

## MUNICIPAL DEPARTMENT

### TO MUNICIPAL OFFICERS.

The CONTRACT RECORD is desirous of publishing, as far as possible, advance information regarding projected works of construction in all parts of Canada, such as sewerage and waterworks systems, railways, street pavements, public and private buildings, etc. Municipal officers would confer a favor upon the publisher by placing at our disposal particulars of such undertakings which are likely to be carried out in their vicinity, giving the name of the promoter, character of the work, and probable cost. Any information thus furnished will be greatly appreciated.

### SCHOOL OF ROAD-MAKING.

At a moment when the subject of road-making is attracting so much attention in Canada, it may be interesting for our people to note what is being done in connection with the subject elsewhere. Reference has already been made in these columns, says the Ottawa Free Press, to the work being done in some of the States of the Union, but Rhode Island has just started a scheme having for its object the educating of practical as well as theoretical road-makers. A school of road-making is somewhat of a novelty, but there seems no reason why it should not be found of as much value as schools for the teaching of other things. The Boston Transcript gives a lengthened description of the proposed plan and its course of study which has been prepared by General Stone, the U. S. road expert. It appears that the course of study will cover two years, so it will be seen that "thoroughness" will be obtained. The graduates are expected to be men who can draw the contracts, be able to run the machinery to build the road, and know the business from the hoe handle to the tripod, from shovelling coal under the boiler of the steam roller to drawing the plans—road engineers, in fact. To enter this course the student must be thoroughly grounded in the rudimentary branches, including algebra and geometry. During the first year the studies will cover English branches, together with higher geometry, trigonometry and surveying. In the second year the distinctive studies will be scientific, including physics and laboratory work pertaining to this subject; enough study in electricity to thoroughly understand the application of motors and electric power, and physiography. In the latter branch special attention will be given to the study of physical geography and its relations to the strata and course of springs as affecting road building. Then the student will be instructed in mineralogy and geology, that he may fully understand the relation these

branches bear to his profession. Steam engineering will also be one of the branches. As a part of the practical instruction each student will in the spring work for one month, 10 hours a day, in building roads, handling the shovel, driving horses, running the plant and so forth. It will be seen that this plan places road making on the same plane as other technical studies and is the first attempt on this continent—something of the kind exists in Germany—to bring theory and practice together in connection with the subject. The scheme is ambitious and elaborate and worthy of imitation. In Canada our provinces could hardly bear the cost of such an institution, but the example set by Rhode Island might be imitated to some extent. There is no reason why road-making in theory and practice should not be made part of the course prescribed at our agricultural colleges. The Ontario government would be doing good service by providing for such a course at Guelph, and we have no doubt that the county councils would be ready to avail themselves of the opportunity afforded and send some persons to make themselves acquainted with the principles of good road-making. If every county or township had a properly qualified person within its borders whose duty it would be to see that the roads are properly made and maintained, in a few years we should see a marked improvement in our rural highways, which at present are in too many cases behind the times. The Rhode Island departure is worthy of imitation.

### ROAD IMPROVEMENT.

The following advice regarding road improvement, given by Mr. Campbell, Provincial Road Inspector, at Guelph, will be of interest to other municipalities as well:

At present in introducing a system of road-making he would advise to spend a little on the streets generally where absolutely necessary, and equip themselves with proper machinery, have a plan laid out and commence laying a substantial piece of road each year. A plan of the streets should be made, the streets classified and the work proceeded with systematically. On a leading street, like Wyndham, where there was a great deal of traffic, paving would have to be put down from side to side; main streets leading into the city would require to be

from twenty-four to twenty-six feet wide, while twenty-two feet would be ample for streets in front of private residences. One of the first steps toward permanent improvement would be to purchase a rock-crusher, put it into the gravel pit and break the stones in sizes varying from two and one-half inches down to dust. The sizes should be two and a half inches, one and a half inches and three-quarters of an inch. He would break up the present road surface, remove about a foot of the dirty material, then thoroughly roll the foundation and apply the new material. First, put on a layer of the coarse material seven inches deep, then a layer of the next grade three inches in thickness; then a two-inch layer of three-quarter-inch grade, and finally cover the whole surface with the screenings of road dust. This should be sprinkled with water to carry the dust into the interstices of the stones, and thoroughly rolled so as to compact the whole mass until the twelve inches of loose stone would be compressed into about nine inches of a solid stone cover. The surface would then be hard and smooth, the road would be of uniform strength and would wear smoothly and evenly. If the roadway was properly crowned, when it rained the water would shed readily into the gutters, and if the gutters are made free, the water runs away and the road is washed clean, instead of, as now, being made into mud. A rock-crusher and heavy street roller are the chief machines needed to inaugurate a thorough system of improvement.

### MUNICIPAL ACCOUNTS.

Mr. Haycock has given notice in the Ontario parliament that he will introduce a bill for the better auditing of municipal accounts. Mr. Haycock, in explaining his bill, points out that the great difficulty in auditing municipal accounts is not so much the payments not being made as to the fact that the receipts therefor are not credited. Especially is this the case where transfers are made from one municipality to another. The bill provides that the treasurer of every municipality who pays money to the treasurer of another shall on Jan. 1 of each year send a statement of such payments, over his own signature and sealed with the corporation seal, to the head of the municipality to whose treasurer he has so paid the money. This statement is to be used by the auditors in their work. The measure also provides that the registrar of every municipality shall make similar returns to the head of the municipality. In conclusion the bill looks towards the appointment of permanent auditors by municipal corporations. Also every municipal corporation shall furnish its auditors with an indelible stamp for use in cancelling vouchers.

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