



# BULLETIN

Volume 66, Number 10 | October 2023

## New Acting L.I.R.R. President

Metro-North President Catherine Rinaldi has announced that she will transition out of her role as interim president of the Long Island Rail Road (LIRR), which she took on in February 2022 upon the retirement of Phillip Eng, who now leads Massachusetts Bay Transportation Authority.

The announcement came during the September 18 Metropolitan Transportation Authority Joint LIRR/Metro-North Railroad committee meeting. LIRR Senior Vice President of Operations Robert Free, a 32-year LIRR veteran, will assume the role of acting president next month.

Rinaldi will continue to lead Metro-North, a post she's held since 2018, and provide advice on cross-commuter railroad matters.

Rinaldi, one of Railway Age's 2021 Women in Rail honorees, said during the meeting that she was thrilled to take on the interim presidency at LIRR, but now with a variety of important accomplishments done, it was a good time to begin the process of transitioning out of the role as interim president.

Rinaldi reported that Janno Lieber (MTA Chair and CEO) had asked Rob Free to assume the position of acting LIRR president. Rob has served the railroad for many years, starting as a cleaner and working his way up to positions of increasing responsibility in the Transportation

Department, leading to his promotion to Senior Vice President of Operations. In the weeks leading up to the October Board meeting, Rinaldi and Free will work together to transition responsibilities.

Commuters, local elected officials and MTA Board members from Long Island have called for LIRR to have a full-time, dedicated leader and for Rinaldi to step down. Among the issues was the reconfiguration of LIRR schedules upon the launch of Grand Central Madison. Those heading into Brooklyn from Long Island could no longer take a direct train (for the most part) and had to make a lengthy transfer at Jamaica to catch a ride to Atlantic Terminal. Trains heading to Penn Station experienced major overcrowding even as others arrived at Grand Central nearly empty. Under major pressure from riders, the railroad ultimately added more trains heading into Brooklyn from Jamaica. More recently, this month the LIRR tweaked its schedules again and restored some direct service from Long Island to Brooklyn.

Lieber argued that having one president of both railroads minimized conflicts between the two and centralized accountability.

Robert Free will start on Wednesday, October 18. [RAILWAY AGE](#), September 19



## Electric Railroaders Association

Founded August 15, 1934 by E.J. Quinby  
P.O. Box 3323,  
New York, NY 10163  
<https://erausa.org>

## Editorial Staff

### Editor-in-Chief

Jeff Erlitz

### Associate Editor

Subutay Musluoglu

### Circulation Managers

Robert Colorafi (Electronic)

David Ross (Print)

### Contact

[erausa.org/contact](https://erausa.org/contact)

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### Back Issues

PDFs of previous issues can be downloaded at [erausa.org/bulletin](https://erausa.org/bulletin)

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## Trip Announcements

**October 13-15:** Motor Bus Society Fall Convention, San Diego. Visit <https://erausa.org/regional-trips/2023/10/> for details.

## Cover Photo

In less than ideal weather, the Transit Museum's three-car set of former BRT "BU" gate cars (1407+1273+1404) is seen laying over between trips at Kings Highway Station on the BMT Brighton Line during the annual Parade of Trains on September 9. The two 1400-series cars were built by the Jewett Car Company in 1907 but the 1273 was built by the Laconia Car Company in 1903, making it 120 years old. Polly Desjarlais photo

(Right) Den Haag PCC 1193 (BN, 1957), operating in Tourist Tram service, is turning off of the Spui and onto Schedeldoekshaven on July 24, 2016. Voogd075 photo via Wikimedia Commons

## Donations

The ERA Board of Directors express their deepest appreciation for this member donation in August 2023.

### \$1000 and Above

Dennis Furbush

*ERA is a 501(c)(3) tax exempt corporation. Your donations are fully tax deductible and can be made either with your membership renewal or using our donation form on our website: [www.erausa.org/donate](https://www.erausa.org/donate). Your donation helps to maintain ERA's 88-year long tradition of traction education and entertainment!*

## Monthly Zoom Meeting

Friday, October 20, 2023 at 7:30 PM.

