

CANADIAN
NORTHERN
RAILWAY
DEVELOPMENT

1917

Canadian Northern Railway Construction, Betterments, Etc.

The Canadian Northern Quebec Ry. proposes to build a bridge on its Huberdeau extension across Rouge River, lots 25 and 32, range 1, Arundel Tp., ue., at mileage 3.33 from the junction with the C.N.Q. Ry.

Montreal Tunnel & Terminal Co.—The tunnel under Mount Royal, through which the C.N.R. will enter Montreal is finished with the exception of a small amount of the concrete lining. It is expected that that will be completed by about Jan. 15, and that the track will be laid and electrified. From the tunnel's city portal at Cathcart St. to Lagache-tiere St. there are about 275,000 yards of excavation to be completed. About half of that will be taken out at first and a temporary station will be built at La-gachetiere St., which, on the permanent station's completion, will be used for express and post office purposes, etc. The temporary station's erection is expected to be started in March or April and to be completed by July, by which time the tunnel should be second tracked and fully completed. A power substation is being built at the west portal and the line from there to the Cartierville yards, 3 miles, is being electrified.

The permanent terminal station will be on Dorchester St., but this will not be erected for some time. Details of the plans for this station, which were prepared by Warren & Wetmore, New York, were given in Canadian Railway and Marine World, Oct., 1914, pg. 467. These plans provided for a three storey building (one storey being below the street level), of steel and concrete, having a frontage of 150 ft., and a depth along St. Monique St. of 100 ft., the front to be set back 12 ft. from the sidewalk. Seven swing doors would lead into a vestibule 21 x 100 ft., at the end of which would be the general waiting room, 60 x 100 ft. and 30 ft. high. On one side would be the baggage and express rooms, and on the other ladies' toilet rooms and men's smoking room. The remainder of the ground floor will be laid out for the company's purposes, and the operating offices will be upstairs. There would be three platforms serving six tracks, which would form part of the trackage of the permanent station. The cost of the temporary plans may, however, be modified.

The Canadian Northern Ontario Ry. is building 100 houses for its trainmen at the following divisional points in its Lake Superior District: Brent, 6; Capreol, 40;

placement between Port Arthur and Winnipeg.

The Saskatchewan Department of Railways announced, Nov. 3, that the C.N.R. will proceed as soon as possible with the construction of its terminals and bridges at Moose Jaw. Under the authority of chap. 12, Statutes of 1913, the Saskatchewan Government was given permission to affix a provincial guarantee to an issue of \$1,000,000 of bonds for terminal works at Moose Jaw, to include all works and equipment necessary for the laying out of the terminals, viz., two crossings of Moose Jaw Creek, and a third at the crossing of the C.P.R. The original agreement with the Moose Jaw City Council was made in Feb., 1912, and various concessions have been made. Since the work to be done includes the construction of the Athabasca St. East station; the completion of the trestle connection between the South Hill approach and the main portion of the city, and the completion of the connection between the C.N.R. and the C.P.R. over the property owned by the city, in the vicinity of Gordon Ironsides & Fure's abattoir. Among the concessions granted is that to construct temporary overhead trestles at Fairford and Athabasca Sts., which are to be replaced by subways within a year after the termination of the war. M. H. MacLeod, General Manager and Chief Engineer, was in Moose Jaw in consultation with the city council on the matter, Oct. 28, when the agreement was finally reached and he was in consultation with Saskatchewan Government officials at Regina prior to the government announcement.

Work is reported to have been started on the connection between the C.N.R. and the C.P.R. at Moose Jaw. This is being done by means of a spur track from the C.N.R. over property owned by the city to a connection with a spur line owned by the city and connecting with the C.P.R. The contract for this spur is reported to have been let to Riddle & Cline, Moose Jaw. The station will be built on Athabasca St., immediately east of Third Ave., on the O. B. Fysh property, and will be of brick and stone construction. A contract is expected to be let for this building at an early date.

We are officially advised that the brick-in-boilers in the boiler house at the Saskatoon locomotive house are being replaced by three of the company's standard locomotive type boilers, each having a nominal capacity of 100 h.p.

at Chinook, pipe line and reservoir now under construction, dam at Richdale repaired. This will give us an ample supply of water to handle traffic. We are also installing passing tracks at Alask, Oyen, Youngstown, Cereal, Richdale, Chinook, Craigmyle and Della; two of these sidings have been completed and in use; grading is completed for the balance and is now waiting for steel. I hope to have the additional passing tracks completed in two weeks, providing, of course, I can secure the additional labor required. We may find it necessary to take up pit tracks in a number of our ballast pits in order to get the necessary steel. We have put our roadbed in much better condition than it was at any time last season, particularly the track between Munson and Drumheller, as this has been practically rebuilt, both bridges and roadbed."

The company is erecting a machine shop and a stores building at Edmonton, Alta. The machine shop will be 119 x 61 ft. and 19 ft. high to eaves. It will have a louvred monitor 10 ft. wide, 80 ft. long and 4 ft. high running along the apex of the roof. There will be an annex at the side of the building, 22 x 11 ft., for lavatory and wash room. The walls will be of brick on concrete foundations, and the roof will be of heavy timber construction, covered with asphalt, felt and tar. The roof will be supported on heavy L beams and built up columns. The building will be steam heated and will have a clear space inside, except for one row of columns down the centre. Up to the present the machinery has been situated in one end of the locomotive house, and as more space is required for locomotives, the new shop is being built. It is not intended to buy additional machinery for this shop at present, but arrangements are being made to install electric motors instead of the steam drive hitherto employed. Electric power will be obtained from the City of Edmonton's plant.

The stores building will be 86 x 48 ft., and two stories, 27 ft. high. It is being built on concrete foundations, 7 ft. deep in the ground. The walls will be of brick and the general construction of the heavy mill type. The roof will be covered with ready roofing material. The ground floor will be divided into spaces with heavy racks for the heavier general stores supplies, which will be sorted in separate compartments in each rack; also a space for the public and men's lavatory. The first floor will be divided partly into offices for the Storekeeper, Road Foreman of Locomotives, Master Mechanic and

January
1917

January
1917

gauchetiere St., which, on the permanent station's completion, will be used for express and post office purposes, etc. The temporary station's erection is expected to be started in March or April and to be completed by July, by which time the tunnel should be second tracked and fully completed. A power substation is being built at the west portal and the line from there to the Cartierville yards, 3 miles, is being electrified.

The permanent terminal station will be on Dorchester St., but this will not be erected for some time. Details of the plans for this station, which were prepared by Warren & Wetmore, New York, were given in Canadian Railway and Marine World, Oct., 1914, pg. 467. These plans provided for a three storey building (one storey being below the street level), of steel and concrete, having a frontage of 150 ft., and a depth along St. Monique St. of 100 ft., the front to be set back 12 ft. from the sidewalk. Seven swinging doors would lead into a vestibule 21 x 100 ft., at the end of which would be the general waiting room, 60 x 100 ft. and 30 ft. high. On one side would be the baggage and express rooms, and on the other ladies' toilet rooms and men's smoking room. The remainder of the ground floor will be laid out for the company's purposes, and the operating offices will be upstairs. There would be three platforms serving six tracks, which would form part of the trackage of the permanent station. The cost of the temporary station was estimated at \$250,000. These plans may, however, be modified.

The Canadian Northern Ontario Ry. is building 100 houses for its trainmen at the following divisional points in its Lake Superior District: Brent, 6; Capreol, 40; Foleyet, 14; Hornepayne, 30; Jellicoe, 10. The houses are being built of sided timber faced three sides in the company's saw mills to 6 in. square and 6 in. square, the half round on the outside. The design of the houses is attractive, they having dormer windows on both sides of the roof with cornice carried around, making a bell-cast end. The interiors are being finished in panelled beaver board. The timber being sided with the saw makes it possible for each piece to lie close to the other, with oakum between, which makes probably the warmest house that could be built for the cold climate of Northern Ontario. The method of construction is also claimed to make the houses slow burning in case of fire.

Canadian Northern Ry.—A contract is reported to have been let to J. J. McKeown, Port Arthur, Ont., for the supply of 200,000 ties for delivery in the spring of 1917. These ties will be used for re-

the work to be done includes the construction of the Athabasca St. East station; the completion of the trestle connection between the South Hill approach and the main portion of the city, and the completion of the connection between the C.N.R. and the C.P.R. over the property owned by the city, in the vicinity of Gordon, Ironsides & Fare's abattoir. Among the concessions granted is that to construct temporary overhead trestles at Fairford and Athabasca Sts., which are to be replaced by subways within a year after the termination of the war. M. H. MacLeod, General Manager and Chief Engineer, was in Moose Jaw in consultation with the city council on the matter, Oct. 28, when the agreement was finally reached and he was in consultation with Saskatchewan Government officials at Regina prior to the government announcement.

Work is reported to have been started on the connection between the C.N.R. and the C.P.R. at Moose Jaw. This is being done by means of a spur track from the C.N.R. over property owned by the city to a connection with the C.P.R. by the city and connecting with the C.P.R. have been let to Riddle & Cline, Moose Jaw. The station will be built on Athabasca St., immediately east of Third Ave., on the O. B. Fysh property, and will be of brick and stone construction. A contract is expected to be let for this building at an early date.

We are officially advised that the brick-ed-in boilers in the boiler house at the Saskatoon locomotive house are being replaced by three of the company's standard locomotive type boilers, each having a nominal capacity of 100 h.p.

A letter was read at the Saskatoon, Sask., Board of Trade, Oct. 27, from W. A. Brown, General Superintendent, Western Division, relative to improvements carried out or in progress on the line between Saskatoon and Drumheller, Alta., in order to handle the coal traffic. He said in part:—"The locomotive house is partly completed; one additional siding is installed, and as quickly as we can get rails, which I am taking up at Plato pit, on the Elrose subdivision, we will lay two more tracks, each with a capacity of 70 cars. In addition, we are erecting an additional water tank and stand pipe, also a new building complete for yardmaster, weighmaster and car checkers, connected with agent's office by telephone. Regarding water supply, the following improvements have been made:—One additional water tank at Drumheller, dam erected and good supply at Mecheche, also abundant supply at Hanna, new well put down

rebuilt, both bridges and roadbed. The company is erecting a machine shop and a stores building at Edmonton, Alta. The machine shop will be 119 x 61 ft. and 19 ft. high to eaves. It will have a louvred monitor 10 ft. wide, 80 ft. long and 4 ft. high running along the apex of the roof. There will be an annex at the side of the building, 22 x 11 ft., for lavatory and wash room. The walls will be of brick on concrete foundations, and the roof will be of heavy timber construction, covered with asphalt, felt and tar. The roof will be supported on heavy L beams and built up columns. The building will be steam heated and will have a clear space inside, except for one row of columns down the centre. Up to the present the machinery has been situated in one end of the locomotive house, and as more space is required for locomotives, the new shop is being built. It is not intended to buy additional machinery for this shop at present, but arrangements are being made to install electric motors instead of the steam drive hitherto employed. Electric power will be obtained from the City of Edmonton's plant.

The stores building will be 86 x 48 ft. and two stories, 27 ft. high. It is being built on concrete foundations, 7 ft. deep in the ground. The walls will be of brick and the general construction of the heavy mill type. The roof will be covered with ready roofing material. The ground floor will be divided into spaces with heavy racks for the heavier general stores supplies, which will be sorted in separate compartments in each rack; also a space for the public and men's lavatory. The first floor will be divided partly into offices for the Storekeeper, Road Foreman of Locomotives, Master Mechanic and women's lavatory, and the remainder into spaces with racks for the lighter material which will be stocked in the building. The building will have a small basement under the offices, 28 x 13 ft. It will be heated by steam. The contractors for both the machine shop and stores building are F. M. Nesbitt & Co.

The Alberta Board of Public Utility Commissioners has authorized the Canadian Northern Western Ry. to build its Oliver-Battleford branch across the high ways through Tp. 59, R. 15-14 west of 4th meridian, mileage 75.83 to 88.76; also through Tp. 59, R. 13-12 west of 4th meridian, mileage 88.76 to 101.87.

Canadian Northern Pacific Ry.—Officials of the C.N.R. from Toronto, Winnipeg and other points visited the Port Mann terminals, Oct. 30. They inspected the car shops and other facilities which have been erected or are in progress. It

[JANUARY, 1917.]

Canadian Northern Railway Construction, Betterments, Etc.

Montreal Tunnel and Terminal Co.—Work has been started on the "cut" for the erection of the Canadian Northern Ry. station in Montreal. This cut will extend from Cathcart St. on the north to LaGauchetiere St. on the south, and from Mansfield St. on the west to St. Monique St. on the east. The work is being gone on with on Dorchester St., between Mansfield and St. Monique Sts., tramway service being temporarily suspended. The cut at this point will be 170 ft. wide and 50 ft. deep, which will be covered with a steel trestle bridge, with a concrete deck on which a double track car line will be laid.

Canadian Northern Quebec Ry.—The Board of Railway Commissioners has authorized the opening for freight traffic of the line through Arundel, Ponsonby, and Amherst townships, Argenteuil and Ottawa counties, Que., mileage 0 to 9.57. This is the recently complete line from Arundel to Kaolin.

Toronto-Hamilton-Niagara line.—A route map has been filed with the Railways Department at Ottawa for a line from Toronto to Hamilton and thence to Thorold, Ont. The object is to secure a right of way for the line as between Bronte and Thorold, 44 miles. The Board of Railway Commissioners' approval has been given for sections of the route, between Toronto and Bronte, on the plans for the actual location of the line. The plans filed show a route along the Toronto and Niagara Co.'s power line.

Canadian Northern Ry.—A press report states that the company proposes to build a new station in Port William, Ont., early in the summer. Two sites are said to be under consideration.

Canadian Northern Pacific Ry.—There has been deposited with the Public Works Department at Ottawa a plan and description of the site and elevation of a proposed railway bridge across the South Thompson River at Kamloops.

agreement would be carried out, but he thought there was a just ground for granting an extension of time.

Sir William Mackenzie and Mr. MacLeod met the New Westminster City Council, Dec. 14, to discuss matters affecting the company's interests in that city. In the course of an interview he is reported to have said the new car shops at Port Mann would be opened about Feb.

1. **Lines on Vancouver Island.**—D. O. Lewis, District Engineer, in charge of construction of lines on Vancouver Island, is reported as stating, Nov. 30, that the line from Patricia Bay to Victoria was ready, and traffic could be operated over it at any time.

Sir William Mackenzie and General Manager MacLeod, were in Victoria, Dec. 12, and made a trip of inspection over the line. Sir William said the line would be opened for traffic as early as possible; the electric motor car which would be used on the line would not be taken over from Port Mann until the ferry slip at Patricia Bay was finished. The line for through traffic from the mainland would be opened after the arrival of the car ferry from Quebec, but whether the Victoria-Patricia Bay line would be opened before that time would depend upon what local traffic could be obtained. (Dec. 1916, pg. 490.)

Greater Winnipeg Water District Railway Construction.

W. G. Chace, M.Can.Soc.C.E., read a paper on the aqueduct for the Greater Winnipeg Water District before the Canadian Society of Civil Engineers recently. The water supply is to be obtained from Indian Bay, Shoal Lake, a branch of Lake of the Woods. The distance being about 97 miles. The right of way, 300 feet wide (except for the easterly 12 miles which is 500 ft wide) was cleared by

points along the line. A telephone line has also been erected from end to end of the right of way, which is used both for train dispatching and for communication between the division engineers and headquarters at Winnipeg. A circuit for use of one of the contractors has also been erected on the District's poles.

The London and Port Stanley Railway and the G.T.R.

In the London & Port Stanley Ry.'s early days an agreement was made with the then Great Western Ry under which the L. & P.S.R. was to have the use of the G.W.R. station at London, Ont., and that the G.W.R. agents should sell tickets and check L. & P.S.R. passengers' baggage in the same way as for G.W.R. passengers. The agreement was carried out by the G.W.R. and its successor, the G.T.R., until the electrification of the L. & P.S.R. The London Railway Commission, which now operates the L. & P.S.R., under the new order of things, has applied to the Board of Railway Commissioners for an order directing the G.T.R. to carry out the original agreement, which is dated April 25, 1870. The commissioners reserved judgment, after refusing the G.T.R. counsel's application to have the matter settled in the courts, on the ground that the commission has no jurisdiction over an agreement affecting the working of two railway companies.

Grain Inspection at Western Points.

The following figures, compiled by the Department of Trade and Commerce, show the number of cars of grain inspected on railways at Winnipeg and other points on the Western Division, for November, and for three months ended Nov. 30, compared with those inspected for three months ended Nov. 30, 1915.

	3 months to Nov. 30, 1915	3 months to Nov. 30, 1916
C. P. R.	21,067	48,189
C. N. R.	847	1,708
C. N. R. Duluth	8,964	23,944
C. N. R. Duluth	128	838
		2,043

January 1917

laid.

Canadian Northern Quebec Ry.—The Board of Railway Commissioners has authorized the opening for freight traffic of the line through Arundel, Ponsonby, and Amherst townships, Argenteuil and Ottawa counties, Que., mileage 0 to 9.57. This is the recently complete line from Arundel to Kaolin.

Toronto-Hamilton-Niagara line.—A route map has been filed with the Railways Department at Ottawa for a line from Toronto to Hamilton and thence to Thorold, Ont. The object is to secure a right of way for the line as between Bronte and Thorold, 44 miles. The Board of Railway Commissioners' approval has been given for sections of the route, between Toronto and Bronte, on the plans for the actual location of the line. The plans filed show a route along the Toronto and Niagara Co.'s power line.

Canadian Northern Ry.—A press report states that the company proposes to build a new station in Fort William, Ont., early in the summer. Two sites are said to be under consideration.

Canadian Northern Pacific Ry.—There has been deposited with the Public Works Department at Ottawa plan and description of the site and elevation of a proposed railway bridge across the South Thompson River at Kamloops.

The British Columbia Minister of Railways has approved of the company's plans for a temporary frame trestle over the British Columbia Electric Ry. at station 157-94, mileage 2.7, the plan having been approved by the B. C. E. R.

Vancouver Terminals.—Sir William Mackenzie, President, and M. H. MacLeod, General Manager and Chief Engineer, arrived in Vancouver, Dec. 12, to deal with a number of matters affecting the company's interests. They met the Mayor and city council to discuss the erection of the sea wall, the hotel, and other matters connected with the development of the False Creek terminals project. The company desires to secure an extension of time for carrying out the sea wall work, but the council wants it to be gone on with and completed within the time originally specified. Sir William is reported to have stated that the work would be resumed as soon as he had an opportunity of verifying certain matters. So far as the hotel site was concerned, Sir William stated that under present circumstances it would not be wise to go on with the erection of a large new hotel in the city. The company would prefer to build on its own property or on property near the same ground acquired from the city. The company would put up a better building on its own site than the one called for by the agreement. The terms of the

line from Patricia Bay was not ready, and traffic could be operated over it at any time.

Sir William Mackenzie and General Manager MacLeod, were in Victoria, Dec. 12, and made a trip of inspection over the line. Sir William said the line would be opened for traffic as early as possible: the electric motor car which would be used on the line would not be taken over from Port Mann until the ferry slip at Patricia Bay was finished. The line for through traffic from the mainland would be opened after the arrival of the car ferry from Quebec, but whether the Victoria-Patricia Bay line would be opened before that time would depend upon what local traffic could be obtained. (Dec. 1916, pg. 490.)

Greater Winnipeg Water District Railway Construction.

W. G. Chace, M. Can. Soc. C. E., read a paper on the aqueduct for the Greater Winnipeg Water District before the Canadian Society of Civil Engineers recently. The water supply is to be obtained from Indian Bay, Shoal Lake, a branch of Lake of the Woods. The distance being about 97 miles. The right of way, 300 feet wide (except for the easterly 12 miles which is 500 ft. wide) was cleared by contract in the winter and early spring of 1914. A standard gauge railway was constructed 40 ft. from the south boundary of the right of way during 1914 at a total cost of \$1,325,000. The construction of the railway presented no unusual difficulties, and was carried out with such dispatch that trains were operating over the whole of it in Jan. 1915. The equipment consists of four 60-ton mozel locos, twenty-five 16-yard dump steel cars (now under contract), 20 flat cars, 10 box cars, 3 cabooses and 2 passenger cars. Additional equipment is being purchased.

The road, which is operated by the Greater Winnipeg Water District Commissioners, is connected with the Paddington transfer yard, meeting there all the railways running into Winnipeg, so that contractors' shipments can be made direct to their camps without reloading. Railway headquarters have been established at Deacon, where the operating staff is located, and where a machine shop, forge shop, and locomotive shed have been erected. A station building containing offices for the operating department and for one of the division engineers has also been erected at this point, as well as a cement shed, pumping plant, coal dock, oil house, camp buildings and electric light plant. Nine sidings and five 12,000-gallon water tanks have been located at nearly equi-distant

passengers. The agreement was carried out by the G.W.R. and its successor, the G.T.R., until the electrification of the L. & P.S.R. The London Railway Commission, which now operates the L. & P.S.R., under the new order of things, has applied to the Board of Railway Commissioners for an order directing the G.T.R. to carry out the original agreement, which is dated April 25, 1870. The commissioners reserved judgment, after refusing the G.T.R. counsel's application to have the matter settled in the courts, on the ground that the commission has no jurisdiction over an agreement affecting the working of two railway companies.

Grain Inspection at Western Points.

The following figures, compiled by the Department of Trade and Commerce, show the number of cars of grain inspected on railways at Winnipeg and other points on the Western Division, for November, and for three months ended Nov. 30, compared with those inspected for three months ended Nov. 30, 1915.

