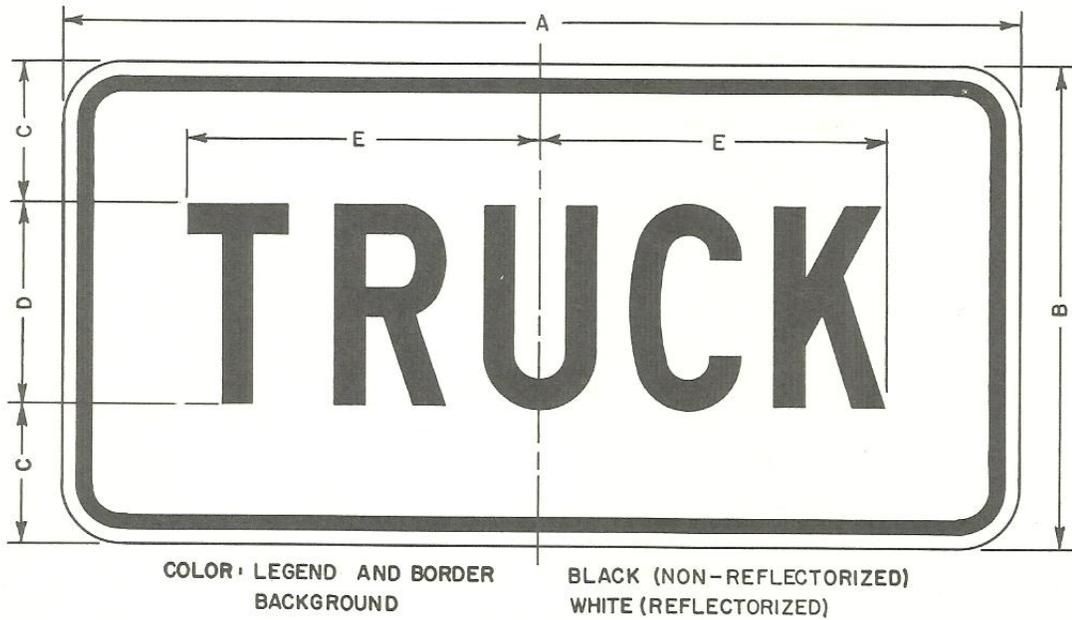


24 x 12

SECTION 706-5 (Cont.)

(d) Truck Marker (M 5-8)

(1) Justification. This marker is authorized to designate a route which is officially designated for trucks to by-pass an area which is congested or where height or weight limitations have been established.



SIGN SIZE	DIMENSIONS				
	A	B	C	D	E
24 x 12	24	12	3 1/2	5	8 5/8

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24 x 12	C	3/8	3/8	B5-2412

**SECTION 706-6. CARDINAL DIRECTION MARKER GROUP  
(M 6 SERIES)**

(1) **Justification.** These markers, with black legend on a white background for U. S. and Pennsylvania Routes and white legend and blue background for Interstate Routes, are authorized to indicate the general direction of the entire route. These markers shall be mounted above the Route Marker, or Alternate Markers, placed in advance of or at an intersection where a turn must be made to follow the indicated route, or as confirming markers placed beyond intersections or as reassurance markers between intersections at intervals as needed.

The 24 inch by 12 inch size shall be used with the 24 inch and the 30 inch Route Markers and the 30 inch by 15 inch size shall be used with the 36 inch and the 45 inch Route Markers.

M6-1



24 x 12'

SECTION 706-6 (Cont.)

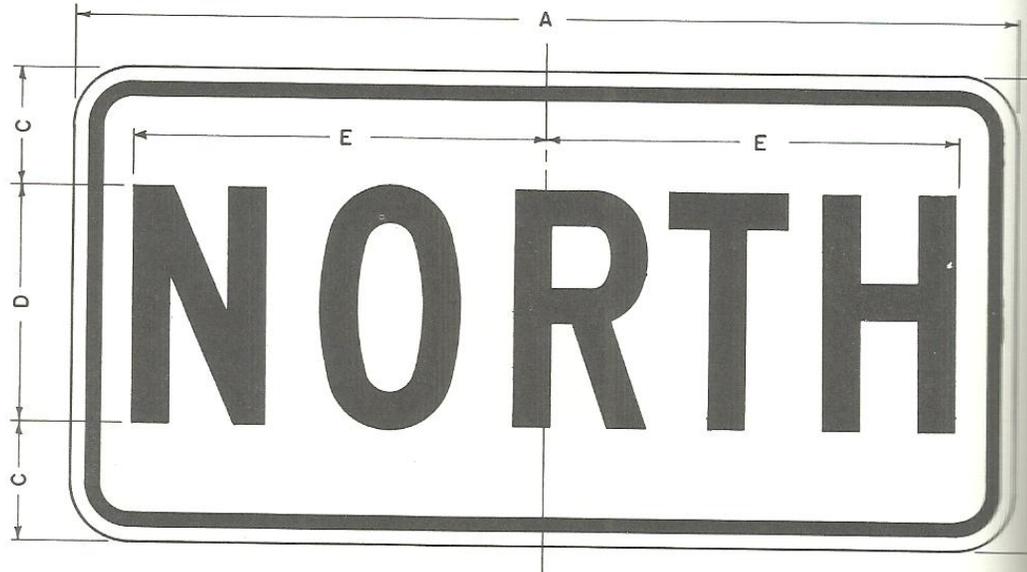
(a) Cardinal Direction Marker, North (M 6-1) (M 6-1-1)

M6-1-1



24 x 12

30 x 15



M6-1

SIGN SIZE	DIMENSIONS					SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
	A	B	C	D	E				
24 x 12	24	12	3	6	10 $\frac{1}{2}$	C	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412

COLOR : LEGEND AND BORDER BACKGROUND

BLACK (NON- REFLECTORIZED)  
WHITE (REFLECTORIZED)

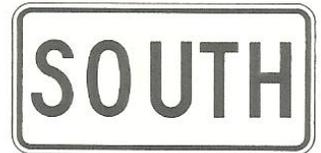
M6-1-1

SIGN SIZE	DIMENSIONS					SERIES LINE	BOR-DER	BLANK STD.
	A	B	C	D	E			
24 x 12	24	12	3	6	10 $\frac{1}{2}$	C	$\frac{3}{8}$	B5-2412
30 x 15	30	15	4	7	12 $\frac{3}{16}$	C	$\frac{1}{2}$	B5-3015

COLOR : LEGEND AND BORDER BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

M6-2

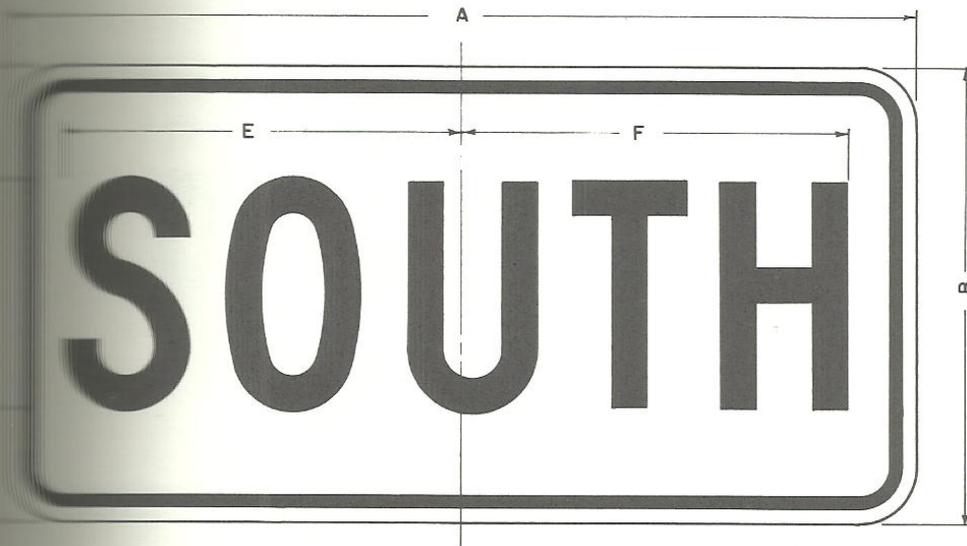


24 x 12

M6-2-1



24 x 12  
30 x 15



M6-2

SIGN SIZE	DIMENSIONS						SERIES LINE	MARGIN	BORDER	BLANK STD
	A	B	C	D	E	F				
24 x 12	24	12	3	6	10 $\frac{1}{2}$	10 $\frac{1}{16}$	C	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412

COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

M6-2-1

SIGN SIZE	DIMENSIONS						SERIES LINE	BORDER	BLANK STD
	A	B	C	D	E	F			
24 x 12	24	12	3	6	10 $\frac{1}{2}$	10 $\frac{1}{16}$	C	$\frac{3}{8}$	B5-2412
30 x 15	30	15	4	7	12 $\frac{1}{4}$	11 $\frac{3}{4}$	C	$\frac{1}{2}$	B5-3015

COLOR: LEGEND AND BORDER  
BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

M6-3



24 x 12

M6-3-1



24 x 12

30 x 15

SECTION 706-6 (Cont.)

(c) Cardinal Direction Marker, East (M 6-3) (M 6-3-1)



M6-3

SIGN SIZE	DIMENSIONS						SERIES LINE I	MAR- GIN	BOR- DER	BLANK STD
	A	B	C	D	E	F				
24 x 12	24	12	3	6	$7\frac{11}{16}$	8	C	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412

COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

M6-3-1

SIGN SIZE	DIMENSIONS						SERIES LINE I	BOR- DER	BLANK STD
	A	B	C	D	E	F			
24 x 12	24	12	3	6	$7\frac{11}{16}$	8	C	$\frac{3}{8}$	B5-2412
30 x 15	30	15	4	7	9	$9\frac{3}{8}$	C	$\frac{1}{2}$	B5-3015

COLOR: LEGEND AND BORDER  
BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

M6-4



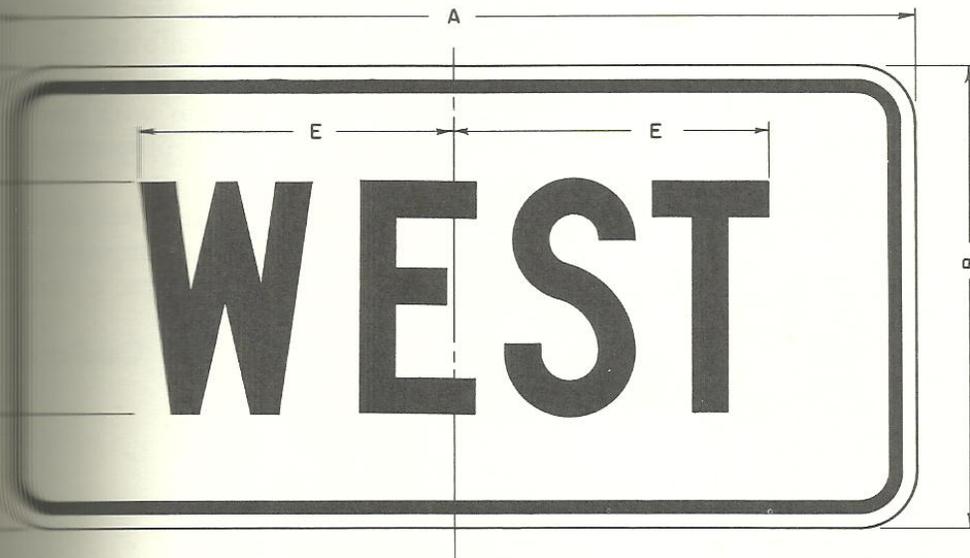
24 x 12

M6-4-1



24 x 12

30 x 15



M6-4

SIGN SIZE	DIMENSIONS					SERIES LINE	MARGIN	BORDER	BLANK STD
	A	B	C	D	E				
24 x 12	24	12	3	6	8 $\frac{3}{8}$	C	$\frac{3}{8}$	$\frac{3}{8}$	B5-2412

COLOR: LEGEND AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

M6-4-1

SIGN SIZE	DIMENSIONS					SERIES LINE	BORDER	BLANK STD
	A	B	C	D	E			
24 x 12	24	12	3	6	8 $\frac{3}{8}$	C	$\frac{3}{8}$	B5-2412
30 x 15	30	15	4	7	9 $\frac{3}{4}$	C	$\frac{1}{2}$	B5-3015

COLOR: LEGEND AND BORDER  
BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

M7-1



24 x 12

SECTION 706-7. TRAILBLAZER GROUP (M 7 SERIES)

(a) "To" Marker (M 7-1)

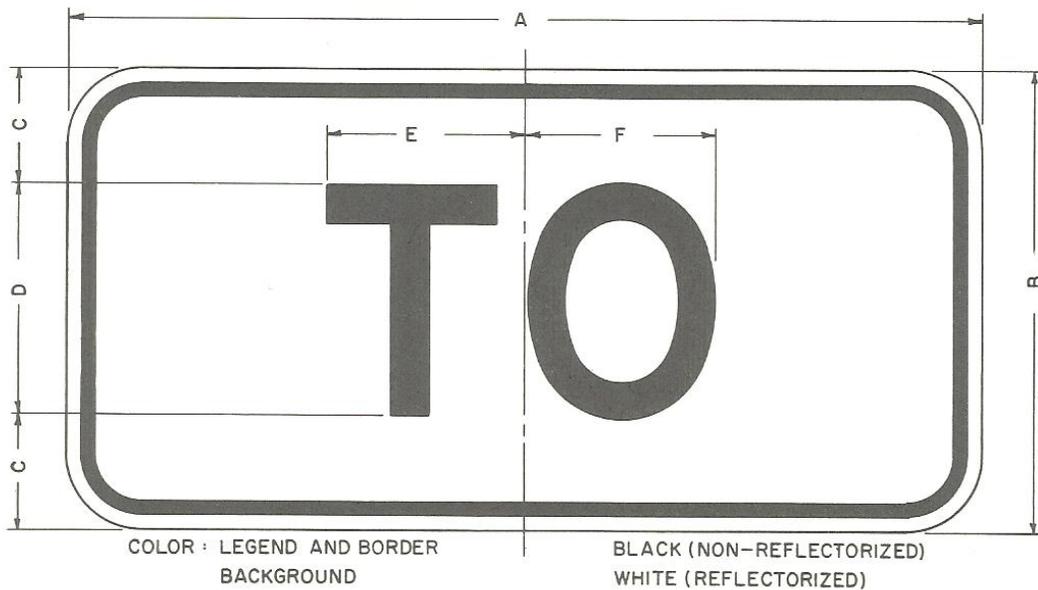
(1) **Justification.** This marker with black legend on a white background is authorized for use, when approval of the Secretary of Highway is first had and obtained, where it is desirable to provide guidance information connecting expressways or bridges, which are part of an expressway facility, over other highways or streets. "Trailblazers" are erected at the nearest or most convenient point of access and at strategic locations along the connecting route.

This marker when used shall be mounted above the Route Marker assembly or other approved symbol to constitute a "Trailblazer."

When used in conjunction with a Route Marker, it shall be a standard 24 inches by 12 inches; when used in conjunction with some other approved symbol, the size may be reduced to be in proportion to the symbol.

This marker is used to indicate that the route on which the marker is posted is not part of the system indicated by its accompanying route marker, but that the motorist is merely being directed over a connecting route to the route indicated.

The assembly may include Directional Arrow and Cardinal Directional marker, if required.



SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24 x 12	24	12	3	6	5 <sup>3</sup> / <sub>16</sub>	5

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24 x 12	E	<sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>	B5-2412



**SECTION 706-8. MEMORIAL MARKER GROUP (M 8 SERIES)**

On highways designated by the legislature as commemorative of an historical event or personage, the Secretary of Highways shall authorize the design and location of appropriate markers, but in no case shall they be placed along routes on the Interstate System.

## SECTION 707. DESTINATION AND DISTANCE SIGNS (D SERIES)

Destination and Distance signs are authorized for use to inform motorists of the destinations that can be reached by way of particular routes or streets.

These signs shall have a black legend on a white reflectorized background or a white reflectorized legend on a green background which may be nonreflectorized or reflectorized. On any particular highway, color and reflectorization should be consistently uniform.

This classification is further subdivided into the following categories:

1. Destination signs.
2. Distance signs.
3. Street Name signs.
4. Parking Area signs.

### SECTION 707-1. DESTINATION GROUP (D 1 SERIES)

Destination signs are generally warranted at the intersections of U.S. or Pennsylvania numbered routes, major unnumbered routes, important rural roads or urban streets.

Preferably not more than two names should be used, one name indicating the destination to the left and one indicating the destination to the right in that order. Exceptions may be made when the intersecting highway carries more than one numbered route, where one destination may be shown for each route.

The vertical arrow should be used only at intersections where overlapping numbered routes, each carrying a destination, split or at "T" or "Y" intersections of major unnumbered routes where the numbered route turns.

Destination signs should generally be located in advance of the intersection. On urban roads and streets they may be located at the intersection.

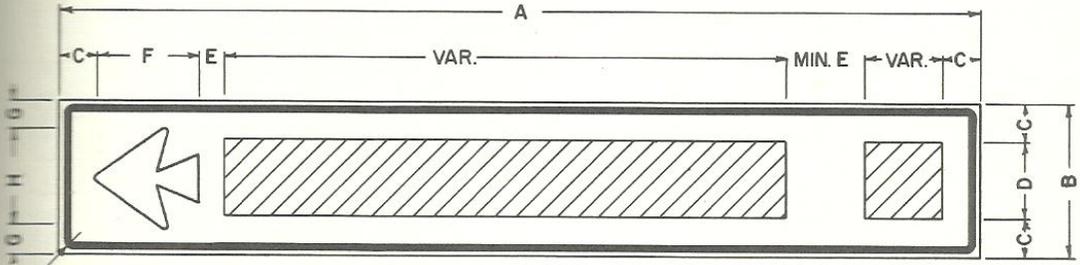
Height and lateral placement shall be in accordance with Section 703.

48 x 8  
72 x 12

(a) Single Line Destination Sign (D 1-1)

(1) Justification. Signs of the 72 inch size are authorized for use on numbered routes and other major routes where a single destination is indicated.

Signs of the 48 inch by 8 inch size are authorized for use on less important rural roads and on urban streets where a single destination is indicated.



COLOR • LEGEND, ARROWS AND BORDER BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
48x8	48	8	2	4	1 1/4	5 3/8	1 1/2	5	7/16
72x12	72	12	3	6	1 7/8	8 1/16	2 1/4	7 1/2	3/4

SIGN SIZE	SERIES LINE	MAR-GIN	BOR-DER	BLANK STD.
72x12	VAR.	3/8	1/2	B5-7212(P)

DI-2

LANCASTER 13  
READING 19

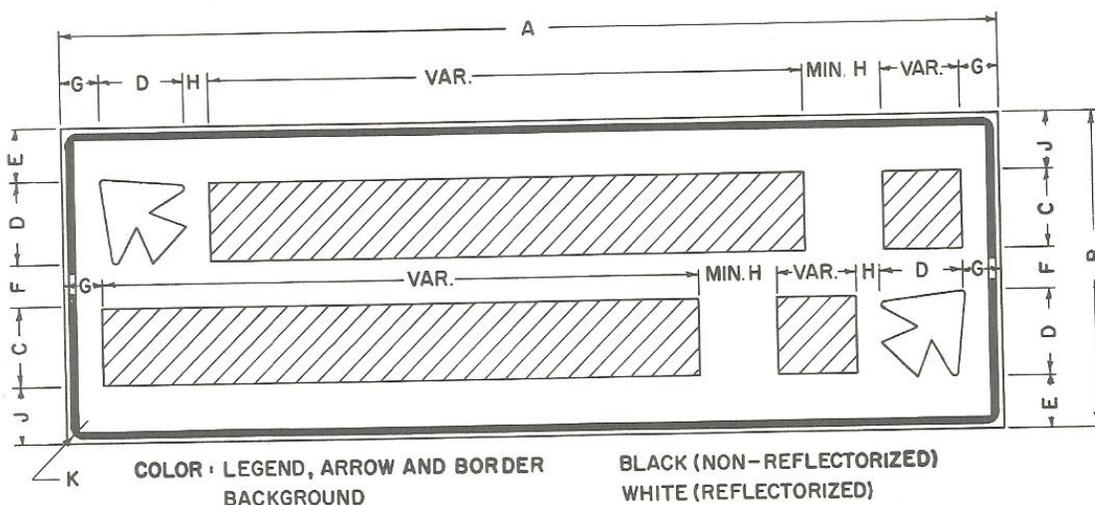
48 x 16  
72 x 24

SECTION 707-1 (Cont.)

(b) Double Line Destination Sign (D 1-2)

(1) Justification. Signs of the 72 inch by 24 inch size are authorized for use on numbered routes and other major routes where two destinations are shown.

Signs of the 48 inch by 16 inch size are authorized for use on less important rural roads and on urban streets where two destinations are shown.



SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
48x16	48	16	4	4 1/4	2 3/4	2 1/8	2	1 1/4	2 7/8	7/16
72x24	72	24	6	6 3/8	4 1/8	3 3/16	3	1 7/8	4 5/16	3/4

SIGN SIZE	SERIES LINES		MAR-GIN	BOR-DER	BLANK STD.
	1	2			
48x16	VAR.	VAR.	3/8	3/8	B5-4816 (P)
72x24	VAR.	VAR.	3/8	1/2	B5-7224 (P)



48 x 24

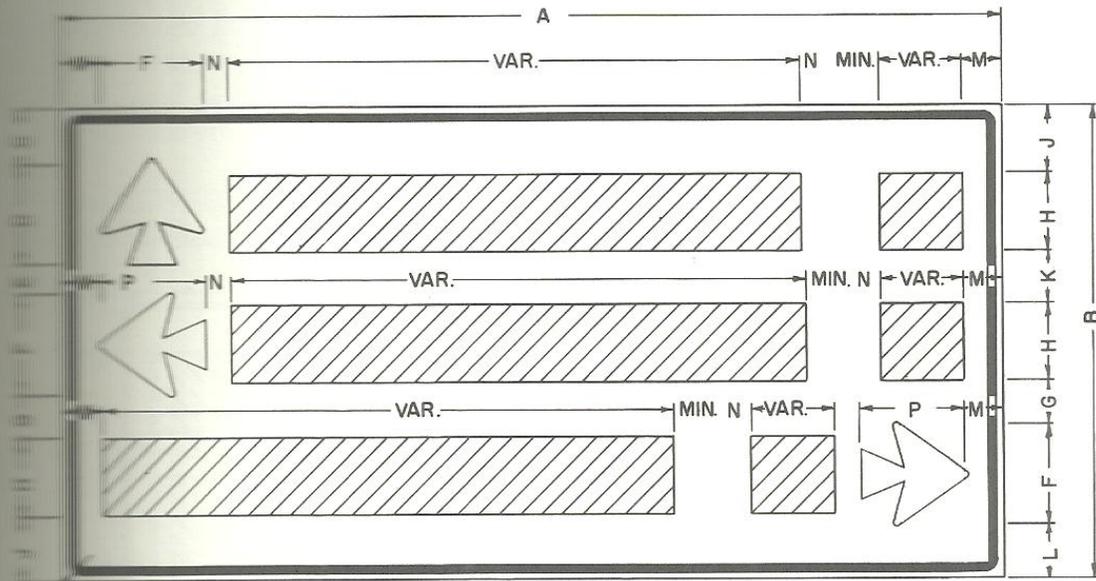
72 x 36

707-1 (Cont.)

**Highway Destination Sign (D 1-3)**

**Justification.** Signs of the 72 inch by 36 inch size are authorized on numbered routes and other major routes where destinations are shown.

Signs of the 48 inch by 24 inch size are authorized for use on less traveled roads and on urban streets where three destinations are shown.



COLOR : LEGEND, ARROWS AND BORDER  
BACKGROUND

BLACK (NON-REFLECTORIZED)  
WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS														
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
48x24	48	24	3 1/16	4 5/8	1 13/16	5	2 1/8	4	3 3/8	2 5/8	2 7/8	2	1 1/4	7/16	5 3/8
72x36	72	36	4 5/8	6 15/16	2 11/16	7 1/2	3 3/16	6	5 1/16	3 15/16	4 5/16	3	1 7/8	3/4	8 1/16

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
48 x 24	VAR	VAR	VAR	3/8	3/8	B5-4824(P)
72 x 36	VAR	VAR	VAR	3/8	1/2	B5-7236(P)



### STREET NAME GROUP (D 3 SERIES)

**Justification.** Street Name signs are authorized for use by municipalities to identify names of streets for both motorists and pedestrians. They should be erected and maintained by the municipality, and should be placed at all street intersections regardless of other route marking that may be present. Signs should have black legend on a white background or white legend on a black or green background.

The street name shall appear in capital lettering at least 3 inches high, and, on more important streets, not less than 4 inches high. Supplementary lettering to indicate the type of street (e.g., Street, Avenue, Road, etc.) or section of city (e.g., N.W.) may be in smaller lettering, at least 2 inches high. Unusual abbreviations are acceptable except for the street name itself.

The Street Name sign should preferably be reflectorized or illuminated.

In business districts Street Name signs shall be placed at least on diagonally opposite corners so that they will be on the far right-hand side of the intersection for traffic on the more important street. Signs naming both streets should be erected at each location. They should be mounted with their faces parallel to the streets they name, as close to the corner as practicable with the nearest part of each sign not less than 1 foot, and preferably 2 feet, back from both curb lines. They should be not less than 7 inches above the top of the curb, either at the same height or with one immediately above the other in a street position.

In residence districts Street Name signs should be mounted as in business districts, but a single sign on each intersection will ordinarily suffice on all but the more important thoroughfares.

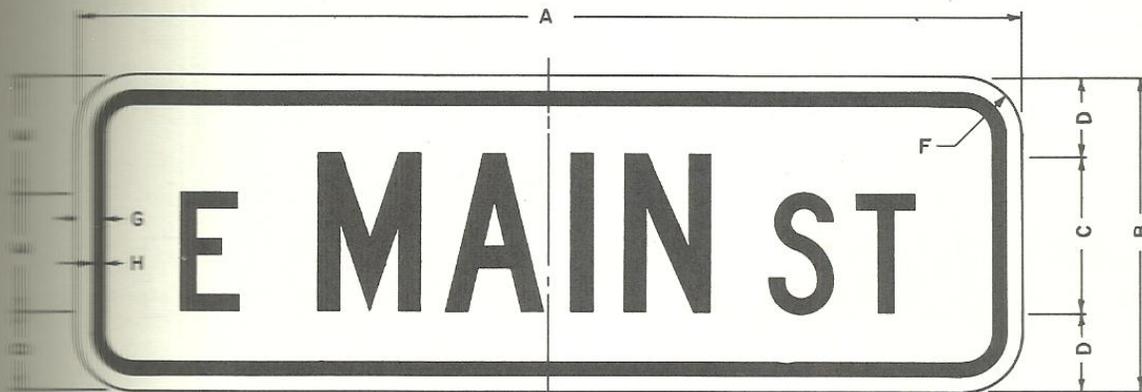
The following is a typical example:

Street Name Sign (D 3)

D 3



24 x 8



COLOR: LEGEND AND BORDER BACKGROUND      BLACK (NON-REFLECTORIZED)  
 WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
24x8	24	8	4	2	3	1½	¾	¾



30 x 24

SECTION 707-4. PARKING AREA GROUP (D 4 SERIES)

(a) Parking Area Sign (D 4-1)

In a congested urban area where an off-street public parking lot or garage is available, it is often desirable to guide traffic to such a nearby facility, thus minimizing aimless travel on the part of drivers unacquainted with the area.

(1) **Justification.** The Parking Area sign is authorized for use where it is desired to show the direction to a nearby public parking area. The legend shall be green on a white background. If used, it should be erected on major thoroughfares at the nearest point of access to the parking facility and elsewhere where it can help relieve the local streets of traffic seeking a place to park. In general, it should not be used more than three or four blocks from the parking area. It shall be mounted in accordance with the general specifications for the erection of signs (Section 703).

No warrants have been established for this sign in terms of the size of the parking facility, its accessibility, or whether a parking fee is charged. Local traffic authorities will have to determine the need for it under the conditions existing in the area concerned. Under some circumstances the sign may be useful in rural areas where crowds congregate for special events. It may also be used in Rest Areas, to direct traffic to desired parking location.



COLOR: LEGEND, ARROW AND BORDER GREEN (REFLECTORIZED)  
BACKGROUND WHITE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
30x24	30	24	9	3	7 $\frac{1}{4}$	15	4 $\frac{1}{2}$	5 $\frac{7}{8}$	10 $\frac{15}{16}$	5	2 $\frac{3}{4}$	2 $\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{2}$

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
30x24	E	$\frac{3}{8}$	$\frac{5}{8}$	B5-3024



## SECTION 708. INFORMATION GROUP (I SERIES)

Of interest to the traveler, though not directly necessary for his ~~purpose~~, are numerous kinds of information that may properly be conveyed by information signs. They include such information as Rest Areas, ~~roadways~~, city limits, and other political boundaries.

The classification of Information Signs, as numbered and illustrated in the following subsections, is further subdivided into the following groups:

1. Rest Area
2. Name
3. Measured Mile Course
4. Legislative Route and Station Markers
5. Telephone

I 1-1



60 x 60

SECTION 708-1. REST AREA GROUP (I 1 SERIES)

It is common practice on rural highways to provide parks or rest areas where a traveler may stop safely from passing traffic for rest or picnicking.

Signs indicating such areas shall have green legend on a white background.

(a) Roadside Rest Sign (I 1-1)

(1) Justification. This sign is authorized for use at a roadside rest area at which there are provided facilities for a number of vehicles to park, tables for eating, water and toilets.



COLOR: LEGEND AND BORDER BACKGROUND GREEN (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	
60x60	60	9	8	7	4	25 <sup>13</sup> / <sub>16</sub>	15	13 <sup>1</sup> / <sub>4</sub>	24 <sup>3</sup> / <sub>4</sub>	3	

SIGN SIZE	SERIES LINES				MARGIN	BORDER	BLANK STD.
	1	2	3	4			
60x60	D	E	B	B	1	1 <sup>1</sup> / <sub>4</sub>	B3-60

SECTION 708-1 (Cont.)

(b) Roadside Rest (—) Mile Sign (I 1-2)

(1) Justification. This sign is authorized for use at the appropriate distance in advance of a roadside rest area.



24 x 30



COLOR: LEGEND AND BORDER GREEN (NON-REFLECTORIZED)  
BACKGROUND WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
24x30	24	30	4	6	8 <sup>11</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>8</sub>	8	2	1/2	5

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
	24x30	B	C			

11-3



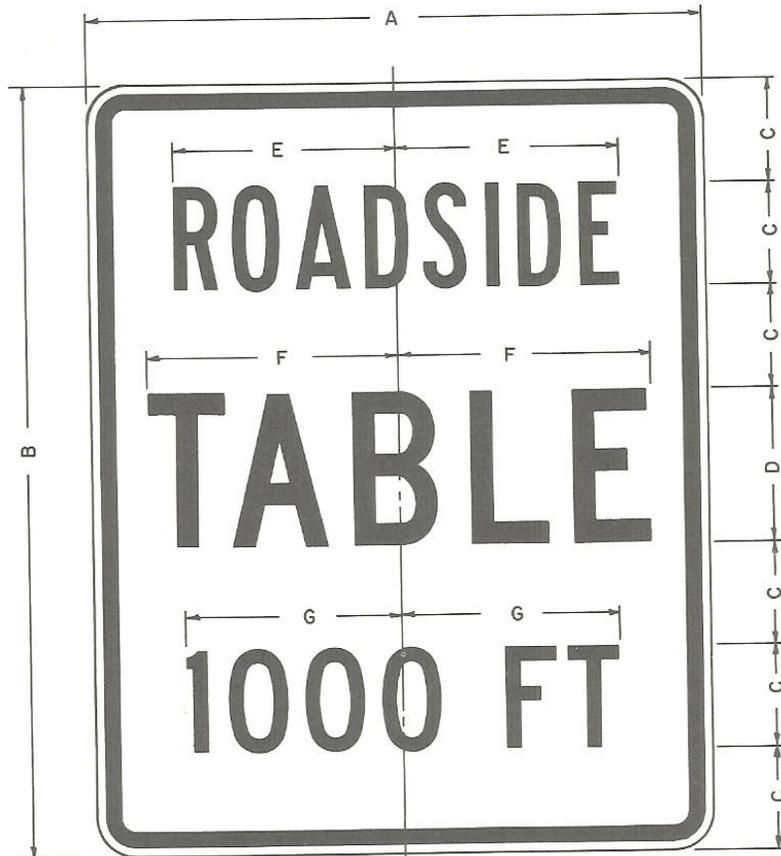
24 x 30

SECTION 708-1 (Cont.)

(c) Roadside Table 1000 Ft. Sign (I 1-3)

(1) Justification. This sign is authorized for use at the appropriate distance in advance of a roadside pull-off area at which a table has been placed to accommodate travelers.

It should not be used in advance of a Roadside Rest.



COLOR: LEGEND AND BORDER GREEN (NON-REFLECTORIZED)  
BACKGROUND WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
24x30	24	30	4	6	8 <sup>11</sup> / <sub>16</sub>	9 <sup>13</sup> / <sub>16</sub>	8 <sup>7</sup> / <sub>16</sub>

SIGN SIZE	SERIES LINES			MAR-GIN	BOR-DER	BLANK STD.
	1	2	3			
	24x30	B	C	C	3/8	5/8



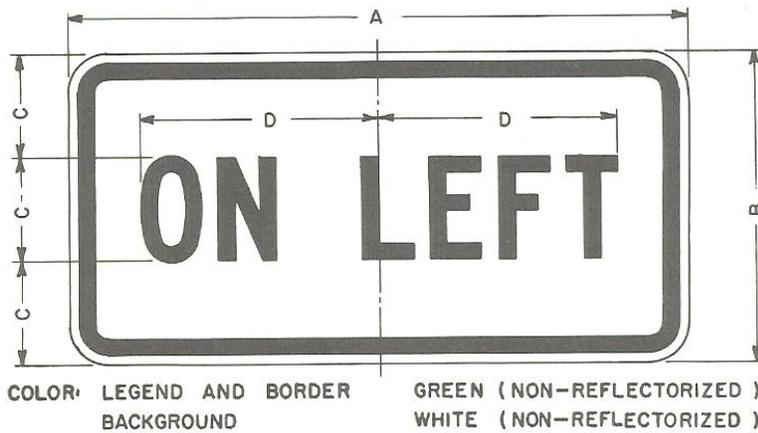
24 x 12

SECTION 708-1 (Cont.)

(d) On Left Sign (I 1-3-1)

(1) **Justification.** This sign is authorized for use below the Roadside Rest (—) Mile Sign or the Roadside Table 1000 Ft. Sign.

It shall only be used on two lane highways. On multiple lane highways no mention of any rest or table area shall be made if the area is not on the right side of the road, unless the highway has been designed to provide a standby lane and protected turning movement.



SIGN SIZE	DIMENSIONS			
	A	B	C	D
24x12	24	12	4	9 <sup>3</sup> / <sub>16</sub>

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24x12	C	<sup>3</sup> / <sub>8</sub>	<sup>5</sup> / <sub>8</sub>	B5-2412

11-3-2

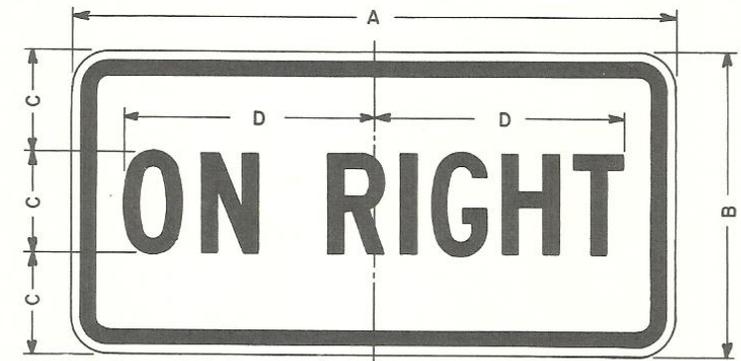


24 x 12

SECTION 708-1 (Cont.)

(e) On Right Sign (I 1-3-2)

(1) Justification. This sign is authorized for use below the Roadside Rest (—) Mile Sign or the Roadside Table-1000 Ft. Sign.



COLOR: LEGEND AND BORDER GREEN (NON-REFLECTORIZED)  
 BACKGROUND WHITE (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS			
	A	B	C	D
24x12	24	12	4	$10\frac{3}{16}$

SIGN SIZE	SERIES	MAR- GIN	BOR- DER	BLANK STD.
	LINE			
24x12	C	$\frac{3}{8}$	$\frac{5}{8}$	B5-2412

## SECTION 708-2. NAME GROUP (I 2 SERIES)

Signs giving information as to names of cities, boroughs and first class post offices may be erected at the corporate limits of the political subdivisions on U.S. or Pennsylvania numbered routes. If the community does not lie on a numbered route, they may be erected on major legislative routes.

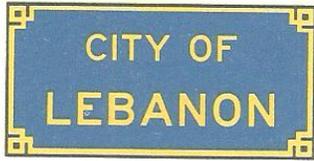
Unincorporated built-up areas which have a post office or a generally recognized name may be identified as villages on these signs.

Signs in this series shall have a gold legend on a blue background. They should normally have 6 inch letters but 5 inch letters are authorized to accommodate a longer name.

Local authorities may request these signs through the Highway Department District Traffic Engineer who shall determine the number and location of any approved for State Highways.

Local authorities are authorized to erect these signs on streets or highways under their jurisdiction.

I2-1

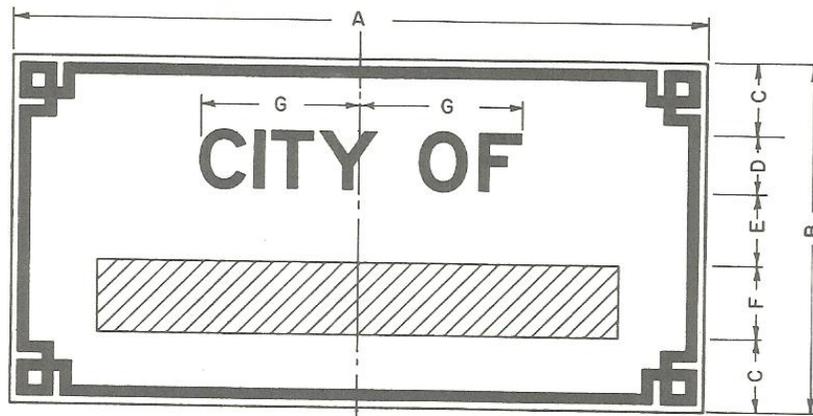


48 x 24

SECTION 708-2 (Cont.)

(a) City Name Sign (I 2-1)

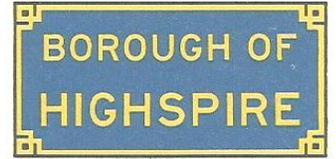
(1) Justification. This sign is authorized for use on U.S. or Pennsylvania numbered routes at entrances to cities. It shall be placed at the corporate limits of the city.



