

HEADLIGHTS



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Vintage Trolley in Portland, Oregon. Replica vintage car 513 rounds the bend
on N.W. Lovejoy Street and N.W. 11th Avenue. **FRANK S. MIKLOS.**

Interstate MAX Construction. Portland Tri-Met MAX Blue Line car 118,
outbound from Hillsboro (below), passes the Interstate MAX under construction
at N.E. Interstate Avenue and N.E. Holladay Street. **RAYMOND R. BERGER**



NEWS

BOSTON

Fate of Arborway Line in Doubt... Again

After twice submitting studies to the Massachusetts Department of Environmental Protection attempting to show that streetcars were infeasible, the DEP has mandated the Massachusetts Bay Transportation Authority (MBTA) to complete restoration of streetcar service on the outer end of the Huntington Avenue route known as the Arborway Line. The Arborway Line to Jamaica Plain (trackage between the Heath Street loop and Arborway) was closed indefinitely for repairs on December 28, 1985. Then in November 2000, the city paved over the tracks that stretched from Heath Street to Centre Street along South Huntington, severing a rail connection to Forest Hills.

MBTA has made no secret of its reluctance to resume operating the rail service. Only part of the \$12 million renovation project, a new loop and terminal for the streetcar line at Forest Hills, has been finished. For now, the Arborway Line loops around at Heath Street to make its return journey downtown and the 39 bus serves the rest of the corridor to Forest Hills. MBTA spokesman Bernard Cohen stated in 1985 that the new Southwest Corridor Extension of the Orange Line might change transit patterns and make the Arborway unnecessary.

While residents along the route have demanded the restoration of the rail service, some of the merchants in the Jamaica Plain business district have complained that the return of the rail service would result in the loss of parking spaces. Public hearings will be held to address the various community issues and it seems that several more years will elapse before the streetcars return.

Breda Low-floors Derailed ...Again

Boston's fleet of Breda low-floor streetcars remain grounded because of continuing derailment problems. Only 17 of the 100 Type-8 Breda low-floor cars that were ordered by the MBTA have been delivered and it may cost as much as \$25 million to redesign the vehicles to correct the causes of the derailments.

Tests will be made of various wheel and flange alignments. The design of the center section of the car will also be studied to determine if modifications can be made to make it less prone to leave the rails.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)

45 HIGH STREET, 10TH FLOOR, BOSTON, MASS. 02110
1-800-392-6100; MBTA.COM

VANCOUVER

Vintage Trolley Success Sparks Streetcar Dreams

The success of the Granville Island to False Creek vintage trolley operation has inspired plans for a much larger streetcar service in Vancouver. The initial line would run from Granville Island to Waterfront Centre, with a spur along False Creek to Yaletown.

Future extensions are envisioned to the University of British Columbia and Stanley Park. A line along the Arbutus corridor using an abandoned interurban right-of-way is also being considered with a spur to a new industrial area east of Main Street.

The exact type of rolling stock has not been determined. It could be new vehicles built to resemble old-style streetcars, or it could be modern cars of a contemporary design. The system may be financed by the city or through a public-private partnership.

SALT LAKE CITY, UTAH

New Siemens Cars Delivered

The Utah Transit Authority has received the first of ten new cars from Siemens Transportation Systems. The cars will differ from the original order by providing more spacious aisles, more comfortable seats and sliding doors instead of doors that fold outward. They will have AC propulsion and will be capable of a top speed of 65 miles per hour compared with 55 miles per hour for the original fleet.

NEWARK

Grove Street Extension Opens

The one-mile extension of the Newark City Subway to Grove Street in Bloomfield was opened on June 22, 2002. Subway service to that town returned just a few months after the 50th anniversary of the abandonment of the 29-Bloomfield line. The trolleys on that line also operated into the City Subway and ran on Bloomfield Avenue just a half block from the new Grove Street terminal. Running time for the new extension is six minutes. In the days of the PCC cars the running time between the old Franklin Avenue terminal and Pennsylvania Station was 12 minutes, so it now takes half that time just to go the extra mile. Two minutes were also added to the run-



ning time of the original portion of the line so the running time for the entire line is 20 minutes. When the PCC cars provided service, station stops would only be made if a passenger was waiting to board or if a passenger on the car signaled to stop. Now the light rail cars usually make all station stops whether or not anyone wants to get on or off, thereby slowing down the service.

