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DOMINION OF CANADA.

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ANNUAL REPORT

OF THE

MINISTER OF RAILWAYS AND CANALS

FOR THE PAST

FISCAL YEAR FROM 1<sup>ST</sup> JULY, 1885, TO 30<sup>TH</sup> JUNE, 1886,

ON THE WORKS UNDER HIS CONTROL.

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SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF THE ACT THIRTY-FIRST VICTORIA, CHAPTER TWELVE, SECTION NINETEEN, AS AMENDED BY THE ACT FORTY-SECOND VICTORIA, CHAPTER SEVEN.

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PRINTED BY ORDER OF THE HOUSE OF COMMONS.

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1887.



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# REPORT

1885—1886.

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*To His Excellency the Most Honourable the Marquess of Lansdowne,  
Governor General of Canada, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY :

I have the honour to submit the Annual Report of the Department of Railways and Canals for the fiscal year ended 30th June, 1886.

This report is submitted in accordance with the provisions of the Act 31 Vic., Cap. 12 (1867), as amended by the Act 42 Vic., Cap. 7, Sections 4 and 5 (1879).

The Annual Reports of the Chief Engineers, together with general and special Reports from Superintendents, both of Railways and Canals, and from other Officers of the Department, are given in Appendices.

Attached hereto (Appendix 1, page 1) will be found a statement showing the amounts expended during the past fiscal year in construction, repairs, and maintenance of the several works under the Department.

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## RAILWAYS.

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The present Report deals with those Railways of the Dominion directly controlled by the Federal Government, and others towards the construction of which subsidies have been authorized.\*

There is prepared by this Department, and laid before Parliament annually a special Statistical Report embodying returns made by Canadian railway companies, as required by statute. These returns give information as to railroad operations in Canada.

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\*It should be observed that while the usual reports furnished by the Superintending Officers, and to be found in the appendices hereto, deal with the fiscal year only, the Canadian Pacific Railway has been dealt with by the Government Chief Engineer of Railways in reports of subsequent date, and the General Report of the Minister contains information on points of interest relating to this Railway and to other subsidized lines up to the end of December, 1886.

## CANADIAN PACIFIC RAILWAY.

## TRUNK LINE.

	Miles.	Miles.
Quebec to St. Martin's Junction, (13 miles north of Montreal).....		159
Montreal (at the head of Atlantic Ocean navigation) to St. Martin's Junction.....		13
St. Martin's Junction to Callander.....		331
Callander to Port Arthur.....	649	
Port Arthur to Red River (opposite Winnipeg)....	428	
Red River to Savona's Ferry.....	1,257	
Savona's Ferry to the waters of the Pacific Ocean at Port Moody.....	213	
		<u>2,547</u>
Total, Montreal to Port Moody, Burrard Inlet.		<u>2,891</u>

The company have extended their line by building a branch, 14 miles long, from Port Moody west to Vancouver, also on Burrard Inlet.

The Canadian Pacific Railway Company was incorporated by Letters Patent the 16th of February, 1881.

By the Act 44 Vic., ch. 1 (1881), a contract made with the company, under date the 21st of October, 1880, for the building of a line of railway between Callander, Lake Nipissing, and Port Moody, British Columbia, was approved and ratified.

By this contract the company undertook to construct the portions between Callander and Port Arthur, and between Red River and Savona's Ferry (Kamloops), British Columbia, the Government undertaking the building of the portions between Port Arthur and Red River, and between Savona's Ferry and Port Moody; the said portions to be conveyed to the company, with station buildings and water service, but without equipment.

Under the terms of the contract, the whole line was to be completed and equipped by the 1st of May, 1891, and upon such completion was to become the absolute property of the company, together with the Pembina branch from St. Boniface (opposite Winnipeg) to Emerson, on the boundary line, a line 64½ miles long, built by the Government.

The total distance between the terminal points named (Callander and Port  
[1886]

Moody), by the route finally adopted *via* Winnipeg and Kicking Horse Pass, is 2,547 miles, of which the portions built by the company are as follows:—

	Miles.	Miles.
Callander to Port Arthur .....	649	
Red River to Savona's Ferry .....	1,257	
	<hr/>	1,906
The portions built by the Government are as follows:—		
Port Arthur to Red River .....	428	
Savona's Ferry to Port Moody.....	213	
	<hr/>	641
		<hr/>
		<u>2,547</u>

#### GOVERNMENT WORKS.

As was shown in last year's report, the Government works, as contracted for, were completed before the close of the fiscal year 1885-86.

#### PROGRESS OF WORKS UNDER THE COMPANY.

*Callander to Port Arthur—649 miles.*—During the past fiscal year the work of finishing the road, comprising ballasting, the provision of water service and station accomodation was carried on, and the line was open for regular passenger traffic in November, 1885.

*Red River to Savona's Ferry—1,257 miles.*—The work remaining to be done in British Columbia was pushed forward, and on the 7th of November, 1885, the last spike was driven, thus making rail connection from Port Moody to Montreal, a distance of 2,891 miles, or to Quebec, a distance of 3,037 miles.

The completion for the purposes of public traffic of the whole of the line of the Canadian Pacific Railway, and its opening and regular operation, not only on the subsidized portion between Callander and Port Moody, but between Montreal, and Quebec to the Pacific, is the final issue of the year's work.

The time tables of the company coming into operation in November, 1885, show the line open for traffic from Montreal to Donald at the foot of the east slope of the Selkirks, 2,446 miles from Montreal; and on the 28th of June, 1886, a through train left Montreal for Port Moody, reaching the Pacific terminus on schedule time. Since that date the train communication has been regularly maintained.

It is understood from the Government chief engineer, that an extensive system  
[1886] xi

of snow shed protection has been constructed by the company through the mountain districts; that these sheds, which are of a very massive character, have effectually served the purpose for which they were designed, and that security to the few remaining portions of the line where, as the result of the present winter's experience, it may appear desirable, will be at once afforded by further erection of the same valuable means of defence, the whole road being thus thoroughly protected.

#### SUBSIDY AND FINANCIAL ARRANGEMENTS.

The subsidy granted to the company was \$25,000,000 in money, and 25,000,000 acres in land.

Under the authority of an Order in Council of the 7th of November, 1883, an agreement was completed with the company on the 10th of November, 1883, by which the company should deposit with the Government moneys and securities to the extent of \$15,942,645, to constitute a fund to secure for ten years, from the 17th of August, 1883, a minimum half yearly dividend at the rate of 3 per cent. per annum on \$65,000,000 stock, the Government undertaking to pay such dividend upon shares issued to that extent, and to pay the company interest half yearly at the rate of 4 per cent. per annum on the balance of the fund not paid out as dividend.

The company further deposited with the Government certificates of shares in the remaining capital stock of the company for \$35,000,000, making the whole of the \$100,000,000 authorized as their capital, the said \$35,000,000 of stock to be returned to the company, from time to time, upon their payment in cash of a sum sufficient to provide a 3 per cent. dividend, during the remainder of the period of ten years, upon the amount so withdrawn.

From the said sum of \$15,942,645, and the interest accruing thereon, the Government undertook to pay to the Bank of Montreal, as trustee, \$975,000, as interest, half-yearly, for 10 years, or until the 17th of August, 1893; also, 1½ per cent. on any portion of the \$35,000,000 of stock which the company might thereafter withdraw, as above provided; the bank to pay out therefrom to the shareholders a dividend of 3 per cent. (except to the Government as holders of the \$35,000,000 stock.)

The company further deposited \$148,507, as interest on their deposit at 4 per cent., from the 17th of August, 1883, to the 17th of February, 1884, to cover dividends then falling due.

Under the agreement of the 10th November, 1883, provision for the sum of

\$15,942,645 required to form the fund for the payment of the 3 per cent. dividend for ten years, on \$65,000,000 of stock, was made as follows —

The company paid at once on the 16th November, 1883..... \$8,561,733

Further they undertook to pay as follows :—

- |   |             |              |
|---|-------------|--------------|
| (1). Before the 1st of February, 1884, with interest at 4 per cent.....   | \$2,853,912 |              |
| (This payment was to be secured by a deposit of land grant bonds—\$3,420,000).  |             |              |
| (2). Within 5 years to pay the balance, with interest, at 4 per cent, (payment secured by postal subsidy and transport service, and further deposit of land grant bonds—\$1,830,000; also by a charge on the \$5,000,000 of bonds held as security for operation) ..... | \$4,527,000 |              |
|   | 7,380,912   |              |
|   |             | \$15,942,645 |

The whole of this sum of \$15,942,645 was treated as 4 per cent. funded debt, and has been redeemed by the Government at the rate of \$975,000 half yearly; the amount of interest on the balance remaining being deducted therefrom.

By the close of 1883 the company saw their way to the completion of the work by a date far earlier than that called for by their contract, and it being considered desirable that they should be aided in the execution of such a scheme, it was decided that Parliament should be asked to grant a temporary advance, so as to place them in a position to carry it into execution.

On the 5th of March, 1884, special sanction was given to an Act 47 Vic., chap. 1, authorizing the grant of a loan of \$22,500,000, bearing interest at 5 per cent.

In consideration of this assistance the company undertook to complete the road by May, 1886, nearly six years in advance of the contract date. By this Act the dividend security agreement of the 10th of November, 1883, was confirmed, except as to the time for the payment of the sum of \$2,853,912, which was extended to the 7th of November, 1888, when the sum of \$4,527,000 would also fall due, making \$7,380,912, the whole bearing interest at 4 per cent.

As security for the said loan, the company mortgaged their entire property to the Government, excepting the rights of mortgagors on the lines from Callander to Brockville and Montreal.

On the 7th of March, 1884, the agreement embodying the provisions of this Act was signed.

Out of this loan of \$22,500,000, an advance was forthwith to be made of \$7,500,000, to cover floating debt, the same to bear interest at 5 per cent, the remainder to be paid as the work proceeded, proportionately to the value of the work done to that of the work remaining to be done.

The arrangement for paying the subsidy also was made to accord with the foregoing, in place of, as theretofore, having a mileage basis.

In 1885, however, the company found that the stringency of the provisions under which they were obtaining their loan from the Government, (the security covering, as it did, the whole of their property,) barred them from ready sale of their stock; and, consequently, from the command of the funds necessary to effectively provide for the traffic requirements of their road and its general improvement, they asked, therefore, that a readjustment might be made: that first mortgage bonds, bearing interest at 5 per cent., might be issued to the extent of \$35,000,000, to be held by the Government as security for the amount of the company's indebtedness to it, and for the development and improvement of the road.

On the 20th of July, 1885, assent was given to an Act 48-49 Vic., chap. 57, authorizing the adoption of this course, and on the 25th of that month a deed of mortgage, approved by an Order in Council of the 20th July, was executed accordingly.

The provisions of this Act and mortgage deed included the issue and delivery to the Government of first mortgage bonds to the extent of \$35,000,000, bearing interest at 5 per cent., and secured by a mortgage on the entire property of the company (except the Algoma Branch), saving the rights of holders of existing mortgages on the extensions of the line from Callander to Brockville and Montreal. The Algoma Branch, however, still remained charged with the lien created by the Loan Act, 47 Vic., ch. 1, special provision being made for a postponement of such

lien in the event of an extension of the branch. Upon such issue and delivery of bonds, the shares in the capital stock, to the extent of \$35,000,000, in the hands of the Government, were to be cancelled and destroyed.

The amounts for which the company were liable to the Government were:—

(a.) Loan under Act, 47 Vic., chap. 1 (or so much thereof as might actually be paid them).....	\$22,500,000
(b.) Balance of amount due under the agreement of the 10th of November, 1883.....	7,380,912
Total.....	<u>\$29,880,912</u>

This amount, with interest at 4 per cent., was to be repaid by the 1st of May, 1891.

Of this total of \$29,880,912, the sum of \$20,000,000 and interest was to be secured by twenty million dollars of the said first mortgage bonds, the remaining \$9,880,912 to be secured by a lien on the whole of the unsold lands of the company.

Of the remainder of these first mortgage bonds—equal, that is, to \$15,000,000—\$8,000,000 worth were to be retained as security for a temporary loan, authorized by the Act, of \$5,000,000, and the balance were to be delivered to the company from time to time, to be applied, under Government supervision, to the improvement and development of the road and the maintenance of its credit.

Under authority of an Order in Council, a deed of mortgage, dated the 25th of July, 1885, was executed, embodying the conditions of the Act.

The temporary loan of \$5,000,000 was made to the company on the 28th of July, 1885. The amount was, however, returned by them;—\$3,000,000, on the 2nd of September, and \$2,000,000 on the 2nd of November, 1885.

The company subsequently finding itself in a position to make a proposition for the discharge of its indebtedness, and the Government considering that in view of the progress made,—the track having actually been laid from end to end by November, 1835,—it would be well that the whole matter should be closed, an agreement was entered into on the 30th March, 1886, subject to the approval of Parliament, by which the company undertook to pay to the Government the amount stated therein to have been actually advanced them out of the \$20,000,000 secured by first mortgage bonds, namely, \$19,150,700, together with the interest thereon, as provided in the Act, and the Government on its side agreed to accept a portion of the company's lands for the balance, namely, \$9,880,912, with interest, the value of such lands to be computed at \$1.50 an acre.

On the 2nd of June, 1886, assent was given to an Act 49 Vic., chap. 9, ratifying the above agreement.

Steps were at once taken to carry it into effect. On the 1st of May, 1886, the company paid \$9,987,347.23, and on the 1st of July, a further sum of \$9,163,352.72, making the total, \$19,150,700.

The amount of the balance to be covered by the acceptance of lands being \$9,880,912, or with interest up to the 1st of May, 1886, \$10,189,521.33, the land grant will be reduced by an equivalent number of acres, computed, as fixed by the Act, at \$1.50 per acre, namely, 6,793,014 acres, leaving the company's land subsidy, 18,206,986 acres.

By special provision of this Act, 49 Vic., chap. 9, authority was given for the release of the security held under the terms of the company's contract to ensure the continuous operation of the road for ten years, should the retention of such security appear unnecessary in the public interest on the completion of the railway to the seaboard and its being opened for traffic. This security was \$5,000,000 of land grant bonds.

On the 2nd of November, 1886, an Order in Council was passed authorizing the closing up of all the matters outstanding between the Government and the company, and a final agreement was signed, accordingly, on the 16th and 20th of that month, comprising the acceptance by the Government of the work executed by the company, as fulfilling the conditions of their contract; the transfer to and acceptance by the company of the portions of the road constructed by the Government, subject to adjustment by the Government of deficiencies, if any, in respect of the construction of the western section; the payment to the company of the balance of their subsidy; the release of the security held for operation, and the deposit by the company with the Government of \$1,000,000 of land grant bonds as security that the company will, whenever required by the Government, improve the portion of their line passing Mount Stephen, in the Rockies. A copy of this agreement, together with the Order in Council authorizing it, will be found in the appendices on page 13.

The arrangements immediately contemplated in the above mentioned agreement have been duly carried out, and the whole road is now the property of the Canadian Pacific Railway Company.

PAYMENTS TO CANADIAN PACIFIC RAILWAY COMPANY.

*Subsidy Account.*

Amount of subsidy under the contract.....	\$25,000,000 00
Amount paid up to the end of the fiscal year 1882-83 (30th June, 1883)	\$7,533,076 60
Amount paid during fiscal year 1883-84	7,254,208 27
do do 1884-85	6,862,201 00
do do 1885-86	2,830,427 00*
From 1st July, 1886, to 31st December, 1886 (balance).....	460,087 13
	<u>\$25,000,000 00</u>

\* In last year's report a sum of \$5,000 was charged against the subsidy, which has now been transferred to the North Shore Railway purchase account to which it belongs.

## CANADIAN PACIFIC RAILWAY LOAN ACCOUNT.

*Exclusive of the Interest calculations.*

PAYMENTS by Government to the Canadian Pacific Railway Company during the fiscal years—	PAYMENTS by the Canadian Pacific Railway Company to the Government— 1886.
1883-84.....\$10,953,462	May 1 Cash.....\$9,987,347 28
1884-85 ..... 9,701,438	July 1 Cash..... 9,163,353 72
1885-86..... 995,800	Land purchased by the Government from the Company to cover the bal- ance at 1.50 per acre..... 9,880,912 00
To pay 3 per cent dividends half yearly on \$65- 000,000 Stock up to August 17 1893 .....	
\$21,650,700	
7,380,912	
\$29,031,612	\$29,031,612 00

## COMMUNICATION EAST AND SOUTH FROM CALLANDER.

The Canadian Pacific Railway Act of 1874 made provision for the construction under subsidy of a line to connect the eastern terminus with existing or proposed railroads to the east. On the 4th of November, 1874, the subsidy of \$12,000 a mile authorized by that Act was granted by Order in Council to the Canada Central Railway Company for 120 miles of an extension of their road to a point about 85 miles from Georgian Bay, (from which bay it was, at that time, proposed to run a branch line east,) the amount of this subsidy aggregating \$1,440,000. On the 18th of April, 1878, an Order in Council passed, which was ratified by a resolution of the House of Commons on the 7th of May, authorizing the acceptance of a proposal made by that company to build a connecting line from their road at Pembroke westward, to a point, at the south-east corner of Lake Nipissing, further west than had originally been contemplated, for the subsidy named. The work was commenced, and the road was completed in 1883. This railway was acquired by the Canadian Pacific Railway Company, who also acquired the road between Pembroke and Ottawa, 105 miles. The company purchased in 1882 the section between Ottawa and Montreal known as the Western Division of the Quebec, Montreal, Ottawa and Occidental Railway, built and owned by the Province of Quebec, the length of this road being 120 miles, and in the year 1885 they acquired, under special statutory provision, the line of the North Shore Railway between Montreal and Quebec, also built by the Provincial Government, thus completing the line of railway communication between the coasts of the Atlantic and the Pacific.

South from Callander communication with the Ontario railway system is made by a subsidized line, the Northern and Pacific Junction Railway.

The following table shows the total length of the road on the main line completed by the company in each year so as to admit of the running of regular trains thereon:—

	Miles.	Total.
By the close of 1881.....	161	161
do 1882 .....	440	601
do 1883 .....	473	1,074
do 1884 .....	358	1,432
do 1885 .....	<u>477</u>	<u>1,909</u>

The following shows the dates on which, by Order in Council, authority was given for the transference to the company of possession and right to operate portions of the line constructed by the Government:—

By Order in Council of the 9th of April, 1881,—the Pembina Branch and the portion between Selkirk and Cross Lake.

By Order in Council of the 12th of January, 1882,—the portion between Telford (Cross Lake) to Rat Portage.

By Orders in Council of the 2nd and 30th of April, 1883,—“Section B” from Eagle River to Keewatin (3 miles west of Rat Portage), also covering operation from Prince Arthur’s Landing.

By Order in Council of the 29th of July, 1885,—Savona’s Ferry, Lake Kamloops to Port Moody.

By an Order of the 2nd of November, 1886, and an agreement thereunder of the 15th and 20th, the portions of the road constructed by the Government were transferred and conveyed to the company “free and clear of all liens and charges thereon existing or due by the Government at the time when the possession and right to run and work such portions were respectively transferred to the company by the Government,” but subject to adjustment and correction in respect of the western section.

The following shews the several statutes and agreements executed thereunder respecting the Canadian Pacific Railway Company and the Government:—

Act.	Deed.	Object.
44 Vic., ch. 1, 1881.....	21st Oct., 1880....	Contract.
45 Vic., ch. 53, 1882.....	10th Nov., 1883...	Change of pass through Rockies. 10 year dividend security.
47 Vic., ch. 1, 1884.....	7th March, 1884...	Loan, 22,500,000.
48-49 Vic., ch. 55, 1885 .....	25th July, 1885....	1st mortgage bond issue.
48-49 Vic., ch. 58, 1885.....	19th Sept., 1885...	To acquire the North Shore Railway.
49 Vic., ch. 9, 1886.....	30th March, 1886.	To repay loan and close accounts.

## NORTH SHORE RAILWAY.

Under the provisions of the Act passed in 1885, 48-49 Vic., cap. 58, the grant of a sum of \$1,500,000 was authorized as a subsidy to secure free access to the port of Quebec for the trains and traffic of the Canadian Pacific Railway; the arrangements to be facilitated by the acquisition of the North Shore Railway by the Government from the Grand Trunk Railway by means of such subsidy, and the subsequent transfer or lease of the road to the Canadian Pacific Railway Company.

The said sum of \$1,500,000 was arrived at as follows:—

By the Act 47 Vic., ch. 8 (see No. 23), there was granted for the extension of the road from St. Martin's Junction to Quebec a subsidy not exceeding.....	\$ 960,000
Also, by the same Act (see No. 34), for a line between the Jacques Cartier Union Railway Junction and St. Martin's Junction, a subsidy not exceeding.....	200,000
Also, by the Act 48-49 Vic., ch. 58 (see No. 64), (which united the two above mentioned subsidies in the one object of obtaining free access for the traffic of the Canadian Pacific Railway from St. Martin's Junction to Quebec), a further subsidy not exceeding.....	340,000
Total.....	\$1,500,000
Of this, the amount applied to the purchase of the road was.....	530,000*
Balance.....	\$970,000

This balance was expended in the purchase of bonds of the road.

Under special agreements to this end, dated the 19th of September, 1885, executed under authority of an Order in Council of that date, the said road from St. Martin's Junction to Quebec was acquired by the Government and transferred to the Canadian Pacific Railway Company.

Reports on the Canadian Pacific Railway, from the Government Chief Engineer, dated the 12th of October, 1886, will be found in Appendix No. 4, page 11.

\* The sum of \$5,000 temporarily charged, as shown in last year's report, against the subsidy account of the Canadian Pacific Railway Company, has now been transferred to the North Shore Railway purchase account, to which it belongs.

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**GOVERNMENT RAILWAYS IN OPERATION.**

The several lines operated and maintained by the Government during the past fiscal year ended the 30th June, 1886, were:—

	Miles.
The Intercolonial and its extensions.....	866
Eastern Extension Railway.....	80
Windsor Branch (maintained only).....	32
Prince Edward Island.....	212
	<hr/>
Total mileage.....	1,190
	<hr/> <hr/>

Details respecting these railways and their operation will be found in Appendix No. 5, p. 17, from the Chief Engineer and General Manager, and in the following appendices from the Chief Superintendent and other officials of the road.

The through ocean mail line from Point Lévis, Quebec, to Halifax, is 688 miles in length.

The length of roads operated was increased by the completion of the Dartmouth Branch of the Intercolonial, five miles in length.

The General Revenue Accounts for 1885-86 show the following as the financial position of these roads for the past fiscal year. The average length of road operated for the whole fiscal year being 1,187½ miles, the Dartmouth branch not having been opened until the 6th of January, 1886:—

—	Expenditure.	Earnings.	Profit.	Loss.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Intercolonial.....	2,489,243 61	2,383,200 77	.....	106,042 84
Eastern Extension.....	94,756 06	66,893 11	.....	27,862 95
Prince Edward Island.....	216,744 34	155,584 36	.....	61,159 98
Windsor Branch (earnings, one third of entire receipts).....	19,229 49	23,658 11	4,428 62	.....
			4,428 62	195,065 77
				4,428 62
Total loss on working.....	.....	.....	.....	190,637 15

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 INTERCOLONIAL RAILWAY.

## LENGTH OF LINE.

*Ocean Mail Line.*

	Miles.
Point Lévis to Rivière du Loup.....	126
Rivière du Loup to Moncton.....	374
Moncton to Painsec.....	8
Painsec to Truro.....	118
Truro to Halifax.....	62
	— 688.

*Extensions.*

Moncton to St. John.....	89
Painsec to Shediac.....	11
Truro to Pictou.....	52
Dalhousie Junction to Dalhousie.....	7
St. Charles Loop Line.....	14
Dartmouth Branch.....	5
	— 178.
	— 866
	=

*Wharf Branches.*

	Miles.
Rimouski to Wharf.....	2
Newcastle, N.B., to Deep Water Wharf.....	2
Dorchester to Shipping Wharf.....	1
Sackville to Shipping Wharf.....	0.5
Stewiacke to Wharf.....	1
	— 6.5
	=

*Capital Account.*

The total cost of the road and equipment chargeable to capital account at the close of the fiscal year, 1884-85, according to last year's report, was..... \$43,627,594 79

[1886]

From which is to be deducted (being the amount of cheques, issued to pay for land and works, cancelled owing to the neglect or refusal of the persons in whose favour they were drawn to accept them.).....	985 80
	<u>\$43,626,603 99</u>

The expenditure charged to capital account for the year ended 30th June, 1886, is as follows :—

Halifax extension.....	\$ 18,670 77
Increased accommodation, St. John.....	32,174 04
Settlement of claims connected with the original construction of the Intercolonial Railway.....	10,289 52
For rolling stock.....	62,560 22
Sleeping cars.....	161,077 48
Applying air brakes to locomotives.....	387 93
St. Charles Branch.....	99,837 01
Dartmouth Branch.....	34,039 50
Dalhousie Branch.....	2,667 51
Rivière du Loup Branch.....	1,703 38
Indian-Town Branch.....	110,672 00
Pasbebiac Branch.....	50 16
Pictou Town Branch.....	12,004 65
	<u>546,134 17</u>
Making the total cost up to 30th June, 1886.....	<u>\$44,172,743 16</u>

*Revenue Account.*

The gross earnings for the year were. ....	\$2,383,200 77
The working expenses were.....	2,489,243 61
	<u>\$106,042 84</u>
The gross earnings, compared with those of the previous year, show an increase of .....	<u>\$15,047 12</u>
The value of the stores in hand, including steel rails and fuel, at the end of the year, 1885-1886, was.	<u>\$719,660 88</u>

The engine mileage, compared with that of last year, was:—

	Miles.
1884-85 .....	4,836,927
1885-86 .....	4,823,353
Decrease .....	<u>13,574</u>

The car mileage, compared with that of last year, was:—

1884-85 .....	47,591,193
1885-86 .....	47,211,083
Decrease .....	<u>380,110</u>

The train mileage, compared with that of last year, was:—

1885-86 .....	4,039,877
1884-85 .....	3,992,506
Increase .....	<u>47,371</u>

The working expenses per mile run by engines, were:—

	Cents.
1885-86 .....	51·61
1884-85 .....	50·47
Increase .....	<u>1·14</u>

The working expenses per mile run by trains, were:—

1885-86 .....	61·61
1884-85 .....	61·15
Increase .....	<u>·46</u>

Expense per mile of railway:—

1885-86 .....	\$2,891 10
1884-85 .....	2,835 63
Increase .....	<u>55 47</u>

The gross tonnage carried was:—

	Tons.
1885-86 .....	1,008,545
1884-85 .....	970,069
Increase .....	<u>38,476</u>

The total number of passengers carried was:—

1884-85 .....	914,785
1885-86 .....	889,864
Decrease .....	<u>24,921</u>

Though the loss on operation amounts, as above stated, to \$106,043.84, it should be observed that no less than \$115,000 has been charged against the earnings of the year for improvements of a character generally charged to capital, and representing works over and above ordinary maintenance and renewal.

There was a decrease in the quantity of lumber transported, and an increase in the quantity of coal. This latter article, of which 165,791 tons (52,893 tons more than in 1884-85) were carried, as against 570 tons in 1879, while adding to the expenses, does not contribute to the net earnings of the road, the low rate for transport adopted with a view to the development of this industry, rendering it, while beneficial to the country, unremunerative to the railway. The necessity for meeting the increasing output from the mines, calls for an increase in the number of coal cars at present available on the road.

The passenger traffic showed a decrease of 28,000 in the number of local passengers carried, while there is an increase of 3,000 in the number of through passengers; the total traffic showing a decrease of 24,921. This falling off is due to the epidemic of small-pox in the Province of Quebec, the summer tourist travel being, in consequence, almost entirely lost.

Comparison of the traffic returns of the road for the decade comprised in the fiscal years from 1876 to 1886 shows that the gross earnings have doubled, the amount of the freight has increased one and a-half times, and the number of passengers is larger by one-third, the figures for 1876-77 being—421,327 tons of freight and 613,428 passengers, with total earnings, \$1,154,445 35, and those for 1885-86,—1,008,545 tons of freight and 839,864 passengers, with total earnings, \$2,383,000.77.

It being considered advisable that the Pullman car service should be in the hands of the authorities controlling the railway, and the contract with the Pullman Car Company expiring, the company's sleeping cars were, to the number of ten, purchased at a valuation in accordance with the terms of the contract, and since the 1st of August, 1885, have been re-modelled and operated by the Department. In this connection it should be observed that provision has been made for the comfort of second class passengers, who are now provided, without extra charge, with sleeping accommodation.

The number of sleeping cars on the road is not sufficient to provide for the requirements of passengers landing from the mail steamers at Rimouski in summer and Halifax in winter, and travelling by the special mail trains meeting such steamers. It is desirable that this inconvenience should be removed by an increase in the stock.

The substitution of the heavier steel rail of 67 lbs. to the yard, in place of the 56-lb. rail, formerly in use, has continued; 68 miles of track have been relaid during the year.

The expenditure on the repair of old snow sheds and fences, and the construction of new snow protection, amounted to over \$20,000, while that for ordinary fencing was over \$43,000, covering 102 miles.

Heavy repairs were made to the wharf at Rimouski, necessitated by a severe storm. The cost was about \$6,000.

The station at Dalhousie, destroyed by fire, was rebuilt, and repairs and improvements to the works at various points on the road were made, which will be found enumerated in the report of the chief engineer of the road. (Appendix 4, page 38).

#### WINDSOR BRANCH.

The Windsor and Annapolis Railway Company are permitted to continue the operations of this line, which is 32 miles in length; the arrangement being that the company pay all charges in connection with the working, two-thirds of the gross earnings being allowed them for such purpose, the Government taking the remaining one-third and assuming all cost of maintenance.

All charges for superintendence and supervision of maintenance of works are borne by the Intercolonial, whose chief officer performs the duty.

The earnings and expenditure for the year ended the 30th June, 1886, were as follows:—

Gross earnings accruing to the Government.....	\$23,658 11
Expenditure for maintenance of way and works.....	19,229 49
Net balance earned .....	\$ 4,428 62

Government earnings, in comparison with those of the previous year:—

1884-85.....	\$24,451 35
1885-86.....	23,658 11
Decrease.....	\$ 793 24

Expenditure in comparison with that of the previous year:—

1885-86.....	\$19,229 49
1884-85.....	18,751 96
Increase.....	\$ 477 53

The road has been maintained in a satisfactory state of efficiency.

## EASTERN EXTENSION RAILWAY.

This line of railway is eighty miles long, extending from the Pictou Branch of the Intercolonial Railway, at New Glasgow to Port Mulgrave on the Strait of Canso, thence connecting with Cape Breton by means of a ferry.

The line, with its equipment, was, on the 9th January, 1884, purchased by the Dominion Government from the Government of the Province of Nova Scotia, together with rights possessed by that Government in the Pictou Branch, between Truro and Pictou; also, the ferry built for the passage of the Strait of Canso.

The road is worked by a staff directed by the chief officers of the Intercolonial:

The cost of the road and equipment amounted on the 30th June, 1886, to \$1,284,495.76, an increase of \$183.79 during the year, on account of rolling stock.

The expenditure of the year amounted to .....	\$94,756 06
The gross earnings were .....	66,893 11
	<hr/>
Loss .....	\$27,862 95
	<hr/> <hr/>

The earnings of the road, in comparison with those of the year 1884-85, show a decrease of \$6,156.90, this being due greatly to the fact that the large fish traffic from the Straits of Canso was cut off, American fishermen having been barred from landing their fish in Canada.

The expenditure during the past fiscal year exceeded that of the previous year by \$16,482.41, heavy renewals and repairs having been necessitated in order to maintain the road in an efficient condition.

Every effort is being made to develop trade in the sections of country traversed by this line, and the interchange of freight between it and the Intercolonial has been facilitated; while freight rates, especially on through freight, have been considerably reduced with this object.

Of the branches of the Intercolonial under construction, the following was the position at the end of the fiscal year:—

## PASSEBIAC BRANCH.

Under arrangements approved by Parliament last session, the Baie des Chaleurs Railway Company have assumed the construction of this branch as a part of their own line.

## DARTMOUTH BRANCH.

By this branch, four miles in length, connection is afforded between the Intercolonial Railway at Richmond and Dartmouth, on the north side of Halifax Har-

hour. The work was completed, and the road opened for traffic, on the 6th of January, 1886.

#### RIVIÈRE DU LOUP TOWN BRANCH.

This branch, about four miles long, connecting the Intercolonial Railway with the Rivière du Loup wharf, has been completed.

#### INDIANTOWN BRANCH.

This branch of the Intercolonial extends from Derby Station, on that road, up the South-West Miramichi River to Indiantown, a distance of thirteen miles. The work was placed under contract in September, 1884, and has now been completed.

#### PICTOU TOWN BRANCH.

In the session of 1886, Parliament voted an appropriation towards the construction of a branch of the Intercolonial Railway, from a point at or near Stelarton to the town of Pictou. On the 17th of November an Order in Council was passed approving of a location by the adoption of which the length of the line will be 13.84 miles, and authorizing the proceeding with the work. Contracts were accordingly entered into on the 22nd of December, 1886, to this end, the works to be completed by the 30th of June, 1887.

### PRINCE EDWARD ISLAND RAILWAY.

#### LENGTH OF LINE.

	Miles.
Tignish to Royalty Junction .....	113½
Royalty Junction to Mount Stewart.....	20
Mount Stewart to Georgetown.....	21
	— 154½

#### EXTENSIONS.

Cape Traverse Branch, County Line Station to Cape Traverse .....	13
Royalty Junction to Charlottetown.....	5
Mount Stewart to Souris.....	39
	— 57
	—
	211½
	—

*Capital Account.*

The total cost of the road and equipment chargeable to capital account at the close of fiscal year 1884-85 was .....	\$3,731,312 56
The expenditure charged to this account for the year ended the 30th of June, 1886, being the amount expended on the Cape Traverse Branch, was.....	4,663 33
Total expenditure on capital account to the 30th of June, 1886 .....	<u>\$3,735,980 89</u>

*Revenue Account.*

The working expenses and receipts for the year ended 30th of June, 1886, were :—

Gross expenses .....	\$ 216,744 34
Gross earnings .....	155,584 36
Excess of expenditure over earnings.....	<u>\$ 61,159 98</u>

The gross earnings, compared with those of the previous year, were :—

1884-1885 .....	\$ 158,583 06
1885-1886 .....	155,584 36
Decrease.....	<u>\$ 3,003 70</u>

The gross expenditure, compared with that of the previous year, was :—

1885-86 .....	\$ 216,744 34
1884-85 .....	211,207 01
Increase.....	<u>\$ 5,537 33</u>

The engine mileage was :—

	Miles.
1884-85 .....	311,443
1885-86 .....	310,434
Decrease .....	<u>1,009</u>

The train mileage was :—

1884-85 .....	249,878
1885-86 .....	249,843
Decrease.....	<u>30</u>

The car mileage was :—

1885-86 .....	1,235,647
1884-85 .....	1,233,476
Increase .....	2,171

The receipts of the road during the past fiscal year have been seriously affected by the existence of an epidemic of small-pox on the island. The working expenses have borne the cost of rebuilding a number of freight cars, the amount being over \$24,000.

A heavy gale which occurred in September, 1885, caused great damage, necessitating considerable repairs to wharves, snow fences and buildings.

In Appendix 4, page 22, will be found a comparative table showing the working expenses and the earnings of this road for the past four years.

The road and its equipments have been maintained throughout the year in a satisfactory state of efficiency.

#### CAPE TRAVERSE BRANCH.

This line was opened for traffic on the 22nd of January, 1885. Its object is to facilitate communication between the Prince Edward Island Railway and the Intercolonial. The branch leaves the island railway at County Line station and runs to Cape Traverse, a distance of thirteen miles. Across the strait to Cape Tormentine, on the mainland, the distance is nine miles. Here, by the line of the New Brunswick and Prince Edward Island Railway Company, forty miles in length, connection is made with the Intercolonial Railway at Sackville. In winter time the ice-boats land at Cape Traverse. This ice-boat service is conducted by the Marine Department, the mails being taken to and met at Cape Traverse by special trains. The system has been worked with regularity during the year.

#### SUBSIDIZED LINES.

By the Acts of Parliament below specified, authority has been placed in the hands of the Governor in Council to grant, upon certain conditions, pecuniary aid towards the construction of various lines of railway throughout the Dominion, as follows, namely :—

**By the Act 45 Vic., cap. 14 (1882) :—**

No. 1. For a railway from Gravenhurst to Callander, both in the Province of Ontario, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole .....\$ 660,000

(NOTE.—Further subsidized by 46 Vic., ch. 25.)

[1886]

2. For a railway from St. Raymond to Lake St. John, both in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 384,000

(NOTE.—Further subsidized by 46 Vic., ch. 25, 48-49 Vic., ch. 59, and 49 Vic., ch. 10.)

3. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the Province of Quebec, or between them, to Edmundston, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 240,000

(NOTE.—Further subsidized by 48-49 Vic., ch. 58.)

4. For a railway from Oxford to New Glasgow, both in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 224,000

(NOTE.—Further subsidized as part of a line to Sydney or Louisburg by 47 Vic., ch. 8.)

The said subsidies to be granted to such companies as shall be approved by the Governor in Council, as having established, to his satisfaction, their ability to complete the said railways respectively, within a reasonable time, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in a agreement to be made by the company with the Government, and which the Government is empowered to make, and to be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, such proportion to be established by the report of the said Minister; provided always, that the granting of such bonuses or subsidies, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting therewith, as the Governor in Council may determine.

By the special Act 45 Vic., cap. 55 (1882) :—

- No. 5. A subsidy authorized in favour of "The Chignecto Marine Transport Railway Company," provided that they construct and thereafter maintain and operate a ship railway, to be approved by the Government, across the Isthmus of Chignecto from the Gulf of St. Lawrence to the Bay of Fundy, per year, for twenty-five years... \$150,000

[1886]

## By the Act 45 Vic., cap. 25 (1883):—

No. 6. To the Baie des Chaleurs Railway Company, for 100 miles of their railway, from Matapedia, on the Intercolonial Railway, to Paspébiac, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$320,000

7. To the Caraquet Railway Company, for 36 miles of their railway, from a point near Bathurst to Caraquet, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 115,200

(NOTE.—Further subsidized by 47 Vic., ch. 8.)

8. To the Gatineau Valley Railway Company, for the first 50 mile section of their railway, from Hull Station, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000

(NOTE.—Cancelled by 48-49 Vic., ch. 59.)

9. To the Great American and European Short Line Railway Company, for 80 miles of their railway from Canso to Louisburg or Sydney, in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 256,000

(NOTE.—This was amended by the Act 47 Vic., cap. 8, sec. 2, the words "To the Great American and European Short Line Railway Company" being struck out, and the word "the" being inserted for the word "their" and the words and figures "for 80 miles of" being omitted. The line was further subsidized by 47 Vic., ch. 8, as part of a line from Oxford Station to Sydney or Louisburg.)

10. To the International Railway Company, for 49 miles of their railway from Sherbrooke, in the Province of Quebec, to the International boundary line, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 156,800  
In connection with the extension of this road through Maine to connect with New Brunswick, at or near Vanceborough or south of that point.

11. To the Northern and Western Railway Company, for 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy Village, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 102,400

(NOTE.—Cancelled by 47 Vic., ch. 8.)

- 12.** To the Montreal and Western Railway Company, for the first 50 mile section of their railway, out of St. Jérôme, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 160,000.

(NOTE.—*Cancelled by 49 Vic., ch. 10.*)

- 13.** To the Napanee, Tamworth and Quebec Railway Company, for 28 miles of their railway, from Napanee to Tamworth, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 89,600.

- 14.** To the Quebec and Lake St. John Railway Company, for 25 miles of their railway, from St. Raymond to Lake St. John, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 80,000  
In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

(NOTE.—*Further subsidized by the Act 48-49 Vic., ch. 59.*)

- 15.** For a railway from the Intercolonial Railway at Petitcodiac to Havelock Corner, in the Province of New Brunswick, 12 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 38,400

- 16.** For a railway from Gravenhurst to Callander, 110 miles, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole ..... 660,000  
In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

“ The nine subsidies first mentioned to be granted to the companies hereinbefore named respectively ; and the two subsidies last mentioned to be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to complete the said railways, respectively ; and all the eleven lines above mentioned, and also the lines of railway in respect of which it is provided by the Act forty-fifth Victoria, chapter fourteen, that subsidies may be granted, shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years from and after the passing of this Act, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made by each company with

the Government, and which the Government is empowered to make; and all the said subsidies authorized by this Act, respectively, to be paid out of the Consolidated Revenue Fund of Canada by instalments, on the completion of each section of not less than ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine."

**By the special Act 46 Vic., cap. 26 (1883):—**

**No. 17.** An advance authorized in favour of the "St. John Bridge and Railway Extension Company," to enable them to build a railway bridge across the River St. John, N.B, with railway connecton with the Intercolonial, such advance to be secured by a mortgage on their entire property, not to exceed 80 per cent. of the expenditure on the work, nor a total sum of.....\$ 500,000

**By the Act 47 Vic., cap. 8 (1884):—**

**No. 18.** To the Government of the Province of Quebec, in consideration of their having constructed the railway from Quebec to Ottawa, forming a connecting line between the Atlantic and Pacific coasts *via* the Intercolonial and Canadian Pacific Railway, and being as such a work of national and not merely provincial utility, a subsidy not exceeding \$6,000 per mile for the portion between Quebec and Montreal, 150 miles, nor exceeding in the whole..... 954,000

**19.** And for the portion between Montreal and Ottawa, 120 miles, \$12,000 per mile, nor exceeding in the whole .....1,440,000

**20.** For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding \$170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work. Per year for fifteen years 170,000

(NOTE.—Further subsidized by the Act 48-49 Vic, ch. 58, sec. 1, sub-sec. 2.)

- 21.** For the construction of a line of railway from Oxford Station, on the Intercolonial Railway, to Sydney or Louisburg, a subsidy not exceeding \$30,000 per annum for fifteen years, or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work, in addition to the subsidies previously granted, and also a lease or transfer to such company of the Eastern Extension Railway, from New Glasgow to Canso, with its present equipment. Per year for 15 years..... 30,000
- 22.** To the Quebec Central Railway Company, for a line of railway from Beauce Junction to the International boundary line, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. . . . . 211,200
- 23.** For the extension of the Canadian Pacific Railway, from its terminus at St. Martin's Junction, near Montreal, or some other point on the Canadian Pacific Railway, to the harbour of Quebec, in such manner as may be approved by the Governor in Council, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole..... 960,000
- (NOTE.—Further subsidized by the Act 48-49 Vic., ch. 58, sec 2. See also, below, subsidy for line between Jacques Cartier Junction and St. Martin's Junction, both subsidies being united by the Act last named.)
- 24.** To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway, to the village of Bancroft, in the township of Dunganon, county of Hastings, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000
- 25.** To the Pontiac Pacific Junction Railway for a line of railway from Hull or Aylmer to Pembroke, provided the Ottawa river is crossed at some point not east of Lapasse, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 272,000
- 26.** To the Gatineau Railway Company, for a line of railway from Kazuabazua to Le Desert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole... .. 160,000

(NOTE.—Cancelled by Act 43-49 Vic., ch. 59.)

- 27.** To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth to Bogart and Bridgewater, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 70,400  
 (NOTE.—Cancelled by Act 48-49 Vic., ch. 59.)
- 28.** To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last Session of Parliament, towards Le Desert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000  
 (NOTE.—Cancelled by 49 Vic., ch. 10.)
- 29.** To the Northern and Western Railway Company, for a line of railway {from Fredericton to the Miramichi River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883)..... 128,000  
 (NOTE.—Further subsidized by 48-49 Vic., ch. 59. and by 49 Vic., ch. 10.)
- 30.** To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000
- 31.** To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 262,400
- 32.** To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 48,000
- 33.** To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- 34.** For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction, connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole..... 200,000  
 (NOTE.—See Act 48-49 Vic., ch. 53, sec. 2.)

- 35.** For a line of railway from Richibucto to St. Louis, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400
- 36.** For a line of railway from Hopewell to Alma, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 51,200
- 37.** For a line of railway from St. Andrews to Lachute, in the county of Argenteuil, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400.

(NOTE.—Cancelled by 49 Vic., ch. 10.)

- 38.** For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 217,600.

(NOTE.—Cancelled by 48-49 Vic., ch. 59.)

- 39.** For a line of railway from Annapolis to Digby, in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 64,000.
- 40.** For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway, between Sussex and St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 128,000
- 41.** To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbor, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 76,800

(NOTE.—In addition to subsidy granted by 46 Vic., ch. 25 ; further subsidized by 49 Vic., ch. 10.)

- 42.** For a branch of the Intercolonial Railway, from Metapediac eastward towards Paspediac, twenty miles, in the Province of Quebec, a sum not exceeding in the whole..... 300,000
- 43.** For a branch of the Intercolonial Railway, from Derby Station to Indian Town, fourteen miles, a sum not exceeding in the whole..... 140,000

“The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of July next and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, except the line mentioned in the fourth section of this Act, which shall be commenced within one year, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed, in comparison with that of the whole work undertaken, to be established by the report of the said Minister. The subsidies to the Province of Quebec shall be capitalized and the interest shall be payable at such time and in such manner as the Government of Canada shall agree upon with the Government of the said Province. The two subsidies last mentioned in the list are for works to be constructed by the Government of Canada.

“Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine.”

**By the special Act 47 Vic., cap. 6 (1884) :—**

No. 44. Relating to an agreement with the Province of British Columbia, authority was given *inter alia* for the grant of a subsidy to “the Esquimalt and Nanaimo Railway Company” in aid of the construction of a line of railway and telegraph between the points named; such subsidy to be in lands *en bloc* on Vancouver Island, the boundaries being fixed by the Act, and in money. .... \$750,000

**By the Act 48-49 Vic., cap. 59 (1885) :—**

No. 45. To the Ottawa, Waddington and New York Railway and Bridge Company, for a line of railway from Ottawa to Waddington, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 166,400

<b>46.</b> To the New Brunswick and Prince Edward Island Railway Company, for a line of railway from Sackville to the Straits of Northumberland, at or near Cape Tormentine, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole .....	118,400
<b>47.</b> To the Montreal and Sorel Railway Company, for a line of railway from St. Lambert to Sorel, a subsidy not exceeding \$1,600 per mile, nor exceeding in the whole.....	72,000
<b>48.</b> To the Brockville, Westport and Sault Ste. Marie Railway Company, for a line of railway from Brockville to Westport, a subsidy not exceeding \$3,200 per mile, not exceeding in the whole.....	128,000
<b>49.</b> To the Quebec and Lake St. John Railway Company, for a line of railway from its junction on the North Shore Railway to St. Raymond, upon condition of the Company extending their road to a point 50 miles north of St. Raymond, a subsidy not exceeding \$3,200 per mile, not exceeding in the whole.....	96,000
<i>(NOTE.—In addition to the subsidy granted by the Acts 45 Vic., ch. 14 and 46 Vic., ch. 25.)</i>	
<b>50.</b> To the Northern and Western Railway Company, for a line of railway from the northern end of the 40 miles subsidized between Fredericton and the Miramichi River by 47 Victoria, chapter 8, to Boiestown, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200
<b>51.</b> To the Montreal and Champlain Junction Railway Company, for a line of railway from Brosseau's to Dundee, a subsidy not exceeding \$500 per mile, nor exceeding in the whole .....	30,000
<b>52.</b> To the Thunder Bay Colonization Railway Company, for a line of railway from the Murillo station of the Canadian Pacific Railway to the east end of Whitefish Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole .....	92,000
<b>53.</b> To the Central Ontario Railway Company, for a line of railway from Coe Hill or Rathburn, to Bancroft, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000

- 54.** To the Belleville and North Hastings Railway Company, for a line of railway from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, a subsidy not exceeding \$1,500 per mile, nor exceeding in the whole..... 10,500  
(NOTE.—*Further subsidized by 49 Vic., ch. 10.*)
- 55.** For a line of railway from Long Sault to the foot of Lake Temiscamingue, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 25,600  
(NOTE.—*Further subsidized by Act 49 Vic., ch. 10.*)
- 56.** For a line of railway from a point on the Canada Southern Railway near Comber, to Lake Erie, at or near the village of Leamington, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 44,800
- 57.** To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth towards Bogart and Bridgewater, 16 miles, in lieu of the subsidy granted by 47 Vic, chap. 8, a subsidy of..... 70,000  
(NOTE.—*Cancelled by Act 49 Vic., ch. 10.*)
- 58.** To the Gatineau Railway Company, for a line of railway from Hull station towards Le Desert, a distance of 62 miles, in lieu of the subsidies granted by 46 Victoria, chapter 25, and 47 Victoria, chapter 8, a subsidy of..... 320,000
- 59.** For a line of railway from the Grand Piles, on the River St. Maurice, to its junction with the Lake St. John Railway, a distance of about 50 miles, in lieu of the subsidy granted by 47 Victoria, chapter 8, for a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy of..... 217,600
- 60.** To the Canada Atlantic Railway Company, for a line of railway from Valleyfield to a point one and a-half miles west of Johnson's, a subsidy not exceeding \$1,600 per mile, and from one and a-half miles west of Johnson's to Lacolle; also from the present terminus at Ottawa to the Chaudière Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000

- 61.** For a line of railway from Indiantown *via* the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 140,800

“The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the Company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister:

“Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine.”

**By the Act 48-49 Vic., cap. 58 (1885):**

**No. 62.** “For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the Province of Quebec, to Edmunston, in the Province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act [1886]

forty-fifth Victoria, chapter fourteen, and constituting, with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present Session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter, being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada" (*additional*)... \$258,000

63. "For a line of railway from the south bank of the St. Lawrence River, opposite or near Montreal, to the harbors of St. Andrews, St. John and Halifax, *via* Sherbrooke, Moosehead Lake, Mat-tawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbors of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such line of railway for a period of twenty years, or a guarantee of a like sum for a like period as interest on the bonds of [1886]

the company undertaking the work: the said subsidy to be so granted upon the terms and conditions of, and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway." Per year for twenty years (*additional*)

80,000

64. "The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montreal, or from some other point on their railway to be selected by the said company, to the harbor of Quebec, in such manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act to aid in procuring the extension of the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada" (*additional*).....

340,000

The said Act further provided as follows in relation to this matter:—

"If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition; and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligations as the Government shall have assumed in acquiring it."

By the Act 49 Vic., cap. 10 (1886):

- No. 65. For a railway from a point at or near Moncton, to Buctouche, in the Province of New Brunswick, thirty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$ 96,000

[1886]

**66.** For a railway from Ingersoll *via* London to Chatham, in the Province of Ontario, eighty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 256,000

**67.** To the Northern and Western Railway Company for ten miles of their railway, intervening between the termini of the portions of their railway for which subsidies are already granted, the one from Fredericton and the other from Indian-town, and an extension of two miles down to deep water at Chatham, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000

(NOTE.—*In addition to subsidies granted by Acts 47 Vic., ch. 8, and 48-49 Vic., ch. 59.*)

**68.** To the Caraquet Railway Company, for ten miles of their railway from the end of the present subsidized portion at Lower Caraquet to Shippegan, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 32,000

(NOTE.—*In addition to subsidies granted by 46 Vic. ch. 25, and 47 Vic., ch. 8.*)

**69.** To the Lake Erie, Essex and Detroit River Railway Company, for thirty-seven miles of their railway, from Windsor to Leamington, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile nor exceeding in the whole..... 118,400

**70.** To the Thunder Bay Colonization Railway Company, for fifty-six miles of their railway, from the end of the present subsidized section to a point near Crooked Lake, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 179,200

**71.** To the Parry Sound Colonization Railway Company for forty miles of their railway, from the Village of Parry Sound to the Village of Sandridge, on the line of the Northern Pacific Junction Railway, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 128,000

- 72.** For a railway from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the Province of Quebec, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 57,600
- 73.** For a railway from Hereford to the International Railway, in the Township of Eaton, in the Province of Quebec, thirty-four miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 108,800
- 74.** For a railway from St. Félix to Lake Maskinongé, Parish of St. Gabriel, in the Province of Quebec, ten miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- 75.** For a railway from Glenannan to Wingham, in the Province of Ontario, five miles. a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 16,000
- 76.** For a railway from a point at or near the McCann Station on the Intercolonial Railway, to the Joggins, on Cumberland Basin, in the Province of Nova Scotia, twelve miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400
- 77.** For a railway from L'Assomption to L'Epiphanie, in the Province of Quebec, three miles and a half, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 11,200
- 78.** To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly towards Desert, in the Province of Quebec, a subsidy of \$5,161 per mile, in lieu of the subsidies granted by 46 Victoria, chapter 25, and 47 Victoria, chapter 8, not exceeding in the whole..... 361,270
- 79.** For a railway from St. Andrews to the Canadian Pacific Railway at or at any point east of the Town of Lachute, in the County of Argenteuil, in the Province of Quebec, seven miles, in lieu of the subsidy granted by 47 Victoria, chapter 8; a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400

- 80.** To the Canada Atlantic Railway Company, for twelve miles of their railway from Clark's Island to Valleyfield and from Lacolle, in the Province of Quebec, to the International boundary, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400
- 81.** For a railway from Truro to Newport, in the Province of Nova Scotia, forty-nine miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 156,800
- 82.** To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the Province of Quebec, a subsidy not exceeding \$1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of \$3,200 per mile)..... 186,295
- 83.** To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette *via* Cap Rouge to Quebec, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400
- 84.** For the construction of wharves and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of... 6,000
- (NOTE.—*In addition to the subsidy for the construction of the line granted by 48-49 Vic., ch. 59.*)
- 85.** To the Gananoque, Perth and James' Bay Railway Company, seventeen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 54,400
- 86.** For a railway from St. Eustache to St. Placide, County of Two Mountains, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 57,600
- 87.** For a railway from a point on the Intercolonial Railway through the Stewiacke Valley, on a line which will afford facilities of communication with the Iron Mines, Spring Side, Upper Stewiacke, and Musquodoboit settlements, twenty-five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 80,000

- 88.** For a railway from Yamaska to the River St. Francis, in the Province of Quebec, ten miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- 89.** For a railway from Perth Centre Station on the New Brunswick Railway, to a point near Plaister Rock Island, in the Province of New Brunswick, twenty-eight miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 89,600
- 90.** For a railway from Fredericton to the Village of Prince William, in the Province of New Brunswick, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 70,400
- 91.** For a railway from a point on the Intercolonial Railway near Newcastle or *via* Douglastown, to a point on the River Miramichi, opposite the Town of Chatham, in the Province of New Brunswick, six miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole .... 19,200
- 92.** For a railway from a point on the Canadian Pacific Railway to Eganville, in the Province of Ontario, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole ..... 70,400
- 93.** To the Belleville and North Hastings Railway Company, for seven miles of their railway from the Village of Madoc to the Junction with the Central Ontario Railway at Eldorado, in the Province of Ontario, a subsidy (in addition to the subsidy of \$1,500 per mile granted by 48-49 Victoria, chapter 59) not exceeding \$1,700 per mile, nor exceeding in the whole.... 11,900
- 94.** To the Napanee, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of ..... 70,000

- 95.** To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the Province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of..... 15,000

“The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose, shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed, in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided, always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine.

#### LAND SUBSIDIES.

- 96.** By 47 Vic., cap. 25, clause 7, as follows:—

“The Governor in Council is hereby authorized, in aid of the construction of a railway from some point on the Canadian Pacific Railway to Hudson’s Bay, to make a free grant of not more than six thousand four hundred acres for each mile of railway within Manitoba, and not more than twelve thousand eight hundred acres for each mile in the North-West Territories.”

- By 48-49 Vic., cap. 60 (1885):**

- 97.** To the North-Western Coal and Navigation Company (Limited), Dominion lands to an extent [1886]

not exceeding three thousand eight hundred acres for each mile of the company's railway from Medicine Hat to the coal banks on the Belly River, about..... 110 miles.

- 98.** The Manitoba and South-Western Colonization Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from its commencement at Winnipeg to its terminus at Whitewater Lake, about..... 150 do
- 99.** To the Manitoba and North-Western Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Portage la Prairie to the crossing of the south branch of the River Saskatchewan, twenty miles from Prince Albert, about..... 430 do
- 100.** To the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company, Dominion land to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from its commencement near Regina, to the navigable waters of Long Lake.....

The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor.

By 49 Vic., cap. 11 (1886):

- 101.** To the Manitoba and North-Western Railway Company, Dominion lands to the extent of six thousand four hundred acres per mile for each mile of the company's branch railway running from a point on the main line of that railway, at or near Todburn, in a north-westerly direction through the county of Russell to the Assiniboine River, near the town of Shellmouth, about..... 26 miles.

[1886]

- 102.** To the North-West Central Railway Company, or to such other company as may undertake the construction of the railway or a railway from a point on the Manitoba and Northwestern Railway, *vid* Rapid City, westward, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Brandon Station, on the Canadian Pacific Railway, or from such point on the Manitoba and North-Western Railway as aforesaid, to Battleford, in the Provisional District of Saskatchewan, about..... 450 miles.
- 103.** To the Wood Mountain and Qu'Appelle Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway for the whole distance commencing at a point in township number four, in range number thirty, west of the second meridian, in the Dominion Lands system of survey, passing through the town of Fort Qu'Appelle, to join the Manitoba and North Western Railway at a point to be fixed for that purpose by the Governor in Council, about..... 240 do

The said grants, and each of them may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses at the rate of ten cents per acre in cash on the issue of the patents therefor.

#### GOVERNMENT ACTION AS TO SUBSIDIZED LINES.\*

With regard to the above enumerated lines of railway, the following represents the action taken and the progress made in so far as the Dominion Government has cognizance or concern; only those lines and companies being mentioned as to which definite steps, other than merely preliminary, have been taken towards securing the subsidy. Information has been brought down to the 31st of December, 1886.

\*Between the present Report and the Appendices thereto, will be found a series of maps showing the several subsidized lines referred to in the following pages.

Since the system of subsidy to railway enterprise was commenced, the following are the sums paid over, namely :—

For the year 1883-84.....	\$ 208,000
do 1884-85.....	403,245
do 1885-86.....	2,171,249
	\$2,782,494

Note.—A tabulated statement of these payments will be found on page 9, Appendix 3.

Add to the above for the six months that have elapsed since, namely from the 30th of June, 1886, to the 31st December, 1886.....	1,109,709
	\$3,892,203
	\$3,892,203

The Canadian Pacific Railway is not included in the above, nor is the subsidy to the Quebec Government for the line from Ottawa to Quebec.

**Albert Southern Railway Company.**

(See No. 36.)

By the Act 47 Vic., chap. 8 (1884), a subsidy not exceeding \$51,200 was authorized towards the construction of a line from Hopewell (now called Albert) to Alma, N.B.

Under the authority of an Order in Council of the 8th of May, 1885, a contract for this work, namely, from Albert to the mouth of Salmon River, in the parish of Alma, was made with the Albert Southern Railway Company on the 23rd of that month; the line to be completed by the 1st of July, 1887.

No portion of the subsidy has been paid up to the 31st of December, 1886.

**Baie des Chaleurs Railway Company.**

(See Nos. 42 and 6.)

The Act 47 Vic., ch. 8. authorized the expenditure of \$300,000 (revoted in the year 1885) for the construction of a branch of the Intercolonial Railway, to extend for a distance of 20 miles eastwards, from Metapedia towards Paspébiac.

Tenders for the work were received, but none of them coming within the limit of expenditure authorized by Parliament, an offer made by the Baie des Chaleurs Railway Company to build and operate this section as a part of their own road from Metapedia to Paspébiac for the amount, was accepted by an Order in Council of the 18th of September, 1885, and a provisional contract was entered into with them on the 7th of November, the section to be finished by the 1st of July, 1888, plans being furnished and the work supervised by the Department.

By the Act 46 Vic., ch. 25 (1883) a subsidy was authorized in favour of this company towards the construction of their said road. The limit fixed by the Act being \$3,200 a mile, for 100 miles, or a total of \$320,000.

Provision, however, having been made, as above stated, for the building of the first 20 miles of this distance, the contract entered into with the company, also on the 7th of November, 1885, as authorized by an Order in Council, also of the 18th of September, for the work under this subsidy dealt with the construction of the last 80 miles only. It contained a clause under which, subject to authorisation from Parliament to that end, the portion, namely, \$3,200 a mile, applicable to the first 20 mile section of the road under the 100 mile subsidy of 1883, should be transferred to the second 20 mile section as an additional subsidy therefor, making the grant for such section \$6,400 a mile.

To this arrangement approval of Parliament was given last session, the two agreements above mentioned being ratified and confirmed by the special Act 49 Vic., ch. 17; the date for the completion of the road being fixed by the Act as the 1st of December, 1888, in place of the 25th of May, 1887, as contemplated by their agreement.

The plans for the first 20 miles having been furnished by this Department, works were commenced, and up to the 31st of December, 1886, there had been paid to the company the sum of \$180,000, the last payment being made under an Order in Council of the 26th of November, 1886.

The location has been approved up to the 30th mile by an Order in Council of the 15th of October, 1886.

**Brockville, Westport and Sault Ste. Marie Railway Company.**

(See No. 48.)

By the Act 48-49 Vic., chap. 59 (1885), aid was granted to an extent not exceeding \$128,000 towards the construction of the portion between Brockville and Westport, about 40 miles, of the line of the Brockville, Westport and Sault Ste. Marie Railway.

Under the authority of an Order in Council of the 28th of April, 1885, a contract was made with the company on the 16th of July, 1886, the subsidized road to be finished by the 1st of August, 1889.

Up to the 31st of December, 1886, no portion of the subsidy had been paid.

**Buctouche and Moncton Railway Company.**

(See No. 65.)

By the Act 49 Vic., chap. 10 (1886), assistance was authorized for the construction of a railway about 30 miles long, to connect Buctouche, N.B., with the Intercolonial Railway at or near Moncton, the subsidy not to exceed \$96,000.

[1886]

Under an Order in Council of the 10th September, 1886, an agreement, dated the 16th of that month, was entered into with the Buctouche and Moncton Railway Company for the execution of this work by the 1st of July, 1887.

**Canada Atlantic Railway Company.**

(See Nos. 60 and 80 )

By the Acts 48-49 Vic., ch. 59, and 49 Vic., ch. 10, the Canada Atlantic Railway Company were subsidized to the extent not exceeding \$134,400, for a line from Clarke's Island, in the St. Lawrence, opposite Valleyfield, through Lacolle to the international boundary, about 50 miles; also from the present Ottawa terminus to the Chaudière Falls, and under the authority of Orders in Council, dated the 17th of September, 1885 and 1st of July, 1886, contracts have been made with the company for the work in question, the date for full completion being the 1st of October, 1886.

Upon due inspection, payments were made, under Order in Council, of \$48,480, up to the close of the fiscal year, and of \$44,334, subsequently, the last Order being dated the 24th of August, 1886, making the total payment \$92,864; the work done and so paid for comprises the whole portion between Clarke's Island and Lacolle, a distance of 43.18 miles.

**Caraquet Railway Company.**

(See Nos. 7, 41 and 68.)

Under an Order in Council, dated the 6th of May, 1884, the subsidies authorized by Parliament in 1883 and 1884, for the road of this company from a point near Bathurst, on the Intercolonial Railway, and Shippegan Harbor, amounting to \$192,000, have been granted to them. An agreement was executed under date of the 20th of January, 1885, for the construction of the line, the portion from Caraquet to Gloucester Junction Station, near Bathurst, to be completed by the 25th May, 1887, and the whole road by the 1st of July, 1888. Up to the end of the fiscal year there had been paid to the company \$108,800, a further sum of \$33,200 being paid subsequently, making the total payments up to the end of December, 1886, \$142,000. The road has been inspected and approved up to the 50th mile from Gloucester Station, and location has been approved up to the 60th mile. By an Act, 49 Vic., ch. 10, a further subsidy of \$32,000 was authorized, covering the last ten miles of the road.

**Central Railway Company.**

(See No. 40.)

By the Act of 1884, 47 Vic., chap. 8, a subsidy not exceeding \$128,000 was granted in aid of the construction of about 40 miles of the Central Railway from the head of Grand Lake to a point on the Intercolonial Railway, between Sussex and St. John, N.B.

Under the authority of an Order in Council of the 5th of June, 1886, a contract was made with the Central Railway Company, on the 7th of July, 1886, for a line from Salmon River at the head of Grand Lake to Norton on the Intercolonial Railway, the work to be completed by the 1st of July, 1888.

Up to the 31st of December, 1886, no portion of the subsidy had been paid.

**Chignecto Marine Transport Railway Company,**

(See No. 5.)

On the 3rd of February, 1882, this company (which received incorporation the same year, by Act 45 Vic., chap. 76) made a proposal to the Government for the construction of a line of railway for the transport of ships overland across the Isthmus of Chignecto, from Tidnish, on Bay Verte in the Gulf of St. Lawrence, to a point at or near the mouth of the River La Planche, in the Bay of Fundy, and by the Act 45 Vic., chap. 55, authority was given for the grant of a subsidy of \$150,000 a year for 25 years, in aid of the work.

No definite action was, however, taken until the 6th of October, 1885, when an Order in Council was passed authorizing entry into agreement with the company, subject to the approval of Parliament, and such agreement was executed on the 4th of March, 1886. Under its terms the subsidy payable is to be \$170,602 a year for 20 years, or such portion thereof as may be required to bring up the net earnings to 7 per cent. per annum on the authorized share and bond capital of the company, \$5,500,000, and to be granted only during the satisfactory performance of the services contemplated, such services comprising the raising, transport, and lowering of vessels of 1,000 tons burden, registered, with full cargo. Should the earnings exceed 7 per cent. per annum, one-half of such surplus is to be paid to the Government until repayment of the whole amount received by said company under their subsidy. The whole work is to be completed and equipped by the 1st of July, 1889.

