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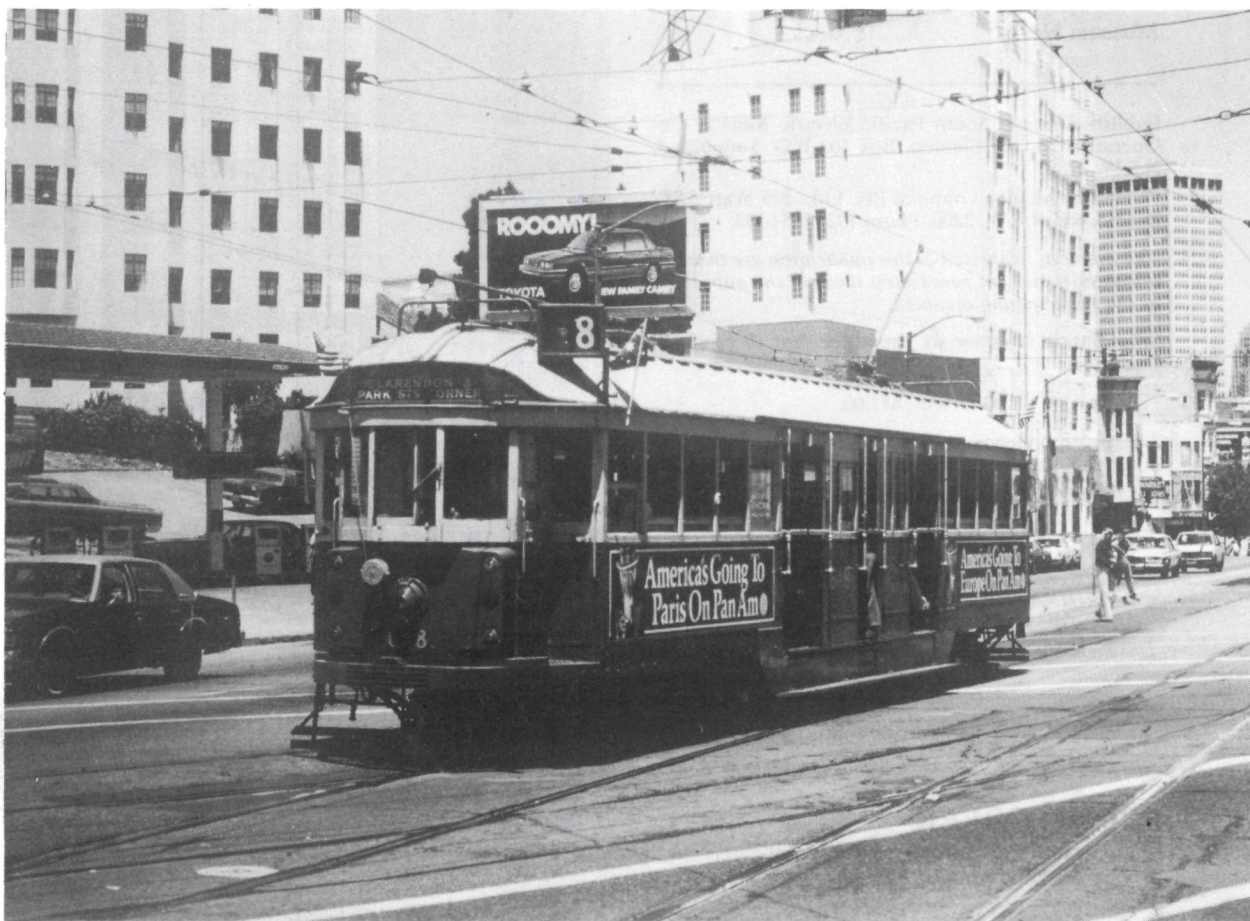
# TROLLEY WIRE

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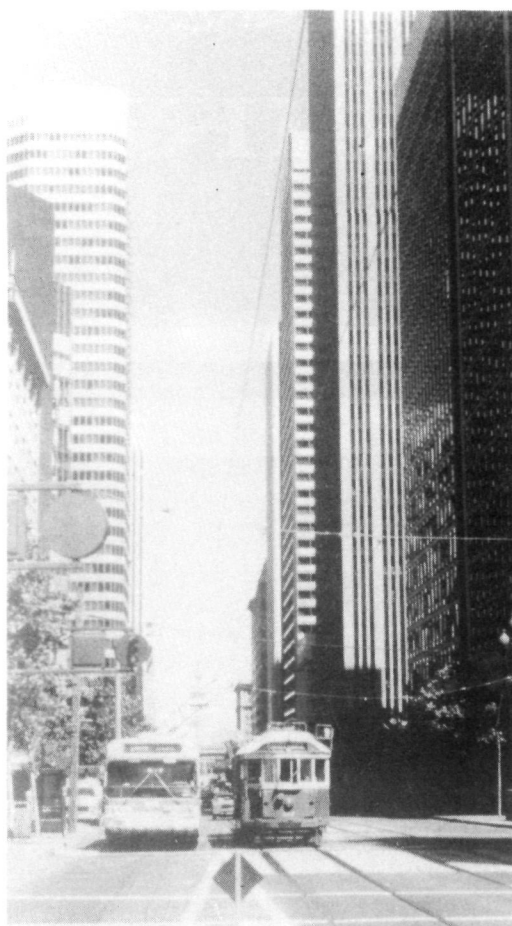
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*Melbourne W2 648 is paced by Canadian-built Flyer trolleybus 5028 along Market Street near 2nd Street, San Francisco on 3 September, 1983. The Ferry Building with its 240ft tower can be seen between the two vehicles at the foot of Market Street.*

T. ACHESON

## FRONT COVER:

*Melbourne W2 648 turns from Market Street into Duboce Avenue in San Francisco during the Historic Trolley Festival on 4 July, 1983.*

T. ACHESON

## BACK PAGE:

*Melbourne scrubber car 10W (ex Sydney K scrubber 138S) and the Restaurant car W2 442 share the sunshine outside South Melbourne Depot in January, 1984.*

D. BUDD

# SAN FRANCISCO REVISITED

By R. I. Merchant

It is sixteen years since Dale Budd recorded his impressions of the streetcar and cablecar systems of the San Francisco Municipal Railway (Muni) in these pages (*TW* June, August and October, 1968). Many changes have occurred in the Bay city over the intervening years including the replacement of the PCC streetcars and the rebuilding of the historic cablecar lines.

These changes culminated in the holding of an historic trolley festival which saw a Melbourne W2 class tramcar running on the streets of San Francisco with trams from Britain, Portugal and U.S. museums during their northern summer of 1983.

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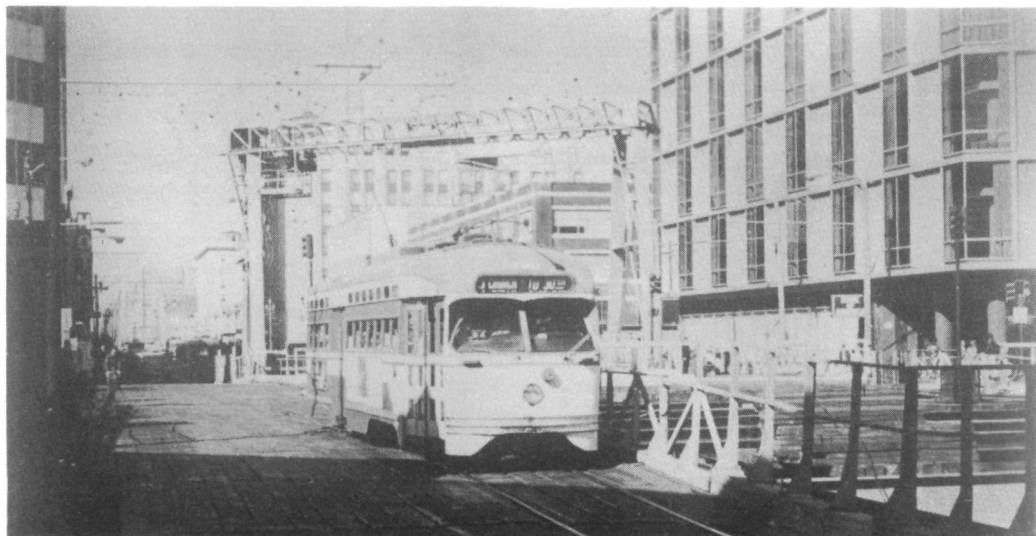
The Bay Area Rapid Transit system (BART) opened in 1970 with many teething problems before reliable operation was achieved. Extensions are now being planned and 150 new cars have been ordered. BART runs deep below Market Street, a thoroughfare which cuts a wide path through downtown San Francisco. It has carried streetcar tracks since 1860; until 1948 had four parallel tracks along its three mile length, and has witnessed

steam, horse, cable and electric operation. Above the BART tunnel provision was made for a tunnel to take the Muni's streetcars below the surface thus freeing Market Street from railborne traffic. The operation would be known as Muni Metro.

## Tunnel Construction

The tunnel under Market Street was constructed using cut-and-cover methods for the stations and tunnelling in between. Market Street was closed to all but transit vehicles and the streetcars used shoofly track arrangements which meandered all over the construction work on temporary alignments. West of Van Ness Avenue, however, where the Muni-only tunnel was to connect the Van Ness Station with Twin Peaks Tunnel, cut-and-cover methods were used as a far less costly alternative to tunnelling. Shooflies were again used between Van Ness and Duboce Avenues, but were avoidable at the sites of the Church and Castro Streets Stations.

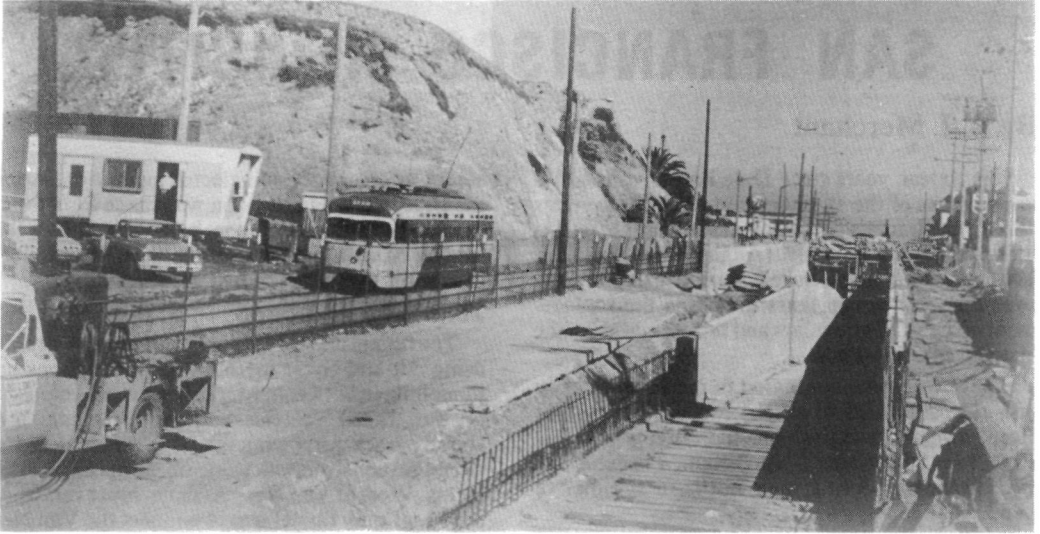
To allow for the construction of the Muni Metro tunnel portal for the J and N line cars at Duboce and Church Streets, a private right-of-way was created over the gutter and footpath in Duboce Street alongside the U.S. Mint.



*PCC 1026 rumbles over a boarded intersection on its way up Market Street. Steelwork for the tunnel construction can be seen in the excavation to the right of the vehicle.*

D. CAMPBELL





*This is lower Duboce Avenue! PCC 1112 is outward-bound on tracks built over the footpath and gutter while the future entrance to the Muni Metro for J and N line cars is under construction at right.*

D. CAMPBELL



*Ex Toronto PCC 1180 rises to the surface of Market Street from the temporary portal of Twin Peaks Tunnel. The new Metro tunnel joins into the Twin Peaks Tunnel at this point and the nearly completed construction work is to the right of the tram.*

D. CAMPBELL



A decision was made to lay new track on 17th Street to detour three streetcar routes away from the Market Street construction sites. Cars ran via Market Street, Duboce Avenue, Church and 17th Streets to a temporary portal of the Twin Peaks Tunnel. One casualty of the Metro subway construction was Eureka Valley Station just inside the eastern entrance to Twin Peaks Tunnel. The cut-and-cover subway tied into the tunnel trackage at this point and the tunnel entrance was widened to accept 'temporary' ramps on both sides of the subway work. These ramps extended over the Eureka Valley platforms to rejoin the normal tunnel alignment. The station was not reinstated as it was considered to be too close to the new station at Castro Street.

Realising that additional running times would result from the detour, a search was begun for second-hand PCC cars. These were located in Toronto and eleven cars were purchased for \$1000 each. They were regauged from the Canadian city's wide gauge of 4ft 10 $\frac{7}{8}$  but their condition was found to be rather poor. On 3 December, 1972 cars on the three routes affected by the detour (K Ingleside, L Taraval and M Ocean View) commenced to use the new diversion. As the additional PCC cars had not yet entered service, buses were used in limited-stop peak service on the N Judah line and the streetcars displaced were used to supplement services on the K and L lines. It was ironic that when the ex-Toronto cars were ready for service

late in 1974, most of the Market Street construction had been completed.

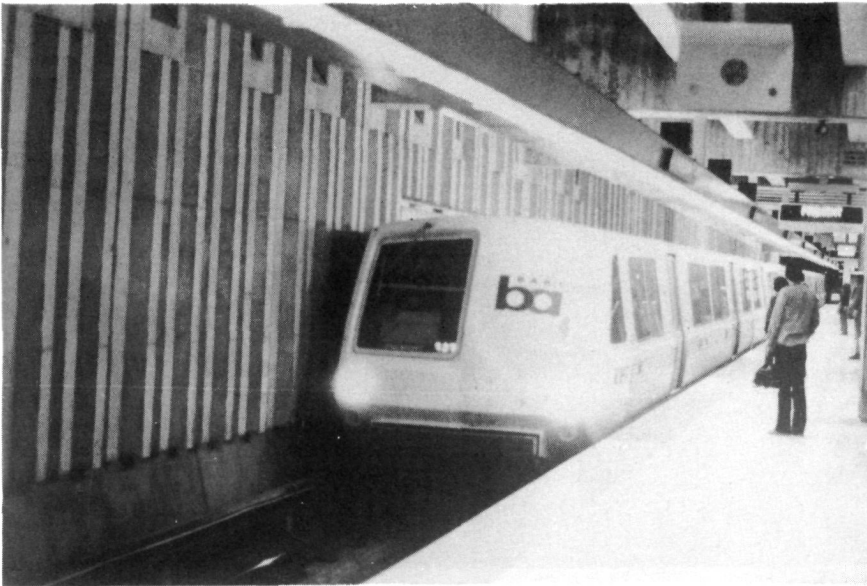
In 1974-75 a track reconstruction programme included the extension of the M Ocean View line (with over a mile of new trackage) and the K Ingleside line to BART's Balboa Park Station, providing a secondary feeder service for both lines.

### New Rail Facilities

The Geneva Upper Yard was opened in 1975 to accommodate the eleven ex-Toronto PCC cars for which there was no space in the Geneva Car barn opposite. The upper yard was expanded in 1977 from one track to six to store about 22 LRVs. In 1981 it was used to store out-of-service PCCs as well as LRVs not yet in service.

