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November 16, 1971

### STREETCAR RETIREMENT PROGRAM

At its meeting on November 1, 1966 the Commission approved tentative programs for the abandonment of streetcar routes and streetcar trackwork which indicated that the use of streetcars would be abandoned by the year 1980, on the understanding that the Queen Street subway would be constructed by that date. Both of these programs were forwarded to the City of Toronto in response to its request for information regarding continued use of streetcars. Copies of these programs are submitted herewith as Appendix A.

During the past year considerable discussion and study has been carried on within Management to assess these long range plans for abandonment of streetcar service in the light of changes which have taken place since they were prepared five years ago. During that period the condition of streetcars in the fleet has deteriorated considerably, the trolley coach fleet has been re-built and modernized, and a number of these vehicles presently operating on Yonge Street will become available for use on other routes when the Yonge subway extension is completed and in operation. A great deal of uncertainty surrounds the future construction of the Queen subway and it is now apparent that this facility will not be constructed and in operation by 1980.

#### Streetcar Fleet

There are 394 vehicles in the existing streetcar fleet with a current requirement for 357 cars in service, including spares. All of these cars were built in the period 1946-1951 and are 19 to 24 years of age. They were originally designed for a useful life of approximately 12 years and have now been in service for about twice that period.

The electrics (cables, trolley equipment, motors, control equipment, etc.) and the bodies and structural members on the cars are not deteriorating very rapidly. As indicated by the following summary, the number of miles operated between defects has decreased substantially in the past 7-8 years and as a result there has been a corresponding increase in service delays caused by bad-order cars.

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<u>Year</u>	<u>P.C.C. Car Miles Per Day</u>
1963	3,194
1964	3,120
1965	2,818
1966	2,007
1967	1,726
1968	1,630
1969	1,422
1970	1,326

In order to keep these cars running for even 10 years the Equipment Department indicates that it will be necessary to commence an overhaul program immediately which will involve an estimated expenditure of approximately \$16,000 per car.

The possibility of purchasing new streetcars has been considered but the costs of such cars is extremely high. Tenders recently received by MUNI in San Francisco indicate a price of approximately \$470,000 for a 65' car. Investigations with WMTA concerning the DE VAS HANOVER type car presently being considered by Boston indicates a price of about \$250,000 to \$300,000 per unit. Preliminary discussions have also been held with Harker-Siddeley regarding the manufacture of a modern type streetcar with approximately the same capacity as a P.C.C. car. A very approximate estimate for such a car might be \$130,000.

Trolley Coaches

There are 152 vehicles in the trolley coach fleet which is currently being re-built with all units to be completed by the end of 1972. When the Yonge subway extension is opened the service requirement on the existing Yonge trolley coach route will be greatly reduced and will be provided with diesel buses rather than trolley coaches. It is also anticipated that it will be possible to reduce the frequency of the trolley coach service currently operated on the Nortown route when the subway extension is opened. As a result of these changes it is estimated that a total of 39 trolley coaches will be available for use elsewhere (24 from the Yonge route, 5 from the Nortown route and 10 now in reserve).

STREETCAR RETIREMENT PROGRAM

Proposed Course of Action

Having in mind all of the foregoing it is felt that the program for gradual abandonment of streetcar service should continue and be revised to include the conversion of the whole of the St. Clair and Rogers Road lines to trolley coach and bus coincident with the opening of the subway extension to Sheppard Avenue, and the conversion of the Dundas and Carlton routes to bus operation possibly in 1975 and 1976 respectively.

As indicated in the following summary this would reduce the number of streetcars required for the balance of the system to 223, including spares, by 1976. The decision regarding the conversion of the remaining routes in the streetcar system would have to be deferred until the situation is clarified regarding a subway in the Queen Street corridor.

<u>Year</u>	<u>Eliminate Service</u>	<u>Estimated Streetcar Fleet Requirements (including spares)</u>
1971	-	357
1974 (Opening of Yonge Extension)	St. Clair East - St. Clair West Rogers Road	312
1975 (Eaton Downtown Redevelopment)	Dundas	279
1976	Carlton	223

The above information is amplified in Schedule A attached.