The new extension continues beyond the Branch Brook Park station which was formerly known as Franklin Avenue. Some trips still turn back there and a pocket track between the inbound and outbound tracks is located just beyond the station for that purpose. The subway extension passes the site of the original stub terminal of the City Subway and crosses Franklin Avenue at grade. From there the double track line climbs a grade to a junction with the single-track Orange Branch of the former Erie Railroad which comes in from the right. That line is now used for CSX freight trains. After crossing Franklin Street in

Car 28 waits to cross Franklin Avenue en route to storage at the new Bloomfield shops on the last night of PCC service.

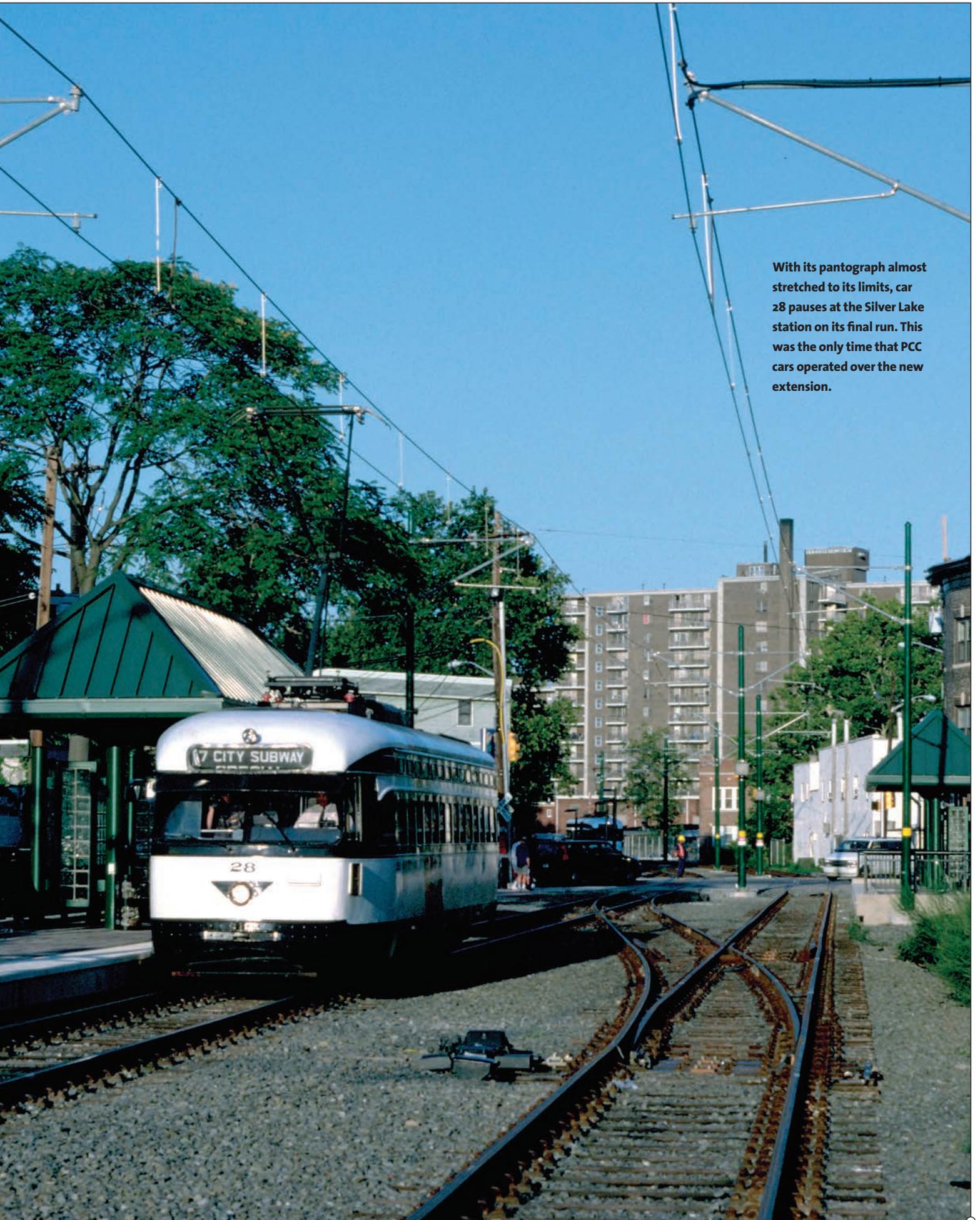
Belleville at grade, the light rail cars pass through the Silver Lake station. Just beyond that station is a grade crossing at Belmont Avenue where the tracks pass switches leading to the new light rail shops and yard. The CSX freight line diverges from the subway line at this point to operate on a parallel track just to the south. The subway extension continues to the two track stub terminal at Grove Street.