The new Muni Metro Rail Centre is built on the site of the old Elkton shops opened in 1907. Federal funds were employed to provide Muni with a modern, fully equipped facility to store and maintain the light rail vehicles; and two years before its official opening on 1 June, 1979, it was already being used for PCC maintenance. The overhead wire system was designed for use with the pantographs of LRVs and is supported by a remarkable array of galvanised steel posts and crossbearers.

The site also contains a station and running loops for K and M line cars to service BART's Balboa Park Station.



*A BART train arrives at Balboa Park Station on 19 November, 1974.*

R. MERCHANT

## New Cars

New trams were also planned to replace the ageing fleet of PCC cars. The Duwag-style trams planned in 1968 have given way to a boxy, articulated light rail vehicle (LRV) similar to cars being ordered for Boston. The 100 new cars, 71 feet long, fitted with pantographs, high-low steps for either street or platform loading, and cab signalling have been manufactured by Boeing-Vertol, a subsidiary of the famous aircraft company, in Pennsylvania. The car bodies were fabricated in Japan by the Tokyo Car Company. Deliveries to the Muni commenced in 1978 and extended until the spring of 1980.

In 1982, the Muni arranged the purchase of 22 additional LRVs from Boeing with an option for eight more. The cars were part of forty cancelled from the Boston order as that system was finding their cars somewhat troublesome. In San Francisco they will help to alleviate the peakhour overcrowding on the Muni Metro which is now carrying 115,000 passengers each weekday on the five routes. Muni is also hoping to eventually obtain the remainder of the cancelled Boston order.

## The PCC Cars

The PCC fleet consisted of 116 cars, all built by the St. Louis Car Co. of St. Louis, Missouri. Of these, 35 were built new for San Francisco. The first of these was a group of ten double-ended cars built in 1948. Numbered 1006-1015, they were converted to single-ended operation in 1955. One of this group, car 1008, was fitted with a panto-

graph and used to test new overhead in the Twin Peaks Tunnel in November, 1976. Its destiny was achieved on 8 November, 1977 when it became the first streetcar to enter the Market Street subway under its own power to test the new catenary overhead. In 1981 car 1008 emerged from the Muni's shops in the bright livery of the LRVs to continue its life as a repair car.

The batch of 25 standard single-ended PCC cars obtained in 1951 were the last PCC cars built in the USA. They are numbered 1016-1040.

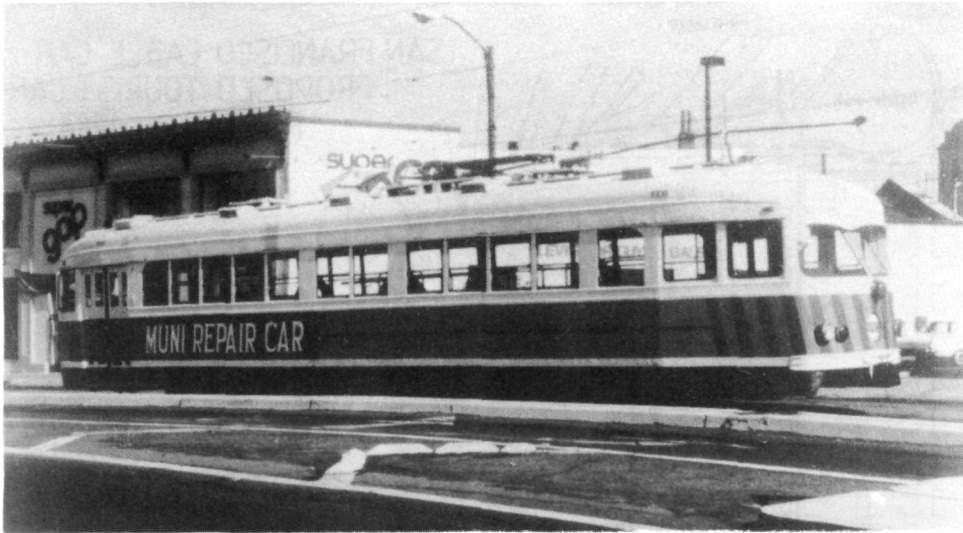
In 1957 a lease-purchase arrangement with the St. Louis Public Service Co. saw another 66 cars arrive, to be numbered 1101-1166. In 1962 an additional four cars from the same source arrived. All 70 cars were purchased by 1964.

Cars 1180-1190 were originally built in 1946-47 for the Kansas City Public Service Co. who sold a batch of cars to the Toronto Transit Commission in 1957. As mentioned above, the Muni purchased the cars in 1973-74 but did not repaint them into the standard green and cream livery. Muni bus red was applied over the Toronto maroon, backup poles fitted and numbers applied over the Toronto cream. The cars were not popular with crews, were badly deteriorated and the parts shortage saw cars 1184 and 1185 cannibalised; they never saw service in San Francisco. All the ex-Toronto PCC cars were scrapped in 1979 except for two which went to museums. The Illinois Railway Museum of Union, Illinois obtained car 1183, and 1190 went to the California Railway Museum at Rio Vista Junction.



*PCC 1033 swings into the western portal of the Twin Peaks Tunnel. The tunnel mouth has been demolished and cut back for construction of high level platforms and an amended track layout for LRV operation.*

D. CAMPBELL



*Muni's repair car 1008 is a former double-ended PCC and it is standing on now-disused trackage on Market Street at Duboce Avenue.*

T. ACHESON

In mid-1981 twenty-five of the ex-St. Louis cars were released for sale at \$2000 each. Of these, 1118 was held as a spare, car 1146 was slated for a Kansas City museum, 1150 held for a museum in Merced, California and 1159 went to The Trolley Park at Glenwood, Oregon. One car is reported to have been sold to a buyer in Anchorage, Alaska.

### **The Cable Car Problem**

San Francisco's 110 year-old three-route cablecar system is the last in the world and is registered as an historic landmark. The dilemma which faced the Muni was that the system was worn out. Much of the under-road work was the original pre-1890 brick construction which had deteriorated badly and could no longer support heavy city traffic. Guide pulleys and depression beams were malfunctioning and worn rails courted disaster. The powerhouse on the corner of Washington and Mason Streets was rebuilt after the 1906 earthquake from the remains of the larger building erected in 1887 and its machinery was in urgent need of repair. A report issued in 1979 stated that "an extensive rehabilitation is necessary if safety and economy are to be restored to the cable car system".

The apparent results of decades of deferred maintenance surfaced in 1979. All cable car service was suspended from 28 May to 3 July due to an equipment failure in the power house. Then on 26 September the whole system was again shut down on the orders of the Public Utilities Commission. To preserve appearances, a Powell Street cablecar was towed by truck to the turntable

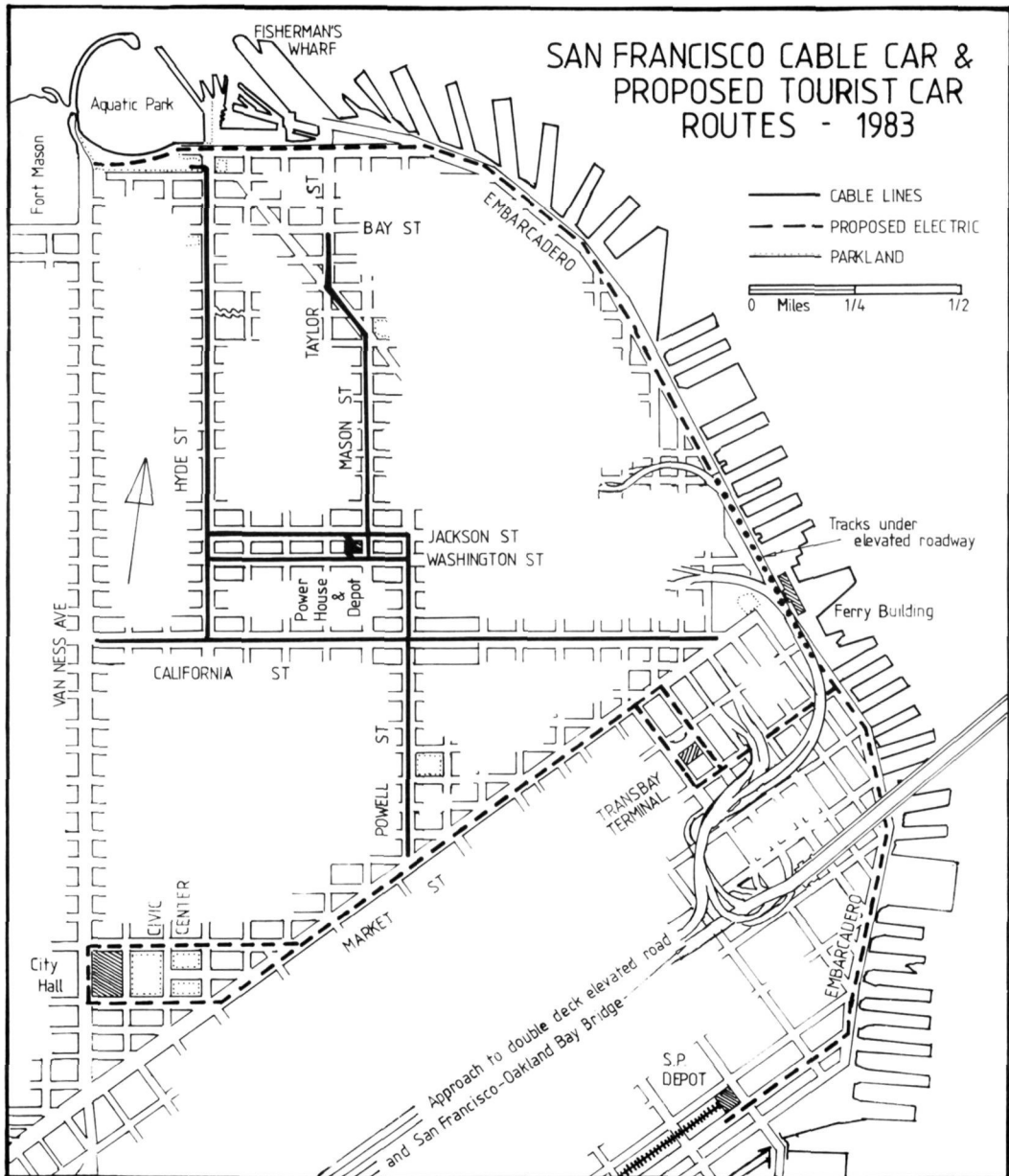
at Market Street, and a California Street car to the Market Street end of that line, and returned them to the depot each evening during the shutdown. After essential repairs, the California Street line resumed service on 6 November, 1979. This line had been completely rebuilt during the 1950s and was not as badly deteriorated as first thought. Repair costs were in the neighbourhood of \$14 million and an oil company made an unprecedented million-dollar donation to the City for cable line repairs. The outer Hyde Street line from the car barn to Aquatic Park reopened on 20 February, 1980 and service was extended to the Powell Street terminus and out to Bay and Taylor Streets on 16 April, 1980.

However, plans were formulated for a complete shutdown of the cable car system for a period of some eighteen months for complete rebuilding. The engineers were to design and reconstruct the system for a life of 100 years, with improvements to safety, reliability and economy whilst reducing maintenance requirements yet retaining all the historical and traditional qualities. The cost was estimated at some \$58.2 million, of which the State would supply \$3.6 million. Federal funding was sought and the Federal Government pledged \$44.6 million. The balance of \$10 million would, it was hoped, be raised by public donation.

### **LRVs Enter Service**

As a preliminary shakedown to familiarise both Muni crews and the public with the new cars, the LRVs were introduced to revenue service by running them on the outer portion of the K Ingleside line as a shuttle service between the western portal





of Twin Peaks Tunnel and Balboa Park Station. This daytime only service began on 23 April, 1979. K line PCCs continued to run only to the old terminus at Phelan Loop, as extension of the regular service to Balboa Park would require an additional three cars which were just not available.

Almost daily, LRVs were run into the new subway to test and 'debug' the tunnel operations.

From 11 February, 1980 a free shuttle operation was run in the subway between Embarcadero and Van Ness Stations. This was immediately followed on 18 February by LRVs in service on the N Judah line and in the subway, and the Muni Metro became part of the San Francisco transport system.

In early April, 1980 the old terminus loop for the K line at Phelan Street was dewatered and the track



*The cable car terminus on Powell Street before the street was converted to a pedestrian mall. Beyond the cable car turntable can be seen construction for the Powell Street Station under Market Street.*

D. CAMPBELL

lifted. The extension of the M Ocean View line from Plymouth Street via Broad Street and San Jose Avenue to the Balboa Park BART Station was opened on 30 August.

On 17 December, 1980 the L Taraval, M Ocean View and K Ingleside lines commenced LRV operation through the subway, leaving only the J Church line using the surface tracks in Market Street on weekdays. All weekend services were, however, still operated by PCC cars using the Market Street tracks. The J Church line finally went to LRV and subway operation on 17 June, 1981.

### **New Route Proposals**

In 1979, the Municipal Railway issued a plan which included in its proposals a new line to be known as route E which would run from the Southern Pacific Railroad depot along the Embarcadero to Fishermans Wharf and Fort Mason. Later plans called for this line to be operated as a tourist route using vintage tram-cars.

An extension of the J Church line from 30th Street via Glen Park BART Station to link with the K and M lines at Balboa Park Station was also mentioned. A logical extension of services, this line has now been approved and construction should be completed by 1987 at a cost of \$19 million.

Consideration is also being given to a 1980 proposal to retain the surface tracks on Market Street for the operation of a tourist line from Civic Centre to Fishermans Wharf. This line would use Market Street and join into the proposed E line on the Embarcadero near the Ferry building. This line would be known as route F.

In order to test public reaction to the continuation of tramway operation on the surface of Market Street as an historic tramway, the Muni's preserved car No. 1 gave free rides every second Saturday from 6 June, 1981. In addition, the California Railway Museum's preserved San Francisco car No. 178 was leased by the Muni and it arrived in the city on 25 September to run with Muni's No. 1. Ridership on the two cars was heavy once the word got around. 178 remained with the Muni until late 1982.

### **End of PCC Operation**

122 years of tramway operation on Market Street came to an end in the early hours of 20 September, 1982 when the last PCC car pulled into the Geneva Car barn from route N.