## Presenting This Month: Paul Grether

Paul will present Benelux: various traction topics from the 1990s through the present. This promises to be a great introduction to those of you planning to attend next year's Benelux trip (see below).

## How to Join Our Zoom Meeting

The Zoom registration link for this meeting is: [https://us02web.zoom.us/join/zoom/register/tZMof-mrpjoiG9b8sST-1whNSSQhKo7lujr\\_w](https://us02web.zoom.us/join/zoom/register/tZMof-mrpjoiG9b8sST-1whNSSQhKo7lujr_w). You can sign in at 7:15 PM. The show begins at 7:30 PM. If you have any problems, email Bob Newhouser at [bnnyc1955@aol.com](mailto:bnnyc1955@aol.com), or on the night of the meeting, text or call Bob at 917-482-4235.

## 2024 Benelux Trip

ERA is planning a tour next year to Belgium, the Netherlands and Luxembourg. The tour will begin in Amsterdam on May 10 and end in Brussels on May 25. The tour will be based in those two cities and we are planning to visit many tram operations and tram and railway museums in all three countries. Group and optional sightseeing will be available. Included travel will be by rail and day passes will be provided for local transit. Baggage handling between our two hotels is included with a coach transfer. Visit <https://erausa.org/international-tours/2024/> for all the details.





# Notice of Annual Membership Meeting

## Friday, November 17, 2023

This combined Annual Membership/monthly Meeting of the Electric Railroaders Association, Inc. will be held Friday, November 17, 2023, at Manducatis Restaurant, 13-27 Jackson Avenue in Long Island City, Queens. There will be a cash bar starting at 6:00 PM. The meeting will start promptly at 6:30 PM, and a complimentary dinner will be served following the meeting at approximately 7:00 PM. We have room for 50 paid-up ERA members so reserve ASAP. **There will be no room for guests at this meeting. No exceptions!**

**Please reserve your space at this dinner meeting (maximum of 50) by one of the following two methods:**

1. Email your name to Michael Glikin, Treasurer at: [trnsper@aol.com](mailto:trnsper@aol.com) (preferred method)
2. Write to Michael Glikin by regular mail at: 8440 South Dixie Highway, Apt. 1402 Miami, FL. 33143

Longtime member and NYC Transit Department of Subways Supervisor Nick DiBari will be our guest speaker. Nick has been with NYC Transit for 27 years, with 22 as an Assistant Train Dispatcher. Nick will show photos and videos from a recent trip to London and Southeast England, as well as a day trip to Brussels, Belgium. He will also share a few photos of the 2022 and 2023 Subways Parade of Trains. This meeting will be recorded and posted on [erausa.org](http://erausa.org). There will be no live Zoom meeting.

The following slate of candidates for the 2024 ERA Board of Directors was submitted by the Nominating Committee:

- For President: **Robert J. Newhouser**
- For First Vice President: **Sandy Campbell**
- For Second Vice President and Corresponding Secretary: **Jeffrey Erlitz**
- For Third Vice President and Recording Secretary: **Robert Colorafi**
- For Membership Secretary: **Alexander "Sasha" Ivanoff**
- For Treasurer: **Michael Glikin**
- For Director: **Paul Grether**
- For Director: **Subutay Musluoglu**

The by-laws allow any active member not included in the nominating committee's slate to be nominated by written petition of at least 25 other active members of the ERA. The petition must be submitted to the membership secretary no later than the close of the first session of the Annual Membership Meeting. If the petition is mailed to the ERA,

it should be sent by certified mail and must be received by the corresponding secretary no later than November 16, 2023. The petition should be accompanied by a biographical sketch not exceeding 250 words including the name, ERA membership number and qualifications of the nominee, and a statement of what the nominee proposes to do for the membership if elected to the board.

