

newsletter

Upper Canada Railway Society



March/April 1973 • 1.75



RAIL TRANSIT RETURNS TO NORTH TORONTO

newsletter



Number 326, March/April 1973

Upper Canada Railway Society

EDITOR --- Edward A. Wickson
CONTRIBUTING EDITORS --- J. Bryce Lee
Michael W. Roschlau
John D. Thompson
Stuart I. Westland

NEWSLETTER is published monthly by the Upper Canada Railway Society Inc., Box 122, Terminal A, Toronto, Ontario M5W 1A2.

Contributions to the NEWSLETTER are solicited. No responsibility can be assumed for loss or non-return of material, although every care will be exercised when return is requested. Please address all contributions to the Editor at 141 Davisville Avenue, Apt. 810, Toronto, Ontario M4S 1G7.

All other Society business, including membership inquiries, should be addressed to the Society at Box 122, Terminal A, Toronto, Ontario M5W 1A2. Members are asked to give the Society at least five weeks' notice of address changes.

Reproduction of the contents of this magazine is prohibited without the written permission of the Society.

A MESSAGE FROM YOUR EDITOR

I suppose that changes in the editorship of the NEWSLETTER from time to time always instil a little apprehension in the minds of readers. Uncertainty over what to expect next or the fear of a drop in the quality of this publication are thoughts that probably come to mind.

With this my first issue, I find myself in the somewhat difficult position of following a job well done—that of Bob McMann, our editor since July, 1969. In my mind he certainly ranks as one of the most versatile members of the staff the NEWSLETTER has ever known.

It was announced last issue that Steve Munro would be assuming the editor's duties; however, Steve has regrettably been unable to do so. He has been a regular contributor for many years and will continue to be so. The Board of Directors has appointed me Editor, pro tem, on the understanding that future commitments may force me to relinquish the position, but hopefully not before a successor is found.

In the meantime, I have instituted a few changes in production technique -- most notably, the typesetting you will notice in this issue. This is a special issue and your comments will be appreciated. My NEWSLETTER staff and I feel that a more detailed survey is in order and for this reason we have enclosed a questionnaire which we respectively request you to fill out and return.

Please remember that any articles or news stories are only as good as the information on hand and we rely greatly on members contributing material.

Edward Wickson

Contributors:

John F. Bromley

R.F. Corley

Frank Culham

Mike Filey

J. Wm. Hood

Omer S.A. LaVallee

R.D. McMann

Steve Munro

Production: John Thompson

HELP!

In the summer of 1972, just prior to the opening of the Canadian National Exhibition in Toronto, vandals broke into Locomotive 6213. As usual, no windows or gauges were broken, but for the first time an important artifact was missing. Four brackets are attached to the roof of the cab directly above the fireman's seatbox, and these brackets hold the Locomotive's inspection certificates. Of the four certificates that were there, one was found to be torn and two were completely gone.

This appeal is directed to those members who have certificates of this type (from a CN Northern preferably) in their collection of rail-roadiana. We would like to borrow a set of certificates so we may make photocopies for display in 6213. If you have these certificates but don't wish to part with them, even on loan, you could photocopy them yourself and send us the copies. The locomotive described in the certificates is not important, the one's that were stolen having been from 6215 anyway. Locomotive 6213's certificates were swiped before the engine was put on display in 1960. If you can help, please contact: Dave Stalford, Chairman, UCRS Preservation Committee, Box 144, Station W, Toronto, Ontario, M6M 4Z2.

Coming Events



Regular meetings of the Society are held on the third Friday of each month (except July and August) at 589 Mt. Pleasant Road, Toronto, Ontario. 8.00 p.m.

June 15: Regular meeting. Steam operated short lines in the (Fri.) U.S.A., Alan Crompton.

July 20: Regular meeting. Members' Summer Slide and 8 mm (Fri.) Movie Night.

Aug. 17: Regular meeting. 16 mm Feature Films Night. (Fri.)

The Cover

Two views of electric traction in Hogg's Hollow, then and now—both locations a few hundred yards apart. ABOVE: Northbound radial car 413 climbs the hill to Lansing on a July day in 1941. (J. Wm. Hood) BELOW: Platform level - York Mills Station, March 31, the first day of service on the Yonge subway northern extension. (Ted Wickson)

YONGE SUBWAY - NORTHERN EXTENSION

Rail Transit Returns to North Toronto

At 6:00 a.m., Saturday, March 31, subway riders in Toronto were presented with their newest subway — the Toronto Transit Commission's 2.7 mile extension of the Yonge subway north from Eglinton Avenue to York Mills Road in the Borough of North York. This is the first leg of the 5.4 mile North Yonge subway extension — the final section to Finch Avenue scheduled to open next winter. Appropriate opening ceremonies were held on Friday afternoon, March 30th, at Eglinton, Lawrence and York Mills Stations.

BACKGROUND

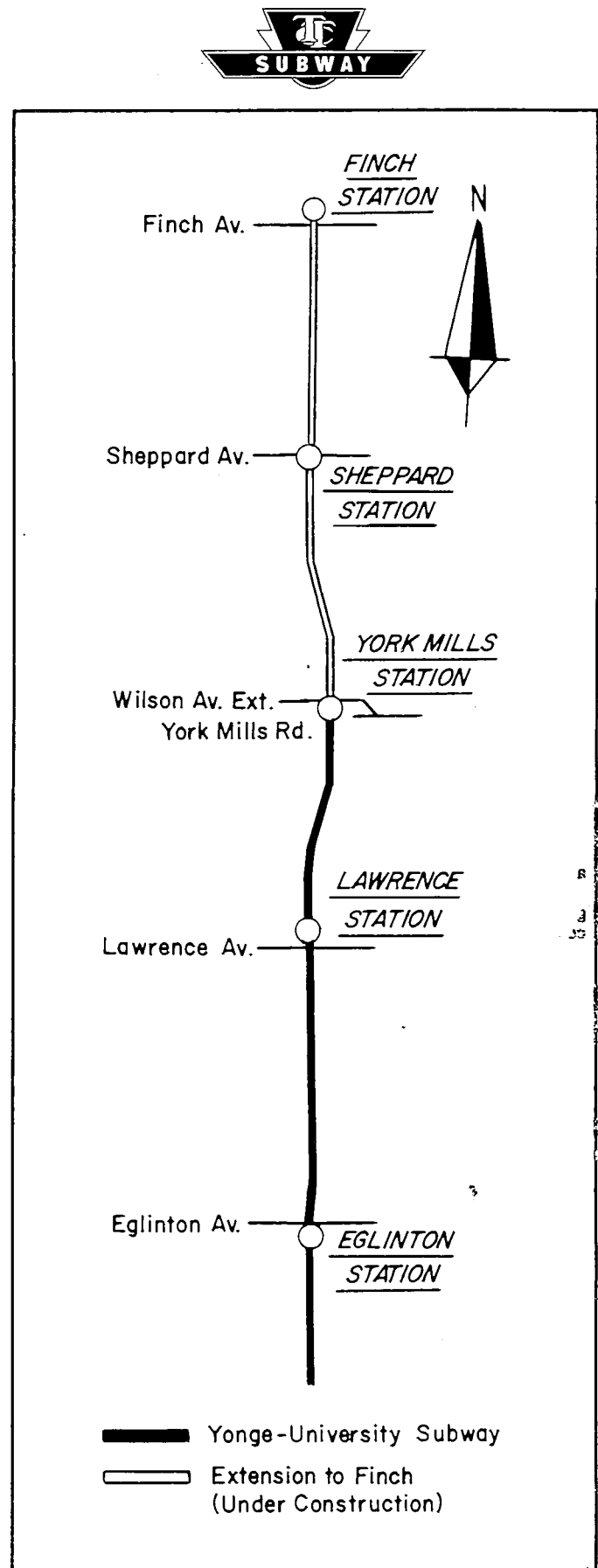
When the Yonge Street Subway was being planned, in the mid-1940's, the statement was made by the TTC that there was no justification in constructing a subway further north than Eglinton Avenue. It was felt that the level of traffic north of that point could continue to be handled on the surface and it was announced that the Eglinton-Glen Echo portion would be handled by "a new modern service", a careful non-commitment to the type of vehicles which would be used. (Actually consideration was given to using P.C.C. cars on this segment for a time, but this was later changed to a plan for combined trolley coach-bus operation.).

However, not too many years had passed after the March 30, 1954 opening of the Yonge Street Subway when it became apparent that growing passenger volumes and the congestion of buses on Yonge St. north of Eglinton indicated that a subway extension would have to come.

Perhaps the first commitment to such an extension came in a 1959 exchange of correspondence between the TTC and the Metropolitan Commissioner of Planning, which resulted in an Eglinton to Sheppard subway extension being shown in the draft Metropolitan Official Plan of that year. However, plans for the Spadina Expressway were developing and by 1962 it had been decided that a rapid transit line should be built in conjunction with it. This route proceeded to take precedence over any Yonge Subway extension, for a number of years.

The first serious study given to the matter of a Yonge extension commenced with the authorization by Metro Council for the TTC to spend \$20,000 for such a study; this authorization was sparked by a request of North York Township that alignments for a subway be determined through the Hogg's Hollow area in connection with a land use study in that location then being conducted by that municipality. The authorization was to prepare a "preliminary" study for the Eglinton-Glen Echo section, a "functional" study for the Glen Echo-Sheppard section, and a "preliminary" study for the stretch from Sheppard to Steeles Ave. The City of Toronto urged that "functional" treatment (station location and parking lot design, etc.) be also done for the section south of Glen Echo, and this was authorized by Metro Council on March 7, 1961.

The study, published in June, 1961, was prepared by Mr. W.E.P. Duncan, who had previously been the TTC's General Manager of Subway Construction, and who was by this time General Consultant to the Commission. He examined several alignments, but recommended one which lay to the east of Yonge Street for the entire distance, and would have involved



a low bridge crossing of the West Branch of the Don River in Hogg's Hollow. He recommended construction in two phases, firstly to Sheppard Ave. beginning in 1970, by which time it was anticipated that the Spadina Expressway and its Rapid Transit line would be in operation, and the Sheppard-Steeles extension to be commenced in 1980 or later.

The total estimated cost for the entire 6.42-mile line was \$100,600,000; the plan was based on close station spacing, and contemplated two supplementary car storage and servicing yards, each to accommodate 42 cars, to be located near Sheppard and Steeles Aves. The report mentioned that elevated construction on private right-of-way between Sheppard and Steeles was considered a feasible alternative, at some cost saving.

In September, 1964 Metropolitan Council requested the TTC and Metropolitan Toronto Planning Board to study the feasibility of "extending the Yonge Subway northerly from Eglinton Ave" (a terminal was not specified), and authorized the expenditure by the TTC of \$25,000 for this second study.

On June 30, 1965 the Commission reported pursuant to the Metro Council request, and the contents of this report set out an operating concept which was ultimately adopted with the construction of the Yonge Subway Northern Extension. This concept involved wide station spacing, at 1-1/4 mile intervals with the operation on Yonge Street of a parallel local bus service. Only three stations would be required, at Lawrence, York Mills and Sheppard, the latter, of course, to be a terminal station with extensive interchange facilities. Unlike Mr. Duncan's earlier report, this second TTC report now proposed an alignment wholly on the west side of Yonge Street and what would have been a very spectacular feature, a half-mile long high level bridge structure through Hogg's Hollow together with a high level York Mills Station. The statement was made that an alignment involving tunnelling under the Don River would present significant operating problems. Commuter parking was proposed as a desirable adjunct to the line, at Sheppard Station, but no location was shown, an available site for such a facility not being apparent.

The complementary Metro Planning Report, under date of September 16, 1965, examined the relative priority of the Yonge and Spadina lines, and opted for the Yonge extension to replace Spadina as the next priority for the following reasons:

1. It was desirable to maintain an uninterrupted program of subway construction, and it looked as though uncertainty over the alignment of the southerly portion of the Spadina line would prevent early finalization of that route (little was it then suspected what was to come!).
2. The Yonge Extension would serve a greater population and an area with a higher riding habit and which was more downtown-oriented than the Spadina tributary area.
3. The Yonge alignment would confer more benefits in land use and redevelopment potential, particularly at Yonge and Sheppard.

The Metro report expressed some concern about the high level bridge proposal, and called for a highly aesthetic structure which would be "a significant architectural and engineering achievement". The report was not enthusiastic about extension of the subway from Sheppard to Steeles because of anticipated development pressure in Markham and

Vaughan Townships where development potential was limited by the restricted capacity of water and sewer services. The cost of the Eglinton-Sheppard extension was estimated at \$57-million.

On the basis of the recommendations contained in the two reports, Metropolitan Council on October 19, 1965 authorized the Yonge Subway Northern Extension as the next rapid transit project, to begin upon completion of the Bloor-Danforth Subway extensions, then expected in 1967. It, however, requested further reports on the provision of additional stations on the line, and that consideration be given in these reports to locating the north terminus at Finch Ave. or Steeles Ave. A condition of Council's approval was that construction of the extension be scheduled in such a way that the line could be progressively opened as each station was completed.

A further Metro Planning report dated March 9, 1966 reviewed supplementary consideration which had been given to a low level bridge over the West Don River, together with more tunnelling in the area to reduce the length of the bridge. It was reported that this would cost \$5-1/2-million more than the high level bridge and that it was considered this additional expenditure was not warranted. The report made the valid observation that the half mile section would afford relief from the enclosure of subway structures for the passengers and in addition provide spectacular views of the valley. It was further reported that having only three stations instead of eight on the Eglinton-Sheppard section would save \$12-million on capital costs and \$500,000 to \$800,000 per annum in operating costs.

As North York Township was applying heavy pressure for an extension to Finch or Steeles, together with an intermediate station at Park Home Ave., the report recommended that property be acquired along an alignment west of Yonge St. for an extension (to be constructed later) to Finch Ave. A complementary recommendation was that, pending this later extension, commuter parking be established on the Ontario Hydro tower line right-of-way north of Finch Ave. with a shuttle bus service taking passengers from the parking lot to Sheppard Terminal.

Just as this report was being completed, citizens activism boiled up in the area on two fronts: ratepayers in the City who were concerned about the loss of housing and noise disturbance from subway trains began to pressure to have the line moved from its planned alignment to one directly under Yonge St. At the same time a relatively small group of residents, but apparently large in influence, attacked the high level bridge proposal as something which would be damaging to their property values (choosing to ignore the fact that the multiple bridges of Highway 401 over the valley were already there and presumably had not affected their investments). Petitions and hearings on the whole matter of the subway alignment marked the year 1966 and finally resulted in what is probably the most unfortunate decision in the history of rapid transit planning in Toronto — the scrapping of the bridge plan and the burying of the subway for the entire distance through Hogg's Hollow, including the difficult and expensive construction feat of passing under the Don River, east of Yonge Street.

Not only did this change involve several million dollars more in construction costs, the profile of the subway became much inferior to what had been proposed, and long ascending grades out of York Mills Station in both directions affect every trip a train makes over the line. The taxpayers and transit riders of Toronto were the losers — and on a continuing basis;

a handful of area residents imagined that they had won something.

Also changed were the alignments both to the north and to the south of Hogg's Hollow; the previous off-street alignments to the west of Yonge Street were abandoned and the decision was made to tunnel the line directly under Yonge Street (with cut and cover construction at stations). This change, while also increasing construction costs, had much more to commend it than the Hogg's Hollow change, as many houses were saved by it, the vibrations from train operation were moved away from quiet residential locations, and the operating characteristics of the line were not adversely affected by the change.

On January 25, 1967 Metropolitan Council adopted the new alignments as described above, the extension now being estimated to cost \$79.5-million. In April, 1967 the TTC engaged W.S. Atkins and Associates to undertake design engineering and consultant work on the extensive tunnel sections that would now be included in the Yonge Subway Northern Extension.

From this point events moved fairly swiftly to the October 3, 1968 start on actual construction at Yonge St. and Lytton Blvd. On July 13, 1967 the Ontario Municipal Board approved the plans and financing; on October 13, 1967 the basic TTC/Metro Council agreement relative to the extension was approved by the latter body.

The story of the construction of the line itself was, and is, one revolving around sharply escalating construction costs, labour unrest, material shortages and unanticipated construction difficulties. Among the latter were quicksand in the area around Teddington Park Ave. and the wet soil conditions in the difficult Hogg's Hollow section south of York Mills Rd. A strike closed down construction of the York Mills-Sheppard section (contract Y-6) for many months and ultimately caused abandonment of plans to open the line to Sheppard Station in the first phase, York Mills Station being substituted as the one-year terminus. Another lengthy strike of elevator workers prevented the escalators at Lawrence and York Mills Stations from being completed and placed in service in time for the

line's opening on March 31, 1973. (More details on the history of construction progress appear in past issues of the *NEWS-LETTER*, in particular April, 1970 pg. 54; Nov., 1970 pg. 171; April, 1972 pg. 63.

The major construction contracts on the Eglinton-Sheppard section are as follows:

Contract Y-1 Dineen Construction Ltd.

390 ft. of cut and cover, Eglinton Station to Orchard View Blvd., including 3 underground passageways beneath the Yonge/Eglinton intersection. Completed June 16, 1971

Contract Y-2 Robert McAlpine Ltd.

6233 ft. of twin tunnel structure plus 482 ft. of single tunnel structure, Orchard View Blvd. to Lawrence Station; included use of 4 renovated TTC tunnelling shields. Completed May 23, 1972

Contract Y-3 Robert McAlpine Ltd.

1178 ft. of cut and cover from north of Limpstone Ave. to north of Ranleigh Ave., including Lawrence Station and finish, substation building and emergency service buildings at Lytton Blvd. and Teddington Park Ave. Completed March 21, 1973

Contract Y-4 Robert McAlpine Ltd.

3866 ft. of twin tunnel structure plus 195 ft. of cut and cover, Lawrence Station to south of Mill St. Completed May 17, 1972

Contract Y-5 H.J. O'Connell Ltd.

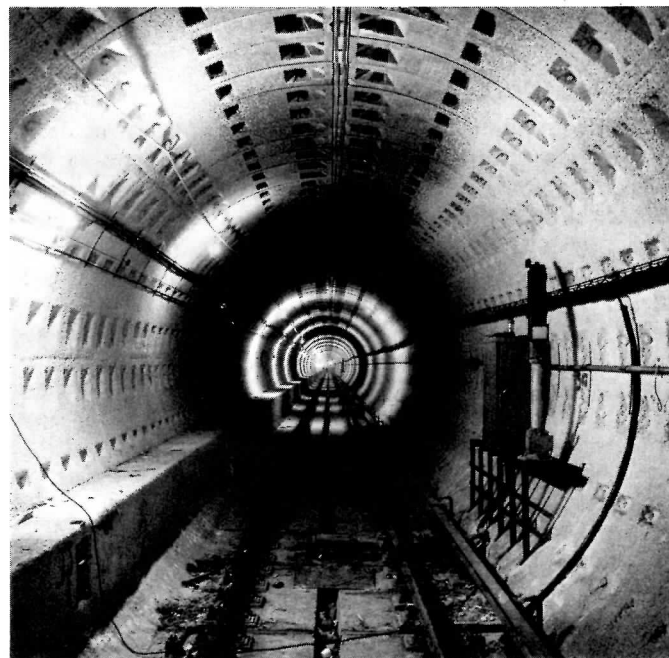
2293 ft. of cut and cover structure from south of Mill St. to York Mills Rd., including Don River crossing and York Mills Station. Completed Aug. 21, 1970

Contract Y-6 S. McNally & Sons Ltd.

