

THE GHOST
RAILWAY

THE CANADIAN
NORTHERN LINE
TORONTO TO
OTTAWA.

to be completed by the end of Sept.

Tenders were received to Sept. 18 for the grading, etc., of the first section of the line between Ottawa and Toronto, viz., from Toronto to Trenton, about 100 miles. The route adopted leaves the company's Toronto-Sudbury line in the Don Valley, about six miles from Toronto, and will strike the boundary of Scarboro tp. about midway between the G.T.R. and the C.P.R., and keeping about equi-distant from these two lines, strikes the boundary of Pickering tp. in the vicinity of Cherrywood, where the line will join the line formerly located. This line runs through the middle of Pickering and Whitby tps., crossing the G.T.R. branch line from Whitby near Brooklin. The line will then drop a little southerly to Orono, in Clarke tp., and thence will gradually run south east until it reaches Port Hope; from thence it will parallel the G.T.R. to Trenton, passing through Cobourg, Grafton, Colborne and Brighton. Beyond Brighton the line crosses the G.T.R. main line and follows along the Bay of Quinte shore to Trenton. The contract of the construction of the Toronto-Trenton section has been let to Angus Sinclair, C.E., Toronto, and work will be started immediately.

D. D. Mann stated in an interview Sept. 7 that the company's general locomotive and car repairing and construction shops would be located in Toronto. They will not be constructed until the line from Toronto to Ottawa and the line from Sudbury to Port Arthur have been completed. The matter has been brought before the city council by the Mayor. A suggestion has been made that the G.T.R. yards at East York, which have been closed, the work done there being transferred to Mimico, would be suitable for the C.N.O.R. It is stated that a C.N.O.R. official has made an inspection of the property.

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has been settled on.

Canadian Northern Ontario Ry.—In reference to the entry of the line from Hawkesbury into Ottawa, the city council approved a plan involving the construction of a level crossing over Hurdman road. When the matter came before the Board of Railway Commissioners for final sanction, it was referred to the Board's engineer. It is understood that this official reported against the crossing being allowed, and recommended that instead of the route approved by the city council, the line enters the city over the Ottawa and New York Ry. and the C.P.R. bridge. The suggested route will necessitate the breaking of the line outside the city and putting in a curve to the C.P.R. about 300 yards south of the present approved route.

The route of the proposed line from Toronto to Ottawa, as far as Trenton, Ont., about 100 miles, was set out in our last issue. For this section a contract has been let to Angus Sinclair, C.E., Toronto, and preparations are being made for the construction. Beyond Trenton, the located line keeps along the lake shore line for some miles east of Belleville, and bears away northeasterly before passing out of Thurlow tp. The route is northeasterly through Tyendinaga and Richmond tps., until it crosses one of the old surveys in the middle of Campden tp. The Bay of Quinte Ry. is crossed south of Enterprise, and the Kingston and Pembroke Ry. a short distance north of Verona. Continuing easterly it passes north of Desert Lake and Mud Lake, crossing the Brockville, Westport and Northwestern Ry. at Newboro. Still proceeding easterly, Portland is reached, where the direction again becomes northeasterly, the route surveyed in 1906, being followed through Smith's Falls, and Richmond to Ottawa, where connection will be made with the Ottawa-Hawkesbury line, now practically completed. It is understood that there will be a branch line from some convenient point into Lanark. We are advised that some residents of Perth have surveyed a line for a branch to connect with

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accomplished on branch-line construction. On the branch from Melville to Regina, Sask., track has been laid for 20 miles, and it was expected that steel would be laid to Balcarres by Oct. 31. No grading has been done beyond this point. On the branch from Melville to Yorkton, about six miles of steel had been laid on Sept. 30, and it was expected to have it laid 25 miles out by Oct. 31. The grading of the line from Tofield towards Calgary, Alta., is progressing and it is expected to have the 50 miles to Camrose completed this fall.

Surveys are being made in the Duck Lake district in connection with the location of a line from Watrous to Prince Albert, Sask.

In connection with the surveys for the location of a line to Vancouver, B.C., three parties are in the field running trial lines via the Nicola valley and the Similkameen district. They are working

the Toronto-Ottawa line at Newboro, crossing Rideau Lake at the Narrows. It is not at all certain that this line will be followed, as it involves a very elevated crossing of the Rideau Lake. Residents in Port Hope, Bowmanville, and other points are not satisfied with the route, and have made representations to the company with a view to some changes being made. At Cobourg, the people are asking that arrangements be made with the G.T.R. for the erection of a union station.

The Toronto board of control has approved a proposition by the company to purchase about half an acre on the Don Esplanade, south of Queen St., at a price to be fixed by the Assessment Commissioner. A condition of the sale is that any other railway can have running rights over the tracks to be laid on the land.

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volving a level crossing.

The construction of the section of the Toronto-Ottawa line, which is under contract, viz., from the Don Valley near Toronto to Trenton, Ont., is being proceeded with. Several subcontracts have been let, and work has been started at various points. The general contractor, Angus Sinclair, is getting his plant on the ground. A new steam shovel has been placed on the work.

The town of Orillia, Ont., has sold a portion of Lakeside park to the C.P.R., in order that it may construct a spur line from Atherley to Orillia, over which the Canadian Northern Ry. will get into the town. The Board of Railway Commissioners recently made an order directing the C.P.R. to construct this spur.

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run into the Central station.

In connection with the securing of the right of way for the line from Toronto to Ottawa, of which the section from Toronto to Trenton is under contract, the C.N.O. Ry. paid \$17,800 into court, and has to pay \$30,000 more into court, to enable it to enter into possession of certain lands required for its right of way in the vicinity of Toronto, the value of which is being settled by arbitration. Construction is proceeding with considerable rapidity. It is reported that the fencing along nearly the whole of the right-of-way has been put up. Between Trenton and Brighton, over four miles of grading has been completed, and considerable stretches have also been graded in the vicinity of Colborne, and other points between Cobourg and the Don Valley. An effort is being made by the residents of the lake front towns to induce the company to change the route of the line easterly from Trenton, so that it will take in all the lake shore territory, striking the C.N. Quebec line at Hawkesbury, from which point the company has already a connection with Ottawa. W. Mackenzie, President C.N.R., on his return to Toronto from Halifax, N.S., recently was waited upon by a deputation representative of the lake front towns between Toronto and Prescott, to urge consideration of the matter.

D. D. Mann, Vice-President C.N.R., said in an interview in Toronto, Dec. 16:

"We will erect repair shops and a roundhouse in Toronto next summer. Should we be given the right of entry, Ashbridge's Marsh will probably be the site on which they will be built. When our eastern and western lines are coupled up we will have to have very extensive shops in Toronto. And as our eastern line is being built under a year's contract, and should be finished, as far as Trenton next fall, we will have to start constructing these shops in the summer. They will be large enough for the requirements of our two lines running out of Toronto, and will be so arranged that extensions can be made just as fast as the exigencies of business demand. The suggestion has been made that Ashbridge's Marsh would be an excellent site.

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Plans were filed Dec. 8, showing a proposed plan of entry of the company's line from Toronto to Buffalo, into Hamilton. The plans show a route over the C.P.R. and the Toronto, Hamilton and Buffalo Ry. A Hamilton report says that the C.P.R. objects to the plan on the ground that the Hunter St. tunnel is not calculated to accommodate more than the present traffic.

Engineering parties are in the field in the vicinity of the Nipigon River and

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repair shop attached.
The C.N.O.R. at present enters the Union Station, Toronto, by the Don Valley over the C.P.R., and it is reported that real-estate circles that recent purchases of land indicate that the company is desirous of securing a line so that an entrance can be obtained on the west. The report states that the land secured will enable the company to construct a line which will connect with its present right of way for the Toronto-Buffalo line at the junction of Davenport Road and Dupont St. The project, however, is in the rumor stage yet.

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settled, but for the present construction in Ottawa is completed.

The construction of the first 100 miles of the Toronto-Ottawa line, from the Don valley to Trenton, is being pushed forward. The work is being carried out by the general contractor—Angus Sinclair Co.—in four sections, on all of which sub-contracts have been let, and gangs of men are at work, 700 men being at present engaged. There is a considerable amount of heavy clay work in the Don valley, and there is also some heavy work to be done in the vicinity of Scarborough Jct., where the line is to be carried under the G.T.R. tracks. The only points at which construction is not actively in progress are Cobourg and Port Hope, where some matters of route are in course of settlement with the local authorities.

The company has completed and

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was impossible to say what would be the outcome.

Canadian Northern Ontario Ry.—A start has been made in tracklaying on the line now under construction between Toronto and Ottawa—the contractor for the first section of which is Angus Sinclair. The tracklaying was done in the vicinity of Trenton, at the point of crossing the Central Ontario Ry. The connection has been made for the purpose of bringing in ties. Track had also been laid from points on the old Midland Ry. of the G.T.R., about a mile north of Scarboro Jct., in order to bring supplies to the construction gangs. Rapid progress is being made with the grading from the Don Valley, and through Scarboro tp. A steam shovel is at work just east of the Kennedy Road, where there is a big cutting, the earth from which is being used on an adjoining farm where there is a big fill. At the point where the line will run under the G.T.R. at Scarboro Junction, 20 ft. below the G.T.R. tracks, there are several gangs at work, as it is a point where the supplies, etc., are brought in off the G.T.R. Grading is also well advanced in Pickering and Whitby tps., as well as in Durham county, and right through to Trenton. All along the route, in addition to the regular gangs of men, the sub-contractors have taken on all the farmers' teams that could be hired, in order to push forward the work as rapidly as possible. Culvert and bridge work is light, and generally speaking the work is easy. It is expected that a contract for a further section of the line easterly from Trenton will be let at an early date. A Trenton press report states that L. D. Barchfield has been securing options on land for right of way into Belleville, Ont.

With reference to matters in Toronto, the reports as to the intentions, not only of the C.N.O.R., but also of the other companies, are as wild as they are numerous and contradictory. The recent large purchases of property, together with the unsatisfactory conditions gen-

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tion between
streets.

Georgian Bay and Seaboard Ry.—A contract has been let to the Toronto Construction Co. for building a line from Coldwater Jct., on the Toronto-Sudbury line, easterly to Atherly Jct., via Orillia. The construction will be in charge of C. W. P. Ramsey, Assistant Engineer, under the direction of A. McCulloch, Division Engineer, Montreal. The section of the line from Atherly Jct. to Orillia is to be used by the Canadian Northern Ry.

Fort William Shops.—Tenders have

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tion purposes.

Good progress is being made with construction on the Toronto-Trenton section of the line to Ottawa, and it is expected to complete it this year, work on the Colborne sub-section having been completed. J. Giroux, who had the contract for this part of the line is removing his outfit to Cobourg to go on with grading the section between there and Port Hope. The question of the entry of the line into the latter town was decided at a meeting held May 3, when the company's offer was accepted. According to the plans the station will be situated on Ontario St., near Hope St. The question of the route beyond Trenton is under consideration. The route as laid out runs within ten rods of the Deaf and Dumb Institute, and an objection is being made to this. A committee representing the City Council and the Board of Trade has reported in favor of the company's plan.

In Toronto the question of the grant-
ing of a right-of-way along the east
bank of the Don River to Ashbridge's
Marsh is under the City Council's con-
sideration. A recommendation was made
Mar. 19, that the Council construct such
a line itself and permit its use by any
railway company.

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line this year, and it was too early to say what would be done next year.

The Irondale, Bancroft and Ottawa Ry., which has been acquired by Mackenzie, Mann & Co., is being operated under lease by G. Collins, General Manager Central Ontario Ry. The I.B. & O.R. is being connected with the C.O.R. at Bird's Creek Station, Ont., by the building of about $1\frac{1}{2}$ miles of track.

Nipigon Ry.—Subsidies have been voted by the Dominion Parliament to aid in building the following lines:—From Nipigon station on the C.P.R. transcontinental line to Nipigon Lake, 30 miles; from Nipigon Bay, Lake Superior, to west of Lake Helen, not exceeding 3.5 miles; from near the crossing of French River by way of Cameron's Falls to Lake Jesse, 1.5 miles; from the north shore of Lake Nipigon for 45 miles northerly.

Canadian Northern Ry.—Vice Presi-

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Born at Toronto, Ont., Oct. 18, 1891.

The Bay of Quinte Railway.

Following the purchase of the Central Ontario Ry., the Marmora Ry. and Mining Co.'s line, and the Irondale Bancroft and Ottawa Ry., the Mackenzie, Mann & Co., interests have secured the Bay of Quinte Ry. which has a total of 89.37 miles of line, distributed as follows:—Deseronto to Bannockburn, Ont., 76.00 miles; Deseronto westerly, 2.00 miles; and Yarker to Sydenham, 11.37 miles. These lines were built under different charters, and finally amalgamated under the title of the Bay of Quinte Ry. The company also operates over 19 miles of the G.T.R. In the official report the mileage is divided as follows:—main line, 78 miles; branches and spurs, 11.37 miles; operated under trackage rights, 19 miles; yard tracks and sidings, 15.30 miles. There are on the line 73 unprotected level crossings; 12 iron bridges of an aggregate length of 1,010 ft., the maximum length being 200 ft., and the minimum length 24 ft.; and one wooden bridge 60 ft. long. Its rolling stock, June 30, 1909, the latest report available, consisted of seven locomotives; 8 first class passenger cars; three baggage, express and postal cars; 18 box cars, 126 flat cars, 20 gravel cars, two cabooses and three other road cars. There was outstanding on June 30, 1909, \$1,395,000 of common stock, and \$880,000 of bonds. The subsidies paid on account of the building of the lines were: From the Dominion Government, \$350,455.25; from the Ontario Government, \$84,000, and from municipalities, \$197,990.43.

The B. of Q.R. head office is at Deseronto, the principal officials being President E. W. Rathbun; General Freight and Passenger Agent, J. F. Chapman; Superintendent, H. B. Sherwood. We have reason to believe that matters in connection with the operation of the line will not be changed at present, probably not until the Canadian Northern Ontario Ry. from Toronto to Ottawa is built to a connection with the B. of Q.R. near Napanee.

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omicals of the two companies in different places are not in harmony.

Canadian Northern Ontario Ry.—

Work on the first section of the line from Toronto to Ottawa is well advanced as far as Trenton, Ont., to which point the first contract let carries the work. The first bridge in the Don valley, at Leslie St., Toronto, has been completed, and the rails were expected to be laid across it and through the ravine as far as Woodbine Avenue by Aug. 20. About a mile east of Leslie St., is a big cut which will take about a month of steam shovel work to get through. From this point track can be laid on the Dawes road, where the abutments for the superstructure of the overhead bridge have been completed. From there to Scarboro the work is nearly completed, and a good deal of track has been laid easterly from Scarboro. It is expected that the bridge work in York and Scarboro townships will be completed and the track laid early in Oct. The grading has been completed to the town limits of Trenton, and track has been laid along portions of the 100 mile section. The connecting up of these different sections is being proceeded with. The station and other buildings are also in course of erection.

A resolution has been passed by the

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and up the Rideau River.

Canadian Northern Ontario Ry.—Application has been made to the Board of Railway Commissioners for the approval of the location plans for the first five miles of a line from near Hurdman's bridge skirting south of the Rideau River. This is the eastern end of the line now under construction from Toronto.

The work on this line between Toronto and Trenton is everywhere well advanced, and the sub-contractors on grading are moving on beyond Trenton, from which point grading is being gone on with to Belleville. The route as approved through Sidney tp., is north of the highway from Trenton, to a point east of Belleville cemetery, thence south of the highway to the city. H. K. Wicksteed, Chief Locating Engineer, recently arrived in Belleville, for the purpose of going over the route located for the line easterly from that city, so as to connect it up at Deseronto, with the recently acquired Bay of Quinte Ry. This will necessitate a route following the bay shore, crossing the branch lines to the cement works on a viaduct, and keeping along the lake front to Deseronto. The Bay of Quinte Ry. will be utilized to Sydenham, from which place it is about 92 miles to Ottawa.

Angus Sinclair, who has the contract for building the line from Toronto to Trenton, has had his contract extended for 22 miles from Trenton to Shannonville. (A press report of Sept. 17, says grading has been begun at Trenton, proceeding easterly, and that A. McGuinnis started work on the west side of the river, at Belleville, working west.

The Toronto-Trenton section of the line is expected to be opened for traffic about the end of the year, and it is hoped to have work on the Trenton-Deseronto section sufficiently far advanced, as to have it ready for traffic during the summer of 1911, and the rest of the line into Ottawa ready by the end of that year.

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sioners.

Canadian Northern Ontario Ry.—An arrangement has been made, subject to sanction by the Board of Railway Commissioners, between the company and the Ottawa city council, by which the C.N.O.R. will be carried across Hurdman Road, temporarily. In a recent interview President Mackenzie stated that the company's Toronto-Ottawa line would be completed to Sydenham, within 90 miles of Ottawa, this year. In the spring the balance of the line would be taken in hand and rushed to completion. The route for this 90 miles has been approved by the Board of Railway Commissioners. As to the entrance into Ottawa, Mr. Mackenzie said the company had been terribly handicapped, but he hoped that by the spring everything would be straightened out.

Good progress is being made all along the sections of the line under construction between Toronto and Trenton, and in the vicinity of Belleville. Those in

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charge of construction at the latter point are said to have received instructions to get the work finished by Jan. 1. In consequence work will be rushed as fast as possible. Good progress is being made west and east of the city, and nearly all the property required in Sydney and most of that for the route in Belleville has been purchased. The Dominion Bridge Co., which has the contract for bridges over the Trent at Trenton and Moira at Belleville will commence operations immediately.

Track was reported, Oct. 14, to have been laid to near Cobourg, Ont. Station buildings at Grafton and Colborne are being built, and the preliminary work for the bridge over the Trent at Trenton is under way.

The Board of Railway Commissioners has approved of plans for station buildings at Port Hope and Cobourg, and of standard plans for various buildings to be erected on the Toronto-Ottawa line.

Representatives of Parry Sound, Ont.,

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Canadian Northern Ontario Ry.—In an interview at Ottawa, Nov. 10, W. Mackenzie, President, is reported to have said that the construction of the Toronto-Ottawa line was now within 90 miles of Ottawa, and he expected the whole would be completed by next fall.

The matter of the entrance of the line into Ottawa was before the Board of Railway Commissioners, Nov. 3, when the company's application for a temporary crossing of the Hurdman road was considered. The application, it was stated, was made for the purpose of establishing a connection for freight purposes with the Ottawa and New York Ry., which could be used during certain hours only. The mayor had expressed approval, but the city solicitor was present to oppose the application. The matter was adjourned in order to permit a formal assent to be obtained from the city council. The arrangement which the company proposes, which is now under consideration, is that the permission to use the crossing be restricted to two years.

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Ottawa will be opened for traffic about June 1, 1911. The section is about 100 miles long and the grading is completed, with the exception of some rather heavy cuttings between the Don and Cobourg, but this is not likely to delay the work very seriously, as the bridge work has been progressing rather slowly owing to the non-delivery of the steel work. There are a large number of these bridges along the route, the most important being:—At the point of junction with the Sudbury line; west fork of Rouge River, 500 ft. steel viaduct; east fork Rouge River, 180 ft. bridge; crossing of Bowman's Creek; Dixie Creek, 850 ft. steel viaduct; Greenwood Creek, 545 ft.; Oshawa Creek, 430 ft.; Stephen's Mill pond, 650 ft. steel viaduct; Port Hope, 840 ft. steel bridge. The last three bridges are not yet built. Track has been laid on various portions of the line between the Don Valley and Cobourg, and between Cobourg and Trenton track-laying has been completed, and a good deal of the ballasting done. At Trenton a steel viaduct is being erected, and when this is completed a connection will be made with the Central Ontario Ry., which has come under the control of Mackenzie, Mann & Co. There will be 15 stations on the line, the most important being at Oshawa, Bowmanville, Port Hope and Cobourg. Jex & Co., Cobourg, have the contract for the erection of the stations at Port Hope and Cobourg.

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Codourg.

There has been a change in the location of the line to Trenton from that originally laid out. The route originally surveyed crossed the Central Ontario Ry. just south of Frankford, and then proceeded in a direct line easterly, crossing the Bay of Quinte Ry. at Mud Lake, the Kingston and Pembroke Ry., at Vernon, and the Brockville, Westport and Northwestern Ry. at Newboro, thence working northerly to Ottawa. By an amended plan the route was changed, and starting at the boundary of Hal- dimand and Cramahe tps., the location now being followed is more southerly, crossing the G.T.R. near Brighton, and keeping along the lake shore, crosses the G.T.R. again at Shannonville, and works north and east to Mud Lake. With the taking over of the Bay of Quinte Ry. a further change in the route has been made. The route now approved leaves the location last mentioned near Shannonville, and proceeds south and east to Deseronto, joining up with the Bay of Quinte Ry., which line will be utilized as far as Harrowsmith, and a new route has been located from that point, joining up with the original survey at Portland. Some part of the present line from Harrowsmith to Sydenham is to be used. The Board of Railway Commissioners has authorized the building of a bridge across the Moira River at Belleville, on five instead of seven piers, as originally planned, and has authorized the Bay of Quinte Ry. to move its tracks from its yard at Nanapanee.

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Press reports state that the company's agents are purchasing land for a right of way from Ottawa to Smiths Falls, Ont., and that the projected line from Ottawa to Key Harbor will branch off from the Toronto line, about four miles southwest of the capital.

At a meeting of the board of trade of North Bay, Ont., Nov. 8, the question of the building of a line from Key Harbor to North Bay, 88 miles, by the C.N.R., was under consideration. The

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Canadian Northern Ry. Construction, Etc

James Bay and Eastern Ry.—The Board of Railway Commissioners has approved location plans for this projected railway between mileage 14.39 and mileage 14.33, in Ashuapamuchouan tp., Lake St. John county, Que. A company with this title was incorporated last session of the Dominion Parliament to build a line from James Bay, easterly to a junction with the Quebec and Lake St. John Ry. near Roberval, Que. The provisional directors are associated with the Mackenzie, Mann & Co., Ltd.

