CANADIAN TRANSPORTATION

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TRANSPORTATION

Transportation has been defined as the " keys with which wise statesmen open the doors of national prosperity." There can be no subject, therefore, which should engage the attention of the Canadian people equal in importance to that of lessening the cost of transporting the products of the Western Plains to tide water and the Eastern manufactured products to the homes of the Western consumer. It is equally true that upon the efficiency of our country's transportation facilities depends the future integrity of our Dominion, the comfort, wealth and power of our people.

Canadian transportation began when Jacques Cartier turned the prow of his little bark into the St. Lawrence and christened it after the saint of that name upon whose birthday he entered its waters, and the pages of its early history are filled with the heroic struggle of brave men who had the courage of their convictions and carried the visions of their imagination to a practical conclusion. The names of Cunard, Howe, Young and Allan are mile-stones along the pathway of its early development, in the same big way as Mount Stephen, Van Horne, Shaughnessy, Hays, Mackenzie and Mann are to-day in its later expansion. By the imaginative genius of such men and their pertinacity the outermost corners of our Dominion are made accessible, and the farthest off inhabitant of the plains becomes the neighbor of him who lives within the sound of the ocean.

Before considering the actual conditions surrounding this problem to-day let me ask you to look at the primitive starting point from which these same conditions have been evolved. For that purpose let us compare for a moment the position occupied by Canada at the opening of the 20th century with that of our great neighbor at the opening of the 19th.

In the year 1800 the population of the United States amounted to 5,300,000 people, grouped together as a fringe along the shores of the Atlantic Ocean; behind them to the westward an undiscovered waste of wilderness and plain, not a single mile of railroad, not a single mile of canal development, no roads to speak of, no wealth, but the indomitable courage, perseverance and faith of her people; and upon this courage and confidence has been built up in 100 years a nation numbering 90,000,000 people, possessing 217,000 miles of railroad, and a country extending from the Atlantic to the Pacific.

The cause of such wonderful progress must be sought in the early, wise and persistent development of her means of communication and transport. And while the 19th century yielded to the United States a marvelous growth in her interior transportation facilities, it is interesting to note that in 1860 she carried 66 per cent. of her export and import trade in her own ships, in 1906 she only carried 12 per cent.

Canada, on the other hand, starts the 20th century with 6,000,000 people, not huddled together on her Atlantic Seaboard, but stretching a continuous line of prosperous provinces from sea to sea; her continent spanned by the steel ribbons of three great railway systems; her natural waterways linked together by a canal system which has no rival; an annual trade

development of $645,000,000; $680,000,000 of the people's savings in the bank, and is doing a business with 6,000,000 people at the beginning of the 20th century that was not equaled by our great neighbor to the south of us until her population had reached the figure of 26,000,000.

Added to all this, Canada, as the occupant of the northern half of this continent, possesses the shortest water route between the continents of Europe and America and America and Asia, thereby inheriting a natural strategic position which, if supplemented by energetic measures of transportation development within, will place her in an unassailable position for the command of a large portion of international trade between the Mother Country and the East.

This means a business connection with a market containing 450,000,000 people in China alone, 300,000,000 in India and 40,000,000 more in Japan. If we can become the carriers for a portion of this great international trade, if we can offer transportation inducements for the capture of our share of this business, then every ton of through freight handled over Canadian rails and by Canadian waterways will reduce the cost of transporting the grain products of the West and the manufactured products of the East, and will bring into closer touch the growing population of this country in all its parts.

In this connection one must not forget that from the little sea-girt islands in the North Sea, which we call the Mother-land, over 3,000 miles of the Atlantic, across this Canada of ours over 3,000 miles more, and again for 6,000 miles over the peaceful waters of the Pacific, the thin red line of transpor-

tation ploughing the waters of two oceans, traversing the fertile plains of a continent, over this continuous and shortest trade route float the folds of our country's flag. The greatness of our Mother-land is founded on her command of the water-borne trade of the world. If Canada is to become likewise great she too must not neglect the development of her transportation.

