

fore we can get the best results in planning and improving our cities and towns, also that if these maps are to be economically prepared we must look for help in their preparation to the federal and provincial governments. Let us urge the importance of this matter on the attention of the authorities concerned. There are the questions connected with child welfare, more scientific methods of distributing public charity, the question of dealing with the feeble minded, of promoting the right kind of technical education to suit our needs and others of a cognate kind.

We must be careful not to dissipate our energies over too wide a field, although we can do much by organization to so arrange and allot our work that we can include every civic activity within the scope of our organization by delegating the work to special committees.

There is need for an International Institute similar to the Agricultural Institute at Rome, to collect municipal statistics all over the world and place them at the disposal of all cities and towns. The writer hopes that the Civic Improvement League will inaugurate a movement to secure the establishment of such an institute.

VICTORIA INNER HARBOR IMPROVEMENTS.

THE 9th annual report of the Inner Harbor Association summarizes the vast amount of improvement work that has been done during the past year or is now in progress in connection with the harbor scheme. The report is, in part, as follows:—

In the upper harbor, or basin, a large portion of the bottom has now been dredged to 20 feet deep at low water. The large rock about the middle of the basin will be removed after the works are completed in the lower harbor.

The channel leading to the inner harbor is now considerably wider than formerly and forms an improvement that will be greatly appreciated by all steamships frequenting the port. The Dominion Government dredges and rock drills are engaged continuously, day and night, in deepening and widening this channel on the northern side, and the operations will be continued until the water is deep enough and wide enough to accommodate without danger ships of much larger capacity than those at present using the inner harbor.

The lower harbor generally, where dredging can be done, is now 20 feet deep at low water. The rock on the western side of the entrance (off Behrens Island) has been removed; the rocks off Shoal Point, on the eastern side of the channel, have been cut back about 200 feet, thus widening the channel considerably and straightening out a very difficult turn. This is being further widened as opportunity offers.

The northern side of the channel, between Songhees Point and Pelly Island, and eastwards to Behrens Island, is gradually being straightened, in accordance with the original scheme. The southern side of Pelly Island, and the immense mass of rock contiguous, is gradually being removed, and by the end of March will be fairly straightened out to line, widening the channel about 120 feet. The removal of Songhees Rock (west of Songhees Point at the eastern approach to the northwest passage) will shortly be undertaken, and a commencement of the removal of the material (mostly packed clay) forming the bottom of the proposed northwest passage, will be made, giving a navigable channel 300 feet wide, free from rock. This work will be proceeded with during the intervals when the dredges are not engaged in the removal of the rock broken up by the drilling plant. The work to the north of Pelly Island may be looked upon as preliminary

to the eventual removal of the whole of the rock in that locality.

The Narrows between Songhees and Laurel Point have been widened about 75 feet by the removal of rock, etc., at the northern side.

To the southeast of Songhees Point the rocks have been cut back to 16 and 20 feet deep at low water. It is proposed to remove the remainder of the triangle to the railway bridge as the work proceeds inwards. All movable material has been dredged from the eastern side of this triangle and the channel, as far as the railway bridge, has been widened about 150 feet.

The general trend of the works of improvement in the inner harbor has been the gradual removal of all impediments to navigation south of a line drawn westward from Songhees Point to Pelly Island, produced westward towards Behrens Island, as laid down on our original plan and this system has been steadily pursued.

The rock blasted by the drilling plant, or broken up by the Lobnitz, is immediately removed by one of the dredges in close attendance upon these machines, and the bottom kept clear, as far as circumstances permit.

The total amount of rock, clay, gravel and sand removed from the bottom of the harbor during the year 1915 has been approximately 420,000 cubic yards, of which total about 36,000 yards were rock blasted out by the drilling plant or broken up by the Lobnitz rock-breaker. The total outlay on these works during the year has been about \$230,000.

The above refers, as stated, to the inner harbor work, and does not cover the extensive work under way on the outer harbor, docks and breakwater. An important part of the latter work completed during the year is the formation of a turning basin, some 21,000 superficial feet in area, dredged to 30 feet at low water, for the manoeuvring of ocean vessels leaving port.

About two-thirds of the length of the breakwater is now above high-water level and the structure is meeting all expectations in securing quiet water under the most stormy circumstances, not only at the new piers under construction, but also preventing the breaking of heavy seas over Rithet's southern wharf. The work on the two piers is making rapid progress. Already nine of the 3,000-ton caissons are in place. At present the work on the piers is all under water and it will be another year before they assume visible shape and proportions.

The total outlay to date on the breakwater has been about \$1,400,000 and on the new piers about \$740,000.

MEAN SEA LEVEL FOR RAILWAY PROFILES.

General Order No. 157 of the Board of Railway Commissioners for Canada requires that on and after February 1st, 1916, all profiles submitted by railway companies subject to the jurisdiction of the Board, which commence at, terminate at or intersect with any of the lines listed in "Altitudes in Canada," edited by James White, assistant to the chairman and deputy head of the Commission of Conservation, shall be based upon mean sea level as provided in that publication. This includes those which touch tide water and are not listed in "Altitudes in Canada." The Canadian Pacific, Canadian Northern, Grand Trunk Pacific and Grand Trunk Railway Companies have all consented to the proposal.

The annual meeting of the Manitoba Good Roads Association will be held on February 14th.