CANADIAN PACIFIC RAILWAY COMPANY

MONTHLY SIGNAL REPORT

Signal Section No. ..... District .....

Division .....

Month of ..... 192....

| | Cause of Failure | Avoidable | Unavoidable | Total |
|---|---|---|---|---|
| Not Chargeable to System | | | | |
| | Total | | | |
| Chargeable to Track Department | | | | |
| | Total | | | |
| Chargeable to Signal Department | | | | |
| | Total | | | |
| Miscellaneous | | | | |
| | Total | | | |
| | Grand Total | | | |

| No. of Signals | No. of Failures | Perfect Signal Operations | Operation per Failure | Trains Stopped | Train Signals | Trains per Stop | Percent Failure | Percent Efficiency |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Monthly Report of Signal Failures on a Division in Which Failures Are Classified Into Four Groups

and mailed the same day the failure occurs. The original is forwarded to the signal engineer, one copy is sent to the signal supervisor, one copy is given to the nearest telegraph operator and the fourth copy is kept for the maintainer's file. If at the time of the failure the cause is unknown, a corrected report must be forwarded after the cause of the failure is located.

Montreal, Que. E. S. TAYLOR,
Signal Supervisor, Canadian Pacific.

# Marker Lights on Single Track Automatic Signals

*Are marker lights necessary for single track automatic block signals? Are you using them in new construction? Why?*

### First Answer

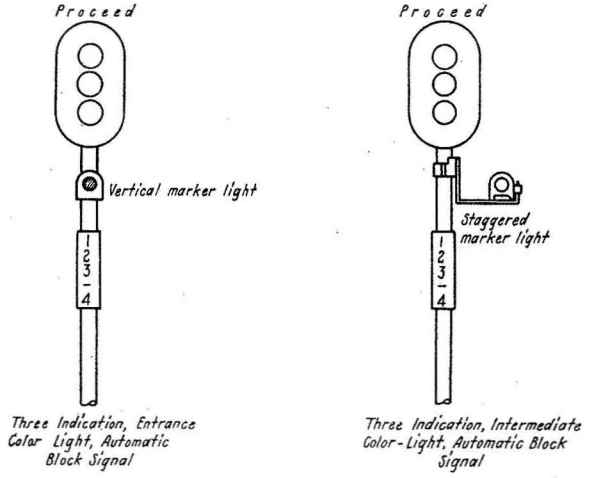
MARKER lights are not used at the present time on several railroads, due largely to the extra expense involved in maintaining them. On the Chicago, Milwaukee & St. Paul the signal indication is depended upon entirely as no marker lamps are used on single track automatic block signals. Moreover, no distinction is made between permissive and absolute automatic block signals; although this road uses some of the advantageous features of the A. P. B. scheme of single track signaling in shortening up the overlap for following movements, it has never gone into the complete scheme which involves the control of signals through from station to station. The St. Paul control system would be classified as single track automatic block signaling with standard overlap. At one time marker lights were used on the light signals in the electrification zone, but at head-block locations these sometimes lined up with the switch lamps which was objectionable and the marker lamps were discontinued. It has been the experience of this road that the absence of marker lights has not resulted in any sacrifice in operating efficiency or safety. Their discontinuance, on the other hand, has resulted in an appreciable saving in maintenance and current consumption.

The Missouri-Kansas-Texas has used a marker light on absolute stop signals which this road now terms as home signals, but this practice has been discontinued. Absolute or home signals are now designated entirely by a square end blade while permissive signals are designated by pointed end blades. Markers have never been used on permissive signals. After thorough discussion of this question of marker lamps on single track automatic signals among the signal officers of the road it was agreed that the expense of maintaining marker lights could be avoided by using pointed end blades for permissive signals and square end blades for home signals. Another road in this territory which has never found that the marker light was neecssary is the St. Louis-San Francisco and it has never used any on automatic block signals.

### Second Answer

WITH the use of the semaphore I am not so sure that they are necessary, and would be inclined, if I used them at all, to use them on absolute signals only. With the use of the color-light signals, however, I believe they are a help if not an actual necessity, and especially on the absolute signal.

One advantage is that a train on a siding, at night time, is enabled to "locate" itself especially if the signals be approach lighted and the marker lights permanently lighted on the absolute signals but approach lighted on the intermediate signals. Some one may say this practice is not logical because the marker light is likely to fail. When equipped as we equip them the chance of failure is small. We at first decided on the 2-c.p. 110-volt lamp and then later changed to a 2½-watt 6-8 volt lamp




**Marker Lights Are Approach Lighted on the Intermediate Signals and Continuous Burning on the Absolute Signals**

burning at approximately 6 volts. This lamp has long life and the hardihood to stand abuse.

The question refers to the staggered marker light as being on the left of the pole. That is true with respect to semaphore signals, as that is the only location that would afford the staggered indication, but we use them on the right-hand side of the pole with intermediate color-light signals, and perpendicular with the signal lights on absolute signals as shown in the drawing herewith.

Nashville, Tenn. GEO. S. PFLASTERER,
Signal Engineer, Nashville, Chattanooga & St. Louis.