Canadian Northern Quebec Ry.—The mayor of Quebec was reported Oct. 23, as having given instructions to the city solicitors to push the action against the company for the return of \$290,000 granted to the Great Northern Ry., one of the companies amalgamated in the C.N.Q. Ry., on condition that its shops be located in the city.

We are officially advised that the company has purchased the property at the corner of St. James St. and Dollard Lane, Montreal. It is intended to make some alterations in the existing buildings in the near future, with a view to having all the company's offices in Montreal located there. This will include the general freight and passenger department, the steamship department and the express department. The price paid for the property is said to have been \$175,000.

In an interview at Ottawa, Nov. 10, W. Mackenzie, President, said work was progressing favorably on the new section of the line between Hawkesbury, Ont., and Montreal, which it is expected will be opened for traffic next fall.

The Dominion Parliament is being asked to authorize the company to build a line from Rawdon northerly to a junction with the National Transcontinental Ry., and from St. Jerome to St. Eustache, Que.

Bay of Quinte Ry.—Application is being made to the Dominion Parliament to authorize the company to enter into agreements with the C.N. Ontario Ry. and the Ontario and Ottawa Ry., for any of the purposes specified in sec. 361 of the Railway Act.

Brockville, Westport and North Western Ry.—Application is being made to the Dominion Parliament to authorize the company to enter into agreements with the C.N. Ontario Ry. and the Ontario and Ottawa Ry. for any of the purposes specified in sec. 361 of the Railway Act.

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The matter of the entrance of the line into Ottawa was before the Board of Railway Commissioners, Nov. 3, when the company's application for a temporary crossing of the Hurdman road was considered. The application, it was stated, was made for the purpose of establishing a connection for freight purposes with the Ottawa and New York Ry., which could be used during certain hours only. The mayor had expressed approval, but the city solicitor was present to oppose the application. The matter was adjourned in order to permit a formal assent to be obtained from the city council. The arrangement which the company proposes, which is now under consideration, is that the permission to use the crossing be restricted to two years.

In the course of a recent interview, D. D. Mann, Vice President C.N. Ry., is quoted as stating that the Toronto-Trenton section of the line from Toronto to

Ottawa will be opened for traffic about June 1, 1911. The section is about 100 miles long and the grading is completed, with the exception of some rather heavy cuttings between the Don and Cobourg, but this is not likely to delay the work very seriously, as the bridge work has been progressing rather slowly owing to the non-delivery of the steel work. There are a large number of these bridges along the route, the most important being:—At the point of junction with the Sudbury line; west fork of Rouge River, 500 ft. steel viaduct; east fork Rouge River, 130 ft. bridge; crossing of Bowman's Creek; Dixie Creek, 350 ft. steel viaduct; Greenwood Creek, 545 ft.; Oshawa Creek, 430 ft.; Stephen's Mill pond, 650 ft. steel viaduct; Port Hope, 340 ft. steel bridge. The last three bridges are not yet built. Track has been laid on various portions of the line between the Don Valley and Cobourg, and between Cobourg and Trenton track-laying has been completed, and a good deal of the ballasting done. At Trenton a steel viaduct is being erected, and when this is completed a connection will be made with the Central Ontario Ry., which has come under the control of Mackenzie, Mann & Co. There will be 15 stations on the line, the most important being at Oshawa, Bowmanville, Port Hope and Cobourg. Jex & Co., Cobourg, have the contract for the erection of the stations at Port Hope and Cobourg.

There has been a change in the location of the line to Trenton from that originally laid out. The route originally surveyed crossed the Central Ontario Ry. just south of Frankford, and then proceeded in a direct line easterly, crossing the Bay of Quinte Ry. at Mud Lake, the Kingston and Pembroke Ry., at Vernon, and the Brockville, Westport and Northwestern Ry., at Newboro, thence working northerly to Ottawa. By an amended plan the route was changed, and starting at the boundary of Haldimand and Cramahe tps., the location now being followed is more southerly, crossing the G.T.R. near Brighton, and keeping along the lake shore, crosses the G.T.R. again at Shannonville, and works north and east to Mud Lake. With the taking over of the Bay of Quinte Ry. a further change in the route has been made. The route now approved leaves the location last mentioned near Shannonville, and proceeds south and east to Deseronto, joining up with the Bay of Quinte Ry., which line will be utilized as far as Harrowsmith, and a new route has been located from that point, joining up with the original survey at Portland. Some part of the present line from Harrowsmith to Sydenham is to be used. The Board of Railway Commissioners has authorized the building of a bridge across the Molra River at Belleville, on five instead of seven piers, as originally planned, and has authorized the Bay of Quinte Ry. to move its tracks from its yard at Napanee.

Press reports state that the company's agents are purchasing land for a right of way from Ottawa to Smiths Falls, Ont., and that the projected line from Ottawa to Key Harbor will branch off from the Toronto line, about four miles southwest of the capital.

At a meeting of the board of trade of North Bay, Ont., Nov. 3, the question of the building of a line from Key Harbor to North Bay, 88 miles, by the C.N.R., was under consideration. The president of the board and the mayor reported having had an interview with W. Mackenzie, President C.N.R., Nov. 3, when he expressed a willingness to undertake the building of such a line. A committee was appointed to see what steps could be taken locally to further the project.

The Dominion Parliament is being

December
1910

St. John County, Que.

Canadian Northern Ontario Ry.—Orders have been issued by the Board of Railway Commissioners to cross and divert public road in lots 275 and 276, St. Benoit parish, to divert and cross by a bridge the public road at station 656-56 St. Andrew's parish; and to build across the public road between lots 15 and 16, Junction Gore, Gloucester tp.

At a session of the Board of Railway Commissioners held at Ottawa, Dec. 6, the matter of the proposed temporary entrance of the C.N.O.R. into Ottawa across Hurdman road, was further adjourned until the city council had time to consider the matter. The Chief Commissioner said the understanding was that the tracks, if laid across the road, are to be used for freight purposes only for two years, and that if used for any other purposes, the Board will compel their removal.

The work on the line between Toronto and Ottawa so far as it has been put under contract, is reported to be well forward. The grading as far as Trenton is practically complete, tracklaying is well advanced and some ballasting has been done. The station buildings are being erected, and the work of connecting up the different sections will be completed as soon as the steel work on the several bridges under construction is completed.

Plans showing a portion of the company's proposed line in North Toronto have been filed with the Minister of Railways. The section for which approval is asked extends from Poplar Plains Road to west of Leaside Jct., the line paralleling the C.P.R.

January
1911

mileage 37.9 from Hawkesbury.

Track has been laid altogether upon 71.7 miles of the Toronto-Ottawa line as follows: mileage 0 to 44.6, 44.6 miles; mileage 69.4 to 71.7, 2.3 miles; and mileage 71.8 to 96.6, 24.8 miles.

The Board of Railway Commissioners has authorized the building of the line across Hurdman's Road, Nepean tp., subject to certain conditions. The route plans for the section of the Toronto-Ottawa line between Deseronto and Portland, came up for consideration before the Minister of Railways, Jan. 10, when representatives from Newboro, Westport and other points attended and pressed their views as to the location. The Minister promised to give consideration to what had been said before approving the plans. The Board of Railway Commissioners has authorized a junction with the G.T.R. Harwood branch in Cobourg; and the building of a branch line in Trenton to connect with the Central Ontario Ry., and certain transfer tracks also in Trenton; to carry the line across Foster Ave., Belleville; to use five piers for the bridge across the Moira River at Belleville; and has approved the location of the line between Sydenham and Harrowsmith, mileage 159.70 to 162.27.

The Minister of Railways, Jan. 12, decided to refer to the Board of Railway Commissioners the application for approval of the location of the Toronto end of the line, from Macpherson Ave., to Rosedale Heights. Speaking in reference to this and other railway matters, Sir Donald D. Mann, Vice President C.N.R., said Jan. 12: "The C.P.R. is already handling business out of North Toronto, and before very long we will also be operating trains through there. Now, suppose the C.P.R. built a big passenger station there, and did not want the Canadian Northern, or any other company in the same terminal, and suppose we built a station, as we probably will do in the course of a few years, and in return for an arrangement in the present Union Station we allowed the G.T.R. to use the C.N.R. terminal in North Toronto, it could be done. The C.N.O. line to Ottawa, now under construction, of course, will be connected up with North Toronto, but just where has not been decided as yet, but north of East Toronto, the line passes within half a mile of the G.T.R. main line between Toronto and Montreal. All that would be necessary, you see, would be to construct a line across that half mile or so, and G.T.R. trains could swing to the

January
1911

THE RAILWAY AND MARINE WORLD

the north there and so continue on over the C.N.O. lines into North Toronto. But remember, I do not propose to utterly abandon the Union Station. It should also be kept in operation. Just how I would not say at present, but it seems to me that in the summer it would be the proper station from which all passenger business connecting with the steamboats should be handled. If all the roads concerned agree on that point I do not see what would be placed in the way by any other interest. It may be, however, that they could not do that, for I am not sure on that point. But, under the scheme I have suggested here as one way of handling the problem, the bulk of the through trains, at least, would be sent across the north end of the city."

The contract for the bridge on the Toronto-Trenton section at Trenton, has been let to S. Henderson, and work was started on the substructure Jan. 1. There will be two abutments and nine piers in from 12 to 19 ft. of water. Five cofferdams have been put in place, and 4ft. of concrete work done in each. It is expected to have the substructure completed in March.

January
1911

tawa.

Plans have been filed showing the route of the proposed entrance into North Toronto for the line to Buffalo. The new line is a prolongation of the Electric Development Co.'s right of way from where it ceases at Davenport Road, north of the C.P.R., to McLennan Ave. Several streets will be closed, and the tracks will be elevated between Avenue Road and Yonge St., at both of which points subways will be built. The route from Toronto will follow the Electric Development Co.'s right of way as far as possible. The entrance into Hamilton is at present undecided, but it is said that a route paralleling the G.T.R. from Burlington to the Valley Inn has been laid out. No plans have been filed with the city authorities, although the mayor was advised Feb.. 4 that they were ready, neither has any report been received from the Board of Railway Commissioners' Chief Engineer, to whom the matter was referred some time ago. Various properties have been purchased near the old N. and N.W. Ry. at Ferrie St., Queen and Greig streets, by persons said to represent the company.

The Electric Development Co. has a right of way from Hamilton to Cainsville, and the C.N.O.R. has filed plans for an entrance into Brantford over this route. (See Toronto, Niagara and Western Ry., Jan., pg. 61.)

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February
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FEBRUARY, 1911.]

THE RAILWAY AND MARINE WORLD

Canadian Northern Ry. Construction, Etc.

Canadian Northern Quebec Ry.—The Board of Railway Commissioners has ordered the company to provide a platform and shelter for freight and passenger traffic at Pointe Aux Trembles, Que.; to fence its property and tracks at Hochelaga terminals, and instal various protective devices along its line in Montreal. The company's application to build an elevated line to connect its tracks with the lines of the Montreal Harbor Commission has been referred to the Board of Railway Commissioners.

James Bay and Eastern Ry.—The Board of Railway Commissioners has approved the revised location from station 405-48 to 536-44, mileage 7.46 to 9.93, from Roberval, Que.; and authorized the crossing and diversion of the public road at stations 726-50 and 605-63 on the Indian Reserve, Lake St. John county.

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has authorized the building of the line from near Hawkesbury, towards Montreal, between lots 78 and 80, St. Eustache parish, station 1848-80; and the building of a bridge over Riviere des Milles Isles, be-

north there and so continue on over the C.N.O. lines into North Toronto. But remember, I do not propose to utterly abandon the Union Station. It should also be kept in operation. Just how I would not say at present, but it seems to me that in the summer it would be the proper station from which all passenger business connecting with the steamboats should be handled. If all the roads concerned agree on that point I do not see what would be placed in the way by any other interest. It may be, however, that they could not do that, for I am not sure on that point. But, under the scheme I have suggested here as one way of handling the problem, the bulk of the through trains, at least, would be sent across the north end of the city."

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A Hamilton press report states that

February 1911

bridge over the St. Esprit River, near Ste. Julienne station.

Canadian Northern Ontario Ry.—In a recent interview Sir Donald Mann is reported to have stated that the new line from Ottawa to Montreal would be completed this year, but it was not likely that it would be opened for passenger service. The line between Ottawa and Toronto would also be completed this year. The grading was well forward, and the engineers were getting within sight of the finish.

In connection with the building of these two lines the Board of Railway Commissioners has issued a number of orders as to the diversion of roads, crossing of highways, bridges and buildings, and approving location of line through Lanark county, mileage 29 to mileage 37.8. It is expected that the first portion of the Toronto-Ottawa line to be opened will extend from Toronto to Belleville, 120 miles.

The question of the approval of the company's plans for its line across North Toronto came before the Board of Railway Commissioners Feb. 26, and opposition was withdrawn by the C.P.R., whose line will be paralleled. The city authorities favored the C.N.O.R. plans, and the Commissioners decided to go over the route before giving any decision.

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April

1911

ized for offices.

Canadian Northern Ontario Ry.—The Dominion Parliament has granted an extension of time for the construction of the various lines authorized to be built by par. c, sub-pars. i to x, of sec. 5, and by pars b, and e of sec. 2, chap. 63, of the statutes of 1909; and a line from Berlin through Guelph, Acton and Brampton to Toronto.

The Board of Railway Commissioners has approved of the revised location plans for the line near Billings Bridge, mileage 2.3 to 3.02, from Ottawa on the Toronto-Ottawa line; and has heard an application for the approval of the locations plans for the route at Smiths Falls, mileage 37.8 to 40.8 from Ottawa. Some opposition was made to these plans on the part of residents of Smiths Falls, and the Commissioners reserved judgment. The company's right of way agent stated at Smiths Falls, April 5, that all the right of way between Ottawa and Smiths Falls had been secured and also most of the land required for the line between Smiths Falls and Sydenham. It is expected that a contract will shortly be let for the construction of the line from Ottawa to Sydenham, and that work will be commenced about during the summer.

Between Toronto and Sydenham, work is well advanced and it is expected to have a train service in operation early in the fall. Track has been laid on 95 miles, and some short stretches have to be completed to connect up with the Central Ontario Ry. at Trenton, and the Bay of Quinte Ry., the tracks of which will be used to Sydenham. Further on towards Ottawa, the Brockville, Westport and Northwestern Ry. will be joined up, and a portion of its mileage used. The Dominion Parliament has authorized these two companies to enter into agreements with the Canadian Northern Ontario Ry., and the Ontario and Ottawa Ry., or either of them.

The

MAY 1911

just been sold, has been secured for terminal station.

Canadian Northern Ontario Ry.—Contracts for the construction of the remaining portion of the C.N.O.R. between Toronto and Ottawa were let May 19. The line will have a total length of about 250 miles. Its building was started two years ago, when a contract was let to Angus Sinclair for a section of 100 miles from just outside Toronto to Trenton. Since then there have been acquired in the interests of the company, the Central Ontario Ry., the Bay of Quinte Ry. and the Brockville, Westport and North-western Ry., and these purchases necessitated some deviations from the route which had been originally laid out. As a result, certain portions of these lines will be taken in, and in course of time certain alterations and improvements will be carried out, notably on the Bay of Quinte Ry. from Deseronto to Sydenham. The contract held by Angus Sinclair was extended to cover work done beyond Trenton, and has now been extended to cover the construction of the line to Deseronto, where connection is to be made with the Bay of Quinte Ry., which is to be used from Deseronto to Sydenham. Mr. Sinclair will also build some four miles of line, in revision of location on the Bay of Quinte Ry. From Sydenham, mileage 163, a contract covering grading, fencing, bridges and culverts, tracklaying and ballasting, has been let to J. P. Mullarkey, to mileage 180, and from mileage 200 to mileage 250, and for the bridges, culverts and other work between mileage 180 and mileage 200, the grading and timber work on which will be done by Ewen Mackenzie.

The Board of Railway Commissioners has approved of the opening for traffic of the Whitney extension of the Central Ontario Ry. from Maynooth station to 14.5 miles northerly. It has also authorized the company to take, for better station accommodation, without the consent of owners, additional land in Hillier tp., Ont.

Representatives of the city of Hamil-

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June
1911

MONTREAL.

CANADIAN NORTHERN ONTARIO RY.—
Toronto to Deseronto, Angus Sinclair;
two short pieces of grade revision on
Bay of Quinte Ry. between Deseronto
and Sydenham, about four miles, Angus
Sinclair; Sydenham to Ottawa, 163
miles; J. P. Mullarkey, except so far as
the grading and timber work from mile-
age 180 to mileage 200, which will be
done by Ewen Mackenzie.

June
1911

operation within two years.

Canadian Northern Ontario Ry.—A start was made at Dwyer Hill, midway between Ottawa and Smiths Falls, June 12, upon the grading of the remaining section of the Toronto-Ottawa line. At this point a subcontract covering six miles has been let to Ross and McCombe. Another subcontract is reported let to —. Harrison, at Smiths Falls. Other contractors are reported to have their plants ready to move in as soon as the general contractors have assigned them mileage. The locating engineers are busy completing their work, so as to let the contractors start work.

The Board of Railway Commissioners has approved location plans for the line through Loughborough, Storrington, Bedford, South Crosby and Bastard tps. The line through these townships is an extension of the line from the terminus of the Bay of Quinte Ry. at Sydenham, towards Ottawa.

The Department of Railways has approved route maps of two small revisions of line between Deseronto and Sydenham, on the Bay of Quinte, which is being made part of the C.N.O.R. between Toronto and Ottawa. The deviations are about five miles and 1½ miles respectively.

The Board of Railway Commissioners has dismissed the application of the ratepayers of Cobourg, Ont., for a subway under the tracks at William St., and has ordered the company to remove certain obstructions to the view near the crossing.

The Department of Railways has an-

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July
1911

IS SAID TO BE—
Canadian Northern Ontario Ry.—The erection of the steel superstructure of the bridge across the Trent River at Trenton has been practically completed, and the steel has been delivered for some small bridges between Cobourg and Trenton, Ont. An announcement of the date of opening this section of the line is expected daily.

The grading on the extension to Belleville has been completed to the city boundary, and is being progressed with through the city. The substructure for the bridge across the Moira River is well advanced, and a contract has been let to T. Manley for the building of a station on Church St., south of Dundas St., at a cost of about \$22,000. A five-stall

September
1911

THE RAILWAY AND MARINE WORLD.

is roundhouse is being built at Napanee, into
which, it is expected, will be completed short
a- in Nov. In connection with the build- city
r- ing of the line on to Ottawa, a sub- plan
et, contract has been let to R. A. Girouard The
at for a section of about nine miles from of
ut Jones' Locks, Smiths Falls to Otter and
nd Lake. hinc

on A spur has been completed at Ottawa, hav
n- connecting the line from Montreal and seas
ds, Quebec, with the Ottawa and New York T
rs, Ry. plei

in The company is reported to have pur- the
m- chased 110 acres of land at Bowesville, Hu
at- near the concrete bridge being built over to
to the Rideau River, at the point where it sou
ain is expected the Toronto-Ottawa line will a
ny join the company's transcontinental line. wh
da. This area will be used for shops, etc., 44
G. according to the reports. Other reports will
B. state that options have been obtained on Ri
are something like 2,000 acres of land on the an
of Merivale road for the company's pur- Su
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September
1911

Lawresbury.

The negotiations for the entrance of the line into Ottawa are proceeding, and it was reported Sept. 13, that the company had completed the purchase of the land necessary for its entrance and terminals. It is stated that negotiations are in progress for the purchase of the site of the Bate warehouse, on the west bank of the Rideau canal, just across from the new central station, for station purposes.

Revised plans for the line at Buck Lake, in Storrington and Bedford tps., and from mileage 164.31 to 165.55, have been approved by the Board of Railway Commissioners, which has also approv-

October 1911

THE RAILWAY AND MARINE WORLD

ed of plans for a station at Belleville.

It is expected that the first section of the new line from Toronto to Ottawa will be opened for traffic Oct. 1. The mileage of this section from the junction with the Toronto-Sudbury line in the Don Valley just outside Toronto, to Trenton, is 104.4 miles. The company's officers inspected the line at the end of Aug., and the inspection by the Engineers of the Department of Railways was fixed for Sept 23. The Board of Railway Commissioners has authorized the company to connect its tracks with the Central Ontario Ry. tracks at Trenton, mileage 104.4, from Toronto. The Board has also approved of the plans for laying out a freight yard at Trenton.

Application will be made to the Board of Railway Commissioners, Oct. 12, for approval of plans for a station building just south of the new bridge over the Don at Queen St. east, Toronto, and for the approval of the plans for the Toronto-Ottawa line from across the north part of Toronto.

October 1911

Canadian Northern Ontario Ry.—The first section of 100 miles of the Toronto-Ottawa line was opened for traffic Oct. 9. It branches off from the Toronto-Sudbury line in the Don Valley, extending to Trenton, Ont., where a junction is effected with the Central Ontario Ry., which is under C.N.R. control. The Board of Railway Commissioners authorized the opening of the line for traffic Sept. 30, the inspecting engineer of the Department of Railways having approved the line Sept. 24. The construction of the remaining mileage into Ottawa is being proceeded with at a satisfactory rate.

The matter of the route from the Don Valley along the north part of Toronto in the direction of Hamilton, etc., has been before the Board of Railway Commissioners on several occasions lately. On Sept. 30, the Commissioners approved

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November 1911

and Capreol tp.