By a special Act, passed last Session, 49 Vic., chap. 18, this agreement was confirmed and ratified.

**Elgin, Petitcodiac and Havelock Railway Company.**

(See No. 15.)

By the Act 46 Vic., cap. 25, a subsidy of \$38,400 was authorized for the construction of a railway from the Intercolonial Railway at Petitcodiac to Havelock Corner. The above named company having made application, a contract was entered into with them on the 25th of May, 1885, under the authority of an Order in Council of the 16th of that month. The road, about 12 miles long, having been completed and inspected, an Order in Council was passed on the 16th of November, 1885, under which the whole amount of the subsidy has been paid.

[1886]

**Erie and Huron Railway Company.**

(See No. 30.)

By the Act 47 Vic., cap. 8, authority was given for the grant of a subsidy not exceeding \$96,000 to this company for a line from Wallaceburgh to Sarnia, and a contract was entered into with them on the 27th of August, 1885, under an Order in Council of the 6th of that month, the line to be completed by the 1st of July, 1887. Under Orders in Council, the last dated the 5th of December, 1886, the whole amount of the subsidy, \$96,000, has been paid, the road being duly completed and inspected.

**Esquimalt and Nanaimo Railway Company.**

(See No. 44.)

Under the authority of Orders in Council passed in June, 1883, the Honorable Sir Alexander Campbell, during the summer of that year, visited British Columbia, with a view to the settlement of matters in abeyance between the Provincial and Dominion Governments, and arrangements were provisionally entered into by him in respect of the building of a line of railway between Esquimalt and Nanaimo by a company to be subsidized by the Dominion Government.

The arrangements in question were conditional upon approval being accorded by the Legislature of the Province of British Columbia, and by the Parliament of Canada. Subject to such approval, their adoption was sanctioned by an Order in Council of the 27th September, 1883.

By an Act of the Provincial Legislature, sanctioned on the 19th December, 1883, but known as Act "47 Vic., cap. 14," and by an Act of the Dominion Parliament, 47 Vic., cap. 6, such approval was accorded.

These arrangements were expressed in articles of agreement dated the 20th of August, 1883. They comprised the grant of a subsidy in money of \$750,000, together with the land in Vancouver Island granted by the Province to the Crown for the purposes of railway construction; materials for construction of the railway and telegraph to be admitted free of duty; the whole line between Esquimalt and Nanaimo to be completed by the 10th of June, 1887.

A company, "the Esquimalt and Nanaimo Railway Company" was duly incorporated under the provisions of the Act, and proceeded vigorously with the work of construction. Up to the 31st of December, 1885, however, no portion of the subsidy had been paid, the reason for non-payment being that the work done did not comply strictly with the conditions of the contract.

By the specification attached to the company's agreement they were restricted to curves of a radius of not less than 800 feet. In the actual construction, however, a sharper curvature was adopted, and Parliament, by an Act passed last Session

(49 Vic., ch. 15), and with the concurrence of the Provincial Legislature, agreed to accept the same as complying with the requirements of the Subsidy Act.

In accordance with the authorization so given, an Order in Council was passed on the 14th of June, 1886, cancelling preceding Orders in respect of location, and accepting the location of the entire line 71½ miles, with the curves adopted by the company.

On the same day an Order was passed authorizing the first payment made to the company, namely, \$422,520 for 40 miles of their road, and this was the only payment made during the fiscal year. Subsequently, under authority of Orders in Council further portions of the subsidy were paid, making a total payment to this company of \$712,500, the balance, \$37,500, of the subsidy being retained as representing the 5 per cent. security to be temporarily held under the contract, after completion, to ensure the making good of any possible defects. As security for the execution of the work, the company deposited \$250,000, which has been returned to them. The railway and telegraph line were duly completed, and, after inspection, permission was given to the company on the 17th of September, 1886, to open their road for public traffic.

**Great Eastern Railway Company.**

(See No. 88.)

By the Act 49 Vic., chap. 10, authority was given for the grant of a subsidy to an extent not exceeding \$32,000, on an estimated distance of 10 miles, towards the construction of a line from Yamaska to the River St. Francis, Que.; and the Great Eastern Railway Company having applied, and having satisfactorily shown their ability to perform the work, a contract was made with them on the 12th of October, 1886, under the authority of an Order in Council of the 9th of that month, the time for completion being fixed as the 1st of October, 1887.

No portion of the subsidy has, up to the 31st of December, 1886, been paid, but the company have applied for the inspection of the road as a completed work.

**Great Northern Railway Company.**

(See Nos. 33, 37.)

By the Act 47 Vic., ch. 8, (1884), a subsidy not exceeding \$32,000 was granted to this company for the construction of a line from St. Jérôme to New Glasgow, Que.; the estimated length being 10 miles.

Under the authority of an Order in Council of the 3rd of February, 1885, a contract for the work was entered into with the company on the 14th of that month, the road to be completed by the 1st of July, 1885.

The line was duly completed and inspected, and under an Order in Council of the 2nd of March, 1885, payment was made therefor, namely for 7.84 miles, \$25,088.

By the Act 49 Vic, ch. 10, a subsidy not exceeding \$22,400 was granted for a line from St. Andrews to Lachute, Que. For this subsidy the above named Company have applied.

**International Railway Company.**

(See No. 10.)

In 1833 Parliament granted a subsidy of \$156,800 to this company for forty-nine miles of their railway, between Sherbrooke and the International boundary line, the object being to enable them to complete their road and lay steel rails. They entered into contract on the 20th of July, 1833, and under successive Orders in Council, the last of which was dated the 21st of December, 1833, they have been paid a total sum of \$144,000, upon a distance of forty-five miles.

**Irondale Bancroft and Ottawa Railway Company.**

(See No. 24.)

By the Act 47 Vic., ch. 8 (1884), the Irondale, Bancroft and Ottawa Railway Company were subsidized, to an extent not exceeding \$160,000 for a line, about 50 miles long, to connect the Victoria Branch of the Midland Railway with the village of Bancroft.

With the sanction of an Order in Council of the 10th July, 1886, a contract was made with the company on the 19th of August, 1886, the first 10 miles to be completed by the 1st of December, 1886, and the remainder by the 1st of July, 1888.

No payment has yet been made.

**Joggins Railway Company.**

(See No. 76.)

By the Act 49 Vic., chap. 10 (1886), authority was given for the grant of aid to an extent not exceeding \$38,400, towards the construction of a railway, the estimated length which is 12 miles, from a point at or near the McCann Station, on the Intercolonial Railway, to the Joggins, on Cumberland Basin, N.S.

The Joggins Railway Company having applied for this subsidy, and the application being satisfactory, a contract was made with them on the 30th of November, 1886, under the authority of an Order in Council of the 5th of October, the line to be completed by the 1st of November, 1887.

No portion of the subsidy has been paid.

**Lake Temiscamingue Colonization Railway Company formerly "La Société de Colonisation du Lac Témiscamingue."**

(See No. 55 and 84.)

By the Act 48-49 Vic., cap. 59, a subsidy was authorized in aid of the construction of a line of railway from Long Sault to the foot of Lake Temiscamingue

surmounting certain rapids on the River Ottawa. The limit of the amount being \$25,600, covering a distance of 8 miles. Under the authority of an Order in Council of the 17th November, 1885, a contract was entered into for the construction of 6 miles, to be completed by the 1st of January, 1887.

Up to the 31st of December, 1886, and under authority of an Order in Council of the 29th of June, 1886, the sum of \$14,400 had been paid for this work.

By the Subsidy Act of last Session, 49 Vic., chap. 10, a further subsidy of \$6,000 was authorized for the building of wharves and landing stages in connection with this line.

In conformity with an express provision to that effect in clause 2 of the above cited Act, Letters Patent have been issued under an Order in Council of the 20th of July, 1886, published in the *Canada Gazette* of the 24th, granting a charter for the construction of this railway to the "Lake Temiscamingue Colonization Railway Company."

**L'Assomption Railway Company.**

(See No. 77.)

By the Act 49 Vic., ch. 10, the grant of a subsidy not exceeding \$11,200 was authorized for a short line of railway,  $3\frac{1}{2}$  miles long, connecting the village of L'Assomption with the North Shore Railway at L'Epiphanie.

Under date the 16th of September, 1886, a contract, as authorized by an Order in Council of the 23th of August, was entered into with L'Assomption Railway Company for the work in question, the line to be completed by the 1st of January, 1887, and under an Order in Council of the 10th of November, 1886, the company have been paid \$8,750 of their subsidy.

**Leamington and St. Clair Railway Company.**

(See No. 56.)

By the Act 48-49 Vic., chap. 59 (1885), aid was granted to an extent not exceeding \$44,800 towards the construction of a line of railway from a point on the Canada Southern Railway near Comber, to Leamington, on Lake Erie.

Under authority of an Order in Council of the 13th of April, 1886, a contract for this work was made with the Leamington and St. Clair Railway Company on the 3rd of May, 1886, the road to be completed by the 1st of August, 1889. No portion of the subsidy has been paid up to the 31st of December, 1886.

**Montreal and Champlain Junction Railway Company.**

(See No. 51.)

By the Act 48-49 Vic., cap 59, a subsidy was authorized to be granted to this company for a line from Brosseau's to Dundee, not exceeding \$30,000. An Order [1886] lvii

in Council was passed on the 25th of September, under which, on the 1st of October, a contract was made with the company for the completion of the road by the 1st of October, 1886. The whole road was completed during the fiscal year, and the full amount of the subsidy, \$30,000, was, after inspection, paid, the Order authorizing the final payment being dated the 10th of May, 1886.

**Montreal and Sorel Railway Company.**

(See No. 47.)

By the Act 48-49 Vic., cap. 59, a subsidy not exceeding \$72,000 was authorized to be granted to this company for a line from St. Lambert to Sorel. Under an Order in Council of the 2nd October, 1885, a contract was made with the company on the 14th, and under the authority of Orders in Council, up to the end of the fiscal year, payments had been made to the company to the extent of \$64,972. Subsequent payments of \$4,950, the last under an Order in Council of the 10th November, 1886, were made, bringing the total payments up to \$69,922, the road 44.67 miles long, having been completed, with the exception of a small quantity of work, to secure the finishing of which \$1,550 was retained.

**New Brunswick and Prince Edward Railway Company.**

(See No. 46.)

By the Act 48-49 Vic., chap. 59 (1885), a subsidy, not exceeding \$118,400, was granted to the New Brunswick and Prince Edward Railway Company for the construction of a line between the Intercolonial Railway at Sackville Station to the Straits of Northumberland at or near Cape Tormentine, whence, by ferry, communication could be had with the railway system of Prince Edward Island.

Under the authority of an Order in Council, dated the 19th of April, 1886, a contract was entered into with the company for this work on the 18th May, 1886.

Work progressed, but no payments were made during the fiscal year. Subsequently, payments have been made to the extent of \$87,120 under Orders in Council the last dated the 29th of September, 1886, the distance of line inspected being 35.45 miles. On the 11th of December the company applied for inspection of the completed road.

**Napanee, Tamworth and Quebec Railway Company.**

(See Nos. 13, 27, 57 and 94.)

In 1883 Parliament authorized a subsidy of \$89,600 to this company, covering their road from Napanee to Tamworth.

A contract, dated 31st December, 1883, was entered into with the company for this work, and upon completion, inspection and approval of the road the balance of the subsidy then due was paid under an Order in Council of the 28th of July, 1884.

In the Session of that year Parliament authorized the grant of a further subsidy not exceeding \$3,200 a mile or a total of \$70,400, for an extension of this company's road from Tamworth to Bogart and Bridgewater. In 1885, however, in substitution for this subsidy, Parliament authorized the grant to the company, of a subsidy of \$70,000 for a line "from Tamworth towards Bogart and Bridge water 16 miles." This, again, was cancelled last Session (49 Vic., ch. 10), a subsidy being granted to the company for 18 miles of their railway from Tamworth to Tweed, \$70,000. Up to the 31st of December, 1886, no contract had been made for this subsidy.

**Northern and Pacific Junction Railway Company—Gravenhurst to Callander.**

(See Nos. 1 and 16.)

For the purpose of affording to the Province of Ontario the advantage of direct railway communication with the North-West, it was necessary that a road should be built connecting the Canadian Pacific Railway with the existing railways of Ontario, and such a line was subsidized by the Acts of 1882 and 1883, to the extent of \$12,000 a mile, for a distance of 110 miles, or a total of \$1,320,000. It extends, southwards, from the Canadian Pacific Railway at Nipissing Junction, east of Lake Nipissing, to the village of Gravenhurst, a distance of 111½ miles, there connecting with the railway system of Ontario. Under the authority of an Order in Council, dated the 10th of April, 1884, a contract was entered into on the 12th of April, 1884, with the Northern and Pacific Junction Railway Company (formerly the Northern and North-Western and Sault Ste. Marie Railway Company), for the construction of this line, the same to be completed by the 1st of May, 1886.

Connection was made from north to south in January, 1886, a through train running on the 27th of that month.

By an Order in Council of the 3rd of May, 1886, the time for completion was extended to the 1st of August, 1886.

Up to the end of the fiscal year the sum of \$1,206,030 had been paid, after inspection of the road, and up to the 31st of December, 1886, a further sum of \$78,370, making a total payment of \$1,284,400, and leaving the sum of \$35,600 to cover finishing fencing and other work.

**Northern and Western Railway Company.**

(See Nos. 11, 29, 50 and 61.)

In 1883 Parliament authorized the grant of a subsidy to this company of \$102,400, towards the construction of thirty-two miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy Village, N.B. This action was suggested to the House, in view of an application made for aid for a line extending from the Intercolonial Railway at the crossing of the Miramichi

[1886]

River, *vid* Boiestown and the Nashwaak Valley to Gibson, on the River St. John, opposite Fredericton. In 1884, no work having meantime been commenced, Parliament voted money for the construction, by the Government, of the portion of this distance, extending from Derby Station, on the Intercolonial Railway, to Indian-town, and authorized the grant to this company of a subsidy of \$128,000 in aid of their railway from Fredericton to the Miramichi, "instead of the subsidy proposed in 1883."

The contract for the construction of this subsidized line, from Fredericton to the Miramichi, forty miles in length, was signed on the 24th of December, 1884, an Order in Council on the 16th of that month having given approval to the draft of such contract. The date fixed for completion was the 1st of July, 1888.

The location for the whole distance, forty miles, has been approved of by Orders in Council, and the road having been duly completed and inspected, the whole of the subsidy, \$128,000, has been paid to the company.

In 1885, a subsidy in favour of this company was authorized to the extent of \$19,200 for a continuance of their line to Boiestown, and under the authority of an Order in Council of the 6th of November, 1885, a contract was made with the company for the work on the 26th of that month. The location was approved by an Order in Council of the 27th. The line, six miles in length, was to be completed by the 1st of November, 1886. The line being completed, an Order in Council was passed on the 13th of July, 1886, under which payment of \$18,200 has been made; the balance, \$1,000, being retained to cover the widening of certain cuttings.

Parliament, also, in 1885, authorized the grant of a subsidy to the extent of \$140,800 in aid of the construction of a line of railway from Indian Town, *vid* the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown.

The Northern and Western Railway Company having applied for the work, they were accepted, and a contract was made with them on the 26th of November, 1885, as authorized by an Order in Council of the 7th of that month; the location for the whole distance, about 50 miles, being approved of by an Order of the 27th. The line is to be completed by the 1st of August, 1888. The contract contained the express condition that the work must be commenced at the Indian-town end of the subsidized line, and that no portion of the subsidy should be paid until the completion of the first ten mile section starting from said point.

By the Subsidy Act of last Session, 49 Vic., ch. 10, a further grant of \$32,000 to this company was authorized for ten miles of their railway, made up of the portion intervening between the present termini of their already subsidized line and of the two miles extending down to deep water at Chatham.

For this subsidy a contract was made with the company on the 14th of August, 1886, covering the intervening portion of line only, and omitting the two-mile deep water extension, this omission being due to their failure to arrive at an understanding with the Chatham Branch Railway Company in the matter. The difficulty has now, it is understood, been adjusted, and a new agreement has been prepared covering the two miles in question.

An inspection has been made of the line from the 46th to the 64th mile from Gibson (opposite Fredericton), but no portion of the subsidy had been paid up to the 31st of December, 1886, the stipulation of the contract above mentioned not having yet been complied with.

The portion connecting Indiantown with the Intercolonial Railway has been built by the Government as a branch of its main road. The execution of the entire scheme as above described will afford direct communication between Fredericton and the Intercolonial Railway at Derby, the distance being about 109 miles.

**Ontario and Pacific Railway Company.**

(See No. 31.)

By the Act 47 Vic., chap. 8, the grant of a subsidy to the Ontario and Pacific Railway Company was authorized, namely, to the extent of \$262,400, on an estimated distance of 82 miles, for a line from Cornwall to Perth, and on the 27th of July, 1886, a contract was made with the company, under the authority of an Order in Council of the first day of that month, for the construction of such line *via* Newington, Chrysler, Manotie and Franktown, the road to be completed by the 1st of July, 1888.

No portion of the subsidy has been paid up to the 31st of December, 1886.

**Pontiac Pacific Junction Railway Company.**

(See No. 25.)

This line was subsidized by Parliament in 1834, to the extent of \$3,200 a mile not exceeding \$272,000.

Under authority of an Order in Council, dated the 12th of December, 1834, a contract, dated the 22nd of that month, was made with this company for the building of the line subsidized, namely, from Aylmer, Que., to Pembroke, crossing the River Ottawa at a point "not east of Lapasse," the first twenty-seven miles to be completed by the 1st September, 1835 (extended to 15th of December, by Order in Council of the 13th of August, 1835) the second twenty-seven miles by the 1st of July, 1836, and the whole road, estimated at 85 miles west of Aylmer, by the 1st of July, 1837.

Under authority of Orders in Council payments have been made, up to the close of the fiscal year, to the extent of \$90,090, and subsequent to that date,

namely, up to the 31st December, 1886, of \$48,180, making a total payment to date of \$138,270, covering a distance of 57 miles from Aylmer.

Towards the close of December, the approval of the location up to the 61st mile from Aylmer and the payment of a further amount of subsidy therefor have been recommended, and the company having given formal notice of intention to open the line from Aylmer to the River Coulonge for public traffic, an inspection has been made with a view to such opening, showing the road to be in a condition to receive traffic.

**Quebec Central Railway Company.**

(See No. 22.)

This company was subsidized in 1884, to the extent of \$211,200, in aid of the construction of sixty-six miles of their railway, from Beauce Junction to the international boundary.

Under the authority of an Order in Council, dated the 2nd of August, 1884, a contract was made with the company on that date for the construction of a line from Beauce Junction on their trunk line, thence up the valley of the River Chaudière to the frontier, the line to be completed by the 2nd of February, 1888.

Up to the 31st December, 1886, the location of the first 23 miles has been approved of by an Order in Council of the 8th of May, 1835. The amount of the subsidy paid is \$60,342, covering 15½ miles of road inspected, starting from Beauce Junction.

**Quebec and Lake St. John Railway Company.**

(Nos. 2, 14, 49 and 82.)

By the Subsidy Act of 1882, a subsidy of \$384,000 was granted for a line from St. Raymond to Lake St. John. By the Act of 1883, the Quebec and Lake St. John Railway Company, engaged in the work of constructing this line, were permitted to receive a further subsidy of \$80,000. By the Act of 1885 a subsidy of \$96,000 was authorized for a line extending from the point of their junction with the North Shore Railway up to St. Raymond, conditionally upon the construction of their line to a point 50 miles north of St. Raymond, and by the Act of 1886 an additional subsidy was authorized, not exceeding \$186,295, for a further distance of 95 miles, extending from the point 50 miles north of St. Raymond to Lake St. John; the aggregate of the subsidies granted to this company being \$746,295. An agreement was duly entered into on the 4th of September, 1883, in respect of the two subsidies first named, under which this line is to be completed by the 25th of May, 1887, the portion up to Lake Edward to be completed by the 31st of December, 1885. On the 10th of February, 1883, an agreement was signed covering the third subsidy, that, namely, of 1885.

Up to the 31st of December, 1886, the road had been built and inspected for a total distance of 80 miles north of St. Raymond (and to a point beyond Lake Edward).

The subsidy has been paid for this distance, amounting, up to the end of the fiscal year, to \$255,772, further payments being made, subsequently, to the extent of \$141,745, or a total up to the 31st of December, 1886, of \$397,517.

The location of the road has been approved by Orders in Council up to the 100th mile north of St. Raymond.

#### Short Line.

In what is known as the "short line" is comprised a scheme for connecting the city of Montreal, as the commercial capital of the Dominion, with Canadian Atlantic ports, by the shortest and best practicable route. This has for some years past been the subject of attention in Parliament, and in furtherance of it subsidies have, from time to time, been granted; companies have been formed and surveys have been made, both by private parties and by the Government, the outcome being that during the past year arrangements have been entered into by which it is hoped that the desired end will be obtained. The scheme is divided into two sections, namely, east of Moncton and west of Moncton.

#### *East of Moncton—Line to Sydney and Louisbourg.*

(Nos. 9, 21.)

As a link in the proposed railway connection with the north-east of Cape Breton, the construction of a line, about 70 miles long, between Oxford and New Glasgow, connecting the Intercolonial Railway with the Eastern Extension Railway, and avoiding a long *détour*, was authorized in 1882, a subsidy of \$224,000 being voted by Parliament for this work.

Under date the 28th July, 1882, a contract was entered into with the Montreal and European Short Line Railway Company for the building of this road, the work to be completed by the 1st of January, 1884.

The company commenced work and continued until the summer of 1883, when they ceased operations. The contract, accordingly, became null and void. As the subsidy was to be paid upon the completion of each ten mile section, and as no one section was completed, no portion of the subsidy was paid.

In the year 1885, the following appropriation was voted by Parliament:—

In aid of the Short Line Railway in Nova Scotia, for settling the unpaid claims of sub-contractors and others for labour, board, etc., in the construction of the said railway between Oxford and New  
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Glasgow, and for acquiring their rights in the railway and in the said claims, the expenditure to be under Order in Council, and to be a first charge on the subsidy for such railway under 45 Victoria, chapter 14 ..... \$125 00

Under an Order in Council of the 14th August, 1885, a special commissioner was appointed, through whom a number of these claims were settled. In 1886 Parliament voted a further sum of \$25,000 for the same purpose and the commissioner has obtained full receipts and assignments from the company's contractors and other parties having interests in the road, the payments made covering liabilities of the company incurred for the construction of the road prior to the cessation of works in August, 1883. Notwithstanding the fact that there have been submitted various propositions from capitalists and others having in view the construction of the short line railway embracing Cape Breton, nothing definite or satisfactory has been arrived at, and consequently it was determined that, rather than delay longer the giving to the people of Cape Breton the advantages of railway communication, the Government should, itself, construct a line through the island, and in the session of 1886 Parliament gave the necessary authority for such construction by an Act, 49 Vic., ch. 14.

Under appropriations voted for the express purpose, a number of surveys were made, with the result that in October last the Government Chief Engineer of Railways was enabled to report, submitting for selection five routes, one to Louisbourg direct, and the others to Sydney and North Sydney.

Upon consideration it was decided by an Order in Council of the 29th of October, 1886, to adopt a location starting from the Straits of Canso—at Point Tupper—passing McIntyre Lake, the Grand Narrows, and the south shore of the Little Bras d'Or to Sydney, with a branch to North Sydney, the length of the main line being 91.50 miles, and that of the branch 3.25 miles. From Sydney a railway is already in existence to Louisburg. The same Order in Council authorized the immediate prosecution of the work between Grand Narrows and Sydney, with the branch to North Sydney; funds to the extent of \$500,000 having been voted by Parliament for this purpose last session. Tenders have been called for.

*West of Moncton—Atlantic and North-West Railway Company.*

(Nos. 20, 63.)

In the session of 1885, after a series of careful surveys of the country, between Montreal and the points from which the harbours named can be reached by existing lines, the decision of Parliament in the matter was expressed by the grant of a subsidy in the following Act, 48-49 Vic., ch. 58 :—

“For a line of railway from the south bank of the St. Lawrence River opposite or near Montreal to the harbors of St. Andrews, St. John and Halifax, *via*  
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Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such line of railway for a period of twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work: the said subsidy to be so granted upon the terms and conditions of, and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect to the subsidy thereby authorize in aid of the said line of railway."

An application having been made for the said subsidies by the International Railway Company and they having agreed to conform to the necessary conditions and requirements, and having evidenced their ability to construct and operate the road, entry into contract with them was authorized by an Order in Council of the 19th of November, 1885, and such contract was executed on the 14th of December, 1885, they undertaking to complete a line from a point on the south bank of the St. Lawrence at or near Caughnawaga to connect with the Intercolonial Railway at Moncton by the 1st of July, 1889.

The International Railway Company subsequently disposed of their interest in this contract to the Atlantic and North-West Railway Company, and this company was accepted as contractors by an Order in Council dated the 13th of November, 1886, the agreement made thereunder being dated the 6th of December, 1886.

The Atlantic and North-West Railway Company, having powers under their charter to enter into arrangements for the crossing of the State of Maine, obtained, from the Maine Central Railway Company, the privilege of acquiring running powers over the portion of their road between Mattawamkeag and Vanceborough, on the boundary line. These arrangements were accepted by an Order in Council of the 30th of December, 1886.

The total subsidies available under vote of Parliament for this work of railway construction, amounting, as above stated, to \$250,000 a year, for a term of twenty years, it became necessary so to apportion this amount as to secure the building of the links to connect with the roads already in existence in New Brunswick and Nova Scotia leading to the harbours named.

Accordingly, an estimate of the cost of the several sections of the surveyed line, as adopted, was made, and as a result an Order in Council was passed on the 14th of June, 1886, dividing the subsidy as follows:—For the portion from the River St. Lawrence to Lennoxville, 100 miles, \$71,100; the portion from Len-

noxville to Moose River, a point about 8 miles east of the western boundary between the Province of Quebec and the State of Maine, 89 miles, is covered by the International Railway already constructed. For the portion, 134 miles long, between Moose River and Mattawamkeag, a station on the Maine Central Railway, \$115,500; from Mattawamkeag to Harvey Station on the New Brunswick Railway, a distance of 81 miles, running arrangements have been made over existing roads; for the portion, 113 miles, between Harvey and a point on the Intercolonial Railway near Salisbury Station, \$63,400; the remaining distance by the Intercolonial Railway to Moncton, being 10 miles, and the total distance between the River St. Lawrence and Moncton being 527 miles. No portion of these subsidies had been paid up to the 31st of December, 1886.

The Atlantic and North-West Railway Company having under their charter, 42 Vic., ch. 65, (1879) power to construct a bridge across the St. Lawrence, near Lachine, submitted for approval plans for such a bridge, to be situated about a mile below the entrance of the Lachine Canal, and about nine miles above Montreal. These plans, having been favourably considered from an engineering point of view, and also with regard to navigation, were approved of by an Order in Council dated the 1st of April, 1882, subsequently modified by an Order of the 14th of November, 1885. The plans so approved show a steel bridge, with stone piers, having two spans of 408 feet each, two of 269 feet each, and eight of 242 feet each. The central 216 feet of each of the two channel spans affords a height of 60 feet above ordinary summer water level; these two spans are on the cantilever principle. The bridge is in course of construction.

By an indenture dated the 6th of December, 1886, the Canadian Pacific Railway Company have obtained a lease in perpetuity of the line and interests of the Atlantic and North-West Railway Company.

#### **St. John Bridge and Railway Extension Company.**

(See No. 17.)

By an Act passed in 1883, 46 Vic., cap. 26, authority was given for the advance to the above named company of a sum not exceeding \$500,000, to aid them in the construction of their proposed bridge over the River St. John, security being taken for the said advance in the shape of a mortgage on the company's property, repayment to be made within 15 years and interest to be paid at the rate of 4 per cent. from the date of the first advance.

The plans and specifications of the bridge having been approved of by an Order in Council, a mortgage was executed on the 10th of December, 1883, and the company have received the sum of \$433,900, representing 80 per cent. of the expenditure in connection with the work, payments being made under the authority of Orders in Council, and after inspection of the work done, the last payment being made under an Order of the 14th of June, 1886. The bridge itself was completed and formally opened on the 30th of September, 1885.

**St. Lawrence, Lower Laurentian and Saguenay Railway Company.**

(See No. 59.)

By an Act 43-49 Vic., chap. 59 (1885), a subsidy of \$217,600 was granted for a line of railway from the Grand Piles, on the River St. Maurice, Que., to a point of junction with the Lake St. John Railway (being in lieu of a subsidy of the previous year).

The St. Lawrence, Lower Laurentian and Saguenay Railway Company having applied for this subsidy, and being approved, a contract was entered into with them on the 20th of February, 1886, under authority of an Order in Council of the 6th of that month, which also approved of the location plans.

After inspection made of the first 20 miles of the road, the sum of \$64,430 has been paid under an Order in Council of the 11th of December, 1886.

**St. Louis, Richibucto and Buctouche Railway Company.**

(See No. 35.)

By the Act 47 Vic., cap. 8, a subsidy was authorized for a line between Richibucto and St. Louis, namely, \$3,200 a mile or \$22,400. Under authority of an Order in Council of the 20th March, 1885, a contract was made with the company on the 5th of May, 1885, the line to be completed by the 31st of December, 1885, and upon the completion and inspection of the work an Order in Council was passed, on the 17th of December, 1885, under which the full amount of the subsidy has been paid.

**Témiscouata Railway Company—Rivière du Loup to Edmundston.**

(See Nos. 3 and 62.)

Towards the construction of a line from Rivière du Loup or Rivière Ouelle, or from some point between them, to Edmundston, Parliament, in 1882, voted a subsidy of \$240,000, and by the Act 48-49 Vic., ch. 58, a further subsidy, not exceeding \$258,000, was voted for a line from Rivière du Loup or Rivière Ouelle, making a total, in aid of this work, of \$498,000.

Under express provisions of this Act a charter was granted by Orders in Council of the 3rd and 6th of October, 1885, to certain persons constituting "The Témiscouata Railway Company," their object being to build the said road, and such charter, being published in the *Canada Gazette* of the 10th of that month, has force and effect as if an Act of Parliament. Under the said charter the company have power to construct a road from the Intercolonial Railway at Rivière du Loup to Edmundston. On the 21st of June, 1886, a contract was duly entered into with the company for the work subsidized, the whole to be completed by the 1st of August, 1889. The location of the portion of the road, 80½ miles, *via* Lake Tém-

iscouata and the River Madawaska has been approved of by an Order in Council of the 30th of September, 1886. No portion of the subsidy has been paid up to the 31st December, 1886.

#### LAND SUBSIDIES.

The following companies have been aided by subsidies in land duly authorized by Parliament and granted by the Department of the Interior :—

They are enumerated here because the engineering details have been dealt with by this Department, the certificate of whose officer has been required prior to the handing over to the company concerned of any part of the subsidy.

##### **Manitoba South-Western Colonization Railway Company.**

(See No. 98.)

By 48-49 Vic., cap. 60 (1885), authority was given for the grant of aid for a line from Winnipeg to White Water Lake, about 150 miles, 6,400 acres per mile.

The charter of the company, granted by Act 42 Vic., ch. 66, (1879) empowered them to build a line from Winnipeg to Rock Lake, near the west boundary of the Province, the line to be completed in five years, namely by the 15th May, 1884.

By the Act 43 Vic., ch. 53, 1880, they were permitted to extend the line up to the Souris coal fields.

By the Act 47 Vic., ch. 73, 1884, the company were allowed to lease their line to the Canadian Pacific Railway, the time for the completion of the railway being extended three years beyond the period fixed by their charter, namely to the 15th of May, 1887.

By an Order in Council of the 4th of October, 1884, the company was subsidized to the extent of 6,400 acres per mile for the whole distance, about 152 miles, from Winnipeg to Whitewater Lake, equal to 972,800 acres; the line for this distance to be completed by the 1st of October, 1885. Location has been approved as follows.—

By an Order in Council of the 3rd Nov., 1881, from Aikins Street, Winnipeg, to Section 18, Township 7, Range 4 W., about 52 miles.

By an Order in Council of the 1st April, 1885, from Section 29, Township 8, Range 4, running west on a tangent to Section 31, Township 7, Range 9. This is the northern branch to the westward.

By an Order in Council of the 10th September, 1885, from Section 29, Township 8, Range 4. Passing through Carman and Manitou and the south shore of White Lake, thence to the western boundary of Manitoba between Ranges 29 and 30.

An Order in Council of the 6th April, 1835, modified the grant of the Order in Council of the 4th October, 1834, so as to make it applicable to the road in three sections:—

	Miles.
1. From Township 7, Range 4 (up to which it is now completed), to Manitou .....	110
2. From Manitou to Whitewater Lake.....	20
3. From Township 8, Range 4, to Township 8, Range 9,	130
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The Order also apportioned the 972,800 acres equally amongst these 130 miles = 7,483.84 acres per mile.

An Order in Council of the 11th September, 1835, extended the time for completion to 6th April, 1836.

An Order in Council of the 5th April, 1836, after report by the Chief Engineer of Railways as to inspection, showing completion of 100 miles, authorized the conveyance of 748,384 acres to the Manitoba South-Western Company, the patents to issue only on the order of the Government of Manitoba, to whom the company, for consideration of \$900,000 of provincial debentures issued, had agreed to transfer 900,000 acres; the work completed being Section 2 from Manitou west, 80 miles, and Section 3, from Township 8, Range 4 west, 20 miles.

By an Order in Council, of the 15th November, 1836, it was decided to apply to certain further extensions completed, namely: on the South Branch, from Boisevain west, 21 miles; on the North Branch, from Holland west, 20 miles, the reserve for Section No. 1, made under the Order of the 6th April, 1835, the remainder to be kept as subsidy for said Section No. 1, from Township 7, Range 4, to Manitou.

It will be observed that the company have already access to Manitou from Winnipeg by way of their South-Western Branch.

#### **Manitoba and North-Western Railway Company.**

(See No. 99 and 101.)

By Act 48-49 Vic., ch. 60, authority was given for the grant of aid for a line from Portage la Prairie to the crossing of the south branch of the River Saskatchewan, 20 miles from Prince Albert, about 430 miles, 6,400 acres per mile.

A grant was made to the company by Order in Council of the 4th of October, 1834, cancelling previous Orders. The date for completion was fixed by Order in Council of 6th of May, 1835, as at the rate of 50 miles a year.

The location and grades having been duly approved, an inspection made of the company's road showed that up to the 1st of December, 1835, they had built and equipped 130 miles of road. Further inspection shows that since that date

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and up to the end of December, 1886, a further distance of about 50 miles has been built, making a total of 180 miles on the company's main line.

By the Act 49 Vic., ch. 11, 1886, authority was given for the grant of aid for a branch of this railway, from a point on the main line at or near Todburn, to the River Assiniboine, near Shellmouth, about 26 miles, 6,400 acres per mile.

A grant was made to the company by Order in Council of the 24th of May, 1886, completion to be by the 31st of December, 1886. Under Orders in Council of the 10th and 21st of September, 1886, the line was permitted to start from Binscarth, the order first named approving the location, 11½ miles, to Russell, up to which point the road has been built.

**North-Western Coal and Navigation Company.**

(See No. 97.)

By 48-49 Vic., cap. 60 (1885), authority was given for the grant of aid for a line from Medicine Hat to the coal banks on the Belly River, about 110 miles, 3,800 acres per mile.

By an Order in Council of the 16th of March, 1885, approval was given to the location of the company's line, and on inspection, in October, 1885, of the road as completed, namely, from Dunmore Station, on the Canadian Pacific Railway, to Lethbridge, 109 miles, Orders in Council have been passed under which a total of 366,595 acres, out of the 414,200 acres to which they are entitled, have been set apart for them.

**North-West Central Railway Company.**

(See No. 102.)

By the Act 49 Vic., ch. 11, 1886, aid was granted for a railway from a point on the Manitoba and North-Western Railway *viâ* Rapid City; or from Brandon, on the Canadian Pacific Railway, to Battleford, about 450 miles, 6,400 acres per mile.

A grant was made to the Great North-West Central Railway Company, for a line from Brandon to Battleford, estimated at 450 miles, by Order in Council of the 22nd July, 1886.

**Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company.**

(See No. 100.)

By Act 48-49 Vic., ch. 60, authority was given for the grant of aid for a line from a point near Regina to Long Lake, 6,400 acres per mile.

On the 30th of December, 1884, an Order in Council was passed granting to the company the above subsidy.

The location of the road from Regina to the navigable waters of Long Lake, a distance of about 23 miles, was approved by Order in Council.

On inspection of the road, made in May, 1886, it was found that it was completed and in running order for a distance of 20·10 miles, the works on the remaining distance to the lake, about two miles, being in progress.

**Winnipeg and Hudson's Bay Railway and Steamship Company**

By 47 Vic., cap. 25, clause 7 (1884), authority was given for the grant of aid for a line from some point on the Canadian Pacific Railway to Hudson Bay, viz, for each mile in Manitoba, 6,400 acres and in the North-West Territories, 12,800 acres.

In the year 1880, by Act 43 Vic., ch. 59, there was incorporated "the Winnipeg and Hudson's Bay Railway and Steamship Company," with powers for the construction of a line from Winnipeg to or near Port Nelson, Hudson Bay.

In 1884, this Act was amended (by chapter 70), and the company were authorized to commence their line either from Winnipeg or from some point between Selkirk and Portage la Prairie, extending to Port Nelson and Churchill or some other point on Hudson Bay, also to construct a branch from any point on its main line to the Canadian Pacific Railway, west of Lake Winnipegosis, construction to be carried on at the rate of at least 50 miles a year.

By the same Act a previous Act authorizing the amalgamation of this company with the Nelson Valley Railway and Transportation Company was repealed, and authorization was given for the winding up of the company last named and the transfer to the Winnipeg and Hudson's Bay Company of all its property and interests.

By an Act passed in 1886 (49 Vic., ch. 73) the date for completion was fixed the 2nd of June, 1890.

By an Order in Council of the 11th of May, 1885, all previous orders in this connection were cancelled, and there was granted to the Winnipeg and Hudson's Bay Railway and Steamship Company a subsidy in land, as authorized by Parliament, as follows :—

	Acres.
Division A.—From the Canadian Pacific Railway to the northern boundary of Manitoba—estimated distance, 225 miles .....	1,440,000
Division B.—From the boundary to the terminus near the mouth of the Nelson River, Hudson Bay—estimated distance, 425 miles.....	5,440,000
Division C.—The Branch, from a point on the main line, near the northern extremity of Lake Winnipeg, to intersection with the Manitoba and North-Western Railway—estimated distance not to exceed 250 miles (Grant to be subject to approval by Parliament).....	1,600,000

The time for completion was fixed by this Order as 50 miles by the 19th of April, 1887, and 50 miles a year thereafter until completion of main line; but if the company do not complete their main line by 11th of May, 1890, they will forfeit their right to a grant for their branch line, which must itself be completed by the 11th of May, 1893.

**Wood Mountain and Qu'Appelle Railway Company.**

(See No. 103.)

By the Act 49 Vic., ch. 11, 1886, the grant of aid was authorized for a railway from a point in Township 4, Range 30, west of the 2nd meridian, passing through Fort Qu'Appelle to the Manitoba and North-Western Railway, about 240 miles, 6,400 acres per mile.

A grant was made to the company by Order in Council of the 23rd May, 1886. The portion between Fort Qu'Appelle and the Canadian Pacific Railway to be completed by the 1st of November, 1887, and 50 miles a year thereafter.

With regard to the undermentioned railways, satisfactory negotiations for railway construction under subsidy have been made, but up to the 31st of December, 1886, the necessary contracts had not been signed, viz:—

**Montreal and Western Railway Company.**

(See No. 78.)

For a line from St. Jérôme to La Chute-aux-Iroquois.

**Lake Temiscamingue Colonization Railway Company.**

(See No. 84.)

For wharves and landing stages.

**West Ontario Pacific Railway Railway.**

(See No. 66.)

For a line from Woodstock to London (in place of from Ingersoll to London), subject to approval of Parliament.

**Toronto, Grey and Bruce Railway Company.**

(See No. 75.)

For a line from Glenannan to Wingham.

**Northern and Western Railway Company**

(See No. 67.)

For a line, two miles long, extending to deep water at Chatham.

## SAULT STE. MARIE BRIDGE.

In the year 1882, by the Act 45 Vic., ch. 89, the Sault Ste. Marie Bridge Company was incorporated with powers, so far as the Dominion of Canada was concerned, to construct a railway bridge across the River Ste. Marie, in or above the rapids, between Lakes Huron and Superior.

Under date the 25th of April, 1883, an Order in Council was passed approving the site at the head of the rapids, and also the structural plans for the bridge; the work as contemplated having twelve spans of 200 feet each and two of 250 feet.

By the Act 48-49 Vic., ch. 24 (1885) the time for the construction of the bridge was extended and completion is now required by the 1st of May, 1891.

Though work does not, up to the 31st of December, 1886, appear to have been commenced, measures have recently been taken with a view to the building of this bridge.

## NORTHUMBERLAND STRAITS TUNNEL SURVEY.

A scheme having been submitted to the Government for the construction of a subway under the Straits of Northumberland to connect the railway systems of New Brunswick and Prince Edward Island, it was considered advisable before arriving at a decision on a matter of such importance that the Government should obtain from its own engineers information as to the feasibility of the plan. An Order in Council was passed on the 24th of August, 1886, under which a limited expenditure was authorized in order that subaqueous borings might be taken covering the distance between Cape Traverse, on the Island, and Cape Tormentine, on the mainland, a distance of eight miles.

The engineers employed succeeded in making borings at each quarter of a mile for the first three miles, starting from Cape Traverse, and at each half mile for the balance. On the first  $5\frac{1}{2}$  miles the boring tool passed through sand and gravel until brick clay was reached. From the  $5\frac{1}{2}$  mile to the  $6\frac{1}{4}$ , through sand and hard grey sand to brick clay. From the  $6\frac{1}{4}$  to the 8th mile, namely, to the shore line of the main land, through mud, sand and red clay to rock. The deepest water is 96 feet at  $4\frac{1}{2}$  miles from the Cape Traverse wharf, and at the  $6\frac{1}{2}$  mile a rocky reef occurs covered by 9 feet of water and about 10 feet of sand. With this exception the bottom is very uniform and satisfactory.

## ST. CLAIR RIVER TUNNEL.

In the year 1884, a company, "the St. Clair Frontier Tunnel Company," was incorporated by the Dominion Act, 47 Vic., ch. 82, for the purpose of building a tunnel for railway passage under the River St. Clair, from a point in or near the town of Sarnia, Ontario, to the city of Port Huron, Michigan, U. S., the Act pro-  
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viding that the plans of the tunnel and its works should be approved by the Governor in Council prior to commencement.

Satisfactory plans having been submitted they were approved by an Order in Council dated the 24th of November, 1886.

The length of the actual tunnel will be 5,280 feet, or one mile, of which 2,310 feet will be under the river. For the centre portion of this distance, 1,500 feet will, practically, be on the level; the ascent from the centre on either side being 1 in 50. The total length of the tunnel and its approaches will be 15,150 feet, and it will make connection between the Grand Trunk Railway and the Chicago and Grand Trunk Railway. The tunnel, cylindrical in form, will have a diameter of 20 feet in the clear. The greatest depth of water over the top of the work will be  $40\frac{1}{2}$  feet and the minimum 15 feet.

#### ROYAL COMMISSION ON RAILWAYS.

As the issue of discussion in Parliament, last session, upon the question of the expediency of constituting a Court of Railway Commissioners for Canada, and with the object of obtaining reliable information which should serve as a guide to decision in the matter, a Royal Commission was appointed by an Order in Council of the 6th of July, 1886, and has since that time conducted enquiries in various localities interested. The Commissioners have not yet reported.

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#### CANALS.

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The canal systems of the Dominion, under Government control, in connection with lakes and navigable rivers, are as follows:—

1. The River St. Lawrence and Lakes.
2. The River Ottawa.
3. The Rideau Navigation, from Ottawa to Kingston.
4. The Trent Navigation.
5. The River Richelieu, from the St. Lawrence to Lake Champlain.
6. St. Peter's Canal, Bras d'Or Lake, Nova Scotia.

The collection of the revenue derivable from the canals of the Dominion being in the hands of the Department of Inland Revenue, reference must be had to the annual report of that Department for all information in relation to the subject. The report in question further deals with general matters relating to the movement of freight on these canals.

The following statement, showing the amount accrued on each canal, for canal revenue proper and hydraulic rents, etc., during the fiscal year ended the 30th of June, 1886, has been furnished by the Department of Inland Revenue:

Name of Canal.	Tolls.	Wharfage and Storage.	Fines and Damages.	Other Receipts	Hydraulic Rents.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland .....	173,984 19	.....	150 89	.....	3,840 06	177,975 14
St. Lawrence.....	60,808 35	5,010 48	4,254 35	13,132 61	18,511 85	101,717 64
Chambly.....	18,454 78	6 00	.....	.....	75 00	18,535 78
Ottawa .....	55,946 47	.....	.....	8 00	36 00	55,990 47
Rideau.....	5,875 36	37 64	.....	99 00	1,421 25	7,433 25
*Burlington Bay.....	577 69	.....	.....	.....	230 00	807 69
Newcastle District .....	539 14	.....	.....	.....	.....	539 14
St. Peter's.....	1,457 29	.....	.....	.....	.....	1,457 29
	317,643 27	5,054 12	4,405 24	13,239 61	24,114 16	364,456 40

\*NOTE—This work was transferred to the Department of Public Works in 1885.

### RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle-Ile to Port Arthur, at the head of Lake Superior, a distance of 2,260 statute miles. The distance to Duluth is 2,384 miles.—See Appendix No. 17, p. 140.

The difference in level between Lake Superior and the point on the St. Lawrence near to Three Rivers, where tidal influence ceases, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Erie, are the Lachine, Beauharnois, Cornwall, Farran's Point, Rapide Plat, Galops and Welland. Their aggregate length is 70½ miles; total lockage (or height directly overcome by locks) is 533¼ feet; number of locks, 53.

Communication between Lakes Huron and Superior is obtained by means of the Sault Ste. Marie Canal, situated on the United States side of the river.

The canal is a little over a mile in length, and has two parallel locks, the largest being 515 feet long, 80 feet wide, with 16 feet of water on the sills, and a lift of about 18 feet.

## ST. LAWRENCE CANALS.

In 1841, as was observed in the report presented last year, at the time when the system of canals between Montreal and Lake Ontario was designed, it was in contemplation to afford a depth, at all stages of the St. Lawrence waters, of 9 feet, a depth seemingly, from the data then possessed, secured through the works proposed. The River St. Lawrence is, however, from various causes, subject to fluctuations, the extent of which it was impossible, at the time when these canals were originally constructed, to arrive at with precision, and the continued observations and experience of subsequent years have shown that while the intermediate river reaches, at all times, afford ample depth for vessels of 9 feet draught, in the canals themselves, at certain periods of low water, this depth cannot be maintained, the bottom not having been sunk to a sufficiently low level.

The following list shows the least depth of water on the sills of the locks of the St. Lawrence Canals at a time of exceptionally low water, in the year 1872 (*vide* report of Chief Engineer, 1880) :—

	Feet.	Inches.
Williamsburgh Canals—		
Rapide Plat, guard lock .....	6	7
“ “ lower entrance.....	7	0
Galops, guard lock.....	8	1
Iroquois, lower entrance.....	9	3
Farran's Point.....	7	9
Cornwall, guard.....	8	3
“ lower entrance.....	9	0
Beauharnois .....	10	10
“ lower entrance .....	9	3

In the year 1871 it was decided to enlarge the canals on the St. Lawrence route so as to afford a navigable depth of 12 feet throughout. Subsequently, however, it was decided that the depth should ultimately be increased so as to accommodate vessels of 14 feet draught; and accordingly in the scheme of enlargement which has so far been carried out, while, at present, a channel-way in the canals is provided for vessels drawing 12 feet only, all permanent structures, locks, bridges, &c., are being built of such proportions as to accommodate vessels of 14 feet draught, the locks being 270 feet long between the gates, 45 feet in width, and with a clear depth of 14 feet of water on the sills.

In view of the interest now being taken in the question of the completion of the scheme of enlarging the St. Lawrence Canals, the following brief resumé of matters treated more at length further on, under their proper headings, may be of some use as indicating the works of canal enlargement for a fourteen feet navigation so far executed, and those remaining untouched :—

*Lachine Canal.*—This canal is completed for a twelve feet navigation, with locks, bridges and culverts adapted for a fourteen feet navigation. The untouched work consists of the excavation of the canal prism to a further depth of two feet for about six out of the eight and a-half miles comprising the canal. About one half of this excavation would be rock.

*Beauharnois Canal.*—No enlargement works whatever have been commenced on this canal.

*Cornwall Canal.*—Here, two new locks have been built at the lower end, and are in use. One is under contract at the upper end, and three are untouched. Out of the eleven and a half miles comprising this canal about ten and a-half remain at the navigable depth of nine feet only.

*Williamsburg Canals* :—

*Farran's Point.*—No work has been done here. The canal is three-quarters of a mile long, with one lock, the navigable depth being nine feet.

*Rapide Plat.*—The construction of one new lock is nearly completed, leaving one yet to be dealt with. No portion of the prism of the canal, four miles long, has been excavated.

*Galops Canal.*—While the approach to the upper entrance has been improved, the canal itself, with three locks and a total length of seven and five eighth miles, remains untouched.

*Welland Canal.*—The whole of the works, including excavation throughout, will be in readiness for the fourteen feet navigation at the beginning of the season of 1887.

Besides the above, the channel way of the River St. Lawrence, itself, offers in parts obstacles to a fourteen feet navigation which it would be necessary to remove. Of this work, progress has been made with a certain portion, and that the most difficult and in the shallowest section of the river, namely at the Galops Rapids, through which a channel giving safe passage to vessels drawing fourteen feet has been nearly completed. In the distance between Cornwall and Beauharnois, covering Lake St. Francis, improvement of the channel would be required in a few places, and also between Beauharnois and Lachine, while excavation and clearance of the channel would be necessary over a distance of about four miles.

## LACHINE CANAL.

	Old Line.	New Line.
Length of canal.....	8½ statute miles.	8¼ statute miles.
Number of locks.....	5	5
Dimensions of locks.....	200 feet by 45 feet.	270 feet by 45 feet.
Total rise or lockage.....	45 feet.	45 feet.
Depth of water {	at two locks 16 "	18 "
on sills..... {	at three locks ... 9 "	14 "
Mean width of new canal....	150 "	

The new canal having been extended for some distance above the entrance of the old canal, the total rise has been increased from 44¾ to 45 feet.

This canal extends from the City of Montreal to the Village of Lachine, overcoming the St. Louis Rapids, the first of the series of rapids which bars the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle-Ile.

The canal now consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two entrances at each end.

The full scheme for the enlargement of this, in common with the other canals of the St. Lawrence, contemplated the affording a navigable depth of 14 feet throughout; the improvement immediately in view, however, was only intended to furnish a navigable depth of 12 feet in the canal proper, and accordingly, on the following reaches, namely, between Lachine and Côte St. Paul, Côte St. Paul and St. Gabriel, and between St. Gabriel and Wellington Basin, the channel has been adapted to navigation by vessels of 12 feet draught only. All permanent works on the canal, such as locks, bridges and side walls, have been built to afford a navigable depth of 14 feet.

The canal was closed on the 30th of November, 1885, and opened on the 3th May, 1886.

The only interruption to navigation occurred through a leak in the bank, part of the original canal near St. Gabriel lock, discovered on the 2nd of November, 1885. A delay of 34 hours was thereby caused to all vessels drawing over 5 feet of water. The water supply during the year has been ample, and the works have been maintained in a state of thorough efficiency.

A portion of the canal in Montreal has been lighted by electricity.

The report of the Superintending Engineer gives details of the repairs executed, and shows generally the condition of the canal. (App. 6, p. 96.)

## BEAUHARNOIS CANAL.

Length of canal .....	11 $\frac{1}{4}$ statute miles.
Number of locks.....	9
Dimensions of locks.....	200 feet by 45 feet.
Total rise or lockage.....	82 $\frac{1}{2}$ feet.
Depth of water on sills.....	9 “
Breadth of canal on bottom.....	80 “
Breadth of canal at water surface .....	120 “

This canal commences on the south side of the St. Lawrence, 15 $\frac{1}{4}$  miles from the head of the Lachine Canal. It connects Lakes St. Louis and St. Francis, and passes the three rapids known respectively as the Cascades, the Cedars, and the Coteau.

The canal was closed by ice on the 3rd of December, 1885, and was reopened for traffic on the 1st of May, 1886.

No accident or interruption<sup>y</sup> to navigation occurred during the year. (See App. 6, p. 98.)

Nothing has been done towards the enlargement of this canal.

## CORNWALL CANAL.

Length of canal.....	11 $\frac{1}{2}$ statute miles.
Number of locks .....	6
Dimensions of locks.....	200 feet by 55 feet.
Total rise or lockage.....	48 feet.
Depth of water on sills.....	9 “
Breadth of canal at bottom (except at two culverts).....	100 “
Breadth of canal at water surface.....	150 “

From the head of the Beauharnois to the foot of the Cornwall Canal, there is a navigable stretch through Lake St. Francis of 32 $\frac{3}{4}$  miles.

The Cornwall Canal extends past the Long Sault Rapids.

This canal was closed on the 10th December, 1885, and re-opened on the 1st of May, 1886. (See App. 8, p. 109.)

## NEW WORKS.

The two locks at the new lower entrance (taking the place of three on the old line), were in constant use during the season of navigation. The dimensions of the new locks are those of the general enlargement scheme, namely: Length, 270 feet; breadth, 45 feet; depth of water, 14 feet. The basin between these two locks is 825 feet long.

Of the four locks still to be dealt with, one is already under contract; also a supply weir, together with works for the improvement of the upper entrance. The works are in progress.

The proposed channel will be sunk to such depth as to admit of the passage of vessels of 14 feet draught.

By the construction of the Cornwall Canal the town of Cornwall was shut off from access to the River St. Lawrence for the discharge of its sewerage, and the Government, accordingly, constructed a sewer fronting the canal, and finally passing under it, by which this difficulty was, to some extent, covered. Last year an appropriation was voted by Parliament under which an extension of this drain has, during the past year, been built, meeting the needs of the town in this respect.

#### WILLIAMSBURGH CANALS.

The Farran's Point, Rapide Plat and Galops Canals are collectively known as the Williamsburgh Canals.

These canals were closed on the 6th December, 1885, and re-opened on the 29th of April, 1886.

From a statement furnished by the Superintendent and attached to his report (p. 112) it appears that the lowest point of water level reached during the season of navigation was in November, 1885, on the Rapide Plat Canal, where it stood at 9 feet on the lower sills of the lock at the foot of the canal, being also 9 feet on the upper sill of the lock at the head of the canal. It should be observed that the water level of the St. Lawrence was higher in this than in preceding years.

A statement showing the highest and lowest depth of water at the locks on these canals will be found in Appendix 9, p. 112.

Naviga'tion was carried on throughout the season without interruption. (App. 9, p. 111.

#### FARRAN'S POINT CANAL.

Length of canal.....	$\frac{3}{4}$ mile.
Number of locks.....	1
Dimensions of locks.....	200 feet by 45 feet
Total rise, or lockage.....	4 feet
Depth of water on sills at ordinary water level...	9 "
Breadth of canal at bottom.....	50 "
Breadth of canal on water surface.....	90 "

From the head of the Cornwall Canal to the foot of Farran's Point Canal the distance on the River St. Lawrence is 5 miles. The latter canal enables vessels  
~~1886~~ [1886]

ascending the river to avoid the Farran's Point Rapid. Descending vessels run the rapids with ease and safety.

No steps have been taken for the enlargement of this canal.

#### RAPIDE PLAT CANAL.

Length of canal .....	4 miles.
Number of locks .....	2
Dimensions of locks.....	200 feet by 45 feet.
Total rise, or lockage.....	11½ feet.
Depth of water on sills. ....	9 “
Breadth of canal at bottom.....	50 “
Breadth of canal at surface of water.....	90 “

From the head of Farran's Point Canal to the foot of Rapide Plat Canal there is a navigable stretch of 10½ miles. This canal was formed to enable vessels ascending the river to pass the rapid at that place. Descending vessels run the rapid safely.

#### NEW WORKS.

Steps have been taken towards the enlargement of this canal in conformity with the proportions of the general scheme. These works consist of the enlargement of the channel way above and for some distance below the present guard lock at the head of the canal, the construction of a new lock, and a supply weir in connection with the old lock. The bottom of the channel, for a distance of about 1,000 feet below, and out into deep water, above the lock, about 700 feet, will be excavated to an extent sufficient to afford a navigable depth of 14 feet. The works are progressing. The new lock is nearly completed.

#### GALOPS CANAL.

Length of canal.....	7½ miles.
Number of locks.....	3
Dimensions of locks.....	200 feet by 45 feet.
Total rise, or lockage.....	15¾ feet.
Depth of water on sills.....	9 “
Breadth of canal at bottom .....	50 “
Breadth of canal at surface of water.....	90 “

From the head of Rapide Plat Canal to Iroquois, at the foot of the Galops Canal, the St. Lawrence is navigable for 4½ miles. This canal enables vessels to overcome the rapids at Pointe aux Iroquois, Pointe Cardinal and the Galops.

## NEW WORKS.

The work under contract is the excavation and deepening of a channel way at the upper end leading to deep water, so as to give a depth available for vessels of 14 feet draught. The work is practically completed, and consequently access to this canal is found to be greatly facilitated. No steps have been taken towards lock enlargement on this Canal.

## GALOPS RAPIDS IMPROVEMENT.

The Galops Rapids, about seven miles below Prescott, the most shallow of the three passed by the Galops Canal, are being improved, for purposes of navigation, by certain works of submarine blasting and dredging.

These works, commenced in 1880, consist of the excavation of a straight channel through the rapids, 3,300 feet long, 200 feet wide, and of such depth as to afford safe passage at low water to vessels of 14 feet draught.

The whole of the drilling and blasting operations are now completed, and the removal of the accumulated debris on some of the shoals by the dredging machine comprises the work remaining to be done. (*See Appendix 15, page 136.*)

## WELLAND CANAL.

MAIN LINE, FROM PORT DALHOUSIE, LAKE ONTARIO, TO PORT COLBORNE,  
LAKE ERIE.

By the works of enlargement, passage is now afforded, at all stages of the Lake Erie level, to vessels drawing 12 feet of water.

No steps have been taken towards lock enlargement on this canal.

	OLD LINE.	ENLARGED OR NEW LINE.
Length of Canal.....	27 $\frac{1}{2}$ miles.	26 $\frac{3}{4}$ miles.
Pairs of guard gates (formerly 3).....	.....	2
Number of locks { lift.....	26	} lift 25 guard 1
{ guard.....	1	
Dimensions.....	{ 1 lock 270 x 45 1 " 200 x 45 1 (tidal) 230 x 45 24 150 x 26 $\frac{1}{2}$	} 270 feet x 45 feet.
Total rise or lockage.....	326 $\frac{3}{4}$ feet.	
Depth of water on sills.....	10 $\frac{1}{2}$ "	12 "

## WELLAND RIVER BRANCHES.

Length of Canal—Port Robinson Cut to River Welland.....	2,622 feet.
“ From the Canal at Welland to the river <i>via</i> lock at aqueduct.....	300 “
“ Chippewa Cut to River Niagara	1,020 “
Number of locks—One at aqueduct and one at Port Robinson.....	2 “
Dimensions of locks.....	150 by 26½ feet.
Total lockage from the Canal at Welland down to River Welland.....	10 feet.
Depth of water on sills .....	9 “ 10 inches.

## GRAND RIVER FEEDER.

Length of canal.....	21 miles.
Number of locks.....	2
Dimensions of locks.....	{ 1 of 150 by 26½ feet. 1 of 200 by 45 “
Total rise, or lockage.....	7 to 8 feet.
Depth of water on sills.....	9 feet.

## PORT MAITLAND BRANCH.

Length of canal.....	1¼ miles.
Number of locks.....	1
Dimensions of locks.....	185 by 45 feet.
Total rise, or lockage.....	7½ feet.
Depth of water on sills .....	11 “

The Welland Canal has one entrance from Lake Ontario, at Port Dalhousie, serving for both the old and new canals, and two from Lake Erie, of which one is for the main line at Port Colborne, and one for the feeder route at Port Maitland; it has also an entrance from the River Niagara, at the town of Chippewa. The enlarged route lies between Port Dalhousie and Port Colborne.

From Port Dalhousie to Allanburgh, 11¾ miles, there are now two distinct lines of canal in operation, the old line and the enlarged, or new line.

From Allanburgh to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

The canals were closed on the 9th December, 1885, and re-opened, the new canal on the 19th of April, and the old canal on the 3rd May, 1886.

## NEW CANAL.

The year has passed without any accident of moment.

Full details of the various repairs, renewals, &c., executed during the year, will be found in the report of the Superintendent. (App. 10, p. 114.)

It is to be observed that the tables showing the minimum depth of water at Port Colborne there given have reference to the old canal, and that for the new canal there must be added to these figures, in all cases, 3 feet.

## OLD CANAL AND FEEDER.

The necessary repairs and renewals of the year have been made, and the works have been maintained in good condition. (App. 10, p. 122.)

## DEEPENING OF THE WELLAND CANAL.

Although the immediate object of the works for the enlarged Welland Canal now completed and in use, was the accommodation of vessels drawing 12 feet of water, it became clear, after the commencement of the works, that a greater depth was desirable in the interests of trade, and the matter having been discussed in Parliament, and the necessary provision made, it was decided that the foundations of all permanent structures on which operations had not advanced too far to render alteration judicious should be built with a view to the ultimate adoption of a navigable depth of 14 feet throughout the canal. This course was adopted, and these locks and other permanent structures were so built. The rock excavation and the harbour works were also carried out to accord with the scheme. The work, therefore, remaining to be done at the beginning of the past fiscal year to afford the navigable depth of 14 feet throughout the new canal was the raising of the locks, weirs, and banks, and the works connected with them, from the second lock above Port Dalhousie up to the 24th lock at Thorold, also, the deepening of the summit level from Allanburgh upwards to Ramsey's Bend, a distance of about  $11\frac{1}{2}$  miles.

Provision having been made by appropriations granted by Parliament for the work, an Order in Council was passed on the 12th of April, 1886, awarding contracts for the several sections to be dealt with. Work has since progressed, and the canal will be open for a 14 feet navigation throughout next season (May, 1887.)

The works for the passage of the waters of the Canal over the Welland or Chippewa River are now completed and nothing remains to be done but to open connection between the canal and the aqueduct.

The work consists of a channel way built on arches through which the river waters pass. These arches were built without accident or interruption to the course of the river, one half of the stream being dealt with at a time.

The length of the aqueduct, including the wing at either end, is about 422 feet, and the breadth, over all,  $120\frac{1}{2}$  feet. The mean width of the channel way or prism

is 86 feet, the bottom being 5 feet below the low water line of the river and  $11\frac{1}{2}$  feet below the high water level. The height from the bottom of the prism to the top of the coping is 26 feet; the height of the whole work from the foundations is  $45\frac{3}{4}$  feet and the segmental arches through which the waters of the river are passed under the canal waters are six in number, each of 40 feet span.

The aqueduct will be available for the passage of vessels drawing 14 feet of water at the lowest stages of Lake Erie level early in the season of navigation opening about the beginning of May, 1887.

#### MONTREAL, OTTAWA AND KINGSTON.

This route extends from the Harbour of Montreal to the Port of Kingston, passing through the Lachine Canal, the navigation sections of the lower River Ottawa and the Ottawa Canals, to the City of Ottawa, thence by the River Rideau and the Rideau Canal to Kingston, on Lake Ontario—a total distance of  $245\frac{5}{8}$  miles.

After leaving the Lachine Canal, the works constructed to overcome the difficulties of navigation are:—

- The St. Anne's Lock;
- Carillon Canal;
- Grenville Canal;
- Rideau Canal;

The total lockage (not including that of the Lachine Canal), is 509 feet—(345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal Harbour:—

Sections of Navigation.	Intermediate distance.	Total distance from Montreal.
	Miles.	Miles.
The Lachine Canal.....	$8\frac{1}{2}$	
From Lachine to Ste. Anne's Lock.....	15	$23\frac{1}{2}$
Ste. Anne's Lock and Piers.....	$\frac{1}{8}$	$23\frac{5}{8}$
From Ste. Anne's Lock to Carillon Canal .....	27	$50\frac{5}{8}$
The Carillon Canal.....	$\frac{3}{4}$	$51\frac{3}{8}$
From Carillon Canal to Grenville Canal.....	$6\frac{1}{4}$	$57\frac{5}{8}$
The Grenville Canal.....	$\frac{3}{4}$	$63\frac{3}{8}$
From the Grenville Canal to entrance Rideau Navigation.	56	$119\frac{3}{8}$
Rideau Navigation, ending at Kingston.....	$126\frac{1}{4}$	$245\frac{5}{8}$

## STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Length of Canal.....	$\frac{1}{8}$ mile.	$\frac{1}{8}$ mile.
Number of locks.....	1	1
Dimensions of lock.....	190 by 45 feet.	200 by 45 feet.
Total rise, or lockage.....	3 feet.	3 feet.
Depth of water on sills.....	6 "	9 "

This work, with guide piers above and below, surmounts the Ste. Anne's Rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the Ottawa River which forms the Lake of Two Mountains,  $23\frac{1}{2}$  miles from Montreal Harbour.

