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REPORT OF FRANK SHANLY, ESQ.,

PREPARED BY ORDER OF THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL,
AND THE DECISION OF THE RAILWAY COMMITTEE THEREON.



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REPORT OF MR. FRANK SHANLY,

PREPARED BY ORDER OF THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL,
AND THE DECISION OF THE RAILWAY COMMITTEE THEREON.

TORONTO, 28th June, 1879.

To the Chairman and Members of Railway Committee,

Privy Council, Ottawa.

GENTLEMEN,

Credit Valley Railway, Toronto.

In accordance with instructions received from your Committee on the 24th inst., I have made a personal examination of the proposed alignment for the entrance of this line into the city, and of the several crossings of the existing lines rendered necessary for carrying it from Queen Street to Brock Street within the 100 feet limit reserved for such purposes.

I have also held a consultation with the officers of the several railways interested, when representatives from each were present, stated their views, and produced plans illustrative of them.

Having thoroughly, as I believe, exhausted the question and the different schemes proposed, I beg leave to report as having arrived at the following conclusions, the question resolving itself into not more than three schemes, which I shall call Nos. 1, 2 and 3.

No. 1 commences at Queen Street and crosses the line of the Toronto, Grey & Bruce Railway, a short distance south from there, where it branches to the Queen's Wharf, with three lines of rails, which, however, without interfering with existing arrangements, may be reduced to one. This crossing made, the 100 feet reserve will be entered upon, and the Credit Valley, "taking the southerly portion of it, will continue in that position till it reaches a point about 150" west of the Great Western Railway, where it and the Northern Railway cross each other. Here I propose that the "Credit Valley" should cross the "Northern" present single and proposed double tracks, and from thence, keeping north of the "Great Western" and south of the "Grand Trunk" tracks, reach Bathurst

Street, leaving the "Great Western" to remain in its present position throughout, but necessitating the removal north of the "Grand Trunk" tracks about 12 feet. Bathurst Street having been reached in this manner, the same arrangement of tracks would be continued to Brock Street, the "Grand Trunk" being still moved northward some 8' to 10' to admit of it. This shifting of tracks will carry with it a necessity for some excavation of slope west of Bathurst Street bridge, and a re-arrangement of the north pier bent of that structure at a trifling cost. Between Bathurst Street and Brock Street, with the exception of removing the present ditch further north, no excavation would be required. The accompanying diagram will illustrate this, but an alteration of the Brock Street bridge similar to that at Bathurst Street will be required.

Brock Street being thus reached, on an independent line, it will be necessary for the "Credit Valley" to find its way to station accommodation, both passenger and freight. For the former, the Union station will be the most convenient, and access thereto, as far as I can now see, can be had only by an arrangement to use the track of the Grand Trunk; for the latter the Credit Valley owns or leases a water frontage, lying between the Water Works property and Simcoe Street, of about 600 feet. To reach this, a divergence of its line from Brock Street will be necessary, keeping north of the Grand Trunk round houses and of the old Water Works buildings, and striking the water at the westerly boundary of the lot referred to. By this arrangement, the Great Western Railway track would be crossed at Brock Street, as well as two or three other side tracks of the Grand Trunk leading into the round houses, also tracks on Esplanade Street belonging to the Northern and Grand Trunk Railways respectively, all existing at the time the plans were registered with your Committee. Since then, however, the Grand Trunk have laid down two or three other tracks, one north of the round house on the spot proposed here to be occupied by the "Credit Valley" east of Brock Street, and one on the vacant land east of the old Water Works, and north of Esplanade Street, all which work has been done within a few hours of the present writing. In no case, however, would the crossing of this side track, or of as many now as could be laid down on the vacant space referred to, be attended with any inconvenience of consequence to the general traffic on the existing or projected lines. In taking up the question of alignment and crossings east of Brock Street, I am probably exceeding my instructions; but, as I read them, all crossings were to be reported on by me, though my business with the alignment question would seem to cease at Brock Street.

The foregoing arrangement seems to me the most convenient that, under the circumstances, can be arrived at, and should be satisfactory to all parties. The whole expense consequent upon the shifting of the tracks, platforms, and general arrangement would, of course, fall upon the Credit Valley Railway

Company, which would also have to deal for running powers, right of way, etc., from Brock Street east. Whilst feeling convinced that the alignment and crossings above described are such as will interfere least with the rights of existing railways, and at the same time give to the Credit Valley Railway Company all the facilities and privileges it can fairly claim, I must refer briefly to other propositions having the same object in view which have been brought to my notice.

No. 2.—From Queen Street to near Bathurst Street would be identical with No. 1, but it would here cross the line of the Great Western Railway, keeping south of it, thence to Bathurst Street in a direct parallel line. In doing this it would encroach (a double track being proposed) about fifteen feet on the enclosed ground occupied by the Northern Railway Company, and continue so from there to Brock Street, where it would fall into the arrangements proposed for No. 1.

I have given this proposition a very complete consideration, and from a close examination and measurement of the ground must pronounce it to be, in my opinion, entirely inadmissible. The loss of this small strip of ground to the Northern Railway between Bathurst Street and Brock Street would be of little or no consequence to its traffic arrangements or to its 'shunting' and 'lying by' facilities, but the entrance to the grounds for about 250 feet west of Bathurst Street could not afford to be curtailed by a single foot without interfering most seriously with its main line, which, together with the double track and necessary sidings at this point, has only a space of less than forty feet in width—no more than is required for the efficient working of its traffic. I have, therefore, in treating of the arrangement of the Credit Valley Company, put this proposition entirely on one side.