COLOR: LEGEND AND BORDER GOLD (REFLECTORIZED)  
 BACKGROUND BLUE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							SERIES		MAR-GIN	BOR-DER	BLANK STD.
	A	B	C	D	E	F	G	LINE 1	LINE 2			
48x24	48	24	5	4	4	6	11 $\frac{5}{8}$	E	VAR.	$\frac{1}{2}$	$\frac{3}{4}$	B5-4824
48x24	48	24	5	4	5	5	11 $\frac{5}{8}$	E	VAR.	$\frac{1}{2}$	$\frac{3}{4}$	B5-4824



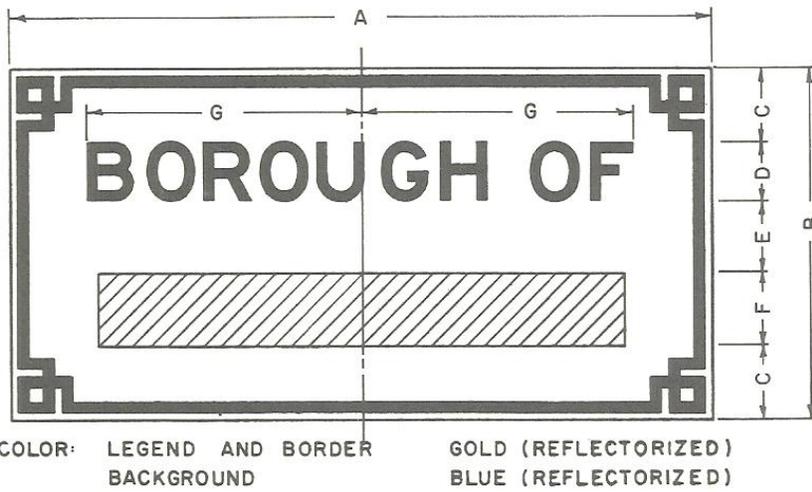


48 x 24

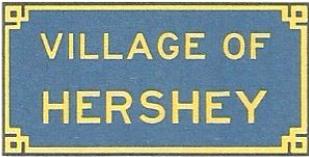
SECTION 708-2 (Cont.)

(b) Borough Name Sign (I 2-2)

(1) Justification. This sign is authorized for use on U.S. and Pennsylvania numbered routes at entrances to boroughs. It may be used on Legislative Routes when there are no numbered routes. It shall be placed within the corporate limits of the borough.



SIGN SIZE	DIMENSIONS							SERIES		MAR- GIN	BOR- DER	BLANK STD.
	A	B	C	D	E	F	G	LINE 1	LINE 2			
48x24	48	24	5	4	4	6	19 <sup>5</sup> / <sub>16</sub>	E	VAR.	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4824
48x24	48	24	5	4	5	5	19 <sup>5</sup> / <sub>16</sub>	E	VAR.	<sup>1</sup> / <sub>2</sub>	<sup>3</sup> / <sub>4</sub>	B5-4824



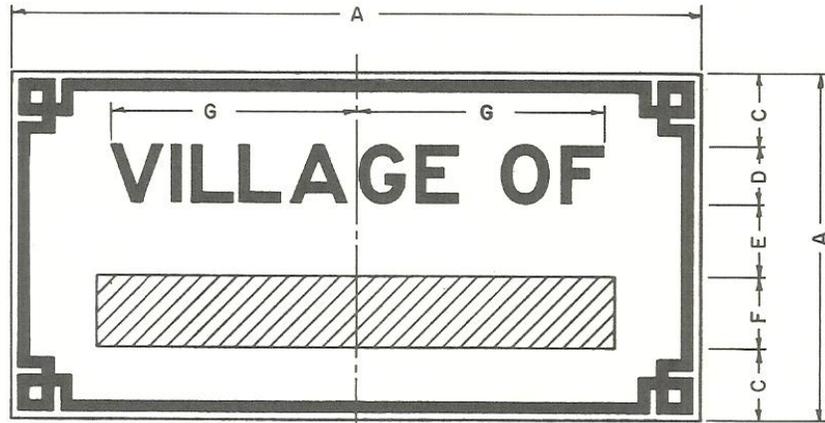
48 x 24

SECTION 708-2 (Cont.)

(c) Village Name Sign (I 2-3)

(1) **Justification.** This sign is authorized for use on U.S. and Pennsylvania numbered routes at the entrances to villages. It may be used on Legislative Routes when there are no numbered routes.

Unincorporated built-up areas which are identified by a post office or a generally recognized name may be named as villages on this sign.



COLOR: LEGEND AND BORDER GOLD (REFLECTORIZED)  
 BACKGROUND BLUE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							SERIES		MAR-GIN	BOR-DER	BLANK STD.
	A	B	C	D	E	F	G	LINE 1	LINE 2			
48x24	48	24	5	4	4	6	17 <sup>7</sup> / <sub>8</sub>	E	VAR.	1/2	3/4	B5-4824
48x24	48	24	5	4	5	5	17 <sup>7</sup> / <sub>8</sub>	E	VAR.	1/2	3/4	B5-4824

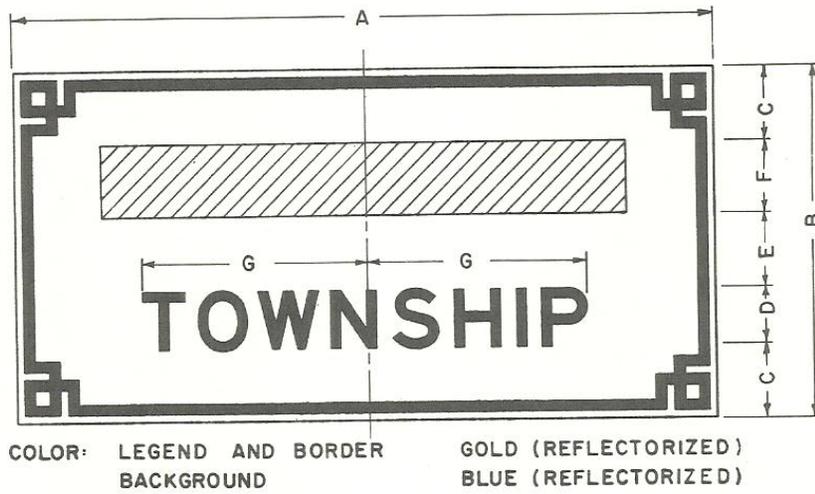


48 x 24

SECTION 708-2 (Cont.)

(d) Township Name Sign (12-4)

(1) Justification. This sign is authorized for use on U.S. and Pennsylvania numbered routes at entrances to First Class Townships. It may be used on Legislative Routes when there are no numbered routes.



SIGN SIZE	DIMENSIONS							SERIES		MARGIN	BORDER	BLANK STD.
	A	B	C	D	E	F	G	LINE 1	LINE 2			
48x24	48	24	5	4	4	6	15 1/4	VAR.	E	1/2	3/4	B5-4824
48x24	48	24	5	4	5	5	15 1/4	VAR.	E	1/2	3/4	B5-4824



72 x 48

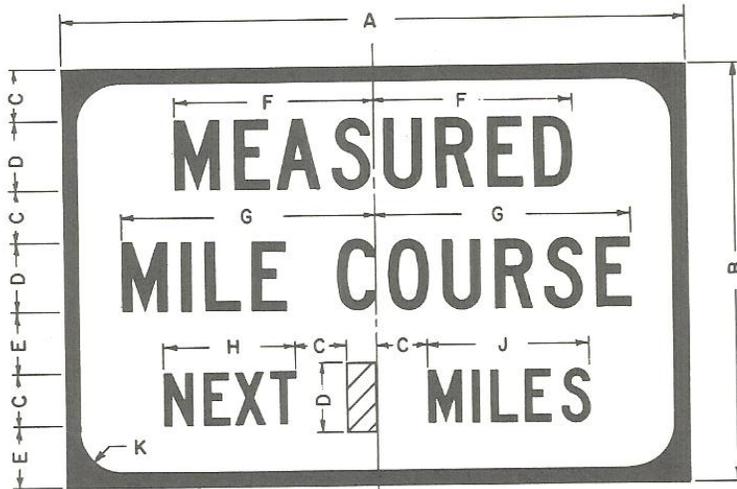
SECTION 708-3. MEASURED MILE COURSE' GROUP (I 3 SERIES)

The Vehicle Code, Section 1110(a) authorizes the erection of accurate mile courses on the highway in order to aid the general traveling public in calibrating their speedometers. The MPH-SECS measurement shall be equal to or less than the designated highway speed limit.

These signs shall have a white legend and a blue background.

(a) Measured Mile Course Sign (I 3-1)

(1) Placement. This sign shall be placed approximately 1,000 feet in advance of the point where the measured mile course begins.

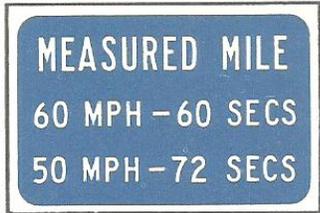


COLOR · LEGEND AND BORDER  
BACKGROUND

WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
72x48	72	48	6	8	7	23	29 <sup>7</sup> / <sub>16</sub>	15 <sup>3</sup> / <sub>4</sub>	18 <sup>9</sup> / <sub>16</sub>	5

SIGN SIZE	SERIES			BOR- DER	BLANK STD.
	LINES				
	1	2	3		
72x48	C	C	C	1 <sup>3</sup> / <sub>4</sub>	B5-7248

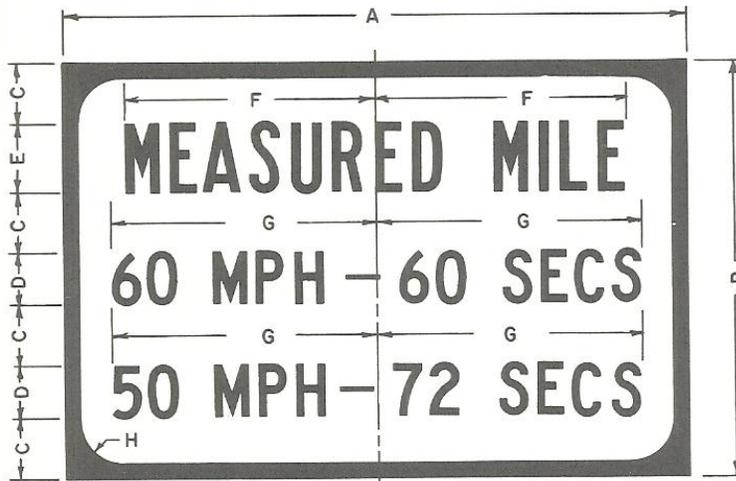


72 x 48

708-3 (Cont.)

**Measured Mile 60-50 Sign (I 3-2)**

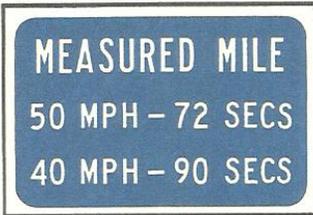
**Placement.** This sign shall be placed approximately 500 feet before the beginning of the measured mile course on highways where the speed limit is 60 miles per hour or more.



COLOR - LEGEND AND BORDER BACKGROUND      WHITE (REFLECTORIZED)  
 BLUE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
72x48	72	48	7	6	8	29	30 <sup>5</sup> / <sub>16</sub>	5

SIGN SIZE	SERIES LINES			BOR-DER	BLANK STD.
	1	2	3		
72x48	B	C	C	3/4	B5-7248

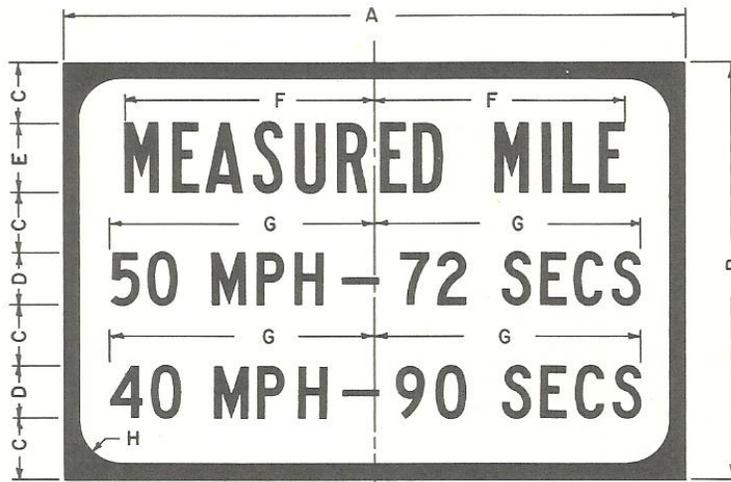


72 x 48

SECTION 708-3 (Cont.)

(c) Measured Mile 50-40 Sign (I 3-3)

(1) Placement. This sign shall be placed approximately 500 feet in advance of the beginning of the measured mile course on highways where the speed limit is 50 miles per hour or more.



COLOR • LEGEND AND BORDER BACKGROUND      WHITE (REFLECTORIZED)  
BLUE (REFLECTORIZED)

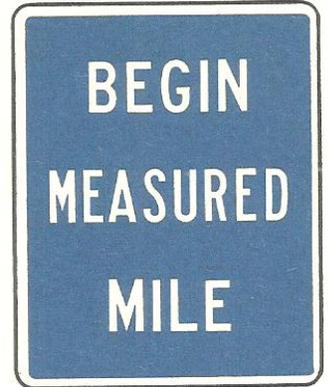
SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
72x48	72	48	7	6	8	29	30 <sup>5</sup> / <sub>16</sub>	5

SIGN SIZE	SERIES			BOR- DER	BLANK STD.
	LINES				
	1	2	3		
72x48	B	C	C	1 <sup>3</sup> / <sub>4</sub>	B5-7248

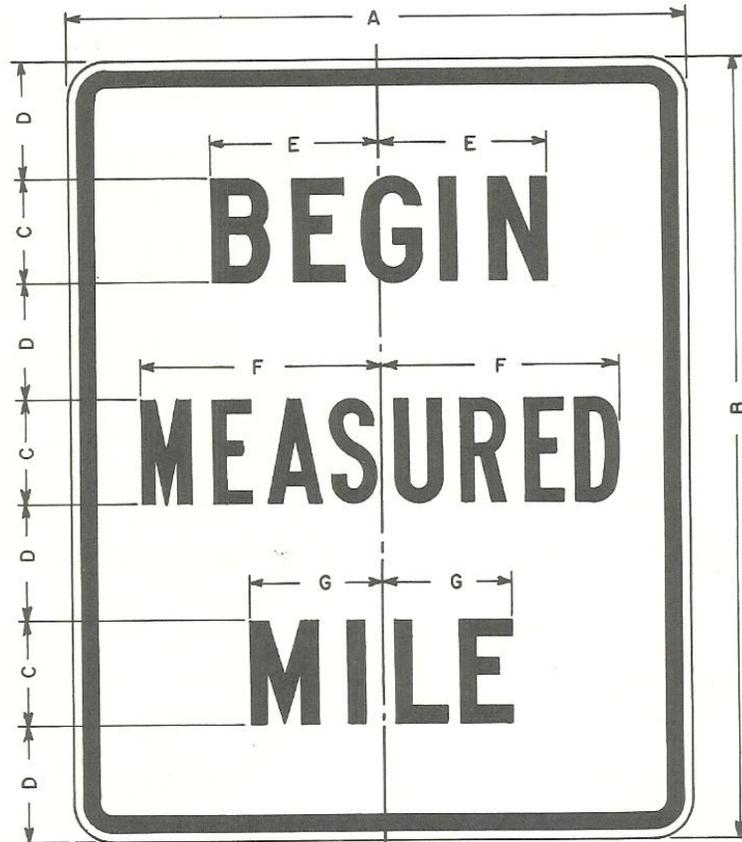
SECTION 708-3 (Cont.)

(d) **Begin Measured Mile Sign (I 3-4)**

(1) **Placement.** This sign shall be placed at the exact beginning of the measured mile course.



24 x 30



COLOR - LEGEND AND BORDER BACKGROUND      WHITE (REFLECTORIZED)  
 BLUE (REFLECTORIZED)

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
24x30	24	30	4	4 1/2	6 3/16	9 1/4	4 3/4

SIGN SIZE	SERIES			MAR- GIN	BOR- DER	BLANK STD.
	LINES					
	1	2	3			
24x30	C	B	C	3/8	5/8	B5-3024

13-5

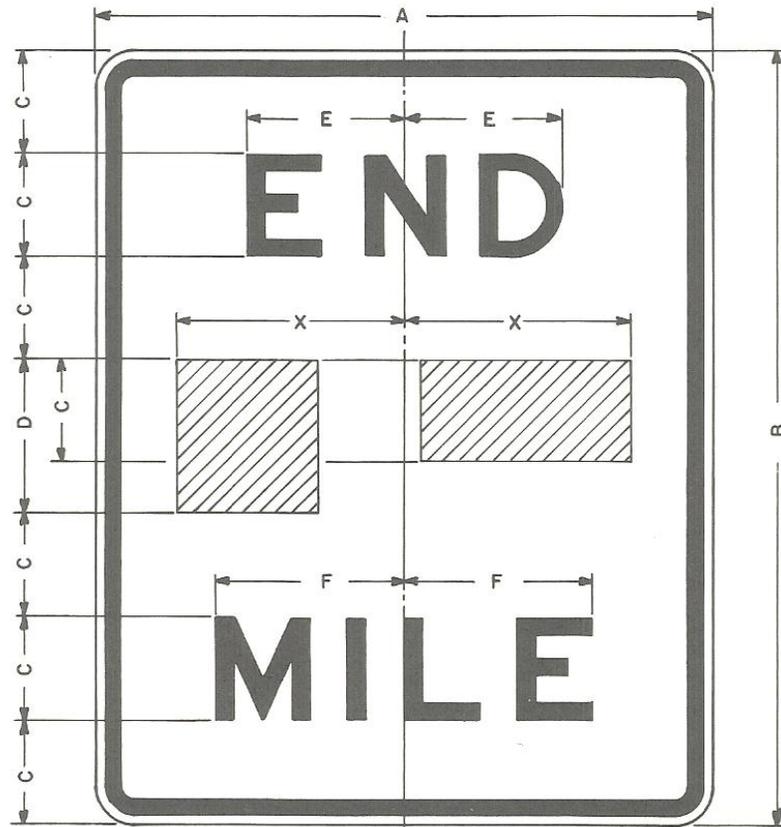


24 x 30

SECTION 708-3 (Cont.)

(e) End (—) Mile (13-5)

(1) Placement. This sign shall be placed at the exact end of each measured mile within the course.



COLOR · LEGEND AND BORDER BACKGROUND WHITE (REFLECTORIZED) BLUE (REFLECTORIZED)

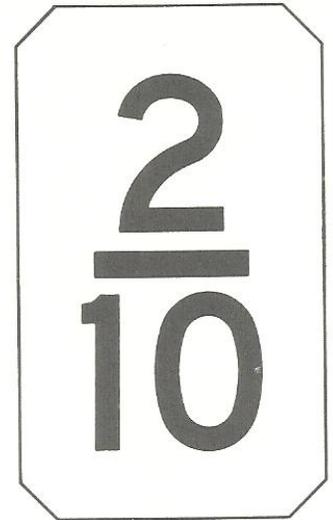
SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
24x30	24	30	4	6	$5\frac{5}{8}$	$6\frac{9}{16}$

SIGN SIZE	SERIES LINES			MAR- GIN	BOR- DER	BLANK STD.
	1	2	3			
24 x 30	E	E	E	$\frac{3}{8}$	$\frac{5}{8}$	B5-2430

	1ST	2ND	3RD	4TH	5TH
X	$6\frac{3}{8}$	$8\frac{1}{8}$	$8\frac{1}{8}$	$8\frac{1}{4}$	$7\frac{7}{8}$



I 4-1

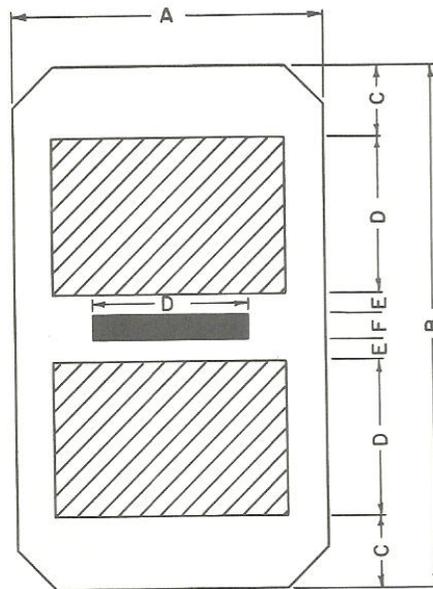


6 x 10

**SECTION 708-4. LEGISLATIVE ROUTE AND STATION MARKERS (I 4 SERIES)**

**(a) Station Marker Plate (I 4-1)**

**(1) Justification.** This plate is authorized for use to mark stations on Legislative Routes, except in cities having intersections of approximately 30 foot intervals and identified by posted street name signs. Where no intersections should be placed at 500 foot intervals.

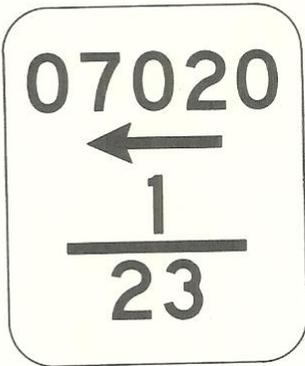


**COLOR: LEGEND      BLACK (NON-REFLECTORIZED)  
BACKGROUND      WHITE (NON-REFLECTORIZED)**

SIGN SIZE	DIMENSIONS					
	A	B	C	D	E	F
6 x 10	6	10	1 <sup>3</sup> / <sub>8</sub>	3	<sup>3</sup> / <sub>8</sub>	<sup>1</sup> / <sub>2</sub>

SIGN SIZE	SERIES		BLANK STD.
	LINES		
	1	2	
6x10	D	D	B5-1006

I4-2

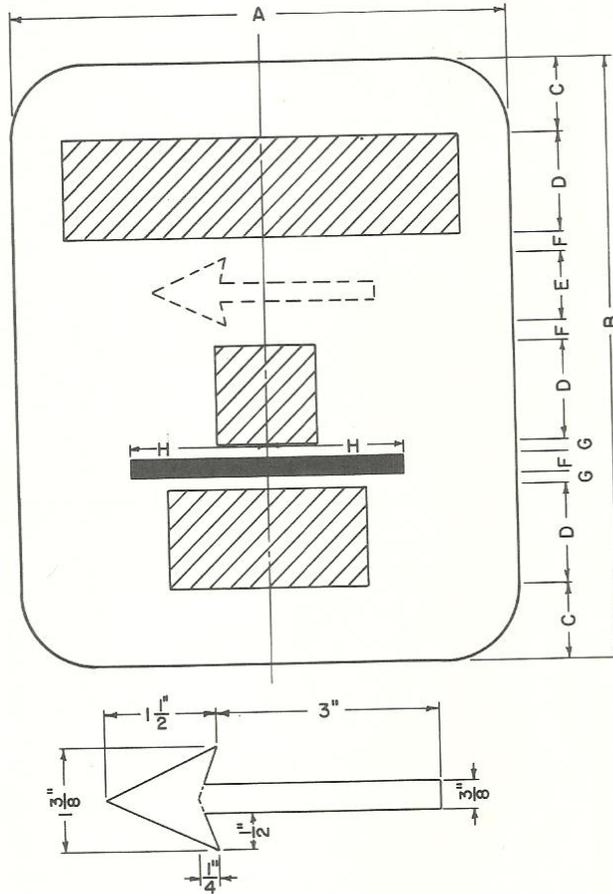


10 x 12

SECTION 708-4 (Cont.)

(b) Legislative Route and Station Marker Plate (I 4-2)

(1) Justification. This plate is authorized for use at intersections to indicate the Legislative Route number and the station at that point. The arrow denotes the direction of the route in advancing stations. The station number shown shall be to the nearest 100 feet.



SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
10x12	10	12	1 1/2	2	1 3/8	3/8	1/4	3

SIGN SIZE	SERIES			BLANK STD.
	LINES			
	1	2	3	
10x12	D	D	D	B5-1210

COLOR: LEGEND AND ARROW BACKGROUND BLACK (NON-REFLECTORIZED) WHITE (NON-REFLECTORIZED)



I5-2



24 x 30  
30 x 36

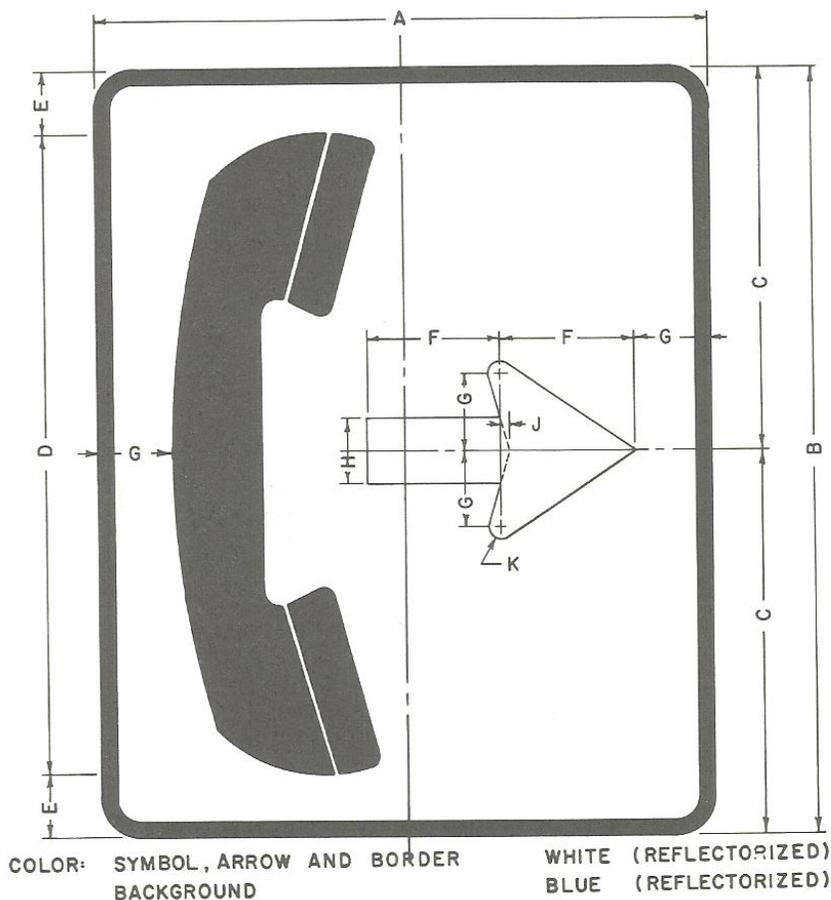
SECTION 708-5 (Cont.)

(b) Telephone with Arrow (I 5-2)

(1) **Justification.** This sign is authorized for use to indicate the location of public telephone facilities.

The left arrow shall be used only on two lane highways, unless the multiple lane highway has been designed to provide a standby lane or protected turning movement.

(2) **Size.** The standard size is 24 inches by 30 inches. The 30 inch by 36 inch may be used where emphasis is needed.



SIGN SIZE	DIMENSIONS										BOR- DER	BLANK STD
	A	B	C	D	E	F	G	H	J	K		
24x30	24	30	15	25	2 1/2	5 1/4	3	2 5/8	3/8	1/2	5/8	B5-3024
30x36	30	36	18	30	3	6 9/16	3 3/4	3 1/4	1/2	5/8	3/4	B5-3630

SECTION 709. RESERVED

SECTION 710. RESERVED

## SECTION 711. TRAFFIC SIGNALS, GENERAL PROVISIONS

### (a) Scope of Regulation.

Highway traffic signals include all power-operated traffic devices by which traffic is warned or is directed to take some specific action. It is unlawful to use on any street or highway in this Commonwealth any traffic signal or any other device, unless of a type which has been submitted to the Secretary of Highways for test, and for which a certificate of approval has been issued by the Secretary of Highways and is then in effect.

The signals and devices hereinafter described are hereby declared to be official and may be erected when duly authorized in accordance with the provisions of these regulations.

### (b) Legal Authority.

The Secretary of Highways with reference to State highways and local authorities in counties, cities, boroughs, incorporated towns, and townships with reference to highways under their jurisdiction are authorized to erect and maintain traffic signals.

Before local authorities, except as hereinafter provided for cities, shall erect or cause to be erected traffic signals, they must first obtain the approval of the Secretary of Highways.

Cities of the first and second class may, on streets other than State highways within such cities, erect, maintain and operate traffic signals, without prior approval of the Secretary of Highways, but such signals must be of a type approved by the Secretary as provided in Regulation 711 (a) and must follow the lighting sequence in accordance with the provisions of Regulation 711-1 (a) (2).

Cities of the third class may, on streets other than State highways within such cities, erect, maintain and operate traffic signals without prior approval of the Secretary of Highways as to hours of operation and type of control. Approval of the Secretary must be obtained as to location and all other requirements of these regulations. The type of control must be one approved by the Secretary in accordance with Regulation 711 (a) and must follow the lighting sequence in accordance with the provisions of Regulation 711-1 (a) (2).

### (c) Justification of Signals.

Whenever it is desired to erect or maintain any traffic signal in this Commonwealth, the need therefor shall first be established, in accordance with traffic engineering principles, upon the basis of safety or convenience or both to traffic. The basis of determination of the need for a traffic signal shall be the volume of traffic entering the intersection, the number of accidents that have occurred in each of the three preceding years, pedestrian traffic and other factors that may be present in a particular case. Minimum standards are hereinafter set forth under the separate classifications.

### (d) Classification of Signals.

Official traffic signals are divided into the following classifications and set forth in the following order:

#### 711-1 Traffic Control Signals.

- (a) Requirements common to pretimed and traffic-actuated signals.
  - (1) Number of signal faces.
  - (2) Color system and sequence.
  - (3) Color and position of lenses.
  - (4) Meaning and application of color and arrow indication.
  - (5) Vehicular signal lenses.
  - (6) Lettering on lenses.
  - (7) Illumination of lens.
  - (8) Visibility and shielding of lens.
  - (9) Types of mounting for signal heads.
  - (10) Location of signal lenses.
  - (11) Height of vehicular signal faces.
  - (12) Transverse location of signal faces.

SECTION 711 (Cont.)

- (13) Limit of signal-controlled area.
- (14) Continuity of operation.
- (15) Traffic signals near grade crossings.
- (16) One-way restricted zone control.
- (17) Emergency operation of traffic signals.
- (18) Location and maintenance of controllers.
- (19) Painting.
- (20) Maintenance records.
- (b) Pretimed control.
- (c) Traffic actuated control.
  - (1) Semi-traffic-actuated control.
  - (2) Full traffic-actuated control.
  - (3) Traffic-adjusted control.
  - (4) Justification of traffic-actuated controls.

711-2 Pedestrian Control Signals.

- (a) Definition and scope.
- (b) Justification in general.
- (c) Justification at school crossings.
- (d) Type of control.
- (e) General design requirements.
- (f) Meaning of indications.
- (g) Location of pedestrian signals and detectors.
- (h) Operation.

711-3 Special Traffic Signals.

- (a) Flashing beacons.
- (b) Flashing school signs.
- (c) Flashing warning signs.
- (d) Fire signals.
- (e) Lane-direction-control signals.
- (f) Traffic signals at drawbridges.

711-4 Train-Approach Signals and Gates.

## SECTION 711-1. TRAFFIC CONTROL SIGNALS

### (a) Requirements Common to Pretimed and Traffic-Actuated Signals.

The features of traffic control signals in which vehicle operators and pedestrians are interested, namely, the location, design, indications, and legal significance of the signals themselves, are identical in pretimed and traffic-actuated signals, the difference between the two being in the mechanisms by which they are operated. Standardization in those design factors that affect the traffic to be controlled is especially important. The subsections immediately following contain all standards and requirements of this nature that are equally applicable to the types of signals named. Standards applicable to but one type, including design features and methods of operation, are presented in subsequent subsections.

(1) **Number of Signal Faces.** There shall be a minimum of two vehicular signals, for the through movement, visible to the driver when stopped for a signal. These two signals, or additional signals, shall be visible to traffic as traffic approaches the intersection.

When the left or right turn movement is terminated at a time other than the through movement for that approach, a separate signal face shall be displayed for that movement in addition to the two signal faces for the through movement and a sign Left or Right Turn Signal (R 18-2 (L)) or (R 18-2 (R)) shall be located close to that signal.

Two (or more) properly located faces will in almost all cases provide drivers with a signal indication even though trucks or buses may momentarily obscure one signal face. Multiple faces provide a safety factor where the signals must compete with a brilliant background such as advertising signs or the sun. The occasional inevitable lamp failure in one face will not leave an approach without any signal indication.

The number of signal faces in excess of two per approach will be dictated by local conditions such as number of vehicular lanes, the need for special turn indications, and the configuration of the intersection and channelizing islands.

(2) **Color System and Sequence.** Each vehicular signal face shall have at least three lenses—green, yellow and red. The sequence or order of illumination of the colored lens shall be as follows: The green lens followed by the yellow lens, followed by the red lens, and repeat. There shall be no yellow lens illuminated following the red lens. If green arrows are used, the signal face may have more than three lenses. The green arrow may be illuminated either alone or in combination with another lens.

(3) **Color and Position of Lenses.** The lenses in a traffic signal normally shall be arranged in a vertical line, except that where physical obstructions require otherwise they may be arranged in a horizontal line. The red shall be at the top, the yellow immediately below, and the green at the bottom. When a horizontal mounting is used, the red shall be at the left, the yellow next and the green at the right.

Green arrow lenses should normally be located as near as practicable to the movements they control, but when more than one arrow is placed in the same vertical line, the straight-through arrow shall be below the circular green, if any, the left-turn arrow next, and the right-turn arrow at the bottom. With a horizontal mounting the left-turn arrow shall be to the immediate right of the yellow, the circular green, if used, shall be next, followed by the straight-through and right-turn arrow, respectively.

Combinations of circular green lens with green arrow lens or combinations of green arrow lenses may be mounted horizontally below the vertically aligned red and yellow lenses as follows:

#### Right Signal on Approach

Right turn green arrow with circular green to the left  
Straight-through green arrow with circular green or right turn green arrow to the right

#### Left Signal on Approach

Left turn green arrow with circular green to the right  
Straight-through green arrow with circular green to the left.

For use in directing vehicular traffic, green arrows shall point out the approximate direction in which movement is permitted. The arrow shall be pointed vertically upward to indicate a straight-



SECTION 711-1 (Cont.)

through movement, in a horizontal direction to indicate an approximate right-angle turn, and obliquely upward slope approximately equal to the angle of the turn when it is substantially different from right angle.

Each arrow lens shall show only one arrow direction. Doubleheaded arrows are not authorized. The arrow shall be the only illuminated part of the lens.

(4) **Meaning and Application of Color and Arrow Indications.** This subsection applies primarily to traffic control signals, but appropriate interpretation is to be made for use of all signals.

**Combinations of signal colors** (green with yellow, yellow with red, or green with red) shall not be shown simultaneously except where green turn arrows are shown together with steady yellow or steady red under those conditions described below.

A **circular green indication** shall be given only when it is intended to permit traffic in each lane approaching the signal to proceed straight through or turn right or left, unless a sign prohibits any of these movements.

**Green arrow indications** shall be shown at intersection where signals for individual turning movements are provided. These include: (1) straight-through (vertical) arrow, (2) left-turn arrow, and (3) right-turn arrow. They shall be reserved to indicate those vehicular movements which are cleared or protected from the delay or restriction of opposing or conflicting movements across the path of that vehicular movement indicated by the green arrow.

Straight-through arrows may be shown alone, with other arrows, or with circular yellow (when provided by circular green or other arrows), but never a circular red.

Except as noted below, each green arrow indication shall be followed by a steady yellow clearance interval to allow the traffic controlled by the arrow to clear the intersection. The yellow indication should be shown following the circular green indication, but should not be displayed in any signal face following a green turn arrow if the related turning movement is permitted to continue by a following or continuing display of a circular green indication in the same signal face.

A green turn arrow may be used with other standard signals, when the movement indicated by the arrow is permitted to continue by the illumination of a circular green following the termination of the arrow. However, a green left-turn arrow shall be extinguished at least three (3) seconds prior to the illumination of the green for opposing traffic.

In those cases where a turning movement is to be cut off at a time other than the straight-through movement, a separate signal face shall be provided to control the turning movement. It shall be equipped with circular red and yellow lenses and a green turn arrow lens. When the turn is to be cut off, a yellow clearance interval shall be shown, followed by a steady red indication. The purpose of such a signal face shall be made clear by its location and by a sign located close to the signal and having an appropriate message, such as LEFT TURN SIGNAL (R 18-2 (L)) or RIGHT TURN SIGNAL (R 18-2 (R)).

No circular green or green arrow indication shall be terminated and immediately followed by a steady red or flashing red indication without the display of the steady yellow clearance interval; however, transition may be made directly from circular green or green arrow indication to flashing yellow indication.

The yellow indication may be either a steady yellow or a flashing yellow (caution signal).

The steady yellow indication shall be used to warn vehicular traffic facing the signal that the red indication will be exhibited immediately thereafter, or that the related green movement is being terminated, to warn pedestrian traffic facing the signal, unless otherwise directed by a pedestrian signal, that there is insufficient time to cross the roadway, and to permit clearance of the intersection.

The yellow interval shall be not less than 3 seconds nor more than 5 seconds in length. In some situations the configuration or dimensions of an intersection, or some physical condition such as high approach speeds, steep hills, or heavy truck traffic, may require a longer than normal clearance interval. In such cases the standard length of the steady yellow interval shall be used in the first part of the clearance interval, followed by all-red indications during the second part of the clearance interval.

## SECTION 711-1 (Cont.)

The yellow signal shall not be shown simultaneously with the green or red indication except in the case of an arrow indication which is to allow a particular movement to continue when others in that direction are being stopped.

The steady yellow indication shall not be used in any transition from steady red or flashing red indication to circular green, green arrow, or flashing yellow indication. The transition from steady yellow to flashing yellow may be made directly. Steady yellow shall not be used as a caution signal.

The flashing yellow indication shall be used as a caution signal when the signal is not being operated as a stop-and-go device. In no case, however, shall a traffic signal flash yellow for all traffic entering an intersection. Flashing operation shall indicate yellow for the major street and red for all other legs of the intersection.

The illuminating element in the flashing signal shall be flashed continuously at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash shall be not less than half and not more than two-thirds of the total flash cycle.

In every case the change from flashing to stop-and-go operation should be made at the beginning of the common main-street green interval (i.e., when a common green indication is shown in both directions on the main street), and no change from flashing yellow to steady red is permissible without an intervening steady yellow.

No flashing yellow "caution" indication shall be terminated and immediately followed by a steady red or flashing red indication without the display of the steady yellow clearance interval.

The red indication may be either a steady red or a flashing red (Stop signal).

The steady red indication shall be used to notify vehicular traffic facing the signal that it must stop before entering the crosswalk on the near side of the intersection or, if none, then before entering the intersection, and remain standing until the green indication is shown, and to warn any pedestrian facing the signal that he shall not enter the intersection unless he can do so safely and without interfering with any vehicular traffic, or unless a separate WALK indication is shown.

The transition from steady red to flashing yellow may be made directly.

The flashing red indication shall be used as a stop signal when the signal is not being operated as a stop-and-go device. Flashing operation shall indicate yellow for the major street and red for all other legs of the intersection.

When a red lens is illuminated by intermittent flashes, drivers of vehicles shall stop before entering the nearest crosswalk at an intersection or at a stop line when marked, and the right to proceed shall be subject to the rules applicable after making a stop at a stop sign. Stop signs shall not be used at signalized intersections even though a traffic signal may be on flashing red for part of the day or at irregular intervals. In emergencies, such as power failure, or when signal and/or flasher are inoperative, or when signals are hooded, stop signs are authorized on the minor street until the signal is again operative.

The illuminating element in the flashing signal shall be flashed continuously at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash shall be not less than half and not more than two-thirds of the total flash cycle.

The transition from flashing red to flashing yellow may be made directly.

(5) **Vehicular Signal Lenses.** All vehicular signal lenses shall be circular in shape, except the green arrow lenses may be rectangular. Two sizes for circular lenses are authorized, 8 inch and 12 inch nominal diameter. All lenses shall be of the same diameter except the 12 inch red may be used with the 8 inch yellow and 8 inch green and the 12 inch arrow may be used with the 8 inch red and 8 inch yellow or with the 8 inch red, 8 inch yellow and 8 inch green.

The 8 inch nominal diameter lens shall have a visible diameter of not less than  $7\frac{3}{4}$  inches and an overall diameter of not less than  $8\frac{3}{8}$  inches.

The 12 inch nominal diameter lens shall have a visible diameter of not less than  $11\frac{1}{2}$  inches and an overall diameter of not less than  $12\frac{1}{32}$  inches.

