A—INTRODUCTION

Section 1.—Function of Signs

The commonest device for controlling, safeguarding, or expediting traffic is the traffic sign. As in the case of any other type of traffic control device, signs must be used only where necessary and where justified by facts and field studies. Signs are not needed to confirm well known or universally recognized rules of the road, such as that requiring drivers to keep to the right, but they are essential where special regulations apply at specific places or at specific times only, or where hazards are not self-evident. They are also needed to give information as to highway routes, directions, destinations, and points of interest.

Section 2.—Legal Authority

Traffic signs shall be placed only by the authority of a public body or official having jurisdiction for the purpose of regulating, warning, or guiding traffic. No traffic sign or signal, or its support, shall bear any commercial advertising.

It is essential that signs be installed only under public authority; otherwise they may not be enforceable and violators will be dismissed in court. Signs placed without authority by private organizations do not fit the program, are often poorly placed and maintained, and are not legally binding. All unofficial and nonessential signs should be removed, as they weaken the value of the necessary signs.

This, however, should not prohibit authorizing public utility companies, without obtaining specific permission in each case, to erect temporary Men Working signs to protect equipment and workmen engaged in construction, maintenance, or repair work in a public highway, provided that such signs conform reasonably to the manual standards as to size, shape, and color. Some utility companies have found that smaller Men Working signs, on lower standards, and otherwise different in some details from those herein prescribed, are more effective for their purposes. Such signs should be permitted if approved by the proper authorities.

A suitable model for the legal authority for the placing of signs is presented in Act V of the Uniform Vehicle Code (secs. 19, 30-33, 37). Interference with official signs is prohibited in section 38 of the same act.

The regulations set forth by signs should be intelligently enforced. Otherwise, no matter how effectively the signs may be designed and placed, the results desired may not be obtained.
Section 3.—Classification of Signs

Functionally, signs are classified as follows:

Regulatory signs giving the highway user notice of traffic regulations that apply at any given place or on a given highway, disregard of which constitutes a misdemeanor, and that would not otherwise be apparent.

Warning signs calling attention to conditions in or adjacent to a highway or street that are potentially hazardous to traffic operations.

Guide signs showing route designations, destinations, directions, distances, points of interest, and other geographical or cultural information.

Section 4.—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 authority. A conservative use of regulatory and warning signs is recommended. On the other hand, a frequent display of route markers and directional signs, judiciously placed, will not lessen their value.

Section 5.—Standardization of Signs

Modern highway speeds and increasingly complex intersections and interchanges require that highway signs be recognized and understood at a glance. Uniformity and simplicity in design, position, and application is of the greatest importance in aiding recognition. All signs hereafter installed on any highway shall conform to the standards set forth in this manual. In situations where messages are required other than those herein provided for, the signs shall be of the same shape and color as standard signs of the same functional type.

Section 6.—Standardization of Design

Uniformity in design includes shape, color, dimensions, symbols, wording, lettering, and illumination or reflectorization. The Public Roads Administration, on request, will furnish to State and local highway and traffic authorities, sign manufacturers, and similarly interested agencies, detailed drawings of the standard signs illustrated in this manual. These designs, both of symbols and of word messages, have been approved by the Joint Committee on Uniform Traffic Control Devices after a thorough review of the varying designs used in many States, supplemented by test studies. Standardization of these designs does not preclude further improvement by minor changes in the proportions of symbols, stroke-width and height of letters, width of borders, or in the lay-out 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.

Section 7.—Sign Shapes

The significance of sign shapes has been standardized as follows:

The octagon shape shall be reserved exclusively for the Stop sign, which requires that the driver shall stop near or at the point where the sign is located before proceeding cautiously.

The round shape shall be used exclusively for the advance warning of a railroad crossing.

Diamond-shaped signs shall be used only to warn of hazards either in the roadway or adjacent thereto.

Regulatory and informational signs shall be rectangular. Informational signs, as a rule, are rectangles with the longer dimension horizontal. Regulatory signs are ordinarily rectangles with the longer dimension vertical.

Special shapes are also reserved for other specific purposes, e.g., the shield or other characteristic shape for route markers on U.S. and State highway routes, and the crossbuck for railroad crossings. In the rare cases where other shapes are desirable they may be used, but only with the approval of the official authority having jurisdiction.

Section 8.—Colors

Warning signs (including the round railroad-crossing sign) and Stop signs shall have a background of "highway yellow" with black symbols or lettering. In the case of the Stop sign a horizontal black panel with white or yellow reflectorized lettering may be used, or a white reflectorized panel with black lettering.

Yellow color cards showing the correct "highway yellow" shade for highway signs may be obtained from the Public Roads Administration on request.

Regulatory signs, other than the Stop sign and parking signs, shall have a white background and black letters. Parking signs shall have red or green lettering, depending on the type of restriction imposed.

Guide signs shall be black and white. Route Markers and auxiliary markers including Junction, Turn, and Directional Markers (M-1 to M-21, inclusive) shall have black letters or symbols on a white background. Destination, Distance, and Information signs shall have black letters on a white background or, optionally for enlarged or oversize signs, white letters on a black background.

Previous editions of this manual have specified that all guide signs use only black lettering on a white background. Tests have shown, however, that white lettering on a black ground is slightly more legible than the reverse arrangement. On the other hand, the black signs do not appear to be as effective in attracting attention by day. The black background, therefore, is made optional only for large signs, which are sufficiently conspicuous because of size alone. For improvement of their daytime visibility, a relatively wide white border is recommended.

Wherever white is specified herein as a sign color, it is understood to include aluminum or silver-colored reflective coatings that reflect white light.

Section 9.—Dimensions

The sign dimensions shown in this manual are to be regarded as the minimum standard. Increases above this minimum are permissible and desirable where investigation has shown that a larger sign is needed for adequate emphasis. However, oversize signs should be used sparingly in order not to weaken the effect of smaller signs.

In determining whether the installation of an oversize sign is warranted, consideration should be given to such elements as highway speeds, the degree of hazard (as appraised by a field survey of sight limitations, intersection complications, etc., or as revealed by accident records), and the competition offered by other signs, lighting, or displays. Generally the use of oversize signs cannot be prescribed on the basis of arbitrary warrants. Each installation is a special case for study and decision.

