

HEADLIGHTS



HEADLIGHTS

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ON THE COVER

Jersey City, New Jersey. New York's skyline seems to look on with envy as an
outbound Hudson-Bergen Light Rail car, no. 2020, enters the attractive Essex
Street station while inbound Car 2017 rounds the corner onto Hudson Street
towards the Exchange Place station.

Car 2003 (below) inbound at the Garfield Avenue station. **JACK MAY PHOTOS**

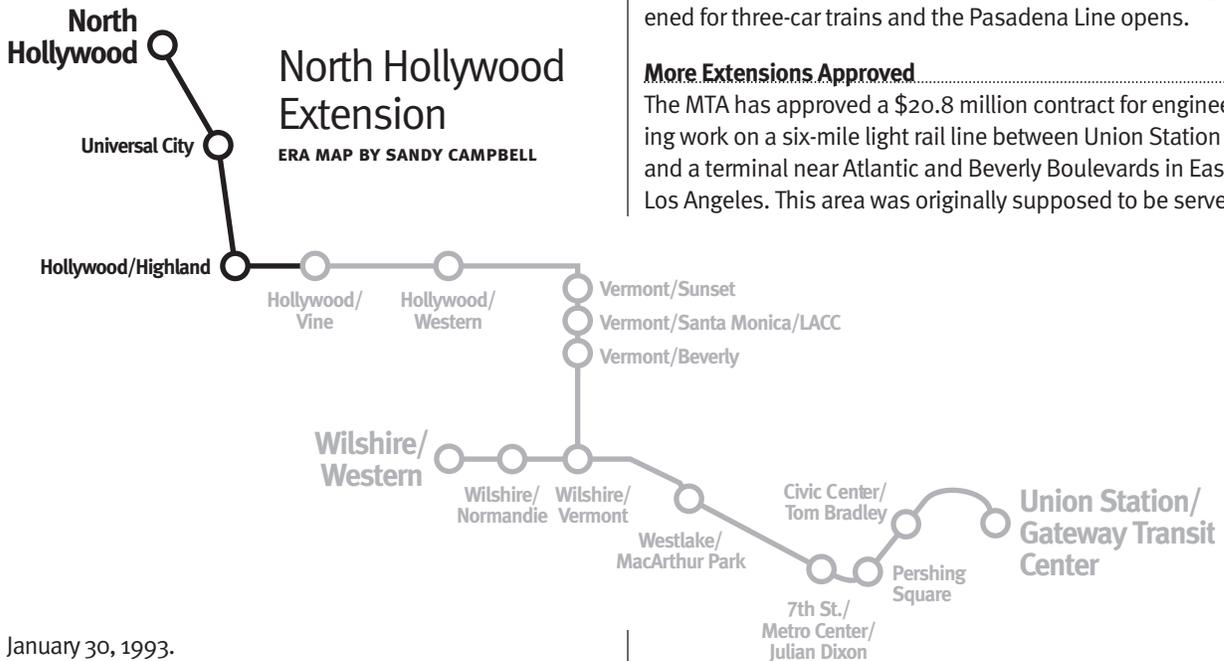


NEWS

LOS ANGELES

Red Line Extension Premieres in Hollywood

It was show time on June 24 when a host of local, state and federal officials turned out to dedicate the 6.3-mile three-station North Hollywood segment of the Los Angeles Metro Red Line subway, which was completed six months ahead of schedule and within the \$1.3 billion budget. The Red Line, which is completely underground, now totals 17.4 miles in length; the first segment opened on



January 30, 1993.

The extension connects downtown Los Angeles with the suburban San Fernando Valley and puts millions of Southern Californians and tourists within walking distance of such world-famous attractions as the Hollywood Bowl and the Universal Studios complex.

Of particular note are the North Hollywood Extension's three stations, which were designed by architects in collaboration with local artists to reflect the history and character of their surroundings. The Hollywood/Highland Station honors Hollywood's cinematic, theatrical and fantastical heritage,

while Universal City Station focuses on the significance of the adjacent historic site where in 1847 Mexico relinquished control of California to the United States. The North Hollywood Station honors the diversity of those who have come in search of "The California Dream."

Standing Room Only

Universal City has become a major stop on the extension. By the time they reach the station at Hollywood and Vine, many of the peak hour morning trains have standing loads. There are standing loads on some trains as late as 11 PM.

Since the North Hollywood extension opened, ridership on the Red Line has nearly doubled. Prior to the extension, the line carried an average of 65,000 daily riders; in July, after the opening of the extension, the figure was 119,150. Further increases are expected when Blue Line platforms are lengthened for three-car trains and the Pasadena Line opens.

