Colorlight crossing indicators for train crews on the EJ&E

ing protection. Our standard on all such locations is to have time cutouts, and other cutouts actuated by hand-throw switches. On these locations we always install a colorlight type signal, which is marked with a letter "X," indicating that the signal pertains to crossing protection only. This signal incorporates the following features to give train crew information on how to handle the train movement:

1) When movement occupies the long approach, it approach lights the "X" signal, and if crossing protection is seized, the signal will display a green aspect.

2) When movement has lost the control of crossing protection on the long approach, the signal will display the red aspect, and then after a predetermined time interval, crossing protection will clear for highway traffic. This feature allows the train crew either to reseize the protection by occupying the short approach before the time interval runs out, or stop train movement before it reaches the short approach circuit. We feel this feature is the most important information given to train crew.

3) When the time cut or other cutout features shorten the long approach circuit, the signal will not display a green aspect until crossing protection has operated 20 sec. on flasher protection and when gates are lowered into horizontal positions at gate locations.

Snow on Signals

What methods do you use to prevent the accumulation of snow on the surface of signal lenses?

Very Little Trouble

By J. I. Kirsch
System Engineer—
Communications and Signals
Pennsylvania
Philadelphia, Pa.

We know of no special device or arrangement to prevent accumulation of snow or ice on signal lenses. The latest design of the hoods on position-light signal lamp units, as used on high signals on our railroad, to prevent the sun from shining into the unit and giving a reflected light, inherently serves also to prevent snow from accumulating on the cover glass. Seldom have we experienced trouble from this source, and when it happens rarely, the only remedy we know is to remove the snow by hand.

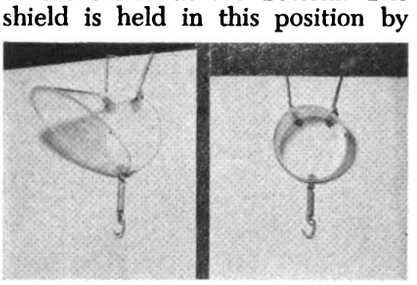
During the winter of 1957-58 we made a trial of a silicone solution for treating cover glasses of signals to prevent sleet and snow from adhering to the glass. This test was not successful. What snow did accumulate on the glass melted and then formed into ice, but did not fall off. It was necessary to remove the ice by hand, which came off in one piece, retaining the shape and contour of the cover glass.

