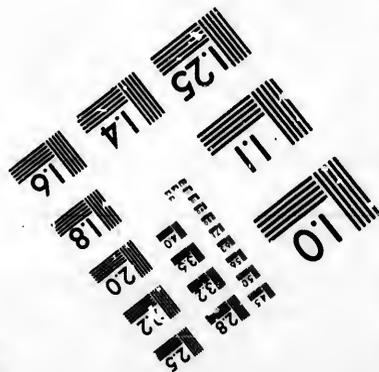
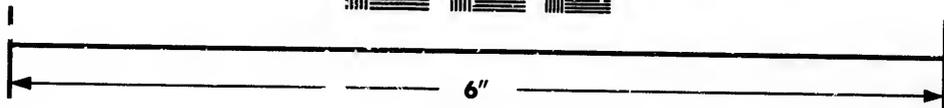
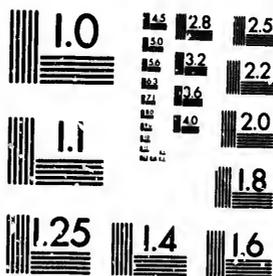


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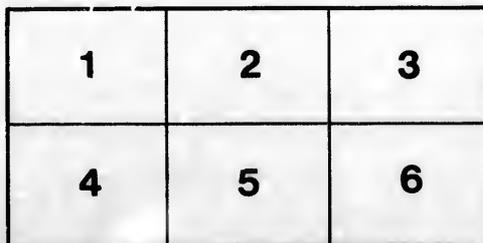
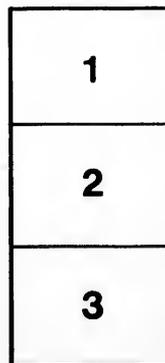
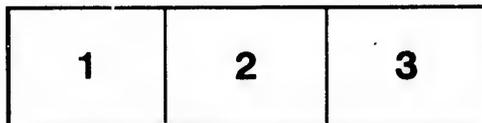
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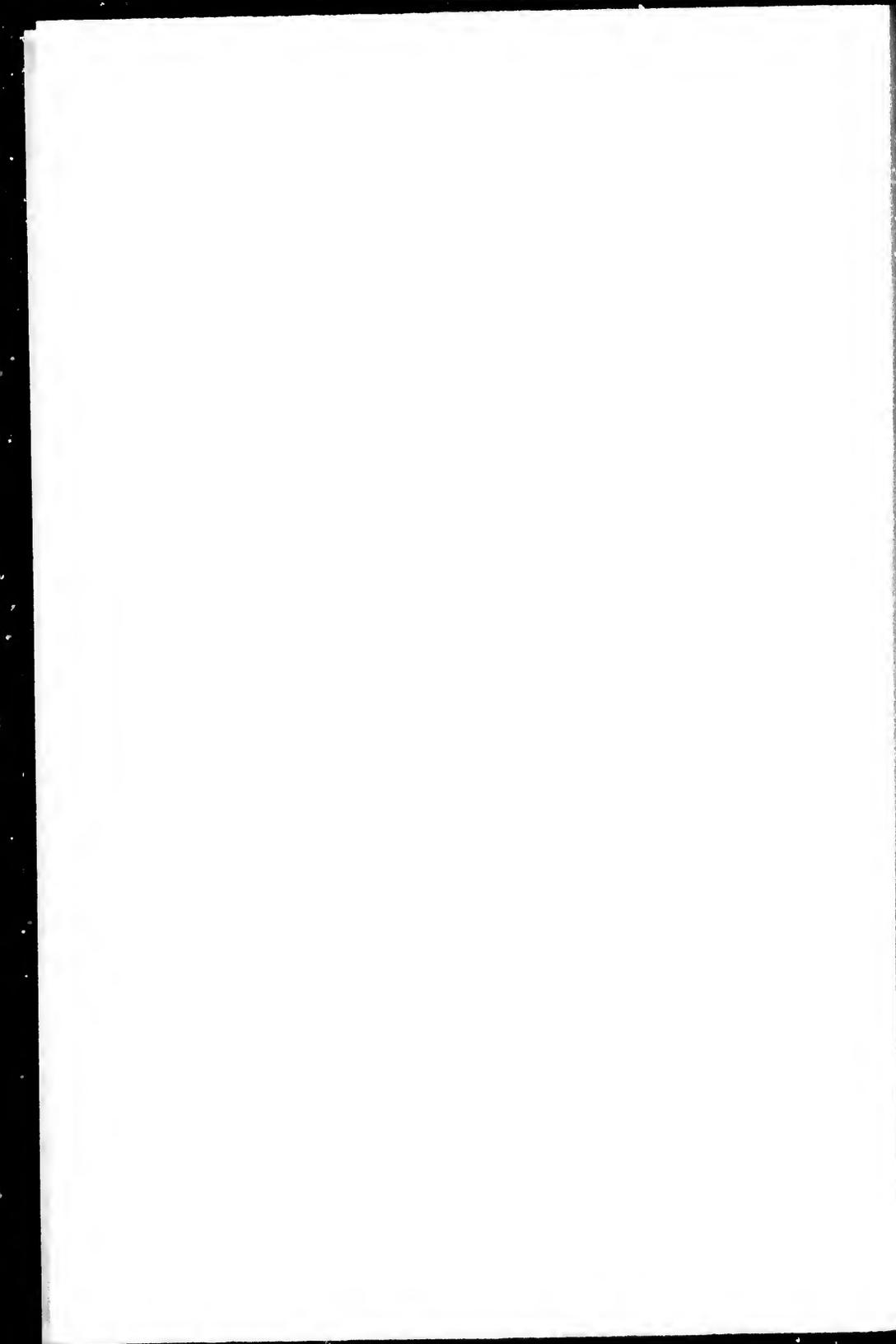
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**For the private information  
of the Directors.**