No. 3.—It has been argued by the Grand Trunk Railway Company that, having laid down its second, or south track, from Queen Street to Brock Street, the Credit Valley Railroad might, under arrangement with it, use the second track and so run into the Union Station. The Grand Trunk Railway does not, however, press the question of the joint use between Queen Street and Bathurst Street, but from this last point to Brock Street strongly urges it, objecting to the Credit Valley Railway laying an independent line of rails, chiefly on the grounds that it would necessitate the removal northward of its (Grand Trunk Railway) tracks, and decreasing the space between them from about ten feet to eight feet. I fail to see the force of this objection, as a space of eight feet is considered ample in Detroit, Chicago and other crowded railway centres, whilst the New York Central at any of its city termini, is content with seven feet, and even six feet five inches.

As before remarked, for passenger traffic the joint use of the Grand Trunk Railway track from Bathurst Street to Brock Street would not be objectionable

especially in view of such joint use becoming a necessity from Brock Street to the Union Station ; but for freight traffic seeking the Credit Valley Railway water frontage, such joint use would be a constant source of inconvenience, delay and possible injury. Upon these grounds, if upon no other, I would advocate the adoption of the independent line from Queen to Bathurst, Brock and the water, with running rights over the Grand Trunk Railway from Brock to the Union Station, as laid down on a plan herewith.

As regards the Toronto, Grey & Bruce Railway as an existing line, I should perhaps add in the probable event, not very far distant, of its desiring an independent track into the city from Queen Street, that in recommending the adoption of No. 1, I have not lost sight of any rights it may lay claim to for space on the 100 feet reservation.

Assuming, therefore, that No. 1 be adopted, and that no change be made in the existing lines, the crossings required are as follows :

Toronto, Grey and Bruce Railway to Queen's Wharf, three.

Northern Railway, near Bathurst Street, two.

Great Western Railway at Brock Street, one.

Northern Railway main line on Esplanade Street, one, and probably six side tracks, of which only four are main running lines.

I think I have touched upon all the points bearing on the matter in question, and trust that I have made myself understood.

I am, gentlemen,

Your obedient servant,

F. SHANLY.

DECISION OF THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL,

BASED ON MR. SHANLY'S REPORT.

OTTAWA, July 22nd, 1879.

GENTLEMEN,—I beg to inform you that the Railway Committee of the Privy Council have had under consideration the mode proposed by the Credit Valley Railway Company, of crossing with their line of railway the lines of the Toronto, Grey and Bruce Railway, the Great Western Railway, the Northern Railway, and the Grand Trunk Railway, in the City of Toronto, at the places shewn on the plan or map accompanying the application, and am directed to state that, after carefully weighing the opinions expressed on the subject by the representatives of the several companies interested, who were present at the meeting of the Committee held on the 19th ult. and 3rd inst., and having duly considered the report of Mr. Frank Shanly, C. E., which was read aloud and fully explained at the meeting of the 3rd inst., the Committee approve, in so far as they have power to give such approval, the mode of crossing recommended by Mr. Shanly, in that part of his report which he designates as Scheme No. 1, and shown on the map accompanying his report, the crossings being described as follows, viz:—

Diamond No 1 Crossing, Toronto, Grey and Bruce Railway, at a point 650 feet south easterly from the south side of Queen Street, the two side tracks now existing of the Toronto, Grey and Bruce Railway to be removed southerly so as to clear the line of the Credit Valley Railway.

Diamond No. 2 Crossing, Grand Trunk Railway Transfer siding at a point about 820 feet south-easterly from the south side of Queen Street.

Diamond No. 3 Crossing, Central Prison siding of the Grand Trunk, and Northern Railways at a point about 460 feet easterly from the south side of King Street.

Diamond No. 4 Crossing, Northern Railway south track (projected), at a point about 750 feet westerly from the west side of Bathurst Street.

Diamond No 5 Crossing, main track (existing) at a point about 635 feet westerly from the west side of Bathurst Street.

Diamond No. 6 Crossing, Grand Trunk Railway Round House, siding No. 1, at a point about 150 feet westerly from the east side of Brock Street.

Diamond No. 7 Crossing, Grand Trunk Railway Round House, siding (2) at a point about 60 feet westerly from the east side of Brock Street.

Diamond No. 8 Crossing, Great Western Railway main track, at a point about 150 feet easterly from the east side of Brock Street.

Diamond No. 9 Crossing, Grand Trunk Railway.

Diamond No. 10, two tracks and Northern Railway.

Diamond No. 11, main track on the Esplanade, at a point respectively about 115 feet, 80 feet, and 45 feet westerly from the east side of John Street produced. The above distances are measured along the proposed Line of the Credit Valley Railway as laid down on the said plan.

I have the honour to be,

Gentlemen,

Your obedient servant,

T. TRUDEAU,

*Secretary to the Railway Committee
of the Privy Council.*

To the Northern Railway Co.,
Toronto.

REPORTS

OF THE FOLLOWING

RAILWAY MANAGERS AND ENGINEERS,

VIZ:—

1.—REPORT OF WALTER SHANLY, ESQ., C.E.

Late Chief Engineer and General Manager Grand Trunk Railway of Canada.

2.—REPORT OF C. J. BRYDGES, ESQ.

Late General Manager Grand Trunk Railway of Canada.

3.—REPORT OF W. K. MUIR, ESQ.

Late General Manager Great Western Railway of Canada, and Canada Southern Railway.

4.—REPORT OF SANDFORD FLEMING, C.E., C.M.G.

Engineer-in-Chief Canada Pacific Railway.

5.—REPORT OF THOMAS SWINYARD, ESQ.

Late General Manager Great Western Railway of Canada.

6.—REPORT OF CHARLES PAINE, ESQ., C.E.

General Superintendent Lake Shore and Michigan Southern Railway.

7.—REPORT OF C. W. MOBERLY, ESQ., C.E.

REPORT OF WALTER SHANLY, ESQ.,

LATE CHIEF ENGINEER AND GENERAL MANAGER GRAND TRUNK RAILWAY OF CANADA.

MONTREAL, 6th January, 1880.

FRED. W. CUMBERLAND, Esq.,
Managing Director,
Northern Railway, Toronto.

