

of the railroad station, and owned by the railroad promoters. The series of towns along the north shore of Lake Ontario, between Toronto and Kingston, are proof of the inability of a railroad company to compel an eastern town to move; they still stand where they stood 50 years ago when the railroad was built past them.

Brantford (see Figure 3) has furnished the most remarkable example of the power of an established town to hold its own against a railway company. The Great Western passed it by about 1850, when it had a population of 3,877, and located through its rival, Paris, which had a population of 1,890, the final choice having been influenced, it is said, by a subsidy. To-day, after over fifty years of struggle, Brantford has at last succeeded in getting the main line traffic of the old Great Western diverted into it, and in spite of transportation difficulties, has grown into a city of over 16,000 inhabitants, one of the most active manufacturing centres in Canada.

It may therefore be taken as good practice in Eastern Canada to carry the location directly into the existing towns, no matter how great may be the cost of right of way or the sacrifice of engineering niceties, for the return will in nearly every case give ample profit on the expenditure. In exceptional cases it may be necessary to construct a freight loop around the town if too serious a sacrifice of grade would otherwise be required, but by the use of momentum freight can be carried directly through a town situated in a hollow. The C.P.R. line into the town of Lachute has 1.00 per 100 falling grades on each side of the town, and runs its traffic straight through without stopping, unless there is local business to be attended to.

The preponderating share that the C.P.R. secures of Montreal-Quebec traffic, although its line is nine miles longer than the I.C.R. and about equal to the G.T.R. (see Figure 4), is an extreme example of the value of a properly located station site.

That any man who can handle surveying instruments is popularly regarded as entirely competent to make a railroad location is but a most general proof of the important influence exercised upon the details of location by topography. The engineer must know his country thoroughly, and it may be said that any man who is sent out on location without having opportunity to study all the information that has been accumulated in the past about his district is improperly equipped. The various Canadian governments have for years been sending out exploring and surveying