The Board of Railway Commissioners as a result of the hearing of the company's application for a right of way adjacent to the C.P.R. tracks in the north part of Toronto, has made an order, to the effect that the C.P.R. give the company running rights over a sufficient number of tracks east of Yonge St. to Summerhill Ave., to enable it to have access to its proposed terminal yards west of Yonge St. There is to be a subway at Yonge St., where each company will have three tracks. Plans for this subway were ordered to be made in conformity with this decision.

St. Wm. Mackenzie President is re-

December 1911

named was reported to
pleted Nov. 9.

Canadian Northern Ontario Ry.—The Dominion Parliament is being asked to authorize the sale of a portion of the constructed right of way of the Carillon and Grenville Ry., between Grenville and Carillon, Que., by the Carillon and Grenville Ry., to the C.N.O.R., and to confirm a notarial deed of sale thereof dated July 25.

Montreal city officials were notified, Nov. 6, that application had been made to the Board of Railway Commissioners for making the necessary connections at Montreal for the new direct line to Hawkesbury. This line will join the existing line near Maisonneuve, and trains will run into the present station on Moreau st., pending the construction of the new central terminal station. This line is a part of the main line to Sudbury, Ont., for which a subsidy was granted last session of the Dominion Parliament. Nothing has been done in the way of constructing the Ottawa-Sudbury section of the line, but the usual preparatory work is being gone on with. Beyond the junction with the existing Toronto-Sudbury line, a further section has been opened for traffic, from Gowganda Jct. to one mile west of Ruel, 14 miles, the order permitting this being dated Nov. 10. The line through to Port Arthur from this point is under contract, and construction gangs are at work from both ends. The Board of Railway Commissioners has approved revised location plans for the following sections: mileage 68.7 to 80.8; 92.37 to 93.27; 124.27 to 127.32, and 182.03 to 183.79, all from Sudbury Jct., Ont.

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December 1911

Sudbury Jct., Ont.

The first section of the Toronto-Ottawa line was opened recently to Trenton, where a roundhouse, machine shop, etc., are being erected. The buildings with the necessary yard space and tracks will cover about five acres. Permission has been granted for the opening for freight traffic of a further section, from Trenton to Belleville, 15.5 miles, and for its connection with the Thurlow Ry. on lot 25, con. 1, Thurlow tp.; and with the Belleville and Point Anne Ry. The grading of the line between Belleville and Deseronto has been completed and track is being laid. From Deseronto to Sydenham the Bay of Quinte Ry. line will be used. The location of this line is being revised at two places in order to give better gradients. Work is also in progress between Sydenham and Smiths Falls, and from the Ottawa end to Smiths Falls. The Board of Railway Commissioners has approved revised locations at Perth Road, Loughborough tp., mileage 170.35 to 171.4 from Toronto; in South Crosby tp., mileage 186.77 to 188.78 from Toronto, and has authorized the operation of construction trains across the C.P.R. and the G.T.R. near Ottawa.

The land which has recently been bought near Rideau Jct., Ottawa, is, we are advised, for yards, etc., for a divisional point.

No official announcement has been

December
1911

Ont.

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has authorized the company to build a line from Stanley St., Trenton, to the railway bridge across the Trent river, to connect the Central Ontario Ry. with the company's Toronto-Ottawa line. The Commissioners have also authorized the opening for traffic of the line from Harrowsmith to Sydenham, mileage 160.50 to 163.60 from Don Jet., Toronto. From Sydenham to Ottawa the line is under contract, and considerable progress has been made with the grading. It is expected that track will be laid over it by Dec. 31.

The plans for the company's line across North Toronto are being worked out, as also are the plans for the line from Toronto to Hamilton and Buffalo. Several surveys have been made through Hamilton and the Niagara peninsula, and plans have been filed. Those for the line through Hamilton were filed Feb. 22, but have not been approved.

Press reports stated recently that the company was considering plans for a line to Kincardine, Ont. We are officially advised that while at some distant date such a line might be built, the company is not considering it at present.

Canadian Northern Ry. Speaking in

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MARCH 1912

Ry.
The line under construction from Toronto to Ottawa, which has been in operation for some time as far as Trenton, was reported completed as far as Deseronto, Feb. 29. At this point connection is made with the Bay of Quinte Ry. and trains will run over it as far as Sydenham, whence the line is under contract to Ottawa. Some betterment, including a couple of cut offs, have been done on the E. of Q. Ry. in order to provide for heavier traffic. A freight service is being operated from Toronto to Sydenham, but it is not expected that a passenger service will be put on until the summer.

The plans for the extension of the

April
1912
P178

Canadian Northern Ontario Ry.—Construction is reported to be proceeding at a satisfactory rate on the line under construction into Ottawa from Toronto. An official inspection of the line was made recently by the company's officers and G. A. Mountain, Chief Engineer of the Board of Railway Commissioners, the special train carrying the party running as far east as Enterprise. A train service was put in operation as far as Napanee, June 14.

Press reports state that plans are being prepared for improving the Brockville, Westport and North Western Ry., which is owned by C.N.O. Ry. interests, and is being operated as a branch line. It is proposed to relay 40 miles with new ties and steel and to bring it up to the C.N.O.R. standard. The point of junction is about 25 miles north of Brockville, to which point the grading on the Toronto-Ottawa line has been completed, and it is expected that tracklaying will be started in June. The grading beyond this point to Ottawa is well advanced.

The company has made very extensive purchases of land in the vicinity of Lakeside Jet., near Toronto, for yard and terminal purposes, and a site for a model city.

JUNE
1912

Canadian Northern Ontario Ry.—Construction is reported to be proceeding at a satisfactory rate on the line under construction into Ottawa from Toronto. An official inspection of the line was made recently by the company's officers and G. A. Mountain, Chief Engineer of the Board of Railway Commissioners, the special train carrying the party running as far east as Enterprise. A train service was put in operation as far as Napanee, June 14.

Press reports state that plans are being prepared for improving the Brockville, Westport and North Western Ry., which is owned by C.N.O. Ry. interests, and is being operated as a branch line. It is proposed to relay 40 miles with new ties and steel and to bring it up to the C.N.O.R. standard. The point of junction is about 35 miles north of Brockville, to which point the grading on the Toronto-Ottawa line has been completed, and it is expected that tracklaying will be started in June. The grading beyond this point to Ottawa is well advanced.

The company has made very extensive purchases of land in the vicinity of Leaside Jet., near Toronto, for yard and terminal purposes, and a site for a model city.

July 1912

spring.

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has authorized the operation of traffic over the line from Toronto to Deseronto, Ont., resending previous orders. Work is well advanced on the line to Sydenham, which includes the cut offs on the Bay of Quinte Ry., the contract for which is being carried out by Angus Sinclair. From Sydenham to Ottawa, 90 miles, J. P. Mullarkey, is carrying out the contract for the greater part of the work, Ewen Mackenzie having completed the grading on the 20 miles from mileage 180 to 200. On this 90 miles track is reported to have been laid from Ottawa to the Rideau River, and track is also being laid westerly from Sydenham. Another track laying gang is preparing to start work at Forfar, where the line crosses the Brockville, Westport and Northern Ry.

A route map has been approved by the Minister of Railways for the company's projected line easterly from North Toronto for 7.2 miles.

Sir Wm. Mackenzie is reported as having recently stated that the company's plans included the laying out of large yards and shops at Leaside Jct., and smaller shops on the Rideau River, near Ottawa. The principal shops of the company would be those at Leaside Jct., near Toronto, and at Port Mann, B.C. A new building for the head offices would be erected in Toronto. The union station to be erected at North Toronto by the C.P.R. would be the company's principal station in the city, although a few of the trains might run into the Front St. station.

The Minister of Railways has approved of a route map for the company's proposed line through the counties of Lincoln and Welland, Ont.

August
1912

P400

district, mileage 208.03 to 209.3, and mileage 271.53 to 274.18 from Port Arthur.

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has approved of revised location of the line in Camden tp., and has authorized the operation of traffic between mileage 145.83 and 149 and between mileage 152.13 and 152.72.

Plans have been filed with the Toronto city authorities showing how it is proposed to connect the Toronto-Ottawa line and the Toronto-Sudbury line with the new union station in North Toronto. The plans include provision for a new joint station about 2.5 miles east of Leaside Junction, and a steel girder bridge which will carry the Ottawa-Toronto line connection over the Don river.

The C.N.O.R. and the C.P.R. trains will run east together from North Toronto

August 1912

mileage 268.03 to 269.3, and mileage 271.53 to 274.16 from Port Arthur.

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has approved of revised location of the line in Camden tp., and has authorized the operation of traffic between mileage 145.83 and 149 and between mileage 152.13 and 152.72.

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The C.N.O.R. and the C.P.R. trains will run east together from North Toronto

*October
1912*

DIAN RAILWAY AND MARINE W

Construction, Betterments, Etc.

station as far as the west Don river, which will be crossed by means of the present bridge, which is to be double-tracked. Immediately east of this the C.N.O. Ry. will deviate, and its own tracks will branch out, that to the north passing under the C.P.R. tracks about 200 yards to the west of the C.P.R. Don bridge, and then connect with the existing line where it emerges over the Don valley, while the Ottawa-Toronto line will run easterly, crossing the Don river on a steel girder bridge about 500 yards farther down the river than that of the C.P.R., after which the line will run out towards the present line, connecting with it in close proximity to the G.I.R. Scarboro Junction station.

In connection with the line

October
1912

Canadian Northern Ontario Ry.—It is expected that the line from Ottawa to Toronto will be completed this year. With the exception of the bridges over the Rideau and Jock rivers, the section between Ottawa and Smiths Falls is practically ready for track laying. This work is to be started early in November. The section between Harrowsmith, the end of the Bay of Quinte Ry., which is incorporated in the line to Smiths Falls, is well advanced toward completion.

November 1912

Canadian Northern Ontario Ry.—It is expected that the line from Ottawa to Toronto will be completed this year. With the exception of the bridges over the Rideau and Jock rivers, the section between Ottawa and Smiths Falls is practically ready for track laying. This work is to be started early in November. The section between Harrowsmith, the end of the Bay of Quinte Ry., which is incorporated in the line to Smiths Falls, is well advanced towards completion.

November 1912

Sound.

During 1912 track was laid on 45 miles of the line between Ottawa and Toronto. The uncompleted section is between Sydenham and Ottawa, 80 miles. J. P. Mullarkey has the contract for the entire distance, with the exception of certain work on a 20-mile section which was let to Ewen Mackenzie. The work on the section is well advanced.

Plans which have been approved by the Board of Railway Commissioners were recently filed at the Toronto City Hall for the line from Leaside Jct. to the union station at North Toronto, which is to be built by the C.P.R. for joint use with the C.N.R. The plan shows a line parallel with the C.P.R. from Leaside Jct., as far as Cottingham street, at which point the two lines will join.

We are officially advised that the com

January 1913

the entire section of 450 miles.

Canadian Northern Ontario Ry.—The Board of Railway Commissioners has authorized the building of a line across the C.P.R. near Donlands station, York Tp., to connect the Toronto-Sudbury line with the Toronto-Ottawa line to the North Toronto Station at the head of Yonge St.

Mr. Wm. Mackenzie, President, is reported as stating, Feb. 5, that it is expected to put a regular passenger service in operation between Toronto and Ottawa, in June or July.

Press reports state that arrangements are being made under which the C.N. Ry. interests and the G.T.R. will build a joint station and hotel in Hamilton, Ont.

An agreement was reached Feb. 5 with

February 1913

Port Arthur by the fall.

Canadian Northern Ontario Ry.—Track is reported to have been laid on the Toronto-Ottawa line between Chaffey's Locks and Lombardy, and that only about seven miles of tracklaying is required to complete the line.

In connection with the building of the line into Toronto, the company is asking for the incorporation of Leaside, or its annexation to the city. The Board of Control was informed, Mar. 5, that a car building plant and other industries will be established there. The plans for an entrance to the yards on Eastern Ave. have been filed with the Toronto City Council. The line connects with the Ottawa-North Toronto line at the junction with the C.P.R. just outside the city, crossing the Don River, paralleling the C.P.R. to Winchester St., crossing the C.P.R. and parallel to the Don River, to south of Queen St., then across the river to Eastern Ave.

p180 April
1913

MAY 20, 1913
Canadian Northern Ontario Ry.—The lift bridge across the Rideau River at Jones Lock, has been completed. The lift span is 57 ft. long, weighs 270 tons, and will be operated by an electric motor.

The Board of Railway Commissioners has approved of revised location plans for the line, mileage 4.35 to 7.21 from Yonge St., through York and Scarboro tps.

By a vote of eight to four, the Toronto City Council, April 8, declined to adopt the resolution of the Board of Control, favoring the annexation by the city of the Leaside townsite, on which the C.N.O. Ry. proposes to lay out terminal yards, and build shops.

MAY 1913

Canadian Northern Ontario Ry.—The last section of the Toronto-Ottawa line to be completed is that between the Jack River and Smiths Falls, Ont. The ballasting and final completion of the line will take several months.

Sir Donald Mann, Vice President, had an

June 1913

Port Arthur, in Dorion tp.
The Board of Railway Commissioners
has approved of revised location plans
for the Toronto-Ottawa line, in the
vicinity of Stonehouse Lake, Storrington
tp., mileage 174.67 to 175.35 from To-
ronto.

June
1913

completed.

Canadian Northern Ontario Ry.—The Dominion Government entered into a contract, June 13, with the C. N. O. R. for the building of a line from Toronto to Ottawa, 250 miles; under the terms of the act passed last session to aid in the construction of this and other lines. Work on this line is rapidly approaching completion.

The question of the proposed tunnel in North Toronto came before the Board of Railway Commissioners at Toronto, July 15. Considerable opposition was manifested, and the hearing was adjourned.

August
1913

September, 1913.]

CANADIAN RAILWAY AND MARINE WORLD.

411

North Toronto Grade Separation, Canadian Pacific Railway.

The C.P.R. is carrying out the grade separation work on its line across the northern part of Toronto, in compliance with the Board of Railway Commissioners' order, which called for the elevation of its tracks as well as those of the Canadian Northern Ontario Ry. line, which is projected to enter Toronto from the west along a route following that of the C.P.R. most of the way through that portion of the city. This order called for the elevation of all through tracks from Dufferin St. on the west to Summerhill Ave. on the east, with subways for the majority of the streets crossed. The constructional work is being conducted by the C.P.R., the C.N.O.R. and the city sharing equally in the cost with the C.P.R.

The C.P.R.'s North Toronto line was formerly owned by the Ontario and Que-

line, work on which is now under way.

The viaduct is to be built for 5 tracks, and will be about 3 miles long, covering the more congested portion of the route. Of these five tracks, the northerly one will be used as a service track by the C.N.O.R., as that line connects at both ends with the C.P.R. route from the north. The southerly one will be for C.P.R. service. Of the three central tracks, the two northerly are to be built at present, and will be used jointly for through service. The fifth track will not be built at present, but provision is made for laying it as occasion may require.

To date, only one subway has been built, that at Avenue Road, which is shown in the accompanying illustration. The others will be proceeded with as ordered, the headway clearance of all but this completed subway being as yet under

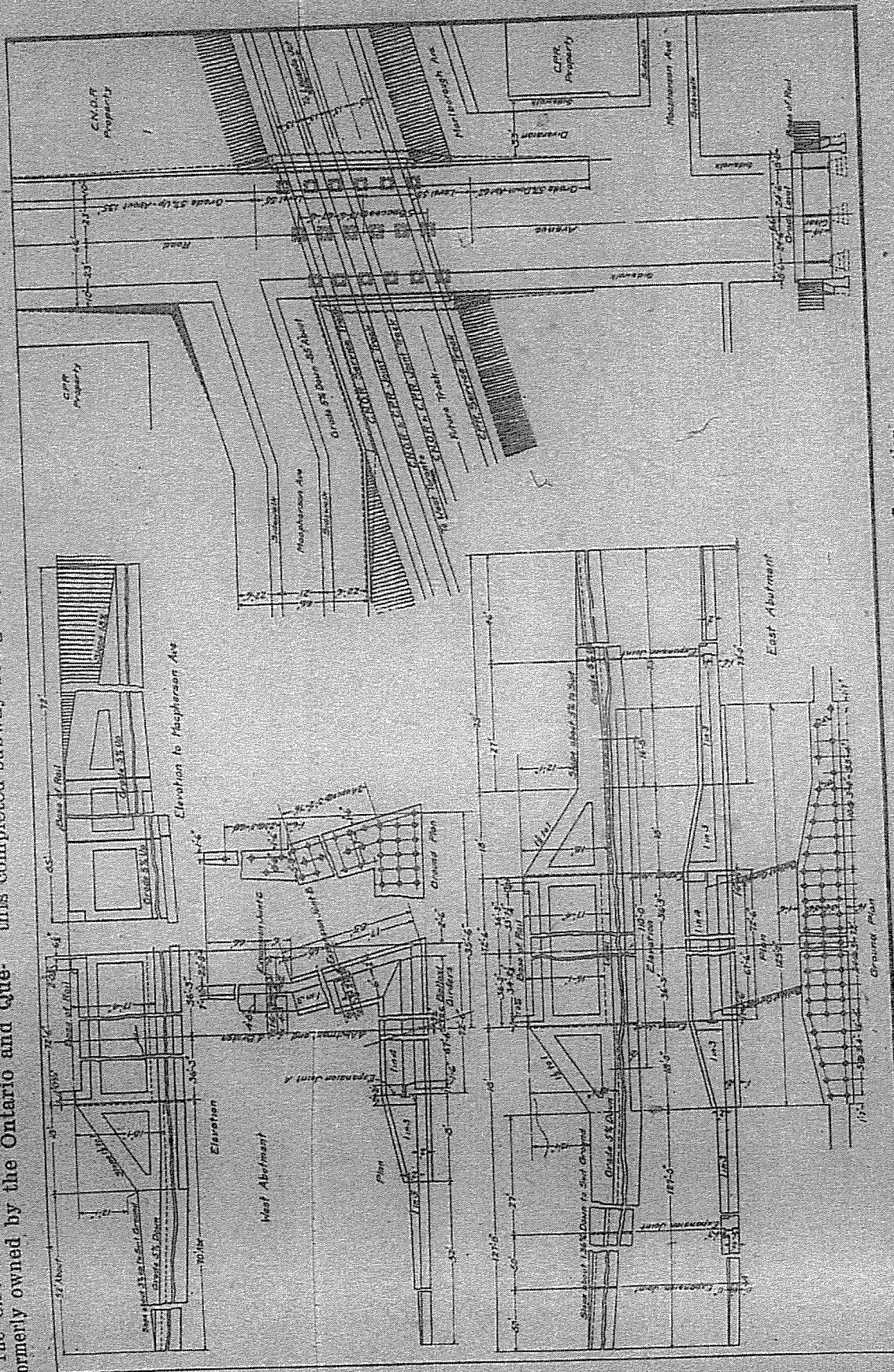
The elevation work between subways has been carried forward in a similar manner, leaving the southerly track open at grade, building a trestle on the north side, on which traffic was diverted. The portion that has so far been elevated is the section from Summerhill Ave. to near Davenport Road, including Yonge St. crossing, which is now being carried on a temporary timber trestle, pending a settlement in the clearance dispute. The two northerly tracks are completed, and the others are being pushed forward. On this section, the elevation is about 12 ft. above the former grade.

It is expected that the new Union Station for the C.P.R. and C.N.O.R. will be in this portion of the line, on the east side of Yonge St., but no definite decision has been announced.

The next subway to be built will be at Davenport Road, where two streets—Davenport Road and Poplar Plains Road—will be carried under the tracks in one

September 1913 p411

C.P.R. The C.P.R.'s North Toronto line was formerly owned by the Ontario and Quebec Ry. which was absorbed by the C.P.R. —will be carried under this completed subway being as yet under consideration, the headway clearance of the subway entrance from the north, the two streets uniting at the intersection of the tracks.



Avenue Road Subway, North Toronto Grade Separation.

subway, by forming a T entrance from the north, the two streets uniting at the intersection of the tracks.

September 1913 411

The substructure for this line is being completed, and the superstructure will be put in place during the winter.

Canadian Northern Ontario Ry.—The line from Toronto to Ottawa, which has recently been completed, is 240 miles long. A freight service has been put in operation, but it is not intended to operate a passenger service until next summer. The company is now able to give connection through the C.N. Quebec Ry. at Hawkesbury, Ont., with Montreal, Quebec and Lake St. John.

The Board of Railway Commissioners has approved of revised location through York Tp. and part of the city of Toronto, mileage 2.28 to 6.16 from Yonge St.

Canadian Northern Ry.—In connection

December 1913

Canadian National Toronto - Napanee Tracks.—Sir Henry Drayton asked, in the House of Commons recently: "What, if any, duplication of tracks and railway services has the Canadian National Ry. system been able to remove between Toronto and Napanee?" The Minister of Railways, Mr. Graham, replied: "The former Canadian Northern tracks between Brighton and Cobourg have been taken up. A saving since June, 1920, of 42,627 passenger train miles per annum has been effected and offices of the two lines at the following places have been consolidated: Toronto, Oshawa, Port Hope, Cobourg, Grafton, Colborne, Brighton, Trenton, Belleville, Napanee."

July 1924
P356

bury Jct. and Callander station, Ont.

Canadian Northern Ontario Ry.--A mixed freight and passenger service has been put in operation on the Ottawa-Sydenham section of the Ottawa-Toronto line which has recently been completed. A regular freight and passenger service has been operated for some time between Toronto and Sydenham, and these services will be run through to Ottawa early in the spring.

The Board of Railway Commissioners has authorized the opening for traffic of the branch from Oshawa station to the material yard south of William St., 2.75 miles, and the building of a transfer track between the C.N.O.R. Oshawa spur and the Oshawa Ry.