In the enlarging of signs, standard shapes and colors shall be used, and standard proportions shall be retained, so far as practicable.
Section 10—Symbols

Where practical, the standard signs use symbols rather than words to convey their messages. A simple conventional symbol like the curve arrow or the intersection diagram is instantly recognized. Symbol designs shall in all cases be essentially like those shown in this manual.

Details of symbols are shown on the sign drawings available from the Public Roads Administration.

Section 11—Word Messages

Most sign messages, particularly those of regulatory and informational signs, cannot adequately be conveyed by symbols. Word messages should be as brief as possible. Where applicable, standard wordings as shown in this manual shall be used.

Section 12—Lettering

Sign lettering shall be in clear, open capital letters of the type approved by the Joint Committee on Uniform Traffic Control Devices and its sponsoring agencies. Detailed drawings of these standard alphabets are supplied to highway departments and sign manufacturers by the Public Roads Administration.

The rounded style of the approved lettering, shown in all the sign illustrations herein, has been found by extensive tests to have better legibility, as well as a more pleasing appearance, than the former standard, which used straight lines and sharp bends throughout.

In no case should lettering be smaller than that shown in the illustrations herein, and in the sign drawings available from the Public Roads Administration.

Section 13—Illumination and Reflectorization

Signs that carry messages of warning, important regulations, or essential directional information are at least as necessary by night as by day. All warning signs, including railroad-crossing signs, all stop signs, all other regulatory signs with the exception of pedestrian signs and urban parking signs and, on State highways and important local roads, all guide signs, shall be illuminated or reflectorized. Parking signs are ordinarily read at slow speeds and often receive some illumination from street lighting. Other exceptions to the general rule are the School sign and similar signs that have significance only during school or daylight hours, and the Men Working sign and other temporary signs, if used only during daylight.

Section 14—Means of Illumination

Illumination may be by means of:

1. A light, within or behind the sign, illuminating the main message or symbol, or luminous tubing shaped to the lettering or symbol; or
2. An attached or independently mounted floodlight or floodlights, directed on the face of the sign.

Ordinary street or highway lighting is not regarded as meeting the requirements for sign illumination. However, such lighting can aid visibility to an appreciable degree and, if present, should be taken into consideration in selecting the exact points at which unreflectorized signs are placed.

All illumination shall be by white light, except that a yellow light incorporated in a sign installation shall be yellow when displayed with a warning sign or red when displayed with a stop sign, in accordance with the signal code set forth in section 107 of this manual.

Section 15—Means of Reflectorization

Reflectorization may be by means of:

1. Reflector buttons or units set into the symbol or message; or
2. Reflecting coatings, either on the sign background or, where a black background or panel is used, in the symbol or message.

All reflecting elements shall reflect white light, except that if a reflecting coating is used as a background of a yellow sign it shall reflect yellow light. If a black panel is used on the stop sign the letters shall be reflectorized by clear reflector buttons or by white or yellow reflecting coating.

Reflector buttons in a highway sign are individual reflecting units arranged in rows or patterns to form the letters or symbols. In suitable sizes and spacings they give the visual effect of continuous lines or areas of light. Reflector buttons are made of glass or transparent plastic with lenses or prisms designed to reflect an incident beam of light directly back toward its source. It is this retrodirective reflection that distinguishes reflector buttons from any sort of specular or diffuse reflectors and gives them their great brilliance. An effective reflector button concentrates most of the reflected light into a narrow cone having only enough divergence to reach the driver's eyes in his normal position above the headlamps. This divergence angle should be on the order of one-half to one degree.

If made with multiple small prisms or lenses, reflector buttons need not be circular, though they remain essentially separate units.

A reflecting coating is a surfacing applied either to the background or to the symbol or lettering of a sign to give a uniformly brilliant reflectance over the entire area so coated. The types of coating most commonly used are of retrodirective reflecting character, having minute glass spheres (or "beads") closely distributed and embedded in a flexible weather-resistant or painted surface. Each bead acts as an independent reflector button, but in mass effect the beads give the appearance of a uniformly brilliant area when viewed in the headlamp beam. A suitable incorporation of pigment in a reflecting coating causes it to reflect colored light, as for the yellow backgrounds of warning signs.

Sheets of polished metal so embossed as to produce a uniform pattern of small bright spots over the entire surface have also been used as reflecting coatings. These are diffuse rather than retrodirective reflectors, and consequently they reflect to the driver's eyes a part of the light from all sources within a fairly wide angular range. Their effective brilliance is not confined to a narrow cone around the axis of any incident light beam.

Reflecting coatings are particularly advantageous in signs having small lettering into which reflecting buttons cannot be fitted in a legible pattern. With a reflecting coating there is usually a minimum of difference between the daytime and nighttime aspects of a sign.

Individual reflectors or clusters of reflecting units, white or colored,
used to mark obstructions or to delineate a highway, are treated as markings, in part II of this manual.

Section 16.—Sign Borders

With rare exceptions, shown in the illustrations, all signs shall have a narrow border of the same color as the message, just inside the edge. This improves the appearance and, in the case of embossed metal signs, the embossed border adds materially to their rigidity. For 24-inch signs the border shall be from three-eighths to five-eighths inch in width, set in three-eighths inch from the edge, and for other sign sizes approximately in proportion. On metal signs, corners shall be rounded on a radius of 1/8 inches.

Section 17.—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-hand side of the roadway, where the driver is in the habit of looking for them. Signs in any other position should ordinarily be considered only as supplementary to signs in the normal location. Under some circumstances signs may advantageously be placed on channelizing islands, or overhead, or (as on sharp curves to the right) on the left-hand shoulder of the road, directly in front of approaching vehicles. In such cases the supplementary signs should be definitely more conspicuous than the signs normally placed. A supplementary sign located on the left of the roadway is often helpful on a three- or four-lane road, or on a one-way road, where traffic in the right-hand lane interferes with the driver's view to the right.

All signs shall be mounted approximately at right angles to the direction of, and facing the traffic that they are intended to serve.

ReflectORIZED signs should usually be turned a little toward the road to keep the incident angle of the headlight beams near 90 degrees throughout the range of useful visibility. Where mirror reflection from the sign face is encountered in such degree as to reduce the legibility of the signs, both nonreflectored signs and those reflectored with buttons should be turned slightly away from the road. At curved alignments the angle of placement should be determined by the course of approaching traffic, rather than by the roadway edge at the point where the sign is located. On grades it may be desirable to tilt a sign forward or back from the vertical, to improve the viewing angle.