This lock was closed to navigation on the 26th November, 1885, and re-opened on the 27th of May, 1886.

Navigation has been conducted satisfactorily and without interruption during the year.

Both the old and the new locks are available.

The work of straightening and deepening the channel above the new lock is well advanced towards completion. The length of the improved channel will be 4,700 feet, the breadth at bottom 100 feet, and the depth, at lowest water, 10 feet. (App. 7, pp. 107, 108.)

## THE CARILLON CANAL.

Length of canal.....	$\frac{3}{4}$ mile.
Number of locks.....	2
Dimensions of locks.....	200 by 45 feet.
Total rise, or lockage.....	16 feet.
Depth of water on sills.....	9 "
Breadth of canal at bottom.....	100 "
Breadth of canal at water surface.....	110 "

This canal overcomes the Carillon Rapids.

From Ste. Anne's Lock to the foot of the Carillon Canal there is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

The canal was closed on the 30th of November, 1885, and reopened on the 1st of May, 1886.

No interruption to traffic has taken place.

The important works necessitated by the accident to the Carillon dam, which occurred in 1883, were completed, in November, 1885. (App. 7, pp. 107, 108.)

By the construction of the Carillon dam, the water at that point has been raised 9 feet. Above this point, for a distance of nearly 7 miles, as far as the foot of Grenville Canal, the level of the river has been raised, and, consequently, the depth of water on the lower sill of the entrance lock of that canal has been increased and the necessity of using the Chute à Blondeau Canal, situated between these points, is obviated.

#### GRENVILLE CANAL.

Length of canal.....	5 $\frac{3}{4}$ miles.
Number of locks.....	5
Dimensions of locks.....	200 feet by 45 feet.
Total rise or lockage .....	43 $\frac{3}{4}$ "
Depth of water on sills .....	9 "
Breadth of canal at bottom.....	40 to 50 feet.
Breadth of canal at surface of water.....	50 to 80 feet.

From the head of the Carillon Canal to the foot of the Grenville Canal, there is a navigable stretch of 5 $\frac{1}{2}$  miles.

This canal, by which the Long Sault Rapids are avoided, is about 56 miles below the city of Ottawa.

The canal was closed on the 30th of November, 1885, and reopened on the 1st of May, 1886.

(See App. 7, pp. 107, 108.)

#### UPPER OTTAWA RIVER.

##### CULBUTE LOCKS AND DAMS.

Number of locks.....	2
Dimension of locks.....	200 by 45 feet.
Total rise, or lockage.....	18 to 20 "
Depth of water on sills .....	6 "
Aggregate length of dams.....	625 "

From the Grenville Canal to the city of Ottawa, a distance of about 56 miles, the river is navigable. Beyond the city, for a distance of 107 miles, to L'Islet or Culbute, continuous navigation is rendered impracticable by the undermentioned rapids:—

The Chaudière, the DuChene, the Chats, the Chenaux, the Portage du Fort and the Grand Calumet.

The Culbute works, situated at L'Islet, surmount the Culbute and L'Islet Rapids on the north channel of the Ottawa.

These works comprise two locks and three continuous dams, all built of wood. The dams reduce the rapids to smooth water, enabling the river to be navigated from the head of the locks to Des Joachims, a distance of 37 miles.

As reported last year a navigable route of 80 miles has been opened with a minimum depth of 7 feet at extreme low water, between Joachims and Bryson; making a total above and below Culbute of 117 miles. (App. 7, p. 108.)

### RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigable waters.....	126½ miles.
Number of locks going from Ottawa to Kingston.	{ 33 ascending.
	{ 14 descending.
Total lockage.....	446½ { 282½ rise and
	{ 164 fall. } at high water.
Dimensions of locks.....	134 by 33 feet
Depth of water on sills, 5 feet; navigable depth through the several reaches .....	4½ feet.
Breadth of canal reaches at bottom.....	{ 60 " in earth.
	{ 54 " in rock.
Breadth at surface of water.....	80 " in earth.

For table of distances of stations between Ottawa and Kingston, see Appendix 18, p. 141.

The summit level of this system is at Upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:—

From the summit, the route towards Ottawa follows the River Rideau, and that towards Kingston follows the River Cataragui. The whole duty of keeping up the water to its proper level is affected by the reserves, given in detail below.

They may be divided into three systems, viz.:—

1. The summit level, supplied by the Lake Wolf system. 2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau. 3. The south-west descending level to Kingston, supplied by the Mud Lake system, formerly known as the Devil Lake system, discharging into Lake Openacon.

Lake Openacon receives the waters of Buck Lake and Rock Lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Crauberry Lake, which, discharging through Round Tail outlet, forms the River Cataragui. This river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

The navigation stopped at Kingston Mills on the 28th November, 1885, and recommenced on the 7th May, 1886.

At Ottawa, navigation stopped the 30th of November, 1885, and recommenced on the 3rd May, 1886.

Navigation throughout the year was uninterrupted.

The level of the water in the several reaches was maintained up to the close of navigation, at the full height required.

In 1885 Parliament voted the sum of \$20,000 "for works necessary to increase the supply of water to the canal and the Gananoque River." In pursuance of the objects of this vote, arrangements were authorized by an Order in Council of the 16th of November, 1885, by which the Gananoque Water-power Company undertook the execution of works raising the water-level of that river, receiving from the Government the sum of \$8,000 towards the cost to be incurred. The greater portion of the work has been executed. (App. 11, p. 130.)

#### TAY CANAL.

This canal, when completed, will be a branch of the Rideau Canal, affording communication between Beveridge's Bay, on Lake Rideau, and the town of Perth, a distance of about 6 miles.

The works, embracing the construction of a dam and two locks, 134 feet by 32 feet, with a depth, at the lowest stage of water, of 5 feet 6 inches, also the deepening of the channel of the River Tay, where required, were carried on during the fiscal year, both locks being completed, and the excavation, from the lake to the River Tay, a distance of about  $1\frac{1}{2}$  miles, being well advanced. (App. 12, p. 132.)

#### RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu through the St. Ours Lock to the Basin of Chambly, thence by the Chambly Canal to St. Johns and the River Richelieu, to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain, the Champlain Canal is entered, and connection is obtained with the River Hudson, by which the city of

New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distance between Sorel and New York:—

Sections of Navigation.	Intermediate distance in miles.	Total distances.
Sorel to St. Ours Lock.....	14	14
St. Ours Lock to Chambly Canal .....	32	46
Chambly Canal.....	12	58
Chambly Canal to Boundary Line.....	23	81
Boundary Line to Champlain Canal.....	111	192
Champlain Canal to Junction with Erie Canal.....	66	258
Erie Canal from Junction to Albany.....	7	265
Albany to New York.....	146	411

#### ST. OURS LOCK AND DAM.

Length of canal.....	$\frac{1}{8}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise, or lockage.....	5 "
Depth of water on sills.....	7 " at low water.
Length of dam in eastern channel.....	300 "
" " western channel.....	690 "

At St. Ours, fourteen miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours Lock is in the eastern channel.

There is a navigable depth of 7 feet between St. Ours Lock and Chambly Basin, a distance of thirty-two miles.

Navigation closed on the 28th of November, 1885, and re-opened on the 15th of April, 1886.

An interruption of about seven hours occurred in the month of August, 1885, to admit of the adjustment of the lock gates (App. 6, p. 101.)

#### CHAMBLY CANAL.

Length of canal.....	12 miles.
Number of locks.....	9

## Dimensions of locks :—

Guard Lock, No. 1, at St. Johns.....	122 feet.	} From 22½ to 24 feet wide.
Lift " " 2.....	124 "	
" " " 3, 4, 5, 6.....	118 "	
" " " 7, 8, 9 combined.....	125 "	
Total rise, or lockage.....	74 "	
Depth of water on sills.....	7 "	
Breadth of canal at bottom.....	36 "	
" " surface of water .....	60 "	

Succeeding the 32 miles of navigable water between St. Ours Lock and Chambly Basin—a natural reservoir formed by the expansion of the River Richelieu—is the Chambly Canal, which overcomes the rapids between Chambly and St. Johns, a distance of 12 miles.

This canal was closed to navigation on the 30th November, 1885, and was re-opened on the 3rd of May, 1886.

In addition to the ordinary repairs, works of improvement to Locks Nos. 1 and 7 were executed, being charged against income.

No accident or interruption to navigation occurred during the year. (See App: 6, p. 99.)

## RIVER RICHELIEU.

The work of surveying the River Richelieu between St. Johns and Rouse's Point was continued during the year; a special report on the results will be found on page 102.

## ST. PETER'S CANAL, CAPE BRETON.

Length of canal.....	about 2,400 feet.
Breadth at water line.....	55 feet.
Lock .....	one tidal lock, 4 pairs of gates.
Dimensions.....	200 feet by 58 feet.
Depth of water on sills.....	18 " at lowest water.
Depth through canal.....	19 "
Extreme rise and fall of tide in St. Peter's Bay.....	4 "

This canal connects St. Peter's Bay, on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or Lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

Navigation was closed on the 1st of January, 1886, and re-opened on the 12th of April, 1866.

The works of the canal are in good order, with the exception of the old retaining wall at the sea entrance, destroyed by the sea-worm. The traffic returns show the passage of 807 vessels bound north, and 714 vessels bound south. (App. 14, p. 135.)

### TRENT RIVER NAVIGATION.

The term "Trent River Navigation" is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in their present condition, are efficient only for local use.

This series is composed of a chain of lakes and rivers extending from Trenton, at the mouth of the Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario, was projected.

The course in contemplation was as follows :—

Through the River Trent, Rice Lake, the River Otonabee and Lakes Clear, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 166 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe; thence by the River Severn to Georgian Bay, Lake Huron, the total distance being about 235 miles.

The execution of this scheme commenced in 1837, was subsequently deferred. By certain works, however, below specified, sections of these waters were made practicable for navigation and for the passage of timber. A branch of the main course, extending from Sturgeon Lake south, affords communication with the town of Lindsay, and through Lake Scugog to Port Perry, a distance of 190 miles from Trenton. Of this distance, 155 miles are navigable for vessels of light draught.

The following table gives the distances of navigable and unnavigable reaches :

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté, to Nine Mile Rapids...		9
“ Nine Mile Rapids to Percy Landing .....	19½	
“ Percy Landing to Heely's Fall Dam.....		14½
“ Heeley's Fall Dam to Peterboro'.....	51¾	
“ Peterboro' to Lakefield.....		9½
“ Lakefield to Burleigh.....	12	
“ Burleigh Rapids.....		1
“ Burleigh Rapids to Buckhorn Rapids.....	7	

	Navigable. Miles.	Unnavigable. Miles.
From Buckhorn Rapids.....		1
“ Buckhorn Dam to Lindsay.....	36½	
	126½	34¾
“ Lindsay to Port Perry at the head of Lake Seugog	28¾	
	155½	34¾
Total distance, Bay of Quinté to Port Perry.....		190
Passing to Fenelon Falls the distance from Buckhorn Dam to Fenelon is.....		31½

The following is a list of the works :—

	Distance from Trenton in miles.
<i>Chisholm's Rapids.</i>	
The work here consists of a canal and lock, a dam and slide	15½
<i>Percy Landing.</i>	
A retaining boom for saw logs.....	28½
<i>Campbellford.</i>	
Guide booms.....	34¾
<i>Middle Falls.</i>	
The work consists of 4 dams and 2 slides.....	37¾
<i>Crow Bay.</i>	
A retaining boom.....	28
<i>Heeley's Falls.</i>	
A dam and slide.....	42¾
<i>Crook's Rapids, Hastings.</i>	
The works consist of 1 lock, 1 dam and slide for timber....	34⅝
<i>Whitlas' Rapids.</i>	
The works, situated below Peterboro', consist of a lock, dam and canal.....	92⅞
<i>Little Lake.</i>	
The works consist 3 piers and 1 boom.....	94
<i>Burleigh.</i>	
Timber slides.....	101

*Buckhorn Rapids.*

There is a dam at this point, which is important as keeping up the level of the water of the lakes west of it, as far as Bobcaygeon, including Lakes Pigeon, Ball, Buckhorn and Chemong..... 125

*Bobcaygeon.*

There are two dams here with canal, lock and slide. These dams retain the waters of the reach as far as Fenelon Falls and Lindsay Lock ..... 140 $\frac{3}{4}$

*Fenelon Falls.*

A large slide and booms..... 155 $\frac{3}{4}$

*Lindsay.*

The old lock, having become useless, was rebuilt by the Government of the Province of Ontario in 1879. Its dimensions are 134 x 33 feet, with 5 feet of water on the sills..... 161 $\frac{1}{4}$

The navigation is, by this work, extended to Port Perry, Lake Scugog..... 190

The dimensions of Dominion locks are 133 feet 6 inches x 33 feet, with 5 feet depth of water on the sills.

The Lindsay lock was constructed by, and is under the control of, the Province of Ontario.

The number of lockages on the several canals show an increase, 2,193 vessels having passed during the season.

Various repairs and improvements were carried out as shown in the reports herewith.

Navigation ceased on the 26th November, 1885, and re-opened on the 1st of April, 1885. (App. 13, p. 133).

## NEW WORKS.

The new works for the improvement of the Trent Valley navigation, for the construction of which appropriations have been voted by Parliament, are at the following places:—Canals, with locks and bridges, at Burleigh Rapids, Buckhorn Rapids, and Fenelon Falls; also dams at Lakefield and Young's Point. Their completion will give communication between Lakefield, 9 $\frac{1}{2}$  miles from Peterboro', and Balsam Lake, the headwater of the system, opening up a total of about 150 miles of direct and lateral navigation.

At Lakefield,  $9\frac{1}{2}$  miles from Peterboro', the main part of the new dam, at the head of the Nine Mile Rapids of the River Otonabee, which maintains navigation on Lake Katchiwannoe up to Young's Point, was completed during the fiscal year, the subsidiary portions of the work are in progress.

At Young's Point, 5 miles from Lakefield, a new dam between Lake Katchiwannoe and Clear Lake, has been constructed, as reported last year. It controls the water level through Clear and Stony Lakes up to the foot of the Burleigh Canal.

At Burleigh Rapids, 10 miles from Young's Point, a canal is being constructed about  $2\frac{1}{4}$  miles in length, passing the Burleigh and Lovesick Rapids, and giving communication between Stony Lake and Deer Bay. The work, comprising the construction of three lift-locks and certain dams, is in progress. The lower lock and entrance have been completed.

At Buckhorn Rapids, 7 miles from Burleigh Rapids, a canal of about one-fourth of a mile long is being constructed, having one lift-lock. The work has been fully completed with the exception of the lock gates which are under contract.

At Fenelon Falls, 32 miles from Buckhorn Rapids, a canal about one-third of a mile in length, connecting Sturgeon Lake with Cameron Lake, is being constructed. This canal has two lift-locks. The whole was completed in October, 1885.

In all the above named works the locks will be of the following dimensions:—

Length .....	134 feet.
Breadth .....	33 "
Depth on sills.....	5 "

(App. 15, p. 136, 137.)

#### MURRAY CANAL.

This canal will extend through the Isthmus of Murray, giving connection westward between the headwaters of the Bay of Quinté and Lake Ontario.

The works on this canal, commenced under a contract given out in August, 1882, comprise a cut through the isthmus  $4\frac{1}{2}$  miles long, and improvements to the entrance channels at either end.

The canal will have a depth of 11 feet below the lowest known water level of the lake, and a width at the bottom of 80 feet. There are no locks.

Its western terminus is the harbor of Presqu'île, from which point to the entrance of the Welland Canal, the distance is about 120 miles.

The works have been carried on steadily and the waters of the Bay of Quinté and of the Harbour at Presqu'île are now united. The dredging of the channel at the western entrance is well advanced. (App. 15, p. 136.)

## ROYAL COMMISSION ON LACHINE CANAL LEASES.

It being desirable, in view of the changed conditions consequent on the enlargement of the Lachine Canal, that an understanding should be had of the position of the several hydraulic leases on the work, a Royal Commission was appointed by an Order in Council dated the 17th of July, 1886, for the purpose of investigating the matter and reporting as to the conclusions arrived at.

The Commissioners commenced their inquiries accordingly; their investigation, however, was not closed at the end of the year.

I have the honour to be,

Your Excellency's most obedient servant,

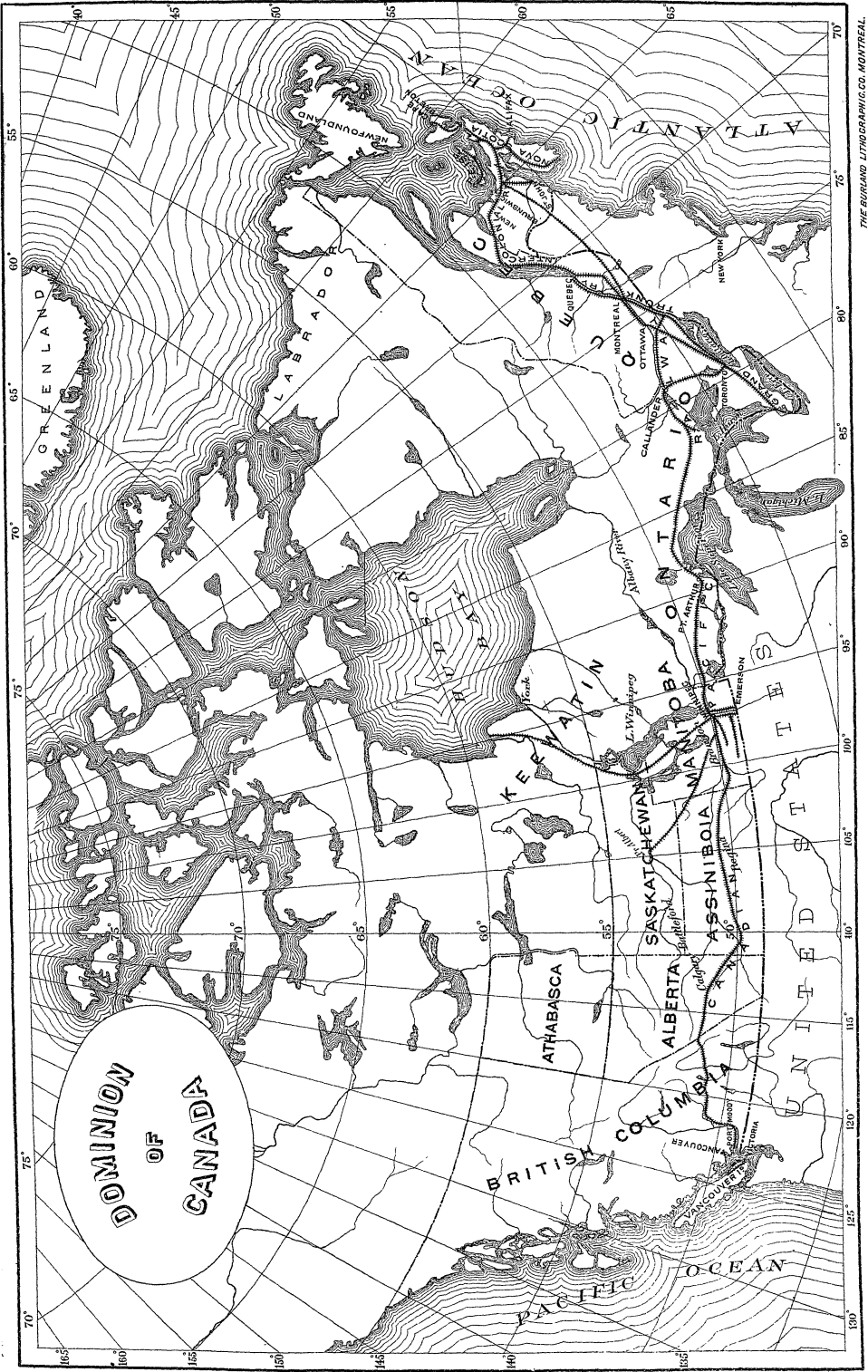
J. H. POPE,

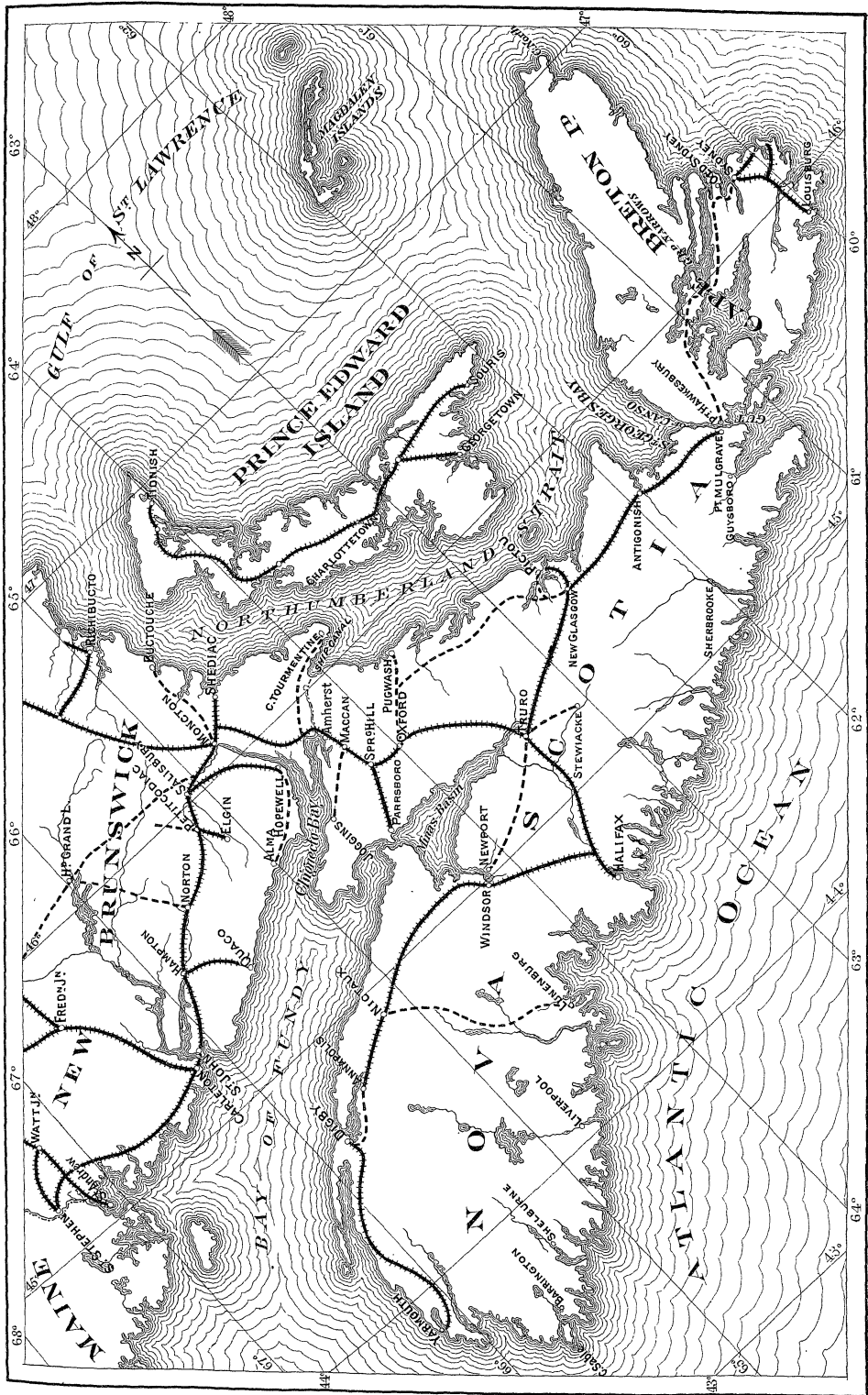
*Minister of Railways and Canals.*

31st December, 1886.

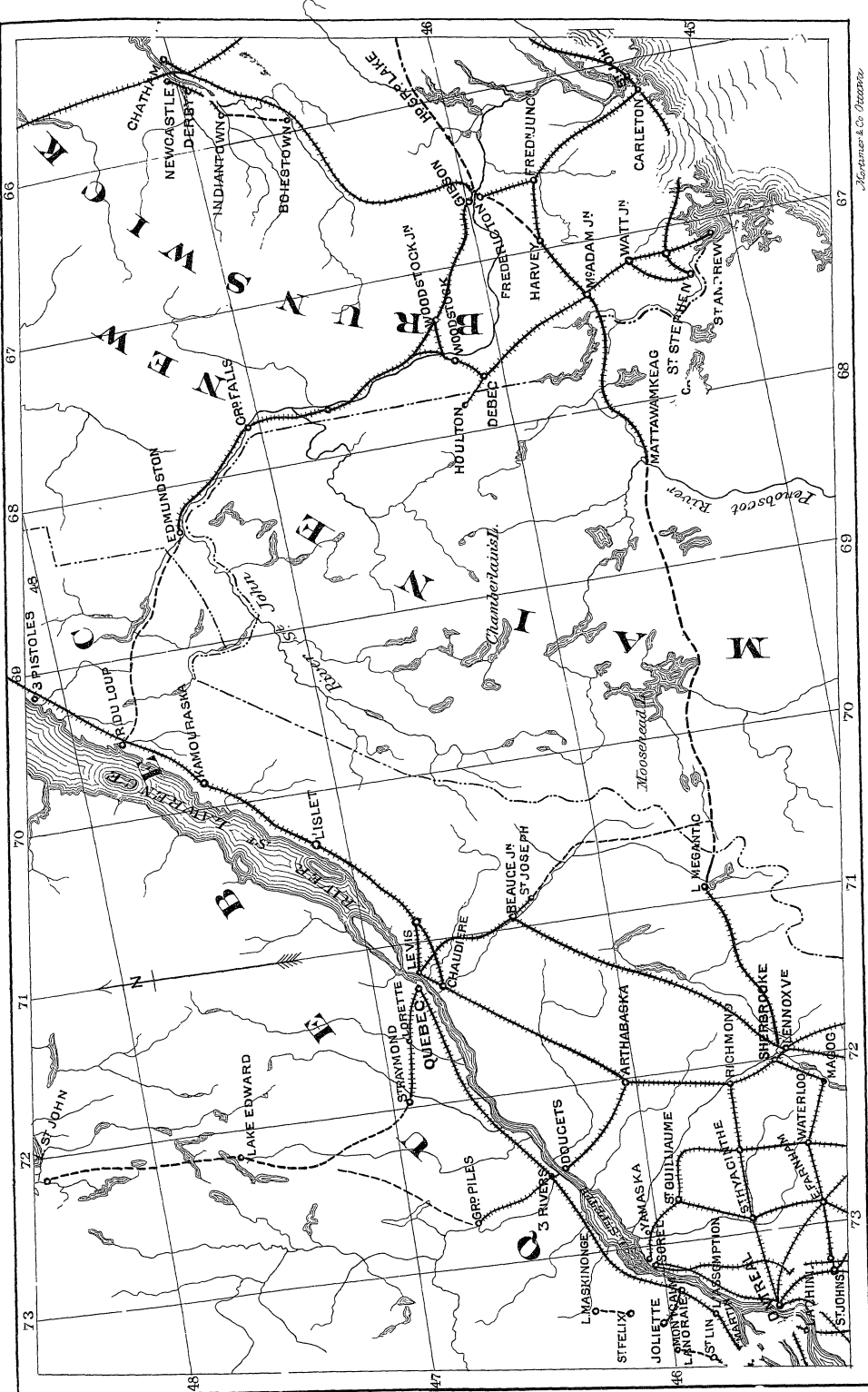
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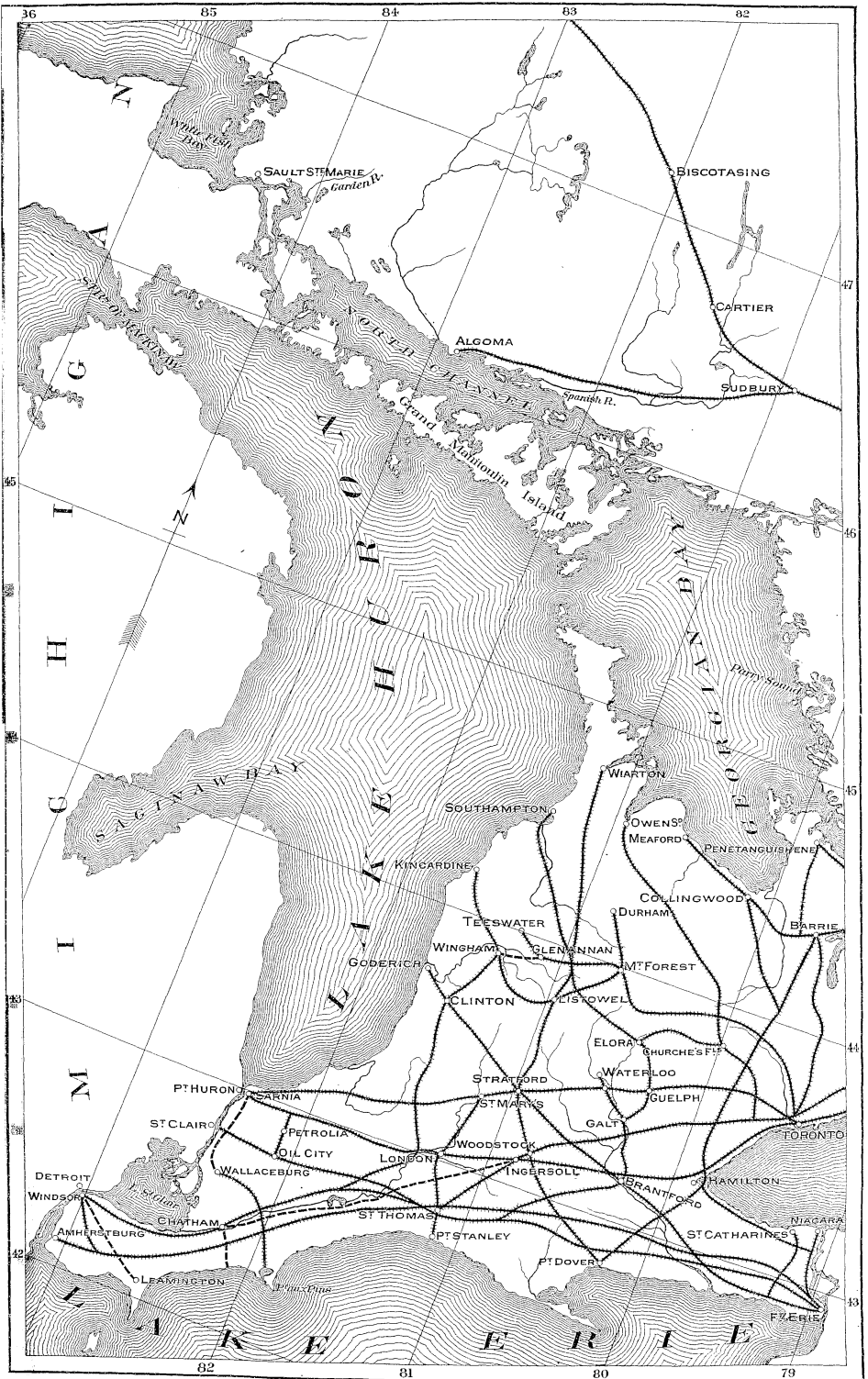


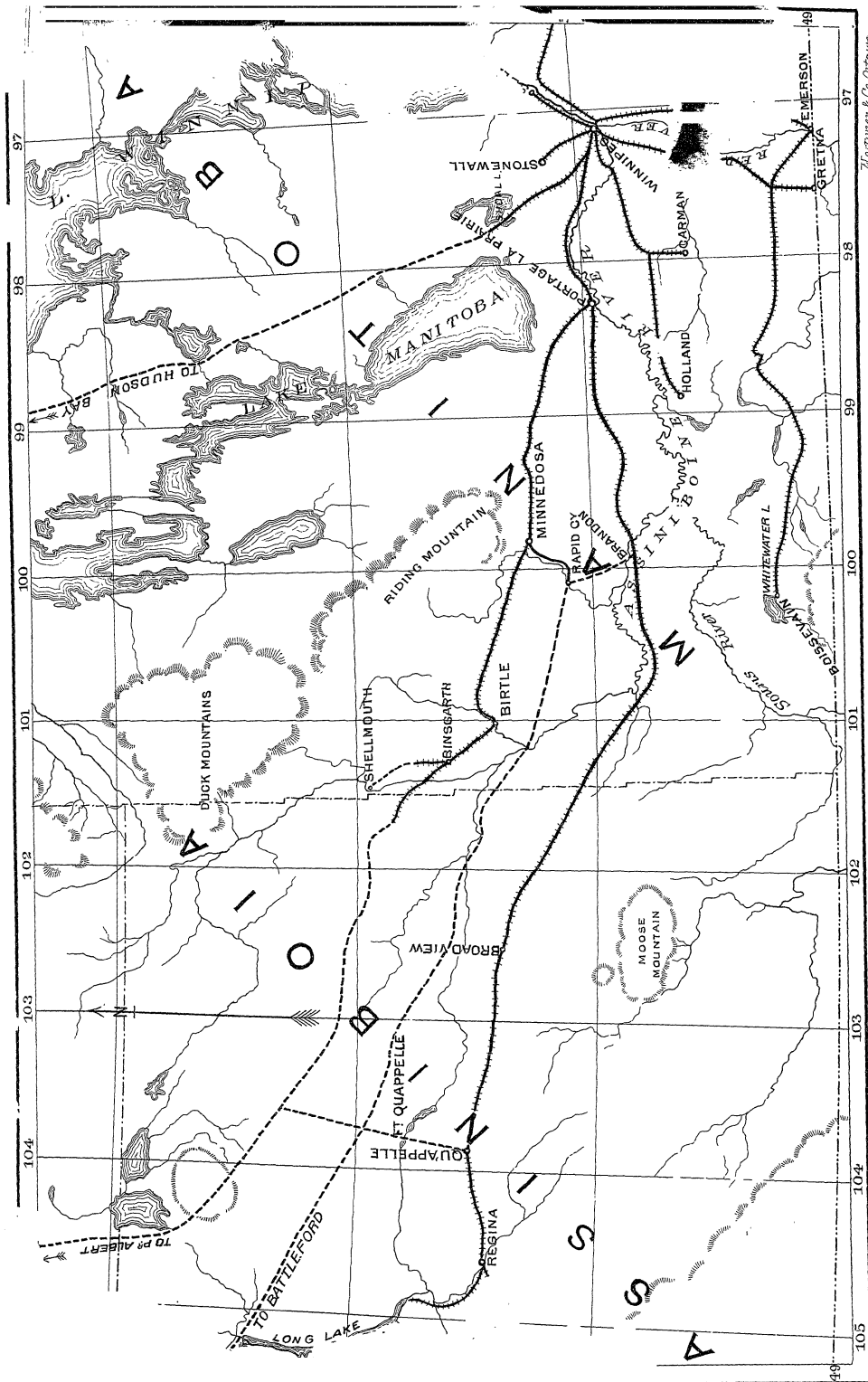












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APPENDICES.

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## APPENDIX No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals, Dominion of Canada, during the Fiscal Year ended 30th June, 1886.

Name of Work.	Construction.	Repairs.	Staff and Maintenance.
	\$ cts.	\$ cts.	\$ cts.
<b>CANALS.</b>			
Lachine.....	210,509 42	19,199 18	50,969 10
Beauharnois—Income .....	8,491 80	14,356 00	19,228 90
Cornwall .....	57,820 83	11,832 83	15,994 80
do drain—Income.....	6,960 95		
Williamsburg .....	149,835 71	7,847 05	7,671 54
St. Lawrence .....	116,051 73		
Welland .....	204,589 48	69,507 48	111,660 22
do deepening 14 feet.....	5,313 77		
do damages.....	5,574 50		
do ditches—Income .....	1,359 00		
Burlington Bay.....		100 00	
Ste. Anne's.....	129,681 67	5,803 01	2,611 90
Carillon .....	32,772 02		
Grenville .....	72,201 22	9,303 31	20,597 82
do Income.....	75 00		
Gulbute.....	26,385 27	2,396 14	730 00
Rideau—Income.....	550 00	35,648 04	27,045 95
Trent .....	75,103 30	5,917 88	1,639 75
Murray .....	179,704 52		
St Ours.....		4,143 47	2,311 70
Chambly—Income.....	14,547 27	11,999 77	19,501 28
St. Peter's.....	2,316 85	297 81	2,360 67
Surveys—Income .....	8,721 62		
Arbitration—Income .....	6,468 58		
Tay.....	65,561 51		
Dredge Vessels .....		776 30	
Fort Frances Canal.....	33 59		
St. Zotique Road—Income .....	4,970 32		
Collection Minor Revenues—Income .....	129 51		
<b>Total on Canals.....</b>	<b>1,385,729 44</b>	<b>199,128 27</b>	<b>282,323 63</b>
<b>RAILWAYS.</b>			
Pacific .....	818,060 81		89 02
do subsidy .....	2,890,427 00		
Surveys, general .....	7,398 59		
do Cape Breton and other railways .....	22,828 07		
do Short Line .....	10,535 96		
Statistics .....	2,985 00		
Intercolonial .....	546,134 17		2,489,243 61
do Eastern Extension .....	183 79		94,756 06
do Windsor Branch .....			19,229 49
Prince Edward Island .....	4,668 33		216,744 34
Subsidies, general .....	2,326,349 00		
Short Line Railway claims .....	124,678 42		
Carleton Branch .....	85,479 15		
<b>Total on Railways.....</b>	<b>6,839,728 29</b>		<b>2,820,062 52</b>
<b>Total on Railways and Canals.....</b>	<b>8,225,457 73</b>	<b>199,128 27</b>	<b>3,102,386 15</b>
Pacific Railway Loan Account.....	995,800 00		
<b>Total amount expended.....</b>	<b>\$12,522,772.15.</b>		

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, December, 1886.

J. BAINE,  
Accountant.

## APPENDIX

STATEMENT showing the amount expended on the construction and the  
(Repairs not

By whom Expenditure Incurred.	Year ending 30th June.	Lachine Canal.	Beauharnois Canal.
		\$ cts.	\$ cts.
Imperial Government.....	} Up to June 30, 1867 {	40,000 00	
Provincial Government.....		2,547,532 85	1,611,424 11
Dominion Government.....	1868	1,852 70	7,008 00
do .....	1869	2,000 00	55 00
do .....	1870		587 50
do .....	1871	12,231 40	187 00
do .....	1872	36,708 15	27 50
do .....	1873	42,982 49	5,280 90
do .....	1874	158,618 35	26 00
do .....	1875	197,420 52	36 00
do .....	1876	327,769 39	
do .....	1877	1,439,375 73	
do .....	1878	1,484,619 63	
do .....	1879	958,053 30	
do .....	1880	369,566 74	
do .....	1881	292,165 51	
do .....	1882	252,821 33	
do .....	1883	396,496 96	
do .....	1884	189,034 41	
do .....	1885	111,215 23	
do .....	1886	210,509 42	
Total .....		9,070,974 11	1,624,632 61

## No. 2.

enlargement of Canals of the Dominion of Canada, up to 30th June, 1886.  
(included.)

Cornwall Canal.	St. Lawrence Canals. — Not Apportioned	Williamsburg Canals.	St. Lawrence. — Chain Vessel and Improvement of Navigation.	Surveys, St. Lawrence and Canals.	Welland Canal.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
					222,220 00
1,933,152 69	116,821 31	1,320,655 54			7,416,019 83
2,786 00					12,097 84
10,692 04					43,486 36
17,780 05					24,173 72
7 50					47,869 10
10,000 21		1,077 00			59,702 76
1,011 75				35,326 44	130,158 47
				26,541 30	746,420 61
1,780 00				22,611 36	1,046,714 91
			28,500 00	21,715 47	1,570,178 19
49,211 37			28,064 67	19,312 64	2,199,962 61
145,015 45			1,623 76	3,946 70	2,138,392 99
143,092 05		4,580 00		4,685 77	1,552,697 41
109,454 95			623 52	8,591 04	1,252,924 75
53,948 14			6,927 96		1,242,943 37
44,587 61			28,933 45		603,402 17
21,728 93			44,874 31		550,240 36
23,018 13		2,473 44	89,846 03		432,952 88
62,034 90		103,237 12	115,110 17		463,505 38
57,820 83		149,835 71	116,051 73		215,477 75
2,687,122 60	116,821 31	1,581,858 81	460,555 60	142,730 72	21,971,541 46

## APPENDIX

STATEMENT showing the amount expended on the construction and the  
(Repairs not

By whom Expenditure Incurred.	Year ending 30th June.	Ste. Anne's Lock.	Carillon and Grenville Canals.	Culbute Lock.	Rideau Canal.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....	Up to June 30, 1867		(*)		3,911,701 47
Provincial Government.....		134,456 51	63,053 64		153,062 60
Dominion Government.....	1868		19,817 22		7,593 67
do .....	1869				
do .....	1870		4,167 96		
do .....	1871		23,119 37		11,732 88
do .....	1872	1,939 46	165,257 28		4,967 50
do .....	1873	540 11	136,250 48		18,070 97
do .....	1874	12,753 27	245,258 38	38,388 99	5,793 16
do .....	1875	32,627 71	339,864 76	63,659 29	9,310 85
do .....	1876	24,935 85	326,203 16	76,842 44	2,163 96
do .....	1877	30,003 08	245,738 04	56,081 87	214 11
do .....	1878	14,618 85	22,676 20	5,933 53	
do .....	1879	22,113 02	243,141 24	20,694 19	7,703 88
do .....	1880	3,054 68	281,514 27	16,668 20	355 05
do .....	1881	69,042 76	336,707 53	4,721 62	
do .....	1882	193,158 36	433,084 39	29,567 15	
do .....	1883	172,959 95	416,826 10	14,249 60	
do .....	1884	142,006 25	399,267 16	8,151 16	
do .....	1885	93,679 57	157,187 72	19,071 76	2,098 76
do .....	1886	129,681 67	104,973 24	26,385 27	
Total .....		1,077,571 10	3,964,108 14	380,435 07	4,134,768 86

\*Expenditure not given.

## No. 2—Concluded.

enlargement of the Canals of the Dominion of Canada, &c.—Concluded.  
included.)

Chambly Canal.	St. Peter's Canal.	Survey Baie Verte Canal.	Murray Canal.	Trent Canal.	Tay Canal.	Total.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
						4,173,921 47
643,711 76	88,949 39					16,028,840 23
	21,519 72					72,675 15
	70,719 80					126,953 20
	46,193 57					92,902 80
2,872 85						98,020 10
1,906 40						281,586 26
759 00		4,877 83				375,258 44
		4,018 90				1,237,818 96
2,415 00	20 97	443 00				1,716,904 37
	11,125 00	110 75				2,389,544 21
80 00	63,330 18	22 30				4,131,396 60
	26,511 51					3,843,338 62
	107,337 75					3,064,098 61
	80,120 54					2,122,893 74
	69,434 76	520 00				2,076,411 65
	484 00		7,135 63			1,593,174 09
			84,071 68	40,767 16	4,831 80	1,747,046 85
	2,471 40		118,187 43	120,643 91	50,878 12	1,578,930 32
	16,820 15		148,902 66	121,382 84	92,473 97	1,506,720 23
	2,316 85		179,704 52	75,103 30	65,561 51	1,333,421 80
651,745 01	607,355 59	9,992 78	538,001 92	357,897 21	213,745 40	49,591,857 70



APPENDIX No. 3.

STATEMENT showing Subsidies voted to the undermentioned Railways, and payments thereon, up to 30th June, 1886.

Subsidies Voted.		Amount.	Railways.	No. of Miles Completed.	Payments.			Total.
Authority.					1883-84.	1884-85.	1885-86.	
45 Vic., cap. 25	\$	156,800	International Railway, Quebec.....	.....	.....	.....	\$	144,000
45 do 14		381,000	Quebec and Lake St. John Railway, Quebec.....	.....	.....	.....		255,772
46 do 25		80,000	Napanees, Tamworth and Quebec Railway, Ontario.....	.....	.....	.....		88,600
46 do 59		96,000	Pontiac Pacific Junction Railway, Quebec.....	.....	.....	.....		90,090
46 do 25		89,600	Caranquet Railway, N.B.....	.....	.....	.....		76,800
46 do 10		70,000	Great Northern Railway, Quebec.....	.....	.....	.....		32,000
46 do 8		272,000	Kingston and Pembroke Railway, Ontario.....	.....	.....	.....		25,088
46 do 25		113,200	Northern and Pacific Junction Railway, Ontario.....	.....	.....	.....		48,000
47 do 8		76,800	Northern and Western Railway, N.B.....	.....	.....	.....		154,440
47 do 8		31,000	Quebec Central Railway, Quebec.....	.....	.....	.....		128,000
47 do 8		48,000	Montreal and Sorel do	.....	.....	.....		60,342
47 do 8		660,000	do Champlain Railway, Quebec.....	.....	.....	.....		64,972
45 do 14		128,000	do Elgin, Petittcodiac and Havelock Railway, N.B.....	.....	.....	.....		30,000
46 do 25		30,000	do St. Louis and Richibucto Railway, N.B.....	.....	.....	.....		38,400
46 do 25		22,400	Canada Atlantic Railway, Ont.....	.....	.....	.....		22,400
47 do 8		96,000	Esquimaux and Nanaimo Railway, B.O.....	.....	.....	.....		48,480
46 do 25		750,000		.....	.....	.....		422,520
47 do 6				.....	.....	.....		2,782,494
					208,000	403,245		2,171,249

JAMES BAINE,  
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
31st December, 1886.



## APPENDIX No. 4.

## CANADIAN PACIFIC RAILWAY.

OFFICE OF THE ENGINEER-IN-CHIEF,

OTTAWA, 12th October 1886.

SIR,—On the 31st of December last I reported the progress made with the construction of the Canadian Pacific Railway up to that date. During the remainder of the winter very little work was done, but upon the opening of the working season in the spring a large force was organized and the works of construction vigorously prosecuted.

## THE LAKE SUPERIOR AND WESTERN SECTIONS.

The building of these two sections was undertaken by the Government, and the Lake Superior Section, extending from Port Arthur to Red River, a distance of 428 miles, was completed previously to the date of my report above referred to, and handed over, for running purposes, to the Canadian Pacific Railway Company.

The Western Section, from Savona's Ferry (Kamloops) to Port Moody, 213 miles in length, has been completed and the contractor settled with, but owing to the ravages of the teredo worm, it has been found necessary to substitute iron for wooden piles on the face of the wharf at Port Moody; this work is now in progress, and it is expected to be finished in a few week's time.

The road bed and permanent way throughout this section are in excellent condition, and in fine running order.

It is found, however, that the excessive dryness of the climate and the heavy winds which prevail in the valleys of the Fraser and Thompson Rivers are cutting away the slopes of many of the gravel cuttings. In my opinion these slopes should be flattened and exposed stones and loose rocks removed. As the facilities for doing such work are much greater than formerly it can be accomplished at a very reduced cost. The contractor would gladly have executed this work, as the gravel cuttings were the best paying description of work embraced in his contract; it was, however, at the time, not thought necessary to have it done.

## THE EASTERN AND CENTRAL SECTIONS.

These sections, extending from Callander to Port Arthur and from Red River to Kamloops (Savona's Ferry) a total length of 1,904 miles, the Canadian Pacific Railway Company contracted to build, as well as to provide the required equipment for the entire line. At the date of my last report the track had been laid throughout, but much remained to be done in finishing up the cuttings, embankments, bridging, ballasting and erection of station buildings, to complete the work in accordance with the requirements of the contract. During last month (September) I made a tour of inspection over the entire line. The Eastern Section (Callander to Port Arthur) and the Central Section (Red River to Kamloops) are completed, fully up to and in some respects above the standard required by the contract, excepting the nine miles of line passing under Mount Stephen, which is yet untouched, but around which a very substantial and workable road has been built. The experience of the past two winters made it evident that provision would require to be made to guard against obstruction of the traffic by snow sliding down the mountain side, and a series of very strong substantial snow sheds are being erected. The walls of these snow sheds

[1886]

on the upper or the mountain side are made of solid crib work, faced square timber and backed with earth and boulders. A strong shed or lean-to roof is supported on the lower side by large posts, the whole being well braced; very massive and skilfully put together. The object sought is to slide the snow over the cuttings and it will, I think, be found that they will do good service.

With a view to the comforts of tourists and pleasure seekers who travel over the line and desire to spend a few days in the mountains to enjoy the magnificent scenery, the Company have erected two very neat looking hotels, the one near Mount Stephen, at Field Station, and the other, under the great glacier in the Selkirks, at Glacier Hotel Station.

They are very comfortable looking houses, and if they are to be operated by the Company as I understand is proposed they will no doubt become favorite resorts for tourists.

On the 28th June, 1886, the road was opened for traffic from Montreal, the head of Atlantic Ocean navigation, to Port Moody, on the Pacific Ocean, the first through train having left Montreal on the morning of that day.

The train was well patronized and made a most successful run throughout reaching the Pacific terminus on the schedule time.

Since that date there has been a regular daily train service between the two ocean termini, and I understand the traffic continues to improve in a manner most encouraging to the management; the Company's Returns for the eight months ending the 31st August showing a nett earning of \$2,131,869.18.

The gross earnings being.....	\$6,080,824 52
Working expenses.....	3,948,955 34
Nett earnings.....	<u>\$2,131,869 18</u>

These returns embraced the dullest traffic months of the year, as the crops do not begin to move until September and the importations of merchandise for the North-West only begin to move about this time, so that the results of the eight months of the present year may be accepted as progressive when compared with last year.

I have the honor to be, Sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

*Chief Engineer.*

A. P. BRADLEY, Esq.,  
Secretary, Department Railways and Canals.

## APPENDIX No. 4a.

CANADIAN PACIFIC RAILWAY,  
OFFICE OF THE ENGINEER IN CHIEF,  
OTTAWA, 20th October, 1886.

SIR,—Having been requested to report on the condition of the works of construction upon the Canadian Pacific Railway, in connection with the application of the Company for the payment of the balance of the subsidy, I have the honor to state that the railway was opened for public traffic in June last, and has since been in successful operation, that it has been built throughout on a location approved by the Governor in Council, except nine miles of the road passing Mount Stephen. At this point, a deviation from the approved location was made, and a heavy grade of three miles in length introduced upon the unapproved location. The railway is built and the traffic trains have been worked over this deviation from the date of the

opening of the railway up to the present time, and although it is, no doubt, more costly to operate than it would have been upon the approved location, it is nevertheless a workable line and is substantially built.

I have no hesitation in pronouncing the road superior, both in quality and character of construction and equipment, to that of the Union Pacific Railway, in 1873; but that it is, in some degree, inferior in respect of the three mile grade upon the nine miles of road passing Mount Stephen. I consider the sections of railway, as a whole, built by the Company have been constructed and equipped, both as to the quality and the character of the railway and of the materials used in the construction thereof, of an approximate standard of the Union Pacific Railway of the United States, as the same was when first constructed in 1873, but inasmuch as the railway is, as regards the nine miles of line passing Mount Stephen, not built upon the location approved by the Governor in Council, I do not feel warranted in issuing my final certificate, in the absence of an Order in Council, accepting the railway as built.

I have the honor to be, Sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

Chief Engineer.

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals.

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## APPENDIX No. 46.

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*CERTIFIED COPY of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Administrator of the Government in Council, on the 2nd November, 1886.*

On a memorandum, dated 23rd October, 1886, from the Minister of Railways and Canals, submitting an application from the Canadian Pacific Railway Company for the return to them, under the Act of last Session, 49 Vic., cap. 9, of the \$5,000,000 of the land grant bonds held under the construction contract as security for the operation of the road, on the grounds that the Canadian Pacific Railway has been constructed and duly placed in operation to its terminus in British Columbia, and that inasmuch as the operation of the railway has proved to be remunerative, the retention of those bonds is no longer necessary in the public interest.

The Minister states that the Canadian Pacific Railway has been constructed and equipped of a quality and character equivalent upon the whole to the approximate standard agreed upon between the Government and the Company, that is to say, the Union Pacific Railway of the United States, as accepted by the Government of that country, the railway being in many respects of superior quality and character to the said approximate standard, and only in some degree inferior in respect of the gradients of a portion of the line in the Province of British Columbia of nine miles in length passing Mount Stephen.

That while the remainder of the railway is of superior quality and efficiency, the said portion is not inferior to similar portions of railway in the leading railways of the United States, that it offers no difficulty in operation, and that it is sufficient for the traffic as at present existing, but that it would be advisable to make provision that if at any time hereafter it should be found expedient to improve the gradients of the portion in question, it should be in the power of the Government to cause such improvement to be made without further expense to the public.

The Minister further states that the Company represent that it is in their interest also that the railway should be fitted in all respects for its traffic and business, and that they are prepared to set apart and place in the hands of the Government \$1,000,000 of land grant bonds as a provision for the improvement in question and

as security for its completion when required by the Government, and that in the opinion of the Minister of Railways and Canals such provision and security would be sufficient to secure the attainment of the desired object.

That the revenue derived from the operation of the railway largely exceeds the running expenses, and that under such circumstances the retention of security that such operation will be continued is not necessary in the public interest.

The Minister, therefore, with the object of closing all matters now outstanding between the Government and the Canadian Pacific Railway Company under their contract of the 21st October, 1880, and its several modifications, and in consideration of the early completion of the railway admitting of the carriage of traffic thereover and of regular operation since the 28th of June, 1886, and also of the fact that the several loans made to them by the Government, under authority of Parliament have been repaid by the Company, and provided that the Company accept the conditions hereinafter imposed, recommends as follows:—

1. That the Government accept the said railway as equivalent in its quality and character in the materials used in its construction and its equipment, to the approximate standard agreed upon between the Government and the Company, namely, the Union Pacific Railway of the United States as the same was when accepted by the Government of that country.

2. That the Government convey to the Company the portions of the road which have been constructed by the Government, and to which, under their contract, the Company are entitled, the Company accepting the same subject to the adjustment and correction by the Government of the defects or deficiencies in construction (if any) according to the specifications and conditions of the contract therefor, except in so far as the same were modified by the Government prior to 21st October, 1880.

3. That in consideration of the completion of the construction and equipment of the railway under the construction contract, the Government pay over to the Company the balance of the subsidy remaining in its hands.

4. That the Government release and return to the Company the \$5,000,000 of land grant bonds held as security for the operation of the railway.

5. That in consideration of the premises the Company undertake that upon being so required by the Government they will make such alteration and improvement of the portion of their railway at and near Mount Stephen as shall be prescribed by the Government, not being in excess of the requirements of the Government Engineer as shown by the plans and specifications prepared by him in that respect, and that, as security for the performance of this condition, the Company do deposit with the Government \$1,000,000 of land grant bonds to be held so long as such condition shall remain unperformed and to be used in such performance if the Company makes default therein.

6. That a proper agreement be prepared and executed in the premises.

The Committee submit the above recommendation for Your Excellency's approval.

JOHN J. McGEE,  
*Clerk, Privy Council.*

To the Honorable  
The Minister of Railways and Canals,  
&c., &c., &c.

—

THIS AGREEMENT, made between Her Majesty the Queen, as representing the Dominion of Canada, hereinafter called the Government, herein represented and acting by the Honorable John Henry Pope, Minister of Railways and Canals of Canada, under the authority of an Order in Council duly made and passed by His Excellency the Governor in Council on the second day of November, 1886, and the Canadian Pacific Railway Company, a body corporate and politic, duly incorporated by Letters Patent of the Dominion of Canada, hereinafter called the Company, herein represented and acting by the Chief Executive Officers thereof, Witnesses :

Whereas under the construction contract, made and executed by and between the Government and Sir George Stephen, Bart., then George Stephen, Esquire, and others, on the 21st day of October, 1880, and assumed by the Company, the Canadian Pacific Railway has been constructed and equipped, of a quality and character, equivalent upon the whole to the approximate standard agreed upon between the Government and the Company, that is to say, the Union Pacific Railway of the United States, as accepted by the Government of that country, the said railway being in many respects of superior quality and character to the said approximate standard and only in some degree inferior in respect of the gradients of a portion of the line in the Province of British Columbia, nine miles in length passing Mount Stephen ;

And whereas it has been agreed between the parties hereto that if at any time hereafter it should be found expedient to improve the gradients of the said portion of the said railway, the Company will make such improvements thereto as is hereinafter provided for, and will give security for its undertaking so to do ;

And whereas the Company has applied under the provisions of the Act passed in the last Session of the Parliament of Canada respecting the Canadian Pacific Railway, for the return to it of the sum of five million dollars in land grant bonds now held by the Government as security for the operation of the said railway ;

And it has been established to the satisfaction of the Government that the revenue derived from the operation of the said railway largely exceeds the running expenses, and therefore the retention of security that such operation will be continued is not necessary in the public interest ;

And whereas it is expedient to close all matters between the Government and the Company arising out of the said contract of the twenty-first day of October, 1880, and its several modifications ;

Now, therefore, this agreement witnesses, that upon the conditions hereinafter stated, the parties hereto have covenanted and agreed to and with each other as follows, namely :—

1st. That the Government shall accept, and hereby does accept, the said railway as equivalent in its quality and character, in the materials used in its construction, and its equipments, to the approximate standard agreed upon between the Government and the Company, namely, the Union Pacific Railway of the United States, as the same was when accepted by the Government of that country ; and it is hereby declared and agreed that the said railway has been and is completed and equipped according to the terms of the said construction contract.

2nd. That according to the provisions of the said contract, the Government do hereby transfer and convey to the Company the portions of the road which have been constructed by the Government, and to which, under the said contract, the Company is entitled, as the same were or are held by the Government, and free and clear of all liens or charges thereon existing or due by the Government, at the time when the possession and right to run and work through such portions were respectively transferred to the Company by the Government ; and the Company hereby accepts thereof, but in respect of the Western Section of said railway, subject to the adjustment and correction by the Government of any deficiencies in the construction thereof, if any, according to the specifications and conditions of the contracts therefor, except in so far as the same were modified by the Government prior to twenty-first October, 1880.

3rd. That in further consideration of the completion of the said railway and of the equipment thereof, according to the said contract, the Government shall forthwith pay to the Company the balance remaining due of the subsidy of twenty-five million dollars granted to the Company under the provisions of the said contract.

4th. That the Government will forthwith release and return to the Company the sum of five million dollars of the land grant bonds of the Company, now held by the Government, under the 17th section of the contract, as security for the due performance of the said contract in respect of the maintenance and continuous working of the railway by the Company for ten years after its completion thereof.

5th That in consideration of the premises, the Company covenants and agrees to and with the Government that upon being so required by the Government it will make such alteration and improvement of the portion of its railway at and near Mount Stephen, as shall be prescribed by the Government, not being in excess of the requirements of the Government Engineer, as shown by the plans and specifications prepared by the Company in that respect, copies whereof have been submitted by the Company and approved by the Governor in Council,

And as security for the performance of this condition, the Company has deposited with the Government \$1,000,000 of the said land grant bonds, to be held as such security until such condition shall be performed; and to be used in such performance if the Company makes default therein.

In witness whereof the parties hereto represented as aforesaid have executed these presents, at the times and places respectively set opposite the signatures of their respective representatives.

Signed, sealed and delivered on }  
behalf of Her Majesty, at }  
Ottawa, the twentieth day of }  
November, 1886. }

(Signed) J. H. POPE,  
*Minister, Railways and Canals.*  
(Signed) A. P. BRADLEY,  
*Secretary.*

SEAL.

Signed, sealed and delivered by the }  
Canadian Pacific Railway Com- }  
pany, at Montreal, the fifteenth }  
day of November, 1886. }

(Signed) W. C. VANHORNE,  
*Vice President.*  
(Signed) C. DRINKWATER,  
*Secretary.*

SEAL.

## APPENDIX No. 5.

## CANADIAN GOVERNMENT RAILWAYS.

OFFICE OF THE CHIEF ENGINEER AND  
GENERAL MANAGER OF GOVERNMENT RAILWAYS,

OTTAWA, 25th October, 1886.

*Mileage Table of the Canadian Government Railway System.*

	Miles.
Intercolonial Railway.....	866
Eastern Extension Railway.....	80
Windsor Branch Railway.....	32
Prince Edward Island Railway.....	212
	1,190

SIR,—In accordance with the usual practice, I have the honor to submit herewith the reports and accounts of the working of the railways under my charge, for the year terminated on the 30th June, 1886.

The Dartmouth Branch, five miles in length, was opened for traffic on the 6th January last, making an aggregate length of road in operation before the close of the year of 1,190 miles, or an average for the whole year of 1,187½ miles.

The result of the year's business of these railways, may be stated, as follows, viz:—

Name of Railway.	Mileage.	—	Amount.	Profit.	Loss.
			\$ cts.	\$ cts.	\$ cts.
Intercolonial.....	866	Earnings.....	2,383,200 77		
		Working expenses....	2,489,243 61		106,042 84
Eastern Extension.....	80	Earnings.....	66,893 11		
		Working expenses....	94,756 06		27,862 95
Windsor Branch.....	32	Earnings.....	23,658 11		
		Working expenses....	19,229 49	4,428 62	
Prince Edward Island.....	212	Earnings.....	155,584 36		
		Working expenses....	216,744 34		61,159 98
				4,428 62	195,065 77
					4,428 62
<b>Total.....</b>					190,637 15

## INTERCOLONIAL RAILWAY.

A large expenditure, such as is usually charged by railway companies to capital account, but which has been charged to working expenses, has again been made this year for additions and improvements to the road and its equipment, embracing additional sidings, station buildings, semaphores and fences, and such improvements as the introduction of iron bridges, heavy rails, increased number of ties, more powerful locomotives and a modernized style of cars; this expense, together with the fact of an increased volume of through coal traffic, &c., to the west, carried at such rates as to increase the expense without a corresponding increase in the earnings, has resulted in an insufficiency of earnings to cover the amount of the working expenses by \$106,042.84.

The expenditure in additions and improvements to the property, which are enumerated above, and, as I have stated, is usually charged by railway companies to capital account, but which is charged to working expenses, amounts to \$115,000. It will, therefore, at once be seen that property exists, which has been created at the cost of operating the road, of a value more than sufficient to represent the year's loss on operating account.

The following statement shows the gross earnings, the weight of freight and the number of passengers carried in each year since the 1st of July, 1876, when the road was opened as a through trunk line:—

Years.	Miles in Operation.	Earnings.	Tons of Freight carried.	Number of Passengers carried.
		\$ cts.		
1876-1877.....	714	1,154,445 35	421,327	613,428
1877-1878.....	714	1,378,946 78	522,710	618,957
1878-1879.....	714	1,292,099 69	510,861	640,101
1879-1880.....	825	1,506,298 48	561,924	581,483
1880-1881.....	840	1,760,393 92	725,577	631,245
1881-1882.....	840	2,079,262 66	838,956	779,994
1882-1883.....	840	2,370,921 10	970,961	878,600
1883-1884.....	847	2,353,647 26	1,001,163	920,870
1884-1885.....	861	2,368,153 65	970,069	914,785
1885-1886.....	866	2,383,200 77	1,008,545	889,864

It thus appears that in this decade, the gross earnings have doubled, the tonnage of freight handled has increase one and a-half times and the number of passengers carried is one-third more.

From the foregoing table it will be seen that the gross earnings for the year ended the 30th June, 1886, exceeded those of the previous year by \$15,047.12; nevertheless, the gross earnings from the freight traffic were less for the year ended the 30th June, 1886, than for the previous year, by \$15,278.26, whereas the gross tonnage of freight carried for the year ended the 30th June, 1886, exceeded that carried the year previous by 38,476 tons, and the tonnage of coal carried to the western provinces during the year ended the 30th June, 1886, exceeded that of the year previous by 52,893 tons. This latter service, as I have already stated, increased the working expenses without a corresponding increase in the earnings. I may here mention that with a view of encouraging the industries and promoting the trade of the country, the Minister has, from time to time, reduced the freight rates to such an extent, that they will not, I feel satisfied, bear any further reduction without entailing a heavy loss in operating the road. The average rate per ton per mile received during the last fiscal year is. I am convinced, little if any more than half the rate received ten years ago, and I might say even five years ago.

A considerable increase in the passenger traffic had been looked forward to, but it will be observed that the number of passengers carried during the year ended the 30th June, 1886, is less than for the year previous. This is no doubt attributable to the prevalence of the smallpox in the Province of Quebec during last season, and the restrictions put on travel by the health officers with a view of eradicating the disease. Not only was the local passenger traffic seriously affected but the through passenger travel was largely reduced and the usual summer tourist travel was almost entirely lost.

The following table shows the quantity and class of rolling stock purchased on capital account up to the 30th June, 1885, with the additions made during the last fiscal year :—

## STATEMENT OF ROLLING STOCK.

	Engines.	Passenger Car Stock.					Conductors' Vans.	Box Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.
		1st Class Sleepers and Parlors.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage, Mail, &c.							
Total to 30th June, 1885.....	163	Nil.	70	Nil.	75	47	51	1529	1442	1828	30	10	20
Additional, 1885-86.....	1	11	*1	6	*1	1	28	.....	.....	.....	1	.....	.....
Total to 30th June, 1886...	164	11	69	6	76	46	79	1529	1442	1828	31	10	20

\* The first class car was converted into a second class car.

† One baggage car has been converted into a conductors' van.

The following rolling stock has been rebuilt during the year ended the 30th June, 1886, to maintain the stock, and charged to working expenses :—

	Engines.	Passenger Car Stock.					Conductors' Vans.	Box Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.
		1st Class Sleepers and Parlors.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage, Mail, &c.							
1885-86 .....	2	.....	.....	.....	2	.....	6	30	21	100	2	.....	.....

The contract with the Pullman Sleeping Car Company having expired, and it having been determined to take control of the sleeping car service, the Government under the terms of the contract purchased from the Pullman Company the ten sleeping cars running upon the road, at a valuation, and on the 1st August, 1885, commenced to operate them; since this time they have been remodelled according to the most modern design, and the service has, I believe, been conducted fairly satisfactorily to the travelling public.

