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HEADLIGHTS

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ON THE COVER

Pyongyang Terminus. Two young engineers inspect Pyongyang articulated Tatra KT8 no. 1015 at the Mangyongdae terminus. There are two long tram lines in active service, the first of which opened in 1991. **CLIVE FOSS**

Spadina Avenue Line. (below) With a backdrop of buildings in the heart of Toronto's Chinatown, Car 4112 pauses for the traffic light at Dundas Street. Until February, 1967, streetcars on the Harbord line used the switches in the foreground to operate along Spadina Avenue as far as Harbord Street. **FRANK S. MIKLOS**

RAIL TRANSIT News

NYCTA

Beginning on January 1, 1998, a $15 MetroCard that normally is good for 10 rides will be good for 11, which should increase its usage considerably. Already, states the New York City Transit Authority, about half of New York City subway and bus passengers use the card. (In Chicago the CTA said that about 30% of its riders are using its Transit Cards which offer $15 in rides for $13.50.)

From left, New York subway tokens from 1953 (15¢), 1970 (30¢), 1979 (50¢), 1980 (60¢), 1986 ($1) and 1995 ($1.50).

SANDY CAMPBELL

In December 1997, New York Governor George Pataki proposed the sale, for the first time, of unlimited ride MetroCards: 30-days for $63, 7-days for $17 and a $4 one-day "Fun Pass". To discourage riders from passing their unlimited MetroCards over the fare barrier to a friend to use at the same time, the computerized card readers would be modified to recognize and reject the use of the same card at any turnstile in the subway for four to six minutes after the first swipe. The scheme is now in use for employee passes.

New York Mayor Rudolph Giuliani denounced the governor's proposal, claiming it would be of no help to New Yorkers who make less than 42 trips a month. Guiliani counter-proposed a MetroCard that would offer 12 rides for the price of 10.

Increased use of MetroCards may eventually permit the TA to discontinue subway tokens altogether. Tokens were introduced in 1953 when the fare increased to 15¢, making useless dime-activated turnstiles (originally a nickel). Five token designs have been issued since then — 30¢ (1970), a 50¢ token celebrating the 75th anniversary of the subway (1979), 60¢ (1980), $1 (1986) and $1.50 (1995) — plus a 1988 variation of the $1 token commemorating the opening of the Archer Avenue Extension in Jamaica, Queens.

PATH

On September 1, 1997, the Port Authority Trans-Hudson Railroad celebrated its 35th year as successor to the Hudson & Manhattan Railroad Company. PATH carried 60.7 million passengers in 1996, the highest number since 1948.

On October 26, PATH began operating all four of its routes (33 Street–Hoboken, 33 Street–Journal Square, World Trade Center–Hoboken, World Trade Center–Newark) on weekends and holidays from 9 am–7:30 pm. For many years PATH operated only two routes on those days: 33 Street–Hoboken–Journal Square and World Trade Center–Newark.

In 1996 direct World Trade Center–Hoboken service was resumed. This was so popular that normal operation is now in effect daytime hours every day.

MIDTOWN DIRECT

Direct service between Manhattan's Penn Station and towns along the Morris & Essex lines, dubbed Midtown Direct, began weekdays in June 1996 and everyday in September 1996, hourly with additional trains at rush hours.

Ridership at about 7,600 daily is about 200% more than projected, resulting in standing room only and complaints on some rush hour trains. (One other result: Drivers of the competing Lakeland Bus Lines went on strike briefly protesting loss of overtime and some layoffs due to a significant decrease in bus patronage.) There's little that management can do immediately to ease the situation.

Midtown Direct trains share the rails of the double-track Northeast Corridor (ex PRR) from just east of Newark, and the double-track tunnel under the Hudson River into Manhattan with NJ Transit's North Jersey Coast and other Northeast Corridor trains operated by Amtrak and NJ Transit.

The track and tunnel are already at or near capacity during peak hours. Whereas 25 years ago about 13 trains an hour used the tunnel at peak times, today the number is 20. Penn Station platforms and stairways are so crowded after passengers disembark from trains that it takes too long to clear them.

