

DEPARTMENT OF PUBLIC WORKS, CANADA

GEORGIAN BAY SHIP CANAL SURVEY

OTTAWA, January 20, 1909.

Honourable WILLIAM PUOSLEY,
Minister of Public Works,
Ottawa, Canada.

SIR,—The government surveys and investigations regarding the feasibility and probable cost of a deep waterway from the Great Lakes to the Seaboard, by way of the French and Ottawa rivers, initiated in 1904, by the Honourable C. S. Hyman, Minister of Public Works, under authority of parliament, and continued under your direction, have led your engineering board to formulate the following results and conclusions :—

1st. That a 22-foot waterway for the largest lake boats (600 ft. x 60 ft. x 20 ft. draft) can be established for one hundred million dollars (\$100,000,000) in ten years, and that the annual maintenance will be approximately \$900,000, including the operation of storage reservoirs for the better distribution of the flood waters of the Ottawa river.

2nd. That the distance from Montreal harbour to French River village on the Georgian Bay is 440 miles. That the rise from Montreal harbour to the Summit of 659 feet can be overcome by 23 locks, ranging from 5 feet to 50 feet in lift, and that the descent of 98 feet from the Summit to Georgian Bay can be made by 4 locks, ranging from 21 feet to 29 feet in height of lift,—27 locks in all, connecting 23 navigable pool levels of various lengths.

3rd. That sufficient water may be stored within its own and adjacent watersheds to operate a summit level above Lake Nipissing. That to use the Lake Nipissing level as a summit would increase the cost at least \$10,000,000 and introduce 12 additional miles of canal cutting. That the natural low water flow throughout the Ottawa and French rivers is more than ample to meet all the requirements. That the spring flood in the Ottawa river can be restrained by storage throughout its watershed so that, under extreme conditions, the reaches will not overflow; currents therein will not be over 3 miles per hour, and locks will be workable, that is to say, practically slack water navigation will obtain.

4th. That ordinary lift locks are best suited to the conditions found. That their minimum length should be 650 feet between inside gates, with 65 feet clear width, and 22 feet clear depth throughout.