

The seriousness of this problem of the choice of proper road material is realized when we reflect that the demands made by this new form of motor traffic are certain to greatly increase in the near future. Highway engineers of every land are looking for an adequate remedy, but so far with only partial success. While constructional methods in nearly all other lines of engineering have been satisfactorily perfected and standardized, we find present highway construction on main trunk roads grossly inadequate for even the traffic of to-day, thereby causing needlessly large charges for maintenance.

It has seemed to the writer that real progress would be made by breaking away entirely from macadam construction on heavy traffic main highways. The improved and more permanent construction best suited to replace the macadam on such roads will here again be largely a local question. Ohio, Indiana and Pennsylvania have taken the first steps toward satisfying the demand for a more permanent construction by building many hundreds of miles of brick pavements laid on a concrete base with a cement grout filler, all supplemented usually by wings of dirt, gravel or macadam. The expense of such a pavement, about \$1,000 per foot of width per mile, does not exceed the average price paid by New York State for its wider but short-life macadam roads, while the brick roads, if properly constructed, promise to be in good condition twenty-five years hence.

Wayne county, Michigan, has constructed a good many miles of main highways, leading out of Detroit, of rich concrete, seven inches thick, at prices which also compete with eastern macadam, while giving promise of outlasting the latter by many years. Where the proportion of automobile traffic is not too great, a large amount of traffic has generally been economically provided for by some form of the bitulithic construction. It may be that Wisconsin, with her widely distributed rich deposits of good gravel and other road materials can wisely follow one or all of these forms of permanent construction. Few States are more favorably situated for road building than Wisconsin. We are fortunate also in being able to profit by the experiments of our older sister States. These have shown us that there is no one best pavement and no one best way of constructing it under all circumstances.

We now recognize that the selection of road material and the method of incorporating it into a road is in large part a local question; in fact, that highway construction in city and country obeys the same rules of procedure as do all other forms of good engineering.

GRAND TRUNK PACIFIC AFFAIRS

In view of the misleading reports in the daily press respecting Grand Trunk Pacific affairs, Mr. E. J. Chamberlin, president of the road, has issued the following statement:—

"The Grand Trunk Pacific Railway have been operating the section of the National Transcontinental Railway between Winnipeg and Lake Superior Junction since August 1, 1911, handling all of last season's grain business and other traffic offered over that line without any detriment to the public. The Government are now asking that the Grand Trunk Pacific execute a permanent lease of that portion of the line between Winnipeg and Lake Superior Junction, known as district 'F,' and negotiations are pending between the Government and the company on that point, but do not, so far as a matter of accommodation, in any way affect the public.

"The contract between the Government and the Grand Trunk Pacific relative to the Transcontinental, that section

between Moncton and Winnipeg, which was to be constructed by the Government and is known as the eastern division, provides that:—

"Pending the completion of the eastern division by the Government the company shall be entitled to lease from the Commissioners to be appointed under the said act, and to operate such portions of the eastern division as may from time to time be completed, upon such terms,' etc., but does not bind the railway company to take over any sections unless they desire to do so, until the entire line is completed.

"Negotiations are in progress between the Government and the company relative to a further lease of the section above referred to when it is fully completed and pending the completion of the whole line. Notwithstanding reports in the papers throughout the country, that portion of the Transcontinental line is not yet completed. There is considerable work to be performed on the entrance into Winnipeg, connecting up the Transcontinental with the Grand Trunk Pacific and the Canadian Northern at the Union Station. There is also considerable other work on the line necessary to be done before the terms of the contract are complied with.

"With regard to the Springfield, or Transcona shops: Major Leonard, chairman of the Transcontinental Railway Commission, has decided that the shops are not part of the contract between the Government and the railway, while the company contend that they are part of the Transcontinental contract. If Major Leonard's contention is eventually sustained, the taking over of the line between Winnipeg and Lake Superior Junction would not include the taking over of the shops by the Grand Trunk Pacific Railway. On the other hand, if the Grand Trunk Pacific's contention that the shops are a part of the Transcontinental Railway is sustained, the taking over of the line would also mean the taking over of the shops and placing them promptly in operation."

LAKE ERIE AND NORTHERN RAILWAY COMPANY.

At a meeting of the directors of the Lake Erie and Northern Railway Company, an agreement was concluded with Messrs. G. W. Farrell and Company for the purchase of the entire issue of \$1,100,000 5 per cent. mortgage bonds.

The Lake Erie and Northern Railway was incorporated by a special act of the Federal Parliament in May, 1911.

The Dominion Government has granted a subsidy of \$6,400 per mile, or a total grant of approximately \$340,000.

The charter provides for the construction of an electric railway from Port Dover on Lake Erie through the towns of Simcoe, Waterford, Brantford and Paris, to the town of Galt, a distance of 53 miles. Connections will be made at Galt with the main line of the Canadian Pacific Railway for an interchange of traffic on completion of the road.

The directors of the company comprise a number of the prominent manufacturers in that district and consist of Messrs. John Muir, Harry Cockshutt, Lloyd Harris and John Sanderson, of Brantford; Richard Thompson, general manager of Penmans, Limited; F. H. Deacon, of Toronto; Martin Todd, general manager of the Galt, Preston and Hespeler Railway, and G. W. Farrell, of Montreal.

Mr. Lloyd Harris, one of the directors of the Lake Erie and Northern Railway Company, stated this week that the directors will call for tenders at once and hope to have construction started this fall.

The towns through which the line will pass—Galt, Paris, Brantford, Simcoe, Waterford to Port Dover—have voted to take second mortgage bonds totalling \$500,000.

The directors believe that the field is a most promising one for both freight and passenger business, the 53 miles through which the line will pass being thickly populated.