

easily handled. Mistakes in not taking advantage of the nature of the ground are particularly likely to occur on lines that are being located by contour plan.

The fall of the Cornwall Bridge is the most striking example that has occurred in Canada, of a failure due to insufficient consideration of the necessities of construction.

It may be said that every district has its own peculiarities, and that if the engineer does not spend some time in studying the characteristics of the local material, he is bound to make some serious errors in his location, the results of which will be generally set down to unavoidable natural causes, whereas they are really due to the failure of the railroad management to recognize the need of thoroughly trained men for the carrying out of its work.

Lastly, it is to be remembered that all Canadian railroads must be built under the provisions of the Railway Act, and of such Provincial Acts as may be in force. The engineer should therefore know the requirements of the Act, for although railway managements may take most vigorous action to influence government opinion upon great questions, they are perfectly prepared to accept all legal requirements as to matters of detail.

In conclusion, the writer may say that he has seen all the examples mentioned, and has made surveys and reports in connection with many of them.