islands for railway and industrial purposes, the city was instrumental in having the Dominion Government dredge the McKellar and Mission Rivers to the standard requirements adopted for the Fort William terminals, viz., 500 ft. channel, with a clear depth all over of 22 ft.

For the C.P.R. to make use of the islands, it was necessary to bridge the channels of the rivers. The way of approach was to first cross to Island no. 2, and then across to Island no. 1. The first bridge is of the bascule type, double tracked and double decked, a full description of which appeared in Canadian Railway and Marine World for Sept., 1912. The bridge under construction is shown in fig. 4. An idea of its size may be gathered from the fact that it has a clear span of 186 ft., which, on account of its being set at an angle, gives a clear channel at the bridge of 125 ft. It is made double decked to carry street car and vehicular traffic on the upper deck, the method of approach at each end being as shown in fig 4. The crossing of the McKellar River is by means of a rolling lift bridge, giving a clear channel in that river for passing vessels.

The plans for the C.P.R. terminals on the island have not been completed, but a coaling plant and a freight shed and pier have already been built. In the centre of the island, it is the intention to lay out yards, but along the river front, except at the outer end of the island, the land is to be laid out into industrial sites, which will be convenient for both rail and water connections. The freight shed plans along the north side of the island contemplate 5 sheds, of which only one has as yet been completed. Much of the transhipment of package freight will be removed from the mainland when these are completed.

The coaling plant that has been constructed on the island, bordering on the McKellar River, is said to be the largest in the world. A description of it appeared in Canadian Railway and Marine World for Feb., 1912. It is for the exclusive use of the company's coal, and will ultimately have a storage capacity of over 2,000,000 tons. The old plant on the mainland will be used for all other coal that is taken up the lakes. An idea of the size of the plant can be gained from fig. 5. It extends nearly as far in the other direction as can be seen in that view, and the bridge on the left extends some 500 ft. On the extreme right is the McKellar River. From the hold of the boat, the coal is lifted by the large fulcrumed arms, deposited in the space between the walls shown, where it is picked up by the large crane on the left, carried and dropped in the vast storage space to the left. The loading of the cars is accomplished in a reverse order. On the elevated track to the right are scale cars that are loaded with coal from the travelling crane on the left, and which run along to loading machines under the elevated track, into which the coal is dropped, the exact loading of the car being thus accomplished without further trimming. In the western coal trade, box cars are used exclusively, grain travelling east in them, the same cars going west loaded with coal, thus maintaining a balance in the traffic, with a minimum of lights. The trackage has been so arranged that there is a continuous movement of the cars through the coaling plant, it being expected that a switch will be constantly employed bringing in and removing the cars, the local movement in the plant being obtained through an electrical winch. The whole plant is electrically operated, a substation at the far end supplying the electricity for local use. The plant was put in operation last October, and about 100,000 tons of coal unloaded from vessels before the close of navigation. It will be stored there pending the completion of the two bridges across the channels to the two islands.