A day parlor car service has been introduced upon the section of road between St. John and Halifax, which, it is believed, will eventually be appreciated by the travelling community, although up to the close of the year it had not been so well patronized as had been anticipated would have been the case.

The comfort of the travellers by second class has not been overlooked; with a view of rendering the long journey between the Maritime Provinces and the Western Provinces less tedious and fatiguing, the Minister has introduced second class sleeping cars upon the road. These have been well patronized, and are, I understand, much appreciated, no extra charge being made in these cars for the sleeping accommodation.

The European mails have been landed in winter at Halifax and in summer at Rimouski as in previous years, and have received good despatch. Passengers land from the mails steamers at Halifax for the west and at Rimouski for Halifax and the west, but as the number of sleeping cars upon the road is insufficient to enable a sleeper to be attached to these trains, the passengers suffer great inconvenience and fatigue by reason of having to sit up through the night in a first class car. This is, it must be admitted, a most unsatisfactory arrangement and the Chief Superintendent asks that provision may be made for the building of several sleeping cars for this service. I quite understand the necessity for the sleeping car service being extended to these trains, and I propose to ask that a sum may be put in the Estimates for this purpose.

Before leaving the subject of rolling stock I desire to draw the attention of the Minister to the fact that in my last annual report I stated, "the managers of the mines are pressing for an additional supply of cars, and although I scarcely think that any inconvenience has so far been experienced from want of means of conveyance, there is no doubt that if the output of the mines continues to increase, additional coal car stock must be provided at an early date," I now feel that the time has arrived when at least 300 additional iron Gondola coal cars should be provided or the collieries may suffer inconvenience and possibly loss from delay in having their coal moved forward.

The introduction of the 67-lbs steel rails has continued as rapidly as the 56-lbs steel rails have been removed from the track; 68 miles having been laid within the year.

The road and rolling stock are in good serviceable condition and every possible care is taken to ensure their being maintained in a high state of efficiency.

#### *Capital Account.*

The expenditure on works under this heading during the year may be stated as follows, viz:—

Construction of branch lines.....	\$260,974 21
Increased accommodation at St. John and Halifax....	50,844 81
Old claims in connection with original construction...	10,289 52
Rolling stock.....	224,025 63
	<u>\$546,134 17</u>

The total cost of road and rolling stock up to the 30th June, 1886, is the following:—

Road.....	\$38,033,684 24
Rolling stock .....	6,139,058 92
	<u>\$44,172,743 16</u>

The Pictou Town Branch, 14 miles in length, towards the cost of the construction of which Parliament has made an appropriation of \$310,000, was put under contract early in the summer, since which time the works of construction have been carried on without any great degree of vigor and at the close of the fiscal year very little progress had been made with the work.

## EASTERN EXTENSION RAILWAY.

This road though not forming part of the Interecolonial Railway is worked by the officers of that road, but the accounts are kept entirely distinct from them; its length is, as last reported, 80 miles.

*Capital Account.*

Cost of the road.....	\$1,088,311 97
Rolling stock.....	196,183 79
Total.....	<u>1,284,495 76</u>

Being an increase over the previous year by the expenditure during the year ended the 30th June, 1886, on account of rolling stock, of \$183.79.

*Operating Account.*

The wooden ties, bridges and fencing having been in the road over six years are decaying rapidly and their life is drawing to a close; so much so, that it has been necessary, in order to maintain the road efficiently, to make heavy renewals of ties and fences and large repairs to the bridges. As regards these bridges, the renewals in the next few years must be heavy and costly. It is the cost of these heavy renewals of ties, fencing, &c., that has caused the expenditure on revenue account to be so large, viz:—

The working expenses for the year ended 30th June 1886...	\$94,756 06
As against the previous year .....	78,273 65
Showing an increase of.....	<u>\$16,482 41</u>

The earnings of the road were also very unfavorable for the nett results. This road in former years had a large fish traffic from the Straits of Canso, but owing to the fact that this year American fishermen could not land their catch in Canada, this source of revenue was entirely cut off, resulting, as might be expected, in a decrease in earnings. The earnings of the last two years compare as follows:—

1885-86 .....	\$66,893 11
1884-85 .....	73,050 01
Decrease in 1885-86 .....	<u>\$ 6,156 90</u>

It is from the causes I have stated that the loss of \$27,862.95 occurred in the year ending the 30th June, 1886.

It might not be considered out of place to here mention that the Minister has during the year made arrangements which greatly facilitate the interchange of traffic between the Intercolonial and the Eastern Extension Railways and the movement of freight upon the latter line, and, with a view of promoting trade throughout this section of country, he has made considerable reductions in the freight rates, more especially on through business from the Intercolonial Railway. It is to be hoped that merchants and others, who have asked for these additional facilities and reduced rates, will so far feel the benefit of the change, as to enable them so to increase their business, as to throw a heavier volume of traffic over the road.

The Haggas water system is still in use upon this road, but it is not found to work satisfactorily, and it will be necessary, ere long, to introduce the elevated system. The engines feed themselves so slowly with the Haggas system that much time is lost upon the journey on this account.

Orders were given early in the spring to have the Port Hasting's wharf repaired, but at the close of the year the work had not been commenced.

The maintenance of the road and rolling stock has received careful attention, and both are in a good state of efficiency, considering that the life of the structures is fast drawing to a close.

#### WINDSOR BRANCH RAILWAY.

The Windsor and Annapolis Railway Company have continued to operate this road under the same arrangement as last year, the Government undertaking the service of maintenance, in consideration of which service the Company pay to the Government one-third of the gross earnings. The earnings so paid over, amounted for the year ended the 30th June, 1886, to the sum of \$23,658.11, being \$793.24 less than the one-third gross earnings of the year previous. The expenses of maintenance (exclusive of any charge for superintendence of the works, of maintenance, which service is performed by the chief officers of the trunk line, and whose salaries are borne by that road) amount to \$19,229.49 as compared with an expenditure of \$18,751.86 the previous year, a difference in favor of the year 1884-85 of \$477.63. It will be observed that the one-third earnings have been sufficient to cover the expenses, which is so far satisfactory.

The maintenance of the road has received the closest attention and is in a high state of efficiency.

#### PRINCE EDWARD ISLAND RAILWAY.

The small-pox epidemic which prevailed in the Island during last season and the restriction to travel enforced by the health officers had a most depressing effect upon the revenues of the road, which, instead of being an increase on the previous year, as was anticipated, resulted in a decrease of \$3,003.70. The working expenses, however, exceeded those of the previous year by \$5,537.33; this was brought about by a number of the old 8-ton capacity freight cars, being replaced by new and improved heavy cars of a capacity of 10-tons, the cost of which greatly exceeded the value of new cars of the original design and capacity.

The following statement shows the nett results of each years operation during the last four years:—

	1882-1883.	1883-1884.	1884-1885.	1885-1886.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Working expenses.....	252,808 41	236,428 13	211,207 01	216,744 34
Earnings.....	146,170 42	144,504 12	158,588 06	155,584 36
	106,637 99	91,924 01	52,618 95	61,159 9

The winter service between the mainland and Charlottetown, *via* Cape Traverse, was conducted by ice boats worked under the supervision of the Marine Department and connecting with the Prince Edward Island Railway at Cape Traverse, to and from which point the mails were carried by special train. I understand that both the ice boats and special train services gave general satisfaction, the mails having arrived and departed with great regularity and having received good despatch.

The road and rolling stock have been well maintained and are in a high state of efficiency.

The rolling stock provided on capital account consists of :—

Engines.....	21
First class cars.....	17
Second class and baggage cars.....	15
Postal and smoking cars.....	3
Box and cattle cars.....	175
Platform cars.....	125
Conductors' vans.....	3
Paymaster's car.....	1
Snow ploughs.....	8
Flangers.....	7
	<u>8</u>

No additional rolling stock having been provided during the past year, the return is the same as appeared in my last annual report, but the following were rebuilt during the year :—

Box cars.....	40
Platform cars.....	10
	<u>8</u>

*Capital Account.*

The cost of the road up to the 30th June, 1886, was...	\$3,277,251 89
The cost of rolling stock.....	458,729 00
	<u>8</u>
	<u>\$3,735,980 89</u>

There having been paid out during the year ended the 30th June, 1886, on account of the construction of the Cape Traverse Branch the sum of \$4,668.33.

GENERAL REMARKS.

The officers of the Government Railways have endeavored as far as practicable in connection with the surrounding circumstances, to work out favorable results in the operation of the several roads, but from the various causes stated it has not been possible to make ends meet.

Attached hereto will be found a full detail report of the Chief Superintendent, Superintendent, Chief Engineer, and Mechanical Superintendent, with the accounts submitted therewith, from which much useful information may be obtained.

I have the honor to be, Sir,

Your obedient servant,

COLLINGWOOD SCHREIBER.

*Engineer-in-Chief.*

A. P. BRADLEY, Esq.,  
Secretary, Department of Railways and Canals.

[1886]

## APPENDIX No. 5a.

## INTERCOLONIAL RAILWAY.

OFFICE OF CHIEF SUPERINTENDENT,

MONCTON, N.B., 19th October, 1886.

SIR,—I have the honor to submit the following report on the working of the Intercolonial Railway, for the fiscal year which ended 30th June, 1886.

I enclose the reports of the Chief Engineer and the Mechanical Superintendent, and the following statements prepared by the Chief Accountant and Treasurer:—

- No. 1. Capital account.  
 “ 2. Revenue account.  
 “ 3. Locomotive power (Abstract No. 1).  
 “ 4. Car expenses ( “ “ 2).  
 “ 5. Maintenance of way and works ( “ “ 3).  
 “ 6. Station expenses ( “ “ 4).  
 “ 7. General charges ( “ “ 5).  
 “ 8. General stores account.  
 “ 9. General balance.  
 “ 10. Comparative statement of averages.

The length of railway in operation during the whole year was 861 miles.

On the 6th January, 1886, the Dartmouth Branch, five miles in length was opened for traffic.

## CAPITAL ACCOUNT.

The total cost of road and equipment on 30th June, 1885, was.....	\$43,627,594 79	
Less refunds on account of previous year's expenditure.....	985 80	
		\$43,626,608 99

The additions during the year were as follows:—

For Halifax Extension.....	\$ 18,670 77	
Increased accommodation, St. John.....	32,174 04	
Completion of the Intercolonial Railway.....	10,289 52	
Rolling stock.....	62,560 22	
Sleeping cars.....	161,077 48	
Applying air brakes to locomotives.....	387 93	
St. Charles Branch.....	99,837 01	
Dartmouth Branch.....	34,039 50	
Dalhousie Branch.....	2,667 51	
Rivière du Loup Town Branch.....	1,703 38	
Indian Town Branch.....	110,672 00	
Paspébiac Branch.....	50 16	
Pictou Town Branch.....	12,004 65	
		546,134 17
Making the total cost to the 30th June, 1886.....	\$44,172,743 16	

The amount deducted from the cost of the railway on the 30th June, 1885, consists of cheques which were cancelled, because the persons in whose favor they were drawn neglected or refused to accept them.

The new passenger station at St. John was opened for traffic during the year, and has been found to be very conveniently arranged.

The amount for completion of the Intercolonial Railway consists of payment on account of claims in connection with the original construction of the line, and of the legal and other expenses of settling the same.

The sleeping cars, ten in number, in use on the Intercolonial Railway, but owned by Pullman's Palace Car Company, were purchased and transferred to the railway.

The expenditure on the St. Charles Branch was chiefly for the settlement of claims for land and other damages.

The Dartmouth Branch was so far completed that it was opened for traffic.

Work on the Indian Town Branch was continued, but it was not completed.

A contract for the construction of the Pictou Town Branch was made and work was commenced.

#### REVENUE ACCOUNT.

The gross earnings of the year were \$2,383,200.77, being a slight increase over last year.

The earnings in 1885-86.....	\$2,383,200 77
do 1884-85.....	2,368,153 65
Increase.....	<u>\$ 15,047 12</u>

There was a slight decrease in earnings from freight traffic and an increase in earnings from passenger and other traffic.

There was an increase over the previous year in the quantity of freight carried of 38,000 tons.

	Tons.
Weight of freight carried in 1885-86.....	1,008,545
do do 1884-85.....	<u>970,069</u>

The following is a comparative statement of a few of the chief articles of freight, showing the quantity carried in this and in the previous year:—

	1884-85.	1885-86.	Increase.	Decrease.
Barrels of flour.....	907,102	739,091	.....	168,011
Bushels grain,.....	729,702	843,949	114,247	
Lumber in feet.....	137,387,675	116,253,382	.....	21,134,293
Head of live stock.....	65,513	70,246	4,733	
Other goods in tons.....	678,035	759,320	81,285	

The decrease in lumber traffic is doubtless the result of the depressed state of the lumber market.

The increase in weight of goods carried is in coal transported to the Upper Provinces.

The following shows the great increase in coal traffic from the mines in Nova Scotia to the Upper Provinces, for the year which ended 31st December:—

	Tons.
1879 .....	570
1880 .....	10,246
1881 .....	30,629
1882 .....	35,089
1883 ..	54,891
1884 .....	112,898
1885 .....	165,791

The rate at which this coal is carried is very low, and it increases the expenses without a corresponding increase in the earnings.

In passenger traffic there was a decrease of 28,000 in the number of local passengers carried, and an increase of 3,000 in the number of through passengers.

Total number carried in 1884-85.....	914,785
do do 1885-86.....	889,864
	<u>24,921</u>

On the 1st of August, 1885, the railway received the sleeping cars from Pullman's Palace Car Company, and commenced to operate them.

The European mails and passengers were landed and embarked at Halifax during the winter, and at Rimouski during the summer, as usual.

Sleeping accommodation has never been provided on the special trains which leave Rimouski for the east and the west on the arrival of the mail steamers. It is desirable that there should be such accommodation, but the number of sleeping cars is too limited to permit any of them to be used for the purpose. I therefore recommend that provision be made for the improvement of this service.

#### EXPENDITURE.

The working expenses for the year were \$2,489,24. 61.

They compare as follows with last year per mile run by engines and trains, and per mile of railway:—

Per mile run by engines:—

1885-86 .....	51.61
1884-85 .....	50.47

Per mile run by trains:—

1885-86 .....	61.61
1884-85 .....	61.15

Per mile of railway:—

1885-86 .....	\$2,891 10
1884-85 .....	2,835 63

The necessary repairs were made to the permanent way and structures, and all the works of the railway were maintained in a thorough state of efficiency.

The work of replacing the steel rails on the main track with heavier rails was continued, and 68 miles of new rails, weight 67 pounds to the yard, were laid.

There were 278,000 new cross ties put into the track.

The large number of ties used is due to their being placed closer together than formerly. They are now placed 2 feet apart from centre to centre, instead of 2½ feet.

These changes in rails and ties are improvements which greatly increase the cost of maintenance.

Sixty miles of the main track were ballasted.

Thirty new sidings were put in at various places along the line.

The fences were repaired where necessary, and 102 miles of new fences were erected. Fifteen miles of this fencing was built on a part of the line which had never before been fenced.

Four miles of new snow fences were built, and 2,000 lineal feet of snow sheds were rebuilt.

Several new stations and other buildings were erected, and the buildings on all parts of the line received necessary repairs.

Eleven new semaphore signals were erected.

Four wooden bridges were replaced with iron ones, and three new iron overhead bridges were built.

One of the principal iron bridges was much improved by lateral bracing.

The improvement of the water supply by providing new tanks of larger capacity was continued, and five tanks, each of 50,000 gallons capacity, were erected.

Great improvements were also made in reservoirs and pipe lines.

The rolling stock received necessary repairs, and is in good order.

One hundred and fifty-nine cars and two locomotives were rebuilt at the cost of working expenses. These locomotives and cars are of much greater capacity than those they replaced, and of course cost considerably more than locomotives and cars, similar to the old ones, would have done.

Considerable extra expense was also incurred in improving and modernizing the passenger cars.

The following is a summary of the expenditure on improvements:—

New sidings.....	\$ 14,000 00
New buildings and semaphores.....	7 000 00
New fences.....	8,000 00
Increased water supply.....	23,000 00
Iron bridges.....	6,000 00
Improvements to permanent way in rails and ties.....	37,000 00
Improvements in locomotives and cars.....	20,000 00
	<u>\$115,000 00</u>

This expenditure was made in addition to the maintenance and renewal of existing works, and was for improvements to the property, but it is all charged to working expenses and against the earnings for the year.

#### STORES.

The value of stores purchased was.....	\$ 979,324 96
The value of stores used was.....	1,139,807 17
The value of old material sold was.....	74,062 84

The value of stores on hand at the end of the year was:—

Ordinary stores, including fuel.....	293,765 24
Iron and steel rails.....	152,336 97
Second-hand materials serviceable.....	58,796 00
Old material for sale.....	214,762 67
<b>Total.....</b>	<b>\$719,660 88</b>

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The old material for sale consists of scrap metals, which will be sold as soon as the market for such articles becomes more favorable.

I have pleasure in stating that the employes generally, have discharged their duties in a satisfactory manner.

I have the honor to be, Sir,

Your obedient servant,

D. POTTINGER,

*Chief Superintendent.*

COLLINGWOOD SCHRIEBER, Esq.,  
Chief Engineer and General Manager Government Railways,  
Ottawa.

No. 1.—INTERCOLONIAL RAILWAY.

CR.

CAPITAL ACCOUNT, Year ending 30th June, 1886.

DR.

	\$ cts.	\$ cts.	1885. June 30...	By Dominion of Canada.	\$ cts.
1886. June 30.. To Cost of road and equipment.....	43,627,594 79				43,626,608 99
Less—Refunds on account of previous year's expenditure.....	985 80				
1886. June 30.. Outlay on Halifax Extension.....	18,670 77	43,626,608 99			
do Increased accommodation, St. John.....	32,174 04				
do do St Charles Branch.....	50,844 81				
do do Dartmouth do.....	89,837 01				
do do Dalhousie Branch.....	34,039 50				
do do Rivière du Loup Town Branch.....	2,667 51				
do do Indian Town Branch.....	1,703 38				
do do Paspebiac Branch.....	110,672 00				
do do Picton Town Branch.....	50 16				
do do Legal expenses (Halifax Street Railway vs. the Queen).....	12,004 65				
do do Rolling stock.....	332 95				
do do Sleeping cars.....	58,700 22				
do do Additional coal cars.....	161,077 48				
do do Applying air brakes to 100 locomotives.....	4,460 00				
do do Pay G. C. Sutherland.....	387 93				
do do Expenditure on completion of I. O. R. between Rivière du Loup and Truro (works, permanent w y, buildings, right of way, &c.).....	2,401 80				
	7,554 77	546,134 17	1886. June 30..	By Dominion of Canada.	546,134 17
		44,172,743 16			44,172,743 16

MONCTON, N.B., 30th June, 1886.

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

No. 2.—INTERCOLONIAL RAILWAY.

REVENUE ACCOUNT, Year ending 30th June, 1886.

Dr.

Cr.

Previous Year.	Expenditure.	Year ending 30th June, 1886.	Previous Year.	Earnings.	Year ending 30th June, 1886.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
732,266 88	Locomotive power	819,604 39	709,927 24	Passenger traffic.....	728,917 55
555,566 31	Car expenses	594,297 62	1,516,528 43	Freight do .....	1,501,250 17
657,605 08	Maintenance of way and works do	605,102 58	141,697 98	Mails and sundries.....	153,003 05
327,887 14	Station expenses	315,261 42			
161,330 16	General charges	162,311 18	2,368,153 65		2,368,200 77
	Car mileage.....	2,496,577 19	73,324 26	Balance.....	106,042 84
2,434,655 57		Cr. 7,333 58			
6,822 34					
		2,489,243 61	2,441,477 91		2,489,243 61

THOMAS WILLIAMS,  
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1886.

## No. 3.—INTERCOLONIAL RAILWAY.

## LOCOMOTIVE POWER—(Abstract No. 1).

Previous Year.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
7,838 37	Mechanical Superintendent's salary, clerks office and travelling expenses .....	8,315 85
186,732 56	Wages, drivers, firemen and cleaners.....	186,767 09
276,580 65	Fuel .....	299,181 82
46,907 29	Oil, tallow, waste and small stores.....	51,318 45
156,998 10	Repairs to engines, tenders and engine tools .....	193,200 97
24,688 15	Water, including pump and tank repairs.....	47,225 46
32,521 76	Miscellaneous .....	33,594 75
732,266 88		819,604 39

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 4.—INTERCOLONIAL RAILWAY.

## CAR EXPENSES—(Abstract No. 2).

Previous Year.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
56,318 80	Repairs to passenger cars .....	65,628 55
20,353 40	do postal, express and baggage cars.....	17,878 82
197,650 68	do Freight cars and vans .....	215,118 38
194,029 03	Wages of Conductors, train baggage masters and brakemen.....	195,275 29
26,978 64	Oil and waste for packing .....	33,192 13
45,531 65	Small stores and fuel.....	47,283 60
14,704 08	Miscellaneous.....	19,920 85
555,566 31		594,297 62

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886,

## No. 5.—INTERCOLONIAL RAILWAY.

## MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Previous Year.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
4,911 35	Chief and Assistant Engineers, Salaries, Clerks, office and travelling expenses.....	5,219 15
300,441 53	Wages in repairing roadway, fences and semaphores, including new sidings laid in.....	278,333 72
55,788 79	Rails and fastenings, including new sidings laid in.....	25,917 59
41,685 65	Sleepers.....	105,223 19
71,307 08	Timber, lumber, etc., for repairs to bridges, cattle guards, crossings, snow-sheds, fences, etc.....	78,208 32
13,419 67	Repairs to wharves.....	13,337 60
90,061 48	Repairs to buildings and platforms, including extensions of and additions to same.....	39,200 59
17,988 91	Repairs to snow ploughs, flangers and tools.....	20,440 20
58,081 15	Clearing ice and snow.....	39,777 65
3,939 47	Miscellaneous.....	Cr. 575 43
657,605 08		605,102 58

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 6.—INTERCOLONIAL RAILWAY.

## STATION EXPENSES—(Abstract No. 4).

Previous Year.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
260,440 86	Salaries and Wages of Station Masters, Agents, Clerks, Telegraph Operators, Station Baggage Masters, Yard Masters, Switchmen, Watchmen and Laborers.....	249,521 95
67,446 28	Fuel, oil, light, stationery, tickets and other incidental expenses.....	65,729 47
327,887 14	Miscellaneous.....	315,261 42

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 7.—INTERCOLONIAL RAILWAY.

## GENERAL CHARGES—(Abstract No. 5)

Previous Year.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
65,415 42	Chief Superintendent, District Superintendents, Train Despatchers, General Freight Agent, General Passenger Agent, Clerks, office and travelling expenses.....	65,534 06
20,392 93	Accounting Department—Salaries of the Chief Accountant and Treasurer, Traffic Auditor, Paymaster, Cashier, Clerks, office and travelling expenses.....	19,998 41
10,025 41	Damages to men, animals and goods.....	9,879 54
21,311 67	Ferry service.....	17,676 11
4,346 87	Telegraph expenses (not including pay to operators).....	1,271 38
25,982 76	Miscellaneous—Printing, advertising, &c.....	30,221 76
13,855 10	Agency expenses.....	17,729 92
<b>161,230 16</b>		<b>162,311 18</b>

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

[1886]

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No. 9.—INTERCOLONIAL RAILWAY,

GENERAL BALANCE, 30th June, 1886.

Dr.

Or.

	\$ cts.	\$ cts.	\$ cts.
Cash .....			
General Stores:—			
Ordinary stores, including fuel.....	293,765 24		1,098,357 24
Iron and steel rails and fastenings .....	152,836 97		3,166 35
Second hand material, serviceable .....	58,796 00		20,059 49
Old material for sale.....	214,762 67		7,641 36
Stations .....			
Rents .....		719,680 88	
Accident insurance .....		60,748 76	
Militia Department.....		1,482 33	
Agriculture Department.....		19,821 39	
Post Office do .....		2,999 57	
Dorchester Penitentiary.....		40,727 72	
Windsor and Annapolis Railway, vs. the Queen .....		45,400 24	
Chatham Branch Railway.....		10 60	
Quebec Central Railway.....		55 00	
Windsor Branch Railway.....		989 91	
Grand Trunk Railway, general account.....		4,139 18	
Windsor and Annapolis Railway, new account.....		2,391 36	
do do .....	1,692 07	5,144 19	
do do .....	6,684 46		
Eastern Extension Railway .....		8,376 53	
New Brunswick Railway .....		32,704 62	
do and Prince Edward Island Railway.....		14,287 07	
Northern and Western Railway of New Brunswick.....		55,248 92	
Chicago and Grand Trunk Railway.....		412 68	
South Eastern Railway.....		54 71	
Pullman Palace Car Co.....		24 58	
Western Counties Railway, general account.....		1,844 27	
do do .....	15,893 35		
do do .....	1,657 42		
Spring Hill and Parrishoro' Railway .....		17,550 77	
St. Martin's and Upham Railway.....		3,161 99	
Halifax and Cape Breton Railway.....		4,107 39	
Rigon Branch Railway .....		1,546 82	
Oxford Branch Railway .....		726 50	
Intercolonial Express Co.....		12,334 80	
International Steamship Co.....		2,468 77	
		36 55	
Carried forward .....	1,079,773 57		1,129,224 44

No. 9.—INTERCOLONIAL RAILWAY—Concluded,  
GENERAL BALANCE, 30th June, 1886—Concluded.

DR.

	\$ cts.	\$ cts.	\$ cts.
Brought forward			1,129,224 44
Allan Steamship Line	1,079,773 57		
Acadia Coal Co.	1,947 75		
Intercolonial Coal Co.	1,231 98		
Vale Coal Co.	566 41		
Halifax Co.	658 56		
Steel Company of Canada.	7 70		
Canadian Locomotive and Engine Co.	22,023 09		
Steamer "Admiral"	49 00		
Steamer "Contest"	3,750 49		
Turo Foundry and Machine Co.	180 00		
Halifax Cotton Co., siding	63 15		
Moncton Sugar Refining Co.	11,507 19		
Moncton Cotton Co., siding	1,411 53		
Halifax Rolling Mills Co.	790 53		
Goldbrook & Schooner "Mary Jane"	23 25		
Glengarry Station	1,967 41		
Bloomfield	71 30		
Coal Branch	5 00		
Weldford	25 21		
Sie. Luce	65 84		
Bie. do	55 00		
Sie. Arsène	80 00		
Individual accounts	22 00		
	6 11		
	2,930 37		
	1,129,224 44		
Brought forward			1,129,224 44

THOMAS WILLIAMS,  
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1886.

## No. 10.—INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT of Averages, Year ending 30th June, 1886.

	1886.	1885.
Mileage of railway.....	861	861
Engine mileage.....	4,823,353	4,826,927
Train do.....	4,039,877	3,992,566
Car do.....	47,211,083	47,591,193
Receipts per engine mile..... Cents.	49·41	48·96
do mile of railway..... Dollars.	2,767 94	2,750 47
Percentage of passenger earnings to gross earnings.....	Per cent.	Per cent.
do freight do do.....	63·00	64·04
do other do do.....	6·42	5·98
Expenses per engine mile—		
Drivers, Firemen and Cleaners' wages..... Cents.	3·87	3·86
Fuel.....	6·20	5·72
Oil, tallow, waste and small stores.....	1·06	·97
Repairs to engines.....	4·01	3·25
Water and tank repairs.....	·98	·51
Miscellaneous.....	·70	·67
Total.....	16·82	14·98
Mechanical Superintendent's salary, office and travelling expenses.....	·17	·16
Total.....	16·99	15·14
Locomotive power per engine mile.....	16·99	15·14
Car expenses do.....	12·32	11·49
Maintenance of way and works do.....	12·55	13·59
Station expenses do.....	6·54	6·78
General charges do.....	3·36	3·33
	51·76	50·33
Car mileage.....	·15	·14
Total per engine mile.....	51·61	50·47
Locomotive power per train mile.....	20·29	18·34
Car expenses do.....	14·71	13·92
Maintenance of way and works do.....	14·98	16·47
Station expenses do.....	7 80	8·21
General charges do.....	4·01	4·04
	61·79	60·98
Car mileage.....	Cr. ·18	·17
Total per train mile.....	61·61	61·15
Working expenses per mile of railway.....	\$2,891 10	\$2,835 63

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N. B., 30th June, 1886.

[1886]

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 INTERCOLONIAL RAILWAY.
 

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## CHIEF ENGINEER'S OFFICE,

MONCTON, N.B., 19th October, 1886.

SIR,—I have the honor to submit my report of the working of the Engineering Department for the year ending the 30th June, 1886.

## TRACK.

The mileage of main line and branches has been increased from 861 to 866 miles.

	Miles.
Previously reported .....	861
Dartmouth Branch.....	5
Total.....	<u>866</u>

During the year 68 miles of old steel rails, weighing 56 pounds to the yard, have been taken up in the main line, and replaced with new steel rails weighing 67 pounds to the yard.

## SLEEPERS.

During the year 278,000 sleepers have been renewed in the main line and sidings.

## BALLASTING.

Ballast trains were at work on all divisions of the road for a portion of the working season. Sixty miles were reballasted.

## SEMAPHORE SIGNALS.

Eleven semaphore signals were put up during the year.

## SIDINGS.

Thirty sidings have been put in at various points along the line, making additional accommodation to the extent of  $2\frac{1}{2}$  miles.

## SNOW SHEDS AND SNOW FENCES.

Four miles of new snow fences have been erected on the different divisions.

About 2,000 lineal feet of new snow shedding was erected in place of that destroyed by fire on northern divisions Nos. 2 and 3.

About 5000 feet of snow shedding was thoroughly overhauled and repaired. A great portion of it was practically renewed.

The expenditure for the year on snow sheds and fences has been \$20,179.30.

One hundred and two miles of new barbed wire and Everett picket wire fencing have been erected.

About 15 miles of this new fencing was erected on parts of the line that had never before been enclosed.

Large repairs have been made to the old board and pole fences.

The expenditure for fencing has been \$48,236.

## WHARVES AND COAL TRESTLES.

At RICHMOND—the face (above high water), stringers and flooring of outer wharf were renewed.

Heavy repairs were also made to the coal trestle and cribs supporting it. \$7,456.96 was expended in the maintenance of the three wharves at Richmond.

At the DEEP-WATER TERMINUS—a new coal drop (now the third) was erected for the accommodation of ocean steamers:

At PICTOU LANDING—a large portion of No. 2 wharf was rebuilt from high water to surface, and other general repairs made at an expense of \$859.16.

At PICTOU, SACKVILLE, DORCHESTER, SHEDIAC AND MONCTON—necessary repairs were made to the wharves.

At ST. JOHN—the top of the deep-water terminus wharf lifted with an unusually high tide, and was considerably damaged by a storm at the same time. The necessary repairs have been made.

At RIMOUSKI—Very heavy repairs were made to the wharf. A large portion of the top was carried away by a storm. The necessary repairs were made by contract at an expenditure of about \$6,000.

At HADLOW—the wharf known as “Princess Pier” was practically renewed from two feet below high water mark to the top.

## TURNTABLES.

At RICHMOND—the iron turntables were overhauled and repaired, as were those at St. John, Moncton, Shediac and Newcastle.

At CAMPBELLTON—a circular wall of brick, with wooden segments, was provided for the new 50-foot table.

At SAYABEC—the wood turntable was thoroughly overhauled and repaired.

## BUILDINGS AND PLATFORMS.

At NORTH STREET—the shingled roof of freight shed on the west side was replaced with slates, at a cost of about \$1,000.

At RICHMOND—general repairs were made to the car shop and tin shop. The latter was painted.

At ROCKINGHAM (4-mile House)—some alterations were made in the station to provide office accommodation for an operator.

At BEDFORD—the station agent's dwelling was thoroughly overhauled, new sills were put in, new floor laid and dwelling plastered throughout.

At WELLINGTON—a portion of the station was converted into living rooms for the agent.

At GRAND LAKE AND ELMSDALE—new station platforms were erected.

At SHUBENACADIE—a new loading platform was provided.

At STEWIACKE—a new floor was laid in the freight house, and a portion of the loading platform was renewed.

At TRURO—heavy repairs were made to the roof and floor of engine house. New longitudinal stringers were provided for 6 pits. Twelve terra cotta smoke jacks were provided in place of decayed iron ones in the round-house.

At GLENGARRY—the station platform was rebuilt, and the station overhauled and repaired.

At HOPEWELL—the roof of station was reshingled, and a new loading platform provided for the accommodation of the Eureka Woollen Mills.

At STELLARTON—Two hundred and fifty feet of the station platform was renewed.

At PICTOU LANDING—the roof of round-house was thoroughly overhauled and shingles railed with galvanized nails.

At LONDONDERRY, WENTWORTH, THOMPSON, AND RIVER PHILIP—necessary repairs were made to the stations.

At LONDONDERRY, WENTWORTH, THOMSON, OXFORD AND RIVER PHILIP—new platforms were also built.

At SPRING HILL—a new house was built for the accommodation of the fuel men; the coal shed was shingled and a new floor laid in it. The coal trestle was thoroughly overhauled and repaired.

At ATHOL—the roof of station was reshingled.

At MACCAN—the west side of station was reshingled.

At NAPPAN—a new platform was erected.

At FORT LAWRENCE—a new platform was erected.

At DORCHESTER—a new brick cased station, and a new freight house are being erected to replace the old station destroyed by fire in April last.

At PAINSEC—a portion of the station platform was renewed.

At HUMPHREY'S MILLS—a new station and platform were provided.

At MONCTON—necessary repairs were made to the station buildings, freight house and platforms, also to the machine shop and engine house. Ten new terra cotta smoke jacks were provided for the latter building. The coal shed and trestle also receiving extensive repairs.

At BOUNDARY CREEK—a new flag station and platform were built to replace the one destroyed by fire.

At PETITCODIAC—necessary repairs were made to the station, and the station platform entirely renewed.

At MEMRAMCOOK, PAINSEC AND SALISBURY—new water closets were provided for these stations.

At WELDFORD—a new coal shed, 40 by 20 was provided, in place of a smaller one destroyed by fire.

At BERRY'S MILLS, WELDFORD, ROGERSVILLE, BARNABY RIVER, AND NEWCASTLE—the station platforms were overhauled and repaired.

At NEWCASTLE—a new high, level coal shed, 300 feet long by 30 feet wide, with trestle approach, was provided. To this shed was attached a delivery shed, 50 by 25 feet, fitted up with cast-iron platforms, a drop and twelve coal waggons. An office was also provided for the men attending to this service. This shed and equipment cost about \$5,000.

The track between the old and new coal sheds was roofed over to prevent snow drifting in between the sheds.

At NIGADOO—a new flag station and platform were provided.

At BEAVER BROOK—necessary repairs were made to the station.

At RED PINE—the station was repaired and a new floor laid in the waiting-room and office.

At BATHURST, BELLEDUNE, JACQUET RIVER AND CHARLO—small coal sheds were erected.

At BATHURST—a new foundation was provided for the tank tub.

At BELLEDUNE—the station platform, 250 feet long by 10 feet wide, was renewed.

At JACQUET RIVER—a new foundation was provided for the tank tub.

At CHARLO—necessary repairs were made to the station.

At DALHOUSIE JUNCTION—a new foundation was provided for the tank tub.

At DALHOUSIE—a combined passenger and freight station was erected in place of one destroyed by fire, at a cost of \$3,000.

The coal shed and engine house were moved from the east to the west end of yard, in a more sheltered position.

At CAMPBELLTON—300 feet of station platform were renewed.

At MOFFATT'S MILLS—a new platform, 200 feet long by 12 feet wide, was built.

At METAPEDIA—the station platform was extended 110 feet.

At MILLSTREAM, ASSAMETQUAGHAN AND SAYABEC—the station platforms, each 300 feet long, were renewed.

At ASSAMETQUAGHAN, CEDAR HALL, SAYABEC AND LITTLE MÉTIS—necessary repairs were made to the tank houses.

At CAUSAPSCAL—the roof of station was resingled.

At ST. MOISE—a new coal shed was built, and a trackman's house which was taken down at Salmon Lake, was re-erected at this place.

At STE. FLAVIE—New double doors were provided for the round-house, new timbers were laid on five of the engine pits of round house, and the floor in the eastern half of the building was renewed.

A new hardwood floor was provided for the waiting-room and office, and alterations made in the partitions of the latter.

At RIMOUSKI—a new floor was provided for the station.

At ST. FABIEN—the station was overhauled and painted.

At BIC, St. SIMON, TROIS PISTOLES and ISLE VERTE—necessary repairs were made.

At ST. ELOI—double windows were provided for the station.

At RIVER DU LOUP—new doors were provided for the engine house. The iron columns, rafters, &c., of the engine house, were thoroughly scraped and painted. The engine house was provided with ten new terra cotta smoke jacks, in place of the rusted out iron ones.

At ST. ANDRÉ and ST. ROCH—necessary repairs were made to the stations.

At ST. CHARLES—a shed was erected for the accommodation of the car repairers, and a part of the freight shed was partitioned off as a store room for their use.

At CHAUDIERE—the offices in the freight shed were thoroughly overhauled and refitted.

At HADLOW—office accommodation was provided for the mechanical foreman, by partitioning off part of one of the wings of the engine house.

At POINT LEVIS—an additional passenger platform was provided.

#### BRIDGES AND\_CULVERTS.

At SACKVILLE ROAD, near BEDFORD—new double iron rail girders, 20 feet spans, were put in, and two more of the same span about four and five and a-half miles south of Truro.

Between TRURO AND DEBERT—five lattice girder spans of 100 feet each, one 50 feet plate girder, and one 24 feet plate girder, were thoroughly scraped and painted.

At VALLEY AND STELLARTON—two new culverts were put in on the Pictou Branch.

At McLEAN'S CORNER, near LONDONDERRY—the old wooden overhead bridge was replaced with an iron structure of 70 feet clear span.

At the FOLLY RIVER VIADUCT the six 100-foot spans have been provided with a complete system of lateral bracing, which has stiffened the girders very noticeably.

At FORT LAWRENCE, near AMHERST—the old wooden trestle overhead bridge was replaced with an iron structure of one clear span of 90 feet with stone abutments at a cost of \$2,500.

Near HUMPHREY'S MILLS—a wooden trestle bridge was thoroughly overhauled and repaired and strengthened.

Near ROTHESAY—a wooden trestle bridge of 4 spans of 16 feet was renewed.

At QUISPAMISIS—a new floor was provided for the overhead bridge.

A large expenditure will need to be incurred in the next few years in providing additional lateral bracing for nearly all lattice bridges in use on the line.

Near NEWCASTLE—two small culverts were built.

Near BATHURST—the floor of Little River bridge was renewed.

Between MONCTON and CAMPBELLTON—six pairs of cattle guards were renewed, and the stringers and cross-ties of 6 open culverts in the Metapedia Valley.

A pair of 19-foot span wooden stringers about  $4\frac{1}{2}$  miles west of Ste. Flavie, were replaced with a pair of double rail girders provided with a standard floor.

Sixteen pairs of stringers of open culverts on No. 3 division were renewed.

At BARLOW'S CROSSING, near TROIS-PISTOLES—an overhead wooden trestle bridge was replaced with an iron structure of 90-foot clear span, with stone abutments, at a cost of \$2,500.

A pair of wooden stringers 3 miles east of Rivière du Loup were replaced with double rail iron girders.

At ISLE VERTE and RIVIÈRE DU LOUP—considerable repairs were made to the Howe truss bridges.

There are two spans of 100 feet each at the former place and 3 spans of the same length at the latter place.

It will be necessary to renew one of these bridges next year.

Between RIVIÈRE DU LOUP and HADLOW—heavy repairs were made to the old masonry.

It was necessary to rebuild a number of culverts that had collapsed.

A large amount will have to be expended for a number of years to bring the masonry of this division up to the standard of that on other parts of the main line and branches.

Gangs of painters and rivetters were at work the whole season painting and making general repairs to iron structures throughout the line.

#### BRANCH LINES.

##### *St. Charles Branch.*

Near HARLAKA 90 feet of iron and 1,310 feet of wooden shedding have been put up to protect a heavy rock cutting.

About 4,000 feet of additional snow fencing has been provided.

##### *Rivière du Loup Town Branch.*

This branch has been completed as far as the public wharf.

A connection is now being made and the track extended to the end of the wharf.

##### *Indiantown Branch.*

This branch has been completed.

At MILLERTON and INDIANTOWN, station buildings and freight houses have been erected.

At DERBY, three miles west of the junction, a gravitation water supply and tank house have been provided.

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*Dartmouth Branch.*

This branch has been completed and has been in operation since the 6th of January last.

I am, Sir,

Your obedient servant,

P. S. ARCHIBALD,

*Chief Engineer.*

D. POTTINGER, Esq.,  
Chief Superintendent,  
Moncton, N.B.

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 INTERCOLONIAL RAILWAY.
 

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MECHANICAL SUPERINTENDENT'S OFFICE,  
 MONCTON, 4th October, 1886.

DEAR SIR,—I beg to submit, for your information, the following statements showing the operations of the Mechanical Department for the year ending June 30th, 1886:—

A.—Statements showing the number of locomotives and the various classes of cars.

B.—Statement showing the locomotive and car mileage, and the average number of passenger and freight cars hauled per mile run by engines.

C.—Abstract of locomotive returns.

D.—Statement of the cost of locomotive power for each month during the year.

E.—General statement of the expenses of the Mechanical Department.

The railway having taken charge of the sleeping and parlor car service, ten sleeping and parlor and one day parlor car were purchased at cost of capital. One locomotive, six second class sleepers, twenty-seven conductor's vans, and one snow plough were also purchased at cost of capital and added to the rolling stock of the road.

During the year, one hundred of the old five-ton hopper cars were condemned and replaced by the same number of larger capacity and more improved style.

Thirty (20-ton) box cars and twenty-one (20-ton) platform cars (to take the place of the same number of the old 10-ton cars condemned), two locomotives, two second class passenger cars, six vans and two snow ploughs, were also rebuilt at the cost of working expenses during the year.

The replacing of the smaller cars and locomotives by others of more improved style and double the capacity has increased the cost of working expenses more than they would have been had the condemned rolling stock been replaced by others of the same style and capacity.

Several of the old passenger cars have also been taken into the shops, remodelled and fitted up in a more modern style.

The rolling stock is in good condition.

WATER SERVICE.

During the year, new tanks, of 50,000 gallons capacity each, were erected at Weldford, Campbellton, Ste. Flavie, L'Islet and St. Moise. This service has been well maintained during the year.

I am, Sir,  
 Your obedient servant,

H. A. WHITNEY,  
*Mechanical Superintendent.*

D. POTTINGER, Esq.,  
 Chief Superintendent,  
 Moncton, N.B.

A.—INTERCOLONIAL RAILWAY.

STATEMENT showing the number of Locomotives and the various classes of Cars on the 1st July, 1885, and on the 30th June, 1886.

	The Various Classes of Cars.														Total.							
	Locomotives.	First Class Sleepers.	Second Class Sleepers.	Parlor.	First Class Passenger.	Second Class Passenger.	First Class Passenger.	Postal and Smoking.	Baggage & Express.	Vans.	Box.	Cattle.	Parlor, 15 and 20 tons.	Hoppers, 5 to 6 tons.		Gondolas, 20 tons.	Coal Cars, 20 tons.	Total.	Snow Plough.	Wagon Plough.	Flangers.	Total.
On hand, 1st July, 1885, serviceable.....	163	.....	.....	.....	69	73	17	26	50	1,435	68	1,359	595	780	450	4,922	30	10	20	60	.....	
do do condemned.....	.....	.....	.....	.....	1	2	.....	.....	5	22	4	83	.....	3	.....	120	.....	.....	.....	.....	.....	
Total.....	163	.....	.....	.....	70	75	17	26	55	1,457	72	1,442	595	783	450	5,042	30	10	20	60	.....	
Purchased on capital account.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Changed from first to second class.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Changed from baggage to van.....	.....	.....	.....	.....	69	78	17	25	83	1,457	72	1,442	595	783	450	5,086	31	10	20	61	.....	
Condemned, 1st July, 1885.....	.....	.....	.....	.....	1	2	.....	.....	5	22	4	83	.....	3	.....	120	.....	.....	.....	.....	.....	
Condemned during year.....	.....	.....	.....	.....	.....	1	1	.....	3	16	.....	.....	.....	.....	.....	173	.....	.....	.....	.....	.....	
Total condemned.....	.....	.....	.....	.....	1	3	1	.....	8	38	4	135	100	3	.....	293	.....	.....	.....	.....	.....	
Less—Rebuilt.....	.....	.....	.....	.....	.....	2	.....	.....	6	30	.....	.....	.....	.....	.....	159	.....	.....	.....	.....	.....	
Add—Serviceable and repairing.....	164	10	6	1	68	75	16	25	81	1,449	68	1,328	595	780	450	4,952	31	10	20	61	.....	
Total on record.....	164	10	6	1	69	76	17	25	83	1,457	72	1,442	595	783	450	5,086	31	10	20	61	.....	

## B.—INTERCOLONIAL RAILWAY.

## STATEMENT of Locomotive and Car Mileage for Year ending 30th June, 1886.

Months.	Locomotive Mileage.				Car Mileage.					
	Passenger.	Freight.	Passenger.	Express, Postal and Baggage.	Freight.	Total.	Snow Plough Mileage.	Average Freight.	Average Passenger.	
	1886—July .....	91,421	250,286	397,691	177,150	3,460,407	4,035,248	.....	13.74	6.28
August.....	85,480	252,254	382,013	157,411	3,409,100	3,948,524	.....	13.51	6.30	
September.....	80,191	250,351	353,936	149,200	3,468,452	3,969,588	.....	13.84	6.27	
October .....	77,501	276,102	311,364	148,922	3,912,206	4,372,492	545	14.18	5.93	
November .....	69,192	253,253	284,964	147,070	3,607,099	4,030,133	.....	14.24	6.24	
December .....	71,240	267,884	300,609	150,296	3,442,140	3,893,045	4,403	12.85	6.32	
1886—January .....	69,128	254,196	283,492	145,609	2,864,728	3,293,829	11,918	11.27	6.20	
February .....	62,699	234,746	255,135	135,755	2,752,256	3,143,146	8,564	11.72	6.16	
March .....	71,836	317,444	290,224	159,254	4,026,504	4,476,682	9,779	12.67	6.26	
April .....	70,796	277,483	334,347	151,739	3,690,180	4,176,266	457	13.21	6.87	
May .....	67,501	269,283	289,717	141,281	3,572,642	4,003,640	824	13.26	6.38	
June .....	78,726	240,954	325,779	152,559	3,381,152	3,859,490	179	14.03	6.08	
Total.....	895,641	3,144,236	3,809,971	1,816,246	41,584,866	47,211,083	36,669	13.22	6.28	

C.—INTERCOLONIAL RAILWAY.

ABSTRACT of Locomotive Returns for the Year ending 30th June, 1886.

Months.	Hours in Steam.	Locomotive Mileage.	Consumption.				Average Consumption per 100 Miles.				
			Tons of Coal.	Pints of Oil.	Pounds Tallow.	Pounds Waste.	Miles Run to hour in Steam.	Pounds Coal.	Pints Oil.	Pounds Tallow.	Pounds Waste.
1885—July.....	33,217	407,491	10,120	25,802	12,721	6,780	10-39	5,563	6-83	3-12	1-66
August.....	37,857	399,089	10,317	27,290	13,195	6,885	10-54	5,734	6-83	3-30	1-72
September.....	37,343	391,798	10,824	25,519	13,564	6,982	10-49	6,188	6-51	3-46	1-78
October.....	40,668	419,289	11,972	25,166	13,962	7,274	10-31	6,396	6-00	3-33	1-71
November.....	37,471	384,224	11,297	21,586	12,604	6,780	10-25	6,566	5-61	3-28	1-60
December.....	40,782	408,253	12,055	23,909	12,897	7,411	10-01	6,614	5-85	3-15	1-81
1886—January.....	39,442	391,328	12,704	23,494	12,957	7,064	8-09	7,271	6-00	3-31	1-80
February.....	37,792	364,399	11,738	21,802	11,996	6,563	9-65	7,306	5-88	3-28	1-79
March.....	47,870	468,165	14,846	27,460	15,317	7,438	9-78	7,104	5-86	3-27	1-58
April.....	38,463	411,529	11,665	23,542	13,358	6,890	10-42	6,354	5-72	3-24	1-67
May.....	36,594	398,093	10,645	23,147	13,437	7,179	10-87	5,989	5-81	3-45	1-80
June.....	35,085	379,145	9,964	23,367	12,887	6,962	10-80	5,888	6-16	3-39	1-84
Total.....	469,584	4,823,353	138,037	292,074	158,895	84,198	10-27	6,410	6-05	3-29	1-74

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## D.—INTERCOLONIAL RAILWAY.

STATEMENT of the cost of Locomotive Power for each month, from 1st July, 1885, to 30th June, 1886.

Months.	Miles run by Engines.	Engine-men's wages.	Fuel.	Oil, Tallow and Waste.	Repairs to Engines, Tenders and Tools.	Water.	Miscellaneous, including Engine-houses and mechanical Staff.	Total.	Averages per 100 Miles.						Total.
									\$	cts.	\$	cts.	\$	cts.	
1885—July.....	407,491	14,598 98	27,175 06	4,358 00	20,191 19	7,630 95	3,803 22	78,037 42	3 66	6 67	1 06	4 95	1 87	0 93	19 14
August.....	399,090	15,255 00	27,734 13	4,464 93	31,098 24	2,630 40	2,914 28	84,096 98	3 82	6 97	1 11	7 79	0 65	0 73	21 07
September.....	391,793	14,471 73	28,460 37	4,152 77	20,465 16	3,527 53	3,914 53	74,992 14	3 69	7 26	1 05	5 22	0 90	0 99	19 11
October .....	419,289	16,378 75	32,180 03	4,461 22	29,047 22	5,627 47	3,406 45	91,001 14	3 89	7 68	1 06	6 91	1 31	0 81	21 70
November .....	384,224	14,798 32	31,500 87	4,075 82	10,697 64	7,129 86	4,061 77	72,264 28	3 86	8 17	1 06	2 79	1 06	1 86	18 80
December .....	408,253	15,972 12	21,977 72	4,511 84	11,349 53	7,244 63	3,134 50	64,190 24	3 92	5 39	1 15	2 53	1 77	0 77	15 53
1886—January.....	391,263	15,546 54	28,234 07	3,726 07	11,093 03	3,619 30	4,541 59	61,790 60	3 97	5 93	0 95	2 83	0 93	1 17	15 78
February.....	364,899	14,270 55	21,067 73	4,075 24	12,118 17	2,065 90	3,510 11	57,107 70	3 91	5 74	1 17	3 37	0 56	0 90	15 65
March.....	468,165	17,929 65	27,489 62	5,038 37	15,687 13	2,503 18	3,729 97	72,382 92	3 83	5 88	1 07	3 33	0 53	0 79	15 46
April.....	411,529	16,505 53	21,616 71	4,180 79	9,285 40	1,798 41	3,175 98	56,562 82	4 01	5 25	1 01	2 26	0 44	0 77	13 74
May.....	398,093	15,424 11	18,600 52	4,180 87	10,446 75	2,085 58	2,948 31	53,666 17	3 88	4 67	1 05	2 62	0 52	0 74	13 48
June .....	379,145	15,415 81	18,144 99	4,092 51	11,721 51	1,347 35	2,769 81	53,491 93	4 07	4 78	1 07	3 09	0 35	0 74	12 24
Total.....	4,821,353	186,767 09	299,181 82	51,318 45	193,200 97	47,225 46	41,910 60	819,604 39	3 88	6 20	1 07	4 00	0 98	0 86	16 99

## E.—INTERCOLONIAL RAILWAY.

## GENERAL STATEMENT of the Expenses of the Mechanical Department, for the Year ending 30th June, 1886.

	\$	cts.
The miles run by trains.....	4,039,877	
do engines.....	4,823,353	
do cars.....	47,211,083	
do snow ploughs.....	36,669	
The cost of locomotive power.....	819,604	39
The cost of car repairs :		
Repairs to passenger cars.....	65,628	55
do postale, express and baggage cars.....	17,878	82
do freight cars and vans.....	215,118	38
Oil and waste for packing.....	33,192	13
Miscellaneous.....	124	00
Total cost of car expenses.....	331,941	89
The cost of locomotive power per 100 miles run by trains.....	20	28
do do do engines.....	16	99
do do do cars.....	1	73
The cost of repairs to cars per 100 miles run by train.....	7	39
do do engines.....	6	19
do do cars.....	0	63
The cost of oil and waste for packing per 100 miles run by trains.....	0	82
do do do engines.....	0	68
do do do cars.....	0	07
The cost of repairs to passenger cars per 100 miles run by them.....	1	72
do postal, express and baggage do.....	0	98
do freight cars and vans do.....	0	51

## INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day or Night.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No of Engine.
1885.						
uly 6...	2.40 p.m.	19	Freight .....	G. W. McCully .....	C. Edwards.....	4
do 13...	2.35 a.m.	Special..	do .....	J. A. Davidson .....	John R. McLellan .....	73
do 18...	2 05 p.m.	do	do .....	W. Crocket .....	E. B. Price.....	28
do 27	8.30 a.m.	32	Express .....	M. Letarte.....	J. McDonald.....	157
do 28...	1.30 p.m.	Special.	Freight.....	C. Quimper.....	John Gilker.....	78
Aug. 4...	4.15 a.m.	do	do .....	Frs. Morency.....	O. Jollivet & E. Ouellet	45 & 14
do 9...	5.45 a.m.	do	do .....	do .....	L. Michaud.....	6
do 11...	6 45 a.m.	37	do .....	D. Hunter.....	C. P. Atkinson .....	144
do 13...	10.00 a.m.	Special..	Working train...	C. B. Humphrey.....	Frank Probert.....	3
do 17...	9.45 a.m.	25	Accommodation	J. Coffey.....	G. A. Kently .....	157
do 18...	6 30 a.m.		Shunting .....		M. O'Brien .....	99
do 21...	9.00 p.m.		do .....		do .....	99
do 22...	6 30 a.m.	18	Freight.....	Wm. Morgan .....	J. J. Smith.....	26
do 25...	7.10 p.m.	38	do .....	J. T. McGinn.....	W. D. Martin.....	25
do 25...	7.10 p.m.	38	do .....	do .....	do .....	25
do 28...	3.00 p.m.	Special.	do .....	Wm. Morgan.....	R. Smith.....	92
do 29...	10.20 a.m.				Hugh Tait.....	27
do 30...	9.20 a.m.	Special.	Freight .....	Jas. Chenard.....	B. Chamberlain.....	145

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## RAILWAY.

Line of the Intercolonial Railway, during the Year ending 30th June, 1886.

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Sackville .....	G. W. McCully	Employé..	Loading freight, strained chest.	Lung injured ....	
Coal Branch.....	{ John R. McLellan..... Gilbert Kidd. J. H. Welch.	{ do do do }	Collided with cars standing on main line.	{ Fatal .....	Accidental. do
Berry's Mills.....	Arthur Green...	do	Jumping off train in motion.	Knee hurt.....	
Between Lévis and Harlaks.	Robert Kerr...	Passenger	Shot, it is supposed by himself.	Fatal .....	
5 miles west of St. Fabien.	Alexander Irvine.	Employé..	Fell off train .....	Finger broken...	
2 miles west of St. Charles.	Eustache Jean.	do	Train broke apart and afterwards collided.	Head and stomach hurt.	
St. Phillip de Néri.	A. Levesque....	do	While coupling.....	Finger crushed..	
Canaan .....	Charles Campbell.	do	Getting on train in motion, slipped and fell.	Slightly hurt....	
Rogersville .....	Wm. Bulger....	do	Fell while jumping from one car to another.	Rib and shoulder bone broken.	
3 miles west of Memramcook Station.	Js. D'Orsay ...	Neither...	Struck by engine while attempting to cross track.	Fatal .....	do
Moncton.....	A. Lutes .....	Employé..	Struck by piece of exploded torpedo.	Leg cut .....	
do .....	E. Herritt.....	do	While coupling.....	Breast and side injured.	
Bible Hill Siding, near Truro.	John Carroll ...	do	do .....	Left arm broken	
Weldford .....	J. T. McGinn...	do	Slipped while attempting to board train.	Knee hurt.....	
do .....	A. Lockhart....	do	Stepping from car to platform.	Foot sprained....	
Spring Hill.....	R. Smith.....	do	Repairing engine.....	Cut top of finger.	
Round-house, Pt. du Chêne.	Jaddus White..	do	Tank rope broke.....	Wrist sprained & other injuries.	
5 1/2 miles west of Metapedia.	Walter Smith (boy).	Neither...	Lying on track.....	Fatal .....	do

[1886]

## INTERCOLONIAL.

RETURN of Accidents and Casualties which have occurred:

Date.	Time of Day or Night.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1885.						
Sept. 4...	2.20 a.m.	Special.	Freight .....	E. Thompson .....	N. Sinclair.....	118
do 8...	6.30 a.m.	do ...	do .....	Jos. Paradis .....	J. McDonald.....	112
do 9...	1.30 p.m.	do ...	do .....	S. Soucy.....	G. Chamberland.....	145
do 10...	11.55 p.m.	38	do .....	N. Merrill .....	Jno. Dalton .....	41
do 16...	9.30 a.m.	37	do .....	E. S. Vye.....	W. Martin.....	25
do 21...	12.00 a.m.	Special.	do .....	E. L. Watts .....	John Morton.....	150
do 23...	9.15 a.m.	do ...	do .....	A. Bélanger.....	J. Valcour.....	131
do 28...	2.20 p.m.	do ...	do .....	W. J. Dickson.....	A. Calder.....	87
Oct. 2...	1.05 a.m.	32	Express .....	A. McLellan .....	B. Lutes.....	147
do 6...	7.45 a.m.	Special.	Freight .....	X. Langlais.....	R. F. Chamberlin.....	145
do 8...	7.00 a.m.					
do 23...	7.45 p.m.	Special.	Freight .....	James McDonald .....	John Edwards.....	13
do 26...	6 & 7 p.m.					
do 28...	2.00 p.m.	Special.	Freight .....	P. McGee.....	J. G. McDonald.....	112
do 29...	2 & 3 a.m.	18	do .....	J. McCafferty.....	J. W. Nairn.....	80
do 29...	1.00 a.m.	Special.	do .....	W. Crocket.....	H. B. Maltby .....	20
do 30...	6.35 p.m.	35	Accommodation	A. Armstrong.....	S. Ross.....	47
Nov. 2...	5.15 p.m.		Shunting.....		{ James McDermott .....	99
					{ M. F. O'Brien.....	101
do 2...	8.30 a.m.		do .....		J. McDermott.....	99
do 5...	11.40 a.m.	36	Accommodation	A. Armstrong .....	D. Pines .....	54
do 12...	6.15 a.m.	27	Freight .....	J. T. McGinn .....	C. P. Atkinson.....	144
do 18...						

## RAILWAY.

on the Line of the Intercolonial Railway, &amp;c.—Continued.

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Sackville Bridge..	{ J. Linkletter. } { Wm. Buck.... }	Employé.	Collision .....	{ Finger broken.... } { Slightly hurt .....	
Rimouski.....	Célestin Rioux	do ...	While coupling.....	Slightly injured.	
Assametquaghan	E. Soucy.....	do ...	While getting on van....	Leg injured.....	
Canaan .....	John Dalton....	do ...	Collision .....	Fatal .....	Accidental.
Kent Junction...	John Trites.....	do ...	Hand caught in car door	Thumb crushed..	
Bathurst.....	T. McDonald ...	do ...	While taking water, tank pipe caught finger.	Finger badly bruised.	
Sayabec .....	A. Beaulieu....	do ...	While shunting.....	Injured foot .....	
Stellarton .....	Wm. Campbell.	do ...	While coupling.....	Left leg injured...	
Canaan.....	Mrs. Tucker and child.	Pass'ngers	First class car left the rails and collided with freight car in siding.	Slightly injured..	
2½ miles west of Trois Pistoles.	Joseph Talbot.	Employé.	While attempting to remove hand car from track was struck by train.	Injured about the head and body.	
Newcastle.....	Jas. Copp.....	do ...	Fell off switch ladder....	Side and hip injured.	
1 mile east of Truro.	Philip Lepper..	do ...	Fell off train while in motion.	Face injured.....	
Richmond Wharf	H. B. Ward....	Neither....	Tripped over boards on wharf.	Shaken & bruised	
Cedar Hall.....	Peter Rosseau.	Employé..	While shunting.....	Finger bruised....	
Amherst.....	R. Kennedy.....	do ...	Steam escaped from tallow cup.	Arm burned.....	
Jacquet River....	R. Davidson....	do ...	Fell off platform.....	Back hurt.....	
Dickies Platform	Wm. Dickie....	Neither....	Fell from car.....	Not seriously hurt	
Moncton.....	L. Hicks.....	Employé.	{ Engine collided with a car while shunting.	{ Head cut and leg bruised.	
do .....	Wm. Dawson...	do ...	Run over while shunting.	Fatal.....	do
3 miles east of Barnaby River.	Unknown.....	Neither....	Struck by engine while walking on track.	do .....	do
Berry's Mills.....	Wm. Stears....	Employé..	Slipped and fell while crossing track in front of train.	Struck on back and left leg.	
Amherst.....	T. S. Moore....	do ...	Struck by hand truck while handling freight.	Back injured.....	

## INTERCOLONIAL

## RETURN of Accidents and Casualties which have occurred

Date.	Time of Day or Night.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1885.						
Nov. 20...	5.50 p.m.	Special.	Freight .....	G. B. Humphrey .....	John Morton.....	74
do 20...	7.00 p.m.					
do 26...	2.58 p.m.	36	Accommodation	A. Armstrong.....	D. Pineo.....	54
Dec. 3...	9.30 a.m.	Special.	Freight .....	J. A. Yeo.....	R. Chamberlain.....	75
do 4...	5.00 a.m.	36	Accommodation	N. L. McDougall.....	J. D. McKay.....	42
do 8...	9.30 a.m.	39	Freight .....	J. W. Henderson.....	M. Fuller.....	29
do 11...	2.20 p.m.	23	do .....	J. Cragie.....	C. Edwards.....	4
do 14...	7.30 a.m.	37	do .....	J. T. McGinn.....	W. D. Martin.....	25
do 15...	6.40 a.m.		Shunting.....		Chas. McHugh.....	36
do 17...	7.20 a.m.	42	Freight .....	D. Morin.....	J. Miller.....	38
do 25...	11.25 p.m.	Special.	do .....	W. M. Thompson.....	H. S. Whitney.....	149
1886.						
Jan. 1...	6.15 p.m.	48	do .....	F. Derouin.....	A. Doig.....	3
do 5...	9.00 a.m.	Special.	do .....	Nap. Bernier.....	Jas. Smith.....	130
do 7...	1.30 a.m.	do ...	do .....	E. Soucy.....	J. Valcourt.....	131
do 11...	1.40 a.m.		Shunting .....		J. McDermott.....	99
do 12...	9.30 a.m.	Special.	Freight .....	J. E. Evans.....	H. B. Maltby.....	106
do 14...	4.10 a.m.	47	do .....	Ls. Couture.....	G. Montgomery.....	31
do 18...	9.30 a.m.		Shunting .....			
do 20...	6.00 a.m.	Special.	Freight .....	D. Brownell.....	E. Rushton.....	128
do 21...	2.40 p.m.	27	do .....	R. A. Rainnie.....	W. J. Hunter.....	48
do 24...	11.10 a.m.		Shunting .....		Geo. Sears.....	94
do 25...	7.15 a.m.	Special.	Freight.....	F. Beaulieu.....	W. E. Turner.....	84

## RAILWAY.

## on the Line of the Intercolonial Railway, &amp;c.—Continued.

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Between Newcastle & Derby	M. Haley... ..	Employé.	Hand caught in car door.	Thumb bruised.	
Charlo .....	R. M. Currie....	do ...	Strained himself lifting a door.	Hurt internally...	
Berry's Mills... ..	Geo. Wheaton...	Neither...	Team struck while crossing track.	Slightly hurt.....	
Ste. Flavie.....	E. Rioux.....	Employé.	Slipped and fell while attempting to get on car.	Foot wrenched ...	
Campbellton. ....	W. Wells. ...	do ...	While coupling. ....	Finger bruised...	
New Mills.....	Chas. Ayer....	do ...	Strained himself while jacking up a car.	Slightly hurt.....	
Sackville. ....	C. Beeswanger.	do ...	Lifting foot board from box cars.	Hand bruised.....	
Canaan.....	J. Lewis.....	do ...	Fell from car.....	Leg hurt.....	
Moncton.....	J. Wilson.....	do ...	While coupling.....	Thumb crushed...	
Isle Verte.....	L. Pelletier.....	do ...	While unloading freight.	Leg bruised.....	
Kent Junction...	Jno. Delaney...	do ...	Fell on shaker gear. ....	Head cut .....	
St. Charles.....	E. Fournier....	do ...	While coupling.....	Shoulder and arm crushed.	
St. Moïse.....	A. Michaud....	do ...	Fell from car.....	Leg hurt.....	
Campbellton.....	E. Perron. ....	do ...	While coupling.....	Two fingers cut off.	
Moncton.....	H. Wright.....	do ...	do .....	Back and leg injured.	
do .....	R. McKenzie....	do ...	Slipped while working on snow plough.	Ankle sprained...	
St. Charles.....	G. Brasley.....	do ...	While coupling.....	Finger crushed...	
Moncton.....	Lewis Hicks....	do ...	Hand caught in crank of switch.	Finger bruised and lacerated.	
Bartibogue.....	J. Holland.....	do ...	While coupling. ....	Breast hurt.....	
Darling's Tank..	Jas. Moody.....	do ...	Fell against gauge glass	Face and eye scalded.	
Campbellton....	A. Delany.....	do	While coupling. ....	Hand crushed....	
4 miles east of Assemetquan,	Odilon Lerasseur.	do ...	Fell from car .....	Fatal. ....	Accidental.

