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Report of the Commissioner Appointed by the Governor and Council of Maine to Locate and Survey Bridges Across the St. John and St. Francis Rivers, Connecting the United States with the Dominion of Canada

State of Maine

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REPORT

OF THE

COMMISSIONER

APPOINTED BY THE

GOVERNOR AND COUNCIL OF MAINE,

TO

LOCATE AND SURVEY BRIDGES

ACROSS THE

ST. JOHN AND ST. FRANCIS RIVERS,

*Connecting the United States with the Dominion
of Canada.*

AUGUSTA:

E. F. PILLSBURY AND CO., STATE PRINTERS,
1880.

REPORT OF COMMISSIONER.

To the Governor and Council of Maine :

The undersigned, Commissioner appointed to confer with the authorities of the Dominion of Canada or their representatives, upon the subject of bridges across the St. John and St. Francis rivers, and to report upon the importance, number, location, estimated cost, and any other fact, asks leave to report: That I proceeded to the Barker House in Fredericton, N. B., and by arrangement by telegraph, I met the Hon. Charles F. Perley, Chief Engineer of the Dominion from Ottawa, and after a full and free conference and inter-exchange of views, he directed George E. McLaughsan and Francis Lawler, his assistant civil engineers, to accompany me and fix upon the location and make the survey, estimates of costs, and all necessary information connected with this great national enterprise.

We were further requested to call on the Hon. John Costigan at the Grand Falls, the representative from that vicinity in the Dominion Parliament. We left Fredericton on the 6th of December, and on the 7th we conferred with the Honorable Representative, and on the 8th we, in

company with Mr. Costigan arrived at Van Buren and at once commenced the work of our instructions. We were here joined by John B. Farrell, representative-elect and many citizens. After a preliminary exploration and survey, we fixed upon a location and proceeded with the survey. Upon a full survey, the location proved to be a perfectly safe and feasible one in the village of Van Buren, and directly opposite and near the depot of the New Brunswick Railroad upon the Dominion side of the St. John river.

We were greatly facilitated in the work, as the ice was of sufficient strength to cross on. On the evening of the 9th we went up to the Little Falls (Edmondston) on the railroad aforesaid twenty-five miles. On the 10th we examined the river and the banks thereof, and fixed upon a location near and westerly of the Madawaska river in the village of Edmondston, the shire town of Madawaska County in the Province of New Brunswick, and near the railroad depot. On the 11th we finished the survey. It was very cold and as the anchor ice, or frozen slush, ran thick, and to obtain the soundings and character of the bottom of the river, it was a most hazardous and difficult task, but by the assistance of the Hon. John Costigan and Representative Farrell with other stout and skilful watermen, we were eminently successful. This is a most central location, and here by postal arrangements with the two

governments is an exchange of mails. On the evening of the 11th we hired a team and, accompanied by the Hon. John Costigan, we drove up the St. John river twenty miles to Fort Kent. On the 12th we proceeded with our work under difficulties on account of extremely cold weather, and that most of all troublesome element in swift water, anchor ice. But by the assistance of our citizens, stout and skilful watermen, with the skill and energy of the Hon. John Costigan, we were most fortunate and found a safe and convenient location and completed the survey, and on the eve of the 13th we drove up the river St. John to the St. Francis river fifteen miles distant from Fort Kent.

On the 14th, accompanied by Mr. Costigan and Robert Connors, Esq., a man doing a very large lumber business on the American side of said river, we at once fixed upon the location. The river at the point of location being comparatively narrow and free of ice, we completed the survey, and late at night returned to Fort Kent. The location of the four bridge structures on the St. John and St. Francis rivers connecting the United States with the Dominion of Canada on the north eastern part of Maine, the building of which an appropriation is asked for in a memorial passed by the Legislature of Maine, and approved by the Governor thereof on the 4th day of March A. D. 1879, and which is now pending before Con-

gress, I have the honor to report that after a careful and critical examination of the conformation of the countries on both sides of the boundary line and the business centers and the growing commercial wants of the beautiful valley of the St. John, and a full and careful examination of the bottoms and banks of the river, the location indicated, to wit: one at Van Buren, one at Little Falls (Edmondston), near the Madawaska river, one at Fort Kent on the St. John river, and one on the St. Francis river near its junction with the St. John, are all of them feasible for such structures, and perfectly safe and at points to meet the great and increasing wants of the people of both countries and facilitate the increasing commercial wants and open up and develop the resources and largely increase the settlement of both countries. The conformation of the country lying between the Aroostook river and that of the St. John by reason of very high elevation of land which extends to the source of the St. John river, virtually precluding for the present, if not for all time, a railroad being constructed through American territory for an outlet to the markets of the world of this great "water shed," drained by the St. John river and its tributaries. An area of more than three millions acres of land which is not less productive than that of any equal extent of territory in the whole nation, with a population of more than

