

more nearly to what ought to be the future trade, to justify the construction of the rail-road.

If this amount of freight is carried over the bridge in 300 days, there will be an average daily movement of 50 tons in each direction, or more than quadruple the quantity estimated by the Company.

For the conveyance of this freight, we may allow 16 tons for the engine, 9 tons for the tender, 30 tons for the cars, and 50 tons for the lading, and we will obtain aggregate trains of 105 tons.

If the present purpose were to prepare a plan simply compatible with good economy, such is the calculation which it would seem advisable to make, in obtaining a business basis on which to compute the strength and cost of this structure.

But, in the case before us, it is deemed expedient to adopt a plan fully equal to all the present and probable future wants of a great rail-way; and we must therefore treat this part of the subject on a much broader ground.

In adjusting the dimensions of the bridge discussed in this report, it is assumed not merely that the flooring may be loaded with gross trains of 105 tons, but that it may be covered any number of times daily with a column, 1000 feet long, of loaded freight cars, filling the track from one abutment to the other, and moving at the ordinary speed of such trains.

Indeed, in computing the strength of the cables, a still more liberal view of the subject has been taken, and