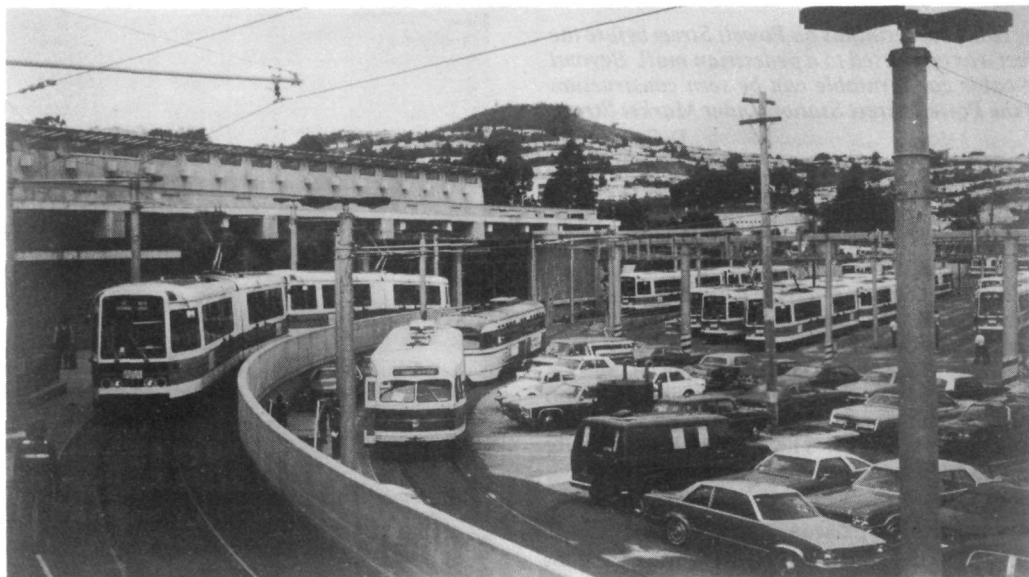
*PCC 1119 is an ex St. Louis car and carries the modified version of San Francisco's Verdant green and ivory colour scheme.*

R. MERCHANT



*LRVs pass on San Jose Avenue outside the Geneva Car barn. Both are bound for Embarcadero Station — car 1243 via the M Ocean View line and the coupled set trailing car 1236 via the K Ingleside line.*

T. ACHESON



*Interchange with BART's Balboa Park Station (left background) is made within Muni's Metro Center. Here a coupled set of LRV cars passes through the upper level while two PCC cars load passengers on the lower level.*

D. CAMPBELL





*A view of the now demolished Geneva Car barn with PCC 1033 pulling out to take up running on the N Judah line. 19 November, 1974.*

R. MERCHANT

The City Council had asked the Muni in 1981 to store the PCCs for a year after service was discontinued. Subsequently 50 cars have been transferred to storage on Pier 70 on the San Francisco waterfront for possible use on the proposed routes E and F. Some of these cars are indoors but the majority of the cars sit in an open yard on the land side of the pier. They include seven of the former double ended vehicles, ten of the 1951-built cars included the last U.S. PCC, No. 1040, and 33 of the ex-St. Louis cars. The Muni put up for sale 29 cars of which they stripped 10 to provide spare parts for the stored cars, if required, and five went to museums. RELIC of South Elgin, Illinois obtained car 1030, the California Railway Museum at Rio Vista Junction took delivery of cars 1016 and 1153; while the Orange Empire Railway Museum at Perris, California secured car 1039. The OERM also took car 1033 which was purchased for spare parts for \$250. Cars 1134 and 1135 were sold to a private party in Carson City, Nevada. These cars left the Geneva Car barn in November. The remaining 22 cars were sold for scrap in December and had gone from the property by mid-January.

Weekend operation was provided by buses until 20 November, 1982 when full light rail vehicle service at weekends using the Muni Metro was introduced.

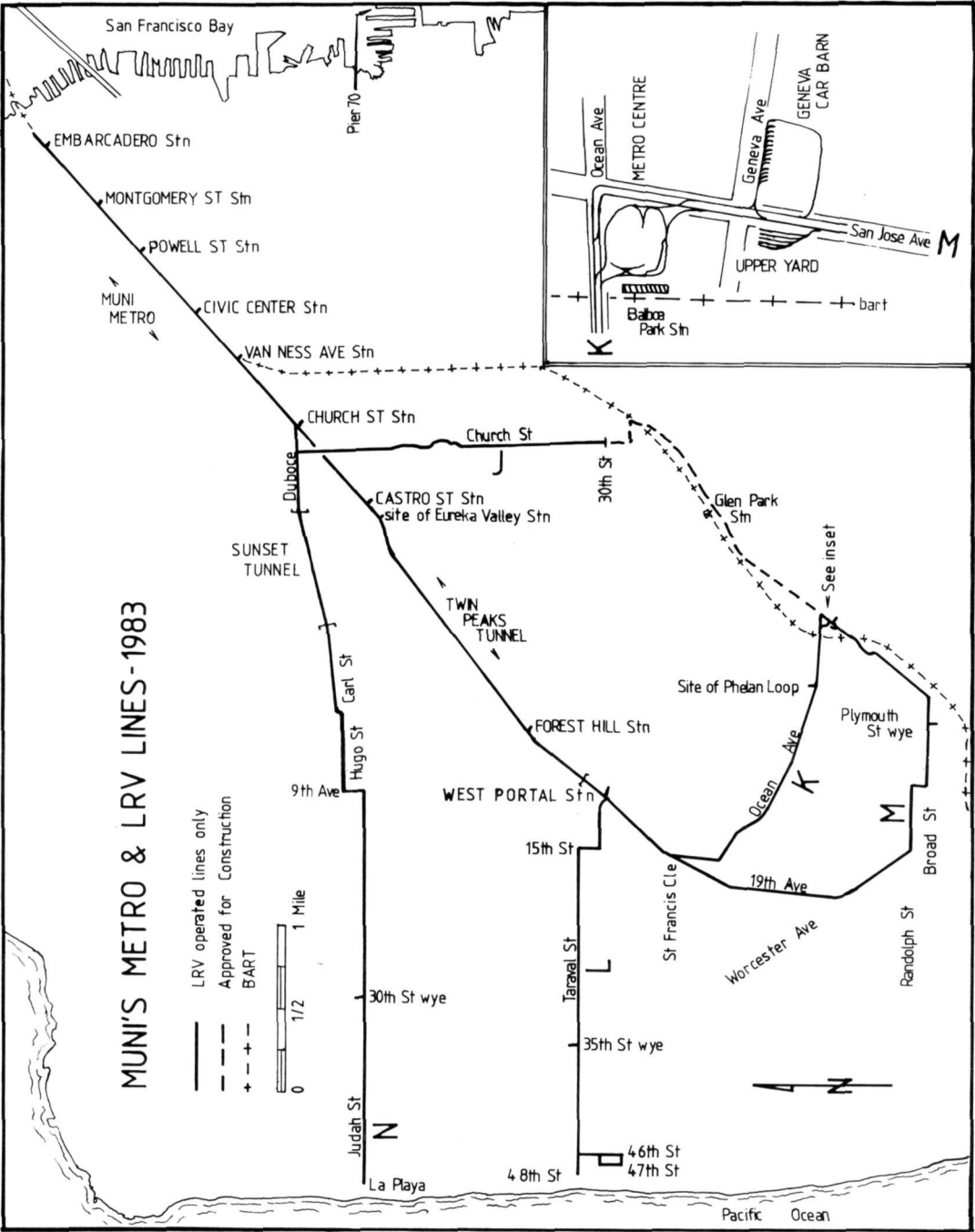
Demolition of the old Geneva Car barn commenced in January 1983. It was built in 1899 and the main brick building was severely damaged in the earthquake of 1906. The site is to be used as a lay-over yard for off-duty LRVs.

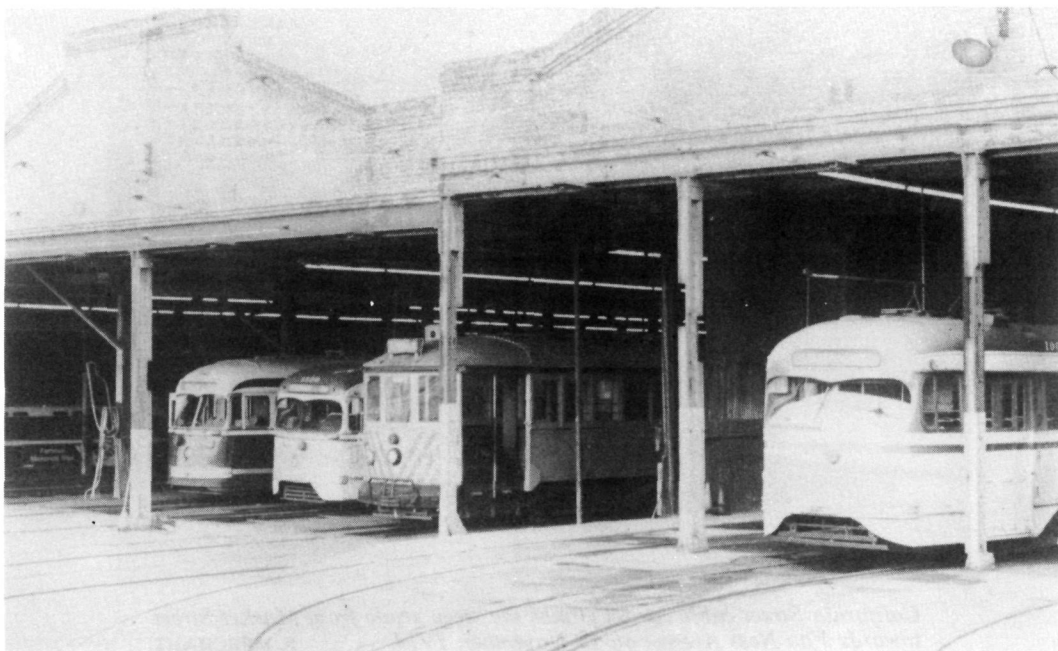
### **A Cable Car Substitute**

As the twenty-month shutdown and rebuilding of the entire cable system approached, a considerable number of merchants and retailers who depended on the tourist boom each summer were looking at the future 1983 season minus cable cars with serious concern. The previous interruptions to service had affected business and a considerable reduction in the number of visitors to the city was predicted.

A drive shaft fractured in the powerhouse and the cable cars halted again from 9 to 22 May, 1982. Temporary repairs were effected which it was hoped would see the system through the summer season until the shutdown in September.

The idea for a trolley festival was born during that summer of 1982. The proposed operation was developed between Muni's management and members of the San Francisco Chamber of Commerce as at least a partial solution to the problem. Local papers reported the festival was the brainchild of a Chamber of Commerce member who got the idea when he saw a tram parade in





*Another view of Geneva Car Barn showing (from right to left) double-ended car 1007, wreck car 0131 in yellow and red stripe livery, 1136 and ex Toronto 1181.*

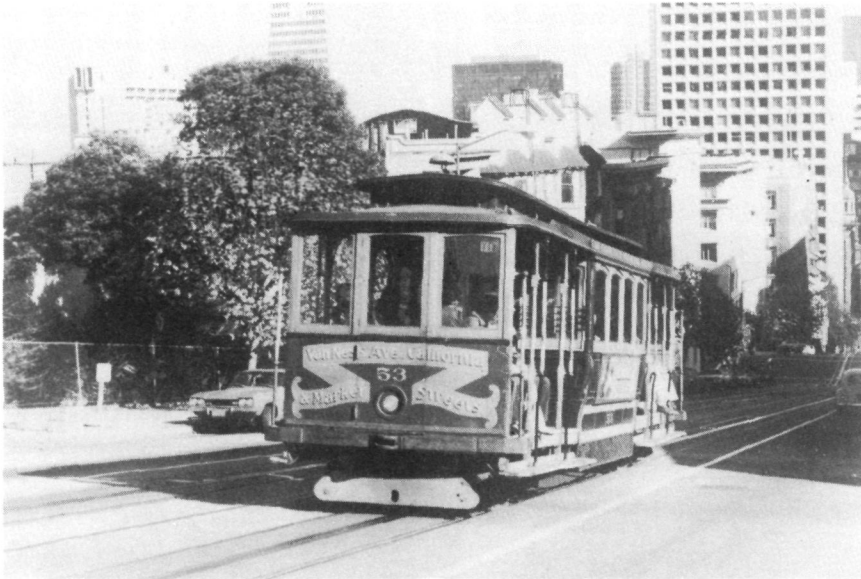
R. MERCHANT



*A lineup of PCC cars on Market Street with car 1163 in the original winged livery pulling away from the stop.*

R. MERCHANT





*California Street cable car 53 climbs the steep grade from Market Street towards Van Ness Avenue on 19 November, 1974.*

R. MERCHANT

Melbourne (possibly the 1982 Australia Day operation) when on a bus trip in Australia for his employer. Though the success of the old tramcar weekend service with Nos 1 and 178 was further encouragement, the selection of a route and the location of enough suitable tramcars was not an easy task.

The Chamber of Commerce undertook the responsibility of sponsoring the event with full co-operation of Muni and City officials. In the autumn of 1982 a search began for cars to run in the Trolley Festival. Contacts in trolley museums led to the location and acquisition of most of the cars required. The Chamber of Commerce then lined up sponsors for each car to provide funds to move the cars to San Francisco in exchange for advertising space on the car while it is in service.

### **The Cable Shutdown**

The last day of full cable car operation was 20 September, 1982. On the following day, the 21st, there was no service in the morning as the cars were in the depot being decorated. At midday there was a procession past the crossing of the Powell and California Street lines with normal service resuming at 12.30pm with free rides. To reduce the problem of last car riders the cable cars kept operating until 4.15am on 22 September, but the last Powell Street car still left the Market Street terminus with 250 people on board. The reconstruction work commenced later the same day.

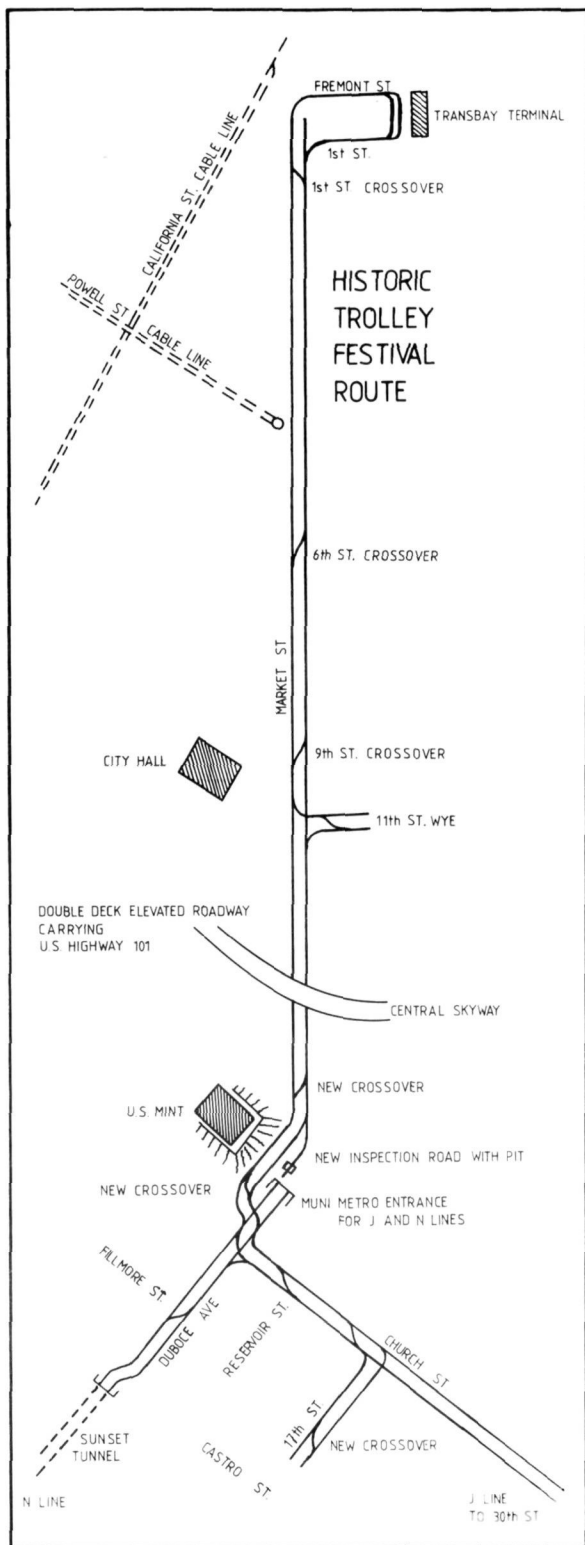
During the closure the museum items from the depot have been relocated in the Embarcadero Centre. A number of cable cars have been placed on display for the benefit of tourists and these are located on the Stockton Street side of the Hyatt Union Square Hotel, at 101 California Street, Justin Herman Plaza and at the Hyde Street Pier.

The next cable car is due to leave the depot in June, 1984.