Montreal-Ottawa Port Arthur Line. Track

July 1913

BY A TOWN OF THE TO GET, JAN. 31.

Canadian Northern Ontario Ry.—It has been announced that the branch on the Toronto-Sudbury line from Uthoff into Orillia, will be opened for traffic, Mar. 1.

Montreal-Ottawa-Port Arthur line.—The Board of Railway Commissioners has

April 1914

autumn.

Canadian Northern Ontario Ry.—The first through train from Quebec, run entirely over the C.N.R. lines, arrived in Toronto May 1, and was sent on to the west, over the company's Toronto-Sudbury line. By this route the company is enabled to give connections from Quebec through to west of Edmonton, Alta.

In connection with the opening for through traffic of the Toronto-Ottawa line a passenger service, mainly for tourist purposes, is to be operated by a gasoline electric car, from Ottawa to Chaffey's Locks 79 miles.

With regard to the lines to be built under

June 1914

272

of inspection to the tunnel works, June 12.

Canadian Northern Ontario Ry.—It was announced that a regular through passenger train service would be put in operation between Toronto and Ottawa, June 29, replacing the previous services.

A passenger train service was put in operation on the spur line, completed four years ago, from Udney, on the Toronto-Sudbury line, into Orillia, June 13. The line is about 10 miles long. Press reports state it is intended to build an extension of this line from Orillia, round the west side of Lake Couchiching, rejoining the Toronto-Sudbury line at Hamlet, thereby enabling the company's trains to run through Orillia.

Canadian Northern Ontario Ry.

July 1914

p 322

~~THE PART OF MONTREAL~~
Canadian Northern Ontario Ry.—The Board of Railway Commissioners has authorized the C.N.O.R. to make a connection with the G.T.R. at Ottawa. The line between Ottawa and Toronto has been opened for traffic, and also the portion of the Montreal-Ottawa-Port Arthur line from the junction with the line from Toronto, this latter being operated as a through line from Toronto to Edmonton.

The Board of Railway Commissioners has approved location plans of the proposed entrance into Toronto, mileage 251.84 to 253.73, Queen St. East.

~~A press report states that~~

August 1914
P374

been completed.

Canadian Northern Ontario Ry.—A proposition is reported to have been submitted suggesting that the C.N.O.R. join with the C.P.R. and the G.T.R. for the building of a joint four track line from a common point near Queen St. East at the Don River, Toronto, where a union station can be built, alongside the Don, to the union station tracks.

Plans have been filed showing the proposed entrance into Toronto from the west. They show a line four miles long, and include a tunnel of 2,360 ft. from east of St. Clarens Ave., just south of Davenport Road, to Talbot St. The tracks will be

Canadian Northern Railway Tunnel in Toronto.

The new line which the Canadian Northern Ontario Ry. has projected from Toronto to the Niagara frontier, will negotiate the escarpment near the northwest corner of Toronto by a tunnel 2,360 ft. long. The line, from the proposed union station at North Toronto, will parallel the C.P.R. North Toronto line for about 3 miles, branching off northwesterly, the original survey locating the line to the south of the shoulder of land which the revised line will pass under.

The east portal to the tunnel will be at the corner of Davenport Rd. and St. Clarens Ave., alongside the Canada Foundry Co.'s plant, the tunnel emerging at the west portal a short distance south of St. Clair Ave., just west of the G.T.R. Toronto-North Bay line, the greatest depth over the tunnel being 40 ft. From this point westerly to the outskirts of Toronto, the tracks will be depressed in a 15 to 20 ft. cut, all the streets crossing overhead. This tunnel and depressed tracks will mean a big saving in what would otherwise be heavy property damages, and at the same time will eliminate all grade crossings.

The tunnel will be double tracked, probably of the same form as that now being used in the tunnel the C.N.R. interests are building under Mount Royal at Montreal. This construction is the twin tunnel type with a dividing

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are practically level, requiring but a small amount of excavation and fill. The principal exception was Capreol, where some heavy cutting was made necessary. Foley was also comparatively heavy, and Fitzbach had some filling. Both Hector and Rideau, however, were practically level.

The several yards were planned in the office of H. E. B. Smith, Engineer of Yards and Terminals, Toronto, from whom the data on which this article is based, was secured, through the courtesy of A. P. Stewart, Chief Engineer. We are also indebted to J. Montgomery, of the Imperial Construction Co., for information concerning the standard buildings which are being erected by that company at these points.

Automatic Electric Block Signalling on the Canadian Pacific Railway.

In addition to the block signalling work referred to in previous issues, automatic block signals are being installed between Montreal Jct. and Iberville Jct., Que., 27 miles; between West Toronto and Islington, Ont., 5 miles; between Markstay and Stinson, Ont., 11 miles; for 3 miles at Mattawa, Ont., and between Renfrew and Extonville, Ont., 6 miles. For the 13 miles between Islington and Streetsville Jct., Ont., they have been rearranged for the new second track.

The block signal system in operation between Fort William, Ont., and Winnipeg is similar to that in use on the Eastern Lines except that the signals protect station limits only. The signals, which are of semaphore type, are located about 3,000 ft. outside of the outlying switch, and, in accordance with usual C.P.R. practice, the

A. L. Smith, Superintendent District 1, Lake Superior Division, Sudbury, Ont., has issued the following special rules:—

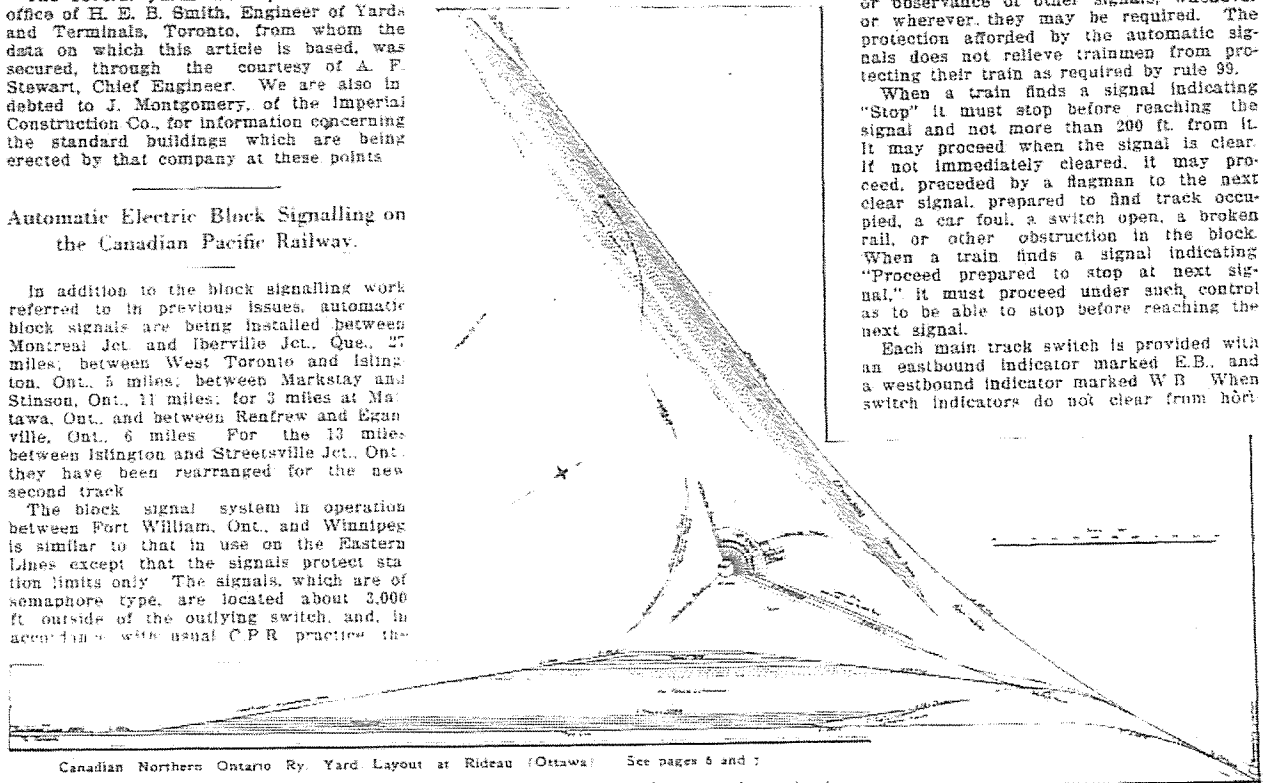
The movement of trains between Markstay and Stinson, and at Mattawa, will be controlled by normal danger automatic block signals of the three position, upper quadrant type, the three positions being:

a signal has a pointed end. A lunar white marker light is placed at 6 ft. below, and on the opposite side of pole from signal light.

The track is divided into blocks, and the block signals control the use of the block but do not effect movement of train under the train rules, nor dispense with the use or observance of other signals, whenever or wherever they may be required. The protection afforded by the automatic signals does not relieve trainmen from protecting their train as required by rule 93.

When a train finds a signal indicating "Stop" it must stop before reaching the signal and not more than 200 ft. from it. It may proceed when the signal is clear. If not immediately cleared, it may proceed, preceded by a flagman to the next clear signal, prepared to find track occupied, a car foul, a switch open, a broken rail, or other obstruction in the block. When a train finds a signal indicating "Proceed prepared to stop at next signal," it must proceed under such control as to be able to stop before reaching the next signal.

Each main track switch is provided with an eastbound indicator marked E.B., and a westbound indicator marked W.B. When switch indicators do not clear from horizontal



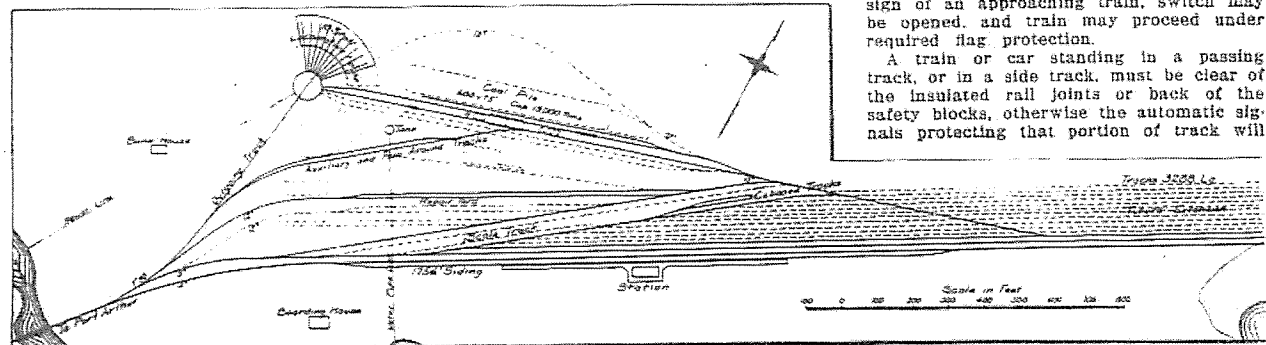
Canadian Northern Ontario Ry. Yard Layout at Rideau (Ottawa). See pages 6 and 7.

semaphore stands at horizontal for "stop" and 90 degrees above horizontal for "clear." They are electrically operated, and act in such a way that a car or engine occupying the main track at any point from the signal through the station yard will hold the signal at "stop," and also if a switch in the main line should be open or a car happen

horizontal, forty five degrees above horizontal, and ninety degrees above horizontal. The indications given are:—Arm horizontal—Stop. When in this position a red light is displayed at night. Arm forty five degrees above horizontal—Proceed, prepared to stop at next signal. When in this position a yellow light is displayed at night.

zonal to vertical by operating the push button underneath the indicator, it will indicate that a train is approaching and switch must not be opened until sufficient time has elapsed to allow the approaching train to pass. If, after this period of time, indicator will not clear, and there is no sign of an approaching train, switch may be opened, and train may proceed under required flag protection.

A train or car standing in a passing track, or in a side track, must be clear of the insulated rail joints or back of the safety blocks, otherwise the automatic signals protecting that portion of track will



Canadian Northern Ontario Ry. Yard Layout at Hector (West End). See pages 6 and 7.

to stand on siding close enough to the switch to foul the main line or there should happen to be a broken rail in the portion of track protected by the signal, the signal will stand automatically at "stop"—furthermore, the mechanism is so designed that in the event of a possible failure of the electric current or in the mechanism itself the signal will stand at "stop."

Arm ninety degrees above horizontal—Proceed. When in this position a green light is displayed at night.

The signals governing eastbound trains have even numbers, and those governing westbound trains have odd numbers, and are on poles, located at the entrance to each block on the right hand side as seen from an approaching train. The arm of

not clear for an approaching train.

Conductors must report by wire to the Superintendent from the first telegraph station all delays caused by signals, giving the number of signal, and cause if known. Engineers must use forms S. M. 1 to report delays at signals, except delays on account of train ahead. Track foreman and other employees will also report promptly by wire

January 1914

Interchange of Traffic With Canadian Northern Railway at Toronto.

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Announcement was made in Canadian Railway and Marine World for February that there is to be a complete interchange of passenger traffic at Toronto between the Grand Trunk and Canadian Pacific on the one hand, and the Canadian Northern Eastern Lines on the other. For a number of years there have been restrictions in this interchange at Toronto that have prevented passengers coming from points on other lines travelling by Toronto, to a number of points reached by the Canadian Northern Ontario, because tickets could not be issued through. By the arrangement now entered into, passengers will be able to obtain through tickets and the benefit of the through fares to all points reached on Canadian Northern Eastern Lines.

To the East, passengers will be able to go by Toronto through to the Rideau Lakes, Ottawa, Montreal and on to Quebec and the Lake St. John country north of Quebec. North of Toronto they may go to Sparrow Lake, and to the Muskoka Lakes, where the Canadian Northern passes through the centre of the district with wharf side stations on Bala Park Island and on the shores of Lake Joseph where they have a marine railway at Lake Joseph station for the handling of motor craft direct from the cars into the water. The line runs into Parry Sound and follows the Hinterland to the Georgian Bay, crossing Bolger Lake, the Maganetewan, Pickerel and French Rivers to Sudbury. At Capreol the line from Toronto is joined by the one from Montreal now nearing completion; the steel is laid all the way to Port Arthur. At present the line is only being operated to Ruel; but when opened through shortly, it will link the eastern and western lines of the system.

MARCH
1914

ing October.

Canadian Northern Ontario Ry.—A contract has been let for the erection of a cooling plant at Trenton on the Toronto-Ottawa line.

The city of Hamilton is reported to have

October 19/4

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ALCO. Steam is now used as motive power.

Ottawa-Toronto passenger service. The Canadian Northern Ry., which has been operating one passenger train a day each way between Ottawa and Toronto, has also put on two daily night trains, the westbound one leaving Ottawa at 10.50 p.m., arriving Toronto 7.30 a.m. and the one eastbound leaving Toronto at 11 p.m., arriving Ottawa 7.40 a.m.

Pacific Great Eastern Ry.—It was reported, Oct. 3, that track had been laid to mile-

1914

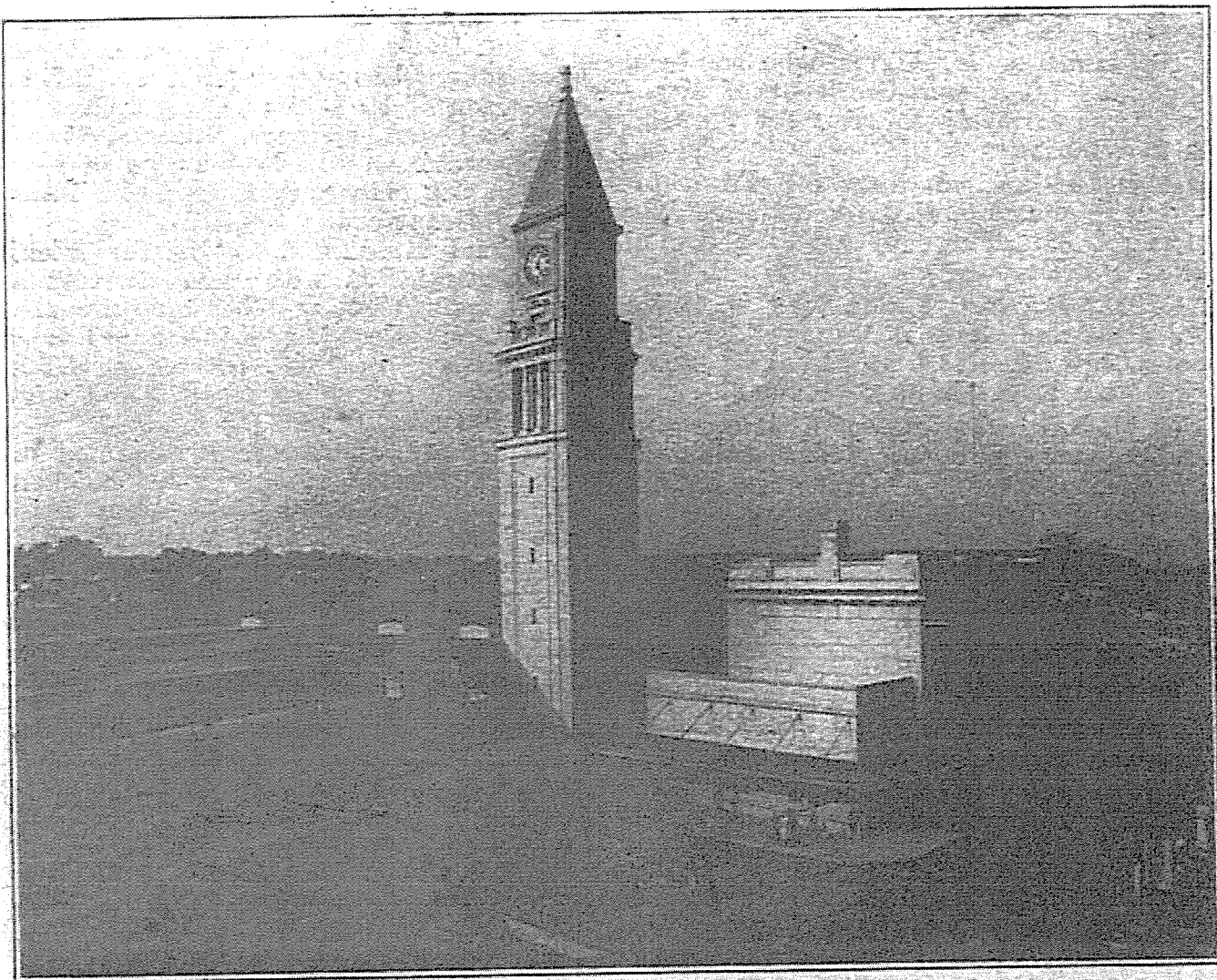
electrical substruction at the western end of the tunnel is about two-thirds completed.

Canadian Northern Ontario Ry.—The first freight train from Toronto arrived in Port Arthur, Ont., Oct. 10. The section of the line from Capreol to Ruel has been operated over for some time, but the Ruel-Port Arthur section has only been finally completed recently. The line from Capreol to Port Arthur forms part of the Montreal-Ottawa-Port Arthur section of the company's transcontinental line. The line from Toronto to Capreol will be the Toronto branch of the transcontinental line.

We are officially advised that although a train of stock cars went over the line as stated, it has not yet been opened for public traffic.

Canadian Northern Ontario Ry.

1914 -



North Toronto Station, Canadian Pacific Railway.

The illustration published in Canadian Railway and Marine World for July, in connection with the article on the opening of North Toronto station, was made, as stated, from the architect's drawing, and did not show the butterfly roofs over the platforms. The above illustration, made from a photograph, shows the station as completed, together with the butterfly roofs. Under the Yonge St. subway, to the left of the illustration, are shown the tracks which are being built to extend the Toronto Railway from its present terminus on Yonge St., just south of the C.P.R. crossing, to the city's old north limits, between Woodlawn and Farnham Avenues, where the Toronto & York Radial Ry.'s Metropolitan Division's present southerly terminus is. There will, however, be no physical connection, as the city of Toronto would not consent to it and also because the two electric railways have different gauges.

P287 1916

Opening of North Toronto Station, Canadian Pacific Railway.

The new station at North Toronto, which is being built by the C.P.R., although not fully completed, was officially opened for traffic June 14, when train 24 left at 10 p.m. for Montreal via Peterborough, carrying also Ottawa sleeping cars. A. D. MacTier, General Manager, Eastern Lines, who came to Toronto for the opening, was entertained at dinner at the National Club, with a number of other guests, by the Mayor and city council, after which the party proceeded to the new station, every portion of which, including the platforms, was thronged with spectators. Speaking from a dais erected in the main wait-

Ottawa via Belleville and Kempton, at 1.55 p.m.; no. 713 for Teeswater, via Streetsville, at 4.45 p.m.; no. 608 for Lindsay at 5.15 p.m., and no. 707 for Owen Sound, via Bolton, at 5.25 p.m. The other arriving trains are no. 605 from Lindsay at 10.30 a.m.; no. 708 from Owen Sound at 8.10 p.m.; and no. 714 from Teeswater via Streetsville at 8.45 p.m.; and the York, from Ottawa via Kempton and Belleville, at 9.20 p.m.

The new station forms part of the whole general scheme of track elevation across the north end of the city, which is now approaching completion, involving the raising of the tracks for about 4

West Toronto, and about four years ago the C.P.R. decided to make use of the line from North Toronto to Leaside Jct. for passenger traffic, starting therefrom one of its Toronto-Montreal night trains, and running one of the Montreal-Toronto night trains into it. This proved such a success that a further development of the northern entrance was decided on. The smallness of the existing station made necessary further accommodation, the result of which is the new station, which is now almost complete. This station has been designed on a larger scale than would be required for C.P.R. traffic alone, as the Canadian Northern



Fig. 1. North Toronto Station, Canadian Pacific Railway.

