



THE  
AMERICAN ASSOCIATION  
*of*  
STATE HIGHWAY OFFICIALS  
MANUAL  
*for*  
Signing and Pavement Marking  
*of the*  
NATIONAL SYSTEM *of*  
INTERSTATE and DEFENSE HIGHWAYS

1958

*Adopted February 10, 1958*  
by the American Association of State Highway Officials

*Approved February 21, 1958*  
*by the*  
U.S. Department of Commerce, Bureau of Public Roads

Scan by Kittelson LLC

**"STANDARD INTERSTATE YELLOW COLOR"**



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**"STANDARD INTERSTATE GREEN COLOR"**



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OFFICIAL MARKER  
FOR  
NATIONAL SYSTEM OF INTERSTATE  
*and*  
DEFENSE HIGHWAYS





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**MANUAL FOR SIGNING AND PAVEMENT MARKING OF THE  
NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS**  
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*Introduction*

THE National System of Interstate and Defense Highways, referred to as the Interstate System and now under construction along the Nation's principal travel desire lines, was conceived and is being built primarily to provide rapid, convenient and safe travel between and through major traffic generating centers. Essential to the realization of these valuable benefits is a uniform system of highway signing that will be fully adequate in an environment of high density, high speed motor vehicle traffic on modern controlled access highways. It has been demonstrated that signing, as developed over the years for conventional, non-access-controlled roads and streets, is not satisfactory. For this reason, a new concept in signing for the Interstate System is required.

The design for signs of the Interstate System must be approached with the premise that the signing is primarily for the benefit and direction of drivers who are not familiar with the route or the area. Signs must contain messages that are carefully selected and designed for easy reading and must be prominently and effectively displayed so as to induce drivers to react promptly, naturally and properly to the traffic and design conditions encountered.

Signing the Interstate routes is the responsibility of the several State Highway Departments since all of the routes comprising the Interstate System are, or will be, official State highway sections. However, variations in signing practice from State to State would result in a confused traveling public. Therefore, it is essential that a system of uniform signing, based on the best current practice, be adopted and universally used on the Interstate System in all of the States and the District of Columbia. Section 12 of the Federal-Aid Highway Act of 1944 requires the concurrence of the Bureau of Public Roads in the signing of federal aid projects as a means of achieving the desired uniformity. The purpose of this manual is to implement this provision



by setting forth the basis for the desirable and required uniformity of practice.

From time to time, as changes in the uniform signing procedure may seem desirable, the Member Department, proposing such a change, shall refer the suggestion to the Association's Operating Committee on Traffic for consideration. The Committee on Traffic may authorize a limited amount of research and experimentation on proposed changes in the official signing procedure, and bring the recommendations of the Traffic Committee to the attention of the Executive Committee. The Executive Committee then may authorize that the proposal be submitted to the Member Departments for letter ballot. If approved by two-thirds of the Member Departments and concurred in by the Bureau of Public Roads, then the proposed addition or alteration to the established uniform signing practice for the Interstate System shall be put into effect in all of the States. If the change revises an existing practice, the individual Member Departments may delay the actual application of the new practice until they find it necessary to renew affected signing in place.

Existing free roads and toll roads incorporated in the Interstate System are not required to comply with these uniform sign specifications until major replacements are necessary in the course of major sign replacement. Sections of such highways that are reconstructed with federal aid and any sections of the Interstate System that are constructed as federal aid projects shall be signed in accordance with these uniform signing standards and federal funds may be claimed for the purpose as a construction reimbursement in accordance with controlling rules and regulations.

The Interstate highway signs will be erected at the roadside and, where warranted, over the roadway, to furnish drivers with the series of clear instructions necessary for orderly progress to their destinations. Highway routes, place names, mileage indications, service facilities, and operating rules are among the items of information that must, in accordance with local needs, be unmistakably identified. It is also desirable that signs giving information regarding police headquarters, airports, recreational areas, historical sites, "anti-littering" warnings, State lines, time zones, stream names and State welcome messages be used.

Sign installations are in fact an integral element of the Interstate highway facility, and, as such, must be planned concurrently with the development of location and geometric design. Plans for signing should be analyzed during the earliest stages of preliminary design. Neglect of the correlation of signing and design can result in physical layouts that are plagued with chronic operating difficulties.

The cost of an up-to-date, effective signing system is but a minute fraction of the total facility cost, and realistic provisions for sign installations commensurate with the superior traffic services of the Interstate Highway System ought always to be the primary objective. The difference in cost between mediocre and excellent signs is negligible. The following specifications are intended to provide adequate sign treatment for the Interstate Highway System.

Other needed signs, not referred to in detail in this manual, shall follow the general principles for Interstate signing set forth in this manual and conform to appropriate color, reflectorization, letter size and type. No other signs except those in general conformance with those described are to be erected within the Interstate System rights of way. References herein to the Standard Manual on Uniform Traffic Control Devices refer to the August 1948 manual as prepared by the Joint Committee of the American Association of State Highway Officials, the Institute of Traffic Engineers and the National Committee on Uniform Laws and Ordinances and to the Revisions (Supplement) thereto of 1954.



## GENERAL CHARACTERISTICS OF INTERSTATE HIGHWAY SIGNING

It is of fundamental importance that the concepts applicable to Interstate highway signing may be developed into a planned system of installations. Competent engineering study will be necessary for proper solution of the problems of many individual locations, sometimes involving consideration of an entire route. The common fault of oversigning found on many major highways usually involves a multitude of signs too small and too poorly designed and placed to accomplish the purpose intended. The incomprehensible sign maze must be avoided.

One of the advantages of controlled access design is that entrance and exit points are clearly defined and preserved, which make possible the determination of sign location to the degree that substantial permanent supporting structures can be constructed and utilized for maximum efficiency and economy.

With respect to sign letter size, the standards here prescribed are the same for both urban and rural areas. Space is often at a premium on urban sections, but the typical traffic pattern is also more complex for the driver to negotiate, and large easy-to-read copy is just as necessary as on rural highways. The lower speeds characteristic of urban operation may well support consideration of different design speeds for establishing urban highway geometry, but do not as logically justify different sign standards.

Because of the need for full-time effectiveness, all Interstate highway signs shall be either reflectorized or illuminated, or possibly both, depending upon conditions. Particularly for major overhead installations where unusually difficult conditions for viewing a sign display cannot otherwise be avoided, illumination will be the indicated solution. Signs of various types shall be identified by distinctive colors and shapes.

Specific values are presented for minimum horizontal and vertical clearances that are applicable to all signing. However, the positioning of major signs requires special attention so that they will suitably fit the local alinement and sight distance conditions, consistent with the general requirements of this manual.

The course of the Interstate route and the destinations along it must be clearly identified, as a major purpose of the Interstate

System is to offer superior and adequate service to population centers located on it. Therefore, an exit sign or other guide signs indicating a route diverging from the Interstate System must not be posted with any of the same destination names as are shown for the Interstate route. Marking alternate routes to the same terminal city violates the purpose of the Interstate System.

The operational requirements of the Interstate Highway System are such that overhead signs will be warranted at many important locations. Existing structures will occasionally serve very well for the support of overhead signs, and under some circumstances they may be the only practical locations that will provide adequate sight distances. On an urban freeway where overhead crossings are closely spaced, for example, it may be feasible to place some signs on the bridges. As a general rule, however, the esthetic values of well designed bridges should not be impaired by using them as sign structures, despite the obvious convenience and economy of this expedient.

#### **Warrants for Overhead Sign Installations**

The factors justifying the erection of overhead sign displays are not definable in specific numerical terms, but the following conditions, ranked in the order of their importance, deserve consideration:

1. Traffic volume at or near capacity
2. Complex interchange design
3. Four lanes in each direction
4. Restricted sight distance
5. Closely spaced interchanges
6. Three lanes in each direction
7. Large percentage of trucks
8. Background of street lighting and advertising signs
9. High speed of traffic

In addition to these, insufficient space for ground signs is an important consideration, as is the special problem created by the junction of two Interstate highway routes, especially since two or more lanes on the exit roadways are often involved. On the other hand, some of the elements listed above can be made less important by careful attention to interchange design.



### Sign Lettering and Spacing

All names of places and highways on guide signs shall be composed of lower-case letters with initial capital letters. The initial capital letters shall be  $1\frac{1}{3}$  times the "loop" height of the lower-case letters. Other legend on guide signs shall be in capital letters.

A suitable design for the lower-case alphabet is available to highway departments and sign manufacturers from the U. S. Bureau of Public Roads. It is intended that the initial capital letters (and numerals) used with this alphabet will be series E of the *Standard Alphabets for Highway Signs* (available from the Bureau) modified by widening the stroke-width to approximately one-fifth the letter (or numeral) height. Tables of recommended letter spacing can also be obtained from the Bureau of Public Roads.

The Stimsonite AGA Reflective Element units, the 3-M Signal Reflective units of the Minnesota Mining and Manufacturing Company, or equal, complying with the Bureau of Public Roads lower-case alphabet and the modified initial capital letters (and numerals) as described in the preceding paragraph are considered as satisfactory for use.

Regulatory and warning signs shall use the Bureau of Public Roads standard rounded capital letter alphabets as indicated on the appropriate drawing in this manual but, as specified later, the signs shall be much larger than those hitherto prescribed in the Manual on Uniform Traffic Control Devices.

With all Interstate highway signs the message dimensions shall be determined first, and the overall sign dimensions secondarily. In this determination the interline spacing shall be approximately from  $\frac{1}{2}$  to equal the heights of the average of the upper-case letters in adjacent lines of letters and selected to provide adequate legibility and symmetry. The spacing to the top and bottom borders shall be approximately equal to the mean of the letter height of the adjacent lines of letters. The lateral spacing to the vertical borders shall be essentially the same as the height of the largest letters.

On guide signs, the use of removable copy contributes materially to simple maintenance and reconditioning, a most important factor in long-range operations.

### Sign Borders

Every sign shall be designed with a border of the same color as the legend, to outline its distinctive shape and thereby make



it more easily recognized, and to give it a pleasingly finished appearance. For guide signs larger than approximately 6 feet by 10 feet the border shall have a width of approximately 2 inches, and on unusually large signs, a width of approximately 3 inches may be used. For guide signs smaller than 6 feet by 10 feet, a width of approximately  $1\frac{1}{2}$  inches may be used, but the width should not generally exceed the stroke width of the major lettering on the sign.

Corner radii of sign borders generally shall be approximately one-eighth of the minimum dimension on guide signs, except that the radii shall not exceed 12 inches on any sign. The sign area outside the corner radius need not be trimmed.

On regulatory and warning signs, borders shall be widened in proportion to the enlargement of the general dimensions set forth in the Manual on Uniform Traffic Control Devices.

### **Color, Reflectorization, and Illumination**

All guide signs on the Interstate Highway System except those for service and rest areas shall have white letters, symbols, and borders on a green background.

Signs for service and rest areas shall have green opaque letters, symbols, and borders on a reflectorized white background.

All warning and regulatory signs shall conform to the Standard Interstate Colors prescribed in this manual.

White letters, symbols, and borders shall be reflectorized except where the signs are independently illuminated, in which case their reflectorization should depend on the likelihood of power interruption or other lighting failure. Where white or yellow sign backgrounds are employed, these shall be reflectorized or illuminated.

For roadside guide signs with white letters the green background may be reflectorized or nonreflectorized, though on any particular route within an individual State a uniform policy shall be followed.

Whether the green background is reflectorized or not, the shade used, when compared in natural daytime light, shall match the Standard Interstate Green Color shown in this manual.

On overhead signs that are not independently illuminated the background as well as the legend shall be reflectorized.

For reflectorizing sign backgrounds, either reflective sheeting or the direct process of glass beads on paint shall be acceptable, however, reflective sheeting gives superior performance, and



considering the reflectorizing materials currently available, is preferred.

Signs at remote locations on the Interstate Highway System may be difficult to reach with power. Where traffic volumes are light and there is no serious interference from extraneous light sources, a reflectorized sign will usually be adequate. However, if an engineering study of the conditions, particularly at overhead locations, indicates that a reflectorized installation is not likely to give effective performance, an illuminated sign will be required.

Experience with incandescent lamp sources for sign illumination has not been altogether satisfactory. Short life, and sensitivity to voltage surges and vibrations are among the difficulties. Tube lighting, especially the rapid-start type of fluorescent lighting, is effective and is recommended and will serve most needs, either for exterior or interior illumination of the sign. With the fixtures now commercially available, exterior lighting is feasible from a position in front of the bottom edge of the sign. The light source is placed parallel to the sign face at a distance of  $\frac{1}{3}$  to  $\frac{1}{2}$  the vertical dimension of the sign, and so aimed that from the driver's position the sign surface appears to be uniformly illuminated. Illumination from below avoids undersirable daytime shadows on the face of the sign.

