

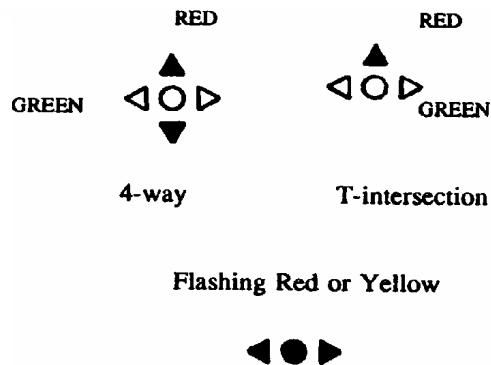
FEATURES

The **vehicle template** is divided into two sections. One half has cutouts scaled to *one inch equals twenty feet* (20X); the other section has cutouts scaled to *one inch equals ten feet* (10X). The 20X scale is the "universal" size and is used for sketching most non-fatal accidents. The 10X scale is used for diagramming critical accidents. A medium ball point pen will fit in all cutouts.

The corners of both templates are rounded with a variety of radii and are used to draw curbs.

TRAFFIC LIGHTS

Many diagrams involve traffic lights. These lights and their color at the time of the accident can be shown using the signal cutouts. A red light is indicated by filling in the triangle. A filled in circle indicates a flashing signal. The diagram illustrates this drawing technique.



SCALE RULERS

The vehicle template has scale rulers of 1 inch equals 10 feet and 1 inch equals 20 feet. These are located along the edges of the template.

COMPASS

A compass has been provided on the objects template for drawing large circles and radii. The numbers above the holes of the compass refer to the diameter of the circle that will be drawn. To draw a circle or an arc, a pointed instrument such as a pencil or pen is inserted in the hole marked "0". This point is held stationary. Another pen or pencil is inserted in the hole corresponding to the size of the circle desired and rotated around the stationary point.

PROTRACTOR

The protractor located in the upper left corner of the objects template is used to draw lines that intersect at various angles. For example, to draw streets intersecting at a 30 degree angle, first draw one of the streets. Next, place the small hole in the template (where the 90 degree lines of the protractor meet) at the intersection of the two streets. Now align the zero degree line on the protractor with the street line on the diagram and draw a short line at the 30 degree line on the protractor. Next connect the short line with the intersection and you have drawn one side of the street intersecting at a 30 degree angle. Repeat the process for the other side of the street.

SPEED NOMOGRAPH

The speed nomograph is used for estimating speeds where skid marks are present.

To use the nomograph, it is first necessary to estimate the skid resistance or adhesion factor for the given tire-road combination. This number is obtained from the table below.

Road Surface	Dry	Wet
Cement	0.60 – 0.75	0.45 – 0.70
Asphalt	0.60 – 0.80	0.40 – 0.65
Gravel	0.40 – 0.80	0.40 – 0.75
Cinders	0.50 – 0.70	0.65 – 0.75
Ice	0.10 – 0.20	0.05 – 0.10
Snow	0.10 – 0.55	0.30 – 0.60

After the length of the skid has been measured, the approximate speed can be determined by placing a straight edge (another template) on both the skid resistance number and the skid distance. The point where the edge crosses the speed line is the approximate speed that caused the skid. When the skid ends with a collision, the speed read from the nomograph is the minimum speed and the actual speed will have to be determined using more complex formulas.

The diagram on the other side of this paper illustrates how these templates are used to diagram a traffic accident. Note the use of triangles to show the direction of travel and the numbers in circles to identify the vehicles involved.