CANADIAN PACIFIC RAILWAY CO.

MONTREAL, 6th September, 1887

TO THE DIRECTORS,

In company with the the President and Sir Donald A. Smith, I have, since the 12th ultimo, made a careful inspection of the railway from Montreal to Vancouver and I am gratified at being able to report that the entire main line is in good working order and that nearly all of it is in excellent condition.

The older portion of the line from Montreal to Mattawa, 318 miles, may be said to be fully completed.

Between Mattawa and Fort William, 382 miles, there were, at the beginning of this season, numerous low places in the roadway, resulting from the shrinkage of embankments and settlement of material incident to all newly built lines. There were, also, a number of short sections where the final ballasting had not been done, or where it had been found insufficient; also numerous places where the earth slopes were found to be exposed to the action of the water during certain seasons and these required more or less rock-facing. All these defects and deficiencies are being made good and within a few weeks the whole of this section will be in such permanent good condition that it may be kept up by a comparatively light force of trackmen, and the work will, I think, be completed within the appropriations already approved by the Board for the purpose. A considerable number of the

lesser timber trestle bridges have been filled with earth in the removal of materials from adjacent cuttings where it was not required for widening embankments. A great many of the smaller trestle bridges should be filled within a year or two, and the long trestles, where practicable, should be divided by prisms of earth to reduce the risk of loss by fire and to prevent excessive delays should fires occur. All of the existing timber trestle bridges on this section were planned and built as permanent structures of this class, and I regard all of them as entirely safe, with proper precautions against fire; but all bridges, however substantial, must be recognized as, to some extent, danger points, and any reduction in their number will result in a saving in working expenses, and at the same time improve the general character and reputation of the line. An estimate of the cost of filling the smaller trestle bridges will be submitted to the Board at an early date. Two iron spans with masonry piers are being added to the Big Pic Bridge, in place of timber trestle work, and the long trestle approach to this bridge, which is the most important on the Lake Superior Section, will soon be divided by earth prisms into three sections.

The Section between Fort William and Winnipeg, 423 miles, which was built by the Government, is now generally in first-class condition, but a large number of the timber trestle bridges and several of the wooden truss bridges have required renewal during the year. They were inferior structures in the first place, and those renewed had nearly reached the usual life of such timber work. Where it could be done without materially increasing the outlay, earth embankments have been substituted for timber trestles. The wooden truss bridges are being renewed in wood, because of the present high price of iron-work and the crowded condition of all the bridge works, and because iron structures would require masonry piers and abutments, which would excessively

increase the outlay. The bridges so renewed are, however, of a very substantial description and will be good for nine or ten years. Two or three somewhat costly accidents have occurred on this Section by the sliding of embankments built on soft material and on sloping rock bottoms. An examination of the places where such slips are liable to occur, shows that little more difficulty of this kind is to be feared, and that a small expenditure will make these places perfectly secure.