Work is now underway to build more stairs, escalators and a new concourse to cope, but this will take several years. Completion of the Secaucus transfer station, now under construction, to transfer passengers between Penn Station trains and trains on the non-electrified Main, Bergen County and Pascack Valley trains, will add to the congestion.

Additional tracks under the Hudson River and a way to supplement or bypass Penn Station seem to be needed. A study team of Port Authority, New Jersey and New York transit agencies in December 1997 proposed a second double-track line from Secaucus transfer and a second tunnel under the Hudson River to Penn Station. This would be further enhanced with a railroad tunnel between Penn Station and Grand Central Terminal in New York. It would run under 31st Street and between Madison and Park Avenues using, in part space near Grand Central provided more than 80 years ago for the proposed extension of the Hudson & Manhattan Railroad (now PATH) from 33rd Street to Grand Central Terminal. These proposals are generally similar to others announced earlier (see *Headlights*, March–April 1996.) Funding is the most serious obstacle to these projects.

COMPILED BY **PETER KOCAN**

SPADINA AVENUE STREETCAR LINE OPENS

text and photos by **frank s. miklos**

Terminal Loop. (top right) Car 4109 picks up passengers at the northern terminal on the mezzanine level of the Bloor Street subway.

Chinatown. (bottom right) Car 4118 pauses at the Dundas Street stop in front of a modern commercial building serving the Chinese community. To the left of the shelter are examples of the artistic sculptures adorning the Spadina line.

Spadina Avenue, Toronto's newest streetcar line, finally opened on July 27, 1997. Funding problems and disputes over the design of the line itself delayed the opening for years. The new rail line replaces the city's most congested bus route and should provide transit users with a vastly improved level of service.

Route 510, as the new line is known, brings regular streetcar service to Spadina Avenue for the second time. The original streetcar route was discontinued in October 1948. Rather than invest in the construction of loops for its fleet of single-ended Peter Witt cars and PCCs, the Toronto Transit Commission replaced its double-ended streetcars with buses. Trackage was retained for emergency reroutings and for the Harbord streetcar line which operated on Spadina Avenue between Dundas and Harbord Streets. When the Bloor Street subway opened on February 26, 1966, all trackage north of College Street was abandoned.

However, the tracks between College and King Streets on Spadina Avenue remained available for short turns and detours. New trackage was installed on Spadina Avenue between King Street and Queens Quay in 1990. This was used for depot moves by streetcars on the new Harbourfront line. These tracks were connected only to the tracks on King Street, making through operation on Spadina Avenue beyond King Street impossible.

The new Spadina streetcar line

crosses King Street and is through-routed with the Harbourfront line. During off-peak hours, about half of the trips turn back at Queens Quay. Plans call for short-turn cars to terminate at King Street. Switches for a new around-the-block loop are in place at Adelaide Street, but the connecting track on Charlotte Street to King Street has yet to be installed.

The northern terminus of the line is an underground platform adjacent to the mezzanine level of the Spadina Station on the Bloor Street subway. Spadina streetcars descend a ramp about a block south of Bloor Street and operate through a short section of subway before entering the underground terminal. Unlike the Union Station underground terminal at the opposite end of the line – with its extremely tight radius loop – the platform at Bloor and Spadina is long enough for at least two cars to discharge passengers and then pull forward to a boarding area at the front of the platform. The arrangement is similar to the Juniper Street terminal on Philadelphia's subway surface lines.

Unique to the Spadina streetcar subway is a second loop between the outbound and inbound tracks. This allows cars to return to the station platform after passing through the boarding area. The second loop can also be used by disabled cars or by cars laying over between trips.

Emerging from the subway, the Spadina streetcars operate on paved reserved trackage in the middle of wide Spadina Avenue. This is a very attractive right-of-way bordered on both sides with trees and curbing. On this section of the line there are three stations with glass shelters to protect passengers from the elements. The

Car Free Zone. (above) Car 4147 operates along the tree-lined reservation on the northern end of Spadina Avenue. Superimposed on this photo is one of the banners which was installed on the street light poles to commemorate the inauguration of revenue streetcar service.

Street Art. (inset) One of the more interesting pieces of artwork found along Spadina Avenue is this replica of a chair complete with cat to observe the passing parade of streetcars.

reservation ends at the former Knox College building, located in a circle in the middle of Spadina Avenue. The roadways follow the circumference of the circle with the streetcar track hugging the left lane.

