

THE GREAT WESTERN RAILWAY

or

C A N A D A.

Prospectus.

MAY 1851

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RAILWAY

market.

THE GREAT WESTERN RAILWAY OF CANADA.

Chartered by the Legislature of Canada.

CAPITAL, £1,500,000 CURRENCY,

IN 60,000 SHARES OF £25 CURRENCY, OR £20 11s. STERLING, EACH.

Directors.

ROBERT WILLIAM HARRIS, Esq., *President*

THE HON. SIR ALLAN MAC NAB

HENRY MACINTREY, Esq.

GEORGE S. TIFFANY, Esq.

JAMES HAMILTON, Esq., M.D.

W. P. McLAREN, Esq.

DANIEL MAC NAB, Esq.

RICHARD JUSON, Esq.

HUGH C. BAKER, Esq.

Bankers.

MESSRS. GLYN, MILLS AND CO., LONDON

THE BANK OF UPPPER CANADA, CANADA

Solicitors in England.

MESSRS. THILOM, CLARKE, AND MORICE, 27, COLEMAN STREET, CITY

Agents in England.

PETER BECHANAN, Esq., and R. S. ATCHISON, Esq., *Office*, 35, MURGATE STREET, CITY

This important Line of Railway is sanctioned by the Legislature of Canada, which, by various Acts, has granted to it, extensive powers, and the most liberal rights.

These Acts, which limit the responsibility of Shareholders to the amount of their subscriptions, enable the Company to raise a Capital of £1,500,000 currency, in 60,000 Shares of £25 currency, or £20 11s. sterling, each.

The greater portion of the Stock, which has already been taken up, has been subscribed for in Canada—by private individuals—the Municipalities of the Counties and Towns, through which the Line passes—and by parties in the United States, interested in the Lines of Railway, connected with its Eastern and Western Terminals.

The limited number of unappropriated Shares, now offered for subscription, may be applied for under the conditions stated in this Prospectus.

The construction of the Line has been commenced, under most favourable arrangements by Contractors of high respectability, and it is expected that the whole Line will be completed within two years.

The length of the Great Western Railway*, is as follows.

MAIN LINE.—	From the City of Hamilton, through the Town of	
	London, to Port Windsor, opposite Detroit, ..	184 miles
EASTERN BRANCH.—	From the City of Hamilton to the Niagara River, ..	42
		—
WESTERN DITTO.—	From the Town of London to Port Sarnia,	19 ..
		—
		226 ..
		—
		275 ..

The whole course of THE GREAT WESTERN RAILWAY lies within the British Territory, and in traversing the most fertile and populous portions of Upper Canada, passes through the Niagara, London, Gore, and other Districts, containing numerous towns and villages, with a rapidly increasing population.

The importance of such a line for national purposes, as well as for provincial interests, is obvious; and it has enlisted the favour and support of the Government of Canada. For, at the same time, that THE GREAT WESTERN RAILWAY forms a direct Trunk Line for the traffic of the principal towns and districts of Canada with one another, and with the Seat of government; it will be the main channel for the stream of passengers and emigration, which flows from this country, to the Western sections of the Province, by the way of the St. Lawrence.†

The principal feature, however, of THE GREAT WESTERN RAILWAY OF CANADA, as a HIGHLY REMARKABLE COMMERCIAL ENTERPRISE,—consists in its uniting this character of a main artery for the local and provincial traffic of Canada, with that of a COMPETING link in the great system of THROUGH COMMUNICATION between the North-Western States of America and the Upper Valley of the Mississippi on the one hand, and the cities of New York and Boston and the sea-board of the Atlantic on the other.‡

* See the annexed Map, No. I.

† These Districts comprise the Counties of Haldimand, Wentworth, Lincoln, Halton, Welland, Norfolk, Middlesex, Oxford, Kent, Essex, Lambton, Huron, Perth and Waterloo. Some evidence of the increase of their population will be found in Note A at the end of this Prospectus.

‡ See Sketch, No. II.

See Sketch, No. III.

A reference to the map will show, that the vicinity of the Niagara River, at the terminus of the Eastern Branch of the Great Western Railway of Canada, is the focus of the various communications, by which the traffic of the interior is conveyed to the Atlantic. Among these channels of communication may be mentioned—the Erie Canal,—the New York and Erie Railroad, 100 miles in length, from New York to the Niagara River,—the direct line of Railways from Boston to the same point, 500 miles in length,—and various other lines of railroad, which radiate in different directions through the States of New England and New York*.

Detroit, opposite Port Windsor, the WESTERN TERMINUS of the Main Line, is in like manner, the focus of the extensive Railway and Canal communications of the North-western States, including Michigan, Illinois, Indiana, Iowa, Wisconsin, and the upper part of Ohio*. A large portion of these important communications are already completed, and in successful operation.

Michigan, for instance, although one of the latest settled and least populous of those States, has already 700 miles of Railway completed or in progress. Among these, a Main Trunk Line of 200 miles in length, in direct continuation of THE GREAT WESTERN RAILWAY of Canada: from Detroit to New Buffalo, on the Michigan Lake is now open, and has paid highly remunerative dividends, with a rapidly increasing traffic.

The stream of traffic between Detroit and the State of New York is at present carried on entirely by the circumitous and dangerous navigation of Lake Erie, which is closed during half the year.

The importance of this traffic may be judged of from the fact, that upwards of eighty large steamers, averaging 150 tons burthen, and whose estimated cost is £ 1,560,000—a sum exceeding the estimated cost of The Great Western Railway,—are employed on Lake Erie, in addition to upwards of 100 other vessels, of different classes; and it appears from official returns, that the number of passengers carried, to and from Detroit direct, during the season of navigation in 1850, was 116,000, independent of the large numbers carried beyond Detroit, by the Upper Lake Steamers, which may fairly be estimated at double the number of passengers, landing at, and departing from Detroit.