The three grade crossings on the new extension are protected only by traffic lights which are not pre-empted by approaching light rail cars. This is the major reason why it takes six minutes just to travel one mile. Also when the traffic light turns red for motor vehicles, there is a pause of about ten seconds before the light rail cars get a signal to proceed. This is done for safety reasons, but it slows down the rail service. There are also very slow speeds at the crossovers leading to the Grove Street terminal. That facility has an island platform with a canopy, but the light rail cars always seem to stop at the extreme inbound end of the platform where there is no protection from the elements. This also forces the passengers to walk a much longer distance to exit the station.

The City Subway extension is within the Zone-one bus fare structure, including monthly bus passes. There is a park/ride facility for more than 100 cars at Grove Street with a daily parking charge of \$2. Parking fees are only sold in conjunction with the purchase of round-trip (two one-way) City Subway tickets or a special monthly ticket that includes the parking charges. Persons with a regular monthly bus pass who normally walk or are driven to the subway must also purchase two one-way tickets if they decide instead to drive to the park/ride lot. Under most circumstances, such passengers will usually try to sell their unused one way tickets to other customers. This is one of those little annoyances that should have been considered before the parking policy was adopted.

After the new extension was opened, it was determined that the fleet of 16 Kinkisharyo light rail cars was insufficient to meet the volume of riders. Two cars were transferred from the Hudson Bergen light rail line to the Newark City Subway to provide more rolling stock for that service.

Because of Federal Railway Administration rules restricting light rail cars from sharing tracks with freight trains, all service after 9:30 PM terminates at Branch Brook Park station even though only about one freight a week operates over the tracks of the City Subway extension.



With its pantograph almost stretched to its limits, car 28 pauses at the Silver Lake station on its final run. This was the only time that PCC cars operated over the new extension.



WASHINGTON, D.C.

Streetcars Proposed for Capitol

District officials have proposed the possible use of streetcars to serve busy corridors where the cost of heavy rapid transit lines cannot be justified. The proposal coincides with plans for a light rail line in the suburbs of Washington that would run between Bethesda and New Carrollton.

Three possible routes are being considered. A north-south route would run between Silver Spring on Georgia Avenue to the Waterfront Metro station. A crosstown route would operate between Woodley Park to the Minnesota Avenue Metro station via U Street. The third route would run from Georgetown along M Street to the new convention center.

Conduit Power Revival?

To be resolved is the question of how the three new lines would be powered, since there is a ban on overhead wires in the heart of the city. D.C. Transit System, which stopped running streetcars in 1962, used a conduit power system with a buried power rail. Similar conduit systems were used in Manhattan and London, though Washington had the only conduit-powered PCCs.

Conduit operation was complicated, and it fell out of favor. One problem was that there was no easy way to switch from overhead wire used in outlying areas to conduit. This would have to be done by hand by a worker called a plow-

man who was stationed in a plow pit at the changeover point. Bordeaux, France may have eliminated many of these issues, because it announced that it is planning to use "ground power feeding" for its new light rail project.

Introduction of 5000 Series Metrorail Cars Delayed

It will be a while before overcrowding on the Washington Metro is relieved. Problems with the 192 new Metrorail subway cars being built by Team AAI-CAF have plagued the vehicles since delivery began last fall, and only a few dozen of the cars have been approved for service. It may be another year before all of the new vehicles are delivered. Most of the troubles with the new cars are concentrated in the complicated software controlling eight computer systems in each car. When the cars entered service they seemed to be running satisfactorily at first, but about a month later they began to experience malfunctioning doors and brakes. Delivery of additional cars is being held up until the problems can be addressed and this has resulted in severe overcrowding on the Green Line during peak periods.