DEAR SIR,—Having made an inspection of the Station Yard (West of Brock Street, Toronto,) of the Northern Railway, and having examined the plan shewing the maze of tracks, frogs and switches, by which it is now occupied, I hand you herewith a memorandum embodying my views on the expediency of allowing a new and independent line of railway being forced through your grounds.

Yours truly,

W. SHANLY.

MEMORANDUM.

In re

THE NORTHERN RAILWAY AND CREDIT VALLEY RAILWAY.

The claim of the Credit Valley Railway Company to be allowed entry for their line into the City of Toronto, over and upon the same right of way, through what used to be known as the "Ordnance Property," as is now occupied by the Northern and Grand Trunk Railways from Queen Street to (near) Bathurst Street, and from the latter point to Brock Street, by the Northern, Grand Trunk and Great Western lines, has recently been referred by the Railway Committee of the Privy Council, to Mr. F. Shanly, Civil Engineer, for examination and report.

The Referee has reported that, as respects that part of the question bearing upon the distance between Bathurst and Brock Streets (all that this memorandum is concerned with), room for the Credit Valley line could be found at small outlay to that Corporation, and at trifling inconvenience to the lines now in possession, one new crossing only of another line of rails (the Great Western), being involved.

As an easy, cheap, convenient and safe way for the Credit Valley to get over that portion of the ground, the plan recommended would seem to leave nothing to be desired. In places that line for so much of the way exactly on a *par* with the Grand Trunk and Great Western Railways, and offers it a clear, uninterrupted "run" over the 1,800 feet, or thereabouts, between Bathurst and Brock Streets,

without interfering with or being interfered with by the numerous branch tracks and sidings of the Northern Railway.

But the Credit Valley, not content to accept the easy, cheap and safe route proposed for it, desires, it is said, to force its way on a line parallel to and south of the one recommended—right through the yard of the Northern Railway, cutting the net work of the tracks covering it, so as to necessitate no fewer than eight “diamond crossings” in the above distance.

Eight diamond crossings are eight points of possible danger; in this instance needlessly sought to be encountered. They would involve large outlay in first construction and in maintenance ever after, and would further require the ceaseless vigilance of watchmen as far as possible to ensure the safety of the passengers and employees of the Railway, and of the teamsters and others frequenting the Northern Railway premises on business during all business hours, and where the manœuvring of trains is as frequent as it even now is on that ground, no human care would *always* be effectual in preventing accidents.

The inconvenience and delays to the working of both lines, if the Credit Valley is to be permitted to cut across the Northern Railway system of tracks, would be incalculable. In the busiest part of the year the going to and fro of trains over and across the Northern yard, may be termed incessant. In one of the *least* busy months it has been ascertained, on an average of nine consecutive days, that an engine passes from the main line to some siding or branch track, or from some siding or branch track to the main line, once in each minute and a half (nearly).

Where one railway has of necessity to cut the rails of another, the trains of the senior road have, by established and equitable custom and usage, precedence of crossings—the junior having, besides, to bear all charges of first cost, maintenance and “watching,” growing out of the cutting of the older line.

The rule, nevertheless, does not exempt the senior road from the annoyance, responsibility, delay and *cost* attendant on looking out for signals, and in this instance the Northern Railway would be the victim of all such annoyances, &c., without any advantages being thereby conferred upon the intruder.

No Railway Company that the writer of this memorandum has ever had to do with, or heard of (until now), but would shun cutting another line, even once, if getting round, over or across, were practicable on some other plan within reasonable degrees of convenience and cost. It seems hard to comprehend then, why the Credit Valley should turn aside from the direct line pointed out to it, and plagued with one crossing, only to entangle its own main line in a mesh of rails involving eight; thus entailing upon itself for all time large additions to working expenses, besides delays, annoyances and risks without end. To persist in such a course would savor of caprice, but caprice fraught with unsafety to the public; and therefore, on public grounds, the threatened invasion of the Northern Railway premises should not be permitted.

The Credit Valley's "objective point" within the city is a piece of ground fronting on the Bay a short distance east of the easterly boundary of the Northern Company's yard. To reach that point, the line laid down by the Government Referee is a very much better one, apart entirely from the question of safety, than any that could be run through the yard, because of its allowing of the deep-water front of this "objective point" referred to above, being approached on easier curvature than any further south line would admit of. If the Credit Valley Railway could get a line even further north than the one recommended, it would be all the better for it.

Frequently, of late the Public Press has urged the necessity of increased precautions being taken for the protection from accident, of railway servants employed in the movement of trains; needlessly and wantonly to add to existing risks, anywhere, would be criminal. To force the main line of another road through the Northern Railway would be to wantonly increase risk to life and limb at that particular point, and needlessly to add to the chances of accident attending the movement of the trains of both lines.

The views expressed above will be concurred in by any and every railway manager and railway train-mover who may take pains to examine the ground and look into the whole question.

The advantages in respect of convenience and economy are, in this case, and for all concerned, on the side of the safe as against the dangerous.

In the code of railway construction and management, deliberately to reject the safe and adopt the unsafe, must be designated an outrage.

In view of all the facts of the case, it is hardly to be feared that the Railway Committee of the Privy Council, or the Railway Committee of the Ontario Legislature, should the matter come before it, will sanction such a line as, it is rumoured, the Credit Valley Company desires to force through and over the multitudinous tracks of the Northern Railway between Bathurst and Brock Streets.

W. SHANLY.

MONTREAL, 6th January, 1880.

REPORT OF C. J. BRYDGES, ESQ.,

LATE GENERAL MANAGER OF GRAND TRUNK RAILWAY OF CANADA.

On the 29th of November, 1879, I spent some hours in looking into the proposal made by the Credit Valley Railway as to their entrance into the City of Toronto, and again inspected the ground on the 20th December, 1879.

Their line at present stops at Parkdale, where they have a station. The City has granted, or sold, them a water lot, south of Esplanade Street, east of the Water Works lot.