## SECTION 711-1 (Cont.)

The 12 inch lens provides an important increase in the target value of the signal at locations where signal indications tend to be overlooked such as:

1. Rural intersections, or those with high approach speeds.
2. Isolated intersections or those where signalization might be unexpected.
3. Special problem locations.

(6) **Lettering on Lenses.** Lettering shall in no case be used on the illuminable part of vehicular signal lenses.

(7) **Illumination of Lens.** Each lens shall be illuminated independently.

(8) **Visibility and Shielding of Lens.** Each signal face shall be so adjusted that its beams will be of maximum effectiveness for approaching traffic for which it is intended. To improve a signal's effectiveness, use of visors, louvers and back-plates shall be given full consideration.

Visors shade the signal lenses from the sun and other conditions which tend to make a lens look obscured when it is not, or to shield the lens from motorist on other approaches who might be confused were they to see the lens. There are three types of visors; standard, tunnel in 8 inch, 12 inch and 18 inch lengths, and full circle visors in 8 inch and 12 inch lengths.

Louvers decrease the possibility of motorist seeing signals which are not intended for them, especially at intersections where roads come together at acute angles.

Back-plates improve the visibility of signals otherwise impaired by background lighting, sunlight, or glare behind the signal face.

In general, vehicular signals should be so aimed as to have the maximum effectiveness for approaching drivers at a distance from the Stop line equal to the average distance they would travel while reacting to the Stop indication and stopping their vehicles from a normal operating speed. The influence of curves, grades, and obstructions should be considered in the directing and location of signals.

Irregular street design frequently necessitates placing signals for different street approaches so that there is a comparatively small angle between their beams. In these cases, each signal face shall, to the extent practicable, be so shielded by visors or louvers that an approaching driver can see only the signal intended for him to obey.

(9) **Types of Mounting for Signal Heads.** Mounting fixtures shall be so designed that horizontal and vertical adjustments are possible through a reasonable angle. Types of signal-head mountings include the following:

1. Alongside the roadway; or on a channelizing island:
  - a. Posts 8 to 15 feet high.
  - b. Short brackets attached to poles (at same heights).
2. Over the roadway:
  - a. Long brackets or mast arms extending from poles off the roadway.
  - b. Cable suspension.
  - c. Posts or pedestals on islands.

(10) **Location of Signal Faces.** The location of signal faces for each direction of approaching traffic shall be as follows:

1. Where all signal faces are post-or pedestal-mounted there shall be at least two on the far side of the intersection.

2. Where there is only one post-or pedestal-mounted signal face, it shall be on the far side, and there shall also be an overhead signal face for that approach.

3. All signals may be overhead, in which case there shall be a minimum distance of six (6) feet horizontally from any signal to the edge of pavement or curb line.

4. In all cases, the minimum horizontal distance between signals, as viewed by the motorist, shall be eight (8) feet measured at right angles to the direction of the approach.

## SECTION 711-1 (Cont.)

Signal faces shall be located so as to give drivers and pedestrians a clear and unmistakable indication of the right-of-way assignment from their normal positions on the approaches and as they enter or pass through the intersection area.

Where physical conditions prevent a vehicle driver from having a continuous view of at least one signal indication for approximately 10 seconds before reaching the stop line, an auxiliary signal shall be used to provide this visibility. If physical conditions make this impossible, a flashing yellow beacon or Signal Ahead sign may be erected in a suitable position to warn approaching traffic.

(11) **Height of Vehicular Signal Faces.** The bottom of the housing of a post-mounted signal face shall not be less than 8 feet or more than 15 feet above the sidewalk, or, if none, above the pavement grade of the center of the highway.

The bottom of the housing of signal faces suspended over roadways shall not be less than 15 feet or more than 17 feet above the pavement grade of the center of the roadway.

Maximum visibility and adequate clearance should be the guiding consideration in deciding signal height. Grades on approaching streets may be important factors in determining the most appropriate height.

(12) **Transverse Location of Signal Faces.** Signal faces mounted at the side of a street with curbs or with established curb lines, should be located as near as practicable to that curb line, normally with a 2-foot clearance. In the case of nearside locations, they should also be located as near as practicable to the Stop line, or to where the Stop line would normally be. For the protection of the equipment from damage by passing vehicles, it is not desirable that any part of the signal head extend within 2 feet of the curb line. A signal or its support shall not obstruct the crosswalk.

Where there is no curb, a signal face mounted at the roadside shall be not more than 10 feet from the edge of pavement or traveled surface, provided that it does not obstruct free use of the shoulder.

(13) **Limit of Signal-Controlled Area.** A signal shall control traffic only at the intersection where the installation is located.

(14) **Continuity of Operation.** It is desirable that a person approaching a traffic signal should presume it is functioning unless he is given a conspicuous and specific indication to the contrary. Hence it is required that all signals in use be "live." When not operating as a stop-and-go device, the signal shall be operated as a flashing device.

Prior to placing signals in service and during seasonal or other shutdowns, when it is not desirable to operate the signals, they shall be hooded, turned, or taken down so persons will be under no misapprehension that a lamp may be burned out.

(15) **Traffic Signals Near Grade Crossings.** At some street and highway intersections, railroad tracks pass within or near the intersection area, and the grade crossing thus formed is protected by train approach signals (section 711-4). At such intersections it is essential that the control of the street traffic signal be preempted from the signal controller upon approach of trains to avoid conflicting aspects of the traffic signal and train-approach signals. Such an arrangement requires a closed electrical circuit between the control relay of the train-approach signals and the preemptor in order to establish and maintain the preempted condition during the time that train-approach signals are in operation.

Traffic signals shall not be used in lieu of railroad grade crossing protection devices. There are, however, some crossings where train movements are regulated to the extent that train-approach signals are not required. In such cases preemption at the adjacent signalized intersections may be desirable to permit non-conflicting highway traffic to proceed during the time the crossing is blocked by a train. Except under unusual circumstances the interconnection should be limited to the traffic signals within 300 feet of the crossing.

The preemption sequence initiated when the train enters the train approach circuit shall immediately bring into effect a selective yellow interval, followed by a signal display which will permit vehicles to clear the tracks before the train reaches the crossing.

## SECTION 711-1 (Cont.)

The operation of the traffic control at the intersection during the time the train approach signals are in operation is dependent upon the configuration of the intersection, the relation of the intersection with the railroad track and the traffic flow at the intersection. Three possible operations are:

1. Placement of the traffic control on flashing operation, with flashing red in signals supplementing flashing railroad signals, if any.
2. Placement of the traffic control in a special "dwell" condition, together with the illumination of blank-out signs which will prohibit all movements across the track.
3. Permit continued operation or cycling of the traffic control, together with the illumination of blank-out signs which will prohibit all movements across the track.

When the train has cleared the crossing the train preemption is released, again a selective yellow interval may be required followed by a designated phase and/or the return to normal traffic control operation.

Careful consideration needs to be given the control of all intersections involving train movement. The plan for signal control must be based on the specific factors that prevail at each intersection involved. The preemption equipment tends to be special for each case and frequently is of considerable complexity.

**(16) One-Way Restricted Zone Control.** Control equipment is available for use at a narrow passage, such as a bridge, tunnel, or construction area, which is not wide enough to allow traffic to flow in opposite directions simultaneously. This operates essentially as a two-phase control, each approach being one phase, with an all-red clearance period added to the normal cycle. Traffic moves in one direction on one phase and in the opposite direction on the other phase. Between these movements the all-red interval provides time for clearance of such traffic as may be in the restricted area. Use of such equipment is authorized.

**(17) Emergency Operation of Traffic Signals.** Traffic signals operated under emergency conditions shall use color sequences with which drivers and pedestrians are familiar. Nonstandard colors, unusual flashing cycles, or flashing of yellow lights in signal assemblies while regular traffic signal operation goes on in the same assembly are prohibited. This does not preclude the use of auxiliary indications independent of the traffic signal assembly to indicate the existence of an emergency condition.

Devices used on emergency vehicles to preempt intersectional traffic signal control shall provide such intersectional traffic signal control a selective yellow interval (for immediate change) or shall operate at a range sufficient to permit a normal yellow interval to take place in any change from green to red.

Traffic signals preempted by such emergency vehicles shall be operated in a manner designated to keep traffic flowing on one artery or one approach or flashing. The stopping of all traffic by the display of **ALL RED** shall be prohibited and all such preempted operations shall be kept to a minimum, not more than necessary to provide passage of the emergency vehicle.

Systems in which intersectional traffic signal control is preempted by emergency vehicles shall be designed and installed so as to provide an additional safety indication (a fail-safe indication) to notify the driver of any emergency vehicle approaching an intersection that the emergency equipment has failed to preempt the Traffic Signal at the intersection. This fail-safe indication shall be given whether the failure results from a prior preemption by an emergency vehicle on the cross street, from equipment malfunction, or from any other cause.

**(18) Location and Maintenance of Controllers.** Controllers should be located where the likelihood of damage by motor vehicles is minimized. They should be located so that the service man can be in a protected area and can have a clear view of the signal units being controlled.

Every controller should be kept in effective operation in strict accordance with its predetermined timing schedule. A careful check of the correctness of timed operation of the controller shall be made frequently enough to insure its operating in accordance with the planned timing schedule.

Controllers should be carefully cleaned and serviced at least as frequently as specified by the manufacturer and more frequently if experience proves it necessary.

## SECTION 711-1 (Cont.)

(19) **Painting.** Painted signal heads, brackets, poles, posts, control boxes, housings and conduits above ground should be repainted at least every 2 years, and as much oftener as may be necessary to prevent corrosion and to maintain the good appearance of the equipment.

Signal heads shall be painted highway yellow.

The insides of visors or hoods and the entire surface of louvers or fins used in front of signal lenses shall be painted a dull black to minimize light reflection to the side of the signals.

All other parts of the assembly, as recited in the first paragraph of this subsection may be painted any color. However, they should be painted highway yellow if it will add materially to the visibility of the signals, or if they are hazardous to a pedestrian.

(20) **Maintenance Records.** Detailed maintenance records shall be kept and analyzed at regular intervals to determine future policies as to equipment purchases and the maintenance program.

Maintenance records shall indicate the time of outage, and the time returned to service. Other facts such as cost of cleaning, lubrication, overhauling, lamp replacement, painting, and similar items, may be kept for each signal installation and each specific controller.

### (b) **Pretimed Control.**

A pretimed control is one which directs traffic to stop or permits it to proceed in accordance with a single predetermined time schedule or a series of such schedules.

Expansible pretimed controls are designed to receive additional dials or timing units (to a total of three) having the capability of producing three different cycle lengths, three different percentage splits and three different offsets for each dial.

Operational features of pretimed control include:

1. **Cycle Length:** Time between the beginning of one indication until that indication begins again.
2. **Sequence:** The arrangement of traffic movements as permitted by the control.
3. **Split:** Percentage of time provided each movement.
4. **Offset:** The relation between successive signal controls grouped together.

Except for instances of progressive movement control as set forth below in this subsection, a pretimed signal is authorized only at an intersection where for each of any 8 hours (not necessarily consecutive) of an average day the traffic volume on the major street (total of both approaches) exceeds:

1. On a one-lane approach, 500 vehicles, and the traffic volume on a minor street approach (one direction only) exceeds 150 vehicles on a one-lane approach, or 200 vehicles on a 2 or more lane approach.
2. On a 2 or more lane approach, 600 vehicles, and the traffic volume on a minor street approach (one direction only) exceeds 150 vehicles on a one-lane approach, or 200 vehicles on a 2 or more lane approach.

The major-street and the minor-street volumes are for the same 8 hours. During those 8 hours the direction of higher volume on the minor street may be on one approach during some hours and on the opposite approach during other hours.

When the 85-percentile speed of major-street traffic exceeds 40 miles per hour, or when the intersection lies within the built-up area of an isolated community having a population less than 10,000, the minimum vehicular volume warrant is 70 percent of the requirements above, in recognition of differences in the nature and operational characteristics of traffic in urban and rural environments and smaller municipalities (see volume chart).

**Progressive movement control.** Erection of a pretimed and coordinated signal is authorized at an intersection which does not meet the traffic volume requirements when it is deemed necessary to maintain a system of grouping of vehicles between consecutive signals.

Pretimed signals may include a phase for pedestrian traffic when for each of any 8 hours of an average day 600 or more vehicles per hour enter the intersection on both approaches of any street (or 1,000 vehicles if there is a raised median island at least 4 feet in width) and during the same 8 hours there

more than 150 pedestrians per hour on the highest volume crosswalk crossing that street. Control of pedestrian indications in such cases shall be accomplished as a part of the timing mechanism of the traffic signal with the pedestrian phase given at a predetermined point during each cycle, and lasting a predetermined length of time.

**(c) Traffic-Actuated Control.**

A traffic-actuated control, as distinguished from a pretimed signal, is a type of traffic control in which the operation is varied in accordance with the demands of traffic as registered by the actuation of vehicle or pedestrian detectors. Traffic-actuated controls can be classified in three general categories:

**(1) Semi-Traffic-Actuated Control.** A type of control in which means are provided for traffic actuation on one or more but not all of the approaches to the intersection. Semi-traffic-actuated control is applicable primarily to an intersection of a heavy-volume, high-speed traffic artery with a relatively light-traveled minor road or street. Detectors are located only on the minor approaches. The signal is normally green on the major street, changing to the minor street only as a result of vehicle or pedestrian actuation thereon.

**(2) Full Traffic-Actuated Control.** A type of control in which means are provided for traffic actuation on all approaches to the intersection. Semi-traffic-actuated control does not detect and measure the demands of all traffic streams, and full traffic-actuated control therefore should be selected for intersections where failure to take all demands into account will materially impair the efficiency of traffic movement. In full traffic-actuated control, detectors are installed on all approaches to the intersection. Right-of-way is assigned to a street only as a result of one or more actuations on that street. When there is no traffic on any street, the green indication will ordinarily remain upon the street to which it was last assigned, but when one street carries substantially more traffic it may be more efficient to return the right-of-way to that street. In the event of continued actuation on one street, transfer of right-of-way will be made to waiting cross traffic upon the expiration of a predetermined maximum period, and then automatically return to the first street at the earliest opportunity. This opportunity cannot arise until a predetermined minimum green period on the cross street has expired and the allowable gap between two consecutive vehicles has been exceeded.

**(3) Traffic-Adjusted Control.** A type of control in which characteristics of signal display at local controllers in an area or for an artery are continuously varied in accordance with the receipt of traffic flow information supplied to a computing master control by sampling detectors located at typical flow points in the area.

A combination of the advantages of a pretimed flexible progressive signal system and traffic-actuation can be realized by a system in which a traffic-actuated master controller is used to supervise either pretimed or semi-traffic-actuated local controllers. Detectors are placed at representative locations in the progressive system to provide the master controller with information concerning the traffic at those points. The master controller selects the cycle and offset combination predetermined to serve best the directional balance and volume characteristics existing at that time. The local controllers are connected to the master controller and operate at any given moment upon the cycle and offset selected by the master controller.

**(4) Justification of Traffic-Actuated Controls.** Traffic-actual controls are warranted under the following conditions:

**Warrant 1: Minimum vehicular volume.** At intersections where the volume of vehicular traffic is not great enough to warrant pretimed signals, traffic-actuated signals are authorized if the volume exceeds 75% of the minimum for pretimed signals (see volume chart).

**Warrant 2: Interruption of continuous traffic.** When the volume of traffic on the major street is so great as to restrict and jeopardize unduly the occasional movement of vehicular or pedestrian cross traffic from the minor street, semi-traffic-actuated controls may be installed to provide for assignment or right-

## SECTION 711-1 (Cont.)

of-way to the minor movement. Such installation is warranted when for each of the 8 highest volume hours of an average day the major street has a total on both approaches of 750 vehicles on a one lane approach or 900 on a two or more lane approach while the minor street has (on one approach only) a total of 75 vehicles on a one lane approach or 100 on a two or more lane approach during the same eight hours. When the 85-percentile speed of major-street traffic exceeds 40 miles per hour, or when the intersection lies within the built-up area of an isolated community having a population less than 10,000, the requirements shall be only 70 percent of the figures above (see volume chart).

**Warrant 3: Minimum pedestrian volume.** Traffic-actuated control includes pedestrian-actuated detectors as set forth in Section 711-2 of these regulations. Pedestrian actuated signals also include school crossings, which are also treated in Section 711-2 hereof (see volume chart).

**Warrant 4: Progressive movement.** Progressive movement control through traffic-actuated controls must meet the same general requirements as pretimed signals and may be used where they do not unduly interfere with or disrupt progressive traffic flow.

**Warrant 5: Accident experience.** The common opinion of the general public that signals materially reduce the number of accidents is rarely substantiated by experience. Not infrequently there are more accidents with signals in operation than before signal installation. Hence, if none of the warrants except the accident experience warrant described below is fulfilled, the initial presumption should be against signalization. Signals should not be installed on the basis of a single accident or on the basis of unreasonable demands and dire predictions of accidents which allegedly might occur. The accident-experience warrant is satisfied when:

1. Adequate trial of less restrictive remedies with satisfactory observance and enforcement has failed to reduce the accident frequency; and
2. Five or more reported accidents a year of a type susceptible of correction by a traffic control signal have occurred within a 3-year period, each accident involving personal injury or property damage to an apparent extent of \$100 or more; and
3. There exists a volume of vehicular and pedestrian traffic not less than 80 percent of the requirements specified in the minimum vehicular-volume warrant, the interruption of continuous traffic warrant, or the minimum pedestrian-volume warrant; and
4. The signal installation will not seriously disrupt progressive traffic flow.

Any signal installed solely on the accident experience warrant should be semi-traffic-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system, and normally should be full traffic-actuated if installed at an isolated intersection.

**Warrant 6: Combination of warrants.** Signals may occasionally be justified where no one warrant is satisfied but two or more are satisfied to the extent of 80 percent or more of the stated values. These exceptional cases should be decided on the basis of a thorough analysis of facts. Adequate trial of other remedial measures which cause less delay and inconvenience to traffic should precede installation of signals under this warrant.



### VOLUME CHART FOR TRAFFIC CONTROL SIGNALS

(All volumes are for each of any 8 hours of an average day but must be the same 8 hours for both directions. A built-up area having a population of 10,000 or more constitutes an urban area; one of less than 10,000 constitutes a rural area.)

#### Pretimed Warrant No. 1

Minimum vehicular volume	Major street		Minor street
	Major total (2 ways)		Minor highest (1 way)
One lane approach	Urban Area	500	150
	Rural Area	350	105
Two (or more) lane approach	Urban Area	600	200
	Rural Area	420	140

#### Actuated Warrant No. 1

Minimum vehicular volume—75% or more of pretimed control			
One lane approach	Urban Area	375	113
	Rural Area	263	79
Two (or more) lane approach	Urban Area	450	150
	Rural Area	315	105

#### Actuated Warrant No. 2

Interruption of continuous traffic			
One lane approach	Urban Area	750	75
	Rural Area	525	53
Two (or more) lane approach	Urban Area	900	100
	Rural Area	630	70

#### Actuated Warrant No. 3

Minimum pedestrian volume		Pedestrians	
	Urban Area	600	150
	Rural Area	420	105
Divided highway	Urban Area	1000	150
	Rural Area	700	105

#### Actuated Warrant No. 4

(Volumes are for each of any 2 hours of an average day, and there must not be a traffic signal within 1,000 feet of the crossing.)

		Pedestrians	
	Urban Area	800	250
	Rural Area	560	175

## SECTION 711-2. PEDESTRIAN CONTROL SIGNALS.

### (a) Definition and Scope.

Pedestrian signals are traffic signals erected for the exclusive purpose of directing pedestrian traffic at signalized locations. They are installed in conjunction with vehicular traffic signals erected under Section 711-1 of these regulations.

### (b) Justification in General.

Pedestrian signals may be used under the following conditions:

1. Exclusive pedestrian phase—Signal phasing wherein pedestrians may proceed to cross the intersection in any designated crosswalk during an exclusive phase while all vehicles are stopped.
2. Semi-exclusive pedestrian phase—Signal phasing wherein pedestrians may proceed to use certain crosswalks with parallel or other vehicular movements, but wherein vehicles are not permitted to enter or turn across these crosswalks during the pedestrian movement.

### (c) Justification at School Crossings.

Installation of pedestrian traffic control in connection with school crossings is authorized, but only under stringent conditions. Brief periods during which the hazards are unusually high are better handled in most cases by other means of control. In many circumstances the pupils' response to traffic signal indications is so inadequate that the signal can become a contributory factor in increasing rather than decreasing accidents. Traffic controls should not ordinarily be installed at school crossings where schoolboy patrols or adult crossing guards can be used effectively, where students can be directed to cross at locations which are already controlled by traffic controls or police officers, or where pedestrian refuge islands provide adequate protection.

As a result of traffic engineering studies and consideration of the control methods recited above, signals may be warranted if:

1. Pedestrian crossing volumes at a designated school crossing on the major street exceed 250 pedestrians in each of 2 hours; and
2. During each of the same 2 hours vehicular traffic through the designated school crossing exceeds 800 vehicles; and
3. There is no traffic signal within 1,000 feet of the crossing.

When the 85-percentile speed of major-street traffic exceeds 40 miles per hour or when the intersection lies within the built-up area of an isolated community having a population less than 10,000, the warrant is 70 percent of the requirements above, in recognition of differences in the nature and operational characteristics of traffic in urban and rural environments and smaller municipalities.

School crossing signals installed under this warrant should be of the pedestrian-actuated type. They shall be equipped with pedestrian indications.

### (d) Type of Control.

Control of pedestrian signal indications in pretimed signals is achieved by being made a part of the timing cycle. Control of pedestrian signal indications in traffic-actuated signals shall be achieved by installation of a pedestrian detector of the push button type, designed to operate on a circuit not to exceed 18 volts.

### (e) General Design Requirement.

All pedestrian signals shall be rectangular in shape and shall contain the lettered messages WAIT and DONT WALK. The message WAIT may not be substituted as an alternate for DONT WALK. The two basic types described below are authorized as standard for pedestrian signals:

**Gas-filled tubing type:** The letters shall be at least 4½ inches in height and shall be in two colors. The WALK indication shall be white and the DONT WALK shall be orange. The messages shall consist of (a) gas-filled formed tubing, or (b) cut-out letters illuminated by gas-filled tubing.

**Incandescent type:** The letters shall be at least 3 inches high. The WALK and the DONT WALK indications shall be in separate signal sections. The WALK lens shall be white glass with either (a) all except the letters obscured by an opaque material, or (b) an opaque band at least 5/8 inches high across the center of the lens obscuring all except the letters and a band of white at the top and bottom. The DONT WALK lens shall be orange glass with all except the letters obscured by an opaque material.

Wherever a WALK indication is provided there shall also be provision for a DONT WALK signal indication. Particular care should be given to the design and construction of the gas-filled tubing type of signal so that in case of an electrical or mechanical failure of the word DONT, the word WALK will also be illuminated. The red DONT WALK and green WALK is authorized in existing signal installations but not in new installations.

All pedestrian signals within one intersection shall be of the same approved type.

**(f) Meaning of Indications.**

The meanings of pedestrian traffic signal indications are as follows:

**WALK:** While the WALK indication is illuminated, pedestrians facing the signal may proceed across the roadway in the direction of the signal and shall be given the right of way by the drivers of all vehicles.

**DONT WALK:** While the DONT WALK indication is illuminated, either steady or flashing, no pedestrian shall start to cross the roadway in the direction of the signal, but any pedestrian who has partially completed his crossing during the WALK indication shall proceed to a sidewalk, or to a safety island if one is provided.

**(g) Location of Pedestrian Signals and Detectors.**

Pedestrian signals shall be mounted with the bottom of the signal not less than 7 feet nor more than 10 feet above the sidewalk level so that there is a signal in the line of vision of pedestrians crossing in any direction.

The DONT WALK indication shall be mounted directly above or integral with the WALK indication.

Pedestrian signals may be mounted separately or on the same support with vehicular signals. When mounted with vehicular signals there shall be a physical separation between the two signal groupings. The pedestrian signal head shall be so positioned and adjusted as to provide maximum visibility at the center of the controlled crosswalk.

Pedestrian-actuated signals have a push-button detector 3½ to 4 feet above the surface of the sidewalk at each end of the crosswalks where actuation is required and on any island or median where a pedestrian may otherwise become stranded. A permanent-type sign explaining its use shall accompany each push-button detector, (Sec. 704-9(d)). Where two crosswalks, oriented in different directions, end at or near the same location, the positioning of pedestrian push buttons should clearly indicate which crosswalk is actuated by each push button.

**(h) Operation.**

Pedestrian indications shall be steady-burning except during the pedestrian clearance interval, when it is preferred that the DONT WALK be flashing. When traffic signals at the intersection are on standard flashing operation, pedestrian signals shall be extinguished.

Two combinations of pedestrian signal intervals and vehicular signals intervals are authorized.

**Semi-exclusive pedestrian-vehicular phase.** Signal phasing wherein pedestrians may proceed to use certain crosswalks with parallel or other vehicular movements, wherein vehicles are not permitted to cross these crosswalks during the pedestrian movement.

**Exclusive pedestrian phase.** Signal phasing wherein pedestrians may proceed to cross the intersection in any designated crosswalk during an exclusive phase while all vehicles are stopped.

Vehicle-actuated controls may provide for pedestrian signal intervals timed as a normal part of the corresponding green interval for vehicles. If the minimum vehicle interval is not of sufficient length to ac-

SECTION 711-2 (Cont.)

commodate a pedestrian WALK and clearance interval, an additional interval for pedestrians shall be provided. This interval includes a WALK interval and pedestrian clearance interval of adequate duration and shall be activated only by pedestrian actuation. In the absence of a pedestrian actuation this interval is skipped and the DONT WALK indication remains.

Under normal conditions, the minimum WALK interval shall not be less than 7 seconds, so that pedestrians will have adequate opportunity to leave the curb, and in some cases complete the crossing, before the clearance interval is shown. However, the WALK interval itself need not equal or exceed the total crossing time calculated for the street width, as many pedestrians will complete their crossing during the clearance interval.

A pedestrian clearance interval shall always be provided. The message DONT WALK should be flashed during the pedestrian clearance interval. The duration shall be sufficient to allow a pedestrian crossing in the crosswalk to leave the curb and travel to the center of the farthest traveled lane before opposing vehicles receive a green indication. Normal walking speed is assumed to be 4 feet per second.

## SECTION 711-3. SPECIAL TRAFFIC SIGNALS

### (a) Flashing Beacons.

(1) **Definition and Application.** A flashing beacon is a section of a standard traffic head or a similar device having a yellow or red lens in each face, which is illuminated by intermittent flashes.

Flashing beacons perform a useful function at locations where traffic or physical conditions do not justify conventional traffic signals. At other special points of hazard, experience has indicated that the flashing beacon is effective in calling the attention of drivers to these locations.

(2) **Design.** Flashing beacon units and their mountings shall follow the general design specifications for standard traffic signals, which include the following essentials:

1. Each signal unit lens shall have a visible diameter of not less than 8 inches.
2. The illuminating element, lens and reflector (together with visor, louvers or back-plates, if used) shall each be of such design as to render the lens when illuminated clearly visible to the approaching traffic for which it is intended.
3. The color of the lens shall be red for stop or yellow for caution.
4. Two (2) signal faces shall be visible to the driver on each approach.

All flashing contacts shall be equipped with filters for suppression of radio interference.

(3) **Justification. Flashing yellow beacon:** The installation of flashing yellow beacon may be warranted as an advance warning device for an intersection or other location under one or more of the following conditions:

1. Physical obstruction existing in the roadway.
2. Important intersection hidden by an obstruction or sharp curve in the highway.
3. Hazardous horizontal and vertical alignment.
4. Special hazard or traffic regulation.

**Flashing red and yellow beacon:** The installation of a flashing beacon at an intersection with yellow flashing on the main street and red flashing on the side street or streets may be warranted by one or more of the following conditions:

1. At intersections where sight distance is extremely limited or where other conditions make it especially desirable to emphasize the need for stopping on one street and for proceeding with caution on the main street. This type of installation is effective at intersections where approach speeds are in excess of that warranted by conditions, and drivers need more notification that can be provided by the use of standard oversize Stop signs, or by Stop signs and Advance Warning signs.

2. A serious concentration of accidents susceptible of correction by the cautioning or stopping of traffic.

(4) **Type of Control.** A flasher device installed in a separate housing remote from the beacon, shall be used solely to provide intermittent illumination of the beacon lens or lenses.

(5) **Location.** The particular purpose of a flashing beacon should largely govern its location with respect to the roadway and the hazard or other condition warranting the beacon. If used alone and located on the roadside, flashing beacons as measured from the bottom of the signal head should be at least 8 feet above the pavement. If suspended over the roadway, the minimum horizontal distance between signal heads shall be eight (8) feet measured at right angles to the roadway they face, the clearance above the pavement should not be less than 15 feet or more than 17 feet. In no case should they be mounted on pedestals in the roadway unless the pedestal is within the confines of a traffic or pedestrian island.

(6) **Operation.** The illuminating element in a flashing yellow (caution) or flashing (red) stop beacon shall be flashed at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash shall be not less than half and not more than two-thirds of the total cycle.

Flashing yellow (caution) may operate continuously or only during those hours when hazard or need for caution exists. Flashing red (stop) shall operate continuously and a Stop Sign may be used in conjunction with it.

SECTION 711-3 (Cont.)

**(b) Flashing School Signs.**

(1) **Definition.** Flashing school signs are standard signs which have been supplemented by the addition of two alternately flashing yellow signals within the face of the sign.

(2) **Design.** The school sign with flasher (W9-1 (F)), established by Section 705-9 (b) of these regulations, is authorized for use in place of the school sign (W9-1) where the flashing feature is considered necessary for emphasis.

The school sign with flasher and speed limit (W9-1 (S)), established by Section 705-9 (c) of these regulations is authorized for use in place of the school sign (W9-1) where flashing features and the indicated speed limit are considered necessary for emphasis and compliance. When activated the sign shall display the numerals "15" in steady red with the yellow lenses flashing alternately. When the sign is inoperative, the numerals "15" shall be not visible. This sign should not be placed where traffic signals are present and operating.

The yellow lenses shall have a visible diameter of not less than 6 inches.

All flashing controls shall be equipped with filters for suppression of radio interference.

(3) **Justification.** Although the signs treated in this subsection may be purchased, erected and maintained by the local authorities or the school district, a permit must be obtained from the Secretary of Highways. The permit must be requested by the local authorities and the permit shall be issued to the local authorities and it shall be their responsibility to see that the signs are erected, operated and maintained in accordance with the permit.

(4) **Type of Control.** All school signs shall be controlled by a time clock, and a flasher device shall be used solely to provide intermitten illumination of the lenses.

(5) **Operation.** The time of operation shall be indicated on the permit, and they shall be limited as much as possible in order not to destroy the effectiveness of the sign. In general, the arrival and departure times can be covered by allowing the sign to operate for one-half hour for each period. The maximum time movements should be covered by two one-half hour periods, but may require a longer period which should not exceed one and one-half hours. All times should be shorter if at all possible. The signs shall not be used when a small portion of the student body is moving about, such as only a minor percentage of the pupils leaving school for lunch. They shall not be flashed at night, on school holidays, during vacations or on non-school days.

The illuminating element in the flashing yellow lenses shall be flashed at a rate of not less than 30 nor more than 60 times per minute. The illuminated period of each flash shall be not less than half nor more than two-thirds of the total cycle.

**(c) Flashing Warning Signs.**

(1) **Definition and Application.** A flashing warning sign is any standard warning sign (W 705) other than the school signs (W9-1 (F)) Section 705-9 (b), and (W9-1 (S)) Section 705-9 (c) with two alternately flashing yellow lights above the sign in a horizontal position.

(2) **Design.** The flashing lights shall be mounted in a horizontal alignment not less than 20 inches apart from center to center in a bracket above the sign and not less than 15 inches behind the sign to eliminate glare. If the sign is externally illuminated the flashing lights may be in front of the sign. They shall normally be 8 inches in diameter.

All flashing contacts shall be equipped with filters for suppression of radio interference.

(3) **Justification.** Although flashing warning signs are ordinarily purchased, erected and maintained by local authorities, a permit must be obtained from the Secretary of Highways before they can be installed. They may be used only in those locations where an engineering study indicates that particular attention must be drawn to a dangerous condition.

(4) **Type of Control.** A flasher device shall be used solely to provide intermittent illumination of the lenses.

(5) **Operation.** The illuminating element in the flashing yellow lenses shall be flashed at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash shall be not less than half and not more than two-thirds of the total cycle.

Flashing signs should be operated continuously throughout the 24 hours of the day.

(d) **Fire Signals.**

(1) **Definition and Application.** The Fire signal is an illuminated red sign with flashing yellow lenses for use in front of a fire-house to indicate that fire equipment is about to emerge onto the street.

(2) **Design.** The Fire signal, when activated, shall display the word FIRE in steady red with yellow lenses flashing alternately on either side, in a horizontal line. When the signal is inoperative the letters shall be invisible.

The red letters shall be 10 inches in height and the yellow lenses shall be 10 inches in diameter.

The illuminating element, lens and reflector (together with visor, louver or back-plates, if used) shall be of such design as to render the lens when illuminated clearly visible to the approaching traffic for which it is intended.

(3) **Justification.** Although the signal must be purchased, erected and maintained by local authority, a permit must be obtained from the Secretary of Highways before it can be installed.

The signal may be used only in connection with a regularly constituted fire company building from which fire-fighting equipment will have cause to emerge onto a street or highway under conditions which are hazardous to the equipment or to passing traffic.

(4) **Type of Control.** A flasher device, installed in a separate housing remote from the signal, shall be used to provide intermittent illumination of the yellow lenses during the time the word FIRE is illuminated in steady red.

(5) **Operation.** The signal shall be turned on immediately before the fire equipment is to emerge and shall be timed to turn off automatically after sufficient time has elapsed to permit the equipment to clear the main stream of traffic.

The illuminating element in the flashing yellow lenses shall be flashed at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash shall be not less than half and not more than two-thirds of the total cycle.

(e) **Lane-Direction-Control Signals.**

(1) **Reversible Lanes.** The direction of flow of vehicular traffic lanes should be reversed only when engineering studies show there is a need for reversible traffic flow, in order to provide additional capacity, and that the planned operation can reasonably be expected to operate safely and efficiently. Reversible lane-control can be attained with appropriate signs and/or signals.

(2) **Definition and Application.** Lane-direction control signals are used to indicate and control the direction of traffic movement on individual lanes of a street or highway such as reversible lanes. These signals are distinguished by signal units over each lane of the roadway; supplementary signs may be used to explain their meaning and intent.

(3) **Design.** Lane-direction-control signs shall have one face for each direction of the traffic flow. Each face controlling a lane where the reversible system is in operation shall incorporate a distinctive rectangular signal unit (or units) of adequate size so that the signal indicator is at all times clearly visible from 1000 feet under all atmospheric conditions except dense fog.

The signals shall have a downward pointing green arrow and a red X symbol illuminated on an orange background. Illumination of signals can be by incandescent lamps or gaseous tubing.

Mountings shall permit the signals to be suspended over lanes on cable or fixed supports.

(4) **Meanings of Indications.** The meaning of lane-direction-control signals are as follows:

## SECTION 711-3 (Cont.)

**Downward-pointing green arrow.** A driver facing this indication is permitted to drive in the lane over which the arrow signal is located. Otherwise he shall obey all other traffic controls present and follow normal safe driving practices.

**Red X symbol.** A driver facing this indication shall not drive in the lane over which the signal is located, and this indication shall modify accordingly the meaning of all other traffic controls present. The driver shall obey all other traffic controls and follow normal safe driving practices.

(5) **Types of Control for Reversible-Lane-Operation.** The type of control provided for reversible lane operation should be such as to permit either automatic or manual operation of the lane-direction-control signals. The control mechanism shall permit the illumination of the red indications in both directions in the same lane for those lanes where the traffic flow is subject to being reversed. The possibility of an erroneous indication of green in both directions in the same lane should be avoided by wiring the green indication so that it can be illuminated only when the red indication shows in the opposite direction.

(6) **Location of Signals for Reversible-Lane Operation.** A lane-direction-control signal head with a face for each direction of reversible traffic to be controlled shall be located over the center of each reversible lane of the roadway at the beginning and end of the lane-controlled section. Confirming lane-direction-control signals over other lanes are optional. If the area to be controlled is more than 1,000 feet in length, or if the vertical or horizontal alignment is curved, intermediate signal indications shall be placed over each reversible lane at frequent enough intervals so that motorists will at all times be able to see at least one indication and preferably two (due to the possibility of a burn-out of a single indication) along the roadway, and will have a definite indication of the lanes specifically reserved for their use. At the terminal and intermediate signal installation points on the lane-controlled sections, signal indications above the reversible lanes shall be located in a transverse straight line at right angles with the roadway alignment. On roadways having intersections controlled by traffic signals, these lane-control indications shall be placed sufficiently far in advance of or beyond such traffic signals to prevent them from being misconstrued as traffic control signals. The use of twelve-inch traffic signal lenses may also aid in distinguishing the two types of signals.

(7) **Operation of Reversible-Lane Signals.** All reversible-lane-control signals shall be coordinated and wired to a master control which will operate so as to permit signal indication faces for each direction in any of the reversing lanes to change from red to green or from green to red, except that the showing of green in both directions over the same lane shall be guarded against by electrical interlock. It shall be possible to show a red indication in both directions in any of the lanes subject to reversing traffic flow. This latter feature permits the establishment of a neutral area or safety zone during the change-over period. The transitional interval, when both directions have a red indication, should be of sufficient length to minimize the hazard of opposite-direction conflicts on the reversible lane or lanes. The change-over should normally be made during a period of light traffic, but in an emergency traffic situation it can be made at any time.

The signals shall be operated continuously.

### (f) Traffic Signals at Drawbridges.

(1) **Application.** Signals installed at drawbridges to control vehicular traffic are a special application of highway traffic signals.

(2) **Justification.** Traffic signals are authorized for use in conjunction with drawbridge gates. They may also be used with other types of protection commonly employed at drawbridges.

(3) **Design.** The traffic control at a drawbridge shall be activated not less than 15 seconds before the gates are closed. The location of the vehicular signals shall be dependent upon the physical approach to the bridge, (grade alignment and sight distance), the location where traffic must stop and the effect that stoppage will have upon other traffic controls and traffic movement in the area.

Careful study must be given to each location.



## 711-4. TRAIN-APPROACH SIGNALS AND GATES

### (a) Scope and Intent of Regulation.

Railroad-highway grade-crossing protection must in all cases conform to order of the Pennsylvania Public Utility Commission. It is the intent of these regulations to effectuate such orders and in some cases to provide such protection where it is necessary to coordinate the train-approach signal with other signals authorized by the Commission's order.

### (b) Definitions.

**Flashing-light signal** is a signal in which indication of the approach of a train is given by two horizontal lights flashing alternately at predetermined intervals.

**Wigwag signal** is a signal in which the indication of the approach of a train is given by a horizontal rotating disk and a red light enclosed in the disk.

**Railroad-highway grade-crossing automatic gate** is a device which, when indicating the approach of a train, presents toward the highway in both directions the appearance of an arm being lowered or in a horizontal position, and extending over the traveled roadway a sufficient distance to protect the lanes used by traffic approaching the crossing.

### (c) Justification.

Railroad-highway grade-crossing signals, gates or signs for the type described herein shall be installed when authorized and ordered by the Pennsylvania Public Utility Commission. These devices shall be used for no other purpose.

### (d) Type of Control.

Railroad-highway grade-crossing signals, gates or signs may be operated manually or automatically. They shall operate upon the approach of trains from either direction on the tracks for which protection is provided and they shall continue to operate until the rear of the train has cleared the track.

### (e) Design.

**Flashing-light-signals and wigwag signals.** The following provisions relate to the design of these

1. The illuminating element, lens, back-plate and reflector (together with visor and louvers, if any) shall be of such design as to render the lens when illuminated clearly visible to the approaching traffic for which it is intended.