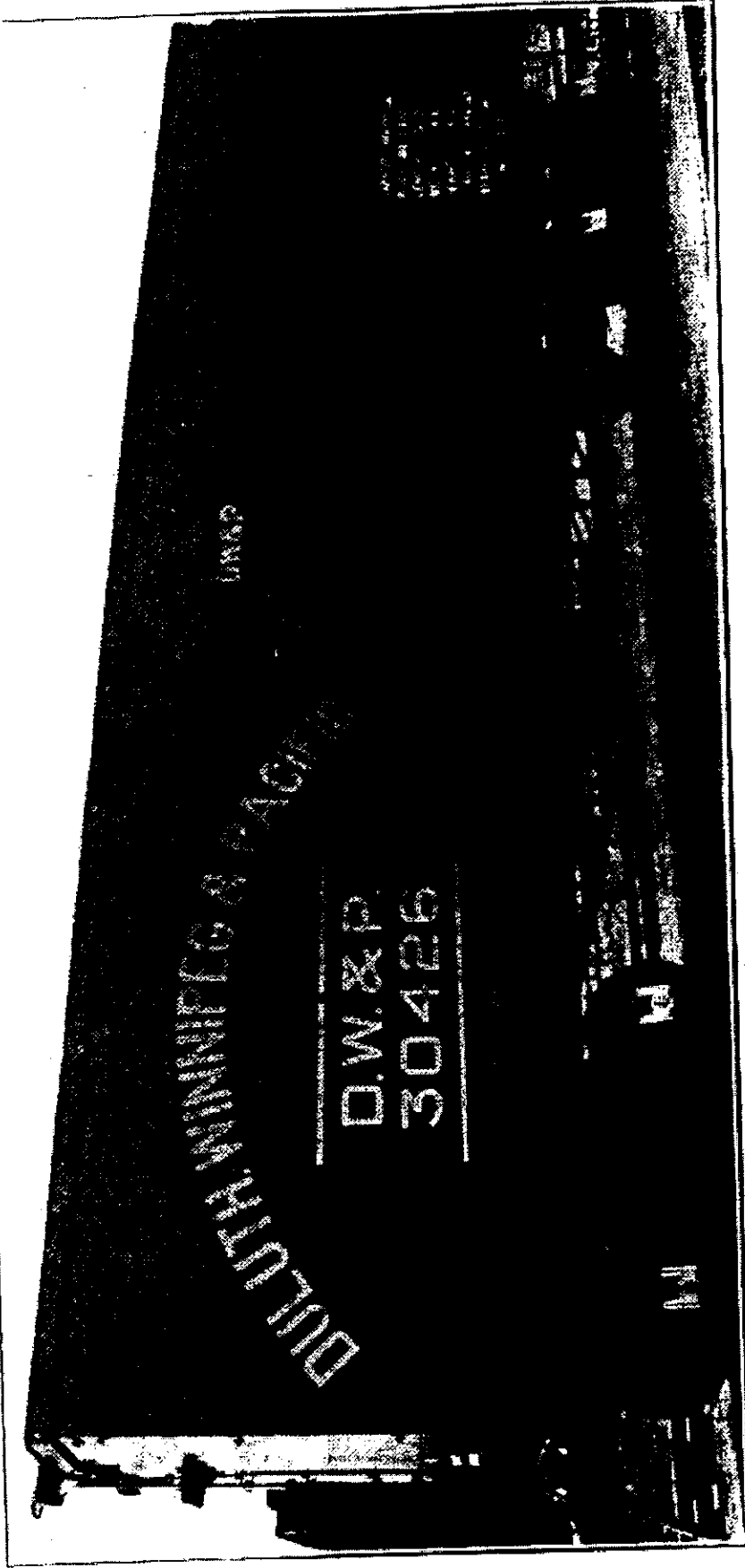
	Nov. 1916	3 months to Nov. 30, 1915	3 months to Nov. 30, 1915
C. P. R.	21,067	48,139	80,018
C. P. R., Calgary	847	1,708	1,517
C. N. R.	8,906	23,944	39,487
C. N. R., Duluth	124	538	2,043
G. T. P. R.	4,697	9,172	19,564
Totals	35,547	82,593	142,569

Mail Transportation on U.S. Railways.—The U.S. Postmaster General's annual report, issued recently, says,—"For many years the department has brought to the attention of Congress the necessity for a change in the basis of compensating railways for carrying the mails, asserting that the then existing basis of pay according to weight was inequitable and unjust, resulting in cases of both overpayment and underpayment to certain railways, and which in the aggregate resulted in the payment by the Government of an excessive sum for this service. The department will, on Jan. 1, file with the Interstate Commerce Commission its comprehensive plan of service, which will embody a recommendation looking to a reduction of the rates but at the same time assure to the railways a just and adequate compensation for the service performed." As a matter of fact, they have repeatedly shown that the compensation has been wholly inadequate.

F. W. Peters, General Superintendent, C.P.R., Vancouver, B.C., received a letter recently from Portland, Ore., asking for forgiveness of a man who stole a ride on a C.P.R. train some years ago. The writer did not enclose the price of the ride.

January 1917

...tive not later than Dec. 15, 1916; and it is further ordered that the application with
 2.—F. W. DRAVES, JR., 2nd Vice-President, W. F. Buchey, GROUP 3.—F. Therman, W.



Box Car, Duluth, Winnipeg and Pacific Railway

The above illustration shows one of the 750 box cars which the Canadian Northern Ry. has had built in the U. S. recently for its subsidiary, the D. W. & P. Ry. They were fully described in Canadian Railway and Marine World for November, 1916, pg. 438.

regard to the rates on paints be dis- Cooke, J. Bell, W. Woodward, H. Colwell, C. Enghel

January 1917

[JANUARY, 1917.]

Canadian Northern Railway Construction, Betterments, Etc.

Montreal Tunnel and Terminal Co.—Work has been started on the "cut" for the erection of the Canadian Northern Ry. station in Montreal. This cut will extend from Cathcart St. on the north to LaGauchetiere St. on the south, and from Mansfield St. on the west to St. Monique St. on the east. The work is being gone on with on Dorchester St., between Mansfield and St. Monique Sts., tramway service being temporarily suspended. The cut at this point will be 170 ft. wide and 50 ft. deep, which will be covered with a steel trestle bridge, with a concrete deck on which a double track car line will be laid.

Canadian Northern Quebec Ry.—The Board of Railway Commissioners has authorized the opening for freight traffic of the line through Arundel, Ponsonby, and Ancherst townships, Argenteuil and Ottawa counties, Que., mileage 0 to 9.57. This is the recently complete line from Arundel to Kaolin.

Toronto-Hamilton-Niagara line.—A route map has been filed with the Railways Department at Ottawa for a line from Toronto to Hamilton and thence to Thorold, Ont. The object is to secure a right of way for the line as between Bronte and Thorold, 44 miles. The Board of Railway Commissioners' approval has been given for sections of the route, between Toronto and Bronte, on the plans for the actual location of the line. The plans filed show a route along the Toronto and Niagara Co.'s power line.

Canadian Northern Ry.—A press report states that the company proposes to build a new station in Port William, Ont., early in the summer. Two sites are said to be under consideration.

Canadian Northern Pacific Ry.—There has been deposited with the Public Works Department at Ottawa plan and description of the site and elevation of a proposed railway bridge across the South Thompson River at Kamloops.

agreement would be carried out, but he thought there was a just ground for granting an extension of time.

Sir William Mackenzie and Mr. MacLeod met the New Westminster City Council, Dec. 14, to discuss matters affecting the company's interests in that city. In the course of an interview he is reported to have said the new car shops at Port Mann would be opened about Feb.

Lines on Vancouver Island.—D. O. Lewis, District Engineer, in charge of construction of lines on Vancouver Island, is reported as stating, Nov. 30, that the line from Patricia Bay to Victoria was ready, and traffic could be operated over it at any time.

Sir William Mackenzie and General Manager MacLeod, were in Victoria, Dec. 12, and made a trip of inspection over the line. Sir William said the line would be opened for traffic as early as possible; the electric motor car which would be used on the line would not be taken over from Port Mann until the ferry slip at Patricia Bay was finished. The line for through traffic from the mainland would be opened after the arrival of the car ferry from Quebec, but whether the Victoria-Patricia Bay line would be opened before that time would depend upon what local traffic could be obtained. (Dec. 1916, pg. 490.)

Greater Winnipeg Water District Railway Construction.

W. G. Chace, M.Can.Soc.C.E., read a paper on the aqueduct for the Greater Winnipeg Water District before the Canadian Society of Civil Engineers recently. The water supply is to be obtained from Indian Bay, Shoal Lake, a branch of Lake of the Woods. The distance being about 97 miles. The right of way, 300 feet wide (except for the easterly 12 miles which is 500 ft wide) was cleared by

points along the line. A telephone line has also been erected from end to end of the right of way, which is used both for train dispatching and for communication between the division engineers and headquarters at Winnipeg. A circuit for use of one of the contractors has also been erected on the District's poles.

The London and Port Stanley Railway and the G.T.R.

In the London & Port Stanley Ry.'s early days an agreement was made with the then Great Western Ry under which the L. & P.S.R. was to have the use of the G.W.R. station at London, Ont., and that the G.W.R. agents should sell tickets and check L. & P.S.R. passengers' baggage in the same way as for G.W.R. passengers. The agreement was carried out by the G.W.R. and its successor, the G.T.R., until the electrification of the L. & P.S.R. The London Railway Commission, which now operates the L. & P.S.R., under the new order of things, has applied to the Board of Railway Commissioners for an order directing the G.T.R. to carry out the original agreement, which is dated April 25, 1870. The commissioners reserved judgment, after refusing the G.T.R. counsel's application to have the matter settled in the courts, on the ground that the commission has no jurisdiction over an agreement affecting the working of two railway companies.

Grain Inspection at Western Points.

The following figures, compiled by the Department of Trade and Commerce, show the number of cars of grain inspected on railways at Winnipeg and other points on the Western Division, for November, and for three months ended Nov. 30, compared with those inspected for three months ended Nov. 30, 1915.

	Nov. 1916	Nov. 1915	3 months 3 months to Nov.
C. P. R.	21,067	48,189	90,018
C. N. R.	847	1,708	1,517
C. N. R.	8,965	23,964	39,487
G. N. R.	128	588	2,043

January
1917

laid.

Canadian Northern Quebec Ry.—The Board of Railway Commissioners has authorized the opening for freight traffic of the line through Arundel, Ponsonby, and Amherst townships, Argenteuil and Ottawa counties, Que., mileage 0 to 9.57. This is the recently complete line from Arundel to Kaolin.

Toronto-Hamilton-Niagara line.—A route map has been filed with the Railways Department at Ottawa for a line from Toronto to Hamilton and thence to Thorold, Ont. The object is to secure a right of way for the line as between Bronte and Thorold, 44 miles. The Board of Railway Commissioners' approval has been given for sections of the route, between Toronto and Bronte, on the plans for the actual location of the line. The plans filed show a route along the Toronto and Niagara Co.'s power line.

Canadian Northern Ry.—A press report states that the company proposes to build a new station in Fort William, Ont., early in the summer. Two sites are said to be under consideration.

Canadian Northern Pacific Ry.—There has been deposited with the Public Works Department at Ottawa plan and description of the site and elevation of a proposed railway bridge across the South Thompson River at Kamloops.

The British Columbia Minister of Railways has approved of the company's plans for a temporary frame trestle over the British Columbia Electric Ry. at station 157-154, mileage 2.7, the plan having been approved by the B. C. E. R.

Vancouver Terminals.—Sir William Mackenzie, President, and M. H. MacLeod, General Manager and Chief Engineer, arrived in Vancouver, Dec. 12, to deal with a number of matters affecting the company's interests. They met the Mayor and city council to discuss the erection of the sea wall, the hotel, and other matters connected with the development of the False Creek terminals project. The company desires to secure an extension of time for carrying out the sea wall work, but the council wants it to be gone on with and completed within the time originally specified. Sir William is reported to have stated that the work would be resumed as soon as he had an opportunity of verifying certain matters. So far as the hotel site was concerned, Sir William stated that under present circumstances it would not be wise to go on with the erection of a large new hotel in the city. The company would prefer to build on its own property or on property near the same ground acquired from the city. The company would put up a better building on its own site than the one called for by the agreement. The terms of the

line from Patricia Bay to Victoria ready, and traffic could be operated over it at any time.

Sir William Mackenzie and General Manager MacLeod, were in Victoria, Dec. 12, and made a trip of inspection over the line. Sir William said the line would be opened for traffic as early as possible: the electric motor car which would be used on the line would not be taken over from Port Mann until the ferry slip at Patricia Bay was finished. The line for through traffic from the mainland would be opened after the arrival of the car ferry from Quebec, but whether the Victoria-Patricia Bay line would be opened before that time would depend upon what local traffic could be obtained. (Dec. 1916, pg. 490.)

Greater Winnipeg Water District Railway Construction.

W. G. Chace, M. Can. Soc. C. E., read a paper on the aqueduct for the Greater Winnipeg Water District before the Canadian Society of Civil Engineers recently. The water supply is to be obtained from Indian Bay, Shoal Lake, a branch of Lake of the Woods. The distance being about 97 miles. The right of way, 300 feet wide (except for the easterly 12 miles which is 500 ft. wide) was cleared by contract in the winter and early spring of 1914. A standard gauge railway was constructed 40 ft. from the south boundary of the right of way during 1914 at a total cost of \$1,325,000. The construction of the railway presented no unusual difficulties, and was carried out with such dispatch that trains were operating over the whole of it in Jan. 1915. The equipment consists of four 60-ton mowal locos, twenty-five 16-yard dump steel cars (now under contract), 20 flat cars, 10 box cars, 3 cabooses and 2 passenger cars. Additional equipment is being purchased.

The road, which is operated by the Greater Winnipeg Water District Commissioners, is connected with the Paddington transfer yard, meeting there all the railways running into Winnipeg, so that contractors' shipments can be made direct to their camps without reloading. Railway headquarters have been established at Deacon, where the operating staff is located, and where a machine shop, forge shop, and locomotive shed have been erected. A station building containing offices for the operating department and for one of the division engineers has also been erected at this point, as well as a cement shed, pumping plant, coal dock, oil house, camp buildings and electric light plant. Nine sidings and five 12,000-gallon water tanks have been located at nearly equi-distant

passengers. The agreement was carried out by the G.W.R. and its successor, the G.T.R., until the electrification of the L. & P.S.R. The London Railway Commission, which now operates the L. & P.S.R., under the new order of things, has applied to the Board of Railway Commissioners for an order directing the G.T.R. to carry out the original agreement, which is dated April 25, 1870. The commissioners reserved judgment, after refusing the G.T.R. counsel's application to have the matter settled in the courts, on the ground that the commission has no jurisdiction over an agreement affecting the working of two railway companies.

Grain Inspection at Western Points.

The following figures, compiled by the Department of Trade and Commerce, show the number of cars of grain inspected on railways at Winnipeg and other points on the Western Division, for November, and for three months ended Nov. 30, compared with those inspected for three months ended Nov. 30, 1915.

	Nov. 1916	3 months to Nov. 1915	3 months to Nov. 1916
C. P. R.	21,667	48,189	80,018
C. P. R., Calgary	847	1,708	1,517
C. N. R.	8,908	23,964	39,487
G. N. R., Duluth	124	528	2,043
G. T. P. R.	4,607	9,172	19,564
Totals	35,547	83,571	142,569

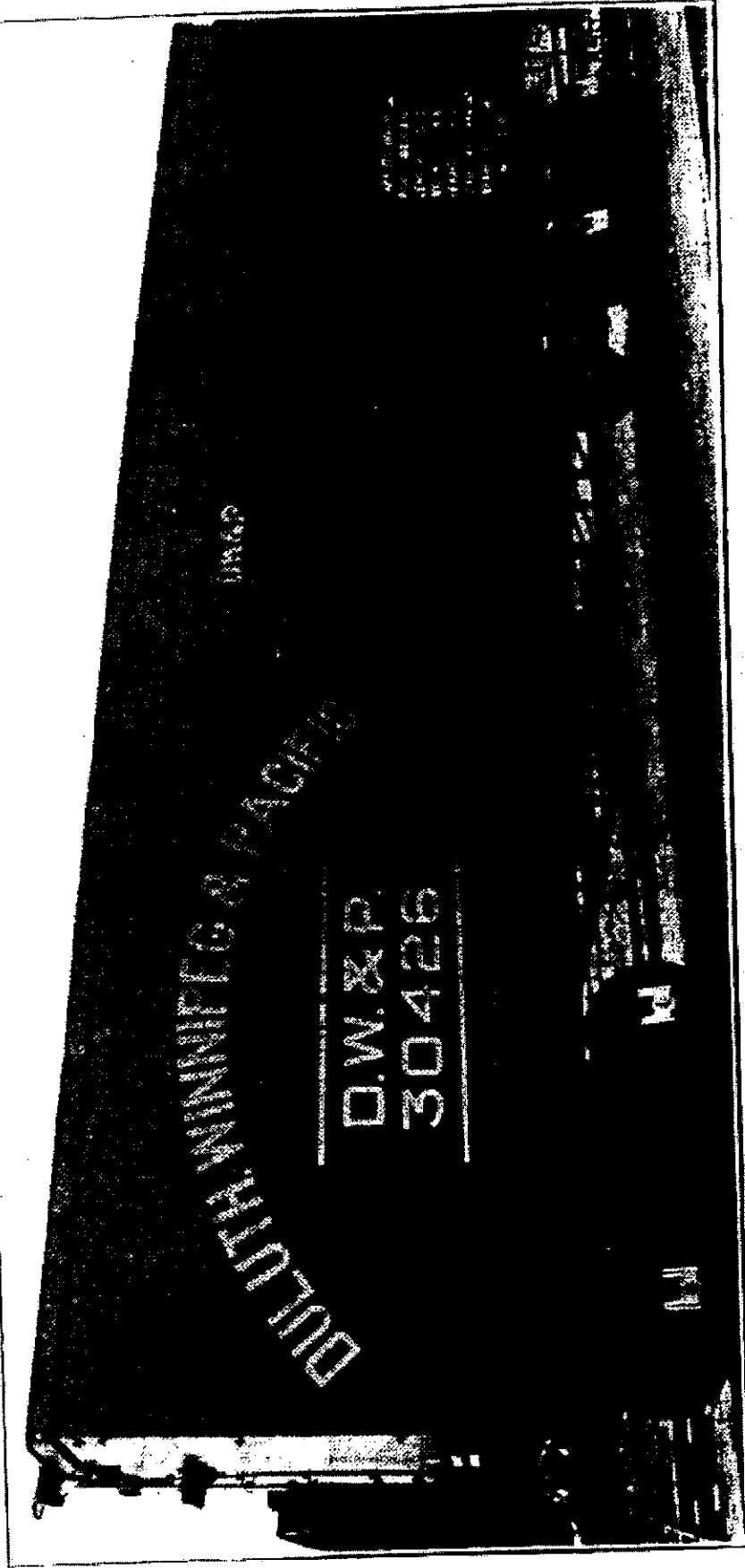
Mail Transportation on U.S. Railways.—The U.S. Postmaster General's annual report, issued recently, says,—"For many years the department has brought to the attention of Congress the necessity for a change in the basis of compensating railways for carrying the mails, asserting that the then existing basis of pay according to weight was inequitable and unjust, resulting in cases of both overpayment and underpayment to certain railways, and which in the aggregate resulted in the payment by the Government of an excessive sum for this service. The department will, on Jan. 1, file with the Interstate Commerce Commission its comprehensive plan of service, which will embody a recommendation looking to a reduction of the rates but at the same time assure to the railways a just and adequate compensation for the service performed." As a matter of fact, they have repeatedly shown that the compensation has been wholly inadequate.

F. W. Peters, General Superintendent, C.P.R., Vancouver, B.C., received a letter recently from Portland, Ore., asking for forgiveness of a man who stole a ride on a C.P.R. train some years ago. The writer did not enclose the price of the ride.

January 1917

...
 tive not later than Dec. 15, 1916; and it is
 further ordered that the application with

2.—F. W. DRAKE, JR., F. F. THORNTON, W.
 F. BUCHEY. GROUP 3.—F. F. THORNTON, W.



Box Car, Duluth, Winnipeg and Pacific Railway

The above illustration shows one of the 750 box cars which the Canadian Northern Ry. has had built in the U. S. recently for its subsidiary, the D. W. & P. Ry. They were fully described in Canadian Railway and Marine World for November, 1916, pg. 438.

regard to the rates on paints be dis- Cooke, J. Bell, W. Woodward, H. Colwell,
 C. Enghel

January 1917

t n e- it. p- C. A-

Electric Locomotives for Mount Royal Tunnel.

Can

The Canadian Northern Ry. has received 3 electric locomotives of the 6 ordered for its electrified zone, extending from the terminal station in Montreal through the Mount Royal tunnel to Cartierville. Following are the general dimensions:—

Length inside knuckles	37 ft. 4 in.
Length over cab	31 ft. 0 in.
Overall height, pantograph down	15 ft. 6 in.
Height over cab	12 ft. 10 in.
Overall width	10 ft. 0 in.
Total wheel base	26 ft. 0 in.
Rigid wheel base	8 ft. 8 in.
Total weight, all on drivers	83 tons
Wheel diameter	46 in.
Tractive effort at 30% tractive coefficient	49,800 lb.
Tractive effort at 30-hour rating	20,300 lb.
Tractive effort at continuous rating	14,500 lb.

They are for 2,400 volt d.c. operation, and have 4 axles with all the weight of the locomotive upon the driving wheels. The motors are nose-supported in the in the usual way and geared to the axle by twin gears. The running gear consists of two 4-wheel trucks, articulated together by a heavy hinge. The equalization of the trucks is accomplished by a semi-elliptic leaf spring over each journal box, connected through spring hangers to the frame and to the equalizer bars. The equivalent of a 3-point suspension is thus obtained through the side equalization of one of the trucks and both side and cross equalization of the other truck. The friction draft gear is mounted in the end frame casting of the truck. The cab, which is of the box type, is divided into 3 compartments, the centre one for the operator. Each operator's compartment is supplied with controller, control switches, ammeter, air brake and pantograph control, air gauges, 2,400 volt cab heater, bell rope and control for the whistle and sanders, thus providing the locomotive with complete double end control.

The motor equipment consists of 4 CGE-229A commutating pole motors, wound for 1,200 volts and insulated for 2,400 volts, two of them being permanently connected in series for operating on the 2,400 volt trolley circuit. The one-hour rating of each motor is 315 h.p. at 1,200 volts. The motors are designed for forced ventilation, which is obtained by a blower in the locomotive cab. Either pair of motors may be cut out, in case of emergency, by a special handle on the

in series for operation on 2,400 volts. This set is mounted in the centre cab and also drives the blower for providing forced ventilation to the main motors.

Fuses of the copper ribbon type, placed in fuse boxes, provide protection for each individual circuit, as well as the main circuit from the trolley. These fuse boxes are all arranged to blow into a common chamber, designed to take care of the arc. In addition to the fuse on the main circuit, a main switch is also provided. This is of the knife blade type, being opened and closed by a handle placed in a position for easy operation in case of emergency, or when it might be necessary to open the circuit while carrying current. This main switch blows into the chamber provided for the fuses, and has a powerful magnetic blowout.

The trolleys are of the slider pantograph type, pneumatically operated and mounted on insulated bases. Two pantographs are used per locomotive. A hand pump is provided in case a locomotive has been standing for some time and has no air supply. A speedometer, similar to the type largely used on automobiles, but especially designed for locomotives, is located in each operating cab. These are connected to the driving wheels of the locomotive by flexible shafts and gearing. A combined straight and automatic air brake equipment is provided on each locomotive, including a 2,400 volt motor driven air compressor, the set consisting of two 1,200 volt motors, operating in series on 2,400 volts and direct connected to an air compressor having a displacement of 100 cu. ft. of free air a minute. The approximate total weight of each locomotive is 83 tons. They are being supplied by Canadian General Electric Co., 2 of them having been built at that company's Peterborough, Ont., works and 4 at the General Electric Co.'s works, Erie, Pa., one having been delivered from the former place and two from the latter.