It is to enable them to reach their lot south of Esplanade Street that they want a right of way between it and their station at Parkdale.

Their present proposal I understand to be to extend their line from their present station across the tracks of the Toronto, Grey and Bruce Railway to reach the south side of the 100 feet granted for Railway purposes on Garrison Common, and to occupy of that 100 feet sufficient on the south side to lay their track. This would carry their line to the point where the Great Western crosses the Northern line, west of Bathurst Street. They propose to cross the Great Western line, and then to run south of the Northern main line, and occupying 16 feet to the south of that main line from the commencement of the Northern Railway grounds, west of Bathurst Street to Esplanade Street at Brock Street.

I have walked over the ground from Parkdale to the Credit Valley Railway lot south of Esplanade Street.

The Grand Trunk line runs north of the Northern line from Bathurst Street to what is known as the Diamond Crossing, west of Strachan Avenue. From the Diamond Crossing to Parkdale the Grand Trunk runs south of the Northern line, and claims the exclusive right to all of the 100 feet south of the Northern lines. The Grand Trunk have lately put down an additional track or siding from the Diamond Crossing to Parkdale, which fills up all the space to the fence. This siding, when I saw it, was not fully finished, but had some cars standing upon it.

From the Diamond Crossing eastward to the Great Western Railway line there is room for a track south of the Northern Railway line, and next to the fence.

From the point where the Great Western now crosses the Northern line, the Credit Valley proposes to run south of the present main line of the Northern Railway from the commencement of its station grounds to the west of Bathurst Street to Brock Street.

It asks for 16 feet wide immediately south of the Northern main line throughout the whole extent of the Northern station grounds for the purposes of

the main line of the Credit Valley Railway. The distance through the station grounds is about 2,400 feet, or nearly half a mile. If this application is successful, it will have a disastrous effect upon the working of the traffic in the Northern Railway station.

On the north side of the main line are all the repair shops for engines and cars, sidings for cars waiting for repairs, engine-houses, &c. There are also north of the Northern Co.'s main line, and between it and the fence, 6 tracks or sidings, into which all incoming freight trains are run, and on which outgoing freight trains are made up.

All the cars brought into Toronto, are thus placed north of the Northern main line, and are then taken along and across such main line for distribution to the various sidings to the south of it. And all cars going west are taken from the southern sidings across and along the said main line to be made up into trains. On the south of the main line are all the sidings, elevators, freight houses, &c., in which the whole of the traffic of the City of Toronto, in connection with the Northern Railway, is handled, all the lumber brought into the city is passed on to these sidings to be either shipped by water or delivered to teams. All the grain and flour, either for shipment or city delivery, is handled on these sidings, and also all the ordinary freight brought to, or sent from, the City of Toronto. The traffic interchanged with the Grand Trunk and Great Western is also handled on those sidings.

The effect then of placing a main line for the Credit Valley Railway south of the present main line of the Northern would be to change the whole of the switches from the present main line to the network of sidings on which all their business for the public is transacted.

It would reduce the standing room on the sidings in the Northern yard by a total of 4,840 feet. It would make the curves leading into some of the sidings much sharper than at present. It would involve 8 diamond crossings of the proposed Credit Valley line to get cars to and from the Northern main line, and its network of traffic-sidings, freight-houses, &c.

It would involve, in consequence, great danger of collision where such continual shunting is going on, as is necessary to carry on the public business of the Northern Railway in its main terminal station at Toronto. It would cause very great delay to the prompt despatch of the traffic, and be, therefore, a public disadvantage to Toronto. It would also destroy the access to the north side of the present local freight shed from Brock Street. This is the freight shed where the local traffic of Toronto is carried on. Whenever the Credit Valley Railway was occupying its main line, and it would have the right to occupy it as often as it pleased, it would prevent the possibility of teams passing to or from the freight shed to Brock Street, which is its only access to the town.

Such a plan as is proposed would be in the highest degree objectionable, would be attended with very great danger from the number of crossings of the

C. V. R. line to get to and from the Northern main line to its net-work of sidings and would cause great delay and difficulty to the large and growing traffic of the Northern Railway in Toronto.

It is besides entirely unnecessary, as what is wanted can be accomplished without incurring all these risks and difficulties.

If the Grand Trunk have the power to prevent the use of the one hundred feet between Parkdale and the diamond crossing, there is ample room for a track next to and south of the fence of the one hundred feet belonging to the Dominion and Local Governments. From the diamond crossing the Northern Railway will, I understand, grant the right of way so far as they have power to Bathurst street.

The line should cross the Great Western near the point where that line now crosses the Northern Railway, and by letting the C. V. R. be the most southern line between Bathurst and Erock Streets, the C. V. R. would only cross the Great Western and Northern lines once, and that so close together as to enable one signal man to attend to both crossings. The C. V. R. would from Bathurst Street run parallel to the Great Western line, to the easterly engine-house of the Grand Trunk Company, and then pass across a piece of unoccupied land belonging to that company between the engine house and the old Furniss lot, which it would run through, and then cross a small angle of unoccupied Grand Trunk ground when it would reach Esplanade Street, along and across which the city of Toronto has given the Credit Valley a right of way.

This arrangement would reduce to a minimum the crossings of the different Railways by each other, it would prevent all interference with the Northern Railway grounds, its sidings and stations, it would not occupy any land belonging to any other railway which would at all interfere with the working of such other railway, and it would avoid the danger of the very numerous and objectionable diamond crossings which the present proposal of the C. V. R. involves.

The only parties to be dealt with would be the Dominion and Local Governments for the right of way along Garrison common, the Northern Railway, the Grand Trunk Railway for the crossing of the two pieces of unoccupied ground, and the city of Toronto, which owns the Furniss lot.

It is assumed that the grant of the necessary right of way between Bathurst and Brock Streets would be given.