Internally illuminated signs using translucent materials are very effective and may justify consideration in some installations. Where internal illumination is used, the colors of the sign shall appear essentially the same by night and by day.

#### **Destination Messages and Arrows (Figure 1)\***

On major guide signs not more than two destination names shall be shown. Additional copy, not ordinarily exceeding two lines, may include route numbers, arrows, cardinal directions, and exit instructions. This limitation applies to both ground and overhead installations. Two destinations and the directional copy are as much as most drivers will be able to comprehend readily at many points along the Interstate Highway System. Numbering of exits or interchanges is not contemplated.

Arrow aiming\* is important. On ground signs used to direct traffic into an exit roadway from the main traffic lanes the arrows shall point upward at an angle to fit the alinement as well as possible. Similarly, through traffic will be directed by upward-pointing arrows, usually, but not necessarily, vertical.

(\*See appendix for Figures 1 to 32 inclusive).

On overhead signs all arrows shall point downward, directly to the lane or lanes to which the message applies, except for an off-ramp where an upward-sloping arrow will be used and pointed in the direction of the exit traffic movement.

The arrows shown on the attached sign design sketches have the standard dimensions that are to be employed.

### **Vertical and Horizontal Clearances**

In ground installations the signs shall be erected at a minimum height of 7 feet above the edge of the pavement to the bottom of the sign. If, however, a secondary sign is mounted below another sign, the major sign shall be at least 8 feet above the level of the pavement edge.

Overhead signs shall provide a clearance of not less than 15 feet over the entire width of the pavement and shoulders.

The minimum horizontal clearance to any ground sign or overhead sign structure shall be 2 feet beyond the edge of the roadway shoulder, to either the right or left. Where there is an unmountable curb, the horizontal clearance shall be at least 2 feet beyond the face of the curb. For overhead sign supports, guardrail protection shall be installed approximately at the edge of the shoulder. Similar guardrail protection may be necessary on some ground sign installations.

## **SIGNING FOR INTERCHANGES**

### **1. Advance Signs (Figures 2, 3 & 4)**

On the approach to an interchange in either rural or urban areas, advance guide sign installations shall be made as prescribed below, except where a special study indicates that a close spacing of interchanges or a particular design of interchange makes such a standard impractical.

In the efficient and safe operation of a freeway facility, it is essential that the driver turn off at the proper exit ramp without hesitation and without the inconvenience of going beyond his desired exit point. For these reasons, two advance exit guide signs are desirable.

It is intended that the full complement of signs indicated will be installed at all "major" interchanges where the interstate route interchanges with another Interstate highway or a major arterial highway or street of any other category. In urban areas,



however, and at times in high population density rural areas, the interchanges of this type may be so closely spaced as to make two advance exit guide sign installations not feasible, and if these conditions exist only one advance exit guide sign will be used.

Where the Interstate route interchanges with a highway or street other than of a major arterial category, only one advance exit guide sign need be used.

In no case shall guide signs placed in advance of the interchange deceleration lane be spaced closer together than 800 feet. To provide sufficient space for proper advance signing, and, in turn, proper operation, interchanges should not be less than one mile apart.

The term "Sign Installation" may include two signs opposite each other in roadside position, one at the left and one at the right of the pavement as a dual installation. This type of installation will be used for special emphasis only, where an overhead sign is not practical.

Subject to the conditions noted, the following advance signs shall be erected in the order shown:

**Advance Exit Guide Sign for Major Interchanges:** At recommended distances of 1 and 2 miles from a major interchange, a sign shall be installed carrying three or four lines of legend as follows:

1. First line, with route marker or markers or name of intersecting highway or street. Numerals and letters shall be 18" capitals.
2. Intermediate lines with the name or names of not to exceed two destinations reached by turning at the interchange. Letters shall be lower-case with loop height not less than 18", and initial capitals 1½ times as high.
3. The last line shall read "Exit 1 Mile," or "Exit 2 Miles," as the case may be or refer to "Exits" instead of "Exit" if the interchange has two or more exit roadways. Letters shall be 12" capitals. The numeral "2" shall be 18" high. The distance posted may vary somewhat from the one and two miles indicated, if the actual distance between the sign and the interchange is markedly different. Fractions of a mile, rather than decimals, should be shown in these cases.

Where the distance between interchanges is less than two miles, this sign with an appropriate change in the distance shown

should be placed at the first available location with a suitable adjustment in the mileage shown.

**Advance Exit Guide Sign for other than Major Interchanges:**

At a recommended distance of one mile from the interchange an advance sign shall be installed, identical in design with the Advance Exit Guide Sign for a Major Interchange except for the letter and numeral size used and resulting overall size. As previously indicated, the location of this sign may be adjusted for the conditions and the interchange spacing, subject only to the minimum allowable distance of 800 feet between the Advance Guide Sign and the Exit Direction Sign.

The minimum sizes of legend components shall be as follows:

First line—12" Route numbers.

Destination names—12" lower-case loop heights and 16" capitals.

Last line—8" capital letters and 12" numerals.

The desirable sizes of legend components are as follows:

First line—15" Route numbers.

Destination names—15" lower-case loop heights and 20" capitals.

Last line—10" capital letters and 15" numerals.

Where special emphasis is needed to properly alert the driver and where space is available, the use of two advance exit guide signs, as in the case of signing for a "major" interchange, is recommended.

There may be locations, whether one or two advance exit guide signs are used, when the use of the larger sizes of legend components, as specified for "major" interchange signing, may be desired to attract the attention of the driver.

These sizes are as follows:

First line—18" Route numbers.

Destination names—18" lower-case loop heights and 24" capitals.

Last line—12" capital letters and 18" numerals.

**Overhead Guide Signs:** (Figure 5) Warrants may dictate the use of an overhead advance exit guide sign, in which case the following sizes of legend components shall be used:

12" Route numbers.



Destination names—12" lower-case loop heights and 16" capitals.

Exit Information—8" capitals and 12" numerals to indicate distance.

Fractions instead of decimals to indicate distance shall be used if pertinent. Where length permits, the route number and destination may be combined in a single line using the letter sizes specified above.

All place names shall be in upper-lower case legend. Other legend shall be in capital letters.

Any special overhead signing that may be needed to sign complex interchanges or special locations shall follow the general principles for overhead signs set forth in this manual and conform to the green background color, reflectorization and/or illumination requirement, letter size, letter type and arrow type aiming as specified.

**Next Exit Sign:** (Figure 6) Where the distance to the next interchange beyond the one for which the advance exit guide sign is posted exceeds 5 miles, and a driver failing to make a desired turn would be required to travel a number of miles out of his way it may be desirable to use a supplementary panel mounted below the advance exit guide sign. This will carry the legend "Next Exit . . . . Miles," or "Next Interchange . . . . Miles," where appropriate. Where two advance exit guide signs are used, the sign shall be placed below the one nearer the interchange. The legend on this sign shall be in capital letters 10 inches high, and the colors shall be the same as the sign it supplements. Where desirable, the "Next Exit" sign may be used when the distance between successive interchanges is less than 5 miles.

## 2. Exit Signs

**Exit Direction Sign:** (Figures 7, 8 & 9) At the beginning of the deceleration lane leading to an exit roadway, an exit direction sign shall be installed. If there is only one exit roadway at the interchange, this sign shall repeat the route and destination information of the Advance Exit Guide Signs, with the last line having a directional arrow. Since this sign is a second or third repetition of the directional information and the driver has been alerted, minimum lettering is permissible. The first line (route number) shall be 12" numerals, and the destination name or



names shall be in lower-case letters with a 12" loop height and initial capitals of 16" height.

Where there are two exit roadways at an interchange, either on the same or on opposite sides of the roadway, to serve different directions of travel on the intersected highway, particularly detailed sign treatment is necessary. To make it clear that only one of the two destinations shown on the Advance Exit Guide Signs can be reached by the first exit, the exit direction sign placed at the beginning of the deceleration lane shall carry the route number or name, the one direction on the first line, and the one destination on the second line, and an upward-pointing arrow appropriately inclined for the exit roadway alignment on the third line.

**Gore Signs:** (Figures 7, 8, 9, 10 & 11) When there is only a single exit at an interchange the interchange signs described above should enable the driver to make up his mind as to whether he will turn or proceed straight through when he reaches the exit roadway. All that is necessary at the actual bifurcation, or "gore," in this case, is a sign to indicate the turning point. In the gore, therefore, there shall be placed a sign with the single word "Exit" in 12" capital letters, and an arrow pointing in the proper direction. Thus the driver receives no reminder or new information that might cause him to react suddenly and dangerously.

When there is more than one exit, however, directional information shall be provided at all gores. An overhead sign installation shall be at the first gore, omitting the "Exit" sign otherwise to be placed at that point. This sign shall extend over the exit roadway and carry the route number or name, the direction, and the one destination, with an upward-sloping arrow pointing in the direction of the exit traffic movement. At the same point, if the second exit is to the right, there shall be signs over the through lanes of the highway indicating, over the right-hand lane, the route and destination served by and distance to the second exit, with a vertically downward-pointing arrow, and over the left-hand lane or lanes the message "Thru Traffic" also with a downward-pointing arrow. The lettering on the "Thru Traffic" sign shall be in 18" capitals. The other two signs shall have the same size lettering as that on the Exit Direction Sign at the beginning of the deceleration lane.

On the gore of the second exit there shall be placed a ground or overhead sign indicating the appropriate route and destina-



tion served, with an arrow pointing upward at an appropriate angle. The size of the lettering on this sign shall also accord with that used in the Exit Direction Sign.

The same general principles shall apply to any other interchange design that provides two or more exits for either direction of travel.

### 3. Other Guide Signs (Figures 12, 13 & 14)

It is sometimes necessary or desirable to provide more information regarding destinations accessible from an interchange than can be given on the standard interchange approach signs. For this purpose an additional sign listing up to three additional destinations, or route numbers, followed by the legend "Next Exit," may be erected approximately midway between the Advance Exit Guide Signs if two are used, and approximately one-half mile in advance of the Advance Exit Guide Sign if only one is used. If such a sign is used, the place names shall be in lower-case letters with a loop height of 10", with capital letters 13.3" high. It shall be of the same background color and reflectorization as the other guide signs.

Where space between interchanges permits, a fixed sequence of signs shall be displayed beginning 500 feet beyond the end of the acceleration lane. At this starting point there shall be erected an Interstate route marker, to be followed 1,000 feet farther on by a speed limit indication, and 1,000 feet still farther along by a mileage sign. The last named sign shall carry two destinations, the next community on the route on the first line, and the terminal destination of most general interest on the bottom line, together with the corresponding mileage information. The legend on the mileage sign shall be in lower-case letters of 10" loop height, with initial capitals and numerals 13.3" high.

Some parts of the Interstate Highway System will pass through "historical" or "recreational" regions, or other areas of special interest served generally by a succession of several interchanges. Such areas may be indicated by a special sign several miles, if possible, in advance of the Advance Exit Guide sign or signs for the first interchange carrying a suitable legend to identify the region, followed by the words "Next (3) Exits," or "Next (3) Interchanges" where appropriate. The legend shall be in lower-case letters of 10" loop height with 13.3" initial capitals, except the bottom line, which shall be in 12" capitals.



A logical and necessary guide sign advising that an interchange affords the last exit before entering a toll section of the Interstate System shall be used where appropriate.

Other miscellaneous guide signs that may be used include county lines, international time zone boundaries, stream names, etc. Place names, as well as stream names, will be in lower-case with loop heights of 10" and capitals of 13.3". Legend, border and background color and reflectorization shall be the same as for the major Interstate guide signs.

## ROUTE MARKERS

(Figure 15)

Route markers, as such, will have a less general application on the Interstate Highway System than on highways of older design. Large directional signs will incorporate the Interstate route marker symbol when appropriate. Route markers in conjunction with auxiliary markers to show junctions and turns will not ordinarily be used on the Interstate Highway System, though they will be used as required on approach highways. "Confirmatory" route markers, however, will be used as previously indicated just beyond the entrances to Interstate highways, and at relatively long intervals along a route. Except for those specific uses and locations listed below, no Interstate Route Marker shall appear on any road or street that is not a part of the designated official Interstate System. Its use off the system to indicate business routes, alternate routes, etc., shall not be permitted. The official Route Marker will indicate to the motorist that he is using a controlled access facility and a section of the official Interstate Highway System.