Respectfully Submitted,  
Robert Colorafi  
*Third Vice-President & Recording Secretary*  
*September 30, 2023, New York, N.Y.*  
For the board of directors of the Electric Railroaders Association, Inc.

### Meeting Agenda

1. Call to order & Welcome by ERA President
2. Proof of notice of meeting
3. Recording of attendance
4. Moment of silence/recognition of passing of ERA officers and members
5. Appointment of Parliamentarian
6. Reading of minutes of last previous annual meeting (can be waived by attending members)
7. Reports of Officers
  - Treasurer: 2022 Financial Results, 2024 Outlook, 2024 International Trip
  - Eric Oszustowicz: Forthcoming Brooklyn Book II, serves as next Headlights volumes
  - Second Vice President: *Bulletin* (Editor-in-Chief)
  - President: Zoom and in-person meetings, 2024 North American convention
8. Reports of Committees
9. Election by plurality vote of the membership present and voting, of an Inspector of Elections for the 12 months commencing November 17, 2023
10. Election, by plurality vote of the membership present and voting, of the Membership Committee for the following year (2024)
11. Election by plurality vote of the membership present and voting, of the Nominating Committee for the following year (2024)
12. Unfinished business (if any)
13. New business (if any)
14. Adjournment





Worldwide Suburban Electric Railway, Metro and Tramway Openings in September 2023

Table with 6 columns: Date, Country, City, Segment, Distance (miles), Rail/Metro/Tram. Rows include openings in Poland, Russia, China, Germany, Bolivia, Mexico, U.S.A., England, India, and China.

URBAN RAIL NEWS, SEPTEMBER 30

Rail News in Review

New York Metropolitan Area

NEW YORK CITY TRANSIT (NYCT)

Long-Term Track and Platform Outages

Last month we mentioned that the southbound platform at Westchester Square 6 Station was out of service to permit MLJ Contracting, under contract A-37146, to demolish and rebuild platform stairs and install a new canopy roof.

Over on the IND Fulton Street Line, the crossover from northbound Track K2 (from Grant Avenue) to express Track A4 south of Euclid Avenue is out of service from September 18 to October 23.

southbound service.

Station Re-NEW-Vation Progress

Since we last reported in the September Bulletin, the following stations have been completed in this station renovation program:

Table with 2 columns: Station, Weekend. Rows include Nereid Av (2, 5), Atlantic Av (L), and 7 Avenue (B, Q).

MTA PRESS RELEASES, September 11-20

Annual Parade of Trains

As mentioned in the caption for this month cover photo, the Transit Museum's annual Parade of Trains was held over the weekend of September 9-10. Three train sets were in operation this year, the ex-BRT BU gate cars, ex-BMT Type B "Standards" and ex-IND R-1/9s.



All three train sets, and the museum's R-32s, are posed for a group photo south of Brighton Beach Station. A revenue train of R-46s, operating on a northbound **Q** service, passed by at just the right moment. Marc A. Hermann/MTA photo

were lined up and posed on the storage and express tracks south of Brighton Beach Station.

### New Car Assignments — July 2

On July 2, new car assignments were put into effect system-wide. This was done in conjunction with the July 2 subway timetable change and crew pick.

On the IRT, car unavailability increased from the December 4, 2022, car assignment by ten, to 470 cars. Total peak requirements were unchanged. This assignment reflects the transfer of 20 R-62s from Livonia to 240th Street for Scheduled Maintenance System work.

