## Canadian Railway and Marine World

May, 1917.

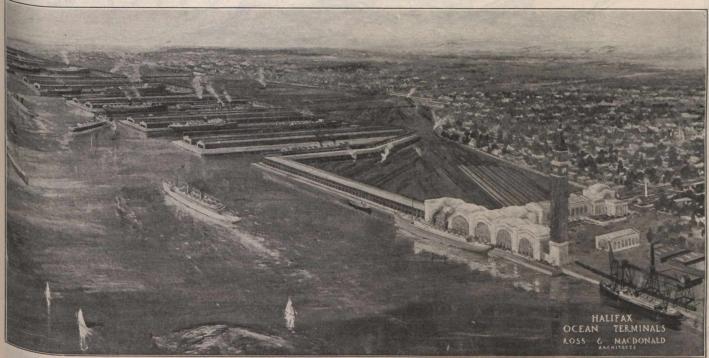
## Halifax Ocean Terminals and Connecting Railway.

By A. C. Brown, A.M.Can.Soc.C.E.

Halifax, which was founded in 1749, and is and has been since its foundation the chief city of Nova Scotia, is situated on one of the finest harbors in the world, one of the finest harbors in the world, and is the nearest equipped terminal port to Europe open all the year round, being over 250 miles nearer to Liverpool than any other terminal either in Canada or the United States. With such a splendid geographical situation it should be the main eastern gateway of Canada. The average course of steamers from Liverpool to New York brings them within pool to New York brings them within about 19½ miles of Halifax, so with adequate terminal facilities and first class

1½ miles wide, except at the Narrows, where it joins Bedford Basin, where it is ¼ of a mile wide. Bedford Basin is 4 miles long and 2 miles wide. The entrance to the harbor is straight and the water deep, while inside there is enough room for the largest ships to manoeuvre with the greatest ease. There is a freedom from currents and severe storms, and the range of the tide is only 2½ ft. at ordinary spring tides. The harbor, too, is well protected, there being only one open entrance with the Atlantic Ocean. The configuration of the shore at the entrance effectually breaks up Atlanthe entrance effectually breaks up Atlan-

Pier 7, a bulkhead wharf 500 ft. long; Pier 8, 120 ft. wide with berths 650 and 740 ft. long; Pier 9, bulkhead 700 ft. long. At deep water: Pier 2, 240 x 700 ft.; Pier 3, 160 x 600 ft.; Pier 4, 95 x 540 ft.; Pier 5, 35 x 400 ft. With the exception of Pier 2, which is of reinforced concrete and is thoroughly modern in every repect, all the piers are of timber pile construction, and are generally in poor condition. In addition to this accommodation there are about 10 privately owned wharves from 200 to 600 ft. long. owned wharves from 200 to 600 ft. long, all being built of timber, with the exception of the Furness wharf, which is being



Complete Scheme for Halifax Ocean Terminals, looking from the Harbor.

ships making Halifax a port of call, passengers could be in Chicago by the time the ships arrived at New York. In addisituated for trade with the West Indies, the ports of the United States, and, with the perfecting of the Panama Canal, for connections, in the event of steamthe perfecting of the Panama Canal, for hade with the west coast ports of Canada. as a ddition to being splendidly situated if a terminal port and a port of call, Halas as an almost ideal situation should. as a ddition to being splendidly situated if a terminal port and a port of call, Halas has an almost ideal situation should reserved as a "free port," that is, a port cargoes free of duty and take up either from the interior. So long as merchanare did not pass beyond the free port the interior. So long as merchanare and not pass beyond the free port the only charges being those for wharf—and warehouse space.

The outer harbor consists of two parts, outer harbor is 7 miles long and about

tic swells, so that no very large waves can enter the harbor.

In addition, however, to the funda-mental need of accessibility and accommodation, special requirements of good terminal facilities, quays, sheds and railway approaches and yards are necessary before a harbor can be used. It is indis-pensable to the conditions of modern trade that there should be the least possible delay in the reception and dispatch of vessels, and everything must be done to procure continuity of operation, and for this reason the location, construction and equipment of quays within the harbor is of the utmost importance. The old railway wharves and yards at Richmond and the deep water terminals, are situated on a narrow and restricted foreshore, ed on a narrow and restricted foreshore, with inadequate railway connections and with no possibility of any great extensions on economic lines. The existing railway terminals provide the following accommodation: At Richmond: Pier 6, 80 ft. wide with berths 280 and 400 ft. long; built of reinforced concrete.

In June, 1912, surveys, both land and hydrographical, were commenced, and a thorough investigation with test borings, soundings, wind and current observation made with the object of obtaining a suitable site for a system of terminals which should comply with the standard required by the Dominion Government, which may be briefly summed up as follows: 1. The be briefly summed up as follows: 1. The location should be the best the harbor could provide. 2. The work should be first class and permanent. 3. As soon as possible accommodation for 9 modern steamships. 4. A possibility of future extensions. 5. All accommodation to be designed with due regard for possible increase in the size of vessels and the increase in trade. After a very careful engineering and economic study of the whole situation had been made, the Minister of Railways and Canals was able, in ister of Railways and Canals was able, in Nov., 1912, to make public the proposed scheme of terminals.

The ocean terminals are situated on the