This view, made from the architect's drawing, does not show the butterfly roofs over the platforms extending along the north side of the station and over the subway. They will be shown in another view, which will be published in Canadian Railway and Marine World as soon as the tower is completed, and the whole building, etc., can be photographed in a finished condition.

ing room the Mayor introduced Mr. MacTier, who spoke briefly, and was followed by Sir James Carroll and C. J. Parr, M.P., of New Zealand, and several members of parliament and members of the city council. The Mayor then declared the station open and the party proceeded upstairs to one of the platforms to see train 24 start sharp on time.

At present five trains leave the station each week day and five arrive, the Sunday service being one train out and one in. In addition to the Toronto-Montreal train, leaving at 10 p.m. as above mentioned train 23 from Montreal via Peterborough, carrying also Ottawa sleeping cars, arrives at 8 a.m. The other departing trains are the Rideau, for

miles, with the elimination of all grade crossings. The North Toronto line has for a number of years been used by the C.P.R. principally as a freight cut off between Leaside Jct. and West Toronto from which points the main line runs down to the union station in the lower part of the city. Originally the Leaside-West Toronto line was the only entrance into Toronto of the Ontario & Quebec Ry., which was absorbed by the C.P.R. in its early days, and subsequently a connection was built from Leaside Jct. to connect with the union station, and all passenger trains from the east were run over it. For several years a connecting stub line service was operated both ways between Leaside Jct., and

in planning a permanent entrance into Toronto decided on the northerly entrance, arrangements being made with the C.P.R. to build the station, the C.N.R. to use it jointly as tenants. It is the Canadian Northern's intention to use this station for most, if not all, of its Toronto passenger service, but the C.P.R. will retain its connection with the present union station near the waterfront, only using the North Toronto station for certain trains.

A perspective of the new station is shown in fig. 1; a ground floor plan in fig. 2; and the trackage arrangement in the station vicinity, with its relation to the city transportation conveniences, in fig. 3. The station is located on the east

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A representative of the new station is

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side of Yonge St., at the present end of the Toronto Ry.'s Yonge St. line, which passes down through the centre of the city. With this convenient and through street car line, the new station is very easily reached from the business centre of the city. The rapid growth of the city

and stone structure, the central section of which has a high roof, flanked by two lower sections containing the station facilities. On the Yonge St. side there is being built a 140 ft. clock tower, the 30 ft. spire of which will be of terra cotta. The station building is 114 x 76

waiting room on the west are the ticket offices and telegraph offices. Flanking the east side of the waiting room are the women's room, smoking room, lavatory facilities, and telephone booths. Adjoining the waiting room in the north-east corner are the news stand and staff

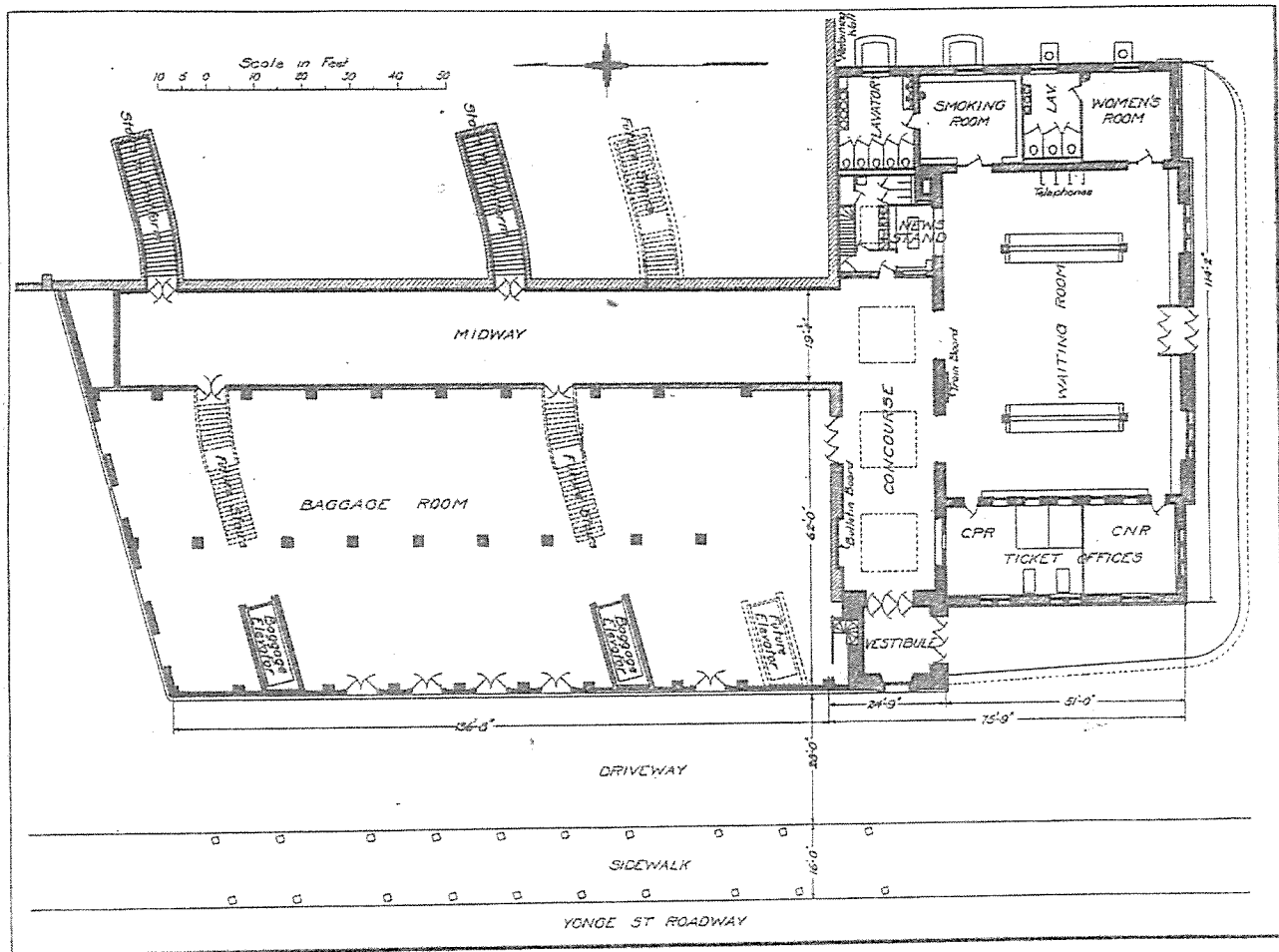


Fig. 2. Ground Plan, North Toronto Station, Canadian Pacific Railway.

The stairs near the south east end of the midway, shown in the above plan as "future stairs," have been built. The two projected stairs on the west side of the midway, also shown as "future stairs," have not been built.

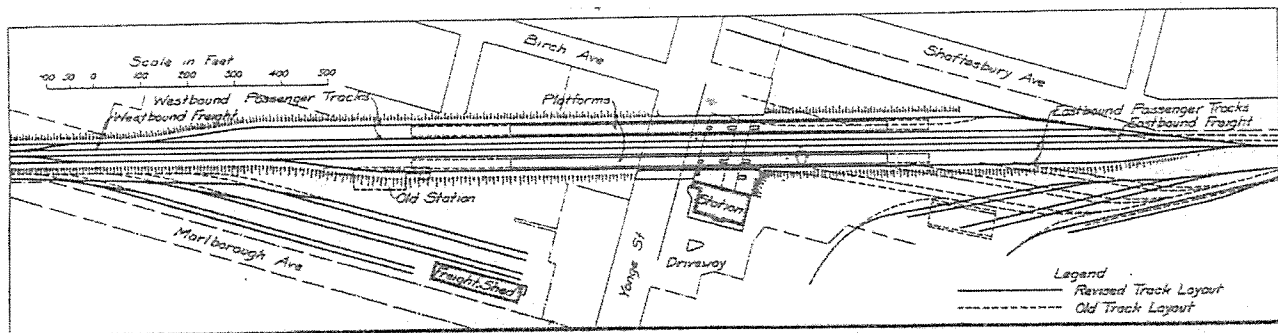


Fig. 3. Track Arrangement, North Toronto Station, Canadian Pacific Railway.

northward makes the North Toronto location particularly available for that section of the city, the new location being more centrally located with regard to the centre of population than the present downtown union station.

The new station is a single story brick

ft., the broader side facing south, with the tracks on the north side passing it at an angle of about 15 degrees. The central or high section of the station is the main waiting room, 70 x 51 ft., with a centrally located entrance from the driveway on the south side. Flanking this

lavatory. Directly opposite the main entrance to the midway under the tracks. The vestibule under the tower leads into the concourse along the north side of the west end of the waiting room, connecting at its east end with the midway. The south and west sides of the station have

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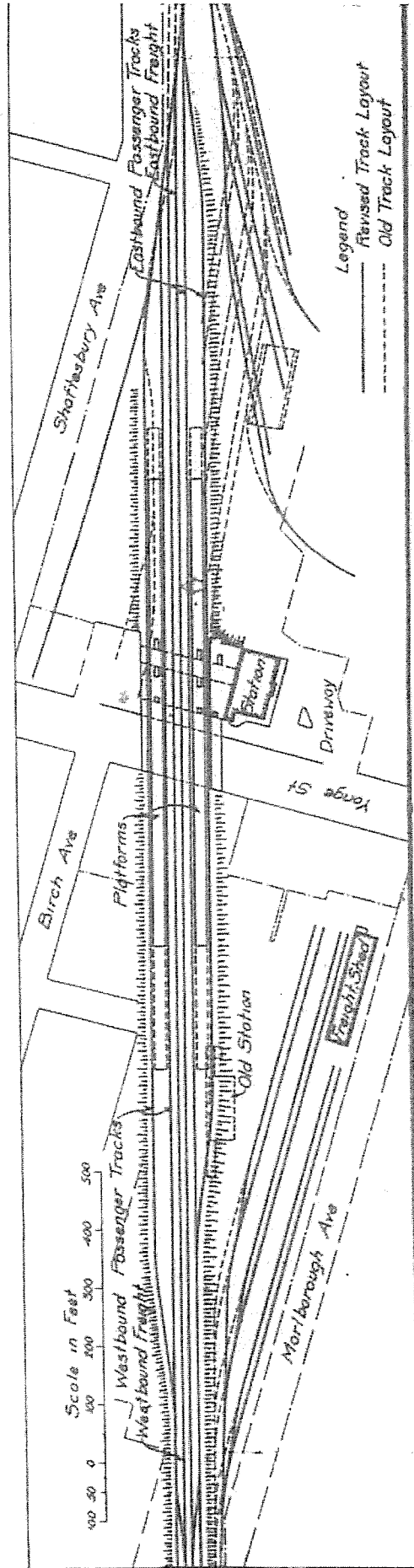


Fig. 3. Track Arrangement, North Toronto Station, Canadian Pacific Railway.

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sidewalks with metal canopies, so that passengers may either alight at the main entrance centrally on the south side, or at the tower vestibule, the expectation being that the latter entrance will be used by the majority of passengers who have already secured their tickets, and only require to pass directly to the trains, relieving the main waiting room of much of the congestion that might otherwise occur. Along the west side of the station is a 28 ft. driveway, so that vehicles may drive up to either station entrance, and pass through under the tracks through this driveway and out on Yonge St. to the north of the station.

The midway is a passage 20 ft. wide passing from the rear of the station to the far side of the tracks, under the latter. The elevation of the tracks makes a difference in grade between the track platforms and the station level of 15½ ft., giving a headway in the midway of about 14 ft.

Passing over the midway are 6 through tracks, which now connect with two main tracks to the west and a single track to the east, but are so located as to connect in the future with the proposed double track to the east on the revised grade. The northerly two tracks are for westbound trains and the southerly two for eastbound trains, each pair being at 31 ft. centres and tributary to a single platform. The two centre tracks at 13 ft. centres from each other and from the adjoining passenger ones are not tributary to a platform and are reserved for freight or other through train movements, the southerly one for eastbound and the northerly one for westbound. As all passenger trains will originate and terminate at the West Toronto yards and may stand in the North Toronto station for a considerable time, this arrangement gives the greatest possible flexibility in operation, by assigning certain tracks for standing trains and keeping certain others open for through movements at all times.

The platforms are 20 ft. 3¼ in. wide and 600 ft. long to accommodate 10-car trains. The portions over the baggage room and subways are of reinforced concrete, and the remaining portions are of wood which will be replaced with concrete when the fill upon which they are built has settled. When traffic requirements warrant, they may be extended to a maximum length of 1,600 ft., thus permitting each platform track to accommodate two trains, or a total of four eastbound and four westbound trains clear of the through tracks.

Butterfly, or inverted umbrella roofs, some 360 ft. long, extend over the concrete portions of the platforms, protecting access to the stairways and elevators. When the fill settles sufficiently to give proper foundation, they will be extended to cover the full length of the platforms. The roof proper is of wood, on a steel frame, which is supported by steel posts in the middle of the platforms. It has a spread of 25 ft. and extends well over cars standing on the platform tracks, thus giving, in many respects, the same protection as the Bush type of train shed when trains occupy the platform tracks. The platforms are reached from the midway by three 6 ft. stairways on the east side. The plans provide for future stairways opposite the present proposed stairways.

The baggage room, 137 x 62 ft., occupies all the section beneath the tracks between the midway and Yonge St. driveway. From the latter the baggage is received through 5 doorways, and is

raised on trucks to the platform level by three 15 x 5¼ ft. elevators. From the southwest corner of the baggage room a spiral stairway ascends to the track level, where the station master's office is located in the tower above the vestibule. Passenger communication with the baggage room is through the concourse.

The whole exterior of the building, with the exception of the spire, is faced with limestone from Tyndall, Man. The choice of this Canadian stone has been justified by the excellent color effect of the masonry in the mass, an effect equal to any that could have been obtained by the importation of the better known building stones from the United States. The spire on top of the tower will be faced with terra cotta of a color and texture to tone in with the limestone facing of the remainder of the building. The section under the tracks is of steel and concrete construction.

The main waiting room, tower vestibule and concourse are lined with marble for their entire height, the architectural effect being obtained by the use of different colored marbles, all set in practically the same plane, so as to avoid as far as possible all offsets and other dirt collecting projections. The plaster ceiling of the main waiting room is treated in a broad manner with large panels. The midway is lined with glazed brick for its full height, as are the staircases heading up to the platforms.

A complete system of electric clocks of British manufacture will be installed; of these the large tower clock with four 8 ft. dials will form a part. The clocks throughout the building will be controlled by a master clock which will be synchronized daily from the company's chief time station at Montreal.

All ornamental ironwork such as door frames, stairs, large windows and the marquise on the south and west fronts has been executed by a Toronto firm and all the steel sash throughout the building have been imported from England. The plastering, marble, heating, ventilating, plumbing and electric work has all been carried out by Toronto firms. Wherever possible, and there are but few exceptions, all materials and labor employed in the construction of the building are of Canadian or British origin, and, in accordance with the company's requirements, Canadian timber has been used for all woodwork, whether rough lumber or finished mill work.

The plans were prepared by Darling & Pearson, architects, Toronto, under the J. M. R. Fairbairn, Assistant Chief Engineer, C.P.R., and D. H. Mapes, Engineer of Building, C.P.R. The contractors are P. Lyall & Sons Construction Co. Ltd.

The track elevation work, which included extensive baggage room and roadway construction under the tracks, was carried out under the charge of Blair Ripley, M. Can. Soc. C.E., Engineer of Grade Separation, C.P.R., now Officer Commanding No. 1 Overseas Construction Battalion.

The Board of Railway Commissioners held sittings for hearing complaints as follows: Winnipeg, June 12; Saskatoon, Sask., June 14; Quebec, Que., June 17; Edmonton, Alta., June 15; Vancouver, B.C., June 26; Victoria, B.C., June 28; Montreal, June 28. Sittings will also be held as follows: Nelson, B.C., July 5; Calgary, Alta., July 10; Moose Jaw, Sask., July 12; Regina, Sask., July 13; Winnipeg, July 14; Fort William, Ont., July 17; Sudbury, Ont., July 19.

Canadian Northern Railway Guaranteed Securities.

In the article in Canadian Railway and Marine World for June on "Further Dominion Aid to the Canadian Northern Ry. and the Grand Trunk Pacific Ry.," onpg. 225, in the second paragraph under the heading "Returns to Parliament," line three, reference was made to the "Total amount of stock outstanding," while at the end the word "securities" was used. The word "stock" was used inadvertently instead of securities, which word was used in the return submitted in the House of Commons by the Minister of Finance. As generally understood the word "stock" refers to shares or common stock, and not to bonds, debentures or other securities which are secured by mortgage, guarantee or otherwise, and a correspondent contends that even the word "securities" does not properly express the character of the C.N.R.'s outstanding indebtedness mentioned in the return.

As mentioned above the word "securities" was used in the return submitted to Parliament, and if our correspondent feels very much excited about it use he should communicate with the Minister of Finance, instead of with us.

The return referred to, which is in the form of a sessional paper, is headed "Statement of Securities Outstanding." The securities listed include bonds of different kinds, 1st mortgage stock, 1st mortgage debenture stock, terminal debenture stock, branch lines stock, second charge stock, perpetual consolidated debenture stock, and perpetual debenture stock.

In the table at the conclusion of the second paragraph referred to the total amount of securities issued was stated as \$383,770,798. This was made up by adding the \$25,000,000 of income bonds to the \$358,770,798 of guaranteed and unguaranteed securities issued. The total guaranteed and unguaranteed securities authorized amount to \$383,438,742.

Canadian Ticket Agents' Association.

The Association's annual outing was held at Port Arthur, Ont., June 12 and 13. The party, numbering about 200 arrived in the city on the Northern Navigation Co.'s steamship Hamonic from Sarnia, and were received by a reception committee of the city council and the board of trade. After the formal reception the members held the annual business meeting, and the ladies were taken for auto trips in the city, and were entertained in the evening by the Women's Canadian Club. The members held their annual smoking concert on June 12, and on June 13, the entire party went taken on a trip around the bay on the tug Whalen, and in the afternoon went via the Canadian Northern Ry. to Kakabeka Falls. They returned east by the C.P.R. steamship Assiniboia to Port McNicoll.

The following were elected officers at the annual meeting, all being located in Ontario:—President, A. M. Hare, Tillsonburg; 1st Vice President, E. R. Blow, Whitby; 2nd Vice President, H. F. Whittier, Trenton; 3rd Vice President, J. Ransford, Clinton; Secretary-Treasurer, E. de la Hooke, London; Auditor, B. Caswell, Smiths Falls. Executive Committee, J. Jackson, Clinton; W. McIlroy, Toronto; W. J. Moffatt, Toronto; F. W. Churchill, Collingwood; C. B. Jones, Orillia.

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Canadian Railway and Marine World

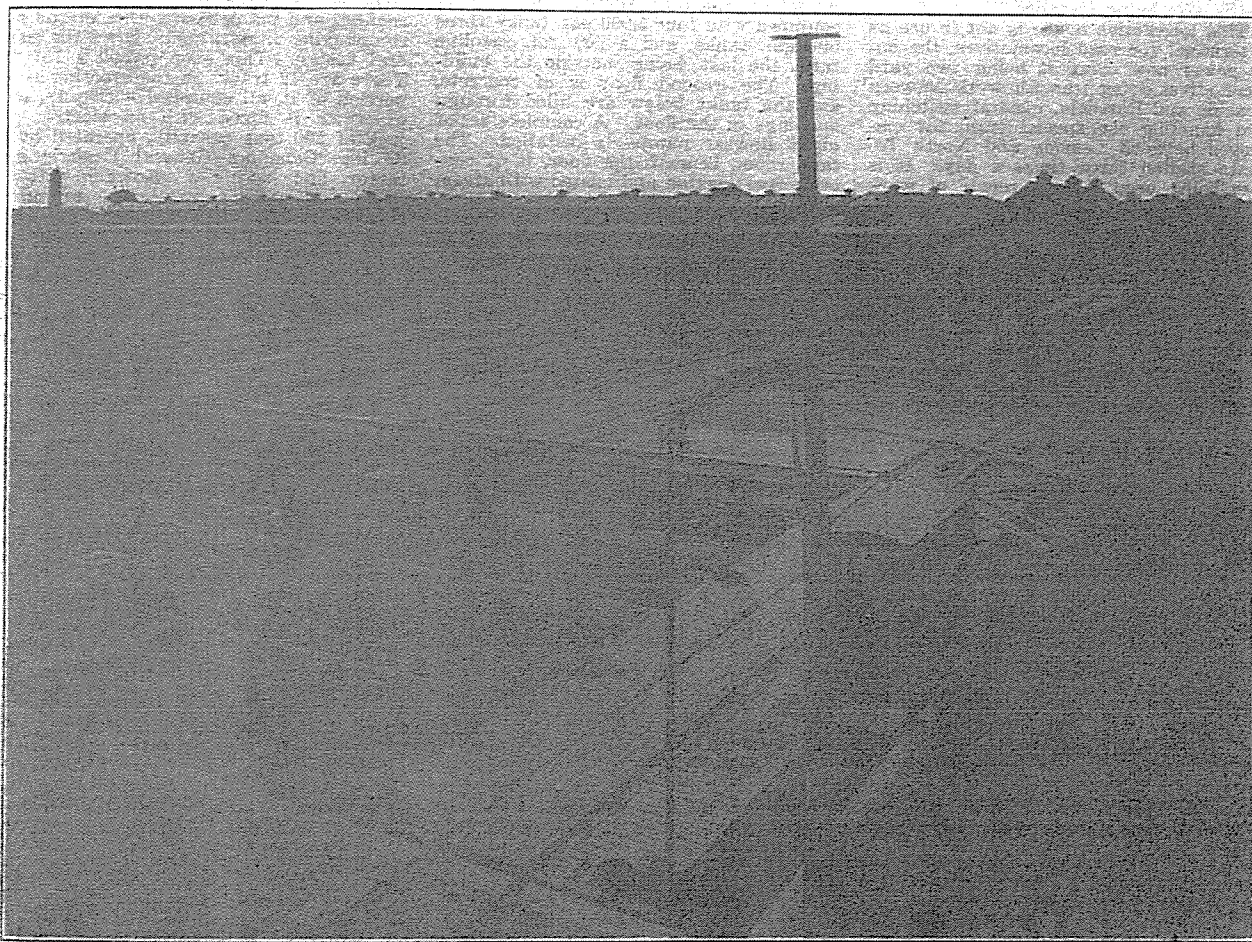
March, 1921

Leaside Shops, Canadian National Railways.

