

counts for materials and other services not shown on the pay-lists. As in the case of labor, a little time spent in systematizing the passing, paying, and recording of accounts will be profitably spent.

All accounts should be submitted to the road superintendent, long enough before the regular meeting of the road committee to allow him to classify and distribute them. A distribution sheet will be found of service, on which will be recorded the following information:—

Person or firm submitting the account.

The class of work to which the account or part of account is to be charged (culverts, tile draining, road surface, etc.).

The road section on which the expenditure is to be made.

The part of each account (where the account is chargeable to more than one class of work or more than one road section) chargeable to each class, or road section.

The total of the account.

The account may usually be charged to one of the following classes of work, and should be so designated in the proper column in the distribution sheet: Grading, draining—Material, labor. Culverts—Material, labor. Road surface—Material, labor, fuel, oil, etc., contract. Bridges—Material, labor, contract. Maintenance—Material, labor; and miscellaneous.

Pay-lists will be recorded on this distribution sheet in the same manner as accounts. If a pay-list or account contains items chargeable to more than one section of road, or to more than one class of work, the account is to be divided so as to show the amount chargeable to each section or to each class of work. By supplying these details respecting each account, the road superintendent is virtually instructing the treasurer as to the posting of that account in his ledger. This distribution sheet, which should accompany each and every batch of accounts, will give the treasurer all information necessary to a proper keeping of the county road accounts, and will enable the treasurer and superintendent to prepare, independently of each other if necessary, at the end of the year's work, reports on the year's expenditure which will be identical.

Thus far the information and data recorded in time book, pay-list and distribution sheet, has been for the period covered by a single pay-list. The next step in recording costs is to re-arrange this information in such a way as to show the expenditure on each piece of work, and the total of such expenditure up to any given time. For this purpose it will be necessary to open an account in the ledger or account book for each separate work, and to have this account divided into heads corresponding with the details supplied on the distribution sheet. The various headings suitable for this form have already been outlined, and if care has been taken in the preparation of the distribution sheet, the work of the treasurer is reduced to that of copying from the distribution sheet into the column designated.

To make the system of cost and record-keeping complete, two other forms are suggested: a daily memorandum book for the foreman, in which he may keep a record of his work, and a report form to be filled out at regular intervals, preferably to cover the same period as the pay-list, and submitted along with the pay-list to the superintendent. Since the information asked for in the report is a summary of that collected in the memorandum book, the preparation of this report will be accomplished largely by copying.

The object of the diary, in addition to forming the basis of the periodical report, is to enable the foreman to

keep an accurate record of his work and have it constantly with him for reference. The facility with which he will be able to compare one day's work with another's should be an important factor in producing increased efficiency. This book, if desired, could be incorporated as a separate section of the time-book, the one book then showing for each day how the time of the gang was spent and the amount of work done. The necessity for regular daily entries should be impressed on the foreman. If the report is submitted with, and made to cover the same period as the pay-list, the superintendent will have all the material necessary for conveniently calculating any unit costs which he may require.

The utility of the system as here outlined may now be more fully comprehended. At the end of the year, by a process no more difficult than the adding of a number of short columns, the treasurer or superintendent may produce a detailed statement of the cost of each part of the work. It is not necessary even to wait till the end of the season; the same information being just as easily obtained at any time during the year. All information ordinarily required, *e.g.*, the cost of grading, culverts, road material, labor, fuel consumed, etc., may be obtained in this way. Unit costs and other detailed information may be obtained from pay-lists and report sheets, and may be recorded according to the superintendent's own ideas. Finally, the labor of preparing the annual statement, which has heretofore been the horror of more than one superintendent, will be eliminated.

(To be continued.)

LOADING OF VEHICLES ON HIGHWAYS.

The Ontario Legislature has before it a bill introduced by Mr. George S. Henry to regulate the loading of vehicles operated on highways. If enacted in its present form, the requirement will not permit an excess of 4 tons per wheel, or of $12\frac{1}{2}$ tons per vehicle. It will also prohibit the use of flanges, clamps or ribs on wheels, that will cause injury to the highway. It restricts, outside of cities, the weight per inch of width of tire to 600 pounds, unless the road be a brick, block, concrete or bituminous pavement with concrete base.

A clause prohibits a speed over 15 miles per hour for vehicles carrying over 4 tons, and 6 miles per hour for vehicles with iron or steel tires carrying over 6 tons. In the case of the latter having hard rubber or similar tires, the allowable speed is 12 miles per hour. Speed on bridges may be limited to 6 miles per hour at the discretion of the municipal corporation.

The municipality may grant a general or special permit for moving vehicles producing loads in excess of the limits mentioned above, but in such cases the owner of the vehicle is made responsible for any damage. Disregard of the above requirements involves a penalty of \$100, which shall be spent in the maintenance and repair of the highway.

About 22 per cent. of the total railway construction in Canada during 1914 took place in the province of Alberta.

Ontario has built well over 3,000 miles of waterbound macadam roads since the introduction of the county road system in 1901.

Alberta has 1 mile of railroad for every 125 persons in the province. The mileage has doubled in three years, there being now a total of 4,097 miles.