

Remodelling of the Grand Trunk Railway Ottawa Terminal Yards.

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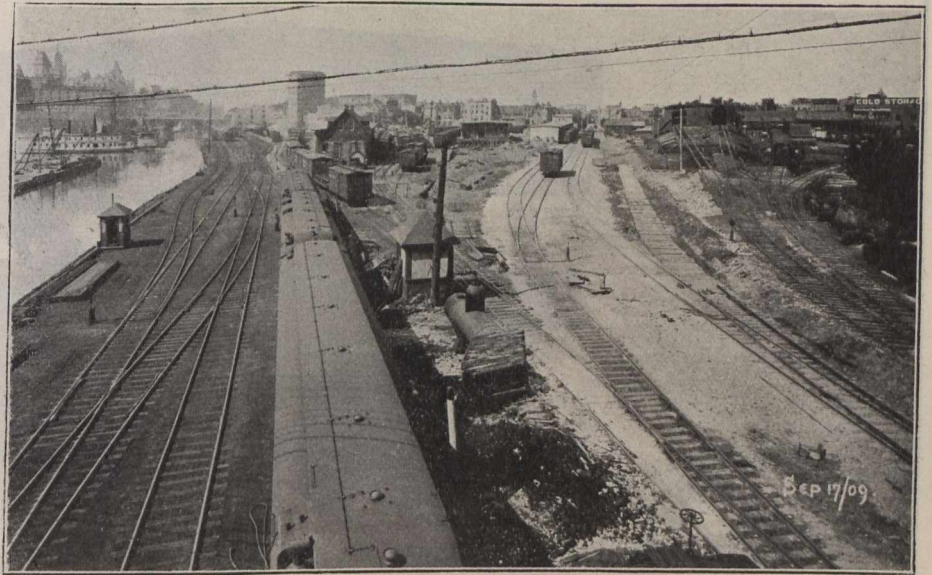
In giving a brief account of the work of remodelling the G.T.R. central station yard in Ottawa it would be superfluous to review the reasons which led up to such work, further than to say that when the Canada Atlantic Ry. was fortunate enough to secure this route to the heart of the city, the terminal was not designed with any consideration of future requirements. Tracks and other railway facilities were built by degrees as demands arose and property was acquired. Under such conditions it was only a question of time until all the available land north of Laurier Ave. was taken up with a jumble of tracks which were very difficult to operate and in an exceedingly poor state of repair, the rails being 56 lb. steel and the switches stub. When we came to consider the remodelling of this yard, the problem which confronted us was not to design a yard by using up the old one, but to design one without any regard for existing conditions, a yard giving the facilities for passenger and freight accommodation.

The passenger and freight yards are entirely separate from south of Laurier bridge, and as both the passenger and freight business enter from Besserer St. the grades of the tracks are governed by the grades of this street. From the station entrance towards the freight shed there is a drop of about 6 ft., which makes the passenger yard ascend from Laurier bridge towards the station and the freight yard descend from Laurier bridge towards Besserer St. While we were anxious to have the two yards of a uniform grade, it was impossible to obtain this without very considerable expense both in land damages and in bringing up the adjacent streets to such grade. With the present arrangement there is excellent drainage for these two yards. The 20 ft. roadway between the two ladder tracks may be called the water shed. The passenger yard drainage runs toward the canal and Laurier bridge and the freight yard drainage goes towards Besserer St., where it

put to work and excavated the freight yard for its entire width and right through to Besserer St. to a uniform grade of 1-10% and to a depth of 2 ft. below the base of rail. At the side of the tracks under the transfer platform the excavation was made about 18 ins. deeper, in order to have the sub grade of the tracks thoroughly drained. This arrangement gives a very dry yard in

be given to each move made, so that freight business would not be tied up during the construction of any of the new works.

The rail in the freight tracks is 80 lbs. and the switches are split with no. 9 frogs, thus having leads which will admit of a safe operation by the ordinary class of engines, although there is a special yard engine to do all the



G.T.R. Central Station Yards, Ottawa, from Laurier Avenue Bridge, Sept. 17, 1909 before Improvements.

all weather. Part of the excavation from this point was dumped into the old canal basin where the freight shed stood on piles, this part having never been filled in. With this work all surface traces of the old canal basin have now been obliterated.