The passage between Detroit and Buffalo, by first class steamers, occupies, under most favourable circumstances, about 36 hours. But the navigation is suspended by the ice during half the year; while during the remainder, it is liable to frequent interruptions, from the storms to which Lake Erie is peculiarly subject. By the RAILWAY, the journey will be performed AT ALL SEASONS IN TWELVE OR FOURTEEN HOURS.

There can be no reasonable doubt, therefore, that the Great Western Railway will at once absorb the greater portion of this traffic, and will become, in connection with the system of railway communication at either extremity, the high road for the traffic of the Western States with the Atlantic.

No competing Line can be made to divert this traffic: as, THE GREAT WESTERN RAILWAY OF CANADA affords the most direct route between the foot of Lake Erie and Detroit, and any other Line, to connect those points, must wind round the Southern shore of Lake Erie, increasing the distance by at least 125 miles.

Again,—such is the fortunate position of the Great Western, that it must form an essential part of that other great, though more northern, Line of communication, commencing at the head, and extending along the Canadian shores of Lake Ontario, through Toronto and Kingston, and thence on the borders of the St. Lawrence River to Montreal, Quebec, and Halifax,—with branch Lines stretching out from Oswego to Syracuse,—from Cape Vincent to Rome,—from Ogdensburg to Boston,—and from Montreal to Portland, Boston, and New York*. Most of these Lines are completed.

It is not professional skill that has placed the location of the Great Western on the precise ground that will thus enable it to control the trade and travel of such a vast portion of the Canadas and the prosperous American States, east and west of its termini. It owes its value and all these incomparable advantages to the physical formation, and great geographical divisions of the country.

The direct Line of travel from the Atlantic coast of the New England States to the Mississippi, has been controlled by that distribution of hills and valleys, which formerly ruled the location of the Erie Canal, and carried that work due west through the central and richest portions of the State of New York, in which great Cities have since grown up, and the highest grade of national prosperity has been nearly reached.

This Line of trade and travel is brought to the Niagara frontier of the Canadian and American possessions, a little south of the western end of Lake Ontario, and a little north of the eastern end of Lake Erie, where Nature seems to have provided for its further progress by bringing the opposite cliffs so near together, that it is practicable there, and *there only*, to pass over by a single arch, the waters discharged by the great cataract of Niagara.

This important and indispensable line cannot be deflected to the South,—for Lake Erie lies in the way; and it cannot diverge to the North,—for Lakes Ontario and Huron intervene in that direction. It *must* pass between the Lakes Erie and Ontario, and cross the waters of the former, below the Niagara Falls, and thence traverse the succession of valleys and level plains which are found in the same parallel, in Western Canada. It cannot deviate from this course until it again encounters at Detroit the narrow channel that connects the Northern lakes with Lake Erie, and which separates Canada from Michigan.

* See annexed Sketch, No. III.

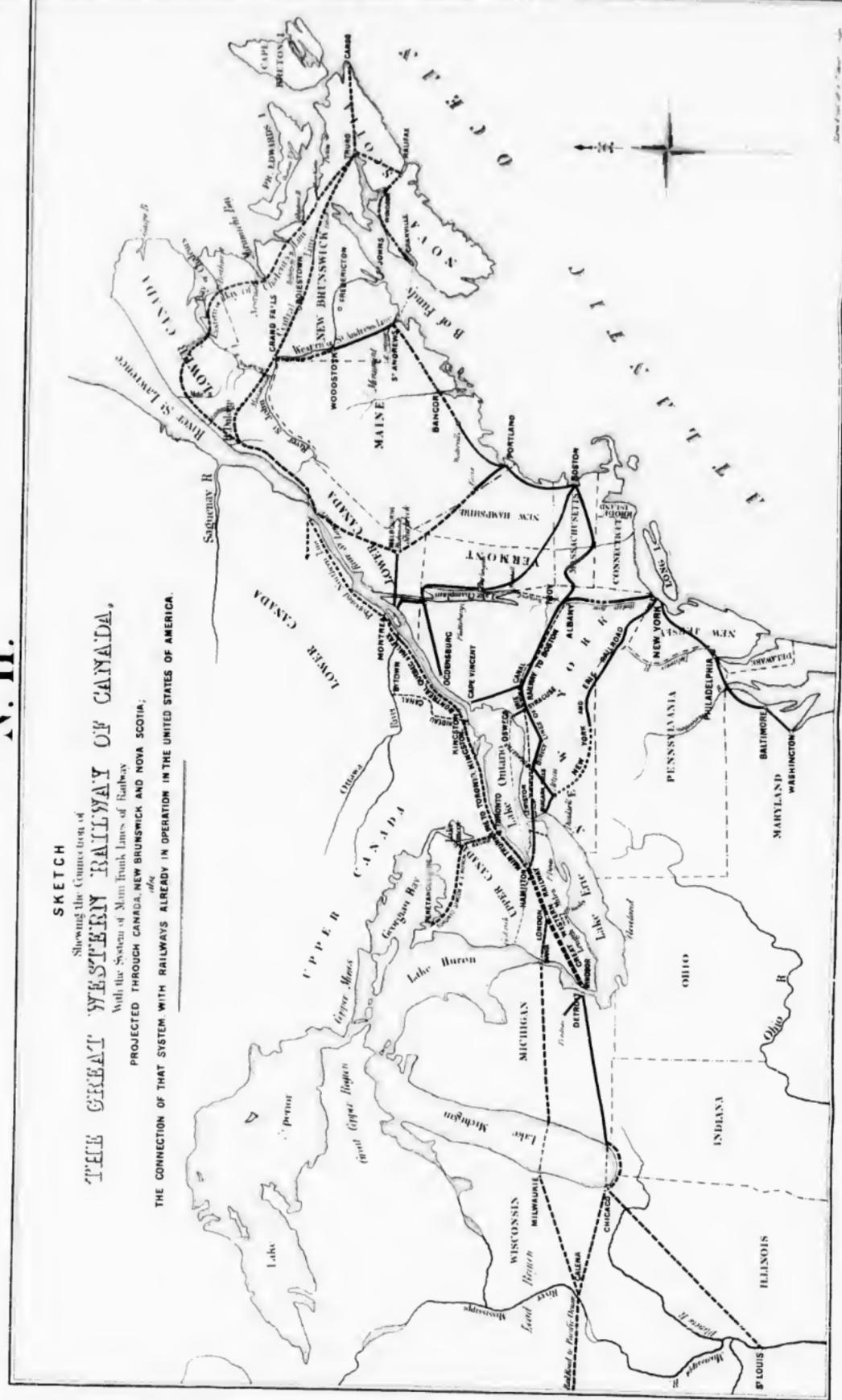
See Note B, respecting the dangerous navigation of Lake Erie.