The Canadian National Ry. shops in Leaside, a town adjoining Toronto on the northeast, occupy a portion of a large area of land acquired by Canadian Northern Ry. interests in 1911, and are situated immediately north of Leaside station, C.P.R., on the latter's Toronto-Montreal line. Connection with the double track C.P.R. line is had by a track from

been made for a 15 track freight classification yard, with capacity for over 600 cars, a feature of this yard being that the north lead will extend directly as an inward track to the locomotive house. The passenger car yard ladder track will also extend direct to the turntable, and from this track will be branch tracks to the stores platform, scrap docks, and

and locomotive shop, and the east portion of the stores platform, nearest the car shop, is utilized for storage of car parts and castings. At the north side of the car repair yard, the heavier grades of car castings are stored. There also is the lumber storage area, which parallels the track leading to the north end of the transfer table. A series of petty



Passenger Car Shop and Transfer Table, Leaside, Canadian National Railways.

Duncan, on the C.N.R. Toronto-Sudbury line, 11.1 miles from Toronto Union station to a point on the C.P.R. line some 1,200 yards east of the new shops. There is not as yet a connection between Leaside shops and the C.N.R. Toronto-Ottawa line, although authority has been given to build a track to connect the latter line with the C.P.R. near the same junction point as is made by the Duncan connection. The C.N.R. has running rights over the C.P.R. tracks to a point west of North Toronto station.

The general arrangement of the shops is shown by the accompanying plan. To the northwest of, and immediately adjoining the C.P.R. yard, just east of the C.P.R. Leaside station, provision has

both ends of the transfer table, while a well arranged layout of switches and cross-overs will provide for facility of movement within the yards.

A most important point in the layout of any repair shops concerns the distribution of material to all portions of them, and in this respect the Leaside shops are well planned. The main stores, and the platform adjoining, provided for the storage of castings, are convenient to the locomotive house, power house, locomotive shop, car shop and blacksmith shop, and plank flooring between the locomotive shop and stores building fits this area for the storage of wheels. Bar iron and similar materials are stored between the blacksmith shop

stores and tool rooms, in connection with the various shops, completes the storage and material distribution system.

The principal buildings are the locomotive house and power house, the combined stores and office building, blacksmith shop, locomotive shop and passenger car shop, the two last being served by the same transfer table. There are numerous auxiliary buildings, the functions of which will be mentioned further on in this article. All buildings are equipped with steel lockers for employees' use, and modern lavatory conveniences.

The locomotive house, of which the first unit of 10 stalls is completed, is of solid brick construction and concrete foundations, and with tar, felt and gra-

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vel roofing. The stalls are 100 ft. long, 14 ft. wide in front, and 30 ft. wide at the rear. All tracks have concrete lined pits, with end drainage, and steam heating coils at the side. The house is equipped with three drop pits, for driving, locomotive truck and tender truck wheels. A concrete floor, 20 ft. wide, extends the length of the house, adjoining the outer wall. The large windows ensure the interior being well lighted, and electric lights are used for artificial illumination. The arrangement of the lighting causes a good light to be thrown into cab interiors, a desirable feature in locomotive house work. The house is piped for compressed air, water and steam; the air compressors and water pumps being located in the boiler house, and the steam being piped from there also. A Hancock boiler testing apparatus is also being installed.

This locomotive house is not in use as a terminal for road locomotives, the only power now using it being two yard locomotives doing transfer work between Leaside and Rosedale, general switching and handling the special train for employees between Leaside and North Toronto station three times a day. It is also being used for the repair of work equipment, principally hoists and steam shovels. The C.N.R. freight and passen-

lathes, planer, radial drill, power hack saw, etc., all driven off a line shaft by one motor. The accompanying cross-section of the house furnishes further details of construction.

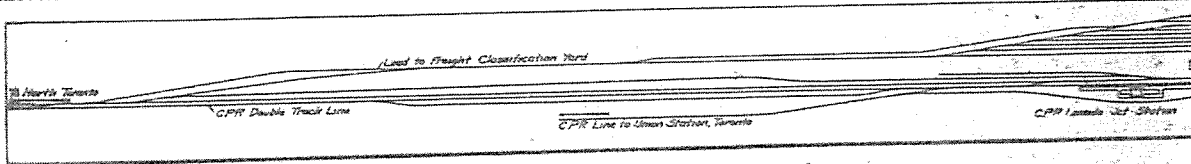
Coal, Sand, Water, etc.—The coaling plant, a Fairbanks-Morse installation, is of 200 tons capacity, of the endless chain bucket conveyor type, and electrically operated. The coal is unloaded into a hopper on the center track, there being two chutes for each track on both sides. The sand house is in connection with the coaling plant, the steam coil drying system being used. The water tank, of 60,000 gal. capacity, is of wood on concrete foundations, and the ash plant, on the north inward track, will be mechanically operated on completion.

Oil Storage.—Auxiliary to the locomotive house is the oil house, also of brick on concrete foundations. It is equipped with four 1,000 gal. tanks, three 500 gal. tanks, and a 200 gal. gasoline tank, the last being outside the building. The ground floor is of concrete, and the tanks below are filled through openings in the floor. A complete set of eight Bowser pumps is installed. The tank room, beneath the floor, is of concrete construction and heated with steam coils.

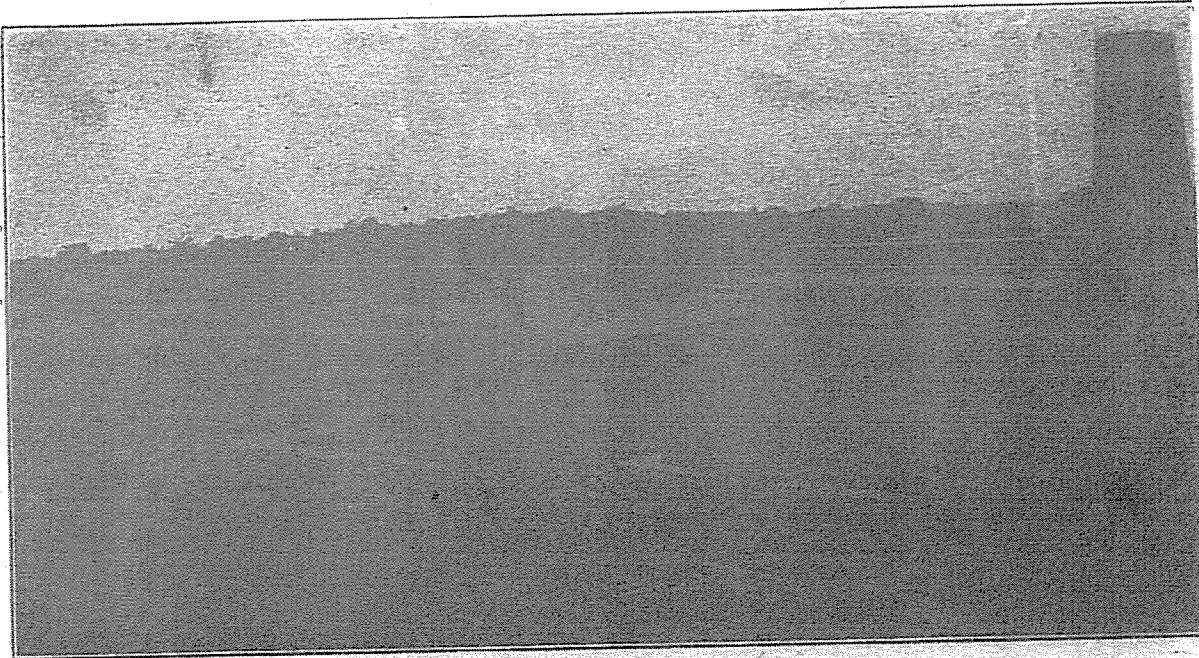
The boiler and power house, of the

compressor, and three boiler feed pumps, condenser and fire pump. Power for the entire plant is received here from the Toronto & Niagara Power Co. at 13,200 volts, and the main transformer, which is water cooled, steps it down to 550 volts, for the use of machine motors. Auxiliary transformers take the current at 550 volts, and step it down to 110 for lighting purposes. Two generators, the capacity of each being 375 k.v.a., are held in reserve. The switchboard was made by the Northern Electric Co., and the high tension instruments by the Canadian General Electric Co., the main transformer by the Maloney Electric Co., and the auxiliary transformers by the Ferranti Co.

The locomotive shop is to the north of the locomotive house, and is of transverse type, built of brick, on concrete foundations, with felt, tar and gravel roofing, and plank floor. One of the accompanying illustrations shows the general design. This shop is 300 x 151 ft. There are 12 tracks in the erecting shop portion of it, all equipped with pits, one of which is fitted with an electric pit jack of 200 tons capacity, operated by a 25 h.p. Canadian General Electric a.c. motor, and having a maximum lift of 90 in. At present, two tracks are used exclusively for tender work, which, not



Leaside Shops, Canadian National Railways. See also opposite page.



Leaside Shops, Canadian National Railways. See also opposite page.

ger locomotives running out of Toronto are being taken care of at the G.T.R. locomotive house at York, 5.44 miles from the Union Station, on the Toronto line.

The turntable, 30 ft. long, is to have an air motor installed.

In connection with the locomotive house is a small machine shop, equipped with

same type of construction as the locomotive house, is equipped with four 200 h.p. Babcock & Wilcox boilers, hand fired, with coal storage at the north side. These boilers supply steam for heating the entire plant, the automatic steam trap principle being employed. The power house portion of the building is equipped with a Canadian Ingersoll-Rand

counting the drop pit track, leaves nine tracks for locomotive repairs.

The large number of windows ensures excellent lighting, and night illumination is by electricity. The shop is heated by steam coils, the steam being piped from the boiler house. Ventilation is provided by windows in both sides of a large hood extending the length of the

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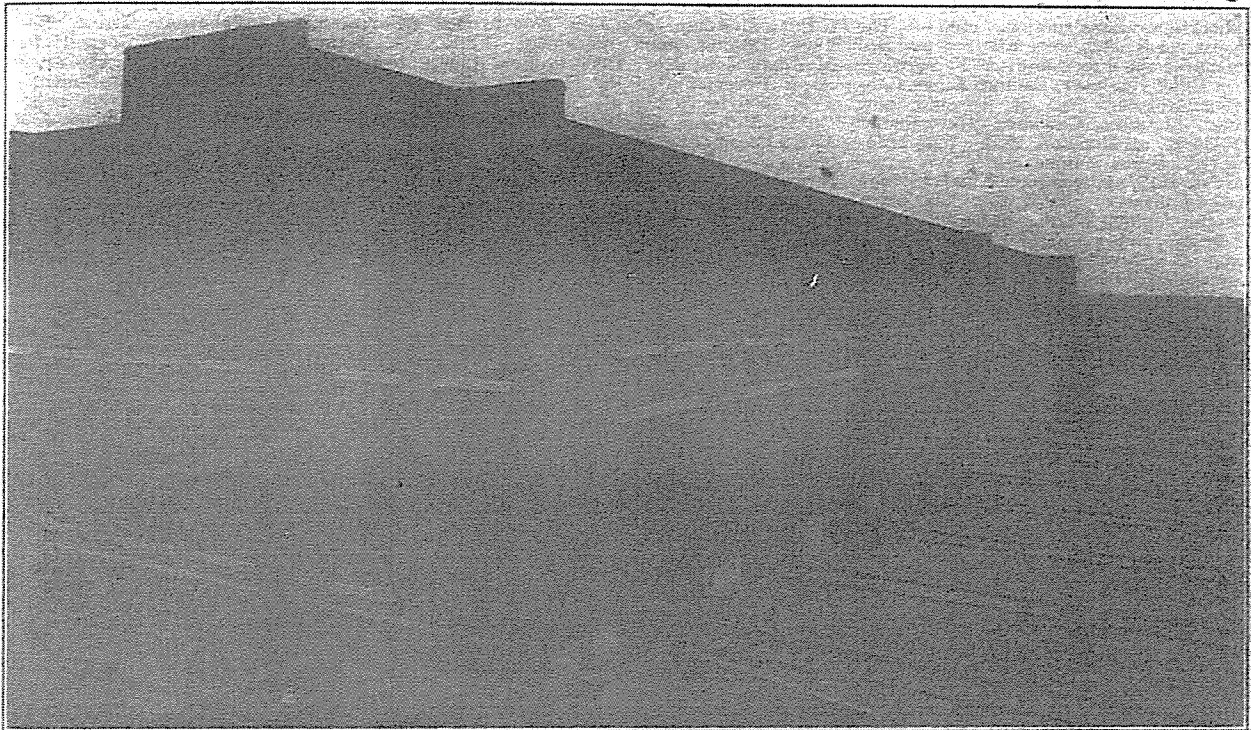
tendance. It is equipped with furniture, electric heaters, etc., and a complete supply of medical and surgical necessities are kept on hand. It is the headquarters for these supplies for the Ontario District, and the first aid kits are made up here.

portion is used for storage of passenger car storm sash.

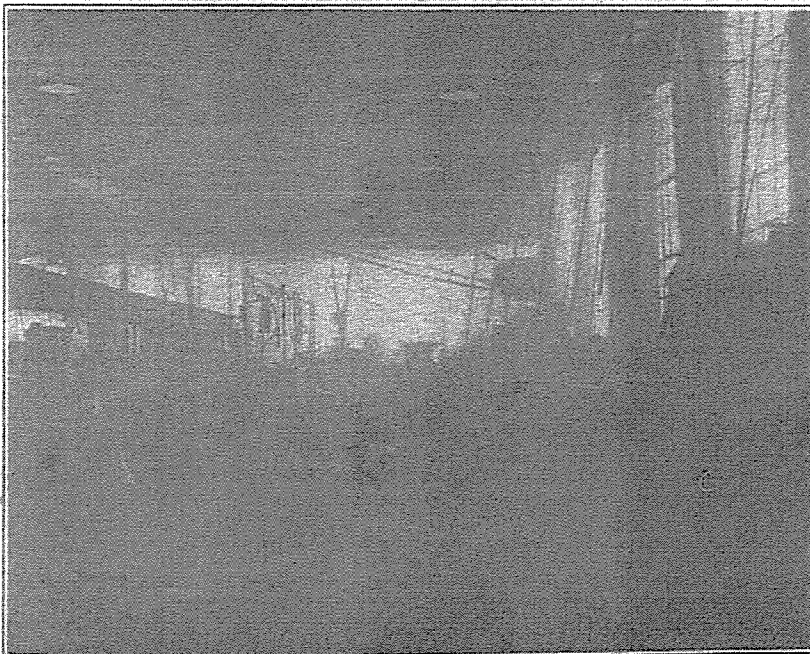
The ice house is of 2,000 tons capacity, but is not all being used for ice storage, a portion of it being used for storage of other material.

Additions, Enlargements, etc.—In so

the proposed planing mill and freight car shop is also shown, but at the time of writing, information was not available as to when this work will be undertaken. It is expected that several of the passenger car yard tracks are to be covered. New machinery for the different shops



Locomotive Shop, Leaside, Canadian National Railways.



Gallery of Locomotive Shop, Leaside, Canadian National Railways.

Wheel Shop, Etc.—The frame construction building shown on the plan as a wheel shop is not at present used as such. The east portion of it contains a complete waste reclaiming plant which is very efficient in operation. The west

far as future additions and enlargements are concerned, the accompanying plan shows the ultimate capacity of the classification yard, and shows the area the locomotive house would occupy if it were enlarged to 45 stalls. The location of



Otis Grant,
Superintendent of Leaside Shops, Canadian
National Railways.

is being received and installed from time to time, and it is probable that extensions and enlargements will be made to the existing plant, to keep pace with the de-

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velopment and growth of the National System.

The total number employed in the shops is about 1,000, the locomotive department employing 430, blacksmith shop 36, car department 446, and locomotive house 37, the remainder being in the electrical department, boiler house, power house, offices and stores.

Location, Construction, etc. — The shops, yards, etc., were planned and laid out under the direction of A. F. Stewart, then Chief Engineer, Eastern Lines, Canadian Northern Ry., at Toronto, now Chief Engineer, Canadian Government Ry., etc., at Moncton, N.B. The grading, which was commenced in the latter part of 1917, and completed in 1918, was done by Franceschini & Co. The plans for the buildings were prepared by G. C. Briggs, Supervisor of Buildings, Canadian Northern Ry., and construction was done by company forces, under his supervision. The yard was laid out and track laying and ballasting completed under the supervision of R. A. Baldwin, Assistant Engineer, Eastern Lines, W. Huffman being the Resident Engineer in charge of the work. The entire shops

are in charge of Otis Grant, Superintendent of Shops, who was born at McAdam Jct., N.B., July 13, 1869. He first entered railway service in May, 1884, since when he has been, to Oct. 1889, messenger boy, New Brunswick Ry. (now C.P.R.); Oct. 1889 to May 1895, machinist's helper, C.P.R., McAdam Jct., N.B.; May 1895 to May 1904, machinist, C.P.R., McAdam Jct.; June 1904 to Oct. 1904, leading hand machinist, C.P.R., McAdam Jct.; Nov. 1904 to Feb. 1906, Asst. Foreman, C.P.R., McAdam Jct.; Feb. 1906 to Jan. 1907, Shop Foreman, C.P.R., McAdam Jct.; Jan. 1907 to Aug. 1908, Locomotive Foreman, C.P.R., McAdam Jct.; Feb. 1909 to May 1909, machinist, Canadian Northern Ontario Ry., Parry Sound; May 1909 to Sept. 1913, Machine Shop Foreman, C.N.O.R., Parry Sound; Oct. 1913 to June 1915, Shop Foreman, C.N.O.R., Parry Sound; July 1915 to Nov. 1919, Locomotive Foreman, C.N.O.R., Parry Sound; Dec. 1919 to date, Superintendent of Shops, Canadian National Ry., Leaside, Toronto.

The foremen are as follows:—Erecting Shop, H. Daley and R. Currie; Machine Shop, E. Farrar and W. Sherwood;

Boiler Shop, W. Hewitt; Tool Room, E. Doherty; Air Brake, E. Brooks; Blacksmith Shop, J. Templeton; Tender Shop, E. Ross; Carpenter Shop, W. Craven; Paint Shop, W. Fleming; Locomotive House, J. Crooks; Foreman Pipe Fitter, J. Cotton; General Car Foreman, H. J. White; Asst. Passenger Car Shop Foremen, A. Gouge, E. Bushey; Truck Foreman, J. Johnson; Paint Shop, A. Arthurs; Tinsmith, H. Cornell; Patternmaking, W. Smith; Freight Car, W. Gouge; Asst. Freight Car Foreman, G. Potter; J. Smith, A. Pettibone and J. Nolan; Engineer, Power House, J. G. Young; and Electrical Foreman, J. Stirling.

The steam shovel and general work equipment repair work is under W. H. Second, Supervisor of Work Equipment, Ontario and Quebec Lines, J. McDonald being foreman in charge. Miss Hill is the nurse in charge of the first aid building.

We are indebted to W. H. Robinson, Official Photographer, Canadian National Ry., for the photographs from which the accompanying half tone illustrations were made.

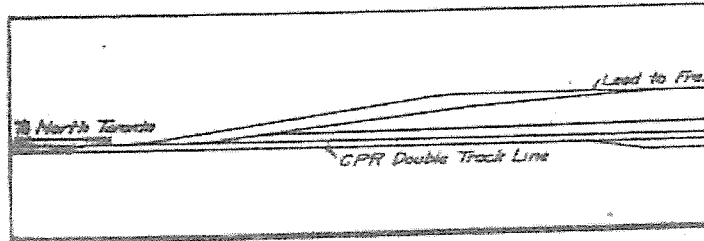
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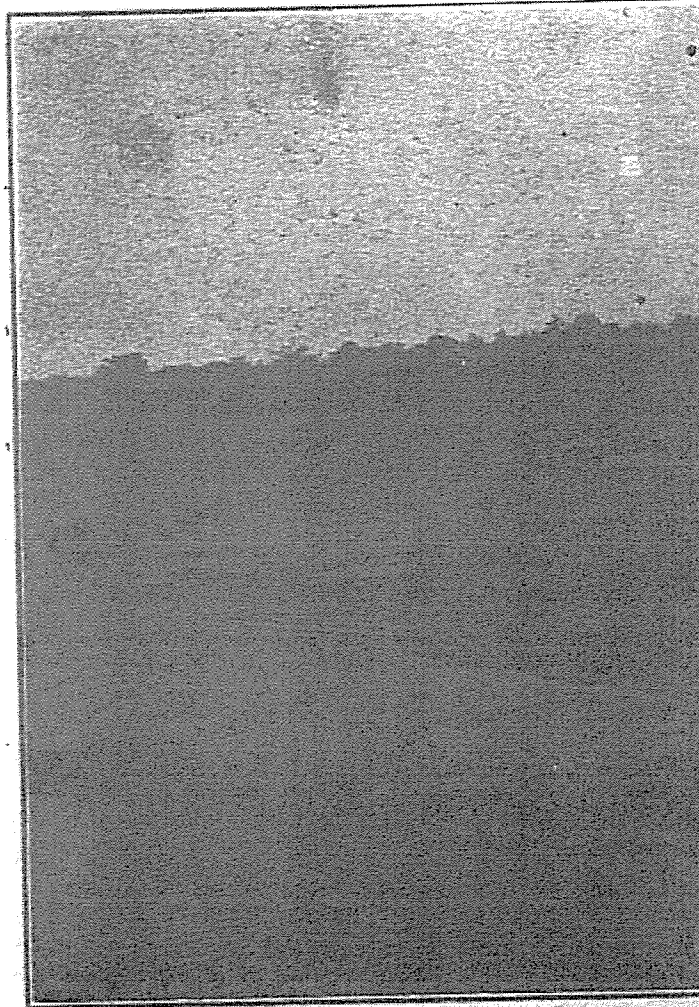
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Leaside Shops

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CNR locomotives
use GTR York

Passenger Car

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The general arrangement of the shops

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Reductions in Railway Competitive Service.

