

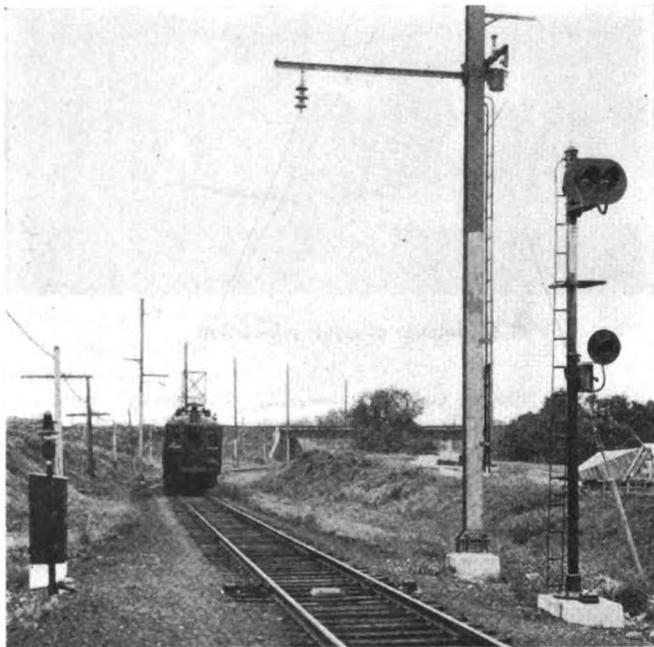
side to Hatboro section is fed from a pair of feeders extending from Jenkintown to Hatboro and connected to the Wayne Junction-to-Neshaminy Falls power line. The substations feed the following sections:

The Reading Terminal has an emergency feed to Wayne Junction. Wayne Junction feeds normally to Reading Terminal, to Neshaminy Falls by way of the short line, and also by way of Jenkintown and Hatboro. A spare converter set is provided at this substation for emergency use. The Hatboro station provides an emer-

#### Motor-Generator Sets

Location	Kv-A
Reading Terminal .....	120
Wayne Jct. ....	120
Neshaminy Falls .....	120
Yardley .....	30
Jenkintown .....	60
Hatboro .....	30
Orvilla .....	(2) 60
Bethlehem .....	60
16th Street .....	10-50
Shawmont .....	10-50
Nicetown .....	10-50
Gladwyn .....	10-50

gency feed to Glenside. Neshaminy Falls provides an emergency feed for Wayne Junction and Hatboro and



On single-track territory on the Hatboro branch—Note special signal

Yardley. Skillman feeds normally to Yardley. Yardley provides normal feed to Neshaminy Falls. Orvilla provides emergency feed to Jenkintown and to Bethlehem as well as to Doylestown. Jenkintown furnishes normal feed also for the Doylestown branch. Three phase, 60-cycle power is available at the different substations.

The motor-generator set, switchboard and transformers at Reading Terminal and Wayne Junction were furnished by the Westinghouse Electric and Manufacturing Co. This class of equipment at Jenkintown, Orvilla, Bethlehem, Hatboro, Neshaminy Falls and Yardley, were furnished by the General Electric Co.

All signal material was furnished by the Union Switch & Signal Company and installed by its construction forces under the jurisdiction of the signal engineer of the Reading Company.

## G. N. Asks to Remove Train Control

COMMISSIONER Frank McManamy of the Interstate Commerce Commission will conduct a hearing at St. Paul, Minn., on September 3 on a petition filed with the commission by the Great Northern for authority to discontinue further maintenance and operation of the automatic train-stop and train control devices on its line between New Rockford and Williston, N. D., 229.3 miles, and for an order vacating, insofar as they pertain to the Great Northern, the commission's orders of 1922 and 1924, as amended, pursuant to which the devices were installed.

The petition shows that the cost of maintenance and operation of the automatic train-control for 1928, 1929 and 1930 amounted to \$26,954 for roadway and \$27,564 for locomotives, a total of \$54,518, or an average of \$18,172 per year or \$1,514 per month. It was manufactured by the Sprague Safety Control & Signal Corporation at a cost of \$368,992, including installation. It is stated that the character of the railroad between these points is such as not to reasonably require the maintenance of automatic train-stop and train-control devices; that the company's record for safety indicates that they are not reasonably necessary on any part of its lines, and that a much greater return for money which it will be required in the future to spend for maintaining the devices can be realized in the way of safety to passengers and employees and protection of property by equipping additional portions of the railroad with the automatic block system, by eliminating dangerous grade crossings with highways, by making improvements and betterments.

For example it is stated that the \$1,500 per month expended for maintaining the devices would more than equip a dangerous highway crossing with the most efficient automatic signal protection "and one such crossing so equipped each month would go far toward reducing the number of collisions between trains and automobiles at public crossings which are a constant hazard to both persons using the highway and to passengers and employees on trains."

It is stated in the petition that the territory on which the devices were installed is one of light traffic density, that the number of passengers carried on the Great Northern decreased from 8,168,937 in 1916 to 1,694,437 in 1930, and that the trend has continued downward: that the reduction in passenger-train miles on the system for 1931 will amount to almost 20 per cent below the figures for 1930. It is also stated that while during 1930 the number of collisions per million locomotive miles run on all railroads of the United States having total locomotive miles of 20,000,000 or more ranged from 0.60 to 3.84, the Great Northern had 1.43 collisions per million locomotive miles, the tenth lowest of the railroads mentioned.

In conclusion it is stated that "of the railroads now maintaining automatic train-stop and train-control devices petitioner is the last in the order of traffic density in the territory protected by these devices of any railroad in the country with the exception of a subsidiary of the Southern Railway. While train-stop and train-control devices may be justified on certain railroads under certain conditions, they are not justified under the conditions which obtain on petitioner's railroad."