

Mr. Chesbrough's Report.

WEST NEWTON, MASS.,
February 20th, 1849.

SIR,—

After having examined the line surveyed for the proposed Halifax and Windsor Railroad, and the plans and estimates of the same, as furnished by Mr. Wightman, who made the survey, I feel prepared to make the following Report :

In my opinion, the survey made is sufficient to give a satisfactory knowledge of the general character of the route, and to afford a basis for an approximate estimate of the probable cost of the work. It is not, of course, so satisfactory as a definite location would have been ; but this could not have been made for the amount appropriated for the survey.

The ground selected for the line, and the plan proposed as it regards grades and curves, appear to me to have been judiciously chosen, with very few exceptions. The most important of these is the steep grades between the 34th and 37th miles from Windsor.

Here, I think, by incurring a reasonable additional expense, and selecting rather different ground for the line, a maximum grade of not more than 60 feet per mile, instead of 80 feet, might be obtained. A slight improvement might perhaps be made in a similar manner, between the 10th and 17th miles from Windsor, and result in diminishing the maximum ascent, going Eastward, to 53 feet per mile, instead of 60. This might prove to be a matter of considerable importance, as the heavy transportation will probably be in that direction. These changes are partially, if not altogether, recommended by Mr. Wightman.

The estimates of cost of the different items which make up the whole work, are, so far as I can see, quite liberal. At a few places, upon further investigation, the estimates may be found too low ; but, should this prove to be the case, which is quite likely at the crossing of Cockscomb Lake, and over the bogs on Sackville River, the opportunities of altering the line are so good, that the estimates need not be exceeded.

The probable net income to be derived from your road after its completion,—the all-important subject so far as a remunerative investment of capital in it is concerned, depends upon three elements : 1st. The cost of constructing the road, and furnishing its equipments. 2nd. The amount of travel and freight that will pass over it ; or in other words, the gross amount to be derived from passengers and merchandize. 3rd. The cost of working the road to accommodate this amount of business.

The cost of construction, as will be seen by reference to Mr. Wightman's estimates, will not, I think, exceed £337,500, and should the present low prices of iron rails and labor continue, will in all probability not be more than £300,000 ; but to guard against disappoint-

ment in the final result of the enterprise, it would not be safe to assume it at less than the higher sum.

The gross revenue to be derived from the business of the road, must depend upon the travelling and business statistics of the population likely to make use of it. My own knowledge of these is so exceedingly limited, that it could be of no value to you whatever. I have, however, for your satisfaction and guidance in making up, or adopting an estimate of the probable gross amount of income, annexed to this paper several tabular statements. No. 1, and No. 1 continued, show as far as it has been in my power, with a good deal of effort to collect them, the cost of construction, progressive increase of business, original estimates of these items, length, &c. &c. of the principal roads that have been for any length of time in operation in New England, and of a few in other parts of the United States. These statements show that the universal tendency of Rail Roads in this country, is to increase the travel and transportation of the merchandize of the districts through which they pass. This increase, however, does not always follow the same rate on different roads ; nor does it usually continue long at the same rate on any given road.

In Massachusetts it has generally been found that the travel along any line of Railroad, was in a short time after its completion, treble that of the original estimate, when that estimate was based upon actual and carefully ascertained statistics. This is owing to the much greater comfort, and economy of time and expense of railway travelling. Sometimes, however, capitalists have been disappointed, by embracing in their estimates too wide a region on each side of the road, and then presuming upon a liberal increase.

Railroads not only tend to increase the amount of travel and business of the districts through which they pass, but they increase also the value of the property along them, and at their termini. As an illustration, see Tabular Statement, page 98, Boston Census of 1846, showing the increase in the valuation of property in the City of Boston. Could I obtain similar statistics of Worcester, Springfield, Fitchburg, and other towns in Massachusetts, they would show similar results. You will perceive from a glance at these statements, that the original estimate of the cost of construction of several of the Railroads in this country has fallen far below the actual cost. This has not been owing so much to under estimates of particular items, as to unforeseen contingencies ; such as changes of plan rendered necessary to accommodate an unexpected amount of business ; and improvements found necessary, as the views of projectors and engineers, became more enlightened.

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