5162 ft. of twin tunnel structure, York Mills Station to south of Johnston Ave.

Contract Y-7 Foundation Co., of Canada Ltd.

1249 ft. of cut and cover, from south of Johnston Ave. to south of Harlandale Ave., including Sheppard Station. Completed June 1, 1972



ABOVE: Typical box section, Contract Y-3; view of Lawrence crossover, looking south. RIGHT: Standard 16-foot diameter tunnel section, Contract Y-4, showing installation of rail, signals and conduit. (Both Photos, Ted Wickson)

Contract Y-8 Dineen Construction Ltd.

York Mills Station finish. Completed June 5, 1972

Contract Y-9 Canada Iron Foundaries Ltd.

Supply of regular and special cast iron rings for tunnel liners.

Contract Y-10 Pre-Con Ltd.

Supply of regular pre-cast concrete rings for tunnel liners.

Contract Y-11 Dineen Construction Ltd.

Sheppard Station finish. Completed November 2, 1972

Finch Extension

Following negotiations with North York, Metropolitan Council on October 17, 1969 approved an extension of the Yonge Subway from Sheppard Ave. to Finch Ave., the essential impetus for this extension arising from the Borough's intention to operate a commuter parking lot on the Hydro right-of-way lands two blocks north of Finch Ave. Approval of this extension, to be constructed originally by tunnelling directly under Yonge Street was given by Metropolitan Council on October 17, 1969.

However, before contracts were awarded, the greatly increasing cost of tunnel construction gave the TTC pause, and it was decided to undertake a study of the comparative costs of cut-and-cover construction for both conventional structure (tracks side by side) and piggyback structure (one track over the other) on the Finch extension. On November 18, 1970 the Commission decided to adopt cut and cover construction, with a conventional structure, at an estimated cost of \$37.5-millions. This was approved by Metropolitan Council on December 15, 1970. The principal contracts on the Finch extension are as follows:

Contract Y-16 Dineen Construction Ltd.

1677 ft. of cut and cover construction, Finch Station.

Contract Y-17 Mollenhauer Ltd.

Finch Station finish.

Contract Y-18 Kilmer, Van Nostrand Co. Ltd.

3066 ft. of cut and cover structure, Harlandale Ave. to Parkview Ave.

Contract Y-19 Kilmer, Van Nostrand Co. Ltd.

3256 ft. of cut and cover construction, Parkview Ave. to Finch Ave. Completed Nov. 29, 1972

OPENING CEREMONIES

Full page advertisements placed by the TTC in the daily newspapers the week of March 26 not only announced the forthcoming subway opening and associated surface route changes, but also invited the public to attend the opening ceremonies at Lawrence and York Mills Stations on the Friday afternoon. About 400 invited guests, TTC Commissioners and officials gathered at Eglinton Station just before 2:00 p.m. to board a special 6-car train (H-2 cars 5540-45) suitably decorated with a big sign on front, "OFFICIAL OPENING - YONGE SUBWAY EXTENSION". Keeping in mind the elaborate opening ceremonies of the extensions to the Bloor-Danforth subway on May 11, 1968 which marked the first time the subway reached the suburbs (Borough of Etobicoke in the west and Borough of Scarborough in the east), the TTC was not about to do anything less for this extension to the Borough of North York. At Eglinton Station a large banner was strung across the tracks at the north end proclaiming, "GET READY - NORTH YORK, HERE COMES THE SUBWAY".

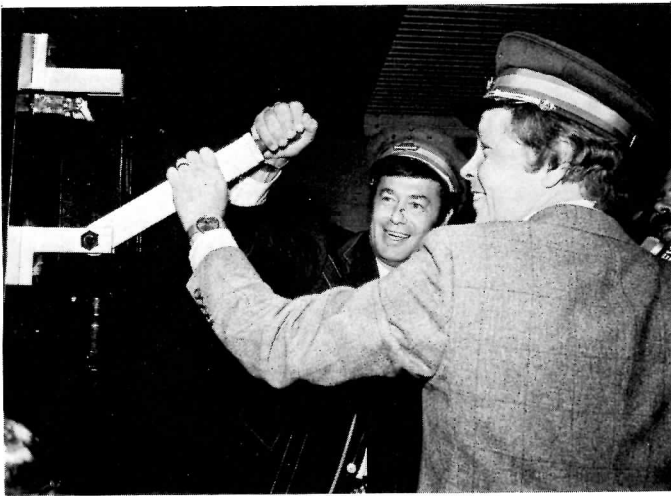
38 MARCH-APRIL 1973

With Toronto Mayor David Crombie at the controls, the special train proceeded slowly through the banner as a chorus of press photographers and film crews recorded the event for posterity. The press safely back on board, Mayor Crombie accelerated the train away from Eglinton Station. En route to Lawrence Station, Master of Ceremonies Harry Pettett (TTC General Secretary) took to the on-board P.A. and explained several features of the new subway extension. At Lawrence Station the train was met by a sea of people on the platform. Here, Mel Lastman, Mayor of North York, joined the official party and, together with Mayor Crombie, activated a symbolic signal. In the confusion they actually left the signal still showing red but after a press photographer brought it to their attention, the signal was changed to green. The brass section from the Lawrence Park Collegiate band provided the appropriate fanfare for this ceremony. Mayor Lastman took over the controls of the train at this point and operated it to York Mills Station. Here everyone detrained and ascended the 78 steps to ground level (escalator installation delayed because of a recent strike). At the surface, inside the station, the York Mills Collegiate band was set up in a corner and provided lively music. A weak sound system coupled with the impossibility of quietening all spectators resulted in speeches being short and generally lost to the dull roar. Press microphones, however, did pick up all that was said and one could only appreciate the ceremony on radio or television. Among the speakers were William Davis, Premier of Ontario; Gordon Carton, Minister of Transportation and Communications; Albert Campbell, Metropolitan Toronto Chairman; Gordon Hurlburt, TTC Vice-Chairman; and, of course, Mayors Lastman and Crombie. For the occasion, a special birthday cake resembling a subway car was baked. Transportation Minister Carton did the honours and blew out all 19 candles (it was March 30, 1954 when Toronto's first subway opened).

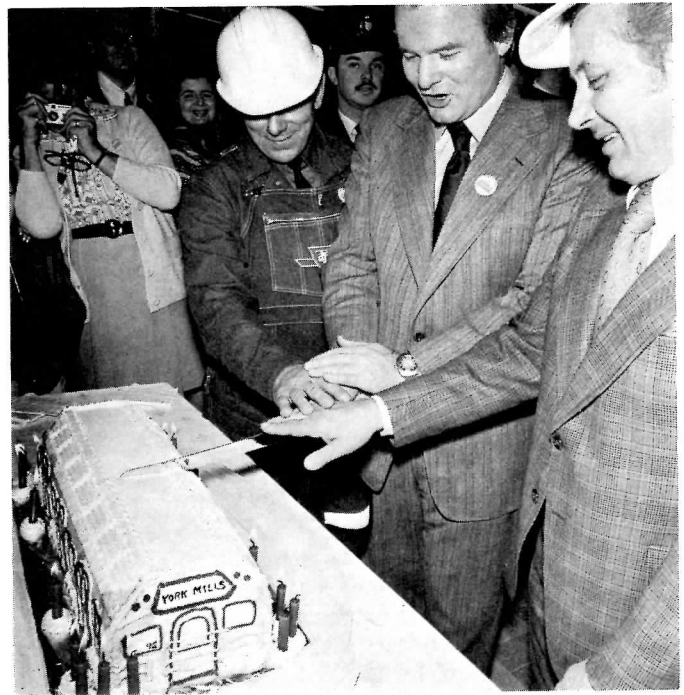
Ceremonies at York Mills came to a close at 3:30 p.m. and the V.I.P. train departed for Eglinton shortly afterward. Both Lawrence and York Mills Stations remained open all afternoon for the public to inspect. Free coffee and donuts were available, and a special commemorative folder and button, "I was at the Subway Opening", were given out.

Inaugural train with Toronto Mayor David Crombie at controls breaks through banner at Eglinton Station.
(Ted Wickson)





ABOVE: Mayors Crombie (right) and Lastman throw symbolic green signal at Lawrence Station. RIGHT: Premier Davis (middle) is assisted by two subway workers in cutting birthday cake at York Mills Station. (Both photos, TTC)



GENERAL DESCRIPTION

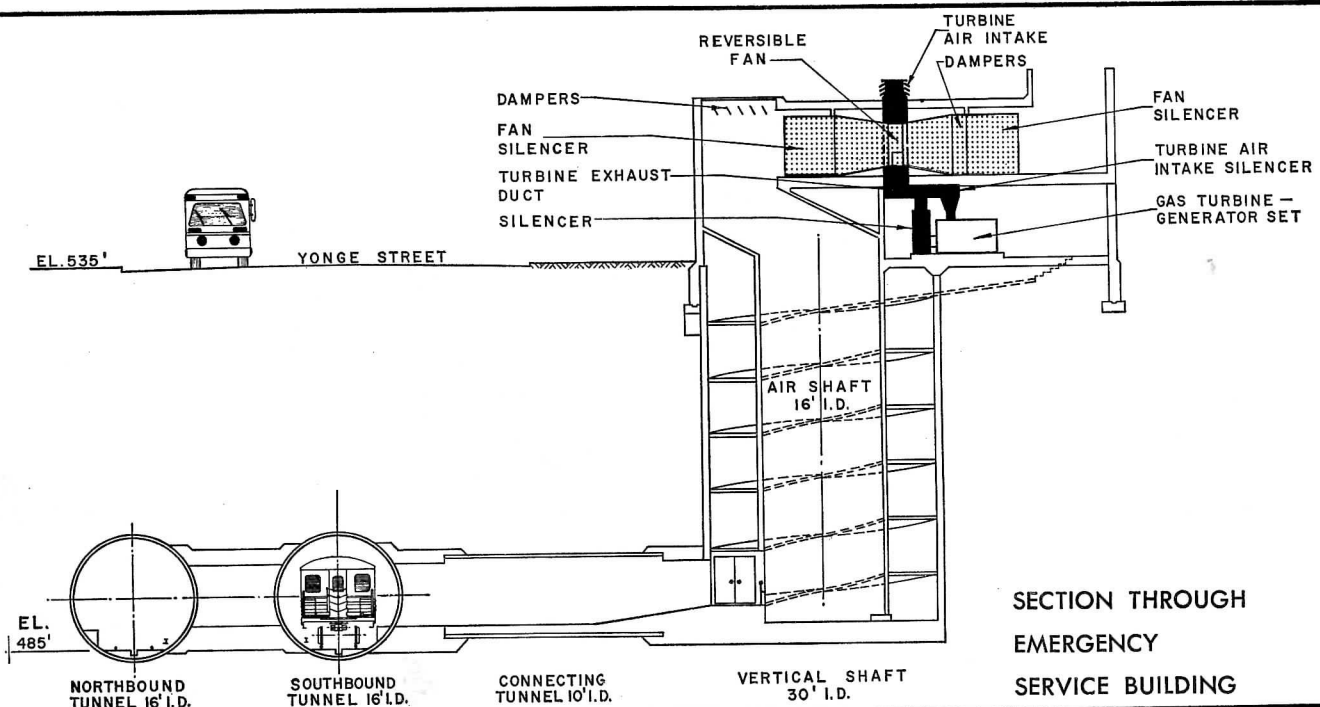
The line runs beneath Yonge Street from just north of Eglinton Station to Hogg's Hollow where it veers slightly to the east, parallel to Yonge Street for the Don River crossing. It is built mostly in tunnel except for short sections at Eglinton, under the Don River, and at the two new stations where cut-and-cover construction was used.

North of York Mills Station, on the last leg of the project, the line goes slightly west to again run beneath Yonge Street to Finch Avenue. The subway has been tunnelled from York Mills to Sheppard Avenue and is being built by the cut-and-cover method from Sheppard to Finch.

Contrasting with the rest of the subway system, station spacing on the new extension averages 7,000 feet (as opposed

to 2300 feet). The entire extension, Eglinton to Finch, is in tunnel at depths varying between 40 and 90 feet. Lawrence, Sheppard and Finch Stations are directly under Yonge Street, whilst the fourth, York Mills lies just to the east of the street.

The wide station spacing means high speed train operation with the result that large volumes of moving air are generated in the tunnels. Vent shafts have therefore been provided at both ends of all station platforms and also at midpoints between the stations where they are incorporated into Emergency Service Buildings at ground level (see illustration this page). In addition to acting as vent shafts and access to the track level, the Emergency Service Buildings also house auxiliary and standby power sources and large reversible fans for ventilation purposes.



Because the alignment for the most part is directly under Yonge Street and most construction work was by tunnelling, a minimum amount of land assembly was necessary. The land needed was entirely at station locations and was purchased by the Subway Property Committee of Metropolitan Toronto.

FINANCING

The total estimated cost of the entire Yonge subway extension from Eglinton to Finch is \$140 million. It is being met as follows:

By Metropolitan Toronto -	\$129,000,000
By the TTC -	11,000,000
	<u>\$140,000,000</u>

The Province of Ontario subsidizes Metropolitan Toronto under the Highway Improvement Act, 1963, to the extent of 33-3/3% of certain right-of-way construction costs for work completed to December 31, 1969, and 50% thereafter. In 1971, the Provincial subsidy was broadened to include all the normal elements of subway construction and effective December 1, 1972, it was extended to 75% on expenditures committed on or after that date. The Provincial subsidy to Metropolitan Toronto for the Yonge subway project will amount to an estimated \$64 million.

POWER SUPPLY

As with the rest of the subway system, TTC's concept of a duplicated power supply has been applied to the North Yonge extension. The average distance of 1-1/3 miles between stations on the extension coincides with the optimum spacing of traction power substations, with the result that a substation is located at each of the four new stations. On the extension, power is drawn from two different hydro utilities. Toronto Hydro provides power at 13,800 volts to the Berwick (Eglinton) and Lawrence substations, while North York Hydro delivers power to York Mills, Sheppard and Finch substations. The new substations not only provide DC to power the trains, but also AC power for heating, ventilation, lighting, mechanical loads and communications in the adjacent passenger stations and running tunnels. At each substation, the input voltage is transformed and rectified to give 570 volts DC output, the traction power requirement. Silicon rectifiers of the outdoor type are used, eliminating the need for expensive buildings.

For the first time on the TTC, a gas turbine driven

generator, rated at 225 kw, has been installed at each Emergency Service Building to provide standby power. In addition to this source of power, provision has been made for the first time for drawing power from the live rail for the operation of emergency services (fans, lights, etc.). Another important feature in the electrical department is TTC's confidence in, and continued use of, aluminum cable (as opposed to copper) in the negative traction power supply. The negative return current from the trains is carried back to the substation by one of the steel running rails. To increase the conductivity of this path, the rail is paralleled by this low-resistivity aluminum cable which is bonded to the rail at 400 foot intervals. Cross connections at each bond ensure an extremely low resistance negative network.

NEW STATIONS

A number of architectural and engineering improvements are evident in both Lawrence and York Mills Stations. The new stations are bright, contemporary and colourful. The combination of special brick and brilliant blue wall tile at Lawrence Station is a surprise to long-time subway riders who have become accustomed to the paler colours at existing stations. New ceiling treatment (suspended enameled aluminum strips) that makes for easy cleaning, wide centre platforms and illuminated directional signs that eliminate overhead clutter, all add significantly to the eye appeal of the stations. To many Torontonians, however, these improvements are but a variation of an old theme.

Apart from eye-appeal, two other features are significant. For passengers waiting at platform level, there are definite improvements in the noise levels and air velocities experienced when compared to other stations. As mentioned previously, air expansion chambers have been built to reduce the air velocity and pressure that occurs when trains come into the stations.

Lawrence Station

At Lawrence Station, for the first time in Toronto, the bus platforms have been built underground. This permits convenient transfer from all Lawrence buses to the subway platform, one level below. Buses enter and exit on two ramps up to Lawrence Avenue, an arrangement that eliminates all left turns. An effective ventilation system comprised of groups of two-stage fans at the north and south bus ramps remove diesel exhaust fumes from the bus loading area. Also, in connection with the bus ramps, there is an extensive snow melting cable installation to prevent icing of the sloped driveways.

Northbound train of Gloucester cars arrives Lawrence Station on opening day. (Ted Wickson)





ABOVE: York Mills Station. UPPER LEFT: Surface bus enters ramp to underground bus platform at Lawrence Station. LOWER LEFT: Lawrence Station - bus platform level. A unique feature in station design, this facility is not only sheltered from the elements but it permits more direct transfer from bus to subway train and eliminates all left turns that would otherwise be necessary by buses with a surface terminal. (3 photos, Ted Wickson)



A secondary entrance is provided off the north end of the subway platform which will be unmanned but under closed circuit TV surveillance by the collector at the main control area. This entrance at Bedford Park Avenue is not expected to be open until the completion of escalator work in June.

York Mills Station

Unlike Lawrence Station, York Mills Station features a large attractive surface structure surrounded by bus loading platforms. The station is located in a deep valley (Hogg's Hollow) on the east side of Yonge Street between Wilson Avenue and York Mills Road. An auxiliary entrance not yet open due to the escalator situation is located off the south end of the platform at York Mills Road. This entrance has the usual closed-circuit TV. It will also serve as the only practical "Kiss and Ride" entrance to the station.

TRACK CONSTRUCTION

There will be 13.6 miles of single track, including tail tracks and crossovers, in the Yonge Subway northern extension to Finch. At the present time, 6.0 single track miles are in use to York Mills. Running rail is 100 lb and is supplied by Sydney Steel Corp. in 39 foot lengths. The supply of specialwork was split between Abex Industries in Canada and Marubeni-Iida of Japan. The 80 lb contact (third) rail is imported from the British Steel Corp. Sales Co.

The running rail is secured to the concrete floor or invert by means of heavy bolt assemblies. Rubber pads are placed between the invert and the tie plates on which the rail rests to provide sound and vibration dampening. As is customary elsewhere in the subway track network, all specialwork at crossovers is mounted on creosoted railroad ties on a well ballasted trackbed. On the North Yonge extension there is no use of heat-treated rails (usually specified for short radius curves) and consequently all running rail, including the third rail, is thermite welded.