Taking a map of the North American continent, one finds three natural outlet channels for the trade of the great Northwest, the Mississippi River, the St. Lawrence River and the Hudson Bay. The Mississippi is navigable from the Falls of St. Anthony to the Gulf of Mexico for more than 2,000 miles. The great chain of lakes connecting the Gulf and River of St. Lawrence give a continuous navigation of 2,500 miles to the heart of a great continent. Hudson Bay will be one day tapped, and for a portion of the year at least afford auxiliary means of transport for grain cargoes out of the West. Of these three natural means of exit, the Dominion of Canada controls two, and by supplementing her natural inheritance by the building of the Georgian Bay canal she will place herself in the proud possession of a water route that will not only induce the trade of her own great West to follow its course, but will attract to it a very large portion of the trade of the Western States.

The question of Canadian transportation has been divided as follows by the Transportation Commission, whose valuable report ought to be made known to every Canadian interested in the country's progress:

1. From place of production to Canadian sea-ports.

2. From place of production to Western ports of Lake Superior.

3. From Western ports of Lake Superior to Canadian sea-ports.

4. From Canadian sea-ports to Europe, and the reverse in each case.

All this of necessity involves the consideration of storage requirements of lake, river and ocean ports.

The harbour facilities of inland lakes, rivers and ocean terminals.

The conditions with regard to the navigation of the St Lawrence route and the provision of a well equipped terminal for use during the winter months when Montreal has no direct water access to the Sea.

This question further involves the consideration of the forces operating against an all Canadian transportation plan:

1. Competition by U. S. Railways.

2. Competition by U. S. vessels from Lake Superior ports.

3. Diversion of Canadian product through the Eastern outlets of Boston, Portland, etc.

The subject is too vast to here consider in its entirety. An idea of its importance may, however, be realized if we study briefly transportation as it affects grain.

Of what therefore does this grain trade consist?

What are its possibilities of growth?

What equipment do we Canadians possess to handle it?

When we speak of the grain areas of Western Canada we mean—

Manitoba, containing 27,000,000 acres,
Saskatchewan " 52,000,000 "
Assiniboia " 50,000,000 "
Alberta " 42,000,000 "

or a total area suitable for cultivation of wheat of 171,000,000 acres.

Should only one quarter of this area be put under cultivation at the average yield of the past three years, this would give 800,000,000 bushels.

Out of the 171,000,000 acres, in the year 1900 only 2½ million acres were under cultivation.

In 1906 this had grown to 6 millions.
In the year 1900 the yield was 33½ millions.
In 1906 the yield was 100 millions.

This grain was taken care of in 1900 in 533 elevators distributed at convenient points west of Lake Superior, with a combined capacity of 18,000,000 bushels.

In 1906 the number had increased to 1200 elevators with a capacity of 50,000,000 bushels.

The railway mileage from the base of the Rocky Mountains to the Red River, covering this wheat area, was

In 1901.....3369
In 1905.....5620

The wheat acreage increased in five years from 2½ to 6 million acres.

The wheat grown from 33½ to 100 million bushels, and the mileage from 3300 to 5600 miles.

Now as the whole of this grain, which is shipped eastward, is tributary to the Canadian Pacific, the Canadian Northern, Grand Trunk and Grand Trunk Pacific Railways, carried to Port Arthur and Fort William, from thence to the Sea, **it is of the most vital import that a continuity of efficient transportation facilities shall prevail from the West to the Sea on Canadian soil.**

From Winnipeg to the commencement of water transportation at Port Arthur and Fort William is 427 miles. The two existing railways will be double tracked and the Grand Trunk Pacific will add another available route, and yet with a continuous growth of population and a continuous building of railways it seems hardly possible to build fast enough. It is a race between the ingenuity of man and the fertility of the soil.

On arrival at Port Arthur and Fort William the grain is stored in huge elevators which now have a capacity of 20 millions.

The corresponding lake ports on the United States side are **Duluth, Superior** and **Chicago,** upon whose harbours the United States Government have spent already 10 millions.

As an example of the colossal growth of Lake Superior tonnage, the value of craft in this trade in 1887 amounted to 2 millions, while in 1904 it amounted to 70 millions.

When the grain is elevated at the western end of Lake Superior it awaits shipment by boat from there to the Georgian Bay ports of Depot Harbour, Victoria Harbour, Midland, Port Colborne, Buffalo or Oswego, where it is again discharged into huge elevators and then shipped to the Sea by rail or boat as the case may be.