Line	AM Cars Assigned	PM Cars Assigned
<b>1</b>	10 R-62, 310 R-62A	10 R-62, 310 R-62A
<b>2</b>	350 R-142	350 R-142
<b>3</b>	250 R-62	240 R-62
<b>4</b>	180 R-142, 170 R-142A	170 R-142, 160 R-142A
<b>5</b>	340 R-142	350 R-142
<b>6</b>	370 R-62A	370 R-62A
<b>7</b>	418 R-188	374 R-188
<b>S</b>	12 R-62A	12 R-62A

On the BMT and IND, delivery of R211A production cars has begun. This assignment reflects the conditional acceptance of the first two 10-car trains, maintained at Pitkin Shop and in operation on the **A**. As a result, fleet size has increased by 20 cars from the December 4, 2022, car assignment, to 3,589 cars. Unavailability has increased from the previous assignment by four cars, to 549 cars. As for the IRT, total peak requirements are unchanged.

Line	AM Cars Assigned	PM Cars Assigned
<b>A</b>	200 R-46, 110 R-179, 20 R-211A	208 R-46, 8 R-68A, 110 R-179, 20 R-211A
<b>B</b>	48 R-68, 152 R-68A	40 R-68, 144 R-68A
<b>C</b>	72 R-46, 72 R-179	64 R-46, 72 R-179
<b>D</b>	232 R-68	224 R-68
<b>E</b>	260 R-160A	260 R-160A
<b>F</b>	210 R-160, 140 R-160B1, 100 R-160B2	210 R-160, 140 R-160B1, 110 R-160B2
<b>G</b>	65 R-160B2	65 R-160B2
<b>H</b> *	8 R-46, 5 R-179	8 R-46, 5 R-179
<b>J Z</b>	88 R-160A, 72 R-179	80 R-160A, 72 R-179
<b>L</b>	176 R-143, 16 R-160A	176 R-143, 16 R-160A
<b>M</b>	192 R-160A	184 R-160A
<b>N W</b>	168 R-46, 80 R-68, 16 R-68A	168 R-46, 80 R-68, 16 R-68A
<b>Q</b>	168 R-46	168 R-46, 8 R-68
<b>R</b>	80 R-160A, 190 R-160B1, 40 R-160B2	80 R-160A, 190 R-160B1, 40 R-160B2
<b>S</b>	4 R-68	4 R-68

\* The Rockaway Shuttle is operated as the **H** train but is advertised to the public as another **S** train.

### Three More Stations Become Accessible

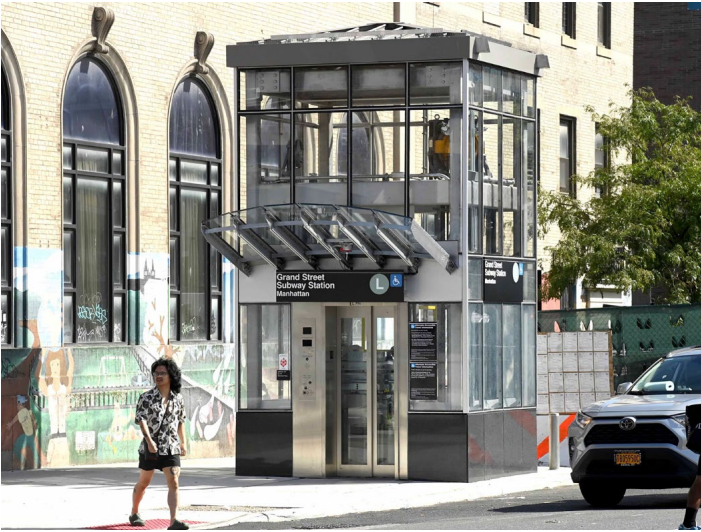
New elevators at Grand Street **L** Station opened to the public on Thursday, August 31. Up in the Bronx, two elevators at the East 149 Street **6** Station, were placed in service on September 15. Six days later, on September 21, a new accessible entrance with a new elevator was opened serving the southbound platform of the Hoyt Street **2 3** Station in Brooklyn.

Grand Street and East 149 Street were funded by a grant provided by the Federal Transit Administration and completed as part of a design-build package of eight stations throughout the subway system, the first such bundle undertaken by MTA Construction & Development as part of an effort to deliver accessibility upgrades better, faster, and cheaper. The remaining stations from that bundle will open later this year.

