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The Railway Viaduct and New Union Station at Toronto.

The railway viaduct through the lower part of Toronto, with the new union station, both of which were originally ordered by the Board of Railway Commissioners in June, 1909, are now assured and construction will soon be in progress, all the plans for the changes having been completed in a general way and approved by the Board of Railway Commissioners.

The original order of the Board of Railway Commissioners in June, 1909, called for a four-track viaduct from west of John St. to or near Berkley St., with three tracks either side of the viaduct at the present level of the Esplanade, with all necessary crossovers, the centre line of this viaduct to be located on the southern boundary of the Esplanade, this four-track portion of the work to be undertaken jointly by the G.T.R. and C.P.R. Independent of this, the C.P.R. was ordered to elevate two tracks from

of its trains into a station to be built in the northern part of the city, and thus get away from the down town trouble. This matter is still under consideration. In view of this desire to take some of its passenger traffic to the north end of the city, the company took exception to its inclusion in the viaduct and union station scheme, and appealed the matter to the Board of Railway Commissioners, which last May ordered the work to be continued under the original order, with an extension of time for the completion of the project, the original two years having already expired. At the same time, the Board approved the G.T.R. plans as the more desirable, and ordered that they be followed instead of the plans for the same proposition supplied by the C.P.R.

The grade separation work at Toronto is divided into two separate portions, parts 1 and 2. Part 1 is the portion that

ing had a greater slope, so that at Strachan Ave., about 200 ft. from the crossing, the rails have been raised about 2 ft. This small rise has not made the raising of the bridge necessary, although a removal of the old bridge, with a more modern bridge to replace it, is under consideration, only such a move is apart from the viaduct scheme.

The 0.25% down grade continues beyond Bathurst St. This portion of the line in the old roadbed was through a cutting, which will be filled to the required depth, without the use of concrete retaining walls, which are necessary through the greater part of the viaduct length. The new rail level at Bathurst St. will be about 4 ft. above the former level, calling for the raising of the overhead bridge at that point a corresponding 4 ft. The highway from the north will have a small ramp, in place of the present practically level approach

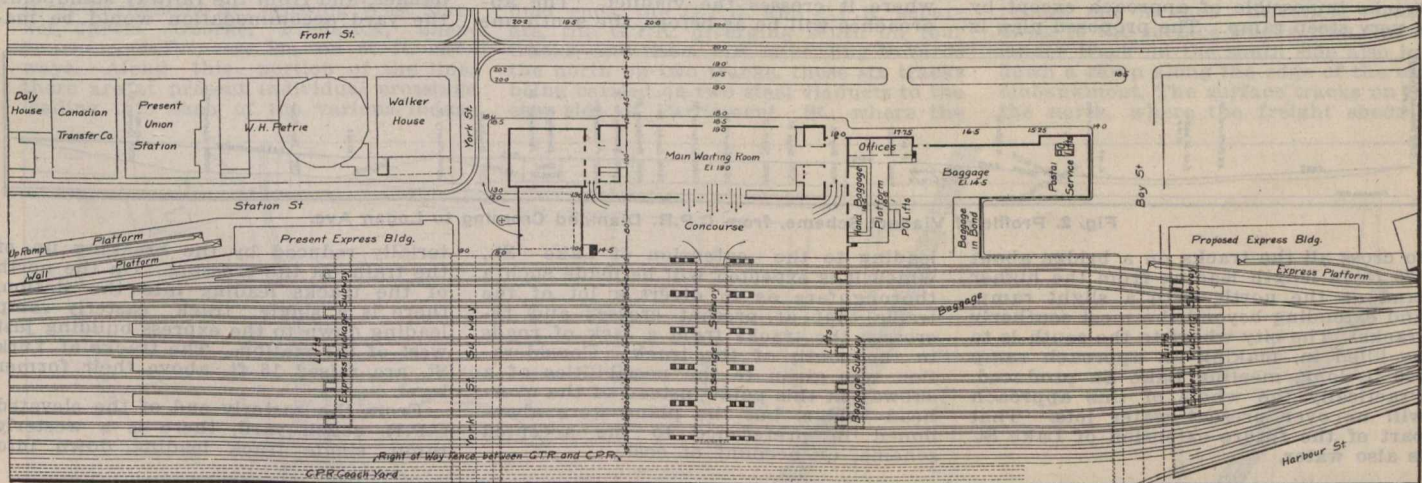


Fig. 1. Plan of New Union Station, showing the Trackage, and Passenger and Baggage Facilities.

the easterly end of the four-track viaduct to near Queen St., with necessary viaducts over certain intervening streets. The corresponding section of the G.T.R. line was also ordered elevated on a two-track viaduct from the same point to Logan Ave., crossing the streets en route on viaducts. All streets were to pass under the tracks with the exception of John St. and Spadina Ave., both of which were to cross the tracks on bridges, to be constructed jointly by the two railway companies. The city was ordered to pay one-third the cost of the viaduct including the elevation of the C.P.R. passenger car yard and G.T.R. Don sorting yard. The same proportion of the cost of the bridges at Spadina Ave., John St. and Eastern Ave., and the elevation of the substructure under the new Union Station was also ordered to be borne by the city. In addition to these liabilities on the part of the city, no damages can be collected by the latter for any city property taken for the proper carrying out of the scheme. Any question of damages between the two companies is to be reserved for settlement by the Board.

At that time the C.P.R. was contemplating taking at least a large number

is now nearly completed, stretching from Mimico on the west to the C.P.R. diamond crossing near Strachan Ave. in the city. Progress reports on this work have been made from time to time in these columns, and the issue of May last, contained an illustrated description of the extent of the work and the means by which it was being carried on. This portion of the work was done under a separate order from that relating to part 2 through the centre of the city.

The new profile the line assumes through the city is shown in Fig. 2, and a plan view of the new alignment and trackage arrangement as at present developed is shown in fig. 3, sections 1 to 4. It will be noticed that the work extends from the junction with part 1 at the C.P.R. diamond crossing on the west, to Logan Ave. on the east, where the line again strikes grade. Grade is struck on the C.P.R. line at Eastern Ave.

From the west, the line in part 1 of the work descends on a 0.4% grade until it strikes the junction with part 2 at the C.P.R. diamond crossing, where the downward grade changes to one of 0.25%, the elevation at that point being 24.0. The original down grade from the cross-

from the from the ridge of land along the north side of the railway right of way. The southern approach, at present a long ramp, will be made slightly steeper. The C.P.R. and the old Northern line of the G.T.R., which meet the main line just west of Bathurst St. require a very small fill, as the elevation of this line back from Bathurst St. is higher than the main line from Hamilton. At Strachan Ave., the Northern and C.P.R. lines cross at grade, while the other is in a long cutting as described.

A short distance east of Bathurst St., the line takes to the viaduct, the concrete retaining wall commencing at elevation 14.0. From that point to near Spadina Ave., the line is practically level, where at elevation 15.0 the line ascends on a 0.4% grade. To the north of the four through tracks that are elevated on the viaduct, there are the tracks at grade leading in to the G.T.R. freight yards and shops. It is the intention to leave these tracks as at present until such time as the work is completed, when the whole arrangement of surface tracks will be changed to better the yard conditions, to conform to the better through facilities