

Answers to Questions on Electric Railway Topics.

Questions addressed to the American Electric Railway Association's Question Box, have elicited replies from Canadian electric railway officials, as follows:—

Overloading of Motors.—Electric car with four 95 h.p. motors has three pairs of 32 in. wheels and one pair 34 in. wheels. Is the motor on the 34 in. wheels overloaded?

W. R. MacRae, Master Mechanic, Toronto Ry.—In my opinion the motor attached to the 34 in. wheels is overloaded.

Life of Steel Underframes.—We are operating a lot of 36 ton cars built with 5 in. steel under frames. They have been in operation nine years and we find that the steel work is corroding badly. (a) What method has been adopted to protect the steel under frames of cars from corrosion? (b) What has the life of these frames proved to be?

M. Power, Master Car Builder, Toronto Ry.—(a) The only method I know of is to have the exposed parts properly protected by a suitable iron paint. Before applying same, the steel should be cleansed by a sand blast. When this cannot be obtained, a wire brush can be used to advantage. (b) I know of no set life of a steel car. From the experience of those using them, it appears to be little longer than wood. In order to have steel construction stand, it requires more care than wood.

Life of Car Axles.—What mileage should $4\frac{1}{4}$ in. heat treated non-keyseated car axles average under double truck four-motor car of approximately 43,000 lbs. weight?

W. R. MacRae, Master Mechanic, Toronto Ry.—At least 250,000 miles.

Car Wheel Guarantee.—What material is purchased under a contract guaranteeing cost per 1,000 car miles?

W. R. MacRae, Master Mechanic, Toronto Ry.—Car wheels.

Lighting of Suburban Stations.—We have installed at a great many of our suburban stations electric lamps fed from the trolley and feed wires. It is a problem to keep these lights in repair, have them lighted when they should be and turned off when they are not needed. We would like very much to get the experience of other companies. (a) Does good service demand that railway companies install fixed lights at suburban stations where there are no agents to care for them? (b) If so, what is the best way to protect and operate them?

C. L. Wilson, Assistant Manager, Toronto and York Radial Ry., Toronto.—Regarding the practice of installing lights at way stations, I may say that this is done only at points where we have a ticket agent or an employe acting in the capacity of an agent or watchman, and it is not customary for us to make this practice general at waiting points.

Automobiles for Employees.—Should utility companies furnish automobiles exclusively to the individual employe, or should there be a garage where cars are subject to assignment?

F. G. Clark, Chief Engineer, Toronto Ry.—The furnishing of automobiles depends largely upon local conditions and the type of organization. Our practice is as follows: Certain officials have cars and drivers furnished for their exclusive use. These cars are kept in the company's garage, and if there happens to be an emergency requirement, the superintendent of garage calls upon the officials to find if the cars may be used for a specific purpose and for a given length of time. Certain other cars are designated for the use of certain officials and are the cars usually used by these men, be-

ing driven by them and to a certain extent are under their care. These cars may be used by the garage superintendent for certain emergencies without the permission of the men who ordinarily use the cars, but for ordinary service are not to be taken out of the garage except by permission of the men to whom they are assigned. Certain other cars are for general use and are assigned upon requisition and are charged for with or without a driver, as would be the case with any livery or public garage.

Competition on Contracts.—How many proposals are necessary on a contract to get full benefit of competition?

F. G. Clark, Chief Engineer, Toronto Ry.—The number of proposals necessary to get the benefit of competition depends upon the nature of the contract, the apparatus and material being purchased, the standing of the companies competing for the contract, etc. In some cases, competition is unnecessary to get proper results; in other cases, two proposals are sufficient, and in certain others, a considerable number of proposals may be desirable. Suitable knowledge of the requirements of the case and common sense appear to be what are necessary in this connection.

Electric Railway Finance, Meetings, Etc.

Brantford Municipal Ry.—The Brantford City Council is applying to the Dominion Parliament for authority to carry on the Grand Valley Ry. under the name of the Brantford Municipal Ry., with all the powers of the G.V.R., and the power to sell any portion of the same absolutely or conditionally, subject to the Board of Railway Commissioners' approval.

British Columbia Electric Ry., and allied companies:

	Oct. 1915	Oct. 1914	July 1 to Oct. 31, 1915	July 1 to Oct. 31, 1914
Gross earnings	\$538,826	\$661,000	\$2,073,697	\$2,679,351
Expenses	480,051	511,877	1,928,530	2,060,681
Net earnings	58,775	149,123	145,167	618,670

The percentage due to the City of Vancouver for November was \$3,323.14, against \$6,145.51 for Nov., 1914. The number of passengers carried on the city and suburban lines for November was 2,269,542, against 2,611,978 in Nov., 1914.

Cape Breton Electric Co.