Particulars of the formation of a committee, composed of Canadian Pacific and Canadian National Rys' officials, to deal with questions of competitive service, were given in Canadian Railway and Marine World for January on pg. 24. We are advised officially that the members of the committee are Grant Hall, Vice President, Canadian Pacific Ry. Co., W. R. MacInnes, Vice President, Traffic Department, Canadian Pacific; S. J. Hunsford, Vice President, Operation and Construction Department, and J. E. Dalrymple, Vice President, Traffic and Express Departments, Canadian National. The main committee is being assisted by a sub-committee consisting of C. B. Foster, Passenger Traffic Manager, A. Hatton, General Superintendent of Transportation, and W. M. Neal, Assistant to the Vice President, Canadian Pacific; D. Crombie, Chief of Transportation, R. L. Fairbairn, Manager, Passenger Service Bureau, and W. L. Harris, Assistant to Chief of Transportation, Canadian National.

On Jan. 3, the Canadian National made several reductions in its passenger train service, notably on the Central Region, either by cancellation of trains or by reducing the number of days per week on which other trains run. On the Northern Ontario District, trains 73 and 74 between Kingston and Harrow-smith, and 302 and 303 between Trenton and Napanee, were cancelled, nos. 275 and 276 between Brockville and Westport were reduced to tri-weekly, nos. 309 and 310 between Picton and Trenton are now run on Saturdays only, and train service on the Milnet-Sellwood branch has been abandoned for the winter. On the Southwestern Ontario District the following trains were cancelled: nos. 217 and 218 between Buffalo and Stratford; 261 and 264 between Brantford and Tillsonburg Jct.; 267 and 382 between Tillsonburg and Tillsonburg Jct.; 138 and 139 between Merrittton and Port Colborne; 119, 123, 122 and 126 between Port Dover, Jarvis and Canfield Jct.; 158 and 159 between Port Dover and Tavistock Jct.; 357 and 358 between Simcoe and Port Rowan; 27 and 36 between Stratford and Sarnia; 39 between Tor-

car. The average operating revenue per passenger train mile was only \$2.40, while the average operating expense per train mile, freight and passenger combined, was \$3.02.

To show the trend in passenger traffic, the results for 1924 may be compared with those for 1919. In 1919, there were 94,625 passengers carried one mile per mile of road on Canadian railways as a whole, compared with 71,669 in 1924; there were 70 passengers per train, compared with 53 in 1924, 11 passengers per passenger car, compared with 8 in 1924, and only 44,883,258 passenger train miles operated, compared with 46,887,018 in 1924. The average receipt per passenger mile in 1919 was only 2.63c compared with 2.79c in 1924, but passenger traffic revenue in 1919 was \$96,262,241, compared with \$80,209,555 in 1924. This shows, first, that there has been a serious decline in passenger traffic and passenger traffic revenue, as between the two years, but, taken in conjunction with passenger train mile figures, it also shows that too many passenger train miles are being operated in relation to the business available. Of course, in sections of the country where motor bus competition is a factor of importance, it may be said that frequency of service is a necessity to hold the traffic, but the self propelled car should be of great and increasing value in meeting that situation.

As pointed out above, people who have become accustomed to great frequency of passenger service naturally complain loudly if it is decreased and if they are obliged to travel on trains where there are not so many vacant seats, but that should not deter the railway management from carrying out a policy, in the interest of economy, of getting passenger train mileage more into line with traffic offering and revenue.

Canadian Pacific Railway Construction, Betterments, Etc.

Chateau Lake Louise.—A swimming pool is under construction at Chateau Lake Louise, Lake Louise, B.C., and is

Chateau Frontenac Fire.

The Canadian Pacific Ry. hotel at Quebec, Que., the Chateau Frontenac, was extensively damaged, Jan. 14, by fire, which during the five hours it raged, is reported to have caused a loss on the building and furnishings of \$2,000,000. The fire was discovered at about 5.30 p.m. in the old tower, and owing to a strong wind the flames spread rapidly through the original part of the hotel, which had been used for some time mainly as quarters for the staff. The fire was got under control about 11 p.m., and although the newer parts suffered damage by smoke and water, the fire was confined to the old part. A commercial traveller, a guest in the hotel, was overcome by smoke; one fireman sustained injuries from a fall, and 4 other firemen sustained minor injuries. The guests in the main body of the hotel, numbering about 500, were provided with accommodation in two trains of sleeping cars and dining cars which were rushed from Montreal.

E. W. Beatty, K.C., Chairman and President, issued the following statement: "Work of reconstruction at the Chateau Frontenac will be undertaken without delay. The old wing which fire has destroyed will be replaced in such a way as to enhance, if possible, the beauty of the entire structure. The section burned was erected in 1892 and was as nearly fireproof as the buildings of those days could be. The new construction, like the central tower, and other newer portions of the Chateau, will be 100% fireproof and will have every safeguard known to modern building science. We were fortunate in that the fire-doors and other precautionary appliances worked quite satisfactorily and that at no time was there danger to the occupants of the buildings. As to the cause of the fire, that will only be known after investigation."

The hotel was got ready again for business with great promptitude and was re-opened Jan. 18. The clearing up of the debris of the damaged section was started at once, and a contract is reported to have been let to Anglin-Norcross Co., Montreal, for reconstruction, the work to be completed by June 1.

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between London and Stratford, and 170 between London and Stratford. Reductions were also made in the service in the Petrolia-Glencoe-Sarnia area. On the Montreal District, trains 365 and 366 between Belleville and Madoc, 98 and 99 between Lindsay and Peterboro, 381 and 74 on the Bethany Subdivision, 90 and 1 between Toronto and Peterboro, 195 and 196 between Lewiston and Lewiston St., and 128 and 129 between Hemmingford and St. Remi, were cancelled.

The reductions have, as was to be expected, been the cause of considerable complaint from residents of areas affected, but that there was need for reduction of passenger train service there is no doubt. As has been pointed out repeatedly in these columns during the past year, passenger traffic revenue is too small in comparison with the number of passenger train miles, and passenger train car miles, operated every month, and the expenditures made in providing the service. For instance, in Oct. 1925, there were 3,860,286 passenger train miles operated, with an average of 7.4 passenger cars per train, making 28,737,747 passenger car miles. There were only 12.8 passengers per train on the average, and of course very few passengers per

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Canadian National Railway Line Changes in Toronto-Oshawa District.

Important changes have been made recently in the lines of the Canadian National Ry. and its electric subsidiary, the Oshawa Ry., including the abandonment of a portion of the Orono Subdivision, Belleville Division, Southern Ontario District steam line, the electrification of the original Canadian Northern steam line connecting link from near the General Motors Corporation plant in Oshawa to the Orono Subdivision line at North Oshawa, and the building of a yard, to be electrically operated, at North Oshawa. As stated in Canadian Railway and Marine World for Nov., 1926, pg. 577, the management had, shortly before, discontinued operation over the Orono Subdivision steam line from Brinlook west to Todmorden, 29.6 miles, Brinlook being the point at which the Orono Subdivision line is crossed by the Port Perry Subdivision line, which leaves the

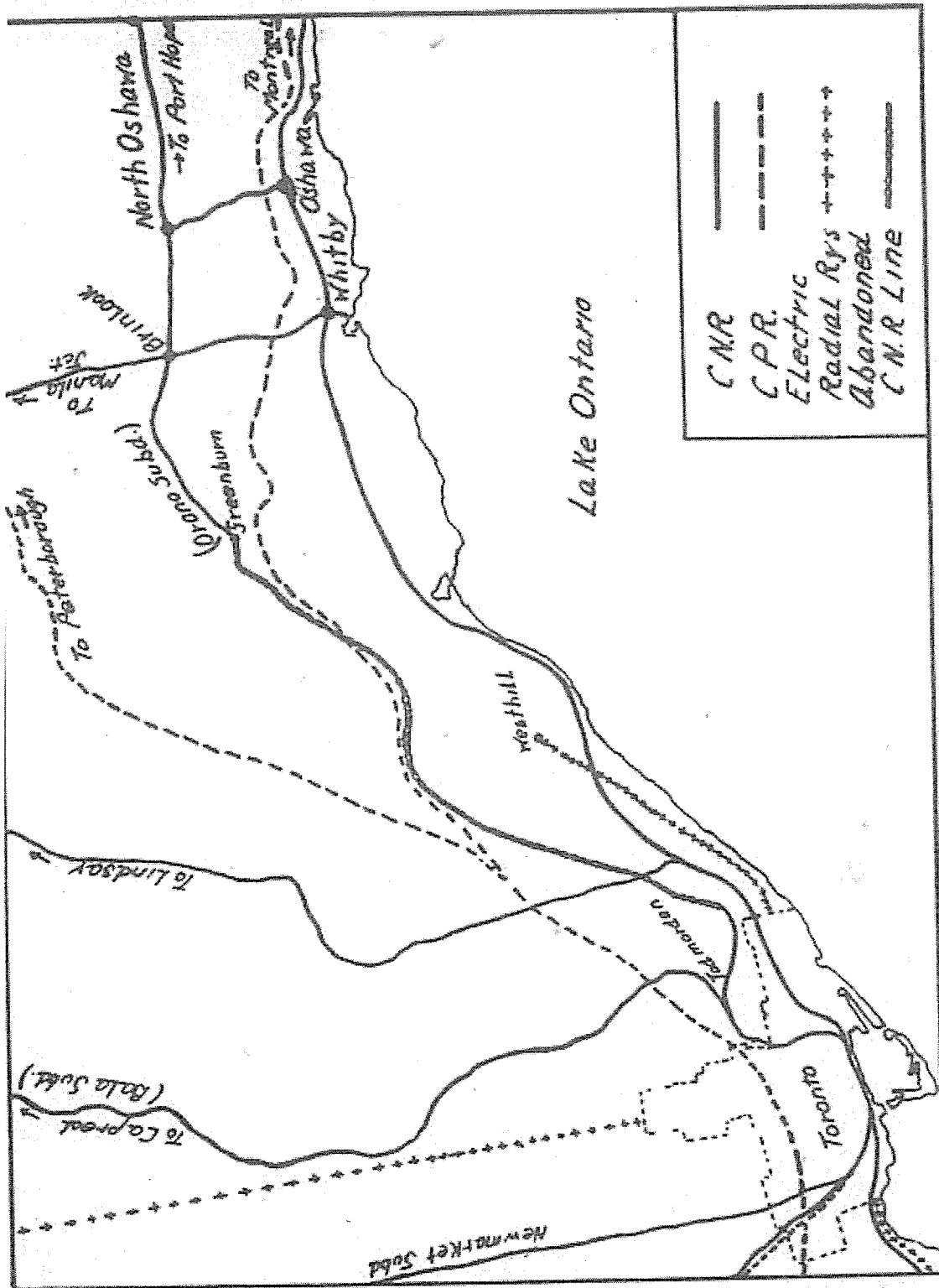
construction on tangent and curve. The poles are on the outside of all curves. The trolley wire is 4/0 grooved type, and aluminum combined messenger and feeder is used. The grade favors southbound traffic, which is of advantage as explained above. The line is laid entirely on private right of way, and the maximum grade to northbound traffic is 1.7%.

The yard which is being built at North Oshawa will be a classification and storage yard with capacity for 250 cars and provision for future expansion when needed. After considerable study, a design for overhead support was worked out which provides a minimum in the way of obstruction, steel towers, spanning 11 tracks, and 300 ft. apart longitudinally, or parallel with the tracks, being employed, the overhead layout involving both cross and longitudinal catenary construction.

be handled the same way, viz., by electric locomotive to North Oshawa, and by steam trains via Brinlook, Whitby Jct. and west. The eastbound outward traffic will continue largely to be handled as before, viz., by electric locomotive to the Canadian National yards in the south part of Oshawa, the grades favoring this movement.

Operation on the Oshawa Ry. is at 600 volts. One of the road's electric locomotives is being equipped with 4 Westinghouse 62-D-5 motors and Baldwin locomotive type trucks ordered from Canadian Locomotive Co., this being the fourth locomotive on the property to be so equipped. In addition, the road is to receive an additional locomotive from the Montreal and Southern Counties Ry., in the near future, on delivery being made to the latter road, also a Canadian National

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Railway Lines in Toronto-Oshawa Territory. The Line between Oshawa and North Oshawa is to be electrically operated, with yard at North Oshawa. The electric radial railways shown are operated by Toronto Transportation Commission.

adian Railway and Marine world for Nov., 1926, pg. 577, the management had, shortly before, discontinued operation over the Orono Subdivision steam line from Brinlook west to Todmorden, 29.6 miles, Brinlook being the point at which the Orono Subdivision line is crossed by the Port Perry Subdivision line, which leaves the double track main line at Whitby Jct. and runs north to Manilla Jct., and Todmorden, 5.5 miles east of Toronto, being the junction of the Orono and Bala Subdivision lines. Since then, westbound passenger and freight trains over the Orono Subdivision line were routed south from Brinlook to Whitby Jct. and thence into Toronto over the former Grand Trunk Ry. double track main line, while eastbound trains have been routed the same way, i.e., via Whitby Jct. and Brinlook to Port Hope. In addition, an irregular service has been given from Brinlook west to Greenburn, 5.9 miles, where there is a ballast pit. There is one station between Brinlook and Greenburn, viz., Kinsale, 2.6 miles west of Brinlook. The track between Brinlook and Todmorden was not taken up directly after the abandonment of the through service between those points, but recently the part of it between Greenburn and a point about 1½ miles east of Todmorden was taken up, this short section east from Todmorden being left for probable future industrial use.

Heretofore, all traffic into and out of the General Motors Corporation plants at Oshawa, interchanged with the Canadian National and Canadian Pacific Rys., has been handled through the streets of that city by the Oshawa Ry., a Canadian National Ry. subsidiary, using electric locomotives. Traffic received from the Canadian National was turned over to the Oshawa Ry. at the main line yards in the south part of Oshawa, and the haul to the General Motors plant, through the streets, involved moving the cars over numerous sharp curves, and up adverse grades, the latter in some cases exceeding 2%. An unfortunate feature of the movement was that the loads going into the plant are heavier than those moving out, so that the grades were opposed to the heavier traffic. In addition, the movement of a great deal of freight through the city streets was an undesirable condition. In order to remove this condition and provide for removal of the restrictions which were making operation inefficient and expensive, the management decided to handle the greater part of the General Motors freight from the north instead of from the south, by utilizing the portion of the Orono Subdivision steam railway line not taken up, and by electrify-

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electric radial railways shown are operated r

The Oshawa Ry. is building a connection with the former Toronto Eastern Ry. track at Mary and Bond Sts., adjacent to the General Motors plant, and about 2,000 ft. of Toronto Eastern Ry. track, east of Ritson Road and southeast of the General Motors plant, is being retained as a tail track for car storage. Other Toronto Eastern Ry. track in Oshawa, not required in connection with Oshawa Ry. switching, is being taken up, as a part of the management's programme of abandoning the entire undertaking of the Toronto Eastern Ry., which was begun by the Mackenzie-Mann interests before the Great War, different plans being proposed for bringing the line into Toronto. The line was designed as a high speed radial to serve the territory between Bowmanville and Toronto. Although a great part of it was graded and steel laid on a portion, none of the overhead current distribution system was erected. The taking up of the rails is nearing completion.

On completion of yard construction at North Oshawa, most of the inbound traffic for General Motors Corporation and other Oshawa industries will be handled via the Orono Subdivision, North Oshawa, and Oshawa Ry. into Oshawa, and the west-bound outward traffic, which largely exceeds the eastbound outward traffic, will

Toronto-Oshawa District.

The locomotive to North Oshawa, and by steam trains via Brinlook, Whitby Jct. and west. The eastbound outward traffic will continue largely to be handled as before, viz., by electric locomotive to the Canadian National yards in the south part of Oshawa, the grades favoring this movement.

Operation on the Oshawa Ry. is at 600 volts. One of the road's electric locomotives is being equipped with 4 Westinghouse 62-D-5 motors and Baldwin locomotive type trucks ordered from Canadian Locomotive Co., this being the fourth locomotive on the property to be so equipped. In addition, the road is to receive an additional locomotive from the Montreal and Southern Counties Ry., in the near future, on delivery being made to the latter road, also a Canadian National

d by Toronto Transportation Commission.

Ry. subsidiary, of the electric locomotive ordered from Canadian Locomotive Co., and described in Canadian Railway and Marine World for April, pg. 218. In addition, the Oshawa Ry. is installing a mercury arc rectifier, 1,200 k.w., near the General Motors plant.

There is no doubt that the additions made to the Oshawa Ry. facilities, the construction of the yard at North Oshawa, and the utilization of the remaining portion of the Orono Subdivision steam line in handling freight to and from Oshawa, will allow of more efficient operation and bring about more desirable conditions on the Oshawa streets, and thus be of benefit to both the railway and the city.

Canadian Railway and Marine World

December, 1927

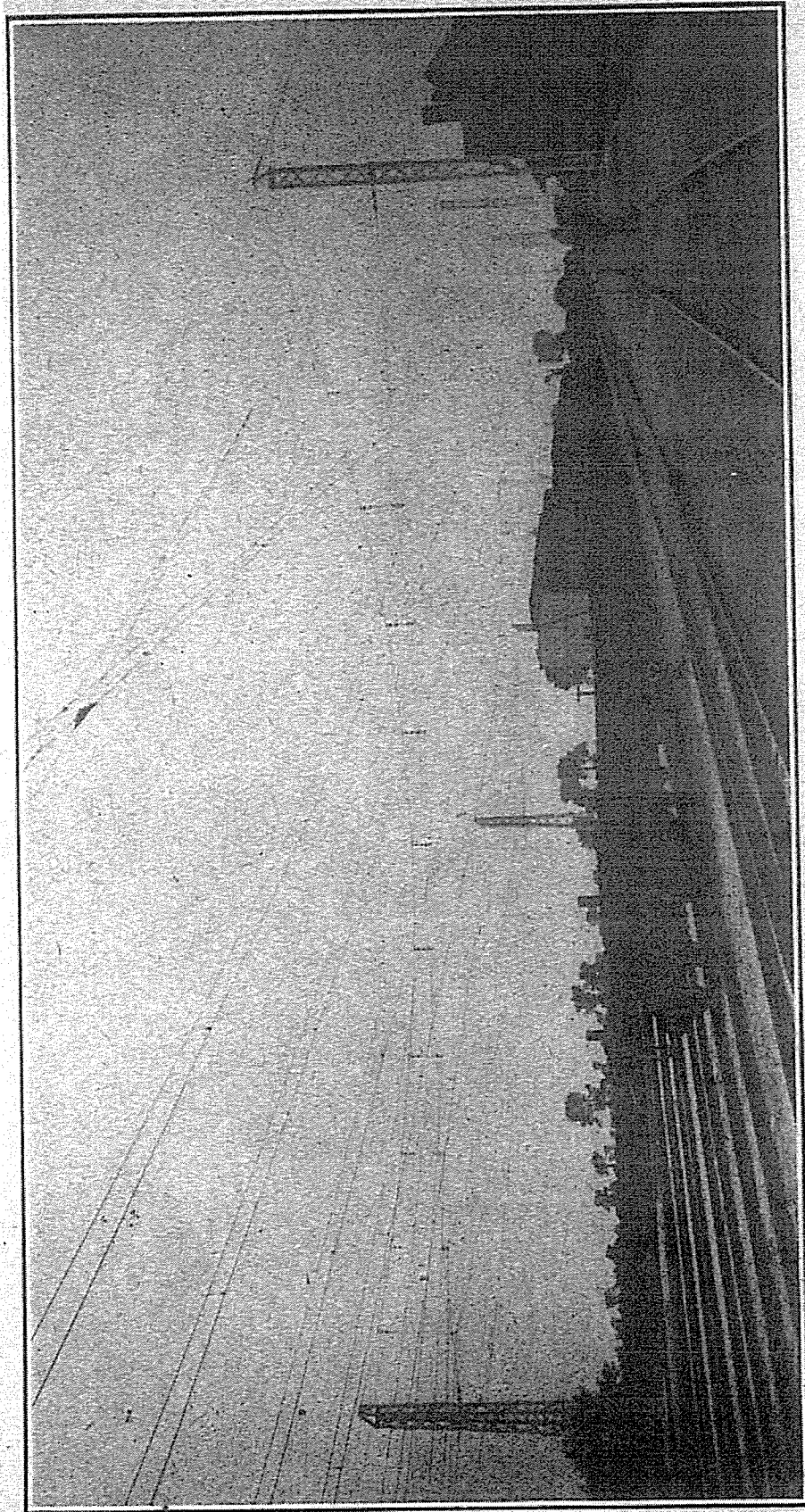
Canadian National and Oshawa Railways' Facilities for Handling Oshawa Traffic.