The Canadian Pacific Rail

Averill, William	Wheel borer
Bennett, Charles W.	Porter
Bigland, Richard K.	Cook
Blundell, William D.	Clerk
Brightman, Reginald	G. Ticket Clerk

E
cul
and
Mi
Na
ver
by
tri
as
un
all
lir
an
tu
tic

th
le
de
p
st
a
P
a

a
r
l
e
t
t
t

February
1917

The friction draft gear is mounted in the end frame casting of the truck. The cab, which is of the box type, is divided into 3 compartments, the centre one for the apparatus and the 2 end ones for the operator. Each operator's compartment is supplied with controller, control switches, ammeter, air brake and pantograph control, air gauges, 2,400 volt cab heater, bell rope and control for the whistle and sanders, thus providing the locomotive with complete double end control.

The motor equipment consists of 4 CGE-229A commutating pole motors, wound for 1,200 volts and insulated for 2,400 volts, two of them being permanently connected in series for operating on the 2,400 volt trolley circuit. The one-hour rating of each motor is 315 h.p. at 1,200 volts. The motors are designed for forced ventilation, which is obtained by a blower in the locomotive cab. Either pair of motors may be cut out, in case of emergency, by a special handle on the change-over switch. The locomotives are geared for a free running speed on tangent level track of approximately 45 m.p.h., and are operated as 2 speed machines with 10 points in series and 9 points in series-parallel. The master controller used is of the non-automatic type and has two handles, one regulating the applied voltage at the motors and the other for controlling the direction of rotation of the motors. The rheostats which form the external motor resistance are placed near the roof of the cab and provided with ample natural ventilation. The master controller and contactor energizing circuits are designed for 125 volts. Each contactor is easily accessible without any disturbance to adjacent contactors. A special electro-pneumatic change-over switch is used for making the transition between series and series parallel connection of the pairs of motors. The 125 volt current for operating the contactors and for lighting the cab and headlights is obtained from a motor-generator set, the motor of which has two 1,200 volt windings and two 1,200 volt commutators

brake equipment, driven air of two 1, series on to an air ment of 1 The appropriate locomotive supplied Co., 2 of company 4 at the Erie, Pa., the former

The (

Averill, V
Bennett,
Bigland,
Blundell,
Brightm
Bryson,
Copeland
Crowther
Dickson,
Ellis, J
Fletcher
Gordon,
Haselgr
Kenna,
McCall
McDon
Mawds
Nase, V
Naylor,
Ratcliff
Sawkin
Sinclair
Speirs,
Spence
Staples
Stirling
Tait, N
Wark,
Wilkin
Wills,
Wright

February
1917

W. F. Tye on Canada's Railway Problem and Its Solution.

W. F. Tye, M.Can.Soc.C.E., consulting engineer, Montreal, formerly Chief Engineer, C.P.R., read a paper on the above mentioned subject before the Canadian Society of Civil Engineers in Montreal, Jan. 17. He dealt exhaustively with the location, cost of construction and results of operation of the Canadian Pacific, Grand Trunk, Intercolonial, Canadian Northern, National Transcontinental and Grand Trunk Pacific, and gave the following as his conclusions and as recommendations:

The National Transcontinental, the Grand Trunk Pacific and the Canadian Northern railways are unable to earn their operating expenses and their fixed charges. Canada has built, and is operating, the first of these roads, and Canada and the various provinces have guaranteed the principal and interest of most of the bonds of the other two. As the roads are unable to earn their fixed charges, these must, of necessity, be paid by the country. The failure of these roads is due to the duplication of lines by all the railways, encouraged and bonussed by the government; to the excessive cost of the Grand Trunk Pacific and National Transcontinental Railways; to the failure of the Grand Trunk Pacific to provide itself with an adequate system of feeders in the west, and to the construction, by the Canadian Northern, of the long and unproductive stretches of road across British Columbia and Northern Ontario, without feeders, terminals, etc.

If the Canadian Northern, the Grand Trunk Pacific and National Transcontinental be maintained in two separate systems, it will cost at least \$400,000,000 to build the necessary branch line feeders and terminals, to provide them with adequate rolling stock, and put them in proper physical condition to compete with the Canadian Pacific. It will be necessary that the Grand Trunk Pacific build 5,000 to 6,000 miles of feeders in the west. It will be necessary that the Canadian Northern build 2,000 to 3,000 miles of feeders in the east, and terminals, costing many millions, in Montreal, Toronto, Ottawa, Quebec and Vancouver.

Canada has already sufficient railway

a year.

The National Transcontinental cost \$100,000 a mile to build. The parallel Canadian Northern cost less than \$50,000 a mile, and is, in every way, as efficient an instrument of transportation. The Quebec Bridge, with approaches, will cost \$40,000,000, and will not be necessary for many long years to come. The National Transcontinental, including the Quebec Bridge, has cost Canada at least \$100,000,000 more to build than it would have cost the Canadian Pacific to build as efficient a road.

Including operating expenses and fixed charges, it costs the Canadian Pacific about \$70 to do \$100 worth of business. Including operating expenses and interest on cost, it costs the Intercolonial and the other Canadian Government roads from \$200 to \$220 to do \$100 worth of business.

Canada should follow the wise example set by Sir John Macdonald, when dealing with the Canadian Pacific in 1879-80, and form a new private corporation, with sufficient power and the necessary safeguards, to take over and consolidate the Grand Trunk, Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways, and develop another Canadian Pacific, rather than to have the Government take them over and develop another and a vaster and more expensive Intercolonial. Conditions for the formation of such a company are much more favorable than they were in 1880, as Western Canada had not then been proved, as it since has been, to be capable of supporting a large and prosperous population. Such a combination would start with gross earnings of at least \$100,000,000 a year, with a probable average increase of 8% a year, and probable net earnings of from \$25,000,000 to \$30,000,000 a year, and a net revenue from other sources of about \$2,800,000. Its fixed charges at consolidation would be about \$35,000,000, and it would be under the necessity of spending in the first five to seven years at least \$100,000,000 to provide rolling stock and to put its properties in good physical condition. Deficits for some time to come would be incurred, owing to the heavy fixed

ous polic
tion, eitl
by the s
anteeing
of which

Passen

The t
tion me
bec, on
time bus
ara Fr
and the
River
meeting
submis
G. C. V
fic Ma
man, I
mittee
Lakes
elected
Lawre
Morris
Ry., M
of bot
P.A., I
sident
Comm
the w
rack
Vande
Grand
The
ger A
subje
Amer
fic O
for u
assoc
ticke
distr
tion
visio
Guid
the
Most
notic
15%
Ltd.
rate
rout
Pres
ern
Pre
plai
Sec
the
reti

February 1917

ing, the first of these roads, and the various provinces have guaranteed the principal and interest of most of the bonds of the other two. As the roads are unable to earn their fixed charges, these must, of necessity, be paid by the country. The failure of these roads is due to the duplication of lines by all the railways, encouraged and bonussed by the government; to the excessive cost of the Grand Trunk Pacific and National Transcontinental Railways; to the failure of the Grand Trunk Pacific to provide itself with an adequate system of feeders in the west, and to the construction, by the Canadian Northern, of the long and unproductive stretches of road across British Columbia and Northern Ontario, without feeders, terminals, etc.

If the Canadian Northern, the Grand Trunk Pacific and National Transcontinental be maintained in two separate systems, it will cost at least \$400,000,000 to build the necessary branch line feeders and terminals, to provide them with adequate rolling stock, and put them in proper physical condition to compete with the Canadian Pacific. It will be necessary that the Grand Trunk Pacific build 5,000 to 6,000 miles of feeders in the west. It will be necessary that the Canadian Northern build 2,000 to 3,000 miles of feeders in the east, and terminals, costing many millions, in Montreal, Toronto, Ottawa, Quebec and Vancouver.

Canada has already sufficient railway mileage for years to come. The additional mileage necessary for these roads could only be had by duplicating existing lines. Such duplication of lines would only add to the burden to be borne by Canada in the way of subsidies, guarantees, etc., without doing the country any good. Canada has sufficient railway mileage and traffic for two good transcontinental systems, the Canadian Pacific and another, but not enough for three.

A consolidation of the Grand Trunk, the Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways would give a well balanced system. The Grand Trunk has an excellent system in the east, with terminals in all large and important centres; the Canadian Northern has not. Each is strong where the other is weak. Combining them must, of necessity, be the most economical and efficient way of handling the situation. Such a combination would not require more than \$100,000,000 to provide it with sufficient rolling stock, and to put it in proper physical condition to compete with the Canadian Pacific. The saving in capital cost would be at least \$300,000,000 and, at present rates of interest, the saving in fixed charges at least \$15,000,000

the other Canadian Government roads from \$200 to \$220 to do \$100 worth of business.

Canada should follow the wise example set by Sir John Macdonald, when dealing with the Canadian Pacific in 1879-80, and form a new private corporation, with sufficient power and the necessary safeguards, to take over and consolidate the Grand Trunk, Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways, and develop another Canadian Pacific, rather than to have the Government take them over and develop another and a vaster and more expensive Intercolonial. Conditions for the formation of such a company are much more favorable than they were in 1880, as Western Canada had not then been proved, as it since has been, to be capable of supporting a large and prosperous population. Such a combination would start with gross earnings of at least \$100,000,000 a year, with a probable average increase of 8% a year, and probable net earnings of from \$25,000,000 to \$30,000,000 a year, and a net revenue from other sources of about \$2,800,000. Its fixed charges at consolidation would be about \$35,000,000, and it would be under the necessity of spending in the first five to seven years at least \$100,000,000 to provide rolling stock and to put its properties in good physical condition. Deficits for some time to come would be inevitable owing to the heavy fixed charges, amounting to about \$35,000,000, as compared with \$10,300,000 a year for the Canadian Pacific. As these high fixed charges are caused by the excessive cost of government construction, and by duplication of lines, bonussed and guaranteed by the government, Canada must pay them. The fixed charges would be at least \$15,000,000 less with one private system than with two, and very much less with private than with government management. With such a combination as has been outlined the series of deficits should not last more than five to ten years, after which the road should be very successful.

In order to control its policy and to share in its certain prosperity, Canada should have an interest in the new company. The Dominion Government should furnish 40% of the money required, own 40% of the stock, and appoint 40% of the directorate, but take no part in the actual management. This would give all the advantage of government control without any of the manifest disadvantages of government management. Once this combination was successful, Canada should once and for all abandon the vic-

Ry., Montre
of both com
P.A., New
sident, Nia
Committee,
the wood ir
rack used
Vanderbilt
Grand Cen

The Inte
ger Associ
subjects, w
American
fic Officers
for use in
association
ticket; pri
distributio
tion of cit
vision ter
Guide, and
the line o
Most of th
notice of
15%, but
Ltd., anno
rates on
route. The
President
ern Navi
President
plain T
Secretary
thern St
retiring
Hudson
presente
was take
Royal S
ship, wh
Valcour
1776.

The C
gave the
trip to
eon at
Falls.
associat
in Janu

Railw
ent we
specting
toba, S
Columb
Alberta
Calgary
Canadian
Canadian
Grand T
Grand T
Manitob
Qu'App
Rd. &
Winnipe

Toti

February 1917

RAILWAY AND MARINE WORLD.

49

Way Problem and Its

ous policy of bonussing railway construction, either by gifts of money or land, or by the still more vicious policy of guaranteeing the bonds of railway companies of which it has no direct control.

F. National Transcontinental cost

Passenger Rate Meetings at Quebec.

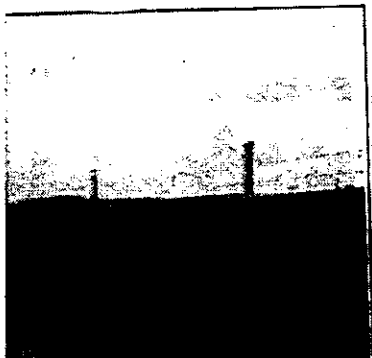
February 1917

pairing of watches. He to the fact that in the watches approved for serial, employees were given a practically 100 different by standard well known and that neither he nor in any way interested as lar make of watch an in- or pushed, provided it was es or grades scheduled in which complied in every nilar lists in force on all is in Canada and the

Numerous interesting discussed, among others, tandard loaners, equitable e for cleaning and repair- duction order, etc. In con- ne preparing of reports, ill, chief clerk, and Miss t in charge of Time Ser- ureau, discussed with the various forms and the pro- n of same, with a view to aximum accuracy.

rs were the guests of the eon on Jan. 18, when D. E. stant to President, and C. stant to Vice President, in nsportation, addressed the ting that their work was the management and had port.

of the meeting, R. Hems- al, one of the inspectors, liss Doyle, on behalf of the old gold wrist watch, show- eciation for the preparation c., and J. Striker, of Buf- Mr. Hulatt for having call- tion, stating that it had es- rsonal relationship between and the chief, which they d which would undoubtedly ry much more efficient ser- as a mark of their appre- ad forwarded to Mrs. Hu- t of roses. Mr. Hulatt, in e present for their kindness e, and also for the compli- Mrs. Hulatt, expressed the ad been to meet all the in- said that all being wel, a ng at some other point on ould be held next year.



Steam Railway Track Laid in 1916.

We have not been able to obtain any official information as to track laid on the three McArthur lines in Alberta. The total figures given in our January issue are amended below by omit- ting from the total the C.P.R. line to Camp Borden, Ont., 3.75 miles, and the G.T.R. line to Camp Borden, 4.21 miles, these lines being regarded as spur lines and not as permanent additions to mile- age. We are officially advised that the estimate made of 2.75 miles of railway to the Intercolonial Ry.'s Halifax ocean ter- minals covered only construction track, it being proposed to lay permanent track during this year. There is also an altera- tion in the estimated figures given in the January table for the Alberta & Great Waterways Ry. It was expected when that table was prepared that track would reach McMurray by Dec. 31, but a statement by J. D. McArthur, President, reported recently, was that 80 miles of track still had to be laid before Mc- Murray was reached. The table corrected as above stated follows:

	Miles.	Miles
*Alberta & Great Waterways Ry.—		
Mileage 174.5 towards McMurray		
Alta.	40.00	
Canadian Northern Ry. System—		
Canadian Northern Quebec Ry..		
Arundel to Kaolin, Que.	9.00	
Canadian Northern Pacific Ry.—		
Victoria to Patricia Bay	13.72	
Victoria towards Alberni	1.00	
	14.72	
		23.72
Canadian Pacific Ry.—		
Pakowi to Manyberries, Alta.	10.40	
Stony Creek to Cambie	10.50	
		20.90
*Central Canada Ry.—		
Heart River to Peace River Land- ing, Alta., M. 47.60 to M. 49.50		1.90
*Edmonton, Dunvegan & B.C. Ry.—		
M. 336.9 to Spirit River, M. 357 . .	20.10	
Spirit River to Grande Prairie Set- tlement, Alta.	48.50	
		68.60
Grand Trunk Pacific Ry.—		
Moose Jaw N.W. Branch M. 67 to 70	3.00	
Regina-Moose Jaw Branch to Ele- vator	2.55	
		5.55
Hudson Bay Ry.—		
Manitou Rapids, M. 241.24, to Kettle Rapids		91.00
Kettle Valley Ry.—		
To connect track ends in Coqui- halla Valley, B.C.		1.70
Pacific Great Eastern Ry.—		
Clinton northerly towards Prince George, B.C.		15.17
Prince Edward Island Car Ferry—		
Connections at Port Borden, P.E.I.		1.00
Quebec & Lake St. John Ry.—		
Lorette to Huron River, Que. . . .		10.00
Toronto, Hamilton & Buffalo Ry.—		
Dunnville to Port Maitland, Ont. . .		5.00
Vancouver, Victoria & Eastern Ry. & N. Co.—		
Completion of Sumas Landing—		
Connor Line	1.13	
Connection between Kettle Valley Lines and Canadian Northern Pa- cific Ry. at Hope, B.C.	0.17	
		1.30

February
1917

Canadian Northern Railway Construction, Betterments, Etc.

ons
and
and
ny,

ght
een
ord,

Dis-
ap-
nt.,

ight
W.

rin-
nes,
gent

Gen-
nont
nted
[R.,
etir-

bec-
isse;
valc
C.

UR-
rans-
As-
Mul-
tions

inted
vice

ercial
ap-
mon-
gned.
ercial

n ap-
isdic-
t and
a and
istant
nt at
omot-

elling
neau,
ercial
north
rlotte
eneral
Prince

Canadian Northern Quebec Ry.—The Dominion Parliament is being asked to extend the time for the completion of the projected branch lines from Rawdon to the National Transcontinental Ry., with a branch line from Rawdon to Joliette; and a line from St. Jerome to St. Eustache, Que.

Mount Royal Tunnel and Terminal Co.—The Dominion Parliament is being asked to extend the time within which the company may complete its railways and station building in Montreal.

A contract has been let to Norcross Bros., of Montreal, for the erection of the temporary station building on Lagauchetiere and St. Monique Streets. The excavation of the larger area on which the permanent station will be erected will be done by Angus Sinclair, of Toronto. This latter contract involves the removal of some 280,000 cubic yards of material.

Canadian Northern Ry.—The ratepayers of Fort William, Ont., decided Jan. 1, by a vote of 409 to 362 in favor of the Vickers St. site for the proposed station for the C. N. R.

A press report states that the company has let contracts to lumbermen along its line between Port Arthur, Ont., and Warroad, Minn., for the supply of 1,300,000 ties and 200,000 posts and poles.

No new track was laid on C. N. R. lines in Manitoba, Saskatchewan or Alberta during 1916.

The company, it is reported, proposes to locate a stockyard near the government elevator at Saskatoon, Sask., at a cost of \$30,000.

Canadian Northern Pacific Ry.—In connection with the building of the branch line from Kamloops the company acquired 90 acres of land in the Kelowna district. Through this area the right of way has been located, and the company claims that the whole 90 acres is thereby exempted from taxation. The town claims that at the most only six acres of this land is exempt, and desires to collect taxes on the balance. Judgment has been reserved in the Court of Appeals, which is being asked to reverse the decision of the lower court that the whole area is exempt.

The C. N. P. Ry. at present obtains

The time within which Champion and White, who claimed certain riparian rights on part of the False Creek area, Vancouver, could appeal against the decision debarring them from further objection to the reclamation works having expired without notification of further proceedings being taken, it is expected that much more rapid progress will be made with the work than heretofore. The particular work with which these proceedings interfered was the building of the sea wall. A large quantity of concrete piling for this is already on the spot.

It was reported Jan. 5 that construction on the Vancouver station building would be started by Jan. 31.

Lines on Vancouver Island.—Good progress is reported to have been made with the construction of the car ferry slip at Patricia Bay, Vancouver Island. As soon as this is completed, which will probably be by April 1, a regular car ferry service will be maintained with the mainland.

The line from Patricia Bay into Victoria is being ballasted and got ready for traffic. The only piece of construction on the line unfinished is the bascule bridge at Selkirk Water, which is being built by the Canadian Bridge Co., Walkerville, Ont.

The grading of the Barkley Sound line is practically completed to mile 106, and the steel for this line is now being delivered at Port Mann. It will not be taken over until the ferry service is put in operation to Patricia Bay. The steel for the bridges necessary on the line will also be taken by the same route. It is reported that this 106 miles will be completed this year. (Jan., pg. 22.)

International Railway of New Brunswick.

The following press dispatch was sent from St. John, N.B., Jan. 12: "The Dominion Government organ here says the Government has acquired the International Ry., which runs from Campbellton to St. Leonards, N.B., and the Maine border. It hints at the purchase price being between \$2,000,000 and \$3,000,000.

We are officially advised that negotia-

February 1917

AS-
Mul-
titions

en appointed
ia, Man., vice

Commercial
as been ap-
gent, Edmon-
ter, resigned.
e Commercial
has been ap-
with jurisdic-
ers Inlet and
Victoria and
to Assistant
ger Agent at
ruce, promot-

ore Travelling
gent, Juneau,
d Commercial
erritory north
een Charlotte
stant General
Agent, Prince
, transferred.

ents have been
ay, Man., R. R.
I. McCreddie;
ble; Edgerton,

B. BRODIE,
senger Agent,
d District Pas-
N.J., vice C. E.

ore Passenger
been appointed
nt, vice C. B.
e, 56 King St.

orthern Ontario
society's sub-
Red Cross and
ds, to Oct. 31,
paid direct to
11,961.83. These
personal sub-
mission and em-
monthly subscrip-
the Toronto

has let contracts to lumbermen along its
line between Port Arthur, Ont., and War-
road, Minn., for the supply of 1,300,000
ties and 200,000 posts and poles.

No new track was laid on C. N. R.
lines in Manitoba, Saskatchewan or Al-
berta during 1916.

The company, it is reported, proposes
to locate a stockyard near the govern-
ment elevator at Saskatoon, Sask., at a
cost of \$30,000.

Canadian Northern Pacific Ry.—In con-
nection with the building of the branch
line from Kamloops the company acquir-
ed 90 acres of land in the Kelowna district.
Through this area the right of way has
been located, and the company claims that
the whole 90 acres is thereby exempted
from taxation. The town claims that at
the most only six acres of this land is ex-
empt, and desires to collect taxes on the
balance. Judgment has been reserved in
the Court of Appeals, which is being ask-
ed to reverse the decision of the lower
court that the whole area is exempt.

The C. N. P. Ry. at present obtains
an entrance into Vancouver over Great
Northern Ry. tracks and to make use of
these passes over the New Westminster
bridge, owned by the province. The com-
pany was reported Jan. 5 to have paid up
arrears of rental for the use of this
bridge, and to be ready to sign an agree-
ment with the government as to the fu-
ture rental to be paid.

The installing of machinery in the car
shops at Port Mann is reported to be well
forward and it is expected that the shops
will be ready for the construction of cars
March 31.

An agreement is reported to have been
reached between the company and the
New Westminster City Council under
which, in return for certain concessions,
the company will remove certain tracks
of the C.P.R. and of the British Columbia
Electric Ry. to C. N. P. R. property. The
total cost of the work is estimated at
\$100,000. The principal concession
granted the company is the right to use
Front St. for railway purposes, and the
removal of the tracks is necessary in or-
der that the city may extend Columbia
St. through to 12th St. without having
to carry it across the tracks.

the Ca
Ont.

The
is prac
the sta
livered
taken
in ope
for the
also be
ported
pleted

Int

The
from
minor
Gover
tional
to St.
der.

ing be
We
tions
were
then
to pur
five y
Domi
on th
upon,
branc
adian
31,19
line,
died

Ut
Way.
N.B.,
from
ager,
was
lease
tion
Inter
Mills
in tl
after
men
the

February 1917

Canadian Northern Railway's Report for Year Ended June 30, 1916.

