

term to 30 years is too general. The department should insist that this be limited to the estimated lifetime of the work and the maintenance system to be inaugurated. It is not good financing to extend the debenture term so that a road will be worn out and reconstructed before the first debenture is wholly paid. The supervision of debenture issues by the department is suggested.

### Civil Liability

The general use of motor vehicles and changed traffic conditions is directing attention to the provisions of the Municipal Act, Section 460, which reads as follows:—

"Every highway and every bridge shall be kept in repair by the Corporation the Council of which has jurisdiction over it, or upon the duty of repairing it is imposed by this Act, and in case of default, the Council shall be liable for all damages sustained by any persons by reason of such default."

The Act making the municipalities liable was introduced in 1850 with reference to roads in cities and towns, and in 1859 was included in the Municipal Act. The control over the highways of the province was then in a transitory state. Municipal institutions were in their infancy and it was thought that the councils would not be able to maintain the roads. This resulted in the formation of great many toll road companies to take charge of the main highways, which had been or were still in some cases under the control of the Minister of Public Works, and to relieve municipalities of liability for non-repair.

There appears to have been some misunderstanding in reference to precedents for the section making municipalities liable. It was, no doubt, copied from the laws of one of the United States, and afterwards looked upon as being in accordance with English law. The late Mr. Biggar, in his Municipal Manual, remarks in this connection that "the common law obligation of parishes in England to repair their highways did not involve the existence of a civil liability to pay. One sustaining injury owing to the non-repair of a road can sue the municipality only if the Legislature gives him a right of action."

### Present Law Unsatisfactory

There can be no question but that the law respecting actions against municipal corporations for damages caused by the non-repair of highways is in a very unsatisfactory state. It is submitted that a municipality should not be held liable for defects in highways unless the defect is of its own direct creation, and that Section 460 should be amended by eliminating the words imposing a civil liability.

No such liability has been imposed by statute in any other of the provinces of Canada except the province of Manitoba, and in the case of that province there is the following provision: "Provided, however, that the liability of such corporation shall be limited to the portion of the road on which work has been performed or public improvements made by the municipality."

### To Discuss Liability Again

In Ontario, the liability to repair extends to the whole width of the highway, and so strictly are municipalities dealt with that practically every person using the highway is insured against accident. The matter has been brought to the attention of the legislature many times during the past fifteen years by provincial deputations and by this association in co-operation with the Ontario Municipal Association.

In 1912 a bill was introduced in the legislature by Mr. Ellis, of Ottawa, who is now director of the Bureau of Municipal Affairs. It was supported by the late Mr. Hanna, provincial secretary, but met with very strong opposition from both sides of the House and was thrown out in committee. The question is to be discussed again with a view to having it formally considered by the new regime.

Some municipalities have adopted the plan of taking out indemnity policies protecting them from personal and prop-

erty liability resulting from accidents on highways under their control. This is to some extent an innovation, but as long as the premium charges are reasonable, it is a business-like proposition, the same as insurance for any other purpose.

It has been announced in the press that some measure of provincial aid will be extended to townships for road improvement. This should be granted in a way that will encourage township councils to be progressive, to appoint township commissioners and to inaugurate the systematic use of split log drags with a view to keeping all the roads good all the time.

### NEW 18,000 K.V.A. HYDRO-ELECTRIC DEVELOPMENT

Abitibi Power and Paper Co. Have Started Construction of Concrete Dam and Power House at Twin Falls on Abitibi River—Will Require 80,000 Cu. Yds. of Concrete

By H. L. TROTTER

Engineer for Morrow & Beatty, Ltd., Iroquois Falls, Ont.

WORK on the new power development for the Abitibi Power & Paper Co. was started last month. The site of the new plant is at Twin Falls, on the Abitibi river, about eight miles above Iroquois Falls. Power will be transmitted at 23,500 volts to the paper mill at Iroquois Falls.

The development involves the construction of a power house and concrete dam, with core walls at each wing. The dam will be of solid concrete and will raise the head water 58 ft., giving a normal operating head of 60 ft. The head water will be raised to the level of Abitibi lake, drowning out all rapids and falls between Twin Falls and the lake.

The power house will have four units, each consisting of a 4,500 k.v.a. generator coupled to a single-runner hydraulic turbine on a vertical shaft. The draft tubes and scroll cases will be moulded in concrete.

The total quantity of concrete in the work will be about 80,000 cu. yds.

The electrical equipment will be supplied by the Canadian Westinghouse Co., Ltd., and the turbines and governors by the I. P. Morris Co., Philadelphia, Pa.

Supplies are being hauled to the site over a snow road from Iroquois Falls, but when the river opens, supplies will come in by scow, via the Black river and Abitibi river, from Matheson on the Temiskaming and Northern Ontario railway.

The general contractors for the work are Morrow & Beatty, Ltd., Peterborough Ont., who built the Abitibi Power & Paper Co.'s original power plant and paper mill at Iroquois Falls. T. A. Barnett, formerly one of the superintendents on the staff of the Hydro-Electric Power Commission of Ontario, is general superintendent in charge of the work for the contractors. Plans, specifications and supervision are being supplied by Geo. F. Hardy, consulting engineer, New York City.

Patents have been issued to the National Iron Corporation, Ltd., Toronto, for water-cooled machines for moulding iron pipe by centrifugal force. Supplementary patents have also been issued for heat treatment of these centrifugally cast pipes. The inventors of these machines are D. S. de Lavaud and F. Arens, Jr.

The sessions of the seventh annual meeting of the Canadian Good Roads Association, which will be held June 1st-3rd in Winnipeg, will be in the banquet hall of the Royal Alexandra Hotel, while the exhibition will be in the "old ballroom," and will consist of samples of road materials, photographs, models of various types of roads, etc. Provision is also made for heavy exhibits in actual operation, consisting of road graders, drags, rollers, etc., which will be located on the property at the rear of the hotel. The first allotment of space is now being made, preference being given to applications in the order in which they were received. In the ballroom there is space for 25 exhibits, the sizes of the booths ranging from 50 to 150 sq. ft. in area and from \$50 to \$200 each in price.