twenty thousand inhabitants, which are rapidly increasing, and whereas New Brunswick has constructed a railroad skirting up the banks of the beautiful St. John in the Province of New Brunswick as far as the Little Falls (Edmondston), with a reliable assurance that it will be extended opposite to Fort Kent. Therefore, we must seek an outlet through the Dominion by said railroad for all of our surplus agricultural products. In fact, there is no way of reaching the Atlantic cities with our surplus of agriculture, manufactured lumber, or other manufactured articles in all this vast territory, which is isolated and shut out from the Atlantic markets ; sealing up this prolific portion of the country, and the people thereof, who are unable to exchange their products and obtain the necessary commodities of subsistence which they need for public prosperity, except at ruinous costs. We must therefore seek an outlet by this railroad which runs along the northern boundary of Maine, to which said road and bridge structures will give the inhabitants of said territory free access, in the use of which it is proposed that they shall enjoy equal use as to trade and transportation with the people of the Dominion. It will greatly facilitate postal relations between the two countries, and materially lessen the expense. It will also diminish the cost of collecting the external revenue, and largely increase it by facilitating and concentrating trade and building up towns on

either side of the line at the points indicated for these bridge structures.

These rivers are the boundary line of the two great nations by "*compromise*," and is therefore an *arbitrary and not a natural line* in division of territory. It divides the beautiful valley of the St. John, divides a people speaking the same language (French), worshipping at the same altars, and really one family (the Arcadians), which Lord Ashburton said was the "*greatest regret of his life, but for the great cause of peace he submitted.*"

It was established by the Treaty of Washington, commonly called the Ashburton Treaty, on the 9th day of August, 1842. In the language of the Treaty the development of the countries was contemplated. Article 3 of said Treaty says: "*In order to promote the interests and encourage the industries of all the inhabitants of the countries watered by the St. John and its tributaries, whether lying within the State of Maine or Provinces of New Brunswick, it is agreed the navigation of said river shall be free and open to both parties, and shall in no way be obstructed by either.*" It is therefore clear that neither of the high contracting powers can, without violating international law, erect structures over the line of boundary, without joint consent and action.

It will further appear that at the time of making the treaty, the high contracting parties clearly set forth that further acts and resolves should be

done by the great powers, as will be seen in the concluding paragraph of the 4th Article of said treaty:

“And in all other respects the two contracting parties agree to deal upon the most liberal principles of equity with the settlers actually dwelling upon the territory, falling to them respectfully which has heretofore been in dispute between them.”

These great rivers flow upon an incline plane, and for a long time in the fall are entirely obstructed by anchor-ice or frozen slush, and in the spring by high freshets and running ice, wholly preventing any crossing, and closing all intercourse between the inhabitants of the two countries, and precluding transportation and commercial exchange at the seasons when the necessities of trade, the wants of the people, and business most imperatively demand it.

The freight coming by the aforesaid railroad as alluded to in the memorial now pending before Congress, as taken from railroad books and crossed and used on the American side of the line in said territory, is as follows:

3,000 tons, actual cost,	\$400,000 00
It is estimated that 500 tons more are hauled by teams, valued at	100,000 00
Making,	<hr/> \$500,000 00

The outgoing freight for 1879, as ascer-

tained by actual facts, was 30,000 bushels of potatoes by railroad, valued at \$9,000.00.

One thousand three hundred tons of starch manufactured by five factories, valued at \$52,000.00.

Thirteen millions long lumber, valued at \$91,000.00.

Seven millions sawed shingles, valued at \$14,000.00.

Three hundred twenty-five thousand of sawed clapboards, valued at \$3,250.00.

Three hundred thousand of sawed laths, valued at \$300.00.

Two hundred thousand of sawed pickets, valued at \$200.00.

*Thirty millions of shaved shingles, valued at \$75,000.00.

Estimated increase from two new starch factories to be constructed in the summer of 1880, six hundred tons of starch.

The estimate of all articles if the bridges are constructed in ten years, will be more than double the above amount, besides more than 2,000,000 railroad sleepers; 1,000 cattle; 10,000 sheep. And further, that our population will more than double in the next decade.

I herewith transmit plans and specifications of bridge structures as also plans of countries and rivers which by an agreement with the chief

*The shaved shingles not all by the New Brunswick Railroad, but would be if the bridges were constructed.

engineers of public works of the Dominion of Canada they have furnished. It will be seen by my report that I accompanied said engineers in the survey, and that the whole expense of the four structures is as estimated \$113,500 "exclusive of roadways from existing highways." The memorial estimates the cost at \$120,000, which is as small an amount as it is possible to complete these bridge structures and necessary roadways.

All of which is submitted.

WILLIAM DICKEY,

Commissioner of Maine.

