

**BOARD OF ENGINEERS REPORT AGAINST HYDRO RADIALS**

**D**URING the latter part of the year 1916 a great deal of discussion took place in Hamilton over the proposal to construct a Hydro-Electric railway from Port Credit through Hamilton to St. Catharines, as part of a through electric radial railway system from Toronto to the Niagara frontier. A by-law was submitted to the ratepayers in January last, and defeated. The discussion, however, kept up. A number of Hamilton citizens, not satisfied with the information which had been given out by the advocates of the scheme, met and decided to get the desired information for themselves, and with that end in view, wrote to the Toronto branch of the Canadian Society of Civil Engineers requesting that a board of engineers be appointed to report on the matter.

The request of these citizens was conceded to and five eminent engineers were appointed, viz., Sir John Kennedy, W. F. Tye, Lieut.-Col. R. W. Leonard, L. A. Herdt and Walter J. Francis. The board appointed Mr. Leonard chairman and Mr. Francis secretary.

The following are extracts from the completed report of the board of engineers, which is in the form of a letter, and is now in the possession of C. W. Cartwright, chairman of the citizens' committee of Hamilton:—

Public Necessity.—The first specific feature in the letter is the determination of the public necessity for the proposed Port Credit-St. Catharines line. Your board finds that no public necessity exists for the construction of the proposed line, because the particular district is at the present time thoroughly well provided with steam, electric and water transportation facilities; because the province, of which the district forms a part, is also amply provided with transportation facilities, and because the number of transportation companies already operating in the district makes it quite unnecessary to inaugurate a new and distinct system.

Operating Revenue, Fixed Charges and Operating Expenses, and Extension to the Frontier.—The second, third and fourth specific features in the letter refer to financial matters. A request is made for the estimated operating revenue based on the conditions in the territory to be served by the proposed lines; the estimated annual fixed charges and operating expenses based on the estimated cost as stated by the commission, \$11,360,363, and an estimate of the cost of the construction of a proposed extension from St. Catharines to the Niagara frontier, coupled with an estimate of the earnings probable on through traffic obtainable at the frontier when such an extension shall have been made.

Your board estimates that the financial statement of the proposed line under local traffic conditions will be as follows:—

Revenue from operation, 59.6 miles, at \$6,000 per mile .....	\$357,600
Operating expenses, 61 per cent. of \$357,600....	218,136
Net operating revenue .....	\$139,464
Fixed charges—	
Interest on \$11,360,363 (as given by the Hydro-Electric Power Commission), at 5½ per cent. ....	\$624,820
Yearly deficit, exclusive of taxes and sinking fund .....	\$485,356
(Sinking fund is not chargeable during the first ten years.)	

Your board further estimates that the financial statement of the proposed line under all traffic conditions will be as follows, after ten years:—

Revenue from operation, 59.6 miles, at \$16,000 per mile .....	\$953,600
Operating expenses, 65 per cent. of \$953,600....	619,840
Net operating revenue .....	\$333,760
Fixed charges—	
Interest on \$11,360,363 (as given by the Hydro-Electric Power Commission) at 5½ per cent. ....	\$624,820
Sinking fund, 1 per cent. ....	113,604
	\$738,424
Yearly deficit, exclusive of taxes .....	\$404,664

The cost of an extension to the frontier has been estimated at about \$2,280,000, arrived at from a consideration of the figures given by the commission for the line from Port Credit to St. Catharines.

The effect of good roads on transportation questions generally is of very great importance. Your board finds that it would be much more in the interest of Hamilton if good roads were seriously taken up rather than the proposed Port Credit-St. Catharines line. The amount proposed to be expended on the proposed line would build at least 800 miles of good roads in the Hamilton district.

The information regarding terminal facilities is so indeterminate that your board has not been able to satisfy itself regarding the obligation of the city of Hamilton in connection with the essential terminal expenditures and costs.

The system of financing and apportionment of losses or profits, being entirely arbitrary, and not within the control of Hamilton, is sure to cause dissatisfaction.

The proposed by-law and agreement is vague and indefinite in many particulars. By it the city of Hamilton would become responsible for nearly \$6,000,000, and would start into the railway business, from which it would have practically no opportunity to withdraw, and over the operation of which it would have no control. One of the parties to the agreement would have entire control without any responsibility, financial or otherwise, while the other party would have no control, and would be, at the same time, responsible to the last dollar. The agreement would prevent Hamilton from entering into any arrangement with any transportation company without the consent of the Hydro-Electric Commission. The city could be required to give a free right-of-way over the corporation property. The apportionment of losses or profits has not been definitely stated. The question of assistance in operating the line under unavoidable and uncontrollable circumstances is not fairly stated. The agreement would require the city to give the proposed railway practically exclusive interests. The renewal clause makes the agreement virtually a perpetual one. No audit is provided for. The agreement as a whole is indeterminate and obscure, although it is definitely stated that the municipalities shall bear all losses in operation, while the Hydro-Electric Power Commission is definitely relieved from any and every responsibility, at the same time having the final and binding decision in all matters. Generally, Hamilton would be placing itself entirely in the hands of a commission over which, by the terms of the proposed agreement, it would have absolutely no control or authority. The board considers this a very important matter, as the city