

HUDSON BAY  
RAILWAY.

1931.

to	dispatch. (Feb., pg. 56.)	out.
ale,	Dominion Government Ry. to Hudson Bay.	Int
un-	—The report of the Chief Engineer on the	fore
uc-	construction of the line, presented to Parlia-	izath
lge	ment by the Minister of Railways, states	capit
nd.	that the located line shows a variation of	De
om-	only 24 miles from being an air line between	facil
his	Pas and Port Nelson, Man. About 350 out	vote
	of the 412 miles have been graded, on	tion
ure	which 204 miles of track has been laid. The	(rev)
the	telegraph line has been completed for 175	\$39,5
rom	miles.	prop
Ry.,	The estimates laid before the House of	El
rta,	Commons include \$5,500,000 for construc-	at
24,	tion of railway, terminals and elevators.	\$85,4
orth	(Feb., pg. 56.)	for
td.	Edmonton, Dunvegan and British Colum-	clud

January 1915

Hudson Bay

A press dispatch from Pas, Man., Mar. 8, says the frost is rapidly leaving the ground in the country through which the line passes, and an early start on construction is expected. The right of way has been cleared to within 40 miles of Port Nelson. The steel work for the bridge across Manitou Rapids is being taken in. It is expected that 2,000 men will be at work by the end of April along the route, and that the grading will be completed to Port Nelson by the next winter.

A press telegram from Pas, Man., credits J. W. Porter, Chief Engineer, with stating that the contract for the steel cantilever bridge across the Nelson River at Manitou Rapids has been let to Canadian Bridge Co., Walkerville, Ont.

Replying to questions in the House of Commons recently the Minister of Railways said the roadbed is completed and fully ballasted to mile 66, and is partially ballasted to mile 176. Track has been laid on 214 miles of the grading. It is expected that the line will be completed by the autumn of 1917, by which time it is expected also that it will be possible to ship grain from Port Nelson. It will require a couple of years further work on the terminals before they will be completed. The total expenditure on the

April 1915  
Hudsons Bay

Has to Jan. 31 was \$6,768,849.21, of which \$1,409,962.15 was expended in 1912-13; \$4,498,717.26 in 1913-14, and \$4,261,688.83 to Jan. 31, 1915. It was stated in the House of Commons in answer to further questions, Mar. 4, that the total expenditure in connection with the project during 1914 had been \$4,188,879.17, of which \$2,344,391.67 had been expended on the railway proper, and \$1,843,987.50 on the Port Nelson terminals and harbor. The Marine Department expended \$45,676.77 on the project during the same period. \$40,164.38 was expended in surveying Hudson Bay and Strait between April 1 and Dec 31, 1914. (Mar., pg. 94.)

April 1915  
Hudson's Bay

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The question is whether the plans, which provide for slips, are in accordance with the terms of the agreement. (Aug., pg. 311.)

### Dominion Government Railway to Hudson Bay.

A weekly accommodation train is being operated on the Dominion Government Railway to Hudson Bay from Pas, Man., to the bridge at Armstrong Lake, 210 miles. The line has only been completely ballasted for the first 90 miles from Pas, and ballasting is in progress along the remaining 120 miles. Grading is fully completed to the Manitou Rapids on Nelson River, 15 miles from Armstrong Lake. Track is expected to be laid to the Nelson River during September. The substructure of the bridge is being put in, and it is expected that the bridge will be completed by Dec. 31. It will be of cantilever construction, the main span being 600 ft. Grading is practically finished for the next 50 miles to Kettle Rapids on the Nelson River, where another cantilever bridge will be erected next spring. Tracklaying will be started on this section next spring. Beyond the Kettle Rapids grading is in progress, and it is expected to have it fully completed to within 40 miles of Port Nelson by the end of the year.

At Port Nelson a short narrow gauge railway has been built southerly to bring in sand and gravel for use in making concrete and in filling the cribwork of the docks which are being built. W. E. Hawes is in charge of the dock construction work at Port Nelson. It is said that as soon as the wharves and docks are completed a grain elevator will be built. Three dredges are deepening the approaches to the harbor. (Aug., pg. 304.)

Canadian Freight Association, Western

July 1915

## Dominion Government Railway to Hudson Bay.

Referring to the building of this railway from Pas, Man., to Port Nelson, the acting Minister of Railways said in the House of Commons recently, that there were possibly many who doubted the advisability of the construction of this railway. While he had had grave doubts as to the feasibility of the undertaking, he had come to the conclusion, after seeing the reports in the Department, and discussing the matter with those who are at work in connection with the railway, that the road will be of value to the country in time to come. It will serve a useful purpose in opening up a large area of agricultural land for settlement; there is also a large area believed to contain mineral resources, and there will be the fisheries in Hudson Bay, which it is expected will rank with those that have made the Newfoundland waters famous. Further, there was no doubt in his mind as to the navigability of Hudson Bay and Straits for several months of the year. This had been demonstrated to his satisfaction since the Railways Department, for its own purpose purchased three vessels for use in its Hudson Bay service, as well as chartering several others, and so far as these vessels are concerned, they have navigated this route without meeting with any accident of importance. It is true that during the first season two vessels were cast away right at Nelson under circumstances which have never been satisfactorily explained and which have absolutely no bearing upon the practicability of the Nelson route. The vessels that were purchased were not built purposely for this route, and other vessels would perhaps be found safer.

On section 1, \$3,229,994 has been expended; on section 2, \$1,602,300, and on section 3, \$1,865,795, a total of \$6,698,089. The total value of the work under contract is estimated at \$9,629,605. During the coming summer the track will be carried forward to the second crossing of the Nelson River at Kettle Rapids, at mile 582. Here a large bridge is to be constructed and it is not expected that track work can proceed beyond this point until the spring of 1917, but, when resumed, it will be carried through to Port Nelson without further delay.

At Port Nelson good progress has been made on the permanent work of harbor development. Previously the work done at that point has been of a preliminary character, consisting of the establishment of the camp, construction of plant, shops for repair of plant, temporary wharves, drydock, etc., necessary for the prosecution of the work. The substructure for the bridge approach to the main dock has been carried out half a mile from shore, and the whole of the bridge superstructure will be completed this coming season. The auction dredge was employed excavating the approach channel with satisfactory results, the remaining dredges, tugs and scows being chiefly occupied in procuring stone filling for cribs and riprap.