The prairie section of the line, from Winnipeg to Calgary, 840 miles, is in excellent condition throughout, except that from Regina westward the embankment is somewhat narrow in places; but a small expenditure, probably less than \$5,000, will correct this, and the work is being gradually done by the ordinary section force. The water supply between Medicine Hat and Calgary is at times insufficient, and some expenditure may have to be made next year in this direction.

With the exception of the Montreal terminus, the entire main line, as far west as Calgary, is well provided with all necessary buildings and appurtenances.

From Calgary to Donald, 183½ miles, crossing the Rocky Mountains, the track is in first-rate condition, but in some places in the Bow River valley the embankments require rock protection against running water, and occasional slack places in the embankment require raising. In the Lower Kicking Horse canyon, where the roadway is exposed for sixteen miles to the action of an excessively rapid mountain stream, a large amount of rock-facing has been done, and more is required. About \$20,000 has been expended in this and in removing impending earth-slides in the same vicinity, and in raising the track in the Lower Kicking Horse flats above high water level, and probably an equal amount will have yet to be expended before the end of the year to make the roadway entirely secure.

In the original construction of the railway, it was thought possible to use pile bridges at the fourth, fifth and sixth crossings of the Bow River, at the three crossings of the Devil's Head creek, and at the crossing of the Blae-berry, instead of more expensive structures; but experience has shewn that these will not answer at the places in question and that it will be necessary to replace them before the coming spring with truss bridges on piers. The necessary iron spans for the fourth crossing of the Bow have been on hand for several years, and will be erected immediately, but it is proposed to use timber truss bridges at the other places named, for the same reasons as stated in connection with the truss bridges between Port Arthur and Winnipeg. These bridges embrace twelve spans aggregating in length 1652 feet and the outlay will be nearly \$65,600.

A slight movement having occurred in the so-called "mud tunnel," in the Kicking Horse valley, an expenditure of about \$9,000 has been incurred in building a line around it. This new line is built on a very sharp curve, but so little difficulty is found in working traffic over it that it may safely be used permanently, in place of the tunnel, saving the large amount of money that would be required to make the tunnel secure.

With the exception of a suitable station building with refreshment rooms, etc., at Banff, in the National Park, this section of the line is sufficiently provided with buildings and appurtenances.

From Donald to Revelstoke,  $79\frac{1}{2}$  miles, crossing the Selkirk Mountains, the track is in good working order. The final ballasting is well advanced and will be completed very soon. A large amount of work has been done this season in reducing earth slopes on the mountain sides, and in moving the line out from such slopes as are likely to slide and which cannot be reduced to a proper angle without excessive cost. But the most important work in

the Selkirks is the construction of sheds and other works for protecting the line against snow-fall and avalanches. The sheds provided last year were found to answer their purpose admirably, but many of them were found to be too short, and during the month of March, when the heaviest avalanches came down, their portals were filled with snow, ice and debris. To guard against this all of the sheds where difficulty occurred last winter are being extended and in a number of cases the original sheds are being connected by covering the intervening spaces. With few exceptions, cheaper works than those provided last year are found sufficient, being outside of the tracks of the heavy slides. Sheds are being provided at a number of new places where the experience of the past winter, which was exceptionally severe, indicated the need of them. All the timber in these works is of cedar and they will require little repair for many years. I am confident that the protection works now building, and which will be finished before winter, will effectually prevent any serious blockades. Succeeding winters may develop snow-slides at new points which may cause slight delays to trains, until protected, but all points where serious difficulties might occur will be fully covered by this season's work.

All necessary buildings and other facilities have been completed on this section, except at Revelstoke which is a divisional point and where an engine house, a number of sidings and the other usual works incident to such a point are being provided. Five or six cottages for employes must be built at this place immediately.

From Revelstoke to Sicamous Narrows, 44 miles, through Eagle Pass, in the Gold Range, ballasting, buildings, etc., are practically completed and aside from a small number of snow-sheds now building, very little remains to be done.

From Sicamous Narrows to Savonas Ferry, 109½ miles,

the line is fully completed in every respect, with the exception of six or eight miles of ballasting and some widening and rock-facing of embankments for a short distance on Kamloops Lake, all of which will soon be done.

The line from Savonas Ferry to Port Moody, 213 miles, was turned over to the Company by the Government last year, in June, and was accepted under protest as in an unfinished and generally unsatisfactory condition. In order to keep it open and safe for traffic the Company has been obliged to expend a considerable amount—about \$80,000—on this section, in removing rock and earth slides, in strengthening bridges, and, generally, in temporarily protecting the line. The rectification and completion of the work on this section has been provided for by an agreement with the Government, and all questions relating to it are to be determined by arbitration. It is expected that the amount expended by the Company in correcting defects and deficiencies up to this time will be recovered, and that provision will be made for all of the work necessary to be done on this section to bring it up to the requirements of the contract between the Government and the Company. The ballasting on this section is completed and the track itself has been put in very good condition.