More Extensions Approved

The MTA has approved a \$20.8 million contract for engineering work on a six-mile light rail line between Union Station and a terminal near Atlantic and Beverly Boulevards in East Los Angeles. This area was originally supposed to be served

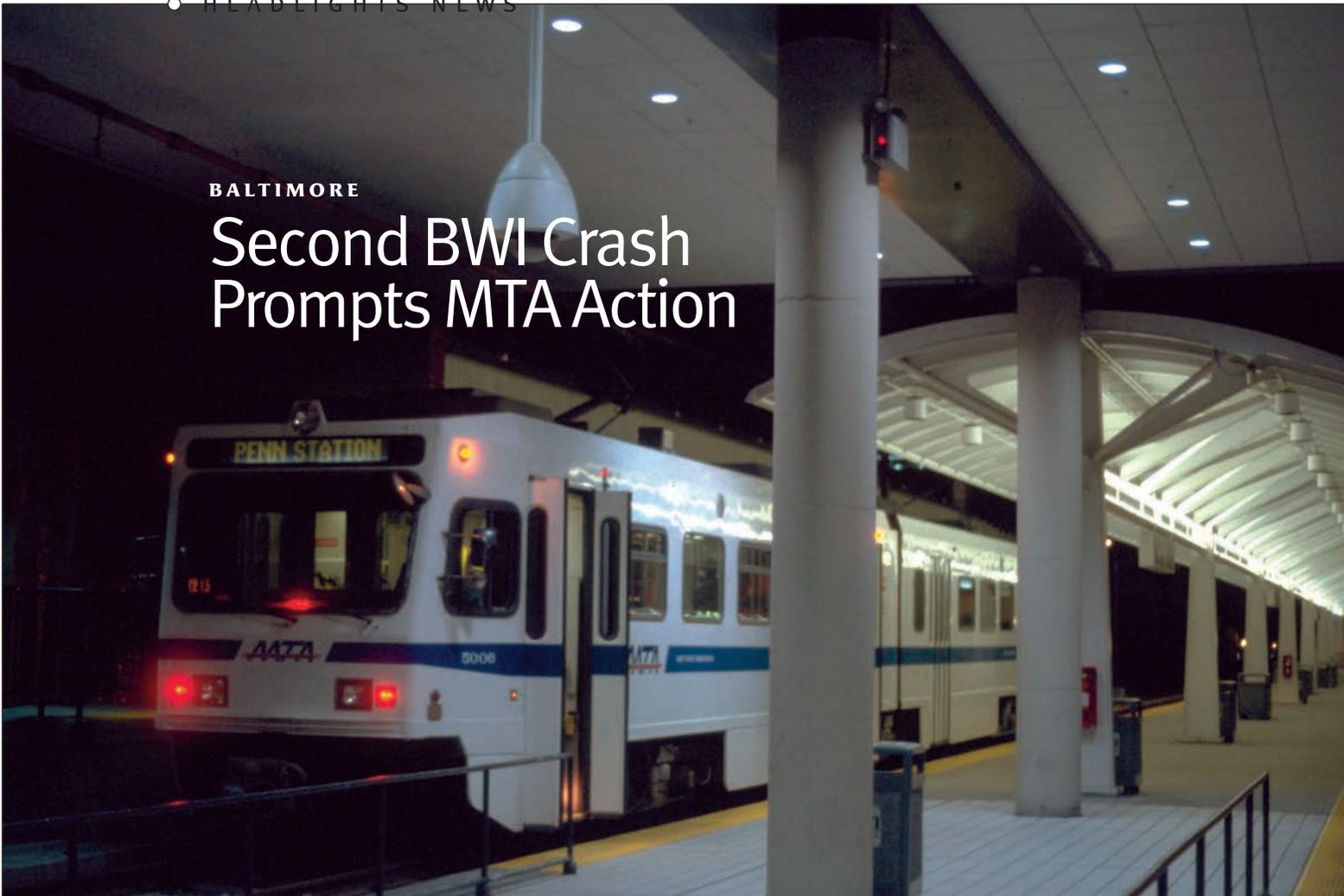
by an extension of the Red Line, which is heavy rail, but that plan was rejected as too costly. The proposed light rail line is about twice as long as the original Red Line rapid transit routing and will include a 1.7-mile tunnel with two stations under Boyle Heights.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY (MTA)

ONE GATEWAY PLAZA
LOS ANGELES, CALIF. 90012-2952

BALTIMORE

Second BWI Crash Prompts MTA Action



Maryland Mass Transit Administration (MTA) engineers have announced that trip stops will be installed on the light rail line at the BWI Terminal following the second accident at Baltimore-Washington International Airport in less than a year. The latest incident on August 15, 2000, was similar to a crash that occurred on February 13 when a light rail train rammed the concrete bumping block and injured several passengers.

The latest accident resulted in injuries to 22 passengers and damaged the end of the car. Upon questioning, the operator of the train, Dentis Thomas, 48, indicated that he blacked out. He also acknowledged that he was taking prescription medication but failed to inform his supervisors of this as required by MTA rules. Sam Epps, the train operator in the earlier BWI crash, was dismissed after traces of cocaine he had used two days before were found in his system.

The transit agency also plans to upgrade the bumping posts at the accident site. The existing posts are designed to withstand a maximum impact of 5 miles per hour. They will be replaced with ones that can take a jolt of 20 miles per hour.

Light rail trains are supposed to approach the terminal at 13 miles per hour or less. The speedometer on the train involved in the latest crash was stuck at 48 miles per hour.

Above, the BWI Terminal station will be getting new bumping posts after a second light rail train crashed there.