The total expenditure upon the H.B.R. and terminals to Dec. 31, 1915, was as follows:

General expenses, engineering, etc.....	\$ 731,874
Pass bridge and terminals.....	588,172
Pass to Thicket Passage:	
On contract account.....	\$3,229,994
Rents, bridges, etc.....	2,680,894
Thicket Passage to Split Lake Jet.....	5,910,890
Split Lake Jet. to Port Nelson.....	1,601,291
Port Nelson terminal.....	1,815,568
	4,977,208
	\$16,465,504

May  
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14, so that the 4,787.90 miles. Figures include which reported median North-ario, Canadian e, Westport & outh Western, a, Central On- St. John. The he those of the he New Brun- land cover 11 and those for k month from

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As to the railway, it was not expected that there would be any great rush of traffic during the first few years after it was opened, but the time would come when it would be of immense value to Western Canada. He believed also that in years to come the line would have a military value. Its total length to Port Nelson is 424 miles. Grading has been completed to mile 378; steel has been laid, including sidings, to mile 242, at which point the erection of the Mountain Rapids bridge over the Nelson River is being proceeded with. The work was expected to be completed in April and track laying will be resumed. The track is surfaced to mile 242, and a final lift of ballast has been given to mile 180. The telegraph line keeps pace with the steel, and has been laid to mile 242. The work is divided into three sections, and all three contracts were given to J. D. McArthur

the bridge approach to the main dock has been carried out half a mile from shore, and the whole of the bridge superstructure will be completed this coming season. The suction dredge was employed excavating the approach channel with satisfactory results, the remaining dredges, tugs and scows being chiefly occupied in procuring stone filling for cribs and riprap.

The total expenditure upon the H.B.R. and terminals to Dec. 31, 1915, was as follows:

General expenses, engineering, etc.....	\$ 721,974
Two bridges and terminals.....	258,172
Due to Thibet Portage:	
On contract account.....	\$4,129,994
Baths, bridges, etc.....	2,689,894
Thibet Portage to Split Lake Jet.....	5,910,896
Split Lake Jet to Port Nelson.....	1,661,261
Port Nelson terminal.....	1,816,968
	4,977,208
	<hr/>
	\$18,466,904

**Delaware, Lackawanna & Western Rd. Connection.**—In the discussion on the extension of the charters for railways in the Niagara Peninsula of Ontario, controlled by Canadian Northern interests, the rumor has been revived that when the C.N.R. builds to the Niagara frontier it will connect with the D.L. & W., and thus secure direct connection with New York. The D.L. & W. mileage from Buffalo to New York is 411 miles.

**Trackmen's Wages on Government Railways.**—The management has voluntarily increased trackmen's wages to \$1.75 a day on country sections and \$1.85 in cities, and coal shovellers and ash pit men's wages to \$1.70 a day.

The Pacific Great Eastern Ry. has resumed traffic on its Squamish-Clifton section, which had been closed since a severe snowstorm of January.

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**Dominion Government Railway to Hudson Bay.**—Chief Engineer Porter is reported to have stated, in an interview Aug. 7 at Pas, Man., that construction was being pushed ahead as fast as possible. It is expected that steel will be laid to the Kettle Rapids of the Nelson River, about 30 miles from Port Nelson, by the end of September. At the date of the interview track had been laid to mileage 278, leaving about 54 miles of practically completed grading on which to lay steel before reaching Kettle Rapids. The line is being ballasted as track laying is progressed with. The preliminary work for the erection of the steel bridge across the Nelson River at Kettle Rapids is well forward, and supplies are being taken forward so as to be in readiness as soon as track laying has reached the rapids. The contract for the erection of the piers has been let to the Hudson's Bay Construction Co., and R. A. Hazlewood is engineer in charge of the work. The bridge is expected to be completed next spring, so that the steel can be laid into Port Nelson during the summer of 1917.

According to the statement credited to the Chief Engineer tenders are to be called for during the winter for the construction of the southern terminals of the line at Pas. There are at least a dozen buildings to be erected, the largest being the station and executive offices. Plans for this building are not complete, though draughtsmen are working on them. In addition to this building there will be a locomotive house, with pits, machine shop, round house, freight sheds, ice house and other buildings. At the north front a 90 ft. turntable will be built, to be operated electrically. (July, pg. 281.)

Edmonton, Dunvegan & British Colum.

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August 1916

**Bridgewater, N.S.**

**Dominion Government Railway to Hudson Bay.**—We are officially advised that grading is progressing favorably on the last 40 miles to Port Nelson, Man., from mileage 285 to 425. Track laying has reached mileage 300, and it is expected it will reach Kettle Rapids, the second crossing of Nelson River, by Oct. 20. The track has received the first lift of ballast to mileage 280, and the telegraph line has been erected up to the same point. The putting in of the substructure for the bridge at Kettle Rapids will be started during October. The construction season now drawing to a close has been very wet and labor has been very scarce, both of which facts have impeded progress. J. W. Porter is Chief Engineer. The head office was removed from Winnipeg to Pas, Man., Sept. 1. (Sept., pg. 364.)

**St. John and Quebec Ry.**—There has been deposited with the Minister of Pub.

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August 1916

had not agreed to the plans. (Dec., 1915, pg. 469.)

**Dominion Government Ry. to Hudson Bay.**  
—Grading is reported to be fully completed from Manitou Rapids, mileage 242 from Pas, Man., to which point a weekly train service is in operation, for a further distance of 50 miles to Kettle Rapids, Nelson River. The steel work for the superstructure of this bridge will, it is reported, be taken in overland during the winter, and assembled ready

*December  
1916*

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for erection as soon as the Manitou Rapids bridge is completed.

Since the above was put in type we are officially advised that work on the line is practically closed down for the winter, with the exception of the erection of the steel superstructure for the bridge across the Nelson River at Manitou Rapids. All the material has been delivered and the Canadian Bridge Co., which has the contract, is proceeding with the erection. (Dec., 1915, pg. 469.)

*December  
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pg. 49.)

