Editorial Comment

Two Single Tracks, Side by Side

THE practice of running trains in both directions on each of two tracks, of a double-track line, is not new, but several new ideas and benefits have been brought to attention by the recently completed installation of centralized traffic control on 75 mi. of two main tracks on the Chicago & North Western.

Many years ago some roads, which ordinarily operated trains right-hand running on double track, gradually developed a practice of using train orders to authorize "wrong main" moves between interlockings, as a means of running faster trains around slower ones which were kept moving at normal speed. As protection for these reverse movements, some railroads installed traffic-direction locking, and a few roads added intermediate signals to permit following train movements. Reverse running, with these forms of protection, and with train movements authorized by signal indication, is in service on sections of two-track on a considerable number of roads, as listed in I.C.C. statistics. On a 13.5-mi. section of two main tracks, the Boston & Maine, in 1929, installed centralized traffic control with signaling for both directions on both tracks, and a similar installation was completed the same year on 32 mi. of two main tracks between Dallas, Tex., and Fort Worth on the Texas & Pacific. The Missouri Pacific, the Boston & Maine, and other railroads have since made installations of C.T.C. on double track, some of which are quite extensive.

In general, however, it may be said that, although centralized traffic control has been installed very extensively on single-track lines, this system has been adopted by only a few railroads on sections with two or more tracks. Hesitancy to make such installations may have been due, in some instances, to a lack of specific information concerning the benefits to be derived by a project including universal crossovers spaced so that run-around moves can be planned and executed as regular practice, rather than as the unusual. In this respect the Chicago & North Western project is outstanding, to the extent that train delays on sidings, rather than run-arounds, are unusual. Advance detailed study to locate the crossovers properly —depending on several considerations—has been an important factor in increasing the number of run-around moves. Preliminary studies, based on time-distance charts to show how train movements could be made, gave adequate advance proof of the benefits to be derived by the new track and signal facilities. However, keen foresight, conviction of purpose and perserverance were essential to inaugurate this project and see it through to completion and utilization.

This discussion is not intended to convey an impression that train operation in both directions on both tracks is a cure-all for operating problems on all sections of two-track roads. The benefits are most pronounced on sections, such as on the C. & N. W. project, where the preponderance of train movements is in one direction or the other during certain hours of each 24-hr. period. Also, many of the benefits have to do with the ability to facilitate train movements in and out of terminals or yards. Accordingly, the locations of terminals and yards, with respect to a proposed project, are important factors.

Having planned and installed the track layouts and centralized traffic control on the basis of handling traffic adaptable for run-arounds on two main tracks, a remaining factor is the acceptance and effective untilization of these new facilities on the part of the operating department, especially dispatchers. On the North Western, this acceptance is enthusiastic and utilization is highly efficient. This has been brought about by a spirit of cooperation on the part of the dispatchers, and by the fact that the system was brought into service in short sections, each including not more than one entire crossover layout. Thus, the dispatchers, enginemen and others, having to do with the operation of trains, had opportunity to acquire knowledge of the system gradually. Therefore, soon after the final location was completed, the efficient use of the system as a whole was readily evident.

Thus, this North Western project is an excellent example of an application of modern track layouts and signaling on two-track territory as a means of improving train operations, by increasing the capacity of existing main tracks, thereby improving service to passengers and shippers, and reducing operating expenses.

Increasing Use of Carrier

YEAR after year, the railroads are installing more and more carrier current equipment, not only for communications but also for line code circuits for centralized traffic control. As shown in the statistics in the January issue, the railroads in the United States and Canada, during 1949, superimposed carrier on existing line wires to derive 34,931 circuit miles for long-distance telephone, 44,010 circuit miles for telegraph, and 35,018 circuit miles for printing telegraph. Typical use of single-channel carrier, as applied for telephone and for printing telegraph on the Western Pacific was explained in an article in the February issue. Also, typical use of carrier for C.T.C. was discussed in an article on the Union Pacific in the December issue.

The widespread adoption and installation of carrier, and the fact that the Western Union Telegraph Company is now well along in its program of relinquishing its ownership or joint ownership of pole lines on railroads, are considerations that may lead to entirely new conceptions of railroad pole lines in the future. A first thought, of course, is the use of carrier on existing line wires to derive more circuits, and thus, at a very reasonable cost, secure line circuits for much needed telephone and printer service. Looking a bit more to the future, is a thought that, when replacing, existing wire, the new ones may well be of greater tensile strength, the better to withstand storms, the additional cost being justified by the increased number of circuits on the wires.

New stronger wires and fewer wires, together with the practice of 100 per cent railroad ownership, may lead to more extensive and effective consolidation of circuits, now on two or more pole lines, onto one pole line, when such lines are due for reconstruction or heavy repair, Micro-wave systems, which were demonstrated and tested on the Pennsylvania and the Long Island, and now in service on the Rock Island, may be further developed and installed to handle some circuits now on line wires. Such possibilities, and others, are worthy of investigation, and may well be analyzed carefully before pursuing past practices or adopting new ones on line wires and pole lines.