The new rail cars represent part of a \$339.5 million contract to provide 192 new cars from the manufacturing company of AAI-CAF, a teaming arrangement between AAI Corporation located in Hunt Valley, Maryland, and Construcciones Y Auxiliar de Ferrocarriles (CAF) of Madrid,



Spain. The first of the new “5000 Series” cars were launched on the Green Line in August 2001, but as of May 2002 only 36 were in service and 24 are at the Greenbelt Metrorail Yard undergoing final safety and reliability testing (see schuminweb.com/schumin-web/photography/2002/metro-tomorrow.htm for a visual comparison of the Breda and CAF cars).

On May 16, the Board of Directors of the Washington Metropolitan Area Transit Authority (WMATA) approved a modification to the contract with Team AAI-CAF granting a 29-week extension to the delivery schedule (April 2003) in exchange for additional work performed by CAF on the railcars. CAF faces a fine of \$330 per car for each day that the cars fall behind in the new delivery schedule.



Instead of overhead wires, Washington’s D.C. Transit System used conduit power for city operations, as seen in these beautiful John Stern vistas. Similar systems may be used for the city’s light rail line, now in the planning stages, and in Bordeaux, France.

CAF has promised to eliminate the bugs that are causing havoc with the cars and deliver the full fleet as quickly as possible. One of the steps that will aid them in meeting the new deadline is the addition of another final assembly line in the U.S. at their Elmira, New York,

plant. Of the remaining 132 cars to be delivered, 16 are in final assembly at the plant in Hunt Valley, 38 are in storage at the Port of Baltimore and the new Elmira plant, and 78 cars are in various stages of assembly in Spain. ☺

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

600 FIFTH STREET N.W., WASHINGTON, D.C. 20001
WMATA.COM

BOOK REVIEWS

Arkansas Valley Interurban: The Electric Way

by Robert Collins

South Platte Press, 1999

P.O. Box 163, David City, Neb. 68631

southplattepress.com/current/interurb.html

60 pp., \$17.95 plus \$3.00 postage

In 1956, Interurban Press published M.D. Isley's book, *Arkansas Valley Interurban*, as its *Special 19*. [Interurban Press published several special issues on various subjects and gave each of them a number. *Special 19* was the 19th in their series of specials.] A revised edition, with additional photographs, data and corrections, was released in 1977. Now, South Platt Press offers another account of this small, but fondly remembered line, *Arkansas Valley Interurban: The Electric Way*, by Robert Collins.

Primitive horse, mule and electric car lines appeared in the south central Kansas town of Wichita by the 1880s. Soon after, local lines were constructed in Newton and Hutchinson, all roughly in the valleys of the Arkansas and Little Arkansas rivers.

As interurban fever swept the country early in the 20th century, the Arkansas Valley Interurban Company (AVI) was chartered on June 10, 1903. After some false starts and financial problems, the company began construction in 1909. With the aim of building lines in several directions from Wichita, it reached Newton to the north in 1911 and Hutchinson 52 miles to the west in 1915, all in the state of Kansas.

After expending over \$1.2 million, all other projected lines were forgotten. The AVI settled down to serve its region with fleet of heavy interurbans, mostly from the St. Louis Car Co., along with several express motors and locomotives.

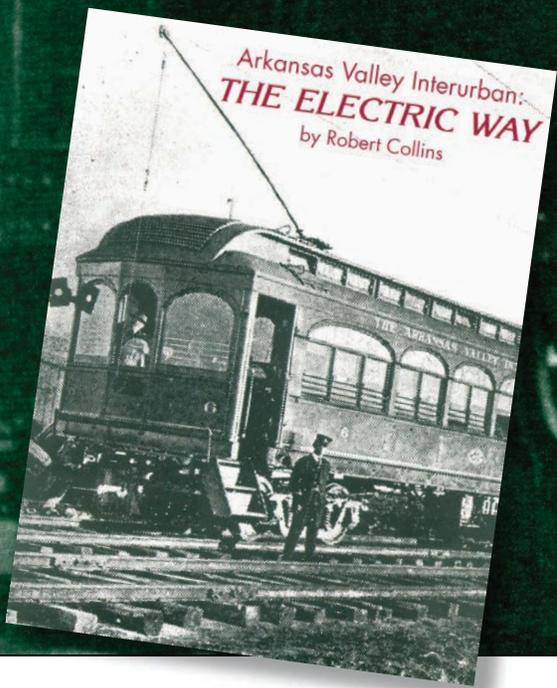
The AVI's history followed the usual pattern of many interurbans. Traffic peaked around World War I, then steadily declined as highways began offering an alternative means of transport. Passenger service ended in 1938, but there was hope the company could survive as a freight carrier. But with no major on-line industries, and with the counties through which it ran demanding payment of delinquent taxes, the AVI declared bankruptcy in 1939.