**Dominion Government Ry. to Hudson Bay.**—It was stated by Mr. Blondin, on behalf of the Minister of Railways, in answer to questions in the House of Commons, Feb. 3, that there had been expended on account of this railway to Jan. 6, \$15,465,304.70. Of this amount, \$10,446,592.90 was expended upon the railway proper, including \$683,166.75 on bridges, trestles and culverts, while there had been expended on harbors and approaches \$5,018,711.74, including \$163,012.30 expended upon bridges. There were 378 miles of grading completed and steel had been laid to mileage 242. It is expected that steel will be laid to Port Nelson early in 1917, and that the harbor will be ready for traffic, though incomplete, about the time the railway will be ready for operation. The Marine Department had expended \$21,293.96 on the project.

Delivery has commenced of 10,000 tons of 80 lbs. steel rails ordered for this line last year from the Algoma Steel Corporation and is expected to be completed by the end of March. They are being shipped by rail from Sault Ste. Marie to Pas, Man. (Jan., pg. 10.)

**Edmonton, Dunvegan & British Colum-**

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## Dominion Government Railway to Hudson Bay.

Referring to the building of this railway from Pas, Man., to Port Nelson, the acting Minister of Railways said in the House of Commons recently, that there were possibly many who doubted the advisability of the construction of this railway. While he had had grave doubts as to the feasibility of the undertaking, he had come to the conclusion, after seeing the reports in the Department, and discussing the matter with those who are at work in connection with the railway, that the road will be of value to the country in time to come. It will serve a useful purpose in opening up a large area of agricultural land for settlement; there is also a large area believed to contain mineral resources, and there will be the fisheries in Hudson Bay, which it is expected will rank with those that have made the Newfoundland waters famous. Further, there was no doubt in his mind as to the navigability of Hudson Bay and Straits for several months of the year. This had been demonstrated to his satisfaction since the Railways Department, for its own purpose purchased three vessels for use in its Hudson Bay service, as well as chartering several others, and so far as these vessels are concerned, they have navigated this route without meeting with any accident of importance. It is true that during the first season two vessels were cast away right at Nelson under circumstances which have never been satisfactorily explained and which have absolutely no bearing upon the practicability of the Nelson route. The vessels that were purchased were not built purposely for this route, and other vessels would perhaps be found safer.

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At Port Nelson good progress has been made on the permanent work of harbor development. Previously the work done at that point has been of a preliminary character, consisting of the establishment of the camp, construction of plant, shops for repair of plant, temporary wharves, drydock, etc., necessary for the prosecution of the work. The substructure for the bridge approach to the main dock has been carried out half a mile from shore, and the whole of the bridge superstructure will be completed this coming season. The suction dredge was employed excavating the approach channel with satisfactory results, the remaining dredges, tugs and scows being chiefly occupied in procuring stone filling for cribs and riprap.

The total expenditure upon the H.B.R. and terminals to Dec. 31, 1915, was as follows:

General expenses, engineering, etc.....	\$ 721,974
Pas bridge and terminals.....	388,172
Pas to Thicket Portage:	
On contract account.....	\$3,229,994
Rails, bridges, etc.....	2,680,896
	5,910,890
Thicket Portage to Split Lake Jet	1,461,891

1916



Navigation Co. and the Great Northern Ry. is another United States railway, which owns the V.V. and E. Ry., for running rights over that line from the international boundary near Huntington to New Westminster and Vancouver, B.C. The applicants also desire to have power to acquire lands for station and terminal purposes. A. H. MacNall, Vancouver, B.C., solicitor for applicants.

**Pacific Great Eastern Ry.**—A combination passenger and freight service has been placed in operation on the line from Squamish to the Lillooet River at Pemberton Meadows.

Plans have been deposited with the Minister of Public Works for a bridge over the Lillooet River between mileages 19 and 20, Alta. Lakes Summit North, and approval has been asked for the same.

**Pacific, Peace River and Alaskan Ry.**—Application is being made to the Dominion Parliament to authorize the building of the following additional lines: From Edgewater at the head of Kitimat Arm, following the Kitimat River north to the summit between Kitimat and Skeena Lakes, thence north to the Skeena River, across the river by a high level bridge, and over the G. T. Pacific Ry. to the mouth of the Kitimat, Skeena River, following that river to the Skeena River, and on to the valley of the Peace River, at Alannah, about 113 miles; and from a junction of the Blackwater and Neena rivers along the valley of the former to the Galambet River, on to the Skeena River, and along that river to the mouth of the Bow.

corner of 410 and 412 St. Francis, Cornwall, is being built by the Cornwall Carriage and Coach Co. The cars will be made at the factory on the site of the old factory, and will be delivered to the city by the Cornwall Carriage and Coach Co. The cars will be made at the factory on the site of the old factory, and will be delivered to the city by the Cornwall Carriage and Coach Co.

**High River, Saskatchewan and Hudson Bay Ry.**—Application is being made to the Minister of Railways for approval of the route map of this projected railway from a point in any of the townships 25 to 29, range 1 west of the 4th meridian, Alberta, northwesterly to Saskatoon and on to the eastern boundary of Saskatchewan in other parts of the townships 25 to 29, and on to Port Nelson, Hudson Bay. The Saskatchewan City Council has been asked to send a representative to express the city's views upon it to the Minister. (Sas. High River and Hudson Bay Ry., Nov., pg. 500.)

**Intercolonial Ry.**—A New Brunswick paper stated, Nov. 3, that four crews were putting up new and heavier bridges on the line, and that by the end of the year, 105 old and light bridges would be replaced.

Work on the old New Brunswick and Prince Edward Island Ry., taken over recently by the Railways Department, is reported to be progressing favorably. About 20,000 new ties have been put in, about four miles of new steel has been laid, and about half the mileage between Sackville and Cape Bretonville rehabilitated. The terminal at Cape Bretonville, the mainland terminus of the service, Edward Island car ferry, is reported to be about half completed.

What the line starts from the Edmonton, Devon and British Columbia Ry. in the vicinity of Round Lake, where there will be a divisional point, which will be named McLennan. The line then runs northwesterly to the Hart River, and along that river to Peace River Crossing, crosses the Peace River, and proceeds southerly to Dunvegan. The contractors for the building of the line are J. E. McArthur & Co., Ltd., Winnipeg. This year about 20 miles of grading has been done, and track will be laid on this mileage as soon as track laying on the E. D. and B.C. Ry. has reached McLennan. No further spending will be done until next spring. The line will be about 45 miles. W. H. Smith, Edmonton, is Chief Engineer of this railway, as also of the E. D. and B.C. Ry. and of the Alberta and Great Waterways Ry. (Nov., pg. 500.)