See Sketch, No. II.

No. II.

No. II.

SKETCH
 Showing the Connection of
"THE GREAT WESTERN RAILWAY OF CANADA,"
 With the System of Main Trunk Lines of Railway
 PROJECTED THROUGH CANADA, NEW BRUNSWICK AND NOVA SCOTIA,
etc.
THE CONNECTION OF THAT SYSTEM, WITH RAILWAYS ALREADY IN OPERATION IN THE UNITED STATES OF AMERICA.



MAP AND PROFILE
OF THE
GREAT WESTERN RAILWAY
CANADA WEST.

C. R. Stuart, Engineer of Location

SCALE

Horizontal 1/4 Miles to the Inch
Vertical 1000 feet to the Inch

STATE OF MICHIGAN



CENTRAL RAILROAD OF MICHIGAN

DETROIT

PONTIAC

FLINT

SAGINAW

BAY CITY

LUDINGTON

CAMPBELL RIVER

CHATHAM

COOKE

HOWARD

KENT

RALPH

EXFORD

ALONGORD

DUNWICH

TOBY HARBOR

SOUTHWARD

MID

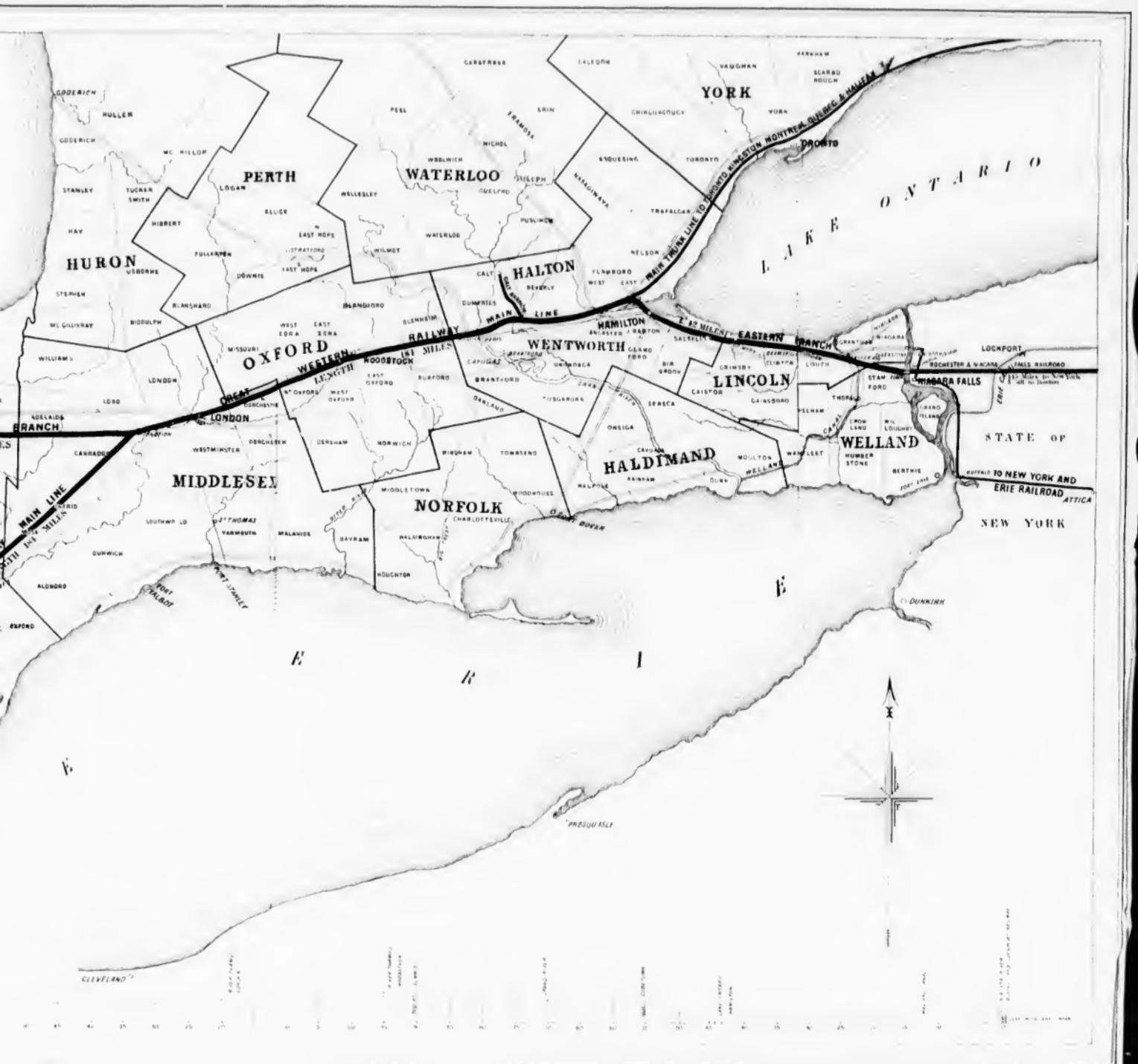
SOUTHWARD

LINE

MAIN LINE

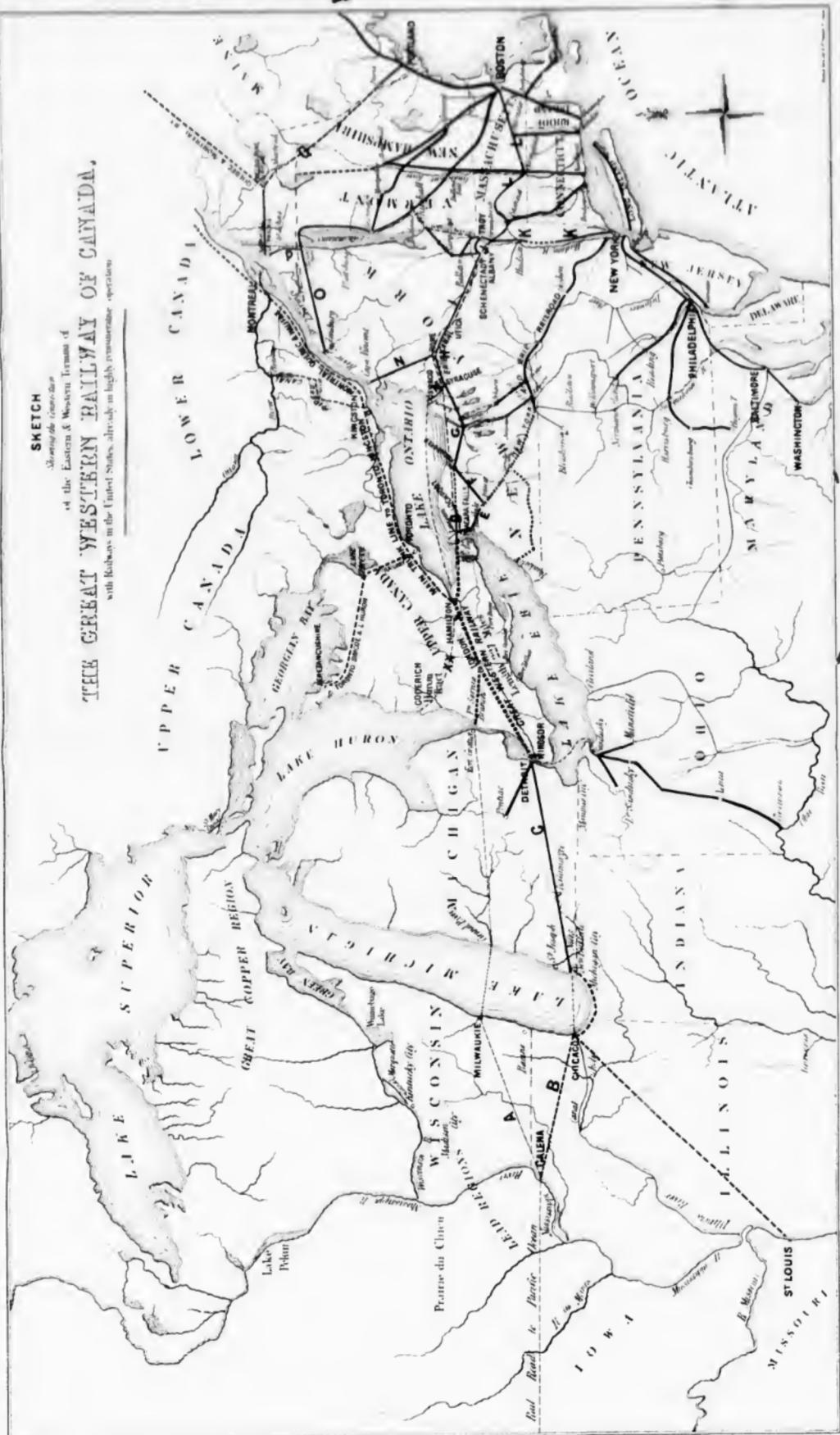
1/4 MILE

N^o I.



No. III.

SKETCH
*Showing the construction
of the Eastern & Western Trunks of
THE GREAT 'WESTERN' RAILWAY OF CANADA,
with details in the United States, striking in high perspective.—(part 2)*



After passing this Channel the same succession of level plains is continued into the fertile and almost boundless region known as the Valley of the Mississippi,—that immense field, which is now absorbing the surplus population of the Kingdoms of Europe, and is increasing in influence and wealth with a rapidity, that has hitherto been without a parallel in the history of the world.

Without dwelling upon the prospects of **EVENTUAL TRAFFIC**⁴, resulting from the rapid progression of population and the development of the resources of the North American States, and of Canada, or upon that invariably resulting from the establishment of Railways,—which renders the present undertaking so peculiarly inviting, with a view to **PERMANENT INVESTMENT**,—it may be sufficient to state, with regard to the **EXISTING TRAFFIC** and the **PRESENT AND IMMEDIATE PROSPECT** of remunerative returns. (See Note F.)