FRANK S. MIKLOS

The installation of trip stops is scheduled to be completed before the end of 2000 as an interim safety measure. It will be replaced by a cab signal system to be installed in conjunction with a \$150 million track upgrade beginning in the summer of 2001. Trains will automatically stop if an operator ignores a restricted signal. Ⓢ

MARYLAND TRANSIT ADMINISTRATION

(410) 539-5000
www.mtmaryland.com

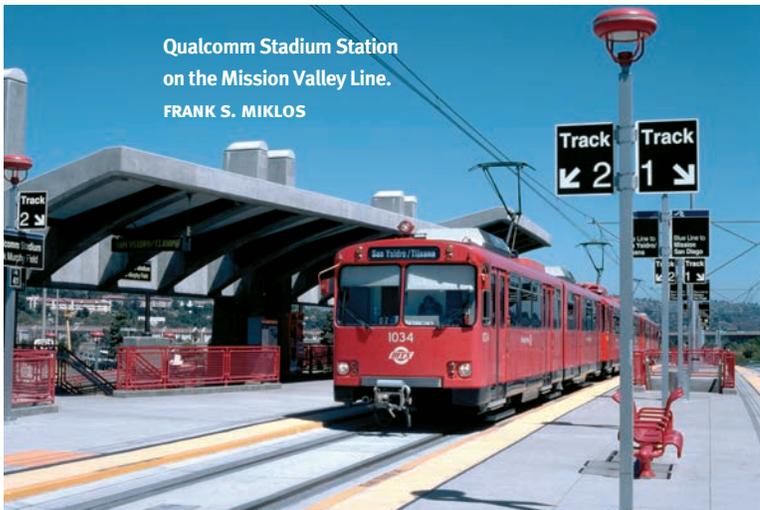
SAN DIEGO

Ground Broken for MVE

Ground was broken on November 17, 2000 for a 5.9-mile extension of the San Diego Trolley. The Mission Valley East Trolley Extension (MVE) will travel along a corridor between the Blue Line's Mission San Diego Station in Mission Valley (just east of Qualcomm Stadium) to a junction with the Orange Line at Baltimore Drive (near Costco) in La Mesa.

Four New Stops

In addition to completing a loop of Trolley lines around greater San Diego, MVE will have four new stops, including an elevated station at Grantville, an underground station at San Diego State University, and ground-level stations at Alvarado Hospital Medical Center and 70th Street. The SDSU station alone is expected to generate 11,000 daily riders and will have banks of elevators and escalators to link the platform with the campus. Revenue service is scheduled to begin in 2004.



Qualcomm Stadium Station on the Mission Valley Line.

FRANK S. MIKLOS

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

SAN DIEGO TROLLEY CUSTOMER SERVICE
1255 IMPERIAL AVE. STE. 900
SAN DIEGO, CALIF. 92101-7490
(619) 595-4949
WWW.SDCOMMUTE.COM/MVE

SAN FRANCISCO

Transbay Terminal/Downtown Extension Project



In mid-August contractors began removing the streetcar tracks from Fremont Street, thereby severing connections between the F-line on Market Street and the Transbay Terminal. While that facility will no longer be served by streetcars, plans are advancing for the construction of a major transit hub on that site.

The proposal calls for the existing 61 year old terminal to be demolished and replaced by a five-story, \$904 million glass-encased facility that will serve Muni, AC Transit buses to the East Bay, SamTrans buses to the Peninsula, Golden Gate Transit buses to Marin County, tour buses and Greyhound. Plans also call for extending the Caltrain line from its terminal at Fourth and Townsend into the new transit hub.

As envisioned, there would be 30 bus bays for AC Transit on the upper levels of the new terminal. Caltrain service would operate into a six-track underground railway terminal which would also accommodate proposed high speed rail lines to other

Above, F-Line PCCs in historic paint schemes. PCC 1007 leads (Red Arrow livery of maroon and creme), followed by PCC 1010 (replicating a special blue and gold livery for the 1939 Treasure Island World's Fair used on San Francisco's double-ended "Magic Carpet" cars).

FRANK S. MIKLOS

California cities. Muni and Golden Gate Transit service would operate out of a ground-level boarding area. Ticket windows and retail shops would be located on the second floor.

Unanswered Questions

Several questions must be resolved before the Transbay Terminal/Downtown Extension Project can proceed, chief of which is obtaining financing for the project. Some funding may come from the sale of public land adjacent to the existing facility. Also to be determined is who will build and operate the new terminal. A new five-member Transbay Joint Powers Authority (TJPA), comprising the various transit operators serving the terminal, has been created to oversee its operation.

SAN FRANCISCO

Third Street Light Rail Project

Ground breaking ceremonies were held on September 27 for the first section of the \$500 million Third Street Light Rail Project. Mayor Willie Brown joined with Muni General Manager Michael Burns in digging shovels into land at the site of the line's streetcar shops. The Metro East Operating and Maintenance Facility will be built on approximately 13-17 acres at 25th and Illinois Streets to store, maintain and dispatch light rail vehicles. The facility will accommodate about 100 vehicles and will relieve overcrowding at the existing San Jose and Geneva Avenue shops.