## INTERCOLONIAL

## RETURN of Accidents and Casualties which have occurred

Date.	Time of Day or Night.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1886.						
Jan. 25...	6 30 a.m.	27	Freight.....	Wm. Morgan .....	S. Watson .....	52
do 31...	5.45 p.m.	Special.	Plough and flanger.	Jas. Daley .....	N. Sinclair .....	91
Feb. 1...	6.30 p.m.	13	Accommodation	W. H. Donkin .....	Robert McDonald .....	55
do 4...	1.00 p.m.	Special.	Freight .....	R. W. Vye. ....	S. Wilson.....	44
do 6...	5.35 p.m.	8	Sussex Express.	J. H. Sproull.....	F. Whitney.....	65
do 13...	6.40 a.m.	38	Freight .....	D. Hunter .....	Wm. Russel.....	103
do 13...	1.00 a.m.		Shunting .....		O. Brock .....	96
do 16...	10.00 p.m.		do .....		John Leonard .....	95
do 17...	4.30 p.m.		do .....		Robert James.....	100
do 18...	1.00 p.m.	Special.	Freight.....	Nap. Bernier. ....	Jos. McGuigan .....	143
do 19...	2.55 p.m.	do	Snow plough....	J. E. Evans.....	do .....	143
do 19...	5.15 a.m.	do	Freight.....	C. Angus .....	John Donald .....	153
March 10.	6.00 p.m.		Shunting .....		H. Como .....	23
do 12...	9.20 a.m.	18	Accommodation	Jas. Miller.....	Mechias Wall. ....	135
do 12...	7.15 a.m.	3	do	B. White.....	A. Davey .....	49
do 17...	6.45 a.m.		Shunting .....		E. Tobin .....	82
do 18...	2.45 p.m.	Special.	Freight.....	Geo. Lamkie.....	H. B. Maltby .....	20
do 20.	11.00 a.m.	35	Accommodation.	N. L. McDougall. ....	D. Pineo .....	60
do 24.	8.45 a.m.		Shunting .....		J. W. Cole .....	18
do 24.	11.25 a.m.		do .....		do .....	18

[1886]

## RAILWAY.

## on the Line of the Intercolonial Railway, &amp;c.—Continued.

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Torryburn.....	Wm. Boyd.....	Employé.	While unloading sleepers, some fell on him.	Slightly injured...	
Rothesay .....	Thos. Heenan. .	Neither...	Struck by snow and ice thrown by flanger.	Slightly hurt.....	
Shubenacadie....	Jas. Ogilvie....	Passenger	Fell when getting off train in motion.	2 fingers crushed, and otherwise injured.	
Petite Roche....	John Murray...	Employé.	Engine struck an ox, causing several cars to leave the rail.	Side hurt.....	
Hampton .....	Newell August (Indian.)	Neither ...	Attempting to get on car while in motion.	Hurt about head and hips.	
Campbellton. ...	D. Hunter.....	Employé.	Slipped on ice .....	Sprained ankle...	
Chaudière Junction.	Paul Comere...	do	While shunting.....	2 fingers bruised.	
Truro .....	HarrisWhidden	do	While coupling.....	Finger crushed and hand bruised.	
St. John.....	Thatcher Irvine	do	Slipped while going over cars.	Ruptured.....	
Assemetquaghan	Jas. Coulombe.	do	While shunting.....	Dislocated shoulder.	
2 miles west of Newcastle.	{ Henry Peters Mrs. Henry Peters.....	{ Neither. do }	Struck by plough, while walking on track.	Not seriously hurt.	
Spring Hill Junction.	C. H. Bass.....	Employé..	While coupling.....	3 fingers injured.	
St. John.....	A. G. Ward....	do	While shunting.....	Sprained knee....	
Campbell's Sid-ing.	Benj. Campbell (3 years old.)	Neither ...	Standing along side track was struck by engine.	Fatal.....	Accidental.
Painsec Junction	H. B. Gordon..	Employé.	While coupling .....	Finger crushed...	
Halifax. ....	John Sullivan.	Neither....	While crossing track was struck by engine.	Arm and leg broken and otherwise injured.	
Bathurst. . . .	David Oulton..	Employé..	While coupling.....	Finger crushed...	
Moncton.....	Jas. Card .....	do	Handling baggage.....	do	
do .....	Geo. Armstrong	do	While coupling.....	Thumb crushed..	
do .....	E. Burke.....	do	do .....	do	

[1886]

## INTERCOLONIAL

## RETURN of Accidents and Casualties which have occurred

Date.	Time of Day or Night.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1886.						
March 31.	7.40 p.m.	38	Freight .....	D. Hunter.....	C. P. Atkinson ..	137
April] 5...	10.00 a.m.		Shunting .....		Harry Como.....	23
do 21...	3.45 p.m.	Special.	Freight.....	J. Chatigny.....	Jas. Scott .....	146
do 22...	7.20 p.m.	10	Express.....	Jas. Millican.....	Hugh Tait.....	68
do 28...	3.00 p.m.					
do 30...						
May 1...	7.00 a.m.	Special.	Freight .....	P. McGee .....	J. G. McDonald...	61
do 3...	7.25 a.m.	do	do .....	W. W. Gordon .....	{ H Cummings..... { J. McEachrin.....	171 166
do 5...	4.10 p.m.	do	do .....	A. Bélanger.....	W. J. Gorham.....	40
do 7...	6.30 p.m.		Shunting .....		M. F. Hicks.....	101
do 10...	2.50 p.m.	50	Freight .....	Louis Couture .....	Alex. Doig.....	3
do 11...	10.00 a.m.	Special.	do .....	W. J. Dickson.....	A. Calder.....	121
June 15...	11.45 a.m.	do	do .....	Jos. Paradis.....	W. E. Turner.....	84
do 16...	1.35 p.m.	do	do .....	G. A. Chesley .....	J. Gilfillan.....	53
do 24...	9.00 a.m.		Shunting.....		Geo. Sears.....	94
do 25...	5.20 a.m.	9	Express.....	Win. Kelly.....	H. Tait.....	68
do 28...	7.30 a.m.	Special.	Working .....	A. Bernier.....	R. F. Chamberlain.....	145
do 30...	6.20 a.m.	33	Express.....	Thos. Corbett.....	R. Bulmer .....	164

## RAILWAY.

## on the Line of the Intercolonial Railway, &amp;c.—Continued.

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
2 miles west of Moncton.	Chas. Campbell	Employé.	Fell from cars.....	Fatal.....	Accidental.
St. John .....	H. Thompson...	do	In jumping from car.....	Knee hurt .....	
Assemetquaghan	Jos. Coulombe.	do	Tank pipe fell on him.....	Slightly injured..	
St. John.....	Dennis Gallivan.	Passenger	Attempting to board train while in motion.	Fatal .....	do
do .....	Geo. Russell (porter).	Employé.	While loading freight.....	Knee hurt .....	
do .....	Pat. Driscoll (porter).	do	Lifting baggage .....	Back strained....	
3 miles east of Ste. Luce.	Jos. Bouchard..	do	While coupling.....	Two fingers bruised.	
New Glasgow ...	M. O'Brien .....	do	Engines collided .....	Slightly injured..	
Trois Pistoles ...	J. B. Gagnon...	do	Fell between cars .....	Fatal.....	No inquest..
Moncton .....	Fred. Evans....	do	While coupling.....	Slightly injured..	
Ste. Anne .....	Odilon Fournier.	do	do .....	Seriously injured.	
Stellarton .....	W. E. McLean.	do	While shunting .....	Hip joint injured.	
Campbellton....	Chas. Mercier..	do	Gauge glass broke striking him on top of hand.	Artery cut .....	
Pte. du Chêne...	B. Elliott .....	do	While coupling .....	Arm injured.....	
Campbellton.....	A. Delaney .....	do	do .....	Hand crushed....	
Torryburn.....	Frank Muse (Indian).	Neither ...	Found lying on track dead.	Fatal.....	Accidental.
4 miles east of Causapsal.	Jas. Martin.....	Employé.	While unloading boards.	Leg broken.....	
Petite Roche.....	Miss Bertin .....	Passenger	Jumped from train while in motion.	Forehead slightly bruised.	

## APPENDIX No. 56.

## EASTERN EXTENSION RAILWAY.

OFFICE OF THE CHIEF SUPERINTENDENT,  
MONCTON, N. B., 21st October, 1886.

SIR,—I have the honor to submit the following report on the working of the Eastern Extension Railway for the fiscal year which ended on the 30th June, 1886.

I enclose the report of the Chief Engineer of the Intercolonial Railway on the permanent way and works, the report of the Mechanical Superintendent of the Intercolonial Railway on the rolling stock, and the following statements prepared by the Chief Accountant and Treasurer.

- |                                  |                   |
|----------------------------------|-------------------|
| No. 1. Capital account.          |                   |
| 2. Revenue account.              |                   |
| 3. Locomotive power              | (Abstract No. 1.) |
| 4. Car expenses                  | ( " 2.)           |
| 5. Maintenance of way and works. | ( " 3.)           |
| 6. Station expenses              | ( " 4.)           |
| 7. General charges               | ( " 5.)           |
| 8. General balance.              |                   |

The length of railway operated was the same as last year, 80 miles.

The general offices of the railway at New Glasgow were closed, being found to be unnecessary.

The gross expenditure for the year was \$94,756.06.

The expenditure for maintenance of way and works was unusually heavy.

Twenty-two miles of fencing were built, and about seventy-five thousand cross-ties were put into the track. The cost of these two items alone being \$28,000.

The whole of the railway and rolling stock were maintained in good order, and some improvements were made.

The gross earnings of the year were \$66,893.11, being a slight decrease from last year's earnings. The decrease was in both passenger and freight traffic.

I have the honor to be, Sir,

Your obedient servant,

D. POTTINGER,  
*Chief Superintendent.*

COLLINGWOOD SCHREIBER, Esq.,

Chief Engineer and General Manager Government Railways,  
Ottawa.

**No. 1.—EASTERN EXTENSION RAILWAY.  
CAPITAL ACCOUNT, Year ending 30th June, 1886.**

Cr.

Dr.

	\$	cts.	1886.	\$	cts.
1885. June 30.....	1,284,311	97	June 30.....	1,284,495	76
1886. June 30.....		183	By Dominion of Canada.....		
		79			
	1,284,495	76			
				1,284,495	76

[1886]

MONCTON N.B., 30th June, 1886.

THOMAS WILLIAMS,  
*Chief Accountant and Treasurer.*

No. 2.—EASTERN EXTENSION RAILWAY.  
REVENUE ACCOUNT, Year ending 30th June 1886.

CR.

DR.

Year ending 30th June, 1886.	Expenditure.	Year ending 30th June, 1886.	Earnings.	Year ending 30th June, 1886.
\$ cts.		\$ cts.		\$ cts.
18,621 87	Locomotive power	37,658 89	Passenger traffic .....	36,952 48
10,608 88	Car expenses	25,522 75	Freight traffic .....	22,237 55
25,411 18	Maintenance of way works	9,868 37	Mails and sundries .....	7,703 08
8,537 74	Station expenses	73,050 01	Balance .....	68,893 11
15,093 98	General charges	5,223 64		27,862 95
		78,273 65		94,756 06

THOMAS WILLIAMS,  
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1886.

## No. 3.—EASTERN EXTENSION RAILWAY.

## LOCOMOTIVE POWER—(Abstract No. 1).

Year ending 30th June, 1885.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
1,200 79	Mechanical Superintendent's salary, Clerk's, office and travelling expenses..	700 00
4,657 11	Wages, Drivers, Firemen and Cleaners.....	4,228 28
4,437 75	Fuel.....	4,333 73
1,506 10	Oil, tallow, waste and small stores.....	916 60
6,737 44	Repairs to engines, tenders and engine tools.....	6,285 73
16 16	Water, including pump and tank repairs.....	46 79
66 52	Miscellaneous.....	284 07
18,621 87		16,795 20

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 4.—EASTERN EXTENSION RAILWAY.

## CAR EXPENSES.—(Abstract No. 2).

Year ending 30th June, 1885.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
1,531 00	Repairs to passenger cars.....	2,180 41
176 04	do postal, express and baggage cars.....	200 41
2,146 78	do freight cars and vans.....	1,089 13
4,882 93	Wages of conductors, train baggage masters and brakemen.....	5,489 88
432 29	Oil and waste for packing.....	424 72
1,023 83	Small stores and fuel.....	419 62
413 01	Miscellaneous.....	382 88
10,608 88		10,187 05

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

[1886]

## No. 5.—EASTERN EXTENSION RAILWAY.

## MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Year ending 30th June, 1885.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
13,511 62	Wages repairing roadway, fences, semaphores,.....	17,373 06
937 09	Rails and fastenings .....	1,197 50
5,097 53	Sleepers.....	19,785 86
3,944 18	Timber, lumber, &c., for repairs to bridges, fences, &c.....	7,831 08
78 05	Repairs to wharves .....	2 90
145 16	do buildings and platforms.....	537 42
324 87	do snow ploughs, flangers and tools.....	504 89
1,249 15	Clearing ice and snow.....	971 15
123 53	Miscellaneous.....	108 00
25,411 18		48,311 86

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 6.—EASTERN EXTENSION RAILWAY.

## STATION EXPENSES—(Abstract No. 4)

Year ending 30th June, 1885.		Year ending 30th June, 1886.
\$ cts.		\$ cts.
6,902 83	Salaries and wages of Station Masters, Agents, Clerks, Telegraph Operators, Baggage Masters, Yard Masters, Switchmen, Watchmen and Laborers	6,908 43
1,321 72	Fuel, oil, light, stationery, tickets and other incidental expenses.....	1,049 59
313 19	Miscellaneous.....	580 11
8,537 74		8,538 13

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 7.—EASTERN EXTENSION RAILWAY.

## GENERAL CHARGES—(Abstract No. 5).

Year ending 30th June, 1885.		Year ending 30th June, 1886.	
\$	cts.	\$	cts.
4,181 90	Superintendent, Train Despatchers' Clerks, office and travelling expenses	2,188 87	
1,894 55	Accounting Department, salary of the Accountant and Auditor, Clerks, office and travelling expenses.....	1,197 63	
288 53	Advertising.....	62 25	
85 37	Damages to men, animals and goods.....	52 02	
8,240 61	Ferry.....	6,763 43	
45 75	Telegraph expenses (not including pay to Operators).....	69 91	
357 27	Miscellaneous.....	589 65	
15,093 98		10,923 82	

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

## No. 8.—EASTERN EXTENSION RAILWAY.

DR.

GENERAL BALANCE, Year ending 30th June, 1886.

CR.

	\$	cts.		\$	cts.
Dominion of Canada.....	33,759	91	Intercolonial Railway.....	38,114	12
Stations.....	664	03	Armstrong Transfer Co.....	0	50
Cash.....	1,085	12	Old Colony Railway.....	4	00
Stores.....	6,351	00	New Brunswick Railway.....	852	48
Rents.....	21	00	Maine Central Railway.....	1,717	56
Fines and rewards.....	9	80	International Steamship Co.....	250	75
Boston and Maine Railway.....	80	21	Bras d'Or Steamship Co.....	3	00
Western Union Telegraph Co.....	240	62	Bank of Montreal.....	4,197	65
Departmental Accounts—					
Post Office.....	\$2,909	60			
Militia Department.....	3	60			
	2,913	20			
Individual accounts.....	15	17			
	45,140	06		45,140	06

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

MONCTON, N.B., 30th June, 1886.

[1886]

## EASTERN EXTENSION RAILWAY.

RETURN of Accidents and Casualties which have occurred on the line of the Eastern Extension Railway, during the Year ending 30th June, 1886.

Date.	Time of Night or Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1886. May 25....	10.00 a.m.	Special.	Freight.	Alex. Grant...	Jas. Sproull.	173	2 miles east of Tracadie.	Jno. McGillivray.	Neither...	While attempting to cross track with cart and pair of oxen was struck by engine.	Leg broken and head cut.	

MONCTON, N.B., 28th October, 1886.

INTERCOLONIAL RAILWAY,  
CHIEF ENGINEER'S OFFICE,  
MONCTON, N.B., 19th October, 1886.

SIR,—I have the honor to submit the following report on the maintenance of the Eastern Extension Railway, for the year ending 30th June, 1886.

The mileage remains the same as last year, 80 miles.

FENCING.

Twenty-two miles of barbed wire and lath wire, fencing were erected in place of decayed board and pole fencing removed or burned, at a cost of about \$9,000.

SLEEPERS.

Seventy-four thousand eight hundred and sixty-two sleepers were renewed during the year, at a cost of about \$19,000.

A large proportion of these sleepers were Prince's pine, hachmatac and cedar.

BALLAST, ETC.

About 1,000 cubic yards of ballast were put out on the main line, to make up subsidences, widen embankments and to repair a wash-out at James River.

At the 74th mile post, a diversion was made in the main line, whereby 700 feet of straight line were substituted for 725 feet of three degrees reverse curve.

SIGNALS.

Telegraph signals were put up at the following stations: French River, Antigonish, Tracadie, Harbor au Bouche and Mulgrave.

BUILDINGS, PLATFORMS, ETC.

A flag station was erected at Brierly's Brook, and the platform lengthened 100 feet.

A flag station and platform was erected at Gerrior's.

At Mulgrave, 40 by 50 feet of the asbestos roofing on engine house was renewed.

A new cattle pen, 100 by 75 feet, was provided.

A road, 300 feet long, was built to connect the public road with wharf.

A portion of the waiting room was partitioned off for an office for the agent.

A portion of the freight shed was partitioned off for a baggage room.

Necessary repairs were made to the following stations and platforms: French River, Avondale, Antigonish, South River, Pomquet, Heatherton, Tracadie and Harbour au Bouche.

BRIDGES, CULVERTS, ETC

Very considerable repairs were made to the following bridges: Pine Tree (trestle), Dennis (trestle), Dewars (Howe truss), James River (Howe Truss), Yankee Grant (Howe Truss).

Fifteen new bents and 42 guard piles were renewed in West River bridge at Antigonish.

Two new bents and 18 guard piles were renewed in Pomquet bridge.

The following Howe truss bridges were painted: Yankee Grant, West River and South River.

Considerable repairs were made to seven box culverts at different points of the line.

Sixty feet of double crib-work was built at James River, to protect abutment of bridge, which was partially washed out by a freshet last spring.

About 200 cubic yards of stone work was built, at James River, West River and other points to protect embankments.

The expenditure for renewals of sleepers and fencing will be very much reduced after next year, but the maintenance of the wooden bridging (of which there is a considerable quantity) will increase from year to year, until these structure are renewed with iron or steel.

The track has been well maintained and is in good running order.

I am, Sir,

Your obedient servant,

P. S. ARCHIBALD,  
*Chief Engineer.*

D. POTTINGER, Esq.,  
Chief Superintendent,  
Moncton, N.B.

INTERCOLONIAL RAILWAY,  
MECHANICAL SUPERINTENDENT'S OFFICE,  
MONCTON, N.B., 23rd October, 1886.

SIR,—I beg to submit the following statement concerning the rolling stock on the Eastern Extension Railway.

It consists of:—

- 9 engines.
- 6 first-class passenger cars.
- 4 second-class do
- 4 postal, baggage and express cars.
- 2 conductors' vans.
- 25 box cars.
- 5 cattle cars.
- 70 platform cars.
- 150 5-ton hopper coal cars.

The shops at New Glasgow were closed in January last, since which time the work of repairing the rolling stock has been wholly done in the shops at Richmond and Moncton. Nearly all the engines and all the passenger and baggage cars but three have been thoroughly overhauled and put in good condition.

Nothing has been done to improve the water service though it is much required.

I am, Sir,

Your obedient servant,

H. A. WHITNEY,  
*Mechanical Superintendent*

D. POTTINGER, Esq.,  
Chief Superintendent, Intercolonial Railway,  
Moncton, N.B.

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 APPENDIX No. 5c.
 

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 WINDSOR BRANCH RAILWAY,
 

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 OFFICE OF THE CHIEF SUPERINTENDENT,  
 MONCTON, N.B., 20th October, 1886.

SIR,—I have the honor to submit the following statements, showing the results of the working of the Windsor Branch Railway for the year which ended 30th June, 1886:—

- No. 1. Revenue account.  
 2. Maintenance of way and works.  
 3. General balance.  
 4. Statement of earnings.

I also send you the report of the Chief Engineer on the condition of the permanent way and works.

This line, 32 miles in length, was operated during the year by the Windsor and Annapolis Railway Company, on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings, the balance, one-third, being paid over to the Government, the latter maintaining the line.

The gross earnings for the year amounted to.....	\$23,658 11
The expenditure for maintenance of way and works was..	19,229 49
	<u>\$ 4,428 62</u>

The gross earnings show a slight decrease when compared with last year, as follows:—

1884-85 .....	\$24,451 35
1885-86 .....	23,658 11
	<u>\$ 793 24</u>

The permanent way and all the works connected with this railway were maintained in good working order.

I have the honor to be, Sir,

Your obedient servant,

D. POTTINGER,  
*Chief Superintendent.*

COLLINGWOOD SCHREIBER, Esq.,

Chief Engineer and General Manager Government Railways,  
 Ottawa.

[1886]

No 1.—WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT, Year ending 30th June, 1886.

CR.

DR.

Previous Year.	Expenditure.	Year ending 30th June, 1886.	Previous Year.	Receipts and Earnings.	Amount, Year ending 30th June, 1886.
\$	cts.	\$	cts.	\$	cts.
18,751 96	Maintenance way and works..... (Abstract No 1.)	19,229 49	7,869 73	Passenger traffic.....	8,105 09
			16,821 75	Freight traffic.....	14,401 18
			969 87	Mails.....	1,151 84
5,699 39	Balance.....	4,428 62			
24,451 35		23,658 11	24,451 35		23,658 11

R. B. BOGGS,  
*Acct., W. B. Ry.*

MONCTON, N. B., 30th June, 1886.

Examined,  
THOMAS WILLIAMS,  
*Chief Accountant and Treasurer.*

## No. 2.—WINDSOR BRANCH RAILWAY.

## MAINTENANCE of Way and Works.

Previous Year.	Particulars.	Amount.
\$ cts.		\$ cts.
6,403 98	Repairs to track.....	5,479 23
472 26	Rails and fastenings.....	1,721 78
3,196 25	Sleepers.....	5,752 92
193 09	Bridges.....	269 07
97 59	Signals.....	38 01
187 43	Culverts and cattle guards.....	38 25
4,671 76	Buildings and platforms.....	€96 03
556 87	Wharf at Windsor.....	
6 90	Switch locks.....	20 70
749 93	Fencing.....	3,439 45
43 50	Hand cars and trollies.....	26 30
210 06	Tools and repairs.....	202 14
722 01	Snow ploughs and flangers.....	408 20
1,209 29	Accountant's office and expenses.....	1,127 91
31 04	Miscellaneous.....	9 50
18,751 96		19,229 49

R. B. BOGGS,  
Acct., W. B. Ry.

MONCTON, N. B., 30th June, 1886.

Examined,

THOMAS WILLIAMS,  
Chief Accountant and Treasurer.

[1886]

No. 3.—WINDSOR BRANCH RAILWAY.  
MONTHLY STATEMENT of Receipts—One-third Earnings.

Month.	Passengers.	Freight.	Mails.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1885—July .....	874 73	1,076 85	96 91	2,048 52
August.....	1,083 56	1,169 37	96 91	2,349 84
September.....	1,317 88	1,571 55	96 90	2,986 33
October.....	731 48	1,853 00	96 91	2,681 39
November.....	539 37	1,794 35	96 90	2,430 62
December.....	562 35	1,210 29	96 91	1,869 55
1886—January.....	411 89	1,023 75	94 45	1,530 09
February.....	339 35	911 51	94 45	1,345 31
March.....	433 18	950 12	94 46	1,477 76
April.....	521 00	1,064 52	95 68	1,681 20
May.....	519 71	978 38	95 68	1,593 77
June.....	770 56	797 49	95 68	1,663 73
	8,105 09	14,401 18	1,151 84	23,658 11

R. B. BOGGS,

*Acct., W. B. Ry.*

MONCTON, N.B., 30th June, 1886.

Examined,

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

No. 4.—WINDSOR BRANCH RAILWAY.

DR.

GENERAL BALANCE.

CR.

1886.	\$ cts.	1886.	\$ cts.
June 30 Windsor and Annapolis Railway..	2,005 85	June 30 Intercolonial Railway.....	2,391 36
Stores account.....	4,359 90	Dominion account.....	3,974 39
	6,365 75		6,365 75

R. B. BOGGS,

*Acct., W. B. Ry.*

MONCTON, N.B., 30th June, 1886.

Examined,

THOMAS WILLIAMS,

*Chief Accountant and Treasurer.*

[1886]

## INTERCOLONIAL RAILWAY.

CHIEF ENGINEER'S OFFICE,

MONCTON, N.B., 19th October, 1886.

SIR,—I have the honor to submit the following report on the maintenance of the Windsor Branch, for the year ending 30th June, 1886.  
The length of the branch is 32 miles.

## TRACK.

One and a quarter miles of old iron rails were replaced with steel rails weighing 56 pounds to the yard.

## SLEEPERS.

Thirteen thousand two hundred and seventy sleepers were renewed.

## FENCING.

Eight miles of barbed wire and lath wire fencing were erected in place of old, decayed pole fencing. Extensive repairs have been made to the old pole fences.

## BUILDINGS.

Necessary repairs were made to the platforms and stations at Windsor Junction, Beaver Bank, Ellershouse, Stillwater and Windsor.

A small coal shed was built at Mount Uniacke tank house.

Outside windows were provided for dwelling apartments of Windsor Station.

## SCALES.

The station scales at Mount Uniacke and Ellershouse were taken out and sent to Montreal, where they were thoroughly overhauled and repaired.

## BRIDGES, CULVERTS, ETC.

The wooden bridge at Sackville River was replaced with three pairs of steel plate girders of 30 feet span each. The masonry in the piers of this bridge was thoroughly overhauled, repaired and pointed.

St. Croix Bridge was provided with new struts and straining beams.

Jardine's Bridge was overhauled and repaired.

The stringers of open culvert at Stillwater were renewed.

The turntable at Windsor was repaired.

The track is in good order.

I am, Sir,

Your obedient servant,

P. S. ARCHIBALD.

*Chief Engineer.*

D. POTTINGER, Esq.,  
Chief Superintendent,  
Moncton, N.B.

[1886]

APPENDIX No. 5*d*.

## PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,

CHARLOTTETOWN, 6th September, 1886.

SIR,—I have the honor to submit the following report on the working of the Prince Edward Island Railway for the fiscal year which ended 30th June, 1886.

I enclose the report, accompanied by statements, of the Mechanical Superintendent and Storekeeper, and also the following statements prepared by the Accountant and Auditor:—

- |   |                   |
|---|-------------------|
| No. 1. Capital account.                 |                   |
| 2. Revenue account.                     |                   |
| 3. Locomotive power                     | (Abstract No. 1.) |
| 4. Car expenses                         | ( " 2.)           |
| 5. Maintenance of way and works         | ( " 3.)           |
| 6. Station expenses                     | ( " 4.)           |
| 7. General charges                      | ( " 5.)           |
| 8. Statement of general stores account. |                   |
| 9. General balance.                     |                   |
| 10. Comparative statement of averages.  |                   |

## CAPITAL ACCOUNT.

The total expenditure on capital account to 30th June, 1885, was.....	\$3,731,312 56
Add to which the expenditure on Cape Traverse Branch for year ending 30th June, 1886.....	4,668 33
	<hr/>
Making the total expenditure to 30th June, 1886....	\$3,735,980 89
	<hr/> <hr/>

The rolling stock provided on capital account up to the 30th June, 1885, was—

- 21 locomotives.
- 17 first-class passenger cars.
- 15 second-class and baggage cars.
- 3 postal and smoking cars.
- 175 box and stock cars.
- 125 platform cars.
- 3 conductors' vans.
- 8 snow ploughs.
- 7 flangers.
- 1 pay car.

Of the above stock, 40 10 ton box cars and 10 10-ton platform cars have been rebuilt during the year at a cost of \$24,189.92, to replace an equal number of 8-ton cars. This sum is included in the working expenses.

## REVENUE ACCOUNT.

The small-pox epidemic which visited this island last season had a demoralizing effect on the passenger and freight traffic, and seriously affected the revenues of the year.

The gross earnings for the year amounted to.....	\$155,584 36
Previous year.....	158,558 06
Decrease .....	<u>\$ 3,003 70</u>

The earnings, per mile of railway, compared with the previous year as follows:—

1884-85.....	\$784 44
1885-86.....	740 87
A decrease per mile of.....	<u>\$ 43 57</u>

The length of road operated in each year was the same, namely, 210 miles.

## STATEMENT.

	Passengers Carried.	Earnings.
1884-85 .....	130,423	\$66,054 32
1885-86 .....	120,374	62,079 81
Decrease.....	<u>10,049</u>	<u>\$3,974 51</u>

	Tons of Freight Carried.	Earnings.
1884-85 .....	57,346	\$74,213 84
1885-86 .....	57,913	76,281 20
Increase .....	<u>567</u>	<u>\$ 2,067 36</u>

The engine mileage, compared with last year, was:—

1884-85 .....	311,443
1885-86 .....	310,434
Decrease.....	<u>1,009</u>

The trains mileage, compared with last year, was:—

1884-85 .....	249,878
1885-86 .....	249,848
Decrease .....	<u>30</u>

The car mileage, compared with last year, was:—

1884-85.....	1,233,476
1885-86.....	1,235,647
Increase.....	<u>2,171</u>

This increase is owing to additional train service on the Cape Traverse Branch.

## EXPENDITURE.

The working expenses, as compared with the previous year, are as follows:—

	Ordinary.	Renewals, Rolling Stock, Rails and Fastenings.	Total.
1884-85.....	\$180,553 54	\$30,653 47	\$211,207 01
1885-86.....	185,849 57	30,894 77	216,744 34
Increase...	<u>\$5,296 03</u>	<u>\$ 241 30</u>	<u>\$ 5,537 33</u>

Included in the above, expended on new work, are the following items:—

A combined freight and passenger station at Peake's.....	\$590 00
Improvement to Peake's station ground, lengthening siding and making it a through one.....	305 58
A station-master's dwelling at St. Peter's.....	691 04
	<u>\$1,586 62</u>

The station building at Peake's is one of the best structures of its kind on the road. The increased siding accommodation at Peake's is of great benefit to shippers.

## TRACK.

Five and one-quarter miles between New Annan and Summerside, on the west-ern division, were re-laid with steel rails, making a continuous steel rail track between Charlottetown and Summerside.

One thousand feet of steel rails were put in Charlottetown yard, and 800 feet of steel rails, at Royalty Junction, to re-place old iron rails.

Nine and one-half miles of track were lifted six inches.

Eighteen and one-third tons of steel fish-plates have been used to replace broken iron plates.

Six hundred iron rails, three steel rail frogs, twenty-two sets of switch sleepers, twenty-four head blocks, and fourteen switch frames were renewed.

A large number of road crossings have been renewed.

The necessary surface ditching and considerable brush cutting has been done.

## SIDINGS.

At Pawe's and at Myrick's warehouse, Tignish, new sidings were put in.

At Peake's, 200 feet were added to the old siding, and it was made a through siding. Two hundred cubic yards of earth were excavated, and twenty cars of ballast were used in this work.

## SLEEPERS.

During the year, 39,566 sleepers have been put in the track.

## BALLASTING.

Six thousand nine hundred and two cubic yards of stone ballast, and 8,500 yards of gravel ballast were distributed.

## BRIDGES, CULVERTS, ETC.

At Elmsdale two new cattle-guards were put in.

Pawe's bridge was newly covered, and otherwise repaired.

Ellerslie bridge was repaired.

Blueshank bridge was temporarily fixed, one end having been carried away by a freset,

At Morell bridge, one end was raised and repairs made. Twenty-five cars of brush and earth were used at the end of this bridge to widen embankment. The bridge was painted.

Marie bridge was painted.

Midgell bridge—a timber crib was placed around pier, and filled with stone ballast. Five cars of stone were used at the end of this bridge for rip-rap. The bridge was painted.

St. Peter's bridge—a pile bent was put under centre span, and other slight repairs made.

Mooney's bridge—a new top was put on.

All other bridges received the necessary attention.

Twenty-eight cattle-guards and twelve cattle-guard stringers were renewed.

Two new timber culverts were put in. Two wooden culverts were rebuilt, and one stone culvert was rebuilt with stone and cement.

#### BUILDINGS AND PLATFORMS.

At Alberton a new floor was put down in office.

At Port Hill the station building was set on sills instead of posts to prevent heaving with frost.

At Summerside extensive repairs were made to the coal shed, and it was raised up and blocked.

At Charlottetown a pitch and gravel roof was put on Superintendent's Office, and the office replastered and otherwise repaired. The roof of freight office was repaired, the office sheathed inside and painted, and a new chimney built. The offices in all other departments received necessary repairs, and were whitewashed. Fifteen thousand shingles were used in repairing roofs of buildings. Three thousand five hundred feet of hemlock plank were used to relay floor in paint shop. The coal shed was raised and blocked up.

At St. Dunstan's, Cemetery, Suffolk and Tracadie, the platforms were rebuilt.

At Mount Stewart the roof of station building was repaired—10,000 shingles being used. Three barrels of pitch and 6 rolls of paper were used to fix gravel roof at this station. The platform was repaired.

At St. Andrews the platform was rebuilt.

At St. Peter's a station master's dwelling was erected. The station roof received needed repairs.

Selkirk flag station was rebuilt to replace one blown down on 23rd September, 1885.

At Rollo Bay the flag station and platform were rebuilt, the former ones having been burnt.

At Souris the platform was repaired.

At Pisquid the platform was rebuilt.

At Peake's a combined passenger and freight station was erected.

At Cardigan 10,000 shingles were used in fixing roof of station.

At Brudenell the platform was rebuilt.

All other platforms and flag stations received necessary attention.

All regular stations received general repairs, and waiting rooms and offices were whitewashed.

#### WHARVES, ETC.

Summerside wharf, which was damaged by storms, received extensive repairs.

At Charlottetown the outer end of wharf was raised four feet. Twenty-five cubic yards of brush and 100 tons of stone were used in this work. About 75 tons of hard stone were placed around breast-work.

At Souris 2,000 feet of plank were used in repairing top covering on road approaches to wharf.

At Georgetown fifty fenders were put on wharf, and 50 tons of stone ballast were used in its repair.

## FENCING.

About 18½ miles of barb wire fence have been erected. Two and two-thirds miles of board and pole fence, one-half mile of hurdle fence, and 2,000 feet of snow fence were rebuilt. The greater portion of the above was erected to replace old fence burnt or blown down by gales. Two and one-quarter miles of the barb wire fence were built in the woods west of Portage Station, western division.

All fencing received the ordinary repairs.

## GENERAL.

The heavy gale of 23rd September, 1885, before referred to, did great damage to snow fences, buildings, wharves, etc., all over the line, and repairs were made at considerable labor and cost. Much time was also expended in repairing bridges, culverts and track, damaged by wash-outs in March, and in putting out fires, and repairing the fences burnt during the season.

## SEMAPHORE SIGNALS, ETC.

All semaphores, switch frames, targets, telegraph signals, and outside lamps, have received attention when necessary, and are in good condition.

## WATER SERVICE.

The "Haggas" water system continues to give good satisfaction.

## ROLLING STOCK.

The rolling stock has received the necessary repairs, and is now in good condition.

## STORES.

The purchases of stores during the year amounted to \$79,2.6.42.

The value of stores on hand, 30th June, 1886, was :—

General stores.....	\$ 59,241 46
Coal.....	2,817 14
Rails and fastenings.....	33,343 17
Old material, serviceable.....	7,932 00
Total.....	<u>\$103,333 77</u>

The stores have, for the most part, been purchased by tender and contracts, which follows out the practice of previous years.

I enclose you a return of accidents and casualties which have occurred on this railway during the year.

I have much pleasure in stating that the officers and employés have, as a rule, performed their duties in a satisfactory and efficient manner.

I have the honor to be, Sir,

Your obedient servant,

JAMES COLEMAN,

*Superintendent.*

COLLINGWOOD SCHRIEBER, Esq.,  
Chief Engineer and General Manager Government Railways,  
Ottawa.

[1886]

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.		CR.
DR.	\$ cts.	\$ cts.
1885. June 30... To cost of road and equipment to date.....	3,731,312 56	3,731,312 56
1886. June 30... To expenditure, year ended 30th June 1886— On Cape Traverse Branch.....	4,668 33	4,668 33
	3,735,980 89	3,735,980 89

W. T. HUGGAN,  
*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886

No. 2.—PRINCE EDWARD ISLAND RAILWAY.  
REVENUE ACCOUNT for the Year ended 30th June, 1886.

Previous Year.	Expenditure.	Year ended 30th June, 1886.	Previous Year.	Receipts.	Year ended 30th June, 1886.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
55,782 13	Locomotive power	51,226 31	66,054 32	Passenger traffic .....	62,079 81
45,068 63	Car expenses	54,994 07	74,213 84	Freight traffic .....	76,281 20
75,486 15	Maintenance of way and works	73,006 22	18,319 90	Mails and sundries .....	17,223 35
25,385 15	Station expenses	26,229 70		Total receipts .....	155,584 36
11,584 95	General charges	12,188 04	158,588 06	..... Balance .....	61,169 98
	Totals.....	216,744 34	211,207 01	Totals .....	216,744 34

W. T. HUGGAN,  
*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

## No. 3.—PRINCE EDWARD ISLAND RAILWAY.

## LOCOMOTIVE POWER—(Abstract No. 1).

Previous Year.	Details.	Year ended 30th June, 1886.
\$ cts.		\$ cts.
1,272 61	Mechanical Superintendent's salary, Clerks, office and travelling expenses...	1,248 83
14,148 15	Wages of Drivers, Firemen and Cleaners.....	14,165 59
15,162 95	Fuel.....	11,799 68
2,565 63	Oil, tallow, waste and small stores.....	2,857 12
20,178 93	Repairs to engines, tenders and engine tools.....	19,353 84
864 53	Water, including pump and tank repairs .....	300 96
1,589 33	Miscellaneous .....	1,600 29
55,782 13	..... Totals.....	51,326 31

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

[1886]

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## No. 4.—PRINCE EDWARD ISLAND RAILWAY.

## CAR EXPENSES—(Abstract No. 2).

Previous Year.	Details.	Year ended 30th June, 1886.
\$ cts.		\$ cts.
7,227 24	Repairs to passenger cars .....	9,855 46
617 72	do postal and Baggage cars .....	1,109 06
22,057 93	do freight cars and Vans.....	27,944 09
11,532 16	Wages of Conductors, Train Baggage Masters and Brakesmen.....	12,365 23
537 67	Oil and waste for packing.....	578 41
2,428 39	Small stores and fuel.....	2,466 14
667 52	Miscellaneous .....	675 68
45,068 63	Totals.....	54,994 07

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

[1886]

No. 5.—PRINCE EDWARD ISLAND RAILWAY.  
MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Previous Year.	Details.	Year ended 30th June, 1886.
\$ cts.		\$ cts.
369 96	Engineer's salary, Clerks, office and travelling expenses .....	404 96
37,911 73	Wages in repairing roadway, fences and semaphores.....	40,074 37
11,700 35	Rails, chairs and spikes .....	10,348 28
10,922 91	Sleepers.....	8,789 78
4,417 81	Timber and lumber for repairs to bridges, cattle-guards, fences, &c.....	4,823 03
953 12	Repairs to wharves .....	1,153 17
4,022 31	do buildings and platforms.....	4,812 36
2,078 63	do snow ploughs, flangers and tools.....	1,714 55
1,109 33	Clearing ice and snow.....	885 72
73,486 15	..... Totals.....	73,006 22

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

No. 6.—PRINCE EDWARD ISLAND RAILWAY.  
STATION EXPENSES—(Abstract No. 4.)

Previous Year.	Details.	Year ended 30th June, 1886.
\$ cts.		\$ cts.
18,854 89	Salaries and wages of Station Masters, Agents, Clerks, Telegraph Operators, Station Baggage-men, Yardmasters, Switchmen, Watchmen and Laborers .....	18,982 39
6,430 26	Fuel, oil, light, stationery, tickets and other incidental expenses.....	6,247 31
.....	Miscellaneous.....	.....
25,285 15	..... Totals.....	25,229 70

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

[1886]

## No. 7.—PRINCE EDWARD ISLAND RAILWAY.

## GENERAL CHARGES—(Abstract No. 5).

Previous Year.	Details.	Year ending 30th June, 1886.
\$ cts.		\$ cts.
5,249 14	Superintendent's and Train Despatcher's salaries, Clerks, office and travelling expenses.....	5,466 83
5,167 21	Accountant and Auditor's, Paymaster's and Cashier's salaries, Clerks, office and travelling expenses .....	5,236 78
477 07	Advertising.....	519 08
239 51	Damages to men, animals and goods.....	164 07
326 59	Telegraph expenses (not including pay to Operators).....	491 80
125 43	Miscellaneous.....	309 48
11,584 95	.....Totals .....	12,188 04

W. T. HUGGAN

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

## No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of General Stores Account, Year ended 30th June, 1886.

1885.	DR.	\$	cts.	\$	cts.
June 30...	To Balance brought forward.....			89,516	42
1886.					
June 30...	To Purchases during the year, including rails .....	79,216	42		
	Charges from other Departments.....	18,253	44		
	Pay-rolls .....	2,924	60		
				100,394	46
1886.				189,910	88
June 30...	By Issues during the year .....			86,577	11
	Balance.	(			
	Ordinary stores.....	\$59,241	46)		
	Fuel.....	2,817	14)		
	Rails and fastenings on hand.....	33,343	17)	103,333	77
	(Old material, serviceable.....	7,932	00)		

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

## No. 9.—PRINCE EDWARD ISLAND RAILWAY.

DR.

GENERAL BALANCE.

CR.

	\$	cts.		\$	cts.
General stores.....	103,333	77	Dominion account.....	113,161	95
Cash.....	10,228	52	Accident insurance .....	3,665	52
Stations.....	1,069	30			
Militia Department .....	78	45			
Anglo-American Telegraph Co.....	46	43			
Judge Weatherbee.....	30	00			
Sidney Grey.....	25	00			
Post Office Department .....	2,016	00			
Total.....	116,827	47	Total.....	116,827	47

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

[1886]

## No. 10.—PRINCE EDWARD ISLAND RAILWAY.

## COMPARATIVE STATEMENT of Averages for Year ended 30th June, 1886.

Details.	1886.	1885.
* Mileage of railway open.....	210	210
Engine mileage.....	310,434	311,443
Train do .....	249,848	249,878
Car do .....	1,235,647	1,233,476
Receipts per engine mile..... Cents	50·11	50·92
do mile of railway.....	740·87	784·44
Percentage of passenger earnings to gross receipts.....	39·90	41·65
do freight do do .....	49·03	46·80
do other do do .....	11·07	11·55
Expenses per engine mile :—		
Drivers', Firemen's and Cleaners' wages.....	4·56	4·54
Fuel.....	3·80	4·87
Oil, tallow, waste and small stores.....	·92	·82
Repairs to engines.....	6·24	6·48
Water and tank repairs.....	·10	·28
Miscellaneous.....	·51	·51
Mechanical Superintendent's salary, office and travelling expenses.....	16·13	17·50
	·40	·41
Total..... Cents	16·53	17·91
Locomotive power per engine mile.....	16·53	17·91
Car expenses do .....	17·71	14·47
Maintenance of way and works do .....	23·52	23·59
Station expenses do .....	8·13	8·12
General charges do .....	3·92	3·72
Total per engine mile..... Cents	69·81	67·81
Locomotive power per train mile.....	20·54	22·32
Car expenses do .....	22·01	18·04
Maintenance of way and works do .....	29·22	29·41
Station expenses do .....	10·10	10·12
General charges do .....	4·88	4·63
Total per train mile..... Cents	86·75	84·52
Working expenses per mile of railway..... \$	1,032·11	1,044·72

\* Average miles of railway for 1885—202½.

W. T. HUGGAN,

*Accountant and Auditor.*

CHARLOTTETOWN, P.E.I., 30th June, 1886.

[1886]

PRINCE EDWARD ISLAND RAILWAY.  
 MECHANICAL SUPERINTENDENT'S OFFICE,  
 CHARLOTTETOWN, 10th August, 1886.

SIR,—I beg to submit the following statements, showing the operations of the Mechanical Department of this railway, for the fiscal year ending 30th June, 1886.

A.—Monthly statement of the cost of locomotive power.

B.—Statement of the performance and consumption of locomotives.

C.—Monthly statement of car mileage.

D.—Statement showing the number of locomotives, cars and snow ploughs.

E.—Comparative statement of the expenses of the Mechanical Department for the years 1884-85 and 1885-86.

During the year we have rebuilt forty 10-ton box cars, and 10-ton flat cars, to replace an equal number of the old 8-ton cars. These cars have been rebuilt at a cost of \$24,189.92, which sum is included in the repairs of freight cars and embraced in the working expenses.

Our stock of locomotives, cars and snow ploughs, provided on capital account, now consists of:—

21 locomotives.

17 first-class passenger cars.

15 second-class passenger and baggage cars.

3 postal and smoking cars.

175 box and stock cars.

125 platform cars.

3 conductors' vans.

1 pay car.

8 snow ploughs.

7 flangers.

I am pleased to be able to report that the rolling stock has been well maintained and is in good condition.

I am, Sir,

Your obedient servant,

J. UNSWORTH,

*Mechanical Superintendent and Storekeeper.*

JAMES COLEMAN, Esq.,

Superintendent Prince Edward Island Railway,  
 Charlottetown.

[1886]

87.

## PRINCE EDWARD

## MECHANICAL

## A.—STATEMENT of the Cost of Locomotive

Months.	Miles run by Engines, less Ballasting.	Cost of				
		Enginemen's Wages.	Fuel.	Oil, Tallow, Waste and Small Stores.	Repairs.	Water, including Tank and Pump Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1885—July.....	33,479	1,344 77	1,243 76	279 19	1,811 35	39 21
August.....	30,053	1,310 71	1,165 84	270 33	1,784 31	24 00
September.....	30,752	1,208 56	1,126 04	251 02	1,417 19	21 94
October.....	31,419	1,322 63	1,326 20	247 17	1,570 43	34 66
November.....	29,446	1,206 97	1,341 38	248 76	1,744 87	19 18
December.....	20,467	1,046 19	863 63	171 71	2,175 10	43 19
1886—January.....	19,932	1,082 65	1,018 16	172 91	2,041 21	58 32
February.....	19,373	1,045 77	938 72	187 03	1,641 00	22 67
March.....	23,500	1,237 57	939 10	188 33	1,624 30	17 45
April.....	20,444	1,003 09	775 09	468 19	1,159 51	8 91
May.....	21,657	1,078 50	421 74	187 04	1,511 63	5 36
June.....	29,911	1,278 18	640 02	185 44	872 94	6 07
Totals.....	310,434	14,165 59	11,799 68	2,857 12	19,353 84	300 96

[1886]

## ISLAND RAILWAY.

## DEPARTMENT.

## Power, for the Year ended 30th June, 1886.

Miscellaneous, including ex- penses of Office and Engine- houses.	Total.	Average Cost per Mile run.						Miscellaneous	Total.
		Enginemen.	Fuel.	Oil, Tallow, &c.	Repairs.	Water.	Miscellaneous		
\$ cts.	\$ cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
213 86	4,932 14	4·02	3·72	0·82	5·41	0·12	0·64	14·73	
219 97	4,775 16	4·36	3·88	0·89	5·94	0·08	0·73	15·88	
156 99	4,181 74	3·93	3·66	0·81	4·61	0·07	0·51	13·59	
309 63	4,810 72	4·21	4·22	0·79	4·89	0·11	0·99	15·31	
241 52	4,802 68	4·09	4·56	0·85	5·93	0·06	0·82	16·31	
321 00	4,620 82	5·11	4·22	0·84	10·62	0·21	1·57	22·57	
321 00	4,694 25	5·43	5·11	0·87	10·24	0·29	1·61	23·55	
287 85	4,123 04	5·40	4·84	0·96	8·47	0·12	1·49	21·28	
279 15	4,285 90	5·27	3·99	0·80	6·91	0·07	1·19	18·23	
220 72	3,635 51	4·91	3·79	2·29	5·67	0·04	1·08	17·78	
175 52	3,379 79	4·98	1·95	0·86	6·98	·02	0·81	15·60	
101 91	3,084 56	4·27	2·14	0·62	2·92	0·02	0·34	10·31	
2,849 12	51,326 31	4·56	3·80	0·92	6·23	0·09		16·53	

J. UNSWORTH,

Mechanical Superintendent and Storekeeper.

[1886]

## PRINCE EDWARD

## MECHANICAL

## B.—STATEMENT of the Performance and Consumption

Months.	Hours in Steam.	Train Mileage.				Miles run by Engines.			
		Passenger.	Freight and Mixed.	Ballasting.	Piloting.	With Train.	Light.	Shunting.	Total.
1885—July .....	4,125	13,349	14,134	2,209	9	29,701	43	6,174	35,918
August .....	4,030	11,352	13,619	3,799	.....	28,770	182	5,097	34,049
September .....	3,989	11,426	13,456	2,107	.....	26,989	245	5,857	33,091
October .....	4,259	11,082	14,022	4,161	23	29,288	251	6,355	35,894
November .....	3,220	9,828	13,636	407	127	23,998	137	5,718	29,853
December .....	2,857	1,754	14,047	106	126	16,033	63	4,492	20,588
1886—January .....	3,079	1,940	13,597	.....	286	15,823	195	3,915	19,933
February .....	2,677	2,296	12,438	.....	549	15,283	202	3,888	19,373
March .....	3,339	2,683	14,097	.....	2,063	18,843	25	4,632	23,500
April .....	2,920	2,104	13,878	98	136	16,216	176	4,150	20,542
May .....	3,085	3,589	13,377	713	132	17,811	22	4,552	22,385
June .....	3,557	10,425	14,268	403	.....	25,096	158	5,120	30,374
Totals .....	41,137	81,828	164,569	14,003	3,451	263,851	1,689	59,950	325,500

[1886]

## ISLAND RAILWAY.

## DEPARTMENT.

of Locomotives, for the Year ended 30th June, 1886.

Total Mileage.		*Average of Cars per mile run with Train.	Average Mileage.		Consumption.				Consumption per 100 Miles run by Engines.			
Cars.	Snow Ploughs.		Miles to one hour in Steam	Of Cars to one of Engine.	Bushels of Coal	Pints of Oil.	Pounds of Tallow.	Pounds of Waste.	Bushels of Coal	Pints of Oil.	Pounds of Tallow.	Pounds of Waste.
158,118	.....	5.32	8.70	4.40	12,207	1,483	1,173	540	33.98	4.12	3.26	1.50
147,633	.....	5.13	8.44	4.33	11,155	1,480	1,126	585	32.76	4.34	3.30	1.71
136,468	.....	5.05	8.29	4.12	11,186	1,691	747	529	33.80	5.11	2.25	1.59
157,505	.....	5.38	8.43	4.39	13,379	2,231	370	525	37.27	6.21	1.03	1.46
134,873	382	5.65	9.27	4.51	12,080	1,178	1,154	519	40.46	3.94	3.86	1.73
71,295	1,253	4.48	7.20	3.46	7,254	924	721	354	35.28	4.48	3.50	1.72
67,988	2,846	4.37	6.48	3.41	8,244	930	691	352	41.35	4.66	3.46	1.76
65,312	3,384	4.43	7.24	3.37	7,881	942	720	353	40.68	4.81	3.71	1.82
82,048	4,623	4.89	7.04	3.49	9,423	916	914	369	40.09	3.89	3.89	1.57
88,038	266	5.47	7.03	4.28	7,566	775	676	340	36.83	3.77	3.29	1.65
106,417	.....	6.02	7.26	4.75	8,688	928	855	371	38.81	4.14	3.81	1.65
115,228	.....	4.59	8.54	3.79	9,171	952	977	409	30.19	3.13	3.21	1.34
1,330,923	12,754	5.11	7.91	4.09	118,234	14,429	10,124	5,246	36.32	4.43	3.11	1.61

\* Deduct piloting in making these averages.

J. UNSWORTH,  
 Mechanical Supt. and Storekeeper.  
 [1886]

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## PRINCE EDWARD ISLAND RAILWAY.

## MECHANICAL DEPARTMENT.

## C.—MONTHLY STATEMENT of Car Mileage, for Year ended 30th June, 1886.

Months.	First-class	Second-class and Baggage.	Postal and Smoking.	Box Stock and Hay.	Platform.	Total.
1885—July.....	32,652	37,611	8,233	43,415	36,207	158,118
August.....	28,007	31,116	8,482	35,143	44,885	147,633
September.....	26,647	29,039	6,829	43,405	30,548	136,468
October.....	29,102	31,592	8,800	52,600	35,411	157,505
November.....	22,908	26,107	6,260	67,270	12,328	134,873
December.....	15,463	14,191	5,693	30,662	5,286	71,295
1886—January.....	15,284	13,688	7,515	21,046	10,455	67,988
February.....	15,309	14,412	5,769	17,394	12,428	65,312
March.....	15,261	16,971	5,305	23,147	21,364	82,048
April.....	15,678	17,511	7,674	34,280	12,895	88,038
May.....	17,442	16,764	6,686	48,344	17,181	106,417
June.....	25,021	27,009	7,780	39,416	16,002	115,228
Totals.....	258,774	276,011	85,026	456,122	254,990	1,330,923
LESS—Ballasting.....		3,689	7,681	2,821	81,085	95,276
Balance .....	258,774	272,322	77,345	453,301	173,905	1,235,647

J. UNSWORTH,

*Mechanical Superintendent and Storekeeper.*

[1886]

## PRINCE EDWARD ISLAND RAILWAY.

## MECHANICAL DEPARTMENT.

D.—STATEMENT showing the Number of Locomotives and the various classes of Cars and Snow Ploughs on hand, 30th June, 1885 and 1886.

Particulars.	Locomotives.		Classification of Cars.							Snow Ploughs.		Total.
	1st Class.	2nd Class and Baggage.	Postal and Smoking.	Box and Stock.	Platform.	Vans.	Pay Car.	Total.	Snow Ploughs.	Flangers.		
On hand 30th June, 1885, serviceable.....	21	17	15	3	135	113	3	1	287	8	7	15
do do condemned.....	.....	.....	.....	.....	40	12	.....	.....	52	.....	.....	.....
Total Stock, 30th June, 1885.....	21	17	15	3	175	125	3	1	339	8	7	15
Condemned on hand 1st July, 1885.....	.....	.....	.....	.....	40	12	.....	.....	52	.....	.....	.....
do during the year.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Less rebuilt .....	.....	.....	.....	.....	40	12	.....	.....	52	.....	.....	.....
.....	.....	.....	.....	.....	40	10	.....	.....	50	.....	.....	.....
Add serviceable and repairing.....	21	17	15	3	175	123	3	1	337	8	7	15
Total on record.....	21	17	15	3	175	125	3	1	339	8	7	15

J. UNSWORTH,

*Mechanical Superintendent and Storekeeper.*

[1886]

## PRINCE EDWARD ISLAND RAILWAY.

## MECHANICAL DEPARTMENT.

E.—COMPARATIVE STATEMENT of the Expenses of the Mechanical Department, for the Year ended 30th June, 1886.

	1886.	1885.
The miles run by trains were .....	249,848	249,878
do engines were.....	310,434	311,443
do cars were.....	1,235,647	1,233,476
do snow ploughs.....	12,754	20,425
	\$ cts.	\$ cts.
The cost of locomotive power was.....	51,326 31	55,782 13
do repairs to cars was.....	38,908 61	29,902 89
do labor, oil and waste, for packing, was.....	578 41	537 67
do repairs to passenger cars was.....	9,855 46	7,227 24
do do postal and smoking cars was.....	1,109 06	617 72
do do freight cars and vans was.....	27,944 09	22,057 93
The cost of locomotive power per 100 miles run by trains was.....	20 54	22 32
do do do engines was .....	16 53	17 91
do do do cars was.....	4 15	4 52
The cost of repairs to cars per 100 miles run by trains was.....	15 57	11 60
do do do engines was .....	12 53	9 60
do do do cars was.....	3 14	2 42
The cost of labor, oil and waste for packing per 100 miles run by trains was...	0 23	0 21
do do do engines was .....	0 18	0 17
do do do cars was.....	0 04	0 04
Repairs to passenger cars per 100 miles run by trains were.....	3 94	2 89
do postal and smoking cars were.....	0 44	0 24
do freight cars and vans were.....	11 18	8 82

J. UNSWORTH,

*Mechanical Superintendent and Storekeeper.*

PRINCE EDWARD ISLAND RAILWAY.

RETURN of Accidents and Casualties which have occurred on the Prince Edward Island Railway, during the Year ended 30th June, 1886.

Date.	Time of Day or Night.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engines.	Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1885.												
July 18	7.00 p.m.	...	Special ....	A. A. Ryan, ...	F. A. Bell, .....	2	Cape Traverse...	Frank Praught...	Employé..	Coupling car at Cape Traverse was jammed.	Collar bone dislocated and otherwise injured.	
Oct. 30	8.00 a.m.	...	.....	Jno. McArthur	Jno. McArthur	1	Summerside Yard	Jno. Burns.....	do ...	While standing on footboard of engine and stooping to look down at engine running over frog, head came in contact with switch board.	..... Face and ear cut.	
Dec. 26	12 a.m.	.....	.....	.....	.....	9	Charlottetown Yard.	D. McGregor.....	do ...	While uncoupling cars got foot caught in guard rail and two trucks of a stock car passed over his legs.	Legs fractured so badly that he died.*	

\* That the deceased David McGregor, came to his death by an unavoidable accident while in the act of uncoupling cars, and the wheels passing over his legs and thigh, and his death was caused by the shock therefrom.

[1886]

## APPENDIX No. 6.

DEPARTMENT OF RAILWAYS AND CANALS,  
SUPERINTENDING ENGINEER'S OFFICE,  
MONTREAL, 27th October, 1886.

SIR,—I have the honor to forward the annual report on the different works under my charge, for the fiscal year ending 30th June, 1886.

They are the Lachine Canal and Beauharnois Canal, on the River St. Lawrence, and the Chambly Canal and St. Ours Lock and Dam, on the Richelieu River, also a survey of the latter river from St. John's to Rouse's Point.

These canals have been efficiently maintained during the past year.

Statements are annexed of amounts collected for fines, damages, &c., and of the depth of water on the mitre sills at the upper and lower entrances of each canal throughout the year.

## LACHINE CANAL.

From the 1st July, 1885, to the close of navigation, by ice, on the 30th November, the trade through this canal was not brisk; but from the opening of navigation this season, on the 3rd of May, until the end of the fiscal year, the trade has been remarkably good, particularly in grain and coal.

The only interruption to navigation during the year, was caused by a leak through the bank of a part of the original canal, which was widened and deepened at the time of the last enlargement of the main canal.

Situated on the north-west side above the St. Gabriel Lock, it is now used as a head-race or feeder for the mills and factories, as well as the regulating weir at Lock No. 3.

This leak found its way under the east side of the flume of Crathern & Caverhill's spike works, causing some damage to their buildings and flume. It was discovered on the morning of the 2nd November. While repairs were being made, the water in that reach of the canal was lowered eight feet, thereby detaining heavy draught vessels for thirty hours, but all boats drawing five feet or less, continued to pass as usual. Had a night watchman been employed on these premises, the leak, no doubt, would have been detected sooner and less damage done.

The water was drawn off the canal on 13th April, that being the earliest day on which it could be done, on account of the ice, which might have injured the slope walls on the summit level, if it had been drawn off sooner. The object of getting the canal dry so early was to enable the Canadian Pacific Railway Company to build the centre piers, in the canal, for their swing bridge, in what is known as the "rock cut," a short distance below the guard lock at Lachine. This work was rapidly pushed on, as were also the general canal repairs, and the water was let into the canal on Sunday evening, the 2nd of May, and navigation opened on the morning of the 3rd May.

Owing to the unprecedentedly high flood in the River St. Lawrence, in April last, which flowed up through the River St. Pierre, it was necessary to fill the reach of canal between Locks Nos. 3 and 4, to prevent injury to the culvert through which the River St. Pierre passes under the canal. The flood water, when highest, flowed into the canal over the dock wall of the Wellington Basin, and over the towing path

between the Wellington Bridge and Lock No. 3, from 4 to 10 inches in depth at various points, doing, however, but little damage to the works. But a large quantity of sand and gravel was washed into the two lower locks, which had to be removed by a diver at a considerable cost. However, it was all removed in time to prevent any detention to the trade.

All the works on this canal, and in connection with it, were kept in excellent condition, and the wants of the trade strictly attended to. The water supply throughout the year, both for navigation and manufacturing purposes, was ample and gave entire satisfaction to all parties interested. Since the completion of the St. Gabriel Basins—Nos. 3 and 4—and the leasing to lumber merchants of the grounds in connection with these basins, and also of the land on the south-east side of the Wellington Basin, great relief has been experienced in wharf accommodation at these places.

#### NEW WORKS.

##### *Booms at Lachine.*

During the winter months, 1,876 lineal feet of booms, 5 feet wide, were built. They are made of four pieces of pine timber, 12 by 12 inches, kept 2 inches apart by tamarac blocks at intervals of 6 to 8 feet. They are faced with an oak timber, 12 by 6 inches on the side next the channel, and all secured together by  $1\frac{1}{2}$  inch square iron bolts, the heads and nuts of which are countersunk. Pine timbers, 10 feet long, 12 by 12 inches, were fitted and bolted to the masonry on the south side of the new entrance, to prevent the booms from injury by chafing against the rough masonry. These timbers are placed from 10 to 12 feet apart. The booms are connected together by chains passing around head blocks, formed of angle iron on the end of each boom. These booms are laid in one continuous line, and are secured to the mooring posts on the bank by chains. They were placed in position early this season, and answer perfectly the purpose for which they were intended, namely, the protection of vessels from injury by rubbing against the side wall or edge of rock cutting.

##### *Canal Lighting.*

While the water was out of the canal, and as soon as the flood water of the river had lowered sufficiently, work was commenced on the new electric light station at the Weir head of Basin No. 2, for the purpose of lighting the lower end of this canal, on the south-east side, from the harbor as far up as Lock No. 3, including the Wellington Basin, and from there to the Wellington Street Bridge, including the four St. Gabriel Basins and the two large St. Gabriel sheds. The portion between the Wellington Bridge and the harbor on the north-west side being still lit by gas. The wheel pit flume and dynamo house are completed, and the machinery is all in place. The lamps will be lit about the 1st of August, if the cables to be laid under water to carry the electric fluid to the north-west side arrive in time.

There are three Leffel turbine wheels, 56 inches in diameter, with 10 feet head of water. One of these is to drive the machinery for lighting the canal with 160 incandescent lamps of fifty-candle power each, and twelve thirty-candle power lamps in the station. The second wheel is intended to furnish power for lighting Montreal harbor by forty arc lights of twelve hundred-candle power each. The third wheel is a spare one, to be used instead of either of the others, in case of accident, or it may be clutched on to assist either of them if necessary.

The water used for driving these wheels does not at all increase the current through the canal, as they are run at night only, when the factories on that reach are closed, and when the water to be used for driving these wheels would otherwise have to be wasted.

*St. Gabriel Basins Nos. 3 and 4, and Lachine and Cote St. Paul Macadamized Road.*

The work remaining to be done under these two contracts was completed before the close of the season of 1885, and the basins and road brought into use. Since then the final estimates were made, and the contractors have been settled with.

## BEAUHARNOIS CANAL.

The canal was closed by ice on the 3rd December, 1885, and opened to navigation on the 1st May, 1886. No accident occurred, and consequently there was no interruption to navigation during the fiscal year.

## LOCKS AND LOCK GATES.

One pair of gates were built and placed in the upper end of Lock No. 13, and the lower gates received considerable repairs. Also the upper gates of Lock No. 12 had their top parts renewed. All the other gates received more or less repairs. Two pairs of old gates were brought to the workshop, hauled out and taken apart.

Other locks received repairs, and the banks around all the locks were covered with shale stone brought up from the Lachine Canal.

## BRIDGES.

A swingbridge was completed and placed at Lock No. 13. It has been built one foot wider than the other bridges. The swing bridges at Locks Nos. 7, 8 and 10 received considerable repairs; these bridges should be renewed before long. The foundations of the swing bridge of Lock No. 11 were rebuilt, before the opening of navigation in the spring. A large bridge over the weir, at Lock No. 11, was built anew, and many others of these bridges have been replanked. Some of the bridges over back ditches and discharges were rebuilt and all the others maintained in good order.

## BANKS, DYKES, DAMS, ETC.

The dyke at Hungry Bay suffered considerably during the last spring floods, and we were obliged to raise a large portion of it. It will be necessary to raise this dyke throughout its whole length to prevent the neighboring lands from being inundated.

A mooring pier of 50 feet by 20 feet and 19 feet in height, has been built at the lower entrance of the canal, for the use of vessels, and is a great benefit to the navigation. The other piers and wharves have been kept in good repair.

