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## The Canadian Engineer

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CIVIL, MECHANICAL, STRUCTURAL, ELECTRICAL, MARINE AND MINING ENGINEER, THE SURVEYOR, THE MANUFACTURER, AND THE CONTRACTOR.

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### CONTRACT AND DIRECT LABOR.

One of the questions that was discussed at some length before the Irish Road Congress was the replacing of the contract system by direct labor.

The contract system had been compulsory in Ireland until 1907, but by an amendment to the local Government Board's Act direct labor was made permissible. The authorities, however, have been very slow to adopt the direct labor principle.

Just now, in Canada, the direct labor and contract systems are competing very keenly for municipal work. Ten years ago nearly all municipal work was done by contract. To-day, the city engineer's department figures very closely on municipal work, and the city engineers are competing in more varied lines of work this year than in previous years.

From the city engineer's point of view it would be much easier for him to continue the contract system, as this entails much less labor and supervision. The preparation of a workable scheme for direct labor is difficult because of the number of friends the municipal council, who are the employers of the engineer, have, and the additional instruction assistants and clerks require who have to do with the various branches of the work. Where a permanent staff can be employed and maintained throughout the year it is not difficult, but where, for the summer months, the engineer is to assemble a staff and train it, and then about the time they are doing efficient work in the autumn, he has to disband them, it is a question whether there is any saving to the municipality. When a permanent staff is necessary the year around, the organization may be perfected and efficient work done, the success of the assistant depending upon not only the class of men available, but upon their remaining in the service.

One danger that has to be avoided in the direct labor system is carelessness in bookkeeping. Unless a proper auditing and a proper distribution of labor is made, it is more than likely that the corporation will pay for work that should be charged to individual sections. It is so easy to cover up the leaks in each particular work this way. Another difficulty that is being met is the influence the whole body of laborers have in the district. They control the organizations and have a direct influence on municipal affairs, and occasionally to their own personal advantage. Councils have more than once been influenced by corporation employees to leave alone departments that should be reorganized. A corporation employing four or five thousand men who vote at annual elections will find it necessary to watch with care the organization under which they work.

#### ELECTRIC RAILWAY PROFITS.

It has been said that the rate of profit on hydroelectric enterprises has been gradually decreasing, and the same apparently holds true in connection with electric railways. The causes which are bringing about this