

persons are adverse to this plan of going into debt to improve roads, but it seems from what we have said, especially with reference to the equal benefits to be derived from the improvements by posterity, and therefore their equal liability and the great immediate and permanent benefits from improved roads, that this plan is entirely proper, and we feel no hesitation in supporting its adoption.

If each township had the authority, if it desired to make use of it, to borrow \$50,000 in bonds, and the average cost of construction of macadam roads is \$2,500 per mile, then the \$50,000 raised on the bonds would be sufficient to construct twenty miles of road, but it is certain that the cost of twenty miles would be considerably less than \$50,000, and we feel safe in saying that twenty-five miles is the lowest average that would be obtained with proper management.

The province should give aid to the counties to maintain their public roads. Let the province appropriate \$1,000,000 to \$1,500,000 annually for ten years for the purpose of maintaining the public roads, which shall be apportioned among the different counties according to their ability to improve their public roads, and according to the value of such improvement to the province. This money should be applied each year in macadamizing an additional piece of road. This will soon lessen the cost of maintenance, on account of the decreased cost of maintaining macadamized roads.

The improved condition of the public roads would benefit the towns as well as the country districts, and they should therefore give assistance, and this can best be brought about by provincial aid to the counties. This aid should be in proportion to the wealth of the county. The poorer districts should receive the most aid if their improvements would benefit the province at large as well as those counties. It should be left to the provincial and county road engineers to decide how the province appropriation should be apportioned. In order to secure the best management of the public road system, each township should be constituted a road district, if large, or two small townships or several townships having but few internal improvements might constitute a district. Each township should have its board of commissioners, and each district should have its road engineer or supervisor appointed by the board. This board should have control of the funds and receive contracts for road construction. There should be a county supervisor in each county, and a provincial engineer or supervisor appointed in a similar manner to the county and provincial superintendents for school purposes. They should be specially trained civil engineers receiving suitable salaries. Their salaries would be saved every year in the better management of road affairs.

The township is the unit of the government under the present plan, and it seems to be the one which is the most likely to give general satisfaction, and should therefore be retained in casting the mode of road government.

Each township should have its board of commissioners, say of three members, serving gratuitously, like township school boards, and should have the same authority relatively as school boards have in their districts. They should be elected triennially, *i. e.*, one each year and should appoint a competent engineer as supervisor to carry out their plans. It is highly important that the supervisor of the road be a trained engineer. It is a business that cannot be grasped intuitively. This has been one of the main causes of the wretched condition of public roads. Supervisors should, therefore, be appointed by a board of commissioners and the elective system abolished, as a competent supervisor is more likely to be appointed by the board than if chosen by popular election.

The supervisor should see that the contracts for the construction and repairing of the roads entered into by the board are carried out in the best manner, or he may assume full control of the work himself, hiring the men and receiving their pay from the board the same as would a contractor. It is, however, preferable that they should be contracted for, as the best labor can thus be secured. Cities employ this system and hold the contractors responsible till the work has been accepted as fully satisfactory.

His salary should be in accordance with his position and the value of his services. If he is employed by more than one township he should draw a portion of his salary from each.

The county commissioners serve as a board in the control of the affairs of the county. They build the county bridges, and thus their duties will not be extended very much in giving them general control over the more important roads of the county. They should be elected, as at present, and should superintend the construction and maintenance of the county roads, through a county supervisor, or engineer, appointed by them.

This officer should be a thoroughly trained engineer, competent to give full information to the board on all points in road construction. He should make an annual report to the provincial engineer as to the condition of the roads and the cost and extent of the improvements made, and such other information as would be of general value or interest. He should determine, with the provincial engineer, the amount of provincial aid his county should receive, and should apportion it amongst the several districts by the advice and assistance of the township engineers. His compensation should be in accordance with his professional abilities and the value of his services.

There should be a provincial supervisor of roads, with one or more assistants, appointed by the Lieutenant-Governor, who shall have jurisdiction over inter-county road matters and be the head of the road department of the province. He should, with the county engineers, form a provincial association of road engineers, which would meet at least once each year and discuss the different aspects of the road question, and formulate new laws whenever required and present them to the provincial legislature for adoption. He should, with the county engineers, determine the amount of provincial aid which each county should receive, and in this he should be guided by the wealth of the county and the general value and importance of the improvements to be made.

The provincial engineer should make an annual report to the legislature, giving statistical information on the general condition of the roads of the province and the number and kind of improvements promulgated during the year. Such a report would be of incalculable value, both now and in the future. He should have made a provincial road map, showing the condition of the public roads leading from and to all principal towns. Such a map would be of great value to the road engineers, to the travelling public and to schools and colleges.

For convenience of administration, and to divide the work systematically, the public roads should be divided into three classes; first, those local roads in the townships connecting the principal roads, and which are, therefore, of secondary importance and of mainly local value, should be under the jurisdiction of the township boards and their road engineer, and should be laid out, constructed and maintained by them, chiefly by local taxation, and should be known as township roads; second, those roads leading from one town to another and traversing several townships, should be under the jurisdiction of the county boards and the county road engineers, and they should decide as to their location, width and nature of the improvements to be placed upon them. While the portions in each township are laid out, constructed and maintained by the township authorities, and the cost of construction and maintenance sustained by the township and county, according to the benefits derived by each, the township should not contribute more than half of the cost of maintenance of roads of the second class, and the county the remainder. These should be known as county roads. Third, those roads extending from one county into another, or through several counties, or from one province to another, or forming the boundaries of these, should be under the jurisdiction of the provincial engineer, and his assistants as far as location, width and nature of improvements are concerned, but they should be under the jurisdiction of the county and township authorities for