The following report has been issued over the signature of Sir Wm. Mackenzie, President: The results of operations for the fiscal year were as follows:

Gross Earnings:	\$ 6,128,470.76
Passenger traffic	2,656,213.12
Freight traffic
Express, mail, telegraph, interest and profits from elevators and other subsidiary companies, investments, etc.	2,787,591.18
	\$35,476,275.06
Working expenses (including taxes, etc.)	26,102,744.52
Net earnings	\$9,373,530.54
Deduct fixed charges	9,621,657.70
Net loss or deficit	\$248,127.16

The system had under operation an average of 8,048 miles in 1916, compared with an average of 7,269 miles in 1914-15, an increase of 779 miles, or 10.72%.

The Total Operating Revenues were \$35,476,275.06, an increase of \$9,564,168.76, or 36.91% over 1914-15. The increases in revenue were derived as follows: Passenger traffic, \$717,246.39, or 13.25%; freight traffic, \$8,352,412.60, or 45.81%; mails, \$12,877.97, or 6.05%; express, \$195,064.70, or 30.27%, and miscellaneous traffic, \$286,567.10, or 19.96%. While a portion of these increased earnings is due to an increased mileage, a substantial improvement has been made in the system's business. This is indicated by the fact that earnings per mile of road for the year were \$4,408.08, compared with \$3,564.74 for the previous year, an increase of 23.66%.

The system's new mileage on the Pacific Coast and the Northern Ontario Divisions have not yet come into full earning power, as operation on them was only commenced in the late autumn of 1915. It will be realized that time is required for the creation of industries to develop the natural resources of these newly opened-up sections of the country. The system is fortunate in the possession of vast timber, mineral, and agricultural traffic resources on these new lines; and from them must be eventu-

demand. The Ontario Government has offered for sale a large acreage of wood; and the company, having 2,000,000 acres of land, mostly covered with pulpwood, is undertaking their development. Arrangements are being made for the establishment of pulp and paper mills in the districts and, in the meantime, large shipments of pulpwood will be made to mills already under operation in the older sections of the country. Mills for the sawing of merchantable timber are also being erected along the company's lines.

A large part of the increase in freight revenue originated from grain traffic. The system carried 131,978,809 bush. of grain in 1916, compared with 58,575,520 bush. in 1915, an increase of 125.31%. Inasmuch as many of the security holders invested their funds in the company's undertakings, believing that the heart of the Empire would some day need to draw heavily upon the wheatfields of the Canadian West, it is with pride that the directors present these figures, illustrating the extent to which the prairies have been opened up, made productive, and the produce marketable by the company's railways. There were probably few who thought that the crucial necessity would come so soon; but, having come, it must be considered fortunate that the Canadian Northern System and the country tributary to it were sufficiently developed to take an important part in supplying the Empire's food requirements. To the preponderance of grain traffic—this commodity being carried at a low rate—is due the decrease in the revenue per ton per mile from 00.831c. to 00.679c, or 18.29%. It is interesting to note, however, that the average distance a ton of freight was hauled, increased from 204.08 miles to 288.46 miles, or 41.35%, with, of course, a marked advantage in operating results.

The passenger train earnings per train mile increased from 87.409c. to 93.379c., or 6.83%. The system's passenger and freight earnings, during the year, were affected by the lack of two important terminals which are under construction,

744.52, compared with \$19,288,514.42 for 1915, an increase of 35.33%. A portion of this increase is due to the operation of a greater mileage and to the expenses incidental to taking over new lines which were operated for only a portion of the year. But, with the heavier traffic, the system was naturally compelled to expend a relatively larger amount in operation, spending for this purpose \$3,243.38 a mile compared with \$2,653.57 the previous year. The system is paying a wage schedule well up to the level of the highest standard. The labor situation in the newer sections of the country has been particularly difficult to meet, but with increasing settlement may be expected to improve. The weather conditions in the winter period covered by the report were unprecedentedly bad in Northern Ontario and Western Canada, where the system has a large mileage under operation. British Columbia was subjected to a lower temperature and a greater fall of snow than in any time in the previous 20 years. These conditions added substantially to the expense in the cost of operation. The working expenses for the year were 74.73% of the operating revenue, a reduction of 1.93 from the previous year. Including revenue from all sources the ratio of working expenses, including taxes, was 73.58%, compared with 74.44% for the previous year.

Land Department: During the year, according to government returns, only 51,243 immigrants came into Canada. Immigration on a large scale is not to be expected until after the declaration of peace; and, in the meantime, sales of western lands are naturally limited. During the year there were sold of the system's lands, 19,443 acres, at an average of \$16.37 an acre, or an aggregate of \$318,248.32. The previous year's sale price averaged \$15.53 an acre. There were cancelled, by mutual arrangement, agreements for the sale of 4,850 acres; so that the net acreage of land available for sale has been decreased by 14,593 acres, leaving 843,127 acres in the prairie provinces available for sale. Land grant bonds of

February 1917

an increase of 11.12 miles, the
The Total Operating Revenues were \$35,476,275.06, an increase of \$9,564,168.76, or 36.91% over 1914-15. The increases in revenue were derived as follows: Passenger traffic, \$717,246.39, or 13.25%; freight traffic, \$8,352,412.60, or 45.87%; mails, \$12,877.97, or 6.05%; express, \$195,064.70, or 30.27%, and miscellaneous traffic, \$286,567.10, or 19.96%. While a portion of these increased earnings is due to an increased mileage, a substantial improvement has been made in the system's business. This is indicated by the fact that earnings per mile of road for the year were \$4,408.08, compared with \$3,564.74 for the previous year, an increase of 23.66%.

The system's new mileage on the Pacific Coast and the Northern Ontario Divisions have not yet come into full earning power, as operation on them was only commenced in the late autumn of 1915. It will be realized that time is required for the creation of industries to develop the natural resources of these newly opened-up sections of the country. The system is fortunate in the possession of vast timber, mineral, and agricultural traffic resources on these new lines; and the business from them must be eventually profitable. When the lines were surveyed, the traffic from the development of these resources was foreseen, and it is pleasant to be able to report that actual operations are proving these expectations well founded. The British Columbia section, from the commencement, produced each month substantial increases in revenue, and, before the close of the fiscal year, yielded most encouraging results. Much of the business offering is from the Pacific Coast to points inland, but a commensurate has been made in the marketing of the excellent timber tributary to the line, and in the cultivation of the rich lands in the valleys through which the railway traverses the mountain country. There is a considerable acreage of land suitable for intensive farming along the company's railway, and its products will find a ready market on the Pacific Coast. The excellent showing made by the mileage in British Columbia, after only seven months of operation, may be well considered an outstanding feature in the year's operations. The colonization of Northern Ontario has been retarded by the war; but, peculiarly enough, there is a compensating feature in the inordinate demand for paper and its consequent startling increase in costs. The spruce, balsam, and jack-pine woods, suitable for making pulp, and of which there is an abundance tributary to the company's lines, are finding an immediate market

pire would some day need to draw heavily upon the wheatfields of the Canadian West, it is with pride that the directors present these figures, illustrating the extent to which the prairies have been opened up, made productive, and the produce marketable by the company's railways. There were probably few who thought that the crucial necessity would come so soon; but, having come, it must be considered fortunate that the Canadian Northern System and the country tributary to it were sufficiently developed to take an important part in supplying the Empire's food requirements. To the proportion of grain traffic—this commodity being carried at a low rate—is due the decrease in the revenue per ton per mile from 00.831c. to 00.679c, or 18.29%. It is interesting to note, however, that the average distance a ton of freight was hauled, increased from 204.08 miles to 288.46 miles, or 41.35%, with, of course, a marked advantage in operating results.

The passenger train earnings per train mile increased from 87.409c. to 93.379c, or 6.83%. The system's passenger and freight earnings, during the year, were affected by the lack of two important terminals which are under construction, but were not completed in time to take care of transcontinental business. It is expected that the tunnel under Mount Royal and a station for the system's business in the heart of Montreal, will be ready for operation in the spring of 1917. The Vancouver terminal is under construction and, it is expected, will be available for the system's business in the summer of 1917. The station at Toronto, which the system will occupy with the C.P.R., has been completed.

The system has also been handicapped by not having a line from Toronto to the Niagara peninsula, connecting with the railway systems of the United States converging at the Niagara frontier. When this line is constructed, it will give the system the further advantage of rail connection with its electric subsidiary line, the Niagara, St. Catharines and Toronto Ry., now serving the important manufacturing district of the Peninsula. Delays in the completion of these undertakings, without which neither a satisfactory transcontinental business nor an entirely successful eastern passenger and fast freight business can be possible, have occurred, as a result of disturbed conditions of finance resulting from the war; and the directors would emphasize the fact that revenues for the year have been obtained notwithstanding the lack of these much-needed facilities.

The Operating Expenses were \$26,102,-

British Columbia was subjected to a lower temperature and a greater fall of snow than in any time in the previous 20 years. These conditions added substantially to the expense in the cost of operation. The working expenses for the year were 74.73% of the operating revenue, a reduction of 1.93 from the previous year. Including revenue from all sources the ratio of working expenses, including taxes, was 73.58%, compared with 74.44% for the previous year.

Land Department: During the year, according to government returns, only 51,243 immigrants came into Canada. Immigration on a large scale is not to be expected until after the declaration of peace; and, in the meantime, sales of western lands are naturally limited. During the year there were sold of the system's lands, 19,443 acres, at an average of \$16.37 an acre, or an aggregate of \$318,248.32. The previous year's sale price averaged \$15.53 an acre. There were cancelled, by mutual arrangement, agreements for the sale of 4,850 acres; so that the net acreage of land available for sale has been decreased by 14,593 acres, leaving 843,127 acres in the prairie provinces available for sale. Land grant bonds of the issue of 1909 amounting to \$272,533 were retired, leaving outstanding in respect of this issue \$2,217,740.

Car Trust Obligations: No car trust obligations were created, and \$3,628,000 were paid in respect of obligations made in previous years.

Ocean Steamship Services: An agreement of great importance in the development of the system's freight and passenger traffic, was made during the year with the Cunard Steamship Co. Under its terms the Cunard Co. has taken over the Atlantic steamships controlled by the C.N.R., and a close working alliance is in effect between the two companies, the various Canadian services of the Cunard line and the Canadian Northern having become, in effect, a single transportation unit between Europe and Canada. Steamship services on the Pacific Ocean are also in contemplation. The arrangement was not completed in time to be of benefit to last year's earnings, but will from now on become of benefit and, after the conclusion of the war, must result in giving to both parties a very substantial and remunerative business.

General Remarks: Since the new lines through Northern Ontario and British Columbia, making the system transcontinental, have been brought under operation during the year under review, your directors deem it advisable to state the salient

February
1917

facts in connection with these lines and to refer to the position the system will henceforth occupy in relation to the traffic of the country. The construction of the new lines involved a greater expenditure than was first contemplated. During the years of construction your directors became impressed with the increasing weight of train loads, which necessitated the older established railways in Canada and the U.S. spending huge sums of money in line revision, and decided that it would be true economy to build these important sections of the system's main line to a standard that would forever obviate the necessity of revisions for grade improvement. As a result, your railway now crosses the summit of the Rocky Mountains by means of 7/10 of 1% grades confined within one division; and these are the heaviest gradients opposing a bound traffic—the direction of the heaviest haul—between the waters of the Pacific at Vancouver and the waters of the Atlantic at Montreal. Nowhere else on the Pacific Coast Divisions and now on the new lines in Northern Ontario, are grades in excess of 5/10 of 1%. The possession of these favorable grades has given the system an all important advantage in the economy of operation, particularly in carrying the two commodities offering in largest volume, viz., lumber from the Pacific slope of the Rocky Mountains to the prairies and eastern points, and grain from the prairie provinces to Eastern Canada and Atlantic ports. The main line from Quebec to Vancouver is superior to any line crossing the American continent in points of grades and curves favoring traffic. Although the transcontinental line has been in operation for only a few months, its superior economies have established the fact that the road must assume a commanding position when traffic has grown to dimensions necessitating the use of heavy

found to be impossible. It is hoped, however, that during 1917 substantial progress will be made and, as the plans are carried into effect, the beneficial results will become apparent in the earnings of the system.

The prospects for grain tonnage for the coming year are not as good as they were last year, as will be seen by the following statement of the grain yields for our three prairie provinces, compiled by our Grain Information Bureau; and, although complete returns are not yet available—threshing still being under way—they may be regarded as approximately correct. The yields are as follows: Wheat, 170,500,000 bush.; oats, 280,000,000 bush.; barley, 44,500,000 bush.; flax, 6,700,000 bush.; total, 501,700,000 bush. According to these figures, the 1916 crop will be less than the 1915 crop, by about 250,000,000 bushels; but it is necessary to remember in this connection, that there remained over from the 1915 crop, in the territory tributary to the system's lines, 38,000,000 bush. of grain, which in all probability will be marketed this year. The prices realized by farmers for the 1916 crop, and the unmarketed part of the 1915 crop, are much better than they were a year ago; and the statement which is made to the system's management by an official of the Alberta Department of Agriculture that "the net result this year will increase the farmers' income by several million dollars," in indicative of the generally strong financial position of grain growers along C.N.R. lines in middle Canada. While the proceeds derived by farmers from the 1915 crop were largely required to liquidate past obligations, the returns from the 1916 crop are largely available for the purchases of live stock, machinery, building material, and general merchandise. Fortunately, the system, having its lines directly connected up with the grain country of Western

trade of the country is substantially better than it was a year ago.

There is, naturally, keen speculation as to the future of Canada after the war, and this is increased by the patent fact that a large measure of the country's present prosperity is due to productions for war purposes. While your directors hesitate to express their views on this matter, they feel assured that the industrial disarrangement through peace will be less serious and of shorter duration than the disarrangement which occurred in 1914 as a result of the war. It must not be forgotten that Canada is essentially a country of the future. Her stock of natural resources remains largely intact. Her vast known mineral wealth is only in the initial stages of development. Her timber resources can be valued in the hundreds of millions of dollars, and will become even more valuable during the world's reconstruction days. Her agricultural resources, which have been the country's mainstay, are still capable of vast development, only one quarter of the surveyed, arable land being under occupation, and less than one eighth of it under annual cultivation. The knowledge of these things must serve to create a spirit of optimism in Canada's future; and a realization that a large portion of these timber, mineral, and agrarian undeveloped resources, now made accessible through the system's new lines, has convinced your directors that the system is capable of an immeasurable expansion in earning power. These things are set forth because your directors believe there is need for a better understanding of the extent to which the system is prepared to enter into the transportation services of Canada, and in partial explanation of the belief they firmly hold that the ultimate prosperity of the C.N.R. system is measurable only by the prosperity of Canada.

New Directors: During the year three new members were added to the director-

February
1917

session of these favorable grades has given the system an all important advantage in the economy of operation, particularly in carrying the two commodities offering in largest volume, viz., lumber from the Pacific slope of the Rocky Mountains to the prairies and eastern points, and grain from the prairie provinces to Eastern Canada and Atlantic ports. The main line from Quebec to Vancouver is superior to any line crossing the American continent in points of grades and curvatures favoring traffic. Although the transcontinental line has been in operation for only a few months, its superior economies have established the fact that the road must assume a commanding position when traffic has grown to dimensions making general the use of heavy trainloads.

In this connection it becomes necessary to examine the locations of the lines from the point of traffic opportunities, this being of not less importance than the physical condition. The system's railways occupy an enviable position in the prairie provinces, in which the first mileage was constructed. Assuming the population of villages and towns having 1,000 inhabitants and over to be urban, the system's railways serve 90% of the urban population of Alberta, and 97% of the urban population of Saskatchewan and Manitoba. In British Columbia the system has lines serving 78% of the urban population. In Ontario and Quebec the provinces from which manufactured products are mainly derived for Canadian consumption, the system will have access to cities and towns with 70% of the factory output of these two provinces, when the 40 miles of railway to Hamilton, for which right of way and terminal properties have been secured, is in operation. Further than this, the system's railways are now serving 75% of the aggregate population of the cities and towns of all Canada having 5,000 inhabitants and over. It is only to be expected that the system will not come into full earning power immediately. The initial years of transcontinental operation are involving terminal improvements, increases in equipment, changes in organization, and the building up of traffic connections. For some time past your directors have had plans prepared for these matters, which it was hoped to put into effect so soon as the lines between Quebec and Vancouver were completed; but, as a result of the disturbed conditions of finance, this was

1915 crop, are much better than they were a year ago; and the statement which is made to the system's management by an official of the Alberta Department of Agriculture that "the net result this year will increase the farmers' income by several million dollars," in indicative of the generally strong financial position of grain growers along C.N.R. lines in middle Canada. While the proceeds derived by farmers from the 1915 crop were largely required to liquidate past obligations, the returns from the 1916 crop are largely available for the purchases of live stock, machinery, building material, and general merchandise. Fortunately, the system, having its lines directly connected up with the grain country of Western Canada, and the industrial centres of Eastern Canada, and the seaports of the Atlantic and Pacific, is in the position to make up the shortage in grain tonnage by a tonnage in general commodities which will be carried at more remunerative rates. The present situation emphasizes the fact that the railway is not as dependent upon grain crop movements as in the past; and, in becoming transcontinental, has acquired a highly diversified traffic.

The following statement of the comparative gross traffic earnings for the four months succeeding the fiscal year under review, is submitted as evidence of this contention:

	1916.	1915.	Increase.
July	\$3,834,200	\$1,961,700	\$1,872,500
August	3,684,900	1,983,600	1,701,300
September	3,187,900	2,757,900	430,000
October	3,716,800	3,678,500	38,300
Totals	\$14,423,800	\$10,380,300	\$4,043,500

In Oct., 1915, there was a heavy grain movement, and it is pleasing to note that the traffic in other commodities has more than offset the lighter grain movement this year. General trade prospects for the next fiscal year are good. For the 12 months ended Sept. 30, 1916, the total exports and imports of Canada was \$808,000,000 in excess of the corresponding period the previous year; and, fortunately for the country, the balance of trade is on the right side, exports having exceeded imports by \$367,000,000. The exports for this period were \$584,000,000 in excess of the exports for the same period the previous year. Statistics gauging the extent of domestic trade are not available, but if railway tonnage be a measuring gauge—and it is usually accepted as such—the general domestic

of these things must serve as a source of spirit of optimism in Canada's future; and a realization that a large portion of these timber, mineral, and agrarian undeveloped resources, now made accessible through the system's new lines, has convinced your directors that the system is capable of an immeasurable expansion in earning power. These things are set forth because your directors believe there is need for a better understanding of the extent to which the system is prepared to enter into the transportation services of Canada, and in partial explanation of the belief they firmly hold that the ultimate prosperity of the C.N.R. system is measurable only by the prosperity of Canada.

New Directors: During the year three new members were added to the directorate: W. K. George, of Toronto, Vice President, Sterling Bank of Canada; W. J. Christie, a prominent business man of Winnipeg, and H. W. Richardson, head of James Richardson & Sons, grain merchants, Kingston, Ont.

Steel Rails Duty.—In reference to statements which have been made in various papers as to the suspension of duty on steel rails imported into Canada, we are officially informed that no general order in council has been passed suspending the duty. Several of the railways wanted to make contracts for their requirements for the upkeep of their tracks and Canadian steel mills were unable to take these contracts, owing to having large orders for munitions. The railway companies were therefore compelled to look to the United States for their supply at a largely advanced price. Some of the companies applied for a refund of duty, and in each case a refund of duty will be granted on rails so imported during a certain period, with the exception of the war tax of 7½%, which will have to be paid by the railways. It was found absolutely necessary for the government to take action along these lines in order to enable the railways to keep up their maintenance and facilitate traffic during the war.

G.T.R. Taxes in Michigan.—The Michigan State Legislature is considering an amendment to the constitution to permit the state to own and control railways, with a view, it is said, of dealing with a claim against the G.T.R. for taxes dating back to 1834, when the Detroit & Pontiac Ry., now a part of the G.T.R. system, was built.

February
1917

Electric Substation for Mount Royal Tunnel.

The Canadian Northern Ry. will have finished at an early date a substation at the Mount Royal tunnel's west portal, near the top of the 0.6% grade, for supplying power to the locomotives for operation on the electrified zone, extending from the terminal station in Montreal to Cartierville. The building is 88 x 70 ft. x 34 ft. high, and consists of a machinery section and a switching and auxiliary section. The machinery room contains two 1,500 k.w. synchronous motor generator sets, with the foundation for a third set, and 3 exciter sets with space for a fourth. It also contains the switchboard. A 25-ton travelling crane is provided in this room to handle the heaviest pieces of machinery. Under this room there is a basement, where rheostats are located beneath the switchboard, and where there are also storage and locker rooms. The switching and auxiliary section is divided from the machinery section by a heavy fire wall. Underneath half of this is a basement containing rooms for oil storage and for the furnace which will heat the building. This section is divided into a busbar room, oil switch room, lighting arrester room, power transformer room, battery room, and feeder entry room. Fire walls and doors fully guard against the possibility of any fire spreading. The machinery room has a glazed brick dado extending 10 ft. above the floor. Above this the room is lined with a light cream colored brick. Ample windows are provided for light and ventilation. Revolving ventilators are located in the roof over the machinery. The exterior of the building is finished with a dark red tarry brick, with parapet, cornice and other trimming of moulded concrete imitating dressed sandstone. Three-phase 60-cycle 11,000-volt power will be delivered at the substation by the Montreal Light, Heat & Power Co., which distributes electric power from 6 water power stations, aggregating 170,000 h.p. All of these are connected to a central distributing station, which is only a short distance from the east end of the tunnel in Montreal. Two sets of cables, one set a spare, will be installed from the central distributing station through the tunnel in ducts and underground all the way to the substation. In addition to these underground lines, an overhead transmission line will connect the power company's Montana St. transformer station, just north of Mount Royal, with the substation. The switches on these incoming lines will be so arranged that the 11,000-volt busbars can be quickly changed from one to the other. Besides the water power generating station the power company has 2 steam

volt synchronous motor operating at a speed of 600 r.p.m. These generators are permanently connected in series. The shunt fields are connected and commutator face windings, series and commutator filed windings are all connected on the ground side of the generators, so that the armatures are only parts subjected to the full potential of 2,400 volts. Separately exciting the shunt fields would ordinarily be objectionable, for the reason that if the commutator should arc over, due to a short circuit on the line, the generator voltage would tend to hold up and maintain the arc. To overcome this objectionable feature, a limiting resistance is placed in series with each of the shunt fields. This resistance is cut into the circuit by means of a contactor, operated by current coils excited in series with the auxiliary switch circuit breaker. When this circuit-breaker opens the auxiliary switch will also be opened, thereby allowing the contactor to open and cut in the additional resistance, thus reducing the voltage of the generators. A speed limit device is also used. The contacts of the trip coil are connected in series with the trip coil of the circuit breaker. In case of about 15% over speed, or more, a revolving weight due to centrifugal force will open the switch, thus killing the low voltage release coil of the circuit breaker and causing it to open. These sets will have a continuous capacity of 1,500 k.w. each and an overload capacity of 200% for 5 minutes.