In June, as part of Grand Street's accessibility design-build package, MTA Arts & Design announced new mosaic artwork commissioned by artist Glendalys Medina, *Gratitudes Off Grand*. The resulting work is comprised of vividly colored geometric forms — circles, diamonds, squares and rectangles reflecting the artist's practice inspired by Taíno, hip-hop and Latino cultures and music. Medina's art also focuses on the way humans create sense out of the world such as the way brains organize patterns.

As part of the ADA work at East 149 Street, three stairways

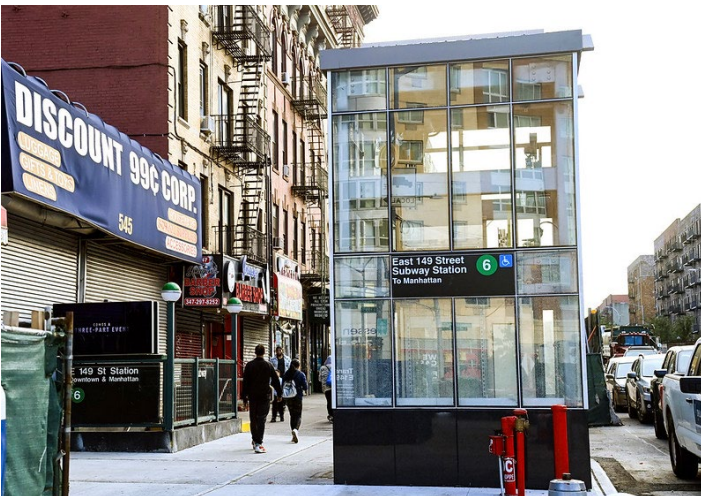




One of the elevators at Grand Street **L** Station on opening day.  
Marc A. Hermann/MTA photo

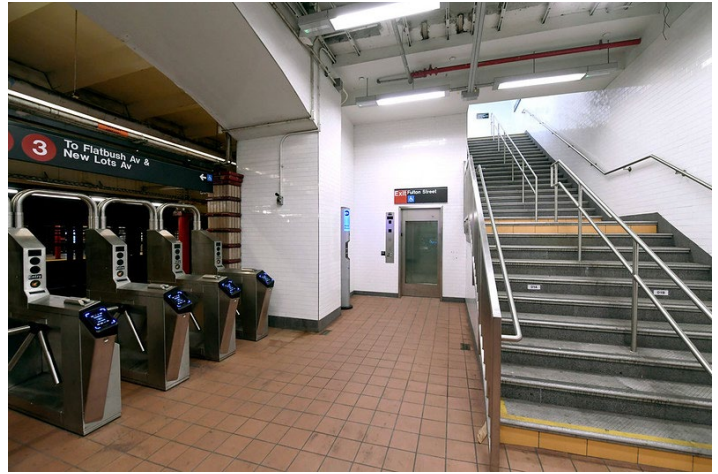
were replaced and the station is slated to receive additional renovations, including new lighting, platform edges, ventilation, water intrusion remediation and other state-of-good-repair work.

At Hoyt Street, the project included the elevator and a staircase within a new street-level entrance to the station that was funded, built by, and will be maintained by Macy's department store. It represents private investment on top of the 67 station accessibility upgrades included in the MTA's 2020–2024 Capital Plan.



One of the elevators at the East 149 Street **6** Station.  
Marc A. Hermann/MTA photo

[MTA PRESS RELEASE](#), August 31  
[MTA PRESS RELEASE](#), September 15  
[MTA PRESS RELEASE](#), September 21



The new fare control area, with elevator in the background, on the southbound platform at the Hoyt Street **2** **3** Station. This area used to have a direct entrance into the former Abraham & Strauss (now Macy's) department store. Marc A. Hermann/MTA photos

## STATEN ISLAND RAILWAY (SIR)

### New Accessible Station

Two elevators at New Dorp Station were opened on September 19, making the station fully accessible. The opening makes New Dorp the first SIR station to feature elevators, with Clifton and Huguenot Stations also slated to be made accessible under the current capital plan. The other currently accessible stations are accessible via ramps to the platform.