SIGNAL SYSTEM

The signal system for the York Mills extension is a wayside, three-aspect colour light system provided by the Uniswitch Division of WABCO and is similar to the existing installation found throughout the subway system. It has been designed for high speed train operation and a two-minute headway. The signal system on the old Yonge Subway was upgraded by WABCO to make it compatible with the new extension. Time signals are in use in several places, notably in the northbound tunnel descending to York Mills Station in Hogg's Hollow. Train movements through crossovers and specialwork at York Mills and Eglinton are also controlled by time signals.

On account of the temporary nature of the terminal at York Mills, turn-back operations are controlled manually - i.e. the towerman at Eglinton Tower must follow train movements and despatch all trains from York Mills by punching a button to give the motorman a proceed signal. By contrast, turn-back operations at Eglinton (in rush hours) are handled by an Automatic Train Despatcher (A.T.D.). The A.T.D. is able to determine those trains turning at Eglinton by means of the train identification system (Identra Coils) in use. All other train turnarounds on the existing subway routes are also controlled by ATD's.

CONSTRUCTION STATISTICS EGLINTON-YORK MILLS EXTENSION

Total Length	2.7 miles
Number of Stations	2
Types of Construction -	
Cut and Cover	.8 miles
Tunnel	1.9 miles
Construction Materials Used -	
Structural Steel	2108 Tons
Reinforcing Steel	8486 Tons
Rail (All Types)	1882 Tons
Cast Iron Tunnel Liners	29,588
Concrete Tunnel Liners	59,796
Concrete	145,006 Cu. Yds.
Excavation	605,385 Cu. Yds.

OPERATIONS AND SURFACE ROUTE CHANGES

Because traffic on the extension was expected to be lighter at the start than on the original Yonge line, alternate northbound trains terminate at Eglinton and York Mills Stations during rush hours, Monday through Friday. At all other times all trains operate to York Mills. To assist the public in differentiating between the trains, automatic train destination signs (Solari) are in use on the southbound platforms of the University subway and on the northbound Yonge line platforms. Just before the train comes into the station, a gong sounds and the sign changes to show the train's destination. During rush hours the headway is 4'12" north of Eglinton and 2'6" south of Eglinton. During base service hours, the headway is 3'42". Running time from York Mills to Eglinton is 6 mins.; to Union Station, 20 mins.

Ironically, the YONGE-97 trolley coach route owes its fate to happenings on the YONGE subway. Created on March 30, 1954 with the opening of the original subway and abandonment of streetcars on Yonge St., YONGE-97 carried on the legacy of electric transit in North Toronto dating back to 1891. Although it was abandoned with the recent York Mills extension coming, there is some comfort in that the trolley coaches made surplus will be used on new routes elsewhere in Toronto. View of 9317 at Glen Echo Loop, Sept. 1972. (Ted Wickson)



A mix of Gloucester (red) and Hawker-type equipment is used on the new extension, the aluminum cars operating in low range. All but 6 of the 76 new class H-2 cars recently purchased from Hawker-Siddeley Canada Ltd. for this extension are now available for regular service. The H-2 cars are assigned to Greenwood Carhouse but are pooled for general use on all subway routes. It should be mentioned that the remaining 6 H-2 cars (5500-05) have recently been equipped with chopper controls and regenerative braking and are only available sporadically for revenue service (see Traction Topics this issue). For complete details of TTC's H-2 cars see page 58, April 1972 NL.

Ten bus routes feed into York Mills Station and a new Gray Coach airport express bus service has been inaugurated from this point. Although not a closed transfer station, the difficulty in handling the heavy traffic at York Mills Station should ease somewhat when the Finch extension opens and some of the feeder routes are moved north. At present, the afternoon rush hour bus loading is impeded by the front entrance requirement (to show transfers) and in the morning, long lines of patrons form on the mezzanine level as the collectors must take each transfer and also make sales of tokens and tickets. Coincident with the Finch opening will be the relocation of Gray Coach's North Toronto Terminal (Glen Echo Loop) to York Mills Station.

Lawrence Station is a closed transfer point and is fed by three branches of the Lawrence bus.

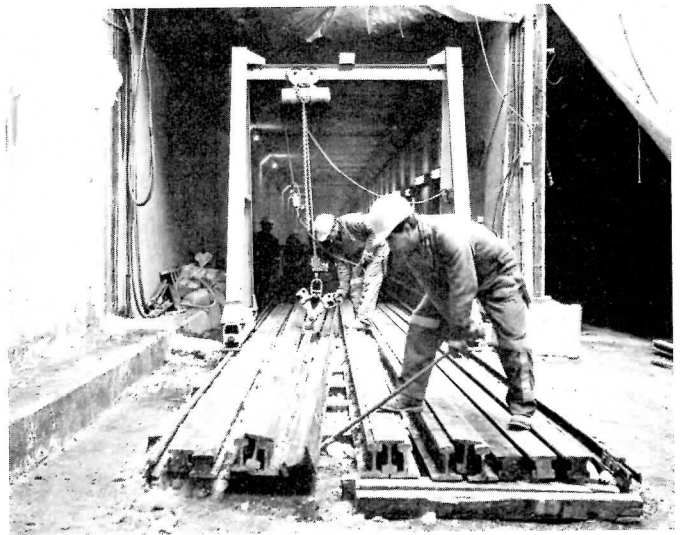
The most significant result of the subway opening to enthusiasts has been the abandonment of YONGE-97, the surface trolley coach route between Eglinton Station and Glen Echo Loop (see Traction Topics). In its place, two new local diesel bus routes have been created on Yonge Street, each providing a common service south of Glen Echo.

CONSTRUCTION PROGRESS TO FINCH

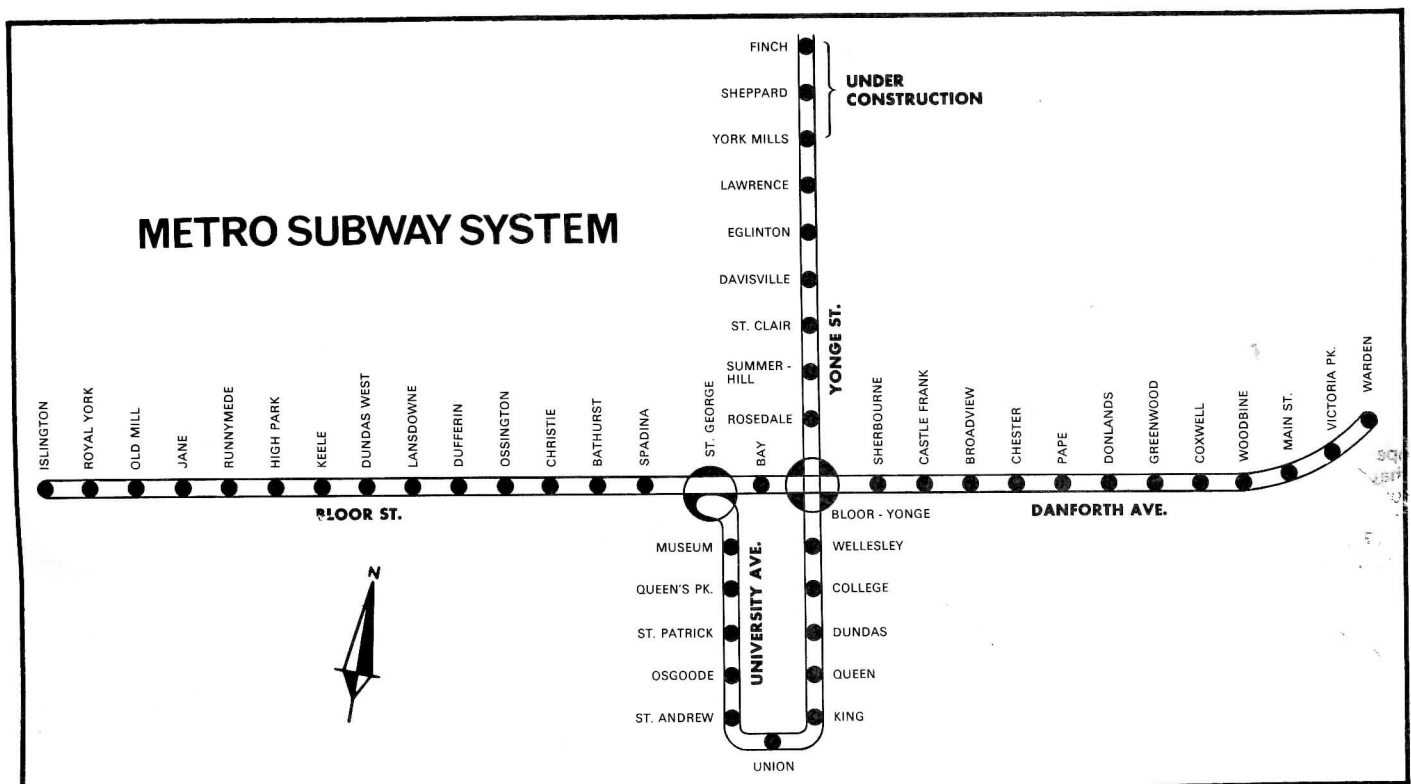
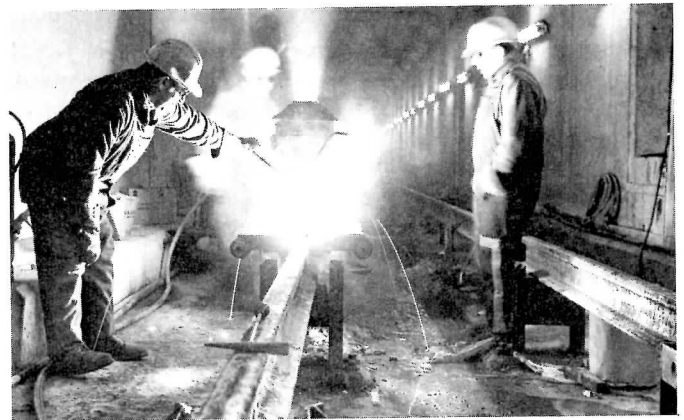
Construction on the remaining 2.7 miles to Finch is about 90% complete. The tunneling contract between York Mills and Sheppard Stations has just been completed. A multitude of delays to this project ruled out an early opening to Sheppard Station. Labour difficulties and soil and water conditions not anticipated required the tunnelers to work longer under air pressure and were the main problems. Sheppard Station had been finished at the same time as York Mills.

The cut-and-cover contracts between Sheppard and Finch have been completed ahead of schedule and TTC track crews have completed the installation of rail in the southbound tunnel in this area. A welding station is set up at Burnett Ave. (4 blocks north of Sheppard) and at this point all supplies are lowered through an opening in the road decking and tunnel roof to be stockpiled below. A small gantry crane is used to move the rail into position at the welding station. Eighteen rails (39' each) are placed on rollers and welded into one continuous string of rail. This entire unit is then transported by two-wheel dollies to the location site. Although the Thermite welding process has been around for decades, the TTC has made some refinements in its application to subway trackwork. The new method employs prefabricated moulds and only requires half the time (10 mins.) to preheat the rail ends to the desired welding temperature of 1700°F. In full production, four welds can be in progress at a given time. It is common for TTC track forces to weld and instal 1600 feet of track in a week. When all trackwork is completed in the Fall, 52,000 feet of single track and 26,000 feet of third rail, including crossovers at five locations, will have been installed on the entire extension, Eglinton to Finch.

With work so well advanced on the majority of contracts, the TTC should be able to revise the present target opening date of April 1, 1974 ahead to January or February of next year.



Welding station on the Finch extension. ABOVE: Stockpiled rail is moved into position for welding by means of a small gantry crane. BELOW: Thermite charge being poured from crucible. Note the rollers on which the rail rests. (Both photos, Ted Wickson)



The Radial Railways of North Yonge Street

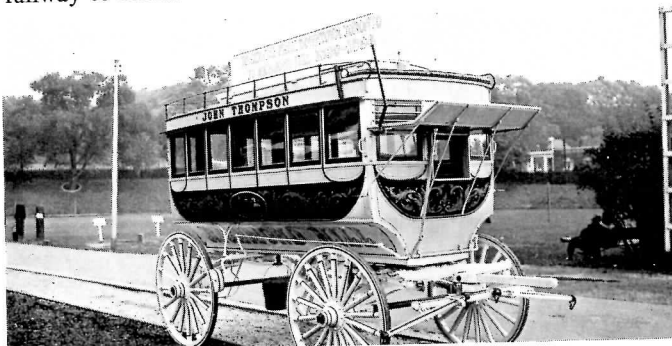
BY TED WICKSON

YONGE STREET BEFORE THE RADIALS

Yonge Street, that great highway running north from Toronto to Lake Simcoe 50 miles distant, has long been a major transportation route. In 1792 General John Graves Simcoe, the first Lieutenant-Governor of Upper Canada, was convinced that a road connecting Lake Simcoe and Lake Ontario at York (now Toronto) would be more direct than the existing Indian trails to the east and west. Such a route would be valuable both as a military road and as a trade route for the North West Fur Co. And so, between 1793-96 Simcoe had the road surveyed and laid out by the Queen's Rangers. It was named Yonge Street in honour of Simcoe's friend, Sir George Yonge who was then Minister of War in the Imperial Cabinet.

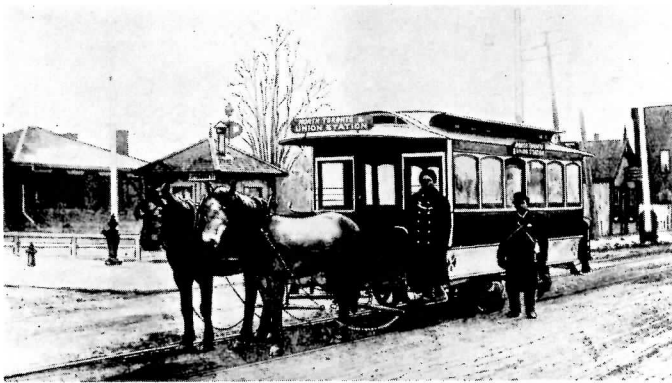
Settlers were attracted by free land grants, usually 200 acres. One of the conditions in the granting of Crown land required the new owners to maintain the road allowance, Yonge Street, in front of their wild land. Unfortunately, there were many absentee owners and portions of Yonge Street remained in poor condition for years. This situation soon became intolerable and during the 1830's a system of toll gates was set up as a means of raising money to improve the road. By 1850, Yonge Street had become a busy highroad. Wagon loads of farm produce and merchandise were teamed up and down, and a stage coach service had been established between

Toronto and Lake Simcoe where the lake steamers were met. In the 1870's the stage coach business was bought out by Jonathan Thompson of Richmond Hill. For more than 25 years his stages plied up and down Yonge Street. With stops to pick up passengers and mail bags, the trip from Richmond Hill to Toronto took 3 hours and the fare was 75c return. Mr. Thompson was put out of business by the coming of the radial railway to Richmond Hill in 1897.



ABOVE: Four-horse stage used on the Richmond Hill-Toronto run. Restored by the TTC in the 1920's, this vehicle was used over the years for parade and display purposes. It is now on display at the National Museum, Ottawa. BELOW: One of John Thompson's two-horse stages (used on the run to Lake Simcoe) standing in front of the Dominion Hotel in Richmond Hill, circa 1895. (Both photos, TTC)





TSR horsecar poses on Yonge St. at the CPR, circa 1888. Original CPR station is shown in left background; Metropolitan station is the small frame building immediately behind the car. (TTC)

The City of Toronto saw its first street railway operation become a reality in 1861. The Toronto Street Railway's *Yonge* route was inaugurated on September 11th and became the first street car line in Canada. Horse cars ran from St. Lawrence Market via King and Yonge to the Yorkville Town Hall at Scollard. The franchise granted the TSR did not permit or require the company to provide service north of the city limits at Scollard and for several years travellers from North Toronto had to make their way down Yonge Street either by walking or catching one of the infrequent stage coaches.

METROPOLITAN STREET RAILWAY CO. OF TORONTO

In 1878 the Metropolitan Street Railway Co. of Toronto was incorporated to provide a street railway service north on Yonge from Scollard to the town hall of Eglinton (second 'g' later dropped) at Montgomery Avenue, a distance of 2-1/2 miles. An agreement was signed between the Company and the County of York in June, 1884, providing for a 30 year franchise. The terms were similar to those of the TSR in their agreement with the City of Toronto. The gauge was 4' 10 7/8", car speed was limited to 6 m.p.h. and only horsepower could be used. The new company was not exempt from the payment of tolls at the various toll gates on Yonge Street. In winter the company was required to maintain service, either by keeping the rails clear of snow or by using sleighs.

Horse car operation commenced on this single-track, side-of-the-road railway in 1885 and according to the franchise, a minimum of 4 round trips had to be made each day (Sabbath excepted) between the CPR at Birch Avenue and Montgomery Avenue. The Metropolitan Street Railway's original plan to run cars as far south as Scollard (where a connection could be made with the *Yonge* cars of the TSR) had to be abandoned with the coming of the Ontario and Quebec Railway (CPR) across Yonge Street between Cottingham and Birch in 1884. By this time the city limits of Toronto had been moved well north of the CPR, to Farnham Avenue, and it would be the TSR's obligation to provide service on this section of Yonge between Scollard and Cottingham. In 1885, the *Yonge* cars of the TSR were extended north and terminated at the CPR North Toronto Station. It should be pointed out that the CPR, as a steam railway, would never have allowed a street railway to cross its own tracks at grade and the situation in 1885 was agreeable to all 3 railways. Both the TSR and MSR had their terminals on either side of the CPR and passengers were afforded an easy transfer across the tracks.

The Metropolitan service to the town of Eglinton proved popular and the following year, 1886, the Company extended its line 3/4 mile north to Glen Grove Avenue. Terms of the new agreement allowing this extension were the same as those of 1884 except that a 4c fare was to be charged; a 5c fare was in effect for the trip from the CPR to Montgomery Avenue.

Very little is known about the original equipment used by the Company. The number of horse cars on roster was probably less than 10 and very likely all were built by the TSR in their shops at Front and Frederick Streets.

A further extension of the railway opened in 1890 to York Mills South (Glen Echo Ave. today), the northernmost point on Yonge Street to be served by horse cars.