There will be three motor-generator exciter sets, each consisting of a 50-k.w. 125-volt generator of the commutating

The switchboard is composed of 32 panels of natural black slate. These will control various outgoing circuits for signals, tunnel lighting and miscellaneous power, as well as the substation machinery. Nine of these panels comprise the 2,400-volt direct current board. The 2,400-volt circuit breakers and lever switches are mounted on panels, back of and above the main switchboard. They are operated by means of insulated handles on the front of the main board so as to eliminate any possibility of the operator coming in contact with the 2,400-volt circuit. The breakers are enclosed between fireproof barriers. They are equipped with powerful magnetic blow-outs to extinguish the arc, and are provided with a resetting device operated from the front of the board. The field switches are mounted back of the panels, with their operating handles on the front of the main board. The complete electrical equipment is being supplied by Canadian General Electric Co., Ltd.

The Canadian Pacific Railway's Honor Roll No. 17.

Adamson, Richard L.	Draughtsman	Strathmore	Wounded
Bland, William G.	Asst. baggage master	Medicine Hat	Killed in action
Buckingham, E. H.	Assistant agent	Clareholm	Wounded
Chapman, Andrew G.	Stover	Winnipeg	Died of wounds
Clarkson, Lorne	Conductor	Calgary	Killed in action
Connors, William P.	Carpenter	Port William	Died of wounds
Craik, William	Laborer	Ogden Shops	Killed in action
Douney, Thomas E.	Fire inspector	Crabbrook	Wounded
Drybrough, David	Clerk	Vancouver	Died of wounds
Eaton, Judson W.	Trainman	B. C. Dist.	Killed in action
Ferguson, James D.	Comptometer operator	Winnipeg	Killed in action
Fraser, John S.	Stover	Winnipeg	Died of wounds
Grant, Fred C.	Trimmer	Angus	Killed in action
Green, Robert H.	Clerk	Toronto	Gassed and prisoner
Hacking, William S.	Stenographer	Montreal	Wounded
Horwill, William B.	Boilermaker's app.	Ogden Shops	Wounded
Howell, Harry	Miner	Lethbridge	Suffering from shock
Hughson, Henry E.	Wireman	Calgary	Killed in action
James, Gerald C.	Winner	Kamloops	Wounded
			Killed in action

MARCH
1917

[MARCH, 1917.]

Canadian Northern Railway Construction, Betterments, Etc.

Mount Royal Tunnel & Terminal Co.—Work is reported to have been started upon the temporary station at Lagauchere St., Montreal, by Norcross Bros., who expect to have it ready for occupation within six months.

Toronto-Hamilton-Niagara Line.—Sir Wm. Mackenzie is reported as stating that construction work will be started at an early date on the line from Toronto, via Hamilton to Niagara Falls, Ont. Sir Donald Mann is also reported as saying that financial arrangements have been completed ready for an immediate commencement of construction following official approval of the route plans.

Canadian Northern Ontario Ry.—The residents of Norway Bay, near Ottawa, have asked the Board of Railway Commissioners to settle the question of the location of a station there. Three sites have been suggested, each of which is strongly advocated by special interests.

Port Arthur Entrance.—The question of the C.N.R. entrance into Port Arthur, Ont., from the east, is being discussed. L. C. Fritch, General Manager, Eastern Lines, having met the city council recently to see if a settlement can be reached. At present the company connects with its Western Lines over C.P.R. tracks.

Canadian Northern Ry.—A contract is reported to have been let for building a new locomotive house at Rainy River, Ont.

The Alberta Minister of Railways reports that during 1916 the branch line from Oliver towards St. Paul de Metis was graded for 100 miles, and 8 miles of steel had been laid up to Dec. 31. The C.N.R. advised Canadian Railway and Marine World in January that no new track had been laid on its Western Lines during that year. A press report from Edmonton, Jan. 30, said 4 miles of steel had been laid out of Oliver towards St. Paul de Metis up to Jan. 27. The first

Plans for the location of the company's tracks through New Westminster have been officially approved by the company's officers, and were sent to the Mayor, Feb. 5. The plans have to be approved by the C.P.R., and the work to be done to carry them out includes the moving of the C.P.R. tracks and locomotive house at Columbia St. The B. C. Electric Ry. is also interested, as its tracks are to be moved to a new location. The C.N.P.R. station will be located on the site of the old Royal City Hotel.

R. B. Pratt, architect for the C.N.R. terminal station on the False Creek flats, Vancouver, is reported as stating that good progress has been made with the piling for the foundation of the station, a start has been made with the concrete work, and a considerable quantity of cut stone for the base course has been delivered. Under the agreement with the city, the building has to be completed by the end of the year.

There appear to be considerable differences between the company and the Vancouver City Council as to the progress being made on the False Creek reclamation and other works, and a good deal of speculation as to whether they will be carried out on time or not. On a recent visit to the city, M. H. MacLeod, General Manager and Chief Engineer, is reported to have said: "I do not mind criticism, but I do dislike unfair criticism. We have 300 men working steadily; the other day by actual count there were 281, and another gang was subsequently put on. I sometimes wonder if the members of the city council realize just what work we are doing, and if they give us credit for what we are really trying to do. We ought to know our business, and I want to tell you that we have made a contract with all the contractors working for us that the various works be completed on time, according to our agreement. There need be no fear that the freight terminals will not be finished by June nor the sta-

Vancouver Island.—The subway on Burnside Ave., Victoria, on the line to Patricia Bay, is well advanced to completion. When this is finished it will be possible to operate the line into Victoria, and enable material to be brought in for track laying and general construction purposes on the line to Alberni. The company has 10 miles of track laying on the mainland for this purpose, but it has no more in sight. The roadbed is completed from near Victoria to within a few miles of Alberni, about 136.5 miles. (Feb., pg. 64.)

City Bridges and Subways.

Following are extracts from the Toronto City Commissioner of Works' interim report for the 11 months ended Nov. 30, 1916:

Mount Pleasant Road Bridge.—The construction of a 3 span reinforced concrete bridge over the old belt line, G.T.R., was begun in Mar., 1916, by C. J. Townsend, contractor. The piers and abutments are nearly complete and the substructure portion of the wooden trestle forming a part of the north approach is complete with the exception of 2 bents.

Strachan Ave. Bridge, over C.P.R.—The contract for the construction of the concrete abutments awarded in 1915 to Roderick Campbell was cancelled and a new contract was awarded to C. J. Townsend in May, 1916. Work was begun on May 20, 1916, and 980 cu. yds. of concrete have been placed in the south abutment and 109 in the north abutment.

Ashdale Ave. Subway.—Complete plans and specification have been prepared for the construction of a pedestrian subway under the G.T.R. on the line Ashdale Ave. This subway is intended to provide a means of communication between Monarch Park and the area located north and south of the G.T.R. right way.

Free Transportation for Legislators
The Revised Statutes of Canada, ch 37, sec. 343, provides that railway companies shall furnish free transportation for members

MARCH
1917

have been suggested, each of which is strongly advocated by special interests.

Port Arthur Entrance.—The question of the C.N.R. entrance into Port Arthur, Ont., from the east, is being discussed, L. C. Fritch, General Manager, Eastern Lines, having met the city council recently to see if a settlement can be reached. At present the company connects with its Western Lines over C.P.R. tracks.

Canadian Northern Ry.—A contract is reported to have been let for building a new locomotive house at Rainy River, Ont.

The Alberta Minister of Railways reports that during 1916 the branch line from Oliver towards St. Paul de Metis was graded for 100 miles, and 8 miles of steel had been laid up to Dec. 31. The C.N.R. advised Canadian Railway and Marine World in January that no new track had been laid on its Western Lines during that year. A press report from Edmonton, Jan. 30, said 4 miles of steel had been laid out of Oliver towards St. Paul de Metis up to Jan. 27. The first break in the track laying on the line will occur at the crossing of Sturgeon River, mileage 17.06 from Oliver, where a bridge 200 ft. long will have to be erected. The central span will be of steel, 57 ft. long and 55 ft. above high water mark, the approaches being of trestle work. It is expected the bridge will take about six weeks to put up. It is the largest bridge structure on the hundred miles of line, which is expected to be completed this season.

Canadian Northern Pacific Ry.—All the machinery for the company's car plant at Port Mann, was reported to have been delivered Feb. 6, and rapid progress was being made with its installation. It is expected that the plant will be ready for operation by Mar. 31.

The British Columbia Minister of Railways stated Feb. 1 that the company would shortly operate a train service on the Steveston Branch, which starts from the B. C. Electric Ry., about two miles from New Westminster, or C.N.P.R. mileage 5.41 from New Westminster bridge, and runs to Steveston, about 12 miles. To connect this line with the rest of the C.N.P.R. involves the building of a bridge across the North Arm of the Fraser River. The line has never been operated. M. H. MacLeod, General Manager and Chief Engineer, inspected it Jan. 30, and made arrangements for putting it in order, and for the operation of one train a day each way.

city, the building of the end of the year.

There appear to be considerable differences between the company and the Vancouver City Council as to the progress being made on the False Creek reclamation and other works, and a good deal of speculation as to whether they will be carried out on time or not. On a recent visit to the city, M. H. MacLeod, General Manager and Chief Engineer, is reported to have said: "I do not mind criticism, but I do dislike unfair criticism. We have 300 men working steadily; the other day by actual count there were 281, and another gang was subsequently put on. I sometimes wonder if the members of the city council realize just what work we are doing, and if they give us credit for what we are really trying to do. We ought to know our business, and I want to tell you that we have made a contract with all the contractors working for us that the various works be completed on time, according to our agreement. There need be no fear that the freight terminals will not be finished by June nor the station by Jan. 1. We are just as anxious as anyone else to live up to our agreement and are straining every effort to do so. I sometimes wonder if the people who appear so anxious to criticize the company ever get right down to it and see what work we are really doing in Vancouver. It means more to us than anyone else to have all the work here completed on contract time and we hope to be able to accomplish this despite the many adverse conditions that have confronted us."

At a meeting of the City Council, held Jan. 31, the following resolution was passed:—"That the City Solicitor, with the assistance of the City Engineer and the chairman of the railways and bridges committee, be instructed to prepare and present a petition to the Minister of Railways of British Columbia, requesting that the City of Vancouver be given an opportunity to lay before the Lieutenant-Governor-in-council, in accordance with clause 41 of the agreement, its various complaints as regards the conduct of the C.N.R. in connection with the agreement existing between the company and the city; the petition to clearly point out that the city's main object is to obviate the possibility of any further delay in commencing the various works included in the agreement, and to guarantee the completion of said works on or before the date set out in the agreement."

the town is complaints.

Strac The concrete Roderic new co Townse gun on concret abutme

Ash plans ed for subwa Ashda to pro tween ed not way.

Fre The 37, s panie upon the S their Rail board may equi ed, l for M.P in t ing be g cou: wit: res: tive

(Sas org las So for be inc fic let R J: G M a: T

March 1917

APRIL, 1917.]

CANADIAN RAILWAY AND MARINE WORLD.

143

Canadian Northern Railway Construction, Betterments, Etc.

Mount Royal Tunnel & Terminal Co.—The Board of Railway Commissioners has authorized the company to build its railway temporarily, for not exceeding five years, from Feb. 26, 1917, across Cote de Liesse Road, between St. Laurent Parish and Mount Royal.

It is reported that a single track has been laid through the tunnel in order to take in material for the building of the temporary station and other work which is now in progress. When the station building is finished, which it is expected will be by the autumn, a second track will, it is said, be laid to care for the traffic. Buildings are being torn down now for the erection of the temporary station, which will be placed in the block bounded by Cathcart, St. Monique, La-gauche and Mansfield Sts. The en-gauche and Mansfield Sts. will be the entrance to the temporary station when on La-gauche St., and the building will be used as an express building when the whole scheme has been completed. When the work has been entirely finished the station premises will extend from La-gauche to Cathcart Sts., and will, it is said, be roofed over in such a way that it will be possible to erect houses on the roof. It will be much like the subway stations in New York.

Western Lines.—M. H. MacLeod, General Manager and Chief Engineer, is reported to have stated that as soon as the weather conditions are favorable work will be started on the erection of the new station at Port William, Ont. The new building, which will be erected a little to the north of the present station, will be similar to the Port Arthur one, and its probable cost is reported at about \$50,000.

We are officially advised that there is no foundation for a recent press report that the company is about to build a new locomotive house at Rainy River, Ont.

The Board of Railway Commissioners is being asked to approve plan of the proposed new main freight line, general layout, of new subway on Water St., and approach to Red River bridge at Winnipeg. The City of Winnipeg is interested in putting in

when the estimates for the year's work were under consideration. There is little likelihood of any new construction being started this year. Some improvements will be made at Grand Beach to meet public demands.

We have been advised that the grading on the line from Oliver to St. Paul de Metis, Alta., which is being built under guarantee of bonds by the Alberta Government, has been completed for 100 miles. Track has been laid for about 18 miles to the first crossing of the Saskatchewan River, and it is expected to lay track on the balance of the 100 miles graded this year if the rails can be secured. This line is being built under the charter of the Canadian Northern Western Ry., which was declared to be a work for the general advantage of Canada, from Mar. 1. As projected the line will be continued easterly to the Alberta-Saskatchewan boundary line, where it will be connected with a line now under construction northerly and westerly from North Battleford, Sask.

Another C.N.W.R. branch line is under construction from Onoway, for which the Government has guaranteed the bonds for \$20,000 a mile for 100 miles. The Premier stated recently in the Alberta Legislature, that in 1913 grading was done on 73.9 miles of this line and steel laid on 32.3 miles; in 1914, a considerable amount of bridge work was done, and in 1915 an additional 1.53 miles of track were laid, the line being in operation to Sanguo, near the end of steel.

C. L. Hall, contractor's engineer in charge of the foundation work for the C.N.R. station on the False Creek flats, Vancouver, is reported to have said that over 2,000 of the 2,500 piles have been driven and two-thirds of the concrete mass has been placed on the top of the piles. The piles are being driven in groups, averaging about 35 in a group; each group is enclosed in a wooden caisson, as the water level in False Creek is almost up to the ground flood. The next step in the preparation of the foundation is the excavation around the piles and inside the caisson. Then the piles are cut off to the proper height and concrete

an increase of subsidy on account of the uncompleted mileage of authorized lines on Vancouver Island. The legislature authorized the guaranteeing of bonds for \$35,000 a mile for 250 miles of railway on the island; in addition to this the legislature also guaranteed bonds in respect of the construction of 145 miles of branch lines on the mainland, upon which construction has not yet been started.

The complete operation of the line from Patricia Bay to Victoria is expected at an early date, and it is also expected to lay track from Victoria to Alberni this year if rails can be obtained.

For the terminals in Victoria plans have been filed showing a 26½ acre area on the Songhees Indian reserve, and it is reported that the company has been advised to submit an offer to the government for the purchase of this site.

A. Angstrom, naval architect, was at Patricia Bay recently inspecting the car ferry terminals, now nearly completed, in connection with the preparation of plans for the building of another car ferry. (Mar., pg. 104.)

New England Lake and Rail Case.

The Interstate Commerce Commission gave a decision, Feb. 12, re Tariff I.C.C. 146, issued by C. J. Pierce, Manager, National Despatch-Great Eastern Line, Boston, Mass., to become effective July 15, 1916, which proposed to increase certain rates, rail lake and rail, and the North and Lake, via the G.T.R. and the North-western Steamship Co., formerly known as the Port Huron & Duluth Steamship Co., from certain points in New York and New England to Duluth and St. Paul, Minn., and points taking the same or related rates. The order is as follows:

By order dated July 11, 1916, the commission entered upon a hearing concerning the propriety of the increases, regulating the lawfulness of the rates, charges, regulations, practices stated in Agent C. J. Pierce's tariff I.C.C. 146, and on Oct. 19, 1916, ordered that the operation of said schedules be suspended until May 12, 1917.

A full investigation of the matters and things involved has been had, and the commission order that the carriers respondent herein be required to cancel said tariff on or before May 11, 1917, in so far as it proposes new rates on granite from stations on the Central Vermont and Montpelier & Wells River Rd. to

April 1917

Western Lines.—M. H. MacLeod, General Manager and Chief Engineer, is reported to have stated that as soon as the weather conditions are favorable work will be started on the erection of the new station at Fort William, Ont. The new building, which will be erected a little to the north of the present station, will be similar to the Port Arthur one, and its probable cost is reported at about \$50,000.

The Board of Railway Commissioners is being asked to approve plan of the proposed new main freight line, general layout, of new subway on Water St., and approach to Red River bridge at Winnipeg. The City of Winnipeg is interested as it has expended \$80,000 in putting in the substructure for a new bridge at Provencher Ave. The matter was discussed at a meeting of the council's works and property committee, Mar. 14, when it was said there is now just enough room for the city's street to run under the C.N.R. approach and reach the bridge at an altitude which renders it reasonably secure from floods. If the C.N.R. is allowed to cross the street further east, either the grade on to the bridge from the subway will be so steep that it will render the bridge valueless as far as Winnipeg is concerned, or the two first spans will be so low that high water will flood it and might easily carry the spans out. There appears to be only one other solution—the raising of the C.N.R. bridge approach.

A press report states that the plans for the electrification of the company's line to Victoria Beach will not be carried out this year. It is said they provide for connecting up the line with the Winnipeg Electric Ry. in East Kildonan.

Battleford, Sask.

C. L. Hall, contractor's engineer in charge of the foundation work for the C.N.R. station on the False Creek flats, Vancouver, is reported to have said that over 2,000 of the 2,500 piles have been driven and two-thirds of the concrete mass has been placed on the top of the piles. The piles are being driven in groups, averaging about 35 in a group; each group is enclosed in a wooden caisson, as the water level in False Creek is almost up to the ground flood. The next step in the preparation of the foundation is the excavation around the piles and inside the caisson. Then the piles are cut off to the proper height and concrete is spread over the top, this concrete forming the base on which the columns of the building will rest.

The company's contract with the City of Vancouver calls for the completion of the terminal station, the sea wall, terminal trackage, tunnel under Mount Pleasant and a 250-room hotel by Feb. 5, 1918. The Mayor is reported to have said, Mar. 1, that the declaration of the C. N. Pacific Ry. to be a work for the general advantage of Canada does not affect this agreement, and would not interfere with the city's action in endeavoring to have pressure brought to bear upon the company to fulfil its agreements. Sir William Mackenzie, on his recent visit to Victoria, had made a suggestion as to an extension of time for the completion of the work, but the council, said the mayor, were not inclined at present to grant any.

The clearing of the track on the Lulu Island Branch has been completed and a train service has been started, connection being made with the British Columbia Electric Ry. at Ewen Ave.

gave a decision, Feb. 12 1916, issued by C. J. National Despatch-Great Boston, Mass., to become 15, 1916, which propose rates, rail lake and lake, via the G.T. western Steamship Co. as the Port Huron & Co., from certain points New England to Duluth Minn., and points taking rates. The order

By order dated July mission entered upon the propriety of the lawfulness of the regulations, practices and Pierce's tariff I.C.C. 1 1916, ordered that the schedules be suspended 1917.

1917. A full investigation and things involved here commission order the respondent herein be said tariff on or before so far as it proposes from stations on the Ry. and Montpelier points taking Duluth that the carriers be required to cancel on May 11, 1917, in so increased rates on a ridges, and that the tered in this proceeding operation of said t as it proposes rat respondent are hereby vacated and set 1917, and that this continued.

Maximum Length
Board of Railway
cided that under
would not be just
mum length for fi
mission on its o
question and hea
ways and railwa
sioner McLean, i
that during the w
ment of freight
sideration. Whe
question of reg
trains will be tal

April 1917

April 1917

money
at office
Toronto,
par in
ould be
World.

ation.
shers by
lication.

17.

149
132

134

144

143

147

142

139

130

133

140

131

129

150

137

127

151 to 156

152

156

152

153

153

152

155

163

161

153

167

139

142

162

157 to 167

167

167

1917.. 159

166

161

160

163

145

board Act

138

140

135

136

141

141

132

167

138

149

Solution of
by southern
them.

to be works for the C. N. Canada; subsec. 2 declared the C. N. Western Ry. subsec. 3 declared the C. N. Saskatchewan Ry., and subsec. 4 declared the C. N. Pacific Ry. to be works for the general advantage of Canada, and subsec. 5 set out that the three latter sections should become operative on the proclamation of the Governor in Council, upon a declaration by order in Council that the lines of the companies had been constructed and were being operated over.

The Saskatchewan Legislature, by chap. 11 of the statutes of 1912, as amended by chap. 11 of the statutes of 1913, arranged to guarantee the bonds of a railway to be incorporated under C.N.R. control, to build a number of branch lines in the province, and by chap. 43 of the statutes of 1912, did incorporate the C. N. Saskatchewan Ry. Under the provisions of these acts the Saskatchewan Government entered into a contract with the C. N. Saskatchewan Ry. to build the following lines: Luck Lake line, 35 miles; Wroxton westerly, 45 miles; Shellbrook westerly, 45 miles; Kipling to New Warren, 35 miles; Lampman northerly, 45 miles; Aylesbury westerly, 50 miles; a total of 225 miles. Surveys have been made for all these lines except that from Kipling to New Warren, and construction was proceeded with on the line from Wroxton westerly and the line from Aylesbury westerly. At the end of 1915, track had been laid for 41.01 miles on the line from Wroxeter and for 8.66 miles on the line from Aylesbury. The first of these two lines extends from Wroxeter, on the Rosburn branch, through Yorkville to Willowbrook, and the second starts from Aylesbury, on the Regina-Saskatoon line, but only the first named appears to be in operation.

The C. N. Western Ry. was incorporated by the Alberta Legislature in 1910, with power to build the Peace River branch, through Whitecourt and Grande Prairie, to the western boundary of the province; and a line northeasterly following the Saskatchewan River to the eastern boundary of the province, which is known as the St. Paul de Metis line, and some other lines. Under the provisions of an act to aid the construction of

that the Pacific Co. will not, bring any appeal to the Railway Commissioners for Canada from any order made under and pursuant to this section, and in the event of any such appeal being brought by others, that the C.N.R. and the Pacific Co. will represent to the commission on such appeal that it is satisfied with the rates the subject of such appeal in so far as they have been established within the provisions of this section." The existence of this section in the agreement was used as an argument by the Premier in the House of Commons in 1912, upon which an amendment proposed by Sir Wilfrid Laurier to bring the whole system under Federal jurisdiction at that time was defeated and it was also used when a similar motion was made during the consideration of the act of 1914.

