

EDITORIAL COMMENT

Prepare for Construction

NUMEROUS railroads, which have had but little or no signal construction to handle during the past several years, may encounter certain difficulties in organizing forces to carry through new construction now being planned or contemplated for 1937. The first pinch, which has already been noticed on several roads, is a shortage of draftsmen, estimators, and designers. The number of men on such work was reduced to a minimum on many roads early in the depression. Some of the men were retained in the maintenance forces, but perhaps the majority drifted in to other industries. Now that the prospects are good for continued activity in signal construction work, many of the roads will be faced with the task of training men in signal drafting and circuit designing work. In certain instances, it may be that some of the maintainers have had some training in drafting or at least are anxious to apply themselves industriously in learning this type of work. Certainly their previous experience in construction or maintenance should give them knowledge of the basic principles of design work. As one method of meeting the present emergency, some roads are using various means of simplified duplication processes and other short cuts to rush the office work.

Likewise, there will undoubtedly be a shortage of good signal construction men as soon as spring programs get under way. A majority of the men employed as signal wiremen on construction work six or eight years ago are not available for this work now. Some went to other fields, some have settled on maintenance jobs and do not now want to move about in construction crews. On new jobs, where experienced wiremen are not available, the foremen in some instances will have to train new men in as wiremen as the jobs progress. In order to facilitate this work, many roads are wiring the instrument housings in a shop or at construction headquarters, while with certain types of installations, the cases or housings may be wired in the factory.

The cost of installation of concrete foundations for signals and instrument housings is one of the major items of construction costs that deserves considerable study before starting a large job. Some of the practices used extensively in the past include (1) mixing and pouring each foundation by hand locally, (2) using a portable light-weight power mixer locally at each foundation, (3) using a power mixer outfit on a work train, (4) precasting the foundations at a central point and setting them in place with a power derrick. Each method has merits under certain circumstances.

Many construction jobs will be delayed and time will be wasted by the forces unless unusually keen fore-

sight is used in planning installations far enough ahead of time to secure delivery of materials as needed in the field. Undoubtedly, a large volume of signal equipment and accessory materials will be ordered during the next few months, and those roads that get their orders in ahead of the rush will benefit accordingly, by having materials when needed to co-ordinate the field construction work.

Improving Signaling Performance

THE prevention of failures of signal apparatus, which may cause unnecessary delays to trains, has become increasingly important in recent years especially on those roads which have inaugurated new fast trains or reduced the running time of important fast passenger and through freight trains. The signal department forces are, therefore, more than ever before, faced with the problem of constructing and maintaining their equipment so that it rarely fails; and, if a failure does occur, of correcting the trouble quickly so as to delay a minimum number of trains. This statement may seem to be trite in that it covers the whole duty of the signal department. Nevertheless, many roads are finding it necessary, when criticized by the operating officers, to approach the problems of signaling with an entirely different point of view in order to improve signal performance.

On some roads, new men being developed for maintenance positions are given a course of instructions, including the elements of electricity, basic principles of signaling, typical circuits, etc. In addition, one road devotes considerable instruction to methods for locating the causes of typical cases of incorrect operation of signaling.

Of course, many of the maintainers have been in railroad service for years and the majority have been on the same territories for extended periods, so that they have gradually acquired much valuable information concerning means of inspecting their equipment so as to prevent failures, as well as to locate trouble quickly when it occurs. Many of these men have had special cases of trouble not as yet encountered on other territories or other roads. A complete explanation of the circumstance involved would be helpful to many other signalmen, especially to those who have not been in maintenance work very long. This could be accomplished by assembling the information in the office of the supervisor or signal engineer and then preparing copies in mimeograph form for distribution to all maintenance men, to be studied and kept on file.