

wheat between Fort William and Montreal, via both routes.

The average rate on waterborne wheat between these points in 1912 was 5.774 cents per bushel, of \$1.92 per ton. To this should be added the contribution by government of .140 cent per ton per mile, equal to \$1.72 per ton, making the total \$3.64 per ton. The rail rate of the Canadian Pacific Railway between Fort William and Montreal is uniformly \$4 per ton, or .402 cent per ton per mile. The average rail rate of all the railways of the West on wheat is not higher. On a longer haul, say, from Winnipeg to St. John, New Brunswick, it is even lower; so that the comparison is fair. Thus, we have on this statement of facts a water rate of \$3.64 per ton as compared with a rate of \$4 per ton by rail. That comparison, however, is based on an average water rate on wheat of 5.774 cents per bushel. The maximum water rate for the season of 1912 between the same points was 8 cents per bushel, and at that rate the charges by water were 29 cents per ton higher than were the current charges by rail. A fair conclusion is that, on the whole, the water rate paid by the shipper is lower on certain commodities which are peculiarly suitable for transportation in steamers; but there is not a material difference between water and rail rates when all the facts and conditions are taken into account. The difference in favor of the water rate is created wholly by the fact that a considerable part of the actual cost of transportation by water is paid by the people at large.

EDITORIAL COMMENT.

Notable among the week's proceedings of engineering interest is the government call for tenders, for the Toronto harbor development, the plans and specifications for which are now complete. They pertain to seawall, breakwater, ship canal, turning-basin, retaining walls, etc. The seawall is to be 17,295 feet in length—over $3\frac{1}{4}$ miles—and is to be built in eleven sections. The structure will be of sheet piling and timber with a superstructure of concrete. The breakwater will be 18,600 feet in length and will be of timber crib work and concrete superstructure. The ship channel and turning-basin will be approximately 16,705 feet long and the whole area will be dredged to a depth of 24 feet. The retaining wall will be 6,894 feet in length.

* * * *

Ottawa and vicinity are interested in the expropriation proceedings recently instituted by the Ontario Hydro-Electric Power Commission in connection with the water-power rights at Chats Falls, on the Ottawa River, some thirty miles west of the city. A private company holds the present power rights by government lease granted two years ago. The price of relinquishment asked by them is some seven times the amount offered by the Ontario Government. The Ontario Railway and Municipal Board has the case before it, and evidence will be heard in September.

It is the intention of the Commission to use the power at Chats Falls as an Ottawa Valley and Eastern Ontario extension of the provincial system, over 100,000 horse-power being available for development in the district.

LETTERS TO THE EDITOR.

An Association for Municipal Engineers.

Sir,—Mr. R. O. Wynne-Roberts' letter in your issue of the 15th inst., has spoken the mind of many municipal engineers now engaged in the Dominion, and he evidently speaks from a knowledge of inter-communication between engineers, as I can trace his name through many English engineering associations.

Your editorial, sir, conveys a suggestion with reference to the Canadian Society of Civil Engineers, and one that every trained municipal engineer welcomes, the more so that he would be enabled to join an established and recognized community of engineers whose branches reach far out in the engineering world, and who possess amongst its members the eminent engineers of Canada.

The Dominion is developing rapidly, townships are springing up like mushrooms and the demand for public utilities in water, sewerage and roads, electric lighting and power, etc., and every other necessity for public health is being asserted in no unmistakable manner, that the time has come when none but the qualified theoretical and practically trained man can be looked upon as the successful candidate, and the competition for the appointments should lie amongst such men.

This branch of engineering is so important to the public well-being, both financially and administratively, that some steps should be taken to have it set upon a better recognized basis. Its members are men with Canadian experience, geological and climatic, whose training has been conducted upon sound scientific and practical lines, and whose experience has been gained by constant and businesslike study.

The question of the establishment of such an association or institution is surrounded with difficulties which can be overcome the more easily by subdivision. I mean that the Dominion is so extensive that the ordinary salaried engineer cannot afford to travel from coast to coast each year to attend conferences. This can be met, I suggest, by a central body representative of the provinces, whose labors shall be directed by the provincial branches; these branches, for economy's sake, to hold their meetings at various cities within their province.

If the institution could become a recognized body by the government by charter, it would materially increase its value and importance, and the aid which would be rendered from government engineering officials would add prestige to its personnel.

Under such conditions it would be a matter of easy negotiation to put forth legislation in favor of municipalities bearing the costs of their engineer's attendance at conferences throughout the Dominion, within reason, of course, i.e., an annual meeting of three to six days' period.

The status of the individual as a member should be taken care of, and various degrees of membership established—say, for a period of one year from the date of formation, chief municipal engineers would be admitted as full members, chief assistants and assistants of eight years' experience as associate members, and younger members of engineering municipal staffs as graduates.

After the first year has expired, examinations for entry as graduates or students on the one hand, and for associate members on the other, should be established. Of course, the latter examination would qualify the associate member for full membership upon his obtaining a town or city engineership.