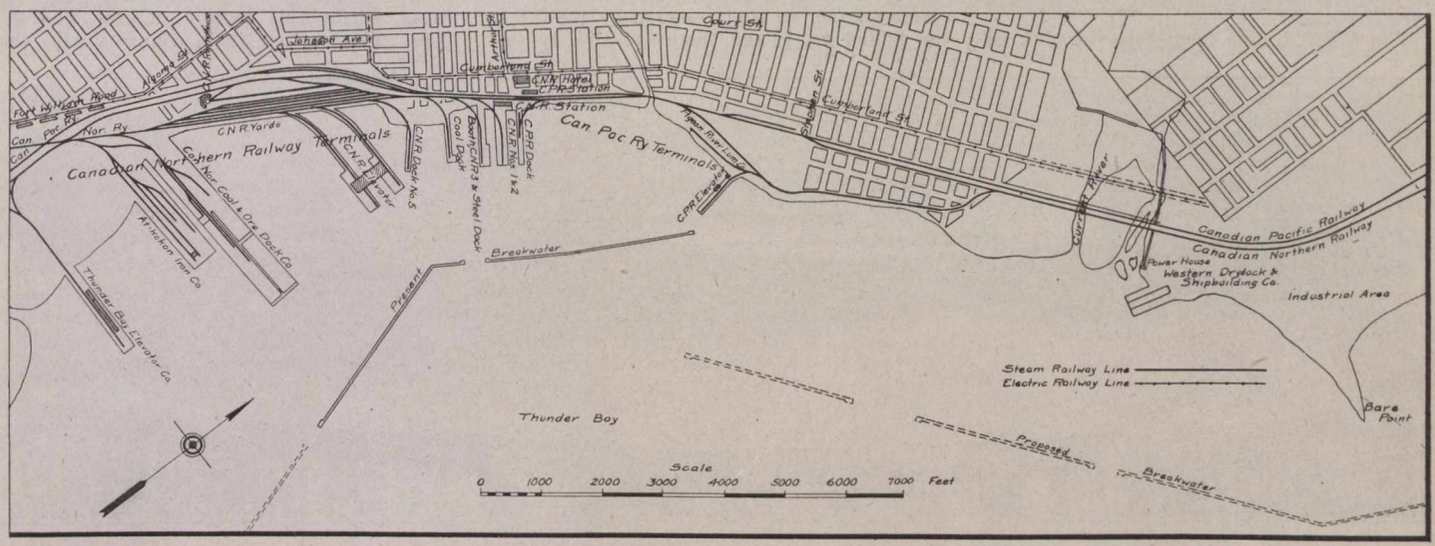

Fig. 6.—Plan Showing Railway Connections Around Port Arthur.

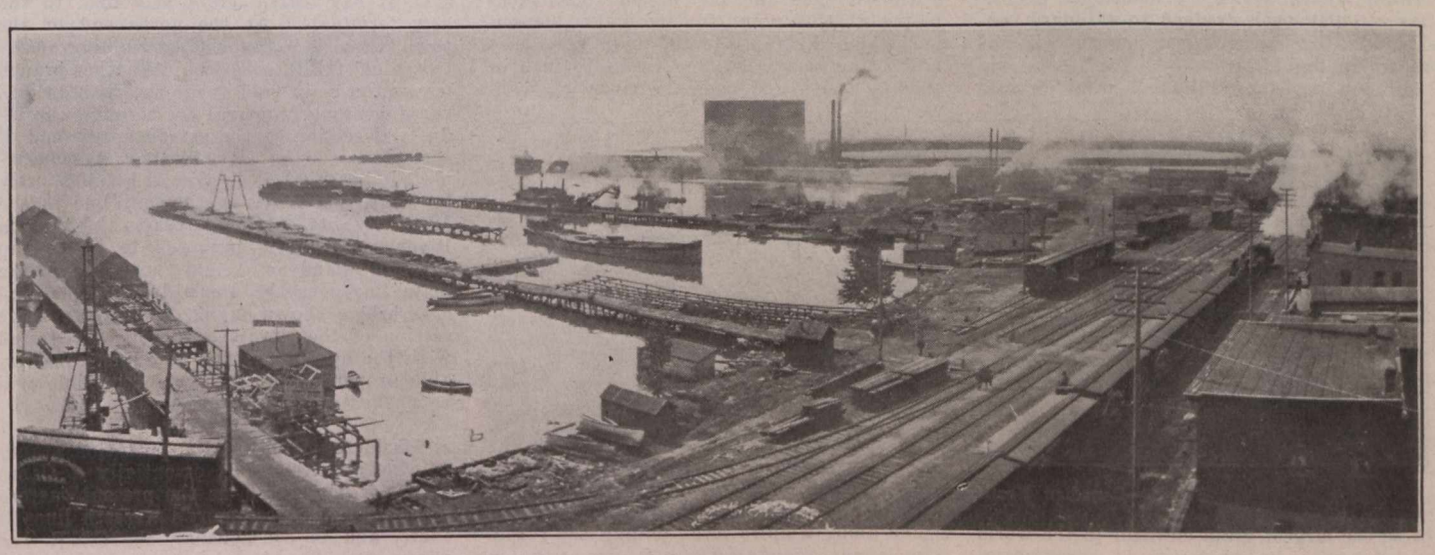

Fig. 7.—Panoramic View of Canadian Northern Ry. Terminals at Port Arthur.

GRAND TRUNK PACIFIC RY.—The late advent of the G.T.P.R. into the western transportation field made it necessary for it to exercise considerable ingenuity in obtaining access to the different large terminal points reached by competitive lines. At the head of the lakes, considerable time was spent in determining the merits and determining circumstances that would influence it in going into Fort William or Port Arthur. The inducements, both natural and those offered by the town proving