

unless equally wide departures from the present rules which govern the operations of railroads should hereafter be found necessary. Besides, when railroads were first introduced into this country, the views of even the best engineers on this subject, were exceedingly crude, and now afford considerable amusement to look back to. You will also perceive that the cost of construction increases on the same road from year to year, after its first completion and opening for use. This has been owing to causes already mentioned, and to the building of Branches, the lengths of which are mentioned in the statements.

With regard to the cost of working the road, it will depend very much on the amount of business to be done, and the amount of accommodation given to that business; that is, whether you run one or more passenger trains a day each way over the road. Thinking it might be satisfactory as a matter of reference, I have appended to this, the Tabular statement No. 2., showing various items in relation to the cost of working, and rates of charges on several of the most important Railroads in the United States.

It will be seen from this statement, that the cost of different items, varies very much on different roads. This is owing not so much to a difference in judicious management, as to a difference of circumstances. For instance, the Boston and Lowell Railroad Company, expended for each mile run of its engines in 1846=103.4 cents, while the Western Railroad Company expended but 72 cents. But while the Lowell Railroad is only 25½ miles long, the company is obliged to maintain expensive depot establishments at each terminus, and incur almost as heavy general expenses, as the Western Railroad Company, whose road is 156 miles long.

The cost of operating the Connecticut River Railroad, affords perhaps a more satisfactory comparison, for the proposed Halifax and Windsor Railroad, than any other that I know of; although, the analogy even here is not complete.

By referring to Tabular Statements No. 3., it will be seen that the cost per train per mile, run in 1848 on this road, was 53.3 cents. The average cost per train per mile, on all the Massachusetts Railroads in 1847, was about 71 cts. per mile.

No doubt one passenger train a day, each way, could carry all the persons who might wish to travel between Halifax and Windsor, but they would be far better accommodated by two trains a day, and this would tend greatly to increase the amount of travel; at least, such has been the effect to a remarkable and unexpected degree, wherever judiciously tried in this country. Supposing then, that you will run two passenger and one freight trains daily, each way over your roads, and that you will not run Sunday trains, the following may be considered a safe estimate of the total cost of working the road, viz.: three trains each way a day, would be 6 trains a day over the whole road. Calling the road 47 miles in length, this would be 282 miles a day,

or for 312 days, the total number of 87,984 miles to be run by the engines in a year: 60 cents per train per mile, would give as the total cost per annum of working the road \$52,790.04, or in round numbers £13,200 currency—60 cents per train per mile run, may be considered large when composed with the Connecticut River Railroad; but that is a new road and has not yet been subject to the deterioration common to older roads; besides, they run a greater number of trains over it without increasing their general expenses, or salaries and miscellaneous expenses of principal officers. On the other hand, it may seem too small when composed with the average of all the roads in Massachusetts; but fuel costs twice as much here as it does in N. Scotia, and labor is 23 per cent dearer here than there.

From the foregoing premises, then, if there should be business enough to yield a gross annual revenue of £30,000, which, after deducting the cost of making the road, (£13,200) would leave a nett income of £16,800,—it would afford a return of about 5 per cent on the estimated cost of the road.

For further and more detailed accounts of the doings and expenditures of the most important Railroads in Massachusetts, I would refer you to the reports of the Directors of the different Companies, made to the Legislature of this State,—copies of which reports have been furnished to Mr. Wightman for the years 1840 to 1847, inclusive.

Which is respectfully submitted.

E. S. CHESBROUGH, Civil Engineer.

Hon. JOSEPH HOWE,

Provincial Secretary, Nova Scotia.

Extract from the Appendix of a Report made by Mr. Samuel B. Ruggles, Chairman of the Committee of Ways and Means of the Assembly of the State of New York, submitted to the House on the 12th March, 1838.

"The following Tables, compiled from public documents, are published for the purpose of exhibiting the progressive increase during a series of twenty years, in the official valuation of the taxable property in the City and State of New York respectively. They embrace the periods of ten years each, one immediately preceding, and the other immediately following the completion of the Erie Canal in the year 1825:

I. *Official Valuation of the Real and Personal Property of the City of New York, from 1815 to 1825 inclusive.*

Year.	Real Property.	Personal Property.	Total.
1815	57,000,000	24,636,042	81,636,042
1816	57,308,200	24,766,000	82,074,200
1817	57,799,435	20,996,200	78,895,735
1818	59,827,285	20,426,806	80,254,091
1819	60,500,295	18,612,766	79,113,061
1820	52,084,328	17,446,425	69,530,753
1821	50,619,720	16,665,350	68,285,070
1822	53,330,574	17,958,570	71,289,144
1823	50,184,229	20,756,591	70,940,820
1824	52,019,730	31,055,946	83,075,676
1825	58,425,895	42,734,151	101,160,046