

ORDERS OF THE RAILWAY COMMISSIONERS OF CANADA.

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Copies of these orders may be secured from the Canadian Engineer for a small fee.

8693—November 17—Authorizing the C.P.R. to construct, maintain, and operate a system of industrial spurs for International Elevator Company, and St. Boniface, Man.

8694—November 18—Granting leave to the C.P.R. to open for the carriage of traffic the extension of its Snowflake Branch to Windygates, Manitoba, mileage 0 to 6.5.

8695—November 18—Recommending to the Governor-in-Council for sanction agreement of the C. N. R. with the Northern Extension Railway Company.

8696—November 15—Granting leave to the Winnipeg Electric Railway to operate their cars and trains over crossing at Logan Avenue, Winnipeg, Man., (C.P.R. crossing) for a further period of two months without being brought to a stop.

8697—November 18—Authorizing the C.P.R. to construct, maintain, and operate industrial spurs across Ross Avenue, Xante Street, and over Blocks 89, 90, 91, and 92, Lot 9, Winnipeg, Man.

8698—November 18—Authorizing the corporation of the city of Toronto, Ont., to lay ducts under the tracks of the G.T.R. and C.P.R. near Strachan Avenue, Toronto, Ont.

8699—November 18—Authorizing the city of Toronto to lay ducts under the tracks of the G.T.R. and C.P.R. on Strachan Avenue, (northern crossing), Toronto, Ont.

8700 and 8701—November 18—Granting leave to the village of Brussels, to erect, place, and maintain its wires across the track of the G.T.R. at intersection of its Wellington-Grey-Bruce division, Brussels, Ont., also across the G.T.R. at intersection of its London, Huron & Bruce division with concession line between 4th and 5th concessions, Township of Morris, Ont.

8702 and 8703—November 18—Granting leave to the Horton and McNab Telephone Company to erect, place, and maintain its wires across the track of the C.P.R. at a point on Lot 8, Concession 4, Township Horton, Ont., and one mile west of Castleford Station, Ont.

8704 to 8709 Inc.—November 19—Authorizing the C.P.R. to use and operate bridge at mileage 47, on its central division, Prince Albert branch, over the Battle River, western division, Wetaskiwin section; over the Government Drainage Ditch, central division, Lariviere section, and bridges, Nos. 147, 151, 196, 71, 84.3, 99.5, and 132.5 on its Cranbrook section, western division, and bridge 104.17 on its McLeod section over Old Man River, also bridges Nos. 1.5 and 102.9 on the western division, Edmonton section of its railway.

8710—November 19—Granting leave to the C.N.R. to operate temporarily and until further Order of the Board spur constructed by the G.T.P. Railway into the property of the Clover Bar Coal Company at Edmonton, Alta.

8711—October 29—Directing that the C.P.R. provide and construct a suitable highway crossing over its track at a point about one mile west of Carlin Station, B.C.

8712—November 20—Approving and sanctioning location of G.T.P. Railway Company's Calgary branch, mileage 0 to 24.753, Province Alberta.

8713—November 20—Approving and sanctioning location of G.T.P. Railway Company's Tofield-Calgary branch, mileage 24.75 to mileage 50, Alta.

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PAVEMENTS.

Mr. W. A. Clement, M. Can. Soc. C.E., the city engineer of Vancouver, B.C., and a committee of the Vancouver Council, Aldermen Macmillan and Crowne visited a number of United States cities to study the pavement problem. Several sections of their report are of general interest and the conclusions reached apply to more than one Canadian city.

1. A perfect pavement has not yet been found, no one paving material combining in itself all the desirable qualities.

2. Nearly every paving material possesses at least one advantageous characteristic not possessed by others.

3. Pavements which give good satisfaction in dry climates are often unsuitable for wet climates.

4. Pavements such as stone block, which would be intolerable on residential streets, often become a necessity on heavily travelled business streets.

5. Pavements which have many qualities to recommend them for streets with moderate grades, may be quite unsuitable for steep grades.

6. The increasing use of pneumatic rubber tired passenger vehicles and heavy drays propelled by gasoline and other motive powers makes it necessary that pavements to meet these conditions of travel, should besides having a durable wearing surface, which will provide a sure grip for horses feet, have great strength, and a surface which will, as far as possible, counteract the tendency of auto tires to slip or slide. It is also desirable that the pavements be inexpensive, or at least of moderate cost.

7. Steep grades in the business section.—From observation and information obtained we are of opinion that for streets with a steep grade in the business portion of the city, that sandstone blocks on concrete foundation occupy the first place, but that granitoid, on most of the streets in Vancouver, will serve the purpose equally well at less cost.

8. Moderate grades in the business section.—For streets in the business section with grades not exceeding three per cent. we consider that a pavement constructed of wood blocks of the large size, on concrete foundation, has more desirable qualities for uses in Vancouver, than any other pavement. It has a good surface for traction, is easy on horses and vehicles, is less noisy than other pavements, does not require a costly plant for making repairs, and when worn out, can be resurfaced with other materials. Granitoid would probably cost 10 or 15 per cent. less, and have a durable wearing surface, but would be more noisy, and harder on horses, as all unyielding pavements must be. If the large sized paving bricks of good quality can be obtained at a reasonable cost, they will also make a good durable pavement, but will be somewhat more noisy than granitoid.

9. Residential streets with moderate grades.—For residential streets with grades not exceeding 3 per cent. would blocks, bitulithic, granitoid and asphalt have more desirable qualities than other paving materials, but we would point out that expensive plants are required for constructing and repairing bitulithic and asphalt pavements, consequently we would not advise their use until the growth of the city warrants the maintenance of a civic plant, nor would we advise their use on streets where there are street railway tracks. In the case of wood blocks and granitoid, the plants required are inexpensive.

10. Residential streets with steep grades.—For residential streets with grades exceeding 5 per cent. we would advise the use of granitoid pavement, as it gives a good foothold for horses, and is not slippery for automobiles.

11. For the paving of lanes with steep grades, we would recommend, as in the case of steep streets, the laying of sandstone blocks, and for moderate grades, granitoid.