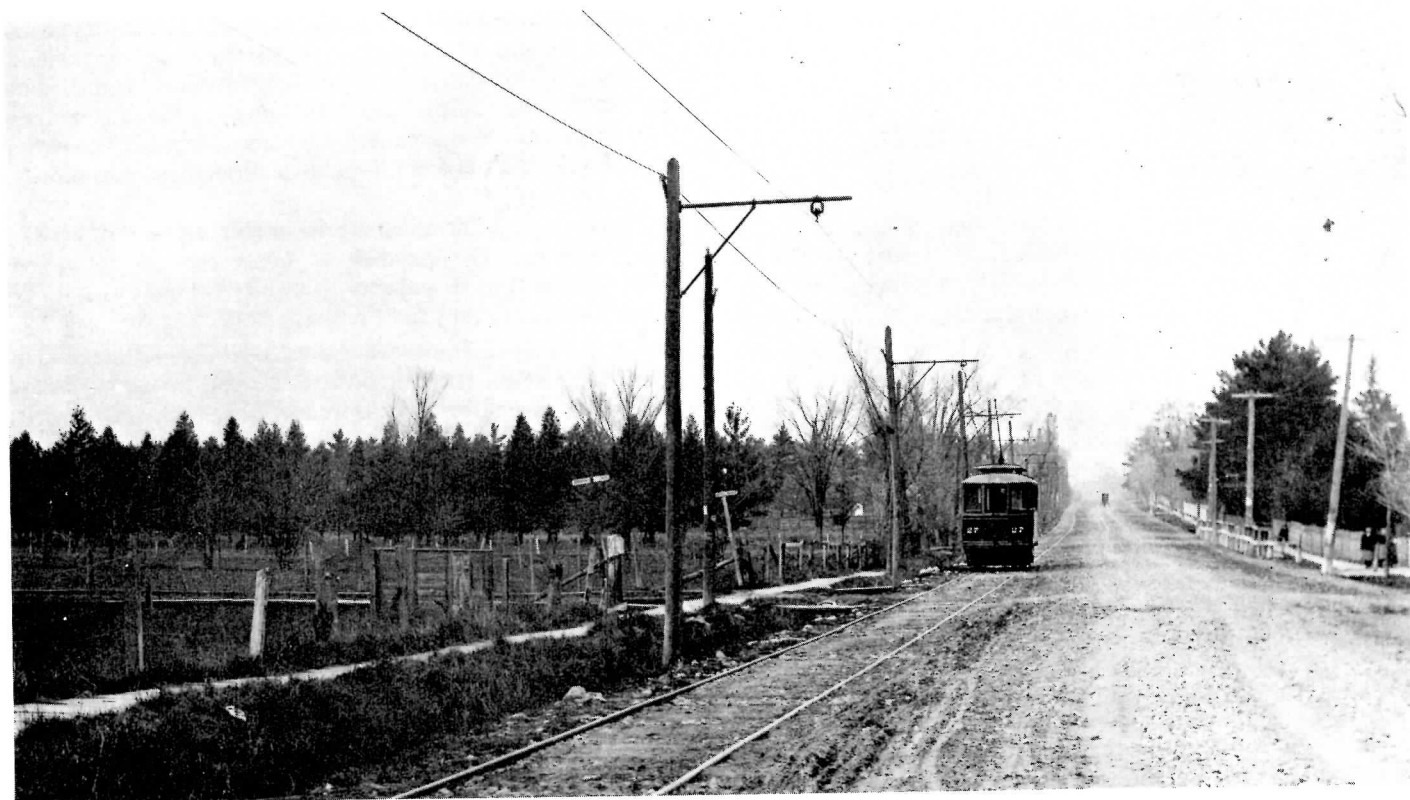
By the late 80's the company was interested in electrifying. In 1889 Company officials and members of the County Council visited Pittsburgh where the merits of electric operation could be demonstrated. A new agreement was subsequently reached concerning electrification of the Metropolitan. The earlier clause providing for the use of horse-power only was rescinded and the new electric cars would be permitted to travel at 12 m.p.h. Foreseeing that the horses drawing ordinary vehicles might become alarmed at the sight of the electric cars, another clause stipulated that, in that event, the conductor and motorman had to leave their car and assist the driver to quieten the horse.

On September 1, 1890, the Metropolitan Street Railway inaugurated the first electric street railway operation in Toronto. Horse cars converted to electric operation provided the initial service from the CPR to Glen Grove. This pioneer electric operation suffered a small setback in the late fall of 1890. At the coming of the first heavy frost the old horse car rails and roadbed were not able to handle the heavy cars. Service was interrupted so often by broken rail bonds that the Company was forced to withdraw the electric cars and restore the horse cars. The line was completely rebuilt and in 1891 the electric cars returned to service, running beyond Glen Grove to the end of track at York Mills South.

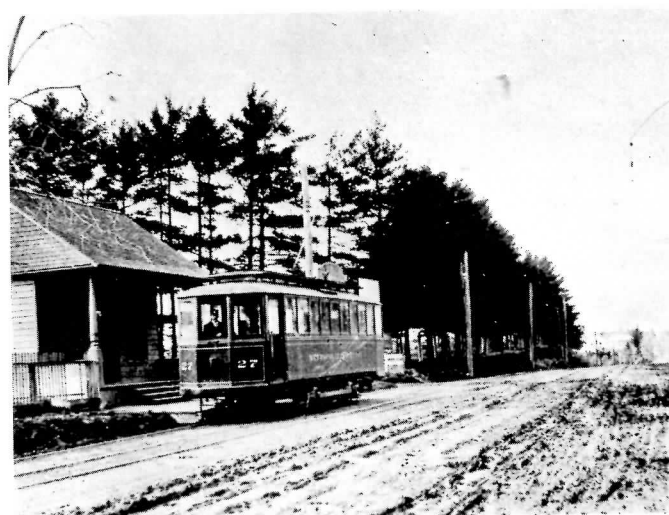
In 1893 the Company's name was shortened to Metropolitan Street Railway Co. ('of Toronto' was dropped). The following year a new agreement with the County of York permitted the Company to extend their line to Lake Simcoe. The speed of the cars was increased to 20 m.p.h. and a new schedule of fares was set up calling for a minimum fare of 5c and a rate of 3c per mile. The Metropolitan was becoming more of a radial railway and less of a street railway. In addition to the growing passenger traffic, mail contracts had been secured and a small express business soon flourished.

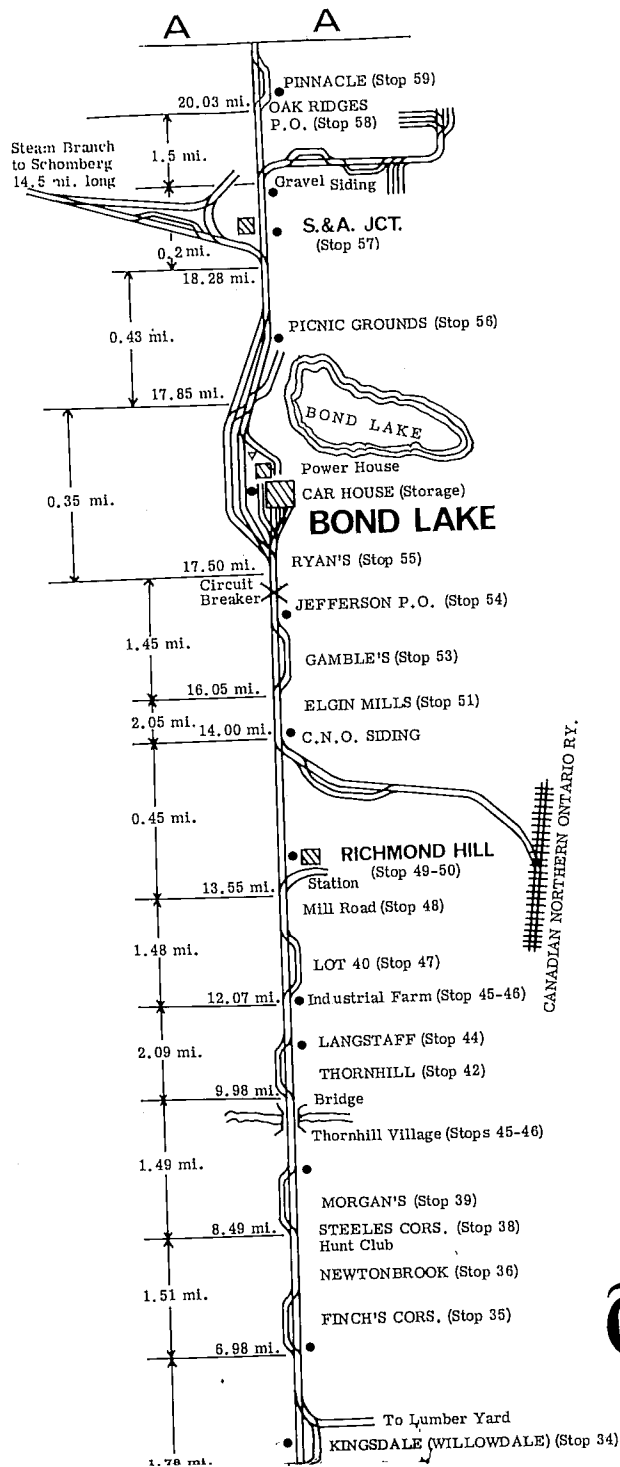
The extension north to Richmond Hill was completed in 1896; however, the electrification was not completed. To comply with the franchise, a token trip by horse car was made in the fall of 1896. It is reported that on this inaugural trip to Richmond Hill the horses were unhitched from the car at the summit of each small hill and the car was allowed to roll down on its own momentum! On May 2, 1897, regular electric service commenced to Richmond Hill. 13 single-truck, closed cars had been purchased from the Pullman Co. for this new service.

The Company shortened its name again on April 13, 1897, to the Metropolitan Railway Company but the local service on lower Yonge Street (CPR to Glen Grove) continued to be identified as the Metropolitan Street Railway.



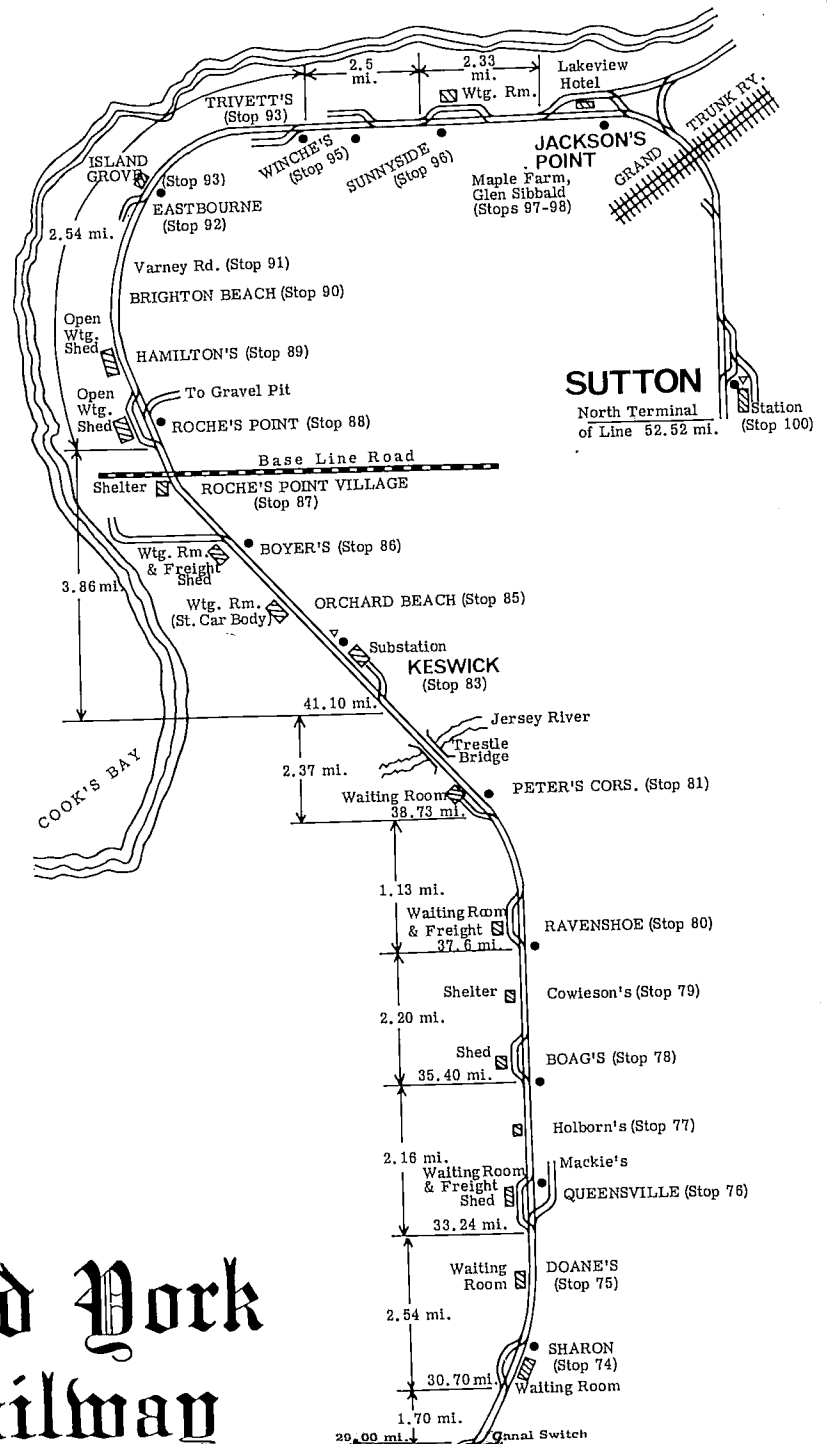
Commissioned to obtain a photographic record of North Yonge St. in 1898, commercial photographer Alexander Galbraith chartered Metropolitan Ry. car 27 to take him to his locations. ABOVE: Yonge and Briar Hill, looking north. (TTC) BELOW LEFT: Northbound car 27 poses in Cemetary Hollow. (Mike Filey) BELOW RIGHT: Yonge and Glen Grove, the local car terminus. Adjacent park and race track generated much traffic to this point. (North York Historical Society) RIGHT: Car 19 lays over at the city terminus, Yonge and CPR about 1900. (Mike Filey)



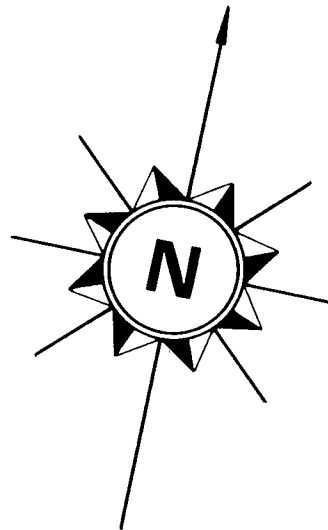
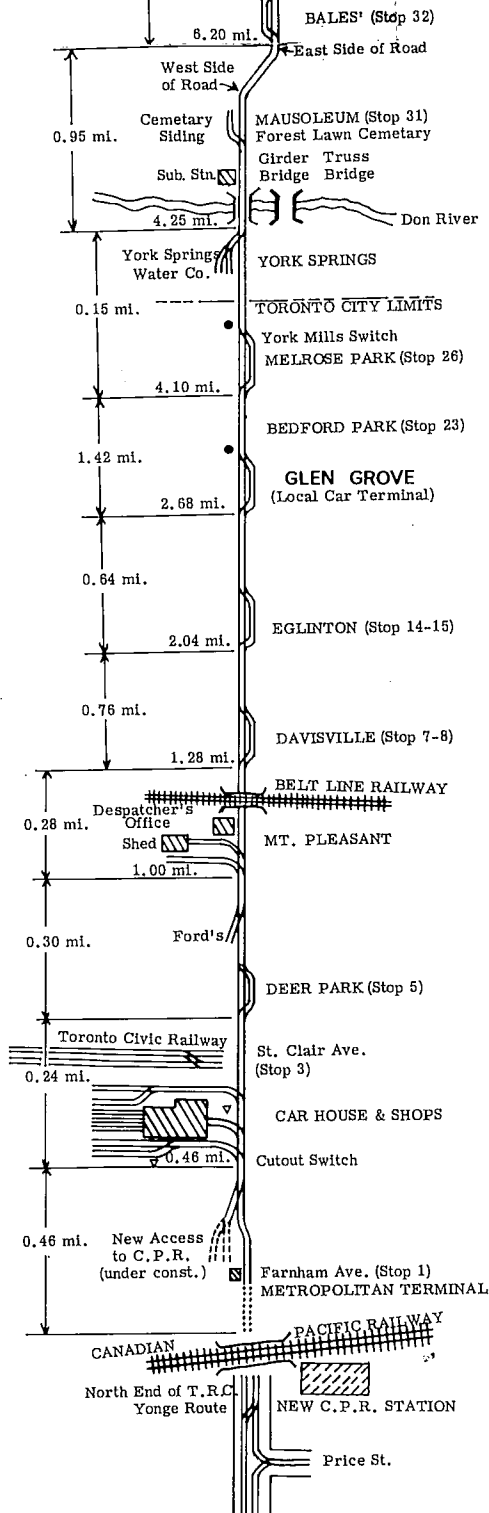


