

# The Canadian Engineer

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## Reconstruction of the Eaton "Model Highway"

Change in Traffic Conditions in Eight Years Necessitates Substitution of Hot Mix Bituminous Concrete for Water Bound Macadam—Motors Now Over 70% of Traffic on Road Instead of 10% as in 1909

IN 1909 Sir John Eaton, president of the T. Eaton Co., Limited, of Toronto and Winnipeg, set aside \$20,000 for the purpose of demonstrating the benefits to be derived from a properly constructed macadam highway. This money was applied to the construction of about  $3\frac{1}{4}$  miles of waterbound macadam west of the C.P.R. tracks on Dundas Street, near Lambton, Ont., the work being under A. W. Campbell, then Deputy Minister of Public Works for the Province of Ontario, and W. A. McLean, who is now Deputy Minister of Highways of Ontario. The road became known locally as the Eaton Highway, or the Eaton Model Road, and Sir John Eaton also paid the maintenance expenditures, amounting to about \$10,000, up to the end of 1913, when the Toronto and York Highway Commission assumed jurisdiction over this road and a treatment of Tarvia A, which had been previously applied, was followed at the commission's expense by annual treatment with Tarvia B.

For eight years this road proved a great boon to a large portion of Etobicoke Township and also to a considerable part of Peel County, as it was the chief means of access to the city of Toronto for the traffic from a big agricultural district. At the time the road was built, steel-tired, horse-drawn traffic constituted 90 per cent. of the traffic carried by the road. By 1917, traffic conditions had changed to such an extent that rubber-tired, self-propelled vehicles were found by a traffic census to be about 70 per cent. of the total traffic on the road. The census

penditure on a new road, provided that a modern type of asphaltic concrete road would be built in such manner as to entitle the county to the 40 per cent. provincial subsidy authorized by the Ontario Highway Improvement Act.

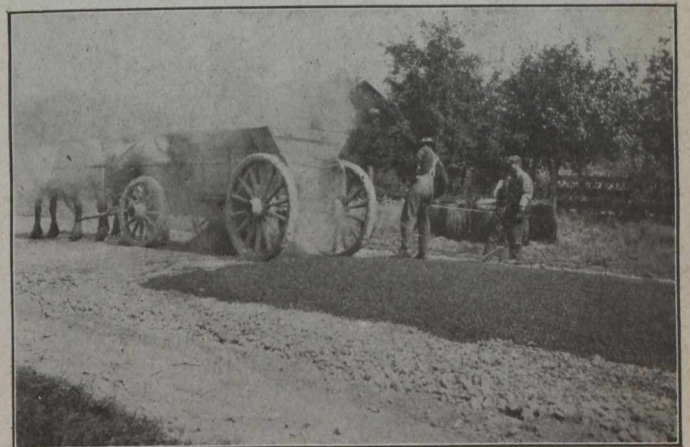


Fig. No. 2.—Unloading the Hot Mixed Material for the Top Course

It was later decided to extend the rebuilt Eaton road westerly to the Summerville Bridge, making a total length of 21,290 feet, or slightly more than four miles, and Peel County is now seriously considering the extension of the road for about another three miles to Cooksville.

The Eaton road was reconstructed during the summer of 1917, the contract being awarded to the Asphaltic Concrete Co., Limited, who scarified and prepared the old surface and then sublet the construction to the Constructing and Paving Co., Limited, of Toronto. The work was under the supervision of E. A. James, engineer of the Toronto and York Highway Commission, and under the inspection of the engineers of the Ontario Department of Public Highways. The actual construction was under the direction of F. B. Neeve, general manager of the Constructing and Paving Co., Limited; Arthur A. Ridler, general superintendent of that company; and Andrew Kinghorn, manager of the Asphaltic Concrete Co., Limited.

The new road is asphaltic concrete, hot-mix method. Crushed limestone was used from various Ontario quarries. Four hundred tons of Mexican Eagle asphalt were supplied by the Asphalt and Supply Co., Limited, of Montreal, fifty tons of Imperial asphalt by the Imperial Oil Co., Limited, of Toronto, and eight tons of Trinidad asphalt by the Barber Asphalt Paving Co., of Philadelphia. All flux used was Fluxphalte, supplied by the Asphalt and Supply Co., Limited, of Montreal, excepting for the Imperial asphalt, which was supplied already fluxed.

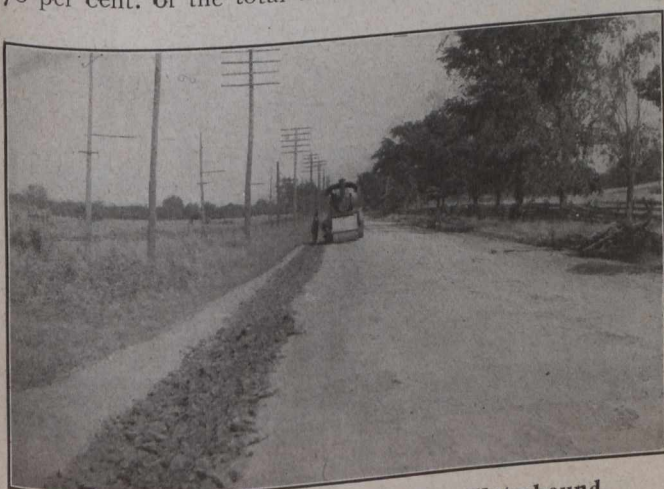


Fig. No. 1.—Scarifying the Old Waterbound Macadam Road

also proved that the road carried heavy traffic. Although the old road was still in fair shape, the change of traffic conditions required such heavy maintenance that a more expensive type of construction was considered economical, so Sir John Eaton offered to reimburse the Toronto and York Highway Commission for their portion of the ex-