

EDITORIAL COMMENT

The Benefits of Either-Direction Signaling

SEVERAL ROADS, which have installed centralized traffic control on lines with two or more tracks, have arranged the signaling for train movements in either direction on each track. The principal advantages of this plan are that it permits two or more tracks to be used simultaneously in either direction during a peak movement, and that it expedites run-around movements. Another decided advantage of either-direction signaling, which was developed on a C. T. C. installation on the Peoria & Pekin Union during a recent severe snow storm, is the opportunity to so route trains that the minimum number of switches need be kept free of snow and ice.

In this particular installation, the C. T. C. installation extends over 7.6 miles of line, including 16.6 miles of track and involving three layouts which formerly required separate interlockings. The signaling is arranged to permit the running of trains in either direction on each track. Although there are 22 power-operated switches in the C. T. C. territory, the trains were so routed during the recent storm that it was generally necessary to keep only two, and occasionally three, of these switches clear of snow. Throughout the entire storm, which lasted several days, no train was delayed on this territory. The manner in which this was accomplished is evident by reference to the accompanying track and signal diagram. There is an interlocking at each end of the C. T. C. territory with track facilities so arranged that trains can be directed to or from each track. The No. 1 main track, the top one in the diagram, was used for Illinois Central, Big Four and Chicago & Illinois Midland passenger trains running in either direction between Bridge Tower (Peoria) and Pekin. Likewise, light engines and freight cuts running between Bridge Tower and East Peoria yard were run in either direction over track No. 2, and were diverted at the turnout just east of signal 222, which was kept clear of snow. All freight trains entering or leaving the yard at Wesley were handled over the turnout switch just west of signal 321, which was kept open, being operated in either direction over

track No. 2 between Wesley and Pekin or Hilliard. The C. & A. passenger trains were run in either direction on track No. 2 between Bridge Tower and Hilliard, the switch for the turnout at Hilliard being kept clear for the diversion of both passenger and freight trains of the C. & A.

Thus, by use of the either-direction signaling, it was practical to operate all trains with only three switches in service. However, it is not to be assumed from this that the remaining 19 power switches could be removed without hampering normal operations, as all of these switches are used to advantage when traffic is normal. The moral of this story is that the slight additional cost of providing for either-direction signaling was well justified.

Replacing Semaphores

ONE OF the many ways in which a signal engineer can curtail operating expenses is to reduce, wherever possible, the cost of operating the signals and related equipment on his road. With this objective in mind, every item of equipment should be scrutinized closely to determine its economic fitness and the justification for its continued use. One of the important items to be considered is the automatic signaling.

There are more than 56,000 automatic semaphore signals in service in the United States today. Almost all of these signals were installed before light signals had been developed for use on steam roads. Practically all of these semaphores are operated by electric motor and are held clear by a solenoid device which normally consumes an appreciable percentage of the total current consumption. Furthermore, many of these semaphores are equipped with continuously-burning or approach-controlled electric lights of comparatively low optical efficiency.

This is an opportune time to make an intensive study to determine whether it is advisable to replace these old semaphores with modern color-light signals. The three-unit type of color-light signal, with Lebbly reflectors and a five-watt lamp, is being used satisfactorily on some roads, one of which is the Great Northern. Other roads, such as the Atlantic Coast Line, are using