The Toronto and York Radial Railway

L A K E
S I M C O E

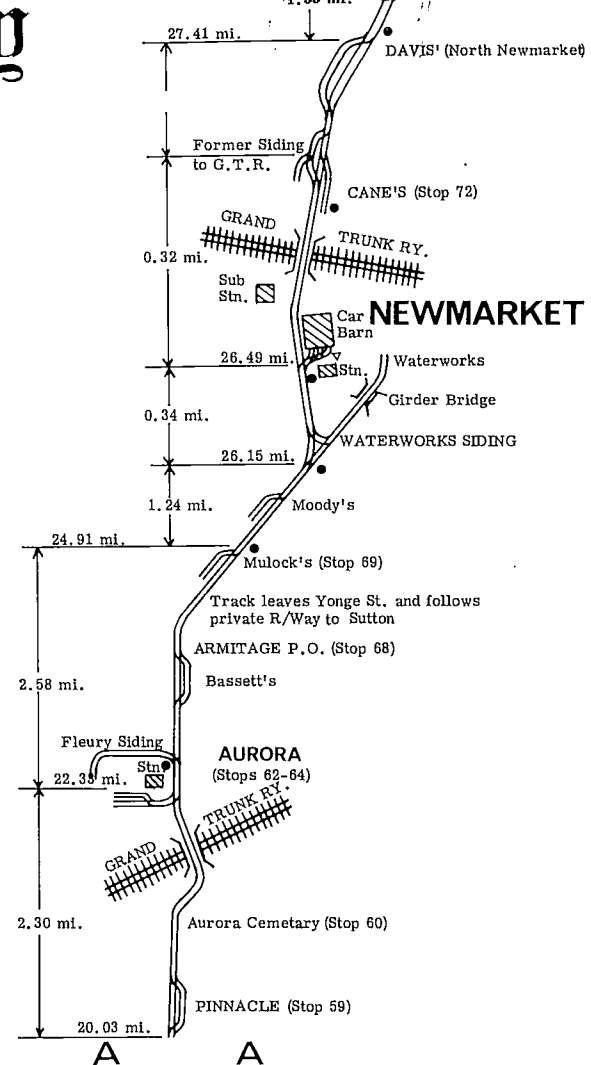


Company



RUNNING TIMES, TORONTO-SUTTON

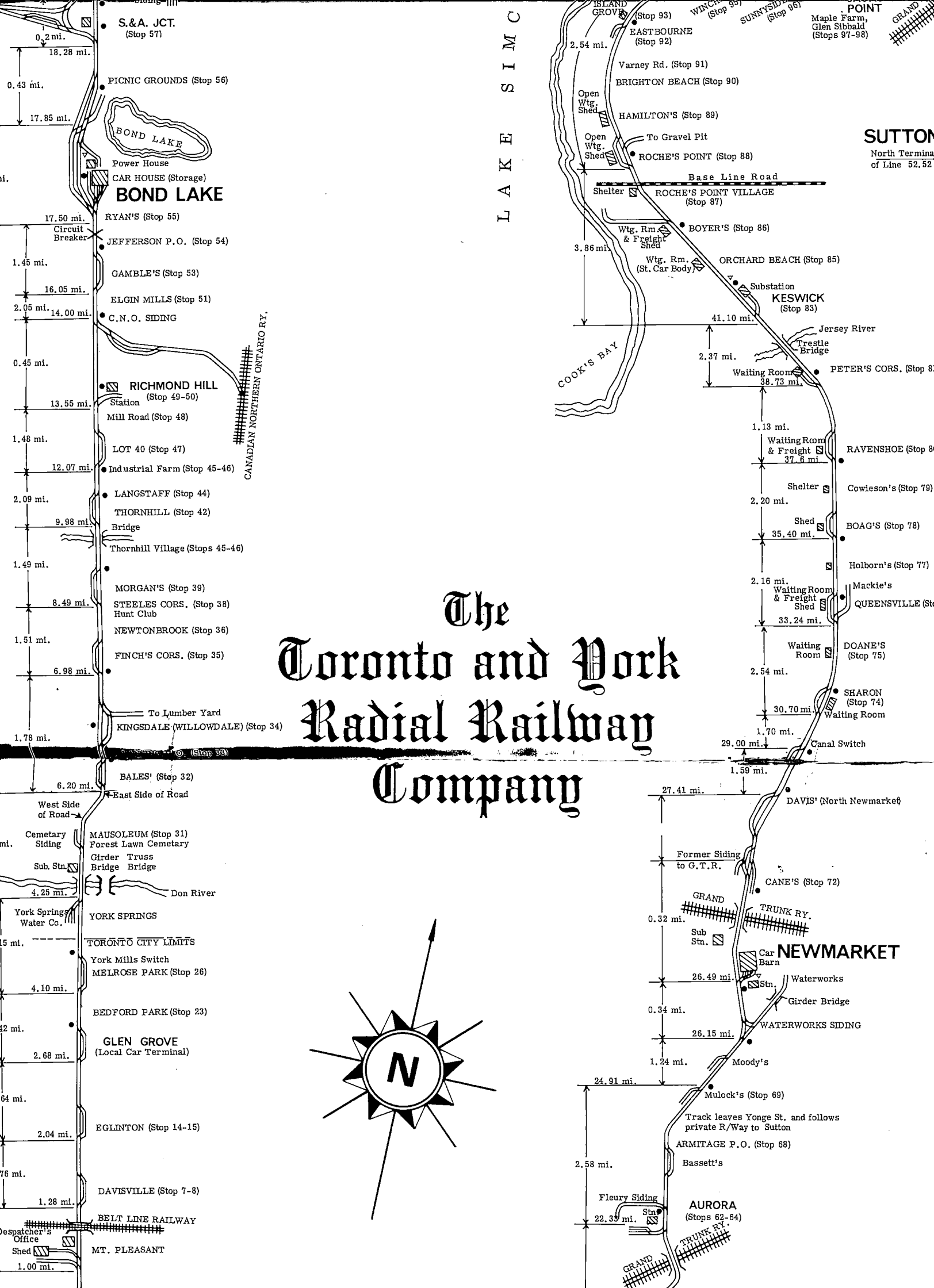
TORONTO TO	Hrs.	Min.
York Mills P.O.	17	
Thornhill	32	
Richmond Hill	45	
Bond Lake Park.	1	00
S & A Junction	1	02
Aurora	1	15
Newmarket	1	30
Sharon	1	42
Queensville	1	48
Keswick	2	06
Roche's Point	2	15
Eastbourne	2	20
Jackson's Point	2	30
SUTTON	2	40
Sutton to Toronto	2	45



TRACK MAP METROPOLITAN DIVISION

SHOWING
 STOPS, CALL BOXES, AIR STATIONS, PASSING SIDINGS, TURNOUTS, SPUR TRACKS,
 R.R. CROSSINGS, BRIDGES & TRESTLES, TOWNS, VILLAGES, COMPANY BUILDINGS,
 MILEAGE & DISTANCES, AND POINTS OF INTEREST. DATE: JULY, 1915

● CALL BOXES ▽ AIR STATIONS





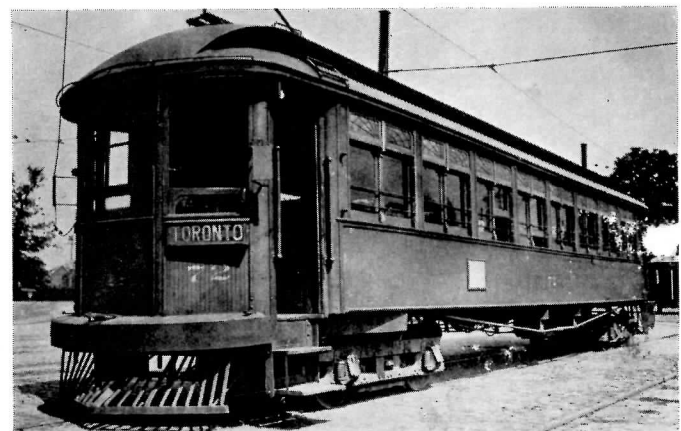
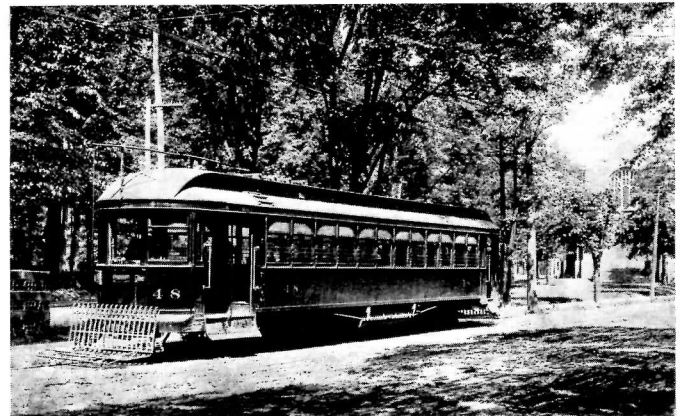
Looking north on Yonge St. at present day Parkview Ave. in Willowdale, circa 1902. Southbound Metropolitan car is either 5 or 7 (TRC, 1899). Note lack of pilot or fender on car. Ontario Railway Act of 1906 would require safety devices.
(North York Historical Society)

Fifteen new passenger cars were purchased from the Toronto Railway Co. in 1906-07. These cars were the largest cars on the T & Y and would provide the backbone of the "Lake Simcoe" service in the years to come. Many other improvements were made to the railway, some voluntary and others under orders issued by the newly created (1906) Ontario Railway and Municipal Board. One example was the replacement of split switches by tongue switches. The Company vigorously promoted its passenger and freight traffic. The Ontario Railway Act of 1906 established uniform passenger tariffs on all radial railways, and as a result the T & Y was forced to reduce fares so that "the tolls charged do not exceed 5c for any distance not exceeding 3 miles, and beyond that distance do not exceed 2c a mile for the distance travelled."

The freight business grew steadily and in 1909 accounted for 25% of the Metropolitan Division's gross earnings. Passenger schedules of 1909 indicated an hourly service from Toronto to Newmarket with every other car continuing on to Sutton. Eighteen passenger cars were required for service in winter and 20 in summer. The Metropolitan Division consisted of 52 miles of single track, of which the first 25 miles followed Yonge Street to Newmarket variously at either side of the road or in a median. The remaining section was built on graded private right-of-way to Jackson's Point and Sutton. In general, the track was of 60 lb. rail and passing turnouts were located every 3/4 mile as far north as Newmarket and then every 2-1/2 miles on the section north to Sutton. The T & Y operated a more frequent "local" service between the CPR and Glen Grove. Nine passenger cars were purchased in 1911 from Preston Car expressly for this local service, enabling the Company to retire most of the original single-truck equipment inherited from the Metropolitan Railway. The Preston-built cars sported the familiar Watson fender of the "city" cars whereas the other radial cars on the Metropolitan featured the railroad type pilot (allowed by the Railway Board in 1906).

The period 1909-1914 was certainly the Golden Age of the Radial on the Metropolitan Division. However, the chronic disagreement between the City and the T&Y over the radial entrance question probably was the one decisive factor that prevented the Metropolitan from reaching its potential. For

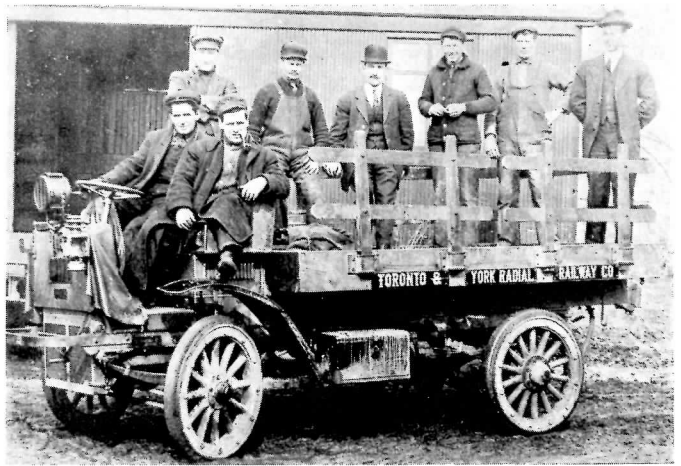
years, the T&Y pressed for an agreement with the City that would allow the radial cars on each division to reach St. Lawrence Market in downtown Toronto. The matter finally went before the courts with the outcome that the City Engineer was granted the same control over the radials as he exercised over the city street railways. The City simply didn't want to give up its streets to the radial companies and that was that. When the T&Y franchise on Yonge Street for that section



UPPER: T & Y "local" car 48 (Preston, 1911) poses at Yonge and Lawton, 1918. LOWER: Car 72 (TRC, 1907) is representative of the large, high speed, long distance radial cars of the T & Y.

(Both Photos, TTC)

between the CPR and Farnham Avenue expired on June 25, 1915, the City saw to it that the radial tracks were torn up, forcing the Metropolitan cars to terminate 5 blocks north of the CPR. The Yonge route of the TRC was then extended north from Price Street through a new subway under the CPR to a new wye at Woodlawn, one block from the Metropolitan terminus at Farnham.



ABOVE: Freight Office employees, circa 1911. To facilitate delivery of express shipments in the City, the T & Y purchased a fleet of trucks.

(Mike Filey)

LEFT: St. Clair Shops and Carhouse, circa 1916. The T & Y Express Terminal was moved from the CPR to this location in July, 1915, after the franchise expired on Yonge St. south of Farnham Ave.

(TTC)



ABOVE: Metropolitan Station and Express Office of the T & Y, August, 1910. Located on the west side of Yonge St., just north of the CPR, this terminal would be demolished 2 years later as construction began on a grade separation between Yonge St. and the CPR. (TTC). LEFT: Rush hour in a summer morning of 1912 finds local car 43 bringing up the rear in a parade of cars heading into the city. View looks south on Yonge St. at Blythwood.

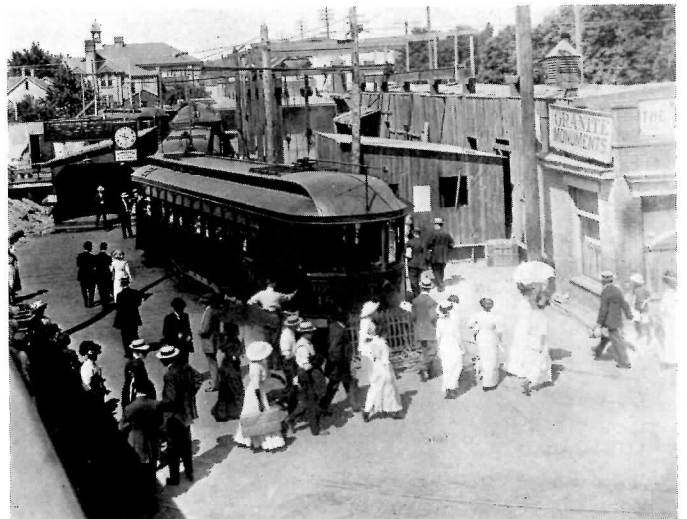
(Mike Filey)

The Toronto and York Radials, along with other private radial companies, were introduced to a new adversary in 1915. In March of that year, several hundred Ontario municipal representatives formed the Ontario Hydro Electric Railway Association. The Association's objects were "to develop a plan for a system of electric radial railways in Ontario, to secure all necessary legislation and government aid in the furtherance of the enterprise, to assist municipalities in carrying bylaws in connection with the radials, and to use lawful means to prevent the renewal of private charters for electric railways or the issuance of new ones to individuals or corporations." Sir Adam Beck, Ontario Hydro's first chairman, was the Radial Association's champion and chief spokesman. The creation and expansion of Ontario Hydro as a publicly owned power service meant that low cost power was rapidly becoming available to hundreds of communities in Ontario. Beck's proposals for municipally owned radial railways providing transportation "at cost" met with overwhelming enthusiasm. The Hydro Chairman accused private companies of charging "all that the traffic would stand". In particular, Sir William Mackenzie's empire came under attack. Mackenzie controlled the Electrical Development Co. that generated power at Niagara Falls, the Toronto Power Co. that transmitted power to Toronto, the Toronto Electric Light Co. that distributed power to consumers in Toronto, and the Toronto Railway Co. that in turn owned the Toronto and York Radial Railway Co. In the ensuing battle, Mackenzie would be faced with the prospect of no renewal to his franchises in Toronto. The entire business became known as the "Clean-Up Deal". The City of Toronto wished to acquire control of the Metropolitan line in North Toronto as far as the new city limits at Glen Echo. A tentative agreement was reached whereby Mackenzie would be given a perpetual franchise and running rights to the heart of the city in return for the replacement of the radial line with a new double track "city" line to Glen Echo. The Metropolitan cars would run downtown over a route to be determined by the city over city-owned lines, with freight traffic operating at night with off-peak power. Legislation was passed in 1917 allowing the City to expropriate that portion of the Metropolitan in return for the conditions described above. Sir Adam Beck took great exception to this proposal and offered an alternative plan: The T&Y would be given the right to

double-track its Metropolitan line south of the City Limits and place it in the centre of the street where its tracks would be straddled with the new "city" line. This would put on the street 8 rails, 2 sets of trolley poles and wires, and 2 railways operating with power from 2 competing systems, one privately owned (T.E.L. Co.) and the other publicly owned (Toronto Hydro) - all on a 66-foot roadway!

While the radial question in Toronto was far from being solved, plans for other Hydro radials elsewhere were well underway. By September, 1915, cost estimates were in for new radial lines totalling 1600 miles. Although Provincial legislation existed that guaranteed municipal bonds issued to raise capital for construction, the First War delayed most projects. It should be mentioned that the first "hydro radial" was the re-organized London and Port Stanley Railway that opened on July 22nd, 1915. Previously a privately owned, run down steam railway, the new L&PS was the model hydro radial - fast, comfortable service in modern equipment, well managed and publicly owned (by the City of London).

After the First War, the provincial government was beginning to view with alarm the vastness of Beck's radial schemes and, in true government fashion, appointed a Royal Commission in 1920 to look into the matter. The question



ABOVE: Crowded Metropolitan Terminal, 1912. Construction of the new Yonge St. underpass and new CPR North Toronto Station played havoc with the T & Y at this time and forced demolition of the previous station (see photo preceeding page) located in the same area. Plans for a new terminus on the east side of Yonge were made but not carried out owing to loss of the franchise in 1915 for the railway south of Farnham. (TTC) LEFT: Winter snows often closed Yonge St. to all traffic but the radial cars. To the T & Y's dismay, their cleared right-of-way became a thoroughfare for public vehicles. View looks north on Yonge, somewhere between Thornhill and Newmarket, January, 1921. (Ontario Hydro)



was: "Shall this government adopt the principle of publicly owned and operated radial railway systems for the Province as a whole and proceed energetically through the Hydro-Electric Commission as conditions may warrant with the construction or acquisition and operation of such a system?" The Commission of Radial Inquiry handed down its report in May of 1921 and its findings struck a heavy blow at the Hydro radial plan. It found that the proposed network of electric railways should not be carried out unless there was good evidence they would be self-supporting and based on the evidence they would not. Another finding was that the radials would duplicate government owned steam railways and this would be unwise and economically unsound, and would strike a serious blow at the success of government ownership. In conclusion, the Commission felt that a priority of funds should go toward the completion of Hydro's \$60 million Chippewa power project (the Hydro radials estimate was \$45 million, just for preliminary construction) and most important, the Province had just started a \$25 million improvement to public highways and it was felt that the effects of this work should be ascertained before proceeding with electric railways.

To Mackenzie and his Toronto and York Radial Railway, the handwriting was on the wall. The Metropolitan Division continued to be profitable during the war but by 1919 was operating in the red. Unfortunate carhouse fires on both the Metropolitan and Scarboro Divisions seriously reduced the number of cars available for service. The increasing use of private automobiles and trucks coupled with the improvements to the Toronto-Barrie Highway (Yonge St.) made it difficult for the Metropolitan to be competitive. Mackenzie wanted out, and his only concern was getting the best price for his railway and power interests in Toronto.

In December, 1920, the conclusion of the Clean Up Deal that would rid the City of the Mackenzie interests was announced: Ontario Hydro was to take the generating plant and transmission lines. Toronto Hydro was to get the Toronto Electric Light Co. The City was to get the Toronto Railway Co. city lines (to be operated by the Toronto Transportation Commission) and also the Scarboro, Mimico and Metropolitan radials. The purchase was ratified by city voters in the municipal elections January 1, 1921. Final details in the T&Y

purchase had yet to be worked out and it was not until the summer of 1922 that the agreement was consummated. The transfer of all named assets between the T&Y and Ontario Hydro took place on November 1, 1921. Arrangements had been made between the City and Ontario Hydro providing for the title to the radials being held by the City but their operation and management would be the concern of the Hydro.