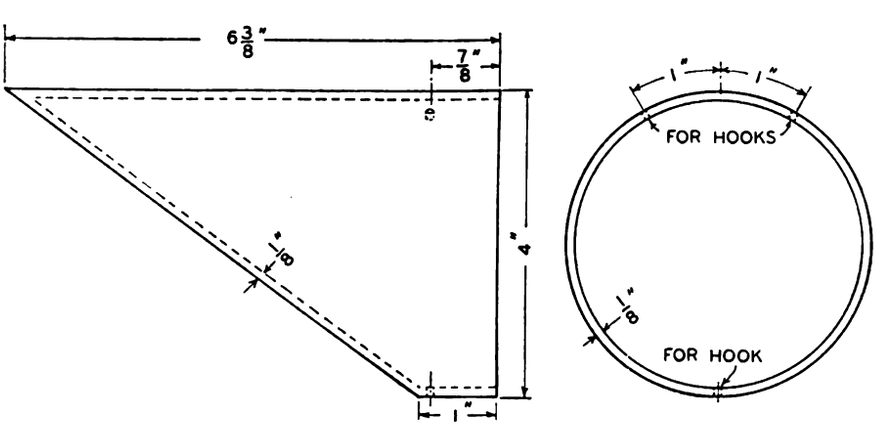
Use Snow Shields

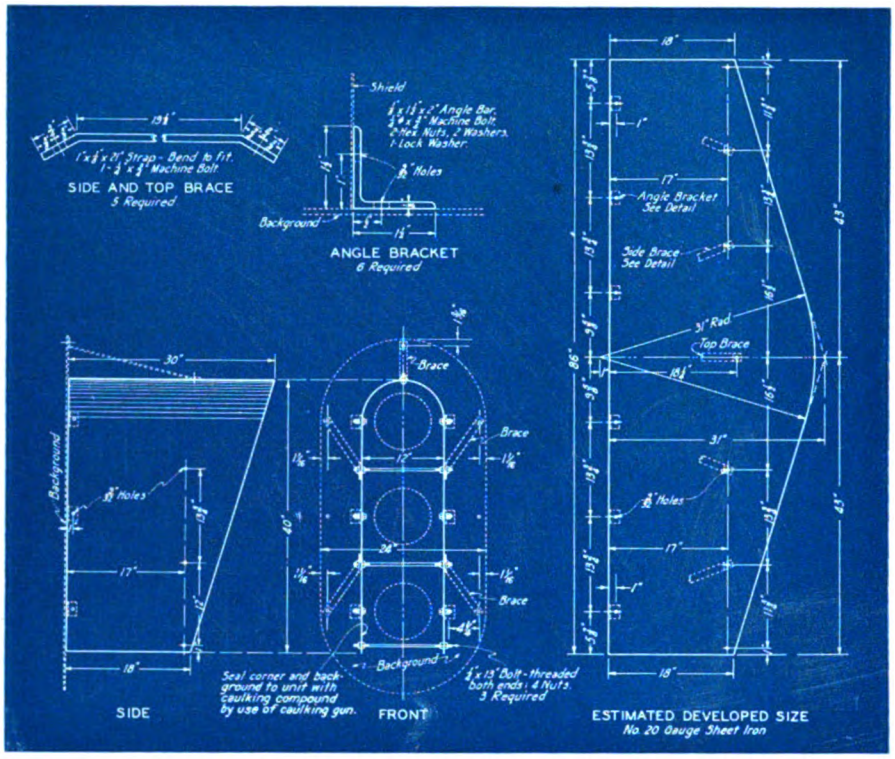
By B. W. Molis
Superintendent of Signals
and Communications
Denver & Rio Grande Western
Denver, Colo.

We use a plastic snow shield on searchlight signals. On signals equipped with this shield, we have never encountered an obscured aspect. It is made of transparent plastic tubing, 4 in. in diameter and 1/8 in. thick. One end is sawed off at an angle of 30 deg. This sloping end is completely closed by a piece, cut from flat 1/8-in. plastic sheet, sealed into the opening. The other end is cut at right angles to the axis of the tube. This end is left open.