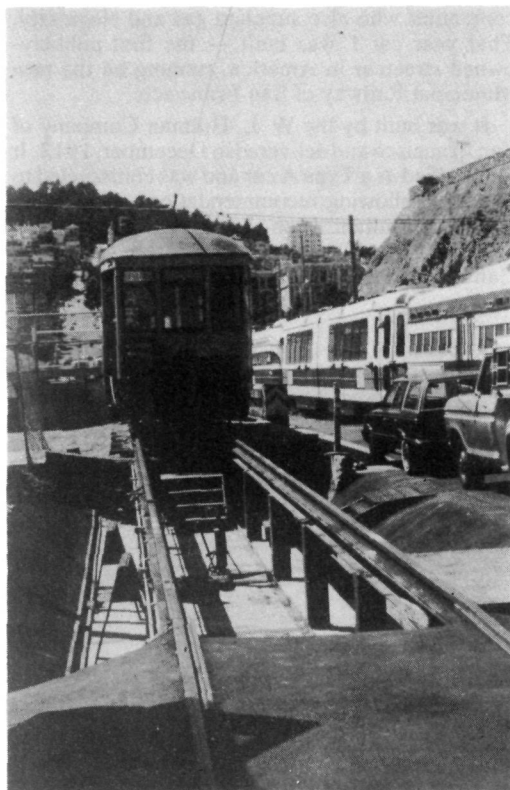
### **The Trolley Festival Route**

Selecting the route for the Festival was relatively simple. A logical service could run from the Transbay Terminal to the wye at 11th and Market Streets or up to Duboce Street near the J and N line entrance to the subway without interfering with any regular LRV services. The longer route was preferred, but the Duboce location had no attraction as a destination point; there was nothing of interest there to promote ridership and provide places of interest for tourists to visit.

The now disused trackage on 17th Street between the J Line on Church Street and Twin Peaks Tunnel was intact, and the old entrance to the tunnel is located in the centre of the interesting and diversified Castro District with its unique shops and restaurants. So the final route was selected to include service on Church and 17th Streets to Castro Street, making the historic trolley line just over three miles long.



This routing caused some operating conflict with regular LRV service at the Duboce Street portal to the subway as well as on Church Street, but the distance involved was short and the Muni would station personnel at the junctions outside the subway entrance to keep the regular service cars running smoothly. Double-ended cars were required for this line because of the crossover at the Castro Street terminal which was put in for this operation. To make this route fully usable, a temporary open-air depot and inspection pit were set up on the private right-of-way alongside the Duboce Street portal. The former inbound track was used to store cars not in use during the daytime with the former outbound track being used for the regular Festival service. Two additional crossovers were installed for this single tracking operation. The inspection pit was constructed over the Duboce Street portal, turning off the inbound storage track at Market Street.



*Muni a at the Festival maintenance facility. The inspection pit is in the foreground while the spare cars are lined up in the background.*

T. ACHESON

## Start of the Festival

The logistics of getting the tramcars from their various locations to San Francisco after leases and agreements were signed was not easy. All cars were required to be in the City for the Festival Parade on 23 July, 1982. However, mechanical problems and/or lengthy trips delayed some cars beyond that date. Oporto 189 arrived at the end of June, and Milwaukee 978 and Portland 503 arrived during the first half of July. Also, the restoration work on Muni 130 had not been completed. Hamburg 3557 did not enter service until 17 September. Because of the delay on these cars the Muni decided to put trolley poles back on one of its two prototype LRVs to provide a back-up for the historic fleet in case of breakdown.

Details of the cars collected for the Festival are given below:

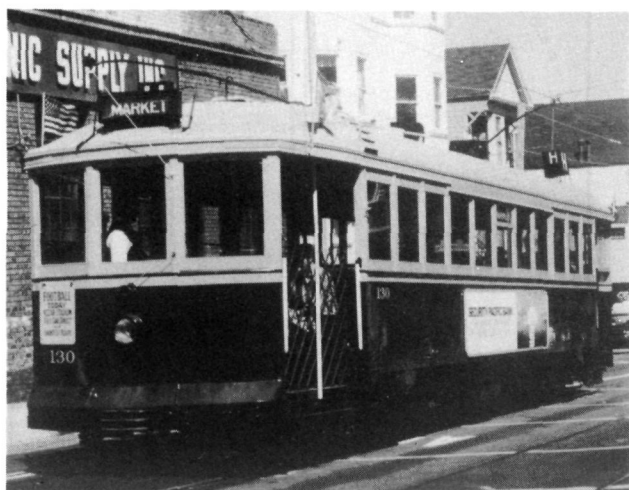
### Car 1

Until 1912 all streetcar systems in the United States were privately owned, often by utility companies who also supplied gas and electricity. That year car 1 was built — the first publicly-owned streetcar in America, running on the new Municipal Railway of San Francisco.

It was built by the W. L. Holman Company of San Francisco and delivered in December, 1912. It is classified as a Type A car and was constructed to a design following recommendations of Chicago transit consultant Bion J. Arnold. No. 1 is a composite wood and steel car of the "improved California" type, with a closed centre section and

open end sections. The "improved" meant that passengers entered and left the car by gated platforms instead of climbing on running boards along the length of the open parts of the car.

Car No. 1 was retired in 1951, demotored and set aside for static display in a proposed museum. In 1959 it was moved to Pier 25 where it remained in store for three years. Rescued to take part in the Muni's 50th Anniversary celebrations, it appeared on 15 October, 1962 in its original form and livery of grey with tile-red roof, black ironwork, and gold lettering and striping. After the celebrations it was retained to begin a new career of fan tours and special appearances. No. 1 is fitted with the bulky folding Eclipse fenders the Type A car retained throughout their service.



*Muni 130 on 17th Street. 3 September, 1983.*

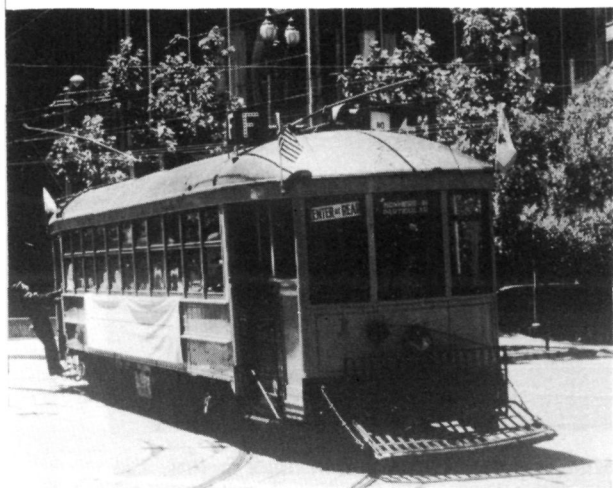
T. ACHESON

### Car 130

No. 130 is lighter but wider than "Arnold" car No. 1 and was built for the Municipal Railway of San Francisco by the Jewett Car Company of Newark, Ohio in 1915. A Type B car, the body was also of the "improved California" style, and like all the Type A and B cars, had the open sections glassed in during the 1920s in deference to the City's prevailing cool, often foggy, weather.

130 survived the conversion to PCC streetcar operation in the 1950s to become a breakdown car, or "wrecker", to tow dead cars. It was later renumbered 0131 and saw service up to 1981.

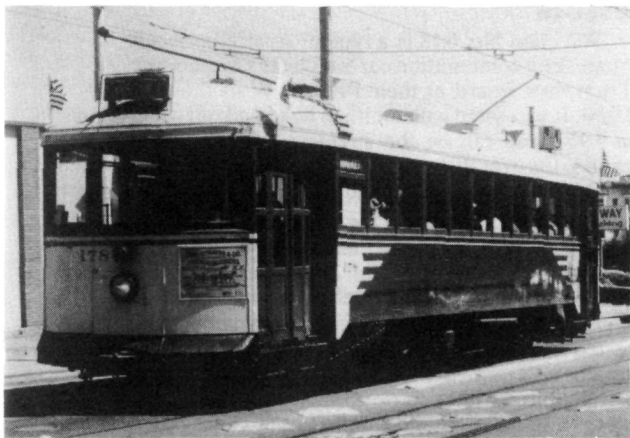
It was restored to passenger service for the Festival by the Muni shops and is being sponsored by the Security Pacific Bank. The car retains its fully enclosed body and has been painted in the Commodore Blue and Golden Yellow livery adopted in the late 1930s.



*Muni 1 swings from Market Street into 1st Avenue while the conductor watches the pole on 2 July, 1983.*

T. ACHESON





*California Railway Museum's 178 in Church Street on 4 July, 1983.*

T. ACHESON

### Car 178

The Bethlehem Shipbuilding Company of San Francisco built Type K No.178 for the Municipal Railway in 1933. It is similar in design to the Type A and B cars but was built as a fully enclosed car.

A number of the class survived in service until 1959 and the Bay Area Electric Railroad Association purchased the last, No.179. After storage at Yuba City and occasional operation on the electric Sacramento Northern Railway, 178 eventually found its way to the Association's California Railway Museum at Rio Vista Junction. The Museum restored the car to the green and cream winged livery of the late 1940s. 178 has operated over the streets of San Francisco on a number of occasions and it joined the Festival with the help of Levi Strauss and Co.



### Car 1040

No. 1040 is the last PCC streetcar built in the United States. It is a single-ended all-electric car built by the St. Louis Car Co. of St. Louis, Missouri in 1952 for the Municipal Railway of San Francisco. It was built as a two-man car but, like its sisters, was converted to one-man operation in 1954. It is one of the thirty cars rehabilitated in 1979 to extend their lives because of the delays in the light rail vehicle programme. 1040 was turned out in the new Sunset Glow Orange, California Poppy Gold and White livery created by Walter Landor. The car was trucked to Pier 70 for storage after the withdrawal of PCC cars in September, 1982 but was returned by the Muni for use as a spare car in the Festival until all expected cars arrived.

### Car 1704

Another PCC car operating in the Festival is St. Louis Public Service Co. No. 1704. It is also a single-ended all-electric car built by the St. Louis Car Co. in 1946 to the St. Louis gauge of 4ft 10ins.

The St. Louis cars were well maintained and when declining patronage from 1954 rendered many cars surplus to requirements, many cars were sold. 1704 was one of 66 cars acquired by the Muni with a lease-purchase agreement concluded with the SLPS in 1957. The cars were regauged, repainted, and had backup controls and poles fitted in St. Louis before departure.

Car 1704 became 1128 in the San Francisco fleet. It was one of the cars retained and moved to Pier 70



*Last PCC built in the USA (left) stands on now-disused trackage on Market Street with Muni and the Central Skyway in the background. 1040 is in the Landor livery of orange, gold and white. Muni 1128 (above) has been returned to its original St. Louis livery and renumbered 1704.*

T. ACHESON

after the withdrawal of the PCCs in 1982. The firms of Anheuser-Busch and Brasco Distributing Co. assisted with the restoration of the car back to the St. Louis red and cream livery for the Festival.

### Car 226

Blackpool Corporation Tramways "Luxury Toastrack" No. 226 is a modern version of an open toastrack car even though it is not a cross-seat vehicle. Its official designation is not often used and it is more commonly known as an "open boat" tram.

Based on a design by Blackpool General Manager Walter Luff, it was one of twelve built by the English Electric Company Ltd. in 1934 for use during the summer season for tours along the promenade of the popular seaside resort. During 1968 the Corporation computerised its transport records and this resulted in the tram being renumbered 601.

A British trade and tourism promotion was planned to be held in San Francisco during October 1971 and, instead of the usual London bus, an English tram, from Blackpool, was shipped to California to run on the streets of San Francisco during "British Week". Unfortunately a dock strike prevented the car from being unloaded until after the promotion had ended. 601 was taken direct to the California Railway Museum at Rio Vista where it entered service on the Museum line.

The "boat" has been renumbered back to its original 226 by the Museum and sponsorship has been provided by The Anchorage, Pier 39, The Cannery and Ghiradelli Square, all located in the Fisherman's Wharf tourist district. The car from Blackpool has proved very popular with the riding public, due in part to fine summer weather experienced during the Festival.



Blackpool "boat" 226 at Duboce and Market.

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### Car 648

W2 class No. 648 is a typical Australian bogie dropcentre combination car built by the Melbourne Tramways Board at their Preston Workshops in 1930. It was fitted with multiple head and tail lights in 1972 and ran on the streets of the Victorian capital for over fifty years. It was in store at South Melbourne Depot at the end of 1981.

648 was purchased for the San Francisco Chamber of Commerce and was shipped by courtesy of Pan American Airways aboard the British freighter *Dilkara*. It was unloaded at Oakland on 20 June, 1983 and was inspected and tested in time for the start of the Festival. The car retains its Tramways Green and Cream livery, and has acquired trolley retrievers on each end. These were originally painted yellow but were later painted green.

The MMTBs high standard of maintenance made 648 one of the best performing cars at the Festival. Muni officials were quite impressed with the low maintenance needed on the car as well as its acceptance by the public. 648 has been tested on all five streetcar lines and in the Market Street subway with no clearance problems.



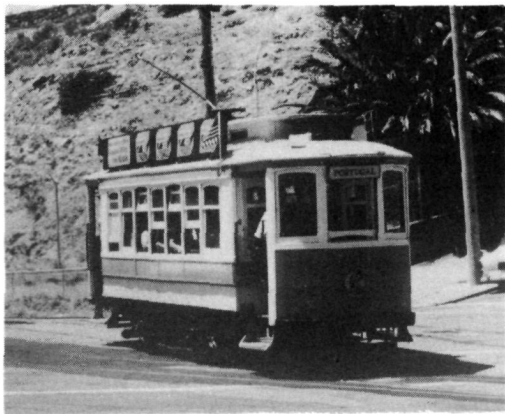
Melbourne W2 648 turns from Fremont Street into Market Street followed by Flyer trolleybus 5211 built 1976.

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### Car 122

This single truck car from Portugal was built for the Companhia Carris de Ferro do Porto (Oporto Tramways Company) by J. G. Brill Co. of Philadelphia in 1909. In 1946 the CCFP was taken over by the Servico de Transportes Colectivos do Porto (Oporto Municipal Transport Board) and car 122 is one of their "Brill 23" class.

It has an 18ft 3in body of the semi-convertible saloon type, a design built, rebuilt and developed in



*Oporto 122 stands on the switch for the inspection road.*

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Portugal long after it had been superseded in the USA. 122 carries 23 passengers on two-and-one seats and was rebuilt to approximately the original design in the early 1930s.

The car was purchased by Gales Creek Enterprises in 1981, one of six Porto cars shipped to Oregon for operation on the Old Town section of Portland's new light rapid transit line. Car 122 has been sponsored by the Eastman Kodak Co. and its livery is thought to be the old CCFP scheme of yellow and white. It is certainly one which should appeal to its sponsor!

### Car 189

Car 189 was built in Porto, Portugal for Oporto Tramways Co. in the mid 1920s, following the design of cars imported from J.G. Brill Co. in 1912. It is of the "Brill 28" class and this class was the first to be built to the new width of 2.40 metres in place of the previously standard 2.25 metre width. This extra width allowed the fitting of two-and-two Brill "Winner" seats, bringing the seating capacity to 28 within a 19ft 7in body.

Like car 122, it was purchased by Gales Creek Enterprises in 1981 for use on the new line now being constructed in Portland, Oregon. It has been restored to what appears to be an early Porto brown and white livery.

The Westin St. Francis Hotel is the sponsor for 189 in the Trolley Festival, arriving in San Francisco after the commencing date.