There is room there for four tracks, two for the Grand Trunk, one for the Great Western, and one for the Credit Valley Railway, and it would be quite feasible to put in more tracks between Bathurst and Brock Streets, by removing the Northern Co.'s fence and occupying the ground between the most northerly siding of the Northern Railway and the present Great Western line.

C. J. BRYDGES.

Montreal, 23rd Dec, 1879.

REPORT OF W. K. MUIR, ESQ.,

LATE GENERAL MANAGER GREAT WESTERN RAILWAY OF CANADA, AND CANADA
SOUTHERN RAILWAY.

F. CUMBERLAND, ESQUIRE,

General Manager, &c., &c.

DEAR SIR,—In compliance with your request to examine and report upon the plan proposed by the Credit Valley Railway Company for running their main line between Bathurst and Brock Street, through the yard of the Northern Railway Company at Toronto, I now beg to say that I have gone carefully over the ground, and find that if this plan was adopted of running the Credit Valley track south of and outside of the general railway right of way, this track would, in the distance of about two thousand two hundred and fifty feet, interfere most seriously, not only with the main track of the Northern Railway Company, but with twenty-five (25) switches, of which eleven (11) are “three throws,” and would shorten thirty-one (31) tracks, and cut off entirely the use of the north side of the Northern Railway Freight House, west of Brock Street, by occupying the present cart-way to and from it, besides interfering with the Northern passenger train shunting track at the Depot, and the transfer upon which the Great Western and Grand Trunk Railway Companies handle their interchangeable freight cars to and from the Northern Company.

A glance at this plan of the proposed occupation of the Northern yard by attempting to run the main track of another Company through the stem of and through such a network of tracks so constantly in use, and diverging to the Work-shops, Engine-sheds, Freight-yard, Timber-booms, and Elevator, would at once convince of the unreasonableness of such a proceeding, apart from the delay to both Companies of their yard, train-work and switching.

There is not the shadow of a necessity for running the line on this reckless, dangerous and most expensive plan, because a simple, cheap and easy line can be got alongside of, and upon the right of way used by the other Railway Companies approaching Brock Street, and without interfering in any way with the tracks, yardage and the switching operations of these Companies.

I append plan, showing how this can be done:—

Taking the Credit Valley line at its present terminus at Parkdale (or Queen Street), carrying it through the short spin switch in the triangle that is not apparently of any use, and through the single track of the Toronto, Grey & Bruce Railway by moving its three-throw switch just far enough south to admit of this

crossing, and which can be quickly done without any hindrance to that Company; continuing along past the Diamond crossing of the Grand Trunk and Northern Railways, west of Strachan Avenue, and entirely clear of them there, having its own independent crossing of the Garrison Creek, but then crossing by Diamond the two Northern tracks to reach its own proper side of the hundred (100) feet right of way, and this at a point where other crossings are now worked and where signal men are already located, and by keeping on the southerly line from west of Bathurst Street, the Credit Valley track is entirely clear of the Great Western and Northern tracks and yard, and reaches Brock Street with perfect immunity, and at very small cost as compared with the plan proposed by the Credit Valley Company.

It can, then, by crossing only the two tracks leading to the Grand Trunk Company's Round-houses, reach Peter Street, and through the Old Water Works property, avoid the numerous tracks in the yard of the Grand Trunk Company, reach the Credit Valley dock property, east of John Street, by crossing only the three tracks on Esplanade street at a point where perfect safety can be insured.

I think any railway expert will at once condemn the expensive, dangerous and utterly unnecessary mode proposed by the Credit Valley Railway Company of apparently trying to force their line through the most important portion of the Northern tracks, and one which, as the statistics will shew, is positively used seventy-six hours out of the ninety-seven, and this the more especially when a so much better line can be had at far less expense, and one that can be operated with perfect safety without any interference or delay to the work of either the Credit Valley or any of the other Railway Companies.

Very respectfully yours,

W. K. MUIR.

TORONTO, 10th December, 1879.

REPORT OF SANDFORD FLEMING, C. E., C. M. G.

ENGINEER-IN-CHIEF, CANADA PACIFIC RAILWAY.

CANADA PACIFIC RAILWAY,

OFFICE OF THE ENGINEER-IN-CHIEF,

OTTAWA, December 26th, 1879.

FRED'K CUMBERLAND, Esq.,

General Manager,

N. & N. W. R'ys,

Toronto.

MY DEAR SIR,—I have to acknowledge the receipt of your letter of the 23rd inst.

You have asked me to give you my opinion in writing respecting the proposal which has been made to carry the Credit Valley Railway on a line pointed out to me through the middle of the depot yard of your Company between Bathurst and Brock Streets, in Toronto.

I have no hesitation in repeating the opinion I expressed to you when the matter was mentioned to me when in Toronto last week.

I then said it was impossible for me to conceive the proposal to have been seriously made by any sane person in any degree familiar with railways. My opinion remains unchanged. An inspection of the plan of the yard which you shewed me is quite sufficient to satisfy anyone of ordinary intelligence and experience that such a proposal should not for an instant be entertained. The number of tracks laid in the yard, the constant shunting going on, the increase of traffic from year to year, requiring more tracks and more shunting, would render it an extremely dangerous matter to run the trains of another Company across the ground. There would be a daily and hourly liability to collision, and the risk to human life and property would be so great that, in my judgment, no one could give his sanction to the proposal without laying himself open to the charge of reckless indifference to the safety of the travelling public.

I am,

Yours very truly,

SANDFORD FLEMING,

Engineer-in-Chief,

C. P. R.

REPORT OF THOMAS SWINYARD, ESQ.,

LATE GENERAL MANAGER GREAT WESTERN RAILWAY OF CANADA.

TORONTO, Dec. 26, 1879.