The official Interstate Route Marker is the red, white, and blue reflectorized distinctive shield adopted by AASHO on August 14, 1957, and subsequently approved by the U.S. Department of Commerce, Bureau of Public Roads. The colors shall match the Standard Interstate Red and Blue Colors as contained in this manual when compared in natural daylight. The Route Marker shall comply with the dimensional drawing and specifications as contained in this manual.

The 18" Interstate shield shall be used with an appropriately positioned directional arrow and the word "TO" to make up a "Trail Blazer Assembly" to direct traffic to the Interstate facil-



ity. The use will be primarily in the urban centers and placed at strategic locations along major urban thoroughfares feeding traffic to the Interstate facility and the use of the word "TO" indicates that the road or street, where the marker is posted, is not a part of the official Interstate System, but that the motorist is merely being directed progressively to the Interstate route.

The word "TO" (in 6" black upper-case letters on a white background), a cardinal direction marker if needed, the 18" Interstate shield and the directional arrow may all be separate units and connected to the same support and positioned from top to bottom in the above order, with the directional arrow complying with the Standard Manual on Uniform Traffic Control Devices, or all component parts of the "Trail Blazer Assembly" may be included on a single panel. The directional arrow should be appropriately positioned to indicate the route and should be black against the white background.

The 24" size shall be used on intersecting highways and approach roads indicating interchange with an Interstate route.

The 36" marker shall be used as the official size to mark the Interstate System roadways. The Interstate Route Marker shall be used on Exit and Advance Exit Guide Signs to indicate an interchange with another Interstate route and when used for this purpose the State name shall be omitted and the marker shall be reflectorized and in approved colors.

The 36" marker shall be used on Guide Signs using 12" lower-case letters for place names.

A 48" marker except as noted below will be used on Advance Exit Guide Signs using 18" lower-case letters for place names.

#### **Cardinal Direction Marker**

Cardinal Direction Markers shall be used with route markers where needed to properly direct the motorist and shall be mounted directly above the Route Marker, except where an Interstate marker is mounted as part of a guide or exit sign. In the latter case, any pertinent cardinal direction will be lettered on the sign.

The Cardinal Direction Marker shall have a reflectorized white legend and border on a blue reflectorized background, the same Standard Interstate Blue Color as used on the Interstate Route Marker.

The Cardinal Direction Marker shall be used in two sizes, 18 by 9 inch with the 24-inch route marker and 24 by 12 inch with the 36-inch route marker.

The 18 x 9 inch size should have a  $\frac{3}{8}$  inch white border extending to the outer edge and 4 inch Series "D" Letters. The 24 x 12 inch size shall have a  $\frac{1}{2}$  inch border and 6 inch Series "C" Letters.

Cardinal Direction Markers will carry the direction only, i.e., NORTH, SOUTH, EAST, or WEST, as the case may be, in accordance with the Manual on Uniform Traffic Control Devices.

Junction and Directional Markers, as provided for in the Manual on Uniform Traffic Control Devices, shall be used with Interstate Route Markers on the approaches to Interstate routes. They shall be of the same size and color as the Cardinal Direction Markers herein specified.

## REST AREAS

(Figure 16)

On extended mileages of controlled-access highways it will be necessary to provide "rest areas" at reasonable intervals, where private car and commercial vehicle drivers may leave the roadway for rest and relaxation. For this purpose there shall be used a sign reading "Rest Area" in capital letters of 16-inch height, with a second line "2 miles" in a 16-inch numeral and 12-inch capital letters. At the beginning of the deceleration lane to the rest area there shall be a sign in the same sizes of lettering reading "Rest Area—Keep Right" with an arrow. There shall be no "Exit" sign at the gore.

Rest Area signs shall have nonreflectorized green letters, symbols, and borders on a reflectorized white background.

## SIGNING FOR SERVICES

(Figures 17, 18 & 19)

On the controlled-access Interstate Highway System, it is assumed that generally there will be no commercial services available to the traveler between interchanges. It is expected that fuel, motor services, and lodging will rapidly become available at most interchange sites. It is also assumed that service signing will not be required in urban areas. However, on those rural sections where such services are infrequent, the driver will need information to enable him to plan his stops. For the present the criteria for determining what establishments shall warrant a Services sign will have to be developed by each State for its own



conditions. The Services sign shall be mounted in an effective location in advance of the exit leading to the services available and should contain such legend as may be appropriate. If the distance to the next point where services are available is considerable, a sign "Next Services ( ) Miles" may be used as a separate panel mounted under the Exit Direction Sign at the beginning of the deceleration lane at the interchange. The legend of this sign shall be in 10-inch capital letters. Very definitely more experience and study of motorist reactions and desires, as well as an indication of where and what private enterprise develops to serve the traffic, are needed in determining the proper signing for essential services.

A sign carrying only the legend "Gas—Food—Lodging" may not entirely satisfy the motorist in that it gives no indication of the location, quantity, quality, or brand of services available. It is not necessary to determine a universal signing practice for Services at this time, but it will develop with experience as more of the Interstate System is placed into service. Federal law prohibits any signing that may be interpreted as commercial from occupying the Interstate right of way.

(Committees of the American Association of State Highway Officials are currently working on a uniform method of marking routes through and into cities that are by-passed by the Interstate route).

All signing for services shall have nonreflectorized green letters, symbols, and border on a reflectorized white background.

## MILEPOSTS

To assist the driver in estimating his progress, and, more important, to provide a means for identifying the location of emergency incidents, and to aid in the operation of the facility, mileposts shall be placed along each section of the Interstate Highway System. It is recommended that "Zero" mileage on the Interstate routes be at South or West State lines and at junctions where routes begin, and that the mileage numbering be continuous within any State. Signs shall be simple vertical panels, without border, of Standard Interstate Green Color background, with reflectorization optional, carrying the white reflectorized mileage numerals only, in a 6-inch height. Mileposts shall be placed along both sides of the highway in line with delineators and the mileage displayed shall in each case be from the same origin. Where an interchange roadway or other interference



prevents installing the milepost at its correct location, it may be moved in either direction as much as 50 feet. If it cannot be placed within that degree of accuracy, it should be omitted entirely.

Mileposts shall be installed only after improvements on the Interstate System have progressed sufficiently to permit the posting of accurate mileage.

## REGULATORY AND WARNING SIGNS

Regulatory and warning signs on the Interstate Highway System shall be in general conformance with the established principles prescribed in the approved standard Manual on Uniform Traffic Control Devices and the background shall be reflectorized. Because of the much greater demands for legible signing, however, all regulatory and warning messages and signs shall exceed in their dimensions the minimum specifications of the standard Manual. The diamond-shaped warning signs have a black legend and border on a yellow background, and shall be 48 by 48 inches in size. The equilateral triangular "YIELD" signs shall have black lettering and border on a yellow background and shall have a vertical measurement of 48 inches. The regulatory signs shall have a black legend and border on a white background and shall normally be 48 by 60 inches in size. For both types of signs the size of the lettering or symbol must determine the size of the plate. All legend shall be in capital letters and heavy enough to minimize the effects of halation. The yellow shade used for the above diamond-shaped warning and triangular "YIELD" signs shall match the Standard Interstate Yellow Color as included in this manual when compared in natural daylight.

In addition to standard sign messages heretofore specified in the Manual on Uniform Traffic Control Devices, other messages shall be used as required by special design features of the Interstate Highway System. Pertinent regulatory and warning signs include, but are by no means limited to the following:

**Merging Traffic.** (Figure 20) This warning sign is to be erected on the appropriate side of the through roadway of an Interstate route in advance of where another roadway enters.

**Keep Off Median.** (Figure 21) This regulatory sign shall be erected within the median wherever there is a tendency for drivers to enter or cross, and at random intervals as required.



**No U Turn.** (Figure 22) This regulatory sign shall be used where a crossover between roadways has been provided for official or emergency use only. It shall be erected to the left of the roadway immediately in advance of the crossover.

**No Stopping on Pavement.** (Figure 23) This regulatory sign shall be used at random intervals as needed, particularly where scenic or other attractions create a tendency to stop temporarily.

**No Stopping Except for Repairs.** (Figure 24) This regulatory sign shall be used at random intervals as needed, particularly where the roadside invites relaxation but where no rest area is provided.

**Keep Right Except to Pass,** (Figure 25) (or **Slower Traffic Keep Right**). This regulatory sign shall be used at random to the extent needed to maintain orderly use of lanes. As an alternate legend for this sign, the message **Slower Traffic Keep Right** may be used.

**Speed Limit.** (Figure 26) Speed limit regulatory signs shall be of standard design, enlarged. The legend must be in accord with the respective State laws, and cannot therefore be prescribed here.

**Yield Right of Way.** (Figure 27) This regulatory sign shall be used at the beginning of the acceleration lane on all entrances to the Interstate System from routes of less importance.

**Exit Speed (30).** (Figure 28) This regulatory sign shall be used to hold traffic to a safe speed on an exit ramp. It shall be mounted on the right-hand side of the ramp roadway just beyond the gore. The speed indicated shall be the safe speed as determined for each individual location and condition.

## SIGN STRUCTURES

The design of sign structures has not been standardized, though committees of the American Association of State Highway Officials and other agencies are giving much study to the problem. It is expected that economical standard designs will be developed in the near future to support overhead signs and that these structures will be readily available from various manufacturers. Catwalks on overhead sign structures to accommodate a repairman may be justified at some locations.

## MISCELLANEOUS SIGNING DETAILS

Additional attention should be given to the matter of identifying entrances to the Interstate Highway System from roads of lesser importance. The standard arrangement of route markers, auxiliary junction and directional markers, and destination signs on the approach roads may be found inadequate for such important interchanges, in which case the Interstate highway signing standards may have to be extended to the approach roads. In general, however, the signing on approach and intersecting roads and streets will follow the conventional practice in the respective States up to the beginning of the Interstate ramps.

Improper placement of signs, either overhead or on the ground, will greatly weaken the effectiveness of an installation that is otherwise well planned. Sign faces shall be oriented to avoid specular reflection, ordinarily by a slight turning away from the roadway. Care shall be taken to keep this adjustment small, so as to maintain adequate reflective values.

On sections where fixed lighting is used, ground signs should normally be located a short distance in advance of the lamp standards to achieve the optimum position for clear viewing.

No fixed recommendations are offered as to sign materials. Plastic coated plywood, redwood tongue-and-groove, aluminum, steel, and other materials are being successfully used, and no general limiting specifications in this area seem desirable or necessary at this time.

## DETAILS OF SIGN DESIGN AND LOCATION

(Figures 29, 30 & 31)

Accompanying these specifications are sketches, not to scale, showing the new guide signs required on the Interstate Highway System, and some of the new or enlarged regulatory and warning signs. There are also sketches showing signing layouts at several typical interchanges on an Interstate highway and the adjacent roads. Interchange design and spacing is so varied that no prescribed arrangement of signs can fit every situation, and a most thorough engineering study must be given to each different signing problem. It should be noted that in these diagrams signs are shown **only for two directions of traffic**, it being assumed that signs for the opposing directions will be essentially similar.

The typical interchanges shown include:

1. A "diamond" interchange, in which there is but one exit



roadway for each direction of travel on the Interstate highway route.

2. A "clover-leaf" interchange, having two exit roadways for each direction of travel. The two exits, closely adjacent, and having common advance signs, require extremely careful design and placement of signs to avoid confusion on the part of the driver in selecting the proper exit, according to the desired destination.

3. An "urban" interchange with a city street, where interchanges are so close together as to prevent any long-distance advance signing, where traffic speeds will be accordingly below those in rural areas, where a geographical destination cannot be specifically named and the street name is the sole information of interest, and where a failure to use an exit will cause little inconvenience because of the short distance to the next exit.

In the preliminary sketches of the new signs an attempt has been made to show the lettering and background sizes to scale, within the limits of the mechanical lettering devices used in their preparation. Dimensions shown are the intended sizes for the finished signs. The sizes of the directional signs will, of course, vary with the length of the place names, the number of names, and other factors. In the intersection diagrams showing sign arrangements the sign sketches are schematic and obviously not to relative scale, either as to sign sizes or as to precise location along the roadways.

## PAVEMENT MARKING

(Figure 32)

All pavement markings within the limits of the Interstate System rights of way shall be reflectorized and in accordance with the approved Manual on Uniform Traffic Control Devices, with solid yellow used for all barrier line applications and white for all other pavement marking, including continuous pavement edge marking in areas where fog conditions or other unusual hazards may be encountered, and adjacent to and for 200 feet on either side of structure piers, abutments, and retaining walls.