	Oct. 1915	Oct. 1914	July 1 to Oct. 31, 1915	July 1 to Oct. 31, 1914
Gross earnings	\$54,152.20	\$30,751.49	\$132,336.88	\$122,733.15
Expenses	16,891.18	18,524.03	70,900.79	73,491.06
Net earnings	17,261.02	12,227.46	61,436.09	49,242.09

Edmonton Radial Ry.—The Mayor of Edmonton, Alta., at the annual public meeting for the discussion of civic affairs, Dec. 1, made a statement as to the city's finances, in the course of which he said: "In the street railway department a decided improvement has taken place, resulting in a very large decrease of the deficits. The total operating expenses and capital charges for the 10 months were \$547,263, a saving over 1914 of \$186,521. The deficit showed a reduction of \$63,506 for 1915, as compared with the corresponding period of last year. Since August the department had been making a decided better showing, and it was clear that under proper handling and normal conditions the system would pay its own way."

Guelph Radial Ry.—Guelph, Ont., press dispatch, Dec. 15: "The Radial Railway Board has paid the City Treasurer more than \$10,000, the surplus over operating expenses from the street railway for 1915. This figures out at 6% on the amount the city has invested in the railway. A few shares were taken over recently from pri-

vate holders, and from these the amount may be made even larger. This is an increase of more than \$2,000 over the amount that the railway earned for the city in 1914."

London and Port Stanley Ry. Earnings.

An estimate of net earnings for six months ended Dec. 31, 1915, states that they will amount to \$10,277.64. During July and August, 65,739 and 89,529 passengers were carried respectively.

London St. Ry.

	Nov. 1915	Nov. 1914	Jan. 1 to Nov. 30, 1915	Jan. 1 to Nov. 30, 1914
Gross earnings	\$31,843.90	\$29,057.59	\$362,199.36	\$334,537.06
Expenses	22,085.48	21,089.50	250,755.85	243,416.06
Net earnings	9,758.42	7,968.09	111,443.51	99,148.96

Toronto Ry.—The receipts from Jan. 1, and the percentages paid to the city, for 1915, compared with those for 1914, are as follows:

	1915	City	1914	City
	Receipts	percentage	Receipts	percentage
January.....	\$471,226	\$70.486	\$501,844	\$75.257
February.....	440,314	66.047	461,274	72.058
March.....	488,468	93.141	510,751	102.150
April.....	467,702	93.540	501,435	100.287
May.....	468,954	93.791	534,466	106.893
June.....	450,582	90.116	525,534	105.107
July.....	449,108	89.822	515,883	103.177
August.....	447,969	89.594	507,912	101.582
September.....	489,573	39.166	525,265	42.021
October.....	461,683	36.935	487,689	39.274
November.....	472,759	46.301	465,055	46.503
	\$5,108,338	\$808,939	\$5,537,088	\$894,390

Toronto Ry., Toronto and York Radial Ry., and allied companies.

	Oct. 1915	Oct. 1914	Jan. 1 to Oct. 31, 1915	Jan. 1 to Oct. 31, 1914
Gross earnings	\$792,001	\$849,636	\$7,942,606	\$8,471,743
Expenses	358,957	426,536	3,993,999	4,333,990
Net earnings	433,044	423,100	3,948,607	4,137,753

Winnipeg Electric Ry.

	Oct. 1915	Oct. 1914	Jan. 1 to Oct. 31, 1915	Jan. 1 to Oct. 31, 1914
Gross earnings	\$286,146	\$230,562	\$2,739,595	\$3,402,502
Expenses	181,176	197,465	1,848,025	1,979,095
Net earnings	104,970	133,097	951,570	1,423,407

Winnipeg, Selkirk, and Lake Winnipeg Ry. Bonds.—The Dominion Securities Corporation, Toronto, has issued a circular from which the following is reproduced:—

In 1905 we marketed \$400,000 1st mortgage bonds of the Winnipeg, Selkirk & Lake Winnipeg Ry. Co., the price then representing approximately a 4.70% basis for 5% bonds, due July 1, 1933. The company completed recently and put into operation 17½ miles of additional road, making a total mileage of approximately 40 miles. In order to repay advances made by the Winnipeg Electric Ry. Co. (which owns the entire capital stock of the Winnipeg, Selkirk & Lake Winnipeg Ry. Co.), and to provide for redemption of the above mentioned mortgage bonds, \$1,400,000 of 5% general mortgage and refunding bonds have been issued, dated July 1, 1915, and maturing July 1, 1925—these bonds having been guaranteed both as to principal and interest by the parent company. We have already arranged for the redemption of the greater portion of the first mortgage issue—over \$300,000—practically all holders of these bonds having taken the new bonds in exchange. After reserving sufficient new bonds to retire the present small outstanding portion of the first mortgage issue, we offer the now unsold balance of approximately \$700,000. The bonds are offered at 92.56, and interest will therefore yield 6%.

Passenger Shelter at Sunnyside, Toronto.

—The question of providing a shelter at the junction of the Toronto Ry. and the Toronto and York Radial Ry. at Sunnyside, came before the Ontario Railway and Municipal Board, Dec. 1, and it was arranged that a heated car will be provided temporarily, the cost to be borne equally by the railways and the city. The portion of the Toronto and York Radial Ry. concerned, formerly the Toronto and Mimico Ry., was nominally acquired by the city on the expiration of the franchise some time ago, but no money has passed, and it is being operated by the T. & Y.R.R., at the city's request.