St. Clair and Rogers Road Streetcar System

Of the existing streetcar routes it is felt that the St. Clair and Rogers Road system is the most appropriate line for early conversion to trolley coach and bus operation. It has been tentatively agreed for some time that the section of the St. Clair route east of Yonge should be converted to trolley coach operation in conjunction with the Yonge subway extension in 1974. In view of the suitability of the streets involved for trolley coach operation, and the poor condition of the trackwork on the Rogers Road route, it would be a natural development to convert the remainder of the St. Clair line at the same time.

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As indicated above a total of 39 coaches will be available after changes to the present Yonge and Mortown routes resulting from the opening of the subway extension. Assuming 7 of these are used on St. Clair east of Yonge a net balance of approximately 32 coaches would be available for replacement of streetcars on St. Clair West.

It is estimated that the St. Clair West line would require a total of approximately 32 free-wheel vehicles, including an allowance for spares. Therefore all of the remaining trolley coaches would be utilized on this line.

A preliminary estimate indicates that the current cost involved would be approximately \$625,000 for converting existing streetcar overhead for use by trolley coaches on St. Clair, for constructing new overhead in the various loops involved and St. Clair Carhouse, and for paving work required in loops, St. Clair Carhouse and St. Clair subway station.

It is suggested that the Rogers Road route be operated entirely by buses. This would eliminate the requirement to convert the streetcar overhead to trolley coach overhead on Rogers Road. It would also provide flexibility to extend the Rogers route and provide convenient service to the Humber Boulevard area west of Weston Road, as requested on numerous occasions by the Borough of York. It is estimated that 13 buses would be required to replace the Rogers Road streetcar route.

The removal of trackwork on the Metro and Borough of York streets would be another major item of cost. A preliminary estimate at current prices indicates that the cost for this work on the Metro streets (St. Clair Avenue and Mount Pleasant Road) would be approximately \$800,000, whereas the cost on the Borough streets (Oakwood Avenue and Rogers Road) would be about \$325,000.

In accordance with a formal agreement with Metro, the Commission would be responsible for 50% of this cost on St. Clair and Mount Pleasant unless the streetcar service is abandoned because of the opening of new rapid transit facilities. There is no such agreement with the Borough of York and the question of track removal and re-paving on Oakwood Avenue and Rogers Road would be subject to negotiations.

STREETCAR RETIREMENT PROGRAM

In view of these considerations it would seem desirable to convert the whole of the St. Clair and Rogers Road system in conjunction with the opening of the Yonge subway extension. The Commission could then take the position that it was turning the abandoned track over to the Municipality concerned in association with a subway extension, as has been done on other occasions.

Retention and conversion of St. Clair Carhouse is subject to further study and investigation as between Equipment and Transportation Departments.

Dundas and Carlton  
Streetcar Routes

For a considerable section of their routes, the Dundas and Carlton services operate as a logical pair. For instance, very little of the track west of Broadview Avenue could be abandoned on either route prior to the elimination of service on both.

The future of the Dundas route must be considered in the light of proposals for the Eaton Fairview downtown development. Tentatively it has been assumed that streetcars should be eliminated from the area of the development by the mid-1970's in association with this project. Accordingly, it appears that the Dundas route might be converted to bus operation by perhaps 1975, depending on progress of the Eaton Redevelopment scheme.

This route is not considered to be suited for conversion to trolley coach operation, since there are plans to relocate various sections of the street alignment where jogs presently exist. In addition, Dundas Street will have to be realigned and perhaps widened and the existing City Hall loop will likely have to be abandoned if the Eaton Fairview project proceeds.

The conversion of the Carlton line to bus operation could follow conversion of the Dundas line by perhaps one year.