First.—That the Michigan Central Railway which is a continuation of the line of the Great Western Railway of Canada, has paid dividends of from eight to ten per cent., while an account of the receipts and working expenses of this line, for six months, ending on the 30th of November last, obtained from authentic source, show a most rapid and extraordinary increase of profit. (See Note D.)

Second.—That the lines of Railway in New York and New England, which complete the communication between the vicinity of the Niagara River and the Atlantic, although competing with the Erie Canal, and with one another, for the traffic, *which will be concentrated on the GREAT WESTERN RAILWAY OF CANADA*, pay dividends of from eight to ten per cent., and occasional large bonuses. (See Note E.)

Third.—That the existing *passenger traffic* between the State of New York and Detroit, supposing two-thirds of it only to be carried by the Great Western Railway, and making no allowance for the increase of travelling occasioned by the increased facility, expedition and economy of Railway communication, would, according to an estimate made by the Company's Engineer in Canada, be sufficient to pay seven per cent. on the cost of construction, *without taking into account the local traffic of Canada*, or the general traffic in goods and merchandise.

The line is of a peculiarly easy character, traversing for the greater part of its distance a level plateau, involving no heavy engineering works; and for more than 247 miles, the Line is so perfectly straight, that it differs less than four miles, from an *air Line* drawn between the same points.