The canal banks have been maintained in good order. The towing path was rounded, and nearly three miles of it have been macadamized. The side walls were repaired. All the walls of the culvert wells were rebuilt on both sides of the canal, and new bridges placed over them. All the side ditches and discharges were cleaned last summer, and in the spring were cleared of snow and ice. The weeds were mowed on both sides of the canal at the proper time. A number of snubbing posts were renewed, and many others reset.

Four new guard posts were placed at Locks Nos. 7, 11 and 12, and many other posts were strengthened with new supports and braces.

The wharves at Ferry No. 2 were rebuilt above the water line.

## BUILDINGS, FENCES, ETC.

Houses were built for the watchmen at Locks Nos. 10 and 14. A shed of 30 by 12 feet has been built with latrines, &c., at the house of the Collector at Valleyfield. Kitchens were built at the Lockmen's houses at Locks Nos. 8, 9 and 12.

The roof of the Lockmaster's house at Lock No. 6 was reshingled and received two coats of paint. The grounds, occupied by the Lockmen of Lock No. 11, were enclosed by a fence, and all the other fences were well maintained.

A car track was laid from the carpenter's workshop to the raceway and strong tracks, moved by water power, placed thereon, for hauling lock gates into the shop for repairs.

## COLLECTOR'S HOUSE.

A house has been erected at Valleyfield, by order of the Government, for the use of the Collector. The work was done by contract with Mr. Octave Cossette, for sum of the \$1,600.

## STEAM DREDGE—CHARGEABLE TO INCOME.

The steam dredge No. 1, arrived here in July, 1885, and commenced to deepen the canal on the 21st of the same month, and continued to work until 1st November 1885. Last spring it recommenced work on the 1st of May, and as continued working till the 21st July, 1886.

This dredge has deepened the reaches below Locks Nos. 7, 8, 9, 10, and partly below Nos. 11 and 12. It should work for at least two more seasons to make the canal perfectly navigable throughout for vessels drawing 9 feet of water.

A large scow, 75 by 20 feet, was built to assist in deepening the canal; wings 3 feet in width were placed on each side, which gave it a breadth of 26 feet in the centre. Two derricks were placed on this scow, one at each end, to permit of unloading two scows at the same time.

By means of these two derricks we were able to do double the ordinary work—that is to say that we could make twenty scow loads per day, instead of ten which was done before. Twenty-eight new dirt boxes were made and an equal number were repaired.

The dredge received considerable repairs in the spring, and also the scow serving the same.

The levels below Locks Nos. 11, 12 and 13, are far from being in good order, and as I have said above, it will be very necessary to have the dredge sent back to stay in this canal for, at least two years, and I hope that the Government will grant a sufficient sum for this purpose.

## CHAMBLY CANAL.

This canal was closed by ice on the 30th November, 1885, and reopened on the 3rd May 1886. No accident or interruption of any kind occurred.

The work done during the fiscal year is divided under two heads, viz. :—“Ordinary Repairs” and “Improvements chargeable to Income.”

The ordinary repairs were principally as follows :

## LOCKS.

*Lock No. 1.*

Two new sluice gates. One pair of new gates were placed at the lower entrance,

*Lock No. 2.*

One new sluice gate frame.

*Lock No. 3.*

Two new sluice gates.

*Lock No. 5.*

Two new sluice gates.

*Lock No. 7.*

One pair of new gates were placed in the upper end; and two new sluice gates framed and painted.

*Lock No. 8.*

The lower mitre sill was, repaired and timber to build a new one prepared.

*Lock No. 9.*

The tops bars of the lock gates were renewed. One pair of new lower gates were completed. One new sluice gate. The lower wing wall, on the west side, was repaired, and twenty feet in length of coping stones were replaced by wood.

The walls of all the locks were painted and grouted with Portland cement during the month of April, and ordinary repairs to foot bridges, sluice gates, &c., were made.

## BRIDGES AND BY-WASHES.

The bridges on Ste. Thérèse Island were repaired and renewed. Two of them were rebuilt with stone.

*Bridge No. 2.*

The stone pier was repaired. The old fenders were renewed and fastened with three iron bars.

*Bridge No. 3.*

The stone pier was repaired.

*Bridge No. 5.*

The stone pier was repaired, and old flooring was renewed.

*Bridge No. 6.*

The pier on the north side was repaired three courses high; the fenders were renewed and fastened with three iron bands, and the old flooring was renewed.

*Bridge No. 7.*

The pier on the south side was repaired and an addition to its length was made. The pier on the north side was also repaired.

*Bridge No. 8.*

Was painted.

A new bridge on the main road, in the parish of St. John's, known as Miss Charland's Bridge, was built according to the instructions of the Department.

Fryer's By-wash was rebuilt this spring, and By-washes Nos. 1 and 2 were repaired.

## BUILDINGS AND FENCES.

Repairs were made to the canal office at Chambly, and some new furniture was made for the same. Necessary repairs were made to the dwelling houses of the Lockmasters and Bridge-tenders and also to the buildings around the Carpenters' shop.

The fences along the line of the canal were repaired and rebuilt at different places.

## WHARVES, ETC.

The wharves at St. John's were repaired and filled up with stones and earth. The wharf below Lock No. 9 was temporarily repaired, to secure it until the water falls low enough to allow the repairs required to be made.

Three scows were repaired and caulked, and one was painted.

## ROADS, BANKS AND DITCHES.

The main roads were repaired and protected at different places where the canal water had caused damage.

A timber stringer has been laid on top of the side wall, from Lock No. 3 to Lock No. 6, on the north side, to secure it. Three thousand and forty-nine feet of timber were used for that purpose. The side walls were kept in good order and stones replaced where missing. Three breaks were repaired.

During the month of April, the side walls were repaired throughout and the canal bottom was cleared of loose stones; and, also, the bottoms of eight locks were cleaned.

The culverts, and seven miles of side ditches were cleaned. Forty-six oak snubbing posts were made and placed on the banks where required.

## WORKS OF IMPROVEMENT CHARGEABLE TO INCOME.

*Lock No. 1.*

During the winter and spring, the lower wing walls, recess walls, and abutments on both sides of Lock No. 1 were taken down and rebuilt; the lower portion, seven feet in height and eighty feet long, being built with timber and concrete backing, and the upper portion of ashlar stone, sand, and cement mortar.

*Lock No. 7.*

The walls on both sides, at upper entrance of Lock No. 7, were taken down and rebuilt in the same manner, ten feet high on both sides, with timber and concrete, and the rest with ashlar stone and cement mortar.

The mitre sill and breast wall were also rebuilt with wood and stone.

## ST. OURS LOCK AND DAM:

Navigation closed here on 28th November, 1885, and re-opened on the 15th of April, 1886. In August, 1885, on the 11th, 12th and 13th, while lock gates were being adjusted, some slight delays to traffic occurred, amounting in all to six hours and fifty-five minutes. During high water, from the evening of 21st of April, to the evening of the 23rd of April, the lock could not be used and vessels passed over the dam.

The lock wall at upper recess on west side was repaired and secured with iron bolts. A leak under the upper mitre sill has been stopped by the aid of a diver, and the lock bottom cleared of sand and gravel. The lock gates were also raised and adjusted.

The banks around the locks were gravelled, and at the upper and lower ends of the island the slopes have been protected with dry stone work.

Some gravel was placed on the upper side of the dam, and the bank above the west end repaired.

Booms and mooring posts were removed in the fall and replaced in the spring. The ice was sawed and removed from the lock gates and piers, and the gates were loaded to prevent damage by high water.

Finished a small scow and made a derrick for use about the piers and lock, and repaired and fitted the large scow for carrying stone and gravel.

Preparations have been made for rebuilding the lock gates which were hauled out three years ago, by procuring timber and erecting sheds in which to do the work.

The Superintendent's house, outbuildings and fences were repaired.

No fines or damages were collected.

## RICHELIEU RIVER.

The survey between St. John's and Rouse's Point has been continued during the year. I append the report of Mr. L. G. Papineau, C.E., on the subject.

I have the honor to be, Sir,  
Your obedient servant,

E. H. PARENT,  
*Superintending Engineer.*

A. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals.

[1886]

LACOLLE, 12th October, 1886.

SIR,—I have the honor to transmit to you my report on the subject of the survey of the Richelieu River, during the year 1885-86.

During the year 1884-85, the survey had been made from the beginning of the Pointe à la Mule shoals to Sturgeon Point, situated two miles above Ile aux Noix.

The work was resumed in July, 1885, commencing at St. John's, with a view of examining the interval between St. John's and Pointe à la Mule, a distance of 5½ miles. As the navigable channel is broad and deep, the cross sections of the bed of river were taken at 500 feet apart.

But in addition to the soundings, we were also occupied in exploring and surveying the boundaries of lands inundated in the spring. In some places these extended to a considerable distance from the river. The study of this region occupied us to the middle of August. However, there still remains some swampy land of the east side, of which we could not determine the outlines, the water having kept high during the summer, making this marsh impassable.

We then commenced a system of triangulation, extending from St. John's to the frontier, to serve as a connection of the different parts of our surveys.

This work was executed with all the precision possible with the instruments and means at our disposal, and we have obtained more satisfactory results than we expected.

By means of one hundred triangles we have fixed the position of all points on the survey of the river with greater exactness than could be done with the most careful chainage. A base line was measured at St. John's, and three other proof lines at different places, and the distances measured directly agreed sufficiently well with the lengths deduced from the calculations to draw the conclusion that the probable error is less than  $\frac{1}{6000}$ , or 20 feet, in the distance from St. John's to the frontier.

The intervening spaces are afterwards completed by the ordinary system of chainage and angles.

In the month of October we resumed the hydrographic survey, properly speaking, at the point where we had stopped it the preceding year, and we continued it as far as the bridge which crosses the Richelieu at Ash Island. In this part the cross sections are made at intervals of only 200 feet.

Beyond the Lacolle bridge the land survey was pushed to the frontier, but, in the month of December, the ice prevented us from continuing the soundings in a boat, and, as it did not become strong enough to cross on from one side of the river to the other without danger, we accordingly stopped that work for the season.

Since the month of January, 1886, my two assistants have been employed at completing the calculations and making plans of the different surveys of the season, and I myself have prepared certain drawings relating to the Lachine Canal, and intended for the Colonial Exhibition at London.

The survey work on land was resumed in the month of July, when the water was low enough to render the shores accessible, and is now being continued.

I have the honor to be, Sir,

Your obedient servant,

L. G. PAPINEAU.

E. A. PARENT, Esq.,  
Superintending Engineer of Canals of Quebec,  
Montreal.

## LACHINE CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ended  
30th June, 1886.

Date.	Name of Vessel.	Name of Owner.	Fines.	Damages.	Totals.
1885-86.			\$ cts.	\$ cts.	\$ cts.
July 18...	Removal of lumber.....	Hurteau Bros.....	4 00	.....	4 00
do 29...	Barge "H. L.".....	Lavallée.....	4 00	15 00	19 00
Sept. 24...	Steamer "Bohemian".....	R. and O. Navigation Co.....	.....	2,500 00	2,500 00
do 25...	do "Pensher".....	J. W. Anderson.....	10 00	.....	10 00
Nov. 28...	Barge "Arab".....	J. B. Blanchard.....	4 00	.....	4 00
June 18...	Str. "Prince Arthur".....	R. and O. Navigation Co.....	.....	1,500 00	1,500 00
		Totals.....	22 00	4,015 00	4,037 00

CANAL OFFICE,  
MONTREAL, July, 1886.

JOHN O'NEILL,  
*Collector.*

## LACHINE CANAL.

STATEMENT of Amounts collected for Bank Dues and Wintering Vessels, during  
the Fiscal Year ended 30th June, 1886.

Date.	Items.	Amounts.
1885-86....	Firewood.....	\$ cts. 1,056 29
	Wintering of vessels.....	134 92
	Totals.....	1,191 21

CANAL OFFICE,  
MONTREAL, July, 1886.

JOHN O'NEILL,  
*Collector.*

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## LACHINE CANAL.

STATEMENT of Basin, Firewood and Bank Dues collected during the Fiscal Year ended 30th June, 1886.

Date.	Items.	Amounts.
		\$ cts.
1885-86.....	Basin dues.....	1,360 33
	Firewood dues.....	42 30
	Bank dues.....	81 00
	Fines.....	5 00
	Total.....	1,488 63

J. B. DESCHAMPS,  
*Pro Collector.*

CANAL OFFICE,  
LACHINE, July, 1886.

## BEAUHARNOIS CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ended 30th June, 1886.

Date.	Name of Vessel.	Name of Owner.	Fines.	Damages.	Totals.
				\$ cts.	\$ cts.
1885-86.					
Oct. 5...	Barge "Texas" .....	Michel L'Espagnol.....		45 00	45 00
do 14...	Barge "Corn Crib" .....	Transportation Co.....		45 00	45 00
May 26...	Barge "Maggie" .....	do .....		40 00	40 00
		Totals.....		130 00	130 00

J. F. BEIQUÉ,  
*Superintendent.*

CANAL OFFICE,  
MELOCHEVILLE, July, 1886:

## LACHINE CANAL.

STATEMENT showing the Depth of River Water on the Mitre Sills of Lock No. 1, at lower entrance, and Lock No. 5, at upper entrance, during the Fiscal Year ended 30th June, 1886. (From Lockmaster's Returns.)

Months.	Lock No. 1, Lower Sill.		Lock No. 5, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1885.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	21 5	19 8	13 3	12 3
August.....	19 6	18 1	12 2	11 3
September.....	18 3	17 10	11 5	11 2
October.....	19 2	17 6	11 11	10 6
November.....	20 0	18 8	12 4	11 3
December.....	30 9	18 1	13 7	11 3
1886.				
January.....	37 7	28 0	13 10	11 7
February.....	33 9	28 8	12 8	11 4
March.....	30 3	28 4	12 5	10 7
April.....	43 1	25 5	16 2	12 4
May.....	25 1	21 11	16 0	13 11
June.....	21 8	20 6	13 10	13 1

N.B.—12 o'clock noon, 18th April, 1886, 43 ft. 1 in.

10.50 o'clock a.m., 18th April, 1886, in Montreal Harbor, 44 ft. 3 in., highest point of flood.

## BEAUHARNOIS CANAL.

STATEMENT showing the Depth of River Water on the Mitre Sills of Lock No. 6, at lower entrance, and Lock No. 14, at upper entrance, during the Fiscal Year ended 30th June, 1886. (From Lockmaster's Returns.)

Months.	Lock No. 6, Lower Sill.		Lock No. 14, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1885.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	13 4	12 0	12 11	12 5
August.....	12 0	11 0	12 7	12 0
September.....	11 2	10 0	12 6	11 10
October.....	12 7	10 0	12 6	12 0
November.....	12 6	11 0	12 11	12 0
December.....	12 11	11 0	13 8	12 3
1886.				
January.....	18 8	12 0	13 11	12 8
February.....	22 10	16 0	13 8	12 8
March.....	22 0	16 0	13 5	11 10
April.....	16 3	15 0	14 9	13 0
May.....	15 8	14 0	13 10	12 10
June.....	14 0	13 0	13 11	12 10

## CHAMBLY CANAL.

STATEMENT showing the Depth of River Water on the Mitre Sills of Lock No. 9, at lower entrance, and Lock No. 1, at upper entrance, during the Fiscal Year ended 30th June, 1886. (From Lockmaster's Returns.)

Months.	Lock No. 9, Lower Sill.		Lock No. 1, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1885.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	11 7	10 7	8 8	8 1
August.....	10 8	10 0	8 6	7 6
September.....	10 7	9 10	9 0	8 0
October.....	11 4	9 9	9 0	8 1
November.....	13 10	11 7	10 2	9 2
December.....	15 2	12 9	9 10	8 7
1886.				
January.....	18 7	14 7	9 11	9 0
February.....	19 1	18 11	9 8	9 0
March.....	19 3	15 0	9 2	8 1
April.....	20 6	16 1	10 9	9 3
May.....	15 10	12 7	11 10	9 6
June.....	12 6	10 9	9 8	8 6

## ST. OURS LOCK.

STATEMENT showing the Depth of River Water on the Mitre Sills of St. Ours Lock, during the Fiscal Year ended 30th June, 1886. (From Superintendent's Returns.)

Months.	Lower Sill.		Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1885.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	13 3	10 10	10 2	9 3 $\frac{1}{2}$
August.....	11 1	9 1	9 4	8 10
September.....	9 7	8 6 $\frac{1}{2}$	9 3	8 7 $\frac{1}{2}$
October.....	11 3	8 4 $\frac{1}{2}$	10 3	8 10 $\frac{1}{2}$
November.....	12 11	10 7	11 8	10 0 $\frac{1}{2}$
December.....	16 1	10 7	11 11	10 2
1886.				
January.....	18 6	14 6	14 5	10 9
February.....	14 11	13 1	11 4	9 6
March.....	14 2	11 9	11 1	9 0
April.....	22 8	16 2	18 2	13 0
May.....	17 6	13 2	13 7	10 10
June.....	13 2	11 1	11 0	9 6 $\frac{1}{2}$

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 APPENDIX No. 7.
 

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 OTTAWA RIVER CANALS.
 

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SUPERINTENDING ENGINEER'S OFFICE,  
OTTAWA, 21st August, 1886.

SIR,—I have herewith the honor to submit my annual report for the fiscal year, upon the various works in connection with the Ottawa River Canals under the head of “Construction and Maintenance.”

I have the honor to be, Sir,  
Your obedient servant,

D. STARK,  
*Superintending Engineer.*

A. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals,  
Ottawa.

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## CONSTRUCTION.

*Ste. Anne.*

The only work in progress here has been the dredging out of the new channel forming the upper entrance to the canal, under contract to the Messrs. Gilbert & Sons.

The season's work—begun with the completion of the short side channel, mentioned in last year's report as being necessary for the accommodation of the navigation, during the deepening of the main one—was recommenced on the 23rd July, 1885, and carried on to the 25th November of the same year, when the dredge was put into winter quarters. Work was again begun on the 10th May, 1886, and has now reached a state of forwardness that gives promise of its entire completion by the close of the present season.

*Carillon.*

Nothing coming under the head of construction here has called for attention since the completion of the dam repairs in November last. These having then been finished, with the exception of about 200 feet on the south side of the river, adjoining the north pier of the slide there, nothing but an examination of this portion, with the affording to it of any additional support it may show to be needed, is necessary to entirely complete all the works at this point, chargeable to capital account.

*Greece's Point.*

The completion of the crib wharfing here, mentioned in last year's report, on the south side of the entrance, as forming the easterly support of the canal embankment and finished in the month of November last, comprises all that has been done in the shape of construction, and all that was needed to fulfil the contract for the work.

*Grenville.*

Nothing under the head of construction has been done here.

[1886]

*Culbute.*

No works of construction have been in progress.

## MAINTENANCE.

*Ste. Anne's Canal.*

Navigation closed at this point on the 26th November, 1885, and was reopened on the 27th April, 1886.

No interruption of any description has occurred to the navigation, which has been conducted in a regular and satisfactory manner.

The piers, forming the transverse channel below the canal, to Isle Perrot, have had requisite repair bestowed upon them, and 300 feet of that above the old lock, forming the westerly side of the upper entrance, has received renewal, 200 feet of new lining, adjoining the lock, having been also put into the same structure.

Ordinary repairs to buildings, wharves, lock gates, booms and fences have been likewise attended to.

*Carillon and Grenville Canals.*

These canals were closed on the 30th November, 1885, and reopened on the 1st May, 1886.

Ordinary repairs to locks, gates, and machinery have been made, as well as all needed by buildings, fences, roads, tow-paths, &c. Some repointing required by the retaining wall on the south side of the Carillon Canal, has also been done.

The repairs found necessary on the Grenville Canal have been slight this season.

The suspension gear on the lower gates of the Greece's Point entrance lock, was somewhat damaged by ice, and two of the locks above had to be furnished with new valves.

These with some chains, and new planking for the gate gangways, embrace everything found requisite.

The provision of a sufficient waste weir in the long reach of this canal above Stonefield, as well as the one between that place and Greece's Point, would materially reduce the annual cost of repair to its banks and tow-paths.

*Culbute Canal.*

No repairs of consequence have been made here during the season.

D. STARK,

*Superintending Engineer, O. R. C.*

## APPENDIX No. 8.

## CORNWALL CANAL.

SUPERINTENDENT'S OFFICE,

CORNWALL, 23rd August, 1886.

SIR,—I have the honor to submit the following annual report on the works under my charge, for the fiscal year ended 30th June, 1886.

The Cornwall Canal was maintained in an efficient state, until the 10th of December, 1885, when it was closed by ice; was opened for navigation on the 1st of May, 1886, and continued in good working order up to July, 1886.

The works executed during the past season come under the head of ordinary repairs; rebuilding one pair of lower gates, and general repairs to all lock gates, supply weirs and bridges. Replanking lower recess of Locks Nos. 19 and 20,—and laying new segments in lower recesses of same locks; raising embankment, and repairing slope walls, and cleaning out side ditches and drains.

I have the honor to be, Sir,

Your obedient servant,

D. A. McDONELL,

*Superintendent.*

H. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals,  
Ottawa.

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## CORNWALL CANAL.

STATEMENT showing the Depth of River Water on the Mitre Sills of Lock No. 15, at lower entrance, and Lock No. 21, at upper entrance, during the Fiscal Year ended 30th June, 1886.

Months.	Lock No. 15, Lower Sill.		Lock No. 21, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1885.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	11 4	11 2	11 5	11 1
August.....	11 5	10 10 $\frac{1}{2}$	11 9	10 10
September.....	11 2	10 10	11 2	10 4
October.....	11 3	10 9	11 2	10 2
November.....	11 4	10 8	11 2	10 0
December.....	11 11	10 10	11 5	10 2
1886.				
January.....	27 3	11 5	11 10	9 4
February.....	27 0	22 11	10 4	9 5
March.....	29 3	21 0	11 2	9 10
April.....	23 4	12 2	12 3	10 5
May.....	12 3	12 1	12 6	12 0
June.....	12 1	11 9	12 11	11 0

D. A. MACDONELL,  
*Superintendent.*

## APPENDIX No. 9.

## WILLIAMSBURGH CANALS.

SUPERINTENDENT'S OFFICE,  
MORRISBURGH, 18th August, 1886.

SIR,—I have the honor to submit my report on the working and condition of the Williamsburgh Canals, under my charge, for the fiscal year ending the 30th June, 1886.

These canals, embracing the Farran's Point, Rapide du Plat, Point Iroquois Junction and Gallops Canals were maintained in good order, and without interruption to navigation during the season thereof. They were closed for the season of 1885 on the 6th of December, and re-opened for traffic on the 29th April, 1886.

## FARRAN'S POINT CANAL.

General repairs were done to the lock gates, one new crab-winch was placed on lock and two others repaired; portions of the chains of lock gates becoming worn, were replaced; one new sheave was placed in chain hole; the pier at the head of this canal was rebuilt.

The ice bridge formed from Croil's Island to the Canadian shore below this canal, caused an ice jam in the river along this canal, the breaking up of which, this spring, did a good deal of damage to the ice breaker at the foot of the canal. This will require attention and repair this autumn.

## RAPIDE DU PLAT CANAL.

The work on this canal consisted in repairs to lock gates, replacing chains where worn, two new sheaves in chain-holes, a new knee in gate of Lock No. 24, two new crab-winchs on locks, and general repairs to the banks by stoning them up wherever required.

A convenient and substantial storehouse was built at Lock No. 23, at Morrisburgh, painted and finished in suitable style. A passage way, of the width of three feet, attached to the upper gate of Lock No. 23, at Morrisburgh, supported by iron braces, was built, affording a safe and convenient crossing, meeting the requirements of parties who wish to cross the canal at this point.

## POINT IROQUOIS JUNCTION AND GALLOPS CANAL.

The gates of Locks Nos. 25 and 26 received repairs. The lower gates of Lock No. 27 were taken out and rebuilt. The swing bridge over Lock No. 25 was repaired, and the swing bridge over Lock No. 26 was repaired by putting in a new ballast box, rebuilding portion with new timber, raising pivot stone, adjusting pivot, laying a new track and levelling it properly; the banks of this canal have been maintained in good order, and the booms in Point Iroquois Canal were thoroughly repaired this spring.

The ice has done some damage to the pier and ice breaker at the head of the Gallops Canal.

The water in the river being high afforded a good supply, and enabled a good depth of water to be kept in the canals.

The buoy boat and scows were repaired and caulked this spring.

The buoys in the River St. Lawrence, between Johnston's and Dickinson's Landing, under my charge, have been maintained in their proper places and positions.

I annex a statement showing the extremes of depth of water on the sills of the several locks at the entrances and outlets of these canals, during the year, and also a statement of fines imposed.

I have the honor to be, Sir,

Your most obedient servant,

A. G. MACDONELL,

*Superintendent Williamsburgh Canals.*

A. P. BRADLEY, Esq.,

Secretary Department of Railways and Canals,  
Ottawa.

### WILLIAMSBURGH CANALS.

STATEMENT showing extremes of Depth of Water on the Sills of Locks at the entrances and outlets of these Canals, during the Year ended 30th June, 1886.

#### FARRAN'S POINT CANAL.

Months.	Lock No. 22, Lower Sill.		Months.	Lock No. 22, Lower Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1885.	ft. in.	ft. in.	1886.	ft. in.	ft. in.
July.....	10 11	10 5	January.....	11 10	9 6
August.....	10 10	10 0	February.....	13 0	10 0
September.....	10 7	9 11	March.....	12 0	9 6
October.....	10 7	9 5	April.....	14 0	10 10
November.....	10 6	9 10	May.....	11 10	11 5
December.....	10 10	9 4	June.....	11 8	11 4

#### RAPIDE DU PLAT CANAL.

Months.	Lock No. 23, Lower Sill. Foot of Canal.		Lock No. 24, Upper Sill. Head of Canal.	
	Highest.	Lowest.	Highest.	Lowest.
1835.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	11 0	10 6	11 0	10 6
August.....	11 0	10 0	11 0	10 3
September.....	10 6	9 9	10 6	9 6
October.....	11 0	9 6	10 4	9 0
November.....	10 8	9 0	10 3	9 0
December.....	10 9	9 0	11 0	10 0
1886.	ft. in.	ft. in.	ft. in.	ft. in.
January.....	11 9	9 0	10 9	8 6
February.....	11 6	10 5	11 0	9 0
March.....	12 0	10 6	11 0	9 1
April.....	12 4	10 6	12 6	10 0
May.....	12 3	11 7	12 2	11 6
June.....	12 1	11 11	12 0	11 8

## POINT IROQUOIS AND GALLOPS CANAL.

Months.	Point Iroquois. Lock No. 25, Lower Sill. Foot of Canal.		Gallops. Lock No 27, Upper Sill. Head of Canal.	
	Highest.	Lowest.	Highest.	Lowest.
1885.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	13 10	10 3	11 7	11 0
August.....	13 6	12 6	11 7	10 7
September.....	13 8	12 6	11 6	10 0
October.....	13 4	11 4	11 0	9 10
November.....	13 6	11 10	11 3	10 2
December.....	16 6	12 6	12 0	10 2
1886.				
January....	14 0	11 8	11 7	10 0
February....	13 8	12 0	11 6	12 6
March.....	13 9	12 1	11 3	10 5
April.....	14 10	12 0	12 5	9 0
May.....	15 3	14 0	12 8	11 9
June.....	15 0	14 0	12 6	11 9

## WILLIAMSBURGH CANALS.

STATEMENT of Fines and Damages, during the Year ended 30th June, 1886.

Date.	Name of Vessel,	Name of Owner.	Fines.	Damages.	Total.
1886.			\$ cts.	\$ cts.	\$ cts.
May 7...	Barge "Aid".....	J. Contin.....	.....	8 00	8 00
June 2...	Schooner "Gibraltar".....	James Norris.....	10 00	.....	10 00
		Total.....	.....	.....	18 00

[1886]

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## APPENDIX No. 10.

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### WELLAND CANALS.

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SUPERINTENDENT'S OFFICE,

ST. CATHARINES, 4th October, 1886.

SIR,—I have the honor of herewith submitting my report on the condition and working of the three canals under my charge, viz.: The Old, the New, and the Feeder, for the year ending 30th June, 1886.

The canals have been operated satisfactorily throughout the year without serious accident.

The traffic through the canal increased very much during the earlier months of this season, and since the controlling gates have been completed across the two raceways at Port Colborne, we have been able to avoid the detentions—for want of sufficient depth of water at the aqueduct at Welland—of the large class of vessels now frequenting the canal to a very great extent.

The canals were closed 9th December, 1885, and opened, New Canal, 19th April; Old Canal, 3rd May.

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### NEW WELLAND CANAL—DETAILS OF WORK OF REPAIRS AND MAINTENANCE.

DIVISION No. 1—FROM PORT DALHOUSIE HARBOR TO LOCK No. 13.

*Port Dalhousie Harbor.*

The east pier has had considerable repairs by having the superstructure built up in several places, also the pier and drawbridge at foot of Lock No. 1.

*Gate-Yard and Shop (Port Dalhousie.)*

The two old lock gates for old Lock No. 1, drawn out on skids, and had three posts spliced, and one new post made. Two new bridges for gates were made, and new studs for supporting bridges. Gates were all thoroughly repaired and placed in the foot of old Lock No. 1. The scow for pier building repaired by a new side put in, and decks repaired. The scow "General Gordon," had her rakes and decks caulked and payed. The scow "Red Rover," has had rakes caulked, apron put in, four upright posts for hoisting aprons or lowering them, all painted and sent to Air Line Crossing as a ferry scow. The scow "Sir Charles" has been caulked, and payed all above water, and considerable repairs done upon her. The two guard lock gates drawn out on the skids, repaired, and placed on the cradle for future use, and four lock gates of 12-foot lift drawn out on the skids, repaired and placed on the cradles. The spare lock gates have all been taken out and placed on the skids and repaired with improved thrust plates, and set screws into the wrist pins, new bridges in place of those broken by ice when drawn off level No. 1.

Collector and harbor master's houses have been very extensively repaired. The pontoon was hauled out on the skids and thoroughly overhauled, and put in good repair as follows: New posts put under drum caps for lifting on, new braces all through, opening in centre, closed up by having solid timbers  $6\frac{1}{2}$  inches by 23 inches

put all the way across, closing the span between the two, and by having a new bottom put in, it has given her one-half more power; decking was put on; new oak sole pieces were put in for foot of braces to rest on, thereby preventing rot in decks. Posts were fastened at foot by heavy iron straps, bolted to posts and through sides of pontoon, making her stronger than when first launched. Several of the spare gates have been hauled out on the skids, and had water wheels and wheel cases put on. The old ferry scow from air line crossing has been rebuilt into a repair scow, dimensions over all, 56 feet, 20 feet beam, 3 feet depth of hold, which makes it very handy and as good as a new one.

*Lock No. 1, Bridge No. 1, and Level.*

Five new cables put on; one-half of public bridge in front of waste weir replanked; side next waste weir graded and sowed with grass seeds; floats have had considerable repairs done to waling and coping.

The four lock gates were taken out on the skids and thoroughly overhauled, several of the valves were in such a position they could not be worked. Those were repaired and put in good working order, also the thrust plate heels, water wheels and machinery for lifting valves rehung, several brass matrices put on. Foot board extension and waling repaired from time to time. New eyebolts put in for opening chain sheave, at foot of lock. Repaired iron work and machinery of bridge.

*Lock No. 2, and Level.*

Seven hundred and eighty feet of wire fence built to protect Government property on the dividing line between Clark's and Government.

Lift foot gates taken out and replaced by one spare new gate. Old gate brought to yard for repairs. The side ditches have all been opened, and a slide in bank repaired and faced with stone. Several washouts in banks have been filled up with broken rubble. The lock overhauled and placed in good order.

Four new cables put on, and several new matrices.

*Lock No. 3, Bridge No. 2, and Level.*

Foot gates taken out. Steps repaired and gates resteped again. Bridge repaired and all nuts and bolts tightened up. Braces properly adjusted. Five hundred and fifty feet of side ditching were done on the level. Tow-path bridge repaired and broken rubble put at each end of same. Put on five new steel cables. Level drawn off. Lower sill repaired and sheave in well holes. Considerable ditching done and culverts repaired. Repaired ironwork and machinery of bridge.

*Lock No. 4 and Level.*

The wing walls on foot of lock heel path side repaired. Tow-path bridge raised at each end with broken rubble.

Put on two new extensions and two steel cables.

*Lock No. 5, and Level.*

Foot gates were removed and repairs done to the steps, gates put back in their place again; one of the valves gave out and was repaired. New waling put on the head gates, ditches opened up. Tow-path bridge raised with broken rubble at each end.

Thirty-one wooden boxes put on shaft, also three new steel cables, and several brass matrices and one new intermediate gear and pinion.

One snubbing post straightened up and braced stronger than before.

*Bridge No. 3 (Lake Street).*

Repaired floats around bridge, and several new eyebolts put in same. Bridge overhauled, and bridge over back ditch painted and put in good order. Pivot refastened.

*Bridge No. 4 (Railway Bridge).*

The bridge overhauled and put in good condition, various times. Floats around repaired, various times, and new timber, eyebolts and chains used in making the repairs.

*Lock No. 6, and Level.*

Shafts repaired. Put on thirty-five wooden boxes, five new cables and four brass matrices. Small bridge over back ditch painted and put in good order, also bridge over reservoir.

One thousand four hundred and eighty feet back ditch opened up, which required considerable excavating to get proper grade. Several washouts were repaired and served with broken rubble. The gates on the banks repaired to keep out cattle. The upper wing wall of waste weir gave away, and was taken out to the foundation and rebuilt. New splash boards put on all four gates of lock bridge on gate repaired.

*Bridge No. 5 (Geneva Street).*

Bridge repaired and put in good order.

*Lock No. 7, and Level.*

Put on two new cables, two crown wheels, thirteen cold sheets, six wooden boxes, three brass matrices, and one new set hoisting gear for valve.

The soakage ditches on the level have all been opened up, and put in good condition; 1,813 feet new ditch was opened up to drain off soakage.

A rough-cast house belonging to the Government has been repaired and made habitable by having inside finished, lathed and plastered; new chimney plastered outside, new eave trough, painted inside and out; kitchen 18 by 24, built at back of house, stone foundation for same painted inside and out complete; also new barn 18 by 24, stone piers for sills; hay loft, upper floor furnished with stalls for storekeeper's horses.

The foot gates were removed out of quoin and No. 6 Level drawn off, it was then found that the lower sills were raised up from the sill bed, and badly cut away by the keels of boats. The sills were filled up by having a rabbit cut in square and filled in with a heavy oak piece well bolted to fill sill out square over this; the sill was plated on top with heavy iron plates  $\frac{3}{4}$  by 6 inches, well bolted through sill to sill bed; face of sill was plated with heavy iron plates 1 by 6 inches, bolted through the sill with screw bolts; beside all this the sill was bolted to sill beds with heavy iron keys 1 by 6 inches bolted through sill and down to sill bed. The spaces or pockets between the braces leading from the king to the mitre sills were filled with oak timbers 12 by 18 inches, and well bolted to the sill bed. The heavy T straps from mitre of sill back over king sill braces, and were turned down at the end so as to bolt into king sill, size  $\frac{3}{4}$  by 6 inches, well bolted to sill bed.

One cone roller framed and two rollers put under turn-table. Two new oak walings put on, 8 by 12 by 22 inches. Iron fence taken up on long level to allow contractors to proceed with their work of raising the banks.

*Bridge No. 6, Niagara Street.*

Bridge overhauled and replanked, &c., small bridge crossing main ditch painted and put in good order.

Floats repaired by using chains, eyebolts, timber, &c.

Bridge-tender's watchhouse repaired; one door taken out, and space closed up, and new window put in.

Considerable repairs were done at the cluster piles on the south end of bridge.

Ironwork and machinery repaired.

*Lock No. 8, and Level.*

Two snubbing posts put back in place after having been pulled out, were extra heavy braced, and other snubbing posts straightened up and extra heavy braces put

around them. Ends of two tow-path bridges filled up with broken stone and rubble. Two pieces of waling put on head gates, and mitre sill repaired by divers. Put on two new cables, one brass matrix.

*Lock No. 9, and Level.*

One valve taken out and repaired by divers. Put on new shaft boxes, matrix: slide valve level extension to gate bridge, and intermediate gear; several snubbing posts straightened and extra heavy braces put around them.

Both head gates taken out, steps repaired and raised, the left gate was turned over, and a broken valve repaired. Gates resteped. Built fence around gravel pit to prevent accidents.

Two thousand three hundred and seventy-three feet ditching to carry off drainage water; ends of tow-path bridge raised with rubble. Three new left hand screws put on; divers took rope fender out from under sill, it having been jambed under same by pressure of gates.

*Bridge No. 7, Queenston Road.*

Bridge replanked, new eyebolts and chains put in floats, cluster piles repaired. The approaches repaired with new planks. Floats around centre crib work have been kept in good order.

*Lock No. 10, and Level.*

Put on three new cables, one matrix, and locking gear repaired; broken rubble put on at ends of tow-path bridge; all soakage ditches cleaned out and opened up.

*Bridge No. 8, (Homer Road).*

Floats around centre pier repaired. Put on new waling 8 by 12 by 26 feet on fender works. Iron work and machinery repaired.

*Lock No. 11, and Level.*

Put on one new waling and one nosing piece, one valve repaired. Two snubbing posts straightened, and new braces put around same.

Broken rubble put on at the ends of tow-path bridge.

Put on four new steel cables, and one new lever stand, segments and bottom repaired.

*Lock No. 12, and Level.*

Put on two new steel cables. Three snubbing posts straightened, and new braces put around same. Broken rubble put on at ends of tow-path bridge.

Four hundred and forty-eight feet iron fence built, and two protection fences put on head gates.

*Steam Pump.*

Pumped out old Lock No. 1, also dam under rubber factory Port Dalhousie.

**DIVISION No. 2.—FROM THE FOOT OF LOCK NO. 13 TO BRIDGE NO. 13 (MARLATT'S).**

*Lock No. 13, Bridge No. 9, and Level.*

Put on two new cables. Gates adjusted. Bridge repaired. Small bridge over opening in the turnpike painted. Iron work and machinery of bridges repaired. Cut out stone for stop block.

*Lock No. 14, and Level.*

Put on five new cables, one brass matrix and two intermediate gears.

Foot gates took out; steps raised with boiler plate. Gates rehung, and new step put under.

*Lock No. 15, and Level.*

Put on four new cables, one pinion and two intermediate gears; also two brass matrices. Took out old, and put in two new foot gates. Repaired valve.

*Lock No. 16, and Level.*

Put on two new brass matrices, four cables and four intermediate gears.

*St. David's Road Tunnel.*

Pitched off 398 square yards projecting stone paving and lifted 65 yards paving, and filled in again with broken stone, and formed drain throughout to carry off soakage water from roof of tunnel. Dug outlet drain through field, and put in drain pipe. Built culvert 62 feet long 10 by 12 feet, walls 14 inches thick, flagged bottom and top with large stone; paved 50 yards at end of tunnel; lengthened out old culvert 6 feet, and put in grating at the mouth.

Put in 4-inch tile drain, 1,200 feet long, 5 to 9 feet deep. Put on  $4\frac{1}{2}$  cords broken stone and 40 loads gravel. Put in two stone wells, west end of tunnel, to catch mud, &c., and prevent same from washing under tunnel. Painted two watch-houses and bridge at St. David's Road.

*Lock No. 17, and Level.*

Put on three new cables, two intermediate gears and two brass matrices.

Foot gates took out, and new plates put under same; gates rehung.

Put on two new water wheels. Painted storehouse.

*Lock No. 18, and Level.*

Put on four new cables, two intermediate gear and one brass matrix.

Took out foot gates; old steps taken out, and new ones put in place and raised with boiler plate; gates rehung.

Put in one new standard for valve lever; painted watchhouse, Grand Trunk Railway Tunnel.

*Lock No. 19, and Level.*

Put in three new cables, one brass matrix, one intermediate gear and one standard for valve lever; gates raised and adjusted.

*Lock No. 20, and Level.*

Put on two brass matrices, one pinion, six cables and two intermediate gears; valve repaired.

Took out foot gates; old steps taken out and new ones put in place and raised with boiler plate; gates rehung.

*Lock No. 21, and Level.*

Put on three new cables, one brass matrix and one intermediate gear.

Took out foot gates; old steps taken out and new ones put in place and raised with boiler plate; gates rehung.

*Lock No. 22, and Level.*

Put on three new cables, one pinion, two intermediate gear and two valve rods. Took out foot gates; old steps taken out and new ones put in place and raised with boiler plate; gates rehng.

One scow load sand delivered for spring repairs.

*Lock No. 23, and Level.*

Put on five new cables, four brass matrices, two intermediate gear, one new water wheel shaft and one valve.

Took out foot gates; old steps taken out and new ones put in place and raised with boiler plate; gates rehung.

*Lock No. 24, Bridge No. 10, and Level.*

Put on three new cables, one lifting screw, three brass matrices and two intermediate gear.

Bolts and rods tightened up on bridge.

Put two streak 3-inch oak plank on swing bridge approach, 3 feet wide.

Put one scow load broken stone and sand on roadway, at toe of bridge.

Built new sidewalk from toe of bridge to connect one on west side.

Built 348 feet floats and placed the same on east side of canal, along stone wall.

Painted storehouse and three small boats.

Cleaned out end houses, culvert, and put rack across same.

Excavated for, and laid in 40 feet 10-inch drain pipe.

Excavated for, and put down extra strong braces to three snubbing posts, puddled up same. Ironwork and machinery of bridge repaired.

*Bridge No. 11 (Railway Bridge.)*

Bolts and rods tightened up. One bridge raised twice so as to oil pivot, and repaired plates. Protection floats repaired.

*Lock No. 25, Bridge No. 12, and Level.*

Put on six new cables, two intermediate gears, two pinions and two brass matrices.

Took out old gates and hung a new one, and fasteners put on.

*Guard Lock and Level.*

Put on four new cables. Gates adjusted.

*Bridge No. 13 (Marlatt's).*

Crane repaired. Bolts and rods tightened. Plates, walings and protection floats repaired.

Cleaned out mud washed into end of Higgin's Culvert.

**DIVISION No. 3.—FROM BRIDGE No. 13 (MARLATT'S) TO AQUEDUCT AT WELLAND.**

*Bridge No. 14 (Allanburgh).*

In good order.

*Bridge No. 15 (Port Robinson).*

Floats repaired. Top chords spliced with iron plates and replanked with new plank in places. Put new spring in the locking gear.

*Bridge No. 16 (Quaker Road).*

Repaired floats. Ironwork and machinery repaired.

*Wash Weirs and Culverts.*

Repaired waste weir at Allanburgh, and bridge approach over waste weir. Repaired Higgin's waste weir and stopped leak. Built new culvert south of Port Robinson, east side of canal.

*Banks, Back Ditches, etc.*

Raised and repaired banks, and cleaned out ditches throughout division.

Repaired Fort Hill road with new pipes under crossing.

Repaired bridge over back ditch in deep cut.

Set snubbing posts south of Welland. Put in four plank boxes in deep cut, on east side.

Cut thistles and weeds throughout division and Government property.

**DIVISION NO. 4—FROM AQUEDUCT WELLAND TO PORT COLBORNE HARBOR.**

*Aqueduct (Welland).*

Painted water-gauges, and put in snubbing posts.

*Old Swing Bridge (Welland).*

Frequent repairs made during season.

*New Bridge No. 17 (Welland).*

Ironwork and machinery repaired.

*Bridge No. 19 (Junction).*

Bolted and secured the coping stones on abutments of bridge. Ironwork and machinery repaired.

*Air Line Ferry (Humberstone.)*

Graded down bank and rebuilt approach to ferry, on west side of canal.

Removed float-bridge and put ferry scow in place. Repaired ferry scow.

*Bridge No. 21 (Humberstone.)*

Bolted and secured the coping stones on abutments of bridge. Ironwork and machinery repaired.

*Floats (Rock Cut.)*

Removed floats out of contractors' way. Repaired and replaced floats after raised and frequently injured by the rise and fall of the lake level.

*Port Colborne Lock and Bridge.*

Put new cable in. Vessel gauge, and spliced vessel gauge wire. Covered stone work of bridge with plank to prevent accident.

*Harbor Port Colborne.*

Built protection breakwater, rotted out, west side, 236 by 12, by 6 by 6 feet with very large stone blocks. Built line fence between Harbormaster and Light, house-keeper's premises, also around Lock-tender's premises.

Removed rotted planks on pier, and replaced with new ones.

Faced sloping banks of harbor with stone, where washed out by storms.

*Back Ditches.*

Cleaned out and opened up ditches east and west side of canal throughout whole length of division.

Repaired apron of ditch that drains into the canal at Lyon's Creek.

Built stone culverts along street, Port Colborne, forming continuation of back ditch, west side of canal, and covered the same with stone flags and levelled earth over top.

*Banks.*

Repaired banks, set and reset snubbing posts throughout.

New bridge over old canal (Allanburgh). Repaired cam rests on bridge.

**DAMAGES.**

I have collected during the fiscal year from masters and owners of vessels passing through the canals the sum of \$150.84 for damages to the works, which  
120 [1886]

amount has been handed to H. H. Collier, Esq., Collector of Canal Tolls, St. Catharines, and I append a detailed statement, marked "A."

I also append a statement, marked "B," showing the greatest and lowest depth of water on the mitre sills at Port Dalhousie and Port Colborne locks, in each month during the fiscal year ending 30th June, 1886, also a comparative statement of the average depth for the month of June, 1885 and 1886, which shows the water has been 1 foot 5½ inches higher at Port Dalhousie, and ½ inch higher at Port Colborne than for the month of June, A.D. 1885.

## "A."

## STATEMENT of Fines and Damages collected from Vessels contravening Canal Regulations, for the Fiscal Year ending 30th June, 1886.

Date Collected.	Name of Vessel.	Fines.	Damage.	Total.
1885.		\$ cts.	\$ cts.	\$ cts.
August 3.....	Barge "Jane Ralston" .....		54 00	
Sept. 8.....	Steam Barge "F. Mercer" .....		76 89	
Nov. 27.....	Scow "Centennial" .....		20 00	
	Total .....		150 89	*150 89

\* Handed to H. H. Collier, Esq., Collector, St. Catharines.

## "B."

## STATEMENT showing the Depth of Water on the Lower Mitre Sill of Lock No.1, Welland Canal, at Port Dalhousie, for the Fiscal Year ending 30th June, 1886.

Months.	Lower Sill.		Months.	Lower Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1885.	Ft. in.	Ft. in.	1886.	Ft. in.	Ft. in.
July .....	14 5	14 0	January .....	14 9	14 1
August.....	14 8	14 2	February.....	14 8	14 4
September.....	14 5	14 0	March.....	14 4	14 1
October.....	14 2	13 10	April.....	15 9	14 10
November .....	14 5	14 0	May.....	15 10	15 5
December .....	14 4	14 0	June .....	15 8	15 3

Average, June, 1885..... Ft. in. 13 11½  
do 1886..... 15 6

[1886]

STATEMENT showing the Depth of Water on the Upper Mitre Sill of Lock No. 27, Welland Canal, at Port Colborne, for the Fiscal Year, ending 30th June, 1886.

Months.	Upper Sill.		Months.	Upper Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1885.	Ft. in.	Ft. in.	1886.	Ft. in.	Ft. in.
July.....	13 11	13 3	January.....	14 3	12 1
August.....	15 2	12 6	February.....	13 0	12 0
September.....	14 3	13 0	March.....	13 2	11 8
October.....	14 8	12 10	April.....	14 4	11 0
November.....	14 9	12 7	May.....	13 11	12 0
December.....	15 6	12 7	June.....	14 1	13 2

Ft. in.

Average, June, 1885..... 13 5½  
do 1886..... 13 6

## OLD WELLAND CANAL.

### DETAILS OF REPAIRS AND MAINTENANCE OF WORKS ON THE OLD WELLAND CANAL.

#### *Lock No. 1, Bridge and Level.*

Dredged out dams at both ends of Lock No. 1, after extensive repairs to lock, now completed. Filled behind piles, under the approach of upper end of bridge, with old girts and sheet-piled front and two sides.

Tore out old approach, and filled inside piles with clay and broken stone, making a solid approach. Put new circle-timber at ends of bridge, covered with 2-inch oak. Put extra rollers under centre of bridge, adjusted rods and put same in first class working order throughout. Repaired floats on level.

#### *New Office for Toll Collector, Customs and Harbor Master.*

The old wooden building, alongside Old Canal, being much decayed and dilapidated, and much too small and inconveniently situated for captains and the public use, a suitable and commodious structure has been erected alongside Lock No. 1, New Canal, built of brick and stone, covered with iron shingles, affording ample office-accommodation and of appropriate design.

Faced 2,640 feet towing paths with stone. Drove 159 old piles in roadway below Welland Vale Works, to protect roadway from being washed away. Opened up ditches and cleaned floats from weeds, &c.

#### *Lock No. 2, Bridge and Level.*

Repaired tow-path between bridge and lock. Moved storehouse on board of scow and sent to Welland. Raised bridge on pivot; put new pivot beam in bridge, in two pieces: put iron-plate  $\frac{3}{4}$  inch by 5 inches, across centre beam. Put in new track. Put in new circle plank on heel of bridge, and made other extensive repairs. Put up 36 feet railing at bridge, alongside walk, and built 1,120 feet railing at bridge. Framed new side stringers for bridge at Shickluna's shipyard, 6 by 12 by 53 feet; framed new trestle for same, 6 by 8 inches, fitted all ready to set in place.

*Bridge at Welland Vale Works.*

Put new pivot-beam in bridge, in three pieces, and through bolted with wire saddle and  $1\frac{1}{4}$  inch truss rods. Put six new joists in heel end of bridge. Put down new plank where required. Put new knees in centre of bridge, adjusted rods, ballasted bridge, and left in first class working order.

Planked bridge to strengthen it for passage of heavy boiler.

*Waste Weirs.*

Removed large log out of valve upper weir and found valve broken, removed same, and covered opening temporarily with wooden gate, 3 by 8. Shifted bridge on weir back to place and secured it.

This bridge was moved 3 feet out of place by the pressure of water against slush boards.

Put surface racks on both upper and lower weirs 6 feet long to prevent sunken logs from getting in valves.

*Twelve mile Creek Bridge.*

Removed old bridge. Took crib work at each end down to low water mark and rebuilt same, making them about 1 foot higher, cut piles in centre below low water mark, put new caps on same and erected new bents upon them, built new bridge upon same, four stringers double truss on longest span. Single truss on shorter span, and cap stringers on top of floor on the shortest span, fastened bents to piles with iron straps  $3\frac{1}{2}$  by  $1\frac{1}{2}$  securely bolted to piles and posts of bents put two iron diagonal braces  $3\frac{1}{2}$  by  $\frac{1}{2}$  on each side of bents securely fastened to piles below low water mark and extending to caps of bents securely bolted to same. Put pieces of boiler plate  $\frac{3}{8}$  inch thick on the up-stream side of bents to protect them from the action of ice coming down the creek; covered bridge with 3-inch pine plank; size of bridge 91 by 16.

Built boathouse 24 by 9, 8 high. Made drain for road across Twelve-mile Creek bridge 14 by 15 by 24. Made picket gate for fence at bridge 6 by 12 and hung same. Built dry stone wall 110 feet long 5 feet high and 3 feet wide and raised approach to Twelve-mile creek bridge.

*St. Paul Street Bridge.*

Put new planks on bridge where required. Tightened up bolts and rods. Put on new piece 6 by 6 at toe of bridge also 16 feet new moulding on end of side sidewalk, plank shifted cam seat at toe approach rendered necessary by pushing in of toe approach. Painted bridge two coats, also Bridge-keeper's house out and inside. Took old stringers off roof bridge keepers house and relaid the same, close jointed and covered same with metallic shingles. Replanked toe of bridge. Relaid 100 feet tow-path under bridge with 3-inch pine.

*Bridge and Locktenders dwellings.*

Took old shingle roof off houses, also roof boards and relaid. Covered roof with metal shingles. Painted all the roof with metallic paint; had all eave troughs and conductor pipes properly repaired—renewing them where required. Put new steps at kitchen of Locktender's part.

*Lock No. 3 and Level.*

Put in four new sheave blocks, iron capped, for opening gates. Drove 31 piles to protect raceway. Dug out old waste weir bridge on tow-path side foot of lock, and built dry stone road at same, 45 feet by 2 feet by 2 feet. Repaired 50 feet fender work on tow-path side below lock. Removed old bridge across race-way, above lock. Built new bridge across same, two stringers, 5 inches by 12 inches, one stringer 3 inches by 12 inches, with double truss formed of 4 inches by 6 inches on outside stringers, hand and crib on both sides,  $2\frac{1}{2}$  inches by 4 inches, with wing on

both sides of end next canal, about 7 feet long, stringers covered with 2-inch pine; one flight of stairs leading from lock up to bridge, with 4-inch by 4-inch posts, and 2½ inches by 4 inches hand rail on both sides, with 7-foot wings at top of stairs, one flight running from other end of bridge to top of bank, with 4-inch by 4-inch posts, and 2½-inch by 4-inch hand rail. On both sides at the top of this flight the rail is extended about 30 feet along the bank for protection. On the other side of the stairs the rail is extended to the fence adjoining. Painted wood work two coats mineral paint.

*Lock No. 4, Bridge and Level.*

Shifted foot boards in foot gates, rendered necessary by settling of lock gate on steps. Put new mud sills and foot timbers under crab's head and foot gates heel path side and reset crab.

Put in snubbing post, tow-path side, made repairs to floats and cleaned hem from weeds. Built wire fence to protect raceway. Put new band and eyebolt in foot gate, tow-path side. Put new gates (made light and small for convenience in handling) in head of shuts above lock in upper race.

*Lock No. 5, Bridge and Level.*

Put new timbers under ballast box of bridge, and some new plank on same.

Raised bridge on pivot, and put new rollers on toe.

Painted heel path bridge. Put new needles in swing bridge and generally overhauled same.

Repaired and relaid sidewalk below lock 50 by 2 feet.

Jacked up swing bridge, took out pivot beam and put in new one, with 1½-inch iron truss rod on both sides, extending from under side of bed over and across, heavy iron cap in centre of pivot beam, adjusted rods, and put in good working order.

*Lock No. 6, and Level.*

In good order.

*Lock No. 7, Bridge and Level.*

Raised bridge on pivot, and replanked where required.

Put in new purchase on head gate, rendered necessary by bad leakage in foot gates, and long 1½-inch bolt through toe of bottom beam down through top girt to hold beam in place. Lock repaired.

⊗ *Hydraulic Race.*

Painted wooden work of aqueduct and bridge across raceway, town line and Thorold road.

Made flood gates 5 by 16 feet and placed same in creek below aqueduct, in case of floods. Rebuilt bridge across race at Bryant's farm, 12 by 30 feet. Put new sill under end stringers and raised same 10 inches higher, put in one new stringer 8 by 12 inches and planked bridge with 2-inch plank.

Built 150 feet board fence along raceway back of Mitchell's property.

Repaired banks back of Holder's.

Built 135 feet dry wall back of Riordan's, 6 feet high, 3½ feet wide, also 213 feet long 6 by 3½ feet, near McDermott's Foundry.

*Gate Yard and Shop (St. Catharines.)*

Made four large mooring posts, iron capped and put them in where required. Made box drain 6 by 10 inches inside, 45 feet long, for drain under roadway below shuts below Empire mills. Made several repairs to the scow as required. Made new spar for derrick 51 feet long and set it up in place. Made new frame and put new hoisting gear in boom lifter of derrick. Caulked lifting scow where required. Framed one high lift tow-path lock gate. Shifted old lock gate taken out of lock No. 15

about 40 feet up stream. Made flood gates for creek below hydraulic race 5 by 16 feet, properly framed together, braced and bolted.

Finished rebuilding old lock gate taken out of Lock No. 13. Put a new toe post on this gate spliced heel post at bottom, put in new bottom and top girts, new mullion, new face, new fender plank and new valve; painted gate two coats mineral paint, launched and got it ready to go to pond head of Lock No. 2.

Finished one low lift tow-path gate, painted 2 coats mineral paint, launched and laid it away in pond at yard.

Commenced framing one high lift tow-path gate, made ladder for use at canal office, made packing box and case for vault in office.

Framed and put together, and finished one high lift tow-path gate; painted two coats mineral paint, launched and tied it up in yard. Took gate from yard to pond, at head of Lock No. 2, and laid it away. Made four sheave blocks with iron caps for Lock No. 3. Framed and put together one low-lift heel-path gate for Lock No. 7.

Finished framing toe-post for old lock gate to be rebuilt. Made new boom for derrick in yard—45 feet long. Made thirty white ash handles for ice chisels; made light gates for head of shuts, Empire Mills. Made three small gates for shuts in upper race, below Empire Mills.

Building new gate for foot Lock No. 7; also, repaired old gate for foot Lock No. 3.

*Lock No. 8, and Level.*

Lock repaired.

*Lock No. 9, and Level.*

Put in two through eyebolts in beam of head gate. Lock repaired.

*Lock No. 10, and Level.*

Lock repaired.

*Lock No. 11, and Level.*

Lock repaired.

*Lock No. 12, and Level.*

Put in new regulating gates in waste weir, with screw attachments. Planked up old openings.

*Lock No. 13, and Level*

Put in new regulating gates in waste weir, with screw attachments. Planked up old openings.

*Lock No. 14, and Level.*

Reset three crabs and repaired bottom of one of lock gate. Removed lock house to Lock No. 12. Put in new regulating gates in waste weir, with screw attachments. Planked up old openings. Put new foundation under crab.

*Lock No. 15, Bridge and Level.*

Repaired Locktender's house. Dug out bank down to foundation of lock wall; concreted and puddled up same again. Repaired floor and underpinned tow-path wall with stone and concrete. Replanked that portion of lock. Rebuilt four abutments, two bridges on heel-path, and floats 102 feet long 12 feet wide. Built new summer kitchen to Locktender's house.

*Lock No. 16, and Level.*

Put in new regulating gates in waste weir, with screw attachments, and planked up old openings. Repaired Locktender's house.

*Lock No. 17, and Level.*

Repaired Locktender's house.

*Lock No. 18, and Level.*

Put in one snubbing post. Repaired locktenders house. Hung one lockgate.

*Lock No. 19, and Level.*

Repaired Locktender's house.

Took down old and built a new waste weir, with rock faced ashlar wall, 18-foot opening, wing walls 7 feet long and 10 feet high, and built bridge across same, 24 feet long.

*Lock No. 20 and Level.*

Repaired Locktender's house. Put in new regulating gates in waste weir, with screw attachments, planked up old openings. Put new wrist pins and braces in lock gates. Took out old gate and hung new one. Put new foundation under crab.

*Lock No. 21, and Level.*

Built new Queen truss bridge, 42 feet long, 13 feet wide across slip, heel-path side. Rebuilt two abutments for above and floats at waste weir. Closed up old gate in waste weir. Put new wrist pins and braces in lock-gates.

Took old timber coping off, and took down wing walls, and rebuilt same with new stone, raised walls 2 feet higher; reset coping raised and strengthened banks of waste weir.

*Gate Yard and Shop (Thorold.)*

Built two carts and nine wheelbarrows. Hauled out foot-gates taken out of Lock No. 25; rebuilt same for head of Lock No. 25, launched and took them to said lock.

Fitted up derrick scow "Mud Hen" for Port Colborne.

Hauled out old lock gate and rebuilt same for Lock No. 18. Built new derrick with crab boom for Government quarry.

Built new train car for submarine trainway for hauling gates, &c., to yard.

Built six new regulating gates with screw attachments for waste weir, also 100 feet trunk drain, and one small boat for crane scow.

Built new shop and put in small water power in same.

Hauled out one pair old lock gates and stripped them; also old floats from Lock No. 21, and stripped them also. Fitted up repair scow No. 1, "Sir John," and crane scow for spring work, &c., and fitted up pumps, &c., in same.

Hauled out one old lock gate, and rebuilt same for Lock No. 20.

*Lock No. 22, Keefer's Bridge, and Level.*

Raised waste weir bridge one foot higher. Took old timber coping off waste weir, and took down wing walls, rebuilt same with new stone, raised walls two feet higher, reset coping, raised and strengthened banks of same.

Repaired leak in bank at heel path bridge, and built new retaining walls, 52 by 6 by 3 feet, and 14 by 5 by 3 feet, and underpinned the apron wall, 10 by 1 by 2 feet, all laid in cement along raceway, foot of lock.

Took down old swing bridge (Keefer's). Removed pivot stone to proper place, and set up new Howe truss swing bridge, 75 feet long and 14 feet wide, with double gearing for operating same; changed tow approach and built new one.

Built 300 feet new protection piling and waling to bridge; planked up 100 feet old piling, north side, and built 111 yards dry stone retaining walls; filled in back with clay, gravel and brush fastened with ties and mud sills. Planked up 110 feet old piling, south side, and built 127 yards dry stone retaining wall in back with clay, gravel and brush, and stone tied back with mud sills and ties. Put new apron, 50 feet long, and braces in heel path bridge below lock and sheet piled bulkhead of bridge.

*Lock No. 23, and Level.*

Repaired leak in banks at Band's grist mill. Took down old tow-path bridge, and rebuilt eight abutments and filled them with stone and gravel, and covered inter-

vening water spaces with seven permanent bridges, one float bridge, 12 feet wide, in all 230 feet long, and put two walls 12 by 12 inches pine entire length. Repaired bridge on tow-path side, and planked up old openings in waste weir. Built stone wall, 18 by 3 by 3 feet on heel path and under tow-path bridge, 28 by 3 by 3 feet, under pinned wall at Cooper's flouring mill in front of waste weir, 20 by 1 by 2 feet, built up four openings in protection wall, 4 by 2 by 3 feet, in front of weir. Built two walls, heel path side, at Band's flouring mill, 9 by 2 by 4 feet.

*Lock No. 24, Bridge and Level.*

Repaired leak in bank back Dawson's flouring mill. Raised swing bridge and put steel plate under to lighten it on wheels, and put on new double gear. Put new braces and supports to road bridge Park-st., near lock. Dug out for and built three stone walls back of Lawson's flour mill, 50 by 3 by 6 feet, 28 by 4 by 12 feet, and 1 by 2 by 2 feet, and puddled up back of same, also faced bank of canal with stone.

*Lock No. 25, and Level.*

Raised tow-path 2,000 feet long, and faced the same with stone.

Took head and foot gates out and hung new gates in place with new improved opening bars, and brought old gates to yard Lock No. 21.

Put new foundation under crabs and reset same. Put in 100 feet trunk drain.

*Guard Lock, Hurst's, Marlatt's and Allanburgh Bridges and Three Mile Level.*

Repaired west approach Marlatt's bridge, also put in new joists and replanked same. Put locks and chains on swing bridges. Excavated for and took out old wooden culverts above guard lock, and built new stone one, 87 feet long, 6 feet wide, with two wing walls, 14 feet long, with iron grating, covered same with 387 yards of clay. Put in 10 feet new bulkhead to culvert. Put grating in drain over tow-path. Faced 500 feet canal bank with stone. Made dam at guard lock, to keep water in 3-mile level and unwatered levels below. Took out dam again, put on all slash boards throughout, and let in water.

*Allanburgh Lift and Guard Lock.*

In good order. Repaired cellar and house, also built new kitchen to Lock-tender's house.

FEEDER CANAL.

FEEDER JUNCTION TO DUNNVILLE AND PORT MAITLAND—23 MILES.

From Dunnville to Stromness and Port Maitland, distance, six and one-third miles, there are two locks, four swing bridges, three waste weirs, with thirty-six stop gates. Toll bridge, 600 feet long, 18 feet wide, and apron below dam, 640 feet long, eleven piers, 10 by 18 by 15 feet, and twenty-six flood gates. Toll-keeper's house; 1,000 feet boom timbers in Grand River; 1,735 feet embankment; eight head gates at entrance to mill ponds; twelve stationary bridges, with an aggregate length of 2,000 feet; two Lock tenders' houses, two bridge houses, five culverts, Overseer's house and office, workshops, repair scow and punts, two piers and harbor, with a depth of water from Lake Erie to outlet of canal of 19 feet, and to lock an average of 10 feet at low water line.

From Stromness to Boulton Ditch, Marshville and Junction, 16½ miles, one lock, three swing bridges, two stationary bridges, one sluice way, three culverts and two ditches.

Owing to continued drought during the present season the supply of water has not been as great on the summit level as in previous years yet it has been sufficient for all ordinary milling and manufacturing purposes along the line.

There have been no accidents or delays caused to vessels, barges or rafts passing through the Feeder during the year.

*Locks.*

The mitre sills of Dunnville, Port Maitland and Junction locks have been carefully cleaned out and all the gates properly repaired and put in good working order, the new lock gate built and placed on east side of guard lock Dunnville, and four new flood gates put in Junction lock.

*Swing Bridges.*

All the worn out and broken planks in the different bridges have been removed and replaced with new ones. The old swing bridge which carries the roadway across the feeder at Boulton Ditch becoming unsafe, it was taken down and replaced by new one, of much improved design. The old toe approach of this bridge has also been removed and a new one built which makes the new bridge 10 feet shorter than the old one. The whole structure has been thoroughly painted with three coats of best lead.

*Stationary Bridges.*

All decayed and worn planks have been removed from the waste weir and other stationary bridges and new ones put in, a new bridge has been built across Chambers' Mill race, 24 feet long in place of the old one which was 76 feet long; the extra space has been filled in with gravel and clay, thereby saving much expense in planking and repairs. Two new stop gates have also been put in.

Bridges all painted.

*Toll Bridge.*

Traffic has very considerably increased over this bridge since the toll rates have been dispensed with and the wear and breaking of planks very much increased so that it has been necessary to plank a considerable portion of it anew. Bridge painted.

