

THE QUEBEC BRIDGE.

Preparations for Early Construction.

At the recent annual meeting of this Co. in Quebec the financial statement showed capital stock subscribed, \$216,300. Receipts, \$50,363.69; expenditure, \$21,944.82. The following were elected: President, Hon. S. N. Parent; Vice-Presidents, R. Audette & Hon. R. R. Dobell; other directors, H. J. Beemer, J. Breakey, V. Boswell, J. B. Laliberte, G. Le Moine, Hon. G. A. Paquet, H. M. Price & N. Rioux; Treasurer, J. Breakey; Secretary, U. Barthe.

It was decided to at once invite tenders for the construction of the work.

THE DIRECTORS' REPORT

was as follows:—The last 12 months have been well employed. A good deal of preliminary business had to be despatched to put the Co. in such a shape as to enable it to call for tenders for the construction of the proposed bridge. The capital stock had to be completed, & calls on same made in compliance 60-61 Victoria, cap. 69. The financial statement which will be submitted will show that that part of our duties has been successfully accomplished.

There were also to be completed the technical studies & surveys essential to the execution of our enterprise. The surveys then in progress to connect the bridge with the railway systems on both sides of the River St. Lawrence, & of the bridge site itself, have been completed, with the plans and profiles of the same, & also those required by the Railway Committee of the Privy Council before approving of the bridge site, so as to show width of spans & clear headway required for navigation purposes; which have since been deposited according to the law, & approved by the Railway Committee & the Governor-General-in-Council.

Considerable expenditure has been forced on the Co. for making test-boring of the river bed at the most suitable points for pier locations, which work has been completed, & without which it would have been impossible to design any part of the foundations of the structure, particularly as all previous investigations and reports on the local conditions of the river at the bridge site were erroneous & entirely misleading.

General plans showing certain limiting dimensions & other essential data, with printed circulars, forms of tender, complete specifications for foundations, piers, & superstructure are now being sent to intending contractors, notice having been received on Sep. 1 that the specification for superstructure had been finally approved by the Chief Engineer of Railways & Canals.

It was your directors' intention to invite tenders at an earlier date this season, but they had to wait until the test borings were completed, in order to be able to furnish full specifications & data to the tenderers. The unavoidable long time spent in the submarine test borings which were commenced last winter well demonstrates the excessive hardness of the bottom of the river at the boring points. It is quite evident that, if that bottom was sand, as reported by some, it would not have taken 6 months of continuous work, from Feb. to Aug., to bore 9 or 10 useful holes at the different pier spots. As a matter of fact, the samples of material taken out from those holes through the core drills show that the bed of the St. Lawrence, where borings were made, is almost entirely composed of boulder gravel, the same material as that on which were built the immense cantilevers of the Forth Bridge in Scotland. Such river beds are so tough that the ordinary drills used at first last year could not penetrate through more than 4 or 5 ft.; wherefore the directors decided to secure the services of a specialist, Mr. Stearns, of Brooklyn, with a powerful plant of steam pumps & diamond drills. Even with that improved machinery the work went on with such difficulty that in some cases it took 3 weeks to bore a single hole.

This work being to the general advantage of the country, as it is designed to complete an important network of railways, is entitled to the generous assistance of the federal & provincial governments & of the city of Quebec. The sacrifices made by the Co. in the past, but more especially since last year, give it so much more right to such help. It can boast of having done its full share by taking bravely the initiative of a work of such importance & elaborately preparing all the preliminaries. Your directors are firmly convinced that when the time comes to face the financial question they will be substantially supported by those whose assistance was promised.

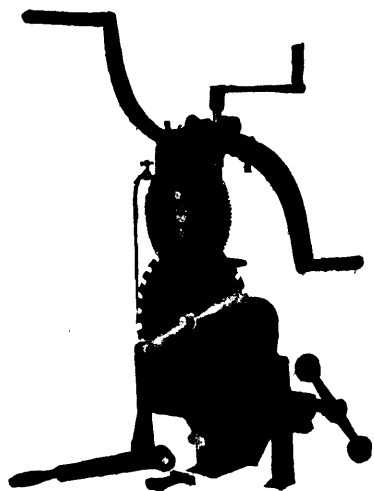
They have recently petitioned the Dominion Government for a subsidy of 33⅓% on the cost of the enterprise, & they have been assured that the subsidy will be voted next session.

Your directors might also take this opportunity of recalling the reasons which have caused the selection, since ratified by the Government, of the Chaudiere site in preference to all others. It is not a question of feeling, nor of preference, but purely & simply a question of engineering, on which most people must admit their incapacity to deal with the question. It is quite natural to desire that the proposed bridge be built as near as possible to the actual limits of our city; but it is equally obvious that when undertaking the construction of such a costly bridge, one should look to the narrowest point of the

river, & as a matter of fact the Chaudiere site is the narrowest point of the St. Lawrence on its whole length. The first consideration is the opening of a direct & constant all rail communication, in all seasons, & at all hours of the day, between the two shores of the St. Lawrence, which for a long distance east & west are deprived of that sort of connection. Business interests in this part of the Province are constantly complaining that railway tariffs are discriminative against them. A bridge at the Chaudiere will remove this objection by connecting the railways of both shores, by increasing traffic & consequently creating a legitimate competition in freight rates, & it will considerably reduce the freight account of the city & district of Quebec. It is the intention of the Co. to have its own independent line to give all railways access to the city. The location question is one of engineering, on which we must take the opinion of professional men. It is fully covered by the reports of Messrs. Shanly, Schrieber, Gauvin & Hoare, from which extracts are annexed to the present report.

Your directors have but a few remarks to add to these authorities. They would be the first to rejoice if it was practicable to build the bridge nearer the city. But it is a manifest impossibility. The question has been sufficiently considered, with all the elements of sound comparison, the local conditions such as the depth & width of the river at the different proposed sites, being well-known facts which cannot be altered by civil engineers. A bridge opposite the city would require a clear channel span of over 3,000 ft., supported by gigantic piers which could not even be built outside of navigable waters; it would moreover require a tunnel line underneath the city through the promontory, & on both shores trains using the bridge would have to make long & useless circuits to connect with the existing railways & to get at the shipping level. As to the Island of Orleans, that route is at once thrown out of consideration by a simple comparison of its 15,000 ft. of steel structure with the 3,310 ft. of metal as required for the Chaudiere bridge. The capital of this Co. & its range of resources are too limited for such gigantic schemes to be entertained. Before having the necessary capital subscribed, the revenue prospects have first to be determined, & your directors consider they have safeguarded the stockholders' interests when they decided to keep within practical limits. Their only choice was whether a bridge at Chaudiere, or no bridge at all.

They preferred the former, because they were convinced that what retarded the progress of the city & district of Quebec was the lack of free all rail connections the year round, which object would be as well gained by a bridge at Chaudiere as opposite the city,



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QUEBEC, September 29th, 1898.

Sealed proposals for the construction of a combined Railway and Highway bridge across the River St. Lawrence, near Quebec, will be received by the undersigned, until noon, Monday, January 2nd, 1899.

Forms of tender, with circular of conditions, specifications, &c., can be had on application to the undersigned.

The Company does not bind itself to accept the lowest or any tender.

ULRIC BARTHE,
Secretary.