2. Roundels and outer lenses shall be a minimum of 8 $\frac{3}{8}$  inches in diameter.

3. The Railroad Crossbuck sign and the signal shall be mounted on the same post.

**Automatic gates.** The following provisions relate to the design of automatic gates:

1. An automatic gate used for the protection of highway traffic at a railroad-highway grade-crossing, when indicating the approach of a train, shall reach the full horizontal position before the arrival of the first train operated over the crossing and shall present toward approaching highway traffic the appearance of an arm equipped with red lights being lowered across the lane or lanes used by traffic approaching the crossings, or at rest in the horizontal position across the lane or lanes.

2. An automatic gate, when installed, shall serve as an adjunct to a highway crossing signal of the flashing-light type. The gate should be mounted on the same assembly as the flashing-light signal; however, where conditions require, it may be mounted on an independent pipe, post, or pedestal located between the signal and the track.

3. The bottom of the gate arms, when in the horizontal or lowered position, shall be not less than 4 feet nor more than 4 $\frac{1}{2}$  feet above the crown of the roadway and, when not indicating the approach of a train, shall neither obstruct nor interfere with highway traffic.

4. Each gate arm extending over the highway shall have three red lights shining in both directions along the highway. The light nearest the tip shall burn steadily and the other two lights shall flash alternately.

## SECTION 711-4 (Cont.)

5. The gate arms shall be striped on both sides with 16-inch alternate diagonal stripes of white and black.

6. Insofar as practicable, the mechanisms should be so designed that if the arms, while being raised or lowered, strike or foul an object they will readily stop and, upon removal of the obstruction, assume the position required by the control mechanism.

### **(f) Location.**

The location shall be in accordance with the order of the Pennsylvania Public Utility Commission. Normally one signal or one signal and gate should be placed on each side of the track or tracks, except in the cases of established one-way streets, where the installation should be made on the approach side. Signals and gates shall preferably be placed on the right of approaching traffic. The location of the signal should be not less than 2 feet beyond the curb, the edge of the traveled way, or the outer edge of the paved shoulder when the shoulder is continued across the tracks.

### **(g) Operation.**

Signals and devices which indicate the approach of a train should be so controlled that they will operate for such period of time before the arrival of any train operated over the crossing as is reasonably required to afford protection. Where the greatest distance along the highway is 35 feet or less between the signal on either side of the crossing and the clearance beyond the farthest track from such signal on which trains operate at medium or higher speed, the signals should operate for not less than 20 seconds before the arrival of any train on any such track. Where this distance is more than 35 feet, the 20 seconds should be increased to provide the additional time required for highway vehicles to clear the crossing.

Circuits for the operation of automatic gates should be so arranged that the gate arm shall start its downward motion not less than 3 seconds after the signal lights start to operate. The gate arm shall reach full horizontal position before arrival of the fastest train operated over the crossing and shall remain in that position until the rear of the train has cleared the crossing.

Electric lamps in the flashing-type of signals shall flash alternately. The number of flashes of each lamp per minute shall be 30 (minimum) to 45 (maximum). Each lamp shall be illuminated for approximately one-half of the operating cycle.

### **(h) A No Right Turn or No Left Turn Signal.**

Is a sign which may be used on a highway adjacent to and approximately paralleling a railroad when that highway intersects or joins another highway that crosses the railroad at grade and which is controlled by signals and/or gates.

The No Right Turn or No Left Turn sign shall be internally illuminated, and it shall be legible only when the crossing signal or gates indicate the approach of a train. It shall be illuminated without flashing during the period that the crossing signals or gates are operating. It may be surmounted by a yellow light which shall flash in synchronization with the crossing signals.

## SECTION 712. MARKINGS, GENERAL PROVISIONS

### (a) Functions and Limitations of Markings.

Markings have definite and important functions to perform in a proper scheme of traffic control. In some cases they are used to supplement the regulations or warnings of other devices such as traffic signs or signals. In other instances they obtain results, solely on their own merits, that cannot be obtained by the use of any other device. In such cases they serve as a very effective means of conveying certain regulations and warnings that could not otherwise be made clearly understandable.

Pavement markings have definite limitations. They may be entirely obliterated by snow, are not clearly visible when wet, and are not very durable when painted on surfaces exposed to traffic wear. In spite of these limitations they have the advantage, under favorable conditions, of conveying warnings or information to the driver without diverting his attention from the roadway.

### (b) Legal Authority.

Pursuant to the provisions of the "Vehicle Code" the traffic markings hereinafter described are adopted as official traffic markings. Local authorities in counties, cities, boroughs, incorporated towns and townships with reference to highways under their jurisdiction are authorized to place and maintain them for the purpose of regulating, warning or guiding traffic.

### (c) Standardization.

Markings shall be uniform in design, position and application. As in the case of all other traffic control devices, it is imperative that markings be uniform so that they may be recognized and understood readily by all drivers.

### (d) Materials.

The most common method of placing pavement, curb and object markings is by means of paint. To improve the night visibility of pavement markings, the use of minute glass "beads" (actually true spheres) embedded in the pavement-marking material to produce a retrodirective reflecting surface is authorized.

The use of thermoplastic materials is also authorized. Thermoplastic markings shall conform to the color, reflectorization and dimension specifications for paint markings.

The use of marking units is likewise authorized. Units on or in the pavement surface shall be of permanent color as specified for pavement markings, and shall be set so that their upper surfaces are essentially flush with the pavement surface.

### (e) Classification of Markings..

Official markings are divided into the following classifications and set forth herein the following

#### I. Pavement marking group.

- (a) Center lines.
- (b) Lane lines.
- (c) No-passing-zone markings.
- (d) Pavement edge lines.
- (e) Paved-shoulder markings.
- (f) Pavement-width transitions.
- (g) Channelizing lines.
- (h) Approaches to obstructions.
- (i) Turn markings.
- (j) Stop Lines.
- (k) Crosswalk lines.
- (l) Approaches to railroad crossings.
- (m) Parking space limits.

SECTION 712 (Cont.)

- (n) Word and symbol markings.
  - (o) Lane-use control markings.
- 2. Curb markings for parking restrictions.
- 3. Object markings:
  - (a) Objects within the roadway.
  - (b) Objects adjacent to the roadway.

## SECTION 712-1. PAVEMENT MARKING GROUP

### (a) Center Lines.

(1) **Justification.** A center line is used to designate the center of the traveled part of a roadway carrying traffic in both directions. Under some circumstances, as at a pavement-width transition, or where a contra-traffic lane is provided, it need not be at the geometrical center of the pavement. On all rural highways having an even number of lanes, and on many urban streets and less important roads, center lines are necessary and should be applied throughout the entire length of the pavement. At certain locations and on some rural roads where a continuous center line is not required, short sections of center line are useful on approaches to busy intersections, marked crosswalks, or railroad crossings, at round curves or over hillcrests. When so used, the center line serves both to warn of any unusual condition and to organize and control traffic through a hazardous or congested zone.

(2) **Center Lines on Rural Roads.** The center line on a two-lane paved rural highway shall be a solid reflectorized white line, not less than 4 nor more than 6 inches wide. Where a solid channelizing line (sec. 712-1 (g)) is used as a center line, however, the width of the solid line may vary from the normal line width to a maximum of 12 inches, depending on the emphasis required. Line segments having a ratio of stripe to gap are standard and segments 15 feet in length, with 25-foot gaps, are recommended.

On four-lane undivided rural pavements, or on pavements of a greater number of lanes, the center lines shall consist of two solid yellow lines, each not less than 4 inches nor more than 6 inches wide, separated by a space of not less than 4 inches.

As a guide to the application of center-line markings, the following warrants are suggested:

a. Center lines are desirable on all paved highways and as a minimum should be placed throughout the length of:

1. Two-lane pavements carrying average annual traffic volumes in excess of 1000 vehicles per day.
2. Two-lane pavements narrower than 20 feet carrying average annual volumes in excess of 500 vehicles per day.
3. Two-lane pavements narrower than 18 feet but not less than 16 feet in width carrying average annual volumes in excess of 300 vehicles per day.
4. All four-, six-, and eight-lane undivided pavements.

b. Center lines should be placed at other locations where the accident record indicates the need for them, and on hard-surfaced roads in areas where driver visibility is likely to be reduced frequently, as at round curves.

(3) **Center Lines on Urban Streets.** The center line on a two-way city street with less than four lanes for moving traffic at any time shall be a solid reflectorized white line. Such a line shall be not less than 4 nor more than 6 inches wide. For increased emphasis, a wider channelizing line may be used for the center line (sec. 712-1 (g)).

The center line on a two-way street with four or more lanes for moving traffic at all times shall be a double solid yellow line except on a street involving reversible lane control. In such case a single solid white line (sec. 712-1 (g)) may be used.

A line marking the center of a one-way street is a lane line and shall be a broken white line.

### (b) Lane Lines.

(1) **Justification.** Lane lines are helpful in the organization of traffic in its proper channels, and in increasing the efficiency of the use of the road-way surface at congested locations. Their use is authorized:

- a. On all rural highways with an odd number of traffic lanes.

## SECTION 712-1 (Cont.)

b. In addition to the double solid center line, on all undivided rural highways of four or more lanes.

c. At the approaches to important intersections and crosswalks, and in dangerous locations, on both rural highways and city streets.

d. At congested locations, particularly on city streets, where the roadway will accommodate more lanes of traffic than would be the case without the use of lane lines. These include:

1. Locations between loading islands and sidewalk curbs.
2. Other locations where the normal lane width is decreased.
3. Approaches to widened intersections.

e. On one-way streets or roadways where maximum efficiency in utilization of the roadway is desired.

(2) **Lane Lines on Rural Roads.** Lane lines on rural roads shall be broken reflectorized white lines, not less than 4 inches nor more than 6 inches wide. Line segments 15 feet long, with 25-foot gaps, are recommended. A solid channelizing line (sec. 712-1 (g)) used in place of a lane line may vary in width from the normal line width to a maximum of 12 inches. The transverse spacing of lane lines, that is, the lane width, should not normally be less than 10 feet, with 12 feet as the desirable width.

(3) **Lane Lines on Urban Streets.** Lane lines on city streets shall be broken reflectorized white lines, not less than 4 inches nor more than 6 inches wide. Due to relatively lower speeds, the line segments and gaps may be shorter than in rural areas, maintaining a 3 to 5 ratio of length of stripe to length of gap. A solid channelizing line (sec. 712-1 (g)) used in place of a lane line may vary in width from the normal line width to a maximum of 12 inches.

The lane width defined by lane lines should not normally be less than 10 feet, but a minimum of 8 feet is permissible where a maximum number of lanes must be made available, as at a signalized intersection where provision must be made for the most efficient storage of stopped vehicles.

On wide, high-speed boulevards and on controlled-access highways in urban areas the standards for lane markings shall be the same as those for rural highways.

### (c) No-Passing-Zone Markings.

Where the Secretary of Highways has designated any portion of any State highway as a "No Passing Zone" the zone shall be marked by a solid reflectorized yellow barrier line.

The barrier line shall not be less than 4 nor more than 6 inches wide, and shall be separated from the adjacent line by a space of not less than 3 nor more than 4 inches.

It may be placed alone or as the right-hand element of a combination line, it indicates that the passing restriction applies. Where the barrier line appears as the left-hand element in the combination line with a broken white line, the passing restriction will apply only to the opposing direction of traffic. When the barrier line appears alone or in combination with another barrier line the passing restriction applies to traffic in both directions. The single barrier line should be used only on highways having a paved cartway of less than 18 feet.

On a two-lane highway the combination no-passing line shall follow the center line throughout the no-passing zone. On a three-lane highway the combination line shall start in advance of the no-passing zone at the left-hand lane line of the center lane and shall extend diagonally across the center lane to the right-hand lane line at the beginning of the no-passing zone, and thence extend along the lane line to the end of the zone. The combination line shall extend across the center lane at an angle to be determined by the formula,  $L = S \times W$ , where L equals the length in feet, S the (offpeak) 85-percentile speed in miles per hour, and W the offset distance in feet.

In no case shall the marking be less than 500 feet in length. If the actual no-passing distance is less than 500 feet, the additional length of marking shall be added at the beginning of the zone.

### (d) Pavement Edge Lines.

Pavement edge lines shall be solid reflectorized white lines 4 inches wide. They shall be used only

as a supplement to and not as a substitute for standard center and lane lines, and shall not be placed on highways having a paved cartway of less than 20 feet.

The purpose of line markings on the edge of the pavement is generally threefold: (1) To reduce speed, particularly by the heavier vehicles, on shoulders of lesser structural capacity than the adjacent pavement, (2) to make driving more comfortable, particularly at night and during inclement weather, by providing a continuous guide for the driver, and (3) to reduce accidents.

**(e) Paved-Shoulder Markings.**

Paved shoulder markings shall be solid reflectorized white lines 12 inches wide, placed at a 45° angle sloping in the direction of traffic flow. Spacing may vary from 20 feet in low speed areas to 100 feet in areas where operating speeds are 50 miles per hour or over. Continuous lines along the outer edge of the paved shoulder shall not be used because of the possible confusion with a pavement edge line or a traffic lane line.

Use of the diagonal line markings is recommended only where the shoulder is 8 or more feet wide and the contrast between the highway paving and the shoulder paving is not sharp. The purpose here is to alert motorists to the fact that the wide shoulder is not another traffic lane and to avoid collisions with stopped vehicles.

**(f) Pavement-Width Transitions.**

Line markings should be used to guide traffic at points where the pavement width changes to a lesser number of lanes. Line markings at pavement-width transitions should be not less than 4 nor more than 6 inches wide and of standard design for center, lane, or barrier lines. Converging lines should have a length of not less than that determined by the formula  $L = S \times W$ , where L equals the length in feet, S the (offpeak) 85-percentile speed in miles per hour, and W the offset distance in feet. On new construction, where no 85-percentile speed exists, the design speed may be used.

A number of situations are possible, depending on which lanes must be offset or cut out, and the amount of offset. Where one or more lane lines must be discontinued, the remaining center and lane lines must be connected in such a way as to merge traffic into the reduced number of lanes.

Through the transition area, in the direction of convergence, the line separating the opposing directions of traffic should be of no-passing-zone design, either the double solid center line of a multi-laned road or a normal broken center line with an adjacent barrier line as prescribed for no-passing zones.

Line markings at pavement-width transitions are not sufficient, in themselves, to guide traffic safely through such locations. Standard signs, and guardrails, edge lines, or delineators must be used in conjunction with the pavement markings.

**(g) Channelizing Lines.**

The channelizing line shall be a solid white line. The width of the line may vary from the width of a normal center or lane line to a maximum of 12 inches depending on conditions and the emphasis required. Generally, 8 to 12 inches is desirable. This marking is used where traffic may proceed on either side, but where crossing the line is to be discouraged.

The channelizing line is useful to form traffic islands in a paved area and to separate turn lanes from the main traffic lanes, where a more restrictive barrier, such as a curb, is impractical or would create a hazard. The wide line will outline a neutral area and guide traffic, but the consequences are not severe if it is driven over inadvertently or to avoid an accident. The use of this marking is, of course, limited to locations where a positive restriction in the form of a physical barrier is not required.

The solid line may be used in lieu of the broken lane line to accentuate the lane marking in critical areas and more clearly define the traffic lanes where it is advisable to discourage lane changing. Typical locations for use of this marking are tunnels where width is restricted, interchange areas where unnecessary lane changing is detrimental to smooth traffic flow, and areas where visibility is poor due to weather conditions. The solid lane line is applicable to both one-way and two-way roadways.

The wide solid line may also be used in lieu of the normal-width center line on urban streets to

## SECTION 712-1 (Cont.)

emphasize the center line or to distinguish it at points where solid lane lines are used. On a two-lane two-way road the solid line may be placed on the center line where emphasis is needed and a barrier line is too restrictive.

A single solid white line may be used to separate the primary traffic lanes from lanes for special use, such as uphill climbing lanes or transit lanes.

Use of the channelizing line at exit ramps of expressways provides a neutral area which reduces the possibility of conflict with the curb nose and also directs turn-off traffic at the proper angle for smooth divergence. At entrance ramps the line promotes safe and efficient merging with the through traffic.

**Exit Ramp Marking.** A solid white line at least 8 inches in width shall be placed along the side of the triangular neutral area between the edges of the main roadway and the exit ramp lane at the gore of every exit ramp terminal. With a parallel deceleration lane, a broken white line shall be placed from the apex of the triangular area for a distance of approximately one-half the length of the full width deceleration lane. Where additional emphasis is desired, diagonal markings may be used within the neutral area.

**Entrance Ramp Marking.** A solid white line at least 8 inches in width shall be placed along the side of the triangular neutral area adjacent to the ramp lane at the gore of every entrance ramp terminal. With parallel acceleration lanes, a broken white line shall be placed from the apex of the triangular area for a distance of approximately one-half the length of the full width acceleration lane. With tapered acceleration lanes a similar broken white line may be placed beyond the solid line but not beyond the point where the tapered line meets the outer edge of the near through line.

### (h) Approaches to Obstructions.

Pavement markings shall be used to supplement standard signs and to guide traffic on the approach to fixed obstructions within a paved roadway.

Obstruction approach pavement markings shall consist of a diagonal line, or lines, extending from the center or lane line to a point 1 to 2 feet to the right side, or to both sides, of the approach end of the obstruction. All lines used in obstruction approach markings shall be not less than 4 nor more than 12 inches wide.

The length of the diagonal marking should be determined by the formula,  $L = S \times W$ , where  $L$  equals the length in feet,  $S$  the (offpeak) 85-percentile speed in miles per hour, and  $W$  the width of the offset in feet. In no case shall the diagonal line be less than 200 feet in length in rural areas or 100 feet in urban areas.

If traffic is required to pass only to the right, the diagonal line shall be marked to the right and shall be one of the following designs:

1. A normal broken center line flanked by a solid barrier line, as specified for no-passing zones. The barrier line shall extend along the center line in advance of the diagonal line for an additional distance equal to the length of the diagonal line, or

2. On roads of four lanes or more a simple continuation of the double center line is prescribed for such roads.

In addition, a solid white diagonal line may be extended to the left of the obstruction, to outline the triangular area from which traffic must be excluded for safety.

If traffic may pass either to right or left of the obstruction barrier lines cannot be used. In this case there shall be two solid white lines diverging from the lane line, one to either side of the obstruction for a length determined by the formula  $L = S \times W$ . In advance of the point of divergence a single solid white line shall be extended in place of the normal broken lane line for a distance equal to the length of the diverging lines.

As an added safeguard it is desirable, especially where traffic is permitted to pass on both right and left of an obstruction, to place broad transverse, diagonal, or longitudinal lines in the triangular area between the guide lines.



Similar markings are desirable at channelizing islands not so designed as to divert traffic naturally.

**(j) Turn Markings.**

Markings to control and guide turning vehicles are sometimes used at intersections. Turn markings have not been satisfactorily standardized, but if used they should be so designed as to indicate the proper place for turning vehicles without being needlessly confusing to through traffic or traffic making other turns. Such markings shall be white.

**(k) Stop Lines.**

Stop lines shall be solid white lines, not less than 12 nor more than 24 inches wide. They shall extend across all approach lanes.

On urban streets where speeds are not high a width of 12 to 18 inches is usually sufficient.

Stop lines (or Limit lines) should be used in both rural and urban areas where it is important to indicate the point behind which vehicles are required to stop in compliance with a Stop sign, traffic sign, officer's direction, or other legal requirement.

Stop lines, where used, should ordinarily be placed 4 feet in advance of, and parallel to, the nearest crosswalk line. In the absence of a marked crosswalk, the Stop line should be placed at the desired stopping point, in no case more than 30 feet or less than 4 feet from the nearest edge of the intersecting roadway.

If a Stop line is used in conjunction with a Stop sign, it should ordinarily be placed in line with the Stop sign. However, if the sign cannot be located exactly where vehicles are expected to stop, the Stop line should be placed at the stopping point.

The word STOP shall not be placed on the pavement in advance of a Stop line, unless every vehicle is required to stop at all times.

**(l) Crosswalk Lines.**

Crosswalk lines in both rural and urban areas should be one of the following designs:

1. Solid white lines, not less than 6 inches and not more than 24 inches wide marking both edges of the crosswalk.
2. Consecutive white rectangles 2 feet by 6 to 10 feet with the long dimension parallel to the direction of vehicular travel, separated by a space of approximately 2 feet. They should be placed on the pavement so that they are between the normal wheel tracks to minimize the tendency for wear of the paved surface.
3. A combination of 1 and 2 above with the lines described in 1 being used to join the ends of the rectangles in 2.

Crosswalks shall be marked at all intersections where there is material conflict between vehicular and pedestrian movement. Marked crosswalks should also be provided at other appropriate points where there is substantial pedestrian movement, as at long loading islands, or where pedestrians are permitted to cross between intersections, or where pedestrians could not otherwise recognize the proper place to cross. Where the cross walk is between intersections, the Cross Walk sign (W 11-2) should be erected.

The width of the crosswalk between crosswalk lines is usually determined by the width of the sidewalks so connected. The width shall in no case be less than 6 feet.

**(m) Approaches to Railroad Crossings.**

Pavement markings consisting of a cross, the letters RR, a no-passing zone marking, and certain advance lines shall be placed on all paved approaches to railroad crossings, except at minor sidings in urban areas where other protection is afforded. Such markings shall be white except for the no-passing zone line, which shall be yellow.

While these markings have value as a means of attracting the attention of the driver to the prox-

## SECTION 712-1 (Cont.)

imity of a railroad grade crossing, because they are distinctively different from all other pavement markings, they are only auxiliary to the standard Railroad Advance Warning sign and the Crossbuck sign which must be used in every case, with crossing signals or gates.

### **(m) Parking Space Limits.**

All lines for parking spaces shall be solid white lines, not less than 4 inches nor more than 6 inches wide.

The marking of parking space limits on urban streets encourages more orderly and efficient use of parking spaces, and tends to prevent encroachment on fire hydrant zones, bus stops, loading zones, approaches to corners, and clearance spaces for islands.

The ends of a parking zone may be indicated on the pavement by lines marked perpendicular to the curb and extending into the roadway the width required by a parked vehicle, usually 8 to 10 feet. As a further refinement a line may be placed parallel to the curb connecting the street ends of these perpendicular lines, indicating the outside boundary of the parking zone.

The zone may be further divided into stalls by the use of similar lines perpendicular to the curb and so spaced that each stall is long enough to accommodate one parked vehicle, usually 22-26 feet. Stalls at the ends of a zone may be 20 feet in length. A short line, parallel to the curb, may be placed the length of the parking zone. For parking stalls along the left-hand curb of one-way streets, markings may be placed on the curb delineating the ends of the individual stalls. The marking of stalls is especially beneficial where parking meters are used.

Curb markings may also be used to indicate parking prohibitions.

Angle parking is generally not desirable, though occasionally it may be justified as, for example, on a pavement over 70 feet in width where traffic is light and relatively slow moving. Where angle parking is permitted the marking of lines to indicate the limits of stalls enables all drivers to park at the same angle with a minimum of wasted space.

### **(n) Word and Symbol Markings.**

Word and symbol markings on the pavement may be used for the purpose of guiding, warning, or regulating traffic. They should be limited to as few words as possible, never more than three.

Word and symbol markings shall not be used for mandatory messages except in support of standard signs. They shall be white in color. If applicable at night, they shall be reflectorized.

The letters and symbols should be greatly elongated in the direction of traffic movement because of the low angle at which they are viewed by approaching drivers. Large letters and numerals should be used, 8 feet or more in height; and, if the message consists of more than one word, it should read "right" i.e., the first word should be nearest to the driver. Where speeds are low, somewhat smaller characters may be used. The space between lines should be at least four times the height of the characters.

On high-speed roads, especially where traffic is heavy, messages of more than one line are undesirable and should generally be avoided.

### **(o) Lane-Use Control Markings.**

Lane-use control markings should be used on the approach to an intersection to supplement Lane-Use Control signs indicating the types of movement that are permitted from specific lanes.

Both word markings and arrow markings shall be white and reflectorized.

Additional markings of the same design should also be placed at a sufficient distance in advance of the intersection so that motorists can select the appropriate lane before reaching the end of the line of waiting vehicles.

## SECTION 712-2. CURB MARKINGS FOR PARKING RESTRICTIONS

The curb markings for parking restrictions shall be of a solid yellow color, covering the face and top of the curb.

Curb markings may be used to show where parking is prohibited at all times. They shall not be used on curbs along which parking is legally prohibited, either by general ordinance, as at fire hydrants, adjacent to corners, and opposite loading islands, or by the erection of standard no-parking signs.

Experience has shown that the public does not easily understand a color code where several colors are used in curb marking to indicate different types or degrees of parking restrictions. Curb markings are authorized only to show that parking is prohibited at all times. Other restrictions should be shown by standard parking signs.

## SECTION 712-3. OBJECT MARKINGS

Physical obstructions in or near a roadway that constitute serious hazards to traffic, including installations designed for the control of traffic, shall be adequately marked.

Typical obstructions of this character are bridge supports, monuments, traffic islands, beacons, signal islands, railroad and drawbridge gates, end posts of narrow bridges, underpass piers and structures, culvert headwalls, poles, trees, rocks, and structures giving restricted overhead clearance.

Only such immovable obstructions as bridge supports and necessary islands should be permitted to remain within the roadway. Even at the present time, other obstructions are occasionally placed in roadways on the mistaken belief that they will serve as aids to the control of traffic. Such installations include signal pedestals in the center of intersections, sign or signal posts at railroad crossings, and large "push" buttons in active traffic areas. These should invariably be removed for safety. It is often necessary, however, to place barricades and similar devices in or near the roadway in emergencies or at construction or maintenance sites.

Judgment must be exercised in the marking of objects off the roadway, but it may be noted that, where they are theoretically at a safe distance from the roadway, marking them may prevent serious accidents and facilitate night driving.

In addition to markings, a guardrail should be placed in advance of solid obstructions such as bridge supports, overhead sign supports, and end posts of bridges. The purpose of the guardrail is to protect vehicles and reduce the severity of impact. Guardrails should be painted white and may be re-

### (a) Objects Within the Roadway.

Obstructions in the roadway, if not illuminated, should be marked with reflectorized hazard markings (W 16-1).

For additional emphasis it is advisable also to mark such obstructions, except islands, with reflectorized white paint or not less than five alternating black and reflectorized white stripes. The stripes shall be downward at an angle of 45 degrees toward the side of the obstruction on which traffic shall pass. Alternate stripes shall be uniform and not less than 4 inches in width. They may be as much wider as necessary to make a good appearance and to provide sufficient visibility, depending on the size of the object and speed of approaching traffic.

Where the vertical clearance of an overhead structure is less than 1 foot more than the maximum height of vehicles, the clearance in feet and inches should be clearly marked on the structure.

A large surface, such as a bridge pier, may require stripes of 12-inch or greater width, depending on its area.

If the obstructing object is such that it does not lend itself readily to the application of painted markings, the striping may be placed on an independent surface attached to or mounted immediately adjacent to the object.

## SECTION 712-3 (Cont.)

Appropriate signs (R 4-7, W 12-1) directing traffic to one or both sides of the obstruction should also be used, as applicable.

In addition to the markings on the face of an obstruction in the roadway, warning of approaching the hazard should be given by line markings on the pavement (Sec. 712-1 (h)).

Where an obstruction lies in the direct line of traffic, it shall be marked, whether or not it is illuminated. The obstruction and markings thereon should, if possible, be illuminated by a floodlight constructed that it will adequately light the object but will not throw a glare in the face of traffic approaching from either direction. When floodlighting is not practical, reflective hazard markings (W 16-2) should be used. A flashing yellow beacon may be used at unusually hazardous obstructions.

The curbs of all islands located in the line of traffic flow should be marked by reflectorized solid yellow material, covering the face and the top of the curb.

### **(b) Objects Adjacent to the Roadway.**

In some cases objects may not be actually in the roadway, but may be so close to the edge of the roadway as to constitute a definite hazard. These include such encroachments as underpass piers, abutments and culvert headwalls. Such objects should be marked with standard clearance markings (W 16-2) and may be marked in addition with white paint or a diagonal stripe design in the same manner as objects within the roadway (sec. 712-3 (a)).

Other adjacent objects that are not likely to be hit unless a vehicle runs well off the roadway, such as guardrails, trees, and rocks, may be painted solid white.

As a further aid to motorists, the marking of curbs directly ahead of traffic at T and offset sections is authorized. The marking shall be reflectorized solid yellow, covering the face and the top of the curb.

# **APPENDIX**

**A. PAVEMENT MARKINGS**

**B. SIGN INDEX**

**C. BLANK STANDARDS**

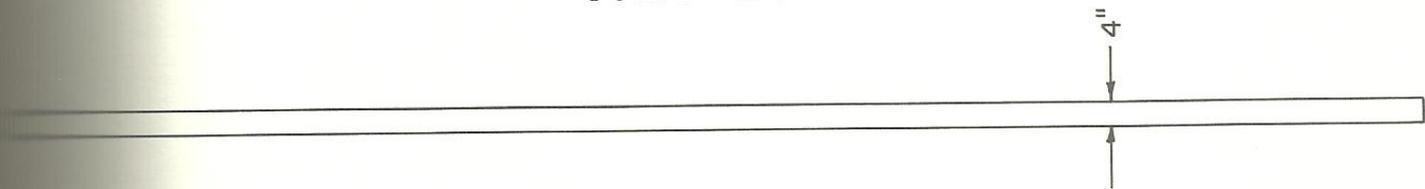
**APPENDIX A**  
**PAVEMENT MARKINGS**

# STANDARD PAVEMENT MARKINGS

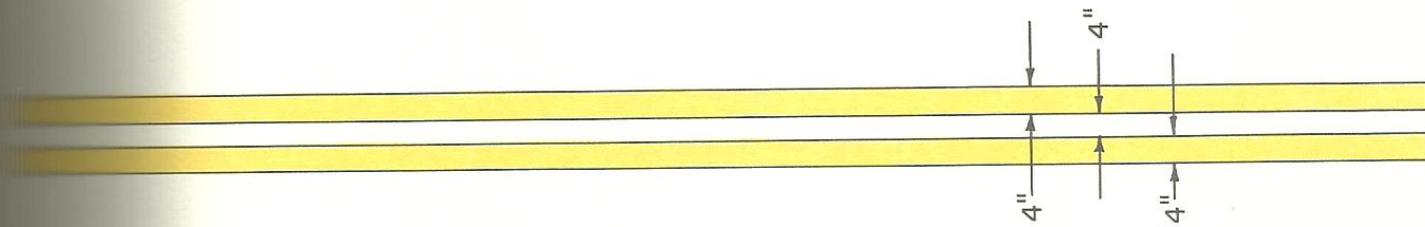
## BROKEN LINE



## SOLID LINE



## TWO-WAY BARRIER LINE



## ONE-WAY BARRIER LINE

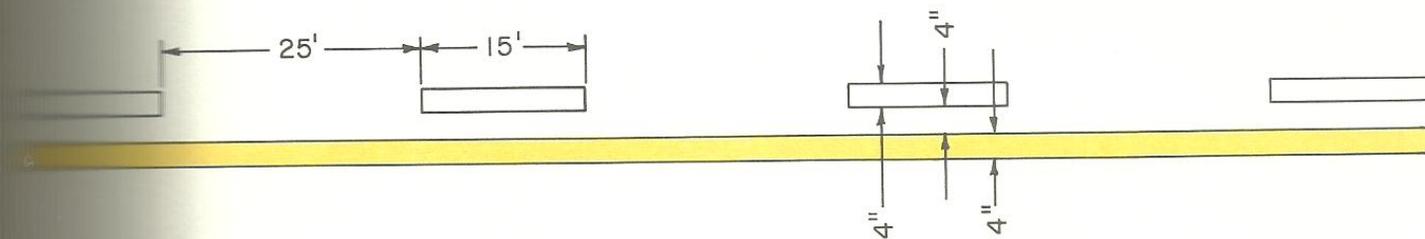


FIGURE M-1

# STANDARD CROSS-HATCHING

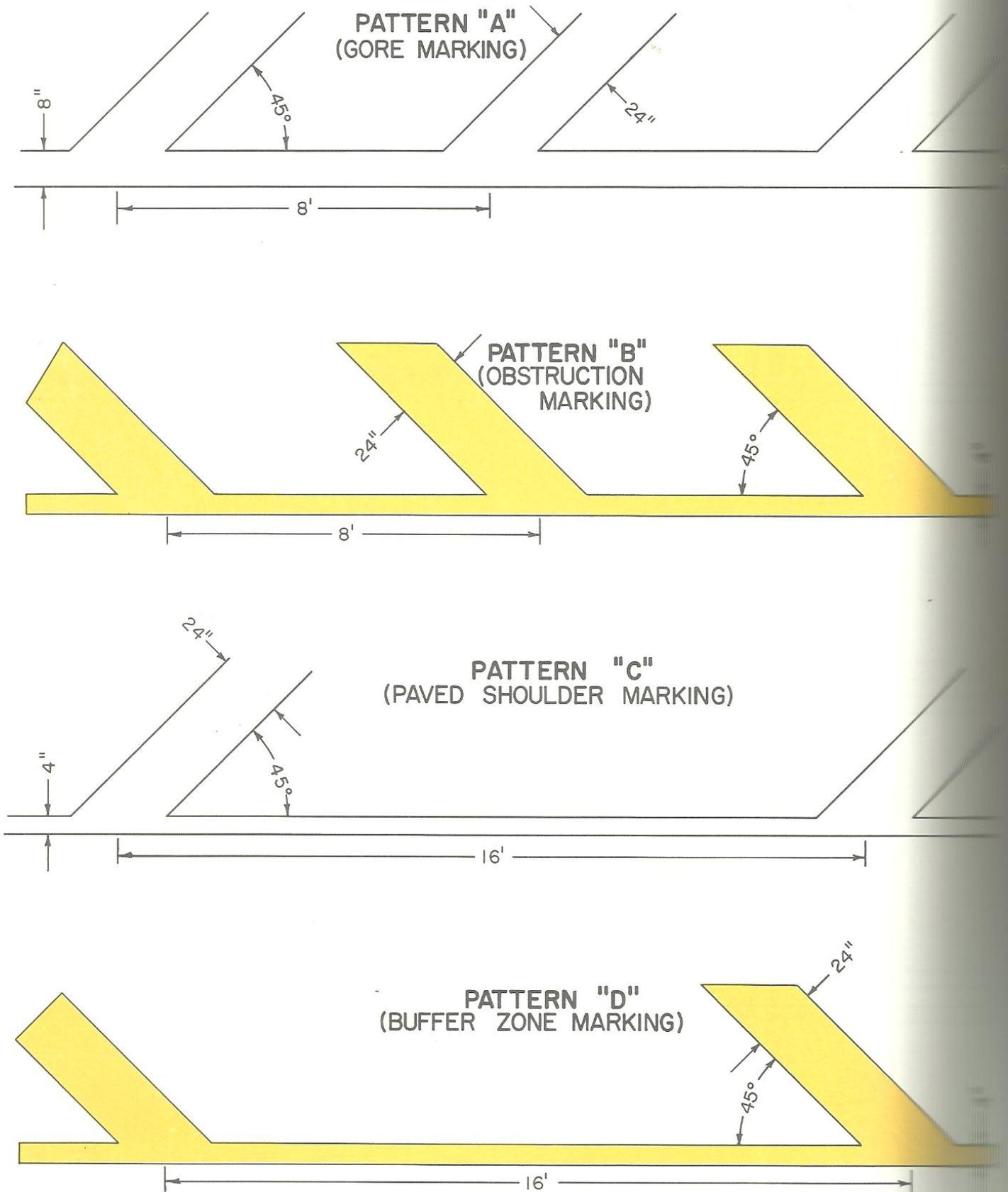
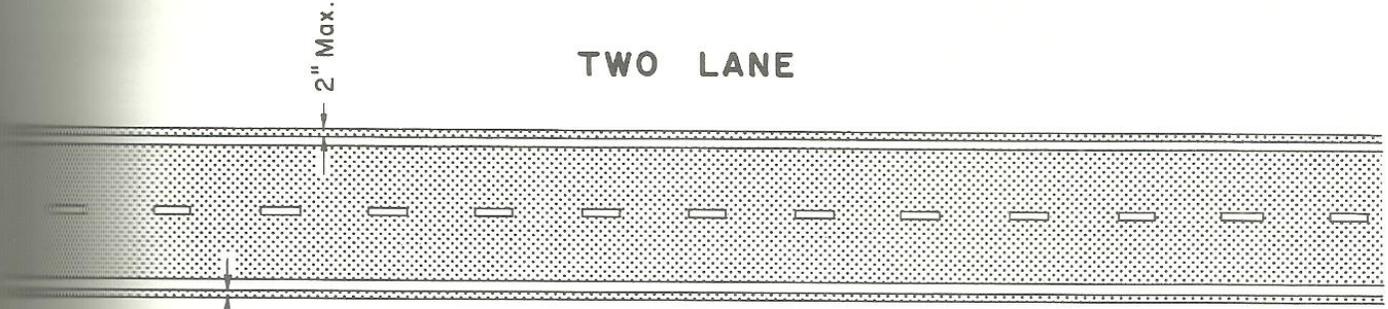


FIGURE M-2

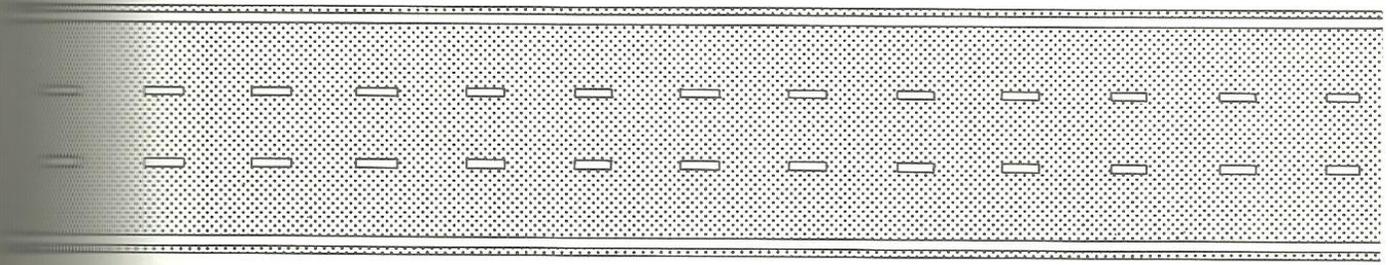


# TYPICAL PAVEMENT MARKING

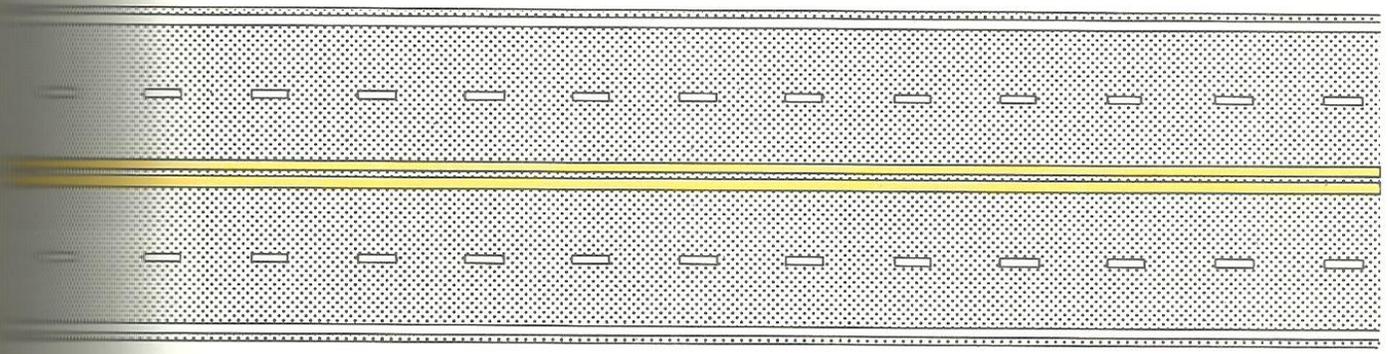
## TWO LANE



## THREE LANE



## FOUR LANE



## FOUR LANE DIVIDED

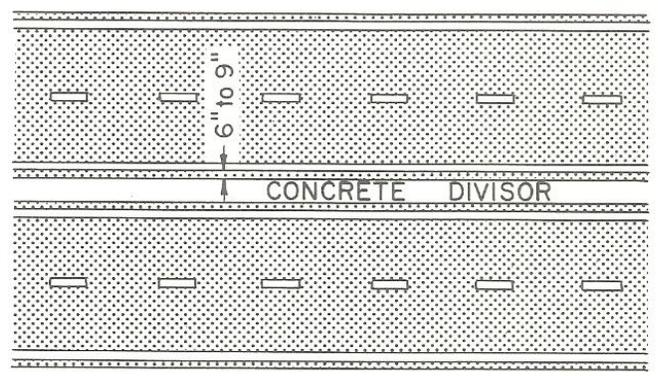
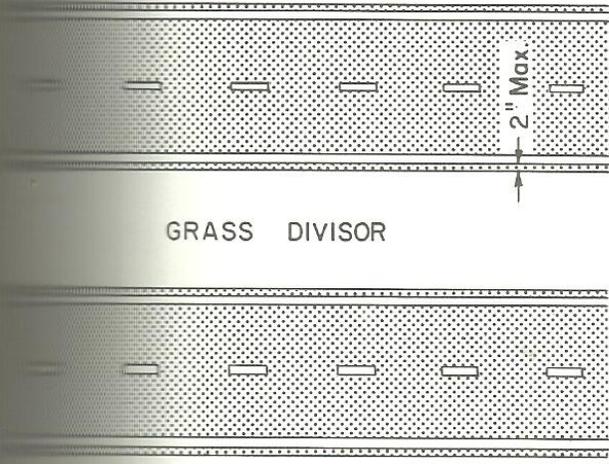
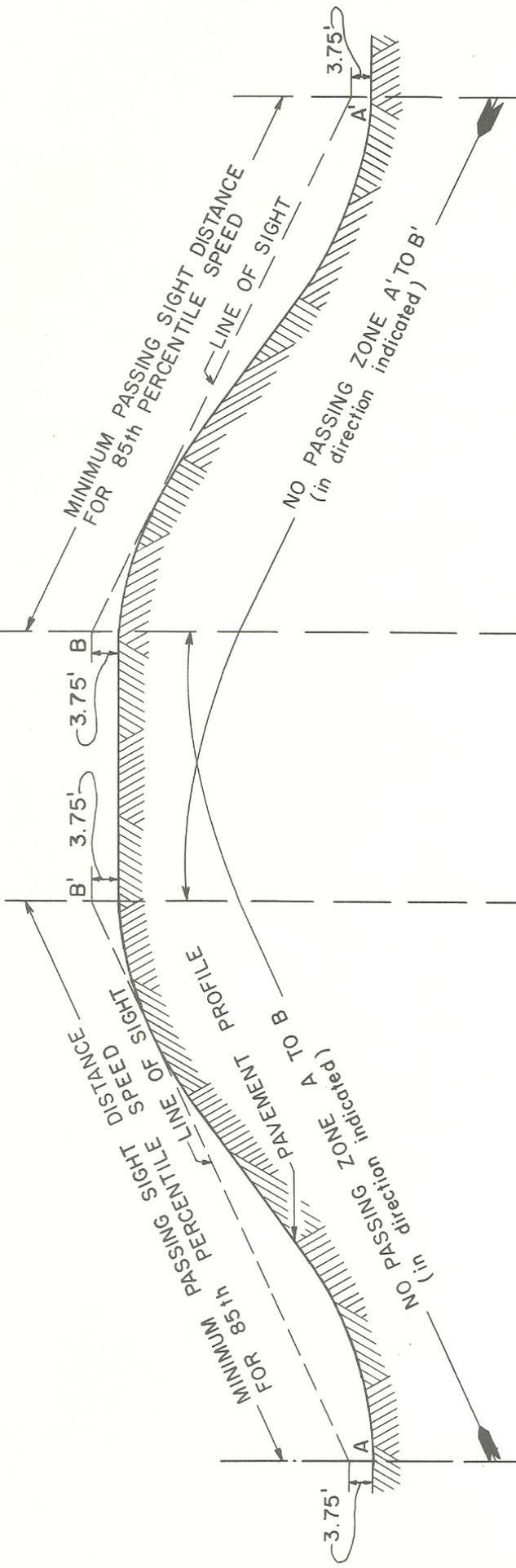


FIGURE M-3

# VERTICAL CURVE



A, A' BEGIN NO-PASSING ZONE  
SIGHT DISTANCE BECOMES LESS  
THAN MINIMUM MEASURED BETWEEN  
POINTS 3.75 FEET ABOVE PAVEMENT.