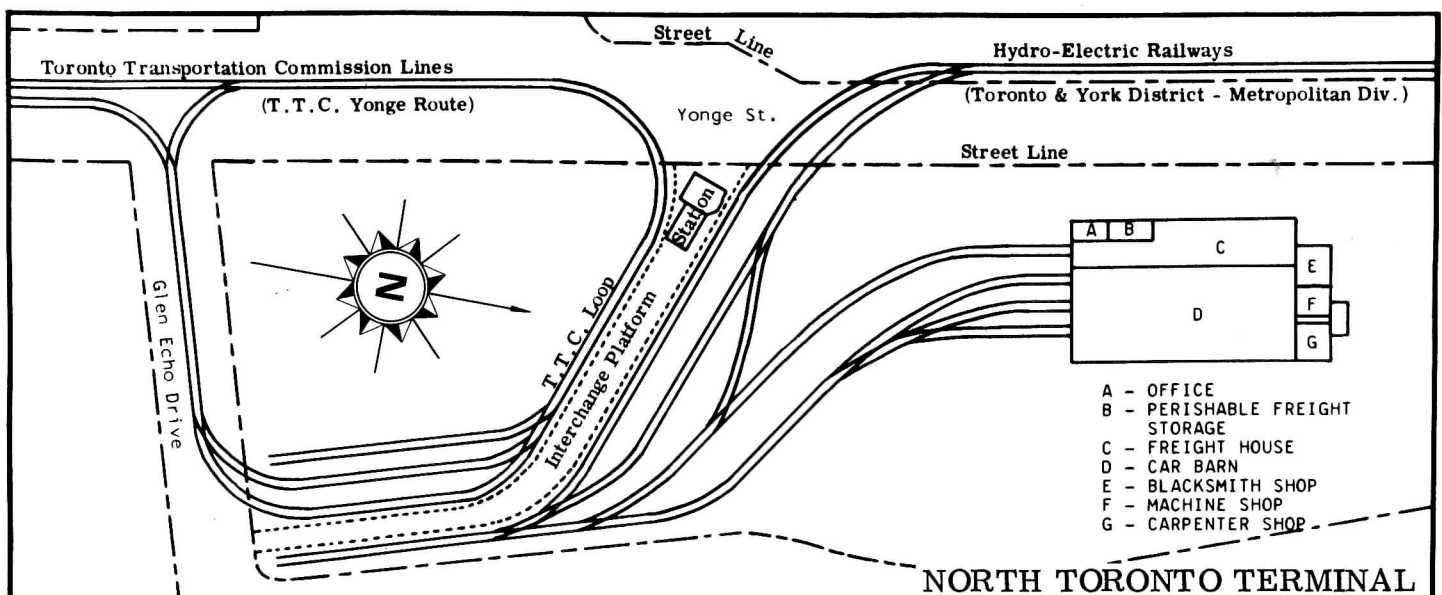
HYDRO-ELECTRIC RAILWAYS

Toronto & York District - Metropolitan Division

At the time Ontario Hydro assumed management of the Metropolitan line, the newly formed Toronto Transportation Commission was constructing a new double-track city line up Yonge Street to the city limits. With the new radial terminus moved to the city limits, a new joint terminal facility known as North Toronto Terminal was constructed with funds provided by the City. The old T&Y car house and shops on Yonge Street just below St. Clair were closed and a new car house and shop building were constructed by the Hydro Electric Railway at North Toronto Terminal. The TTC also built a new car house at Yonge and Eglinton for this extension of the Yonge route to the city limits.



Yonge St. and Farnham Ave., looking south, Aug. 30, 1922. Extension of TTC's YONGE route to North Toronto is well underway. Radial cars are shown at the "city" terminus but in a few months time will be relocated to a new terminal at the City Limits. (TTC)





An ambitious plan to modernize and rehabilitate the Metropolitan line was announced by Ontario Hydro and included 10 new high-speed, lightweight cars, the installation of the Nachod block system and additional sidings to permit better headways, new substations and other improvements to the way and structures — all in all an expenditure of \$1.1 million. Included in the plans were a new freight terminal in downtown Toronto and motor trucks to handle freight to and from the railway terminals. Sir Adam Beck, like Mackenzie before him, still believed a radial entrance was the key to the success of the Metropolitan and he submitted various proposals to the City, all of which were rejected. The final blow came on January 1, 1923 when the citizens of Toronto defeated the pro-radial aldermen in the civic election. The City, however, did appropriate \$650,000 for some improvements to the Metropolitan but the purchase of new cars was not carried out.

In October, 1925, the Mayor received a report from the TTC outlining several economies in operation that could be achieved if the Transportation Commission were to take over the Hydro's Toronto and York operations. The TTC made it clear that it would simply operate the radials but would not assume any deficits incurred. The City of Toronto and the on-line municipalities served by the Metropolitan could not agree on the sharing of financial responsibility and so the Mayor recommended abandonment. Toronto's legal counsel advised that the City was required by law to keep service on the Metropolitan until 1930. Months of negotiations



Until such time as the TTC's double-track city line was completed to Glen Echo, the Hydro-Electric Railways was obligated to provide service south to Farnham. This was accomplished by having the TTC operate Niles cars on a shuttle basis over the newly constructed track. Top view of North Toronto Terminal on Oct. 19, 1922 shows transfer between the Hydro radial and shuttle car. View above, on same day, looks south on Yonge at City Limits. Radial cars are stored on the Metropolitan line to be abandoned. (Both photos, TTC)
LEFT: Newly finished North Toronto Terminal. (R. McMann)

continued and by December, 1926, the TTC had won its point. The TTC was given complete control of the Metropolitan Division and the City was required, "on demand, to furnish the TTC with money to operate the radial, including sums in excess of revenues needed to meet full cost of maintenance and operation, such cost to include maintenance, renewals, depreciation and debt charges as thought proper by the TTC." Funds for new capital expenditures, however, had to be approved by City Council. The TTC was also given the power to add to or extend the Metropolitan service by means of rail extensions or bus routes, the power to fix tariffs, and the power to interchange traffic or arrange running rights with other street or electric railways including the city lines operated by the TTC for transportation of passengers, package freight or express.

TORONTO TRANSPORTATION COMMISSION Lake Simcoe Line

The formal transfer of the Metropolitan Division of the Hydro-Electric Railway to the TTC took place in a ceremony at North Toronto Terminal, 12:01 a.m. January 12, 1927. It should be mentioned that the Schomberg and Aurora Railway which formed a part of the Hydro Electric Railways and in reality was a branch of the Metropolitan Division, was not taken over by the TTC. The City hoped to sell the S&A to the CNR but the latter was not interested. For a few months the TTC continued to operate this 14-mile branch with final operation occurring on June 20th. The S&A was originally incorporated in 1898 but the franchise was subsequently acquired by the Metropolitan Railway and later the Toronto and York. Construction began in 1901 and the line opened as a steam railway in 1904. It was electrified in 1916 and in 1922 came under the control of the Hydro-Electric Railways. Throughout its history the S&A remained standard gauge.

The Lake Simcoe Line was the new name given the Metropolitan and, together with the Mimico and Scarboro radials, was operated by the Radial Dept. of the TTC. As in the case of the H.E.Ry. 5 years earlier, the TTC had its own plans to streamline the operations of the Lake Simcoe Line. In June of 1927, the TTC applied to Board of Control for \$430,000 to be used for capital improvements on the line. Track reconstruction, the remodelling of express and service cars, and the purchase of 14 new passenger cars were planned.

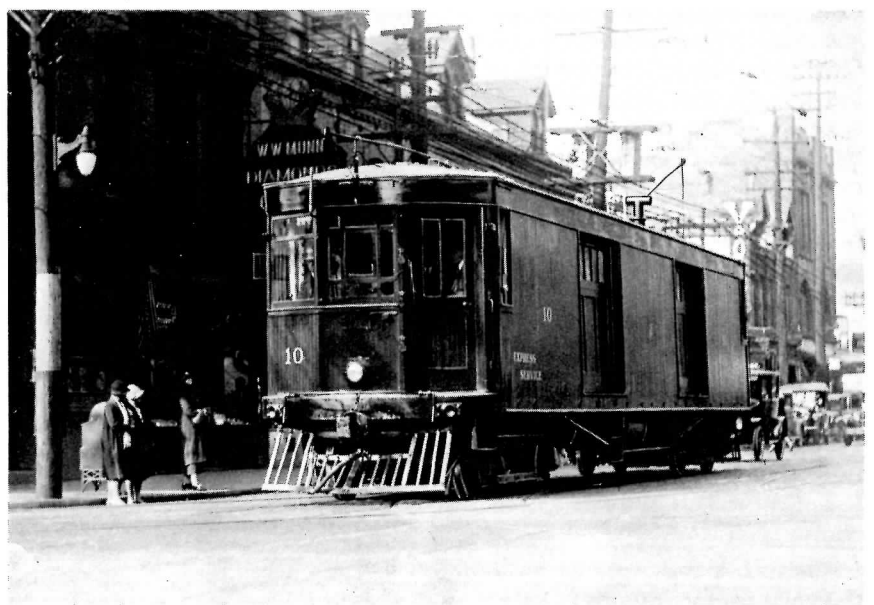


ABOVE: Radial connection is made at North Toronto Terminal, Aug. 13, 1927. The following month, the entire Lake Simcoe Line would be changed to TTC gauge and North Toronto Carhouse and Shops, shown in background, would be closed down. (Mike Filey)
ABOVE RIGHT: TTC's Eglinton Division was built in 1922 primarily to allow the YONGE city route to be operated from this point. In Sept., 1927 all radial passenger cars were transferred to this carhouse from North Toronto. (TTC) RIGHT: History is made Nov. 1, 1927 as the first radial enters the City. Express car 10 is the celebrity and is shown on Yonge St. at Bloor (Mike Filey)

During the Hydro operation, no new rolling stock had been acquired for the Metropolitan. The TTC was confident that with these improvements the Metropolitan Division could be on a self-supporting basis in 2 or 3 years. City Council concurred and advanced the monies needed. In September of 1927, the TTC regauged the Lake Simcoe Line and closed the North Toronto Shops and Car House. With military precision, all cars were regauged according to plan and the rails were changed at the rate of one mile an hour, all work starting on September 11th and concluding on September 17th. All cars were reassigned to Eglinton Division and future heavy repairs were carried out at Hillcrest Shops.

The TTC launched an advertising campaign to attract passenger traffic on the Lake Simcoe Line and continued to promote Bond Lake Park and the concessions it owned there. Through charter service was offered to Bond Lake from any point in the city, using standard city cars. It was, therefore, not uncommon on weekends to see Peter Witts or 6-motor trains in the siding at Bond Lake.

The old Sherbourne St. Shops building (used as a warehouse after March, 1924) was converted to a freight and express office. On November 1, 1927, radial history was made as the first Lake Simcoe Line express car was despatched from downtown Toronto. The routing chosen for the express cars was west on Front to Church, north to Carlton, west to Yonge, and north on Yonge to the City Limits and points north. Property was acquired between Wellington and Front,





View of Toronto Bus Terminal, Bay and Dundas, June 16, 1928. Short-haul bus travel in the late '20's was becoming both fashionable and convenient. (TTC)


just east of Yonge for use as the new radial passenger terminal. The opening of this terminal was planned for the arrival of the new lightweight cars in 1928. However, in looking at the balance sheet for the year ended 1927, the Commission had a complete change of heart. Plans for the new cars and the downtown passenger terminal were dropped.

In an effort to improve the financial outlook, the TTC bought out Metropolitan Bus Lines in the fall of 1928 and turned its routes over to Gray Coach Lines, the Commission's wholly owned subsidiary. A co-ordinated radial-coach service was inaugurated with all profits from the bus operation being credited to the Lake Simcoe Line. Rumours persisted that the TTC was planning to abandon the rail service but these were officially denied. However, in May, 1929, the Commission wrote the Board of Control and recommended abandonment. For the record, and to the TTC's credit, the Mimico and Scarboro lines had both been put on a self-supporting basis after their incorporation into the city system in 1928.

To look into the affairs of the North Yonge radial, the TTC had retained R.M. Feustel, President of the Indiana Service Corporation. He forecast a continued downward trend in gross earnings and noted that the equipment was obsolete and contributed to the high cost of power. Even with huge capital expenditures on the Metropolitan, only the operating expenses could be reduced somewhat, and in short, "the maximum amount of money could be saved by an early abandonment of operations." The City's legal counsel advised there were no legal difficulties, but the communities along the line protested vigorously. Abandonment had been planned for September 30, 1929, but at the request of York County which had commissioned its own study of the matter, the TTC agreed to continue operations for another 2 months. The report to the County was favourable and showed that the radial could be put on a paying basis "by the purchase of new modern cars, by the co-ordination of a bus service to act as feeders...and not in competition, and if the line be given sympathetic operation and the competing motor coach lines be removed..." In discussions with the City of Toronto, York County was quick to point out that since the original deal with Mackenzie in 1921, the southern 3 miles of the Lake Simcoe Line (Farnham to Glen Echo) had been incorporated into the TTC city system and earnings on this portion averaged \$400,000 a year, or about 15 times greater per mile than on the rest of the line. If these earnings could be credited to the Lake Simcoe Line as a whole, then it would show an operating profit.

Negotiations dragged on between the City and County. At one point the City offered to lease the radial to the County for

\$1 a year, on condition that the County assume financial responsibility for its operation. Seeing that no satisfactory settlement with the County was forthcoming, City Council on February 12, 1930 set the abandonment date for March 15th. And so, at 1:15 a.m. on March 16th, the last radial car, a "Thornhill Local" arrived back at North Toronto Terminal bringing to an end the era of Toronto's most famous radial.



Discontinuance of

RADIAL SERVICE

Effective Sunday, Mar. 16, 1930

The Commission has been instructed by the City of Toronto to discontinue operation of the Lake Simcoe radial railway service after the completion of trips scheduled for the night of Saturday, March 15th, 1930.

Redemption of Tickets

Tickets heretofore sold for use on the radial cars and co-ordinated coach services will not be good for use after Saturday, March 15th, 1930. Outstanding tickets will be redeemed if presented at the North Toronto Terminal or at the Head Office, Yonge at Front, on or before April 30th, 1930.

MOTOR COACH SERVICES

**RICHMOND HILL, AURORA
NEWMARKET
JACKSON'S POINT
and Intermediate Points**

Commencing Sunday, March 16th, 1930, frequent daily coach services from downtown Toronto (Bay at Dundas) will be provided to Richmond Hill, Aurora, Newmarket, Sutton, Jackson's Point and intermediate points.

"Local" service will be provided between North Toronto City Limits and Richmond Hill and intermediate points. Rates of fare and frequency of service on the "local" route will be the same as heretofore prevailed on the radial service.

Time-tables, tickets and information on both services are available at all Gray Coach Lines offices and agencies.

TORONTO TRANSPORTATION COMMISSION



While the Metropolitan radials (and subsequent North Yonge Rys.) north of the City Limits were never profitable, TTC's YONGE route in North Toronto (over a former Metropolitan franchise) was just the opposite. Witness this scene of Peter Witt trains on Yonge St. at Eglinton, April 12, 1944. (TTC)

Roster Information

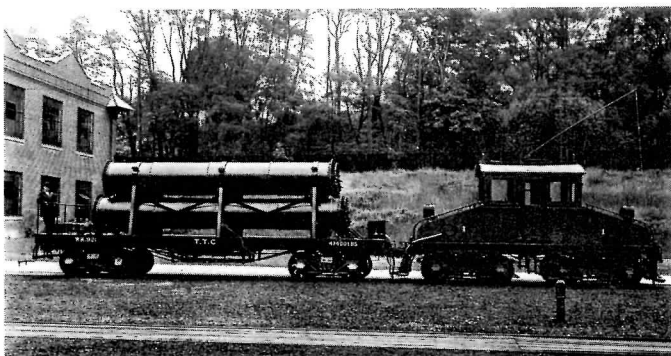
PASSENGER CARS

CAR NUMBER	ORIGIN	BUILDER & YEAR	DISPOSITION
1, 3	NEW	T.R.C. 1896	3 or 5 burned in 1905; other 3 were renumbered 101, 103, 105 and transferred to Mimico Div. after 1905
5, 7	NEW	T.R.C. 1899-1900	
15, 1st 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39	NEW	PULLMAN 1896	Records conflict on these vehicles even to numbers. Information shown considered most likely. 8 cars disposed of in 1911-12, thought to be 1st 17, 25, 27, 29, 31, 33, 35, 37. No. 15 to line car between 1914-27. No. 19 sold for scrap after 1914 but first used as service car for short time. No. 21 to service car at some time after 1914. No. 23 probably was car that became "PRIVATE" car. No. 39 became line car after 1914
1st 28	ex-112, division used on unknown - probably Mimico prior to 1914	PULLMAN ?	To Express Motor in 1914
34, 36, 38, 40, 42	Fairmont Park Traction in 1909. Cars originally built for Long Island Elec. Ry. in 1896; Altered for F.P.T. in 1897. Not clear if cars ever went to L.I.E.Ry. as they were on Brill property in 1897.	BRILL 1896-97	34 sold to Sudbury - Copper Cliff as their #10 in 1914. 36 was renumbered to 2nd 223 for Scarboro Div. between 1921-26. 38, 40, 42 all went to TTC in Jan. 1927
43, 44, 45, 46, 47, 48, 49, 2nd 50	NEW	PRESTON 1911	All to TTC 1922
1st 51, 1st 53, 55, 57	NEW	T.R.C. 1902	1st 51 & 1st 53 burned in fire, 1918; 55 to TTC 1-27; 57 burned at Newmarket 1907 & later rebuilt as plow #7
2nd 51, 2nd 52, 2nd 54	Norwich & Westerly in 1911 or 1912. 2nd 51 originally 2nd 137 from Mimico Div.	SOUTHERN 1906	2nd 51 & 2nd 52 to TTC 1-27; 2nd 54 burned in fire 1918
1st 50, 1st 52, 2nd 53, 1st 54, 3rd 54, 56, 58, 60, 62, 64, 66	All new on T & Y. 2nd 53 originally 133 from Mimico in 1925 which was earlier 1st 52. (9 cars only in group) 1st & 3rd 54 same	T.R.C. 1906	1st 50 renumbered to 1st 131 for Mimico, 1910. 1st 52 renumbered to 133 for Mimico, 1910 and later became 2nd 53 in 1925. 1st 54 to 2nd 135 for Mimico, 1910 and later was 3rd 54 in 1925. 2nd 53, 3rd 54, 56, 58, 60, 62, 64, 66 all to TTC 1-27
59, 61	59 ex-Grand Valley Ry. "Hiawatha", acquired in 1906; 61 ex G.V.Ry. "Red Cloud", acquired in 1905	OTTAWA 1903	To TTC 1-27
68, 70, 72, 74, 76, 78	NEW	T.R.C. 1907	To TTC 1-27
112	See 1st 28 for origin; not certain which division 112 was first used on.	PULLMAN ?	To 1st 28 prior to 1914
302	Steam Railway Coach (trailer)	G.T.R. 1896	To TTC 1-27
PRIVATE	Probably ex-23	PULLMAN 1896	