*Dam.*

The flood gates of dam have all been thoroughly repaired. Three new ones put in and all the chains repaired.

The apron below the dam has been repaired in very many places with new plank.

*Waste Weirs.*

The top gates of all the waste weirs have been repaired.

*Lock Houses.*

Minor repairs and painting to lock and bridge shanties.

*Culverts.*

The culverts at Dunnville and Cranberry Creek also Hall and Stromness culverts have all been cleaned out as well as Marshville Culvert.

*Logs in Feeder.*

All sunken logs have been removed out off Feeder channel and from entrance of waste weirs and locks.

*Ditches.*

All rubbish, logs and stumps carried into back ditches off the low lands have been removed and burnt.

*Embankment.*

The roadway across the embankment at Dunnville has been repaired with stone and holes filled up with gravel.

*Feeder Bank.*

Over two miles of the tow-path bank of Feeder, between Marshville and Boulton Ditch, has been repaired, the gullies filled with clay and the bank faced with gravel and stones.

*Boom Timber.*

Two hundred feet new boom timber have been added in place of those carried away by freshets and boom chains repaired.

*Thistles and Weeds.*

All thistles and obnoxious weeds on banks of Feeder, between Dannville, Port Maitland and Junction and other Government property, have been kept cut during the year.

## GENERALLY.

Took up all growing trees along tow-paths each side of canal, replanted same to preserve them until contractors' works are completed.

All the gearing connected with the opening of the lock gates, swing bridges, and waste weirs, the gates-valves, &c., throughout have been renewed wherever necessary, and kept in repair throughout the season.

All thistles and weeds have been cut as usual on all the Government property; ditches and culverts everywhere cleaned out, and deepened when necessary.

All bridges blocked up for winter use.

WILLIAM ELLIS,  
*Superintendent.*

A. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals,  
Ottawa.

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## APPENDIX No. II.

## RIDEAU CANAL.

RIDEAU CANAL OFFICE,  
OTTAWA, 20th September, 1886.

SIR,—I have the honor to submit my annual report on the state of the works under my charge for the fiscal year ending 30th June, 1886.

Navigation closed at Ottawa and Kingston Mills on 30th and 28th November, respectively. Opened at Ottawa, 3rd May, and at Kingston Mills, 7th May.

The water in ascending and descending reaches, between Ottawa and Kingston, was maintained at the full depth required on the sills of the different locks until the close of navigation.

The spring freshets, although quite as high as the year previous, passed off without doing any serious damage to the works.

The enlarged bulkhead at Long Island Locks, which was built to renew the old one carried away the spring before, enabled us to pass the freshet of this spring with comparative ease. It is very desirable, owing to the increased body of water which, under a combination of circumstances may be suddenly thrown into the river, that the area of discharge at the Hog's Back should be now enlarged, by deepening the channel on the south side.

The principal repairs to the works were as follows:—

*Kingston Mills.*

Gravel placed on dam and repairs to upper sill of lock.

*Brewer's Lower Mills.*

Swing bridge renewed, repairs to waste weir and Lockmaster's house.

*Brewer's Upper Mills.*

Bridge over Mill Creek renewed, and general repairs to station.

*Jones' Falls.*

Repairs to White Fish Dam, and general repairs to station.

*Davis'.*

Repairs to Lockmaster's house.

*Chaffey's.*

General repairs to station.

*Newboro'*

Gravel on lock walls, and repairs to high bridge.

*Narrows.*

At this station considerable expenditure was incurred in unwatering and rebuilding the wing walls and upper recesses. Owing to the unusual rise of the Rideau Lake, during the winter, difficulties were encountered in keeping the dams above and below the lock sufficiently tight for the steam pump to keep the water under.

The taking down and rebuilding the walls in such an exposed situation, and during the severe cold weather, was however successfully accomplished. The leakage through the walls from the Upper Rideau Lake, now amounts to almost nothing, where formerly it was so great, that every year the summit level feeding towards Kingston, fell below navigation height early in the season.

*Poonamalie.*

General repairs to station.

*Smith's Falls Combined.*

Timber for gates delivered, one pair of swing bars renewed, and two pairs of sluice frames; clay placed round basin wall to stop leakage.

*Old Slys.*

New swing bridge across lock, bridge over waste weir rebuilt, new stop-logs and gravel on lock.

*Edmonds,*

Ordinary repairs to station.

*Kilmarnock.*

Ordinary repairs.

*Merrickville.*

Ordinary repairs.

*Clowe's Quarry.*

Renewed one pair of lock gates, and repairs to by-wash.

*Nicholson's.*

Ordinary repairs to station.

*Burritt's Rapids.*

Swing bridge painted; gravel placed on dam; repairs to lock and embankmen

*Long Island and Manotick.*

Pier under swing bridge rebuilt; repairs to piers and boom at head of island; renewed bulkhead at locks, increasing the openings from three to six.

*Black Rapids.*

Repairs to piers and lock.

*Hog's Back.*

Rebuilt and enlarged the long apron below the main bulkhead. This was a work of some magnitude, as it has to carry the whole of the Rideau River passing over it during the freshet, accompanied with ice, logs and drift wood.

The new work stood this year's freshet without any damage whatever being done.

*Hartwell's.*

Ordinary repairs.

*Ottawa.*

One pair of lock gates renewed. New stone sill to Lock No. 6. Repairs to wharf around basin. Excavated high places of rock in the channel leading to the basin. Ordinary repairs to locks.

Navigation was uninterrupted during the season.

I have the honor to be, Sir,

Your obedient servant,

FRED A. WISE,

*Superintending Engineer.*

A. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals,  
Ottawa.

## APPENDIX No. 12.

## TAY CANAL.

RIDEAU CANAL OFFICE,  
OTTAWA, 27th September, 1886.

## REPORT OF PROGRESS FOR THE YEAR ENDING 30TH JUNE, 1886.

Both Locks No. 1 and 2 are now finished.

The excavation required from the Rideau Lake to the Tay River, a distance of about one mile and a quarter, is well advanced.

The contractors encountered a good deal of difficulty in maintaining a tight dam to complete the rock excavation at the entrance, and did not succeed until they removed the dam to a point below where the rock was found, when no further trouble was experienced in unwatering.

The dredge has been kept at work excavating the cuts across the bends of the river, and in the river itself where there was no rock.

Considerable damage was done to the contractors' dams in the river by the high water and ice this spring, necessitating their being reconstructed before any progress could be made with the excavation.

Owing to the high water in the lake, no crib work was done outside, but it is their intention to finish the entrance this fall, if possible. ]

I have the honor to be, Sir,

Your obedient servant,

F. A. WISE,  
*Superintending Engineer.*

A. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals,  
Ottawa.

## APPENDIX No. 13.

## TRENT CANAL.

ENGINEER'S OFFICE,

PETERBOROUGH, 1st September, 1886.

SIR,—I have the honor to submit the annual report on the works under my charge for the fiscal year ending 30th of June last.

The height of the water on the several stretches was above the average during the whole season. The only interruption to navigation was at Hasting's, which was caused by the giving way of one of the lower stringers of the swing bridge. The water during the spring was very high, but it did little more than the usual amount of damage, except at Bobcaygeon, where it tore off a number of the lower braces of the dam and removed about 100 feet of the apron.

Navigation closed on the 26th of November, and opened on the 1st of April. The number of lockages on the several canals during the year was 2,193, a larger number than in any previous year.

The nature and objects of the several works along the line of navigation have been fully described in detail in former reports, I shall therefore confine myself to laying before you as briefly as possible a description of the necessary repairs which have been executed at the different stations during the past year.

*Bobcaygeon.*

The lower lock gates were repaired, so as to make them last for some time yet. New balance beams and corbels were placed on the upper lock gates.

The floor of the canal was replanked. To do this, a coffer was built at the head of the canal, to shut out the water. A breastwork, 250 feet long, was constructed at the lower entrance of the lock.

This, besides forming a glance to the lock, serves for a landing wharf, something which was very much needed. The gravel in front of the breastwork at the upper entrance was washed away by the action of water from side-wheel steamers. Sheet piling was driven along the whole face of this breastwork. This forms a solid work for the protection of the embankment, which has always heretofore been a source of danger to the village. The stone pier at the head of the canal was rebuilt, and the pivot pier of the swing bridge received a coat of cement on top, to prevent the formation of ice inside the pier during the winter.

The cedar joists over the raceway leading from the canal were found, upon the removal of the planking, to be in a bad condition. These were renewed, and the whole floored with new plank. The walls of the raceway were pointed with Portland cement.

*Buckhorn.*

A plan of permanent brackets, fastened to the top of the dam, was adopted, instead of light sloop logs, for which the appropriation was made. These have admirably fulfilled the object for which they are intended, viz., to retain the water in the upper stretch. The brackets are 20 feet long, 30 inches high, and 4 inches thick. They are secured to the cap of the dam by strong hinges and straps, and are held in position by means of short chains, fastened to the upper timbers of the dam: When the brackets are not required, they are allowed to fall forward, and are there

secured till needed. When the water is receding in the spring, these are gradually let up at the proper time, and without any danger to those engaged on the work. A glance pier was placed above the slide, and the dam was well gravelled.

The works at this station are now in good condition.

*Whitlaw's Rapids.*

A breastwork, 200 feet long, was constructed on the west side of the lower entrance to the lock. This has been a great benefit to navigation, and has given a landing wharf for merchandize which heretofore had to be landed while in the lock. The back of the east wall of the lock was built up. The lower lock gates were taken out and repaired.

*Hastings.*

The swing bridge, which is a very old structure, gave out. Some of the braces and part of one of the lower stringers of the bridge were decayed.

These were repaired, and the bridge received a coat of paint. The roller of one of the gates became loose and prevented the gate opening or shutting. The gate was raised, and the roller replaced. Nine new stop logs were furnished for the lock.

*Chisholm's.*

The lock walls were pointed with Portland cement, and the opening gearing for the gates procured.

I have the honor to be, Sir,  
Your obedient servant,

RICHARD B. ROGERS,  
*Acting Superintending Engineer.*

A. P. BRADLEY, Esq.,  
Secretary Department Railways and Canals,  
Ottawa.

## APPENDIX No. 14.

## ST. PETER'S CANAL.

OTTAWA, 14th October, 1886.

SIR,—I have the honor to submit the following relative to the St. Peter's Canal. Navigation through the canal ceased on the 1st January, and opened on the 12th April of the present year.

The following is a statement of the traffic through the canal during the year ended 30th June, 1886:—

Year.	Vessels.		Tonnage.		Tolls Collected.	
	North.	South.	North.	South.	North.	South.
1885.	No.	No.	Tons.	Tons.	\$ cts.	\$ cts.
July.....	134	116	12,055	14,056	268 31	244 71
August.....	146	111	14,496	7,930	275 27	185 51
September.....	127	111	7,970	9,527	150 78	128 37
October.....	124	103	8,055	9,950	140 28	186 18
November.....	83	68	9,957	8,065	152 28	189 18
December.....	21	30	2,572	2,672	25 30	49 19
1886.						
January.....	1	1	103	50	1 86	2 26
April.....	18	24	1,218	812	32 17	20 42
May.....	79	74	860	1,280	108 16	83 26
June.....	74	71	9,266	7,897	152 30	187 19
Totals.....	807	714	66,342	62,239	1,316 71	1,276 27

During the year a careful examination was made of the works of the canal, and I am pleased to state that with the exception of the retaining wall at the southern entrance, which was built many years ago, they are in good order.

The retaining wall referred to has, owing to its exposure to the sea, and the ravages of the sea worm (*teredo navalis*) been completely destroyed, and the bank will have to be protected to prevent its being washed away.

An old building on the canal property has been repaired and fitted up as waiting rooms for passengers; a suitable room has been prepared for the accommodation of the Locktenders at night.

The public road adjoining the canal has been thoroughly repaired, and a new road has been made across the canal property, from the lock in the direction of St. Peter's Village.

I have the honor to be, Sir,

Your obedient servant,

HENRY F. PERLEY,

Engineer in Charge.

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals, Ottawa.

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## APPENDIX No. 15.

## UPPER ST. LAWRENCE AND TRENT VALLEY CANALS.

PETERBOROUGH, 10th November, 1886.

SIR,—I have the honor to submit this, my report, for the fiscal year 1885-86, and generally to date.

The works in my charge are the Galops Rapid improvements, and the Murray Canal, on the Upper St. Lawrence; also the surveys and explorations, as connected with the projected Trent Valley Canal, and the works of construction in progress on the Black Lakes Division thereof, comprising the regulating dams at Lakefield and Young's Point, and the canals at Burleigh, Buckhorn, and Fenelon Falls.

## UPPER ST. LAWRENCE RIVER.

*Galops Rapid Improvements.*

This rapid, situated about seven miles below Prescott, presents the first obstruction to the navigation in descending the river. The projected improvements consist in the formation of a straight channel through the rapid, to the south of that now in use, and extending over a distance of three-quarters of a mile, crossing in succession, the following detached shoals, all of which are composed of limestone rock *in situ*, viz.:—"The Upper Bar," "North Shoal," "Caledonia Shoal," "Island Shoal," and the "Lower Bar."

The specification for the work contemplated a perfectly straight cutting in the bed of the river, 200 feet in width on bottom, and 17 in depth at ordinary low water.

*Season of 1886.*

The torpedo vessel resumed the drilling and blasting operations on "Upper Bar," 17th April, and completed that work 23rd September, subsequently the vessel was taken to Montreal by the contractor for repairs.

The chain vessel, the "Dredge," was engaged from 3rd May to 9th June, in removing the dam of debris formed during previous dredgings on the lower end of "Island Shoal," and upon the completion of which work was recommenced on "Lower Bar," to be continued until the season closed.

The present state of the work is as follows, viz.:—

"Upper Bar," drilling and blasting, completed 23rd September, 1886.

"North Shoal," drilling and blasting completed 2nd September, 1885.

"Caledonia Shoal," drilling and blasting completed 21st August, 1885.

"Island Shoal," fully completed, 9th June, 1886.

"Lower Bar," drilling and blasting completed 4th August, 1885, and dredging operations thereon approaching completion.

The work was commenced in 1880, under the skilful and energetic management of the present contractors, Messrs. E. E. Gilbert & Sons, to whom the contract was transferred in 1882 by Messrs. W. Davis & Sons, the original contractors.

*Murray Canal.*

This work is situated about 75 miles west of Kingston, and 120 from the entrance to the Welland Canal at Port Dalhousie, and will connect the Bay of Quinté, the head of river navigation, with the harbor of Presqu'île on Lake Ontario by an artificial "strait" or channel, formed by dredging through the Isthmus of Murray and the surrounding shoals, a distance of fully 6 miles; and further, by dredging and other

wise perfecting a new entrance to the harbor, through the shoals known as Calf Pasture, Salt Point, and the Middle Ground lying off Presqu'île Point. The width of the channel through the isthmus is 80 feet on bottom, and that of the Bay of Quinte and Presqu'île entrances, 200 feet, with a depth at ordinary low water (the zero of the Toronto harbor gauge) of 12 feet 6 inches, or 1 foot deeper than in the shallowest parts of the Bay of Quinté.

The width of the new entrance to the harbor from the lake will be greater, varying from 200 to over 1,000 feet, the depth will also be increased to 16 feet.

The work this season, with the exception of the entrance piers and the preparation of stone, &c., for bridges, has been confined to the excavation by dredging. No less than seven powerful dredges have been continuously engaged thereat with this very satisfactory result.

The waters of the Bay of Quinté and the harbor of Presqu'île are now united, and the new entrance from the latter to the lake, through the Middle Ground and other shoals is in a very advanced state.

The contract was entered into with Messrs. J. D. Silcox & Co., on the 24th August, 1882, to be completed 1st July, 1885.

The superstructure of the Trenton Road Bridge, also that of the Central Ontario Railway Bridge, is now in course of construction, and therefore the original alignment of the approaches to both bridges will shortly be restored.

#### TRENT VALLEY CANAL.

##### *Surveys.*

It is submitted, that sufficient information has now been obtained to enable me to make a final report to the Chief Engineer. An estimate of the cost of construction of the entire line as surveyed has already been prepared, which, with the plans, &c., now in hand, will be forwarded with the report as soon as completed.

#### TRENT NAVIGATION.

##### CONSTRUCTION.

##### *Lakefield Dam.*

This dam is situated at the outlet of Katchiwannoe Lake, and controls the navigable reach extending upwards to Young's Point. The work comprises the main dam across the river, and a wing dam or waste-way in which is included the head gates to the Strickland mills. The main dam was completed last season, but the construction of the wing dam has thus far been deferred for sufficient reasons, principally in order to suit the convenience of mill-owners and persons interested in the water supply, it has, however, been commenced with their consent, and will now be prosecuted to completion. In connection with this work, the formation of a submerged raceway has also been authorized, facilities for water-works for fire purposes having been granted to the Municipality of Lakefield.

The contract was entered into with Mr. Charles Wynn, 9th March, 1884, to be completed 1st December.

##### *Young's Point Dam.*

Is situated between Clear and Katchiwannoe Lakes, and regulates and controls, for navigation purposes, the levels of Clear and Stony Lakes to the foot of the Burleigh Canal.

The work was completed last season, and fully answers the purposes for which it was constructed.

The contract was entered into with Mr. Charles Wynn, 23rd January, 1884, to be completed 1st December.

##### *Burleigh Canal.*

This work is designed to overcome the falls and rapids at Burleigh and Lovesick, and thereby complete the navigation between the Stony Lake and Deer Bay reaches.

It consists in the construction of two locks, combined, with bridge, regulating and other dams, &c., at Burleigh Chute, and also of a lock and regulating dams at Lovesick Rapids, and lateral dams across the several outlets from Deer Bay.

Since my last report, extraordinarily rapid progress had been made, in view of the difficult character of the work, more particularly at Burleigh Chute, at which place the Lower Lock and entrance thereto have been completed, as well as the massive and complicated foundation walls of the Upper Lock, where also, considerable progress has been made in the ordinary masonry of the lock walls.

The piers for the swing bridge are also completed, and the dams are all in such a forward state as will enable the work thereon to be continued during the coming winter.

At Lovesick, the progress of the work has been equally rapid and satisfactory, the lock walls being fully half finished, and the dams and other works here, in a similar condition to those at Burleigh Chute, thus leaving no room to question the ability of the contractor to complete his contract next season.

The contract was entered into with Mr. George Goodwin, 27th September, 1882, to be completed 1st September, 1884. From various circumstances, chiefly from a desire to improve upon the original location, the work of construction was practically not commenced until after the completion of the Buckhorn by Mr. Goodwin. The lock gates for all the locks have been provided for, and together with the superstructure for the swing bridge on the colonization road will shortly be commenced.

The consequence of the channel of the chute having been selected as the site for the combined locks, that, at Burleigh Falls, is now the only available means of running timber and logs, and since the existing dam and slide at this station are in a ruinous condition, it is now proposed to reconstruct both works on a different site from that now occupied by them, for which purpose a survey has been made and the necessary plans prepared.

#### *Buckhorn Canal.*

Consists in a lock and short reach of canal, and the improvement of the channel of Little Buckhorn Rapids, by which means the navigable waters of Deer Bay and Buckhorn Lake are now connected.

The contract was entered into with Mr. George Goodwin, 27th September, 1882, to be completed 1st September, 1884. The work was fully completed in December, 1884. A contract for lock gates has been awarded to Mr. George Goodwin, to be completed before the opening of navigation next season, and arrangements are being made for the construction of the swing bridge over the lock.

#### *Fenelon Falls.*

This work comprises two locks, combined, a headrace for hydraulic purposes, a short reach of canal, and other work in connection with a "draw" intended to be placed in the Victoria Railway Bridge. This canal is situated about the centre of the village of Fenelon Falls, and is designed to overcome the falls, and rapids of the Fenelon River, between Sturgeon and Cameron's Lakes.

The contract was entered into with A. F. Manning & Co., 14th October, 1882, to be completed 1st July, 1885. The work was completed in October, 1885, with the exception of the pivot and rest piers for the railway bridge, of which, for reasons stated in my last report, the contractors were relieved.

A contract for the construction of lock gates has been awarded to Mr. Charles Wynn, to be completed this season, and arrangements are also being made to place the swing bridge on Colborne street, across the Upper Lock.

I have the honor to be, Sir,

Your obedient servant,

TOM S. RUBIDGE,

*Engineer in Charge,*

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals,

Ottawa.

## APPENDIX No. 16.

List of Contracts entered into in connection with the Canadian Pacific Railway.

No. of Contract	Names of Contractors.	No. of Contract	Names of Contractors.
1	Sifton, Glass & Co.	53	Barrow Hematite Steel Co.
2	Richard Fuller.	54	Guest & Co.
3	F. J. Barnard.	55	West Cumberland Iron and Steel Co.
4	Oliver, Davidson & Co.	56	The Kellogg Bridge Co.
5	Joseph Whitehead.	57	The Truro Patent Frog Co.
5a	Joseph Whitehead.	58	W. Hazelhurst.
6	Guest & Co.	59	Whitehead, Ruttan & Ryan.
7	Ebbw Vale Steel, Iron and Coal Co.	60	D. O. Mills.
8	Murray Steel and Iron Co.	61	D. O. Mills.
9	West Cumberland Iron and Steel Co.	62	D. O. Mills.
10	West Cumberland Iron and Steel Co.	63	D. O. Mills.
11	Naylor, Benson & Co.	64	Ryan, Whitehead & Ruttan.
12	Hon. A. B. Foster.	65	James Crossen.
13	Sifton & Ward.	66	Bowie & McNaughton.
	Purcell & Ryan.	67	Moncton Car Co.
14	Sifton & Ward.	68	Ontario Car Co.
	Jos. Whitehead (completing contract No. 14).	69	North-West Transportation Co.
15	Joseph Whitehead.	70	North-West Transportation Co.
16	Canada Central Railway Co.	71	Toronto Bridge Co.
17	Anderson, Anderson & Co.	72	Ontario Car Co.
18	Red River Transportation Co.	73	Toronto Bridge Co.
19	Moses Chevrette.	74	Wm. Goodherbam, jun.
20	Merchants Lake and River Steamship Co.	75	Pillow, Hersey & Co.
21	Patrick Kenny.	76	Cooper, Fairman & Co.
22	Holcomb & Stewart.	77	Stubbs & Co.
23	Sifton & Ward.	78	Sked & Haycock.
24	Oliver, Davidson & Co.	79	The Truro Patent Frog Co.
25	Purcell & Ryan.	80	James Crossen.
26	James Isbester.	81	Dunlop & Rannie.
27	Merchants Lake and River Steamship Co.	82	Ontario Car Co.
28	Red River Transportation Co.	83	James Crossen.
29	Cooper, Fairman & Co.	84	Ontario Car Co.
30	Robb & Co.	85	Nobles & Follis.
31	Patent Bolt and Nut Co.	86	Fairbanks, Morse & Co.
32	Cooper, Fairman & Co.	87	James Crossen.
32a	LeMay & Blair.	88	Walter Oliver.
33	Kavanagh, Murphy & Upper.	89	J. Patterson.
34	North-West Transportation Co.	90	Ferris, Paul & Milwar.
35	Cooper, Fairman & Co.	91	Canadian Pacific Railway Co.
36	William Robinson.	92	Andrew Onderdonk.
37	Heney, Charlebois & Flood.	93	Andrew Onderdonk.
38	Edmond Ingalls.	94	Horton & Son.
39	John Irving.	95	Bayliss, Jones & Bayliss.
40	Gounn, Murphy & Upper.	96	Guest & Co.
41	Purcell & Co.	97	John McDonald.
41	Manning, Macdonald, McLaren & Co.	98	Colin Nicol Black.
43	Joseph Upper & Co.	99	Canadian Pacific Railway Co.
44	West Cumberland Iron and Steel Co.	100	A. Onderdonk, station building, Yale.
45	Barrow Hematite Steel Co.	101	A. Onderdonk, station building, Lytton.
46	Ebbw Vale Steel, Iron and Coal Co.	102	A. Onderdonk, station building, Ashcroft.
47	Patent Bolt and Nut Co.	103	John Philip Bacon, water tanks.
48	John Ryan.	104	A. Onderdonk, station buildings.
49	Richard Dickson.	105	Wilsoo & McCrearty, engine house.
50	Miller Brothers & Mitchell.	106	Head Wrightson & Co.
51	Dominion Bolt Co.	107	James Leamy & Donald McGillivray, rebuild- ing wharf at Port Moody, B.C.
52	North-West Transportation Co.		

## APPENDIX No. 17.

## ST. LAWRENCE NAVIGATION.—TABLE OF DISTANCES—A.

FROM STRAITS OF BELLE-ILE TO PORT ARTHUR, AT HEAD OF LAKE SUPERIOR, BY WATER.

From	To	Sections of Navigation.	Statute Miles.	
			Inter-mediate	Total to Straits of Belle-Ile.
Straits of Belle-Ile.....	Cape Whittle.....	Gulf of St. Lawrence....	240	240
Cape Whittle.....	West Point, Anticosti.....	do.....	201	441
West Point, Anticosti.....	Father Point.....	River St. Lawrence.....	202	643
Father Point.....	Rimouski.....	do.....	6	649
Rimouski.....	Bic.....	do.....	12	661
Bic.....	Isle Verte.....	do.....	39	700
Isle Verte (opp. Saguenay)	Quebec.....	do.....	126	826
Quebec.....	Three Rivers.....	do to Tide-water.....	74	900
Three Rivers.....	Montreal.....	do.....	86	986
Montreal.....	Lachine.....	Lachine Canal.....	8 $\frac{1}{2}$	994 $\frac{1}{2}$
Lachine.....	Beauharnois.....	Lake St. Louis.....	15 $\frac{1}{2}$	1,009 $\frac{1}{2}$
Beauharnois.....	Ste. Cécile.....	Beauharnois Canal.....	11 $\frac{1}{2}$	1,021
Ste Cécile.....	Cornwall.....	Lake St. Francis.....	32 $\frac{1}{2}$	1,053 $\frac{1}{2}$
Cornwall.....	Dickinson's Landing.....	Cornwall Canal.....	11 $\frac{1}{2}$	1,065 $\frac{1}{2}$
Dickinson's Landing.....	Farran's Point.....	River St. Lawrence.....	5	1,070 $\frac{1}{2}$
Farran's Point.....	Upper end of Croyle's Island	Farran's Point Canal....	3	1,071
Upper end Croyle's Island..	Williamsburg or Morrisburg..	River St. Lawrence.....	10 $\frac{1}{2}$	1,081 $\frac{1}{2}$
Williamsburg.....	Rapide Plat.....	Rapide Plat Canal.....	4	1,085 $\frac{1}{2}$
Rapide Plat.....	Point Iroquois Village.....	River St. Lawrence.....	4 $\frac{1}{2}$	1,090
Point Iroquois Village.....	Upper end Presqu'île.....	Point Iroquois Canal.....	3	1,093
Presqu'île.....	Point Cardinal, Edwards- burg.....	Junction Canal.....	2 $\frac{1}{2}$	1,095 $\frac{1}{2}$
Point Cardinal.....	Head of Galops Rapids.....	Galops Canal.....	2	1,097 $\frac{1}{2}$
Galops Rapids.....	Prescott.....	River St. Lawrence.....	7 $\frac{1}{2}$	1,105
Prescott.....	Kingston.....	do.....	59	1,164
Kingston.....	Port Dalhousie.....	Lake Ontario.....	170	1,334
Port Dalhousie.....	Port Colborne.....	Welland Canal.....	26 $\frac{1}{2}$	1,360 $\frac{1}{2}$
Port Colborne.....	Amherstburg.....	Lake Erie.....	232	1,592 $\frac{1}{2}$
Amherstburg.....	Windsor.....	River Detroit.....	18	1,610 $\frac{1}{2}$
Windsor.....	Foot of St. Mary's Island....	Lake St. Clair.....	25	1,635 $\frac{1}{2}$
Foot of St. Mary's Island...	Sarnia.....	River St. Clair.....	33	1,668 $\frac{1}{2}$
Sarnia.....	Foot of Joseph's Island.....	Lake Huron.....	270	1,938 $\frac{1}{2}$
Foot of St. Joseph's Island	Foot of Sault Ste. Marie.....	River St. Mary.....	47	1,985 $\frac{1}{2}$
Sault Ste. Marie.....	Head of Sault Ste. Marie.....	Sault Ste. Marie Canal..	1	1,986 $\frac{1}{2}$
Head of Sault Ste. Marie...	Pointe aux Pins.....	River St. Mary.....	7	1,993 $\frac{1}{2}$
Pointe aux Pins.....	Port Arthur.....	Lake Superior.....	266	2,259 $\frac{1}{2}$
Port Arthur to Lake Shebandowan.....			45	
Lake Shebandowan to North-West Angle.....			312	
North-West Angle to Winnipeg.....			95	
Pointe aux Pins to Duluth.....			390	

Of the 2,259 $\frac{1}{2}$  miles from the Straits of Belle-Ile to the Head of Lake Superior, 71 miles are artificial navigation, and 2,188 $\frac{1}{2}$  open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical or 2,234 statute miles.

The total fall from Lake Superior to Tide-water is about 600 feet.

The steamboat voyage from Collingwood to Port Arthur is 532 miles.

## APPENDIX No. 18.

TABLE of distances of Stations between the cities of Ottawa and Kingston.

No. of Station.	Name of Station.	Distances from Ottawa.	Locks.		Dams.		Length of Artificial Canal at each Station, in miles.		
			No.	Lift at Low Water.	No.	Length.		Height.	
				Ft.		In.		Feet.	Feet.
1	Ottawa .....	0	8	82 0	3	$\left. \begin{array}{l} 230 \\ 1,320 \\ 1,616 \end{array} \right\}$	18 33 14 28 60	4.00	
2	Hartwell's .....	4 $\frac{1}{2}$	2	22 0	.....	100	12	0.13	
3	Hogsback .....	5 $\frac{1}{2}$	2	13 6	1	320	12	0.13	
4	Black Rapids .....	9 $\frac{1}{2}$	1	10 0	1	300	14	1.50	
5	Long Island .....	14 $\frac{1}{2}$	3	27 0	3	850	68	0.50	
6	Burritt's .....	40 $\frac{1}{2}$	1	10 6	1	240	9	0.05	
7	Nicholson .....	43 $\frac{1}{2}$	2	15 2	1	500	16	0.33	
8	Clowes .....	44 $\frac{1}{2}$	1	10 6	1	481	6	0.13	
9	Merrickville .....	46 $\frac{1}{2}$	3	25 0	1	150	8	0.06	
10	Maitland .....	55	1	4 9	1	270	8	0.25	
11	Edmunds .....	59 $\frac{1}{2}$	1	10 10	1	343	20	0.13	
12	Old Slys .....	60 $\frac{1}{2}$	2	15 6	1	250	24	0.25	
13	Smith's Falls .....	61 $\frac{1}{2}$	4	33 9	2	600	5	0.25	
14	First Rapids or Poonamalie ..	64	1	7 9	1	260	9	0.13	
15	Narrows .....	83 $\frac{1}{2}$	1	4 0	1	600	9	1.25	
Total rise at low water .....		.....	.....	292 3	.....	.....	.....	0.06	
				Fall.					
16	Isthmus .....	87 $\frac{1}{2}$	1	4 0	.....	.....	.....	1.25	
17	Chaffey's .....	92	1	12 6	.....	.....	.....	0.13	
18	Davis .....	94 $\frac{1}{2}$	1	9 0	1	300	15	0.06	
19	Jones' Falls .....	97 $\frac{1}{2}$	4	60 0	1	300	60	0.25	
20	Brewer's Upper Mills .....	108 $\frac{1}{2}$	2	19 0	1	200	20	1.75	
21	do Lower Mills .....	110	1	14 2	1	200	12	4.25	
22	Kingston Mills .....	120 $\frac{1}{2}$	4	46 8	1	6,042	14	0.25	
23	Kingston .....	126 $\frac{1}{2}$	.....	.....	.....	.....	.....	.....	
Total fall at low water .....		.....	.....	165 4	.....	.....	.....	.....	
Total .....		.....	.....	47	.....	24	15,472	.....	16.46

## APPENDIX No. 19.

TABLE showing the dates of the closing of the Canals in the Autumn of 1885 and of the opening in the Spring of 1886.

Canals.	Closing.	Opening.
Lachine Canal.....	30th November, 1885.....	3rd May, 1886
Beauharnois Canal.....	3rd December, 1885.....	1st do 1886
Cornwall Canal.....	10th do 1885.....	1st do 1886
Williamsburg Canal.....	6th do 1885.....	29th April, 1886
Welland Canal—		
New Canal.....	} 9th do 1885.....	19th do 1886
Old Canal.....		3rd May, 1886
St. Anne's Lock and Dam.....	26th November, 1865.....	27th April, 1886
Carillon Canal.....	} 30th do 1885.....	1st May, 1886
Grenville Canal.....		
Culbute Lock and Dam.....	} 30th do 1885.....	1st do 1886
Chute à Blondeau.....		
Rideau { Kingston Mills.....	28th do 1885.....	7th do 1886
{ Ottawa.....	30th do 1885.....	3rd do 1886
St. Ours Lock.....	28th do 1885.....	15th April, 1886
Chambly Canal.....	30th do 1885.....	3rd May, 1886
Erie Canal (New York).....	1st December, 1885.....	1st do 1886
St. Peter's Canal (Cape Breton).....	1st January, 1886.....	12th April, 1886
Trent Canal Works.....	26th November, 1885.....	1st do 1886

APPENDIX No. 20.

STATEMENT of Contracts entered into between 1st July, 1886, and 30th June, 1886.

Railways and Canals.	Deed, Letter or otherwise under which contract was made.	Name of Contractor.	Date of Contract.	General Description.
Canadian Pacific Railway .....	Contract 8,441.....	A. Onderdonk .....	Dec. 7, 1885	Pending final settlement of contracts 92, 61, 62, 63 will carry Government mails by train between Port Moody and Savona's Ferry, B.C., on Canadian Pacific Railway.
Intercolonial Railway .....	do 7,894.....	M. J. Hogan and Dominion Bridge Co .....	Aug. 12, 1885	Erect a snow shed at Harlake, on St. Charles Branch, Intercolonial Railway.
do .....	do 7,895.....	Alex Grant & Co .....	do 14, 1886	Erect a cedar crib work at a point 5 miles east of Bic Station, Intercolonial Railway.
do .....	do 7,920.....	Bienavon Co. (limited) .....	Sept. 1, 1885	Supply 2,000 steel rails, 67 lbs. per yard, and fish plates, bolts and nuts, delivered f. o. b., at Newport, for Intercolonial Railway.
do .....	do 7,923.....	James Harris & Co .....	do 15, 1885	Construct 12 freight conductors' vans for Intercolonial Railway, delivered on track, St. John, f. o. b.
do .....	do 7,937.....	John Blagdon & Son.....	do 7, 1885	Construct coal trestle at Dartmouth, 178 feet long, 6 to 9 feet high, Intercolonial railway.
do .....	do 7,938.....	do .....	do 4, 1885	Repair wharf, No. 2, Richmond, Intercolonial Railway.
do .....	do 7,939.....	Barry & Powers.....	Aug. 17, 1885	Masonry, overhead bridge at Barlow's Crossing, 4 miles west of Trois Pistoles, P. Q., for Intercolonial Railway.
do .....	do 7,940.....	Oakes & PAV .....	Sept. 4, 1885	Complete works on Dartmouth Branch, excavation earth and rock. Plank crossings and retaining walls, &c.
do .....	do 7,941.....	do .....	do 4, 1885	Build crib work at Grand Lake, N.S.
do .....	do 7,945.....	John Blagdon & Son.....	do 24, 1885	Pile approaches to swing bridge at Halifax, N.S.
do .....	do 7,946.....	Rhodes, Curry & Co .....	do 24, 1885	Combined freight and passenger station at Dartmouth.
do .....	do 7,947.....	Daniel Gunn .....	Aug. 28, 1885	Fencing between Pictou Landing and Truro.
do .....	do 7,948.....	do .....	do 18, 1885	do Truro and Folly Lake.
do .....	do 7,949.....	John F. Teed.....	Sept. 4, 1885	Snow fence, 4,400 lineal feet on different points on the Indiantown Branch.
do .....	do 7,965.....	Ontario Car Co .....	Oct. 8, 1885	Build 10 conductors' vans, delivered at Chaudière Junction.
do .....	do 7,968.....	Walter H. Allan .....	do 15, 1885	Build 3 snow ploughs same as (model) No. 80.
do .....	do 7,969.....	R. R. Call.....	do 15, 1885	Build coal shed and trestle at Newcastle.
do .....	do 7,970.....	F. B. Atkinson.....	do 15, 1885	Fill with earth L'Anse Labadie and under freight shed, Lévis, P. Q.

STATEMENT of Contracts entered into between 1st July, 1885, and 30th June, 1886—Continued.

Railways and Canals.	Deed, Letter or otherwise under which contract was made.	Name of Contractor.	Date of Contract.	General Description.
Intercolonial Railway	Contract 7,871	F. B. Atkinson	Oct. 15, 1885	Repair Samson's Wharf, Lévis, P.Q.
do	7,989	Robert Smith	do 15, 1885	Repair Prince's Pier Wharf, Lévis, P.Q.
do	7,995	Ontario Car Co.	Nov. 3, 1885	Construct 20 platform cars, delivered at Chaudière Junction.
do	7,996	do	do 3, 1885	Construct 2 2nd class cars and 5 conductors' vans, delivered at Chaudière Junction.
do	7,997	Arcade Lemieux	do 28, 1885	Transshipping of freight at Chaudière Junction.
do	7,998	W. E. Buchart	do 24, 1885	Repair Kimouski wharf.
do	8,039	Jackson, Sharp & Co.	Dec. 8, 1885	Construct 1 drawing-room car.
do	8,108	Cook, Jones & Innes	April 3, 1886	Construct Pictou Town Branch.
do	8,224	Frank Curran	Mar. 10, 1886	Barbed wire fencing between Moncton and Adamsville coal branch, 4 miles north of Kent Junction, thence to Barnaby River, Red Pine and Bathurst, thence to Greek to Bel River, Bel River to Campbellton.
do	8,225	D. C. Slack	do 10, 1886	Pictou Landing to Hopewell, Riverdale and Truro, Mount Uniacke to Stillwater, Ethershouse, Newport, Windsor, Elmsdale to Stewiacke and Truro.
do	8,226	James Graham	do 10, 1886	Halifax, Bedford and Windsor Junction.
do	8,227	Andrew King	do 10, 1886	Barnaby River to Newcastle and Bartibogue.
do	8,228	James O. Fish	do 10, 1886	Causapscal to Amqui and Sayabec.
do	8,229	Odillon Mignault	do 10, 1886	Fairfax Junction to Salisbury, Sussex and St. John.
do	8,230	James Brown	do 10, 1886	Painsec Junction to Sackville, and to Pointe du Chêne.
do	8,231	W. H. T. Sumner	do 10, 1886	Truro to Thompson, viz Polly Lake.
do	8,238	Daniel Gunn	do 10, 1886	Rivière du Loup to Hadlow.
do	8,239	F. B. Atkinson	do 10, 1886	Little Métis, St. Flavien, Ste Luce to Kimouski.
do	8,240	A. Grant & Co.	do 10, 1886	Thompson, Salt Springs, Athol and Aniac.
do	8,241	R. L. Black	do 10, 1886	Mulgrave, Antigonish and New Glasgow.
do	8,242	Stewart & Maxwell	do 10, 1886	Malapedia to Mill Stream Bridge, Assomogues to Causapscal, Sayabec to Little Métis, Rimouski to Rivière du Loup.
do	8,244	Barry & Power	do 10, 1886	

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do	8,245	John A. Jones	do 30, 1886	Erect an old rail overhead bridge bowstring truss, 53 feet span, near Dorchester, N.B.
do	8,264	Smith & McPhail	April 16, 1886	Interchange of freight at Pointe du Chêne, Shediac, and between it and Buctouche.
do	8,275	The Patent Nut and Bolt Co. (Limited)	March 3, 1886	Supply 32 tons iron bolts and nuts for maintenance, f.o.b., export ship at Liverpool (with allowance, if delivered at Cardiff or Newport, of 2s 6d.)
do	8,287	Peter Nadeau	April 22, 1886	Build a station and dwelling and freight shed, at Dalhousie, N.B.
do	8,288	G. S. Mayes	do 20, 1886	Build bridge between Brown's Point and Loch Broom, Pictou, Town Branch.
do	8,289	John F. Teed	do 28, 1886	Build section house and freight room, at College Bridge.
do	8,295	Arcade Lemieux	May 21, 1886	Transshipping of freight at Chaudière Junction.
do	8,306	James Harris & Co.	June 8, 1886	Construct 100 platform cars, 33 feet long, delivered on Intercolonial Railway tracks, at St. John, N.B.
do	8,419	West Cumberland Iron and Steel Co. (Limited)	do 7, 1886	Supply 4,000 tons steel rails (67 lbs. per yard) for Intercolonial Railway, delivered, f.o.b., in port of Maryport, Cumberland.
do	8,491	Town Council, Moncton	do 21, 1886	They to construct a brick sewer to drain the 12 Government cottages on Bridge Street, and the intercolonial Railway property on Foundry Street, Moncton, N.B.
do	8,455	Guest & Co.	Feb. 24, 1886	Supply 1,000 tons steel rails (67 lbs. per yard) and fish-plates for Intercolonial Railway, delivered, f.o.b., Alexandra Dock, Newport or Cardiff.
do	8,454	Ebby, Vale Steel, Iron and Coal Co. (Limited)	do 25, 1886	do do do
do	8,398	Intercolonial Coal Co.	June 9, 1886	Supply 6,000 tons of fresh mined round steam coal for Railway sleepers for Prince Edward Island Railway—
do	8,333	John R. Larkins	Jan. 25, 1886	3,000 hemlock.
do	8,334	T. H. Pope	do 25, 1886	8,000 do
do	8,335	Robert Ellis, jun.	do 25, 1886	8,000 do
do	8,336	Wm. Barclay	do 26, 1886	500 do
do	8,337	J. A. Paslay	do 26, 1886	1,000 do
do	7,943	R. G. & F. Hicks	Oct. 10, 1885	Back ditches, Section 10 along Feeder, between Marshville and Welland Junction.
do	7,944	J. & L. Misener	do 12, 1885	Back ditches, Section 11 along Feeder, between Marshville and Welland Junction.
do	8,087	James Wilson	March 3, 1886	Supply forged iron, steel and blacksmithing for old and new lines and Feeder.
do	8,088	do	do 3, 1886	Supply castings, wrought iron and brass works, for old and new lines and Feeder.
do	8,091	McLeary & McLean	do 9, 1886	Supply timber, &c., for do
do	8,088	R. T. Sutton	do 23, 1886	Excavation, Section K, North.
do	8,100	John Conlon	do 20, 1886	do do K, South.
do	8,102	C. F. & H. T. Dunbar	April 3, 1886	do do Sections 2, R. S. T.
do	8,104	John McDonagh	March 18, 1886	Supply timber for lock gates (increased height).

[1886]

STATEMENT OF Contracts entered into between 1st July, 1885, and 30th June, 1886—Continued.

Railways and Canals.	Deed, Letter or otherwise under which contract was made.	Name of Contractor.	Date of Contract.	General Description.
Welland Canal.....	Contract 8,217.....	F. B. McNamee.....	April 6, 1886	Deepen Section O. P. L, M, N.
do	do 8,222.....	Isbester & Reid.....	do 8, 1886	do do
do	do 8,247.....	Smith & Jones.....	May 15, 1886	do do B & C.
do	do 8,249.....	Smith, Leonard & Mumford.....	do 4, 1886	do do
do	do 8,251.....	McDonald & McFarlane.....	do 11, 1886	do do
do	do 8,253.....	Chas. H. Raynor & Co.....	do 5, 1886	do do F, G, H, I.
do	do 8,255.....	Wm. Gibson & Co.....	do 7, 1886	do do J.
do	do 8,280.....	Smith, Leonard & Mumford.....	do 26, 1886	do do E.
Lachine Canal.....	Letter 111,387.....	The Royal Electric Co.....	April 6, 1886	Furuish Edison Incandescent Electric Light plant to light Lachine Canal.
GENERAL.				
Baie des Chaleurs Railway Co.....	Contract 7,879.....	Baie des Chaleurs Railway Co	Nov. 7, 1885	Subsidy agreement—Line from Metapediae, eastwards, towards Paspébiac, 20 miles
do	do 7,915.....	do do	do	Subsidy agreement—20 miles from Paspébiac, 80 miles.
Canada Atlantic Railway Co.....	Contract 7,910.....	Canada Atlantic Railway Co.	Aug. 14, 1885	Subsidy Agreement—For line from, 1st. Valleyfield to 1 1/2 miles west of Johnson's, 34 miles. 2nd. Lacolle to Eastabury, on Missisquoi Bay, 10 miles. 3rd. Present terminus, at Ottawa, to Chaudière Falls, 3 miles. do For line from Junction with Grand Trunk, at St. Lambert, to Sorel, 45 miles.
Montreal and Sorel Railway Co.....	do 7,911.....	Montreal and Sorel Railway Co	Oct. 14, 1885	do
Montreal and Champlain Junction Railway.....	do 7,912.....	Montreal and Champlain Junction Railway.....	do	For line from Brossard to Dundee, ballasting and rolling stock, 60 miles.
La Société de Colonisation du Lac Témiscamague.....	do 7,991.....	La Société de Colonisation du Lac Témiscamague.....	Nov. 25, 1885	do For a line from foot of Long Sault to foot of Lake Témiscamague.
Northern and Western Railway Co., of New Brunswick.....	do 7,919.....	Northern and Western Railway Co., of New Brunswick	do	do For a line from Indian town to Boiestown, 4 1/2 miles
do	do 7,950.....	do do	do	do From end of 40 miles subsidised by 47 Vic., c. 8, at St. Mary's to Boiestown, 6 miles.
International Railway Co. (Short Line).....	do 7,992.....	International Railway Co. (Short Line).....	Dec. 14, 1885	do Oaughnawaga to Moncton.

[1886]

Quebec and Lake St. John Railway Co.....	do 8,059.....	Quebec and Lake St. John Railway Co.....	Feb. 10, 1886	do For line from Junction of Company's line, on North Shore Railway to St. Raymond, and to extend to a point 50 miles north of St. Raymond.
St. Lawrence, Lower Laurentian and Saguenay Railway Co.....	do 8,060.....	St. Lawrence Lower Laurentian and Saguenay Railway Co.....	do	do For 40 miles from or near Grand Piles, on River St. Maurice to its Junction with Lake St. John Railway.
Témiscouata Railway Co.....	do 8,232.....	Témiscouata Railway Co.....	June 21, 1886	do Line from Intercolonial Railway, at Rivière-du-Loup, to Edmonton, 83 miles.
New Brunswick and Prince Edward Railway Co.....	do 8,233.....	New Brunswick and Prince Edward Railway Co.....	May 18, 1886	do Line from Sackville Station to wharf, Cape Tormentine, N.B., 37 miles.
Leamington and St. Clair Railway Co.....	do 8,234.....	Leamington and St. Clair Railway Co.....	do	do Line from Comber, on Canada Southern Railway, to Lake Erie, at Leamington Village, 14 miles

CONTRACTS ENTERED INTO—OMITTED FROM REPORTS OF PREVIOUS YEARS.

Contract	Name of Contractor	Date	Description
Contract 8,303.....	Hugh L. McDonald.....	Jan. 13, 1886	Railway sleepers for Prince Edward Island Railway—3,000 tamarac, 4,000 hemlock, 3,000 spruce.
do 8,304.....	James Kelbride.....	do 17, 1881	7,000 hemlock, 13,000 spruce.
do 8,305.....	Archibald McPhee.....	do 19, 1881	500 spruce.
do 8,306.....	Thomas Bowling.....	do 18, 1881	500 do
do 8,307.....	Leo Angus McCormack.....	do 18, 1881	2,000 tamarac, 800 spruce.
do 8,308.....	Toderick McPhee.....	do 18, 1881	1,000 spruce.
do 8,309.....	Angus J. McDonald.....	do 18, 1881	15,000 do
do 8,310.....	Joseph Murphy.....	do 19, 1881	200 hemlock, 6,000 spruce.
do 8,311.....	Isaiah Home.....	do 20, 1881	80 tamarac, 30 hemlock, 360 spruce.
do 8,312.....	John Hughes.....	do 21, 1881	6,000 do
do 8,313.....	John J. Fletcher.....	do 21, 1881	3,100 hemlock, 6,000 spruce.
do 8,314.....	J. R. Bourk.....	do 22, 1881	500 hemlock, 500 spruce.
do 8,315.....	Robert Ellis.....	do 24, 1881	500 tamarac, 500 do
do 8,316.....	Angus McCormack.....	do 24, 1881	5,000 spruce.
do 8,317.....	Wm. McKinnon.....	do 25, 1881	100 do
do 8,318.....	John Carey.....	do 25, 1881	100 tamarac, 400 hemlock, 1,500 spruce.
do 8,319.....	Donald McDougall.....	do 25, 1881	3,000 hemlock, 3,000 spruce.
do 8,320.....	James Ford.....	do 25, 1881	15,000 do
do 8,321.....	Hugh Goff.....	do 27, 1881	5,000 do
do 8,322.....	John Ashton.....	do 27, 1881	5,000 do
do 8,323.....	Robert Ellis.....	Dec. 19, 1885	6,000 do
do 8,324.....	Wm. Bulger.....	do 19, 1885	5,000 do
do 8,325.....	J. T. Perry.....	do 27, 1885	5,000 do
do 8,326.....	Samuel McAulish.....	do 27, 1885	5,000 do
do 8,327.....	T. H. Pope.....	do 27, 1885	29,000 do

[1886]

STATEMENT of Contracts entered into between 1st July, 1883, and 30th June, 1886—Continued.

Railways and Canals.	Deed, Letter or otherwise under which contract was made.	Name of Contractor.	Date of Contract.	General Description.
do	8,328.....	John Miller.....	do 27, 1883	5,000 spruce
do	8,329.....	Robert Ellis, jun.....	Jan. 26, 1856	10,000 hemlock.
do	8,330.....	John R. Larkins.....	do 26, 1885	4,000 do
do	8,331.....	James Kilbride.....	do 26, 1885	10,000 do
do	8,331.....	Robert Ellis.....	Jan. 26, 1885	4,000 hemlock.
do	Contract 8,332.....	Gilbert DesRoches.....	July 10, 1882	Construct station at Miscouche.
do	8,338.....	Michael Kelly.....	do 23, 1883	Enlarge and alter freight house at Charlottetown.
do	8,339.....	Thomas D. Archibald <i>et al</i> .....	do 10, 1881	Supply 5,200 tons of coal for locomotives.
do	8,340.....	G. W. Gerow.....	Oct. 3, 1881	Transport two locomotives from Gibson to St. John, N.B.
do	8,341.....	Wm Hazelhurst.....	March 22, 1880	Construct four turntables for Intercolonial Railway.
do	8,343.....	Eastern Express Co.....	Aug. 29, 1874	Convey express matter in New Brunswick and Nova Scotia, on Intercolonial Railway cars, between St. John and Pointe du Chêne and Amherst.
do	8,345.....	Town of Truro.....	July 15, 1876	Supply water to Intercolonial Railway at Truro Station.
do	8,346.....	Duncan Waddell.....	March 0, 1884	Masonry of pivot pier of bridge over Narrows, at Halifax, 529 cubic yards.
do	8,347.....	Western Union Telegraph Co, and Halifax and Cape Breton Railway Co.....	June 22, 1880	Agreement—Mutual facilities for construction, use and operation of a telegraph line, from New Glasgow to Strait of Canso. Free up to, and not over, \$300 per annum.

## APPENDIX No. 21.

## GENERAL STATEMENT SHOWING

- 1st. Water Power and other Public Property leased on Canals and Railways, during the Fiscal year ending 30th June, 1886.
- 2nd. Property purchased or damaged by the Department of Railways and Canals, for the Dominion Railways or Canals; and Property sold by the same Department, as not being required for said Railways or Canals, during the Fiscal year ending 30th June, 1886.
- 3rd. Agreements respecting subsidies granted by the Dominion Government to aid in the construction of Railways, entered into by certain Railway Companies with the Minister of Railways and Canals, during the Fiscal year ending 30th June, 1886.  
[1886]

## GENERAL STATE

## 1st. Water Power and other Public Property leased on Canals

Date of Signature.	Terms of Lease.	Lessees.	Property Leased.	For what purpose used.
<i>Chambly Canal.</i>				
Sept. 12, 1885	Pleasure of the Government.	Bissett & Donaghy...	Wharf lot, at St. John's, P.Q. ....	Storage.....
do 12, 1885	do	Simard & Godin.....	do do	do
do 12, 1885	do	James O' Cain.....	do do reserving 14 ft. lane in rear.	do
June 14, 1886	do	H. Riendeau.....	Triangular lot, at Chambly Basin, near Lock No. 7.	do
<i>Beauharnois Canal.</i>				
Dec. 21, 1885	do	É. Larocque, wife of F. X. Barbeau.	N. part of S.W. $\frac{1}{2}$ 21, in 1st. Con. Catherinestown, head of Canal.	Farming.....
do 21, 1885	do	Auguste Crevier.....	Part of Canal bank above St. Timothée Bridge, south side.	Public scale.....
<i>Lachine Canal.</i>				
Oct. 29, 1885	do	Wm. Clark.....	Water supply through a 2-in. pipe, from Canal to his factory on Canal Street, Montreal.	Canned meats factory.
Nov. 19, 1885	do	Dominion Barb Wire Co.	Water supply through a 6-in. pipe, at Lachine, 1,400 ft. below Guard Lock.	Water for wire mill and fire.
do 4, 1885	do	Henderson Bros. ....	2 storage lots between St. Gabriel Basins, 2 and 3 north of No. 2, St. Anne's Ward Montreal.	Piling lumber....
<i>Rideau Canal.</i>				
Dec. 9, 1885	do	John Samson.....	Part lot 40, 1st Con. Nepean, Ottawa Front, at Dow's Swamp.	.....
<i>Welland Canal.</i>				
Aug. 1, 1885	do	Corporation, County of Welland.	Water supply through a 2-in. syphon pipe, from Canal to draw lake water across towpath, north of aqueduct across Chippewa River, to the County Court House, Town of Welland.	Water supply....
Nov. 20, 1885	do	Corporation, Village of Port Colborne.	Land, 25 x 380 ft. along P. Ramey's lots, from East Street, Port Colborne, to Grank Trunk Railway Station.	For a road.....
June 25, 1886	do	James Bridges.....	Part of lot No. 26, in 5th Con. Crowland, west of Canal and north of west Main Street, Town of Welland.	Temporary store house.

[1886]

## MENT SHOWING

and Railways, during the Fiscal Year ended 30th June, 1886.

Amount of Water Power Leased.	Area of Property Leased.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			Remarks.
				Amount of each Instalment.	When Payable each Year.	When first Instalment was Payable	
			\$ cts	\$ cts.	\$ cts.		
.....	{ 86 ft. 10 in. } X 71 ft.	July 1, '85	25 00	25 00	July 1...	On delivery of lease.	In advance.
.....	55 X 70 ft.	.....	25 00	25 00	.....	do	.....
.....	65 X 70	Sept. 1, 1885	25 00	25 00	Sept. 1...	do	.....
.....	65 X 70	.....	.....	.....	.....	do	.....
.....	1,700 ft. ....	May 1, 1886	10 00	10 00	May 1...	do	This cancels lease No 6,058 to "Catelli Bros."
.....	9-93 arpts.	Aug. 20, 1881	10 00	10 00	Sept. 1...	do	(Formerly widow of Hector A. Demers.)
.....	50 X 30 ft.	Oct. 1, 1885	5 00	5 00	Oct. 1...	Oct. 1, 1885	.....
2-inch pipe.	.....	Sept. 1, 1885	10 00	10 00	Sept. 1...	On delivery of lease.	.....
6-inch pipe.	.....	do 1, 1885	40 00	40 00	do 1...	do	.....
.....	.....	Nov. 1, 1885	300 00	300 00	Nov. 1...	do	.....
.....	1 acre.....	Dec. 1, 1885	4 00	4 00	Dec. 1...	do	.....
2-inch pipe.	.....	Aug. 1, 1885	1 00	1 00	Aug. 1...	do	.....
.....	25 X 380 ft	Nov. 1, 1885	1 00	1 00	Nov. 1...	do	.....
.....	0-20 acre..	Aug. 15, 1871	20 00	20 00	Aug. 15...	do	He paid for previous occupation up to 15th Aug., 1885—\$280.

[1886]

## GENERAL STATEMENT showing : 1st. Water Power and other

Date of Signature.	Terms of Lease.	Lessees.	Property Leased.	For what purpose used.
<i>Williamsburgh Canals.</i>				
Aug. 25, 1885	21 years, renewable for ever.	Municipal Council, Village of Iroquois	Part of lot No. 24, in 1st Con. Matilda, Iroquois Canal.	Pump house and water supply.
<i>Intercolonial Railway.</i>				
Oct. 2, 1882	1 year or 5 years.	Rossin House Hotel Co. to Her Majesty	Office on ground floor of their hotel, on York Street, Toronto.	Intercolonial Ry. Office.
Aug. 31, 1885	On 6 months notice	John Breakey.....	License to cross Intercolonial Railway on a level, at Chaudière Junction, by his railway from Chaudière mills.	Crossing.....
Dec. 1, 1885	On 3 months notice.	Daniel O'Keefe.....	License to connect a pipe for his hotel with water pipe of Intercolonial Railway, at Campbellton, N.B.	Water supply....
Jan. 1, 1886	3 years or on default.	New Brunswick Railway Co.	Running powers to Company over Carleton Branch Railway, to Fairville, and from Company to Intercolonial Railway from Fairville to the St. John Cantilever Bridge.	Running powers.
Mar. 29, 1886	1 year or on 3 months notice.	Canada Railway News Co.	License to sell books, &c., St. John Station.	.....
Jan. 1, 1886	do	C. A Demers.....	License to sell books, &c., at Lévis Station.	.....

Public Property leased on Canals and Railways, &c.—*Concluded.*

Amount of Water Power Leased.	Area of Property Leased.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			Remarks.
				Amount of each instalment	When Payable each Year.	When first Instalment was Payable	
20 h. p.	.....	Aug. 1, 1885	\$ cts. 70 00	\$ cts. 35 00	\$ cts. 1st Jan. & 1st July.	On delivery of lease.	
.....	{ 1 year... { 5 years..	Oct. 1, 1882 do 1, 1883	200 00 360 00	50 00 90 00	Quarterly.	.....	
.....	.....	.....	20 00	.....	.....	.....	
.....	.....	.....	30 00	30 00	Jan. 2...	At signature	
.....	.....	.....	*	.....	Monthly...	*Schedule rates per trip.	
.....	.....	Mar. 1, 1886	300 00	75 00	Quarterly.	.....	
.....	.....	Jan. 1, 1886	160 00	40 00	do	.....	

2nd, Property purchased or damaged by the Department of Railways and Canals, and property sold by the same Department, as not being required for the Railways or Canals of the Dominion, during the Fiscal Year ended 30th June, 1886.

Date of Signature.	Vendors.	Purchasers.	Property Purchased, or Sold, or Damaged.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
			<i>Carillon Canal.</i>			\$ cis.	
Nov. 7, 1885	John Gourley et al.	Her Majesty.	Release, damages to 1/4 of lot N.W. pt. 24, 1st Con., East Hawkesbury	Carillon Canal.	.....	15 00	
do 20, 1885	Al. v. r. Lamb et al.	do	Release, damages to 1/4 of lot W. 1/2 5, 1st Con., East Hawkesbury	do	1/2 or 3 acre.	120 00	
April 9, 1886	John M. Kinby et al.	do	Release, damages to 1/4 of lot 23, 1st Con., East Hawkesbury	do	1 1/2 acres.	100 00	
Feb. 2, 1886	Phil. Félon	do	Deed to Government, part of E. 1/2 of S. pt. 8, 1st Con., block A, Chatham	do	0-275 do	400 00	Land and fences.
do 4, 1886	John Fitzgerald	do	Deed to Government, part of 3, 4, 5, 6, 7, 1st Con., block A, Chatham	do	3-0-19 do	1,000 00	Land.
S. pt. 9, 1885	do	do	Release, damages to lot No. 3, 1st Con., block A, Chatham	do	.....	600 00	Fences.
Oct. 19, 1885	Wm. Forrester et al.	do	Release, damages to lot E. 1/2 6, 1st Con., block C, Chatham	do	.....	20 00	
Aug 10, 1885	Geo. Bradford, jr.	do	Release, damages to lot 15, 1st Con., block C, Chatham	do	.....	750 00	
Oct. 6, 1885	W. Owens	do	Release, damages to lots 18, 19, 1st Con., block C, Chatham	do	.....	400 00	
Sept. 21, 1885	A. McConnell	do	Release, damages to lots 14, 15, 1st Con., block C, Chatham	do	.....	577 00	
			<i>Chambly Canal.</i>				
June 4, 1886	H. Riendeau	do	Release, damages by leakage, to buildings, Chambly Basin	Chambly Canal	.....	100 00	
do 22, 1886	Widow Chas. Langeher	do	Release, maintenance of bridge at St. Johns, P.Q.	do	.....	1,800 00	For 6 years from 1st July, 1880.

Date of Signature.	Vendors.	Purchasers.	Property Purchased, or Sold, or Damaged.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
			<i>Intercolonial Railway.</i>				
Oct. 2, 1885	Wm. J. Travis	do	Deed to Government land in Parish of Norton, King's County, N.B., near Bloomfield Station	Intercolonial Ry	1 acre	475 06	
Jan. 26, 1886	Order in Council	do	Appropriation of land covered with water, at Dalhousie, in re Dalhousie Wharf and deep water lot	do	52-69 acres	15,000 00	
June 7, 1886	Nova Scotia Coal Co	do	Deed to Government of their railway from Westville to Granton	do	.....	.....	[in 1871.
do 23, 1886	Ra. Chas. Dawson	do	Certificate as to value and price paid for lots 11, 12, 24, 26, Metepetia Range, Tp. Restigouche	do	.....	.....	
			<i>Ottawa River—Damages by Dams at Rocher Fenit and Grand Calumet Falls.</i>				
July 18, 1885	James Cahill	do	Release, damages to lots 22, 23, 24, in 5th Con., Grand Calumet	Oulbute Works	20 acres	100 00	
do 2, 1885	Widow R. Stewart	do	Release, damages to lot 8, in 1st Con., Mansfield	do	16 do	100 00	
Aug 23, 1885	Geo. H. Gilker	do	Release, damages to lots 15, 16, North Range, Grand Calumet	do	8 1/2 do	500 00	
do 31, 1885	M. Godin	do	Release, damages to lot 1, North Range, Grand Calumet	do	6 3/4 do	200 00	
Sept. 7, 1885	Colton & Lachance	do	Release, damages to lots 21, 22, North Range, Grand Calumet	do	32 do	250 00	
do 10, 1885	D. Carmichael	do	Release, damages to lots A and 1, in 2nd Range, Grand Calumet	do	30 do	475 00	
Oct. 3, 1885	C. Lapine and N. McCuaig	do	Release, damages to lot 3, in 2nd Range, Grand Calumet	do	3 do	25 00	
Sept. 28, 1885	T. Bertrand	do	Release, damages to water front, 1/2 lot 19, North Range, Grand Calumet	do	20 do	100 00	
do 28, 1885	D. Frost	do	Release, damages to lot 9, in 1st Range, Mansfield	do	20 do	125 00	
Sept 28, 1885	D. Bertrand	do	Release, damages to lot 30, in 2nd Range, Mansfield	do	25 do	100 00	
do 28, 1885	F. Bertrand	do	Release, damages to lot 36, in 2nd Range, Mansfield	do	15 do	50 00	
do 28, 1885	Wm. Gillis, jun.	do	Release, damages to lot 9, Range B, Mansfield	do	7 1/2 do	25 00	
do 28, 1885	T. Bertrand	do	Release, damages to lot 8, Range A, and lot 10, Range B, Mansfield	do	20 do each	125 00	
do 28, 1885	do	do	Release, damages to lot 6, Range A, Mansfield	do	6 1/2 do	100 00	
do 28, 1885	John Cobb	do	Release, damages to lot 5, Range A, Mansfield	do	2 1/2 do	75 00	Hon. Geo. Bryson et al, mortgages

2ND — PROPERTY purchased, or damaged, or sold, by the Department of Railways and Canals, &c.—Continued.