Canadian transhipping points east of the Great Lakes are:

	Elevator Capacity.	
Midland	4 millions.	
Depot Harbour	1½	
Victoria Harbour	4	(building)
Port Colborne	2	
Kingston and Prescott	2	
Total	13½ millions.	

The U. S. ports are:

Buffalo	22 millions.
Oswego	1
Toledo	5½
Cleveland	2
Detroit	2
Total	32½ millions.

From the Georgian Bay ports westward three railways run to the Sea, and already 160 out of the 190 miles of the Trent Valley Canal system are completed, joining the Georgian Bay with Lake Ontario.

This gives to Canada the following choice of routes from Fort William to the Sea, within her own territory.

1. The all-water route, via the Great Lakes, Welland Canal and the St. Lawrence River to Montreal.

2. All-water route, via Georgian Bay, Trent Valley and the St. Lawrence River to the Sea.

3. Water and rail, via the Georgian Bay ports, Grand Trunk and Canadian Pacific Railways to Montreal.

A comparison between the chief water route from the Great Lakes to New York with the Canadian water route from the Great Lakes to Montreal furnishes interesting matter for consideration.

	American water route. Buffalo, Erie Canal, Albany Hudson River to New York.	Canadian water route. Port Colborne, Welland Canal, Lake Ontario to Montreal.	In favor of the Canadian Water Route.
Distance	430 miles.	320 miles.	110 miles shorter.
Number miles of canal	306 "	64 "	242 miles less.
Number miles of clear river navigation	124 "	256 "	132 miles more.
Extreme draft	6 feet	14 feet	8 feet more.
Cargo capacity	8,000 bush.	80,000 bush.	72,000 bush. more.
Time consumed	86 hours.	46 hours.	40 hours less.
Total hours, navigation season	5,040 hours.	5,040 hours.	....
Possible trips per carrying unit	27 trips.	48 trips.	21 trips more.
Possible bush. capacity per carrying unit per season	216,000 bush.	3,760,000 bu.	3,544,000 bushels.

The advantages of the Canadian water route over the American water route may be stated to be as follows:

1. That the St. Lawrence water route from the Great Lakes to Montreal is shorter than the American water route from the Great Lakes to New York by ..... 110 miles.

2. That the number of miles of slow speed canal navigation by way of the Canadian route as compared with the American route is less by ..... 242 miles.

3. That the Canadian water route furnishes more draft than the American by ..... 8 feet.

4. That a boat using the Canadian water route can carry in cargo more than a boat using the American water route, each trip ..... 72,000 bu.

5. That the time consumed each trip by the Canadian route is less than that by the American route by..... 40 hours.

6. That the length of open navigation is identical in both cases.

7. That it takes a tow of ten boats on the American route to carry what may be carried by the Canadian route in one.

8. That one boat by the Canadian water route can carry more bushels of grain per season than can be carried by one on the American route by 3,544,000 bu.

Yet notwithstanding these overwhelming advantages in favour of the Canadian route, the American railways carry through Buffalo the business that ought to go through the Canadian canals, and they are able to do this only because no adequate terminal facilities have been supplied in Canada to take care of this business. When these facilities are provided Canada will control the grain export business of North America.

The railways, however, from Buffalo to New York and Boston have so developed their carrying capacity and so reduced periodically their freight rates as to practically kill the Erie Canal as the carrying medium of export grain. It therefore becomes a question at the present moment for the Canadian water route to join hands with Canadian railways to bring this business into its natural channel.

Taxpayers of the State of New York have decided to spend 110,000,000 dollars to enlarge the Erie Canal to a depth of 12 feet. By so doing they propose to reduce the cost of carrying a bushel of wheat from Buffalo to New York to $\frac{3}{4}$ of a cent. This

would require the railways to reduce their price for the rail haul from Buffalo to New York from 4 cents to ¾ of a cent, which is not thought a possibility by transportation authorities.