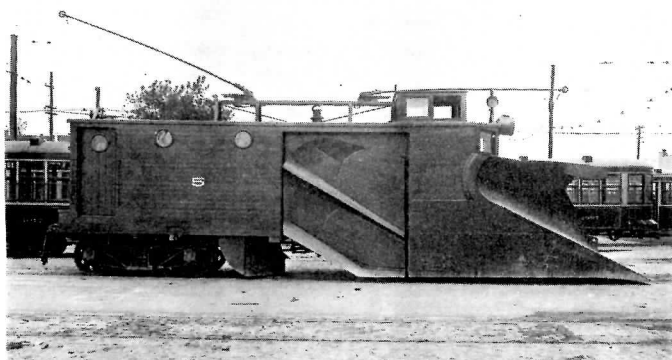
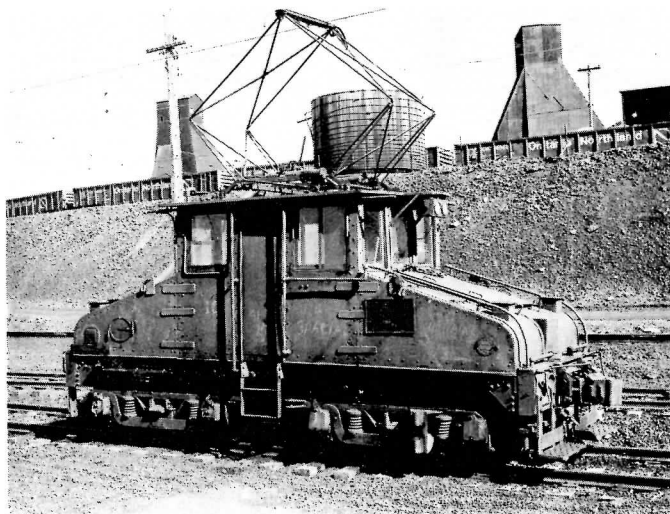
SERVICE CARS			USE	DISPOSITION
1	NEW	BAIRDWIN 1899	LOCOMOTIVE	To TTC 1-27
3	Probably New	T & Y ?	LINE CAR	To TTC 1-27
5	NEW	RUSSELL 1911	PLOW	To TTC 1-27
7	Ex-passenger car 57	T & Y 1907	PLOW	To TTC 1-27
8, 3rd 10	NEW	PRESTON 1912	EXPRESS	To TTC 1-27
2nd 10	?	?	EXPRESS	Wrecked S & A Jct. 1912
2nd 11	Ex-passenger car 28(1st)	T & Y 1914	EXPRESS	To TTC 1-27
2nd 12	NEW	T.R.C. 1903	EXPRESS	Converted to 2nd 28 on Metropolitan Div. between 1914-1926
2nd 14	NEW	T.R.C. 1906	EXPRESS	To TTC 1-27
15, 21, 39	Ex-passenger cars 15, 21, 29	PULLMAN 1896	LINE CARS	To TTC 1-27
16	NEW	T.R.C. ?	EXPRESS	Sold or scrapped between 1914-1926
2nd 17	?	T & Y ?	FLAT	Out of service 1914 - assume sold for scrap
19	Ex-passenger car 19	PULLMAN 1896		Scrapped after 1914
20, 22, 24	NEW	T.R.C. 1908	Express Trailer	To TTC 1-27

26	NEW	T & Y 1911	Express Trailer	To TTC 1-27
2nd 28	Ex-2nd 12 between 1914-1926	T.R.C. ?	Express Trailer	To TTC 1-27
90	NEW	RUGGLES 1904	ROTARY PLOW	To TTC 1-27
91-95	?	McGUIRE ?	Side Dump Trailer	91-94 to TTC 1-27; 95 assume gone by 1914
2nd 95	NEW	Cleveland Electric Improvement, 1914	BONDER	To TTC 1-27
801-813	NEW	C.C.&F. 1922	Flat Trailers	To TTC 1-27
850-851	NEW	Diff. Car. Co. 1922	Dump Trailer	To TTC 1-27
901-910 912-920	Second Hand circa 1909 "	? circa 1904 ?"	Gondola/Flat Flat	SEE NOTE "A"
921-924	Second Hand circa 1909	? circa 1904	Flat	To TTC 1-27
935	NEW	T & Y 1900	Flat with Crane	To TTC 1-27

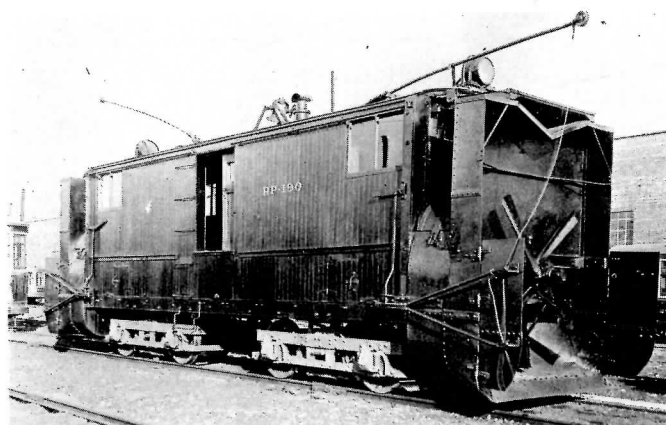
NOTES: A. 902, 904, 907, 908, 909, 913, 919 all disposed of (sold or scrapped) by 1926; 901, 903, 905, 906, 910, 912, 914-918, 920 to TTC 1-27



Locomotive No. 1 was assigned to Hillcrest during its days on the TTC (photo above). It saw little use on the Lake Simcoe Line except for the occasional trip pulling a weed killer car. (TTC) RIGHT: Sold to Noranda Mines in 1938, LM-1 became their No. 15. Somewhat modified over the years, it is still quite recognizable as this July, 1971 view attests. (Ted Wickson)

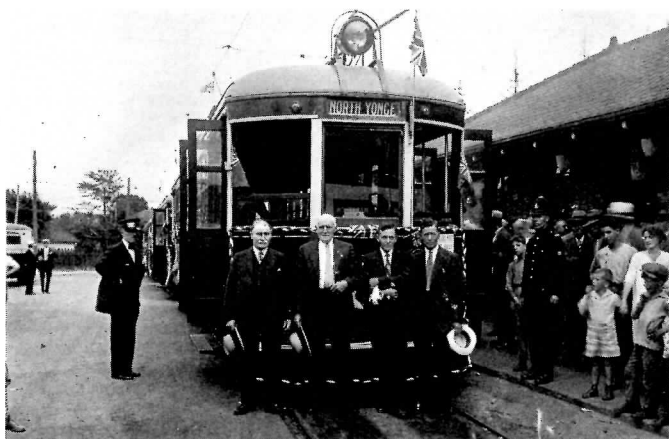


The T&Y possessed two unique pieces of snow fighting equipment for use on the Metropolitan. RIGHT: Rotary Plow 90 (renumbered 190 in North Yonge Railways days) was purchased in 1904 when the Metropolitan was being extended north from Newmarket to Jackson's Point. Plow 5 (shown above) was delivered in 1911 and saw the most use. (Both photos, TTC)



NORTH YONGE RAILWAYS

BY STUART I. WESTLAND



LEFT: Reeves of the four participating municipalities pose at North Toronto Terminal in front of the inaugural car, July 17, 1930. (TTC)

the kind of values placed upon rapid transit lines in present times.

Following a vote in the four municipalities on May 3, 1930 on the matter of purchasing the line (resulting in 1330 votes for and only 110 against), the sale was consummated at a price of \$66,500, covering that portion of line south of the north limit of the Village of Richmond Hill, including the Richmond Hill station property. The TTC had originally estimated a scrap value of \$150,000 for this portion of the railway. The purchase agreement provided for TTC operation of the line, including the supply of crews and rolling stock, and placing the signal system in good operating condition. The four municipalities were responsible for all deficits (or shared in any profits) in the following proportions:

North York Township	—	55%
Township of Markham	—	11%
Township of Vaughan	—	11%
Village of Richmond Hill	—	23%

An interesting condition in the purchase agreement restrained the municipalities from ever subsequently selling the line to a private operator.

The Townships set up "Radial Areas" for taxation purposes, consisting of those portions of the municipality the residents of which were considered to be conveniently served by the car operation. As most of the population at that time (and for many years afterwards) was concentrated in a corridor close to Yonge Street, most of the citizenry was taxed for radial deficits.

The Nachod signal system was installed at a cost of \$8500, and a new \$17,700 substation was constructed in Willowdale on Norton Ave., just east of Yonge St., to power the line. This unit, still in operation today for other purposes under the ownership of North York Hydro, was more centrally located for the new operation than was the old Metropolitan Division substation at York Mills Road, which was at that time sold to North York Hydro. Another \$14,000 was expended in improvements to track and overhead, and land was purchased at the north limit of Richmond Hill for a future track loop, evidently with the expectation that single end cars would eventually be used for the intended purpose.

On May 5, 1930 the Council of the Town of Newmarket, encouraged by the progress achieved by the municipalities to south, decided to attempt to perform a similar rescue operation for the next 12.42 miles of line north from the Richmond Hill limit. However, by May 13th this ambition had grown to one of saving the entire balance of the line (from Richmond Hill to Sutton), for on that date the Newmarket Council convened a meeting of all municipalities along that part of the railway. The meeting decided that, if the York County injunction proved unsuccessful, an attempt should be made to purchase the entire line north of Richmond Hill for \$75,000. Subsequent discussion with the City and the TTC

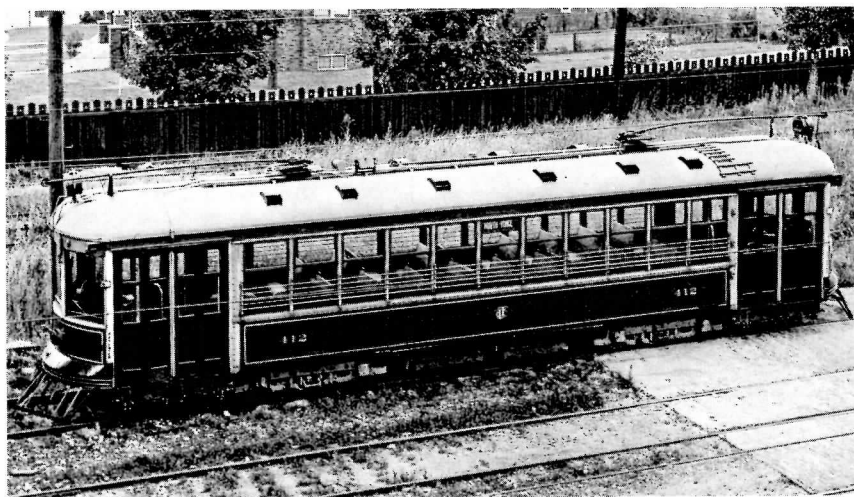
Phoenix-like, the North Yonge Railways rose from the figurative ashes of the Lake Simcoe Line after four months of abandonment. The events which produced this rather unique 18-year operation were set in motion, however, even before the last Lake Simcoe Line car operated.

Two days before the March 16, 1930 cessation of operation, a delegation of North York Township Council members appeared before Toronto Board of Control to discuss purchase or lease from the City of the Southernmost 4.48 miles of the 48.66 mile line, representing that portion from Glen Echo terminal to Steeles' Corners, for continued operation. In the meantime, the County of York, while refusing to take the Lake Simcoe Line over from the City or even to pay a portion of the annual deficit, had applied for a court injunction to restrain the City from abandoning and dismantling the entire line, basing its application upon the terms of an 1894 agreement between the County and the Metropolitan Street Railway Co., the original owner of the railway. These injunction proceedings for a time complicated the sale of the southerly portion of the line and delayed the inception of the North Yonge Railways.

A delegation from the Village of Richmond Hill also appeared before the Toronto Board of Control to discuss reopening of the railway as far north as that community, some 10.3 miles from Glen Echo, again on a purchase or lease basis. This was quickly followed, on the day after abandonment, by a meeting of North York Council, attended also by the Reeves of Markham and Vaughan Townships and Richmond Hill, at which basic preliminary agreement was arrived at with respect to the joint purchase and financing by the four municipalities of the new operation.

The interest of these four Councils in purchasing the portion of the former Lake Simcoe Line within or adjacent to their boundaries reflected an unusual affection which the citizens of the area had for their electric railway. As stated in the pages of Canadian Railway and Marine World, they felt "that a railway service would be a more tangible asset and of greater value in developing their communities, the buses being looked upon, by comparison, as of a very transient nature". It is interesting to observe that this attitude was rather parallel to

412 at Eglinton Division Aug. 3, 1937. Cars 409-416 (Ottawa, 1925-25) were originally purchased by the Hydro-Electric Rys. for use on the Mimico Division. The extension of TTC's city car service (LAKE SHORE route) to Long Branch in 1928 made surplus most of these cars. The events transpiring in Toronto's northern suburbs in early 1930 soon gave the cars a new lease on life. See UCRS Bulletin No.44 for car history and specifications. (TTC)



revolved around the Richmond-Hill-Newmarket segment only, however, and the TTC again came up with the figure of \$150,000 as a sale price, this not to include Bond Lake Park. While the spirit was willing, the finances were weak, and the lighter traffic north of Richmond Hill gave promise of substantially higher deficits than those likely to be faced by the four southern municipalities. This was apparently realized by the voters in the northern municipalities, who turned down the purchase proposal in a vote involving the Town of Newmarket and King and Whitchurch Townships. This vote was held after a court ruling had been issued dismissing York County's attempt to restrain scrapping of the line and to force the City of Toronto to continue to operate it.

Operation of the new North Yonge Railways began at the strange hour of 7:30 p.m. on July 17, 1930, replacing the TTC North York bus route which had operated between Glen Echo and Richmond Hill (via Yonge Blvd.) for the four months since the Lake Simcoe Line abandonment. The TTC had converted cars 409-416 (originally operated on the Mimico Division of the Hydro-Electric Railways' Mimico Division) to provide all service on the line. Two decorated cars left North Toronto Terminal (Glen Echo) had proceeded to Richmond Hill where a celebration was held. The first car carried a band, while the second carried municipal and transit officials.

The eight lightweight double end cars (Ottawa, 1924-25) proved to be the only passenger cars used on the line during the history of the North Yonge Railways. Former radial snow plows RP-190 (rotary) and TP-7 were retained at Eglinton Division for service on the line, but saw little if any operation, being scrapped in 1943 and 1946 respectively. The active snow fighting unit on the railway was former Toronto Civic Railways double truck double end car 2120 (McGuire-Cummings, 1912; previously 120 and originally No.1) which was converted in 1930 to a snow scraper, specifically for use on the North Yonge Railways. This unit was further refined during World War II, having side wings and bay windows for the wing operator added.

The basic service pattern involved originally hourly base service to Richmond Hill and an alternating 20' and 40' service to Steeles, departures from Glen Echo being scheduled at 20 minutes and 40 minutes after the hour. Under this pattern the two cars in service each made alternate trips to Richmond Hill and to Steeles. In the A.M. peak, 30' service was given to Richmond Hill, and an alternating 10' and 20' service to Steeles, this requiring a total of 4 cars in operation. In the P.M.

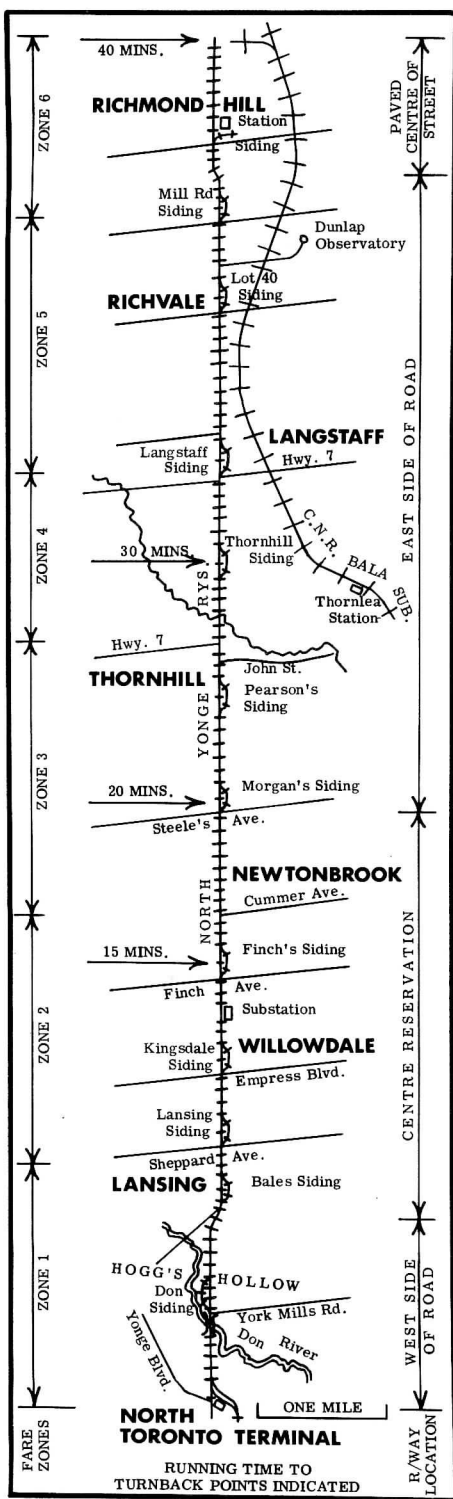
peak an even 10' service to Steeles was scheduled, requiring a 5th car. Saturday mid-morning and evening and Sunday service was the same as weekday base service, although on Saturdays the A.M. peak service was operated on the same schedule as weekdays, and during Saturday afternoons a third car was added in order to give an even 20' headway on the Glen Echo-Steeles portion of the line, and a 40' headway to Richmond Hill.

The Saturday afternoon service pattern became the standard off-peak service in later years as traffic grew on the North Yonge line. Departures from North Toronto Terminal at such periods were scheduled on the hour and at 20 and 40 minutes past the hour. However, on weekdays between peaks, the final operating pattern involved strips to Steeles, Thornhill and Richmond Hill and 20' service from Steeles, both on even headways. However, southbound service from Thornhill occurred on a very irregular alternating 20'-50' sequence. Peak hour service was based on a 10' headway on the south end of the line and a 30' service to Richmond Hill. Finch Ave. Stop 10' was used as a turnback point for various rush hour trips in later years.