Controversy over the original plan for a streetcar-only reservation south of this point was one of the major delays to the project. Merchants in the area objected to the design of the reservation on the upper end of the line because it was off limits to motor vehicles. As a concession, the streetcar track is set in paving that is a few inches higher that the adjacent traffic lanes. The raised paving discourages motorists from driving on the streetcar tracks, but still allows access in certain circumstances.

A wide range of sculptures and other artwork line the route. There are numerous pop art novelty figures such as the cat on a chair illustrated here.

Other installations were created with oriental themes appropriate to the portion of the line serving Toronto's Chinese community.

The Spadina Streetcar Line differs from traditional Toronto practice in two key areas. First, overhead was installed by a private contractor and is similar to newer European designs. Second, the position signals used on other Toronto light rail lines were not installed on the Spadina Line. Instead, pairs of regular traffic lights are used with signs identifying them as "transit signals". Despite the labels, though, motorists frequently proceed when these lights turn green, sometimes into the path of the streetcars.

Opening day featured the usual inspection trips with transit officials and civic leaders. In conjunction with this, the Toronto Transit Commission pulled out preserved PCC 4549 along with Peter Witt 2766 for trips over the new route. Colorful banners were installed along the length of the route proclaiming the return of a "Grand Avenue".

Fares are collected at the farebox at the time of boarding, but the line could easily be adapted to a proof-of-payment system. This is in widespread use elsewhere, but is only used to a limited extent in Toronto. In an effort to speed up service on Queen Street, for example, passengers with passes or transfers are permitted to board streetcars through the rear doors. All passengers depositing fares into the farebox are given a transfer, which they must retain as proof of payment. Random checks are made by Toronto Transit Commission supervisors; passengers without a transfer or pass are subject to a fine.

Spadina has a variation of this arrangement. On busy summer weekends, ridership along the Harborfront (Queens Quay) portion of the line is so heavy that collecting fares on inbound trips would disrupt headways. During those periods no fares are collected on inbound streetcars east of Spadina Avenue. Fares are collected in the passageway leading from the underground light rail platform to the mezzanine of the Yonge–University subway at Union Station after passengers exit the streetcars. Passengers boarding the streetcars along Spadina Avenue are issued transfers as proof of payment, but those boarding inbound streetcars along Queens Quay may get a free ride if they exit at any stop before Union Station.