At every off-ramp the deceleration lane shall be marked by a double yellow barrier line extending from the nose of the gore toward approaching traffic a distance of approximately one quarter the length of the deceleration lane. The marking shall extend further for a distance of approximately one third the length

of the deceleration lane as a combination stripe with a broken white line on the through-traffic side and a solid yellow barrier line on the deceleration lane side. This marking is intended to keep vehicles from swerving back into the through lane after turning into the deceleration lane.

At entrance ramps a double yellow barrier line shall extend from the gore a distance of approximately one quarter the length of the acceleration lane. Continuing further for a distance of approximately one third the length of the acceleration lane there shall be a combination stripe with a solid yellow barrier line adjacent to the through lane and a broken white line on the side next to the acceleration lane.

## DELINEATORS

(Figure 32)

Delineators, on metal posts assembled and erected in such a manner that the top of the reflective unit is approximately four feet above the grade of the pavement edge, shall be placed continuously along the right side of the Interstate roadways on the shoulder edge or two feet from the face of curbed sections and on the outside of interchange ramp connections where practicable as guide markings rather than warning devices. White reflector units shall mark the Interstate roadways and amber shall mark the interchange ramps and the acceleration and deceleration lanes. The amber units shall be double or elongated vertically, and at the end of the acceleration lane there shall be placed a triple or correspondingly elongated amber delineator. Along the through roadways the delineator spacing shall be approximately 200 feet. The amber delineators at interchanges shall be spaced at 100 feet.

The delineator reflector units shall be positioned to be clearly visible for a distance of 1,000 feet during night time under normal weather and atmospheric conditions when illuminated by the upper beam of standard automobile headlights when the vehicle is located in the right hand traffic lane approaching the delineator. Glass or plastic prismatic reflective elements or plastic elements with reflective sheeting sealed therein used for this purpose shall be approximately 3 inches in diameter. For multiple application (amber) elongated reflective units of appropriate length may be used in place of two or three circular units.



If exposed reflective sheeting is used, the single unit (white) application should be approximately 3 x 8 inches in size placed vertically.

For the multiple unit (amber-Interstate Yellow Color) application of the exposed reflective sheeting should be 5 x 5 inch squares, mounted as diamonds, with the first unit at the top of the delineator post and the other or others being placed immediately below.

The reflective elements or sheeting used shall be of a quality or type that will give the specified visibility when used in the above sizes.

### GENERAL

No Stop Sign or Stop Signals of any type shall be erected or operated on the through roadways of the Interstate System.

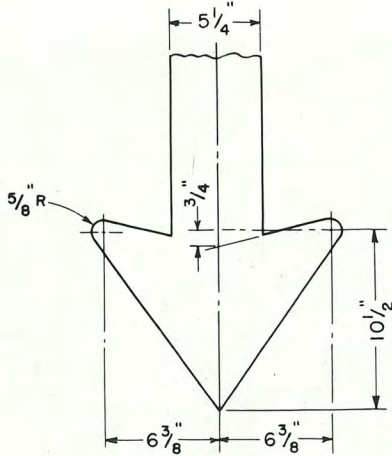
Church, School, Civic Club, semi-official and similar signs shall not be placed on the Interstate right of way. Only official signs, under the direction and control of the State highway department and necessary for the orderly operation of the highway facility shall be placed.

Where the Interstate highway is developed on existing location, the route will be marked with the Interstate Route Marker together with such other route markers as apply to the existing highway.

Interstate highways shall not be signed as Memorial Highways.

# STANDARD ARROWS ON MAJOR GUIDE SIGNS

## GROUND AND OVERHEAD SIGNS



## OVERHEAD SIGNS

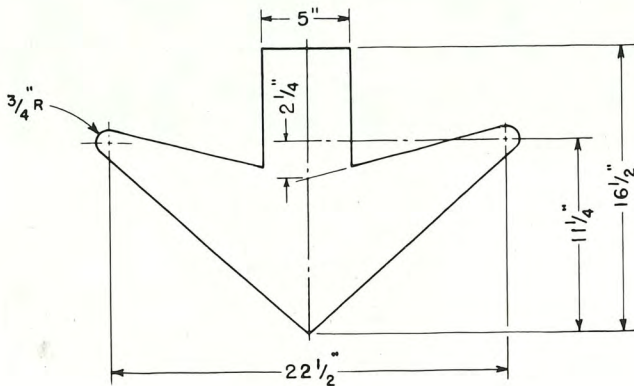


Figure No. 1





Figure No. 2

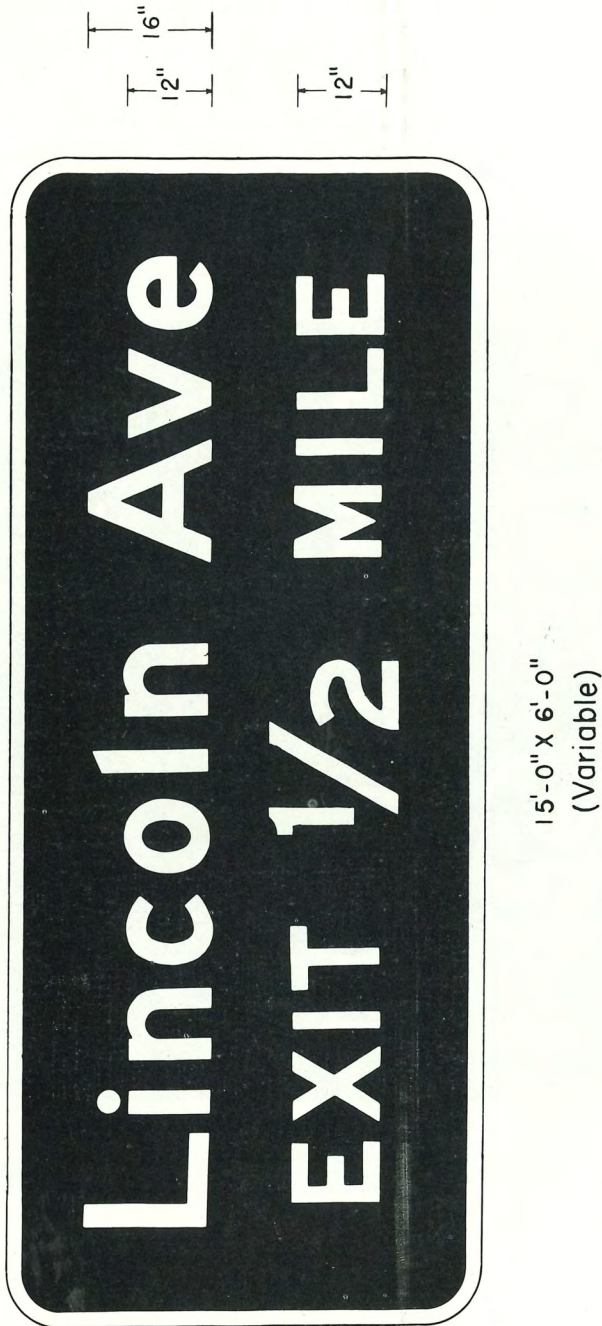


Figure No. 3





15'-0" x 11'-0"  
(Variable)