But the point I desire to make in connection with these figures is this. If our American competitors deem it worth while to spend $110,000,000 to get a waterway of 12 ft. deep from Buffalo to the Hudson River, **is it not about time that Canadians awakened to the fact that without the expenditure of another dollar on canals they are the owners to-day of a through water route of 14 ft. draught, and could, if they supply the terminals and the carrying power, be in an even better competitive position than the United States will be after it has spent the proposed $110,000,000 on its Erie Canal.**

Investigation into the comparative cost of carrying a ton of freight a mile by rail and by water by the highest authorities gives the following result:

A 6,500 gross ton freighter, costing $280,000 on a 1,000 mile trip, will carry her maximum cargo at a cost not exceeding 0.6 of a cent per ton per mile. This is less than 1-10 of the average freight rate per ton per mile that is earned by the railways on this continent. The cheapness of the carrying power of water as compared with rail will be made more clear by the fact that in large freight vessels the consumption of coal is 5 lbs. per 100 ton miles of freight carried, whereas the consumption of coal on railways is 19 lbs. per 100 ton miles.

The problem of cheapening the cost of handling the nation's business leads the student of transportation into figures the magnitude of which becomes almost staggering. The Canadian railways at the present moment are handling annually

58,000,000 tons of freight and 28,000,000 passengers. If you can reduce the cost 2 cents per ton you make a saving of $1,160,000 in the transportation charges on your business.

It is a curious fact, vouched for by a high railway authority, that the average daily work of a freight car in Canada to-day ranges between 29 and 33 miles, just a little over a mile an hour. This presents a very interesting phase of the transportation question, and shows that the railways obtain but a very small proportion of the efficiency out of the cars at their disposal. What is the use of perfecting roadbeds, reducing grades, laying 80 lb. rails, building huge Mogul engines, and strengthening bridges in order to increase the length of trains, if inadequate facilities are provided at the terminals for the quick despatch of cars differently routed to their proper destination ?

And here is where the problem of cheapening transportation is to be solved by the development on broad and comprehensive lines of our sea-ports at which our rail and water ways converge. In this connection I may be pardoned for referring to a national development with which I have been personally associated for the past year, during which time it has been my privilege to stand at the gateway of Canada's commerce and watch the ebb and flow of that great volume of trade which leaves our shores in the shape of exports and the immense cargoes for distribution throughout this country. There is at the present moment going on in the Port of Montreal a development to take care of the import and export trade of Canada, into which is being put $4,500,000, and she is getting for that expenditure 14 ocean berths and 14 double deck steel concrete freight sheds, with a storage area of 1,500,000 square feet, and a working capacity of 150,000 tons of freight per week. It

becomes a question therefore of considerable moment whether this expenditure is a wise one, and whether when completed the Canadian people will possess in their national port facilities and accommodation that will enable them to hold their own with the rival ports of this continent. Looking around for a comparison, we find that New York is paying $29,000,000 in the year 1907 for an improvement scheme almost identical with our own. For that $29,000,000 New York builds 8 piers and places upon them 8 double deck steel concrete sheds, having an area of 120,000 square feet less than those now being erected in Montreal. Montreal's development will place alongside of every shed two railway tracks, whereas the New York development is inaccessible to railways, and cars have to be lightered on barges into the ship and vice versa. This means that Canada is getting a port development for 4½ millions that New York has got to spend 29 millions to obtain, and by having the additional advantage of direct inter-communication between the railways, sheds and ships it has been possible during the past season to effect a very considerable saving in the handling charges of freight through the Port of Montreal.

There have been handled by the Traffic Department of the Harbour Commission during the last season 1,500,000 tons of freight, carried in 75,000 cars, 400,000 tons of this freight were handled direct between the car, shed and ships, or vice versa. On this 400,000 tons of freight there has been an estimated saving of 50 per cent. or $80,000 in the handling charges alone. In other words, this means that the Port of Montreal has been able during the past season to handle 400,000 tons of freight for what it used to cost to handle 200,000 tons; and as almost the whole of this saving has been effected on through freight destined to all parts of Canada and all parts of the world, it is a matter of gratification that in the near future Canadians may

possess the cheapest, shortest and safest trade avenue on this continent. The true national significance of the Port of Montreal and the interest that every Canadian citizen should have in its expansion and development is evidenced by the following phase of the annual business.