DEAR SIR,—In compliance with your request I have made a thorough inspection of the location of the present Railway lines and property between the Parkdale Station and the Credit Valley Company's water lot at John Street, in the City of Toronto, and likewise a careful examination of the maps placed before me, showing :

- 1st. The position of the tracks of the Credit Valley Railway, as proposed by that Company, across the Northern yard, in order to gain access to the water lot above mentioned, and
- 2nd. The location of the track giving access to the same water lot, as recommended by Mr. Frank Shanly, the engineer appointed by the Dominion Government to report on the question.

In these plans the paramount questions for consideration appear to be: The right of access, the safety of the public, and the conveniences of working affecting the Railway Companies themselves.

The right of access is purely a question of law and equity, and as such, will, I presume, be decided by the proper tribunal.

Out of the question of access, however, arise the points I have before mentioned, namely, the approach the most or least objectionable as regards the safety of the public, and the most or least convenient as regards the working arrangements of the Companies themselves.

These points may and should be determined by the weight and force of the evidence of those qualified, by their known skill and experience in railway construction, to testify.

From my knowledge of and practice in railway management and working, I have not the slightest hesitation in giving a most decided opinion, and I say that neither in the interest of the public, nor in the interest of the Railway Companies also, is the approach through the Northern Railway Company's station and shunting grounds, as proposed by the Credit Valley Company, desirable in any respect. I can discover no advantage whatever that can be gained by it; on the contrary, it seems to me that it would be fraught with the greatest danger to the public, and with immense inconvenience to the two Companies themselves; it would in reality create an evil absolutely ruinous to the Northern Railway Company's

working arrangements in particular; while by its adoption the working arrangements of the Credit Valley Company would likewise be minimized, cramped and hampered so as to render it as intolerable to themselves as to the public, for whose benefit such access has mistakenly been conceived. In point of fact the very advocacy of such an approach by the Credit Valley authorities places their Company in a most inconsistent position, for, instead of obtaining an access calculated to afford the advantages and facilities to the public which has been declared by them to be, and properly should be, their aim and object, they would burden themselves and the public with the most limited, crowded, and obnoxious right of way to their water lot depot that could possibly be devised.

The bare fact that by it the operations upon 2,900 feet of main line, and 12 miles of shunting track of the Northern Company (which even at the least busy seasons of the year are already occupied on an average 78.10 per cent. of every hour of the day, from 7 a.m. to 6 p.m., with the Company's own trains, engines and cars), would at all times be subjected to interruption and disorganization by the arrival and departure, at any moment, of the trains and engines under the independent control of another Company, is alone sufficient, in my opinion, to condemn such a proposal, even were there no other and less objectionable access obtainable.

It must be plain and palpable that any curtailment of, or interference with the conveniences, only now found adequate for the practical and efficient every-day working of the traffic of a Company that has provided them, must be as serious an injury to the patrons of that railway as to the vital interest of the Company itself; neither should it be overlooked that the volume and value of that Company's traffic are far more than for a long time to come, can possibly be the volume and value of the traffic over the line of the *new Railway*, a large portion of whose resource will have to be obtained from the traffic taken away from, but now carried and accommodated by the other Companies, having their depots in the City of Toronto.

In regard to the other plan which has been submitted to me for my opinion viz.: the plan of access to the same lot on John Street, as recommended by Mr. Frank Shanly, I have studied it most carefully, and I must candidly state that the line as there laid out by him, appears to me to be the simplest and most practicable, and calculated to afford the greatest service to the Credit Valley Company, whilst its adoption would be the least inconvenient and injurious to all other interests throughout. From Parkdale Station to Peter Street it will only once cross the main tracks of the Northern and Great Western Railways, and that at the existing crossings of those Companies at Garrison Station. It will also be much less expensive, and will altogether avoid interference with the station yards and shunting grounds of any one of the existing roads having their depots in the City.

It is singular, and perhaps worthy of mention, that Mr. Shanly, without any knowledge that I had, in April last, inspected the different Companies' lines of access into Toronto, in anticipation of giving evidence, if required, upon the question, should have hit upon, and laid out precisely, the route I had come to the conclusion to advocate as the most available and least objectionable, both from a railway and from a public point of view, as well as being incomparably the best and most convenient for the Credit Valley Company's own purposes.

Believing this to be the case, I strongly support the location selected by Mr. Shanly.

With all respect,

I remain, dear sir,

Yours faithfully,

THOS. SWINYARD.

F. Cumberland, Esq.,

Northern & North Western Railways,
Toronto.

REPORT OF CHARLES PAINE, ESQ., C.E.,

GENERAL SUPERINTENDENT, LAKE SHORE AND MICHIGAN SOUTHERN RAILWAY.

TORONTO, December 11th, 1879.

FRED. CUMBERLAND, ESQ.

MY DEAR SIR,—In sending you my report upon the routes proposed for the Credit Valley Railway, I wish to add what might not be proper in a report, that I think the location of a line through your yard should be resisted by every possible means, as involving the most serious consequences to your Company. I should regard it as almost equivalent to the destruction of the yard. While it could be worked after such a division, it would be at such a disadvantage as to make you seek a new place of business.

Yours truly,

CHARLES PAINE.

TORONTO, December 11th, 1879.

FRED. CUMBERLAND, ESQ.,
General Manager,
Northern Railway of Canada.

SIR,—At your request I have made a careful examination of the two routes proposed for the Credit Valley Railway, between Parkdale Station and the Water lot owned by that Company, near John Street, and respectfully submit my opinion.

Between Parkdale Station and Bathurst Street, the location along the rights of way of the Grand Trunk and Northern Railways, and parallel with those lines, is common to both projects, and presents nothing objectionable from an Engineer's standpoint. At Bathurst Street the routes separate, one passing along the general right of way, the other directly through the shunting yard occupied by the Northern Railway.

The line through the yard of the Northern Railway is objectionable from every point of view, both for the present occupants of the property and for the intruding Company. It would involve a very serious interference with the

business of the Northern Railway, a considerable loss in the length of its present tracks, and expensive charges in those not shortened or destroyed.