*Oporto 189 stands at the terminus in 17th Street at Castro Street on 3 September, 1983. It and its sister car will eventually run in Portland, Oregon.*

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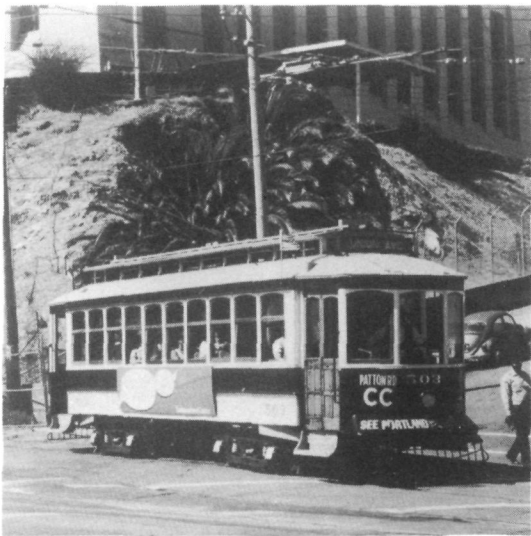
### Car 503

This J. G. Brill Co. product of 1902 was built for the Portland Railway Light & Power Co. as a semi-convertible car featuring windows which slide up into the roof. It was originally numbered 203 until the PRL & PC was taken over by the Portland Traction Company. It operated on 3ft 6in gauge and spent its life on the Portland Heights and Council Crest line.

One of the finest scenic tram rides in North America was that afforded by the PTC route the wooded park at Council Crest, located nearly 1000 feet above the level of downtown Portland. Curves were sharp and grades as steep as 12 per cent required the use of trams fitted with magnetic brakes. Trolley operations to Council Crest ended in 1949, just one year before all Portland city cars ceased running.

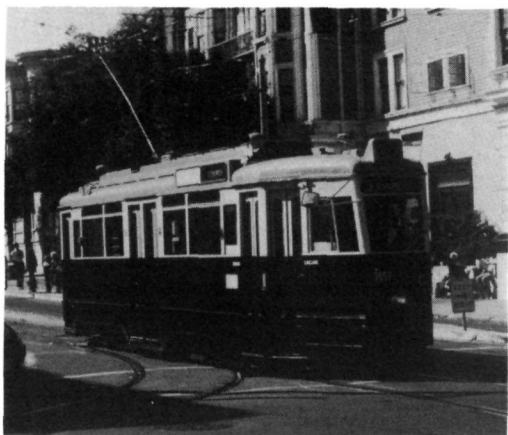
503 was retained in Portland (with two other cars) and the establishment of the Trolley Park at Glenwood enabled the cars to be given to the Oregon Electric Railway Historical Society.

Restoration was carried out by Gales Creek Enterprises at Glenwood and sponsorship was provided for the Festival by Embarcadero Centre. The car arrived late in San Francisco due to some last minute motor problems just before shipment. Car 503 carries its Portland livery of red and ivory, and rides on Melbourne W2 trucks.



*Portland 503 rolls out of Duboce Avenue onto Market Street on 10 September, 1983. The car was originally narrow gauge and is riding on W2 trucks. The US Mint building can be seen on the hill behind the car.*

T. ACHESON



*Hamburg 3557 on Duboce Avenue on 25 September, 1983.*

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### Car 3557

Car 3557 is from the West German city of Hamburg, whose last trams ran on 30 September, 1978. It is a single-ended car built by Linke-Hofmann-Busch in 1951 for the Hamburger Hochbahn AG. It is a bogie vehicle of the V6E class and, unlike most European trams, is fitted with a trolley pole instead of a pantograph.

It was shipped to San Francisco for a private owner about 1979 and it appears that the buyer relinquished ownership. The car was donated to the Municipal Railway and was stored in the Geneva Upper Yard for some years. It was moved to Pier 70 for storage with the retained PCC cars in late 1982.

In July, 1983 it was transferred to the Duboce Avenue yard where the car was made operable. Later it was moved to Muni's Metro Centre under its own power to be inspected, cleaned up and repainted in the Hamburg red and cream livery. 3557 entered service in the Festival in early September and was running on a regular basis. Since it is a single-ended car, it usually operated on the J-Church line to 30th Street.

### Car 978

The St. Louis Car Company built this one-man bogie safety car for The Milwaukee Electric Railway & Light Company in 1928. 978 has been preserved by the East Troy Trolley Museum in Wisconsin.

It was trucked to San Francisco in July with support from Delta Airlines but on inspection was found to have serious defects in the bolsters, floor and roof. The car has been set aside at Muni's Metro Centre awaiting a decision on the work to be done.

### Car 1213

Another spare car for the Festival is 1213, one of the Municipal Railway's new Light Rail Vehicles, a double-ended articulated car built by Boeing-Vertol, a subsidiary of the aircraft manufacturer, at Morton, Pennsylvania in 1977. Originally numbered 1221, it and a sister car were fitted with trolley poles and used for testing in the Metro tunnel under Market Street. The poles were required when traversing overhead wiring not yet adapted for pantographs. The two cars were returned to Boeing in July, 1978 for rebuilding to a more refined configuration and renumbering, 1221 becoming 1213.

1213 was refitted with trolley poles for its use in the Festival and became the first LRV to operate over the surface tracks in Market Street.

\* \* \*

On Thursday, 23 June, 1983 San Francisco's Historic Trolley Festival began with a mid-day parade down Market Street using every piece of old equipment that was available. The procession was led by Muni's No. 1 with Mayor Diane Feinstein at the controller. Mayors running streetcars in San Francisco on important occasions has been a tradition since the first Muni line opened in 1912,



*LRV 1213 approaching Duboce Avenue on Market Street on 10 September, 1983.*

T. ACHESON



*Blackpool "boat" 226 and Melbourne W2 648 meet at the corner of Duboce Avenue and Church Street on 4 July, 1983. The Muni Metro entrance is to the right in front of the W2.*

T. ACHESON



and this festive event was no exception. Muni's repair car PCC 1008 and line car 0304 also showed up in the procession.

Following the civic parade, several of the Festival cars remained downtown for part of the afternoon to give some introductory rides to anyone interested. On the next day, Friday, regular five-day-a-week service began for the summer season. The service was operated from Thursdays to Mondays, providing a 15-minute service between the Transbay Terminal and Castro Street from 11 am to 7pm on Saturdays and Sundays, and from 9am to 5pm on Mondays, Thursdays and Fridays. The Muni's regular flat fare of 60 cents was charged on the historic cars.

Six cars were required at any one time to cover all schedules. The two single-ended PCC cars were normally used as supplementary cars, and because they could not run to Castro Street, usually ran as short workings to 11th Street.

The close of the Festival on 26 September, 1983 ended with another parade down Market Street and a promise from the Mayor's office and Muni officials that there would be another.

During the 14-week Festival it was stated that over 250,000 people rode the cars, with the Blackpool 'boat' being the most popular due to the fine summer weather experienced during the period of the Festival. Muni officials, however, were

impressed with the reliability and maintenance-free operation of the Melbourne W2 and are said to be in the market to purchase 10-15 more for use on E line. W2 648 has travelled over the entire San Francisco system and, on 25 September, made a trip through the subway under Market Street.

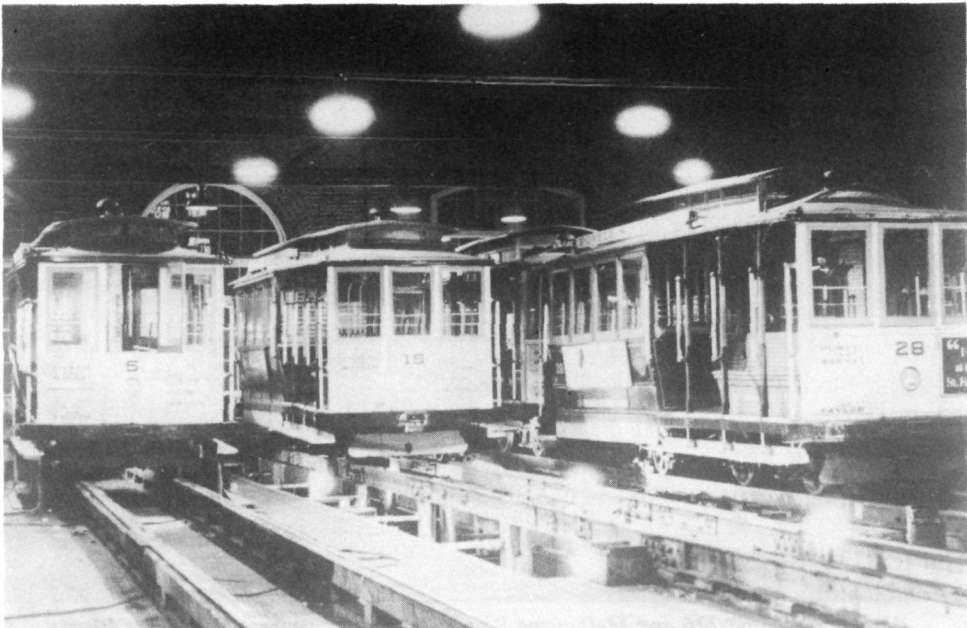
On 2 November, 1983 continued operation of some of the historic cars recommenced on weekends until December. The cars used were the Muni-owned St. Louis 1704, Hamburg 3557 and Muni 1, 130 and 1040. The Melbourne W2, owned by the Chamber of Commerce was also used.

### Meanwhile . . .

The cable car reconstruction is in full gear. All 69 blocks along the cable car routes are involved, with the City taking advantage of the upheaval to renew century-old sewers and water mains.

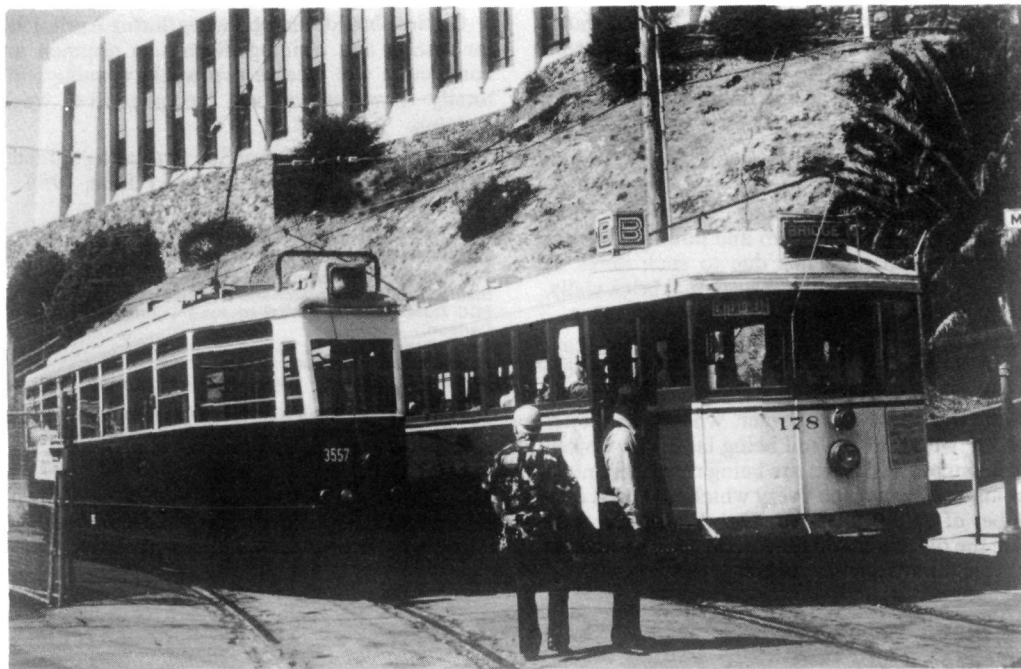
The work has been divided into seven major contracts: one for the depot/powerhouse, and six for the six zones of street work. For the greater part, the street work has progressed in two-block segments, each block taking about 10-12 weeks to complete.

The car barn at Washington and Mason Streets is being reinforced to meet current earthquake resistance standards, while preserving the historic outer brick walls. It is being equipped with four independent cable-drive systems, so that in future if one cable must be shut down for attention then



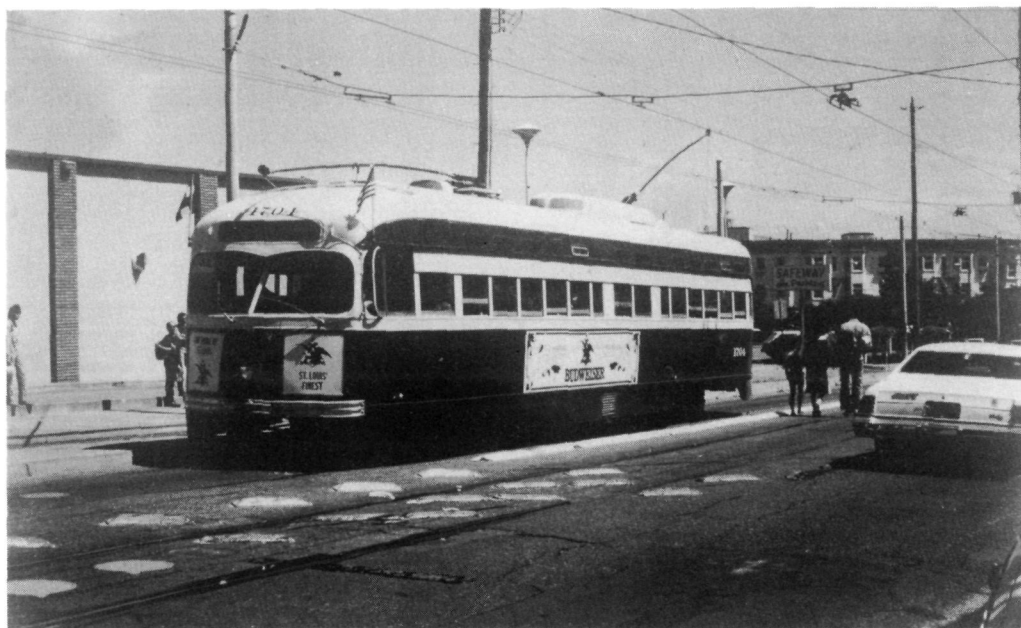
*Powell Street cable cars in the depot in November, 1974. The winding gear is on the level below the depot tracks*

R. MERCHANT



*Hamburg 3557 passes Muni 178 at the entrance to the Duboce Street reservation on 25 September, 1983.*

T. ACHESON



*St. Louis 1704 (ex Muni 1128) has been restored to its St. Louis Public Service colours of red and cream. It is seen on Church Street near Duboce Avenue on 25 September, 1983.*

T. ACHESON

the others will still function. An underground viewing room is being added to the museum already existing there, so that visitors can observe the huge sheaves that guide the cables.

### Progress to Date

The reconstruction of the cable car tracks and street reconstruction is proceeding well on all lines and all contracts are running to schedule. The rebuilding of the old car barn and powerhouse has run into several problems due to such items as missing foundations under the original brick walls, the sandy ground surface and long winter rains.

Work is also being performed on the cable cars as well. Several modifications to the cars' braking system are being tested and the trucks are being rebuilt with new and larger wheels to better conform with the new rail being laid. The Powell Street single-ended cars are being repainted into a new maroon/grey/blue livery which was tried on a number of cars from 1979. One Powell car may retain the old green and cream colours as a special car, but the specific vehicle has yet to be selected.

Cables should start operating during April, 1984 for testing and training. Returning gripmen and conductors will receive two weeks training while totally new crews will receive five weeks training.

The return to service of San Francisco's greatest tourist attraction is now set for 21 June, 1984.

### References:

*The People's Railway* by Anthony Perles  
*Inside Muni* by John McKane & Anthony Perles.  
*PCC from Coast to Coast* by Fred Schneider & Stephen Carlson.  
*Time of the Trolley* by William Middleton.  
*Pacific News* — Issues 246, 247 & 248.  
*Modern Tramway* — various issues between 1970 and 1983.  
*The Gazette* — Orange Empire Trolley Museum magazine.  
*The Review* — California Railway Museum magazine.  
*Trolley Fare* — Arden Trolley Museum magazine.  
*San Francisco Examiner* — cuttings from odd issues.  
*San Francisco Progress* — cuttings from odd issues.  
 The assistance of D. M. Campbell and R. S. Jones is also acknowledged.