**Dominion Government Railway to Hudson Bay.**—A press report states that at Oct. 21, track had been laid on 176 miles from Pas to Port Nelson, Hudson Bay. On the remaining 246 miles, a very considerable amount of grading has been done, at various points, but these are not connected up, beyond mileages 157 from Pas. The total 774.25 miles has been completed to 774.25 miles from Pas. It is expected that grading will be completed 912.56 miles at Mackenzie, mileages 242. By Dec. 31, at this point a steel bridge, 276 ft. long, will be in place, and it is expected to start putting in the concrete substructure at noon on 11.25

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Railway Development.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alberta and Great Waterways. By—We were officially advised recently that grading had been completed to mileage 131 from the junction with the Edmonton, Dunvegan and British Columbia Ry., and that tracks had been laid to mileage 80. A press report of later date states that track has been laid to mileage 45, and that ballasting is practically completed for 30 miles. Our official advisers further stated that it is expected to finish tracklaying to the end of the completed grading by Dec. 20. Supplies will then be taken in to the end of the track for next season's work. Press reports state that a train service will be put in operation to Sucker Creek, early in December.

The Alberta Legislature has authorized the construction of a branch line from near Lac la Biche, easterly to the Saskatchewan boundary of the province. (May, pg. 408.) Alberta Central and Hudson Bay Ry.—The Board of Railway Commissioners has authorized the company to build an overhead bridge to carry the highway and the International Transit Co.'s tracks across the gulch at Cathcart St. and Weide Ave. To go on, South St. (Nov., pg. 406.) Burraville Tunnel and Bridge Co.—Owing to the lack of a quorum of directors the consideration of R. Modjeski's report on the tenders for the building of the proposed bridge across the Second Narrows of Burraville, Vancouver, B.C., was adjourned recently to a date to be fixed by the president. (Nov., pg. 486.)

Central Canada Ry.—The Alberta Legislature has passed an act providing for the financing and building of the line from its junction with the Edmonton, Dunvegan and British Columbia Ry. to the Peace River Crossing, authorizing the building of a branch line from Sucker Creek to Grouard, about 30 miles, and providing for the guarantee of bonds for \$20,000 a mile in aid of the construction. We are officially advised that the line starts from the Edmonton, Dunvegan and British Columbia Ry. in the vicinity of Round Lake, where there will be a divisional point, which will be named McLennan. The line then runs northwesterly to the Hart River, and along that river to Peace River Crossing, crosses the Peace River, and proceeds southerly to Dunvegan. The contractors for the building of the line are J. D. McArthur & Co., Ltd., Winnipeg. This year about 30 miles of grading has been done, and track will be laid on this mileage as soon as track laying on the E., D. and B.C. Ry. has reached 35000 man. No further grading will be done until next spring. The distance from McLennan to the Peace River is about 45 miles. W. R. Smith, Edmonton, is Chief Engineer of this railway; as also of the G., D. and B.C. Ry. and of the Alberta and Great Waterways Ry. (Nov., pg. 466.)

Dominion Government Railway to Hudson Bay. A press report states that at Oct. 21, track had been laid on 175 miles from the Peace River to Fort Nelson, Hudson Bay. On the remaining 245 miles, a very considerable amount of grading has been done at various points, but there are not connected up, beyond mileage 197 from Peace. This telegraph line has been completed to 25 miles from Peace. It is expected that further work will be suggested up as far as Macklin

possible to get in the plant and materials along up the station buildings. It is expected that the line will be fully completed by the end of 1915. The plant engaged on building and bridge work, track laying and grading, consists of 3 steam shovels, 4 100 Hart convertible cars and numerous box cars and flat cars, in addition to 2 passenger cars being operated as far as mileage 110. (Nov., pg. 509.)

An Ottawa dispatch, Nov. 16, states that the latest reports from construction headquarters show that 180 miles of track have been laid, and that in all 325 miles of grading have been completed. Grading and other work will be continued during the winter.

Edmonton, Dunvegan and British Columbia Ry.—We are officially advised that grading has been completed from Lacombe, Alberta, to mileage 290, which is 12 miles from the Big Smoky River, and that track has been laid to mileage 200. It is expected to have track laid to the end of the completed grading early in December. (Nov., pg. 460.)

Erie and Ontario Ry.—The Board of Railway Commissioners has approved of the location and detail plans of the station at Cathcart and Bridge streets, Dunaville, Ont. (Nov., pg. 509.)

Gengarry and Stormont Ry.—The Board of Railway Commissioners has authorized the company to connect its tracks with the Ontario and Quebec Ry. (C.P.R.) 7077 feet east of mileage 37, Smiths Falls subdivision, mileage 6 of the G. and S. Ry.

Track was reported Nov. 7 to have been laid from St. Polycarp, Que., to the east of the station in Cornwall, Ont. The steel for the remaining portion of the line has been delivered, and it was expected to have it laid by Dec. 1. Ballasting is in progress, and it is hoped to have the line ready for operation by Dec. 31. The passenger station at the corner of 7th and Sixth streets, Cornwall, is practically completed, and considerable progress has been made on the freight shed, locomotive house, and turntable east of Sidney street. (Sept., pg. 513.)

High River, Saskatchewan, and Hudson Bay Ry.—Application is being made to the Minister of Railways for approval of the route map of this projected railway from a point in any of the townships 25 to 29, range 1 west of the 4th meridian, Alberta, northwesterly to Saskatchewan, and on to the eastern boundary of Saskatchewan in either of the townships 63 to 66 and 69 to 72, range 26. The Saskatchewan City Council has had the route map before it, and has arranged to send a representative to express the city's views upon it to the Minister. (See High River and Hudson Bay Ry., Nov., pg. 460.)

Intercolonial Ry.—A New Brunswick paper stated, Nov. 2, that four crews were putting up new and heavier bridges on the line and that by the end of the year, 105 old and light bridges would be replaced. Work on the old New Brunswick and Prince Edward Island Ry. taken over recently by the Railways Department, is reported to be progressing vigorously. About 20,000 new ties have been put in, about four miles of new steel has been laid, and about half the miles between Sackville and Cape Tormentine rehabilitated. The ties and sleepers at Cape Tormentine, the mainland

The contract for the subway under the tracks at Main St., Montreal, N.B., had been let to Soper and Macdonald, Ottawa.