Signs on the road shoulder should be not less than 6 feet nor more than 10 feet from the edge of the pavement or traveled way, except where conditions do not permit or where other requirements are specified with regard to particular signs elsewhere in this manual. Where a raised curb is present a sign should ordinarily be placed adjacent to the roadway, with its nearest edge at least 1 foot from the curb line.

Signs in rural areas should normally be mounted at a height of not less than 2 1/2 feet above the crown of the pavement to the bottom of the sign or, where several signs are placed on a single mounting, 2 feet to the bottom of the lowest sign. However, where parking is likely to occur, or where other obstructions are present, such as a

bridge handrail, the height should be at least 7 feet to the bottom of the sign. In business and residence districts signs should be mounted at least 7 feet high to the bottom of the sign.

Overhead signs, whether in rural or urban areas, shall be not less than 14 1/2 feet above the road surface, and preferably centered over the traffic lanes to which they apply. Standard locations for a number of typical signs are illustrated in figures 1 and 2.

Warning signs are generally placed in advance of the condition to which they call attention. Stop signs as near as practicable to the point where the stop is to be made. Intersection guide signs are placed as shown in figures 8–10. Other signs are placed as required, in all cases as specified in the sections of this manual dealing with individual signs or classes of signs.

Section 18.—Standardization of Application

Important 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. Each sign shall be displayed for one definite and specific purpose only.

This manual sets forth criteria for the application and use of all types of signs. It is impossible, however, to set up specifications that can apply to every case. The proper signing of highways depends to a very great extent on the experience and good judgment of the engineer responsible for the placement and maintenance of signs.

Similar conditions in urban and rural areas should be treated in generally the same manner. It is recognized, however, that urban conditions differ from rural in respect to speeds, frequency of intersections, traffic congestion, parking, competing lights and displays, etc., and that in many instances signs must be differently applied and located. Where practical, therefore, this manual sets forth separate specifications for rural, residence, and business districts.

Before any new highway or any detour or temporary route is opened to traffic all necessary signs shall be in place.

Changes in the traffic characteristics of a highway may at any time call for a reappraisal of local sign requirements. Signs required by road conditions or restrictions shall be immediately removed when those conditions cease to exist or the restrictions are withdrawn. Guide signs directing traffic to and on temporary routes or detours shall be removed when no longer applicable.

Section 19.—Erection

Normally signs should be individually erected on separate posts, except where one sign supplements another, or where route or directional signs must be grouped. Two signs for different purposes should not be placed closer together than 100 feet along the highway if it can reasonably be avoided. Exceptions to this rule are sometimes necessary where space is limited, but the principle is sound. Two signs closely adjacent are difficult to read, especially at high speed.

This general rule applies to signs facing in opposite directions. To minimize distraction, such signs should not be placed immediately opposite each other on each side of the roadway.
Figure 1.—Height and lateral location of signs—typical installations.

Figure 2.—Height and lateral location of signs—typical installations.
Section 20.—Materials

Metal treated with a rust-resistant coating has been generally used for permanent signs. Waterproof resin-bonded plywood and certain fiber materials when properly fabricated have also demonstrated satisfactory qualities for use under certain conditions. Wooden boards may be used for large signs and for temporary and seasonal signs, and heavy cardboard is adequate for temporary signs for special occasions or emergencies (see appendix B for suggested specifications).

It is recognized that technological progress may develop new and satisfactory, or superior, materials for highway signs. The above suggestions are not intended to exclude any other suitable materials now or hereafter available.

Noncorrosive bolts, screws, and washers shall be used for attaching permanent signs to their supports, to avoid discoloration.

Section 21.—Sign Posts and their Foundations

Sign posts and their foundations shall be so constructed as to hold signs rigidly in a proper and permanent position, and prevent them from swaying in the wind, or from being turned or otherwise displaced by children or irresponsible persons.

Sign posts for independent mounting should preferably be of metal or concrete, though wood is acceptable if well protected and treated against rot. Each State and municipality should adopt the material and design dictated by local resources and past practice as the most satisfactory and economical. Concrete or metal posts having holes spaced on 3-inch centers will fit the bolt holes of most of the standard rectangular and square sign plates. For rectangular and warning sign plates and for certain other signs a 1-inch spacing is necessary, and metal posts punched or drilled on 1-inch centers are preferable. Wood posts may be drilled as desired at the time a sign is mounted.

In some cases, especially in business and residence districts, signs can be correctly placed on existing supports used for other purposes, such as traffic signal standards, street lamps, or public utility poles, through raising, lowering, and minimizing sidewalk obstruction. Correct location of the sign should not thus be sacrificed, however. Utility poles should be used only with the permission of the controlling company.

A portable or removable type of mounting is desirable for Men Working, School, and similar signs used temporarily or intermittently. Such a mounting should be heavy enough not to turn over in the wind, and its base should not be appreciably wider than the sign.

Section 22.—Maintenance

All traffic signs shall be kept in proper position, clean, and legible at all times. Damaged signs shall be replaced immediately.

Signs poorly maintained lose their authority as traffic control devices. Damaged, defaced, or dirty signs are ineffective and discredit the agency responsible for them.

To insure adequate maintenance a suitable schedule for inspection, cleaning, and replacement of signs should be established. All signs should be inspected at least twice a year and any that are defective should be cleaned, touched up, or replaced and taken in for repair and refinishing or scrapping. Employees of the highway department, traffic police, and other governmental employees whose duties require

that they travel on the highways should be instructed to report any damaged or obscured sign at once.

Special care should be taken to see that weeds, shrubbery, construction materials, and snow are not allowed to obscure the face of any sign.

In the case of illuminated signs, a regular schedule of bulb replacement should be maintained, so that bulbs will be renewed before they would normally be expected to burn out.

Section 23.—Reflector Markers

Small reflecting units at the roadside have been widely used during recent years. These may be used to mark culverts and other hazards, or, in series, to indicate the alignment of the road. In the latter application they are known as delineators. Although, like signs, they are usually mounted on posts and convey a warning to the driver, they are more closely related to obstruction markings, or to guide lines. They are accordingly treated in this manual as markings, in part II, sections 155 to 157.

Section 24.—Major Routes

In respect to the application of certain signs reference is made to major routes. For the purposes of part I of this manual, dealing with signs, a major route is defined as a route that carries an average daily traffic of 2,000 vehicles or more. A signalized intersection is construed as an intersection of major routes.