Figure No. 4



Figure No. 5



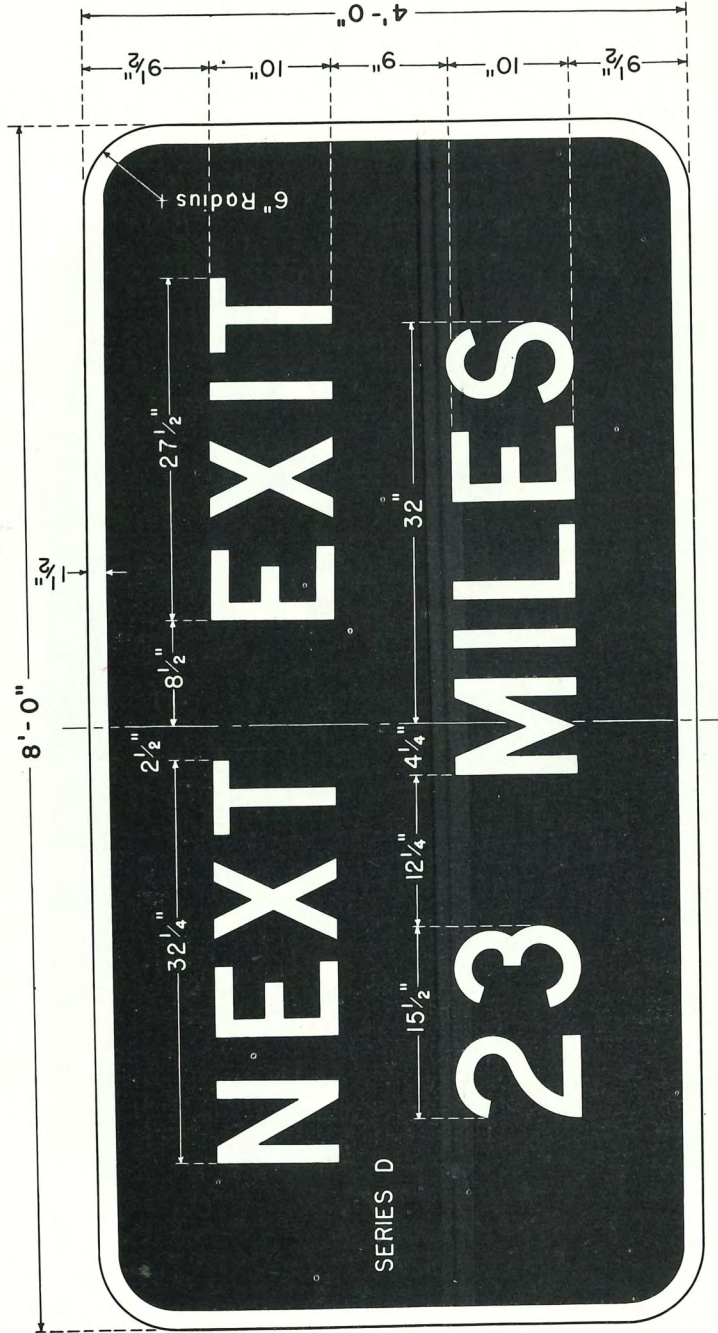


Figure No. 6

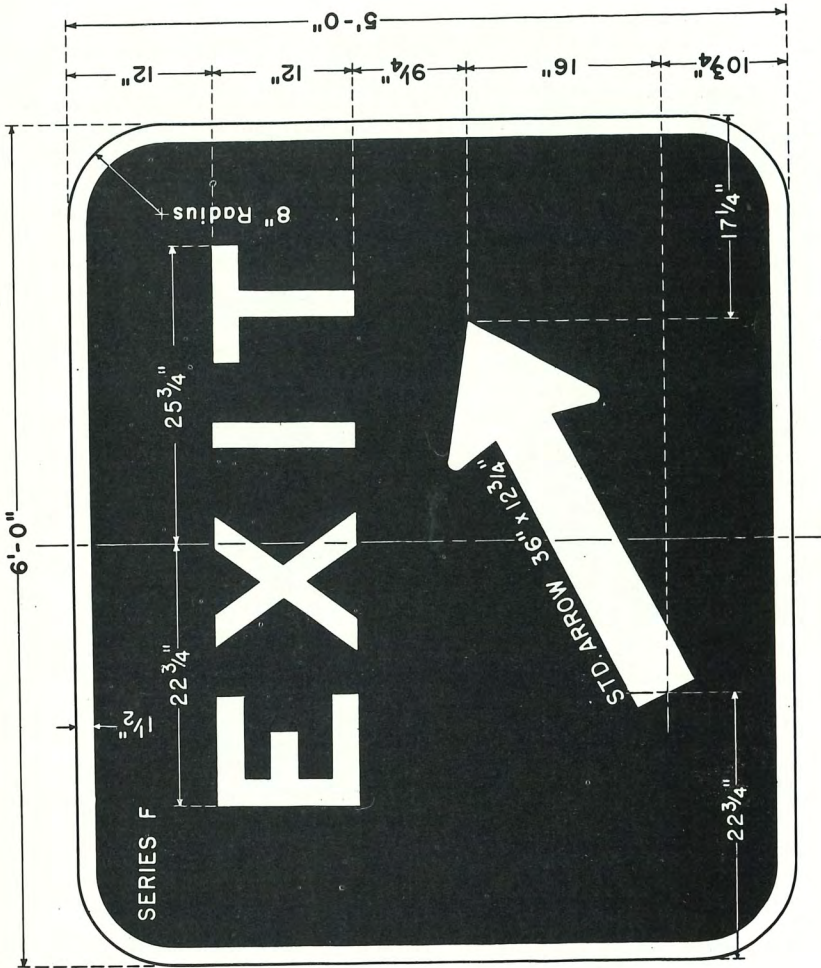


Figure No. 7





Figure No. 8



Figure No. 9



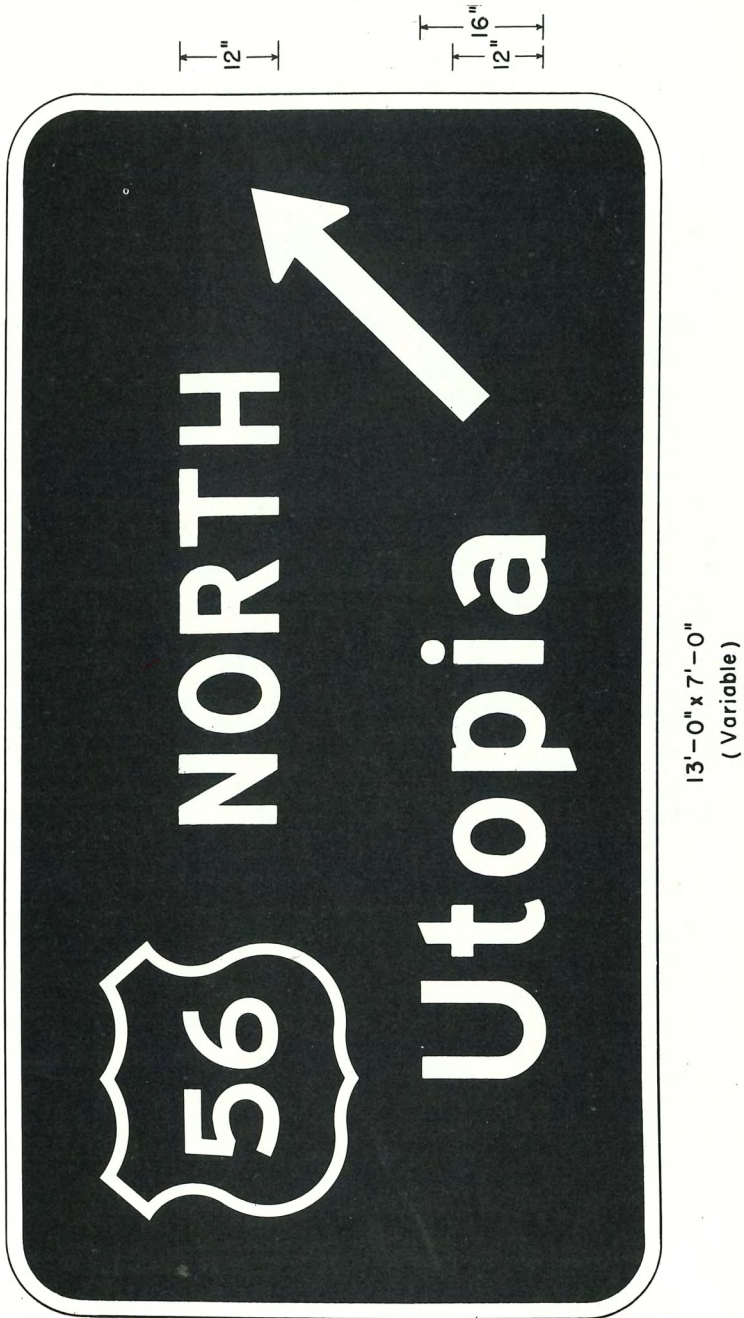


Figure No. 10

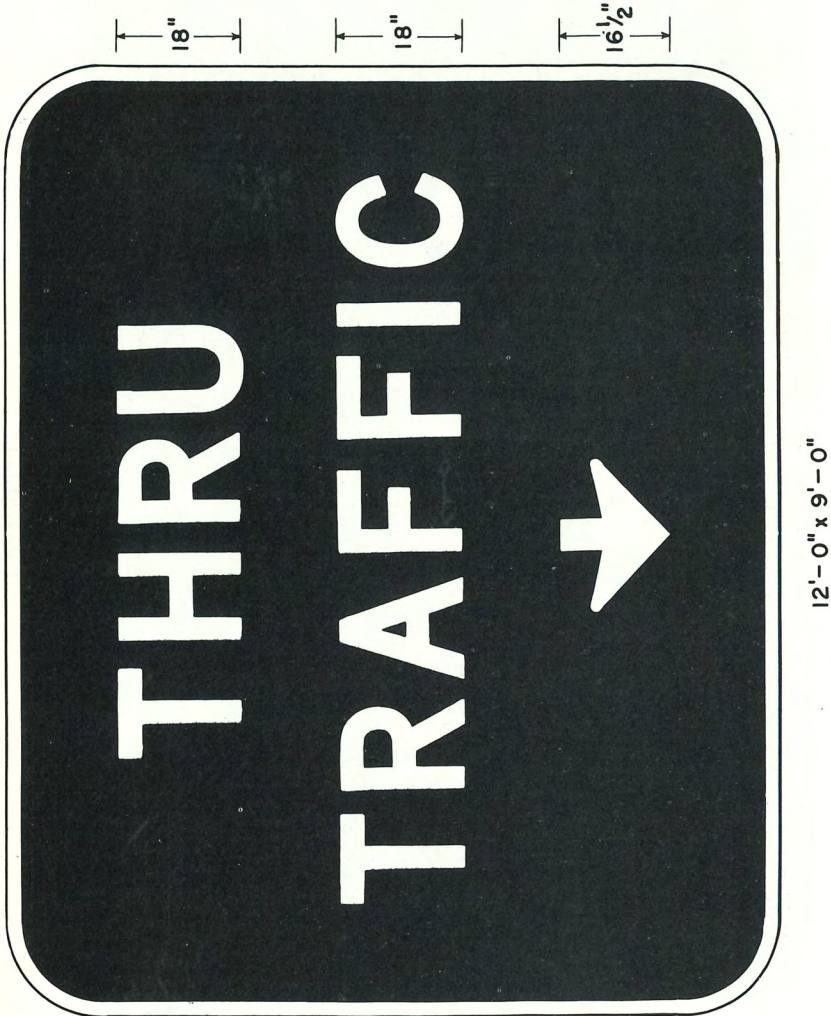


Figure No. 11

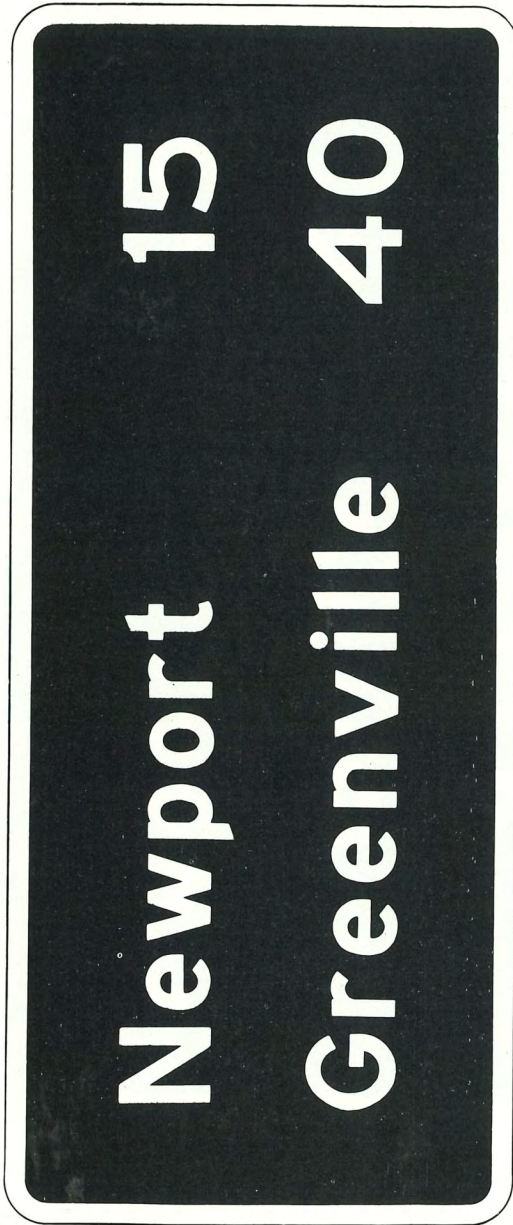




Figure No. 12

13.3"  
10"

13.3"  
10"



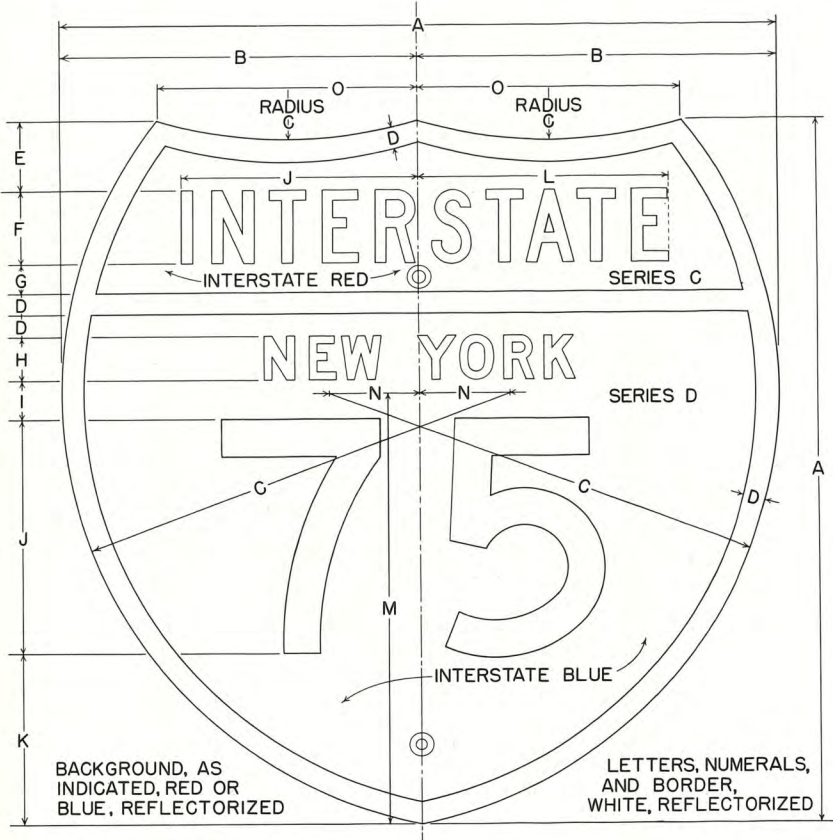
16'-0" x 6'-6"  
( Variable )

Figure No. 13





Figure No. 14



SHIELD SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
18	18	9	11 $\frac{1}{4}$	$\frac{9}{16}$	1 $\frac{25}{32}$	1 $\frac{7}{8}$	$\frac{3}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{32}$	6	4 $\frac{5}{16}$	6 $\frac{1}{4}$	10 $\frac{31}{32}$	2 $\frac{1}{4}$	6 $\frac{9}{16}$
24	24	12	15	$\frac{3}{4}$	2 $\frac{3}{8}$	2 $\frac{1}{2}$	1	1 $\frac{1}{2}$	1 $\frac{3}{8}$	8	5 $\frac{3}{4}$	8 $\frac{1}{4}$	14 $\frac{3}{8}$	3	8 $\frac{3}{4}$
36	36	18	22 $\frac{1}{2}$	1 $\frac{1}{8}$	3 $\frac{3}{16}$	3 $\frac{3}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{1}{8}$	12	8 $\frac{3}{8}$	12 $\frac{1}{2}$	21 $\frac{15}{16}$	4 $\frac{1}{2}$	13 $\frac{1}{8}$
48	48	24	30	1 $\frac{1}{2}$	4 $\frac{3}{4}$	5	2	3	2 $\frac{3}{4}$	16	11 $\frac{1}{2}$	16 $\frac{1}{2}$	29 $\frac{1}{4}$	6	17 $\frac{1}{2}$