Kettle Valley Lines.—George Bury, Vice President C.P.R., completed a visit of inspection over the company's Western lines, including the K.V.R. now under construction, Oct. 30. The K.V.R., from Midway to Merrist, B.C., he is reported to have said, will be completed by June, 1915, when it will be taken over for operation by the C.P.R. (Nov., pg. 509.)

The Board of Railway Commissioners has authorized the opening for traffic of the line from Hyndman, Ontario, to Hamilton, Ontario, 75 to 100, west of Peniston. Lake Erie and Northern Ry.—It was announced in Bradford, Ont., Nov. 11, that the section from Bradford to Galt will be opened for traffic Jan. 1, 1915. The line has been leased to the C.P.R. Plans for the station in Galt, laid with the Town Council, show a brick building with a 300 ft. platform, a short distance south of Main St.

A resolution has been passed by the Bradford Patriotic and War Relief Association inviting the City Council and the Board of Trade to cooperate with the I.E. and S. Ry. directors in applying to the Dominion Government to advance to the company the balance of the subsidy voted in aid of construction, in order that work on the Bradford-Port Dover section may be proceeded with. The amount is \$192,000, and W. R. Kellie, General Manager, stated in a letter to the Association, Nov. 9, that it would be sufficient to finance construction for about five months. (Oct., pg. 483.)

Moncton and Bouchette Ry.—A temporary station has been provided at Bouchette, N.B., to replace the one destroyed by fire recently. A new building will, it is reported, be erected in the spring. (May, pg. 214.)

Northern Pacific and British Columbia Ry.—Application is being made to the Dominion Parliament for the incorporation of a company with this title, with power, in connection with the Northern Pacific Ry. Co., a U.S. railway to enter into an agreement with the Vancouver, Victoria and Eastern Ry. and Navigation Co. and the Great Northern Ry., another United States railway, which owns that line from the international boundary near Hamilton to New Westminster and Vancouver, B.C. The applicants also desire to have power to acquire lands for station and terminal purposes. A. H. MacNell, Vancouver, B.C., solicitor for applicants.

Pacific Great Eastern Ry.—A combination passenger and freight service has been placed in operation on the line from Squamish to the Lillooet River at Pemberton Meadows.

Plans have been deposited with the Minister of Public Works for a bridge over the Lillooet River between mileages 19 and 20, Alas., Lakes Summit North, and approval has been asked for the same.

Peace River and Athabasca Ry.—Application is being made to the Dominion Parliament to authorize the building of the following additional lines: From Littlewater at the head of Kitimat Arm, following the Kitimat River northwesterly to the summit between Kitimat and Skeena Lake, thence northwesterly to the Skeena River, across that river by a high level bridge, and over the G. T. Pacific Ry. to the mouth of the Klaskanen River, and on to the valley of the Skeena River, and on to the river of the Nass River, at Alagnah, about 113 miles, and from a junction of the Blackwater and Nass

11000 ft., about 63 miles from the junction of the Peace and Athabasca Rivers at Fort Chip, Athabasca, N.W.T. (Nov., pg. 498.)

Prince Edward Island Railway.—The Board of Railway Commissioners has advised that the application for the extension of the line from Charlottetown to St. John's, P.E.I., will be three miles long, and that the cost of the grading is \$125,000, including the cost of the cut and fill, and the cost of the culverts and bridges. The cut and fill will be 40,000 cu. yds., and the cost of the culverts and bridges will be \$10,000. The total cost of the extension will be \$135,000. The Board of Railway Commissioners has advised that the application for the extension of the line from Charlottetown to St. John's, P.E.I., will be three miles long, and that the cost of the grading is \$125,000, including the cost of the cut and fill, and the cost of the culverts and bridges. The cut and fill will be 40,000 cu. yds., and the cost of the culverts and bridges will be \$10,000. The total cost of the extension will be \$135,000.

St. John and Quebec Ry.—The Board of Railway Commissioners has advised that the application for the extension of the line from St. John's, P.E.I., to Quebec, N.S., will be 100 miles long, and that the cost of the grading is \$1,000,000, including the cost of the cut and fill, and the cost of the culverts and bridges. The cut and fill will be 400,000 cu. yds., and the cost of the culverts and bridges will be \$100,000. The total cost of the extension will be \$1,100,000.

Western Dominion Ry.—The Board of Railway Commissioners has advised that the application for the extension of the line from Regina, Saskatchewan, to Vancouver, B.C., will be 1,000 miles long, and that the cost of the grading is \$10,000,000, including the cost of the cut and fill, and the cost of the culverts and bridges. The cut and fill will be 400,000 cu. yds., and the cost of the culverts and bridges will be \$100,000. The total cost of the extension will be \$10,100,000.

The Board of Railway Commissioners has advised that the application for the extension of the line from Vancouver, B.C., to Seattle, Wash., will be 100 miles long, and that the cost of the grading is \$1,000,000, including the cost of the cut and fill, and the cost of the culverts and bridges. The cut and fill will be 400,000 cu. yds., and the cost of the culverts and bridges will be \$100,000. The total cost of the extension will be \$1,100,000.

December 1914

Hudson Bay

**Dominion Government Railway to Hudson Bay.**—Chief Engineer Porter is reported to have stated, in an interview Aug. 7 at Pas, Man., that construction was being pushed ahead as fast as possible. It is expected that steel will be laid to the Kettle Rapids of the Nelson River, about 30 miles from Port Nelson, by the end of September. At the date of the interview track had been laid to mileage 278, leaving about 54 miles of practically completed grading on which to lay steel before reaching Kettle Rapids. The line is being ballasted as track laying is progressed with. The preliminary work for the erection of the steel bridge across the Nelson River at Kettle Rapids is well forward, and supplies are being taken forward so as to be in readiness as soon as track laying has reached the rapids. The contract for the erection of the piers has been let to the Hudson's Bay Construction Co., and R. A. Hazlewood is engineer in charge of the work. The bridge is expected to be completed next spring, so that the steel can be laid into Port Nelson during the summer of 1917.