In conclusion, one fact connected with the advantages which this important Railway possesses, cannot be overlooked.—In making his report to the Directors, Charles Stuart, Esq., one of the most eminent and experienced Civil Engineers in the United States, remarks, "that he knows of no case comparable with this, and that it is doubtful whether another location of the same extent, can be found on the Continent of America, so well adapted to the attainment of high velocity, and great economy of transportation."

TERMS AND CONDITIONS ABOVE REFERRED TO.

The terms and conditions on which the unappropriated Shares, above referred to, are offered for Subscription in this Country, are as follows, viz.:—

1. That the sum of £20 11s. sterling, being the par rate of Exchange between Canada and Great Britain, paid in England, shall be considered as the full payment on each Share of £25 Canada Currency.

2. That notwithstanding the Directors may make calls in Canada at earlier or different times from those undermentioned, the amount of the Subscription for these Shares shall be payable at the Company's Bankers, in London, as follows, *viz.*:

£25 per cent. on the issue of the Scrip Certificate, such Scrip Certificate to be issued before or on the 10th of July next.
 15 per cent. on the 10th October next.
 15 " 10th January, 1852
 15 " 10th April
 15 " 10th July,
 15 " 10th October, "

3. That six per cent. interest shall be allowed on all monies paid to the Company's Bankers in London from the day of payment, and that on such Instalments as are not paid on the said several days, interest from such days at the rate of £3 per Cent. shall be paid by the holders of the Shares in respect of which, such default shall occur, and the holders shall be liable to forfeiture of all the previous payments (if any), if each Instalment is not paid within Three Months from the day on which it is payable as above, provided falls in Canada to an equivalent amount have been made payable at or before such periods.

4. That the Company shall have an Office in London, for their Agents in Great Britain, where Shares taken in England, shall be transferable, and where warrants for the Dividends declared in Canada, payable in Sterling money at par, at the Company's Bankers' in London, shall be issued to the holders of the Shares taken in England.

Further information may be obtained on application by letters (paid), addressed to the AGENTS in England of the **GREAT WESTERN RAILWAY OF CANADA**, No. 65, Moorgate Street, London.

⁴ See Note C, respecting the **EVENTUAL TRAFFIC** on the Great Western Railway.

For Notes A, B, C, D, E, F and G, see page 1 and 5. For the References to Sketch No. III, see page 2.

⁵ See Note D.

NOTE A.

INCREASE OF POPULATION IN THE DISTRICTS THROUGH WHICH THE GREAT WESTERN RUNS.

In 1830, the population of the entire Province of Upper Canada amounted to 210,437 inhabitants.

In 1848—eighteen years afterwards—the population of the Eight Western Districts, through which THE GREAT WESTERN runs, amounted to 291,082; or upwards of **eighty thousand** more than the population of the whole Province in 1830.

In 1848, the population of Upper Canada had reached 743,292, and, at the present time, it falls little short, probably, of a Million.

ON THE WAY TRAFFIC alone of THE GREAT WESTERN RAILWAY is likely to be large, will appear from the following Statement of the property and production of Upper Canada:—

In 1818. The lands in cultivation in this part of Canada, were valued at, £9,029,541.

The lands uncultivated, belonging to individuals, at..... £5,503,583.

Together,..... £14,530,525.

In 1847. The value of the Wheat and other Grain Crops, estimated at the lowest average price in that part of Canada was..... £367,625.

This estimate does not include the value of manufactured Timber, nor of Hemp, Flax, Tobacco, and Hops, grown in the Western Districts; and it is, of course, exclusive of the value of the Horses, cattle, and Sheep, raised in Upper Canada.

The value of the various kinds of Mills, Houses, and Buildings, and also of Personal and other Property, not attached to land is very great; but as it is not liable to taxation, no accurate estimate of its amount can be given.

NOTE B.

STORMS, TO WHICH LAKE ERIE IS PECCARIA SUBJECT.

James L. Barnum, Esq., of Buffalo, in his Letters, on Lake Ontario, to the Chairman of the Committee on Commerce (of the United States House of Representatives), under date of May 15, 1848, says: "The storms and tempests on the Lakes (Erie, Huron and Michigan) are as violent as on the Atlantic, and the dangers of navigating them are known and acknowledged by those who have had both, to be equally so great, if not greater. The last tempest weather last fall was very destructive to lives and vessels, amounting to us, nearly as careful as possible, to sixty lives lost, thirty-six vessels driven ashore, twenty of which became total wrecks; four foundered with entire loss of crew, &c. of stores, and producing a loss in the value of property of over two hundred thousand dollars. And it has suffered in losses, within the last few years, more than **four hundred lives**, and destruction and damage to steamboats, vessels, and cargoes, more than **one million of dollars**. Human and destructive as the want of safe harbours is to our commerce, the difficulties are vastly increased from the almost impassable condition of the flats in Lake St. Clair. Here steamboats and vessels are daily compelled, in all weather, to fast around, and shift their anchors, carcasses, and baggage, into lighters; exposing life, health, and property to great hazard, and then, by extraordinary hoisting and landing, are enabled to get over. Indeed, so bad has this passage become, that one of the largest steamboats, after lying two or three days on these flats, everything taken from her into lighters, was unable, with the powerful aid of steam, and every thing else she could bring into service, to pass over."

In the early part of last Spring (1850), a steamer, with a detachment of Her Majesty's troops on board, foundered on Lake Erie, and an officer and several of the men lost their lives.

THE GAZETTEER OF THE STATE OF NEW YORK, published in 1842, at Albany in that State, in describing Dunkirk on the Southern shore of Lake Erie, (see Sketch No. 3,) has the following passage, confirmatory of the hazards and dangers of the navigation of Lake Erie:—

"The Harbour of Dunkirk has been much improved by recent UNITED STATES expenditures, and affords a depth of about 12 feet of water over the bar. As an anchorage, this harbour is EXTREMELY UNFATHOMABLE & PERI OF BETRAYAL, and is much susceptible to sudden tempests by Steamboats and Sail Vessels."