B, B' END NO-PASSING ZONE  
SIGHT DISTANCE AGAIN EXCEEDS  
MINIMUM.

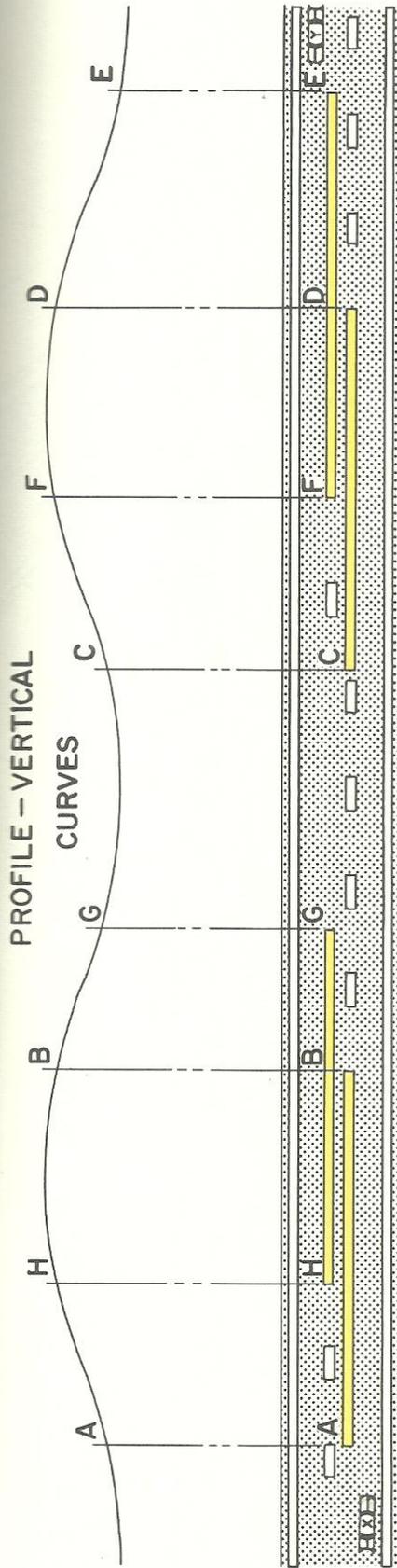
TWO LANE

THREE LANE

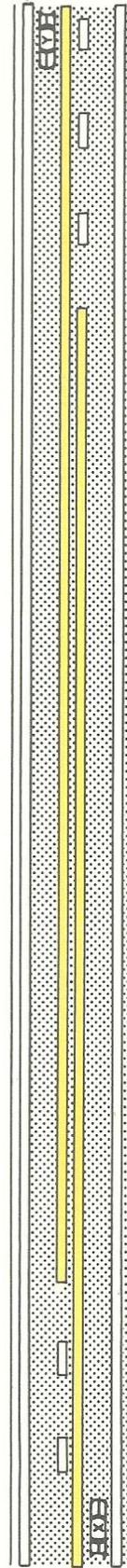
TAPER: L = LENGTH IN FEET  
S = 85th PERCENTILE SPEED IN M.P.H.  
W = OFFSET IN FEET

100'  
Min.

# MARKING SUCCESSIVE VERTICAL CURVES



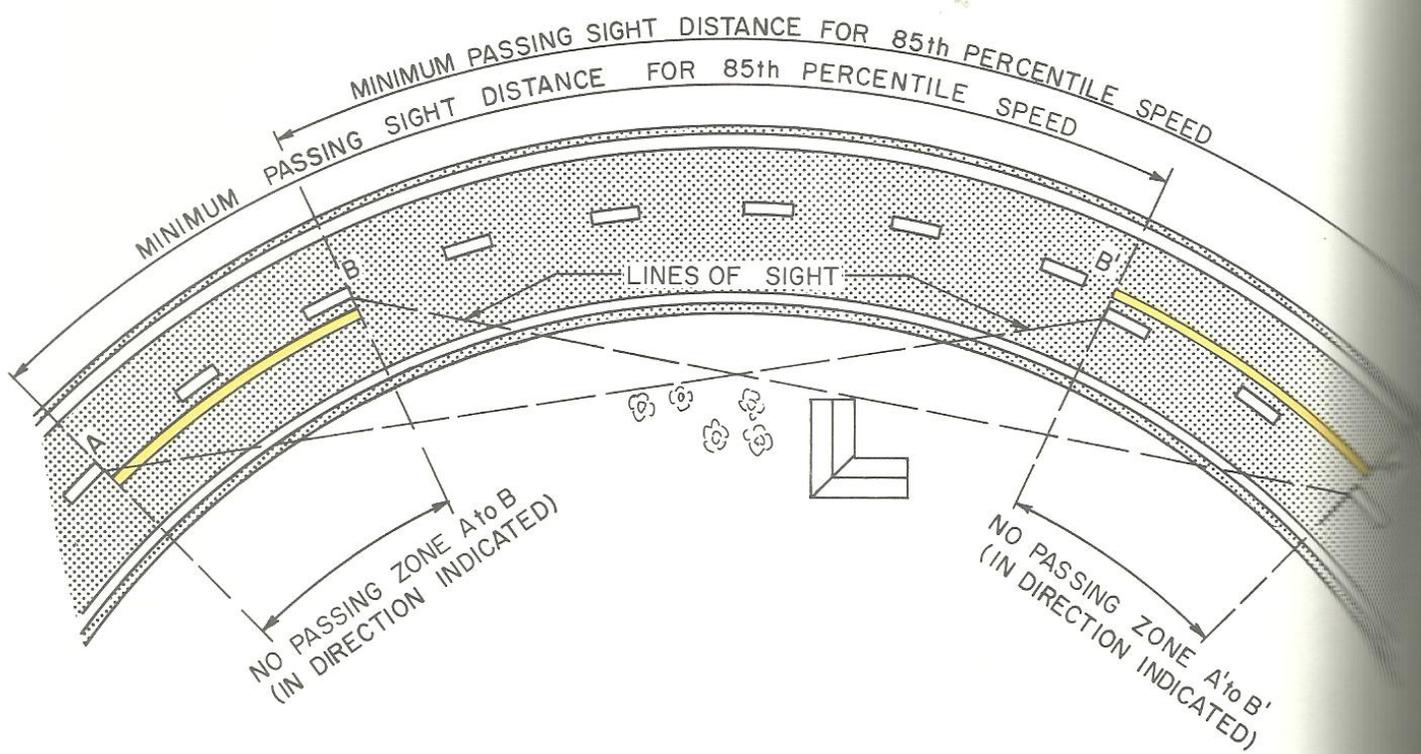
<b>POINTS A &amp; C</b>	<b>POINTS B &amp; D</b>	<b>POINTS E &amp; G</b>	<b>POINTS F &amp; H</b>
WHERE SIGHT DISTANCE BECOMES LESS THAN MINIMUM FOR CAR "X".	WHERE SIGHT DISTANCE BECOMES MORE THAN MINIMUM FOR CAR "X".	WHERE SIGHT DISTANCE BECOMES LESS THAN MINIMUM FOR CAR "Y".	WHERE SIGHT DISTANCE BECOMES MORE THAN MINIMUM FOR CAR "Y".



NOTE: AT LOCATIONS WHERE THE DISTANCE B-C (FOR CAR "X") OR F-G (FOR CAR "Y") ARE LESS THAN 400 FEET, DASH LINES SHALL BE OMITTED AND A DOUBLE YELLOW BARRIER LINE ONLY SHALL BE USED BETWEEN POINTS H&D, AS SHOWN ABOVE.

**FIGURE M-5**

# MARKING 2-LANE HORIZONTAL CURVES

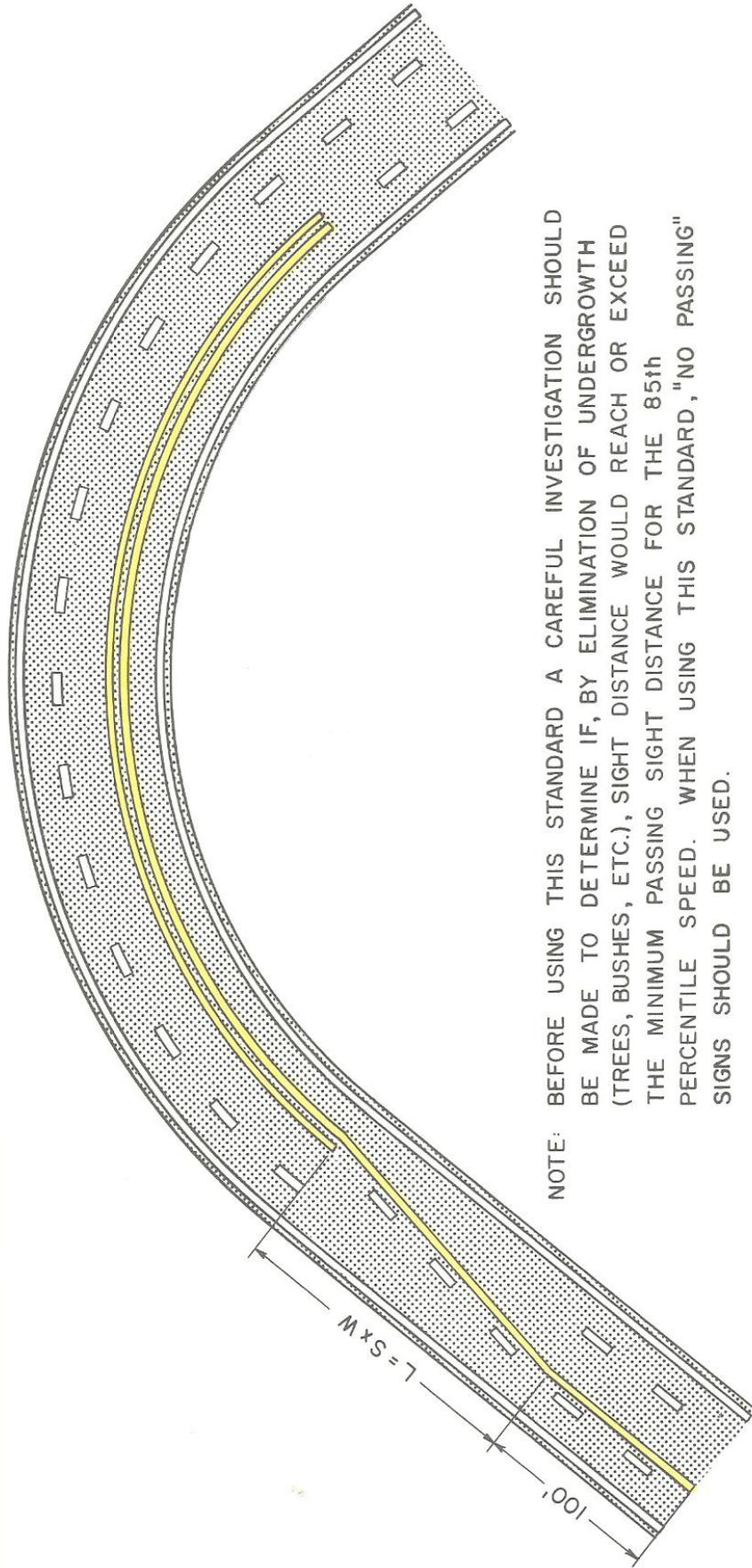


A, A' BEGIN NO-PASSING ZONE  
SIGHT DISTANCE, MEASURED ALONG  
CENTERLINE (OR RIGHT-HAND LANE LINE  
ON THREE LANE ROAD) BECOMES LESS  
THAN MINIMUM.

B, B' END NO-PASSING ZONE  
SIGHT DISTANCE EXCEEDS MINIMUM

NOTE: NO-PASSING ZONES IN OPPOSITE DIRECTIONS  
MAY OR MAY NOT OVERLAP, DEPENDING ON  
ALINEMENT.

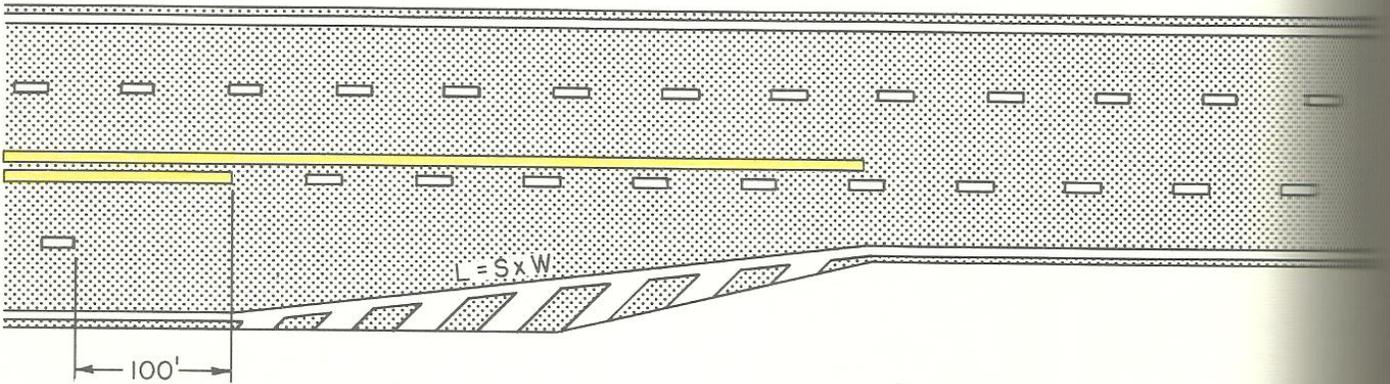
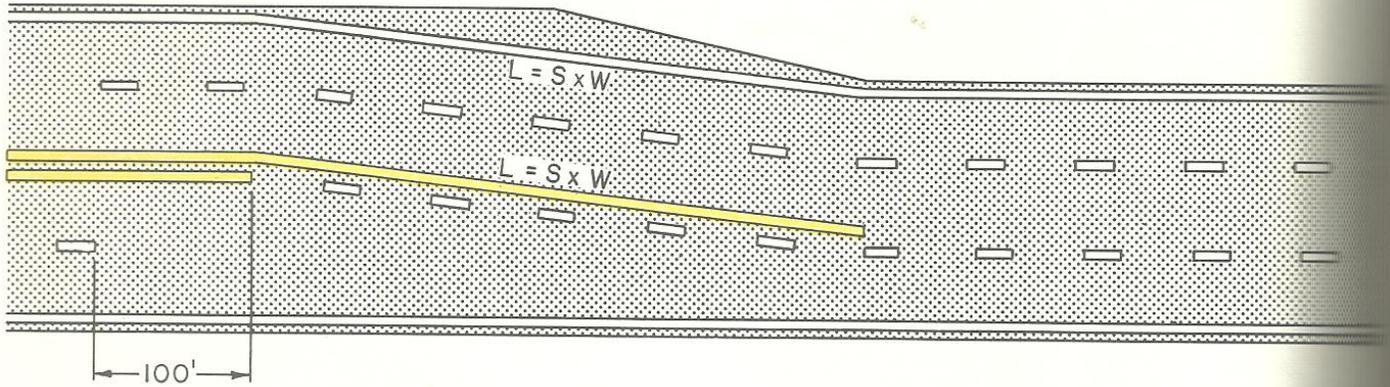
FIGURE M-6



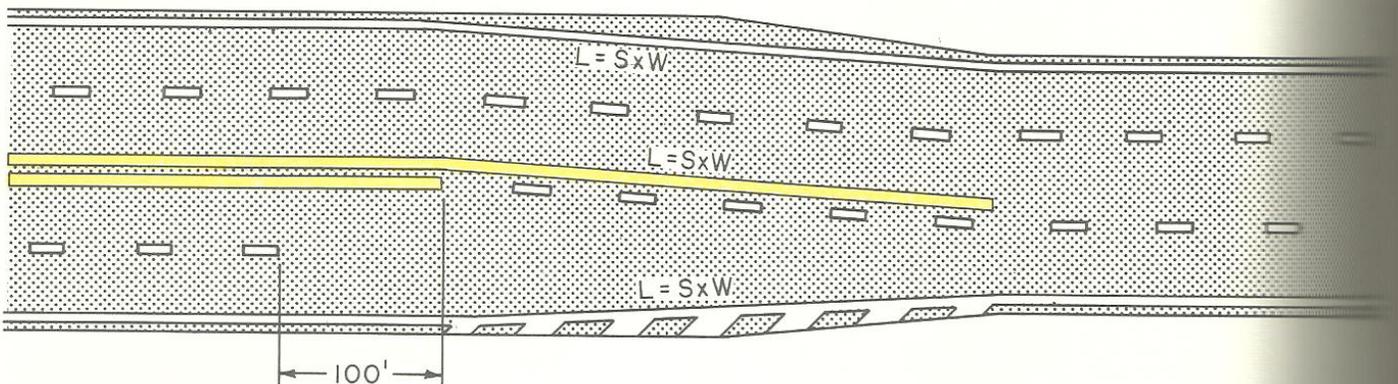
NOTE: BEFORE USING THIS STANDARD A CAREFUL INVESTIGATION SHOULD BE MADE TO DETERMINE IF, BY ELIMINATION OF UNDERGROWTH (TREES, BUSHES, ETC.), SIGHT DISTANCE WOULD REACH OR EXCEED THE MINIMUM PASSING SIGHT DISTANCE FOR THE 85th PERCENTILE SPEED. WHEN USING THIS STANDARD, "NO PASSING" SIGNS SHOULD BE USED.

FIGURE M-7

# TRANSITION LANE MARKING 4-LANES TO 3-LANES



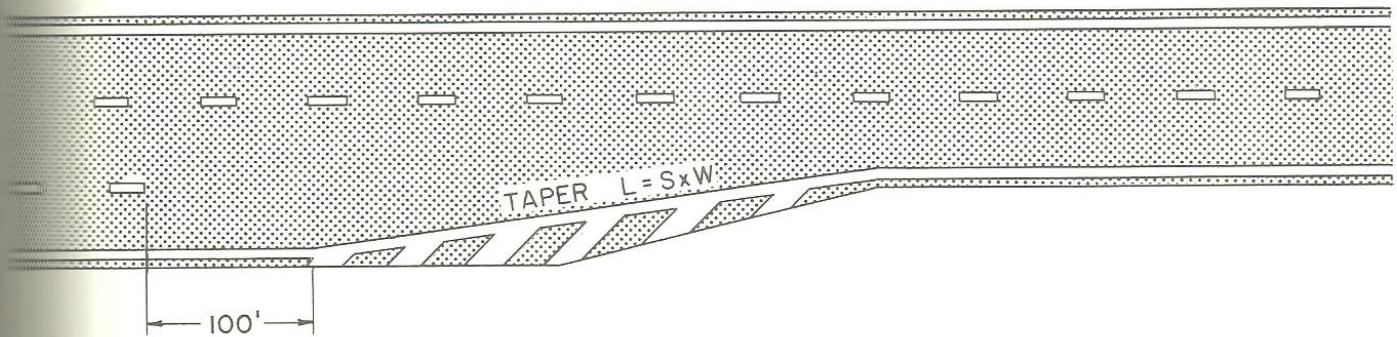
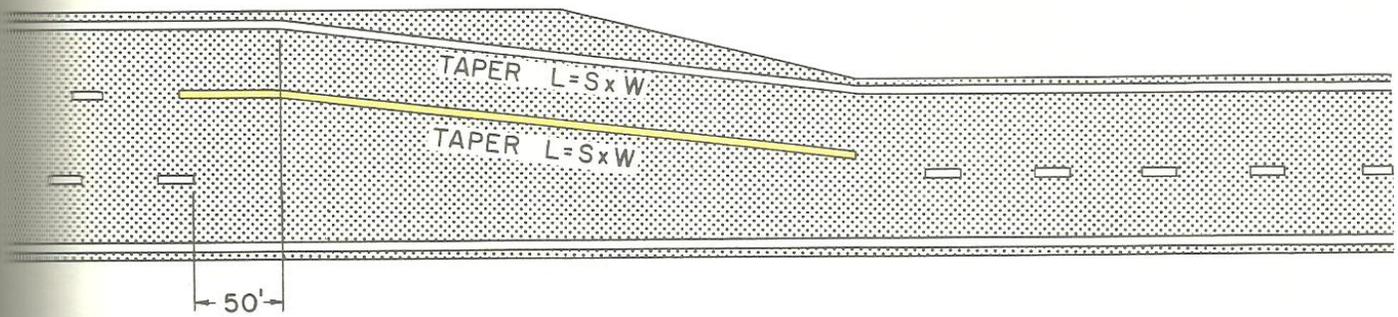
TAPER: L = LENGTH IN FEET  
 S = 85th PERCENTILE SPEED IN M.P.H.  
 W = OFFSET IN FEET



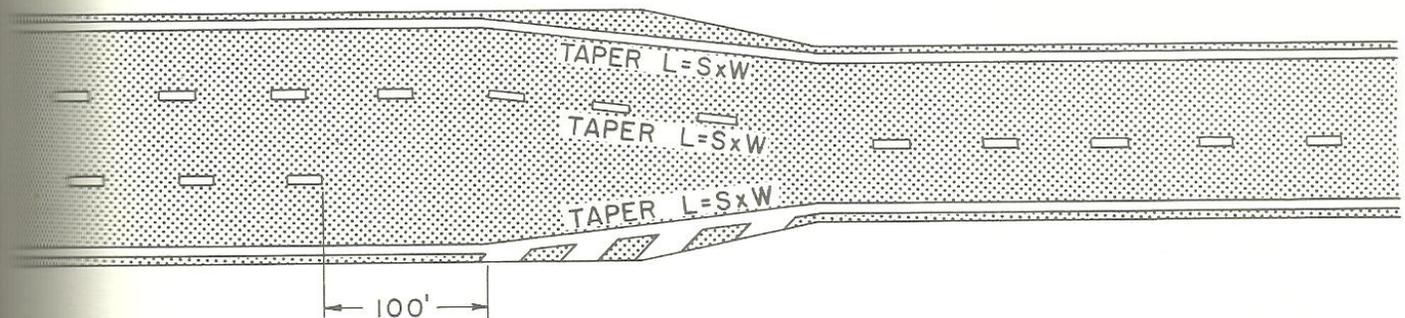
NOTE: THE DESIRABLE TAPER TO BE USED IS SHOWN ON THE DRAWINGS. THE MINIMUM LENGTH OF THE TAPER SHALL BE 350'. IF MINIMUM DISTANCE IS NOT AVAILABLE, ADDITIONAL PAVEMENT SHOULD BE ADDED TO THE PAVEMENT TAPER. CROSS-HATCHING IS OPTIONAL (SEE FIGURE M-2 PATTERN "C".)

**FIGURE M-8**

# TRANSITION LANE MARKING 3-LANES TO 2-LANES



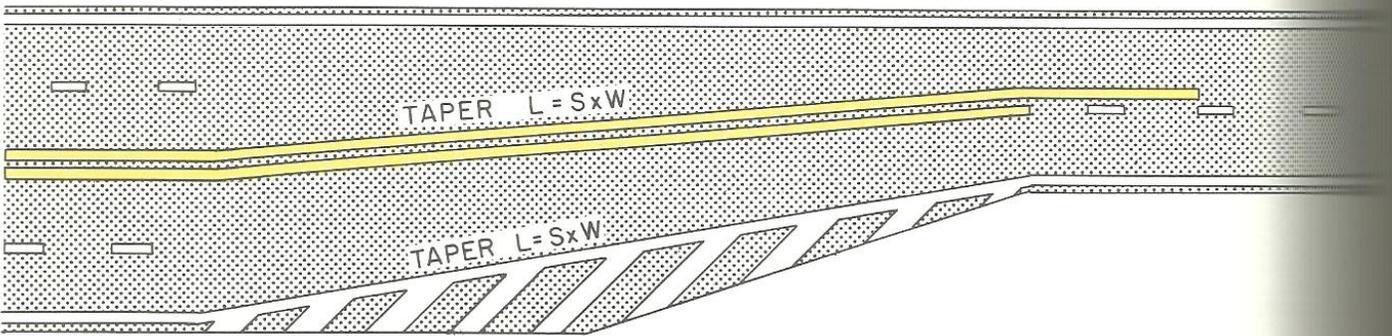
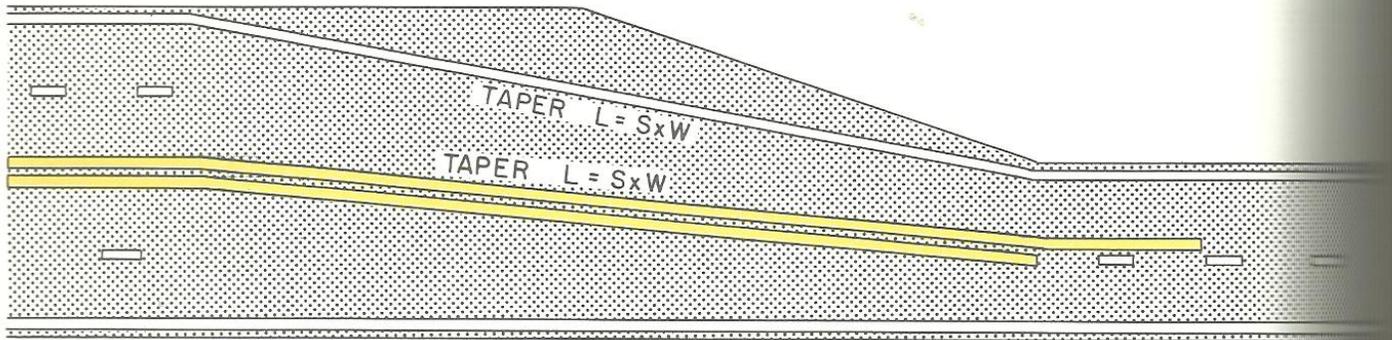
TAPER:  $L$  = LENGTH IN FEET  
 $S$  = 85th PERCENTILE SPEED IN M.P.H.  
 $W$  = OFFSET IN FEET



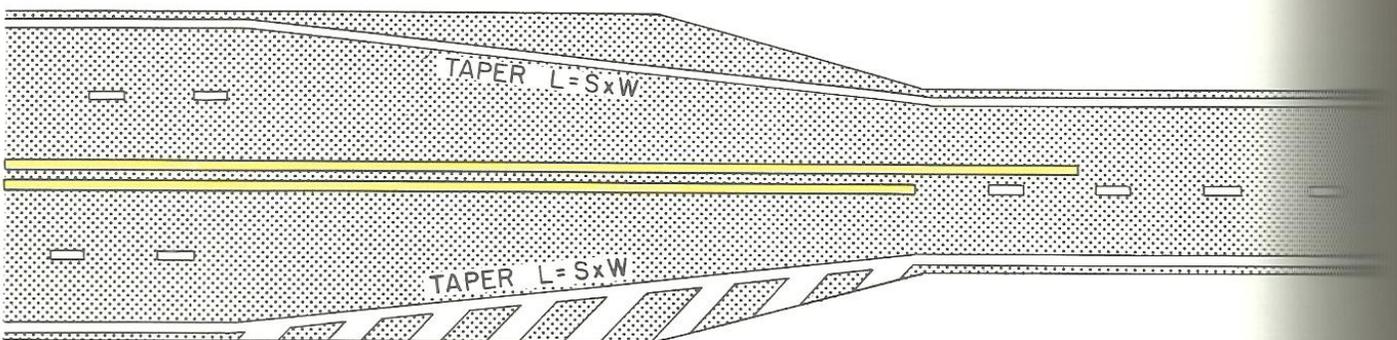
NOTE: THE DESIRABLE TAPER TO BE USED IS SHOWN ON THE DRAWINGS. THE MINIMUM LENGTH OF THE TAPER SHALL BE 350'. IF MINIMUM DISTANCE IS NOT AVAILABLE, ADDITIONAL PAVEMENT SHOULD BE ADDED TO THE PAVEMENT TAPER. CROSS-HATCHING IS OPTIONAL (SEE FIG. M-2 PATTERN "C").

**FIGURE M-9**

# TRANSITION LANE MARKING 4-LANES TO 2-LANES



TAPER: L = LENGTH IN FEET  
 S = 85th PERCENTILE SPEED IN M.P.H.  
 W = OFFSET IN FEET

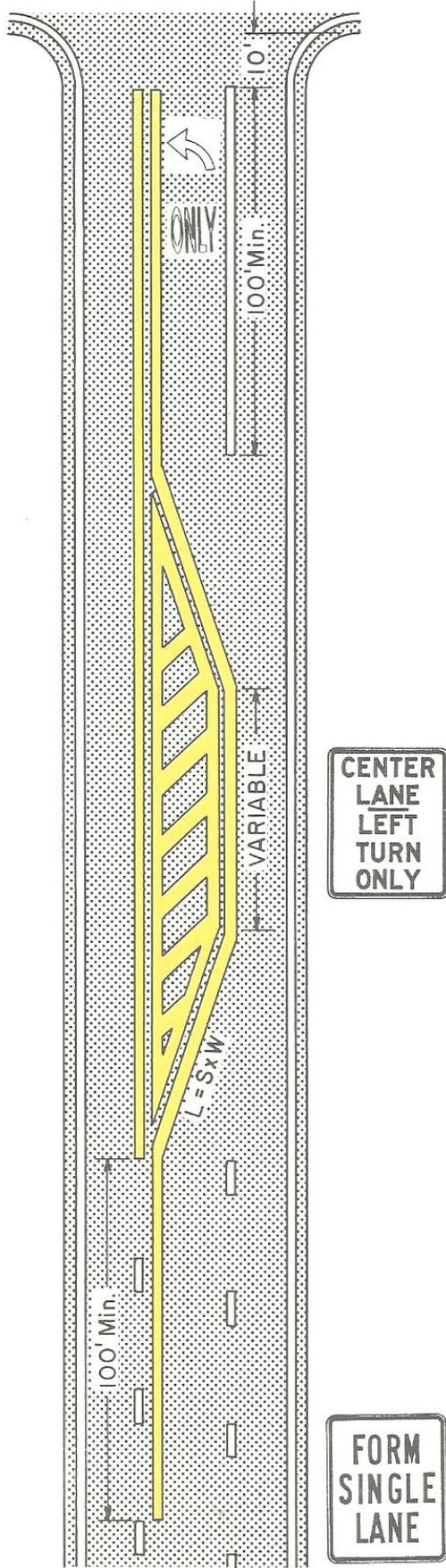


NOTE: THE DESIRABLE TAPER TO BE USED IS SHOWN ON THE DRAWINGS. THE MINIMUM LENGTH OF THE TAPER SHALL BE 350'. IF MINIMUM DISTANCE IS NOT AVAILABLE, ADDITIONAL PAVEMENT SHOULD BE ADDED TO THE PAVEMENT TAPER. CROSS-HATCHING IS OPTIONAL (SEE FIG. M-2 PATTERN "C").

**FIGURE M-10**



LEFT TURN LANES

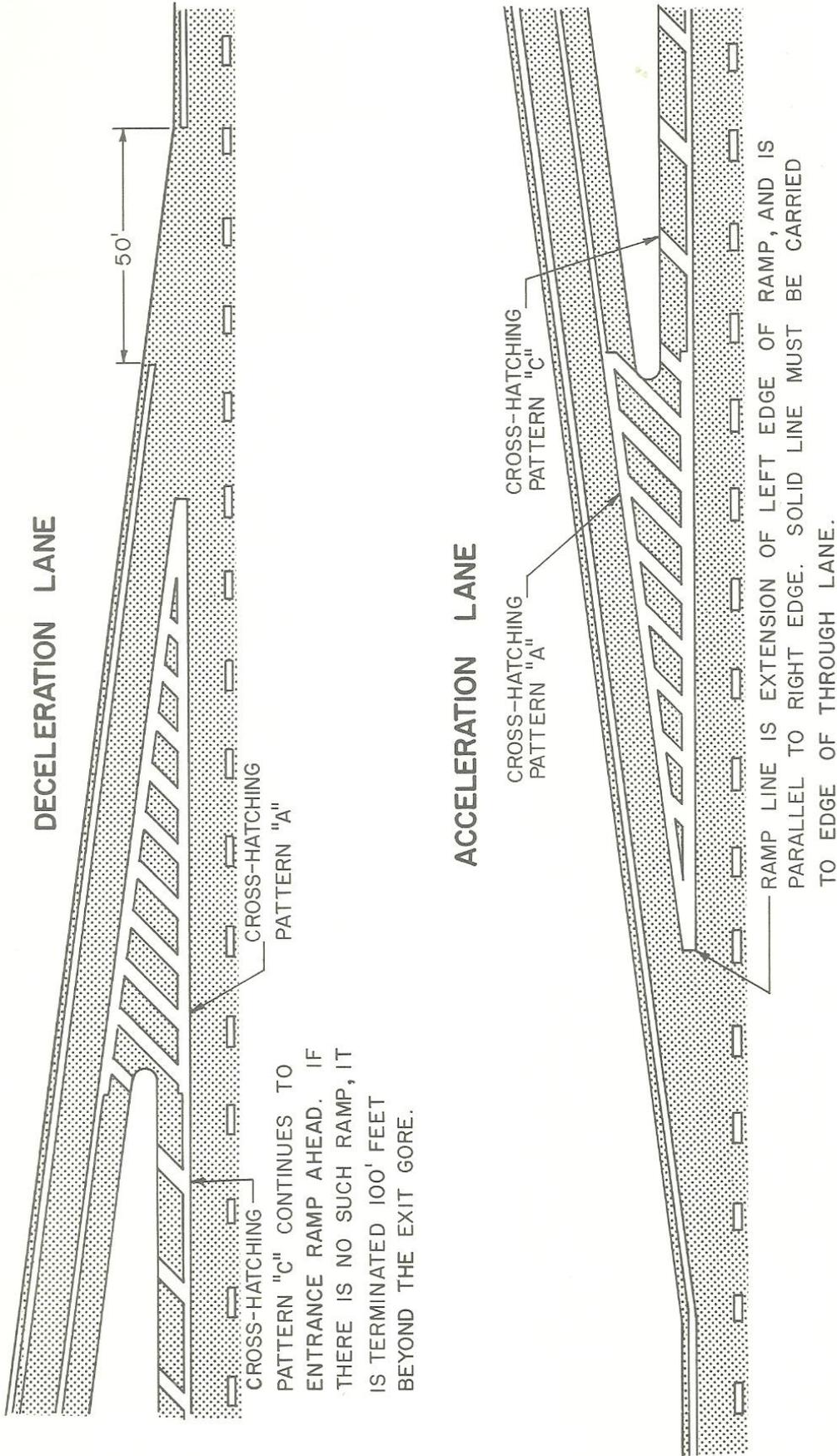


- L = LENGTH IN FEET
- S = 85th PERCENTILE SPEED IN M.P.H.
- W = OFFSET IN FEET

NOTE: IT IS DESIRABLE THAT THE SIGNS FOR THIS PATTERN BE MOUNTED OVERHEAD. SEE FIG. M-2 FOR CROSSHATCHING PATTERN "D". UNDER CERTAIN CONDITIONS THIS LAYOUT MAY BE USED ON 4-LANE HIGHWAYS.