The Minister of Railways for British Columbia has referred the matter to the Provincial Attorney General for an opinion on the scope of the order, and the Dominion Government has been asked for a statement as to what the order is intended to cover. Pending the receipt of further information, the B. C. Government declines to make any statement on the matter.

The Railway Club of Edmonton, Alta., was organized at a meeting held there, Mar. 2, when the following officers were appointed: President, W. A. Brown, General Superintendent, Canadian Northern Ry.; Vice Presidents, J. A. MacGregor, Superintendent, C.P.R.; M. Walton, Superintendent, Grand Trunk Pacific Ry.; Secretary, J. H. Cummings, local representative, Baltimore & Ohio Rd. The purpose of the club is to enable men engaged in transportation work to get together for the exchange of ideas and to enable them to give fitting reception to prominent railway men visiting the city.

The Railway Y. M. C. A.—At a recent meeting of directors, the International Secretary requested on behalf of the National Council, the release of David Thomson, Secretary, Railway Y. M. C. A., Kenora, Ont., to organize a new department of work for returned soldiers.

April 1917

MAY, 1917.]

CANADIAN RAILWAY AND MARINE WORLD.

Canadian Northern Railway Construction, Betterments, Etc.

Timiskam
Rail

Canadian Northern Quebec Ry.—Plans for the erection of a new railway station at Pointe aux Trembles were submitted to Montreal City Council, April 10.

Canadian Northern Ontario Ry.—The Minister of Lands informed the Legislature, April 4, that the company had not complied with the provisions of sec. 7 of its land grant act by executing and delivering an agreement in respect of the land grant as provided in sec. 22 of 4th Edward 7, chap. 18.

Application was made to the Board of Railway Commissioners recently for approval of revised location plans of the line through Scarboro and York Tps. to facilitate entrance to North Toronto station. Two questions were reserved for consideration by the Board's Chief Engineer, viz.: the width of a subway at Dawes Road and the crossing of Don Mills Road. The question involved in the latter matter is whether there should be one or two level crossings. At present there is one crossing by the C.P.R., while if the proposed plans were approved the C.N.R. would also have a crossing. Township representatives thought the junction with the joint line could be made in such a way that there would be only one crossing, while it pointed out for the company that the plans as submitted obviated a 1% gradient, which would seriously interfere with operation, as the maximum gradient on the line to Ottawa and Montreal is only .05%. There is a difference in height of 17 ft. between the C.P.R. and the C.N.R., and the C.P.R. objects to pay for a 6,000 ft. cut to meet the C.N.R. level. The Board's Chief engineers will inspect the plan and report.

Canadian Northern Ry.—The installation of the machinery in the new machine shop at Edmonton, Sask., is reported to have been completed.

Work is reported to have been resumed on the bridge across Sturgeon River, on the Oliver-St. Paul de Metis line in Alberta, and it was expected that the bridge would be completed by April 30. The rails laid on the line from Oliver to Sturgeon River are said to be of light weight, and will be replaced with heavier steel as soon as possible. Grading is practically completed to St. Paul de Metis.

Canadian Northern Pacific Ry.—Application has been made to the Board of Railway Commissioners by the City of Prince George, B.C., to order the con-

The company is reported to have let a contract to the Fraser River Pile Driving Co. to build a bulkhead out to the harbor line on its waterfront property at New Westminster, B.C. The area to be enclosed will, it is said, be about 20 acres, part of which will be used for railway yards and part for industrial sites.

Rapid progress is reported to have been made with the laying out the company's terminals at False Creek, Vancouver. The 2,500 piles necessary to carry the foundations of the station have all been driven, over which a wooden platform, 35,000 sq. ft. in area, is being laid to support the concrete floor. Concrete is already being poured on this area. The work is being done by day and night gangs.

Vancouver Island Lines.—A press report states that the ferry slip at Patricia Bay, Vancouver Island, was put into use April 6, when several car loads of steel rails were unloaded from the mainland. The slip is 108 ft. long, and is built in three parts, the shore end resting on shoes, and two central hinges supported by screw mechanism, which can be mechanically operated to any desired elevation. The outer end of the apron is operated at present by hand power, but as soon as the mechanism arrives it will be operated by electric power to be supplied by the B. C. Electric Ry. This transfer apron is said to be larger than any of those in operation on the coast at present. It can be adjusted so as to permit of light angles of intersection at extremes of tide level. The slip is completed so that a berth 308 ft. long is afforded for the steam transfer ferries or any barges which may be used. Creosoted piling has been used entirely below high water mark, where it is anticipated the teredo would attack the structure if the timber were not protected.

The viaduct at Burnside Ave., at the Victoria end of the line from Patricia Bay is completed with the exception of the back filling, which was expected to be finished by April 30.

At Selkirk Water, Victoria, the large pier for carrying the rolling lift bridge is well under way. The caisson's cutting edge has been sunk 17 ft. in the material at the bottom of the harbor and the caisson has been excavated to the desired depth and piling for the foundations of the pier has been driven. These piles have been driven 75 and 80 ft. for the

The Ont
lution Ap
diture for
N. O. R.
the consol
the Lieut.
vance to t
such moni
struction
ed \$626,5
the provis
the line.
for gene
remainder

Extensi
\$125,000;
North Ba
tika, \$20
freight sl
and freig
tional su
additiona
\$6,000;
\$2,000; a
house, \$3
ing at C
\$15,000;
ing timb
crete str
of way,
ings, \$4,
and fast
station g
office ad
coaling
track in
\$8,000, a
tools, \$1
of reduc
line \$60
that the
by these
of the
been un

In cor
sion of
Enginee
ance, in
for the
"Survey
made at
In some
surveys,
surveys
lines su
construc
to 55, n
81, but
these w
tween n
It reduc
ft., gra

MAY
1917

tion. Two questions were reserved for consideration by the Board's Chief Engineer, viz.: the width of a subway at Dawes Road and the crossing of Don Mills Road. The question involved in the latter matter is whether there should be one or two level crossings. At present there is one crossing by the C.P.R., while if the proposed plans were approved the C.N.R. would also have a crossing. Township representatives thought the junction with the joint line could be made in such a way that there would be only one crossing, while it pointed out for the company that the plans as submitted obviated a 1% gradient, which would seriously interfere with operation, as the maximum gradient on the line to Ottawa and Montreal is only .05%. There is a difference in height of 17 ft. between the C.P.R. and the C.N.R., and the C.P.R. objects to pay for a 6,000 ft. cut to meet the C.N.R. level. The Board's Chief engineers will inspect the plan and report.

Canadian Northern Ry.—The installation of the machinery in the new machine shop at Edmonton, Sask., is reported to have been completed.

Work is reported to have been resumed on the bridge across Sturgeon River, on the Oliver-St. Paul de Metis line in Alberta, and it was expected that the bridge would be completed by April 30. The rails laid on the line from Oliver to Sturgeon River are said to be of light weight, and will be replaced with heavier steel as soon as possible. Grading is practically completed to St. Paul de Metis.

Canadian Northern Pacific Ry.—Application has been made to the Board of Railway Commissioners by the City of Prince George, B.C., to order the construction of a transfer switch to give connection between the Grand Trunk Pacific Ry. and the Canadian Northern Pacific Ry. at Rainbow, mileage 282 from Edmonton, Alta. The estimated cost of the work is \$200,000, and the C.N.R. suggests that the cost be apportioned equally between the two companies. The commissioners directed the immediate deposit of plans for the work and will probably shortly issue an order.

The company's proposal for its station in New Westminster was to locate it on Columbia St. west of 10th St. It is reported that this site is regarded as being too far west for general convenience, and that it would be necessary to cross five tracks to get in or out of it. The Mayor had a meeting with Grant Hall, Vice President and General Manager, Western Lines, C.P.R., April 6, as a result of which a proposition for the building of a union station is to be submitted to the company.

work is being done by day and night gangs.

Vancouver Island Lines.—A press report states that the ferry slip at Patricia Bay, Vancouver Island, was put into use April 6, when several car loads of steel rails were unloaded from the mainland. The slip is 108 ft. long, and is built in three parts, the shore end resting on shoes, and two central hinges supported by screw mechanism, which can be mechanically operated to any desired elevation. The outer end of the apron is operated at present by hand power, but as soon as the mechanism arrives it will be operated by electric power to be supplied by the B. C. Electric Ry. This transfer apron is said to be larger than any of those in operation on the coast at present. It can be adjusted so as to permit of light angles of intersection at extremes of tide level. The slip is completed so that a berth 308 ft. long is afforded for the steam transfer ferries or any barges which may be used. Creosoted piling has been used entirely below high water mark, where it is anticipated the teredo would attack the structure if the timber were not protected.

The viaduct at Burnside Ave., at the Victoria end of the line from Patricia Bay is completed with the exception of the back filling, which was expected to be finished by April 30.

At Selkirk Water, Victoria, the large pier for carrying the rolling lift bridge is well under way. The caisson's cutting edge has been sunk 17 ft. in the material at the bottom of the harbor and the caisson has been excavated to the desired depth and piling for the foundations of the pier has been driven. These piles have been driven 75 and 80 ft. for the foundation of the concrete pier. The bottom of the concrete will be 24 ft. below low water mark, so that no future excavation of the channel will expose the pile foundations to the depredations of the teredo. The south pier at the rest end of the lift bridge is now being proceeded with.

It is expected to have about 10 miles of track laid on the Victoria-Port Alberni line early in May, rails for that mileage having been delivered. (April, pg. 143.)

Transport of Canadian Troops Through the United States.—The Dominion Government has issued the following memorandum: "The United States Government has given permission for the passage of Canadian troops on the C.P.R. through the State of Maine and on the Canadian Northern Ry. through the State of Minnesota, between Canadian points in both cases."

and freight additional sidin additional \$6,000; ex \$2,000; ad house, \$3,0 ing at Co \$15,000; st ing timber crete struc of way, \$ ings, \$4,00 and fasten station gro office addi coaling pla track in c \$8,000, and tools, \$15, of reductio line \$60,0 that the pl by these v of the wo been unde

In conn sion of m Engineer : ance, in h for the y "Surveys made at s In some p surveys, v surveys w lines surv constructi to 55, mil 81, but or these was tween mil It reduces ft., grade maximum 3° 30', an sion, mile and will r bound gr southboun curves 6, 7° to 3° 309° 15'. 1,300 ft. 50 ft., cu curve fro not comp likely tha ing this y work is p revision c Bay and standard distance

The La is asking open a d

MAY 1917

Canadian Railway AND Marine World

ESTABLISHED 1898.

Devoted to Steam and Electric Railway,
Marine, Express, and Telegraph, also Railway and
Canal Contractors' Interests.

Official Organ of various Canadian Transportation
Associations.

Published on the first of each month.

ACTON BURROWS, LIMITED Proprietors,
70 Bond Street, Toronto, Canada.

ACTON BURROWS, A. Can. Soc. C.E.
Managing Director and Editor-in-Chief.

AUBREY ACTON BURROWS - Secretary and
Business Manager.

Associate Editors
JOHN KEIR AND DONALD F. KEIR

United States Business Representative,
A. FENTON WALKER, 143 Liberty St., New York

Member of
Canadian Press Association Inc.,
Associated Business Papers Inc.

Authorized by the Postmaster General for Canada,
for transmission as second class matter.
Entered as second class matter, July 25, 1913, at the
Postoffice at Buffalo, N.Y., under the Act of Congress
of March 3, 1879.

SUBSCRIPTION PRICE, including postage any-
where, \$2 a year.

SINGLE COPIES, 20 cents each, including postage.
The best and safest way to remit is by express money
order. Where one cannot be obtained, a post office
money order, or bank draft, payable at par in Toronto,
may be sent. Cheques or drafts not payable at par in
Toronto cannot be accepted. Remittances should be
made payable to Canadian Railway and Marine World.

NOTICE TO ADVERTISERS.

ADVERTISING RATES furnished on application.
ADVERTISING COPY must reach the publishers by
the 10th of the month preceding the date of publication.

TORONTO, CANADA, JUNE, 1917.

PRINCIPAL CONTENTS.

Appointments, Transportation	235
Birthdays of Transportation Men	231
Board of Railway Commissioners	229
Orders by Summaries of	227
Traffic Orders	233
Canadian Northern Ry., Construction	237
British Columbia Relationship	228
Canadian Pacific Ry., Annual Meeting	235
Construction, etc.	232
Honor Roll	222
Electric Railway Department	238 to 244
Answers to Questions	241
Finance, Meetings, Etc.	244

Canadian Northern Railway Con- struction, Betterments, Etc.

Ontario Division.—The connecting link between the C.N.R. Toronto-Sudbury line and the Leaside-North Toronto line at present under construction, will run from the station yard at Duncan to a connection with the C.P.R. near the east end of the West Don bridge, 2.2 miles. We are officially advised that the work has been nearly completed. The junction switches at Donlands have not yet been put in, and there is still some work to be done on one highway and several private crossings, also some ditching. Other completion work is in progress. The C.P.R. line from West Don to the eastern end of the North Toronto double track grade elevation, is to be made a double track line (see C. P. R. Betterments, etc., on another page) and will be used jointly. Angus Sinclair is the contractor for the C. N. R. work.

From the east end of the C.P.R. West Don bridge a line has been located to a junction with the company's Ottawa-Toronto line near Scarborough Village, 4 miles. The Board of Railway Commissioners has been asked to approve a revision of this route, which necessitates the alteration of the plans previously prepared for the building of a viaduct over the Don River. It is expected that work will be started on this piece of line as soon as possible after the revised plans are approved.

The company's yards and terminals at Leaside will adjoin those laid out by the C. P. R.

Western Lines.—M. H. MacLeod, General Manager and Chief Engineer Western Lines, is reported to have said or inferred at Vancouver, that the most important work to be carried out during this year would be the laying of an additional mileage of heavy rails on the main line between Winnipeg and Edmonton, in place of the present rails, which would be utilized elsewhere; the laying of track on the Oliver-St. Paul de Metis line, the completion of the Vancouver terminal, the completion and permanent opening of the ferry to Patricia Bay and the line into Victoria, and the laying of steel on the Victoria-Port Al-

Western Division.—Ballasting on the Goose Lake branch was resumed at the end of April, and it is expected to complete the work this season. There is considerable work to be done on the road-bed between McGee and Kindersley, Sask., and the heaviest ballasting work has to be done between Kindersley and Calgary, Alta. About 500 Chinese are reported to be engaged in the work.

A press report states that the bridge across the Sturgeon River, on the Oliver-St. Paul de Metis branch, Alta., has been completed and that track laying has been restarted.

Pacific Division.—It is reported that a regular ferry service has been started between Port Mann, on the Fraser River, and Patricia Bay on Vancouver Island, and that a train service is being operated from Patricia Bay to Victoria. Three trips are made a day between these points by a gasoline-electric car. (May, pg. 195).

Canadian Coal Fields, Ltd., has been incorporated under the Dominion Companies Act, with \$10,000,000 capital and office at Toronto, to acquire and operate coal lands and other properties, and in connection therewith to own and operate steam and other vessels, wharves, docks, etc., tramways, aerial carriers and other shipping and handling facilities. The incorporators are, F. H. Phippen, K.C., A. J. Reid, K.C., R. H. M. Temple, W. Bowler and F. C. Allen, Toronto, all of whom are connected with the Canadian Northern Ry. legal department.

Railway Lands Patented.—Letters patent were issued during April in respect of Dominion railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:

Calgary and Edmonton Ry.	Acres.
Canadian Northern Ry.	1,438.15
Canadian Pacific Ry. roadbed and station grounds	160.00
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.	8.70
	3,511.66
Total	5,116.51

German Locomotives.—In a recent prize court case in England, an affidavit was read to the effect that from information in the British Government's hands, 8,000 locomotives were laid up at Essen

JUNE 1917

gus Sinclair is the contractor for the C. N. R. work.

From the east end of the C.P.R. West Don bridge a line has been located to a junction with the company's Ottawa-Toronto line near Scarboro Village, 4 miles. The Board of Railway Commissioners has been asked to approve a revision of this route, which necessitates the alteration of the plans previously prepared for the building of a viaduct over the Don River. It is expected that work will be started on this piece of line as soon as possible after the revised plans are approved.

The company's yards and terminals at Leaside will adjoin those laid out by the C. P. R.

Western Lines.—M. H. MacLeod, General Manager and Chief Engineer Western Lines, is reported to have said or inferred at Vancouver, that the most important work to be carried out during this year would be the laying of an additional mileage of heavy rails on the main line between Winnipeg and Edmonton, in place of the present rails, which would be utilized elsewhere; the laying of track on the Oliver-St. Paul de Metis line, the completion of the Vancouver terminal, the completion and permanent opening of the ferry to Patricia Bay and the line into Victoria, and the laying of steel on the Victoria-Port Alberni line. If steel could be procured work would be gone on with on the branch from Kamloops into the Okanagan Valley.

We are officially advised that the company placed contracts for about 750,000 ties between Port Arthur and Warroad; for approximately 400,000 ties between Fort Frances and Duluth, for about 600,000 ties in the vicinity of Edmonton and west of that point, and for 200,000 ties in British Columbia. Owing to labor scarcity deliveries are slow coming in, and will fall short of the requisitions.

Central Division.—The Board of Railway Commissioners has refused the company's application for a change of levels in its subway at Water St., St. Boniface, Man. The principal reason given is that it would interfere with the Provencher Ave. bridge now under construction across the Red River, on the line of Water St., by the cities of St. Boniface and Winnipeg; the Board's Chief Engineer advising that it would not be safe to lower the grade of the west end and of the Provencher Ave. bridge. The substructure for four of the pieces is reported to be practically completed, and pier 5 and the approaches are reported to be well forward. The Dominion Bridge Co. is preparing to erect the superstructure.

by a gaso

Canadian
incorpora
panies A
office at
coal land
connection
steam an
etc., tram
shipping
corporato
J. Reid, K
and F. C.
connected
Ry. legal

Railwa
tent were
of Domir
Saskatch
lumbia, a

Calgary an
Canadian I
Canadian I
grounds
Qu'Appelle
Rd. and

Total
Germa
prize cou
was read
tion in t
8,000 loc
alone du
and tear
ing oils i
lubricant

Grain
London
the Lond
ported to
preparat
requisite
elevator

Summ
meeting
ger Assn
8, it was
sions be
and train
traffic.

The C
tural De
out flow
tions. A
supply v

The G
Co. has c
Vawn, S
closed it
Ont.

The C
booklet
reached
immigra

June
1907

general
acts
the
ern-
with
the
sec-
add

the
de-
since
pro-
St.
with
ed to
mat-

y.—A
y has
estern
ch is
that
early
trans-
o the
It is
m the
eight
oe ob-
M.C.R.
An
o have
as be-
t that
ae, pg.

light

bill 82
mmons

e Sum-

in each
ce, the
Canada,
e solar

n each
be pre-
ime oc-
acil, or-
in any
nent or
he time
e legis-
ment of
referred
scribed

affected thereby.

Canadian Northern Railway Con- struction, Betterments, Etc.

Mount Royal Tunnel & Terminal Co.—

The important work in progress in Mont-
real in connection with the building of
the temporary station for the C.N.R. sys-
tem is making satisfactory progress. The
work involves the excavation of 250,000
cu. yd. of material near to Dorchester, St.
Monique, Cathcart and LaGauchetiere
Sts. This excavation is about 50 ft. deep,
250 ft. wide from side to side at the top,
and about 1,200 ft. long from Cathcart to
LaGauchetiere St. A feature of the ex-
cavation will be the bridge or viaduct
carrying Dorchester St. across, which
will be 165 ft. long and 64 ft. wide. It
will be of concrete and steel and will be
erected in two sections, the northern half
towards Cathcart St., 32 ft. wide, being
built first. Shafts 50 ft. deep have been
sunk for the steel columns which will
carry the girders, and when these are in
place the work on the other half of 32 ft.
width will be started. This method of
erecting the bridge was adopted in order
to prevent any interruption of traffic.
From this bridge it will be possible to
overlook the platforms and the terminal
tracks up to the temporary station at La-
gauchetiere and St. Monique Sts. on the
one side, and towards the mouth of the
tunnel under Mount Royal on the other.

The International Bridge & Terminal
Co. is making application to the Board of
Railway Commissioners for approval of
the plan, profile and book of reference of
its branch line from its tracks at the
northern end of its bridge to the Shevlin
Clarke mills. This is the link which will
give connection between the company's
projected Toronto-Hamilton-Niagara line
and lines in the U.S.

Western Division.—Track laying on the
line from Oliver to St. Paul de Metis is
reported to be making satisfactory pro-
gress the track layers being reported to
have reached mile 40 on June 14.

A ballast pit has been opened at Cam-
rose, Alta., and gravel trains are being
operated in various directions carrying
material for the ballasting of the main
line and branches in northern Alberta.

The company is reported to have plans
prepared for the erection of a large sta-
tion at Alberta Beach, 42 miles west of
Alberta on the main line. It is also plan-
ning to carry out a number of improve-
ments at that point to add to its attrac-
tiveness as a summer resort.

be rep-
8 year
of 80
The n
rolling
of 70
by sir
interi
by pu
is dri
sealed
then
usual
thus
the se
in the
pier
tion
ed to
pg. 2

Wa

The
issued
merce
tions
dividu
leasing
amount
upon
ganiza
to the
sent,
tion n
gestio
loaded
outgo
ately
positi
not o
dinar
use
tram
handl
all ca
that
be ol

July
1917

Th
was
Com
ways
of ca
pany
islat
or to
faile
on J
Join
voke

is act.
ice of
time
other
such
pt af-
or on
s, the
pplica-
m the
ument
e such
as in
e Gov-
mission-
to ad-
ie used
or such
he said
ders as
nt car-
s act in
may be

Pacific Division.—W. E. Siler arrived at Port Mann, B.C., June 10, from Toronto, in connection with the starting of work in the car shops there. He is reported to have said that 100 men are to be employed.

The erection of the company's station on the False Creek flats, Vancouver, is proceeding rapidly. The foundation work was completed some time ago, and at June 14, the basement had been finished, nearly all the concrete for the ground floor put in, and a considerable quantity of the steel frame work for the first floor put in place. Those in charge of the work are reported to have said that the progress was sufficiently forward to warrant the expectation that the building will be ready for opening by Jan. 1, 1918.

Vancouver Island.—We are officially advised that the bridge erected over Selkirk Water, Victoria, B.C., consists of timber trestle work on either side of the navigable channel. Part of this trestle work will be filled in and other parts will be replaced by steel and concrete within 8 years. This work will probably consist of 80 to 85 ft. girders on concrete piers. The navigable channel is crossed by a rolling lift bridge having a clear opening of 70 ft. The piers are being constructed by sinking open caissons with a jet, the interior of the caisson is then excavated by pump to the desired depth when piling is driven and the bottom of caisson is sealed with concrete. Each caisson is then pumped out and braced and the usual pier is erected on the foundation thus obtained. The driving of piles and the sealing of caissons has been completed in the larger pier and work on the other pier is practically completed. The erection of the steel superstructure is expected to be started early in July. (June, pg. 233.)