Line to Be Built in Two Phases

Phase 1 will extend Muni Metro light rail service south from its current terminal at Fourth and King Streets. Present plans

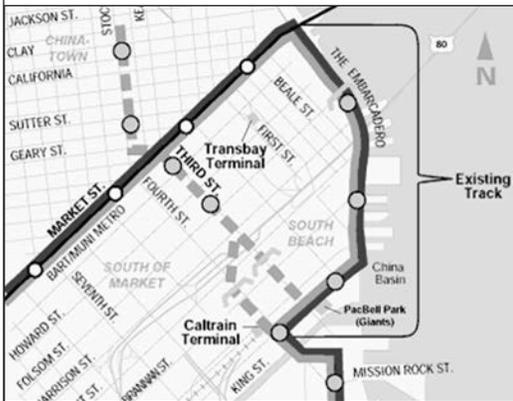
call for the line to operate as an extension of the existing J-Church streetcar route. It will replace the 15-Third Street bus line now serving that area. The line will cross the Fourth Street Bridge and run along Third Street and Bayshore Boulevard, terminating at the Bayshore CalTrain Station in Visitacion Valley. Tracks will be constructed primarily in the center of the street to improve

safety and reliability and 19 stops will be provided. An estimated 50,000 daily riders are expected to use the service which is scheduled to begin operation in 2004.

Phase 2 will extend light rail service north from King Street along Third Street, entering a new Central Subway near Bryant Street, crossing beneath Market Street and running under Geary and Stockton Streets to Stockton and Clay Streets. Underground subway stations will be located at Moscone Center, Market Street, Union Square and Clay Street in Chinatown. Muni and the City are actively pursuing funding for the Central Subway.

THIRD STREET LIGHT RAIL PROJECT

MUNI CAPITAL PROGRAMS
 1145 MARKET STREET, 5TH FLOOR
 SAN FRANCISCO, CALIF. 94103
 (415) 703-6655
WWW.SFMUNI.COM/ABOUTMUN/3RDOVER.HTM



BART: Ridership Up, Speed Down

Ridership on BART reached a record high of 353,000 on July 20, 2000. Higher volumes were carried when the Bay Bridge was closed after the 1989 earthquake, but the July 20th figures reflected ridership under normal operating conditions.

In an unusual development, BART has imposed speed restrictions as low as 43 miles per hour on portions of the Dublin-Pleasanton extension. That line operates in the median of Interstates 580 and 238. The slower speeds are in response to numerous accidents on the adjacent roadways which send vehicles or debris onto the BART tracks. Waist-high concrete barriers and chain link fences separate the tracks from the traffic lanes but these have proven inadequate to keep wreck-related debris from the rail roadbed. The slower speeds will allow train operators more time to stop if they spot such material on the tracks. Officials from BART are working with the California Department of Transportation (Caltrans) to improve the barriers between the rapid transit tracks and the traffic lanes.

ARKANSAS

Little Streetcar Line Planned for Little Rock

The Central Arkansas Transit Authority (CATA) has received a \$1 million federal grant for the first phase of the city's 2-mile River Rail streetcar line. The route will carry passengers across the Arkansas River on the Main Street Bridge from a loop along Markham and Second Streets in the River Market District. Tracks will continue along Main Street through downtown Little Rock. Future extensions may serve the proposed Clinton presidential library and the Little Rock National Airport. Service will be provided by a fleet of replica cars of a traditional design.

**CENTRAL ARKANSAS
 TRANSIT AUTHORITY (CATA)**
WWW.CAT.ORG/RRAIL

ATLANTA

North Line Extension Opens

A 1.9-mile, two-station extension of MARTA's North Line from Dunwoody to Sandy Springs and North Springs was opened on December 18, 2000. Both stations have large parking facilities and are served by several bus routes. Over 1,000 parking spaces are at Sandy Springs while North Springs has nearly 2,500 spaces. A new exit ramp from Georgia Highway 400 leads directly to the North Springs station.

**METROPOLITAN ATLANTA
 RAPID TRANSIT AUTHORITY (MARTA)**
 2424 PIEDMONT ROAD N.E.
 ATLANTA, GEORGIA 30324
 (404) 848-4711
WWW.ITSMARTA.COM

WASHINGTON, D.C.

Metro Eyes Longer Trains

Ridership on the Metrorail system is now up to 611,000 trips on weekdays. Plans have been announced for increasing the length of rush hour trains on the Blue and Yellow lines from four cars to six cars in an effort to provide more seats during the busy periods. Some eight-car trains will also be tested at nights without passengers to see if the stations and power systems can handle them on a regular basis. Eight-car trains will occupy the full length of the station platforms, so they will have to be perfectly positioned to avoid having doors opening inside the subway tunnels.

Before eight-car trains can be operated on a regular basis, additional new cars will have to be purchased. Delivery is expected soon on the first of 192 new cars which will be phased into service during 2001. Most of these will be needed for the final segment of the Green Line, though, which is scheduled to open in January. There still will not be enough cars to permit the operation of longer eight-car trains on other portions of the existing system.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

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

Amtrak Launches Acela



At a press conference in Union Station on April 18, 2000, Amtrak announced that the Acela Express high-speed rail service will begin on December 11.

One daily round-trip between Boston and Washington will be operated. One to two more runs will be added each month after that until all 20 of the new 304-passenger trains are delivered.



The 150-mile per hour tilt trains will eventually provide 10 weekday round trips between New York and Boston along with 19 round trips between New York and Washington, many of which will run through to Boston. The New York to Boston run takes four hours, New York to Washington about two-and-one-half hours, both considerable improvements over pre-Acela service.

Show Me the Money

Acela Express service replaces existing Metroliner service and will have a one-way fare of \$122.00 between New York and Boston, and \$140.00 between New York and Washington. By comparison, the Delta Shuttle costs approximately \$200.00 round-trip between La Guardia Airport in New York and Logan Airport in Boston or Reagan National Airport in Washington (airfares depend upon how far in advance you order; weekend specials can be as low as \$98.00 round-trip).

NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)

60 MASSACHUSETTS AVENUE N.E., 4TH FLOOR, WASHINGTON, D.C. 20002-4285
WWW.AMTRAK.COM

ARIZONA

Light Rail to Rise in Phoenix

The Regional Public Transportation Authority (RPTA) has awarded a contract to Parsons Brinckerhoff for preliminary engineering on a new light rail line that links central Phoenix with the neighboring cities of Tempe and Mesa. The 20-mile Central Phoenix / East Valley Light Rail Project will have about 22 stations and serve a corridor with the highest travel demand in the Phoenix metropolitan area. Along the route are such attractions as the Convention Center, the Bank One Ballpark (home of the Diamondbacks), America West Arena (home of the Phoenix Suns) and the Arizona State University campus and stadium. Service is expected to be provided by a fleet of low-floor cars. Construction is scheduled to begin in 2003 with revenue service starting in late 2006. ☺

REGIONAL PUBLIC TRANSPORTATION AUTHORITY

WWW.VALLEY CONNECTIONS.COM

BOOK REVIEWS

CENTENNIAL STATE TROLLEYS

by **Ken Fletcher, 1995**

Colorado Railroad Museum

P.O. Box 10, Golden, Colo. 80402

11"x 8½" soft cover, 160 pp., \$25.00

What did Aspen, Durango, Leadville and Pueblo have in common? Aside from their Colorado location and railroad connections, they all supported streetcar operations at one time. From Englewood and Leadville, which managed to build only short horsecar lines that never justified electrification, to the large systems of Denver and Pueblo, *Centennial State Trolleys* ranges across the Centennial state to illustrate all the trolley systems that ever turned a wheel there.

Organized alphabetically by town name, each section contains a short descriptive text, a map, and at least one photograph of the company under review. Reproduction of the 200 or so illustrations is excellent, and captions provide additional information. All are black and white, except for the cover pages, and a number are half page or larger in size. *Trolleys* concludes with a bibliography and one striking shot of the state's new trolley line in downtown Denver. Reasonably priced, Fletcher's book stands as a visual record of Colorado's once extensive electric traction network.

Right, rear view of Denver Car 328 loading passengers at safety island near state capital.