FIGURE M-11

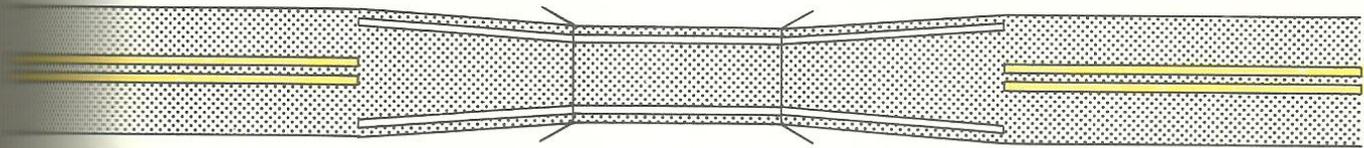
# GORE MARKINGS FOR EXIT AND ENTRANCE RAMP



SEE FIG. M-2 FOR PATTERNS

# EDGE MARKING FOR BRIDGES

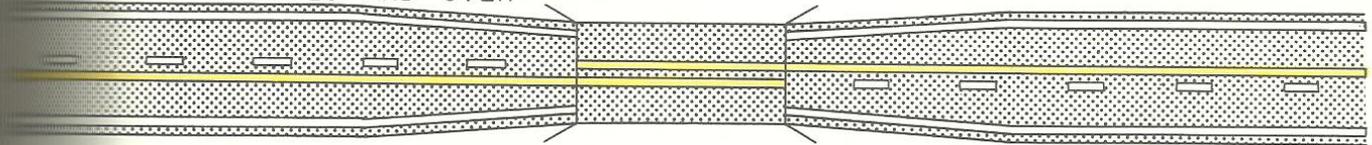
WIDTH OF BRIDGE  
12' TO 17'-11"



WIDTH OF BRIDGE  
18' TO 19'-11"



HIGHWAY 20' AND OVER



WIDTH OF BRIDGE  
20' AND OVER

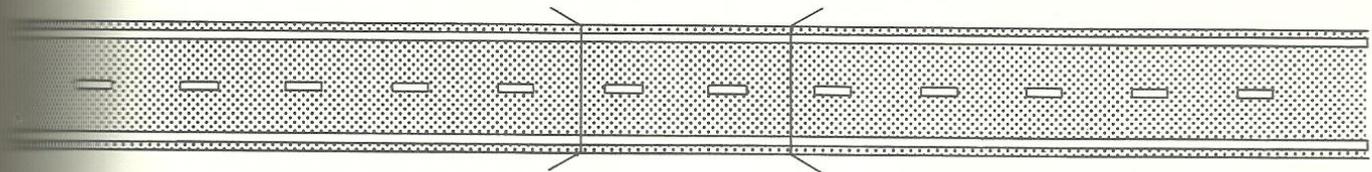
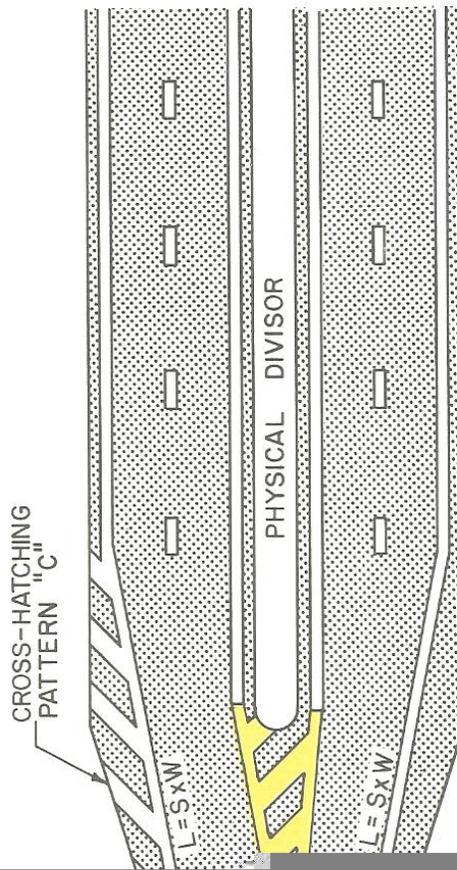


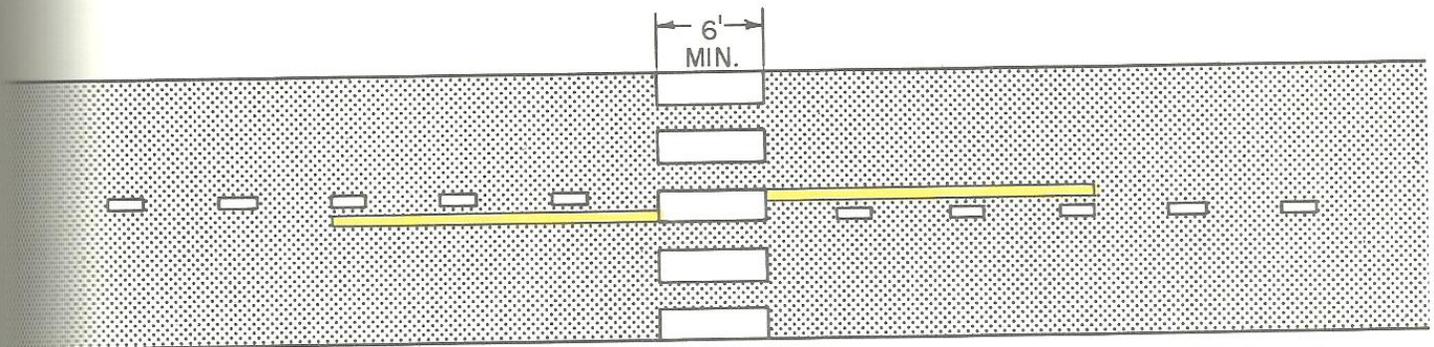
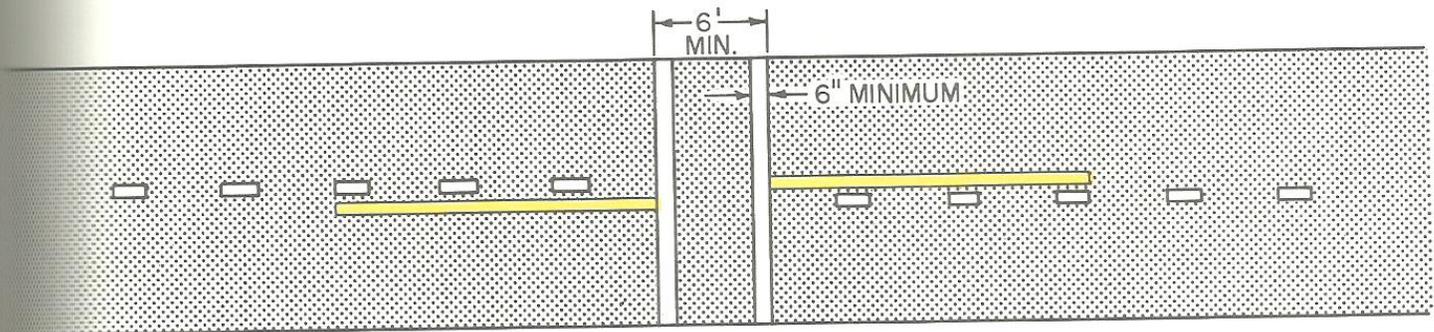
FIGURE M-13

# 2-LANE TO 4-LANE DIVIDED



ED SECTION IS NOT PAINTED WHERE THE AVAILABLE  
NES. THE DESIRABLE TAPER IS SHOWN ON THE  
SHALL BE 350'. IF MINIMUM DISTANCE IS NOT AVAILABLE,  
O THE PAVEMENT TAPER OR THE DIVISOR SHALL BE CUT  
THE PRESENT PAVEMENT. CROSS-HATCHING IS OPTIONAL.

# CROSSWALK MARKINGS



NOTE: THE SPACINGS BETWEEN THE PAINTED RECTANGLES SHALL BE DETERMINED BY THE PATTERN OF WHEEL TRACKS. THE RECTANGLES SHALL BE 2 FEET WIDE.

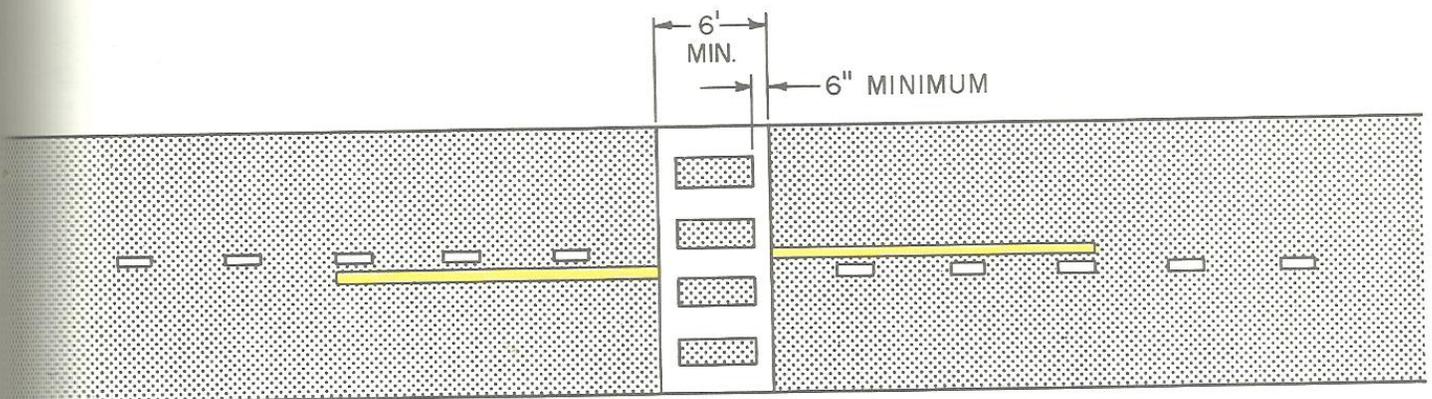


FIGURE M-15

# CENTER LANE-LEFT TURN

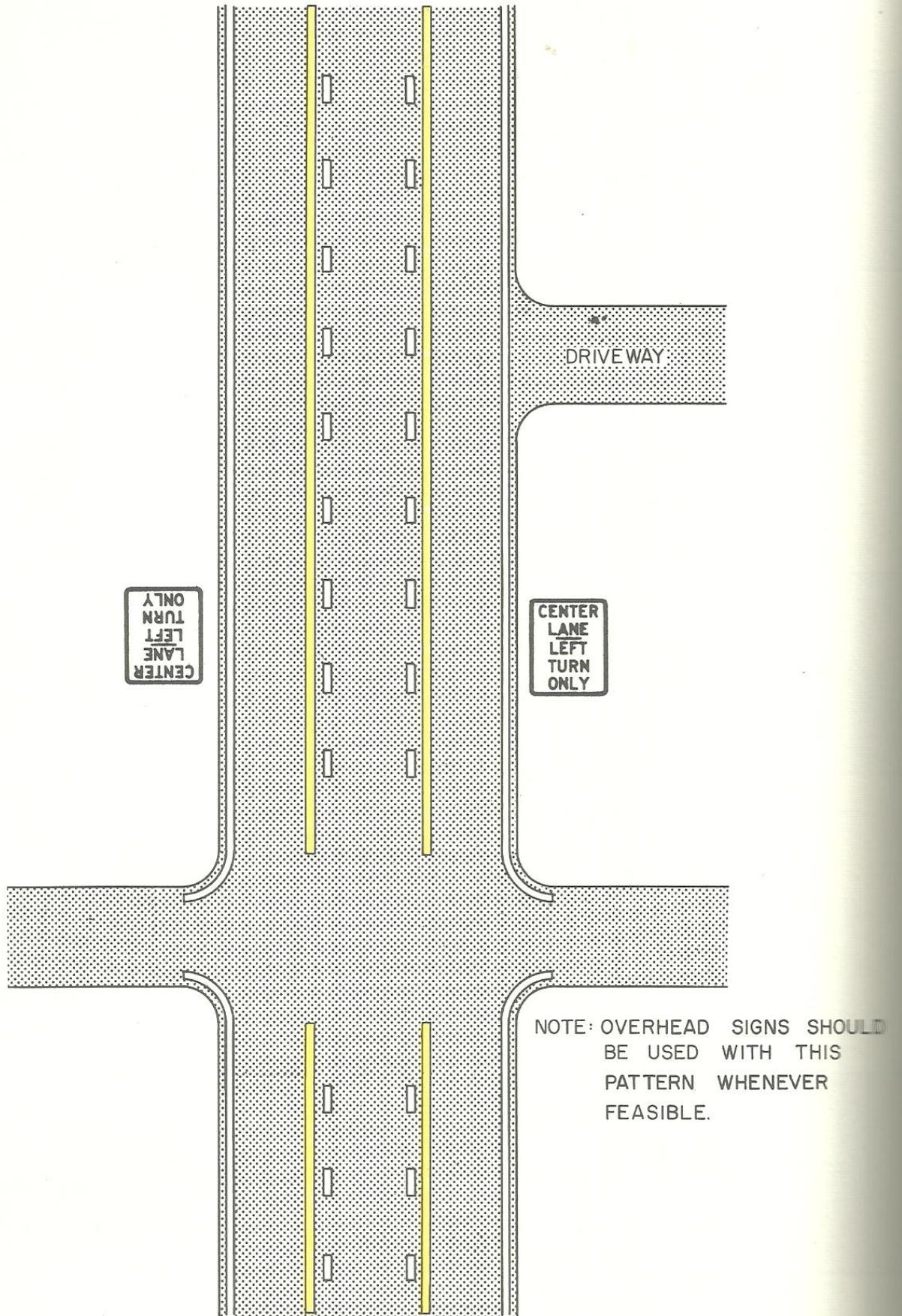


FIGURE M-16

# WORDS FOR PAVEMENT MARKINGS

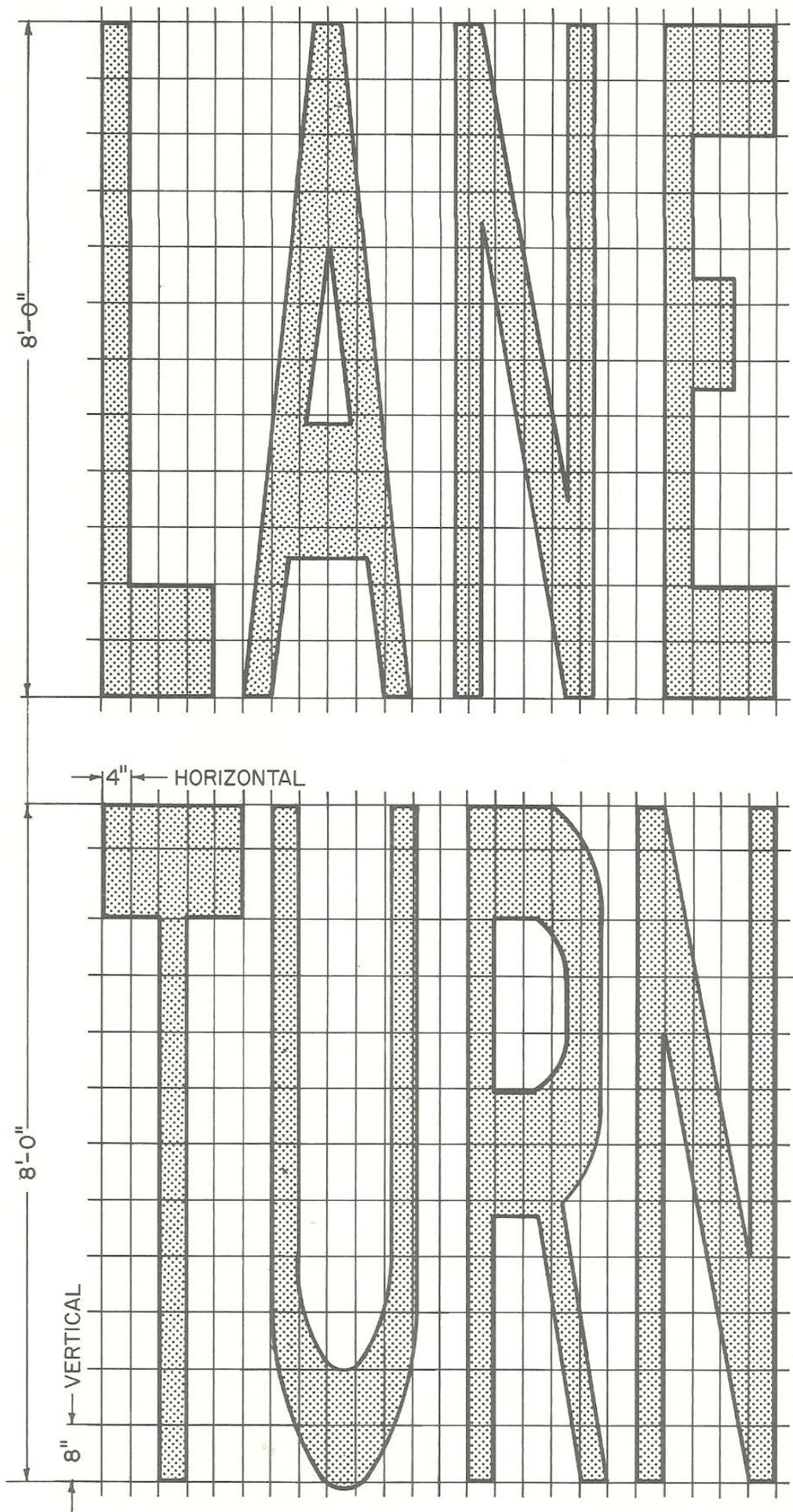


FIGURE M-17

# WORDS FOR PAVEMENT MARKINGS

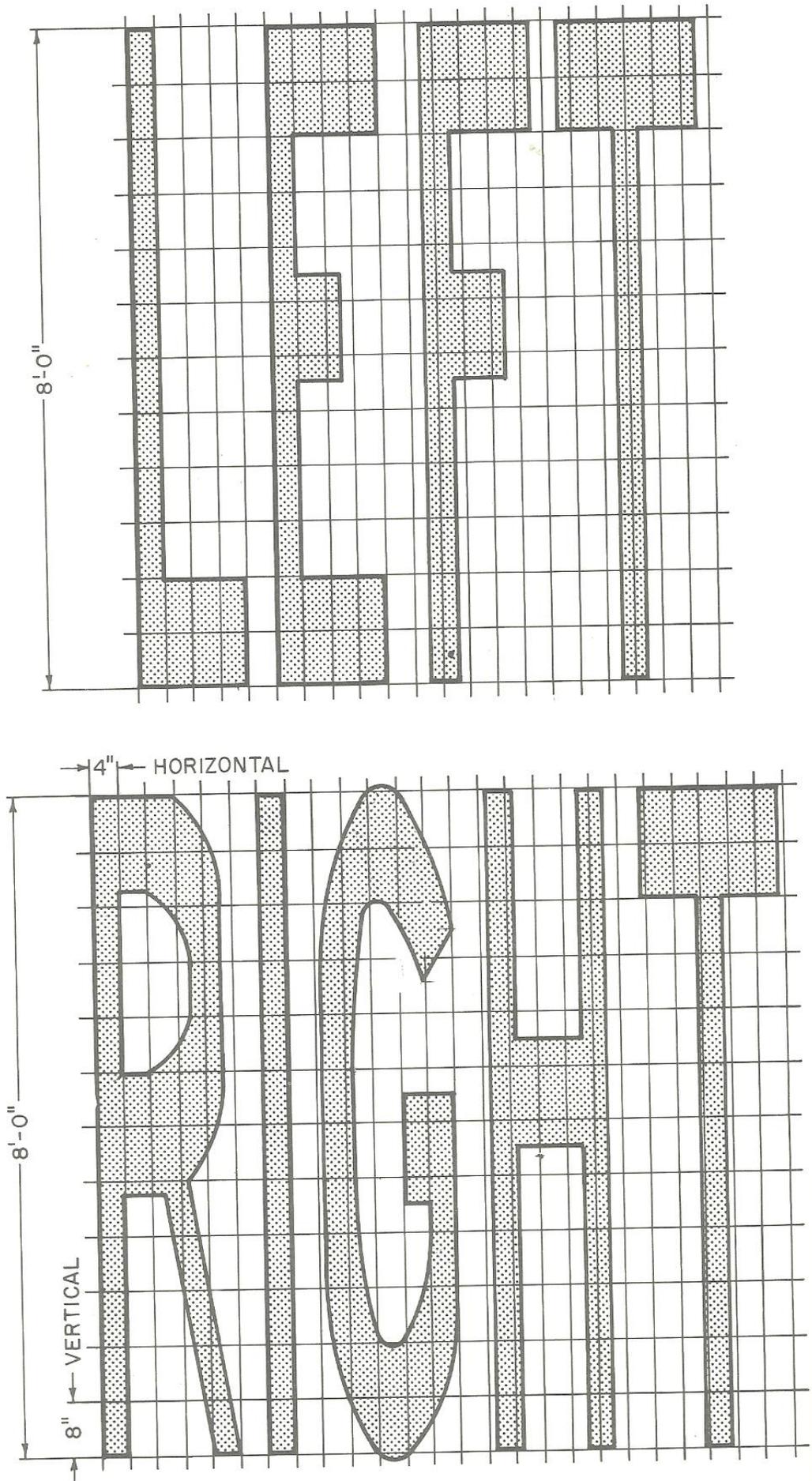


FIGURE M-18



# WORDS FOR PAVEMENT MARKINGS

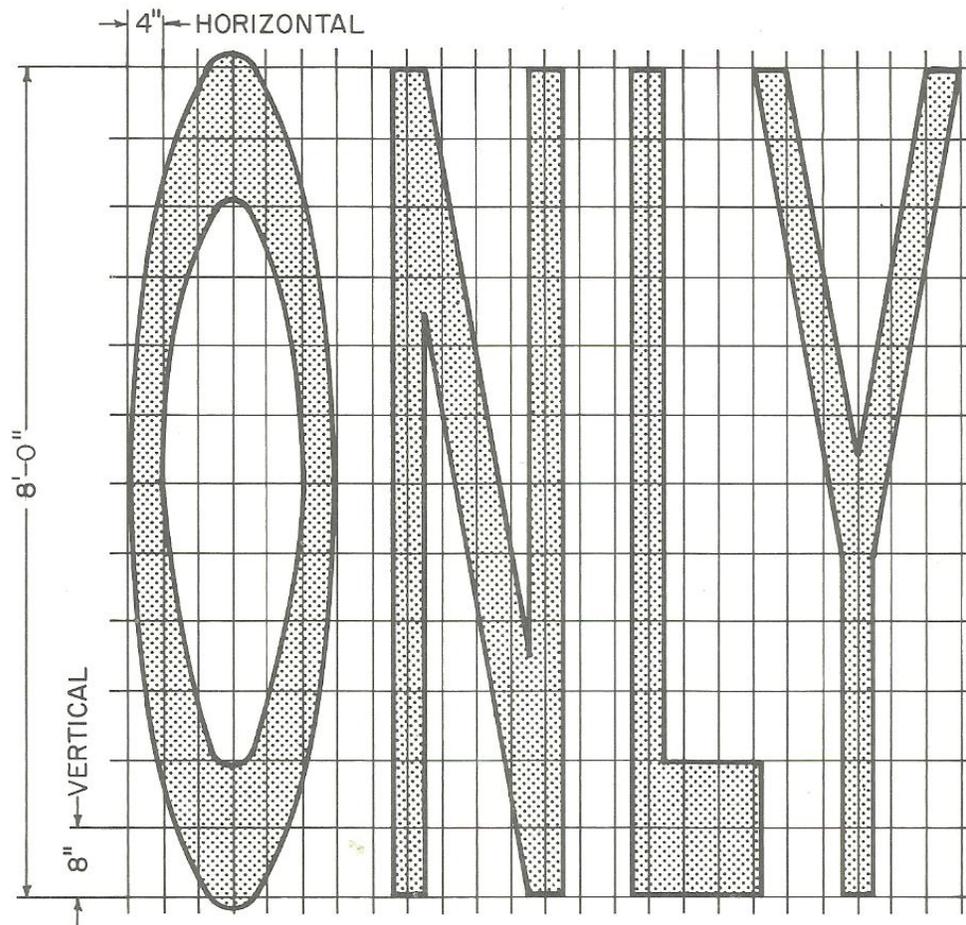
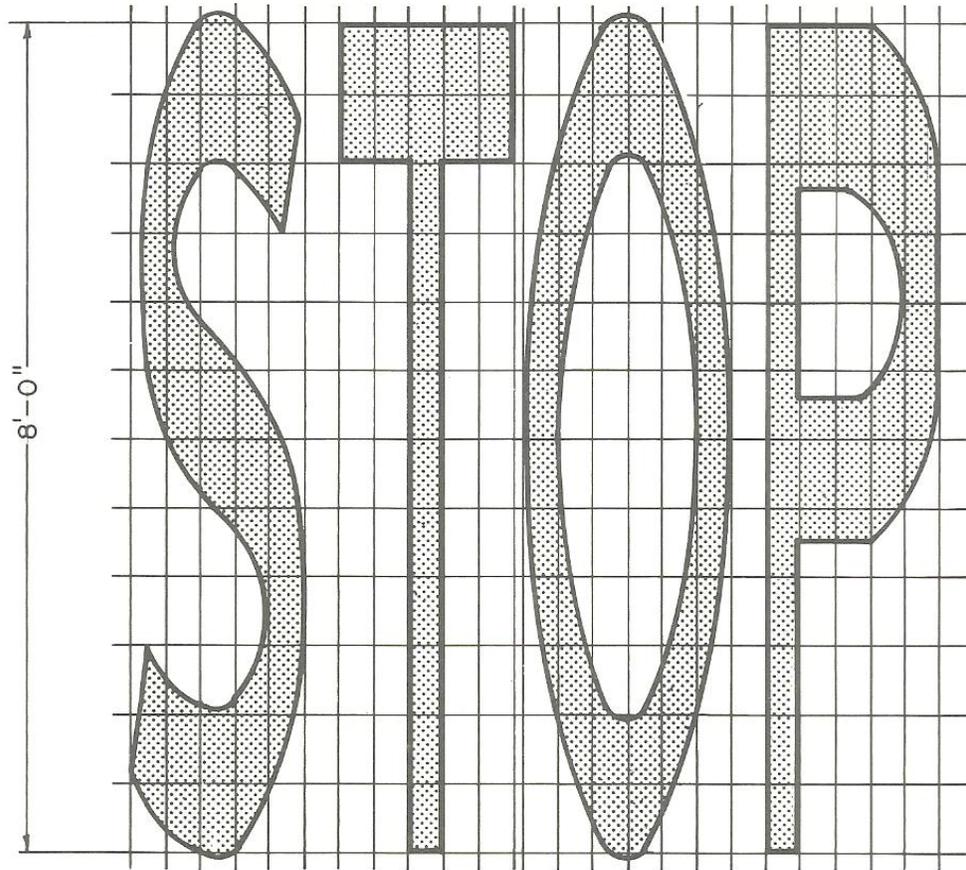


FIGURE M-19

# ARROWS FOR PAVEMENT MARKINGS

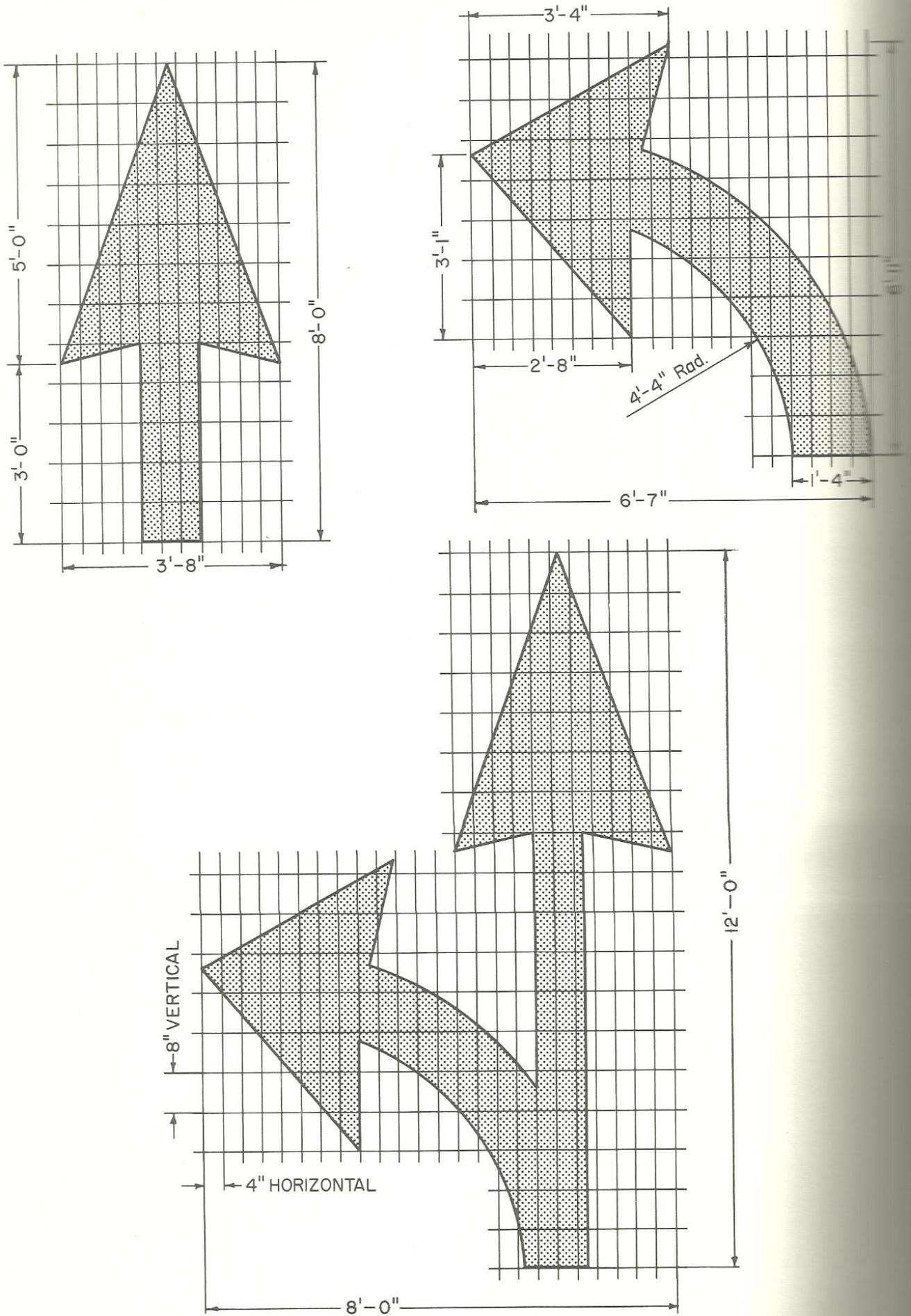
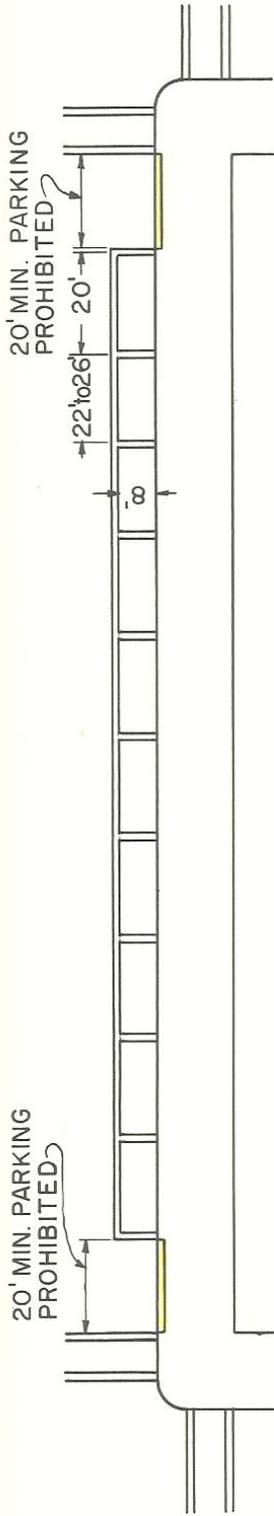


FIGURE M-20

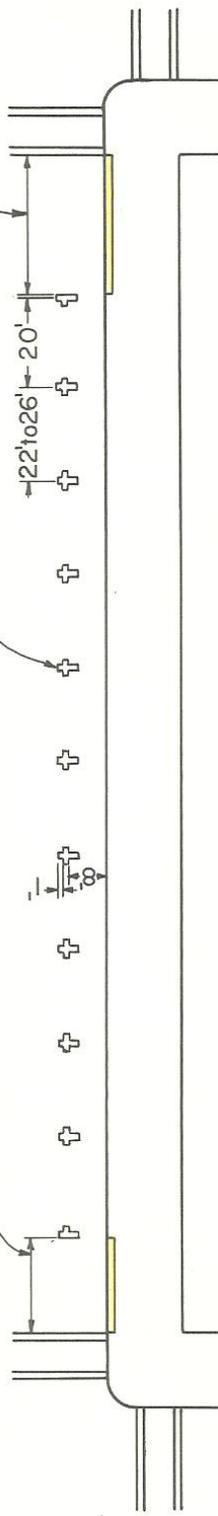
TYPICAL  
PARKING - SPACE - LIMIT MARKINGS



AT APPROACH TO SIGNALIZED INTERSECTIONS 30' MIN. PARKING PROHIBITED.

EXTENSION ENABLES DRIVER TO SEE LIMITS OF STALL.

20' MIN. PARKING PROHIBITED



20' MIN. PARKING PROHIBITED

20' MIN. PARKING PROHIBITED

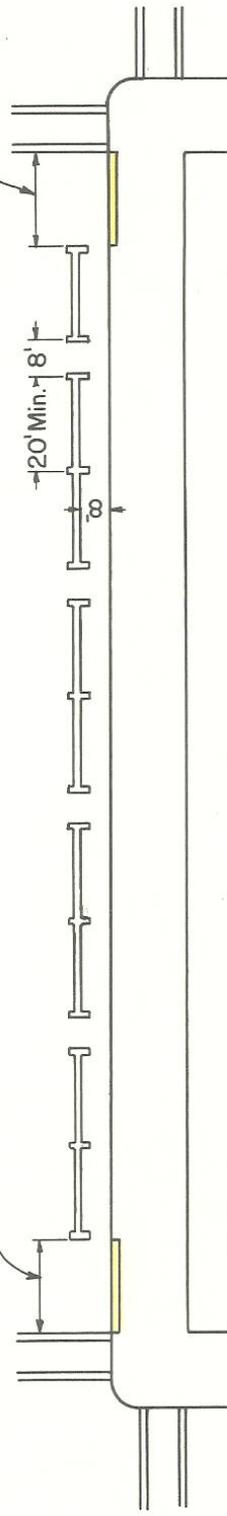


FIGURE M-21



# **APPENDIX B**

## **SIGN INDEX**

## SIGN STANDARD NUMBERING SYSTEM

The signs in this manual are designated by letters and numbers under a system which is an expansion of that used in the Manual on Uniform Traffic Control Devices for Streets and Highways adopted by the American Association of State Highway Officials, 1961.

As a result, the working designation of a sign will be the same as that shown in the National Manual but the order or inventory number will be considerably longer and will include more information.

The sign standard number itself is broken down into parts as follows:

### Class

Columns 1 and 2.

- R – Regulatory
- W – Warning
- G – Guide
- M – Route Marker
- D – Destination and Distance
- I – Information

### Series

Columns 3 and 4.

Under R (Regulatory)

- 01 – Right-of-Way
- 02 – Speed
- 03 – Turning
- 04 – Alightment
- 05 – Exclusion
- 06 – One-Way
- 07 – Parking and Stopping (Urban)
- 08 – Parking and Stopping (Rural)
- 09 – Pedestrian
- 10 – Restrictions
- 11 – Littering
- 12 – Roadsides
- 13 – 20 – Miscellaneous

Under W (Warning)

- 01 – Changes in Horizontal Alightment
- 02 – Intersections
- 03 – Advance Warning of Control Devices
- 04 – Converging Traffic Lanes
- 05 – Narrow Roadways
- 06 – Changes in Highway Design
- 07 – Grades
- 08 – Roadway Surface Conditions
- 09 – Schools
- 10 – Railroad Crossings
- 11 – Entrances and Crossings
- 12 – Obstructions
- 13 – Speed (Advisory)
- 14 – Institutions
- 15 – Miscellaneous
- 16 – Hazard and Clearance Markers
- 20 – Construction and Maintenance Warning

Under G (Guide)

20 – Construction and Maintenance Guide

Under M (Route Markers)

- 01 – Route Markers
- 02 – Junction Markers
- 03 – Advance Turn Markers
- 04 – Directional Arrows
- 05 – Alternate Route Markers
- 06 – Cardinal Direction Markers
- 07 – Trailblazer Markers

Under D (Destination and Distance)

- 01 – Destination
- 02 – Distance
- 03 – Street Name
- 04 – Parking Area

Under I (Information)

- 01 – Rest Area
- 02 – Name
- 03 – Measured Mile Course
- 04 – Legislative Route and Station Markers
- 05 – Telephone

**Sub-series**, such as symbol or message shown on the face of the sign, Columns 6 and 7.

**Suffix**, denoting signs which are peculiar to Pennsylvania, but which are related to signs in the National Manual in the same sub-series, Column 9.

**Special Designation**, denoting the speed limit, route or distance (by numbers), or denoting the direction indicated by symbols (by letters), Columns 11, 12, 13.

**Horizontal Dimension** of the sign in inches, Columns 15, 16, 17.

**Vertical Dimension** of the sign in inches, Columns 18, 19, 20.

There are several signs which are not normally made nor erected by the Pennsylvania Department of Highways. However, they are official, and they may be purchased and erected along state highways by public authorities or private parties after permission has been obtained from the District Engineer for their placement within Highways Department right-of-way. These signs have been marked by an asterisk following their identification numbers.