One of the new elevators at New Dorp on September 19.  
Marc A. Hermann/MTA photo

Both elevators installed include the latest technology to support passenger safety, including a new fire alarm system, smoke and heat detectors and cameras inside the elevator cabs. Each elevator will also be equipped with an emergency two-way communication system which gives riders the ability to communicate with dispatchers in the event of an emergency via standard voice communications or visually by



answering on-screen questions, which improves communication for riders with hearing or speech disabilities.

This project was funded by a grant provided by the Federal Transit Administration and completed as part of a design-build package of eight stations throughout the subway system, the first such bundle undertaken by MTA Construction & Development as part of an effort to deliver accessibility upgrades better, faster and cheaper. The remaining stations from that bundle will open later this year. [MTA PRESS RELEASE](#), September 19

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## LONG ISLAND RAIL ROAD (LIRR)

### Work Train Derails

For the second time in a little over one month's time, the LIRR was disrupted by a train derailment. On Thursday, September 7, a work train derailed while crossing tracks immediately east of the Queens Village Station on the Main Line. The train had just left the Belmont Park Branch with a load of concrete ties and was heading to Jamaica.

Occurring at about 10:09 AM, the derailment happened right in the middle of Queens Interlocking and blocked three of the four main tracks. Very limited service was able to be operated, in both directions, on the westbound local track (Track 3). The two derailed work cars were rerailed by about 8:00 PM that evening. At that time, regular off-peak service resumed.

During that day's PM peak, 11 eastbound trains were canceled. Extremely limited westbound service operated hourly from Hicksville and Mineola to Penn Station, with a stop at Jamaica. There was no westbound service from the Main Line (Ronkonkoma) and Port Jefferson Branch stations east of Hicksville. Full service had resumed by the following morning's rush hour.

[MTA PRESS RELEASE](#), September 7

### Hempstead Train Derailment Followup

Last month's *Bulletin* had the news item about the August 3 Hempstead train derailment east of Jamaica Station.

Immediately following the derailment, the railroad moved all Main Line train movements over to Tracks 3 and 1, those which are normally used for westbound moves. Main Line Track 2 was reopened for the Thursday PM and Friday AM peaks, but all train movements were at restricted speed. Track 2 was taken out of service in the off peak to assist with the recovery. By the Friday PM peak, Main Line Track 2 was restored to normal speeds, but after the rush both tracks were taken out of service until early Monday morning.

The incident train consisted of the following M7 cars: E-7264-7263+7268-7267+7322-7321+7604-7603-W. Cars 7603-7604 were returned to service quickly but the others remain out of service.

### Valley Tower Closes

On Saturday, September 23, Valley Tower, in Valley Stream on the Montauk Branch, closed and its control functions



On February 26, 2023, the last day of operation before East Side Access opened, West Hempstead to Valley Stream shuttle train #6951 passes Valley Tower before ending its run at Valley Stream Station. M7 7669 (Bombardier Transportation, 6/2006) leads the eight-car consist. Jeff Erlitz photo

were transferred to Jamaica Central Control.

Valley was the very last of the "traditional" interlocking towers to be closed. By "traditional" we mean those towers that were large wooden or brick structures. There are only two other "towers" left on the LIRR, Brook Tower at Atlantic Terminal (formerly Flatbush Avenue) in Brooklyn on the Atlantic Branch and Lead Tower between Island Park and Long Beach on the Long Beach Branch.