The same work in describing Lake Erie has the following passage:—

"Lake Erie is said to be the only one of the chain, in which there is any perceptible current, a circumstance which may, perhaps, be occasioned by its smaller depth of water, its bottom is rocky, and the softness of its water, also renders it more easily and more permanently affected by freshets, its navigation being generally obstructed by ice for some weeks every spring, after that of all the other Lakes it is open and unimpeded."

Lake Erie is about 260 miles in length, and from 30 to 40 miles in breadth. Its surface is elevated 500 feet above the tide waters of the Hudson River at Albany, and 334 above Lake Ontario. The greatest depth which has been observed in sounding this Lake, is 250 feet.

NOTE C.

ESTIMATED TRAFFIC OF THE GREAT WESTERN RAILWAY OF CANADA.

To give some idea of the INCREASE OF PASSENGERS, resulting from the establishment of Railways, the following extract is taken from Baron Charles Dupin's Report on the Paris and Orléans Railway:—"Experience has proved both in France and abroad that, in a short space of time, the facility, the expedition, and economy afforded by Railways, more than double the number of passengers and the quantity of merchandise. In order to support such statements, we will quote the following facts relative to the Railways of Belgium, Lundland, and Scotland, in instances of extreme difference, and giving rise to a variation in the returns, which far exceed all expectation."

Comparison of the number of travellers conveyed by thourough the whole or a portion of the Line:

Railways,	Pas-senger before the establishment of Railways.	Pas-senger after the establishment of Railways.	Increase per Cent.
Manchester and Liverpool	100	1,620	1,500
Stockton and Darlington	180	1,600	280
Newcastle and Shields	90	500	460
Manchester and Firth	100	900	800
Hamburg and Antwerp	100	1,000	1,400

To give some idea of the INCREASE OF CONVEYANCE, or CONSUMPTION OF GOODS AND MERCHANDISE, after the establishment of Railways, the following passage from the same writer will do:

"PROGRESS IN THE CONVEYANCE OF MERCHANDISE by Railway, compared to that of passenger:—

Years.	Pas-senger.	Tons of Goods.
1811	12,100	22,900
1812	17,500	50,500
1813	1,35,180	172,000

Here while the number of passengers increased 1,400 per cent. in ten years, in the same time the quantity of goods increased 1,400 per cent."

Now, the increased transport both of Passengers and Merchandise, resulting from the establishment of Railways, has been in America.

Of this fact the following statement of the increase of revenue on five of the Railways, in direct communication with the Eastern Terminals of THE GREAT WESTERN RAILWAY, is an ample induction.

Line	Amount of Net Revenue.	Amount of Increase.	Increase per Cent.
1. The Boston and Worcester.			
1812.	£45,174		
1816.	59,134		
In three years, ....	.....	14,237	33 per cent.
2. Western Railway.			
1812.	61,545		
1816.	100,515		
In three years, ....	.....	39,198	80 per cent.
3. Utica and Schenectady.			
1815.	18,128		
1816.	66,839		
In seven years, ....	.....	47,681	13 per cent.
4. Albany and Syracuse.			
1814.	23,568		
1816.	31,237		
In three years, ....	.....	10,269	33 per cent.
5. Auburn and Rochester.			
1815.	22,073		
1816.	45,904		
In three years, ....	.....	22,928	100 per cent.

But the steady PROGRESS IN AMERICA of the increase in the number of passengers resulting from the construction of Railways, is placed in the clearest light by the following Tabular Statement:

STATEMENT SHOWING THE INCREASE OF PASSENGERS ON THE RAILROADS FROM BOSTON, CONNECTED WITH THE EASTERN TERMINES OF THE GREAT WESTERN RAILWAY.

THE POSITION OF THESE LINES IS SHOWN IN SKETCH No. III.

NAME OF CORPORATION.	1819.	1823.	1824.	1825.	1826.	1827.	1828.	1829.	1830.
Western R.R. Albany to Boston.	100,117	200,967	220,257	220,634	265,514	388,310	405,611	415,804	
Albany and Schenectady.		132,085	158,541	151,051	220,410	236,889	240,810	281,273	
Utica and Schenectady.		161,349	161,536	221,518	266,534	270,412	302,061	370,288	
Syracuse and Utica.		121,361	123,534	175,270	198,512	216,810	294,145	310,245	
Auburn and Syracuse.		83,110	90,251	87,211	105,800	110,605	151,215	209,731	No Report.
Auburn and Rochester.		100,190	121,369	119,360	112,255	181,011	209,260	251,656	361,864
Tonawanda - Rochester to Attica.		79,512	71,130	92,387	131,068	118,114	194,941	235,104	
Attica and Buffalo.		63,943	71,817	87,031	150,799	116,225	190,108	236,173	
Buffalo and Niagara Falls.				50,845		106,110	101,670	121,682	
Michigan Central R.R.						90,070	132,672		509,180
* Albany to New York R.R.									

* Called Hudson River Railroad; only one half completed.

On the Central Railway of Michigan, connected with the Western Terminals of THE GREAT WESTERN RAILWAY, the receipts in the month of May for three years were as follows: —

1815. £5,021,50 Dollars.
1816. 32,847.83
1817. 110,115.00

being an increase of nearly two hundred per cent. in two years.

The number of Passengers carried on that Railway was, according to the Returns of J. W. Brookes, Esq., the Superintendent, as follows: —

1814, when the Railway was partially open, less than 25,000.
1816, the Railway still incomplete, 431,278.

The earnings of the Railway now exceed FORTY MILLION DOLLARS.

But the rapid increase of Population, Commerce, and Wealth in the States of Wisconsin, Michigan, and Ohio, all of which will gradually largely increase the traffic of its Western Terminals, is a certain guarantee, that THE EVENTUAL TRAFFIC OF THE GREAT WESTERN RAILWAY will be limited only by its capacity of transportation.

Wisconsin, Michigan, and Ohio are rich in Mineral Wealth, as well as favoured with the highly fertile soil, which has enabled them with a rapidity unknown to European experience, to assume their position among the States of the North American Union.

In the State of Wisconsin, the returns of population were as follows: —

In 1810, the population was 3,214.
In 1815, 10,678.
In 1820, 21,158.
In 1825, 3,000.