DEPARTMENT OF PUBLIC WORKS, }
ENGINEER'S OFFICE, }
ST. JOHN, N. B., Jan. 2, 1880. }

SIR:—I have to-day placed with the Express Company a parcel addressed to yourself, containing five (5) plans in connection with bridging the upper St. John, being copies of those which I will forward to the Honorable the Minister of Public Works of Canada, my instructions being to prepare such plans, together with estimates of cost for his information, and for the consideration of the Government.

I can thus only call your attention to the position of the bridges in question on the map of a portion of New Brunswick, and to the sketch plans of bridge sites as well.

Bridge No. 1, between Van Buren, Maine, and St. Leonards, New Brunswick. It is proposed to cross the St. John at this site with five (5) spans of 130 feet each, and about 120 feet of trestlework on the Maine side, to act as flood arches during freshet seasons.

For estimating the cost of piers and ice-breakers for this and the other bridges, it has been assumed that they will be built up to the summer level of the water in the river with birch timber, and above that level with cedar, sheathing the portions liable to chafe from running ice with heavy birch timber or planking; filling the whole interiors with a sound class of stone, hand-laid and grouted with Portland cement. The abutments to be built of similar materials and sheathed as well, only that the faces shall be filled with grouted stone, the remainder of the interiors with earth. It is also assumed that the piers, abutments, ice-breakers, embankments, etc., shall, where required, be protected by a heavy wall of stone and brush.

No particular form of truss for the superstructure is recommended, the price in estimating being sufficient to cover the cost of any of the systems ordinarily in use. In New Brunswick the "Burr truss" has been in use since 1858, for highway bridges, and has given much satisfaction by its simplicity of construction, the minimum use of iron, and cheapness, though I must say that the spans erected during the past few years, are much too slightly built, for stability and permanence.

The advisability of covering these bridges in from the weather, would form a legitimate subject for discussion, in the event of their construction being proceeded with. The rule in

New Brunswick is not to cover, thus avoiding superfluous weight, liability to damage during high winds and permitting the snow to cover the roadways during winter. This bridge is estimated to cost \$37,500.

Bridge No. 2, between Madawaska, Me., and Edmondston, N. B. It is proposed to cross the river at this site with six (6) spans of 120 feet each; the piers, ice-breakers, etc., being built in a similar manner as described. Estimated cost, \$34,000.

Bridge No. 3, between Fort Kent, Me., and Madawaska Co., N. B. The proposal is to cross at this site with five (5) spans of 120 feet each, and one span of 80 feet, dispensing with the use of ice-breakers, making the piers extra heavy. Estimated cost \$29,500.

Bridge No. 4, across the St. Francis river. This bridge to be built in two (2) spans of 120 feet each, the pier being constructed to resist the ice from other directions, for during the spring freshets the St. John rises more rapidly than the St. Francis, and the ice is thus carried up the last named river. Estimated cost, \$11,500.

SUMMARY.

Bridge No. 1,	\$37,500 00
“ 2,	34,000 00
“ 3,	29,500 00
“ 4,	11,500 00
	—————\$112,500 00

I may mention that the above estimates include the cost of all approaches, but not the cost of roadways from existing highways.

I have the honor to be sir,

Your most obedient servant,

HENRY T. PERLEY.

PORTLAND, Dec. 4, 1879.

Hon. W. Dickey, Fort Kent:

DEAR SIR:—The action of the last Legislature of Maine, in reference to bridging over the St. John and St. Francis rivers, the boundary between this State and New Brunswick, at the several important points named in the Memorial to Congress, appears to us most timely, and worthy of the serious consideration of our Federal Government.

The feelings existing between our citizens and those of New Brunswick are already most friendly, and in view of possibly closer relations that may obtain in the future, it would seem to be true policy for this Government to increase in every legitimate way the business and social intercourse of the two Districts.

Our official duties have, for several years, called us often into this border country, where observation has convinced us that very great advantages must accrue from the construction of these bridges in the consequent development of a vast and fertile region and we are satisfied that this will not only increase the material prosperity of the people on both sides of the line but prove of great political importance to the United States.

A. W. WILDES,	} <i>Railroad</i>
JOHN F. ANDERSON,	
CHAS. J. TALBOT,	
	<i>Commissioners</i>
	<i>of Maine.</i>

STATE OF MAINE, }
EXECUTIVE DEPARTMENT, }
AUGUSTA, Dec. 27, 1879. }

The subject matter of bridging the St. John river on the boundary of this State, as indicated in the foregoing report, is one I have examined with especial care, and am fully satisfied that the mutual interest of Maine and New Brunswick would be greatly promoted by the construction of a few bridges at intervals of fifteen or twenty miles over said river. Their construction will greatly promote the welfare of the inhabitants on both sides of the line, add to the prosperity of that beautiful country, by encouraging its more rapid settlement, and increasing its facilities for communication with the sea-board and distant market. I cheerfully commend the subject to the favorable action of Congress.

ALONZO GARCELON.

By the Governor:

E. H. GOVE, *Sec'y of State.*

Read and approved by the Council and ordered printed.