According to the statement credited to the Chief Engineer tenders are to be called for during the winter for the construction of the southern terminals of the line at Pas. There are at least a dozen buildings to be erected, the largest being the station and executive offices. Plans for this building are not complete, though draughtsmen are working on them. In addition to this building there will be a locomotive house, with pits, machine shop, round house, freight sheds, ice house and other buildings. At the north front a 90 ft. turntable will be built, to be operated electrically. (July, pg. 281.)

has been let to J. H. Hicks & Sons, Bridgewater, N.S.

**Dominion Government Railway to Hudson Bay.**—We are officially advised that grading is progressing favorably on the last 40 miles to Port Nelson, Man., from mileage 285 to 425. Track laying has reached mileage 300, and it is expected it will reach Kettle Rapids, the second crossing of Nelson River, by Oct. 20. The track has received the first lift of ballast to mileage 280, and the telegraph line has been erected up to the same point. The putting in of the substructure for the bridge at Kettle Rapids will be started during October. The construction season now drawing to a close has been very wet and labor has been very scarce, both of which facts have impeded progress. J. W. Porter is Chief Engineer. The head office was removed from Winnipeg to Pas, Man., Sept. 1. (Sept., pg. 364.)

**St. John and Quebec Ry.**—There has been deposited with the Minister of Public Works at Ottawa plan and description

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**Dominion Government Ry. to Hudson Bay.**—The suspension of work on this railway from Pas to Port Nelson, Man., is merely the ordinary suspension for the winter months. Certain bridge work at Kettle Rapids will be gone on with during the winter. The nature and extent of the work for next year will not be decided upon until the spring, but it is generally anticipated that the line will be completed during the year.

Nothing definite has been decided, we are officially advised, as to the various terminal buildings to be erected at Pas.

It is reported that the dock for ocean going steamships at Port Nelson has been completed. It is 3,000 ft. from the shore line, with which it is connected by a steel trestle over which trains will be run. Considerable progress was made with the

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# **t, Projected Lines, Surveys, Const**

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Ry.— other harbor works during the past year.  
mpleted (Dec., 1916, pg. 484.)

ec. 31. Edmonton, Dunvegan & British Colum-  
om Car- bia Ry.—Ballasting and other work on  
the Ed- the section from McLennan to Spirit

...son, M. Can. Soc. C. E., Winnipeg, is the person principally interested. (Sept. 1915, pg. 348.)

**Dominion Government Ry. to Hudson's Bay.**—Construction on the railway from Pas to Port Nelson, Man., is reported suspended for the winter. Track has been laid to the Kettle Rapids of the Nelson River, 330 miles from Pas. During the winter, however, work will be gone on with on the erection of the bridge at Kettle Rapids, and upon another bridge further on. It is expected to lay track to Port Nelson early next summer. Work on the terminals at Port Nelson is also reported to have been suspended for the winter. (Nov. pg. 447.)

**Esquimalt & Nanaimo Ry.**—R. Mar-

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12.) Hudson Bay Ry.—It was reported in Winnipeg, Feb. 21, that the Canadian Railway Association for National Defence had recommended the taking up of 300 miles of rails on this railway for use on other Canadian lines. (Jan., pg. 12.)

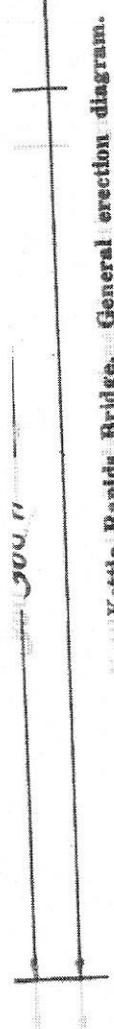
Tenders are under

section and \$2,334,380 on the Hudson Bay Ry. section. (April, pg. 146.)

Hudson Bay Ry.—A letter was read at a meeting of the Yorkton, Sask., Board of Trade, on April 3, from J. F. Reid, M.P., stating the Minister of Railways had made a definite promise that track would be laid this season on the final 90 miles of the line from Pas to Port Nelson, Man. We are, however, officially advised that nothing can be said definitely upon this matter, as it depends entirely upon what supply of steel rails may be available. (Mar., pg. 98.)

Intercolonial Ry.—A press report states

1918



Kettle Rapids Bridge. General erection diagram.

cation and erection and has many commendable points.

The method of erecting the bridge is of special interest, as it was out of the question to use staging of any kind for the channel span; the channel being of great depth, with a current of 9 miles an hour. Furthermore, the remoteness of the site, being at the end of a long construction line leading from Pas, precluded the possibility of bringing material for the north end in from that side, and the problem of getting this half of the structure across.

designed for lifting fifteen tons. The materials for the north end were then taken out on cars to the extreme end of the cantilever truss on the south side, and materials transferred by means of this cableway to the north side.

The staging for the north anchor arm was erected first and on this a light double boom traveller assembled. The steel work was then transferred and placed with this traveller, starting at 12, and erecting the lower half of the anchor truss, backing up with the travel-