Up to 1810, Wisconsin imported no supplies of every kind, including provisions. In 1810, the people fed themselves, supplied an army of 15,000 immigrants, and of their supplies consuming, as exported through the Lakes, produced to the value of between three and four millions of dollars.

In 1810, the State of Ohio, whose Northern districts will contribute largely to the traffic of THE GREAT WESTERN RAILWAY, contained Eighteen towns, and its produce barely sufficient to maintain its thinly sparsely population. In 1810, the population had increased to 1,19,467, and the products of its industry amounted in value to the aggregate, to 63,000,000 dollars; viz., —

	Dollars.
Products of Agriculture.	71,807,011
Manufactures.	14,888,011
Commerce, &c. per cent. on capital.	8,050,411
Mines.	2,192,682
The Forest.	1,019,061
Fisheries.	10,991
£ 63,000,000	

On during the principal day of Ohio, was founded in 1819. In 1810, the population amounted to 90,000. In 1810, it has increased to 48,411, and to 1816, to 66,478. But its trade and manufactures increased at a still more rapid rate than its population. The annual products of its industry nearly double in amount and value, those of any other State in the Union, except those of New York, Pennsylvania, Virginia, and Massachusetts.

The rapid advancement of Michigan, with its population, is well known has been equally remarkable.

NOTE D

RECEIPTS AND EXPENSES OF THE MICHIGAN CENTRAL RAILWAY.

Extract from Statistical Memoranda, furnished by the Engineer of the Great Western Railway of Canada, April 1854. — For the purpose of testing Mr. Stuart's estimate of the probable revenue of this Road, and for my own information, I obtained from Mr. Brooks, the superintendent of the Michigan Central Road, the receipts and working expenses of his road for the six months ending 30th November last, which I give you, as follows:—

Months	RECEIPTS.			Total Expenses.
	Freight	Passenger	Miscellaneous	
June	Dollars	Dollars	Dollars	Dollars
June	16,265	50,301	3,611	50,113
July	11,294	12,100	3,160	56,584
August	31,506	13,439	2,501	48,436
September	31,435	62,512	3,050	117,007
October	34,120	10,062	11,023	105,572
November	61,452	38,602	3,013	105,119
Total	261,019	307,000	24,142	592,860
				592,860

The expenses for the same length of time comprised under the following heads—load, repairs, building repairs, locomotive repairs, car repairs, locomotive service, train service, station service, fuel, oil, stationery, state tax and miscellaneous, were £1,821 dollars, or at the rate of 301.619 dollars per annum, leaving a profit for six months of 142,936 dollars. The stock of this road is 2,561,400 dollars. The whole cost was 5,965,143 dollars. The balance of the cash, over and above the stock, is in the shape of a funded debt, bearing 5 and 8 per cent. interest, which amounts to 121,109 dollars per annum; or for six months 121,054 dollars, to which add working expenses, makes 21,185 dollars, leaving to be divided on stock for six months 170,158 dollars, or nearly 11 per cent. per annum. The freight upon the Central road, is mostly load, and almost two-thirds of the passengers are way passengers.

NOTE E

ROUTE OF THE RAILWAYS IN THE UNITED STATES CONNECTED WITH THE EASTERN TERMINUS OF THE GREAT WESTERN RAILWAY OF CANADA.

Statement of the Length, Cost, Receipts, Expenses, and Profits of the Railroad from Albany to Buffalo, for the year ending September 30th, 1850, compiled from the Reports of the different Corporations to the State Engineer and Surveyor:

NAME OF CORPORATION.	Length in Miles.	Total Cost in \$.	Capital Stock paid.	Total Earnings.	Total Expenses.	Profits.	Percent. on Cost.	Dividend Paid.	Percent. Prod.	REMARKS.
Albany and Schenectady	17	£11,412	£1,900,000	208,581	91,471	117,113	61	£10,000	5	per cent.
Utica and Schenectady	18	£11,318	3,194,010	524,125	308,473	63,622	15	£50,000	10	"
Syracuse and Utica	21	£10,082	2,490,000	142,575	292,578	210,016	11	£90,000	8	"
Auburn and Syracuse	26	—	—	—	—	—	—	—	—	None
Auburn and Rochester	18	£10,000	2,196,765	515,810	163,165	357,345	11	£60,861	10	"
Pompeiana	133	£210,820	£800,000	344,398	109,622	231,576	19	£2,000	9	"
Vine and Buffalo	312	£902,015	£800,000	229,510	70,000	158,810	15	£2,100	9	"
Rochester and Syracuse	101	£205,000	3,304,970	170,991	60,850	116,115	16	per Ann.	per Ann.	For two months only.

* ALBANY AND SCHENECTADY.—This road, in addition to the 356,000 dollars, divided a bonus of 31 percent. from its surplus in 1850.

* SYRACUSE AND UTICA.—This road increased its stock 600,000 dollars in 1851 from Surplus Lardings.

* AUBURN AND SYRACUSE.—This road and the Auburn and Rochester were consolidated in July 1850, and are now called the ROCHESTER AND SYRACUSE RAILROAD.

HAMILTON, N. Y., Sept. 1st, 1851.

Signed

ROSWELL G. BENEDICT,

Engineer, G. W. R. B.

NOTE F

THE GREAT WESTERN RAILWAY OF CANADA.

Extract from the Report of C. B. STEARNS, Esq. Engineer of Location of the Great Western Railway of Canada, and now Surveyor General of the United States Navy, to the Directors of the Company, dated 1st September, 1851.

Having endeavored to exhibit briefly the most prominent sources of strength on which your Railway is to depend for its support, I do not deem it necessary to enter into any speculative estimate of the quantities which it will command, or the profits which it will yield.

It can be confidently asserted, that there is no process of estimating its future results, based upon the foregoing facts, or upon the experience of other works of internal improvement, which will not justify all that need be claimed.