Canadians possess the only clear water route from the Great Lakes to the Sea on this continent which permits vessels drawing 14 ft. to carry their cargoes to and from the Port of Montreal. Every railroad has direct communication with the water front of this port, which is owned and controlled by the people, not a foot of the fore shore of the Harbour of Montreal in its entire extent of 10 miles of frontage being privately owned, thus making possible the only economic harbour development upon this continent under like conditions.

This possession enormously increases the value of the Port of Montreal as a natural asset, and with proper terminal development and proper use of the waterways already in existence the Port of Montreal will afford;—

To the growers of Grain in the Great North West,

To the Fruit and Farm products of the Provinces of Ontario and Quebec,

To the Lumber Interests of British Columbia and New Brunswick,

To the Coal and Iron Interests of Nova Scotia and Cape Breton,

To the Importing and Exporting Merchants of the entire country,

To the Farmers producing Cheese and Butter,

In short, to every Canadian citizen doing business throughout the country the cheapest, safest and quickest delivery and receiving point on this continent.

The Port of Montreal takes care of the imports of the Iron Manufacturer, now amounting to 10¼ millions a year.

Of the Woollen Manufacturer, who imports upwards of seven millions a year.

Of the Sugar Merchants, importing six millions a year.

Of the Cotton Manufacturers, importing three and a half.

Of the users of Flax, Hemp and Jute, who import one and a quarter million.

Of the Grain plains of the Great West, the Grazing lands of Ontario and Quebec, which exported through the Port of Montreal in 1906, 40 million dollars worth of animals and their products.

Cheese and Butter coming from Quebec and Ontario, 18 millions more.

Manufactured goods for South Africa, Australia and the West Indies, 4 millions more.

The Forest, Fisheries and Mines, seven millions more.

And so it becomes truly of broad national interest to all Canadians no matter what be their occupation, or where they may live, that somewhere in Canada there should be proper terminal facilities to handle Canadian business.

Montreal happens to be at the point where the farthest inland ocean navigation on this continent meets the deepest artificial waterway, connecting it with 2,500 miles of water navigation into the heart of this great continent. For that

reason during seven months in the year the cheapest, safest and quickest trade route for the large export and import business of this country ought naturally to gravitate toward Montreal, and it is a national duty that the Port of Montreal should be developed on broad and comprehensive national principles. The plan of this development on such a comprehensive scale should be given the best expert attention in all its details that money, time and experience can afford. In thus laying out a definite and complete plan covering development work for the next 25 years and carrying it on in sections, when the whole is complete there will be harmony in all its parts and a development that will enable Canadians to handle their own business efficiently and economically, and compete for the business of the Western States on a basis that will produce satisfactory results.

Alongside of the transportation question and inseparable from it is the question of the growth of our population. The dream of 100 millions of people in this country is not so far off as might be supposed at first sight.

Last year's crop of newcomers from all sources, on reliable authority, amounted to 400,000 people. Add 100,000 as the natural increase to our own population and you have an annual increase in 1907 of half a million people. If this yearly increase is not exceeded and we go on increasing at the rate of half a million a year, in 25 years the population of this country would be 18,000,000; and if at the end of 25 years all outside immigration should cease, we will then be adding to our population at the rate of two millions a year, which in 25 years more, or 50 years from 1907, would give to this country (Canada) a population of 60,000,000 people.

This is the great future that Canada must now lay the foundation for, that Canada must build railways, canals and ocean terminals to take care of.

The safety of this great future must be guarded by the aggregate individual integrity of her citizens. This wonderful panorama of development is almost unfolding itself without our realizing what is going on, and as the lines of our transportation are extending themselves to the outermost corners of this great Dominion, unconsciously is being established a bond of union under the folds of a common flag which has been the symbol of equal rights, justice and freedom to the least of her citizens since the British Empire began. We may not speak the same tongue nor worship at the same altar, yet as children of a common flag we are bound together by the thread of a common patriotism over whose strands—like the power of Niagara passing over wires to move in far distant places the wheels of mighty commerce—is passing a force of brotherhood, sympathy and power against which neither the voice of the demagogue nor the roar of hostile cannon can avail.