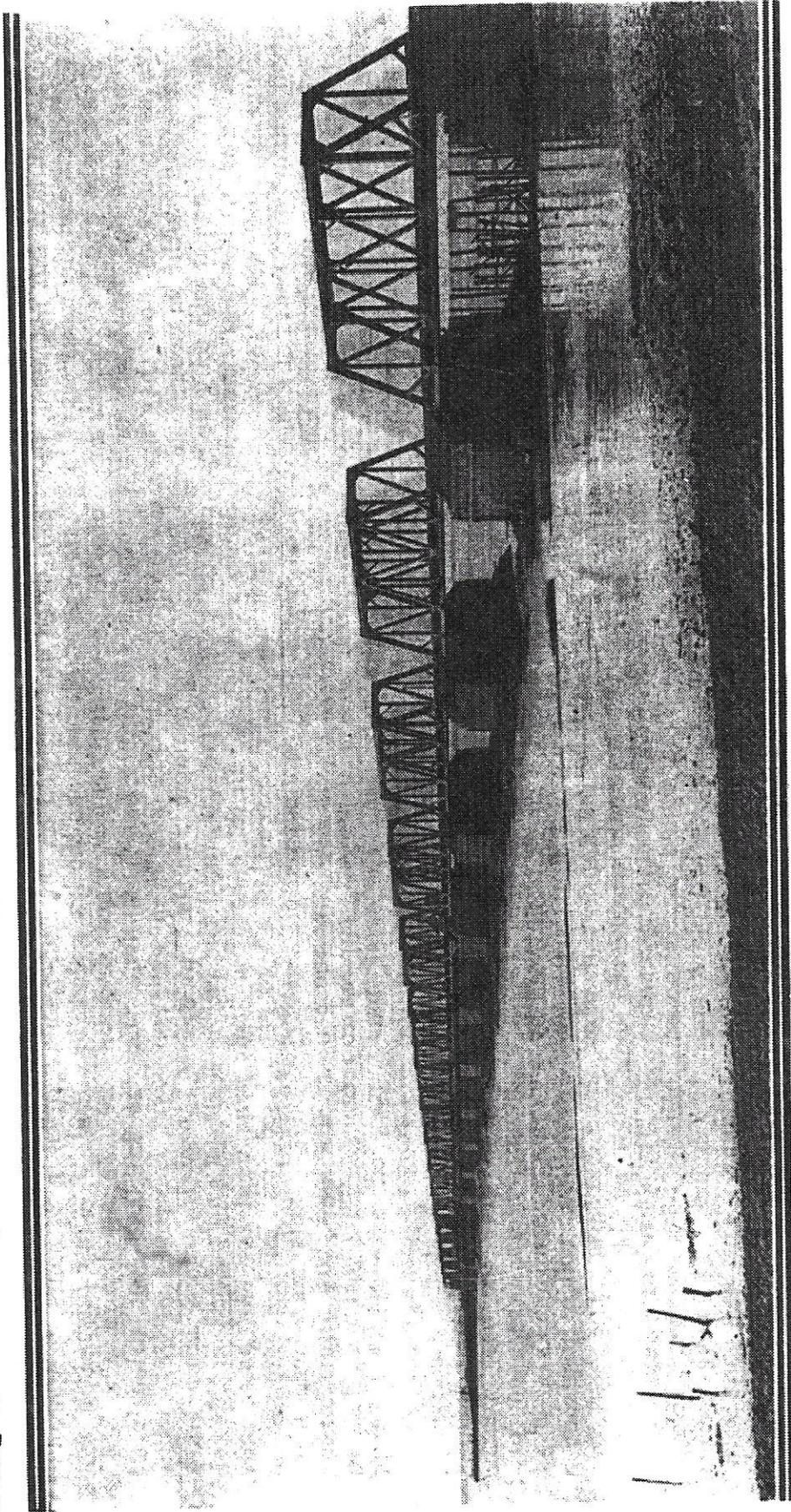
of W. A. Bowden, M. Can. Soc. C. E., Chief Engineer, Railways and Canals Department, Ottawa. The bridge was designed by W. Chase Thomson, M. Can. Soc. C. E., Montreal. The superstructure was fabricated and erected by Canadian Bridge Co., Ltd., Walkerville, Ont.

Quebec & Saguenay Ry.—A press report states that construction on this railway was resumed Mar. 15, and that it is hoped to complete the section to Baie St Paul, by the end of May.

1918







**Bridge Pier at Port Nelson, Man.**

This pier, consisting of a number of stone filled, cribwork piers and a series of steel spans, extends from the shore at the Hudson Bay Ry. terminus at Port Nelson to a handmade island, also of stone filled cribwork, which will be used as the loading and unloading berth for ocean steamships, as the water is not deep enough to allow them to approach nearer to shore. The photograph was taken in September, 1916. The above mentioned work was described as follows by D. W. McLachlan, Engineer in Charge, in a report to the Railways Department, May 6, 1916. "It has been found a most difficult matter to decide the design and form of the harbor works in the Nelson estuary, but after close observation and study it has been decided to build a cigar-shaped island near the natural channel of the estuary, and from this island to the end of the present works construct a bridge on piers, which, though unusually large, can be safely protected from ice action by the liberal use of riprap."

is the preserver for all naint underneath tion from rain and dampness. When car way. For all movements requiring trans-

## The Erection of Kettle Rapids Bridge, Hudson Bay Railway.

The Kettle Rapids Bridge, on the Hudson Bay Ry., crosses the Nelson River about 3½ miles north of Pas, Man. The Nelson River, at this point, forms a deep, narrow gorge, through which flow swift rapids, directly in the way of the site chosen for the crossing. The banks on both sides consist of solid rock for a considerable distance back of the shores, and are a determining factor in selecting the continuous girder type of truss adopted. The design consists of a single track through truss structure, 1,000 ft. long, continuous over 4 supports. These piers are built on small islets of rock, between

and in place economically, formed one of the chief considerations. The following erection programme was adopted:—

The south arm, between piers 1 and 2 was erected on wooden staging, with an ordinary derrick car, the only unusual features being that L0 was erected 10 in. lower than its normal elevation in order to allow for deflection in cantilevering. The truss, as a whole, was also erected on the permanent pier member rollers, about 5 ins. closer to the shore than its normal position. The main joints were then completely riveted, and the derrick car erected the balance of the south half

ler until L-0 was reached. The traveller was then jacked up, so as to bring the trucks level with the top chord of the span, and the balance of the steel for the north anchor arm completed, going forward from U-2 to U-12. After riveting this anchor arm, the cantilever portion of the truss between panels 12 and 20 was easily completed, with the traveller running out on the top chord.

The whole of the south half of the bridge was then jacked forward on the permanent pier member rollers, and a coupling made at L-20. After this joint was riveted, jacks were applied at the