If then, there should be of tonnage passengers of the first class, an average number of 100 each way daily, at two cents per mile, and of a second class of through passengers, half this number daily, at one cent per mile, the yearly receipts would be £16,000. Dollars

If the way passengers should equal fifty per day each way, at 12 cents a mile, half way, the receipts from that source would be £11,000.

If the emigrants should equal 200 per day for one half year, at one dollar each from Lake Ontario to Detroit or Port Huron, the receipts would amount to £6,500.

If 500 barrels of flour, only, be carried from Detroit to Hamilton, at twenty cents per barrel, it would add £1,000 to the receipts.

If, and if the through and way freight reached only 600,000 tons, or half a full train per day, the yearly receipts would be £12,000.

And for funds and express, £1,000.

And we obtain a total of £58,000.

Subtract from this amount 3% per cent., the average expense of the railways from Albany to Buffalo last year, and we have for expenses £32,000.

Leaving a net revenue of £26,000, equivalent to ten per cent. on the estimated cost of the work, and over nine per cent. on the capital stock of six millions of dollars.

At £1,000,000, or £1,000,000,000, the value of the work, the revenue would be £260,000,000.

Extract from Letter from ROSWELL G. BENEDICT, Esq., Engineer of the Great Western Railway of Canada, to PETER RICHARDSON, Esq., dated Hamilton, 16th April, 1851.

I consider that THE THROUGH PASSENGER business of the Great Western Road will be double that of the Central Road, and that THE WAY PASSENGERS will be nearly if not quite equal. The local freight business cannot but equal it. In addition to this, the Great Western will have the benefit of all the freight brought to Detroit. The same argument holds good with regard to passengers. The number of passengers between Detroit and Buffalo during the season of navigation 1850, (a space of about five months) was 145,000, independent of the large numbers carried past Detroit, by the upper lake steamers amounting to at least double the above number.

I have no means of ascertaining the exact number of Through Passengers on the Central Railroad; but it cannot vary much from 60,000.—I think it safe, and much below the figure to estimate 100,000 Through Passengers on the Great Western Line, and assuming the way travel and freight to be only equal, we shall more than realize the estimate of Mr. Stuart, making no allowance for increase, &c.

(Signed)

ROSWELL G. BENEDICT,
Engineer Great Western Railroad, Canada

NOTE G.

Table of Gradients.

DENOMINATION OF GRADE.	NAME OF DIVISION.				Total.
	Eastern.	Central.	Western.	Pt. Sarnia Branch.	
Level and under 5 feet per mile.....	Miles.	Miles.	Miles.	Miles.	Miles.
5 to 10 feet per mile,.....	2137	3183	8552	1140	18742
10 to 20 feet per mile,.....	415	206	850	845	2316
20 to 30 feet per mile,.....	855	1175	611		2941
30 to 40 feet per mile,.....	893	975	682		2460
40 to 50 feet per mile,.....		3835	300		635
50 feet maximum west,.....		1140			1140
Total,	4210	5584	10995	1985	27754

Linear Arrangement.

DIVISION.	CURVES IN MILES.					
	Lengt in miles,	Radius 11400 ft.	Radius 5730 ft.	Radius 2865 ft.	Radius 1910 ft.	Total Length.
Eastern,.....	1182		1.87	0.41	1210	
Central,.....	7094	0.53	1.42	2.52	0.58	784
Western,.....	10638	1.53	2.01			10995
Sarnia Branch,.....	1724	1.59		1.02		1985
	26438	3.52	5.33	3.54	0.98	27754

REFERENCES TO THE SKETCH, No. III.

The Railways in the United States connected with the WESTERN TERMINUS of the Great Western Railway are distinguished as follows:—

- A. Milwaukee and Mississippi..... Railway.
- B. Chicago and Galena..... ———
- C. Michigan Central..... ———

The Railways in the United States connected with the EASTERN TERMINUS of the Great Western Railway are distinguished as follows:—

- D. Lewiston and Lockport..... Railway.
- E. Attica and Buffalo..... ———
- F. Tonawanda (Rochester to Attica)..... ———
- G. Rochester and Syracuse..... ———
- H. Syracuse and Utica..... ———
- I. Utica and Schenectady..... ———
- J. Albany and Schenectady..... ———
- K. Hudson River and New York City..... ———
- L. Western (Albany to Boston)..... ———

The Railways which radiate in different directions, through the States of New England and New York, and which will be tributaries to the traffic of the Great Western Railway are distinguished as follows, viz.:—

- M. Oswego and Syracuse..... Railway.
- N. Rome and Cape Vincent..... ———
- O. Ogdensburg, Burlington, and Boston..... ———
- P. Montreal, Lachine, and Beauport..... ———
- Q. St. Lawrence and Atlantic..... ———

XX. denotes a projected line of Railway into the Huron Tract belonging to the Canada Company.

The Canals connected with the Main Lines of communication through Canada, are denoted by a dotted line, viz.:—

- The Welland Canal, connecting Lake Erie with Lake Ontario.
- The Rideau, ——, Kingston at the Eastern End of Lake Ontario with the Ottawa River at Bytown.
- The Erie, ——, the Eastern end of Lake Erie with the Hudson River in the State of New York, at Albany and Troy.

The Maps attached to this Prospectus have been compiled from the following Authorities:

1. Skeleton Map, showing the Railroads completed and in progress in the United States, and their connection as proposed with the Harbour of Pensacola, prepared by order of the House of Representatives of the United States, 1st Session, 30th Con., and presented to Congress, 1848.
2. Distances Railway, Steamboat, and Telegraph Book, with the Map attached, published at New York, in May 1850.
3. Report and Survey of Major Ridgmont, of the Royal Engineers, and other officers and Surveyors, on the Proposed Railways through Nova Scotia and New Brunswick to Quebec, published by Order of the House of Commons, 1846—1847.
4. Report on THE GREAT WESTERN RAILWAY OF CANADA, of Charles R. Stuart, Esq., late State Engineer and Surveyor of the State of New York, and now Surveyor General of the United States Navy.
5. MS. Map of R. G. Benedict, Esq., Chief Engineer of THE GREAT WESTERN RAILWAY.