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King, Queen and Bathurst  
Streetcar Routes

The question of the use of streetcars in the downtown area is another matter. In this connection the original premise that streetcars should be retained on King and Queen Streets until the opening of a Queen Subway is still considered valid. The obvious alternative of converting these routes to bus operation prior to the opening of the Queen Subway implies an acceptance of the fact that the Commission would be able to provide only a more inferior service into the downtown area. Current loadings at the peak point on Queen indicate rush hour figures of 3,500 per hour and on King 3,000 per hour.

In this regard it should be noted that these streetcar lines have been experiencing decreasing riding since the introduction of the Bloor-Danforth-University subway lines. However with greater reliance being placed on public transit together with the anticipated growth in the downtown area the demands on the existing transit system in the area are expected to increase considerably. With the extension of the Yonge subway northerly and assuming the construction of the Spadina line feeding into the University Subway via St. George Station these two north-south subway lines would undoubtedly require relief in an east-west direction.

Consideration might be given to the purchase of new streetcars for use on the King and Queen lines until a Queen Subway is available. The number of cars would be about 170. After that time these streetcars might be used to provide an intermediate capacity system such as an extension from Warden subway station northeast along the Hydro or abandoned railroad right-of-way, thus fulfilling the need described in the Commission's conceptual plan. As indicated earlier in this report the minimum cost of new streetcars could be in the neighbourhood of \$130,000, with an anticipated life of perhaps 20 years.

It is believed that the Kingston Road and Kingston Road Tripper streetcar routes should be retained with the King and Queen lines as they are considered to be an integral part of this system. The Long Branch route, which to some degree, functions as an extension of the Queen line, could be converted to bus at almost any time. However the trackwork is presently in good condition.

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The Bathurst streetcar route fulfills a vital need in serving the Canadian National Exhibition and would be affected by the various proposals which are being considered for improved service to the central waterfront area. Metro Centre is also an important consideration for its effects on downtown transit requirements.

General

It is recognized that the deterioration of the streetcar fleet requires immediate action. It is therefore proposed to commence a program to overhaul about 50 of these cars per year at a unit cost of approximately \$16,000 or an annual cost of \$800,000.

At the present time it would appear necessary to continue the program for 4 to 5 years in order to overhaul sufficient cars for the King-Queen-Bathurst routes. However, the situation would be reviewed each year in the light of plans and approvals that may be forthcoming for construction of the Queen subway or other rapid transit lines and any decision which may be reached to purchase new streetcars.

The cost of \$16,000 per unit for the proposed streetcar overhaul is high, particularly since it does not include complete replacement of all structural members and control equipment, etc. However assuming an added life of 8 to 10 years for the streetcars which are overhauled, and having in mind that it requires approximately 1.6 buses at a unit cost of say \$43,000 to replace a streetcar, the streetcar overhaul program appears to be the least expensive course of action available.

The program outlined above for converting streetcar operations on the St. Clair, Rogers Road, Dundas and Carlton routes to buses and/or trolley coaches will require further studies of garaging needs. In this connection it is likely that public reaction will be encountered in converting streetcar storage locations to diesel garages.

Attached to this report is Planning Department drawing No. 7223 showing the streetcar system coloured so as to indicate the various stages as they might be programmed.

→ New cars vs bus. -

Bus 1972	\$43K (10yrs)
Bus 1982	\$74K (1982 prices & repair)
	<hr/>
	117K
x	16 (add. factor)
	<hr/>
	8187K


STREETCAR REFINEMENT PROGRAM

RECOMMENDATION

In view of the foregoing considerations, it is recommended that the Commission:

1. Approve the conversion of the whole of the St. Clair streetcar 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. Metro, the City and the Borough of York should be advised accordingly.
2. Approve in principle the conversion of the Dundas and Carlton streetcar routes to diesel bus operation, possibly in 1975 and 1976 respectively.
3. Defer a decision on the conversion of the remaining streetcar routes until such time as more definite information is available concerning the timing of a Queen Subway project, or other east-west downtown subway alignment.
4. Approve for inclusion in the 1972 capital budget the commencement of a heavy maintenance program on streetcars at the rate of 50 per year in the estimated amount of \$800,000.
5. Continue investigation into purchase of new streetcars.