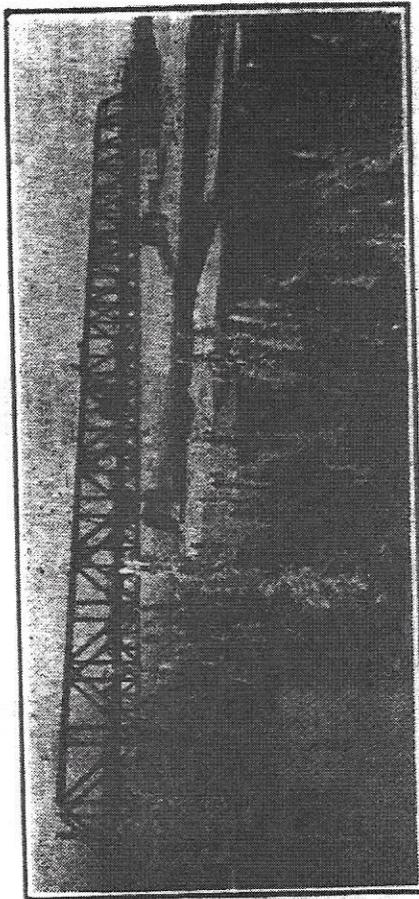
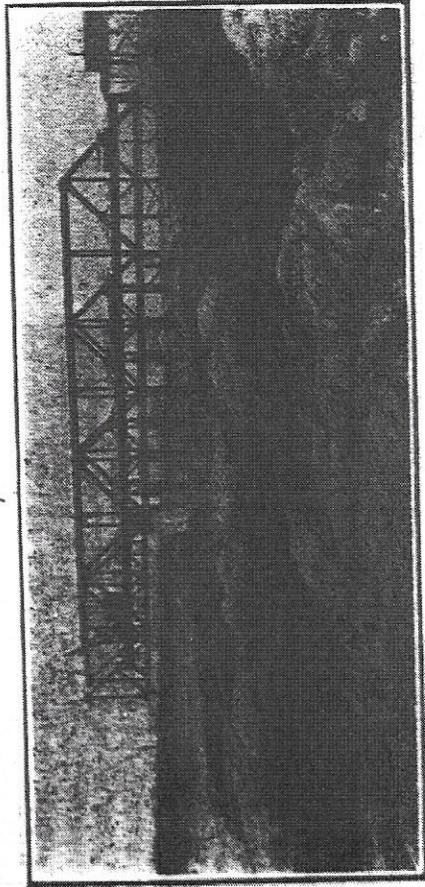


FIG. 1. D. S. B. Bridge. The completed structure.

1918

**Kettle Rapids Bridge. The completed structure.**

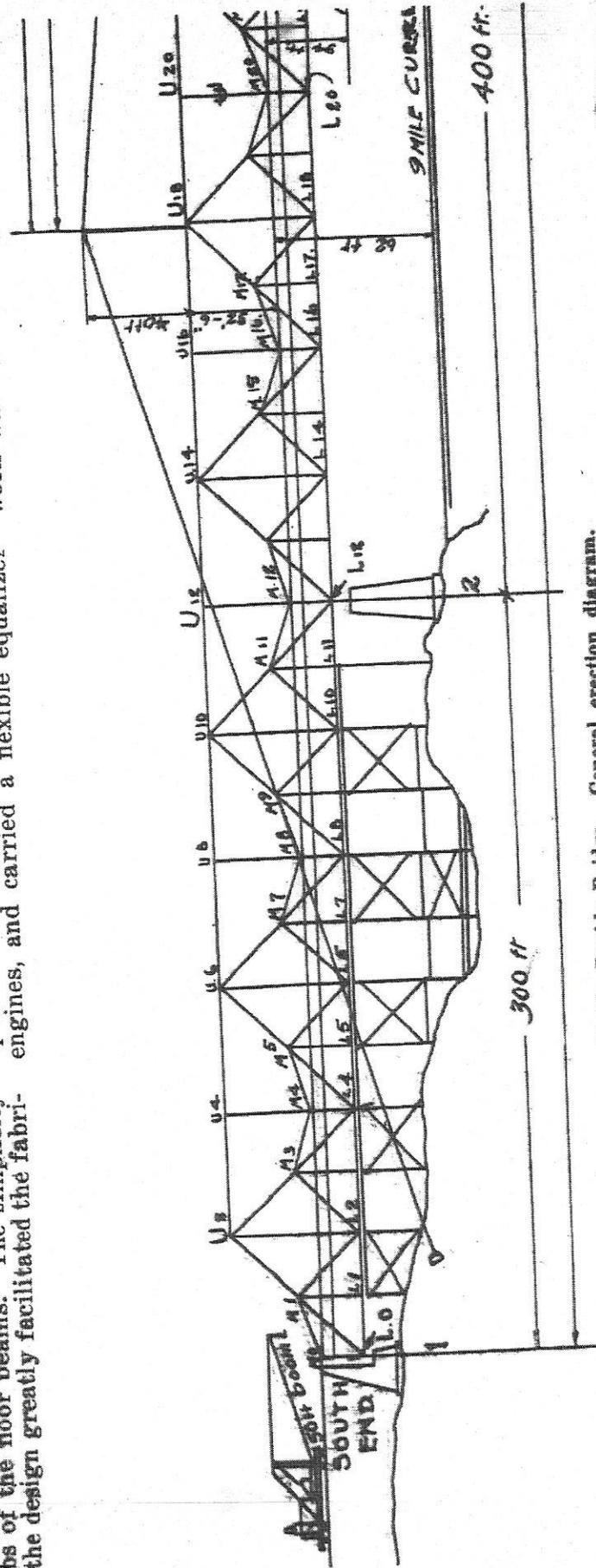
which and the adjacent shores the stream is shallow, with a slow current. The channel span is 400 ft. long, c. to c. of pier members, and the two flanking arms 300 ft. each. The trusses are the Warren type, having 50 ft. main panels, subdivided to form two 25 ft. stringer panels. They are 50 ft. deep, c. to c. of chords, and are spaced 24 ft. apart. All truss joints are riveted throughout. The floor system is the ordinary open floor type, having wooden ties carried on two lines of built up stringers, which frame into the webs of the floor beams. The simplicity of the design greatly facilitated the fabri-

of the crossing, as a cantilever, from L-12 to L-20. The riveting followed the erection very closely, so as to take care of the erection stresses.

A cableway tower was then erected on the north shore, materials for it being hauled by team over the ice some distance from the crossing. A short cableway bent was also erected on the completed truss at U-18, and a double cableway made of two 2 1/4 in. diameter cables was erected on these towers and securely anchored at both ends. These two cableways were operated by two double drum hoisting engines, and carried a flexible equalizer

two extreme ends of the bridge, points L-0 north and south ends. These ends were raised until the joint at U-20 was closed, after which the four corners were raised simultaneously until a load of 118 1/2 tons was registered on each of the 4 jacks, which fixed the distribution of the dead load stresses throughout the entire structure.

Work on the piers was started in 1916 by the general contractors for the whole line from Pas to Port Nelson, but owing to floods, but little work was done until February and March, 1917. The entire work was under the general supervision



**Kettle Rapids Bridge. General erection diagram.**

1918