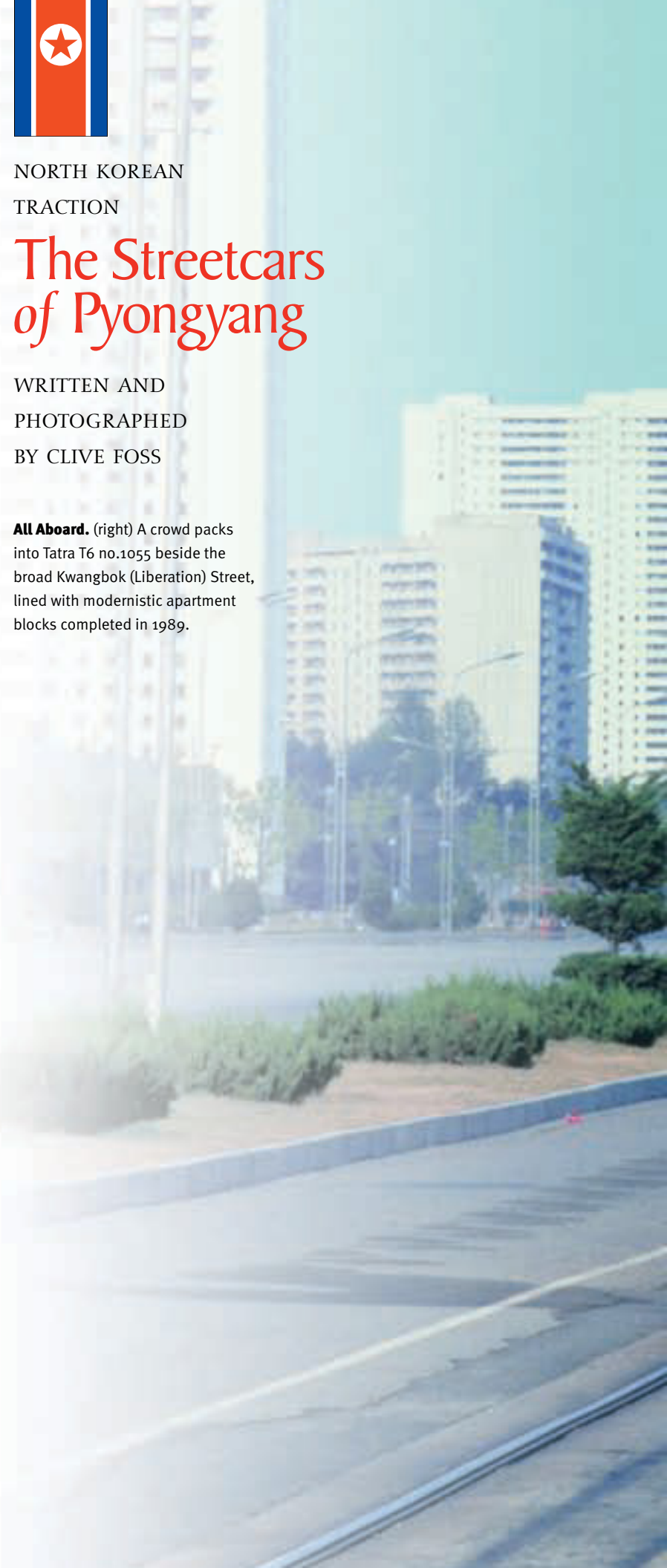
Another new streetcar line may be the offing. Plans call for a rail link to the Bathurst Line branching off the Spadina Line at Queens Quay and Spadina Avenue. This would enable rail service to be operated between Union Station and the Exhibition Grounds. Not determined is whether the new service would share trackage with the Spadina Line along Queens Quay and through the subway under Bay Street. Concerns have also been raised about traffic problems that could occur at the Bathurst Street and Lakeshore Boulevard intersection. The Union Station streetcar terminal, with its narrow platform and tight loop, may have to be modified to handle more than one route. Meanwhile, the Spadina streetcar route has taken its place as the newest addition to Toronto's excellent mass transit system.

AN OVERVIEW OF ROUTE 510

They're Off! (top left) A streetcar climbs the ramps from the underground terminal loop at Bloor Street where an easy transfer is available to the Toronto subway system.

Déjà Vu All Over Again. (left) Rounding the curve onto Spadina Avenue, a streetcar completes its trip around the perimeter of the circle enclosing this imposing Knox College building. In an earlier view, (above) PCC 4340 is shown at the same location on the Harbord line in a view taken in September 1966. That line was discontinued when the Bloor Street subway opened on February 26, 1966. The track and overhead were removed shortly thereafter.

Raised Leg. (top right) East of College Street, the tracks are slightly raised to discourage motorists from driving on them. The CN Tower looms in the background of this northbound Spadina streetcar.



