



Large scale project, involving 315 miles of railroad line, is being rapidly pushed to completion—Signal, telephone and telegraph construction efficiently handled by 2300 men

# Pennsylvania Electrification Signaling

THE Pennsylvania is rapidly pushing to completion the latest project in its electrification program. The signal, telephone, and telegraph construction, which has required a peak crew of 2,300 men, is co-incidental with the electrification of 315 miles of railroad line, involving 773 miles of track. The program now under way supplements and extends into new territory the electrification completed in 1935 between New York, Philadelphia, Pa., Baltimore, Md., and Washington, D. C. (For information on the previous installations see *Railway Signaling*, page 245, May 1935, and page 213, June, 1931.)

In addition to the main line from Paoli, Pa., to Harrisburg, the current project includes the heavy freight route between South Amboy, N.J., and Monmouth Junction; the low-grade freight line from Morrisville, Pa., to Thorndale, Parkesburg to and including Enola yard at Enola; freight lines along the Susquehanna river between Cresswell and Perryville, Md.; and the Columbia Branch between Dillerville and Royalton. Embraced in the project also is the electrification of the freight yards at Pavonia, N.J.,

and South Philadelphia, as well as additions to present electrification in the New Jersey yards at Harsimus Cove, Meadows, Waverly, Linden, South Amboy, and Trenton; Frankford Junction and 52nd Street, Philadelphia; and Thurlow, Pa., near Chester. Regular passenger service was inaugurated on the main-line Paoli-Harrisburg sector on January 15, 1938.

**Features of new signal work include extended sections of universal code track circuits for wayside and cab signals, respacing of signals for high speed, extensive revision of 24 interlockings, 2 interlockings changed to C.T.C. installations, new signal power substations and transmission line, and the conversion of open-wire line to cable in the entire territory.**

Completion of the work will enable the Pennsylvania to realize the advantages of continuous electric operation of trains in the entire territory between Harrisburg, Philadelphia, New York, Baltimore, and Washington. Upon completion the Pennsylvania will have 2,677 miles of electrified trackage.

The actual electrification construction work, and a few features of the signal construction, such as track bonding and signal transmission line, is being done by four contractors, each contractor working on specified sections of the railroad, under the direction of the chief electrical engineer.

## Organization for Signal Construction

The signal work on this project, as might be judged from the number of men engaged, is quite extensive. In order, therefore, to facilitate the handling of men and material, and to provide for efficient co-ordination of the work, a separate electrification signal, and telephone and telegraph, construction force was established under the direction of a specially assigned