Figure No. 15



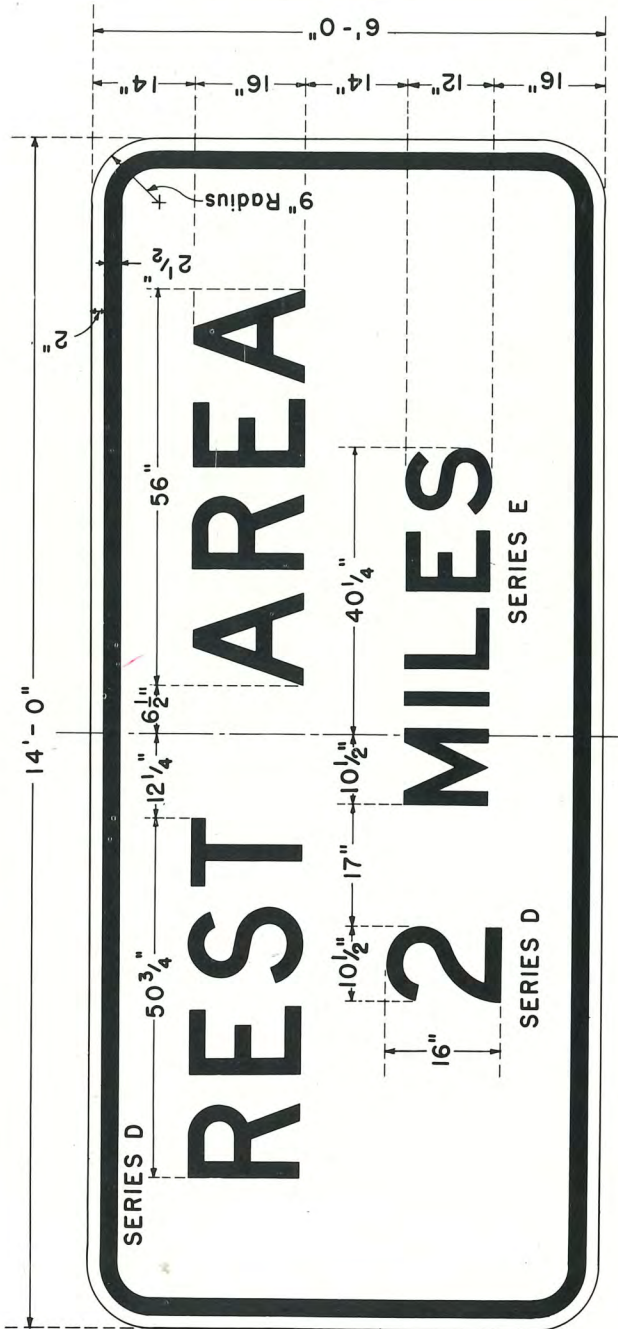


Figure No. 16

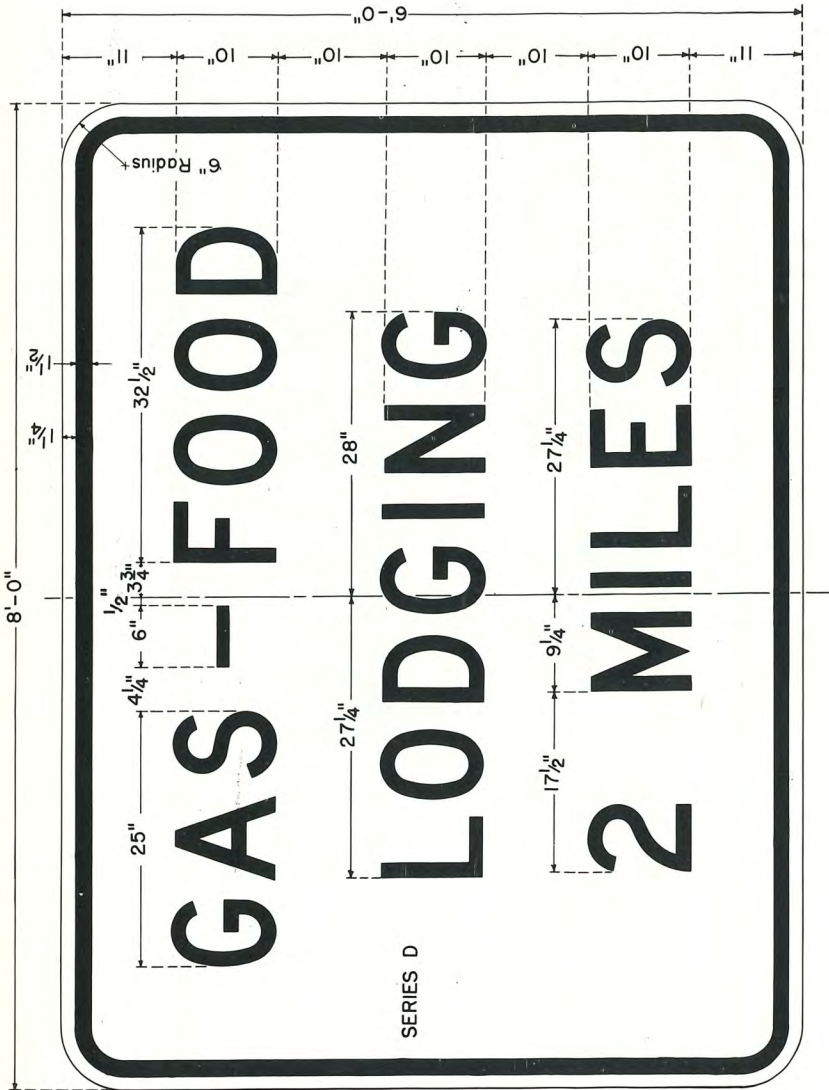


Figure No. 17



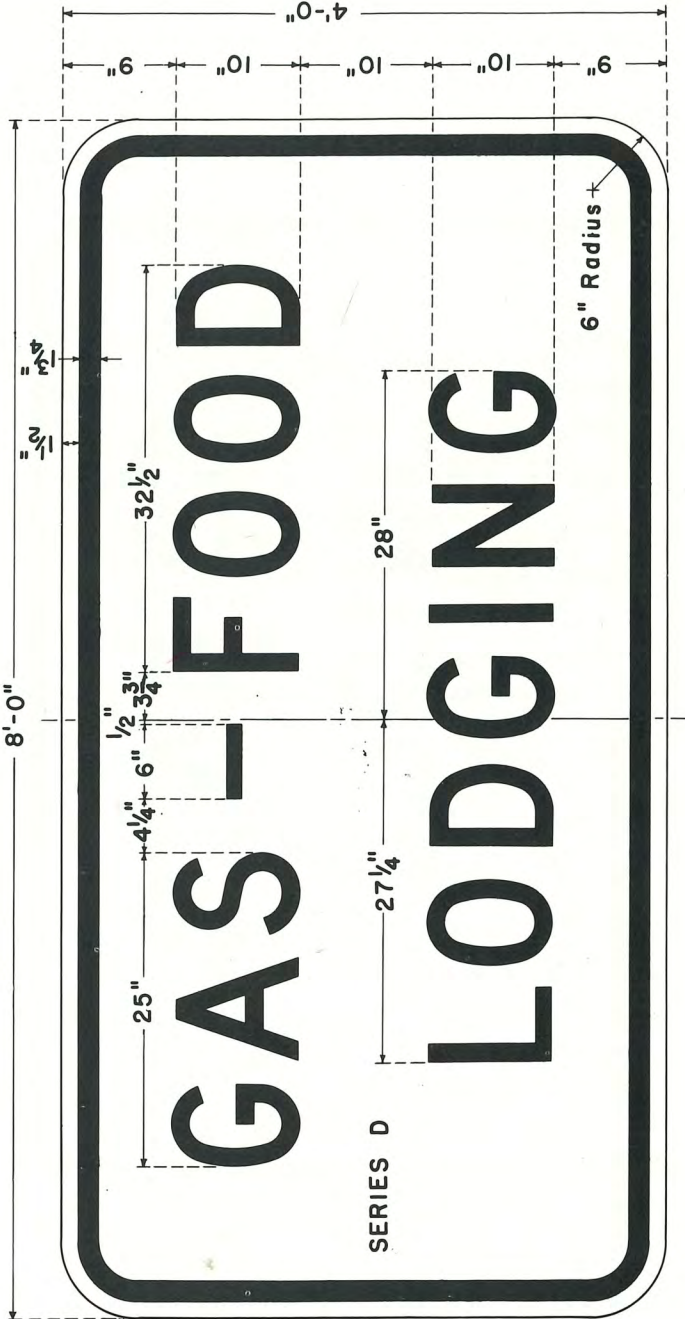


Figure No. 18

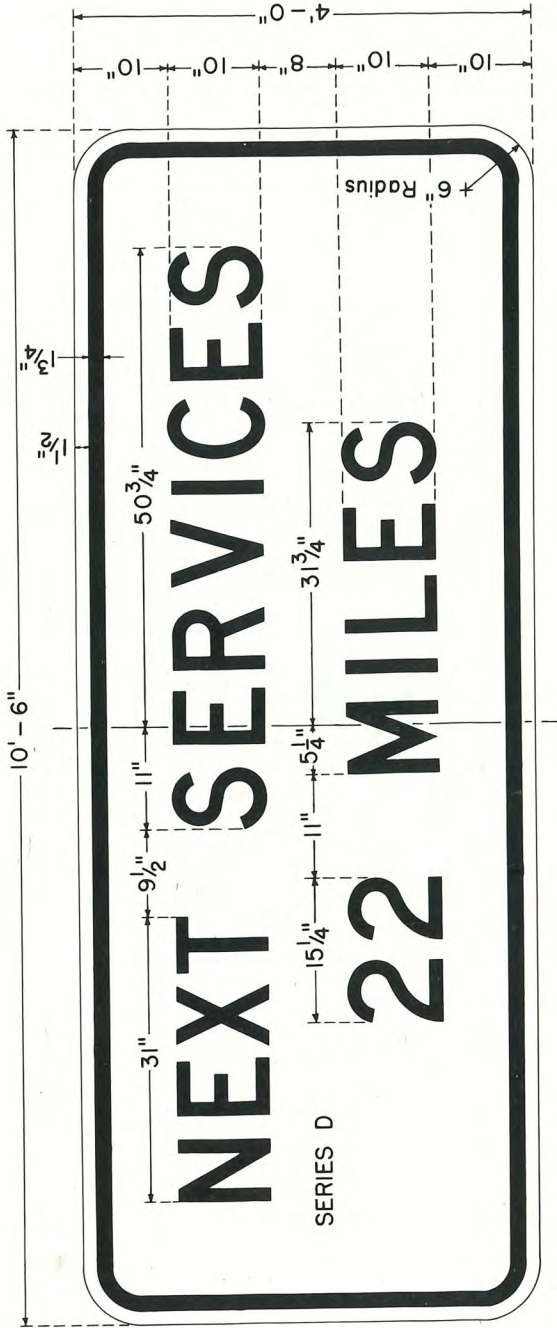


Figure No. 19





Figure No. 20

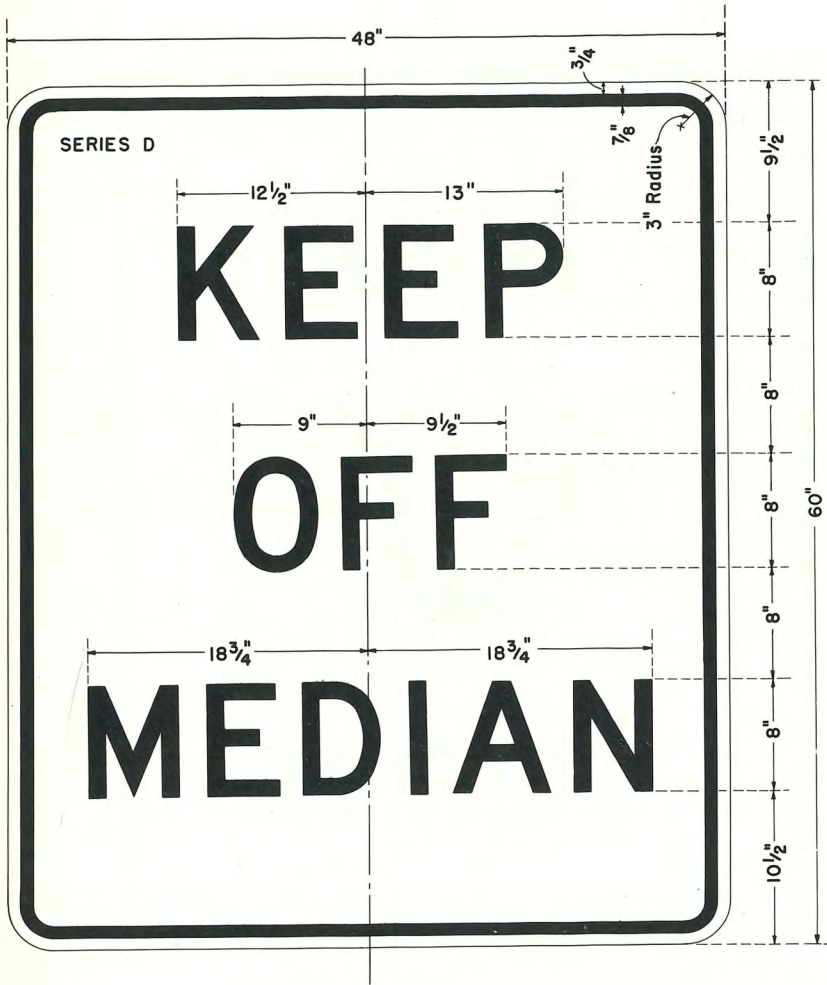


Figure No. 21



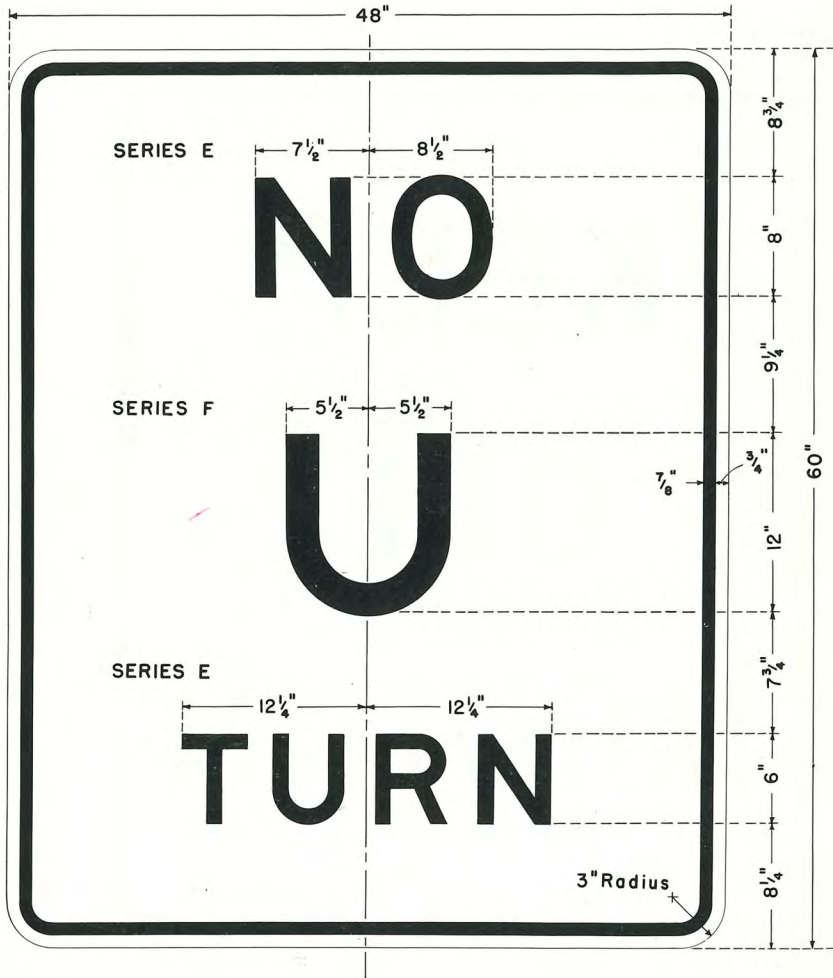


Figure No. 22





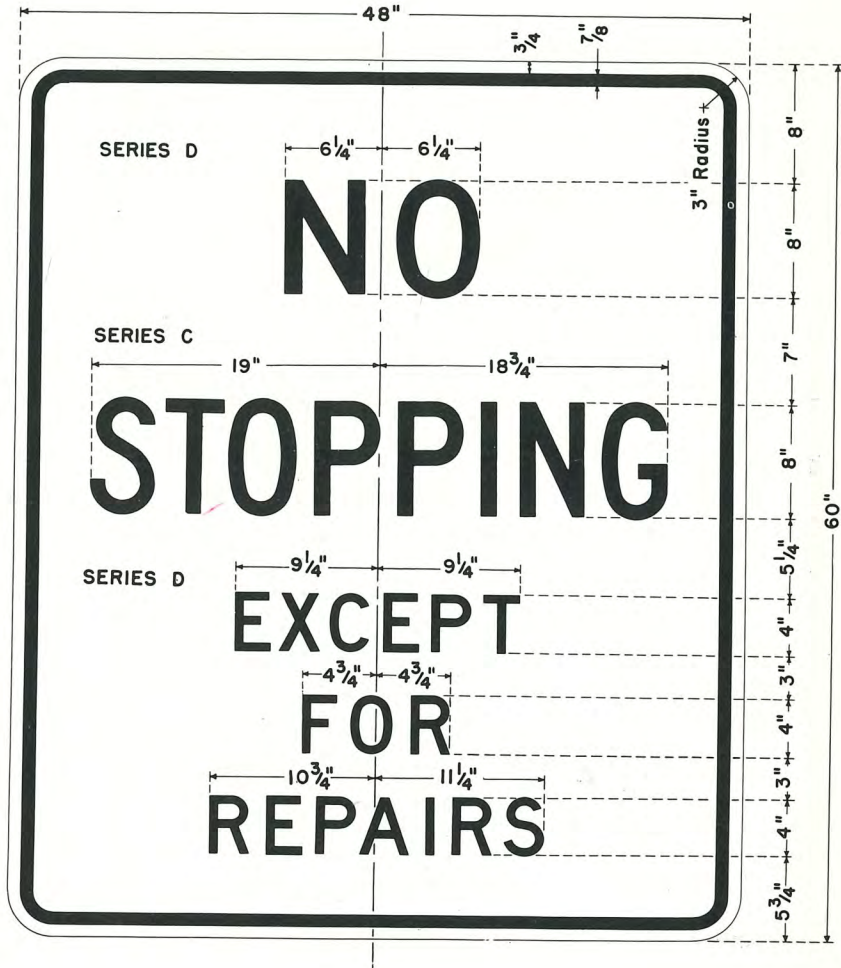


Figure No. 24

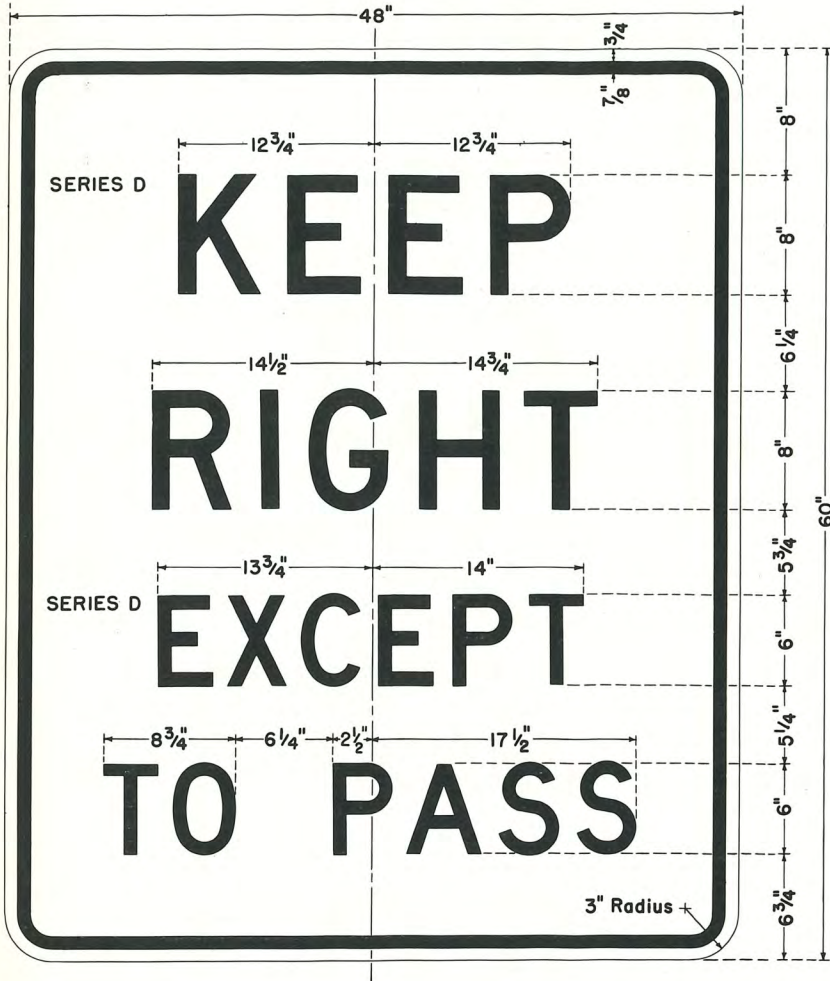


Figure No. 25



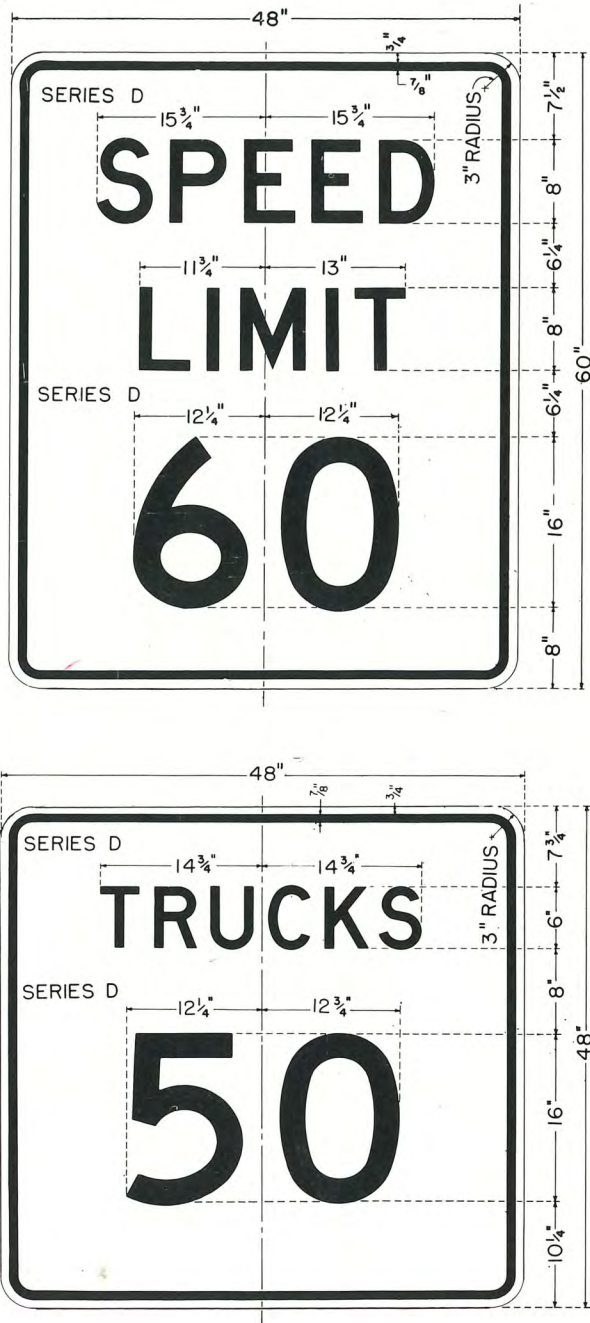