*Melbourne 648 passes Muni 178 on Market Street on 4 July, 1983. The turnouts for Duboce Avenue are in front of the W2. Car 178 will pass under the double deck Central Skyway on its way to the Transbay Terminal. The Skyway carries traffic from US Highway 101 around the central business district.*

T. ACHESON

# MELBOURNE INTERLUDE

On the weekend of 25 and 26 February, 1984 museum representatives from Sydney, Newcastle and Port Kembla visited Melbourne to inspect some W2 type tramcars. These units were in excess of the needs of the Metropolitan Transit Authority of Victoria and available for purchase.

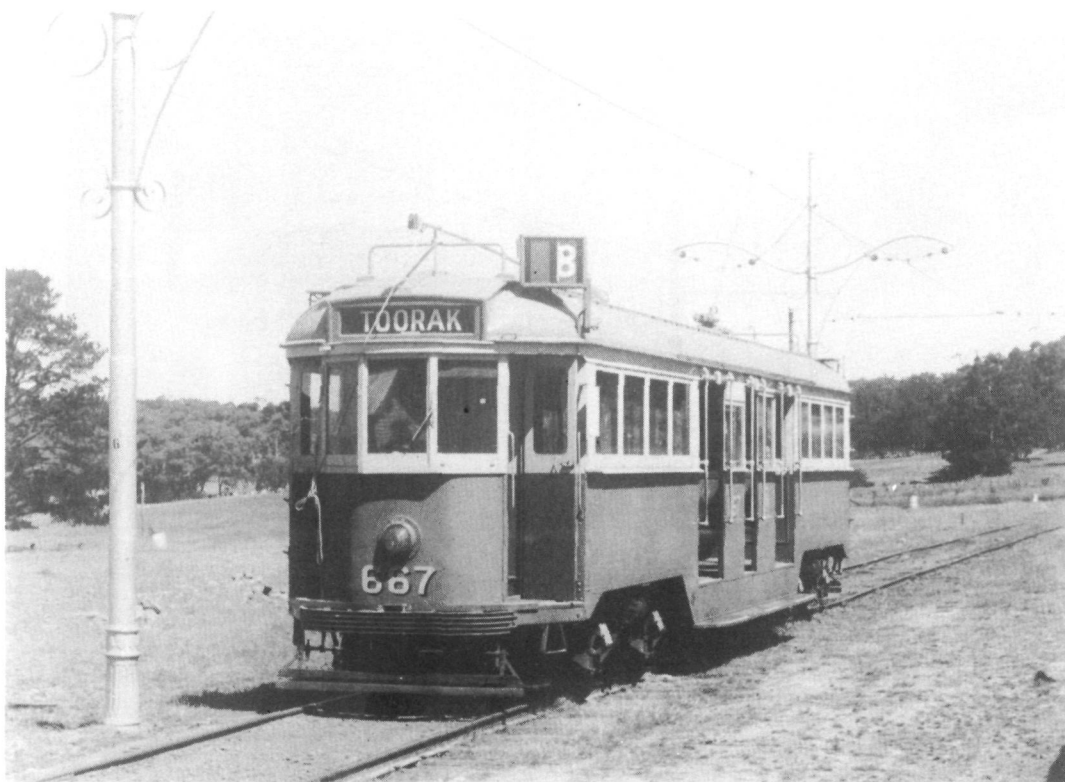
In addition to inspecting these vehicles and other items at the Preston Workshops the party of some 25 people were the guests of the Tramway Museum Society of Victoria at both Bylands and Kilmore on the Saturday afternoon. On the Sunday afternoon portion of the Melbourne tramway system was covered in hired tour tram Y1 612.

The various groups first gathered at Royal Park at 1 pm on Saturday afternoon to join a brand new diesel Coaster bus organised by the Port Kembla members of the party. This enabled a very sociable return journey to be made to Bylands and Kilmore.

The first stop was made at the TMSV museum at Bylands where rides were conducted in W3 667 along the electrified main line. The visitors were conducted around the property by TMSV members who had previously positioned various tramcars in strategic locations so that a maximum amount could be seen in a limited period of time.

Electric cars Melbourne W2 331 and Ballarat 17 were stationed at the present northern limit of electrification accompanied by an unrestored four wheel cable trailer in reasonable condition. The star of the show was possibly cable grip car No. 28 which was restored by the late Alf Twentyman in 1977 using a considerable quantity of parts from grip No. 417.

As the new Z series trams have gradually taken over the greater proportion of off-peak period operation in Melbourne the non standard cars which were manufactured in small numbers have



*W3 class tramcar 667 at the southern end of the main line track at the TMSV museum at Bylands on 25 February, 1984.*

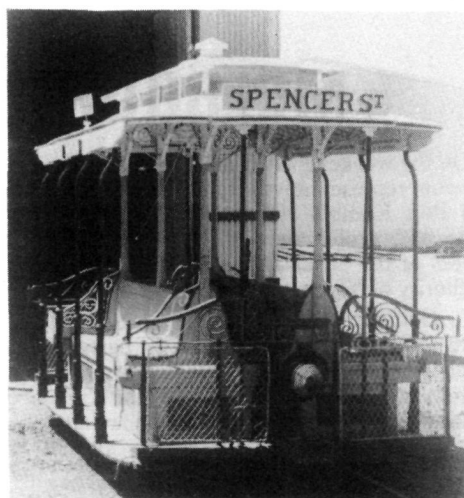
K. McARTHUR

disappeared from the city. Representatives are now preserved for posterity at Bylands... the L, X1, X2, PCC, VR, W3 and W4 types have all fortunately found a haven in the museum in addition to interesting examples from Geelong, Ballarat and St. Kilda tramways.

In addition to grip car No. 28, the TMSV has two long-bogie saloon cable trailers, one having been converted by splicing together two six windowed horse cars. Several single truck trailers in various stages of preservation and restoration are also set aside. It is the museum's intention to eventually restore these cable cars in the various route colour schemes which were a striking feature of Melbourne's streets prior to World War I.

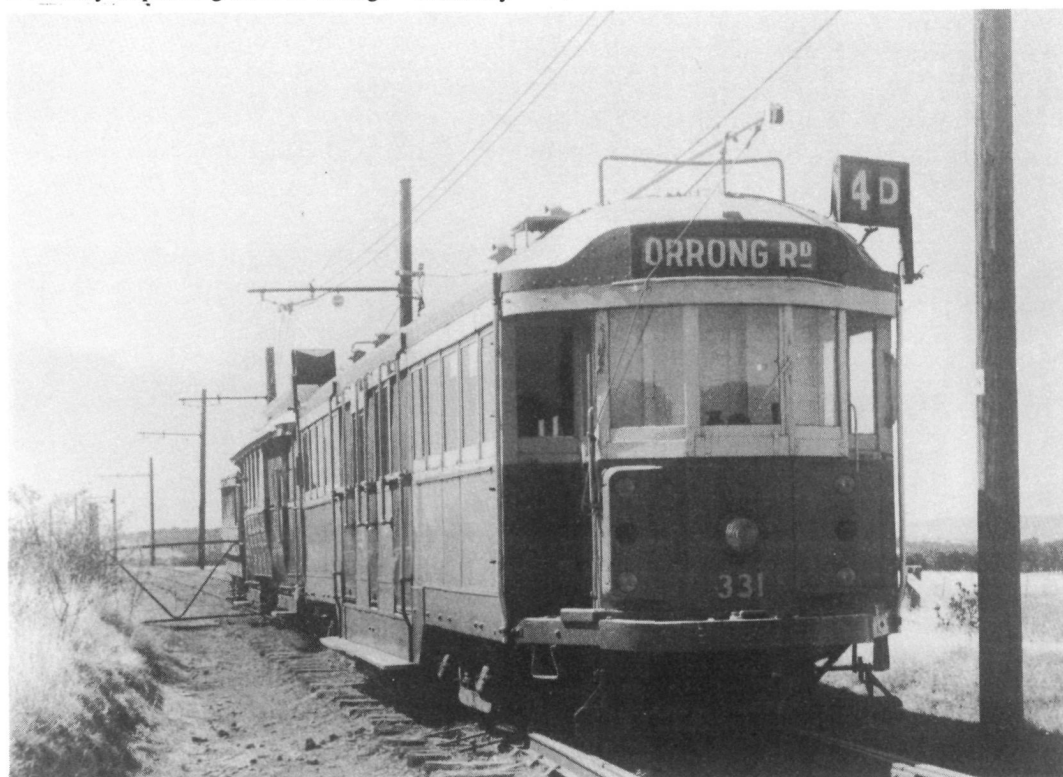
Also located on the museum property are the bodies of several recently retrieved early Melbourne electric trams. These include A type "California" cars and examples of the rare F and G classes which entered service as cross bench enclosed summer cars and were eventually converted to the more conventional "California" configuration.

In addition to all these attractions the TMSV has a steadily expanding fleet of vintage "Tramway



*Melbourne cable grip car No. 28 at Bylands on 25 February, 1984.*

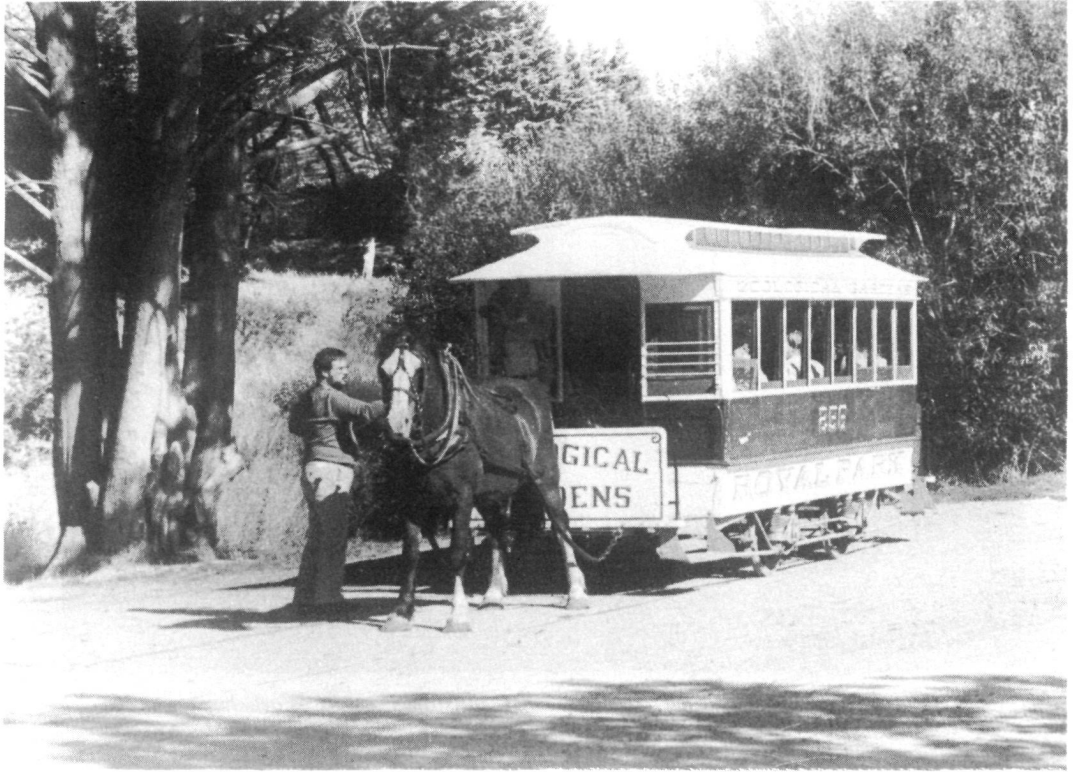
K. McCARTHY



*W2 331, Ballarat 17 and a cable tram trailer stand at the present northern limit of electrification on the TMSV's main line.*

K. McCARTHY





*Hooking up the horse to saloon car 256 at the southern end of the Hudson Park horse tramway at Kilmore, Victoria. 25 February, 1984.*

K. McARTHUR

Buses". This collection will guarantee that future generations will be able to witness an almost complete display of the evolution of street transport in Victoria from the 1880s.

The next area visited by the party was the nearby town of Kilmore where the Hudson Park horse tramway was specially opened for inspection. Several trips were made in saloon car 256 while replica open toastrack horse car 253 was admired in the car shed.

The group departed from Kilmore on the return trip to Melbourne at 5.30 pm after expressing their appreciation to the TMSV members who made the visit possible.

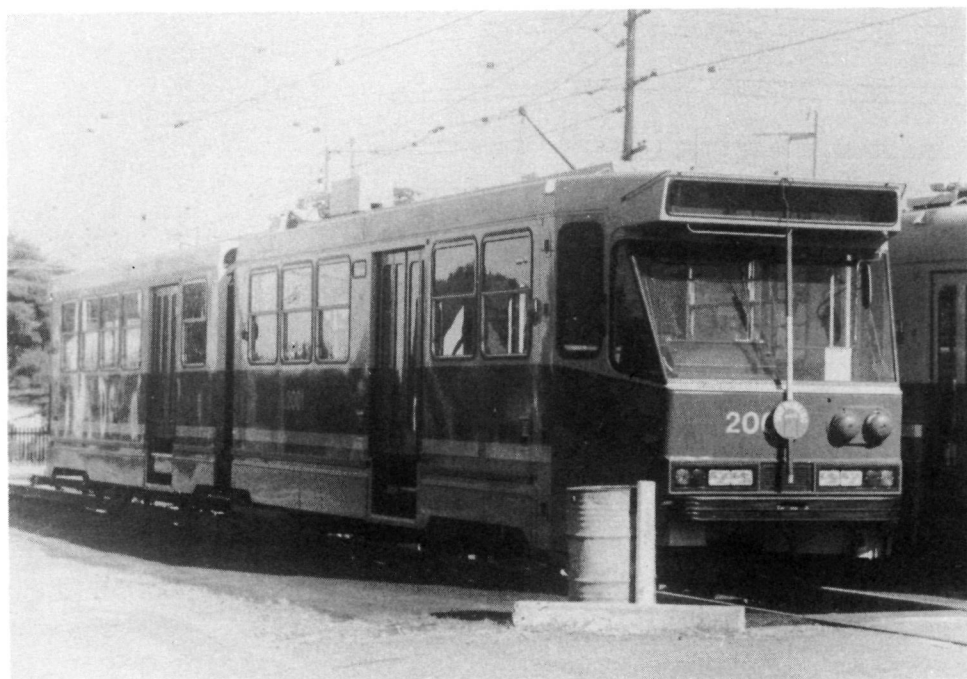
That afternoon was the 23rd anniversary of the closure of the Sydney tramways. Those present who witnessed that event in 1961 agreed that the fortunes of the museum movement and the future of continued tramway operation in Australia are now more secure than anytime in the intervening period. In 1961 it seemed only a matter of time before trams would vanish completely from Australian streets.

The Sunday morning itinerary consisted of a visit to Preston Workshops. Mr. John Scholtz, the Assistant Works Manager generously gave up part of his weekend to escort the party around the workshops.

W2 type trams 392, 560 and 577 were first inspected in the former Thornbury Depot followed by 370 and 637 in the Preston Workshops. The Sydney Tramway Museum representatives from Loftus selected car 392, the Newcastle Museum settled for 637 and the Port Kembla Museum Project group decided on the purchase of cars 370, 560 and 577.

With the selection task completed the party then inspected the workshops. New A type trams 231 and 232 attracted much attention. The final fitting out of these vehicles was underway and it is clear that the units will be fitted with standard carbon shoe trolley poles.