The average daily traffic here referred to is the average 24-hour volume, not to be confused with the 8-hour counts used in establishing warrants for traffic signals in part III of this manual.

B—REGULATORY SIGNS

Section 25.—Application of Regulatory Signs

Regulatory signs shall be used to inform highway users of certain laws and regulations enacted to promote safety and convenience upon the streets and highways, the violation of which would constitute a misdemeanor. They are essential to indicate the applicability of legal requirements that would not otherwise be apparent. Great care must be exercised to see that they are erected wherever needed to fulfill this purpose, but unnecessary mandates should be avoided.

Regulatory signs shall be erected at those locations where the regulations apply, and shall be mounted so as to be easily visible to the motorist whose actions they are to govern. The message on the sign shall clearly indicate the requirements imposed by the regulation. Signs that have been erected but are no longer applicable shall be removed. All regulations set forth by signs should be zealously enforced. Otherwise, no matter how effectively the signs may be designed and placed, the results desired will not be obtained.

Although applicable regulations differ widely from one location to another, depending on traffic requirements, highway conditions, and local legislation, it is possible to establish uniform standards of application, location, size, shape, colors, and dimensions for different types of regulatory signs, so that the motorist can always recognize them quickly and be governed accordingly.
Section 26.—Classification of Regulatory Signs
Regulatory signs are classified in the following groups:
1. Stop sign (secs. 28-31).
2. Speed series (secs. 22-36).
   (a) Turning (sec. 37).
   (b) Signal (sec. 39).
   (c) Alignment (sec. 36-39).
   (d) Exclusion (sec. 38-40).
   (e) One way (sec. 45-48).
5. Pedestrian series (secs. 50-52).

Section 27.—Design of Regulatory Signs
With few exceptions, regulatory signs are rectangular in shape, with the longer dimension vertical. With the exception of the Stop sign, the Night Speed sign, and the parking signs, they are white, with black lettering and border. Stop signs are “highway yellow” with black lettering and border, the Night Speed sign has a black background, while parking signs are white with red or green lettering and border as specified. To improve the reflectorization of the Stop sign, a panel of black or reflectorized white coating may be applied across the center of the sign.

Minimum dimensions are given for each sign here specified. Where conditions require greater visibility, or where the required message cannot be accommodated on a smaller area, larger signs may be used, in which case all dimensions shall be increased approximately in proportion.

STOP

Section 28.—Stop Sign (R-1)
It is commonly provided by law that State and local authorities, with reference to highways under their respective jurisdictions, may designate through highways and erect Stop signs at specified entrances thereto, or may designate any intersection as a stop intersection and erect like signs at one or more entrances to each intersection.

A suitable model for stop sign legislation is to be found in Act V of the Uniform Vehicle Code (sec. 198).

Section 29.—Design of Stop Sign
Owing to the importance of Stop sign, they are given a distinctive shape (octagonal) and color of a warning sign (yellow). The Stop sign not only notifies the motorist of a regulation that must be observed, but warns him of a potential hazard as well.

The STOP sign shall be octagonal in shape, shall have a yellow background, and shall carry the word STOP in letters at least one-third the height of the sign.

A variety of Stop sign designs are in use, including in addition to the basic standard of black letters on a yellow background, several arrangements of a horizontal panel intended to improve legibility, especially when reflectorized. California uses a red background, holding that red is the proper color to indicate a compulsory stop. The Joint Committee recognizes that there is at present no satisfactory evidence to favor one of the various designs as preferable to all others. It therefore specifies only that the Stop sign shall be octagonal and that it shall have a yellow background, in accordance with the accepted standard of 47 States. Arrangements have been made for research, from which it may be possible in the future to agree upon a single standard design that will be most effective both by day and by night, or perhaps different designs to meet specifically different conditions in rural and urban areas. Pending further information, however, the Committee recognizes a number of panel arrangements, and while for the sake of uniformity if specifies yellow as the standard background, it does not disapprove of the red background in the absence of any conclusive evidence showing it to be less effective than the yellow.

The minimum size of Stop signs in rural districts shall be 30 inches by 30 inches. In residence and business districts a minimum size of 24 inches by 24 inches may be used where speeds are low, traffic is light, and mounting space is limited.

The 24-inch Stop sign that has been standard for many years is disproportionately small in relation to its importance, having an actual area less than 50 percent of that of the standard 24-inch warning sign. This manual accordingly establishes the 30-inch standard for general application. To expedite replacement the smaller signs should, where practicable, be relegated to less important roads and streets.

All Stop signs shall be illuminated and reflectorized.
Illumination may be by floodlight, by fixed white light or flashing red light in the letters, or by a flashing red signal in the face of the sign or just above it. The flashing red illumination should be kept in operation both by day and by night.

Reflectorization may be by (1) a yellow reflecting coating covering the entire sign background; (2) white or clear reflecting buttons in the black letters; (3) a black horizontal panel in which white or yellow letters are made of reflecting coating or set with clear reflecting buttons; or (4) a white horizontal panel of reflecting coating on which the letters appear in black. Colored reflecting coatings other than those specified, or colored reflecting buttons, are not recommended. They tend to weaken the brilliance by night and to impair legibility by day. The panel, if used, should be just wide enough to accommodate the line of lettering, with necessary margins above and below the lettering.

Secondary messages on Stop signs, such as STATE HIGHWAY or THROUGH STREET, may be used but are not recommended.

Section 30.—Warrants for Stop Sign
Conditions warranting Stop signs are:
1. Intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous.
2. Intersection of a county road, city street, or township road with a State route.
3. Intersection of two main highways where no traffic signal is present.
4. Street entering a through highway or street.
5. Unsignalized intersection in a signalized area.
6. Railroad crossing where a stop is required by law or by order of the authority having jurisdiction over the highway or street.
7. Other intersection where high-speed, restricted view, or serious accident record indicates a need for control by the stop sign.

Stop signs should not ordinarily be erected at intersections where traffic signals are present. The conflicting commands of two types of control devices are confusing. If traffic is required to stop when the operation of Stop-and-Go signals is not warranted, the signals should be put on flashing operation with the red flasher facing the traffic that must stop.

In some States, the meaning of a red flashing signal has not been established by law, and a Stop sign is necessary to make the requirement enforceable when the Stop-and-Go signal is not in operation. This condition should be remedied by legislation (See sec. 38 of Act Y, Uniform Vehicle Code).

