

## MONTREAL AQUEDUCT SCHEME.

**C**ONTROLLER VILLENEUVE, of Montreal, whose motion to appoint experts to report on the proposed aqueduct power development was defeated by his fellow controllers, is making a strong endeavor to get the desired information in another manner. Taking advantage of his "parliamentary privileges," he has given motion that he will ask a certain series of questions regarding the aqueduct, at a future meeting of the board. Mayor Martin stated that if necessary the whole staff of the various departments interested would be set to work to answer the questions. It is expected that answers will be ready within a fortnight. The questions asked by Controller Villeneuve are as follows:—

1.—Names of the experts, and date of their appointment, who have approved, or only examined the figures on the debit of the tailrace, as planned for the new enlargement, contract No. 2?

2.—By whom were those figures calculated, verified, and at what date? Do such figures show the depth, width of section of tailrace, its slope in longitudinal profile, and that the back water of the St. Lawrence has been studied well enough in 1913 so as to establish a permanent flow of all the water passing through the turbines, without changing the height of the waterfall at the power-house and the amount of power? and without an excess of current that would be damageable to the tailrace?

3.—If such calculations have not been made or verified as exact by experts, was it possible to determine the measurements of the enlargement of the tailrace and how can one be assured that the tailrace will be able to take care of all the water coming from the canal, without causing eddies that will be dangerous to the plant?

4.—On what basis, on what calculation, on what type of plant, on what selection of machinery and equipment, on what dimensions of plant, buildings, installation, are based the figures for the settling basin at the wheel-house? When was that basin excavated?

5.—Whether the kind of plant, the type of machinery, the power of installation, the plans for a plant, have or have not been studied, calculated and prepared, how was it possible to give contracts for excavating the basin and the tailrace, and have the basin dug out on imaginary measurements?

6.—On what selection of machinery, on what kind of plant and electric installation, on what disposition of buildings, on what plans, specifications, studies and projects, were based the estimates of the approximate cost of the power-house, pumping plant and electric plant, and the figures reported to the Board and the Council to the support of a demand of a credit, showing the total cost of the undertaking and the cost price of one hydraulic h.p.?

7.—After the study made up to this date, by the engineers of the aqueduct as to the plant of a power-house, a pumping house and a central electric station, can the department estimate, within a million dollars, the probable cost of the work and the installation to the plant to be erected and equipped?

8.—If no serious and careful estimate was ever made, how can the superintendent of the aqueduct estimate the probable cost of a hydraulic h.p. and the cost price of lighting, declare it advantageous and economical, that is, municipally not prohibitive under local conditions at Montreal?

9.—To what did the department estimate the annual expenditure of the operation and maintenance of the new power? These permanent charges are:—

- (a)—Salaries of operators and guardians.
- (b)—Maintenance, lubrication, repairs to machinery, buildings and canals.
- (c)—Sinking fund on buildings, machinery, transmission lines, canals, bridges, fences and roads.
- (d)—Interest on capital invested since 1906 or 1907 (not including filtration plant).

10.—What is the gravity of the accident to the intake? What soundings had been taken before ordering that structure? By whom? What was the nature of the soil in the foundations? Who has superintended, inspected and accepted that work? Who signed the orders for payment? Were any extras paid to the contractors for rock excavating? When will be made the necessary repairs?

11.—What is the amount payable by the city, for repairing the concrete conduit after the accident of 1913? Has the amount been paid? Who was it paid to?

Who was found responsible for the accident? Who passed judgment on the damages and the responsibilities?

12.—What is the annual salary for engineers, draughtsmen, chainmen, surveyors, inspectors, clerks, etc., paid by the department to parties employed permanently in connection with the enlargement of the aqueduct (not including the filtration plant): (1) for 1913, 1914; (2) for 1915, for the five months of 1916.

13.—Are the engineers in charge of the filtration plant also in charge of the aqueduct? On what scale are they paid; what is the monthly total expenditure on the aqueduct and the filtration plant?

14.—At what was ever estimated the project of municipalizing the lighting, the cost of aerial or underground lines for transmission and distribution of electricity?

15.—What are the fixed charges per month, for operating the Laval pump (pump No. 8) and the boiler connected with it? (a) Salary of engineer and fireman; (b) Cost of coal for boilers operating that pump; (c) Lubricating and light; (d) Maintenance and repairs of machinery; (e) Wear and tear and sinking fund.

16.—What is the number of bridges to be erected on the canal and what is their approximate cost?

17.—What will be the approximate cost of the boulevards? How much land was given free of cost to the city and how much there is to be expropriated? Where are we at with the whole expropriation of the boulevards?

18.—Has the cost of an auxiliary steam plant been calculated?

19.—What will be that cost?

20.—Has an adequate study been made of the work to be done at the intake to prevent obstruction of the canal frazil and to insure the deviation of floating ice. What was the estimated cost of that work in 1913; on what mode of construction and on what calculation was based the estimation? Were any experts consulted on the subject?

Controller Villeneuve requested the city comptroller and auditor to supply the following information to the Board:—

(a) A statement of the accounts spent since 1906 for the aqueduct.

1. The concrete lateral conduit. 1, contract for conduit and accessories; 2, purchases of land or expropriations for the conduit; 3, salaries of engineers, inspectors, office clerks, etc., for 1906-1909; 4, compensating basin, for twin conduit; 5, gate basin at the intake; 6, intake in the River St. Lawrence.

2. Widening the canal (contract No. 1); 1, Quinlan and Robertson, contract and extras; 2, salaries of engineers, inspectors, offices, instruments, etc., 1909-1913.

3. Widening the canal (contract No. 2), Cook Construction Co. 1, amount of tender; 2, amount paid to date. Amount claimed by the Cook Construction Co. for extras and damages.

4. Salaries of engineers, inspectors, offices, instruments, etc., (1913 to date).

(b) What is, to date, the capital engaged in the widening of the aqueduct (not including the filtration plant).

What is the amount of interest already paid on that same capital, either engaged or spent? What is the average rate of interest?

What is the amount still available on the loans authorized to that end?

(c) What round figure is represented by the capital engaged in the steam pumping station of Centre Street (complete)? (a) buildings and chimneys; (b) machinery (pumps and engines), bridges; (c) steam tubing. Is there a sinking fund for depreciation and renewal?

(d) What are the total and fixed charges per annum for the operation of the low level steam pumping plant? (a) Salaries; (b) oil, upkeep, repairs; (c) total annual disbursements for coal. The above covering the year 1915.

(e) What was the cost of the last thirty million gallon pump installed? (a) Complete cost of machinery, installed; (b) cost of buildings and foundations; (c) cost of the last row of boilers; (d) cost of the boiler house; (e) cost of the last brick chimney.

(f) What is the total annual amount of charges paid by the city to electric light and power companies for (a) for lighting streets, parks, etc.; (b) for lighting municipal buildings; (c) for motive power in pumping stations, shops, etc.?