CLASS																				SERIES		SPACER		SUB-SERIES		SPACER SUFFIX		SPECIAL DESIGNATION		SPACER		HORIZONTAL DIMENSION		VERTICAL DIMENSION		DESCRIPTION	
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20																			
R		7	-		6	-	(					)	1	2	1	8			R7-6	1218	NO PARKING LOADING ZONE	PAGE 72															
R		7	-		7	-	(					)	1	2	1	8			R7-7	1218	NO PARKING BUS STOP	PAGE 73															
R		7	-		8	-	(					)	1	2	1	8			R7-8	1218	NO PARKING HERE TO CORNER	PAGE 74															
R		7	-	1	0	-	(					)	1	2	1	8			R7-10	1218	NO PARKING TEMP. POLICE REGULATORY	PAGE 75															
R		7	-	2	0		(					)	1	2		6			R7-201	126	TOW-AWAY ZONE	PAGE 76															
R		8	-		1	-	(					)	1	8	2	4			R8-1	1824	NO PARKING ON PAVEMENT	PAGE 78															
R		8	-		1	-	(					)	2	4	3	0			R8-1	2430	NO PARKING ON PAVEMENT																
R		8	-		3	-	(					)	1	8	2	4			R8-3	1824	NO PARKING	PAGE 79															
R		8	-		3	-	(					)	2	4	3	0			R8-3	2430	NO PARKING																
R		8	-		4	-	(					)	4	8	3	6			R8-4	4836	EMERGENCY PARKING ONLY	PAGE 80															
R		8	-		5	-	(					)	4	8	3	6			R8-5	4836	EMERGENCY STOPPING ONLY	PAGE 81															
R		9	-		1	-	(					)	1	8	2	4			R9-1	1824	WALK ON LEFT FACING TRAFFIC	PAGE 82															
R		9	-		2	-	(					)	1	2	1	8			R9-2	1824	CROSS ON GREEN LIGHT ONLY	PAGE 83															
R		9	-		6	-	(					)		9	1	2			R9-6	912	PUSH BUTTON FOR GREEN LIGHT	PAGE 84															
R		9	-		7	-	(					)		9	1	2			R9-7	912	PUSH BUTTON FOR WALK SIGNAL	PAGE 85															
R	1	0	-		1	-	(					)	2	4	3	0			R10-1	2430	KEEP OFF MEDIAN	PAGE 86															
R	1	0	-		1	-	(					)	3	6	4	8			R10-1	3648	KEEP OFF MEDIAN																
R	1	0	-		1	-	(					)	4	8	6	0			R10-1	4860	KEEP OFF MEDIAN																
R	1	0	-		2	-	(					)	4	8	3	0			R10-2	4830	ROAD CLOSED	PAGE 87															
R	1	0	-		3	-	(					)	6	0	3	0			R10-3	6030	ROAD CLOSED ( ) MILES AHEAD	PAGE 88															
R	1	0	-		3	-	1	(				)	4	8	1	2			R10-3-1	4812	BRIDGE OUT PANEL	PAGE 89															
R	1	0	-		4	-	(					)	2	4	3	0			R10-4	2430	WEIGHT LIMIT ( ) TONS	PAGE 90															
R	1	0	-		4	-	(					)	3	6	4	8			R10-4	3648	WEIGHT LIMIT ( ) TONS																
R	1	0	-		4	-	1	(				)	2	4	1	2			R10-4-1	2412	( ) MILES	PAGE 91															
R	1	0	-		4	-	1	(				)	3	6	1	2			R10-4-1	3612	( ) MILES																
R	1	0	-		4	-	2	(				)	2	4	1	2			R10-4-2	2412	BRIDGE	PAGE 92															
R	1	0	-		4	-	2	(				)	3	6	1	2			R10-4-2	3612	BRIDGE																
R	1	1	-		1	-	(					)	3	0	2	4			R11-1	3024	100.00 LITTERING FINE	PAGE 93															
R	1	2	-		1	-	(					)	1	2	1	8			R12-1	1218	ROADSIDE PLANTING	PAGE 94															
R	1	2	-		2	-	(					)	1	8	1	2			R12-2	1812	KEEP OFF SEEDED	PAGE 95															
R	1	3	-		1	-	(					)	1	8	2	4			R13-1	1824	SNOW EMERGENCY ROUTE	PAGE 96															
R	1	4	-		1	-	(					)	1	8	2	4			R14-1	1824	PLAY STREET CLOSED	PAGE 97															
R	1	5	-		1	-	(		R	)		)	2	4	3	0			R15-1(R)	2430	STOP HERE → ON RED	PAGE 98															
R	1	5	-		1	-	(		L	)		)	2	4	3	0			R15-1(L)	2430	STOP HERE ← ON RED	PAGE 99															
R	1	5	-		2	-	(					)	3	0	2	4			R15-2	3024	DO NOT BLOCK INTERSECTION	PAGE 100															
R	1	6	-		1	-	(					)	3	6	3	6			R16-1	3636	STOP FOR SCHOOL BUS	PAGE 101															





CLASS																				SERIES		SPACER		SUB - SERIES		SPACER		SUFFIX		SPECIAL		DESIGNATION		SPACER		HORIZONTAL DIMENSION		VERTICAL DIMENSION		DESCRIPTION	PAGE
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20																						
W		2	-			4	-		(			)		3	0		3	0			W2-4	3030	"T" SYMBOL	PAGE 128																	
W		2	-			4	-		(			)		4	8		4	8			W2-4	4848	"T" SYMBOL																		
W		2	-			5	-		(			)		3	0		3	0			W2-5	3030	Y SYMBOL	PAGE 129																	
W		2	-			5	-		(			)		4	8		4	8			W2-5	4848	Y SYMBOL																		
W		2	-			5	-	1	(			R	)	3	0		3	0			W2-5-I(R)	3030	Y SYMBOL SECONDARY RIGHT	PAGE 130																	
W		2	-			5	-	1	(			R	)	4	8		4	8			W2-5-I(R)	4848	Y SYMBOL SECONDARY RIGHT																		
W		2	-			5	-	1	(			L	)	3	0		3	0			W2-5-I(L)	3030	Y SYMBOL SECONDARY LEFT	PAGE 131																	
W		2	-			5	-	1	(			L	)	4	8		4	8			W2-5-I(L)	4848	Y SYMBOL SECONDARY LEFT																		
W		3	-			1	-		(			)		3	0		3	0			W3-1	3030	STOP AHEAD	PAGE 132																	
W		3	-			1	-		(			)		4	8		4	8			W3-1	4848	STOP AHEAD																		
W		3	-			2	-		(			)		3	0		3	0			W3-2	3030	YIELD AHEAD	PAGE 133																	
W		3	-			2	-		(			)		4	8		4	8			W3-2	4848	YIELD AHEAD																		
W		3	-			3	-		(			)		3	6		3	6			W3-3	3030	SIGNAL AHEAD	PAGE 134																	
W		3	-			3	-		(			)		4	8		4	8			W3-3	4848	SIGNAL AHEAD																		
W		3	-			4	-		(			)		3	6		3	6			W3-4	3636	SCHOOL AHEAD	PAGE 135																	
W		3	-			4	-		(			)		4	8		4	8			W3-4	4848	SCHOOL AHEAD																		
W		4	-			1	-		(			)		3	0		3	0			W4-1	3030	MERGING TRAFFIC	PAGE 136																	
W		4	-			1	-		(			)		4	8		4	8			W4-1	4848	MERGING TRAFFIC																		
W		4	-			2	-		(			)		3	0		3	0			W4-2	3030	PAVEMENT WIDTH TRANSITION (3-2)	PAGE 137																	
W		4	-			2	-		(			)		4	8		4	8			W4-2	4848	PAVEMENT WIDTH TRANSITION (3-2)																		
W		5	-			1	-		(			)		3	0		3	0			W5-1	3030	ROAD NARROWS	PAGE 138																	
W		5	-			2	-		(			)		3	0		3	0			W5-2	3030	NARROW BRIDGE	PAGE 139																	
W		5	-			3	-		(			)		3	0		3	0			W5-3	3030	ONE LANE BRIDGE	PAGE 140																	
W		5	-			4	-		(			)		3	0		3	0			W5-4	3030	NARROW UNDERPASS	PAGE 141																	
W		5	-			5	-		(			)		3	0		3	0			W5-5	3030	ONE LANE UNDERPASS	PAGE 142																	
W		6	-			1	-		(			)		3	6		3	6			W6-1	3636	DIVIDED ROAD	PAGE 143																	
W		6	-			1	-		(			)		4	8		4	8			W6-1	4848	DIVIDED ROAD																		
W		6	-			2	-		(			)		3	6		3	6			W6-2	3636	END DIVIDED ROAD	PAGE 144																	
W		6	-			2	-		(			)		4	8		4	8			W6-2	4848	END DIVIDED ROAD																		
W		7	-			1	-		(			)		3	0		3	0			W7-1	3030	HILL	PAGE 145																	
W		7	-			1	-		(			)		4	8		4	8			W7-1	4848	HILL																		
W		7	-			1	-	1	(			)		4	8		4	8			W7-1-1	4848	( ) MILE HILL	PAGE 146																	
W		8	-			1	-		(			)		3	0		3	0			W8-1	3030	BUMP	PAGE 147																	
W		8	-			2	-		(			)		3	0		3	0			W8-2	3030	DIP	PAGE 148																	
W		8	-			3	-		(			)		3	0		3	0			W8-3	3030	PAVEMENT ENDS	PAGE 149																	
W		8	-			4	-		(			)		3	0		3	0			W8-4	3030	SOFT SHOULDER	PAGE 150																	
W		8	-			4	-	1	(			)		3	0		3	0			W8-4-1	3030	LOW SHOULDER	PAGE 151																	











CLASS SERIES SPACER SUB-SERIES SPACER SUFFIX SPACER SPECIAL DESIGNATION SPACER HORIZONTAL DIMENSION VERTICAL DIMENSION																				DESCRIPTION	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
M		1	-		2	-		(			)			2	4		2	4		M1-2 2424 U.S. ROUTE MARKER	PAGE 220
M		1	-		3	-		(			)			3	0		2	4		M1-3 3024 U.S. ROUTE MARKER	PAGE 221
M		1	-		4	-		(			)			2	4		2	4		M1-4 2424 PA. ROUTE MARKER	PAGE 222
M		1	-		5	-		(			)			3	0		2	4		M1-5 3024 PA. ROUTE MARKER	PAGE 223
M		1	-		6	-		(			)			2	4		2	4		M1-6 2424 INTERSTATE ROUTE MARKER	PAGE 224
M		1	-		6	-		(			)			3	6		3	6		M1-6 3636 INTERSTATE ROUTE MARKER	
M		1	-		7	-		(			)			3	0		2	4		M1-7 3024 INTERSTATE ROUTE MARKER	PAGE 225
M		1	-		7	-		(			)			4	5		3	6		M1-7 4536 INTERSTATE ROUTE MARKER	
M		2	-		1	-		(			)			2	4		1	2		M2-1 2412 JUNCTION MARKER	PAGE 226
M		2	-		1	-	1	(			)			2	4		1	2		M2-1-1 2412 JUNCTION MARKER IS.	
M		2	-		2	-		(			)			2	4		1	2		M2-2 2412 END MARKER	PAGE 227
M		3	-		1	-		(		R	)			2	1		1	5		M3-1(R) 2115 ADVANCE RIGHT TURN ARROW (90°)	PAGE 228
M		3	-		1	-	1	(		R	)			2	1		1	5		M3-1-1(R)2115 ADVANCE RIGHT TURN ARROW (90°) IS.	
M		3	-		1	-		(		L	)			2	1		1	5		M3-1(L) 2115 ADVANCE LEFT TURN ARROW (90°)	PAGE 229
M		3	-		1	-	1	(		L	)			2	1		1	5		M3-1 2115 ADVANCE LEFT TURN ARROW (90°) IS.	
M		3	-		2	-		(		R	)			2	1		1	5		M3-2(R) 2115 ADVANCE RIGHT TURN ARROW (45°)	PAGE 230
M		3	-		2	-	1	(		R	)			2	1		1	5		M3-2-1(R)2115 ADVANCE RIGHT TURN ARROW (45°) IS.	
M		3	-		2	-		(		L	)			2	1		1	5		M3-2(L) 2115 ADVANCE LEFT TURN ARROW (45°)	PAGE 231
M		3	-		2	-	1	(		L	)			2	1		1	5		M3-2-1(L)2115 ADVANCE LEFT TURN ARROW (45°) IS.	
M		4	-		1	-		(			)			2	1		1	5		M4-1 2115 DIRECTIONAL ARROW (90°)	PAGE 232
M		4	-		1	-	1	(			)			2	1		1	5		M4-1-1 2115 DIRECTIONAL ARROW (90°) IS.	
M		4	-		2	-		(		R	)			2	1		1	5		M4-2(R) 2115 DIRECTIONAL ARROW (45° RIGHT)	PAGE 233
M		4	-		2	-	1	(		R	)			2	1		1	5		M4-2-1(R) 2115 DIRECTIONAL ARROW (45° RIGHT) IS.	
M		4	-		2	-		(		L	)			2	1		1	5		M4-2(L) 2115 DIRECTIONAL ARROW (45° LEFT)	PAGE 234
M		4	-		2	-	1	(		L	)			2	1		1	5		M4-2-1(L) 2115 DIRECTIONAL ARROW (45° LEFT) IS.	
M		4	-		3	-		(			)			2	1		1	5		M4-3 2115 DIRECTIONAL ARROW (STRAIGHT)	PAGE 235
M		4	-		3	-	1	(			)			2	1		1	5		M4-3-1 2115 DIRECTIONAL ARROW (STRAIGHT) IS.	
M		4	-		4	-		(			)			2	1		1	5		M4-4 2115 DIRECTIONAL ARROW (RIGHT & LEFT)	PAGE 236
M		5	-		3	-		(			)			2	4		1	2		M5-3 2412 BY-PASS MARKER	PAGE 237
M		5	-		5	-		(			)			2	4		1	2		M5-5 2412 BUSINESS MARKER	PAGE 238
M		5	-		6	-		(			)			2	4		1	2		M5-6 2412 DETOUR MARKER	PAGE 239
M		5	-		8	-		(			)			2	4		1	2		M5-8 2412 TRUCK MARKER	PAGE 240
M		6	-		1	-		(			)			2	4		1	2		M6-1 2412 CARDINAL DIRECTION MARKER (NORTH)	PAGE 242
M		6	-		1	-	1	(			)			3	0		1	5		M6-1-1 3015 CARDINAL DIRECTION MARKER (NORTH) IS.	
M		6	-		2	-		(			)			2	4		1	2		M6-2 2412 CARDINAL DIRECTION MARKER (SOUTH)	PAGE 243
M		6	-		2	-	1	(			)			3	0		1	5		M6-2-1 3015 CARDINAL DIRECTION MARKER (SOUTH) IS.	
M		6	-		3	-		(			)			2	4		1	2		M6-3 2412 CARDINAL DIRECTION MARKER (EAST)	PAGE 244
M		6	-		3	-	1	(			)			3	0		1	5		M6-3-1 3015 CARDINAL DIRECTION MARKER (EAST) IS.	







# REGULATORY

PAGE 8

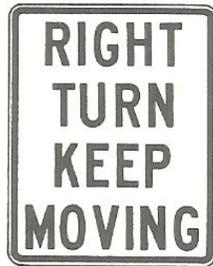
RI-1



24 x 24  
30 x 30  
36 x 36

PAGE 9

RI-1-1



24 x 30

PAGE 10

RI-2



36 x 36  
48 x 48  
60 x 60

PAGE 11

RI-3



12 x 6

PAGE 14

R2-1(55)



24 x 30  
30 x 36  
36 x 48  
48 x 60

PAGE 15

R2-2(45)



30 x 30  
36 x 36  
48 x 48

PAGE 16

R2-2-1(20)



144 x 60

PAGE 17

R2-2-2



48 x 36

PAGE 18

R2-2-3



30 x 30  
48 x 48

PAGE 19

R2-4



36 x 48  
48 x 60

PAGE 20

R2-5-1



120 x 60

PAGE 21

R2-5-2



288 x 144

# REGULATORY

PAGE 22

R2-8

**RADAR ENFORCED**

36 x 8  
48 x 8

R2-8

**RADAR  
ENFORCED**

30 x 15

PAGE 24

R3-1



24 x 30  
30 x 36

PAGE 25

R3-2



24 x 30  
30 x 36

PAGE 26

R3-3



24 x 24  
30 x 30

PAGE 27

R3-4



24 x 30  
36 x 48

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R3-5(R)



30 x 36

PAGE 29

R3-5(L)



30 x 36

PAGE 30

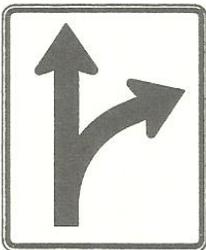
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PAGE 31

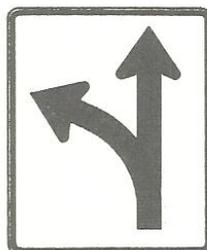
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PAGE 32

R3-6(LS)



30 x 36

PAGE 33

R3-7(R)



30 x 30  
48 x 48

PAGE 34

R3-7(L)



30 x 30  
48 x 48

PAGE 35

R3-7-1



24 x 30

PAGE 36

R3-8(SRR)



30 x 30

PAGE 37

R3-8(LLS)



30 x 30

PAGE 38

R3-8(SR)



30 x 30



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R3-8(LS)



30 x 30

PAGE 40

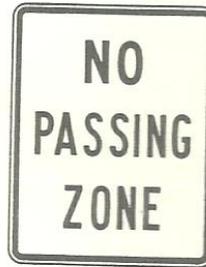
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PAGE 41

R4-1-1



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36 x 48

PAGE 42

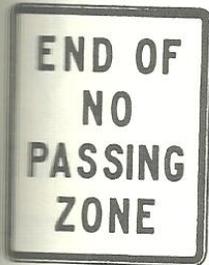
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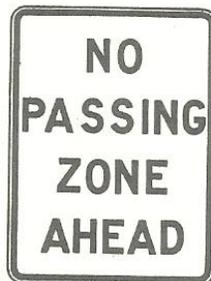
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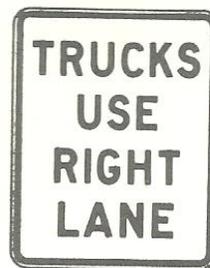
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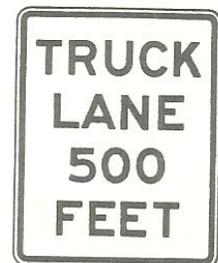
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PAGE 46

R4-6(500)



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48 x 60

PAGE 47

R4-7(R)



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24 x 30  
36 x 48

PAGE 48

R4-7(L)



18 x 24  
24 x 30  
36 x 48

PAGE 49

R4-8(R)



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36 x 48

PAGE 50

R4-8(L)



18 x 24  
24 x 30  
36 x 48

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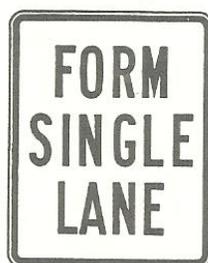
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PAGE 52

R4-10



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36 x 48

PAGE 53

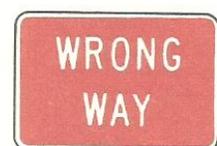
R5-1



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PAGE 54

R5-1-1



36 x 24  
48 x 36

# REGULATORY

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R5-2



24 x 24

PAGE 56

R5-2-1



24 x 18

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R5-3



24 x 12

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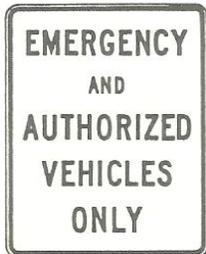
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PAGE 59

R5-4



36 x 48  
48 x 60

PAGE 60

R6-1(R)



36 x 12

PAGE 61

R6-1(L)



36 x 12

PAGE 62

R6-2(R)



18 x 24  
24 x 30  
36 x 48

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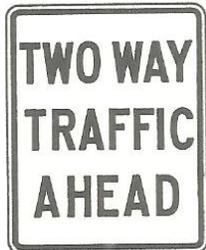
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36 x 48

PAGE 64

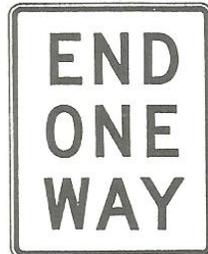
R6-3



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PAGE 65

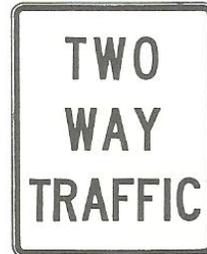
R6-4



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36 x 48

PAGE 66

R6-5



24 x 30  
36 x 48

PAGE 68

R7-1\*



12 x 18

PAGE 69

R7-2\*



12 x 18

PAGE 70

R7-4\*



12 x 18

PAGE 71

R7-5\*



12 x 18

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R7-6\*



12 x 18

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R7-7\*



12 x 18

# REGULATORY

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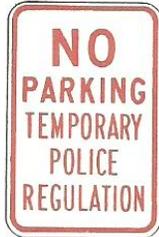
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PAGE 75

R7-10\*



12 x 18

PAGE 76

R7-201\*



12 x 6

PAGE 78

R8-1



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PAGE 79

R8-3



18 x 24  
24 x 30

PAGE 80

R8-4



48 x 36

PAGE 81

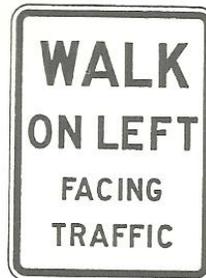
R8-5



48 x 36

PAGE 82

R9-1



18 x 24

PAGE 83

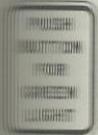
R9-2\*



12 x 18

PAGE 84

R9-6\*



9 x 12

PAGE 85

R9-7\*



9 x 12

PAGE 86

R10-1



24 x 30  
36 x 48  
48 x 60

PAGE 87

R10-2



48 x 30

PAGE 88

R10-3



60 x 30

PAGE 89

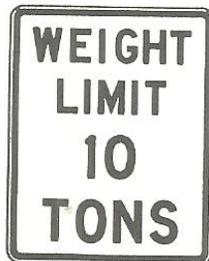
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48 x 12

PAGE 90

R10-4 (10)



24 x 30  
36 x 48

PAGE 91

R10-4-1 (2)



24 x 12  
36 x 12

PAGE 92

R10-4-2



24 x 12  
36 x 12

# REGULATORY

PAGE 93

R11-1



30 x 24

PAGE 94

R12-1



12 x 18

PAGE 95

R12-2



18 x 12

PAGE 96

R13-1\*



18 x 24

PAGE 97

R14-1\*



18 x 24

PAGE 98

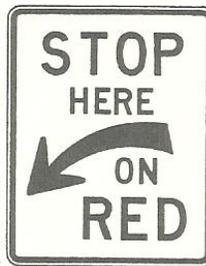
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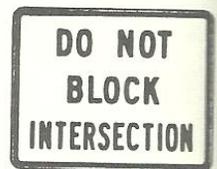
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PAGE 100

R15-2



30 x 24

PAGE 101

R16-1



36 x 36

PAGE 102

R17-1



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36 x 48

PAGE 103

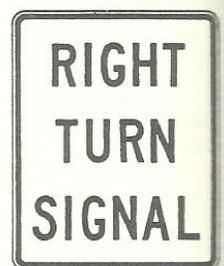
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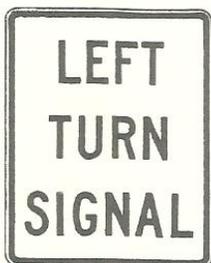
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PAGE 105

R18-2(L)\*



24 x 30

PAGE 106

R19-1



24 x 24

# WARNING

PAGE 108

WI-1(R)



30 x 30  
48 x 48

PAGE 109

WI-1(L)



30 x 30  
48 x 48

PAGE 110

WI-2(R)



30 x 30  
48 x 48

PAGE 111

WI-2(L)



30 x 30  
48 x 48

PAGE 112

WI-3(R)



30 x 30  
48 x 48

PAGE 113

WI-3(L)



30 x 30  
48 x 48

PAGE 114

WI-4(R)



30 x 30  
48 x 48

PAGE 115

WI-4(L)



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48 x 48

PAGE 116

WI-5(R)



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48 x 48

PAGE 117

WI-5(L)



30 x 30  
48 x 48

PAGE 118

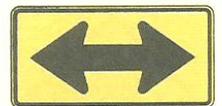
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96 x 48  
120 x 60

PAGE 119

WI-7



48 x 24  
96 x 48  
120 x 60

PAGE 120

WI-8(R)



30 x 30  
48 x 48

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WI-8(L)



30 x 30  
48 x 48

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W2-1



30 x 30  
48 x 48

PAGE 123

W2-2



30 x 30  
48 x 48

PAGE 124

W2-3(R)



30 x 30  
48 x 48

PAGE 125

W2-3(L)



30 x 30  
48 x 48

PAGE 126

W2-3-1(R)



30 x 30  
48 x 48

PAGE 127

W2-3-1(L)



30 x 30  
48 x 48

# WARNING

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W2-4



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48 x 48

PAGE 129

W2-5



30 x 30  
48 x 48

PAGE 130

W2-5-1(R)



30 x 30  
48 x 48

PAGE 131

W2-5-1(L)



30 x 30  
48 x 48

PAGE 132

W3-1



30 x 30  
48 x 48

PAGE 133

W3-2



30 x 30  
48 x 48

PAGE 134

W3-3



36 x 36  
48 x 48

PAGE 135

W3-4



36 x 36  
48 x 48

PAGE 136

W4-1



30 x 30  
48 x 48

PAGE 137

W4-2



30 x 30  
48 x 48

PAGE 138

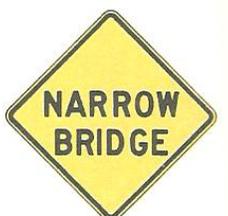
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W5-2



30 x 30

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30 x 30

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W5-4



30 x 30

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W5-5



30 x 30

PAGE 143

W6-1



36 x 36  
48 x 48

PAGE 144

W6-2



36 x 36  
48 x 48

PAGE 145

W7-1



30 x 30  
48 x 48

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W7-1-1(2)



48 x 48

PAGE 147

W8-1



30 x 30

# WARNING

PAGE 148

W8-2



30 x 30

PAGE 149

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30 x 30

PAGE 150

W8-4



30 x 30

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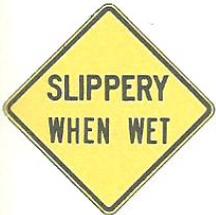
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30 x 30

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30 x 30

PAGE 154

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30 x 30

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W9-1(F)\*



30 x 30

PAGE 156

W9-1(S)\*



30 x 54

PAGE 157

W9-2



30 x 30

PAGE 158

W9-3\*



30 x 30

PAGE 159

W9-4\*



30 x 30

PAGE 160

W10-1



36 Dia.

PAGE 161

W10-2\*



PAGE 162

W11-1\*



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48 x 48

PAGE 163

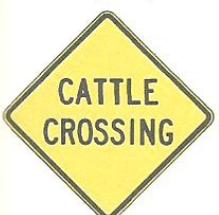
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PAGE 164

W11-4\*



30 x 30

PAGE 165

W11-5



30 x 30

PAGE 166

W11-6\*



30 x 30

PAGE 167

W11-7\*

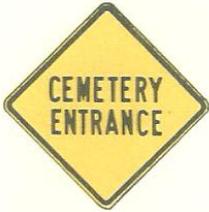


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# WARNING

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W11-8\*



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PAGE 169

W12-1



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W12-2(126)



36 x 36  
48 x 48

PAGE 171

W12-3(126)



48 x 24  
96 x 48

PAGE 172

W13-1(30)



18 x 18  
24 x 24

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W13-2(22)\*



12 x 18

PAGE 174

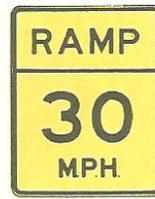
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48 x 60

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W13-4(30)



48 x 60

PAGE 176

W14-1\*



30 x 30

PAGE 177

W14-2\*



30 x 30

PAGE 178

W14-3\*



30 x 30

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W14-4\*



30 x 30

PAGE 180

W15-1



30 x 30

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W15-2



30 x 30  
48 x 48

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48 x 24

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30 x 30

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W15-6\*



30 x 30

PAGE 185

W15-7\*



30 x 30

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W16-1



18 x 18

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W16-2(L)



12 x 36

PAGE 188

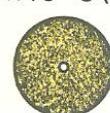
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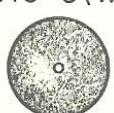
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W16-3(Y)



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W16-3(W)



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W20-1(A)



48 x 48

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W20-1(B)



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W20-1(C)



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W20-1(D)



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W20-2(A)



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PAGE 193

W20-2(B)



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W20-2(C)



48 x 48

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W20-2(D)



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W20-3(A)



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PAGE 194

W20-3(B)



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W20-4(A)



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W20-4(B)



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PAGE 195

W20-4(C)



48 x 48

PAGE 195

W20-4(D)



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W20-5(RA)



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PAGE 196

W20-5(RB)



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W20-5(RC)



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W20-5(RD)



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# CONSTRUCTION and MAINTENANCE

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W20-5(LA)



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W20-5(LB)



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W20-5(LD)



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W20-5(CA)



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W20-6(A)



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PAGE 199

W20-6(B)



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W20-6(C)



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W20-6(D)



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PAGE 200

W20-7(A)



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W20-7(B)



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W20-7(C)



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30 x 30

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W21-1



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24 x 24

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36 x 36

# CONSTRUCTION and MAINTENANCE

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30 x 30

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W21-5



30 x 30

PAGE 207

W21-6



30 x 30

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30 x 30

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W21-8



30 x 30

# CONSTRUCTION and MAINTENANCE

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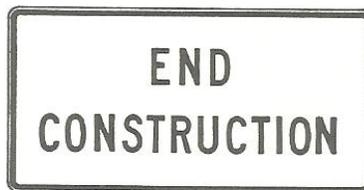
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72 x 48

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G20-2



60 x 30

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G20-3-1



30 x 30

PAGE 213

G20-3-2



30 x 30

PAGE 214

G20-5(R)



48 x 30

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G20-5(L)



48 x 30

PAGE 216

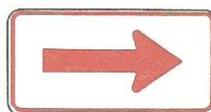
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48 x 30

PAGE 217

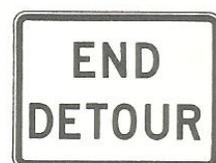
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24 x 18

# MARKERS

PAGE 220

MI-2(6)



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PAGE 221

MI-3(230)



30 x 24

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MI-4(73)



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MI-5(516)



30 x 24

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MI-6(83)



24 x 24  
36 x 36

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MI-7(176)



30 x 24  
45 x 36

PAGE 226

M2-1



24 x 12

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M2-1-I



24 x 12

PAGE 227

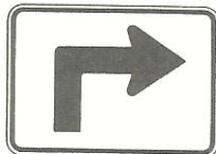
M2-2



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PAGE 228

M3-1(R)



21 x 15

PAGE 228

M3-1-I(R)



21 x 15

PAGE 229

M3-1(L)



21 x 15

PAGE 229

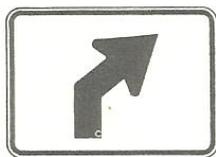
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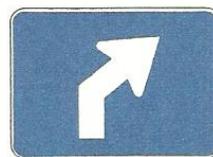
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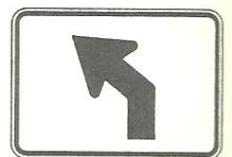
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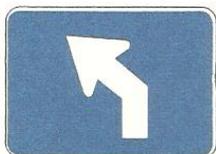
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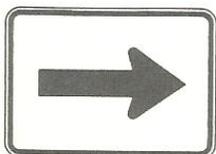
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M4-1



21 x 15

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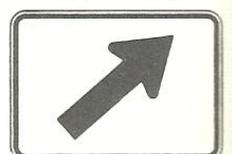
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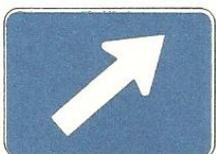
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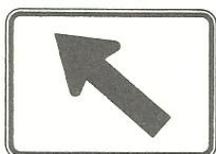
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M4-2(L)



21 x 15

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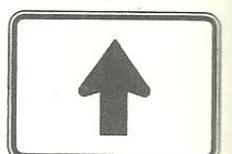
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21 x 15

PAGE 235

M4-3

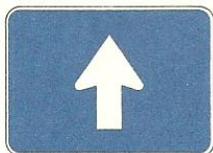


21 x 15

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PAGE 235

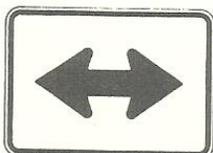
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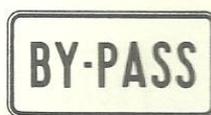
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21 x 15

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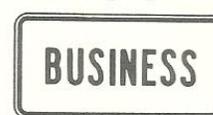
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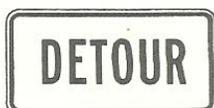
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M5-6



24 x 12

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M5-8



24 x 12

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M6-1



24 x 12

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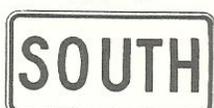
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30 x 15

PAGE 243

M6-2



24 x 12

PAGE 243

M6-2-1



24 x 12  
30 x 15

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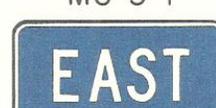
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24 x 12

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M6-3-1



24 x 12  
30 x 15

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M6-4



24 x 12

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M6-4-1



24 x 12  
30 x 15

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M7-1



24 x 12

## DESTINATION AND DISTANCE

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DI-1



48 x 8  
72 x 12

PAGE 250

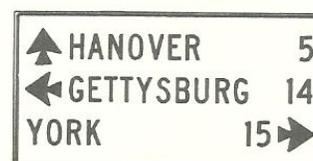
DI-2



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72 x 24

PAGE 251

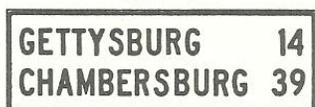
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72 x 36

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D2-1



48 x 16  
72 x 24

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D3\*



24 x 8

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D4-1



30 x 24

# INFORMATION

PAGE 256

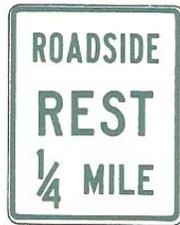
I1-1



60 x 60

PAGE 257

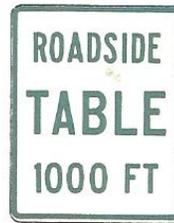
I1-2



24 x 30

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I1-3



24 x 30

PAGE 259

I1-3-1



24 x 12

PAGE 260

I1-3-2



24 x 12

PAGE 262

I2-1



48 x 24

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I2-2



48 x 24

PAGE 264

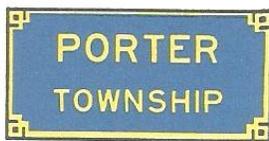
I2-3



48 x 24

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I2-4



48 x 24

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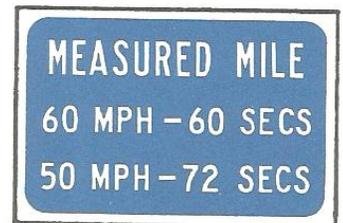
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72 x 48

PAGE 267

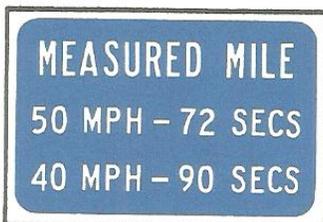
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72 x 48

PAGE 268

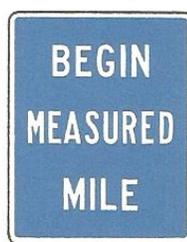
I3-3



72 x 48

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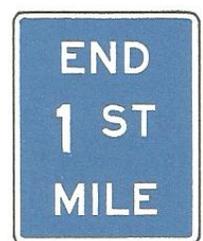
I3-4



24 x 30

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I3-5



24 x 30

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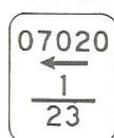
I4-1



6 x 10

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I4-2



10 x 12

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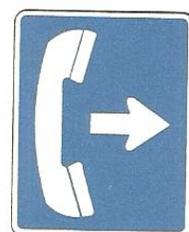
I5-1 \*



24 x 30  
30 x 36

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I5-2 \*



24 x 30  
30 x 36

# **APPENDIX C**

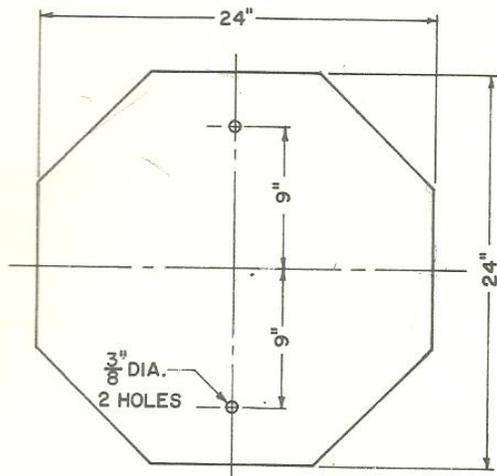
## **BLANK STANDARDS**

A variety of materials can be used effectively for permanent signs, and the choice among them will depend largely on local experience or the availability of satisfactory materials.

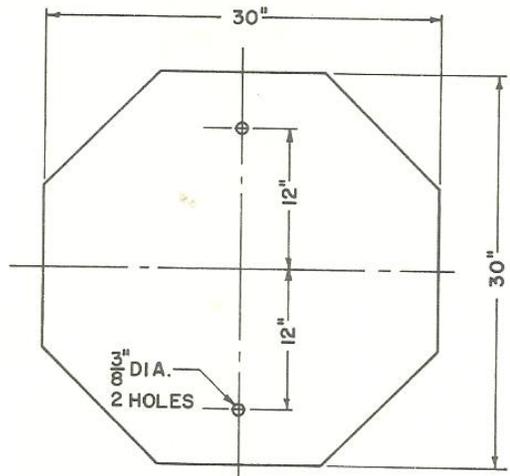
The Pennsylvania Department of Highways and most of the larger cities have suitable specifications that can be obtained by smaller communities.

Sign blank standards used by the Pennsylvania Department of Highways are illustrated on the following pages for your information and convenience.

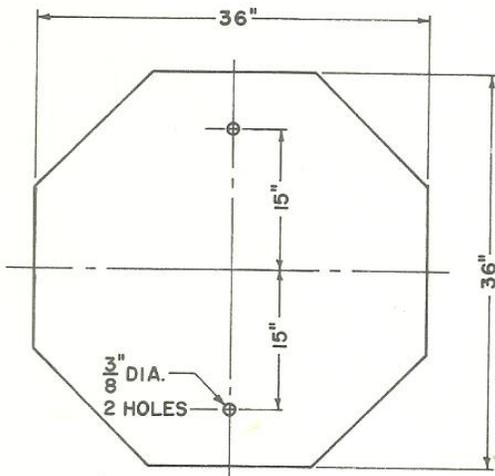
When the same size blank is used for both square and diamond shaped signs the letter (S) for square or the letter (D) for diamond follows the sign blank number. The letter (P) indicates signs made of plywood.