Figure No. 26

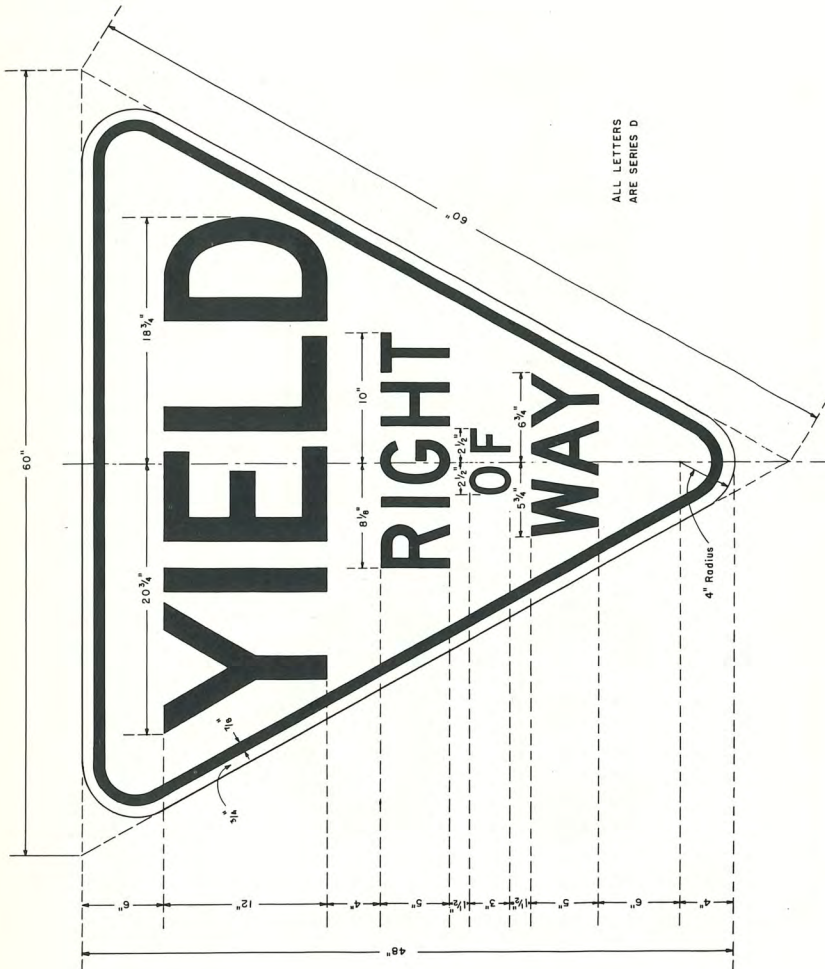


Figure No. 27



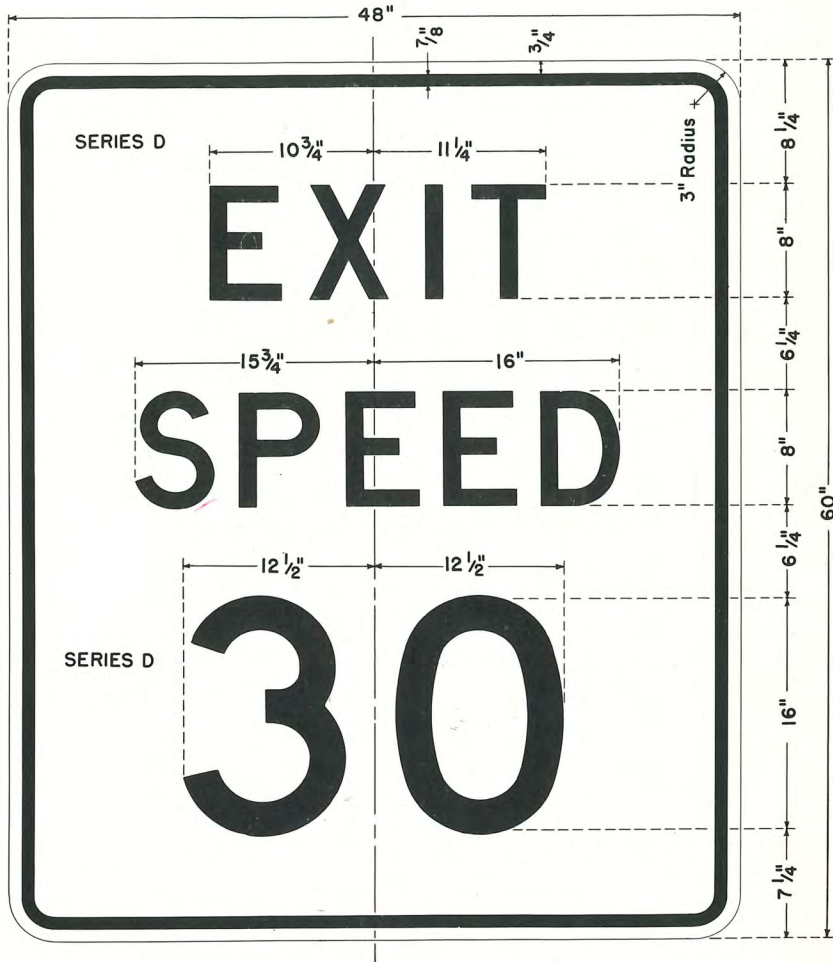


Figure No. 28

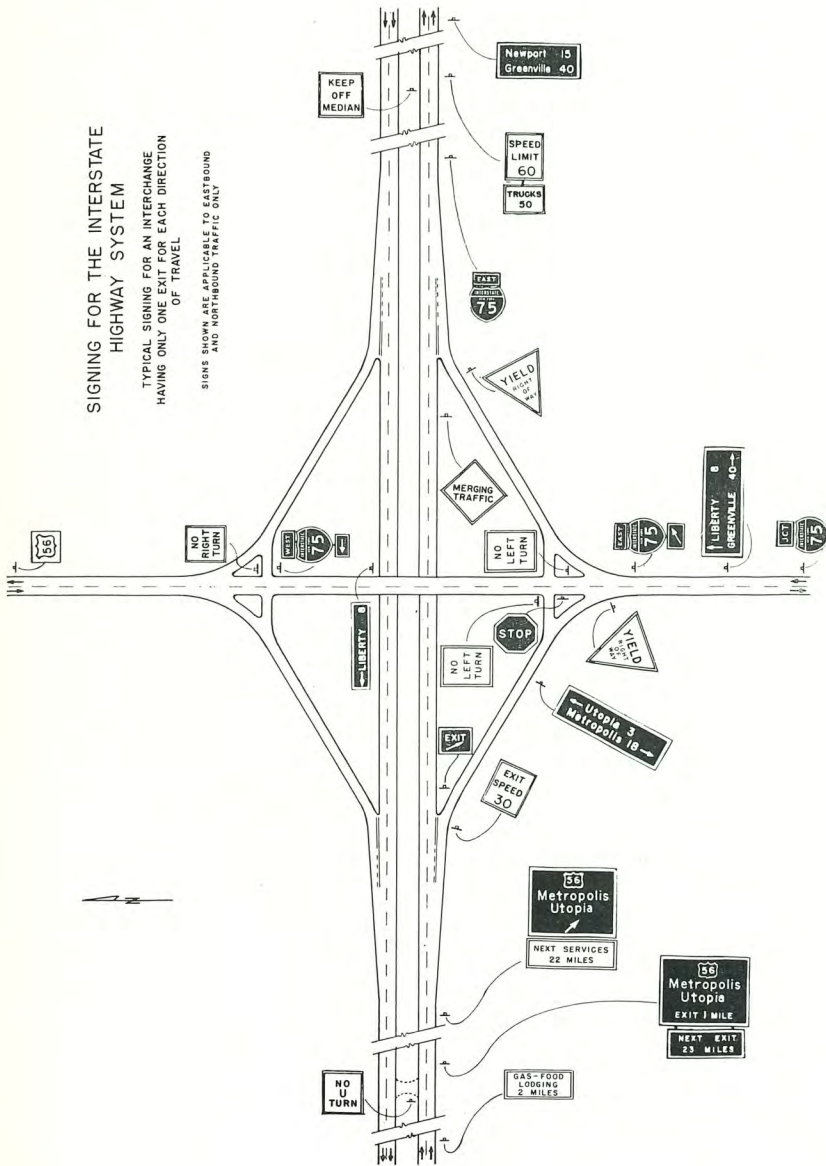
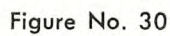


Figure No. 29





### SIGNING FOR THE INTERSTATE HIGHWAY SYSTEM

#### TYPICAL SIGNING FOR AN URBAN INTERCHANGE AT A CITY STREET INTERSECTION

SIGNS SHOWN ARE APPLICABLE TO EASTBOUND  
AND NORTHBOUND TRAFFIC ONLY

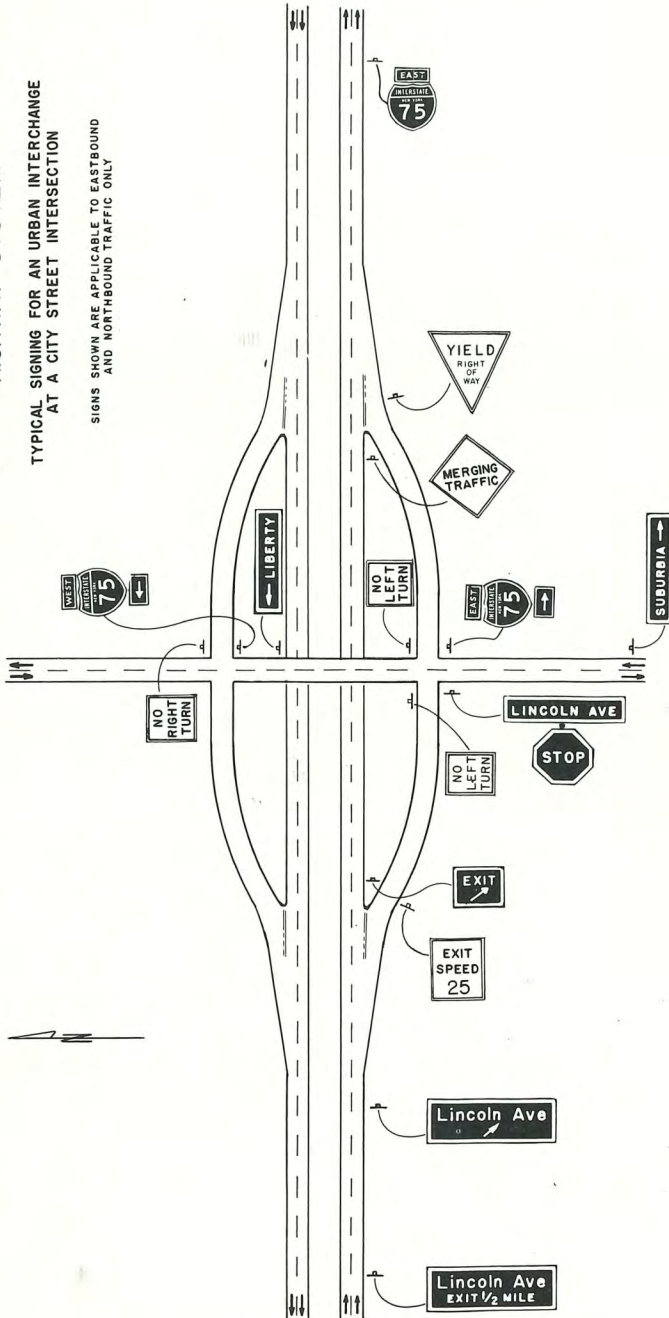


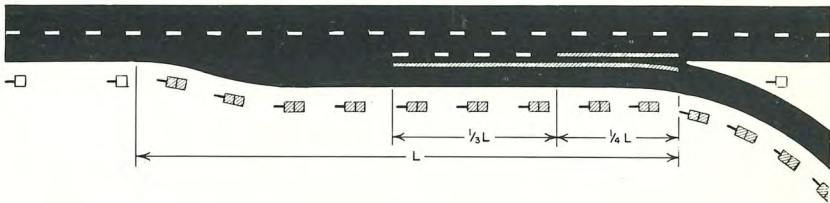
Figure No. 31