The extension of the Company's line westward from Port Moody is now fully completed to Vancouver, 12½ miles. The Company's agreement with the Government of British Columbia required this line to be carried to a point on English Bay, about two miles west of the present city of Vancouver. The rails have been laid on this section of two miles, but the ballasting remains to be done. A wharf 1000 feet long has been built by the Company, on the Coal Harbor front of Vancouver, and three large freight sheds have been built thereon. These docks to a considerable extent rest on timber piles, and as these

have already been attacked by the teredo, which works most rapidly on this part of the Pacific Coast, a considerable expense, probably \$25,000 will have to be incurred in the immediate future in the way of earth filling and rock facing. Facilities for passenger and freight traffic, sufficient for present purposes, have been provided at Vancouver, and workshops for locomotive and car repairs are building. Considerable additions to the side track accommodations at Vancouver will have soon to be made to provide for the rapidly growing traffic at that point.

The New Westminster branch, 9 miles, is fully completed and in operation.

Of the main line of the railway generally, I may say that when the work now going on, as already described, is finished, which will be within ten weeks from this time, the line will be in excellent condition throughout, meeting every requirement of a first class railway, capable of carrying a heavy traffic with the greatest economy, and equal to any need or emergency requiring an especially fast train service; and I feel safe in assuring the Board that no serious delays or interruptions of traffic are to be feared from snow or any other causes.

The equipment is in first rate condition, but at least twenty locomotives and three thousand freight cars should be added as soon as possible. The movement of bountiful grain crop just harvested in the North West will, during the next four months, tax the rolling stock of the Company to its utmost capacity, and will, I fear, compel us to decline elsewhere much traffic of importance. The extension of the Algoma branch to Sault Ste. Marie will be completed about the end of next month, and the bridge across St. Mary's River and the two American lines extending thence to St. Paul, Minneapolis and Duluth are expected to be ready for traffic but a few weeks later. These new connections will bring within easy reach, an immense

freight traffic, already created, and will afford constant employment for a large number of cars.

Five or six sleeping cars should be added to the equipment in time for next summer's business; it will probably be necessary, also, to provide for additional grain storage at Fort William to the extent of 1,000,000 bushels, bringing the storage capacity at that point and Port Arthur up to 2,750,000 bushels.

I beg to call the attention of the Directors to the very unsatisfactory state of our steamship connections at the Pacific terminus. The service between Vancouver and Victoria is performed reasonably well, but the line to San Francisco is most inferior in character, is shunned by passengers, and is almost impracticable for freight. Our connection with Seattle, Tacoma, and other Puget Sound points is made by means of small local boats, not at all suited to the purpose. The Alaska trade, the passenger business especially, is increasing rapidly and is already of much importance to the Canadian Pacific Railway, but the steamships plying in that direction do not touch at Vancouver, and we are not able to compete for the business on anything like equal footing with rival lines. Notwithstanding its disadvantages, in the way of steamship connections, the past year's experience has demonstrated clearly the ability of the Canadian Pacific to compete successfully with any and all of the other trans-continental lines for San Francisco and Puget Sound trade; and when the present meagre population of British Columbia is compared with that of the Pacific Coast States to the south of us, and within our easy reach, the importance of suitable connections will at once be apparent. To provide such, two handsomely appointed and reasonably fast steamships would be required for the San Francisco trade, and two smaller, but fast and well appointed vessels, for the Puget Sound and Alaska trade. We have already had sufficient experience in this business to justify the belief

that three steamships would be more than self-sustaining, and the value of the traffic they would contribute to the railway would be very great. It should be remembered that on account of the American Customs regulations and laws governing the coasting trade, American bottoms only could be used. It would be nearly as great folly, after building a railway across the continent, to stop short of providing the connections necessary to bring to it all the traffic within reasonable reach, as to fail to provide sufficient rolling stock. I am unable to furnish a close estimate of the cost of four suitable steamers, but from the best information at hand, I think the total cost would not be far from \$1,200,000. The steamers would have to be specially built, as there are no American boats available which would answer the purpose.

W. C. VAN HORNE,

*Vice-President.*