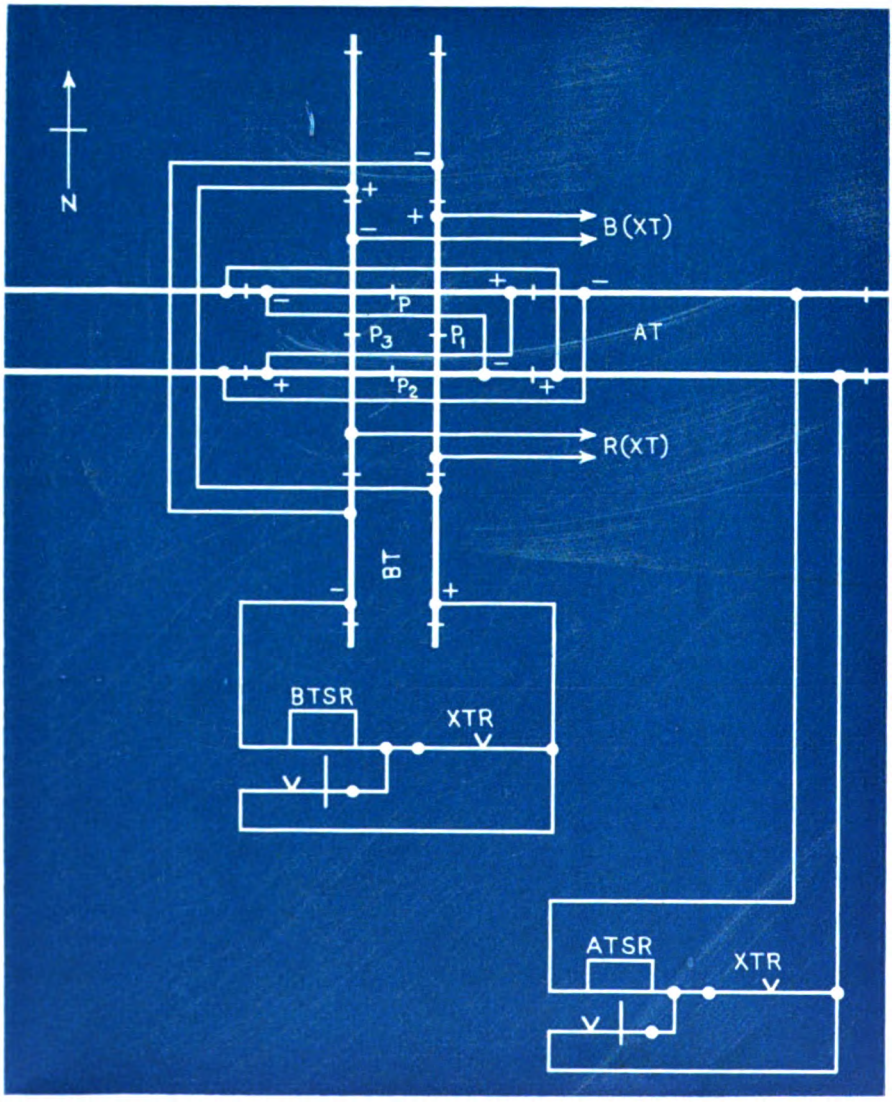
When applying this shield, the open end, 4 in. in diameter, is placed over the central portion of the cover glass of the searchlight signal, the tube extending from the cover glass, with the angled portion of the shield at the bottom. The shield is held in this position by







Above: D&RGW snow shields. Below: Staggered polarities for long dead sections



three wire hooks. The two hooks in the upper part of the shield fit the bezel ring cap screw spacings. The hook at the bottom includes a coil spring to give tension to hold the shield tightly against the face of the cover glass.

When snowfall is wet and sticky, it may accumulate on the top of the shield and on the portion of the cover glass not covered by the open end of the shield, but no snow adheres to sloping under surface of the shield. Therefore, the color aspect goes out through the section of tube and this sloping surface of transparent plastic. These shields are in service on searchlight signals on masts 14 to 15 ft high. No shields have been applied on bridge signals. No phantom indication has been experienced, even with foreign light directed to the signal.

On colorlight signals we use a metal shield (see plan). This shield has practically eliminated snow interference on colorlight signals.

Long Dead Sections

What are you doing to overcome the effects of the increasingly longer dead sections created by latest design of new crossing frogs with long wing rails, especially in view of the added problems being created by reduced wheel bases not only on locomotives but Adapto cars, and the like. Bear in mind that trap circuits of the conventional design, at least, cannot identify occupancy of the end unit of a cut which has been dropped off within such dead section.

Staggered Polarities

By V. J. Dougherty
Signal Inspector System
Southern Pacific
Stockton, Calif.

Construction and design of crossing frogs to permit installation of insulated joints at points, P, P-1, P-2 and P-3, would permit use of circuits similar to those in the drawing, at a minimum of cost, with complete protection provided. All polarities being staggered, breakdown protection is provided on insulated joints. Train operating on East-West railroad does not affect BTSR, and hence does not interfere with automatic block circuits on North-South railroad.

Conversely, operation on North-South railroad does not interfere with East-West block signaling.