Date of Signature.	Vendors. &c.	Purchasers.	Property Purchased, or Sold, or Damaged.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
do 28, 1885	Jane Furneston, widow, and the heirs of the late Thos. Bryson	Her Majesty.	<i>Ottawa River—Damages by Dams at Rocher Fendu and Grand Calumet Falls.</i>				
Sept. 28, 1885	John Young	do	Release, damages to Island No. 5, or B, opposite lot 5, Range A.	Culbute Works	5 1/4 acres and 9/4 do	800 00	Except part owned by James Findlay
Oct. 19, 1885	Geo. Kempt	do	Release, damages to lot 7, in 1st Range, Calumet Island	do	10 do	50 00	
do 5, 1885	Jos. Brisard	do	Release, damages to lot 10, in 1st Range, Calumet Island	do		300 00	
do 6, 1885	Ant. Lagarde	do	Release, damages to lots 1 and 2, in 6th Range, Grand Calumet	do		10 00	
do 6, 1885	O. Tremblay	do	Release, damages to lot Centre § 9, in 1st Range, Calumet Island	do		40 00	
do 6, 1885	Wm. Letts	do	Release, damages to lot S. § 9, in 1st Range, Calumet Island	do		100 00	
do 8, 1885	F. X. Rouleau	do	Release, damages to lot 15, in 1st Range, Calumet Island	do		320 00	
do 19, 1885	do	do	Release, damages to lots 16, 18 and 19, in 1st Range, Calumet Island	do		25 00	
do 12, 1885	J. Henan et al.	do	Release, damages to lots 30 and 31, in 7th Range, Calumet Island	do		450 00	
do 19, 1885	M. Hughes	do	Release, damages to lot 9, in 1st Range, Litchfield	do		150 00	
do 19, 1885	do et al.	do	Release, damage to lot 4, in 2nd Range, and lot 6, in 1st Range, Litchfield.	do		50 00	
do 22, 1885	L. McDonnell	do	Release, damages to lot 15, in 5th Range, Litchfield	do		1,190 00	R. McDonell, mortgagee.
do 22, 1885	J. Kelly	do	Release, damages to lot 3, in 5th Range, Calumet Island	do		15 00	
						125 00	

do 23, 1885	D. Carmichael	do	Release, damages to lot 10, in 1st Range, Litchfield	do		200 00	
do 24, 1885	T. McCormick	do	Release, damages to lot N.W. § 12, in 5th Range, Litchfield	do		55 00	
do 30, 1885	T. Maguire et al.	do	Release, damages to lot N.W. § 13, in 5th Range, Litchfield	do		50 00	
Nov. 21, 1885	M. Griffia et al.	do	Release, damages to lot N.W. § 8, in 1st Range, Calumet Island	do		240 00	
do 19, 1885	T. M. Carewell	do	Release, damages to lots 13, 14, 15, in Range A, Mansfield	do		250 00	
Oct. 27, 1885	E. Barford	do	Release, damages to lots 38 and 39, in 2nd Range, Mansfield	do		650 00	
Nov. 10, 1885	N. Hubert dit Neveu	do	Release, damages to lot 37, in 2nd Range, Mansfield	do		60 00	
do 5, 1885	Jos. Belland	do	Release, damages to lots 33 and 39, in 8th Range, Calumet Island	do		500 00	
do 17, 1885	D. Gervais	do	Release, damages to lot 23, in North Range, Calumet Island	do		130 00	
Oct. 24, 1885	T. Letts et al.	do	Release, damages to lot N. § 9, in 1st Range, Calumet Island	do		40 00	
Nov. 5, 1885	H. Luceam	do	Release, damages to lot 3, in 2nd Range, Litchfield	do		750 00	
Oct. 30, 1885	A. McLehan	do	Release for damages to lot N. § 2, in 2nd Range, Litchfield	do		25 00	
Nov. 23, 1885	C. Neville et al.	do	Release for damages to lot 19, in 5th Range, Calumet Island	do		70 00	
Oct 10, 1885 Jan. 2, 1886	L. Jacques, & widow of P. Jacques	do	Release for damages to lot 17, in 1st Range, Calumet Island	do		70 00	
Oct. 10, 1885	D. St. Germain	do	Release for damages to lot S.E. § 6 of 19, in 1st Range, Calumet Island	do		240 00	With his declaration for self and as tutor.
Dec. 1, 1885	W. Findlay et al., et al	do	Release for damages to lot 7 in 1st, 7 and 8 in A Range, Waltham	do		250 00	
do 2, 1885	P. Mellon	do	Release for damages to lot 8, in 1st Range, Waltham	do		10 00	
Nov. 28, 1885	Widow Ed. Wrinn	do	Release for damages to lot N.W. § 6, in 6th Range, Litchfield	do		300 00	
Dec. 14, 1885	T. & A. Keys	do	Release for damages to lot N. § 14, in 5th Range, Litchfield	do		450 00	
do 29, 1885	S. McCormick	do	Release for damages to lot S.E. § 19, in 5th Range, Litchfield	do		20 00	
do 18, 1885	Denis Shea	do	Release for damages to lot N.W. § 10, in 5th Range, Litchfield	do		20 00	
do 19, 1885	Wm. Stephen	do	Release for damages to lot 8, in 6th Range, Litchfield	do		5 00	
do 1, 1885	J. Thomson	do	Release for damages to lot 6, in 1st Range, Litchfield	do		1,060 00	
do 11, 1885	Thos. Cole	do	Release for damages to lot S.E. § 13, in 5th Range, Litchfield	do		110 00	

Date of Signature.	Vendors, &c.	Purchasers.	Property Purchased, or Sold, or Damaged.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
			<i>Ottawa River—Damages by Dams at Rocher Fendu and Grand Calumet Falls.</i>			\$ cts.	
Oct. 26, 1885	G. & J. Bryson .....	Her Majesty.	Release for damages to lots 5 and Island A, in Range A, lots 23 and 18, in 1st Range, Mansfield .....	Culbute Works.....	.....	900 00	
Nov. 28, 1885	H. Quinn.....	do	Release for damages to lot S.W. ½ 15, in 5th Range, Litchfield .....	do	.....	210 00	Tenant.
Jan. 30, 1886	P. Gillis <i>et al</i> .....	do	Release for damages to lot 11, in 5th Range, Litchfield .....	do	.....	50 00	
do 26, 1886	Heirs D. Callaghan.	do	Release for damages to lot 29, in 7th Range, Calumet Island .....	do	.....	40 00	Mr. J. Power's release, 6th Nov., 1885.
do Feb. 10, 1886	John Shea.....	do	Release for damages to lot 4, in 5th Range, Calumet Island .....	do	.....	100 00	
do 6, 1886	J. Cahill <i>et al</i> .....	do	Release for damages to lot 18, in Con. front C., Westmeath .....	do	.....	20 00	
Nov. 23, 1885	D. Lacroix.....	do	Release for damages to lots 28 and 29, North Range, Calumet Island .....	do	.....	40 00	
Feb. 11, 1886	M. Gervais, sen. and jun .....	do	Release for damages to lot S.E. ½ 17, in 5th Range, Litchfield .....	do	.....	200 00	
Oct. 14, 1885	P. Ounningham .....	do	Release for damages to lot 14, in 5th Range, Calumet Island .....	do	.....	135 00	
Jan. 14, 1886	N. McCuaig .....	do	Release for damages to S.W. pt. and rear ½ 2, in 7th Range, Litchfield .....	do	.....	40 00	
Feb. 13, 1886	do <i>et al</i> .....	do	Release for damages to lot 3, in 6th Range, Litchfield .....	do	.....	35 00	
Jan. 14, 1886	do .....	do	Release for damages to lots front ½ 2 and ½ 4, in 2nd Range, and 5, in 1st Range, Calumet Island .....	do	.....	125 00	
Nov. 19, 1885	J. Houston .....	do	Release for damages to lot front ½ 34, in 5th Range, Calumet Island .....	do	.....	90 00	
Oct. 10, 1885	John Fumerton.....	do	Release for damages to lot 7, in 5th Range, Litchfield.....	do	.....	50 00	
do 17, 1885	John O'Brien .....	do	.....	do	.....	90 00	

Jan. 8, 1886	Alex. Fraser.....	do	Release for damages to lots 5 and 6, in 1st Range, Waltham.....	do	.....	105 00	C. McDermott.
Dec. 19, 1885	Jas. Hanratty and H. Chevater .....	do	Release for damages to lot front ½ 23, in 1st Range, Calumet Island .....	do	.....	100 00	
Nov. 24, 1885	R. Connelly <i>et al</i> .....	do	Release for damages to lots 40, 41 and 42, in 2nd Range, Mansfield.....	do	.....	550 00	
April 5, 1886	Pat. Quinn .....	do	Release for damages to lot N.W. ½ 17, in 5th Range, Litchfield .....	do	.....	225 00	
April 5, 1886	R. Kennedy .....	do	Release for damages to lot S.E. ½ 16, in 5th Range, Litchfield .....	do	.....	200 00	
do 5, 1886	Mrs. D. McMillan .....	do	Release for damages to N.W. ½ 16, in 5th Range, Litchfield .....	do	.....	175 00	
do 19, 1886	F. Frappier <i>et al</i> .....	do	Release for damages to lot 11, in 1st Range, Calumet Island .....	do	.....	130 00	
do 20, 1886	D. Legault <i>et al</i> .....	do	Release for damages to lot 20, in 1st Range, Calumet Island .....	do	.....	100 00	
May 3, 1886	T. Lafrance .....	do	Release for damages to lot 31, in 2nd Range, Mansfield .....	do	.....	75 00	
do 4, 1886	W. O. Spencer.....	do	Release for damages to lots 12, 13, in 5th Range, Calumet Island.....	do	.....	140 00	
do 4, 1886	G. H. Gilker.....	do	Release for damages to lots 32, 33, in 7th Range, Calumet Island .....	do	.....	250 75	
do 5, 1886	J. Gemmill.....	do	Release for damages to lot 35, in 2nd Range, Mansfield .....	do	.....	75 00	
do 6, 1886	O. Ingram .....	do	Release for damages to lot N. ½ 18, in 1st Range, Litchfield .....	do	.....	100 00	
do 31, 1886	M. Hennessy <i>et al</i> .....	do	Release for damages to lot 12, Con. A, Coulonge Lake, Westmeath.....	do	.....	160 00	
June 5, 1886	W. Findlay <i>et al</i> .....	do	Release for damages to lot E. ½ 15, Con. B, Coulonge Lake, Westmeath .....	do	.....	50 00	
do 17, 1886	C. Miller and E. Hawkins .....	do	Release for damages to lot 10, Con. B, Coulonge Lake, Westmeath .....	do	.....	40 00	
do 28, 1886	G. Carswell .....	do	Release for damages to lots 30, 31, in 8th Range, Calumet Island.....	do	.....	200 00	
June 5, 1886	Ann Quinn <i>et al</i> .....	do	Release for damages to lot 15, in 5th Range, Litchfield .....	do	.....	25 00	
do 16, 1886	G. H. Gilker.....	do	Release for damages to lot 34, in 7th Range, Calumet Island .....	do	.....	100 00	
May 27, 1886	Wm. Cosgrove .....	do	Release for damages to lot 19, in 4th Range, Litchfield .....	do	.....	100 00	H. K. & W. F. Egan
do 24, 1886	A. Paul and J. Roney .....	do	Release for damages to lot S. ½ 18, in 1st Range, Litchfield .....	do	.....	125 00	
June 28, 1886	J. Marton.....	do	Release for damages to Island No. 7, opposite Mansfield .....	do	.....	105 00	
May 18, 1886	Geo. Bryson, jun.....	do	Release for damages to lot 25, in 2nd Range, Mansfield .....	do	.....	70 00	
do 24, 1886	S. A. Huntington.....	do	Release for damages to lot 4, in A Range, Waltham .....	do	.....	125 00	

Date of Signature.	Vendors, &c.	Purchasers.	Property Purchased, or Damaged, or Sold.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
Oct. 31, 1885	Wm. Elliott .....	Her Majesty.	<i>Rideau Canal.</i> Release for damages between Kingston and Lower Brewer's Mills to lots 37, 38, 39, 40, in 5th Con., Kingston .....	Rideau Canal .....	.....	\$ cis. 140 00	
do 31, 1885	J. Barnigan .....	do .....	Release for damages between Kingston and Lower Brewer's Mill to lots 35, 36, in 4th Con., Kingston .....	do .....	.....	320 00	
Nov. 2, 1885	P. Neelson .....	do .....	Release for damages between Kingston and Lower Brewer's Mills to lot E. 2, 13, in 6th Con., Pictsburg .....	do .....	.....	95 00	
Feb. 20, 1886	Gananoque Water Power Co .....	do .....	Company may improve navigation from Rideau Canal, at Morton, to Gananoque, and to assign hereafter same to Government if required, company using water for their mills .....	do .....	.....	.....	
July 10, 1884	C. M. Douglas <i>et al.</i> ..	do .....	<i>Trent Valley Canal.</i> Release, damages by Lakefield dam to broken lots 24 and 25, 11 5th Con., Douro .....	Trent Navigation .....	.....	350 00	
Oct. 9 } Nov 30 }	Widow Jane Rose .....	do .....	Release, damages by Lakefield dam to lot 35, in 11th Con., Smith .....	do .....	.....	125 00	Compensation may be paid to mortgagors.
Nov. 4, 1885	Robt. Stitt <i>et al.</i> .....	do .....	Bond, if a lost cheque for \$39.75 for wages, Aug. '85, as rangeman, is claimed hereafter .....	Galops Rapids .....	.....	59 50	
April 10, 1886	A. E. Robertson <i>et al.</i> ..	do .....	Deed of part lots W. 2, 5 and E. 2, 6, in 1st Con., Matilda .....	Rapide Plat .....	332 acres .....	3,298 63	

Date of Signature.	Vendors, &c.	Purchasers.	Property Purchased, or Damaged, or Sold.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
Sept. 5, 1886	Alonzo Read .....	Her Majesty	<i>Welland Canal.</i> Deed of parts of lots No. 1, in broken front Louth; 23 in 2nd Con. Grantham; road between Louth and Grantham, Big Island ..	Welland Canal .....	2.93 acres .....	840 00	With release for damages by raising water in 1875, to same lots.
Oct. 7, 1886	F. E. Andrews .....	do .....	Deed of parts of lots No. 21, in 1st Con. Grantham, on 8, 4, Port Dalhousie Village, N. of James Street .....	do .....	0.22 do .....	847 00	With release for damages to lots 1, 2, 3, 4, Port Dalhousie.
do 20, 1886	D. & J. Leitch .....	do .....	Receipt for injuries on board Government scow in canal .....	do .....	.....	550 00	
do 28, 1886	S. Neelon .....	do .....	Waives claim for damages to str. 't Europe, and accepts compromise re damages to Lock No. 1 .....	do .....	.....	.....	
Dec. 31, 1885	E. Middaugh .....	do .....	Release for damages by Feeder to lot 10, Dochstader tract, Canborough .....	do .....	.....	650 00	
do 29, 1885	J. J. Dochstader .....	do .....	do do lot 11 .....	do .....	.....	294 00	
Feb. 9, 1886	Alex. Abbey .....	do .....	Deed of pt. broken front village, lot 92, Port Dalhousie, or 21 and 21 1st Con. Grantham ..	do .....	0.08 acres .....	300 00	With release for damages to 2 roads, 18 per.
Mar. 9, 1886	E. Neff <i>et al.</i> .....	do .....	Release for damages by back ditch to lot 28, in 2nd Con., Humberstone .....	do .....	.....	225 00	
do 20, 1886	R. Armour .....	do .....	Release, Dunnville dam damages to lots 10, 11, and pt. of N. 2 of 12 in 1st Con., Dunnville .....	do .....	.....	250 00	
do 29, 1886	P. Powers .....	do .....	Release, Feeder, to lot 27, in 6th Con., Crowland .....	do .....	.....	375 00	
Feb. 20, 1886	W. Stevens <i>et al.</i> .....	do .....	Release, damages by Dunnville dam to lot 1, Dochstader tract, Canborough .....	do .....	.....	100 00	
Mar. 8, 1886	J. Hamilton <i>et al.</i> .....	do .....	Release, damages by Dunnville dam to lots 8, 9, in 2nd Con., Dunnville .....	do .....	.....	35 00	
do 19, 1886	St. Catharines, Thorold and Niagara Falls Macadamized Road Co .....	do .....	Release, by cutting for canal, far stoppage of traffic on their road .....	do .....	.....	303 75	
May 3, 1886	Pim & Potter. ....	do .....	Release, by loss of business, &c., on lot 22, West St., Port Colborne .....	do .....	.....	100 00	
Apr. 13, 1886	E. J. Dochstader <i>et al.</i>	do .....	Release, by Dunnville dam, to E. pt. of W. pt 1, Dochstader tract, Canborough .....	do .....	.....	150 00	
May 13, 1886	A. Lymburner .....	do .....	Release, by Dunnville dam, to S.E. pt. 8, Dochstader tract, Canborough .....	do .....	.....	192 75	
do 13, 1886	R. C. Lymburner .....	do .....	Release, by Dunnville dam, to lot 3, Dochstader tract, Canborough .....	do .....	.....	485 00	
June 25, 1886	P. Vaebinder .....	do .....	Release, by Dunnville dam, to N. pt. 17, in 4th Con., South Chayuga .....	do .....	.....	133 00	
May 10, 1886	M. Henry <i>et al.</i> .....	do .....	Release, by Dunnville dam to lots 2, 3, Indian Reserve, Canborough .....	do .....	.....	360 00	

Date of Signature.	Vendors, &c.	Property Purchased, or Damaged.	For what purpose used.	'rea of Land.	Amount Paid.	Remarks.
May 11, 1886	A. Armour	Welland Canal. Release, by Dunnville dam, to broken lots 10, 11, in 2nd Con., Dunn	do		189 00	
do 25, 1886	A. Rittenhouse et al	Release, by Dunnville dam, to lots 1, 2, 3, 4, in 3rd Con., Dunn	do		182 00	
do 12, 1886	Eliz. Burnham et al.	Release, by Dunnville dam, to E. pt. 1, Doch-stader tract, Canborough	do		115 00	
June 30, 1886	Wm. Dashwood et al.	Release, by Dunnville dam, to lot 13, and N. ½ 13, in 4th Con., South Cayuga	do		90 00	
May 13, 1886	Jas. Sweet, et al	Release, by Dunnville dam, to S. W. pt. 3, Dochstader tract, Canborough	do		140 00	
July 2, 1886	J. W. Nelson	Canadian Pacific Railway. Deed of lot 10, block 45, Emerzon	Femina Branch, Canadian Pacific Railway	0.2 acres	148 50	
Sept. 19, 1886	Grand Trunk Rail-way Co.	Deed of North Shore Railway, St. Martin Junction to Quebec Harbor	North Shore Ry.		525,000 00	See Smeady Act 48-49 Vic., c. 58, \$1,400,000.
do 4, 1886	Her Majesty	do	do			
July 13, 1885	J. P. Burnyeat	Bond, if a lost cheque of \$116.66 be claimed.	Can. Pac. Ry		1 00	
Aug. 13, 1885	S. J. Jackson	Deed, lot N.E. ¼, Sec. 25, Tp. 13, Range 1, East.	Stonewall Branch.	10.07 acres.		
Sept. 12, 1885	D. Young and J. Mc-Donald	Deed of N.W. ¼ sec. 30, Tp. 13, Range 2 East.	Stonewall Branch.	9.09 acres.		
Dec. 9, 1885	J. M. Reid	do	do	1.25 do		
Feb. 23, 1886	Western Canada Loan and Savings Co.	do	do			
do 10, 1886	George Wardner	do	do			
Nov. 5, 1883	G. G. Major	do	do	3.7 do	1 00	
Sept. 21, 1883	W. Perkins	do	do	5.54 do	50 00	And interest.

Date of Signature.	Vendors, &c.	Property Purchased, or Damaged.	For what purpose used.	'rea of Land.	Amount Paid.	Remarks.
do 6, 1836	Order in Council	Transferring them a lot and house, "Black Hawk," at Kamloops, B.C.	do		700 00	Built for engineers.
Jan. 4, 1881	M. Smith	Deed of "Montreal House" and "Black Hawk," properties at Kamloops, B.C.	Can. Pac. Ry			
Nov. 17, 1883	T. Binnie	Deeds of land in British Columbia between Port Moody and Swains's.	do			
Sept. 25, 1884	S. Robertson et al.	Lot 463, group 1, New Westminster.	Can. Pac. Ry	8.13 acres.	81 20	
Nov. 17, 1885	M. Hoy	do 409, Tps. 11 and 12	do	7.68 do	267 50	
do 5, 1883	J. Reynolds and W. Hall	do 373, group 1	do	1.19 do	11 90	
Jan. 12, 1884	Wm. Nelson	do 438 do 1	do	7.32 do	118 00	
May 5, 1884	W. J. & G. Howison.	do 248 do 1	do	2.47 do	108 00	
Nov. 5, 1883	M. Cox	do 217 do 1	do	12.81 do	719 50	
Jan. 12, 1881	Wm. Fisher	do 435 do 1	do	17.48 do	700 00	
Apr. 9, 1886	J. C. Provost	do 238 do 1	do	6.00 do	48 00	
Nov. 5, 1883	G. G. Major	Sec. 36, block 6 North, Range 1 East, Tp. 9, New Westminster.	do	5.37 do	53 50	
Sept. 21, 1883	W. Perkins	Lot 222, Group 1, New Westminster	do	0.90 do	40 00	
May 9, 1885	Jas. B. Agassiz.	do 9 do 3	do	10.90 do	5,000 00	
Feb. 6, 1886	R. P. Rethel and J. A. Laidlaw	do 37 do 1, Tp. 30, Yale	do	4.33 do	146 60	
Oct. 25, 1883	D. McDonald	do 1 do 1, Tp. 30, New Westminster.	do	1.93 do	19 30	
Nov. 17, 1883	Reyds, Jaylor, Carion and Harris	do 2 do 3	do	10.22 do	312 42	
May 9, 1885	L. A. Agassiz.	do 49 do 1, Tp. 30	do	10.41 do	5,000 00	
Feb. 26, 1884	J. R. Scott	do 381 do 1	do	6.24 do	186 00	
Jan. 8, 1884	A. McLean	Secs 17, 18, block 6 North, Range 1 East, Tp. 9, New Westminster.	do	7.60 do	76 00	
do 8, 1884	J. McKenney and J. J. Innesky	Lot 248, group 1, New Westminster	do	10.46 do	385 10	
Mar. 31, 1884	J. Mciver	do 271 do 1	do	0.38 do	400 00	
Feb. 26, 1884	F. Haney	do 385 do 1	do	6.12 do	293 00	
June 18, 1884	E. A. Atkins	do 382 do 1	do	5.03 do	314 15	
Aug. 27, 1884	J. W. Wells	do 476 do 1	do	3.07 do	9 21	
May 9, 1885	W. Wilson	do 279 do 1	do	6.02 do	1,500 00	
Oct. 23, 1884	Jas. Fraser	Sec. 26, block 6 North, Range 1 East, Tp. 9, New Westminster.	do	5.93 do	59 50	
Mar. 30, 1886	W. J. Harris	V.E. Corner sec. 35, Tp. 11, New Westminster	do	10.25 do	510 00	
Apr. 23, 1885	W. Papee and H. Ferguson	Lot 283, group 1, Township 9	do	8.59 acres.	42 90	
Dec. 22, 1884	W. J. Harris	do 402 do 12	do	4.65 do	46 50	
Feb. 6, 1885	Mrs. Elizabeth Irving	do 223 do 9	do	4.53 do	119 00	
May 16, 1885	W. & J. Hammond	do 249 do 9	do	6.63 do	274 80	
do 15, 1885	W. Hammond	do 219 do 9	do	8.96 do	247 00	
do 15, 1885	W. Hammond	do 278 do 9	do	10.83 do	137 56	
do 15, 1885	W. Hammond	do 278 do 9	do	10.83 do	1,235 00	

2nd. PROPERTY purchased, or damaged, or sold by the Department of Railways and Canals, &c.—Continued.

Date of Signature.	Vendors, &c.	Purchasers	Property Purchased, or Sold, or Damaged.	For what Purpose used.	Area of land.	Amount Paid.	Remarks.
June 6, 1867	R. Robertson	Her Majesty	Lot 433, group 1, Tp 9, New Westminster	Can. Pac Ry.	14.11 acres	\$ 942 35	
do 10, 1867	Hon. H. P. P. Crease	do	Sec. 27, block 6, N. R. 1 E. 9 do	do	2.95 do	60 00	
July 24, 1866	Mrs. E. J. Mohun	do	Lot 280, group 1, Tp. 9 do	do	7.87 do	169 00	
do 22, 1865	Wm. Fisher	do	do 238 do 1 do	do	4.63 do	37 44	
Dec. 19, 1866	Jos. Farr	do	do 31 and 32 do 1, Yale	do	16.80 do	379 00	Or Tps. 27 and 30, New Westminster.
Feb. 24, 1866	Mrs. J. McLennan	do	do 383 do 1, New Westminster	do	5.39 do	37 73	
do 25, 1866	Estate M. Lacroix	do	do 6 do 3, Tp. 17 do	do	9.23 do	790 23	
Sept. 21, 1866	R. G. McKeaney	do	do 483 do 1, Tp. 20 do	do	13.32 do	300 00	
Oct. 5, 1865	H. P. Bates	do	do 462 do 1, Tp. 20 do	do	12.75 do	8 00	
Sept. 23, 1866	W. Pickles and J. Morton	do	Sec. 25, block 6, N. R. 1 E. 9 do	do	2.50 do	74 50	
do 28, 1866	Wm. Pickles	do	Lot 482, group 1, Tp. 20 do	do	10.53 do	140 00	
Oct. 1, 1865	J. B. Greaves	do	do { 402 } do 1, Yale, Kamloops Division	do	17.07 do	650 00	
do 22, 1866	C. Pennie	do	do { 403 } do 1 do	do	18.24 do	3,500 00	
do 421 } do 1 do					14.98 do	303 52	
Nov 24, 1865	A. Robertson	do	do 431 do 1, Tp. 14, New Westminster	do	2.75 do	275 00	
Dec. 16, 1865	J. Hinch	do	do 401 do 1, Tp. 12 do	do	4.90 do	100 00	
do 16, 1865	H. Ferguson	do	do 403 do 1, Tp. 12 do	do	4.225 feet	250 00	
July 25, 1860	Wm. Dodd	do	do 6, block 5, Yale, suburban lands	do	5.400 do	160 00	
do 26, 1860	D. W. B. Gladwin	do	do 2 do 4 do town do	do	7.688 do	550 00	
Aug. 14, 1860	Isaac Oppenheimer	do	do { 1 } do 4 do suburban do	do	6.750 do	250 00	
Sept. 29, 1860	D. M. Eberts	do	do 2 do 5 do town do	do	8.910 do	650 00	
Jan. 25, 1861	Hudson Bay Co.	do	do 19, 19, 20 do 17 do town do	do	13,000 do	10 00	
Feb. 14, 1861	Bishop L. J. D'Herbomez	do	do 4, 12, 13 do 4 do do	do	3.13 acres	100 00	
May 21, 1865	L. Malatesta	do	do 4, group 1 do	do	13.35 acres	165 00	
Dec. 30, 1861	J. Robson & Isaac Oppenheimer	do	do 12 do 1 do Emory town site	do			
May 23, 1863	A. Underdonk	do	do 48 do 1 do	do			

Jan. 31, 1864	Eau Chung	do	Water privilege and mining claims, at 9 Years, Flat, Yale	Can. Pac. Ry.		450 00	
do 25, 1866	Chas. Fennie	do	He desires using waters of Covvie Creek on lots 401 and 421, Kamloops Division, Yale	do	29.84 acres	4,000 00	With his bond to keep in order the ditch on same.
do 29, 1866	Executors of L. N. Agassiz	do	Lot 19, group 1, Tp. 30, New Westminster	do	11.00 do	1,427 00	
May 10, 1866	Ah. Yep	do	do 89, do 1, Kamloops Division, Yale	do	0.70 do	500 00	
Mar. 16, 1866	Wm. McGill	do	do 12, do 1 do	do	8.84 do	11 00	
May 16, 1866	Rev. Jayol, Oarion & Horis	do	do 2, do 3, New Westminster	do	0.053 do	100 40	
July 19, 1860	Edwin Peck	do	do 7, block 13, Town of Yale	do	1.191 do	250 00	
June 6, 1866	A. Browning & G. Dietz	do	do 5, group 1, Yale District	do		100 00	
Jan. 18, 1866	Indian Department	do	O.C., do pay for Indian Reserves, between Port Moody and Savona's Ferry	do		5,869 24	
Mar. 1, 1866	do	do	do do do	do		200 00	
July 20, 1860	William Evans	do	Lot 11, group 1, Yale District	do	1.349 do	50 00	
do 20, 1860	A. Van Volkenburgh	do	do 7, block 5 do suburban lands	do	0.062 do	100 00	
do 19, 1860	Thos. York	do	do 5 do 5 do do	do	0.136 do	250 00	
Dec. 6, 1860	S. Tinckley	do	do 4 do 5 do do	do	0.169 do	800 00	
Aug. 18, 1860	E. H. Saunders	do	do 1 do 5 do do	do	0.208 do	225 00	
Apr. 18, 1861	Wm. Evans	do	do 6 do 5 do do	do	600 feet	75 00	
June 3, 1866	J. C. Barnes	do	Abandons irrigation of lot 423, group 1, and lot 1, group 4, Yale District	do		8,700 00	
June 3, 1866	J. C. Barnes	do	Lot 178, outer 2 miles, St. Andrews	Pembina Branch, Can. Pac. Ry.	0.77 acres	7 70	Vesting order of court.
May 19, 1866	A. McT. Campbell	do	do 113, Parish St. Paul	do	4.16 do	Prim. 32 2 1/2 int. 61 35	
do 27, 1866	Phoebe Taylor et al.	do	do 279 and 280, outer 2 miles, St. Andrews	do	1.02 and 0.92 acres	153 59	
June 19, 1866	J. L. Benson	do	do 174, 187, 191, 200, outer 2 miles, St. Norbert	do	1.32 acres	19 40	
July 7, 1866	R. F. Pattersn	do	do 41, Parish Kildonan	do		13 20	And interest.
Aug. 3, 1866	Sir D. A. Smith	do	do 255, Parish St. Andrews	do		7 70	
Oct. 1, 1866	Jas. Corrigal	do	do 209, 211 do	do	0.77 acres	15 20	
Sept. 21, 1866	Wm. Pruden	do	do 222 do do	do	0.76 and 0.76 acres	7 60	
do 14, 1866	S. Leask	do	do 250 do do	do	0.76 acres	7 60	
do 14, 1866	W. Morrison	do	do 183 do do	do	0.77 do	7 70	
do 14, 1866	A. McBeth	do	do S. 1/2 68, Parish St. Paul	do	0.99 do	9 90	
do 27, 1866	Peter Knight	do	do 67 do do	do	1.00 do	10 00	
July 14, 1866	Sir D. A. Smith	do	do 287, 272 247, outer 2 miles, St. Andrews; lot S. W. 1/4 and S. E. 1/4 Sec. 6, N. W. 1/4 9, Tp. 13, Range 6, East	do		1 00	
Feb. 23, 1866	J. Paton	do	S. W. 1/4 Sec. 35, Tp. 12, Range 2, East	do	3.49 and 8.18 acres	61 20	

2nd. PROPERTY purchased, or damaged, or sold by the Department of Railways and Canals, &c.—Continued.

Date of Signature.	Vendors, &c.	Purchasers.	Property Purchased, or Damaged, or Sold.	For what purpose used.	Area of Land.	Amount Paid.	Remarks.
ar. 19, 1886	Hon. J. Schultz. ....	Her Majesty	Lots 37, 38, 39, Parish of St. John. ....	Stonewall Branch, Can. Pac. Ry. ....	1-92, 0-96 and 3-86 acres.	\$	
July 30, 1886	Alex. McDonald. ....	do ...	S.E. $\frac{1}{4}$ Sec. 30, Tp. 13, Range 2, East. ....	do	3-67 acres. ....	1 00	
Feb. 23, 1886	Manitoba Investment Association. ....	do ...	S.E. $\frac{1}{4}$ Sec. 23, and N. $\frac{1}{2}$ of N.E. $\frac{1}{4}$ Sec. 14, Tp. 12, Range 3, East. ....	do	9-19 do ...	36 70	
Apr. 23, 1886	Her Majesty	City of Victoria, B.C.	Abandons the "Mud Flat," Crown Lands, east of James Bay Bridge, in Victoria Harbor, B.C. ....	Not required for Can. Pac. Ry. ....		91 90	Canada, <i>Gazette</i> , April, 1886, page 1614.

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## AGREEMENTS

Respecting Subsidies granted by the Dominion Government to aid in the construction of Railways, entered into by certain Railway Companies with the Minister of Railway and Canals, during the Fiscal Year ended 30th June, 1886.

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3rd.—AGREEMENTS respecting Subsidies granted by the Dominion Government to with the Minister of Railways and Canals, during

Date of Signature.	Name of Railway Company.	Line of Railway to be Constructed.	Acts of Canada Granting Subsidy.	Amount of Subsidy.	
				Per Mile.	Not exceeding in the whole
Aug 27, 1885	Erie and Huron Railway Co.	From Wallaceburg to Sarnia, Ont.	47 Vic., c. 8.	\$ 3,200	\$ 96,000
Nov. 7, 1885	Baie des Chaleurs Railway Co.	From Metapediac eastwards towards Paspébiac.	46 Vic., c. 25 & 47 Vic., c. 8.	In lieu of \$3,200 per mile.	300,000
do 7, 1885	do	From a point where first 20 mile section terminates, easterly from Metapediac Station of I.C.R., 80 miles, to Paspébiac; subsidy to be \$6,400 per mile for 21st to 40th mile, 20 miles	46 Vic., c. 25	By the Act, for 100 miles 3,200 } 320,000 By this contract for : 6,400 } 128,000 3,200 } 192,000	
Dec. 29, 1885	Canada Atlantic Railway Co.	From Valleyfield to 1½ miles west of Johnson's; from Lacolle to East Albany, Missisquoi Bay; from present terminus at Ottawa to Chaudière Falls.	48-49 Vic., c. 59.	1,600 } 54,400 3,200 } 41,600	96,000
Oct. 14, 1885	Montreal and Sorel Railway Co.	From junction with Grand Trunk at St. Lambert, to Sorel.	do	1,600	72,000
do 1, 1885	Montreal and Champlain Junction Railway Co.	To complete by ballasting from Brousseau's to Dundee, and rolling stock.	do	500	30,000
Nov. 26, 1885	Northern and Western Railway Co. of New Brunswick.	From Indian town, via Miramichi Valley to junction with Co.'s line at Boiestown.	do	3,200	140,800
do 26, 1885	do	From north end of the 40 miles subsidized at St. Mary's, between Fredericton and Miramichi River, by 47 Vic., cap. 8, to Boiestown.	do	3,200	19,200
do 25, 1885	La Société de Colonisation du Lac Témiscamingue.	From foot of Long Sault to foot Lake Témiscamingue.	do	3,200	25,600
Dec. 14, 1885	International Railway Co. (short line)	From south bank of river St. Lawrence at or near Caughnawaga, to the harbors of St. Andrews, St. John and Halifax, via Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and through township of Salisbury, to Moncton.	47 Vic., c. 8 48-49 Vic., c. 58.	170,000 per year for 15 years. 80,000 per year for 20 years. 250,000 in all per year for 20 yrs.	
Feb. 10, 1886	Quebec and Lake St. John Railway Co.	From junction on North Shore Railway to St. Raymond, and to extend line to 30 miles north of St. Raymond.	48-49 Vic., c. 59.	3,200	96,000
do 20, 1886	St. Lawrence, Lower Laurentian and Saguenay Railway Co.	From or near Grand Piles, on River St. Maurice, to its junction with Lake St. John Railway.	do		217,600

aid in the construction of Railways, entered into by certain Railway Companies the Fiscal Year ending 30th June, 1886.

Number of miles to be Subsidized.	Maximum Grade Feet to the mile.	Radius Curvature, not less than—	Width of Clearing, each side.	Width of Cuttings.	Embankments.	Rails.		When to be Completed.	Remarks.
						If steel.	If iron.		
No.	Feet.	Feet.	Ft.	Ft.	Ft.	Lbs.	Lbs.		
30	53	955, except 2 curves.	50	20	16	54	.....	July 1, 1887	One curve of 661 feet and one of 716 feet allowed in Village of Wallaceburg.
20	.....	.....	60	20	16	56	.....	do 1, 1888	Subject to approval of Parliament, Company may deviate near "Flat Lands." O.C., Aug. 28, 1886.
80	67	716	59	20	16	56	.....	May 25, 1887	Subject to approval of Parliament.
20									
69									
34 10, 3	Valleyfield eastwards, 40 Ottawa, 53	Valleyfield to East Albany, 5,730 Ottawa, 637	50	20	16	56	.....	Oct. 1, 1886	
45	50	2,865	50	22	16	56	.....	do 1, 1886	
60	.....	.....	.....	.....	.....	.....	.....	do 1, 1886	Line is already built.
44	70	955	50	20	16	56	60	Aug. 1, 1888	O.C. 9th April, 1886, allowed grades 80 feet and curves 717 feet.
6	70	955	50	20	16	56	20	Nov. 1, 1886	
6 ½	79	637	50	14	10	16	25	Jan. 1, 1887	Guage 3 feet, sleepers 6'.0 x 8' x 5'
.....	58	955	50	22	6	56	.....	July 1, 1889	On road to be built.
32	132	819	50	Rock 18, earth 20	15	50	.....	Already completed.	
40	80	955, except at Genevieux's Mountain, 717 feet.	50	20	14	56	.....	Aug. 1, 1889	To be paid for only at the rate of \$4,352 per mile.

## 3rd.—AGREEMENTS respecting Subsidies granted by the Dominion

Date of Signature.	Name of Railway Company.	Line of Railway to be Constructed.	Acts of Canada Granting Subsidies.	Amount of Subsidy.	
				Per Mile.	Not exceeding in the whole
June 21, 1886	Témiscouata Railway Co.	From I.C. Railway at Rivière du Loup to Edmundston, N.B.	45 Vic., c. 14	\$ 3,200	\$ 240,000
			48-49 Vic., c. 58.	72 miles, 2,800	258,000
				8 miles, 6,000	
May 18, 1886	New Brunswick and Prince Edward Railway Co.	From Sackville Station, I.C. Railway, to proposed wharf at or near Cape Tormentine, on Straits of Northumberland, N.B.	48-49 Vic., c. 59.	3,200	118,400
do 3, 1886	Leamington and St. Clair Railway Co.	From Comber, on Canada Southern Railway, to Lake Erie, at Leamington Village.	do ...	3,200	44,800

OTTAWA, 5th November, 1886.

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## Government to aid in the construction of Railways, &amp;c.—Concluded.

Number of miles to be Subsidized.	Maximum Grade: Feet to the mile.	Radius of Curvature, not less than—	Width of Clearing: each side.	Width of Crossing.	Embankments.	Rails.		When to be Completed.	Remarks.
						If steel.	If iron.		
No.	Feet.	Feet.	Ft.	Ft.	Ft.	Lbs.	Lbs.		
83.	79	818	50	Rock 18, earth 20	16	56	.....	Aug. 1, 1889	
37	66	1,000	50	18	16	56	.....	do 1, 1889	
14	30	955	50	20	16	56	.....	do 1, 1889	

H. A. FISSIAULT.

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APPENDIX No. 22.

STATEMENT of Claims reported or awarded on by the Official Arbitrators in connection with the Department of Railways and Canals during the Fiscal Year ended 30th June, 1886.

Claimants.	Nature of Claims.	When Referred.	To whom Referred.	Whether for Report or Award.	Amount claimed.	Amount Awarded or Recommended.	Date of Award or Report.	Remarks.
					\$ cts.	\$ cts.		
Etienne Chenard.....	Damage to land by water, I.C.R.....	Feb. 16, 1885	One arbitrator	.....	.....	\$50 to \$75	Oct. 6, 1885	Govt. to build 2 culverts
E. Marois.....	do horse killed.....	Oct. 13, 1884	do	.....	200 00	200 00	do	.....
Ch. Fortier.....	do ox killed.....	.....	do	.....	30 00	.....	.....	.....
Major-General Laurie.....	do horse killed.....	April 8, 1885	do	.....	.....	Nil	Jan. 12, 1886	.....
Caragnet Railway Co.....	do sleepers burnt.....	June 25, 1885	Full Board	.....	.....	\$37 24	Feb. 25, 1886	.....
Gabriel Lemieux.....	do land taken at Chaudière Junction, I.C.R.....	Dec. 10, 1884	do	Award.....	.....	\$280, with interest	do	.....
A. J. White.....	do to land by water, I.C.R.....	Nov. 19, 1884	One arbitrator	Report.....	130 00	.....	do	Referred to Full Board for award, 20th Jan., 1885; awarded 26th Feb., 1886. \$275.
Jas. McLeod.....	do two horses killed.....	Jan. 20, 1885	do	do	.....	275 00	do	.....
W. Charland.....	do cutting off private road on St. Cyrille Street.....	Aug. 2, 1883	Full Board	Award.....	1,597 00	500 00	May 26, 1886	.....
John Bannon.....	.....	Oct. 15, 1885	do	Report.....	875 45	.....	(Mar. 3, 1886	.....
Hon. W. Muirhead.....	.....	do	do	do	4,275 90	.....	do	.....
W. Wyse.....	.....	do	do	do	2,025 45	.....	do	.....
Layson & Sons.....	Goods money, works, &c., supplied to J. G. Gough — contractor Section 16, I.C.R.....	do	do	do	385 00	.....	do	.....
Philip Wall.....	do	do	do	do	200 00	.....	do	.....
Thos. F. Gillespie.....	do	do	do	do	200 51	.....	do	.....
David Megher.....	do	do	do	do	60 05	.....	do	.....
W. Gray.....	do	do	do	do	54 00	.....	do	.....
Judge W. Wilkinson.....	do	do	do	do	8,632 45	.....	do	.....
F. X. Marquis.....	Damage, cutting off private road on St. Cyrille Street, I.C.R.....	Aug. 29, 1883	do	Award.....	.....	800 00	Mar. 6, 1886	.....
Louis Nadeau, heirs.....	do	Aug. 2, 1883	do	do	.....	3,887 30	Mar. 10, 1886	.....
Gilbert Carrier.....	do	do	do	do	.....	150 00	do	.....
Estate of Pierre Barres.....	do	do	do	Award.....	.....	11,575 00	do	.....

Louis & Joseph Nadeau Heirs of D. D. Young.....	Damage, land taken for St. Charles Branch, I.C.R.....	do	do	do	.....	1,300 00	do	.....
Sarah W. Gillespie widow of R. M. Her- rison.....	do	do	do	do	.....	32,000 00	do	.....
Heirs of G. B. Hall.....	do	do	do	do	.....	1,100 00	do	.....
Hon. Geo. Coulière.....	do	do	do	Award.....	.....	13,000 00	do	.....
L. W. McCann.....	Damages, 800 sleepers burnt, I.C.R.....	June 25, 1885	Full Board	Award.....	144 00	144 00	Feb. 29, 1886	.....
Teles. Paradis.....	do land, St. Charles Branch.....	Aug. 2, 1883	do	do	.....	17,512 00	do	.....
Etienne Sampson.....	do	Dec. 4, 1882	do	do	49,386 22	.....	do	.....
G. T. Davie (2 cases).....	do	Aug. 2, 1885	do	do	.....	3,782 00	do	.....
J. B. Beaubien.....	do	do 2, 1885	do	do	.....	3,895 67	May 20, 85	.....
J. N. McElmore.....	2 cows killed, I.C.R.....	July 31, 1885	One arbitrator	Report.....	.....	16,791 23	Feb. 26, 1886	This case is now referred back to Full Board for award, and is still pending.
W. D. Chisholm.....	Eastern Extension Building destroyed by sparks.	Feb. 18, 1885	do	do	860 00	750 00	June 23, 1886	Referred back to Full Board 15th July, 1886, awarded 8th Nov., 1886, \$750.
T. Powers.....	Welland—Lot 27, 6th Con., Crowland	Dec. 26, 1882	do	do	400 00	375 00	Dec. 7, 1885	.....
Geo. Matthews.....	do Damages during enlarge- ments.....	Aug. 17, 1885	do	do	.....	150 00	Jan. 7, and Mar. 3, 1886	.....
Fabien Frappier.....	Culbute—Lot 11, Range 1, Pontiac Co	Feb. 9, 1884	do	do	do	130 00	Jan. 25, 1886	.....
John Handrahan.....	do do 5 do	do	do	do	do	75 00	do	.....
W. L. Spencer.....	do Lots 12, 13 do 5 do	July 9, 1884	One arbitrator	Report.....	.....	140 00	do	.....
Jos. Rainville.....	do Lot 23 do 9 do	.....	.....	.....	.....	90 00	do	.....
George Gilker.....	do Lots 32, 33, 34, Range 9 do	.....	.....	.....	.....	100 00	do	.....
T. C. Gaboury, M.D.....	do Lot 7 do 9 do	.....	.....	.....	.....	60 00	do	.....
Peter McChaigne.....	do Lot 16 do 15 do	.....	.....	.....	.....	87 00	do	.....
Patrick Sullivan.....	do Lots 29, 30, 1, 2, 34, Range 9; Lot 24; Lots 32, 33, also Oak Island, Range 8, Pontiac Co	.....	.....	.....	.....	400 00	do	.....
W. Cosgrove.....	do Lot 13, Range 4, Litchfield	.....	.....	.....	.....	100 00	do	.....
W. T. Durrell.....	do Lots 20, 21 do 3 do	.....	.....	.....	.....	150 00	do	.....
Adam Paul.....	do Lot, S. 1/2 18 do 1 do	.....	.....	.....	.....	125 00	do	.....
Oliver Ingram.....	do do N. 1/2 18 do 2 do	.....	.....	.....	.....	100 00	do	.....
Archibald Campbell.....	do do 1 do 4 do	.....	.....	.....	.....	100 00	do	.....
John Moorhead.....	do do 21 do 7 do	Feb. 9, 1884	One arbitrator	Report.....	.....	100 00	do	.....
Julie Marion.....	do Island No. 7, Mansfield.....	.....	.....	.....	.....	550 00	do	.....
Thomas Lafrance.....	do Lot 34, Range 2, Mansfield.....	.....	.....	.....	.....	165 00	do	.....
W. & Jennie Bryson.....	do do 2 do 8 do	Nov. 9, 1884	One arbitrator	Report.....	.....	75 00	do	.....

STATEMENT of Claims reported or awarded on by the Official Arbitrators, &c.—Concluded

Claimants.	Nature of Claims.	When Referred.	To whom referred.	Whether Report.	Amount claimed.	Amount Awarded or Recommended.	Date of Award or Report.	Remarks.
Geo. Bryson, jun. ....	Gulbute—Lot 25 Range 2, Mansfield...	Nov. 9, 1884	One arbitrator	Report..	\$ cts	\$ cts.	Jan. 25, 1886	
Catharine and Joseph	do do 29 do 2 do ..	.....	.....	.....	.....	300 00	do ..	
Lafance .....	do do 35 do 2 do ..	.....	.....	.....	.....	75 00	do ..	
John Gemmill .....	do do 4 do A Waltham.	.....	.....	.....	.....	.....	do ..	
S. A. Huntington .....	do do 47 do 2 do ..	.....	.....	.....	.....	.....	do ..	
James Coughlin .....	do do 23 do 1 Westmeath;	.....	.....	.....	.....	.....	do ..	
Martin Hennessy .....	do do A, 12th Con., Coulonge, Lake Front.	.....	.....	.....	.....	.....	do ..	
T. DAVIS .....	Williamsburg—Land taken.....	Aug. 4, 1885	Full Board .....	Award..	Not stated	1,843 00	Feb. 26, 1886	
L. Flagg .....	do .....	do 4, 1885	do .....	do ..	do ..	1,916 00	do ..	
A. E. Robertson .....	do .....	do 4, 1885	do .....	do ..	do ..	2,970 25	do ..	
J. M. Ellsworth .....	.....	.....	.....	.....	.....	.....	.....	

CHAS. THIBAUT, Secretary of Official Arbitrators.

OTTAWA, 1st October, 1886.

APPENDIX No. 23.

ALPHABETICAL LIST of Railways Subsidized by Dominion Government since Confederation under Acts, 37 Vic., c. 14; 44 Vic., c. 11; 45 Vic., c. 14 and 55; 46 Vic., c. 25 and 26; 47 Vic., c. 6, 8 and 25; 48-49 Vic., c. 58, 59 and 60; 49 Vic., c. 8, 10, 11 and 18; with Agreements entered into, to 31st December, 1886.

A.D.	Designation of Act.	APPROPRIATION OF GRANT WITH DESCRIPTION OF LINE SUBSIDIZED.	CONDITIONS OF GRANT UNDER THE SUBSIDY ACTS.					
			Rate per Mile, Money and Land.	Estimated Number of Miles.	If per mile, Total for the whole work not to exceed—	If for a term of years, Amount and duration of instalments.	Money.	Land.
			\$		\$		\$	Acres.
1886	49 Vic., c. 10	Albert Ry. Co., Salisbury to Hopewell.....	3,200	16	51,200	.....	.....	15,000
1884	47 Vic., c. 8	Albert Southern Ry. Co., Hopewell to Alma.....	3,200	20	64,000	.....	.....	51,200
1884	47 Vic., c. 8	Annapolis to Digby.....	3,200	20	300,000	.....	.....	64,000
1884	47 Vic., c. 8	Baie des Chaleurs Ry. Co., Metapedia towards Paspébiac.....	6,400	20	320,000	.....	.....	300,000
1883	46 Vic., c. 25	do From 20 miles end to Paspébiac.....	3,200	60	192,000	.....	.....	320,000
1885	48-49 Vic., c. 59.	Brockville, Westport and Sault Ste. Marie Ry. Co., Brockville to Westport.....	1,500	40	60,000	.....	.....	128,000
1885	48-49 Vic., c. 59	Bellefleur and North Hastings Ry. Co., Madoc to Eldorado.....	1,700	7	11,900	.....	.....	22,400
1886	49 Vic., c. 10	Buctouche and Moncton Ry. Co., Moncton to Buctouche.....	3,200	30	96,000	.....	.....	96,000
1874	37 Vic., c. 14	Canada Central Railway Co., Pembroke to Ollander.....	12,000	120	1,440,000	.....	.....	1,440,000
1883	46 Vic., c. 25	Caraquet Ry. Co., Bathurst to Caraquet.....	3,200	36	115,200	.....	.....	115,200
1884	47 Vic., c. 8	do Caraquet to Shippigan Harbor.....	3,200	24	76,800	.....	.....	78,800
1886	49 Vic., c. 10	do Lower Caraquet to Shippigan.....	3,200	10	32,000	.....	.....	32,000
1884	47 Vic., c. 8	Central Ry. Co., Head of Grand Lake to Intercolonial Railway	3,200	40	128,000	.....	.....	128,000
1885	48-49 Vic., c. 59.	Central Ontario Ry. Co., Coe Hill or Rathburn to Bancroft.....	3,200	20	64,000	.....	.....	64,000
1885	48-49 Vic., c. 59.	Canada Atlantic Ry. Co., Valleyfield to Lacolle.....	3,200	44	1,600	.....	.....	98,000
1886	49 Vic., c. 10	do Terminus, Ottawa to Chaudière Falls { Clarke's Island to Valleyfield..... { Lacolle to International Boundary.....	3,200	3	3,200	.....	.....	38,400

A.D.	Designation of Act.	APPROPRIATION OF GRANT WITH DESCRIPTION OF LINE SUBSIDIZED.				CONDITIONS OF GRANT UNDER THE SUBSIDY ACTS.			
		Rate per Mile. Money and Land.	Estimated number of Miles.	If per Mile. Total for the whole work not to exceed—	If for a term of years. Amount and duration of instalments.	Total Subsidy. Money.	Land.	Acres.	
1881 44 Vic., c. 1	Canadian Pacific Ry. Co., Callander to Port Arthur, and Selkirk to Kamloops.								
1884 47 Vic., c. 8	do do (additional)	6,000	160	960,000			25,000,000	25,000,000	
1885 48-49 Vic., c. 58	do do (additional)			340,000					
1884 47 Vic., c. 8	C.P.R. Extension. Connecting Jacques Cartier Union Junction with North Shore.			200,000			1,500,000	1,500,000	
1886 49 Vic., c. 10	Cap Rouge and St. Lawrence Ry. Co., Lorette to Quebec.	3,200	12	38,400	Yearly instalments of \$85,301 for 20 years.	38,400			
1882 46 Vic., c. 55	Chignecto Marine Transport Ry. Co., Ship Railway—Gulf of St. Lawrence to Bay of Fundy.		16 85						
1884 47 Vic., c. 6	Esquimaux and Nanaimo Ry. Co., Esquimaux to Nanaimo, Vancouver's Island.		71				750,000	Land on Vancouver Island (see 47 V, c. 6)	
1884 47 Vic., c. 8	Erie and Huron Ry. Co., Wallaceburg to Sarnia.	3,200	30	96,000			86,000		
1886 49 Vic., c. 10	Erie, Essex and Detroit Ry. Co., Windsor to Leamington.	3,200	37	118,400			118,400		
1883 46 Vic., c. 25	Elgin, Petricodiac and Havelock Ry. Co., Petricodiac to Havelock Corner.	3,200	12	38,400			38,400		
1886 49 Vic., c. 10	Eganville to a point on C. P. R.	3,200	22	70,400			70,400		
1886 49 Vic., c. 10	Fredericton to the Village of Prince William.	3,200	23	73,600			70,400		
1886 49 Vic., c. 10	Gananoque, Perth and St. James' Bay Ry. Co.	3,200	22	70,400			70,400		
1886 48-49 Vic., c. 59	Gatineau Valley Ry. Co., Hull towards Le Desert.	3,200	17	54,400			54,400		
1884 47 Vic., c. 8	Great Northern Ry. Co., St. Jerome to New Glasgow.	6,193	62	383,000			320,000		
1885 49 Vic., c. 10	Great Eastern Ry. Co., Yamaska to River St. Francois.	3,200	10	32,000			32,000		
1886 49 Vic., c. 11	Great North-West Central Ry. Co., Brandon to Battleford.	3,200	10	32,000			32,000		
			450	16,400 acres			2,880,000		

1886 49 Vic., c. 10	Hereford to International Railway.	3,200	34	108,800			108,800	
1884 47 Vic., c. 26	International Ry. Co., Sherbrooke to International Boundary.	3,200	49	156,800			156,800	
1884 47 Vic., c. 8	do do Montreal to Harbors of St. Andrews, St. John and Halifax.		351		\$170,000 for 15 yrs. \$80,000 for 30 yrs. or \$250,000 per ann. for 20 yrs.			
1884 47 Vic., c. 8	Irondale, Bancroft and Ottawa Ry. Co., Victoria Branch of Midland Ry. to Bancroft.	3,200	60	192,000			160,000	
1886 49 Vic., c. 10	Intercolonial Ry., Branch of Derby Station to Indiantown.	3,200	14	44,800			44,800	
1884 47 Vic., c. 8	Joggins Ry. Co., McCann Station to Joggins.	3,200	12	38,400			38,400	
1884 47 Vic., c. 8	Kingston and Pembroke Ry. Co., Mississippi to Renfrew.	3,200	15	48,000			48,000	
1886 49 Vic., c. 10	L'Assomption Ry. Co., L'Assomption to L'Epiphanie.	3,200	3 1/2	11,200			11,200	
1886 48-49 Vic., c. 58	Lake Temiscamingue Colonization Ry. Co., Long Sault to Lake Temiscamingue.	3,200	8	25,600			25,600	
1886 49 Vic., c. 10	Lake Temiscamingue Colonization Ry. Co., Wharves and Landing Stages.	3,200	14	44,800			44,800	
1885 48-49 Vic., c. 59	Leamington and St. Clair Ry. Co., Chatham to Lake Erie.	3,200	14	44,800			44,800	
1885 48-49 Vic., c. 60	Manitoba and North-Western Ry. Co., Portage la Prairie to 20 M. from Prince Albert.	6,400 acres	430				2,752,000	
1886 49 Vic., c. 11	Manitoba and North-Western Ry. Co., Branch from Todburn to Shellmouth.	6,400 do	26				166,400	
1886 48-49 Vic., c. 60	Manitoba South-Western Colonization Ry. Co., Winnipeg to White Water Lake.	6,400 do	150				960,000	
1885 48-49 Vic., c. 59	Montreal and Sorel Ry. Co., St. Lambert to Sorel.	1,600	45	72,000			72,000	
1885 48-49 Vic., c. 58	Montreal and Champlain Junction Ry. Co., Prouseau to Dundee.	5,181	60	30,000			30,000	
1885 49 Vic., c. 10	Montreal and Western Ry. Co., St. Jerome towards Le Desert.	3,200	70	361,270			361,270	
1884 47 Vic., c. 8	Northern and Western Ry. Co., Fredericton to Miramichi River.	3,200	40	128,000			128,000	
1885 48-49 Vic., c. 59	do do do End of line previously subsidized to Boiestown.	3,200	6	19,200			19,200	
1886 49 Vic., c. 10	Northern and Western Ry. Co., Additional between Fredericton and Indiantown, and extension to Deep-water at Chatham.	3,200	10	32,000			32,000	
1885 48-49 Vic., c. 59	Northern and Western Ry. Co., Indiantown to Junction with N. & W. Ry. at or near Boiestown.	3,200	44	140,800			140,800	
1882 45 Vic., c. 14	Northern and Pacific Junction Ry. Co., Gravenhurst to Oshawa.	6,000	110	660,000			1,320,000	
1883 46 Vic., c. 25	Northern and Pacific Junction Ry. Co., Gravenhurst to Oshawa (additional).	6,000	28	690,000			89,600	
1883 46 Vic., c. 25	Napanee, Tamworth and Quebec Ry. Co., Napanee to Tamworth.	3,200	18	70,000			79,000	
1886 49 Vic., c. 10	do do do Tamworth to Tweed.	3,200	6	19,200			19,200	
1886 49 Vic., c. 10	Intercolonial Ry., near Newcastle to opposite Chatham, N.B.	3,200	37	118,400			118,400	
1885 48-49 Vic., c. 59	New Brunswick and Prince Edward Ry. Co., Sackville to Cape Tormentine.	3,200	37	118,400			118,400	
1885 48-49 Vic., c. 60	North-Western Coal and Navigation Co., Dunmore Station, C. P. R., to Lethbridge.	3,800 acres	109				57,600	
1886 49 Vic., c. 10	New Glasgow or St. Lin to Montcalm.	3,200	18	57,600			57,600	

ALPHABETICAL List of Railways Subsidized by Dominion Government since Confederation under Acts, &c.—Continued.

A.D.	Designation of Acts.	AUTHORITY AND APPROPRIATION OF GRANT WITH DESCRIPTION OF LINE SUBSIDIZED.	Rate per Mile. Money and Land.	Estimated Number of Miles.	If per mile.		Total Subsidy.
					Total for the whole work not to exceed—	Amount and duration of instalments.	
1884	47 Vic, c. 8.	Ontario and Pacific Ry. Co., Cornwall to Perth.	3,200	82	\$ 262,400	.....	262,400
1886	49 Vic, c. 10.	Ingersoll to Chatham, Ont.	3,200	80	256,000	.....	256,000
1886	48-49 Vic, c. 53.	Ottawa, Waddington and New York Ry. Co., Ottawa to Waddington.	3,200	52	166,400	.....	166,400
1882	45 Vic, c. 14.	Oxford to Louisburg—	3,200	70	224,000	.....	480,000
1883	46 Vic, c. 25.	Ganso to Louisburg.	3,200	80	256,000	.....	.....
1884	47 Vic, c. 8.	Oxford to Sydney or Louisburg (additional).	.....	.....	\$30,000 p. ann. for 15 yrs. with lease or transfer of Eastern Extension from New Glasgow to Ganso	.....	.....
1884	47 Vic, c. 8.	Provincial Government of Quebec { Montreal to Quebec do. Ottawa. do. Parry Sound Colonization Ry. Co., Parry Sound to Sandridge. Perth Centre to Plaister Rock Island. Pontiac Pacific Junction Ry. Co., Hull to Pembroke. Qu'Appelle, Long Lake and Saskatchewan Ry. and Steamboat Co., Regina to Long Lake. Quebec Central Ry. Co., Beauce Junction to International Boundary. Quebec and Lakes St. John Ry. Co., St. Raymond to Lake St. John.	6,000 12,000 3,200 3,200 3,200 6,400 acres	159 120 40 28 85 22½	954,000 1,440,000 128,000 89,600 272,000	.....	2,394,000 128,000 89,600 272,000 ..... 211,200 384,000
1885	46 Vic, c. 25.	Quebec and Lake St. John Ry. Co., St. Raymond to Lake St. John (additional).	3,200	25	80,000	.....	80,000
1885	48-49 Vic, c. 59.	Quebec and Lake St. John Ry. Co., Junction on North Shore Ry. to St. Raymond.	3,200	32	96,000	.....	96,000
1886	49 Vic, c. 10.	Quebec and Lake St. John Ry. Co., 60 miles North of St. Raymond to Lake St. John (additional).	3,200	(95)	186,295	.....	186,295
1884	47 Vic, c. 8.	St. Louis, Richibucto and Buctouche Ry. Co., Richibucto to St. Louis.	3,200	7	22,400	.....	22,400
1885	48-49 Vic, c. 59	St. Lawrence, Lower Laurentian and Saguenay Ry. Co., Grand Piles to Junction with Lake St. John Railway.	3,200	£0	217,600	.....	217,600
1883	46 Vic, c. 25.	St. John Bridge and Ry. Extension Co., to build Railway Bridge and connections.	.....	.....	.....	.....	.....
1886	49 Vic, c. 10.	St. Andrews to Lachate.	3,200	7	22,400	.....	22,400
1886	49 Vic, c. 10.	St. Eustache to Ste. Placide.	3,200	18	57,600	.....	57,600
1886	49 Vic, c. 10.	St. Felix to Lake Maskinongé.	3,200	10	32,000	.....	32,000
1886	49 Vic, c. 10.	St. Viacke Valley and Lansdowne Ry. Co., Intercolonial Ry. through Steviacke Valley towards Iron Mines, &c.	3,200	25	80,000	.....	80,000
1886	49 Vic, c. 10.	Toronto, Grey and Bruce Ry. Co., Glenannan to Wingham.	3,200	6	16,000	.....	16,000
1882	45 Vic, c. 14.	Témiscouata Ry. Co., Rivière du Loup to Edmundston.	\$2,800 " 75 "	83	240,000	.....	488,000
1885	48-49 Vic, c. 59.	Thunder Bay Colonization Ry. Co., Marillo to Eastend of Whitefish Lake.	3,200	28½	92,000	.....	271,000
1885	48-49 Vic, c. 59.	Thunder Bay Colonization Ry. Co., End of subsidized line to Crooked Lake.	3,200	56	179,200	.....	156,800
1886	49 Vic, c. 10.	Truro to Newport.	3,200	49	156,800	.....	.....
1884	47 Vic, c. 25.	Winnipeg and Hudson's Bay Ry. and Steamship Co., Winnipeg to Hudson's Bay.	6,400 acres in Man. 12,800 ac in N.W.T.	225	.....	.....	6,880,000
1886	49 Vic, c. 11.	Wood Mountain and Qu'Appelle Ry. Co., From Wood Mountain ½ Qu'Appelle and Fort Qu'Appelle to the Manitoba and North-Western Ry.	6,400 acres	435	.....	.....	1,536,000

A.D.	Designation of Acts.	AUTHORITY AND APPROPRIATION OF GRANT WITH DESCRIPTION OF LINE SUBSIDIZED.	Rate per Mile. Money and Land.	Estimated Number of Miles.	If per mile.		Total Subsidy.
					Total for the whole work not to exceed—	Amount and duration of instalments.	
1883	46 Vic, c. 25.	Quebec and Lake St. John Ry. Co., St. Raymond to Lake St. John (additional).	3,200	25	80,000	.....	80,000
1885	48-49 Vic, c. 59.	Quebec and Lake St. John Ry. Co., Junction on North Shore Ry. to St. Raymond.	3,200	32	96,000	.....	96,000
1886	49 Vic, c. 10.	Quebec and Lake St. John Ry. Co., 60 miles North of St. Raymond to Lake St. John (additional).	3,200	(95)	186,295	.....	186,295
1884	47 Vic, c. 8.	St. Louis, Richibucto and Buctouche Ry. Co., Richibucto to St. Louis.	3,200	7	22,400	.....	22,400
1885	48-49 Vic, c. 59	St. Lawrence, Lower Laurentian and Saguenay Ry. Co., Grand Piles to Junction with Lake St. John Railway.	3,200	£0	217,600	.....	217,600
1883	46 Vic, c. 25.	St. John Bridge and Ry. Extension Co., to build Railway Bridge and connections.	.....	.....	.....	.....	.....
1886	49 Vic, c. 10.	St. Andrews to Lachate.	3,200	7	22,400	.....	22,400
1886	49 Vic, c. 10.	St. Eustache to Ste. Placide.	3,200	18	57,600	.....	57,600
1886	49 Vic, c. 10.	St. Felix to Lake Maskinongé.	3,200	10	32,000	.....	32,000
1886	49 Vic, c. 10.	St. Viacke Valley and Lansdowne Ry. Co., Intercolonial Ry. through Steviacke Valley towards Iron Mines, &c.	3,200	25	80,000	.....	80,000
1886	49 Vic, c. 10.	Toronto, Grey and Bruce Ry. Co., Glenannan to Wingham.	3,200	6	16,000	.....	16,000
1882	45 Vic, c. 14.	Témiscouata Ry. Co., Rivière du Loup to Edmundston.	\$2,800 " 75 "	83	240,000	.....	488,000
1885	48-49 Vic, c. 59.	Thunder Bay Colonization Ry. Co., Marillo to Eastend of Whitefish Lake.	3,200	28½	92,000	.....	271,000
1885	48-49 Vic, c. 59.	Thunder Bay Colonization Ry. Co., End of subsidized line to Crooked Lake.	3,200	56	179,200	.....	156,800
1886	49 Vic, c. 10.	Truro to Newport.	3,200	49	156,800	.....	.....
1884	47 Vic, c. 25.	Winnipeg and Hudson's Bay Ry. and Steamship Co., Winnipeg to Hudson's Bay.	6,400 acres in Man. 12,800 ac in N.W.T.	225	.....	.....	6,880,000
1886	49 Vic, c. 11.	Wood Mountain and Qu'Appelle Ry. Co., From Wood Mountain ½ Qu'Appelle and Fort Qu'Appelle to the Manitoba and North-Western Ry.	6,400 acres	435	.....	.....	1,536,000

DEPARTMENT OF RAILWAYS AND CANALS,  
31st December, 1886.