

TORONTO TRANSIT COMMISSION

REPORT No. 8

MEETING DATE August 1, 1972

From: General Manager of Operations

Subject

STREETCAR RETIREMENT PROGRAMME AND THE USE OF SURPLUS TROLLEY COACHES

Date: July 26, 1972

At its meeting on November 23, 1971, the Commission considered the attached report on the streetcar retirement programme and expressed some concern for the reduction of the streetcar fleet and the consequent loss of an efficient public transit vehicle.

While expressing general agreement with the report relative to the proposed streetcar retirement programme, the Commission only specifically approved inclusion in the 1972 Budget for the commencement of a heavy maintenance programme on streetcars at the rate of 50 per year in the estimated amount of \$800,000. The Commission also authorized a continued investigation into the possible purchase of new streetcars.

With respect to the conversion of the whole of the St. Clair route to trolley coach operation and the conversion of the Rogers Road streetcar route to diesel bus operation coincident with the opening of the Yonge Subway Northerly Extension, the Commission stipulated that a further report be submitted before any final decision is made, since St. Clair Avenue most closely approximates a private right-of-way for transit purposes.

The Commission approved in principle the conversion of the Dundas and Carlton streetcar routes to diesel bus operation possibly in 1975 and 1976 respectively, again noting a further report would be submitted.

The Commission agreed that conversion of the remaining streetcar routes should be deferred until such time as more definite information concerning the timing of a Queen subway project or other east-west downtown subway alignment.

In view of the foregoing and additional information which has been received regarding new development in the downtown area, a study has been undertaken on the feasibility of converting either the St. Clair or Dundas streetcar routes to trolley coach operation in the immediate future. This report attempts to assess the relative merits and costs associated with these two proposals in order that the Commission may be in a position to consider both alternatives.

St. Clair, EarlsCourt and Rogers Road Routes

At the present time a total of 27 streetcars are operated during the fall and winter seasons on the St. Clair and EarlsCourt routes between Keele Street and Eglinton Avenue and a further 12 streetcars are operated on the Rogers Road route. It is estimated that it would require 39 trolley coaches to replace the streetcar service now operated on the St. Clair and EarlsCourt routes plus an additional 13 trolley coaches to replace the existing streetcar service on Rogers Road.

Based on anticipated service changes arising from the operation of the YSNE it is anticipated that 39 rebuilt trolley coaches now used on the Yonge and Nortown routes will become available for use elsewhere when the subway extension opens to Finch Avenue. As indicated above, this group of trolley coaches would be sufficient to replace the current streetcar service on St. Clair Avenue plus additional trolley coaches or diesel buses which would have to be acquired to replace the existing streetcar service on Rogers Road.

It is agreed that both St. Clair Avenue and Mount Pleasant Road form an excellent streetcar route, due to the width of the street. For the same reasons however, they are well suited to trolley coach or bus operation.

Although considerable work has been done by Metro in repaving the track allowance on St. Clair Avenue during the past few years, very little of the rail has been replaced, and if streetcar service is to be maintained on St. Clair Avenue on a semi-permanent basis, a high percentage of the trackwork on St. Clair Avenue and Mount Pleasant Road will have to be reconstructed during the next ten-year period at an estimated cost of \$750,000 (\$325,000 for the section east of Yonge and \$425,000 for the section west of Yonge).

The trackwork on the Rogers Road route is in extremely poor condition and would have to be reconstructed at an estimated cost of \$375,000, if streetcar service is to be continued for a further 10-15 years. For this reason, and also because the use of buses on the Rogers Road route would permit flexibility in extending the route to provide service west of Weston Road, it is considered desirable to convert the route from streetcar to bus operation as soon as possible. It is noted that the Council of the Borough of York passed a resolution in March of this year requesting an early programme to replace streetcars on Rogers Road with a bus system.