Later that year, the H.E. Salzberg Company of New York purchased the company, renaming it the Arkansas Valley Railway (AVR). Electric operation ended in the fall of 1940 after the AVR purchased two General Electric 44-ton diesels and a used Brill gas-electric car.

World War II, which stimulated traffic on many railroads, had the opposite effect on the AVR. With steel in great demand, and with no war plants on-line, the company was sold to the federal government in 1942, which promptly contracted with Salzberg to scrap it.

Collins tells the story of the AVI well, in a readable, flowing narrative, chronologically organized. There are numerous photographs, maps and illustrations, a roster, and a bibliography. Layout and design are pleasing, and the price is reasonable.

In contrasting the two accounts of the AVI's history, this reviewer believes the older M.D. Eisley book is more detailed and presents a broader view of the company, but its cluttered layout and topical organization makes it less readable. Although Robert Collins' more recent book does not add much significant new material, it is a worthy effort and deserves a place on the shelf of all those interested in America's brief but fascinating interurban era. ☺





Car 005 has reached the end of the line on S.W. Northrop Street and is about to turn onto N.W. 23rd Avenue for the start of its trip back to Portland State University.

FRANK S. MIKOS



PORTLAND SPEEDS AHEAD

THE ROSE CITY IS BUILDING ON SUCCESS
FASTER THAN MOST CITIES CAN WRITE
A PROPOSAL BY FRANK S. MIKLOS

Since our last visit to the Rose City ("A Tale of Two Cities," *Headlights*, July–Dec. 1999, pgs. 9–20), service has begun on a new downtown streetcar line which connects many of the important attractions in the center of the city. The MAX light rail line has been extended westward to the suburb of Hillsboro and a new branch has been opened to Portland International Airport (*Airport MAX*, pg. 20). Construction is well underway on the a line northward along Interstate Avenue to the Portland Expo Center and an extension southward along I-205 to Clackamas County has been

proposed (*Interstate MAX and the I-205 Project*, pg. 26). Finally, the Vintage Trolley (pg. 28) continues between downtown and the Lloyd Center on weekends and an occasional service is operated with vintage trolleys on the new streetcar line, while a second vintage line, the Willamette Shore Trolley (pg. 30), runs along the Willamette River from Portland to Lake Oswego.

The new \$55 million Portland streetcar line began revenue service on July 20, 2001. It begins at Portland State University and terminates in the upscale Northwest District. Except for the single-track stub terminal on



THE PORTLAND STREETCAR

While the MAX light rail service is designed to transport passengers between the suburbs and downtown Portland, the streetcar line is intended to serve **local travel** in the center of the city.



Northbound cars cut diagonally through the campus of Portland State University. Car 004 approaches the traffic light with the horizontal bar displaying a stop signal for streetcars at the intersection of S.W. Mill Street and S.W. 6th Avenue.
FRANK S. MIKLOS

Because the streetcars are **not as heavy** as the MAX light rail trains, lighter rails and a more shallow roadbed could be used.

Montgomery Street at the university end of the line, the trackage for inbound and outbound cars is on parallel streets.

Most of the route is within the downtown zone where transit rides are free, but travel to the northwest end of the line requires the payment of a one-zone fare. Unlike the MAX light rail service, which has ticket vending machines at each stop, passengers purchase streetcar tickets from vending machines onboard each car. All TriMet bus and light rail passes are accepted on the streetcars.

While the MAX light rail service is designed to transport passengers between the suburbs and downtown Portland, the streetcar line is intended to serve local travel in the center of the city. It is not operated by TriMet, but by a separate city agency known as Portland Streetcar Incorporated (portlandstreetcar.org). However, the streetcars are staffed by TriMet crews. Private funding also helps to support the operation of the line.