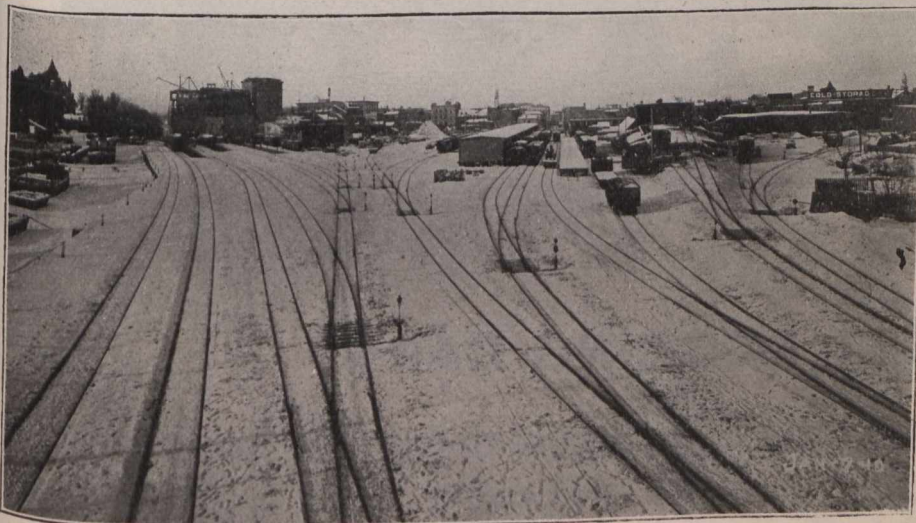
In the carrying out of this work the chief point we had to keep in sight was the safe and speedy operation of present business. The freight facilities were so congested that we could not cut out one track without making provision for its business at some other point. It so

switching work in this yard. The maximum curvature is $9\frac{1}{2}$ degrees, which is the turnout for no. 9 frog. Up to the time of writing there have not been any derailments in this yard since its completion, whereas previously there was an engine off the track on an average every 24 hours.

The freight yard consists of a freight shed and office 668 by 30 ft., with four parallel tracks the full length of the shed. A transfer platform 560 by 16 ft. and three pairs of unloading team tracks with macadamized roadways 30 ft. wide are also parallel with the freight shed. The floor of the freight shed is level with the floor of cars standing alongside. Freight can thus be loaded or unloaded into the cars through the shed. Opposite every alternate door in the shed is a set of weigh scales set in the floor, which saves a considerable amount of trucking.

The passenger yard tracks are in pairs 13 ft. centres, with room between each pair of tracks for a platform 19 ft. wide. The shortest pair of tracks have a train capacity of eight cars each (figuring average length of car over all at 70 ft.) and the longest can hold 17 cars. The total train capacity of this yard is 100 passenger cars, which figures out of a little more than double the train capacity of the old passenger yard. The passenger yard tracks are built of 100 lb. rail with no. 9 frogs. All the switches are on the one ladder, which gives the engine driver approaching the yard a clear view of the condition of all the switches. Ultimately it is the intention to have all these switches interlocked, the tower to be located either on or near Laurier bridge. A train shed, of the Bush type, 500 ft. long, covers all the tracks from the baggage annex to the canal. The tracks are ballasted with crushed stone which will keep down the dust in the station vicinity. The platforms are concrete at an elevation of 7 ins. above the top of rail.

In the passenger yard layout, in order to provide a through second track for the C.P.R. in the event of its double



G.T.R. Central Station Yards, Ottawa, from Laurier Avenue Bridge, Jan. 17, 1910, showing Improvements made.

drains into a sewer at Musgrove St. This was one of the difficulties in the old yard, there was no drainage, which meant a lot of heavy maintenance work during spring and fall weather.

In the centre of the old yard between Laurier Ave. and Besserer St. there was a hump of about 3 ft. and as the tracks were lying on blue clay with little or no ballast underneath, a steam shovel was

happened that part of the new freight shed was located on vacant property, thus enabling us to build the freight office and about 300 ft. of the freight tracks and two of the freight tracks before disturbing the old shed, which was located where part of the main passenger ladder track now runs. As the new tracks peculiarly crossed the old tracks diagonally, a good deal of study had to