Where two main highways intersect, especially at a T intersection, and there is no priority to determine which direction of traffic should be stopped, a thorough study should be made. Although the flow of traffic may indicate that the Stop sign or signs should be placed on one highway, it is sometimes feasible in the interest of safety to stop the greater traffic volume in favor of the smaller.

The "Four-Way Stop" installation, where legal, has been found useful as a safety measure at some locations. Because of its delaying effect, it should be sparingly used. It should not be used unless the volume of traffic on the intersecting roads is about equal. Where there is an considerable volume of traffic, a traffic signal installation is the more satisfactory solution.

Section 31—Location of Stop Sign

Stop signs shall always be erected at the point where the vehicle is to stop or as near thereto as possible, and may be supplemented with a stop line and with the word STOP on the pavement, as shown in figure 3. In no case shall a Stop sign be placed farther than 50 feet from the intersected roadway. As a general rule, the distance should not exceed 15 or 20 feet, particularly in built-up areas.

In rural districts, the Stop sign shall be placed not less than 6 feet nor more than 10 feet from the edge of the approach roadway or pavement. It shall be mounted so that its bottom will be 2½ feet above the crown of the roadway (fig. 1).

In residence and business districts, and at any place where parked vehicles may frequently obscure the Stop sign, the sign shall be mounted so that its lower edge will be 7 feet above the top of the curb. The left edge of the sign shall be not less than 1 foot nor more than 3 feet back from the face of the curb. Where there is a marked crosswalk on the pavement, the sign shall be erected 4 feet in advance of the crosswalk line nearest to approaching traffic.

Where only one Stop sign is used, it shall be on the right-hand side of the roadway. At an intersection where a wide throat exists on the stop approach, the observance of the Stop sign may be improved by the erection of an additional Stop sign on the left side of the approach road, and by the use of a stop line. At certain chan-
nelized intersections, Stop signs may be effectively placed on channelizing islands.

In the event the visibility of a Stop sign at any location is restricted, the sign shall be located as specified and a Stop Ahead sign (W-13, sec. 69) shall be erected not less than 350 feet nor more than 500 feet in advance of the Stop sign.

Figures 3, 8, 9, and 10 show typical Stop sign installations.

Section 32.—Speed Limit Sign (R-2)

The Speed Limit sign (R-2) shall be a vertical rectangle not less than 18 inches by 24 inches in size having black letters and numerals on a white background. On major routes, as defined in section 24, the sign should preferably be not less than 24 inches by 30 inches in size. Below the words SPEED LIMIT is shown in large numerals the speed limit in miles per hour. The limit that is displayed on this sign shall be the prima facie or absolute speed limit established by law, or a prima facie or absolute speed limit established after appropriate engineering and traffic investigation according to law. The speed limits shown should be in multiples of 5 miles.

A prima facie speed limit is a limit the exceeding of which is presumed under the law to be a violation; the defendant, however, having opportunity to prove that his speed was safe for conditions. At or below the prima facie speed the burden of proof is on the prosecution to show that there was a violation. Above the prima facie speed the burden shifts to the defendant to show that there was not a violation.

Speed legislation ordinarily specifies two or more different prima facie or absolute limits, applicable in urban and rural areas, respectively. The State highway authorities are usually further authorized, on the basis of an engineering and traffic investigation, to alter these limits at such places and times as they see fit. In some States, a special reduced limit is set for nighttime in rural areas.

A suitable model for speed limit legislation may be found in Act V of the Uniform Vehicle Code (secs. 66, 67).

Section 33.—Location of Speed Limit Sign

Speed Limit signs indicating statutory speed limits shall, when used, be located at the point of change from one type of district to another, and at additional locations within the district where it is necessary to remind motorists of the limit that is applicable.

In rural districts on US and other State numbered routes Speed Limit signs indicating the statutory speed limits shall be erected at the entrance of the State and at boundaries of metropolitan areas. A special oversize sign is often desirable at State boundaries.

Signs indicating altered speed limits shall not be erected until the altered speed limits are approved and officially authorized. In such cases a Speed Limit sign shall be located at the beginning of each section where the speed is altered, and at appropriate intermediate locations. At the end of such sections there shall be erected a Speed Limit sign showing the next speed limit, or, in case there is no speed limit in the area about to be entered, an End (55) Mile Speed Sign (R-5) shall be used.

Speed Limit signs shall be erected on the right-hand side of the road and shall face traffic approaching the section where the stated speed applies. In rural districts they shall be mounted so that the bottom edge of the signs will be 1/2 feet above the crown of the roadway except where parking of vehicles or other condition necessitates a higher mounting, and not less than 6 feet nor more than 10 feet from the edge of the roadway or pavement. In residence and business districts where there are curbs, the nearest part of the sign shall not be less than 1 foot back from the face of the curb. In districts where parking is permitted the signs shall be mounted so that the lower edge is not less than 7 feet above the top of the curb (fig. 1).

Section 34.—Night Speed Sign (R-3)

A special problem in speed signing is presented in States where different day and night speed limits are prescribed. Although posting both speeds destroys the effective simplicity of the standard speed sign, it seems necessary that the night limit be shown as well as the day limit. It is suggested that this be done by erecting immediately below the standard Speed Limit sign (R-2) or combining with it, a Night Speed sign (R-3) carrying the legend NIGHT (45). This should be 18 inches by 14 1/2 inches in size for use with the smaller speed sign, or 24 inches by 19 inches for use with the larger. The numerals in the Night Speed sign, and the words SPEED LIMIT in the standard sign, should be reflextorized. As a special but logical exception to the general color scheme, the Night Speed sign should have its legend in white upon a black background.
Section 35.—Speed Zone Ahead Sign (R-4)

The SPEED ZONE AHEAD sign may be placed in advance of an authorized speed zone to inform motorists that they are entering a section where the statutory speed limits have been altered. It shall have black lettering on a white background, and it shall be of the same size as the Speed Limit sign (R-2) at the beginning of the zone indicated. In rural districts it shall be placed not less than 300 nor more than 500 feet in advance of the intersection. In all cases it shall be erected in the same manner as the Speed Limit sign (sec. 33).

This sign must always be followed by the regular Speed Limit sign erected at the beginning of the zone where the altered speed limit applies.

Section 36.—End (35) Mile Speed Sign (R-5)

The END (35) MILE SPEED sign may be displayed at the end of an authorized speed zone to inform motorists that they are leaving a section where the statutory speed limits have been altered. It shall have black lettering on a white background, shall be of the same size as the Speed Limit sign (R-2) at the beginning of the zone, and shall be erected in the same manner (sec. 33).