JOHN STERN / SPRAGUE LIBRARY COLLECTION



PUEBLO'S STEEL TOWN TROLLEYS

by Morris Cafky and John A. Haney

Colorado Railroad Museum, 1999

P.O. Box 10, Golden, Colo. 80402-0010

8½" x 11" softcover, 144 pages

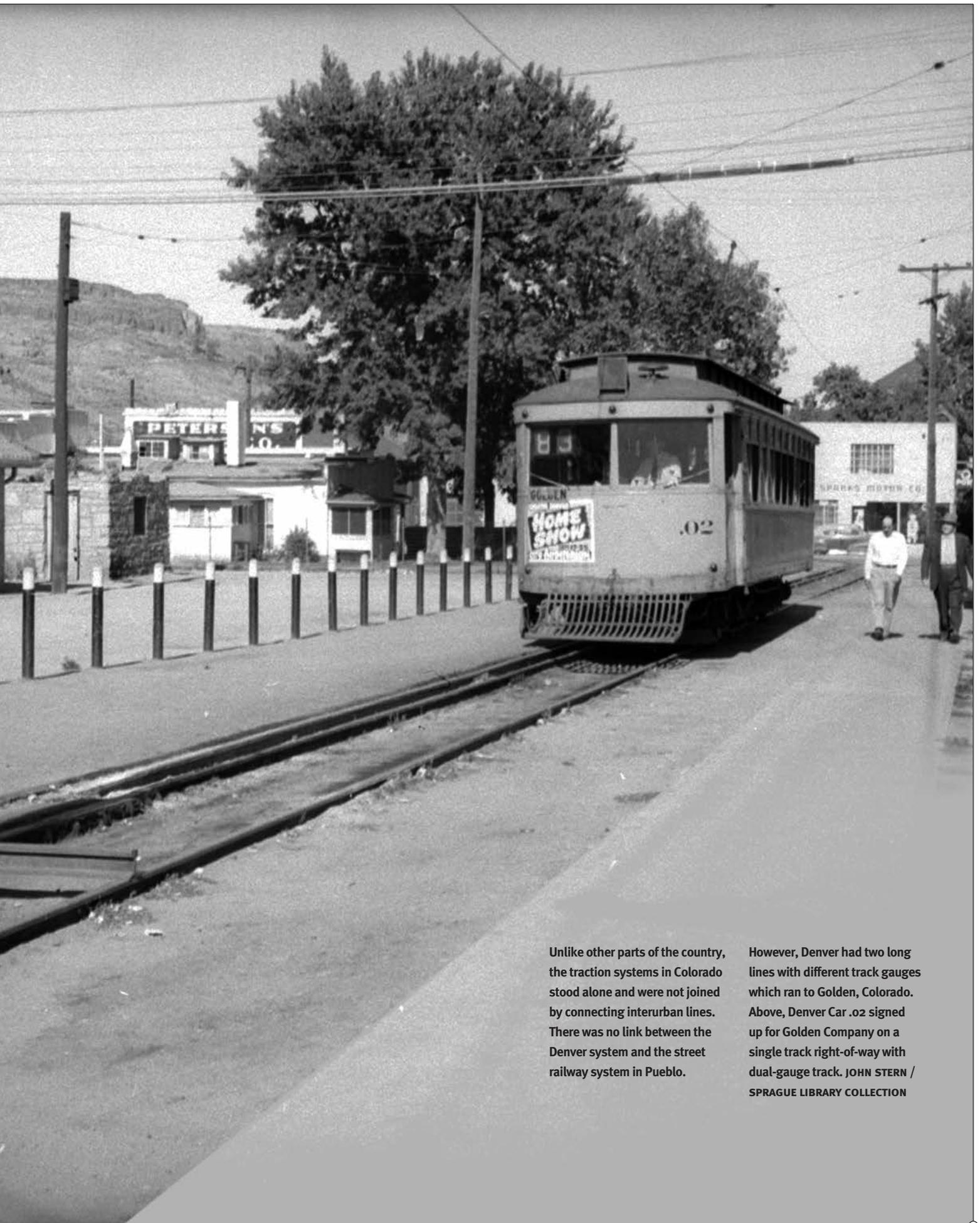
\$30.00 plus \$3.75 shipping

Founded on a trading post in 1842, the central Colorado town of Pueblo grew slowly, reaching a population of 28,000 in 1900 and 50,000 by 1940. With a citizenry of diverse ethnic backgrounds, the city developed a mixed economic base of industry, commerce and regional centers. Divided by the Arkansas River, the separate neighborhoods were linked by a street railway system, laid to an unusual four-foot gauge, and operated in its last decades by an all-Birney fleet of cars.

Horsecar service began in 1878 and gradually expanded, especially after 1881, when the Colorado Coal & Iron Company built a steel mill on the south side of the river. Electrification began in 1890, and three years later the company had 24 single-truck motor cars and 16 trailers. Heavier cars, track rebuilding, and corporate reorganizations culminated in the H. M. Bylesby Company gaining control in 1911 under their Arkansas Valley Railway, Light and Power Company. A great flood in 1921 caused extensive damage to the city's infrastructure, including its transit system. Reorganized as the Southern Colorado Power Company in 1923, the company rebuilt and converted to one-man cars, operated mostly by Birneys. They helped the company weather the hard times of the 1930s, as the older double-truck cars were phased out by 1934. A new franchise in 1940 required an end to the street railway service. The company planned to convert to trolley coaches, but World War II delayed this, and declining ridership after the conflict led to bus replacement of the remaining rail cars in 1947.

Pueblo's Steel Town Trolleys is divided into roughly two parts. The first presents the chronological history of the company, as outlined above, and the second covers anecdotes, details of operations, routes, an illustrated roster, track maps, a bibliography, and an index. The authors write in a sprightly style, and their words are supplemented by many sharply reproduced photographs, including several in color. My only complaint is the poor quality of the binding, at least on my copy; a number of pages have fallen out. Overall, however, this is a good account of a small city traction company and the half-century of service it provided. ☺





Unlike other parts of the country, the traction systems in Colorado stood alone and were not joined by connecting interurban lines. There was no link between the Denver system and the street railway system in Pueblo.

However, Denver had two long lines with different track gauges which ran to Golden, Colorado. Above, Denver Car .02 signed up for Golden Company on a single track right-of-way with dual-gauge track. JOHN STERN / SPRAGUE LIBRARY COLLECTION



JACK MAY; SANDY CAMPBELL (INSET)

LIGHT RAIL BLOSSOMS IN NEW YORK'S BACKYARD

Next Stop, New York? The World Trade Center in downtown Manhattan looms deceptively over Jersey City (left); the Hudson River actually separates the two cities. Here, a HBLR train at the Jersey Avenue station is outbound towards the East 34th Street terminus in Bayonne.

Stretching Room: Although leg room is adequate, as the author discovered (below), seats in Hudson-Bergen Light Rail vehicles are not cushioned. Rather, they have thick fabric on top of a hard fiberglass base.



PART 1: NEW JERSEY TRANSIT BEGINS A BUILDING SPREE WITH THE NEW HUDSON-BERGEN LINE BY FRANK S. MIKLOS

New Jersey's Hudson County is something of a paradox. With the smallest land area of any county in the state, the 12 municipalities within its borders are some of the most densely populated in the United States. Situated on the Hudson River across from Manhattan, Hudson County was in a strategic position to serve as a gateway for the westward expansion of trade from New York harbor. The completion of the Morris Canal between Jersey City and Phillipsburg on the Delaware River in the early 19th Century provided a route for canal boat traffic across the state, serving the industrial cities of Newark and Paterson en route.

The development of the railroad industry sparked an enormous expansion of the port facilities in Hudson County. Freight and passenger terminals were constructed by every major eastern railroad seeking access to New York City. By the turn of the century the Hudson County waterfront was lined with railroad yards.

On the Jersey City/Bayonne border the Greenville yards of the Pennsylvania Railroad served car floats that ferried freight cars to railroad yards on the New York side of the harbor. Continuing north through Jersey City, the Central Railroad Company of New Jersey (CNJ) had a large freight yard with an emphasis on coal traffic which was shipped via that railroad from the Anthracite region of Pennsylvania. Beyond this was the CNJ's passenger terminal, which also served the Baltimore & Ohio Railroad and the Reading Company. Bordering CNJ's passenger terminal on the north was a freight and small passenger facility operated by the Lehigh Valley Railroad which served piers handling barge traffic

in the Morris Canal basin.