In effect, the Rogers Road line is part of the St. Clair route since the present streetcar service on this route operates along St. Clair Avenue to the subway station during rush hour periods. If the Rogers Road route is converted to bus operation, and St. Clair remains as a streetcar operation, it would be difficult to maintain this direct service to the subway for passengers on the Rogers Road route, since it would require a mixture of streetcars and buses on St. Clair Avenue east of Oakwood Avenue. This combination of streetcars stopping at safety islands in the centre of the street and buses stopping at the curb would create loading problems and be confusing to the public. It would be physically possible to have the buses use the track allowance and load at the safety islands. However, this is not considered desirable from an operational point of view.

If the St. Clair route is converted to trolley coach operation at the same time as the Rogers route is converted to bus operation, there would be no problem in mixing the bus and trolley coach service on St. Clair Avenue and the direct service to the subway could be retained for passengers on the Rogers Road route. Both trolley coaches and buses could use a repaved track allowance and load at safety islands or alternatively could use the roadways and load at the curb, without operating problems.

A further consideration is the cost of repaving in association with streetcar abandonment. Abandoning streetcar service on St. Clair in conjunction with the opening of the Yonge Subway Northern Extension would mean that the entire cost of repaving the track allowance could be claimed from Metro Toronto. This cost is estimated to be \$800,000.

The previous report on this subject, included a preliminary estimate of \$625,000 for converting existing streetcar overhead on St. Clair for use by trolley coaches, for constructing new overhead in the various loops involved and in St. Clair carhouse and for paving work required in loops, St. Clair carhouse and St. Clair subway station. This estimate was very preliminary and from a subsequent and more detailed investigation into the changes required particularly at St. Clair carhouse, it is now estimated that the cost will amount to about \$975,000.

Based on preliminary estimates available to date the main elements of cost in the conversion of the St. Clair and the Rogers Road streetcar routes to trolley coach and bus operation would total \$1,535,000 as follows:

Converting streetcar overhead, on St. Clair route, new overhead and paving in loops and St. Clair carhouse, etc.	\$ 975,000
Purchase of 13 buses for Rogers Route	\$ 560,000
TOTAL	\$1,535,000

This assumes that Metro would pay all of the cost of repaving the abandoned track allowance on the St. Clair route on the basis that it was abandoned because of the expansion of the subway system. It also assumes that the Borough of York would assume the cost of repaving abandoned track on the Rogers route since the Commission has no agreement with the Borough to pay any portion of this cost.

To offset the estimated expenditure of \$1,535,000 there is a future expenditure of \$750,000 for trackwork on the St. Clair route and \$375,000 for trackwork on the Rogers Road route if streetcar service is continued on these routes.

In view of this substantial cost estimate for the proposed route conversions it was considered essential to review the future passenger demand for transit service on St. Clair Avenue. The Spadina Rapid Transit Line will be constructed on a north-south axis to intersect the St. Clair route, and a high degree of passenger demand may be anticipated on a long-term basis. It is felt that the proposed use of trolley coaches and buses will be suitable to meet this anticipated demand and will permit more flexibility for the important turning movements associated with loops at the connecting stations of the Yonge and Spadina subway lines or for future routing changes if required.

Comparative Operating Costs

Calculations have been made by Treasury Department of the changes in annual operating costs which would result from the proposed replacement of streetcars on the St. Clair and Rogers Road routes with trolley buses and diesel buses. These calculations were based on the capital costs mentioned earlier in this report together with estimates of mileages, headways, manpower and maintenance costs provided by Planning Department and the Transportation, Equipment and Plant Departments.

The annual cost, including depreciation and interest on the capital investment plus direct manpower, maintenance and power costs, of continuing to operate streetcars on these routes has been estimated at \$105,000 less than the cost of operation by diesel buses on the Rogers Road route and trolley buses on the St. Clair route. The difference, amounting to 7.5 (cents) per mile, is small because it is considered

that the streetcars can be replaced by an equal number of trolley buses in all but rush hours, when an extra nine vehicles will be required. For the purpose of the above calculation useful lives of 15 years for trolley coaches and 30 years for trolley coach overhead have been assumed. It has been estimated that the useful lives of streetcars on these routes could be extended by ten years at a rehabilitation cost of \$16,000 per streetcar. If this proved impracticable and new streetcars had to be purchased to continue service on the St. Clair and Rogers Road routes, the expected high capital cost of the new streetcars would result in annual operating costs substantially higher than those for diesel and trolley buses.