In Valley Tower on January 8, 1978, the original US&S 35-lever Model 14 interlocking machine was still in everyday use. Jeff Erlitz photo

Brook Tower really isn't even a tower any more. Around April of 2021, the computer workstation that had been in the cinder block structure located between Tracks 2 and 3 since November 1999 was moved into the Station Master's office located off the main concourse. Brook controls the Atlantic Branch between Atlantic Terminal and East New York.

Lead Tower controls the drawbridge over Wreck Lead (otherwise known as Reynolds Channel) as well as the end of double track east of Island Park Station. Lead is located in the bridge

tender's cabin on the bridge.

VA Tower, as it was originally known by its telegraph call letters, was placed in service on June 27, 1933 during the grade crossing elimination project through Valley Stream. It had a Union Switch & Signal (US&S) 35-lever Model 14 interlocking machine. On April 30, 1937 the tower was renamed Valley, following Pennsylvania Railroad practice at that time.

On October 26, 2009 the US&S Model 14 electro-mechanical interlocking machine was replaced with a computer workstation using Alstom's (formerly GRS-General Railway Signal) PTM Office Control System. Sometime in 2020, perhaps, that office control system was replaced with Railware, Incorporated's Dispatch X software. Dispatch X is one of the LIRR's now-standard office control systems.

### Mineola Station Centennial

On Friday, September 22, the railroad celebrated the 100th anniversary of the station building in Mineola along with the completion of the rehabilitation of the building. The station building was rebuilt and upgraded as part of the Main Line Third Track project.

When the ticket office at the newly built Mineola Station opened at 7:00 AM on Saturday, September 22, 1923, George Eggers of Glen Cove bought the first ticket followed by Peter L. Cody of Roslyn and Ray Bernard of Mineola.

The original Mineola Station was built in 1837 and in 1865 a depot building was erected and named Mineola Junction. A second station was built in 1883 and was replaced by a new station in 1923.



Mineola station on, apparently, opening day, September 22, 1923. MTA photo

According to the Long Island Rail Road Information Bulletin of December 3, 1923, a large delegation of LIRR officials led by General Superintendent C. Dwight Baker and the Railroad band boarded a special train at Jamaica at 1:00 PM destined for Mineola and the "Station Day Celebration" activities.

Celebration Chair R.T. Childs celebrated the new station's opening exclaiming, "For years it has been regretted among the well-wishers of Mineola that our railroad station facilities were so inadequate. Today all that is changed. We hope another change may soon take place, and that in the very



Mineola station building on September 22, 2023. Marc A. Hermann/MTA photo

near future we may again welcome you and your associates to celebrate the electrification of the line to Mineola."

The upgraded station features new public artwork created by artist Donald Lipski. *Bessie and Roxey* (2023) celebrates two separate but interconnected figures of Long Island history, aviator Bessie (Bessie) Raiche and Roxey, the LIRR dog.

Commissioned by MTA Arts & Design, *Bessie and Roxey* is a majestic 20-foot-tall bronze sculpture that lifts two incredible stories from the early twentieth century. Raiche, the first woman to pilot an airplane solo, stands proud on her plinth. Seated at the top of her raised left arm is Roxey, de facto mascot of the Long Island Rail Road.

[MTA PRESS RELEASE](#), September 22

### M9 Deliveries Continue

Since we last reported in the April, 2023 issue of the *Bulletin*, additional M9 cars have been delivered to the LIRR, as follows:

Date	Cars
3/16/2023	9169-9170
4/21/2023	9125-9126
6/1/2023	9191-9192
7/11/2023	9193-9194
7/28/2023	9127-9128
9/29/2023	9175-9176

With these 12 cars, 194 of the 202-car order have now been delivered. There are only eight cars left to be delivered.