Exchange Place in Jersey City was the location of the Pennsylvania Railroad's passenger terminal. North of there the Pennsylvania Railroad had another freight yard at Harsimus Cove which was

used primarily for coal traffic. The Erie Railroad's passenger terminal was at Pavonia Avenue in Jersey City. Trains of the New York Susquehanna & Western Railroad and the New Jersey & New York Railroad also used the Erie Terminal.

North of Jersey City was the City of Hoboken where the Delaware, Lackawanna & Western Railroad had a massive passenger terminal. In Weehawken, at the extreme north end of Hudson

couplers were employed to move freight cars through the street trackage. Piers along the Hoboken waterfront were served by the Hoboken Shore Railroad (formerly the Hoboken Manufacturers Railroad) whose electric freight motors once did the switching. Diesel switchers subsequently replaced the electrics and the trolley wire was removed. The piers and manufacturing plants on the Hoboken waterfront have been elimi-

nated along with the Hoboken Shore Railroad, but sections of track remain in the street paving.

With so much land occupied by railroad yards, the residential districts in Hudson County were forced to make efficient use of the remaining open space. Housing in Jersey City and Hoboken consisted mostly of row houses and multi-story tenements. The original settlements were further hemmed in by the New Jersey Palisades on the west. These are sheer rock cliffs towering over 150 feet above the riverfront communities. Most of the streets in Hoboken are narrow and limited to a single lane with parking. Washington Street, the city's

Reaching the waterfront terminals from the communities on top of the Palisades was as much a challenge for the trolleys as it was for the railroads.

County, the New York Central built a terminal for its West Shore line. The Weehawken terminal was also used by the New York Ontario & Western Railroad.

All of the passenger terminals in Hudson County were served by ferries linking them with various terminals in New York. The Exchange Place, Erie, and Hoboken Terminals were also served by the Hudson & Manhattan Railroad which provided rapid transit service to midtown and lower Manhattan. More commonly known as the Hudson Tubes, that railroad was acquired by the Port of New York Authority in 1962 and renamed PATH (Port Authority Trans Hudson). The yards and shop facilities for the Hudson Tubes were located at Henderson Street in Jersey City, just west of the Exchange Place Terminal.

In addition to the freight and passenger terminals, rail service was also provided to piers lining the Hudson River. The Pennsylvania Railroad had considerable freight trackage in the streets surrounding Exchange Place where several manufacturing facilities and warehouses were located. The most notable of these was the Colgate Palmolive plant which was famous for having the largest illuminated clock in the world on its roof. At night this was easily visible from the Manhattan and Brooklyn waterfronts. Hybrid vehicles resembling a steeplecab locomotive with large rubber tires and



COLLECTION OF FRANK S. MIKLOS



COLLECTION OF FRANK S. MIKLOS

main commercial artery, is one of the few thoroughfares with two-way traffic. Jersey City has its share of narrow streets, but has several important wider arterials. Many of these were built to accommodate railroad and trolley service, which required wider clearances. Christopher Columbus Drive was originally known as Railroad Avenue because it once served as the right-of-way for trains en route to the Exchange Place Terminal. For most of its existence a massive four-track elevated structure for Pennsylvania Railroad trains covered Railroad Avenue. Years after steam locomotives disappeared from the New York City and Chicago elevated structures, the Pennsylvania

Railroad operated steam-powered trains over the streets of Jersey City.

The railroads were challenged by the Palisades in their attempts to reach their terminal sites on the banks of the Hudson River. The Erie, Lackawanna and New York Central all constructed tunnels. The Pennsylvania Railroad carved out a cut through the rocks. The CNJ did the same thing for its line between Jersey City and Newark, but chose to build its four-track main line around the southern perimeter of the Hudson County peninsula through the City of Bayonne. This was linked to the CNJ mainline at Elizabeth via a two-mile bridge across Newark Bay.

The Trolley Years. Trolleys served all of the railroad terminals in Hudson County except for the CNJ's facility in Jersey City. The streetcar lines were all incorporated into the vast Public Service Railway Company in the early 1900s. Reaching the waterfront terminals from the communities on top of the Palisades was as much a challenge for the trolleys as it was for the railroads. Most of the routes scaled the cliffs on rights-of-way that were carved out of the rock face. Others traveled on streets that climbed a steady grade from the lower communities to the "heights," as that area came to be known. The famous Hoboken trestle provided the most spec-

Something Old, Something New: A Grove Street trolley turns from York Street into the Exchange Place terminal on Hudson Street in the late 1930s (top left). In the background an excursion boat is docked at one of the many piers that once lined the Jersey City waterfront. Today (right), the old piers have disappeared in this modern view of a car rounding the bend from Hudson Street onto Essex Street a few blocks south of the photo on the opposite page.



FRANK S. MIKLOS

I Had a Dream: Today (bottom right), the HBLR line crosses Martin Luther King Drive at grade to enter the light rail station at that location. Sixty years ago the street was known as Jackson Avenue and was served by streetcars on the Jackson line. One of those trolleys (bottom left) crosses the bridge spanning the railroad line which at that time ran in a cut. Aside from this, most of the street remains unchanged.