Dundas Route

The Commission has been represented in discussions dealing with the proposed Eaton-Fairview development, which is to be located immediately adjacent to the Dundas car route. These discussions have indicated an apparent necessity to alter and perhaps abandon the existing short-turn loop for the Dundas service which operates via Bay, Louisa, James and Albert Streets as early as 1973 should the project proceed without delay.

A number of alternative courses of action are currently being considered for such an eventuality.

In addition, in accordance with present plans for the development it will be necessary to abandon streetcar operation on Dundas Street entirely when the first phase is completed (scheduled for 1976) since it will conflict with other vehicular traffic wishing to gain access to the underground parking from the south side of Dundas Street between Bay and Yonge.

The developers are anxious to obtain the Commission's concurrence with these arrangements at the earliest possible date. Accordingly, the possibility of using the available trolley coaches for conversion of the Dundas route instead of the St. Clair route has been given further consideration as follows:

As noted previously 39 rebuilt trolley coaches are expected to be surplus to scheduled requirements when the Yonge Subway Northerly Extension commences operation. This number of vehicles would be adequate for the conversion of the Dundas car route if the demand was reduced slightly. To accomplish this, it would be possible to reroute the Dundas car line at the west end via Howard Park Avenue and High Park loop. The Carlton service which currently provides service through this area, would then be rerouted via Dundas Street to Dundas West Subway station.

In addition, it would be possible to revise the east end routing of the Dundas car route to operate via Dundas Street East, Logan Avenue, Gerrard Street East and Carlaw Avenue. Service on Broadview Avenue between Dundas Street East and Broadview subway station would then be limited to that provided by the King car line only. The possible revised routings for the Dundas line are shown on Planning Department drawing No. 7287, a copy of which is submitted herewith. [Not attached]

The use of trolley coaches on the Dundas route would preclude the conversion of the section of the St. Clair route west of the Yonge subway, since insufficient vehicles would be available for the operation of both lines. While it would be possible to convert the section of the St. Clair route east of the subway to trolley coach operation and supplement the remaining trolleys on the Dundas route with diesel buses, this would necessitate the installation of trolley coach overhead on both routes.

If streetcars are abandoned on the Dundas route, there appears to be less possibility than for the St. Clair route of associating this abandonment with the subway extension and in accordance with the

existing agreement with the Metropolitan Corporation, the Commission would be required to pay approximately \$325,000 as its 50 percent share of repaving the track allowance. In addition, it has been estimated that the cost of installing overhead for trolley coach operation on the modified Dundas route noted previously in this report, would be in order of \$600,000 including the installation of new overhead.

The streets involved on the Dundas route are not nearly as wide as those on the St. Clair route. As a result, the use of trolley coaches on the Dundas route would be hampered by the vehicular congestion experienced on this line. A comparison might be made between the Dundas route and the Bay route, where service was adversely affected when the route was converted from streetcar to bus operation.

In accordance with the policy followed for the St. Clair route, some consideration has been given to the long term requirements on the Dundas car route. The Commission's Conceptual Plan for Rapid Transit in Toronto, makes provision for the construction of a rapid transit line on an east-west axis through the Queen Street corridor, and allocates a high priority to this project, second only to the Spadina Rapid Transit line. The construction of any such rapid transit line would substantially reduce the passenger demand on the King, Queen, Dundas and possibly the Carlton car routes. Accordingly, it is questionable whether the extensive expenditures required to convert the Dundas route to trolley coach operation are warranted, if it is assumed that Queen Rapid Transit line will be constructed.