The new articulated car 2001 was standing on the open road at the northern boundary of the property. This piece of advanced technology occupied the party's attention for some time. It is a



*Melbourne's new articulated tramcar 2001 outside Preston Workshops on 26 February, 1984.*

K. McCARTHY



*A comparison of front ends. Articulated car 2001 (left) and Z3 car 144 at Preston Workshops. "Men Working" signs hang from the destination box rails on both cars.*

K. McCARTHY

massive vehicle which seems to be fitted with retractable steps suited to high platform and low road level loading. Current will be collected through a single hinged arm pantograph located above the centre articulated bogie. This visit caused the writer to recall a similar inspection in January 1951 when PCC car 980 was seen and demonstrated in Malvern Depot when it was in its first flush of public operation. It does not seem that 33 years separate these two inspections of unique vehicles. The technology introduced on 980 in 1950 took 25 years to be applied to the Z design. It is hoped that the features of 2001 will not have to incubate for a quarter century before being used on a production fleet of tramcars!

The success of the Melbourne Z type tramcars, the advanced technology of the new A cars and the features of articulated car 2001 certainly leave no doubt that Melbourne made the correct decision when it retained its tramway system while Brisbane, Sydney and Adelaide backed the wrong urban "horse" by making the change to bus transport in the 1950s and 1960s.

During Sunday afternoon 26 February and extensive tram tour was conducted on part of the Melbourne tramway system in Y1 car 612. On this jaunt the chocolate and cream L car was observed in traffic on the West Coburg route to the Zoo. The tour concluded at dusk bringing to a close a most enjoyable and rewarding weekend.

## HERE AND THERE

### NEWS ITEMS OF INTEREST FROM ALL OVER

#### Canberra

The roof of the Tradesman's Club building has been extended eastwards to cover the Brisbane and Adelaide trams although the picture windows have yet to be fitted.

Brisbane four-motor car 499 has been repainted in Phoenix car colours (carried by cars 547-554) and a new ceiling is being fitted. Adelaide 156 is also receiving attention and the sides of the saloon have been primed. The sliding doors have been

removed from the toastrack portion of the car for restoration.

#### Goolwa

It has been reported that proposals for a horse tramway at Goolwa have been put forward. The intention is to relay track on portion of the original roadbed of the 1854 horse operated line from Goolwa to Port Elliot which was South Australia's first railway venture.



*The one that got away! D class 156 on its way to Canberra. The AETM assisted the Tradesman's Club to acquire the car but resisted the temptation to divert it to St. Kilda!*

J. RADCLIFFE

## Victor Harbor

Moves are afoot to return horse trams to Victor Harbor in time to celebrate the 150th Anniversary of South Australia in 1986. It is understood that track will again be laid on the causeway linking Victor Harbor station with Granite Island, with possible operations back as far as the Hindmarsh River.

## Rockhampton

The last reports of tramway preservation in Rockhampton appeared in the August, 1976 issue of *Trolley Wire* when the activities of the "18-35 Group" of the Rockhampton Branch of the National Trust of Queensland were recorded. This group had collected what remaining parts could be found of the Purrey steam trams and trailers and had them stored in a shed at the local showground, with the eventual aim of restoring a single tram to static condition.

News has now reached us that the Rockhampton City Council has taken over the project with the view of having a tram restored for the 1988 Bicentenary. A steering committee has been formed to help the Council get the project under way.

The 75th Anniversary of Council operated public transport will be celebrated in June and will culminate with the holding of a celebratory Tramways Ball on 8 June.

From that date restoration will commence on the tram.

## Port Museum Project — Port Kembla, N.S.W.

The possible use of electric trams in the Port Kembla area was briefly mentioned in this magazine in August and October 1978. At that time the Port Kembla Chamber of Commerce obtained options on the purchase of three Melbourne tramcars for the proposed project.

Although further developments have not been mentioned in this publication, various negotiations have been conducted in the ensuing period. The main thrust over the last two years has resulted in the Port Kembla Task Force negotiating for the establishment of a grain terminal at the port, together with the construction of a new electric railway from Maldon to Dombarton and the duplication of the existing Illawarra track from Coniston to Dombarton via Unanderra.

Work commenced on this new railway last year and during February the NSW State Government announced that approval had been given for the construction of a grain handling terminal to cost in excess of \$110m.

Unemployment has reached crisis proportions in the Illawarra Region during the current economic depression . . . the average has reached

14% while some suburban regions record unemployment figures as high as 24%. Joint Federal and State instrumentalities have been established to assist the region in its present predicament, one such initiative being the Steel Centres Assistance Scheme.

In 1978 the Port Kembla Chamber of Commerce and kindred groups approached the State Government to consider the possibility of establishing a large industrial museum in the district. The then Minister for Planning and Environment, Hon Paul Landa, responded that the government was sympathetic with the proposal and some seaside land was set aside for the project.

In January 1983 this parcel of land was released for the establishment of a large factory in which laser engineering techniques will be developed so the Port Kembla Museum Scheme had to look elsewhere for a suitable site.

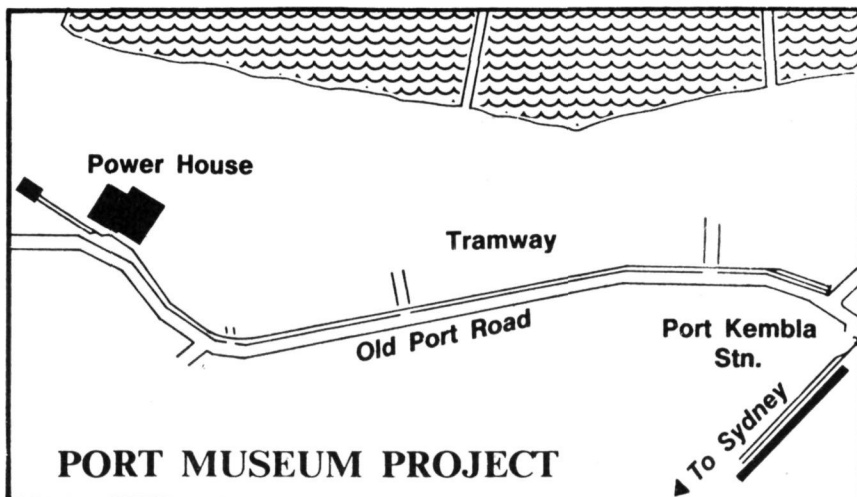
The former PWD power station stands disused on the southern shore of the outer harbour. This consists of two main sections; buildings which housed the circa 1920s power house and the larger complex erected in the 1950s. The boilers and generators were removed from the earlier portion in the early 1960s but boilers and turbines stand disused in the newer buildings. This station has now been proposed for a museum in which the history of the industrial and social development of the Illawarra area can be displayed.

The key to the success of the project is the establishment of some form of reliable regular transport to cover the 1 km which separates the proposed museum site from Port Kembla station. The station will be the terminus of the electric railway from Sydney due for completion in December 1985. The Port Museum Steering Committee has drawn up plans to have an electric tramway constructed along this 1 km route operated by former Melbourne W2 type cars.

The whole concept of a tramway and museum has met with unanimous support from the public and the news media in the Illawarra region while the Wollongong City Council has approved the project in principle.

A considerable amount of negotiations and studies have still to be conducted before work commences on the museum and the first tram departs from the car shed but local politicians, aldermen, businessmen and trade union officials have expressed their support and the future of the project seems promising.

In the meantime the generosity of Port Kembla businessmen has resulted in W2 type tramcars 370, 560 and 577 being purchased while a covered secure store and restoration location has been offered adjacent to Port Kembla station on the proposed route.



Map by  
courtesy Illawarra  
Mercury

The museum and tramway development is aimed in the initial stages to provide jobs during the economic recession. A considerable work force will be required to prepare the buildings and surrounding areas during the establishment period while relics will be restored in local workshops under work creation funding. The completed museum will be mainly located indoors thus avoiding the need for a large permanent staff which is required for, and has caused economic problems in, many open air village type museums in recent years.

The initial Heritage and Tourism study of the entire district was conducted in June 1983 and the opinion emerged that such a museum concept would be viable. The next step requires a detailed feasibility study to be conducted which will investigate the structure needed to make the project financially successful, the type and availability of exhibits for the museum, and the suitability and availability of the former power house for the project.

If this report is favourable to the scheme, the c 1920 buildings will be prepared for the first stage of the project with an expected opening in late 1986. The museum development stages span the period 1984 to 1988; 1984 being the sesquicentenary of European settlement in Wollongong and 1988 the bicentenary of European settlement in Australia.

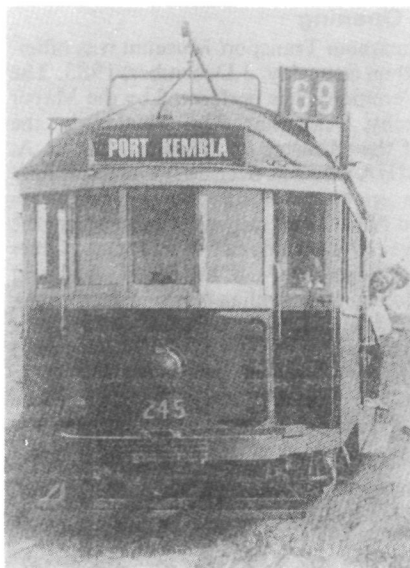
The supporters of the project have been asked to what use the W2 trams will be placed if the museum project does not reach maturity . . . the assured reply has been received that the cars will still be used in the district on other projects if the museum proposals fail. In recent years several tramway schemes have emerged in the Illawarra District ranging from short routes linking car parks with shopping centres to a major light railway project for the southern suburbs. This latter scheme envisaged

a loop linking Port Kembla station with Oak Flats through Kemblawarra, Primbee, Windang, Lake Illawarra and Warilla, closely settled areas which rely on private bus routes.

Let us hope that the Port Kembla schemes reach fruition and that trams will be a transport mode in Port Kembla by the time the 25th anniversary of the closure of the last street tramway route in NSW occurs in February 1986.

#### Glenelg Update

The STA of SA has announced that City Depot would cease to be a bus depot from February, 1984. The 30 buses, along with the drivers, were transferred to other depots from 12 February, 1984. It was also announced that a new tram depot is to be built on land adjacent to the Morphettville racecourse. This would enable City Depot to be completely closed. The future of the adjoining Victoria Square offices is still to be decided, but they are situated on prime city real estate.



Reproduced by courtesy Illawarra Mercury

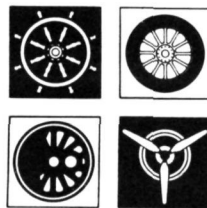




*Overhead testing on a newly wired line. Locomotive 4403 towed electric locomotives 4608 and 4631 and overhead inspection car AL21 for unpowered testing of overhead wiring between Waterfall and Helensburgh on 15 March, 1984. The electric service to Helensburgh is expected to open in early May as the first stage of the Illawarra Electrification project.*

D. GASH

## GLENORCHY . . .



## Tasmanian Transport Museum Society

### Museum Opening

The Tasmanian Transport Museum was officially opened on Saturday, 3 December, 1983. The Opening Ceremony was performed by the Mayor of Glenorchy, Alderman D. J. Shields in the absence of the Minister for Tourism, Mr. G. A. Pearsall, MHA who was overseas. The Ceremony took place on the platform of the recently reconstructed New Town railway station where the Mayor unveiled a commemorative plaque. Other speakers included Mr. A. F. Maddock (Assistant General Manager, Australian National Railways), Mr. P. B. Oldfield (Deputy Director of Tourism) who handed over a cheque for \$25,000 as a Government contribution to the project, Mr. W. E. Mounster (President) and Mr. R. J. Darling (Vice President T.T.M.S.). Speakers referred to the years of voluntary work performed by members of

the Society to bring the Museum to its present stage and expressed confidence that the Museum will fulfil an important role in the community.

At the conclusion of the ceremony the Mayor flagged away a diesel rail car from the station to signal the start of short train journeys for visitors using our 80 year old steam locomotive C22 hauling a century-old carriage from the former Bellerive-Sorell Railway. Afternoon tea, catered for by the womenfolk associated with the Society, was served at the Glenorchy Football Club rooms nearby.

The Museum will now be open on Saturday, Sundays and most public holidays from 1-5pm. Visits by school parties or other groups during the week can be arranged.



*The Tasmanian Transport Museum's opening ceremony taking place on the platform of the reconstructed New Town Station on 3 December, 1983.*

D. JONES

### **Train Operations**

Since the Opening, trains have operated over the Museum tracks on the third Sunday of each month. These are usually hauled by steam locomotive C22. In addition a railcar is run on the first Sunday, though this service is not usually advertised as maintenance on the vehicles may prevent their use.

### **Museum Development**

The employment of a builder and hard work by Society members enabled the entrance building to be completed in readiness for the opening. The resultant facility is a credit to all involved and provides a most suitable introduction to the Museum. As well as providing for ticket sales, the building acts as a sales outlet for a wide range of souvenirs, publications, drinks and confectionery.

The Steam Technology building is now roofed, the floor gravelled and graded, and the two roller doors are on site ready for hanging. The installa-

tion of windows and roof trim will complete this building.

Seven rail tracks have now been laid leading from the turntable in what will be the area of the future roundhouse. Although fully occupied with a variety of railed exhibits (locomotives, railcars and wagons), a re-organisation to allow a better presentation is planned for the near future.

### **Trolley Buses**

For the first time both Society trolley buses are together at the Museum. Ex Hobart Leyland No. 74 and BUT No. 235 have been stored in a variety of locations during Society ownership. No. 235, the last bus to arrive at the Museum, came in November following its participation in Hobart's Christmas parade.

Both buses are now stored in the Steam Technology building, a temporary measure pending a re-arrangement of vehicles within the Electric Traction building.



*Locomotive C22 operating at the Tasmanian Transport Museum on Opening Day, 3 December, 1983.*

D. JONES

## BALLARAT . . .

### Ballarat Tramway Preservation Society



#### Car 661

W3 661's repaint was completed in time for the Begonia Festival. Its debut in chocolate and cream livery was made on Sunday, 11 March, when it ran as a special carrying passengers from the Vintage Train who had travelled from Melbourne. The finished job, complete with gold lining, numbers and monograms, looks very impressive. No 661 ran successfully during the remainder of the Begonia Festival. It was interesting to note that many of the people wanted to ride the tram because it was brown!

#### Begonia Festival

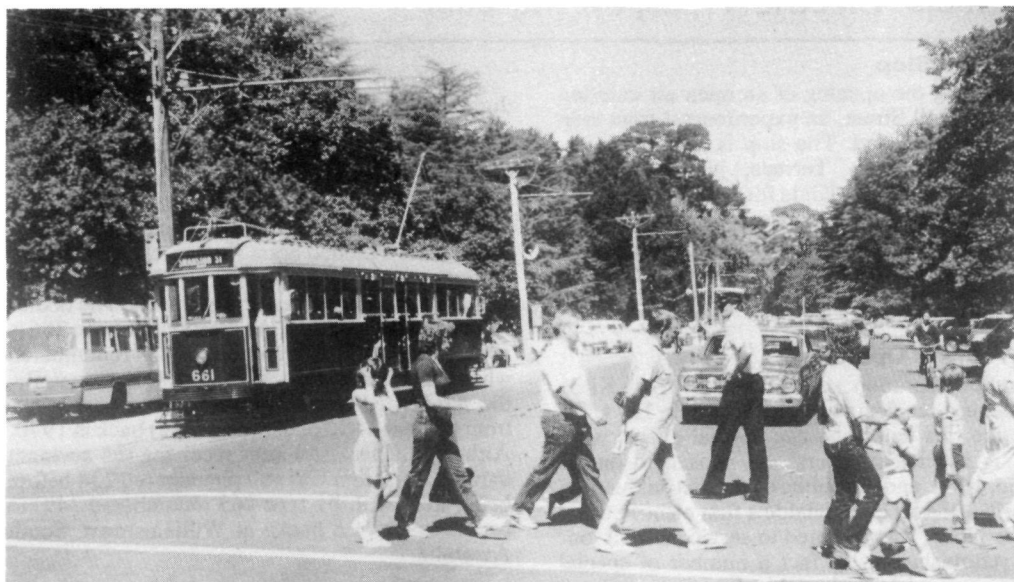
The Festival ran for ten days, finishing on Labor Day, 12 March. During the Festival trams ran on weekdays as well as weekends, with a total of 2657 passengers being carried. The most successful days of patronage were Sunday, 4 March, with 603 passengers. Sunday, 11 March with 652, and the Labor Day Holiday, 12 March with 707 riders.