Car 004 has just left the stop on S.W. 5th Avenue and is about to turn onto S.W. Montgomery Street where it will lay over on a single-track stub terminal. FRANK S. MIKLOS

The streetcar line forms a 4.8-mile loop which serves the Portland Art Museum, the Downtown Public Library, and comes within a couple of blocks of the Pioneer Courthouse Square. It passes through the trendy Pearl District before reaching the Northwest District with its restaurants and fancy shops. The upper end of the line also serves Good Samaritan Hospital, which is one of the city's largest medical facilities.

Portland's original fleet of five streetcars is nearly identical to cars that are being built for Tacoma, Wash. They were made in the Czech Republic by the firm of Skoda. A sixth car was subsequently ordered to accommodate larger than expected ridership, and a seventh is expected to be ordered for Port-



land as an add-on to the Tacoma order.

Supplementing the fleet are two of the replica streetcars that were built by Gomaco for service on the MAX trackage between downtown and the Lloyd Center. They are being operated to accommodate ridership on the streetcar line until the additional Skoda cars are delivered, but plans call for them to continue to provide limited streetcar service.

In most cases structures are built on air rights over highway or railway rights-of-way, but in Portland the space under an existing freeway (I-405) was utilized for the yard and storage building for the Portland Streetcar line. Here, Skoda-built car 005 is shown in two views at the facility (top left and middle), which also houses the staff of Portland Streetcar. Car 002 (bottom left) poses next to replica vintage car 514 on two of the yard tracks. RAYMOND R. BERGER PHOTOS

The Skoda cars are air-conditioned, with low-floor center sections to meet Americans with Disabilities (ADA) requirements. They are shorter and narrower than the cars used for the MAX service, and all five streetcars have a different combination of colors. One is blue on one side and teal on the other, and another is blue and orange. The remainder are teal and orange, red and orange, and blue and red.

On opening day more than 1,000 people lined downtown streets, and hundreds more stood along the curbs in residential neighborhoods to greet the parade of streetcars. A Brazilian-style band preceded the first car, which was decorated with a green wreath and bright red roses. City officials tossed brightly colored beads to the onlookers, who cheered the passing streetcars. For the balance of the weekend passengers were allowed to ride the streetcars for free.

The routing for the streetcars was carefully chosen to generate the greatest potential ridership. It serves the most densely populated neighborhood in the state with some 20,000 residents per square mile. It passes an abandoned railroad yard that is slated for major residential and commercial development. The existence of a permanent, visible mass transit service was recognized as key to the revitalization of the neighborhoods. Unlike bus routes, which can be too easily changed, a rail line reflects a long-term commitment to the provision of a regular transportation service. Also, people like the experience of riding the streetcars for pleasure, but will not go out of their way

just to ride a bus.

A shop facility and yard for the streetcars is located under the I-405 freeway overpass at 15th Avenue. It occupies the entire block between Northrup and Lovejoy Streets. Inbound and outbound tracks criss-cross near the south end of the line at the intersection of 10th Avenue and Market Streets, where a switch allows cars to turn back.

There is also one switch at 10th Avenue and Morrison Streets for a physical connection to the MAX light rail trackage. This is primarily intended to allow the Skoda streetcars to have access to TriMet's light rail shops if heavy maintenance is required.