In view of all of the foregoing it is felt that diesel buses should be used when the Dundas route is converted. A detailed report is being prepared to show the operating details and cost estimates for conversion of this route to bus operation in conjunction with the Fairview-Eaton development and will be submitted to the Commission at a later date.

CONCLUSIONS

After reviewing all of the factors involved it is felt that the St. Clair and Rogers Road routes should be converted to trolley coach and bus operation coincident with the opening of the Yonge subway extension.

It is also felt that serious consideration should be given to the possibility of retaining the use of the existing streetcar allowance on St. Clair Avenue as a transit way for free wheeling vehicles on this street.

Preliminary investigations indicate that it might be physically possible to use the existing safety zones for trolley coach operation on St. Clair Avenue, except at Atlas and Greensides Avenue, Boon and Elmwood Avenues, and Greenlaw and Nairn Avenues where the safety zones are directly opposite one another, and it would be hazardous for trolley coaches to operate two abreast between them. Adjustments to the existing safety zones at these three locations could be made and the cost would not appear to be excessive. Other operational problems such as the necessity of making a left turn from the curb lane on Keele Street to the centre of the road on St. Clair Avenue have been considered and are not insurmountable.

This entire approach has not yet been discussed with the appropriate traffic authorities and, undoubtedly, they would have some reservations about the retention of the safety islands along the route if it is converted from a streetcar operation. In this event, reserved curb lanes might be a reasonable alternative, particularly in view of width of the street.

Subject to approval by the Commission that streetcar service should be abandoned on St. Clair Avenue, a more detailed investigation could be made into the possibility of retaining the streetcar allowance for trolley coach operation or alternatively, reserved curb lanes for transit. These matters should be discussed with the appropriate traffic authorities.

FINANCING

An amount of \$125,000 was included in the 1972 Capital Budget under Project No. 7223 for preliminary work such as design and preparation of drawings and purchase of materials for conversion of the section of the St. Clair route east of Yonge Street.

RECOMMENDATION

It is recommended that the Commission approve the conversion of the whole of the St. Clair and EarlsCourt routes to trolley coach operation, and the conversion of the Rogers Road route to bus operation at a total estimated cost of \$1,535,000, the project to be scheduled for the section east of Yonge to be converted as soon as possible after the proposed opening of the YSNE to York Mills station in 1973, and for the section west of Yonge to be converted as soon as possible after the opening to Finch station in 1974.

Authority is also requested to advise the Metropolitan Corporation, the City of Toronto and the Borough of York of these arrangements and to discuss with the appropriate Metro officials the retention of the existing streetcar right-of-way on the St. Clair route for use as a transitway for trolley coach and bus operation, or reserved curb lanes for transit.

(Signed)

J.H. KEARNS

General Manager of Operations

[Minute:]

THE COMMISSION DISCUSSED THIS REPORT IN DETAIL AND AGREED THAT BEFORE IT IS PASSED IN ITS ENTIRETY THAT A FULL COMMISSION SHOULD BE PRESENT. HOWEVER, IN THE INTERIM THE COMMISSION AUTHORIZED MANAGEMENT TO PROCEED WITH THE FOLLOWING:

1. THE ROGERS ROAD ROUTE BE CONVERTED TO BUS OPERATION.
2. THE INSTITUTION OF TROLLEY COACHES ON MOUNT PLEASANT IN ORDER THAT MANAGEMENT MAY PROCEED WITH THE ORDERING OF THE NECESSARY OVERHEAD MATERIALS REQUIRED FOR THIS CHANGE-OVER.
3. THAT A LETTER BE WRITTEN TO THE METROPOLITAN TRANSPORTATION COMMITTEE REQUESTING THEIR COMMENTS ON THE POSSIBILITY OF EXCLUSIVE LANES FOR TRANSIT ON ST. CLAIR AVENUE.

AS AGREED ABOVE, THE COMMISSION INSTRUCTED THAT THIS REPORT BE RE-SUBMITTED FOR FINAL APPROVAL WHEN A FULL COMMISSION IS PRESENT.