NORTH KOREAN TRACTION

The Streetcars *of* Pyongyang

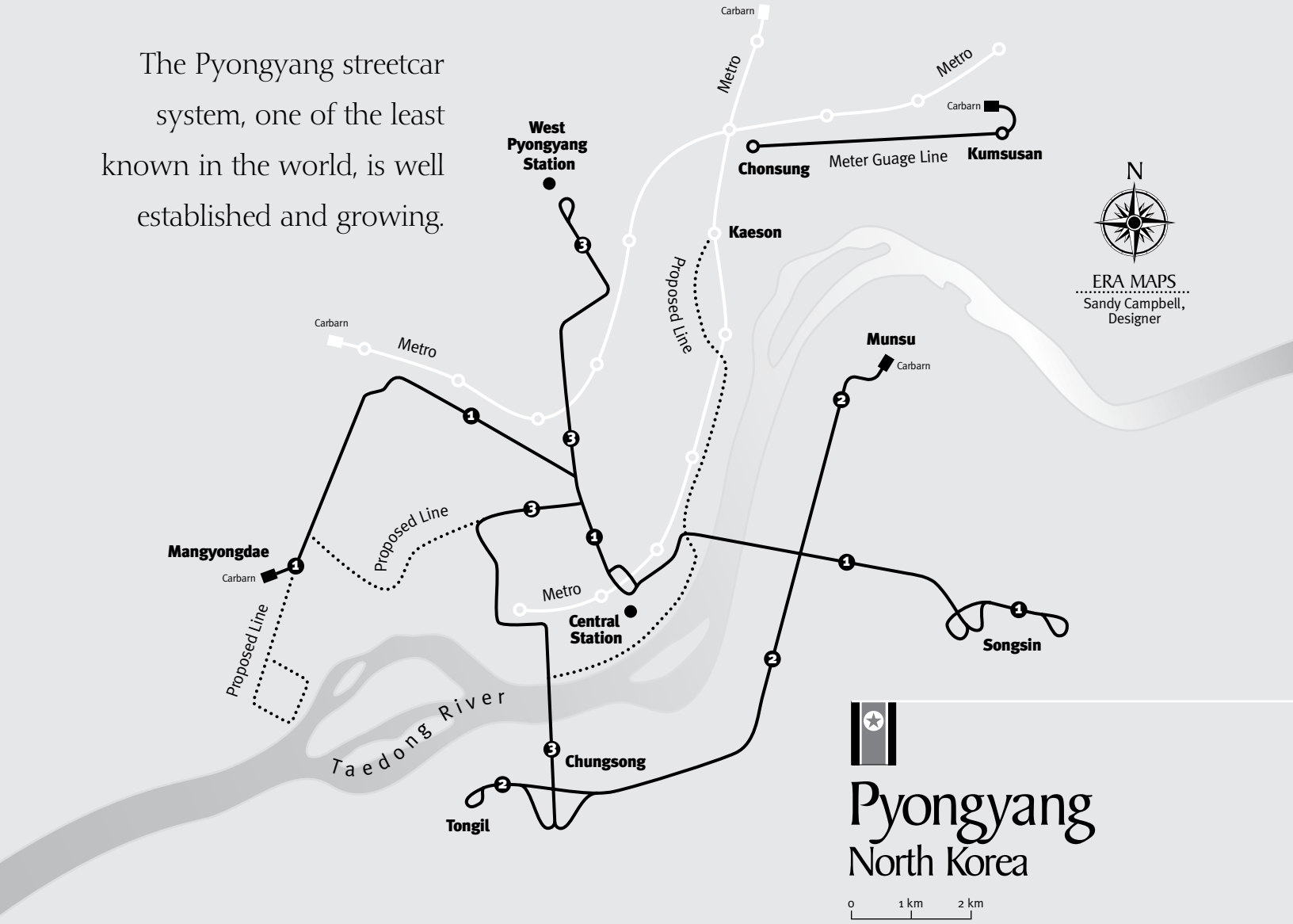
WRITTEN AND PHOTOGRAPHED BY CLIVE FOSS

All Aboard. (right) A crowd packs into Tatra T6 no.1055 beside the broad Kwangbok (Liberation) Street, lined with modernistic apartment blocks completed in 1989.

Although the Iron Curtain has disappeared from most parts of the world, it is still a reality in North Korea, whose heavily defended frontiers are rarely crossed by foreigners. Nevertheless, it is possible to get a visa to visit a few places, notably the capital Pyongyang, which turns out to be a remarkably attractive modern city. Despite severe economic problems in recent years, Pyongyang has managed to create and maintain one of the most rapidly growing streetcar systems in the world. This short note is the result of a visit in 1997, combined with information provided by Leo Sullivan of Boston, much of it from the German bulletin, *Blickpunkt Straßenbahn.*


1055

The Pyongyang streetcar system, one of the least known in the world, is well established and growing.



Trips to North Korea normally follow a fixed program that includes a couple of days in the capital, always with polite and well–informed English speaking guides. The tour includes a short visit to the Pyongyang Metro, an item of civic pride. The Metro, opened in 1973, has two intersecting lines that connect the main points of the city on the north side of the Taedong river (see map). Its stations are lavishly decorated in the style of Moscow: broad platforms with marble, polished stone, elaborate chandeliers and mosaics showing the great Leader (as he is officially known) Kim Il Sung, and scenes symbolic of the modern development of the country. The trains are clean and comfortable and seem to run frequently, but the tourist is allowed only to travel for one stop.

