

Crossing Protection Installed Extensively on the Milwaukee

Recent installation of wig-wag, flashing-light and rotating disk types of signals has increased safety and reduced cost of operation

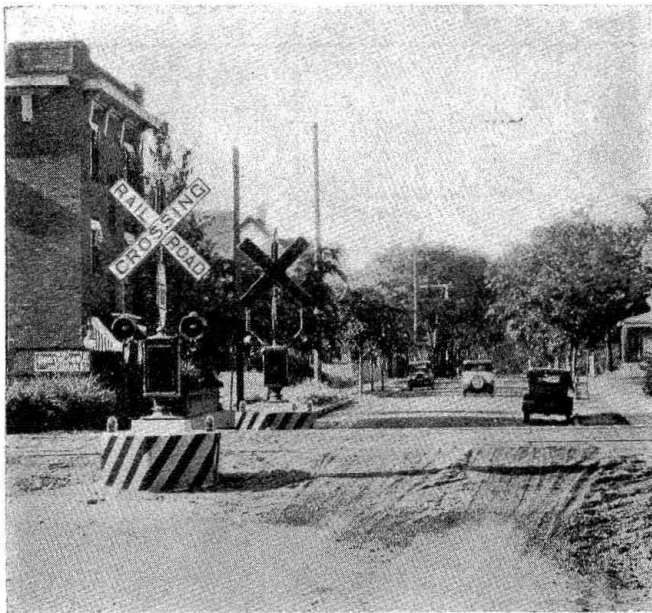
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A GREAT deal of consideration is now being given to the means of providing protection for the public at street and highway grade crossings of railroads. The objective is, of course, to afford maximum protection at minimum cost. Different schemes of control such as automatic, manual, or a combination of both, are being used. In many instances, centralized manual control of the signals at several crossings is feasible. Where only part-time manual protection had previously been in effect, the installation of crossing signals arranged for operation throughout the 24 hours, increases the safety. When this, together with other features such as greater effectiveness, flexibility and dependability, are fully explained, city authorities are more ready to go along with the idea of replacing the older forms of protection.

Griswold Signals Installed in Twin Cities

During the past year and a half, 88 Griswold signals, including 11 of the traffic type, have been in-



Stop disk is rotated 90 deg. when no trains are approaching stalled at crossings on the C. M. St. P. & P. in St. Paul and Minneapolis. This type of signal was adopted as a result of a number of conferences with the city planning engineer, traffic committee and



Rotating disk-type crossing signals at 24th street, Minneapolis

other city officers. The most recent installation, consisting of 50 signals providing protection for 19 adjacent street crossings, is probably one of the largest single installations of its kind ever made.

This installation, as well as six others in the Twin Cities, was handled by the Griswold Signal Company under contract. This particular installation was completed in one month. An idea of its size may be gained from the fact that 65,000 ft. of wire and 5,000 ft. of conduit were used. The contractor used metal forms for concrete work and cabinets made of celotex, with oil heaters inside, were placed over the foundations to keep them from freezing as the work was done in cold weather. An Ingersoll-Rand pavement breaker was used to cut through the pavements to lay cables. The cables are No. 8 single-conductor 600-volt, lead-covered.

Heavy Traffic Conditions

The 19 crossings are located between the Minneapolis passenger station and South Minneapolis, at which point the tracks from St. Paul and East, the Iowa and Minnesota divisions from the south, and the Hastings and Dakota divisions from the west, converge. In addition to trains of the Milwaukee, the Chicago, Rock Island & Pacific and the Minneapolis, St. Paul & Sault Ste. Marie also operates over the Milwaukee tracks in this territory. A total of 140 regular trains are scheduled over these crossings daily and in addition a great many coach and switching movements are made. The number of tracks over the crossings varies from 5 to 11. The right-of-way cuts diagonally through a highly congested area of the city, intersecting several streets on which the traffic is exceptionally heavy. A number of the streets carry over 15,000 vehicles in 8 hr. in addition to a heavy street car movement.

A total of 66 gates were removed from the 19 crossings. Twenty-four-hour protection is provided in place of 10 and 18 hr. protection, previously furnished at all except three of the crossings. The number of accidents occurring at these crossings has