Section 37.—Turn Prohibition Signs (R-6 to R-9, inclusive)

Turn Prohibition signs shall be used at intersections to indicate regulations prohibiting the types of turns specified. The NO U TURN sign may also be used between intersections on a wide roadway where dangerous U turns might be made. Where U turns are prohibited by statute throughout a given area, it is unnecessary to erect prohibitory signs at or between intersections as prescribed above.

Turn Prohibition signs shall be 18 inches by 24 inches in size except that when mounted below traffic signals where vertical clearance is limited they may be 14 inches by 9 inches in size (R-106 to R-109, inclusive). They shall have black lettering on a white background.

Where required at unsignalized intersections, the NO RIGHT TURN sign shall be placed on the near right-hand corner. Where NO LEFT TURN, NO U TURN, or NO TURNS signs are required two shall be used, one at the near right-hand and one at the far left-hand corner. Such signs shall be mounted, facing traffic approaching the intersection, so that the bottom part of the sign will not be less than 7 feet nor more than 10 feet above the top of the curb and so that no part of the sign will be less than 1 foot back from the face of the curb. At signalized intersections the signs shall be mounted just below the signal face, facing the traffic to which they apply. These are minimum requirements, and additional signs should be placed as necessary, at or in advance of the intersection. If advance signs are used, care should be taken that no alley or driveway exists 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. 45) should be used, rather than the Turn Prohibition sign.

A Turn Prohibition sign mounted on a traffic signal installed directly over any roadway shall have a clearance of at least 14½ feet above the roadway.

When the movement restriction applies during brief periods only, the Turn Prohibition sign shall be mounted on a movable pedestal and placed in the roadway adjacent to the curb or in the middle of the intersection during such periods only.

Section 38.—Traffic Signal Speed Sign (R-10)

The Traffic Signal Speed sign, reading SIGNALS SET FOR (25) M. P. H., may be used to indicate the beginning of a section where the traffic control signals are coordinated into a progressive system and timed for a specified speed. The signs shall be 12 inches by 18 inches in size, with black lettering on a white background. Where used, they should be mounted on, or as near as possible to, each signal face where the timed speed changes, and at intervals of two blocks throughout any section where the timed speed remains constant.

Section 39.—No Passing Sign (R-11)

The NO PASSING sign may be used on two- and three-lane roads at the beginning of a zone through which restricted sight distance makes overtaking and passing hazardous. It shall have black letters on a white background, and be of a minimum size of 20 inches by 24 inches. It shall be erected at the right-hand side of the roadway, at a height of 2½ feet to the bottom of the sign, not less than 6 feet nor more than 10 feet from the edge of the roadway. Because a driver about to pass a vehicle ahead often has only a restricted view to the right, an additional
sign on the left-hand side of the road may be desirable.

The sign normally should be supplementary to standard pavement markings as described in part II of this manual (secs. 134, 135). Where pavement markings are well maintained, and weather conditions are not likely to hide the markings, the No Passing sign need not be used.

Standards for determining the location and extent of no-passing zones are set forth in part II of this manual (sec. 156), in connection with pavement markings through such zones.

Section 40.—End No Passing Zone Sign (R-12)

The END NO PASSING ZONE sign may be used at the end of a no-passing zone where a No Passing sign has been erected at the beginning. It shall be of the same size and color, and shall be erected in the same manner as the No Passing sign.

Section 41.—Keep Right Except to Pass Sign (R-13)

The KEEP RIGHT EXCEPT TO PASS sign may be used on multiple-lane pavements where motorists are required to keep in the right lane except when passing. It shall be erected 300 feet to 500 feet from the beginning of a multiple-lane pavement, and at other locations where there is a tendency on the part of the motorist to drive in the inside lane or lanes when not passing.

This sign shall be placed on the right-hand side of the roadway, facing approaching traffic, with the bottom of the sign at a height of 2½ feet above the crown of the roadway, and not less than 6 feet nor more than 10 feet from the roadway edge.

Section 42.—Keep Right Sign (R-14)

The KEEP RIGHT sign shall be used within and at the ends of medium strip, parkways, loading islands, and refuge islands, at traffic islands, and at underpass piers, where traffic is required to keep to the right of such obstructions.

The sign shall be a vertical rectangle 18 inches by 24 inches in size, with black lettering and arrow on a white background. It should normally be mounted at a height of 2½ feet to the bottom of the sign.

Where the obstruction is in or near the line of traffic that the sign may be obscured by vehicles, a second sign of the same design should be mounted directly above the standard sign with its bottom edge at a height of 7 feet above the pavement level.

On a median strip the Keep Right sign should be mounted about 50 feet beyond the approach end of the island. On a pedestrian island or intersection-channelizing island it should be mounted at the approach end or as close thereto as practicable. The sign should be mounted on the face of or just in front of a pier or other obstruction in the center of the roadway, in which case the standard stripe markings on the obstruction (sec. 151) should be discontinued to leave a 3-inch space around the outside of the sign, as shown in figure 20.

Where traffic is permitted to pass to either side of an island or other obstruction in the roadway, the Double-Arrow warning sign should be used (W-30, sec. 86).

Section 43.—Do Not Enter Sign (R-15)

The DO NOT ENTER sign shall be conspicuously placed at the end of a one-way roadway or ramp to prohibit traffic from entering the restricted section. It shall be 24 inches square, with black lettering on a white background. It shall be mounted on the right-hand side of the roadway, facing traffic entering the roadway or ramp in the wrong direction. In rural districts it shall normally be erected at a height of 2½ feet to the bottom of the sign, and as close to the pavement edge as practicable, but with not less than 1 foot clearance to the nearest edge of the sign. In residence or business districts, or where a low mounting will not give adequate visibility, it shall be mounted not less than 7 feet nor more than 10 feet above the curb or roadway.

Section 44.—Selective Exclusion Signs

The laws of some States permit the State or local authority having jurisdiction to exclude trucks or other commercial vehicles from any designated highway where signs have been placed giving notice thereof. These signs have not been satisfactorily standardized but NO TRUCKS, TRUCKS EXCLUDED, and COMMERCIAL VEHICLES EXCLUDED are suggested as suitably brief and specific messages.