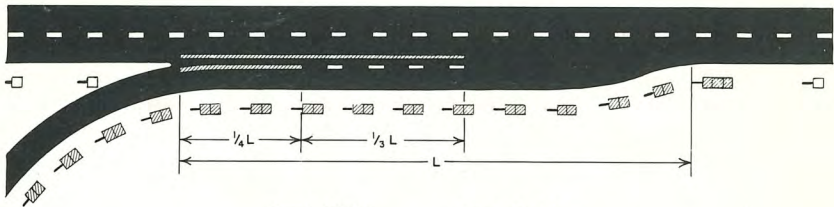
## PAVEMENT MARKING AND DELINEATORS

( NOT TO SCALE )

### A. - INTERCHANGE EXIT



### B. - INTERCHANGE ENTRANCE



WHITE YELLOW




-  SINGLE WHITE DELINEATORS ON RIGHT OF THROUGH ROADWAYS, AT 200' SPACINGS
-  DOUBLE AMBER DELINEATORS ON RIGHT OF ACCELERATION AND DECELERATION LANES AND RAMPS, AT 100' SPACINGS
-  TRIPLE AMBER DELINEATOR AT END OF ACCELERATION LANE

Figure No. 32

Scan by Kittelson LLC

**"STANDARD INTERSTATE RED COLOR"**



Scan by Kittelson LLC

**"STANDARD INTERSTATE BLUE COLOR"**