Officially, visitors are not allowed to ride other forms of public transport, which include a network of modern streetcar lines, the first built in 1991, after a long period without them. Streetcars go back to 1923, when the country was occupied by the Japanese. They built a line that ran north for about four miles from the central railroad station through the heart of the old town. By 1940, two more lines were added, to the East station and to the suburbs across the river. Finally, in 1948, the communist regime (officially the Democratic Peoples Republic of Korea) built a short extension to the first line. I have no information on the equipment that was used. The entire system was destroyed in the massive bombing that flattened the entire city in 1951. When Pyongyang was rebuilt, its public transport depended at first on buses. Trolleybuses were introduced in 1962 and extended through much of the city. They were supplemented in 1973 by the metro.

As the city grew and experienced a shortage of transport, it turned to streetcars. The first two standard gauge lines were opened in 1991. No.1, a long cross–town lines runs about 10 miles from Mangyongdae [CF1] at the end of the broad and futuristic Kwangbok (Liberation) Boulevard, past the sports complex and central station, through the center of the town, and across the river to the eastern suburb of Songsin. The first part is on a private right–of–way at the side of the boulevard, but most seems to be in the middle of the street, as is line no.2. That runs entirely on the east side of the city, parallel to the river, from Munsu to Tongil, a distance of about seven miles. When these lines were built, some of the trolleybus lines were abandoned.

Each line has its own carbarn (at Mangyongdae and Munsu) and uses Tatra K6 motors, usually in double units. Line 1 also employs articulated Tatra

KT8s, while line 2 has a fleet of Chinese Tatra KT4s, originally articulated cars which have been welded together to form one exceptionally long unit. Since this line has very few curves, it did not need the articulation. In 1997, the fleet consisted of 129 Tatra T6 motors; 45 Tatra KT8 articulated units; and 60 Tatra KT4s built at the Shenyang trolleybus works in Manchuria (China).

Thanks to a helpful guide, I was able to take a short ride on one of the K8s. The track was a bit rough, there was some sparking from the overhead, but the cars seemed to operate in a satisfactory manner. They were hardly adequate for the large crowds, though, who packed them for most of their run. Likewise, many streets had long lines of people waiting for the rather infrequent trolleybuses; the tram service was evidently much more dependable, presumably it had priority in this time of shortages.

Since 1991, there have been two additions, and further planned extensions. In 1993, a third line was opened from the West Pyongyang station, past the sports complex and across the river to Chungsong, near the terminus of line 2. In 1997, it was not in operation because of lack of equipment. Another line, built on meter gauge in 1995, is isolated from the rest. It connects Chonsung metro station in the northern part of the city with Kim Il Sung University and the tomb of the Great Leader in Kumsusan district, a distance of about two miles. It has its own fleet of four-axle ex-Zurich cars, painted in green and grey instead if the red and white of the rest. In 1997, it was not running, but was to be restored for service on special holidays. Temporary abandonment of this line may reflect the current shortages of fuel and electricity that afflict the whole country.

Big changes, though, are about to happen, since Pyongyang has acquired a new fleet of second-hand Tatras from Germany. In May 1997, 100 cars were shipped from Leipzig (68 motor T4D, 32 trailer B4D), and another 24 from Dresden (12 T4D motors, 12 B4D trailers). These should make it possible to operate full service on line 3 and to relieve the crowding on the others. They may also bring the next extension nearer to realization. This planned line would run from the birthplace of the Great Leader in Mangyongdae, one of the capital's main tourist sites, through the center of the city (presently served only by metro and trolleybus) to the Kaeson metro station near the Kim Il Sung stadium. It will share some trackage with line 3, and run part of the way beside the parkway along the river. No date has been announced for its construction or opening.

This streetcar system, one of the least known in the world, is well established and growing. When the present difficulties are overcome, it hopefully will become more accessible to the railfans who will enjoy visiting it.

Modern Rolling Stock. Tatra T6 no.1055 on the broad Kwangbok (Liberation) Street at the western end of the crosstown line.