Such signs shall be at least 18 inches by 24 inches in size and shall have black lettering on a white background. They shall be conspicuously placed at all entrances to the restricted roadway.
Where an unrestricted roadway intersects the restricted roadway, the Exclusion sign shall be placed on the right-hand side of the restricted roadway approximately 25 feet from the intersection so as to be clearly visible to all drivers and others turning into the restricted roadway. A supplementary sign may be necessary on the left-hand side of the restricted roadway. In rural districts these signs shall normally be erected at a height of 2½ feet from the bottom of the sign, and not less than 6 feet nor more than 10 feet from the roadway edge. In residential or business districts where a low mounting height will not give adequate visibility, they shall be mounted not less than 7 feet nor more than 10 feet above the curb or roadway. On entrance ramps or channelized roadways, or where a curb is present, they shall be as close to the pavement edge as practicable, with a minimum of 1 foot to the nearest edge of the sign.

It is similarly provided in some States that the proper authority may exclude pedestrians, bicycles, or other nonmotorized traffic from controlled-access roadways, and shall erect signs setting forth such restrictions. No standardized message has been developed for such signs, but they should clearly indicate the type of traffic that is admitted, and, if necessary, the types that are excluded. They should be not less than 18 inches by 24 inches in size, with black lettering on a white background. They should be erected in the same manner as other Exclusion signs, described in the two preceding paragraphs.

A suitable model for exclusion legislation may be found in Act V of the Uniform Vehicle Code (secs. 75, 178).

Section 45.—One Way Sign (R-16)

The One Way sign shall be used to indicate streets upon which traffic is allowed to travel in one direction only. It shall consist of a white arrow symbol on a black horizontal rectangle 36 inches by 12 inches in size. Centered in the arrow shall be the words ONE WAY. The sign must be made in rights and lefts.

One Way signs shall 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 (fig. 4). Where the intersection is signalized, the signs shall be placed below the appropriate signal faces. One Way signs shall also be placed parallel to the one-way street directly opposite the exits from driveways, alleys, and other publicly acces-
possible places. A One Way sign should always be used, where applicable, rather than a Turn Prohibition sign.

At unsignalized intersections the One Way sign shall be mounted not less than 7 feet nor more than 10 feet above the top of the curb or pavement, and with no part of the sign less than 1 foot from the curb line.

Section 46.—Two Way Traffic Ahead Sign (R-17)

The TWO WAY TRAFFIC AHEAD sign shall be used on a one-way street in advance of an intersection beyond which the one-way traffic regulation does not apply. It shall be a vertical rectangle 18 inches by 24 inches in size, with black lettering on a white background.

This sign should not be used on a one-way connecting ramp or channelized roadway, or at the end of a divided stretch of highway, or at a T intersection where a one-way street ends.

The Two Way Traffic Ahead sign shall be placed on both the right- and left-hand sides of the street, not more than 25 feet from the intersection where two-way traffic is resumed (fig. 4). It shall be mounted 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 1 foot back from the face of the curb.

Section 47.—Parking and Stopping Signs (R-18 to R-26, inclusive)

Parking signs and other signs governing the stopping and standing of vehicles cover a very wide variety of regulations and only general specifications can be laid down here. Typical examples are as follows:

- NO PARKING ANY TIME (R-18).
- NO PARKING 8 A.M. TO 8 P.M. (R-19).
- NO PARKING EXCEPT SUNDAYS AND HOLIDAYS (R-20).
- NO STOPPING OR STANDING (R-21).
- ONE HOUR PARKING 9 A.M. TO 7 P.M. (R-22).
- METER PARKING ONLY (R-23).
- DIAGONAL PARKING (R-24).
- NO PARKING LOADING ZONE (R-25).
- NO PARKING BUS STOP (R-26).

Other wordings will be found necessary to fit local conditions.

The legend on parking signs shall state whatever regulations apply, but the signs shall conform to the standards of shape, color, location, and use. Generally, parking 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 the regulation is 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.

Successful use by a number of cities of parking signs mounted at a 90-degree angle with the curb line appears to justify the acceptance of such an arrangement as an alternative standard. In this case the arrow should be omitted, and a sign at either end of a parking zone should carry, if necessary, a small appended plate (R-27) reading THIS SIDE OF SIGN.

Where parking is prohibited at all times or at specified times, parking signs shall have red letters and border on a white background (Parking Prohibition signs); and where only limited-time parking is permitted, or where parking is permitted only in a particular manner, the signs shall have green letters and borders (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, with the sign lengthened vertically if necessary.

In residential and business districts, parking signs shall be 12 inches by 18 inches in size. Where several restrictions or qualifications must be set forth, the vertical length of the sign may be increased as necessary. In rural districts, the size of the sign may be increased to 24 inches by 30 inches.

At the transition point between two parking zones, it may be advantageous to use, instead of two signs, a single sign 20 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 directions that the respective restrictions apply. (R-28.)

Section 48.—Placement of Parking Signs

Parking signs in residence and business districts shall be mounted 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 1 foot back from the face of the curb. They 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 (fig. 1).

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.

Mounting at an angle of 90 degrees with the curb line is also acceptable. In this case two signs must be mounted back to back at a transition point between two parking zones, each with the appended plate reading THIS SIDE OF SIGN (R-27). At intermediate points within a zone a single sign without any arrow or appended plate should be used. Otherwise standards for placement should be the same as specified above.

Section 49.—Parking Signs in Rural Districts

In rural districts NO PARKING ON PAVEMENT signs (R-29) may be used to emphasize the provisions of law that no person shall stop, park, or leave standing any vehicle upon the part of the highway where it is practical to leave such vehicle off such part of the highway. The signs should be used primarily at points of scenic beauty or other points of interest where violations are prevalent, and where stopping or parking on the pavement obstructs the normal flow of traffic. If necessary the sign may be made to read NO STOPPING ON PAVEMENT (R-30).

These signs shall be 24 inches by 30 inches in size, using red letters and border on a white background. They shall be mounted at right angles to the pavement, facing approaching traffic, and not less than 6 feet nor more than 10 feet from the edge of the pavement. They should ordinarily be reflectorized. Where off-pavement parking is likely to occur, they should be mounted not less than 7 feet nor more than 10 feet above the pavement level. If parking is not practical, they should be at a height of 3½ feet to the bottom of the sign. They should be located at those points where hazardous parking is likely to occur, and at necessary intervals throughout any section where the condition exists.

