Editorial Comment

Consolidated Control of Interlockings

MODERN equipment for controlling power switches and signals remotely has made it practicable to consolidate the controls of what was previously several interlockings on entire terminal areas or on extended mileages of up to 100 mi. or more. Such consolidations not only reduce operating expenses decidedly, but also are a means of improving the coordination of train movements, because one man has direct charge of the controls.

One railroad has inaugurated a program for consolidation of the control of all the interlockings on a 107-mile double-track division. The controls of three interlockings in the terminal area at the north end have already been consolidated in one tower. Following a proposed reconstruction of the yards at the south end of this division three interlockings will be controlled from one tower. This leaves nine interlockings on the line of road between terminals—three of these interlockings being now controlled from a machine in the dispatcher's office—and it is anticipated that, as soon as practicable the control of the remaining six, as well as the control of one new plant to be installed will all be brought into the same machine in the dispatcher's office. These interlockings will include all the crossovers and sidings which are normally used by through trains. An important feature of this overall project is that train operations in and out of the yards and junctions in each terminal area are to be controlled locally by one man, working under the supervision of the dispatcher who also is to have direct charge of the control of the remainder of the interlockings out on the line of road.

On another railroad, the construction of a new classification yard required three new junctions and changes in train operations at seven existing junctions, all within an area about two miles wide and eight miles long. The power switches and signals which form interlockings at five of these junctions are now controlled from a new centrally located modern interlocking machine. In the future, when the old mechanical interlockings at some of the other junctions are replaced by power switch machines and signals, these, too, can be controlled from the central machine. The new project now includes controls by means of which train movements are authorized by signal indication. Thus train movements are coordinated, so that stops and delays are minimized.

On still another railroad, centralized traffic control has been installed to control crossover layouts and junctions on 32 miles extending from the eastern end of a 100-mile double-track division. A proposed project includes the control of not only an interlocking at the entrance of the yard at the west end of the division, but also the control of siding switches and crossovers used by through trains on the west end of the division. This leaves one large interlocking at a complicated junction layout near the center of the division that will continue to be controlled locally.

Thus, in large terminal areas or throughout extended road mileages, the consolidation of the control of interlockings is proving to be practicable, and is paying for itself by reducing operating costs.

More Communications Needed With the 40-Hour Week

ONE of the subjects of conversation at the recent convention of the Communications Section, A.A.R., was the need for more communications service on the railroads. This need has been increased during the last year because the 40-hour week has necessitated more intensive supervision. In all the departments affected, there is an added need to minimize delays when employees encounter unexpected situations which necessitate revised directions from supervisory officers. In such instances, a supervisory officer may need to confer with his superior officer at general headquarters, before he again calls his foreman. These instances prove a need for modern telephone facilities with capacity sufficient to handle all calls promptly.

Such capacity is not available on many railroads because of two limiting factors: (1) insufficient number of line circuits between division offices and district or general offices, and (2) antiquated, manually-operated switchboards that require operators on duty at all hours. The wages for these operators are increasingly expensive under the 40-hour week, and, therefore, these higher operating expenses are an added justification for the installation of automatic telephone exchanges to replace the old manual switchboard systems. With automatic exchanges in service at general offices and several division offices, connected by an adequate number of trunks, some roads thus provide for dialing through two or more exchanges. The fact that this service is available 24 hours every day, at a minimum operating expense has proved to be a great help to the men making the calls. With either manual or automatic exchanges additional line circuits between headquarters are needed on many roads as an aid in handling the increasing number of calls. Many roads are obtaining these additional line circuits by installing carrier equipment, and microwaves are a new possibility in this field.

The men who use telephone service on railroads are inclined to accept such service as they may get. If they have to wait 30 min. to an hour to get a call through, or never get through at all, they accept this as inevitable. In such situations, it would seem that the communications officers of such roads are the ones who could make a study of the requirements for telephone service that could be used efficiently, and then make recommendations as to the equipment needed to furnish the service needed.

The three factors which favor action now are that: (1) there is a decided need for increased communication service; (2) modern equipment is available to do the job efficiently, and; (3) the savings in operating expenses will amortize the investment at a rapid rate.