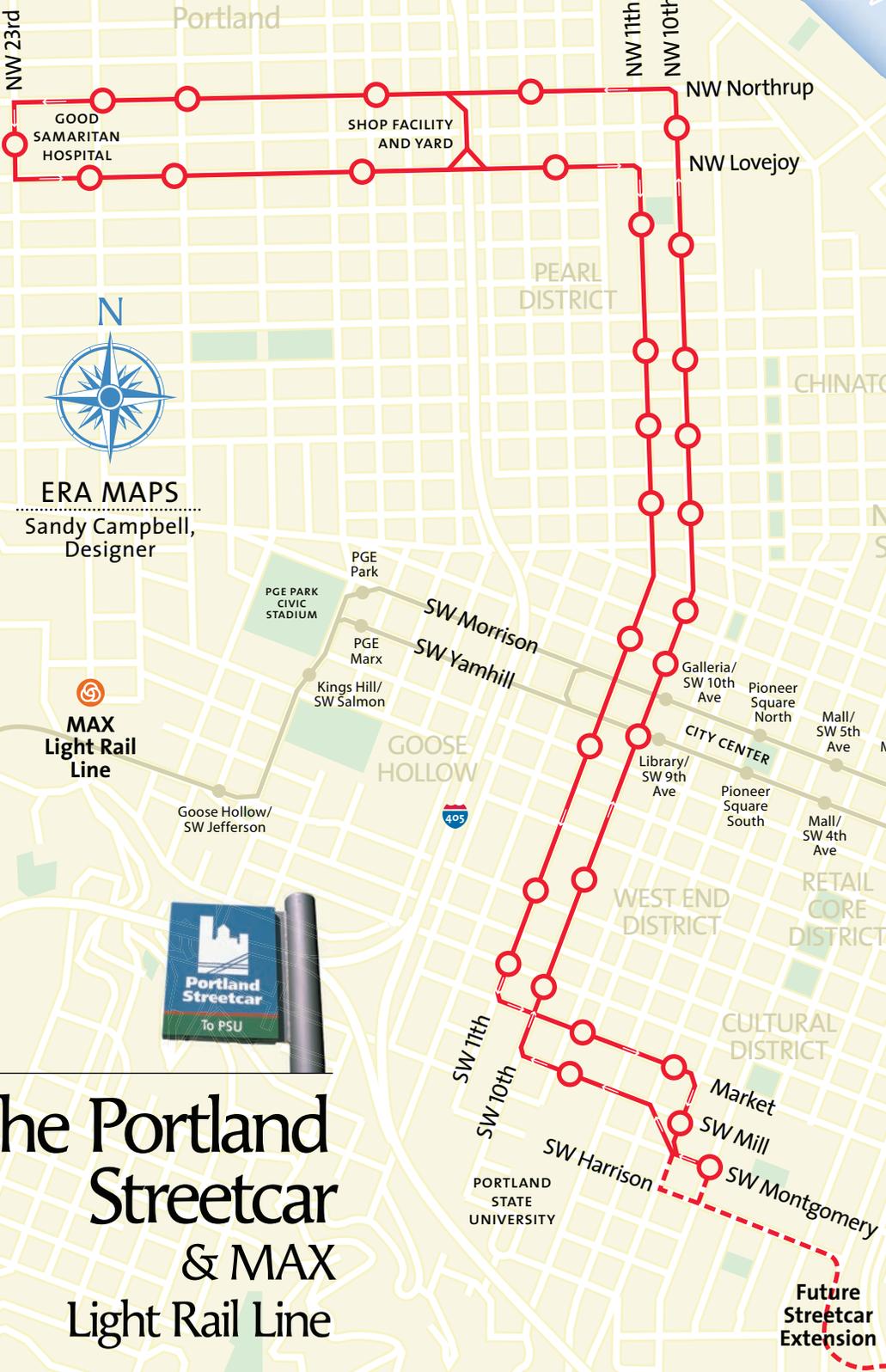
The streetcar tracks are set in the right-hand traffic lanes adjacent to the curb lane parking spaces on 10th and 11th Avenues, Northrup and Lovejoy Streets and 23rd Avenue, but they use the left-hand traffic lanes on Market Street, 5th Avenue and Mill Street at the southern end of the line. The streetcars follow the same traffic rules as all other vehicles on the streets where they operate. They stop for traffic lights and can run at the posted speed limits where traffic conditions allow.

At streetcar stops the sidewalks are extended across the parking lane to meet the streetcar track and to provide a station platform with a small shelter for waiting passengers. The platforms are not high enough for perfectly level boarding, but the streetcars have retractable ramps for wheelchair passengers. Stations are long enough for only one streetcar since the vehicles are not equipped for operation in trains.

Good Samaritan Hospital is at the northern end of the Streetcar line on N.W. 23rd Avenue. Here car 002 stops across from the hospital before heading back downtown.
FRANK S. MIKLOS

The routing for the streetcars was carefully chosen to generate the **greatest potential ridership.**

Interstate
MAX
(2004)



ERA MAPS
Sandy Campbell,
Designer

MAX Light Rail Line



The Portland Streetcar & MAX Light Rail Line