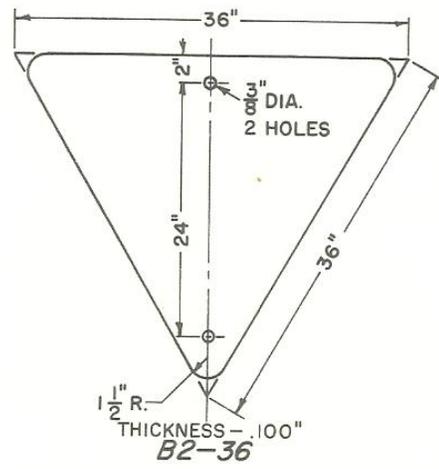
THICKNESS - .080"  
**B1-24**



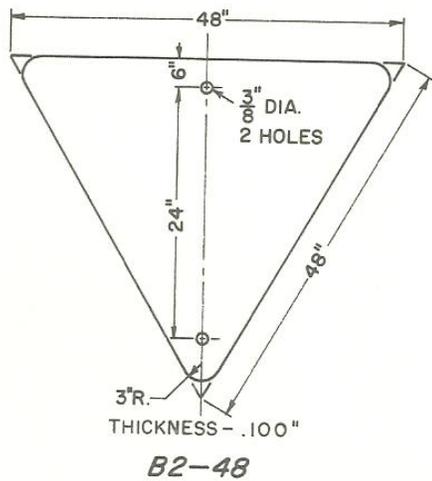
THICKNESS - .080"  
**B1-30**



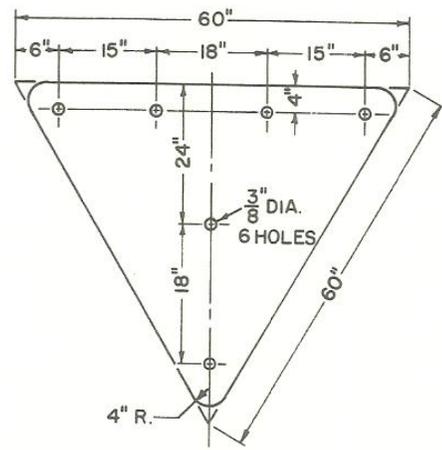
THICKNESS - .100"  
**B1-36**



THICKNESS - .100"  
**B2-36**

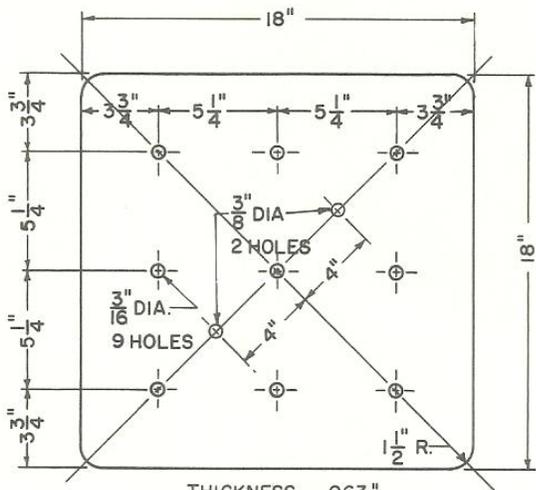


THICKNESS - .100"  
**B2-48**

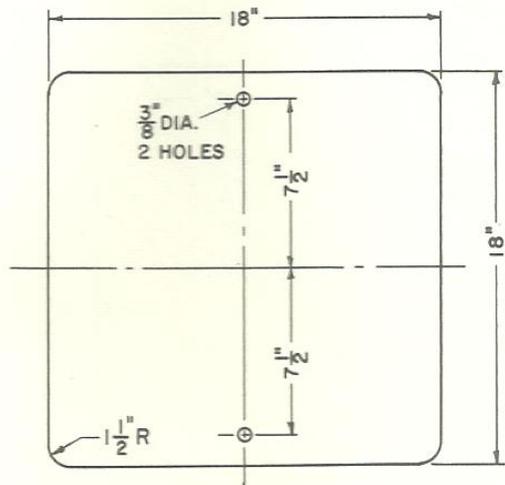


THICKNESS - .125"  
**B2-60**

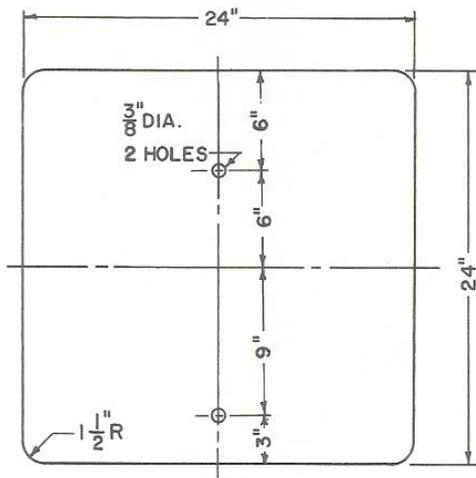




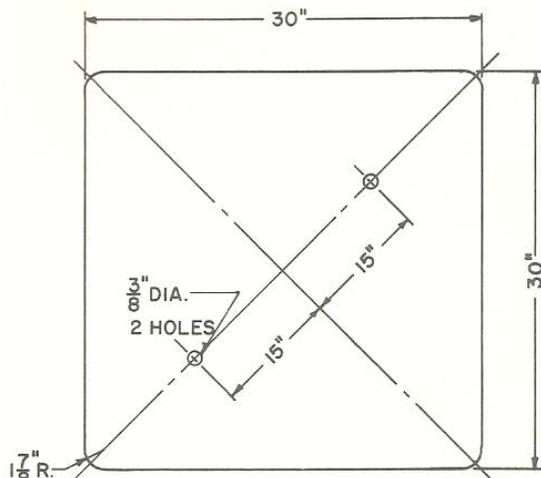
THICKNESS - .063"  
**B3-18(D)**



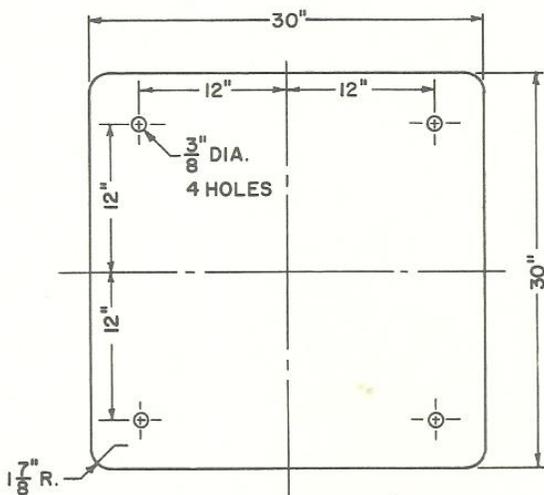
THICKNESS - .063"  
**B3-18(S)**



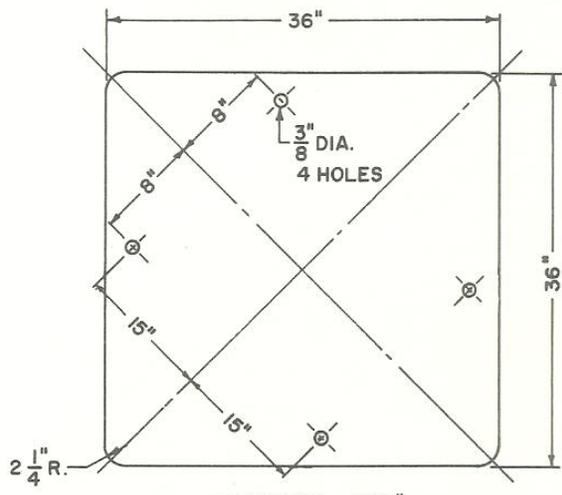
THICKNESS - .080"  
**B3-24**



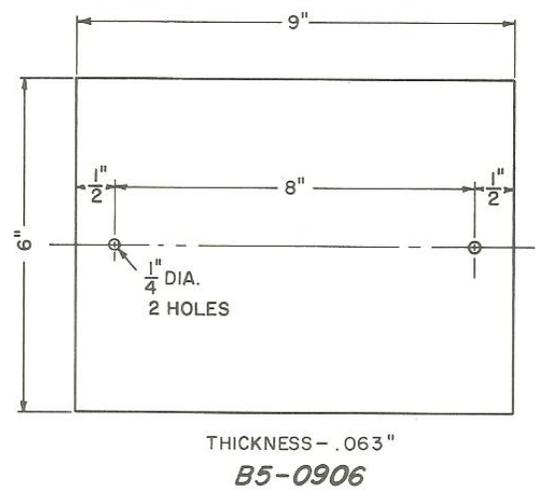
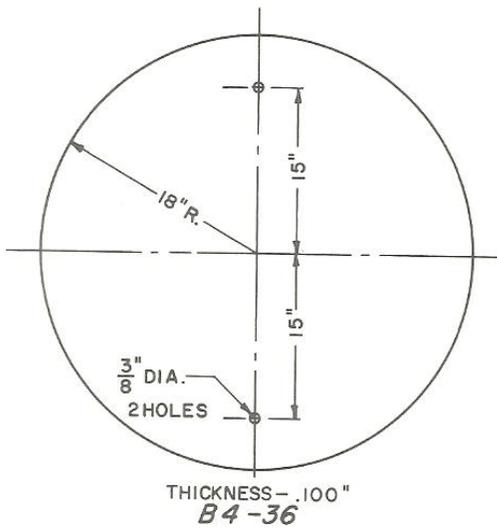
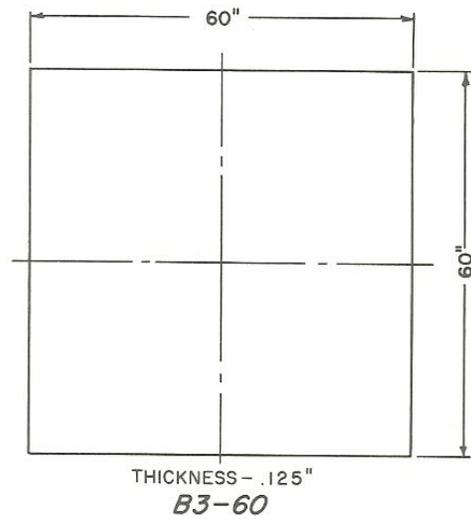
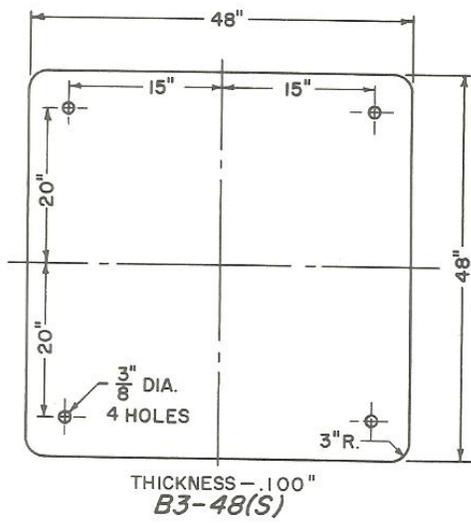
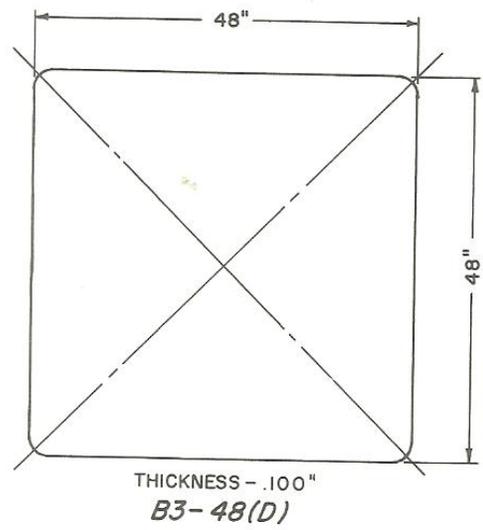
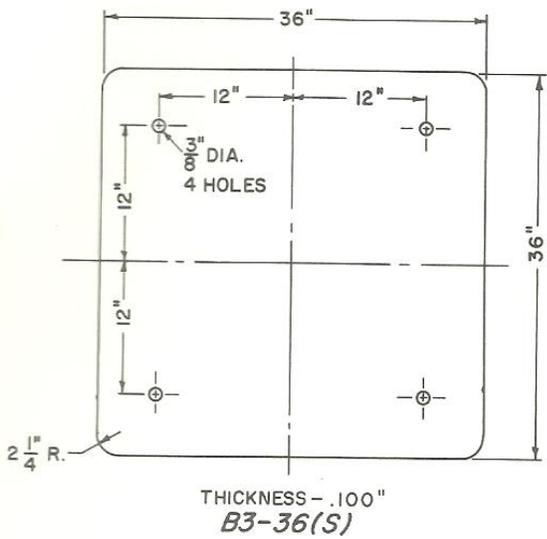
THICKNESS - .080"  
**B3-30(D)**

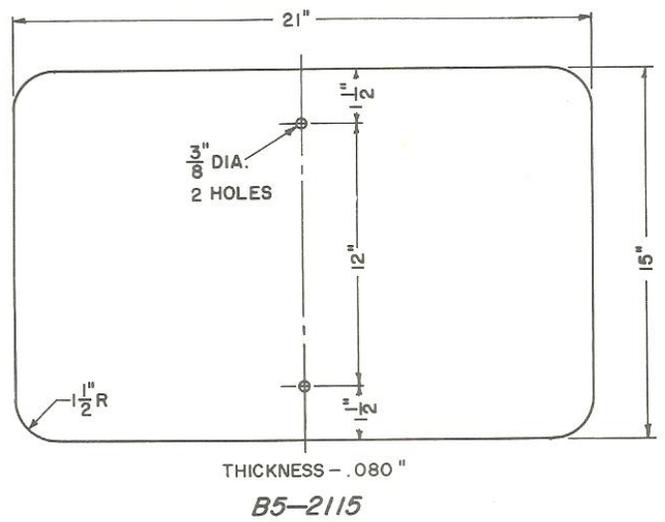
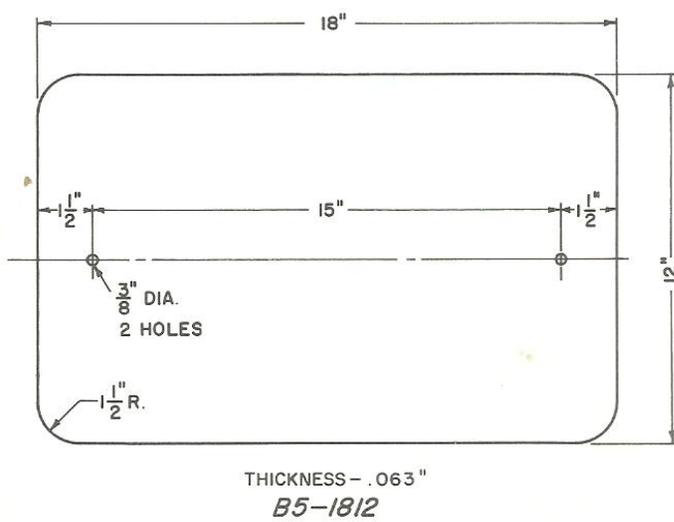
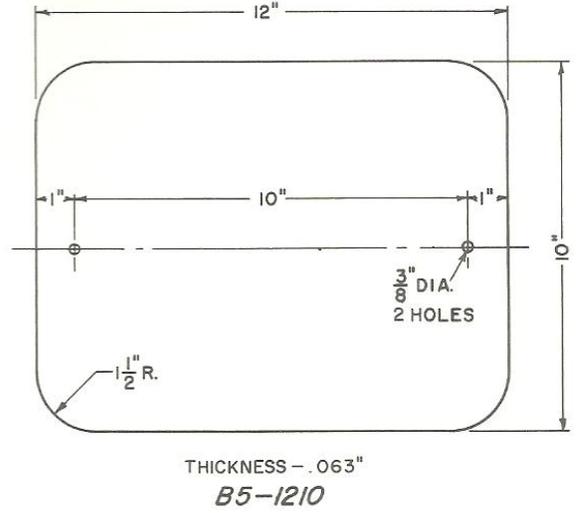
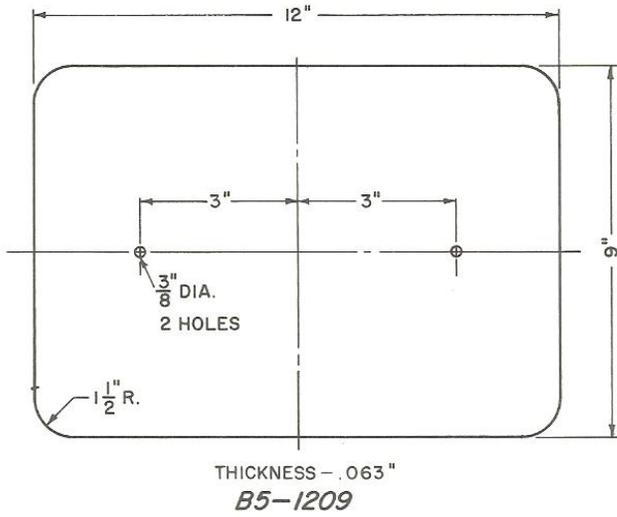
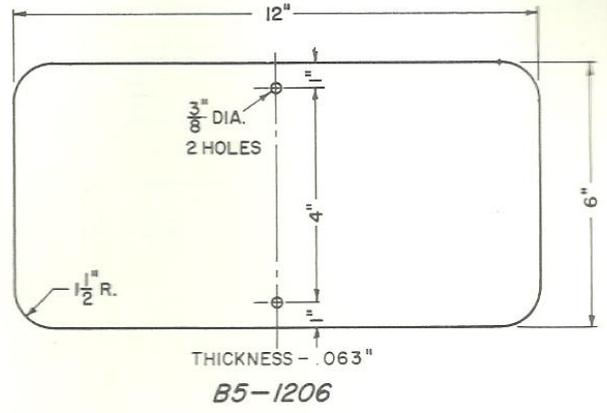
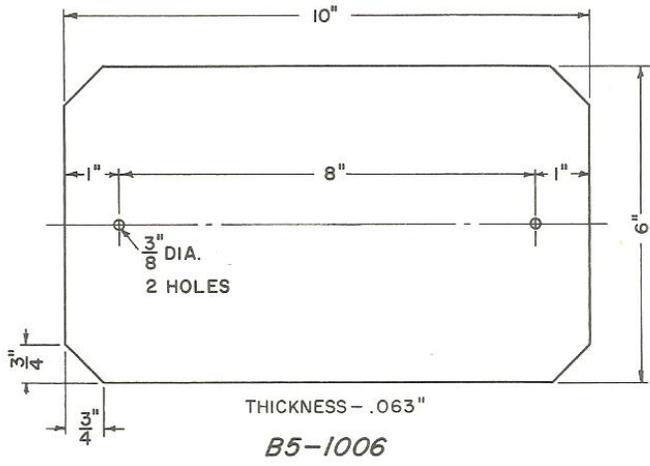


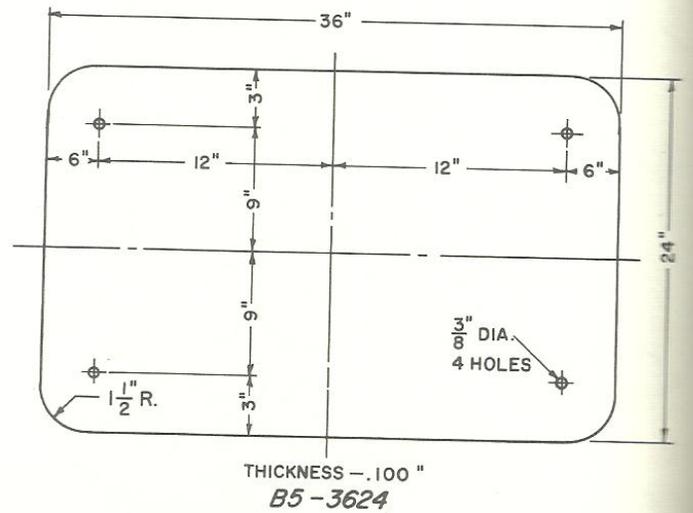
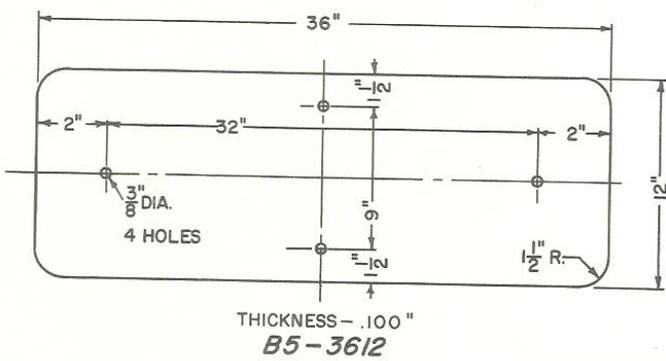
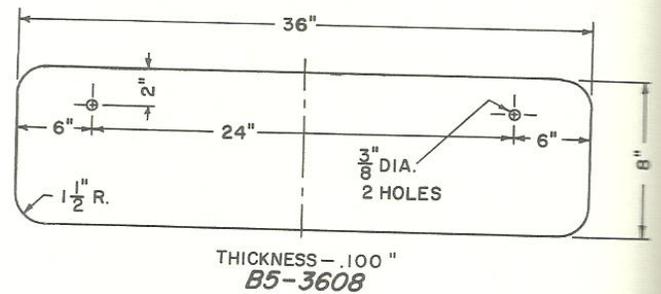
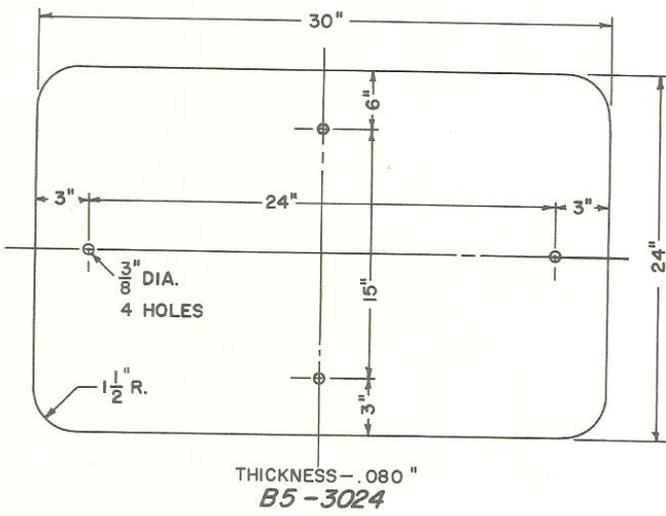
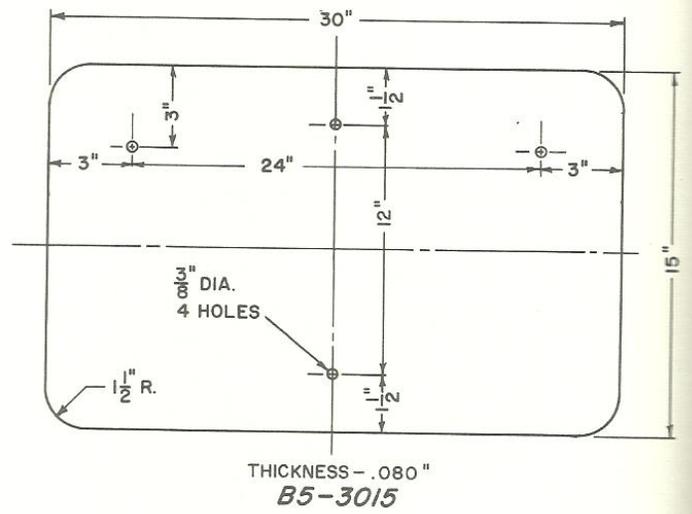
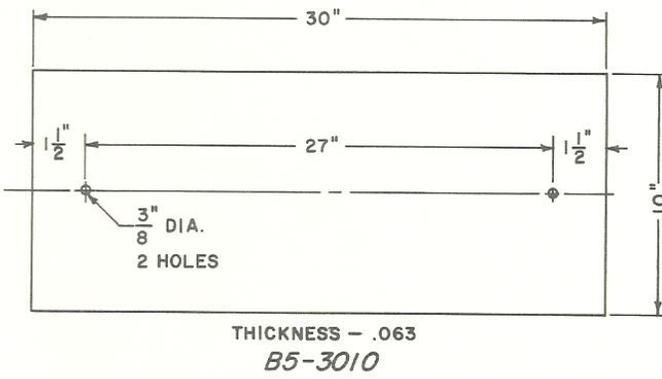
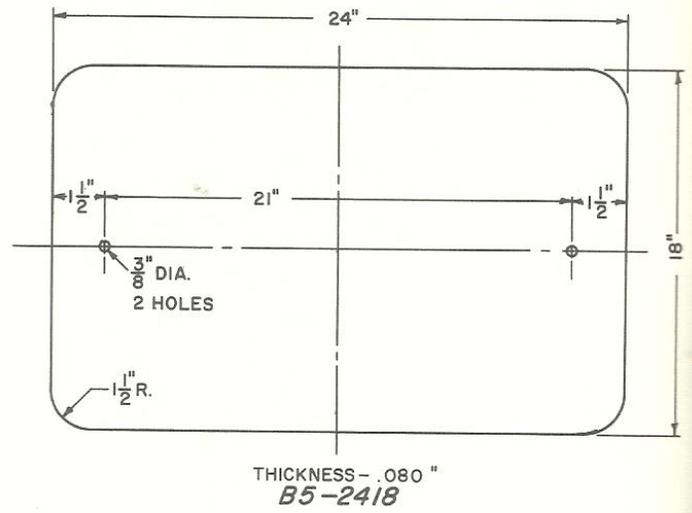
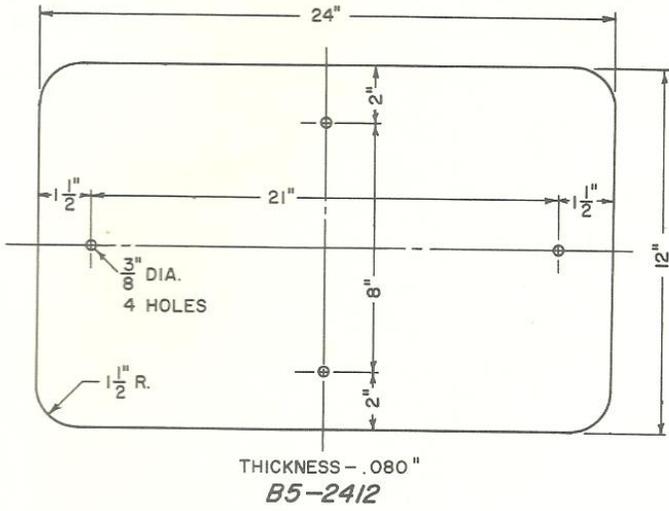
THICKNESS - .080"  
**B3-30(S)**

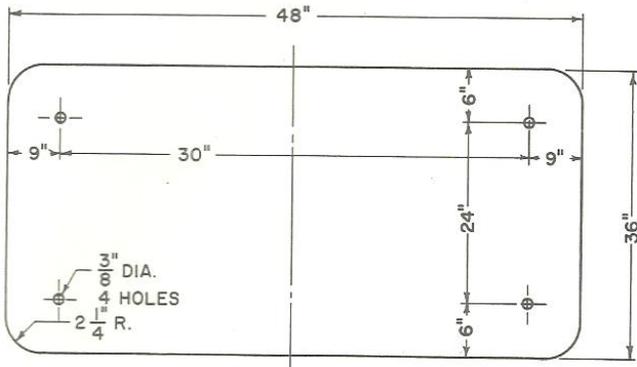


THICKNESS - .100"  
**B3-36(D)**

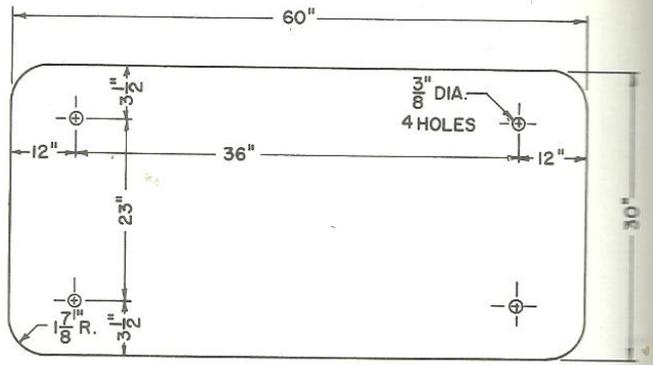




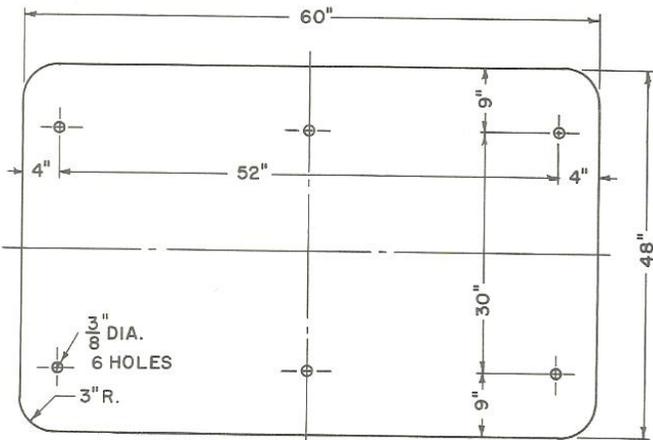




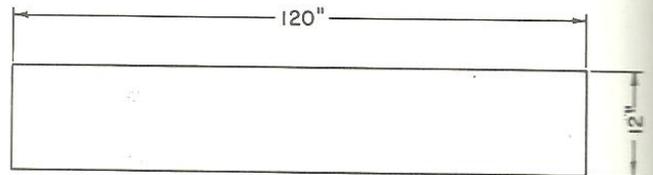
THICKNESS - .100 "  
B5-4836



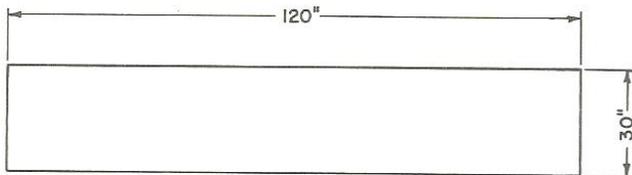
THICKNESS - .125 "  
B5-6030



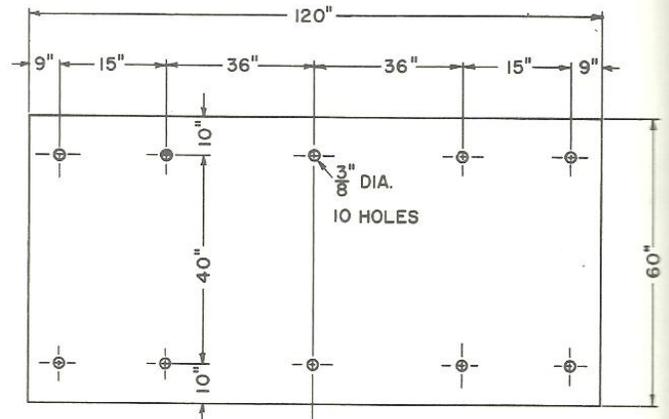
THICKNESS - .125 "  
B5-6048



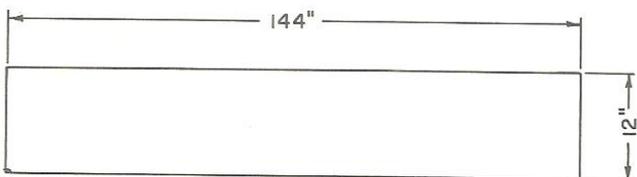
THICKNESS - .125 "  
B5-12012



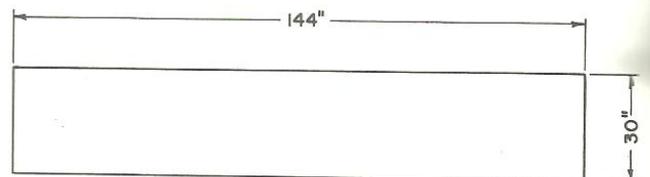
THICKNESS - .125 "  
B5-12030



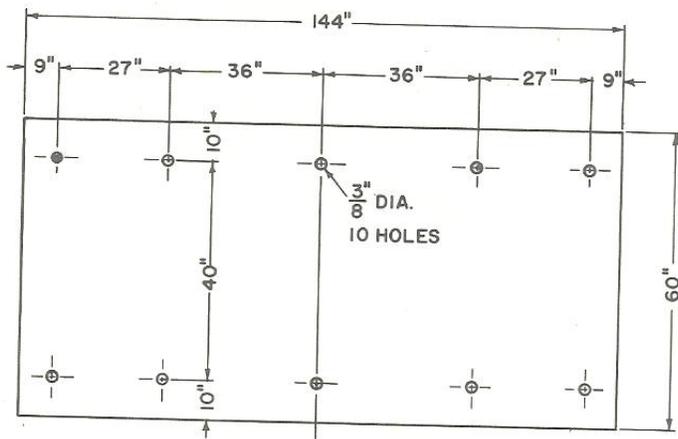
THICKNESS - .125 "  
B5-12060



THICKNESS - .125 "  
B5-14412

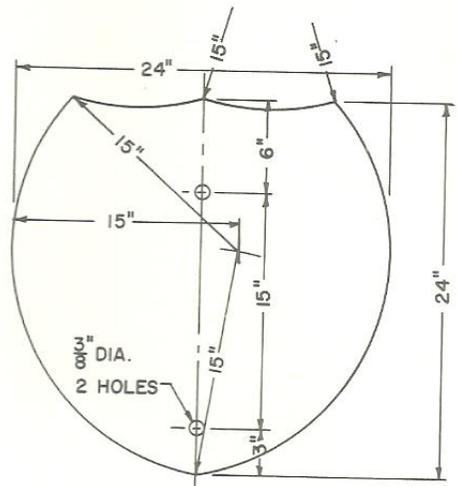


THICKNESS - .125 "  
B5-14430



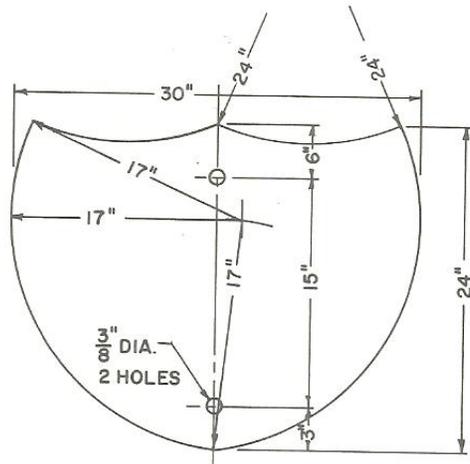
THICKNESS - .125 "

**B5-14460**



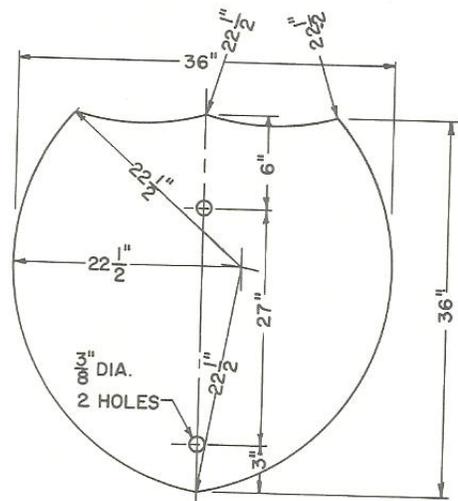
THICKNESS - .080 "

**B6-24**



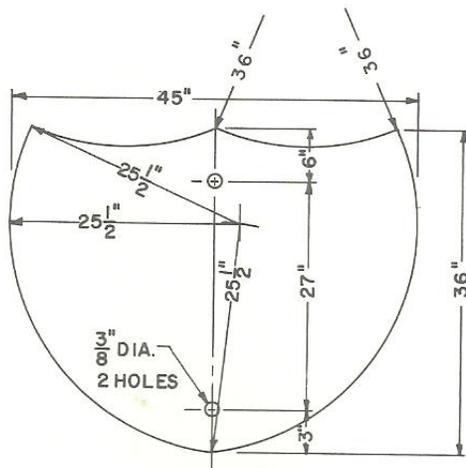
THICKNESS - .080 "

**B6-3024**



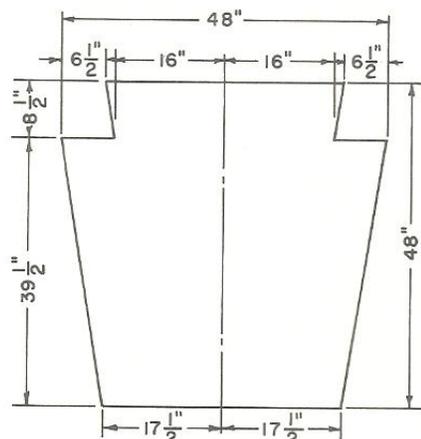
THICKNESS - .100 "

**B6-36**



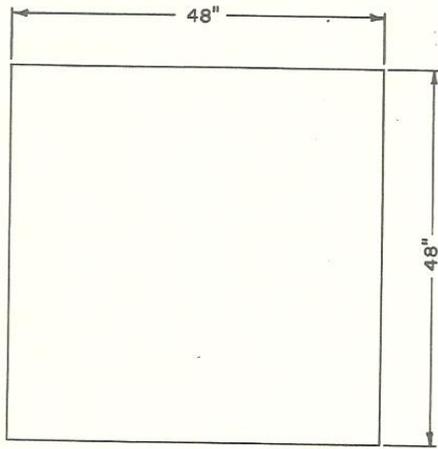
THICKNESS - .100 "

**B6-4536**

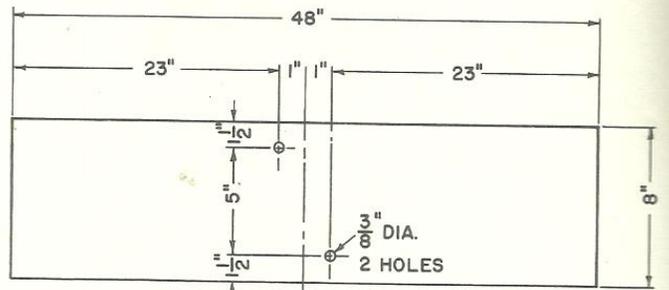


THICKNESS - .100 "

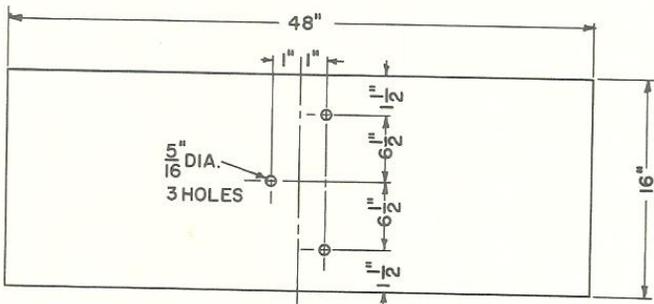
**B7-48**



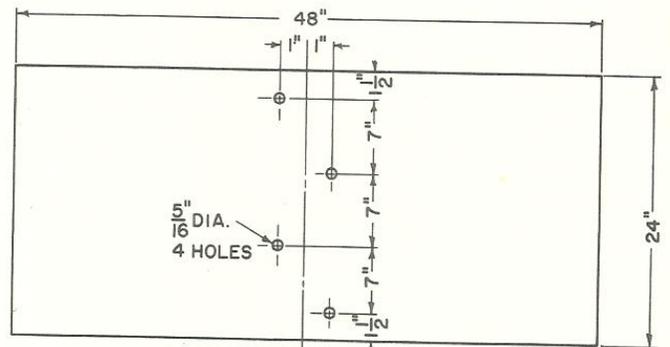
THICKNESS - .500" (5 PLY)  
**B3-48(P)**



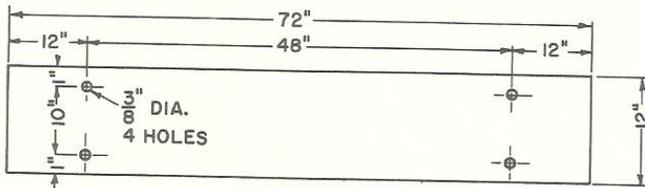
THICKNESS - .75" (7 PLY)  
**B5-4808(P)**



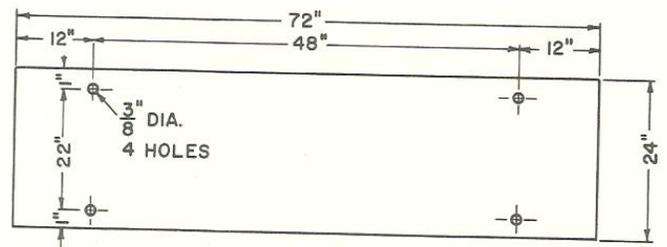
THICKNESS - .75" (7 PLY)  
**B5-4816(P)**



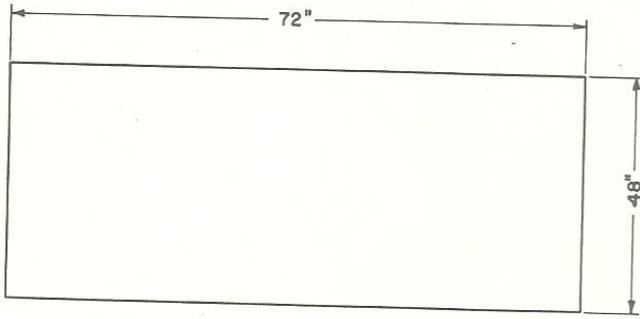
THICKNESS - .75" (7 PLY)  
**B5-4824(P)**



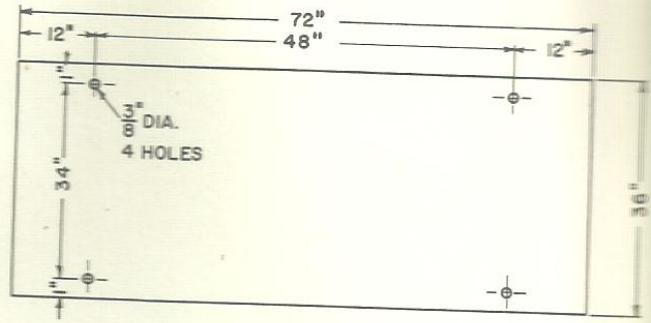
THICKNESS - .75" (7 PLY)  
**B5-7212(P)**



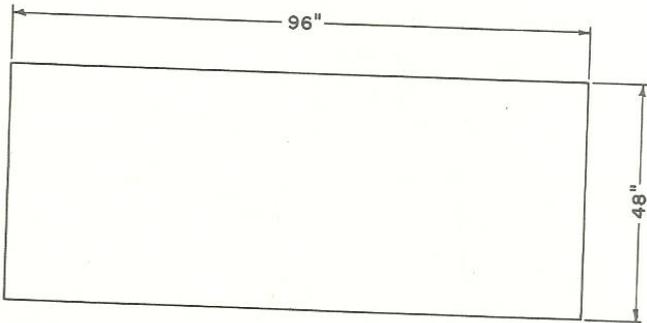
THICKNESS - .75" (7 PLY)  
**B5-7224(P)**



THICKNESS - .50" (5 PLY)  
**B5-7248 (P)**



THICKNESS - .75" (7 PLY)  
**B5-7236 (P)**



THICKNESS - .50" (5 PLY)  
**B5-9648 (P)**



# NOTES