An article on Canadian National Ry. line changes in Toronto-Oshawa District, which was published in Canadian Railway and Marine World for September, on page 507, accompanied by a map showing the steam and electric railway lines, in the territory between Toronto and Oshawa, gave details of the plan decided on by the

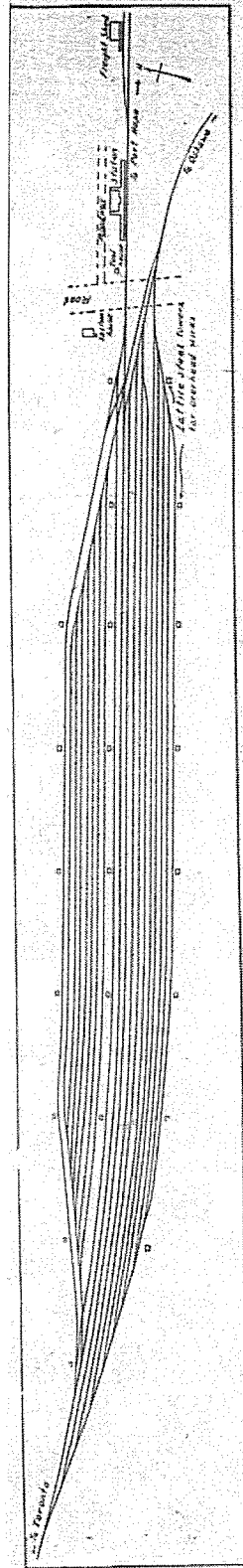
freight moving over the streets was, and is, steadily increasing, it was evident that some other method of handling it would have to be found. It was therefore decided to handle this freight from the north, rather than from the south, and to haul it by electric locomotives between Oshawa and North Oshawa. Freight from Oshawa

Northern Ontario Ry. some time before its amalgamation into the Canadian National system, and was designed to be a steam-operated feeder for its line running east from Toronto, providing connection with the city (then the town) of Oshawa. The connection is 2 miles long. Going north, there is a 6 degree curve to the left on

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North Oshawa Yard, looking west. Self-supporting towers at left and guyed towers at right.



Layout of Electrified Yard at North Oshawa.

Orono Subdivision line at North Oshawa. As then explained, this freight was handled formerly by the Oshawa Ry. between the Canadian National Ry. (former Grand Trunk Ry. line) yard in the south of Oshawa, to the General Motors factories, this movement being expensive, on account of it being over a route located entirely on city streets, with numerous sharp curves and heavy grades, some of the latter exceeding 2%. This freight movement was also objectionable from the Oshawa citizens' point of view, and as the volume of

The movement of eastbound carload freight from the General Motors plant, which does not amount to as much as that westbound, is the same as before, viz., by electric locomotives south over the Oshawa Ry. line to the Canadian National yard in South Oshawa. The gradients favor this movement. The sketch map given in connection with the article in our September issue illustrates the routings described above.

The line between Alice St., Oshawa, and North Oshawa, was built by the Canadian

of 2,000 ft. of 1.6%.

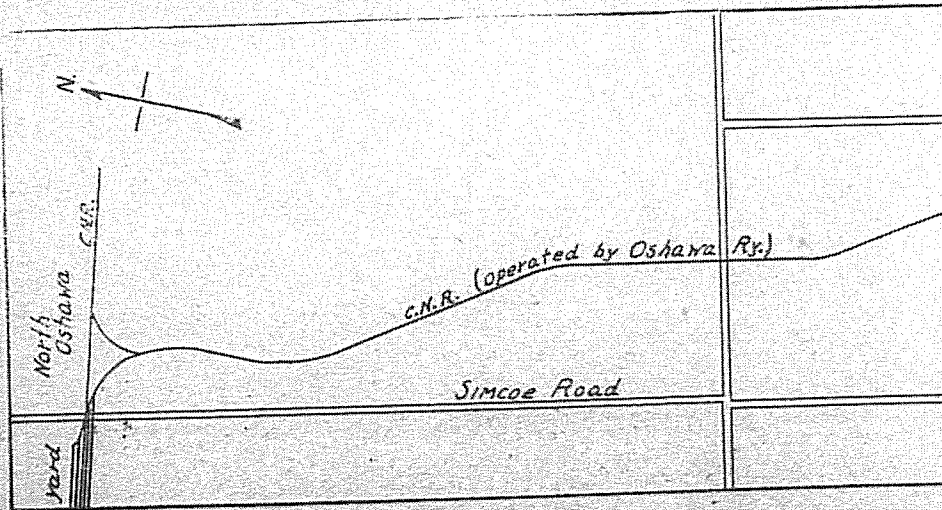
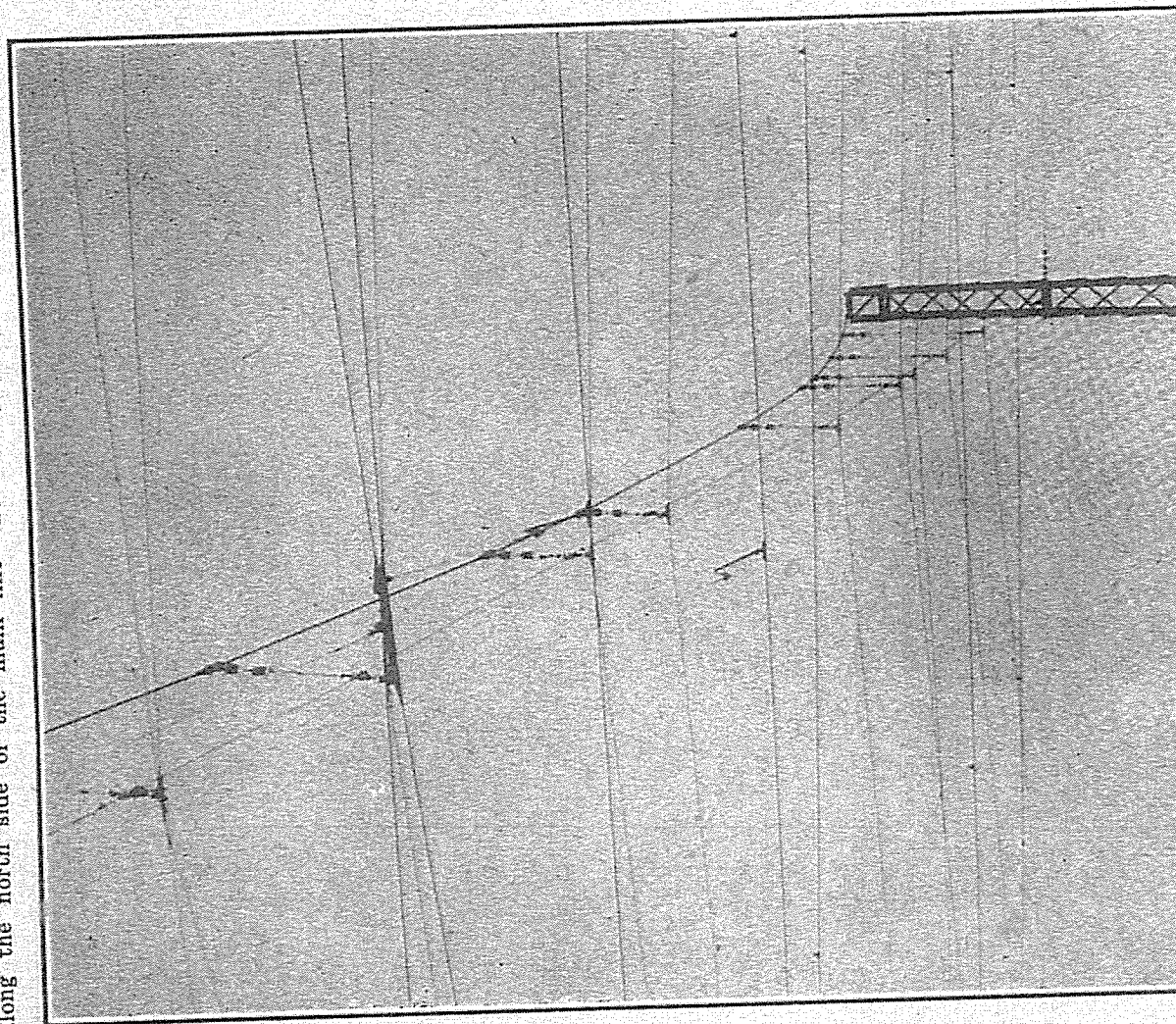
The interchange and classification yard which has been built at the junction is just west of the Y. The location of the connection and the yard, in relation to Oshawa's industrial section, is shown in one of the plans given herewith, and the yard layout, as it will be when the yard tracks north of the Orono Subdivision main line are added, is given in the other plan. At present, only the yard tracks south of the main line have been built.

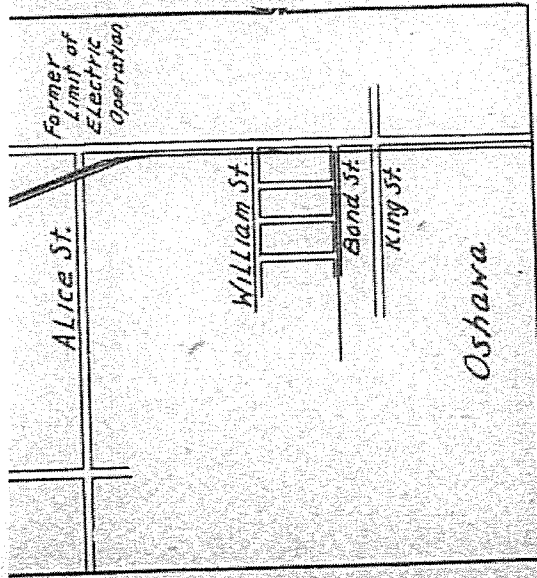
From the former north limit of Oshawa

CANADIAN RAILWAY AND MARINE WORLD

Ry. electric operation, near Alice St., in Oshawa, the connection has been triple tracked for 2,750 ft., and from the end of that section to North Oshawa it is single track. The rails are 80 lb., and ties are of untreated wood laid in gravel ballast. To provide for electric operation by the Oshawa Ry., an overhead current distribution system was erected during the past summer, which includes wood poles, spaced 150 ft. apart throughout, with inclined catenary construction on both tangent and curve. Poles were placed on the outside of all curves. The trolley wire

layout includes 10 large lattice work steel towers, 7 along the south side of the yard, spaced at 300 ft., and 3 grouped at the east end, together with 7 smaller towers along the north side of the main line for center support. The towers are on concrete pedestals. All of the steel for the towers, including bolts, was hot galvanized, and the members were bolted up in place, no riveting being resorted to. The three

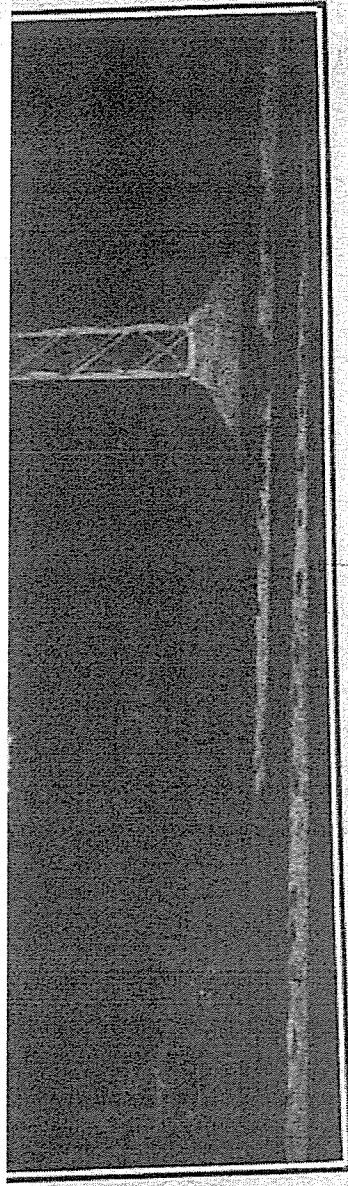




Location of North Oshawa Yard, and Electrified Connection with Oshawa Railway Lines.

is 4/0 grooved type, and aluminum combined messenger and feeder is used.

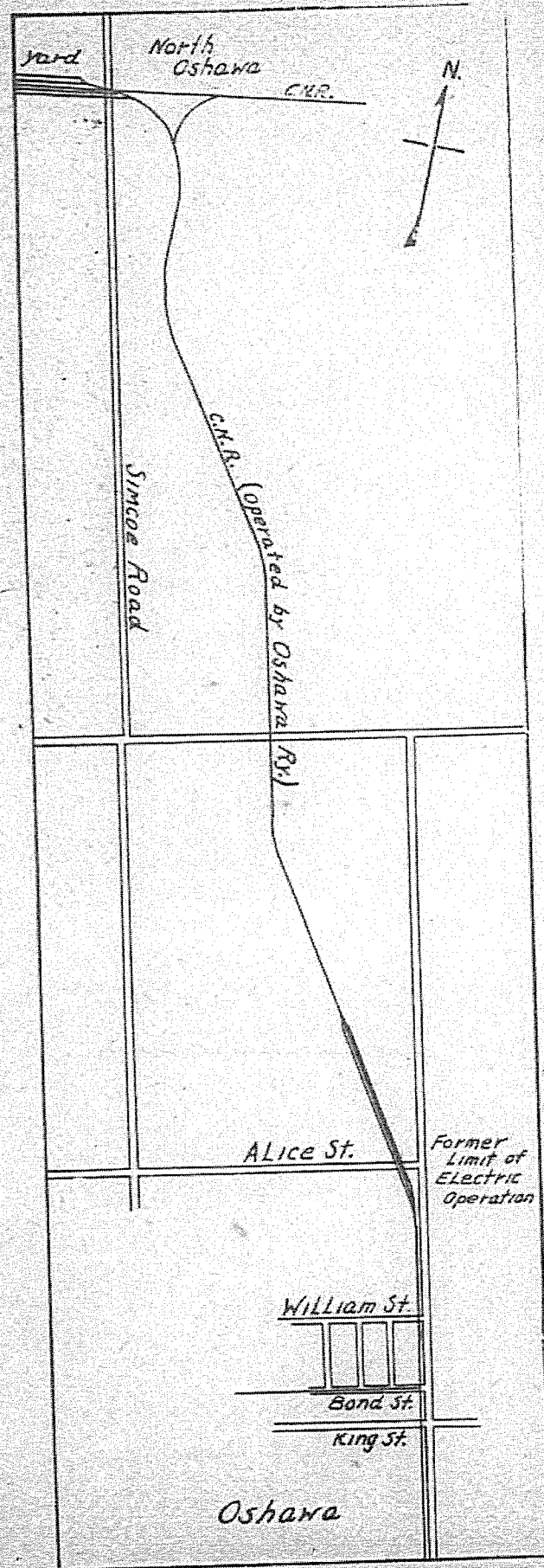
The yard at North Oshawa, like the connection, is also designed for electric operation, the most interesting feature of it being the manner in which the overhead work suspension was worked out. The



North Oshawa Yard, looking south to self-supporting tower, and showing cross-catenary span and other overhead details.

tracks. The large towers, which are self-supporting, i.e., not guyed, are 41 ft. 2 in. high, and were designed for a maximum stress of 13,500 lb. applied at the top, and the smaller ones, 2 ft. square, and also of lattice work construction, are, at present, back guyed. When the yard is completed by the building of the yard tracks north of the main line, other large towers will be erected at the north side, as shown in the yard plan, when the middle ones (the smaller ones, north of the main line and adjacent to it) will become simply struts

large towers at the east end of the yard are for dead end support; at the west end of the yard, the strains are taken up more gradually by back guyed small towers. The transverse messengers in the yard are of Siemens-Martin $\frac{1}{8}$ in. steel. There are 10 longitudinal trolley wires, of 4/0 material, serving as many tracks, each supported from a Siemens-Martin $\frac{1}{2}$ in. steel longitudinal messenger, by catenary hangers spaced at 30 ft. The trolley wires are bonded together by stranded 4/0 hard-drawn copper cable, which, in addition to



Location of North Oshawa Yard, and Electrified Connection with Oshawa Railway Lines.

being the current carrier between the trolley wires, also serve to steady the overhead structure. The transverse messengers are fastened direct to the towers by socket eyes, while the longitudinal messengers are insulated from the transverse ones by two 2-X-H insulators in series in the dropper wires.

At the time of writing, Nov. 12, six of the yard tracks south of the main line have been completed, in addition to the most southerly track, used as a run-around. The capacities of these tracks, from north to south, are 46, 42, 41, 40, 40 and 41 cars respectively, a total of 250 cars, and the ultimate capacity of the completed yard will be about twice that number.

The object in using the steel tower construction for the overhead work, in place of wood poles, was to secure freedom from the obstruction along and between tracks which the wood poles would inevitably cause. If wood poles had been used, about five times as many as there are steel towers would have been necessary, together

with a great multiplicity of guys. A further advantage in the use of the steel towers was that an extra track in the same yard area was made possible.

The yard and connection are operated with Oshawa Ry. Co. electric locomotives. Operation throughout is at 600 volts, as elsewhere on the Oshawa Ry. lines. Before this yard went into operation, car-load freight between Toronto and Oshawa was handled by the former Grand Trunk Ry. double track line, and a great deal of setting out and picking up by through trains at Oshawa was required. Since the yard went into operation, on Aug. 22, the Canadian National has been operating a turn-around service between the Danforth yards in Toronto and the new yard. Between 75 and 80% of the traffic into and out of the General Motors Oshawa plant passes through the Danforth yards. Operation of this turn-around service daily permits freight trains between Toronto and Belleville to be operated as through tonnage trains, and obviates much switching and loss of time at Oshawa. The new

system of operation should result in marked economy.

Construction of the electrified yard and connection of the Oshawa-North Oshawa connection was carried out under authority of A. E. Warren, General Manager, Central Region, C.N.R., and D. E. Gallo-way, Assistant Vice President, C.N.R., and Vice President, Oshawa Ry. H. L. Vercoe, Construction Engineer, C.N.R. Electric Lines, designed the track and yard layout. E. B. Walker, Electrical Engineer, C.N.R. Electric Lines, did the designing in connection with all electrification work, with G. P. Thomas, Electrical Supervisor, Oshawa Ry., in charge of erection. The engineering work was under the supervision of T. I. Irving, Chief Engineer, Central Region, C.N.R. The steel for the yard overhead current distribution support towers was erected by Oshawa Ry. forces. The insulators and other electrical fittings were supplied by Dominion Insulator and Manufacturing Co., N. Slater Co., and Canadian Line Materials Co.

Changes in Express Classification.

Canadian National Train Service Discontinued.

Canadian National Ry. has, owing to lack of traffic, discontinued service between Todmorden and Brinlook, Ont., 29.6 miles, on Orono Subdivision, Belleville Division, Southern Ontario District, formerly the Orono Subdivision, Ottawa Division, Northern Ontario District. Brinlook is the point at which the Orono Subdivision is crossed by the Port Perry Subdivision line, which leaves the former Grand Trunk Ry. double track line at Whitby Jct., and runs north to Manilla Jct. Todmorden, 5.5 miles east of Toronto, is the junction of the Orono and Bala Subdivision lines. The Orono Subdivision line is a former Canadian Northern one, closely paralleling, east out of Toronto, both the Grand Trunk and Canadian Pacific Toronto-Montreal lines. Passenger and freight trains between Port Hope and Toronto, which were operated formerly over the Orono Subdivision between Port Hope and Todmorden, are now operated over that subdivision between Port Hope and Brinlook only; from Brinlook they proceed south to Whitby Jct. and run into Toronto over the double track G.T.R. main line. Eastbound passenger trains and freight trains are routed the same way. An irregular service is being given from Brinlook as far west as a ballast pit, Greenburn, 5.9 miles, on the part of the Orono Subdivision on which regular service has been discontinued. There is one station between Brinlook and Greenburn, viz., Kinsale, 2.6 miles west of Brinlook. Some years ago there was considerable discussion of a scheme to abandon a portion of the Orono Subdivision line and use the remainder in connection with the Toronto Eastern line, which it was proposed to complete and bring in to Toronto, but nothing ever came of it. The track between Todmorden and Greenburn, 23.7 miles, is not being taken up at present.

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competition.

Orono Subdivision, Belleville Division, Southern Ontario District, Central Region, between Ronnac, mile 0, and Greenburn, mile 41.8, 41.8 miles. The section was opened for operation in 1911, having been built under the charter of the James Bay Ry. Co., under authority of Dominion 1905 Statutes, chap. 110. It was built by the Canadian Northern Ontario Ry. Co., successor by change of name to James Bay Ry. Co. In 1914 Canadian Northern Ontario Ry. Co. became part of the Canadian Northern Ry. system. Control of it was acquired by the Dominion Government in 1917. The section is laid with 80 lb. rails. Maximum grade in both directions is 0.5%, and maximum curvature is 4 deg. The system loss from operation in 1933 was \$22,496. The line passes through fairly well settled agricultural territory; buses and trucks operate over excellent highways in keen competition with the railway.

Orono Subdivision, Belleville Division

1934

materialized.

Deseronto Subdivision, Belleville Division, Southern Ontario District, Central Region, between Trenton, mile 35.5, and Brighton, mile 45.4, 9.9 miles. This line was opened for operation in 1911. The original charter was granted to James Bay Ry. Co. in 1895, and in 1906 the name was changed to Canadian Northern Ontario Ry. Co., which was granted right to build the line. The line is laid with 80 lb. rail in good condition. Maximum grade to both eastbound and westbound traffic is 0.5%. Maximum curvature is 4 deg. 6 min. The line passes through well settled farming territory; a good paved highway, open all year round, parallels it, and railway revenue has suffered severely from bus and truck competition. There has been no train ser-

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vice on the line since early in 1932, and
no maintenance work has been done on
it since then.

Harrisburg Subdivision, London Divi-

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