On Labor Day No. 38 began the service at 10am. From 11am the service ceased for an hour and a half due to the procession. During the after-

noon Nos. 14 and 661 ran out and a three car service was maintained. As is usual with Begonia Festival running, the heavily loaded trams ran the gauntlet of heavy motor traffic. Even parked cars were a hazard, as they were often reversed right into the path of oncoming trams.

### 200,000th Passenger

The Society achieved a milestone on the Labor Day Holiday, that of carrying its 200,000th passenger. This figure was attained in slightly over nine years, passenger carrying operations having commenced on 26 December, 1974.



*W3 661 stops to give way to pedestrians on Labor Day, 12 March, 1984.*

A. BRADLEY



*Ballarat 14 passes between rows of parked cars and traffic on Labor Day, 12 March, 1984.*

A. BRADLEY

# ST. KILDA . . .



## Australian Electric Transport Museum

### New Tram Stop

Following the opening of an open air cafe/tea rooms in Shell Street, an experimental tram stop has been introduced. The stop is near the intersection with Fooks Terrace, just before the tramline enters the St. Kilda foreshore reserve. As it is not a compulsory stop, passengers must inform the conductor if they intend to alight at this point. The conductor then informs the motorman with the appropriate bell cord/buzzer signal when approaching the stop.

### Ten Years of Operation

Public operation of trams at St. Kilda commenced ten years ago on 23 March, 1974. To celebrate this milestone two special events were held. A special members' day was held on 23 March, 1984, and the public event was on Sunday, 8 April, 1984 when Adelaide's first electric tram, A type No. 1, was returned to service after a four year refurbishment. In fact a number of special events were celebrated on this day:

- \* Ten years of public operation at St. Kilda.
- \* The return to service of No. 1.
- \* The 75th birthday of tram No. 1 (entered service March, 1909)
- \* South Australian Heritage Week.

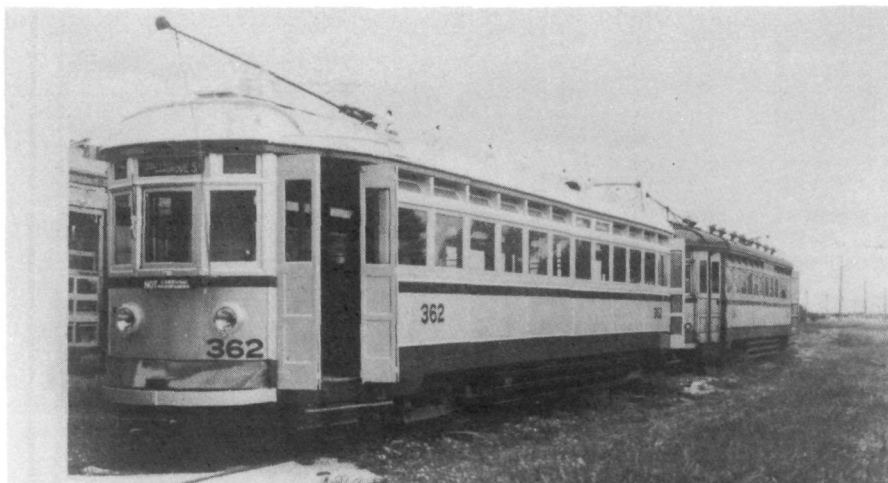
Full details of these events will appear in the June issue of *Trolley Wire*.

### Spare Parts

Recently the AETM was fortunate to retrieve a number of parts for use in car 264 from two drop-centre cars stored privately by member Trevor Tate. Parts included brass fittings, brake rods, tow bar assemblies, air receiver filters, air compressor governors, switches, veneers and seats. The bodies were Nos. 266 and 270. As mentioned above 266 is actually the body of former F type 234 renumbered when placed on the trucks of 266. Coincidentally, the AETM retrieved plywood saloon seat backs from the real 266 (for use in car 282) back in 1970. Although never used after receiving the accident damage, this tram was still renumbered 234 before being sold (with F1 type 263 renumbered 249) to become part of a house at Williamstown, South Australia.

### Trackwork

New member Ken Coleborne has been busy replacing worn sleepers on the tram lines over the past few months. Ken has also been working on modifications to the switches for Roads 7 and 8, the new depot tracks.



*Coupled H type cars are not used in regular traffic at St. Kilda although a number of test runs have been made. The repainted appearance of car 362 can be compared with the 'as received' condition of car 360.*

P. SHILLABEER



### Car 264

Restoration of the western saloon is now well advanced. The driver's cabins and front aprons have been removed. Exploratory work to rebuild the floor and to reconstruct the driver's cabins has begun. Other work included the filling of screw holes, priming and undercoating of the side frames.

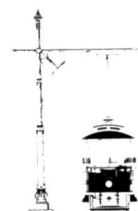
### New Depot

The overhead wiring over Road 7 in the new depot has now been erected. Some modern parafil suspension has been used. Lack of a suitable frog

has meant that the wire does not actually join onto the existing main line overhead wire. However the wire does run parallel and close to the existing overhead for a short distance after the trams join the main line. This will not create a great problem at the moment as motormen are required to change trolley poles at this point to reverse the trams back to the main depot fan, where passengers join for trips to the beach.

All operable trams are being progressively tested to ensure that they safely negotiate the switch leading to the main line and the switch for Roads 7 and 8.

## LOFTUS . . .



## South Pacific Electric Railway

### King Street Cable Trailer Car No. 3

Work commenced at Warrawong High School on the restoration of King Street cable trailer No.3 on 1 February. Although the twelve senior students involved in the project are only allocated two hours per week on "Historic Restoration", by the end of February considerable progress had been made.

The early part of February was spent in sorting parts and discarding those items rotted beyond restoration and not required for patterns. The frail floor was next removed from the main chassis frames and by the end of the month the cracked main side chassis sill had been removed. The many mortises and bolt holes were being set out on a new replacement member at that stage prior to refitting.

The entire wheel-axle-bearing-spring-pedestal assemblies have been completely stripped and by early March all parts had been cleaned of flaked paint and rust, the wheels reprimed and given a finish coat of gloss black and the other running gear items prime coated.

During February one team of students constructed 24 laminated curved lower side body ribs (studs) and work was progressing on a similar number of upper side ribs. It was first thought that entirely new main side posts would have to be constructed as the original items were badly rotted at the lower ends while all had been cut through three quarters of the way up the window tracks when the roof was removed at Loftus. All now will be repaired; in fact five have been fully restored by laminating new timber into the lower portion and using dowels to rejoin the upper ends of the posts.

This has saved a considerable amount of work which would have been required in cutting window guide grooves and rebates if new posts were constructed.

The project has been judged one of imagination in education circles, while a photo and article on the basic concept of this alternative senior education scheme was featured in the *Illawarra Mercury* on 27 February.

### New Site

Following the Christmas/New Year break, work has resumed on the depot yard special work for Roads 1 to 4 and the points for the triangle, which form part of the completed unit. Rail joints are being cleaned and welded rather than fishplated, which will prove to be more satisfactory. On Saturday, 3 March, track was connected to Road 2 to enable the welder, mounted on a four-wheeled trolley, to be brought out of the depot and put to use. The welder is powered by a petrol engine and is proving useful in welding up the pointwork.

The former Lons Road grooved rail has been re-located around the site where required and around the area where the former Railway Square waiting shed is to be re-erected.

Work is continuing on the installation of the domestic power supply and lighting inside the depot.

After a long delay, the Sutherland Shire Council has advised that it has approved the plans for the tramway track for the new main line, plus the drainage for the Museum site.

## Old Site

Work has still been confined to selective track maintenance under the direction of Trevor Glenn on selected Saturdays. Tie bars have been placed in the track outside Road 2 and the curve leading out of the depot yard to the main line has also received attention.

The recent rains brought the weeds up along the main line and Ben Parle has been active with his mower. The result is a much neater appearance along the line. Ben has also been active in the car parking area and the area around the main depot building.

The bookshop is receiving some maintenance and a coat of paint following a break and enter during the week prior to the Christmas Party on 10 December. Peter Kahn is carrying out this work.

The Members' Open Day and Children's Christmas Party was the usual success and many of our younger members were able to try their hand at the controls of the trams for the first time. Santa made his usual appearance for the children, arriving in R1 1979.

The 23rd Anniversary of the closure of Sydney's tramways was marked by an extra running day on Saturday, 25 February. Some prior publicity had been given to the event on radio and in the press which resulted in a considerable number of people visiting the Museum. Our Traffic Manager, Peter Kahn featured in a photograph in the *Daily*

*Telegraph*, swinging from the footboard of N car 728.

A recent visitor to Loftus was Ian Ross, a Director of the National Tramway Museum at Crich. Ian's responsibilities at Crich include electrical engineering (except rolling stock), overhead and telephones. He was in Australia on a business trip.

Chris Jacobs has manufactured new brass runners for the canvas doors in LP car 154 and these have now been fitted into the car.

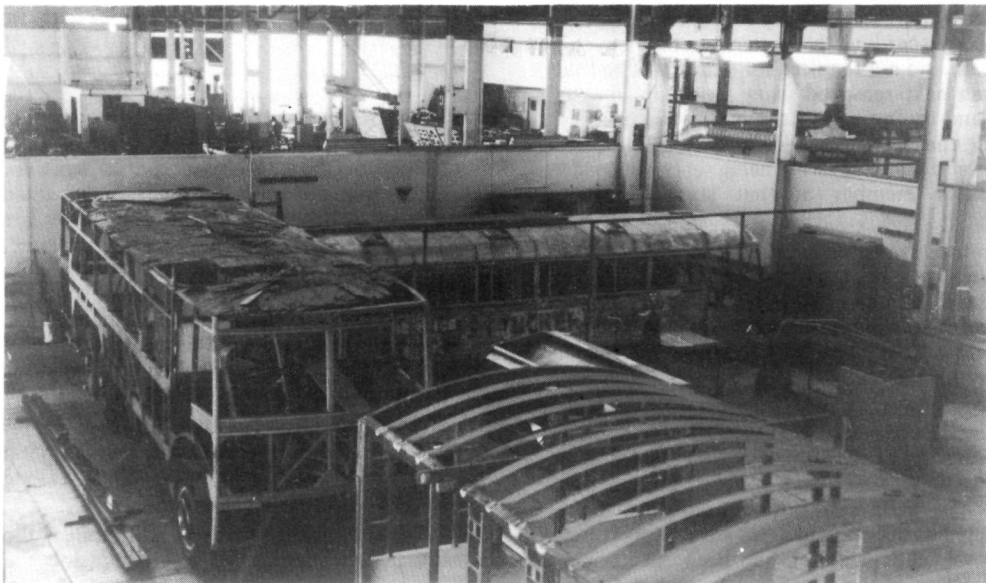
## Trolleybus Restoration

Dennis O'Brien was able to inspect work on the Trolleybus (Kogarah No. 19) prior to the Apprentice Technical College's Christmas break and has reported that the spare top deck, which had been mounted on a trailer, had been separated from the trailer and brought into the workshop, where it was deskinned and the rusted framework repaired and replaced.

By using parts from the two spare top decks and the original top deck from No. 19, a very sound top deck has been created.

The skin of aluminium panels has been cleaned, panel beaten and refitted to the bus framework with very pleasing results.

The trailer mounted top deck, originally from No. 14, has been completely stripped of all useful parts,



*Inside the SRA/UTA Apprentice Training College at Chullora. At left is the lower deck of trolleybus 19 while behind can be seen the top deck from trolleybus 21. In the foreground is the KA class car from Parramatta Park which is also undergoing restoration.*

D. O'BRIEN

such as glass, light fittings and interior trim, for use in the lower section of No. 19.

The recently arrived parts from Cardiff, Wales have all been cleaned, painted and overhauled by Bill Parkinson and some have been delivered to the College for fitting when required.

Once again, we extend our thanks to Messrs Cooper, Graham and Acres of the Apprentice

Training College for the excellent work so far undertaken.

### Late News

Melbourne W2 car 392 arrived at Loftus (old site) on Saturday, 24 March and was unloaded onto R class trucks before being moved into the depot. The bogies arrived on Friday, 30 March when bogies and body were reunited.

## WARABROOK . . .

### Newcastle Tramway Museum



#### Newcastle Activities

The Newcastle Tramway Museum is gradually vacating the store site at Rhonda Colliery made available by the Hunter Valley Steam Railway. This latter group has now transferred most of its rolling stock to Glenreagh the junction on the branch railway to Dorrigo which will eventually be the location of its operating steam museum.

Brisbane car 550, Newcastle LP 327 and Sydney tram LP337 and R 1884 have been situated in the disused colliery yard over the last two years.

#### Sydney Restoration

The restoration of Sydney R1 1995 at Forestville for the Newcastle Museum was documented in the February 1984 issue of this magazine.

On Saturday, 28 January, Brisbane car 550 and the bogies from W3 668 were transferred to Forestville from Newcastle. While at Rhonda the roof of 550 was restored and some external bodywork carried out. Since arriving in Sydney the task of complete restoration has proceeded at a rapid pace.

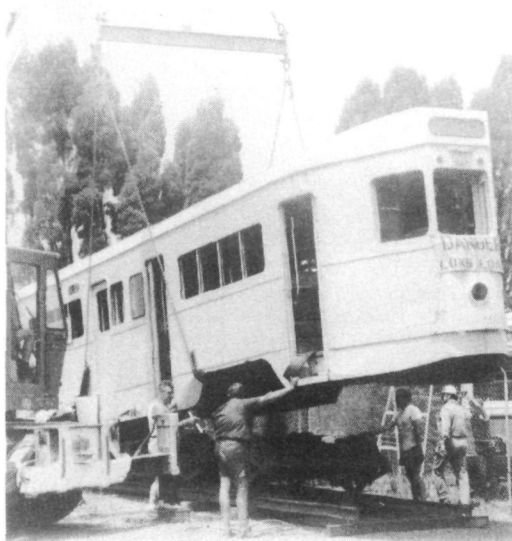
The W3 bogies were delivered with two points in mind:

1. To see if they would fit the Brisbane Phoenix car so that identical units could be obtained from Melbourne.
2. To be overhauled in Sydney for refitting to W3 668.

While the Brisbane car could be positioned on the bogies there was not adequate room for the trucks to swing on curves. Considerable frame modifications would be necessary for these units to be suitable for the Brisbane tramcar.

#### Purchase of W2 637

As mentioned elsewhere in this issue W2 car 637 was selected for purchase by the Newcastle Museum during the visit to Preston Workshops on 26 February. It is intended to use the trucks, controllers and compressor from this car in the restoration of other units while the body parts will be used as spares for the three W2 trams, 244, 245 and 247 already at Newcastle.



*Brisbane Phoenix car 550 being unloaded at Forestville after being transferred from Newcastle on 28 January, 1984.*

K. McARTHUR