**Con-
etc.**

al Co.—
n Mont-
ding of
.R. sys-
ss. The
250,000
ster, St.
chetiére
ft. deep,
the top,
heart to
the ex-
viaduct
s, which
vide. It
I will be

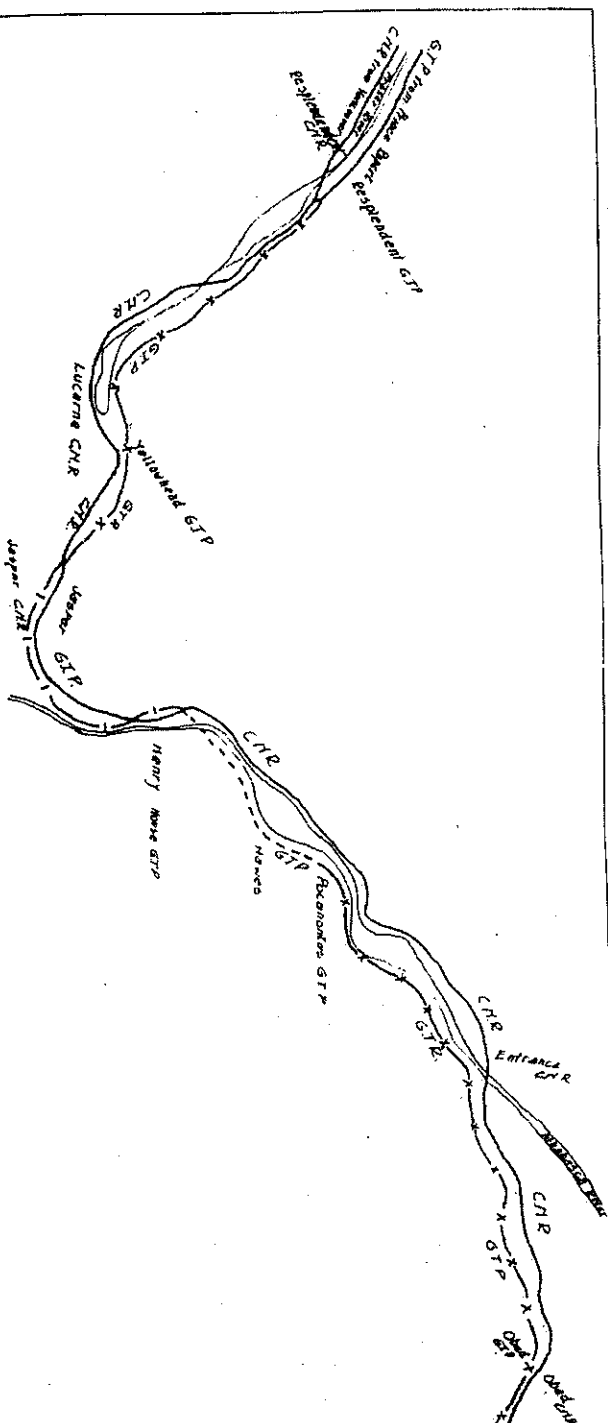
July
1917

Lifting of Canadian Northern and Grand Trunk Pacific Railway Rails, for Shipment to France.

Canadian Railway and Marine World for June contained particulars of about 300 miles of steel rails, with the necessary turnouts, angle bars, bolts, spikes, and other track material, having been taken up from the National Transcontinental Ry., between Moncton, N.B., and Winnipeg, and shipped to France, for military railways. Of this, 98.2 miles were taken up from the N.T.R., between Moncton and Diamond Jct., 11.8 miles east of Lewis, Que., and 206.6 miles were taken up between Quebec and Winnipeg. These rails, etc., were not taken out of the main line, but out of sidings and divisional yards. About two-thirds of the rails lifted have been replaced by lighter rails. The balance have not been replaced, as the sidings and divisional yards were built to take care of a very large business anticipated in the future, and will not be required for some years to come. It was also mentioned that a request

done, and the G.T.P.R. line to be relaid with light steel. Starting from the east at Imrie, G.T.P.R. rails are taken up to Chip Lake, 14.4 miles, and both G.T.P.R. and C.N.R. trains run over C.N.R. tracks between those points, a connection having been built from the G.T.P.R. to the C.N.R. at Lobstick. From Chip Lake to Dandurand, 56.9 miles, the G.T.P.R. is used by both companies, the C.N.R. being abandoned for 59.8 miles between those points. From Dandurand the C.N.R. track is utilized for both companies for about 80 miles to near Henry House, the G.T.P.R. being abandoned, except from Pochontas west to the new junction point with the C.N.R. The G.T.P.R. line between Pochontas and the new junction point has been relaid with light rails, so as to maintain shipping facilities for the Jasper Park Coal Co.'s line at Pochontas. From the point above mentioned, near Henry

to connect with the composite line at mile 1,016. This means a temporary line of 15 miles, and, as practically all shipments of coal from this mine are eastward, it means that it must be hauled back from mile 1,016, in other words, an extra haul of 30 miles, which in one sense is considerable, but in another sense, when it is considered that most of the coal has to be hauled hundreds of miles, it is inconsiderable. It is hoped to overcome this difficulty by running a short trestle across Brule Lake, at about mile 1,001, to make a connection with the composite line, which is on the other side of the lake, but it will not be possible to give this service until the rails are lifted and the work of getting the new line operated is completed. The Jasper Park Coal Co. will therefore have some temporary inconvenience in the extra haul. The arrangements for lifting track, and other matters connected therewith, are in



August
1917

Canadian Northern Railway Construction, Betterments, Etc.

Western District.—The Minister of the Interior has been authorized by Order in Council to grant to the C. N. R. a license of occupation of a portion of the bed of Red Deer River, in the S.W. ¼ Sec. 28, Tp. 28 Range 19, west of the 4th Meridian, Alta., as a site for a railway bridge on the Saskatoon-Calgary line.

Pacific District.—It is reported that the B.C. Government has called upon the company to proceed at once with the completion of all the lines on the mainland for which provincially guaranteed bonds have been issued. This covers the branch line from near Kamloops into the Okanagan Valley for which surveys have been made, and the terminals at False Creek, Vancouver, where considerable work is in progress. The company's traffic at present goes into Vancouver over the Great Northern Ry., the plans for its own line from New Westminster not yet having been definitely settled.

We are officially advised, in regard to the company's car shops, at Port Mann,

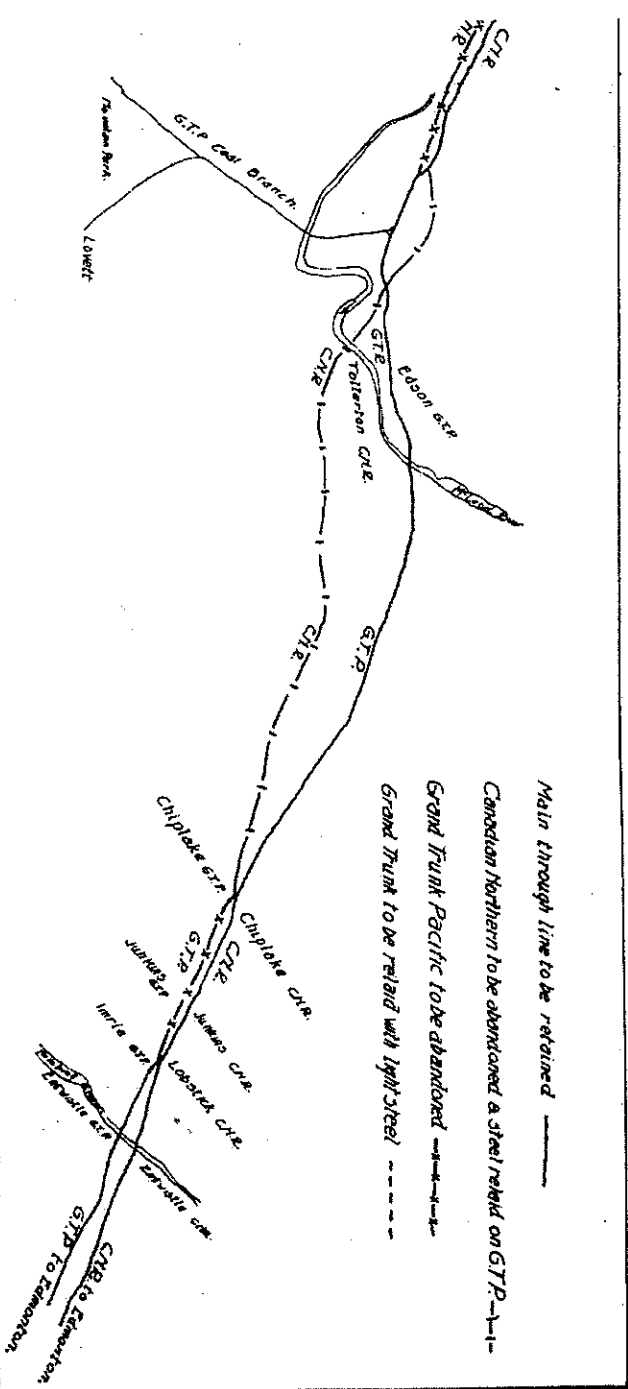
False Creek, but that will be attended to after the completion of the sea-wall just west of the Main St. bridge. The filling in will then extend right out to the sea-wall and the Main St. bascule bridge will be unnecessary when that is done. But it may be some time next summer before that is accomplished, although it is expected to have the station and a good deal of the other terminal work done this year.

Vancouver Island.—The British Columbia Government has notified the company that it must proceed at once with the completed portion of its undertakings. The time fixed by the late government for the completion of the lines on the Island was July 1, and this company asked for a further extension. There are funds arising out of the proceeds of the sale of provincially guaranteed bonds available for this work, which includes the completion of the line from Patricia Bay to Victoria and the laying out of terminals in Victoria.

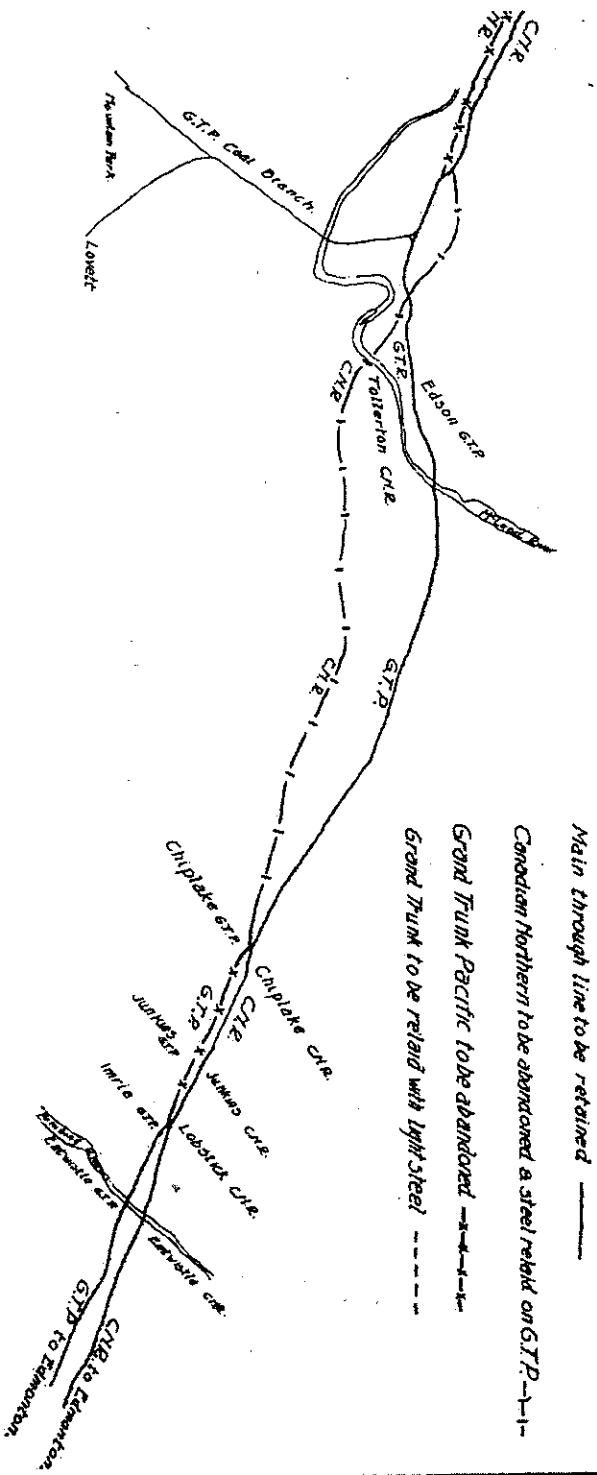
Ontario District.—The C.P.R. has moved the old Lambton station, which about three years ago was moved from its original site, to a new one, up to the golf club grounds, where certain trains have been stopping for some years past. On the site and grounds adjoining the old station, sidings have been laid. Other sidings, principally for coal traffic purposes are necessary and the company has applied to the York Tp. Council and to the Board of Railway Commissioners for approval of the plans. The work will necessitate the closing up of a street, and the strengthening of the walls of a subway. The company proposes to provide a new street 66 ft. wide, but the township council is asking for one 80 ft. wide. The matter came before the Board July 17. Work in connection with the laying of the new sidings is in progress.

Saskatchewan District.—The Board of Railway Commissioners has authorized the opening for traffic of the Moose Jaw south westerly branch, from Vantage to

Canadian Pacific Railway Construction, Betterments, Etc.



August
1917



Track Lifting for Overseas Shipment, Canadian Northern and Grand Trunk Pacific Railways, Imrie, Alta., to Esplanade, B.C. (See pg. 308.)

that W. E. Suter, of Winnipeg, is in charge of filling up the plant, which will be operated by electricity generated at the company's own plant, and that no decision has been reached as to the date for the plant being started in operation.

Vancouver Terminals.—Rapid progress is reported on the work of erecting the passenger station at False Creek, Vancouver. All the foundation work has been

finished, the form work for the concrete for the second story is practically in place and the concrete men are at work on that floor. Once the concrete is set for that floor, good progress can be made towards finishing the building, as there is a vast quantity of cut stone, tiling and terra cotta on the ground all ready for the completion of the structure. Meanwhile, work on the offices and freight sheds located a short distance south of the station has also been rushed and these are practically finished as far as the acting details to the offices and freight sheds are being attended to by the various sub-contractors. There is a considerable amount of filling in to be done yet over the whole area of the C.N.R. grant at

ft. is being erected at Cordova Bay.

Some rails have been laid on the line to Barkley Sound, but generally work is at a standstill on it, owing to shortage of rails.

It is reported that the plans for the terminals in Victoria have not been submitted to the B.C. Government for approval. (July, pg. 274.)

Railway Lands Patented.—Letters patent were issued during June, respecting Dominion railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:

Calgary & Edmonton Ry.	Acres.
Canadian Northern Ry.	11,286.00
Canadian Pacific Ry.	3,520.00
Canadian Pacific Ry., roadbed and station grounds	6.47
Canadian Northern Western Ry.	12.49
Edmonton, Dunvegan & British Columbia Ry.	1.72
Qu'Appelle, Long Lake & Saskatchewan Rd. & Steamboat Co.	386.58
	800.00

Total 15,968.26

D. O. Lesperance, Chairman, Quebec Harbor Board, has been appointed a senator.

Assiniboia, Sask., mileage 50 to 64.5. The extension was actually opened for traffic June 18, but regular train service was not placed in operation until June 24.

Alberta District.—The distance between Weyburn and Lethbridge, when the new line is completed, will be to 55.8 miles. This line will connect with the line into Lethbridge at Sterling, and the only section now to be built is that between Altavan, at the Saskatchewan-Alberta boundary, and Manyberries, Alta., 37.9 miles. The construction of this section is likely to be undertaken from the Manyberries end. (July, pg. 270.)

Intercolonial Railway Coal Rates.—It was announced recently that a general increase in freight rates on coal, from Nova Scotia and New Brunswick mines, had been put into effect. We were officially advised July 23 that it had been considered advisable to modify these rates for the time being, and that the rates that would be adopted eventually had not then been decided on.

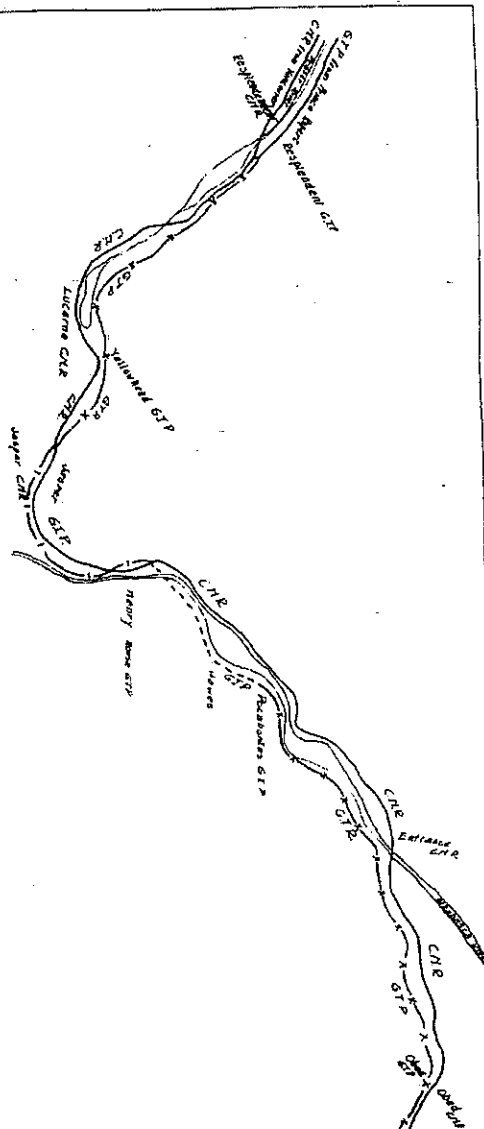
August
1917

etc., were not taken out of the main line, but out of sidings and divisional yards. About two-thirds of the rails lifted have been replaced by lighter rails. The balance have not been replaced, as the sidings and divisional yards were built to take care of a very large business anticipated in the future, and will not be required for some years to come.

It was also mentioned that a request utilized for both companies, the G.T.P.R. miles, to near Henry House, the G.T.P.R. being abandoned, except from Pocatimas west to the new junction point with the C.N.R. The G.T.P.R. line between Pocatimas and the new junction point has been relaid with light rails, so as to maintain shipping facilities for the Jasper Park Coal Co.'s line at Pocatimas. From the point above mentioned, near Henry

which is on the other side of the lake, until it will be possible to give this service until the rails are lifted and the work of getting the new line opened is completed. The Jasper Park Coal Co. will therefore have some temporary inconvenience in the extra haul.

The arrangements for lifting track, and in other matters connected therewith, are in progress. The company's traffic at present goes into Vancouver over the Great Northern Ry., the plans for its own line from New Westminster not yet having been definitely settled. We are officially advised, in regard to the company's car shops, at Port Mann,



Track Lifting for Overseas Shipment, Canadian Northern and Grand Trunk Pacific Railways, Inver, Alta., to Resplendent, B.C.

had been received by the Dominion Government for another 800 miles of rails, etc., which would be taken up from the Grand Trunk Pacific, west of Edmonton, where it closely parallels the Canadian Northern, and that Grand Trunk Pacific trains would be run over Canadian Northern tracks between those points. Subsequently it developed that some places, particularly Edison, Alta., would be seriously affected by removing the G.T.P. track, and the plan was changed so as to take up some G.T.P.R. and some C.N.R. track.

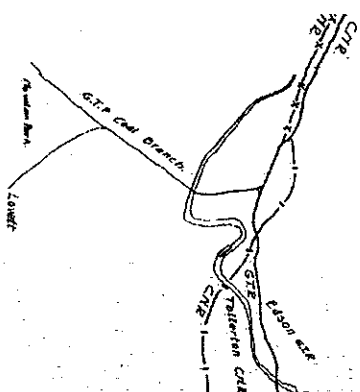
The track that has been, or is being taken up, is situated between Inver, on the east, and about Resplendent, on the west. Inver, on the G.T.P.R., is 866 miles west of Winnipeg, and Lonsdale, the corresponding point on the C.N.R., is 906 miles west of Winnipeg. Resplendent, on the G.T.P.R., is 1,073 miles west of Winnipeg, and on the Canadian Northern, 1,117 miles west of Winnipeg. The accompanying map shows the main through line to be retained and to be operated by both the C.N.R. and the G.T.P.R.; the C.N.R. and the G.T.P.R. lines to be abandoned

House, G.T.P.R. track is used to Geikie, about 25 miles, the C.N.R. being abandoned, and from Geikie, the C.N.R. is used for about 38 miles to about 2 miles east of Resplendent, from which point both companies continue to use their own lines, the C.N.R. to Vancouver, and the G.T.P.R. to Prince Rupert. On any part of the C.N.R. lines abandoned rails are removed to the G.T.P.R. roadbed, to release G.T.P.R. rails, the reason being that the specifications in this requisition for 300 miles of track are for rails and accessories precisely the same as were supplied under the first requisition, which was filled from the National Transcontinental Ry. The C.N.R. and C.P.R. rails, have different borings, so that it is necessary to ship G.T.P.R. rails only.

By the use of the composite through line above outlined, all industries are taken care of, without having their sidings accommodation lengthened, except for very short distances, with one exception, viz., the Jasper Park Coal Co., at Pocatimas, mile 1,001. In this case light rails have been laid on the G.T.P.R. roadbed,

Quebec and Saguenay Ry. Purchase.—It was reported in Ottawa recently, that a bill is to be introduced by the government fixing a specific price for the purchase of the Q. and S. Ry. An act was passed last session, under which the government took over the line, the value of the property to be fixed by the Court of Exchequer. The Exchequer Court judge made an investigation and asked for instructions as to allowing interest. Nothing further was done and it is now reported that the Government will, in the new bill, fix a definite price approximately, the report says, \$4,200,000.

The C.P.R. Stirling subdivision has been extended to Maryberry, Alta., by the opening up of the new section of the Weyburn-Lehrbridge extension from Paskowki, 18.2 miles.



Track Lifting for Overseas Shipment, Canadian Northern and Grand Trunk Pacific Railways, Inver, Alta., to Resplendent, B.C.

that W. E. Suter, of Winnipeg, is in charge of lifting up the plant, which will be operated by electricity generated at the company's own plant, and that no decision has been reached as to the date for the plant being started in operation.