11-53-45-3-1

  
J.H. KEARNS  
General Manager  
of Operations

Attached hereto: Appendices A and B



APPENDIX "A"TENTATIVE STREET CAR ROUTE ELIMINATION PROGRAMMERevised August 1956.

<u>DATE</u>	<u>TENTATIVE ROUTE ELIMINATION</u>
Bloor-Danforth Extension Inauguration	- Bloor Shuttle - Keele Station to Jane - Danforth Shuttle - Woodbine Station to Luttrell Loop
<u>1972</u>	- Dundas North of Bloor
<u>1975</u>	- Dundas
<u>1975</u>	- St. Clair } - Earls Court } - Rogers Road } Converted to bus or trolley coach depending on completion dates for Spadina Rapid Transit System.
<u>1976</u>	- Carlton
<u>1980</u> (Queen Subway Inaugurated)	- Balance of System - (Bathurst, Queen, Long Branch, Kingston Road, King, Kingston Road Tripper.)

October 3rd, 1956.  
11.100.31.

TENTATIVE TRACK ABANDONMENT PROGRAMMEREVISED August 1966.

<u>DATE</u>	<u>STREET</u>	
Bloor-Danforth Extension Inauguration	Bloor Street	- Dundas to Jane
	Danforth Avenue	- Luttrell to Coxwell
	Coxwell Avenue	- 100-feet north of Upper Gerrard to Danforth Avenue.
	Dundas Street	- North of Dundas West Station to Runnymede Loop
<u>1972</u>	Bay Street	- South of Dundas including City Hall Loop
	Victoria Street	- Queen to Dundas
<u>1975</u>	Rogers Road	- Bicknell Loop to Oakwood
	Oakwood Avenue	- Rogers Rd. to St. Clair
	Keele Street	- Keele Loop to St. Clair
	St. Clair	- Keele to Mt. Pleasant, except Wychwood to Bathurst
	Mt. Pleasant	- St. Clair to Eglington (Mt. Pleasant Loop)
	Old Weston Road	- St. Clair to Townsley Loop
	Robina Avenue	- St. Clair to Oakwood Loop
<u>1976</u>	Howard Pk. Ave.	- High Park Loop to Dundas
	Dundas Street	- Roncesvalles to Church
	College Street	- Dundas to Bathurst Spadina to Parliament
	Ossington Avenue	- College to Dundas
	McCaul Street	- McCaul Loop to College
	Bay Street	- College to Dundas
	Church Street	- Carlton to Dundas
	Gerrard Street E.	- Coxwell to Main
	Coxwell Avenue	- Lower Gerrard to 100 feet north of Upper Gerrard
	Main Street	- Gerrard to Main Loop
	Bathurst Street	- Hillcrest to St. Clair
	Parliament Street	- Gerrard to Carlton
	St. Clair Ave.	- Wychwood to Bathurst
	Vaughan Rd.	- St. Clair to Bathurst
	Wychwood Ave.	- South of St. Clair
Lansdowne Ave.	- Dundas to College	
<u>1980 or Queen Subway</u>	Balance of System	

STREETCAR RETIREMENT PROGRAM

	<u>Number of Streetcars at Beginning</u>	<u>Routes Abandoned</u>	<u>Replaced by</u>		<u>Number of Streetcars at End</u>
			<u>Trolley Coaches</u>	<u>Buses</u>	
1971	357				
1974	357	St. Clair East and West Rogers Road	39	13	312
1975	312	Dundas	-	36	279
1976	279	Carlton	-	64	223

Streetcar Routes Remaining

Bathurst	28
Queen	64
King	50
Kingston Road Tripper	18
Kingston Road	25
Long Branch	9
	<u>194</u>
Spares	<u>29</u>
Total cars	<u><u>223</u></u>