It would separate the busy yard into two parts, to be worked with difficulty and danger across the track of another Railway, at the same time incurring for the Credit Valley Railway all the risk and delay consequent upon the numerous crossings of its track, necessary to permit access by the Northern Railway to its tracks and wharves.

Such a location should not be considered when any other can be found at reasonable cost.

In this instance the alternative is simple, less expensive, and free from any of the objections by which the line through the Northern Railway grounds is surrounded.

No person accustomed to the consideration of such questions could hesitate in the choice of routes, but must select the line upon the southern side of the general Railway right of way between Bathurst Street and Brock Street, thence through the old Water Works property to Esplanade Street, thence easily into the Water lot of the Credit Valley Railway, as the most feasible route now open for the entrance of an additional Railway to that part of the City.

This location will require only slight changes in the present occupation of the general right of way; it crosses the other Railways at the most favourable point where they already cross each other and have the necessary semaphore tenders; it does not divide the shunting yard of any road, nor involve the incoming road in the dangers and trouble which must result from such a division.

Yours truly,

CHARLES PAINE.

REPORT OF C. W. MOBERLY, ESQ., C. E.

TORONTO, 31st December, 1879.

F. W. CUMBERLAND, ESQ.,

General Manager,

Northern Railway of Canada.

SIR,—In compliance with your request, I submit my written opinion, on the proposed location of the Credit Valley Railway within the City limits, from Parkdale to the Credit Valley Railway water lot near Simcoe Street.

I have carefully examined the several plans in your Engineer's office which bear upon this subject, and I am thoroughly acquainted with the relative positions of the existing railways along the City front.

There are no obstacles of any importance to prevent the Credit Valley Railway from running their line from Parkdale eastwards, keeping to the south of the Grand Trunk and Northern tracks, and crossing the Northern and Great Western tracks near the present diamond crossing of these two lines, to the west of Bathurst Street. The present watchmen and semaphores would be available for the additional crossings.

Thence the line could follow to the north of, and parallel to the Northern Railway to Brock Street. The Grand Trunk Railway and the Great Western Railway main tracks would require to be moved a few feet to the north.

This could be accomplished at small cost, and without interfering with the alignment; in fact the curvature at Bathurst Street would be improved by such a change.

From Brock Street to the Credit Valley Railway water lot a very good approach can be obtained by curving round the eastern Grand Trunk Railway engine house, and passing through the old Water-Works lot on John Street. A very slight change would have to be made in the Grand Trunk Railway and Great Western Railway tracks, between Brock Street and the engine house, involving slight expense, and making no material difference in the alignment or working of the lines.

Practically, the line which I have thus described is almost identical with the location proposed by Mr. Frank Shanly, and which, as I understand, was approved by the Railway Committee of the Privy Council.

The proposed location of the Credit Valley Railway, through the Northern yard, is preposterous. No practical railway man would select such a location, unless every other approach proved impracticable. In other words, I am of opinion

that no railway expert, who had a choice of locations, would hesitate, in the interest of the Credit Valley Railway Company, in adopting Mr. Shanly's proposal, and in rejecting the line suggested through the Northern yard, as the latter would for all time to come, be worked with extreme embarrassment, delay and danger to the trains of both Companies, whilst, by Mr. Shanly's line, the Credit Valley Railway would have a free and unfettered run for its trains, except where the diamond crossings with the other lines would occur.

There are already signalmen and semaphores at the points where the crossings would be requisite, which would avoid the necessity of providing additional service.

Having regard to the complicated alterations which would become necessary over the whole track system of the Northern yard, and to the heavy filling of that location through the yard, the ultimate cost would be much greater to the Credit Valley Railway Company than would attach to the adoption of Mr. Shanly's line.

The whole grouping of the various sidings would have to be re-arranged and in many instances valuable sidings would have to be abandoned. In fact, the yard would be practically divided by the Credit Valley Railway.

There are nearly thirteen miles of main tracks and sidings in the Northern yard, and the shunting over these tracks is almost continuous, the majority of the switches being placed on the ground which the Credit Valley Railway proposes to appropriate.

The track of the Credit Valley Railway would encroach so closely on the local freight house that it would shut off the receiving side, thus rendering the freight house almost useless.

It is a singular fact (and perhaps such an instance has never occurred before in a large and prosperous city like Toronto, with several railway lines established along the water front), that a new railway can obtain such a cheap and favourable line as is, according to Mr. Shanly's report, open to the Credit Valley Railway, and without damaging private property or existing railways.

I remain,

Yours truly,

C. W. MOBERLY.

APPENDIX

BEING

REPORTS RELATING TO THE SHUNTING SERVICE, ETC., IN THE NORTHERN DEPOT,
TORONTO.

APPENDIX.

F. W. CUMBERLAND, ESQ.,
General Manager.

SIR,—Having been ordered to post myself in the Company's yard, in Toronto, in such a position as to command an uninterrupted view of the main line between Bathurst Street and Brock Street, and to keep an accurate account of the number of times engines or cars went upon or left the main line between those two points, and of the length of time the main line was thus occupied, I went to the yard and kept an account of every occupation of the main line, upon the dates and during the hours as per subjoined table, which I hereby certify to be correct:

Date. 1879.	No. hours.	No. minutes.	Time occupied.	Time clear.	Entered upon or left.
April 2nd 8.30 a.m. to 6 p.m.	9½	570	336	234	162
“ 3rd 7.00 a.m. to 6 p.m.	11	660	438	222	214
“ 4th “ “ “	11	660	455	205	261
“ 5th “ “ “	11	660	422	238	219
TOTALS.....	42½	2550	1651	899	856

Percentage of time line was occupied..... 64·75
 “ “ “ clear 35·25
 Line entered upon or left once in..... 2·98 min.

WESLEY S. DODD.