FRANK S. MIKLOS



Manhattan

GOVERNORS ISLAND

14th St. (PATH)
9th St. (PATH)
Christopher St. (PATH)

Hudson River

Hoboken Terminal (FALL 2002)

Exchange Place (PATH)
Essex St.
Harborside
Harsimus Cove

ELLIS ISLAND

STATUE OF LIBERTY

Hoboken (PATH)

Newport

Marin Blvd.

Jersey Ave.

LIBERTY STATE PARK

Liberty State Park

FUTURE EXTENSION CONTINUES TO WEEHAWKEN, NORTH BERGEN AND WEST NEW YORK

Hoboken

2nd St. (PROJECTED)

9th St. (PROJECTED)

COMPLETED AS OF 9/01

Grove Street (PATH)

YARDS & SHOP

Garfield Ave.

Martin Luther King Drive

PATH

Journal Square (PATH)

Jersey City

West Side Ave.

Route 440 Park & Ride (PROJECTED)

LINCOLN PARK

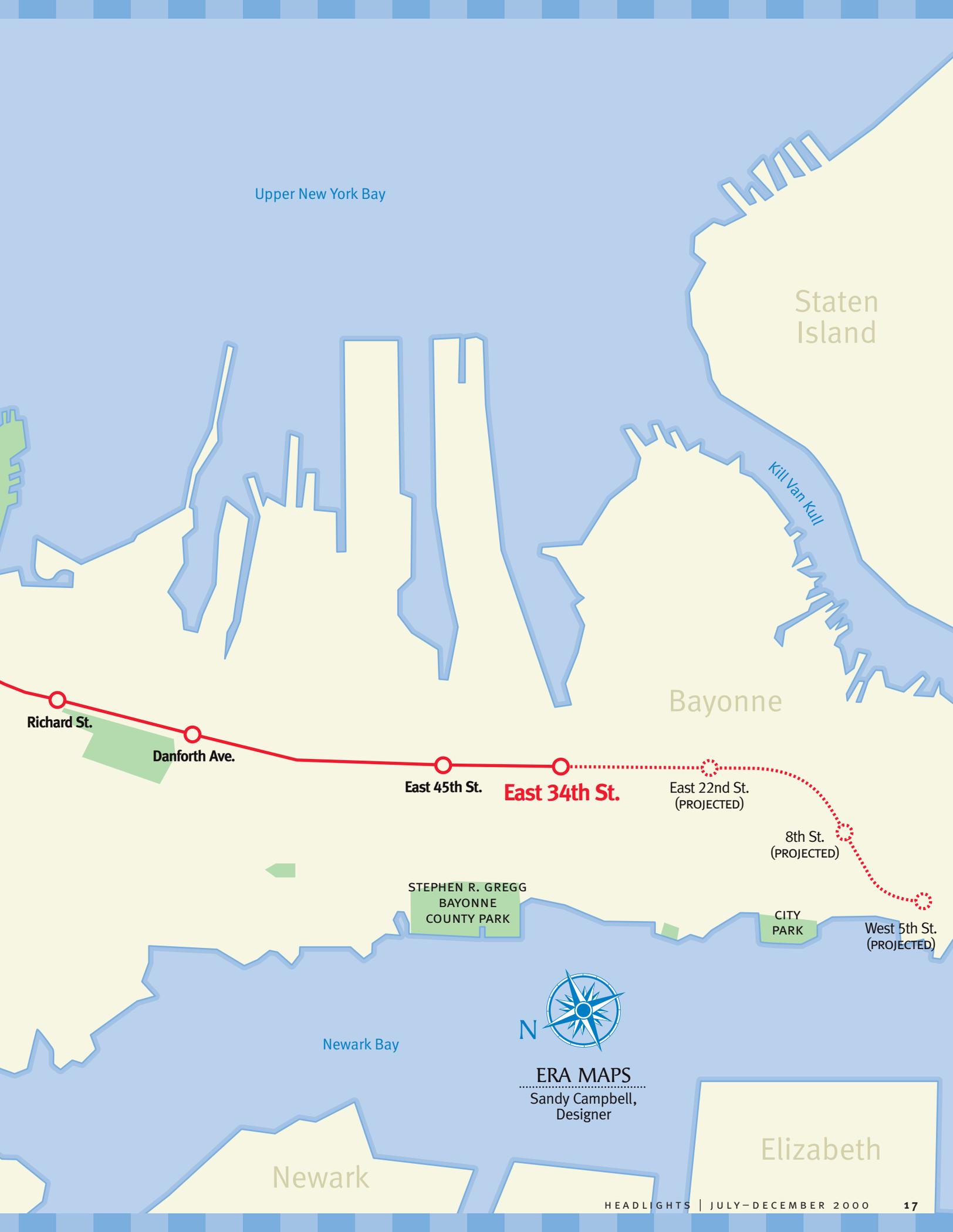
Hackensack River

Secaucus

Kearny



New Jersey Transit Hudson-Bergen Light Rail



Upper New York Bay

Staten Island

Bayonne

Richard St.

Danforth Ave.

East 45th St.

East 34th St.

East 22nd St.
(PROJECTED)

8th St.
(PROJECTED)

West 5th St.
(PROJECTED)

STEPHEN R. GREGG
BAYONNE
COUNTY PARK

CITY
PARK

Newark Bay



ERA MAPS
Sandy Campbell,
Designer

Newark

Elizabeth