Section 50.—Walk on Left Sign (R-31)

On rural highways where no sidewalks are provided, a pedestrian sign WALK ON LEFT FACING TRAFFIC may be used to encourage safer pedestrian habits. This sign shall be 18 inches by 24 inches in size, with black lettering on a white background. It should be erected, ordinarily on the right-hand side of the road, where pedestrians must walk on the pavement or road shoulder in the absence of pedestrian pathways or sidewalks. It is particularly desirable at the edge of built-up districts, where sidewalks are discontinued. It should be mounted at a height of 3½ feet to the bottom of the sign, and at the outside edge of the usable shoulder of the road.

Section 51.—Pedestrian Crossing Signs (R-32 to R-35, inclusive)

Pedestrian Crossing signs may be used to supplement traffic-signal control, or to aid in limiting pedestrian crossing to safe places. They will ordinarily be required only in business districts or at signalized intersections. The following messages are typical:

CROSS ON GREEN LIGHT ONLY (R-32).
CROSS ON RED LIGHT ONLY (R-33).
CROSS ONLY AT CROSS WALKS (R-34).
NO PEDESTRIAN CROSSING (R-35).

Pedestrian Crossing signs shall be 12 inches by 18 inches in size, with black letters on a white background. They shall be erected to face pedestrians about to cross the roadway at a height of approximately 7 feet to the bottom of the sign. Where signals are present, an appropriate location is on the posts supporting the signals.

Section 52.—Pedestrian-Actuated Signal Sign (R-36)

The Pedestrian-Actuated Signal sign should be used where it is desired to enforce pedestrian observance of traffic-actuated signals. To permit pedestrians to register a demand for the Go signal a pedestrian push button should be conveniently mounted on a post at each end of each cross walk controlled by the traffic-actuated signals. Such a push button should be at a height of from 3½ to 4 feet above the sidewalk, and the Pedestrian-Actuated Signal sign, reading PUSH BUTTON FOR GREEN LIGHT, should be mounted immediately above it.

The sign shall have black lettering on a white background, and shall be 8 inches by 10 inches in size.

Section 53.—Road Closed Sign (R-37)

The ROAD CLOSED sign shall be used to mark roads that have been closed to all traffic (except the contractor's equipment and such vehicles as may be permitted to enter for access
to residences on the closed portion of the road) either because of construction or maintenance operations or because of a temporary emergency such as high water or a landslide. It should not be used where traffic is maintained or where a route is detoured several miles in advance of the actual construction or blockage.

The Road Closed sign shall be 40 inches by 24 inches in size, with black lettering on a white background. It shall be illuminated or reflectorized.

The sign shall be mounted on a barricade in the center of the roadway or directly facing traffic on the right half of the roadway, at a height of 2½ feet to the bottom of the sign. If a temporary or detour route begins at the barricade, a Temporary Route Assembly with a directional arrow (sec. 107) or a Detour sign (sec. 111) should be mounted just below the Road Closed sign, with the lowermost part of the assembly not less than 2 feet above the road surface.

Section 54.—Load Limit Sign (R-38)

Due to seasonal weakening of the road surface, obsolescence of bridges or pavements, or other impairment of a roadway, it is often necessary to limit the load permitted on a roadway. The Load Limit sign, reading LOAD LIMIT (10 TONS), shall be used to indicate such restrictions. The sign shall be 18 inches by 24 inches in size, with black lettering on a white background. It shall be located immediately in advance of the bridge or other structure to which the restriction applies. In the case of an extended length of road, the sign shall be placed on the right-hand side of the restricted roadway approximately 25 feet from any intersecting road on which the restriction does not apply, so as to be clearly visible from all vehicles turning into the restricted roadway. A supplementary sign may be necessary on the left-hand side of the roadway. If the limit applies at an intermediate point where there is no alternate routing, a special sign should be provided to divert heavy vehicles at the nearest intersection where a suitable detour is available.

Load Limit signs in rural districts shall normally be erected at a height of 2½ feet to the bottom of the sign, and not less than 6 feet nor more than 10 feet from the roadway edge. In residential or business districts where a low mounting height will not give adequate visibility they shall be mounted not less than 7 feet nor more than 10 feet above the curb or roadway. On entrance ramps or channelized roadways, or where a curb is present, they shall be as close to the pavement edge as practicable, with a minimum of 1 foot to the nearest edge of the sign. At bridges they may be mounted on the bridge structure.

Section 55.—Other Regulatory Signs

Regulatory signs other than those specified above may be required to aid the enforcement of other laws or regulations. They should be of adequate size, and designed with black lettering on a white background, on rectangular plates with the longer dimension vertical. They should be mounted in accordance with the general requirements for sign position (sec. 17), or as necessary to make them most effective.

Typical miscellaneous regulatory signs are TRACTORS WITH LUGS PROHIBITED, WET PAINT—DO NOT CROSS LINE, NO DUMPING ALLOWED, NO HITCH HIKING, and NO FISHING FROM BRIDGE. The uses for such signs are sufficiently obvious to require no detailed specifications.

C—WARNING SIGNS

Section 56.—Application of Warning Signs

Warning signs, as their name implies, shall be used for the purpose of warning traffic of hazardous conditions either on or adjacent to the road. Warning signs require caution on the part of the motorist and generally call for reduction of speed in the interest of his own safety and that of other motorists and pedestrians. Adequate warnings are of great assistance to the vehicle operator 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 tends to breed disrespect for all signs. Improved highway design generally reduces the need for warning signs.

Typical locations and hazards that may warrant the use of warning signs are:

1. Turns (secs. 59, 68).
2. Curves (sec. 60).
3. Reverse turns and curves (secs. 61, 62, 68).
4. Successions of curves, with or without short tangents (sec. 63).
5. Intersections (secs. 64-67).
6. Advance warnings of stop signs and traffic signals (secs. 69, 70).
7. Grades, dips, and bumps (secs. 71-73).
8. Changes in pavement widths (secs. 74-77).
9. Narrow roadways, bridges, and other points of limited clearance (secs. 76-79).
10. Road construction or repairs (secs. 81-83).
11. Other temporary road conditions (secs. 84, 85).
12. Pedestrian islands or similar obstructions (sec. 86).
13. School zones (sec. 87).
15. Entrances and crossings (sec. 90).

Determination of the sign to be erected shall be in accordance with the criteria set forth in the following pages. When doubt exists as to which sign to use, the one requiring the minimum restriction shall be erected.