F. W. CUMBERLAND, ESQ.,
General Manager.

SIR,—Having been ordered to post myself in the Company's yard, in Toronto, in such a position as to command an uninterrupted view of the main line between Bathurst Street and Brock Street, and to keep an accurate account of the number of times engines or cars went upon or left the main line between those two points and of the length of time the main line was thus occupied, I went to the yard

and kept an account of every occupation of the main line, upon the dates and during the hours as per subjoined table, which I hereby certify to be correct :

Date. 1879.	No. hours.	No. minutes.	Time occupied.	Time clear.	Engines entr'd upon or left Main Line.
Nov. 6th 7.00 a.m. to 6.00 p.m.	11	660	459	201	356 times.
“ 7th “ “	11	660	496	164	424 “
“ 8th “ “	11	660	528	132	508 “
“ 10th “ “	11	660	502	158	400 “
“ 11th “ “	11	660	517	143	423 “
“ 12th “ “	11	660	522	138	432 “
“ 13th “ “	11	660	559	101	439 “
“ 14th “ “	11	660	544	116	428 “
“ 15th 7.00 a.m. to 4.00 p.m.	9	540	429	111	359 “
TOTALS.....	97	5820	4556	1264	3768

Percentage of time line was occupied..... 78.28
 “ “ clear..... 22.72
 Line entered upon or left once in..... 1.54 mins.
 Average occupation per hour..... 46.86 “
 Total time of occupation, 75 hours 56 minutes.

M. MACLEOD.

NORTHERN RAILWAY OF CANADA, TRAFFIC DEPARTMENT,

TORONTO, 16th December, 1879.

DEAR SIR,—With reference to the shunting in the yard, of which a record was kept for a few days, in April last, by Mr. Dodds, I desire to say that it does not show anything like our usual shunting movements, as at that time navigation had not fully opened, and we were running very few freight trains. As a matter of fact there was not so much business as in the preceding winter months, February and March, as is proved by the annexed statement, certified by our Yard Master.

In November, when Mr. McLeod made a similar record, we were doing more business, but were *not so active* as in September and October, as the Yard Master's statement of arrivals and deliveries of loaded freight cars for the corresponding period, in the months of September, October and November will show.

Yours truly,

J. HARVIE.

F. W. CUMBERLAND, Esq.,
 General Manager.

NORTHERN RAILWAY OF CANADA, TORONTO, YARD OFFICE.

THE following statement shows the number of loaded Freight cars which arrived and were delivered in this yard during periods indicated therein. (The dates correspond for the several months, avoiding the Sundays.)

Date. 1879.	Number of Cars.	Date. 1879.	Number of Cars.	Date 1879.	Number of Cars.	Remarks.
February 1..	58	March 1....	38	April 2....	42	Average per Day.
" 3..	49	" 3....	29	" 3....	34	February and March, 45 Cars.
" 4..	43	" 4....	41	" 4....	53	April, 42 Cars.
" 5..	58	" 5....	44	" 5....	41	
Total....	208	Total....	152	Total....	170	
Sept'ber 4..	89	Oct. 4....	146	Nove'ber 5..	79	
" 5..	42	" 6....	107	" 6..	92	Average per Day.
" 6..	77	" 7....	105	" 7..	112	September and October, 92 Cars.
" 8..	76	" 8....	100	" 8..	88	November, 81 Cars.
" 9..	74	" 9....	111	" 10..	60	
" 10..	139	" 10....	110	" 11..	64	
" 11..	88	" 11....	130	" 12..	66	
" 12..	86	" 13....	98	" 13..	82	
" 13..	109	" 14....	95	" 14..	95	
" 15..	64	" 15....	111	" 15..	71	
Total....	844	Total....	1,113	Total....	809	

I certify the above to be a true and correct statement. Cars which arrived and were delivered between the hours of six o'clock, p.m., and six o'clock on the following morning are not included, as I am not on duty during these hours, and consequently have no knowledge of them.

G. E. DALBY,
Yard Master.

NORTHERN AND NORTH-WESTERN RAILWAYS.

GENERAL FREIGHT AND PASSENGER AGENT'S OFFICE,

TORONTO, ONT., 3rd January, 1880.

STATEMENT OF FREIGHT BUSINESS.

DEAR SIR,—In compliance with your request, I now hand you a general statement of the Freight business handled at the Toronto Depot during last season of Navigation, and which you will see I have reduced to car loads, and you will see that, taking the season as from the 1st May to the 30th November, we brought in the equivalent of 23,133 car loads, or at the rate of 771 cars per week, or 129 cars per day, being equal to $7\frac{1}{2}$ Freight trains, of 17 cars each, per day, for passage over our main line.

Of course, I need not say that the handling of these $7\frac{1}{2}$ trains per day, over the main line and sidings of our Toronto depot, means an almost continuous movement of our shunting engines (of which we have three (3) in full work) across the main line and between the arrival sidings and shipping tracks, and which has been found, as I understand, to represent between 70 and 80 per cent. occupation of the main line during the working hours of the day.

Respectfully yours,

ROBT. KERR.

F. W. Cumberland, Esq.,
General Manager.

STATEMENT of business handled in Toronto yard during season of Navigation, 1879, from May 1st to November 30th.

—	Quantity.	Tons.	Car Loads.	Remarks.
Grain, bushels	4,295,992	120,327	10,026	There being 30 weeks from 1st May to 30th November, 23,133 car loads are equal to 771 cars per week, or 129 cars per day, equal to $7\frac{1}{2}$ trains of 17 cars per day pass over main line.
Flour, barrels	84,394	9,114	844	
Lumber, 1,000 feet	57,160,000	71,450	7,145	
Timber, cubic feet	106,500	2,662	213	
Cordwood, Slabs, } Cedar, &c. } Cars	1,000	10,000	1,000	
General Merchandise, tons	36,703	36,703	3,670	
Miscellaneous, tons	2,354	2,354	235	
Totals		252,610	23,133	

ROBT. KERR,

G. F. A.