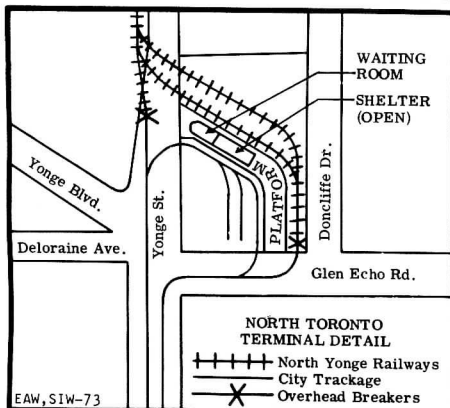
All night service was not provided on the line until April 14, 1942, when the schedule was amended so that one car stayed out to provide five round trips over the line between 12:20 a.m. and 6:10 a.m.

The fare structure was based on six zones, 5c being charged per zone. A round trip to Richmond Hill cost 55 cents. Orange fare receipts were issued for cash fares paid on the cars, indicating the zone to which fare had been paid. Tickets were not sold on the cars, but single, return and commutation tickets were sold at North Toronto Terminal and at certain other agencies along the line. The fare structure remained unaltered during the history of the North Yonge Railways.

The line was located on the west side of Yonge Street through the Hogg's Hollow section, the only bridge on the line being the girder span over the West Branch of the Don River at York Mills. From Stop 4 to Stop 13 (Steeles) the track was on a central median in Yonge Street; from Steeles to the south limit of Richmond Hill the track was on the east side of Yonge Street. Through that town the line consisted of paved trackage in the centre of the street, and it veered to the east side again at the north limit (Stop 27 - Hunt Ave.) just before the end of track. There were ten passing tracks originally, and a stub end siding into the Richmond Hill Station. In 1934 the most



TOP: Scrapper 2120, the only active piece of snow fighting equipment, is shown at Stop 20A (Industrial Farm), Feb. 15, 1944. (TTC)
 MIDDLE: Car 413 changes ends at Steele's, 1937. (Mike Filey)
 BOTTOM: Platform at North Toronto Terminal, Sept. 7, 1944. (TTC)



northerly 300 feet of track were removed (the curve to the side of the road was paved over) in connection with a road project: henceforth cars changed ends in the middle of the street. A siding at Stop 24A (near the south limit of Richmond Hill) was abandoned and the switches removed at an unknown date, while the sidings at Stops 4 and 8 (Bales Sliding and Willowdale Siding respectively) were removed in 1942 and replaced by a new siding at Stop 6, just north of Sheppard Ave. The passing sidings which were regularly used as meeting points were equipped with spring switches, and thus used in regular operation, whereas the others were equipped with switch stands. Don Switch, at York Mills Rd., was switch stand equipped, although it was often used for meets.

The final major change in service was instituted on November 11, 1946, and it might be said to have been a precursor of doom for the electric railway operation. The growth of the areas tributary to the North Yonge Railways in the post-war period began to tax the line rather severely. The limited number of available cars and the constraints on scheduling imposed by the single track both militated against

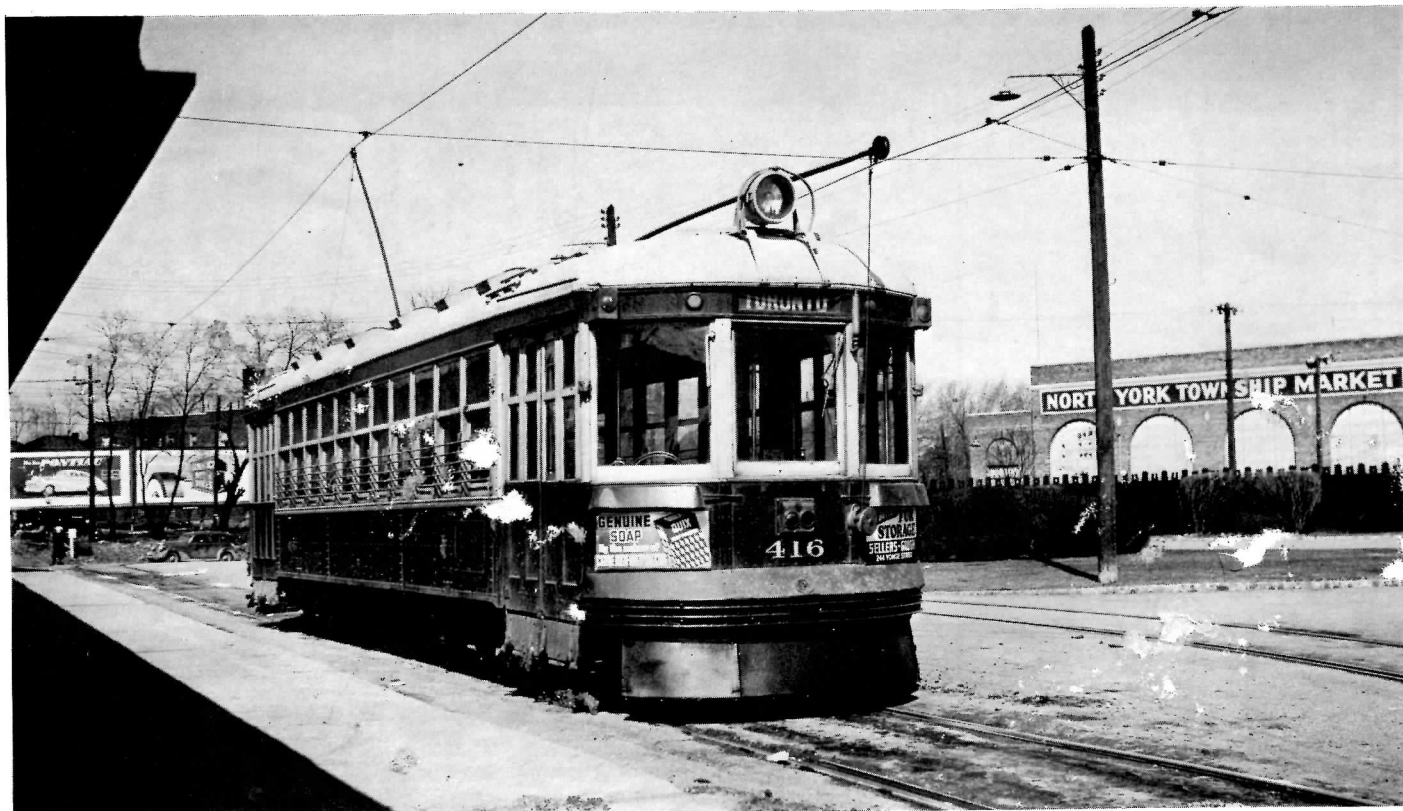
any marked improvement in the rail service. Accordingly, on the above-mentioned date, C-36 Brill buses began in supplementary service, operating on the schedule of certain rail trips, but short turning at Finch Ave. Thus, headway was not changed, but the capacity of certain runs was considerably enhanced.

This still unsatisfactory form of operation led to some thought being given by the TTC during 1947 to a major upgrading of the railway, on the assumption that its municipal owners wanted to keep rail service indefinitely, which at this time still appeared to be the case. The scheme, which never came to public notice, would have involved double tracking between Stops 4 and Steeles Ave. and the installation of a loop at that point. Consideration was given along with this to altering about a dozen Small Witts for service between Glen Echo and Steeles Ave. The most spectacular part of the alteration would have been the addition of left hand doors to permit loading and unloading from either side of the car, which would have been necessary on the Hogg's Hollow portion of the line for safety reasons. This section would have remained single track because of physical constructions including the Don River bridge. The existing track arrangement at North Toronto Terminal permitted the looping of cars from the north, but the left hand doors would probably have been used at the Terminal. The 400-series cars would have continued to provide the service north of Steeles.

This scheme was not actively pursued, probably because of increasing disenchantment at this time with having to maintain the 400's, at least one of which seemed to be in Hillcrest at any given time. Their Taylor trucks and



BELOW: Car 416 as it looked toward the end of its days. Former Hydro-Electric carhouse can be seen in background, then in use as a market. Building still exists today as part of an automobile dealership. Photo by J. Wm. Hood, April 4, 1948. LEFT: Car 416 on shop trucks awaiting restoration at the Halton County Radial Ry., March 25, 1973. (Ted Wickson)



Westinghouse HL Control, unlike the equipment on any other Toronto cars, were becoming increasingly difficult to maintain, this multiple unit control equipment (never used in M.U. service) being unfamiliar to most shop personnel. The Commission inspected the Taylor trucks on the Kitchener Peter Witts following abandonment of that system (on Dec. 28, 1946), which would have provided a set of spares, but they were considered unusable because of their deteriorated condition.

By the early months of 1948, North York Council began to wonder about the advisability of bus substitution, presumably also because of the operating difficulties being imposed by growth in the area. Public meetings were held in the municipal offices around the middle of the year to which the citizenry came out and vocally defended their electric railway, just as they had done 18 years before. The talk of abandonment was laid aside, but, alas, for only a very few months.

The severe electric power shortage which visited Ontario in the Fall of 1948, which resulted in regular evening blackouts for a period, provided a perfect reason to abandon unwanted electric railway operations, and the TTC seized the opportunity to motorize the Spadina line permanently and, in concert with the owners of the North Yonge Railways, to remove car operation from the latter line, ostensibly for a temporary 6-month period, and to try out some spanking new diesel buses on the route (1170-1189, GM Model TDH-4507's). Accordingly, car operation ceased on both routes with the schedule of Saturday, October 9, 1948, the last car on North Yonge being the all-night car.

The 400 series cars were moved to inside storage (409-415 at Danforth Carhouse and 416 at Russell) in order to protect them for further operation. However, the 6-month "temporary" abandonment period expired and no call went up from the North Yonge riders for the cars' return. In the summer of 1949 North York Township mailed out a letter to all property owners in the "Radial Area" pointing out that, in

the Council's view, the buses were giving a better service than had been possible with the cars, and that some considerable expense would have to be undergone to prepare the railway for a resumption of operation. A vote was finally scheduled on the matter for September 26th, the results of which (4:1 in favour of permanent bus operation) showed that the municipalities had convinced their citizens of the logic of their case; however, only a small percentage of the eligible voters had turned out.

Even before the vote which rang the final death knell for the North Yonge Railways (almost a year after the last air whistle had sounded along the line), the eight cars had been moved to outside storage at Russell Division. They were sold to the TTC's regular scrapper of that era, the Western Iron and Metal Co., and were disposed of from the system in the early months of 1950.

In the meantime, all of the track on the line except that at North Toronto Terminal was sold by the four owner municipalities to Andrew Merrilees Ltd., who commenced removal in the unseasonably sub-zero cold of November 2, 1949. Track removal was completed in the spring of 1950.

This narrative has a final happy note, however. The North Yonge Railways will be represented at the Ontario Electric Railway Historical Association's Halton County Radial Railway by car 416, the well preserved body of which was only recently purchased and moved from Hillsburgh, Ont., where it had served as a residence for 23 years. Restored, and mounted on a pair of Taylor trucks (to be obtained from the M.B.T.A., Boston), this car will serve as a powerful reminder, for those who saw and rode on the line, of the picturesque 10-mile suburban electric railway between the City Limits and Richmond Hill.

The coming of the Yonge St. subway on Mar. 30, 1954 created a third generation of public transportation on Yonge St. in North Toronto. The Peter Witt street cars gave way to shiny red trains of Gloucesters cars south of Eglinton and new T-48A CanCar trolley coaches north of Eglinton. This view of busy Eglinton Terminal on Sept. 16, 1962 must be a far cry from that of 1885 when the horse cars of the Metropolitan Ry. first reached this point and provided but 4 round trips a day to the City. (TTC)



TRACTION TOPICS

BY MIKE ROSCHLAU

* The TTC has decided to replace streetcars on the ROGERS RD. line with trolley coaches instead of diesel buses. It will be a branch of OSSINGTON-63, initially running along the same route as the streetcar does at present. It will later be extended west to Jane St. via Weston Rd., Humber Blvd., and Alliance Ave. Rubber stamp approval from the Borough of York was forthcoming shortly after the TTC decision. Final details are now being worked out between York Dept. of Works, York Hydro and the TTC Plant Dept. Conversion from streetcar to trolley coach is expected to take place during the last three months of 1973. Much of the overhead hardware will be salvaged from the recently abandoned YONGE route.

* The TTC changed its mind on March 27 and decided to let San Francisco have 10 of its surplus streetcars after all. A further request for one more car was approved by the TTC on May 1. Terms of the sale give the TTC the right to repurchase the cars at a predetermined price (not disclosed) after 2½ years or first choice of the PCC's that will become surplus on the Muni when their new cars are delivered. At time of writing the A-14 class PCC's chosen are not yet known.

* THE SPADINA ISSUE:

In late February, the TTC decided to consider providing an express streetcar service along the controversial Spadina corridor; somehow, however, this idea has been turned away, since there has been no word about it since. In March, the Toronto City Council hired lawyer J.J. Robinette to fight the proposed \$155 Million Spadina subway route. On the first day of the debate, April 9, Robinette surprised everyone present by stating that the City of Toronto is opposed to any subway route in the Bathurst or Spadina corridors; but is in favour of a line further west. Lawyers from Metro and North York demanded that Robinette change his stance, without success. Toronto Mayor Crombie then intervened to defend Robinette making the situation even more confusing. When the TTC stepped in, J.H. Kearns, general manager, pleaded for a subway line to relieve the predicted massive jams on the overcrowded Yonge line which presently carries over 31,000 passengers per hour during peak periods.

It seems that if the Spadina line were built, it would have to be shut down on evenings and weekends, like the University line is at present. It is much more justified to commence construction of a north-south line farther west or a line along Queen St. William Kilbourn, a Toronto alderman, proposed in March that rapid transit routes could be built on existing CNR lines from Union Station to Downsview between Keele and Dufferin Streets. This could also provide a line parallel to Bloor which could merge with a Queen line; it would result in much less property damage and disruption, since it follows the existing right-of-way. It is served well by connecting bus routes and the proposed dial-a-bus service in the Downsview area.

* The Ontario government has agreed to pay more than \$10 million toward the TTC operating losses to cover half of the cost of the single fare conversion. The Metro Toronto Executive Committee has therefore allocated \$23.9 million for the TTC deficit - to be split more or less 50-50 between Metro and the Province.

* The TTC has agreed to operate an experimental dial-a-bus system with a fleet of 27 radio-operated minibuses linking seven areas in North York with major shopping centres and subway stations. The program is scheduled to begin in November of this year and fares are to be 35 to 50 cents without transfers to regular TTC services. This is subject to revision.

* Westinghouse Electric Corp. of Pittsburgh announced on March 26 that they are to become the U.S. licensee for urban rail transit equipment developed by the French firm - Societe MTE. This would give Westinghouse rights to produce MTE's new mono-motor rail trucks. These trucks have incorporated a single motor which is geared to drive all four wheels on the truck, instead of two motors, one for each axle.

* All six chopper equipped H-2 cars (5500-05) are now in revenue service on the TTC. The first pair, 5504-05, made history on Nov. 2, 1972 as being the first two Canadian rapid transit cars equipped with regenerative chopper controls to move under their own power. Many weeks of testing was carried out and on Feb. 15, 1973, the same two cars were the first to enter revenue service. The other four cars followed suit shortly afterwards. Operating practice initially has been for the TTC to combine two chopper equipped cars with 4 conventional cars making up a 6-car revenue service train. However, the results of their operation has been so satisfactory that the TTC now will couple all 6 together as a unit for revenue service sometime in May.

TTC's choppers are manufactured by Hitachi Ltd. of Japan. This manufacturer has been a pioneer in this development and has already supplied similar regenerative chopper controls for 124 cars running on the Chiyoda line of the Tokyo Rapid Transit system and also 200 cars of the high speed new Tokaido line.

SHORT TURN:

Beginning on March 16, the use of TTC student fares was extended to 24 hours a day for the entire year. An alternate 20-cent cash fare was introduced as well.... On April 16, the TTC eliminated the 58-inch height restriction for children's fares. Instead, any child 12 years and under including those taller than 58 inches may ride for children's fares when showing a birth certificate. When proof of age is not available TTC operators are to use the old height guideline.... Walter M. Lowney Ltd., a candy manufacturer, has agreed to finance free TTC rides for children on August 20, kids day at the Canadian National Exhibition.... The TTC has decided to get cost estimates for extensions of the Bloor-Danforth subway line east to Kennedy Rd. and west to Kipling Ave.; and for a spur north from Danforth & Greenwood to Don Mills & Eglinton, the busiest intersection in North America.... A new entrance from the concourse level of the York Centre development to the St. Andrew subway station opened on February 26.... The Eglinton Ave. reserved bus lanes have been extended to remain in operation indefinitely while the TTC has asked for a bus lane on Bay St. this summer; southbound in the morning and northbound in the afternoon between Gerrard and Front Sts. between June 20 and Sept. 12.... The TTC is studying a proposal to set up Gray Coach Lines Bus Parcel Express (BPX) terminals at subway stations so that businesses using BPX would not have to go downtown to drop off parcels. The proposal includes the possibility of moving the parcels by subway!.... On April 18, a short order restaurant (directly accessible from Bay Subway Station), with an old TTC "Niles" car motif, opened for business.

TROLLEY COACH NOTES:

* TTC's YONGE-97 trolley coach route was discontinued in the wee small hours of Saturday, March 31 - a result of the Yonge subway opening and surface route changes taking effect later that morning. Trolley coach 9308 (7 run) was the last "regular" trolley to leave Glen Echo Loop. On hand for the occasion at 2:13 a.m. were a handful of Society enthusiasts. The TTC had announced that trolley coaches might continue to be used in rush hours "as required" to supplement the diesel buses on the new routes created on Yonge Street: YONGE-97 & 97A. The TTC will be hard pressed for diesel buses until new deliveries in May and there exists a surplus of trolley coaches. This fact, plus anticipated heavy use of the surface bus on Yonge St. until the escalators at Lawrence Station are working prompted the decision to keep the overhead up and trolley coaches available for operation. However, after observing passenger traffic in the rush hours on April 2 and 3 in which a handful of trolleys were sent out as extras, TTC officials decided there was no further need for the coaches. The trolley coach entrance and exit at Glen Echo Loop were permanently barricaded the second week of April. Coaches 9300-06 have been transferred from Eglinton Division to Parkdale garage where they will be rotated with coaches from Lansdowne Division. The remainder of the surplus coaches at Eglinton will be rotated for use on NORTOWN-61.

* Just after the morning rush hour on March 26, the trolley coaches of the Transportation Dept. of Kitchener's Public Utilities Commission made their last run, bringing to an end 78 years of electric transit service in Kitchener-Waterloo. The trolley coaches which had been in service since Jan. 1, 1947, were subsequently advertised for sale and have been sold to B.C. Hydro for use in Vancouver. (A full scale history of electric transit in Kitchener will appear in an upcoming issue).