Vancouver Terminals.—Rapid progress is reported on the work of erecting the passenger station at False Creek, Vancouver. All the foundation work has been finished, the form work for the concrete for the second story is practically in place and the concrete men are at work on that floor. Once the concrete is set for that floor, good progress can be made towards finishing the building, as there is a vast quantity of cut stone, tiling and terra cotta on the ground all ready for the completion of the structure. Meanwhile, work on the offices and freight sheds located a short distance south of the station has also been rushed and these are practically finished as far as the acting details to the offices and freight sheds are being attended to by the various subcontractors. There is a considerable amount of lifting in to be done yet over the whole area of the C.N.R. Grant at

August 1917

Canadian Northern Railway Construction, Betterments, Etc.

three clasps, for his South African ser-

Quebec Division.—The Dominion Parliament has extended for five years the time for building the projected branch line from St. Jerome to St. Eustache, Mount Royal Tunnel and Terminal Co.—The Dominion Parliament has extended for five years the period within which the railways and other works authorized to be constructed by the company in Montreal may be built.

Central District.—The new passenger station to be built at Fort William, Ont., will be on Vickers St., between Victoria Ave. and Miles St. The main portion will be 2. stories high, with full sized basement and at the north side of the main building will be the baggage and express building, 1 story high. The main portion of the building will be 56 x 40 ft. with a total height of 28 ft. above the sidewalk. The baggage and express building will be 81 x 30 ft. and will be 16 ft. high over the sidewalk. The footings, foundation and basement walls will be of concrete. The main walls will be of stone and brick and the roof will be covered with felt, pitch and gravel. All doors will be double boarded with maple finish, and all doors and inside finish on ground floor will be selected oak. The first floor will be finished in fir. The interior of walls will be turreted and plastered and all windows will be glazed with 32 oz. glass. The three main entrances will be covered over with ornamental iron canopies or marquises. The waiting room, ticket offices, women's waiting room and vestibule will have da-

of the ment prob the end of carrying which the Faise Cre gouvernme the line b meant the the same respect to the terms ried out spirit. Vancou reported to tween Vi Chiname 309.)

A Gra son Gra 2,272 bu Govern Ogeina, of lading the car in the ment w to be 5 made a went to appeal chewan 3, affir courts, compar with co way co respon Grain The ciation Emure

September 1917

the Royal

has been C.P.R., ce, chief on, was, o is re- 29, 1856. der rule by his ut it is ad what the Vic- or fur- vices of stages ter the ined a part, of He is been nadian at line Allan was promot- to a out on n was Mac- at ca- ide in aving adier- ng to id to was with nt to now the rope he

cruit railway construction men, and returned to Canada, Apr. 21, 1917, after spending four weeks in France. He resumed his railway position, July 1, 1917, and is now a reserve officer, C.E.F.

Lt. Col. G. S. Rennie, formerly Chief Medical Officer, Toronto, Hamilton & Buffalo Ry., and Dominion Power & Transmission Co., Hamilton, Ont., has, according to a press dispatch, been made administrator of all British, Canadian and United States military hospitals in the district near Rouen, France, as well as maintaining command of No. 2 Canadian General Hospital. For nearly two years he was in charge of a chain of hospitals in England, and left for France some two months ago to take an important command.

Major J. M. Rolston, M.Can.Soc.C.E., of Vancouver, has been created a Chevalier of the Legion of Honor, by the French Government, for services in railway construction. He graduated from the Royal Military College, Kingston, in 1900, and was for a time in the Grand Trunk Pacific Ry. service, during the building of the mountain section. When war broke out, he was in northern British Columbia. He left Canada as Captain in "Tobin's Tigers," and after serving two months at the front was transferred to a railway construction corps. He was mentioned by Sir Douglas Haig in dispatches in February last.

Capt. Wm. Stewart McTier, who was reported recently to have been awarded the Military Cross for gallantry in the firing line, is the son of A. D. McTier, General Manager, Eastern Lines, C.P.R. He went to the front with the first Canadian Contingent and has been twice wounded, first at Ypres, and lately at Vimy Ridge. At the outbreak of war he was on the ocean returning from Europe and immediately on landing joined the 13th Battalion under Lt. Col. Loomis, now Brigadier-General and D.S.O. He went to the front with that unit and fought with it at Ypres and Festubert. He was wounded by shrapnel and returned to Montreal to convalesce. On returning to the front he was attached to Brigadier-General Loomis' staff, the latter having taken over the command of a brigade in the meantime. After serving in that capacity for a short time one of Lieut. MacTier's feet gave out and an operation was necessary. On his return to the front on this occasion he was transferred to a Montreal Highland battalion and promoted.

Flying Corps, is the eldest son of F. L. Wanklyn, General Executive Assistant, C.P.R.; Montreal. He was born at Montreal, Aug. 14, 1888; educated at St. Andrews School, Brockville, graduated from the Royal Military College, Kingston, in 1909; received a commission in the Royal Artillery (Imperial), in June, 1909; seconded to Royal Flying Corps in 1911. Since war broke out he has served as Flight Commander in France and Belgium, received the Military Cross June, 1916, and was mentioned in dispatches. In 1916 he was Squadron Commander in command of R.F.C. experimental depot at Orfordness, on the east coast of England, until gazetted Deputy Assistant Director at War Office, London. In July, 1917 he was appointed Wing Commander, R.F.C., with lieutenant colonel's rank and sent to Canada to take command of one of the new aviation camps. He is now officer commanding at North Toronto.

Major Chas. Wesley Weldon McLean, D.S.O., of the Royal Horse Artillery, son of Col. (Temporary Brig. Gen.) H. H. McLean, M.P. for Queens-Summary, N.B., and formerly President, St. John, N.B. Ry., has been given a second bar for distinguished service. Twice in the same day he went forward, at great personal risk, into a heavy barrage to reconnoitre. The following day he led a party under heavy shell fire, threatening to cause grave casualties, and saved the guns and ammunition. He served in the South African War and was in operations in Cape Colony, south of Orange River, 1899-1900, in operations in the Orange Free State, Feb. to May 1900, including operations at Paardeberg and actions at Poplar Grove and Driefontein, and in operations in Orange River Colony, May to Aug. 1900. He was given the Queen's medal, with three clasps, for his South African services.

Canadian Northern Railway Construction, Betterments, Etc.

Quebec Division.—The Dominion Parliament has extended for five years the time for building the projected branch line from St. Jerome to St. Eustache, Mount Royal Tunnel and Terminal Co.—The Dominion Parliament has extended for five years the period within which the railways and other works authorized to be constructed by the company in Montreal may be built.

Central District.—The new passenger train will be built at Port William, Ont.,

dos of burlap and the lavatories will be finished with porcelain enamel. The whole of the color scheme will be strictly in accordance with C.N.R. standard colors. The building will be steam heated throughout, and lighted with electricity. There will be cement sidewalk round three sides and paved platform, 700 ft. long, on the track side, the top of which will be level with the rail. The estimated cost is about \$45,000. The plans have been prepared by the company's architect at Winnipeg, J. Schofield, and the work will be done under his supervision. Tenders are under consideration for the erection of a 205 ft. addition to the company's freight shed on Water St., Winnipeg. J. Schofield, the company's architect, Winnipeg, is in charge.

Vancouver Terminal.—M. H. MacLeod, General Manager, Western Lines, is reported to have stated on a recent visit of inspection to Vancouver, that satisfactory progress was being made with the terminal works at False Creek, and that there was no doubt that the new station would be ready for operation by Dec. 31. A report has been prepared by F. L. Fel-lows, City Engineer, covering the work yet to be done by the company on the terminal property in order to fulfil the terms of the agreement of Feb. 1913. He says that two pieces of work mentioned in the agreement are not likely to be accomplished within the time fixed, Feb. 1918, viz., the complete filling of False Creek to the grade of city datum and the boring of the double track electrified tunnel to give access to the terminal yards. Nothing has been done toward carrying out the latter work. Alderman Hamilton, chairman of the utilities committee, is reported to have said in an interview on Aug. 3, that the acquisition of the C.N.R. by the Dominion Government probably means that the city is at the end of its trouble with regard to the carrying out of the agreement under which the company acquired part of the False Creek flats from the city. The government was proposing to take over the line by the purchase of stock, which meant that the government would be in the same position as the company with respect to the city. He had no doubt that the terms of the agreement would be carried out by the government in a fair spirit.

Vancouver Island.—Track laying is reported to be progressing on the line between Victoria and Alberni, a number of Chinamen being employed. (Aug., pg. 309.)

September
1917

Canadian Railway AND Marine World

ESTABLISHED 1892

Devoted to Steam and Electric Railways,
Marine, Express, and Telegraph, also Railway and
Canal Contractors' Interests.
Official Organ of various Canadian Transportation
Associations.

Published on the first of each month.

ACTON BURROWS, LIMITED - Proprietors,
70 Bond Street, Toronto, Canada.

ACTON BURROWS, A. Can. Soc. C.E.,
Managing Director and Editor-in-Chief.
AURREY ACTON BURROWS - Secretary and
Business Manager.

Associate Editors
JOHN KERR AND **DONALD F. KERR**

United States Business Representative,
A. FRANTON WALKER, 143 Liberty St., New York

Member of
Canadian Press Association,
Associated Business Papers,
Audit Bureau of Circulation.

Authorized by the Postmaster General for Canada,
for transmission as second class matter.
Entered as second class matter, July 25, 1913, at the
Postoffice at Buffalo, N. Y., under the Act of Congress
of March 3, 1879.

SUBSCRIPTION PRICE, including postage any
where, \$2 a year.

SINGLE COPIES, 20 cents each, including postage.
The best and safest way to remit by express money
order. Where one cannot be obtained, a post office
money order, or bank draft, payable at par in Toronto,
may be sent. Cheques and drafts not payable at par in
Toronto cannot be accepted. Remittances should be
made payable to Canadian Railway and Marine World.

NOTICE TO ADVERTISERS.

ADVERTISING RATES furnished on application.
ADVERTISING COPY must reach the publishers by
the 10th of the month preceding the date of publication.

TORONTO, CANADA, OCTOBER, 1917.

PRINCIPAL CONTENTS.

Appointments, Transportation	397
Bridgways of Transportation Men	351
Board of Railway Commissioners	356
Orders by, Summaries of	402
Traffic Orders	398
Canadian Government Railways, Box and	
Stock Cars	397
Canadian Northern Ry., Act for Acquisition	
by Dominion Government	398
Beetlemans	357
Canadian Pacific Ry., Construction	354
Freight Car Conversion	354
Honor Roll	408
Electric Railway Department	403 to
Accident Case, Supreme Court Judgments	406
Calgary Municipal Ry., One-Man Cars	403
Edmonton Radial Ry., Employees' Wages	407
Finance, Meetings, Etc.	404
Finney, Traffic Notes	404
London and Lake Erie Ry. and Transpor-	
ation, Co.'s Proposed Dismantling	404
Ry.	

Act for the Acquisition of the Canadian Northern Railway.

Following is the full text of the act passed by the Dominion Parliament at its recent session to acquire the C.N.R. Co.'s capital stock:

1. His Majesty may acquire the 600,000 shares of capital stock of the Canadian Northern Ry. Co. (par value \$60,000,000) not now held by the Minister of Finance in trust for His Majesty, on such terms and conditions satisfactory to the Governor in Council as may be set out in an agreement to be made between His Majesty and the owners and pledgees of not less than five-sixths thereof, and for a price to be determined by arbitration as hereinafter provided.

2. (1) Upon the making of said agreement, at least five-sixths of the said 600,000 shares shall be transferred to the Minister of Finance in trust for His Majesty, and if there be any of the said 600,000 shares not transferred as aforesaid, the Governor in Council may declare the said shares to be the property of the Minister of Finance in trust for His Majesty, and the same shall thereupon become the property of His Majesty and shall be paid for pro rata with the shares so transferred.

(2) The necessary qualification shares the entrance to Picton harbor, N.S., Aug. for directors may be transferred to or allowed to remain in their names by the Minister of Finance on such conditions as he may determine.

3. (1) So soon as the said five-sixths of the said shares have been transferred as aforesaid, the Governor in Council may assist the Canadian Northern Ry. Co., or any company included in the C.N.R. System, in paying and settling any indebtedness of such company or postponing the payment thereof on such terms as may be agreed upon, and for such purposes may make advances out of the Consolidated Revenue Fund; provided, however, that until authorized by parliament, the total of such advances shall not exceed \$25,000,000. A statement of any such advances, showing in detail the purposes for which they were applied, shall be presented to Parliament by the Minister of Finance within 20 days after the opening of the next ensuing session thereof.

(2) The Canadian Northern Ry. Co., and each company included in the C.N.R. System, shall from time to time do such acts and things, make and issue such arrangements, obligations and securities in

tion not be unanimous, an appeal from such determination shall lie to the Supreme Court of Canada on behalf of His Majesty, or of the owners or pledgees, upon any question of law or fact, but no such appeal shall lie unless notice of appeal is given within thirty days from the rendering of the determination. In determining the value of the said six hundred thousand shares the arbitrators, should they regard it as expedient to take into consideration the reproduction cost of the C.N.R. System, shall not include therein the increase in value, due to the war, of labor, materials, equipment or of any property.

(3) The amount of the value so determined shall be paid out of the Consolidated Revenue Fund.

The Railway Situation in Hamilton.

The Hamilton, Ont., City Council passed the following resolution, Sept. 11: "That the report of W. F. Tye and N. Cauchon on the railway situation in Hamilton, as embodied in proposal C, be approved, that it be sent on to the Board of Railway Commissioners for Canada, as representing the views of the City of Hamilton, and that the board be petitioned to permit no new railway entrance into Hamilton and no new extensions, additions or changes in existing railway works in Hamilton or its vicinity unless same are in accordance with said proposal, and to so notify the railway companies concerned; and that for the purpose of relieving congestion and freight traffic through the city the railways be asked to adopt the measures proposed."

A suggestion was made that the council should endeavor to get officers of the railways together to discuss the project with a view of reaching some agreement, and this was passed on to the railway committee for action. Full details of the proposal C, which has been endorsed by the council, and of the other two proposals made by the engineers, with a plan showing all of them, was given in Canadian Railway and Marine World for September, pg. 342.

Railway Crossings and the Public.—During the past few weeks there have been quite a number of fatalities at points where railways cross public highways.

October
1917

Revenue Fund: provided, nowever, that until authorized by parliament, the total of such advances shall not exceed \$25,000,000. A statement of any such advances, showing in detail the purposes for which they were applied, shall be presented to Parliament by the Minister of Finance within 20 days after the opening of the next ensuing session thereof.

(2) The Canadian Northern Ry. Co., and each company included in the C.N.R. System, shall from time to time do such acts and things, make and issue such agreements, obligations and securities in connection with the payment or settlement or postponement of payment of the said indebtedness, as the Minister of Finance may require.

4. (1) The Governor in Council shall appoint one arbitrator, a majority of the said owners and pledgees shall appoint another and the two so appointed shall appoint a third, or failing agreement as to such appointment, the third arbitrator shall be appointed by the Judge of the Exchequer Court of Canada.

(2) The said arbitrators shall determine the value of the said 600,000 shares as of the date of the said agreement, and the said arbitrators shall proceed in a summary way, and may receive with respect thereto such reports and statements authenticated in such way as they may decide and such evidence as they may deem necessary or helpful, examine witnesses under oath and hear parties by counsel or representatives, and the unanimous determination of the arbitrators shall be final but should the determina-

with a view of reaching some agreement and this was passed on to the railway committee for action. Full details of proposal C, which has been endorsed by the council, and of the other two proposals made by the engineers, with a plan showing all of them, was given in Canadian Railway and Marine World for September, pg. 342.

Railway Crossings and the Public. — During the past few weeks there have been quite a number of fatalities at points where railways cross public highways, with the customary demand by the public for the elimination of level crossings. It goes without saying that level crossings are dangerous. So also are street crossings, and it will take time to eliminate them. In the meantime why not eliminate the fool motorist? Signs, signals, crossing bells, red lights, etc., seem to have no effect on this class of individual, who is always ready to rush a crossing and "take a chance." When a man states that he cannot hear a freight train of about 3,000 tons, travelling about 30 miles an hour, approaching a crossing, until it hits his car in the centre, one is apt to question his sanity.

Motor Freight Service.—It was announced at Victoria, B.C., Sept. 15, that a motor freight service would be put in operation on Oct. 1 between that city and Sidney, on the east coast of Vancouver Island, a distance of about 18 miles. It is said that a 5-ton motor truck will be used, making one round trip a day.

October
1917

War Acquisition of the Canadian Northern Railway by the Dominion Government.

World
he Do-
ng of-

provide
ain its
n it in

funds
nent to
e, etc..
nadian
et for
which

est in-
are se-
edit of
ractive
ld not
ent se-
always
y diffi-

fidence
men-
Marine
to the
three
viously
ard to

for an
nt line
about
by the
rs, the
, Ont.,
ading.
Sand-
ent ob-
-Mond
other
of the
ant at
able it
he end

The act authorizing the Dominion Government to acquire the whole of the Canadian Northern Ry.'s capital stock which it does not already own, as passed at the Dominion Parliament's last session, and published in full in Canadian Railway and Marine World for October, provides for an agreement, as to the terms and conditions, to be entered into between the Government and the owners of the stock and for the price therefor being fixed by arbitration. At the time of writing (Oct. 26) we understand that the agreement has not been signed, but that it has been drafted and that its terms have been practically settled, with the possible exception of the maximum price to be paid. As a preliminary step towards the arbitration proceedings the company's books are being audited by chartered accountants appointed by the Government.

During the discussion of the bill in the House of Commons, the Finance Minister stated that Sir William Meredith, Chief Justice of Ontario, would represent the Government in the arbitration to fix the price. Press reports have mentioned F. H. Phippen, K.C., as likely to represent the company as arbitrator, but as he is its General Counsel, his appointment is not considered probable.

As soon as the stock has been transferred the Government may advance not exceeding \$25,000,000 to assist the company in paying indebtednesses, and the company will then probably be in a position to place orders for rolling stock, which is imperatively required, and to proceed with necessary works which have been delayed.

Unconfirmed press reports state that Hon. F. Cochrane, ex Minister of Railways, will be appointed chairman of the C.N.R. directorate, and Hon. G. P. Graham, another ex Minister of Railways, has been mentioned as a probable member of the board.

November 1917

Hamil-
is been
ls and

Port Arthur Harbor.—During this year the harbor at Port Arthur, Ont., has been dredged to a depth of 25 ft. below zero

er 30-
R. of-
Super-
ato; J.
Union
endent
uperin-
Super-
Lynch.
J. H.
Divi-
at Lon-

pointed
Ontario
Tren-
Place,
and en-
2, since
4, time-
Trenton.
nt, same
patcher,
4, Secre-
Superin-
to Oct.
perinten-
ec. 1906,
ad; May
and from
ral Man-
a Ry., all
Sept. 1,
Division,
on, Ont.;
uperinten-
trict, On-
on, Ont.;
Represent-

has been
tern lines.
onto, was
16, 1872.
May, 1886,
1891, ma-
stern Ry.,
ay 1891 to
ous points
ont; Sept.

gent, same
Aug. 1916, Assistant Superintendent. To-
ronto District. Ontario Division, same

Aug. 1912 to 1914, Chief Engineer, G.T.P.R., Winnipeg.

Agreement for Acquisition of Canadian Northern Railway Stock.

The agreement between the Dominion Government and the holders of Canadian Northern Ry. capital stock has been signed and the following summary of its principal provisions has been given out:

The agreement provides for the naming of the arbitrators, one by the government, and one by the stockholders, the two so named to appoint a third. Should they fail to agree, the third arbitrator is to be appointed by the Chief Justice of the Exchequer Court. No arbitrator is named in the agreement, but the government arbitrator has already been selected, viz., Sir William Meredith, Chief Justice of Ontario, and it is said that Wallace Nesbitt, K.C., will represent the owners of the \$60,000 of stock.

The government already owns 400,000 shares of the stock. This represents 40% of the entire stock holdings and was taken by the government in 1914, on account of the guarantee of the company's bonds then given. The other 600,000 shares are now to become the property of the government and have, it is said already been transferred. Their par value is \$60,000,000. The agreement fixes the maximum to be paid for these 600,000 shares at \$10,000,000. No greater sum therefore can be paid, no matter what their value may be found to be by the arbitrators. If the value is found to be less than \$10,000,000, then the less sum will be paid. It is said that Mackenzie, Mann & Co. Ltd., own approximately five-sixths of these shares. Consequently the maximum that can be paid to them will be something over \$8,000,000. As, however, these shares are pledged to their bankers as

part security for advances of various kinds, the monies doubtless will be paid to the bank.

The duty of the arbitrators is to take evidence such as may be offered on behalf of the government and of the stockholders. Both parties will be heard in the usual way as before all arbitrations. There has been no previous inquiry into the value of this stock, at which both parties have been heard. After the taking of evidence and the making of any further investigations which the arbitrators may deem useful, it will be for them to decide what the value of the stock really is. The agreement does not call upon the arbitrators to adopt any particular method. They may enquire what the stock could be sold for; they may ascertain the value of the assets and deduct the liabilities. They may take into consideration earning power. They are not restrained in any way but simply required to get at the fair value in the best way possible. It is further specifically provided that if the arbitrators should see fit to take into consideration the reproduction cost of the system, then they must not include therein the increase in value, due to the war, of labor, material, equipment, or of any property whatever. The shareholders will be required to disclose all liabilities of the company of every kind, to the arbitrators. Should, however, it be found later that liabilities exist that were not disclosed, or in excess of those disclosed, then a corresponding deduction will be made from any award given.

The arbitrators must commence work forthwith, and complete the taking of

December 1917

evidence in such time as to announce their award before Mar. 1, 1918. Pending the award, it is provided that nothing but ordinary operating obligations shall be entered, and no obligation shall be entered into, not to be completely executed within six months, except with the approval of the Minister of Railways. All costs connected with the arbitration are to be in the discretion of the arbitrators and to be taxed by an officer.

Prior to the Canadian Northern bill coming before the Senate last term, two

of the directors resigned, viz., Senator Frederic Nichols, who had been a director from the formation of the company, and Senator H. W. Richardson, who had been one of the government directors for the past year or so. Graham A. Bell, C.M.G., Assistant to the Minister of Railways and Financial Controller of the Railway Department, has been appointed a director to succeed Senator Richardson. The other director has not been appointed. It is stated, apparently with authority, that Hon. Frank Cochran, ex Minister of

Railways, will be appointed chairman.

Sir Wilfred Laurier in his pre-election manifesto, issued recently, in referring to the matter, said: "The opposition asked that the report of the arbitration, whatever it be, should be laid before parliament for approval. Though this motion was rejected it is the right of the people to declare that the case should not have been finally closed by the action of a moribund parliament, but that the whole matter should be reported to and adjudicated upon by the new parliament."

Transporation Appointments Throughout Canada.