

THE NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY

THE NEW ENGLAND STEAMSHIP COMPANY
NEW BEDFORD, MARTHA'S VINEYARD AND NANTUCKET STEAMBOAT COMPANY
THE HARTFORD AND NEW YORK TRANSPORTATION COMPANY

OFFICE OF THE PRESIDENT

New Haven, Conn., November 25, 1925.

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Mr. Elliott:

The Railway Age of November 21st, page 959, under the heading, "Great Northern Completes Electrification Plan", concludes as follows:

"The proposed new tunnel through the Cascades which will be $8\frac{1}{2}$ miles long, will replace 17 miles of the present line. The maximum grade will be considerably reduced and a number of snow sheds eliminated. The present plans for the tunnel call for an eastern entrance at Berne, Wash., and a western entrance near Scenic."

While Chief Engineer of the Northern Pacific, I developed the possibility of a low-grade tunnel line for the Northern Pacific through the Cascades.

As I recall, the east portal would be located in the bottom of the valley below Easton and reached by a grade not exceeding one-half of one per cent.

The west portal would be located down in the valley below Weston and it would be reached by a grade not exceeding one per cent, which would require certain development including the former loop about 4 miles above Lester.

The length of the tunnel would be about $3\frac{1}{2}$ miles.

The above combination as to lower summit elevation, also of grades on the approaches, shortened length of tunnel, etc., would, as I recall, result in a crossing of the Cascades far superior to that which the Great Northern may contemplate, or the CM&St.P. has

brought about.

Prospectively there is so much advantage in this improvement that I think there should be no hesitation in the making of actual surveys for the best definite location that can be secured. If the location proves satisfactory you should then consider a sufficient appropriation from month to month for the purpose of driving through a construction tunnel, perhaps 8 x 10. Such a construction tunnel would be desirable because it would afford not only drainage and ventilation for the enlargement when undertaken, but because also there would be time enough to construct it from one end, and there would be no problem of pumping water out of the upper end during the period of construction, providing as I recall, the grade should be continuously descending through the full length of the tunnel at a rate sufficient for drainage purposes, in order that one of the portals may be lower than the other, in order to better conform to the controlling features of topography, relative elevations of the two valleys, and conditions affecting the support of the grades of the lines approaching the tunnel from both the east and west.

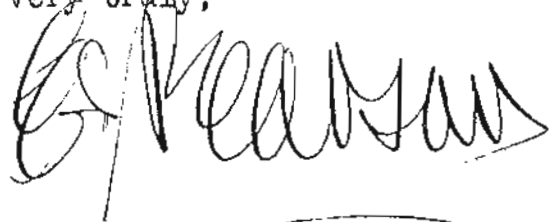
With such a construction tunnel open clear through, the completion of the main tunnel would be simplified and made much less expensive, moreover, the work of enlargement could be carried on at several localities if after the construction tunnel was completed it should prove desirable to expedite the completion of the tunnel as a whole, for either single or double track.

Assuming that the grade of the tunnel might perhaps descend at the rate of one-half of one per cent westbound, this would be sufficient so that all westbound trains would make the run quickly and without the

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emission of much steam or smoke or the burning out of much oxygen. Such a grade, moreover, would not be so heavy but that Diesel electric engines would suffice to push the trains through in the ascending direction, in order that they also might not fill the tunnel with steam and smoke and burn out the oxygen -- a possible combination for the operation of such a tunnel which is very much less expensive and simple than that of either electrification or mechanical ventilation.

Yours very truly,

A handwritten signature in cursive script, appearing to read "G. Pearson". The signature is written in dark ink and is positioned to the right of the typed name "G. Pearson".

Mr. Howard Elliott,
34 Nassau Street,
New York City.