## METRO-NORTH RAILROAD (MNR)

### Additional Dual-Mode Locomotives Ordered

Siemens Mobility, the U.S. subsidiary of the German transportation manufacturing giant, announced on September 26 they had received an order from MNR for six SC-42DM





**Rendering of the SC-42DM in potential MNR livery operating on the Park Avenue Viaduct.** Siemens Mobility

dual-mode locomotives. The locos are being funded by the Connecticut Department of Transportation, as part of the long-standing agreement between the States of Connecticut and New York which govern the operation of services over the New Haven Line within Connecticut.

This is the second option under a contract placed in 2020 for a base order of 19 locos, which was followed by an option for eight additional locos. This second option brings the total to 33. Options remain to purchase 32 additional units, along with 14 more for ConnDOT, 25 for the New York State Department of Transportation for Amtrak operated services on the Empire Corridor, and 60 for the LIRR, as a replacement for their DM30AC dual-modes, which are fast approaching the end of their useful service lives. If all options were to be exercised, a total of 171 locos could ultimately be delivered.

A variant of the Siemens Charger model currently operated by Amtrak on various state corridors throughout the nation, the SC-42DM is rated at 4,200 hp, providing a maximum speed of 110 mph in diesel mode or 80 mph in electric mode for operation on MNR's 750V DC third-rail territory in Grand Central Terminal and the Park Avenue Tunnel, the Harlem and Hudson Lines, and the western portion of the New Haven Line.

They will be built in Siemens' Sacramento, Calif., facility. In addition to adhering to current EPA Tier IV standards, they will meet the MTA's sustainability objectives by substantially reducing CO<sub>2</sub>, PM (particulate matter) and NO<sub>x</sub> (oxides of nitrogen) emissions.

The SC-42DMs will be replacing MNR's workhorse General Electric built P32AC-DM Genesis II dual-mode locomotives, the oldest of which entered service in July, 1995. The first test units are scheduled to arrive in late 2024, and then delivered progressively through 2027.

[SIEMENS MOBILITY](#), September 26

[RAILWAY AGE](#), September 26

## **NJ TRANSIT (NJT)**

### **Funding Approved for Rail Projects**

The Federal Highway Administration (FHWA) has awarded an additional \$425 million in federal transportation dollars to the New Jersey Department of Transportation (NJDOT) for transportation projects as part of the Federal August Redistribution process.

Each year, August Redistribution provides an opportunity for the FHWA to increase spending authority to state DOTs based on the availability of unused funds. Use of these funds must be approved by the FHWA no later than September 30, 2023. This is the highest amount New Jersey has ever received, and the fourth-highest award nationwide, only behind California, Pennsylvania, and Texas. Since 2018, the NJDOT has received \$830 million in August Redistribution funds, more than four times the amount in the prior ten years.

The additional spending will be split, with \$315 million for NJT projects and \$110 million for NJDOT projects.

This announcement took place at Long Branch Station, which will receive \$7.9 million of this additional funding to help complete the Long Branch Station Pedestrian Tunnel project. This project will reconnect the east and west halves of Long Branch, which are currently divided by the above-ground rail alignment. It will also improve access to the station for commuters and community members while connecting neighborhoods separated by the railroad tracks. In February 2023, \$13.2 million in federal funding had been secured for the new pedestrian tunnel.

In addition to the \$7.9 million committed to Long Branch, other NJT projects benefiting from the additional federal funding include:

- Watsessing Avenue (\$31.6 million) and Roselle Park (\$9 million) Station Modernizations — These projects will renovate the stations, providing new platforms and canopies and installing elevators and ramps to allow for full accessibility;
- Replacement of six bridges (\$106.5 million) — These projects will replace bridges in Little Falls, Readington, High Bridge and Bayonne, as well as two in Waterford;
- Delco Lead (\$33.8 million) — This project is part of NJT's Resilience Program and will construct a storage location at a location along the Northeast Corridor that is not flood-prone;
- Hoboken Yard Improvements (\$5 million)-This project includes design and construction of inspection pits in Hoboken Yard for required periodic inspections of Multilevel rail cars, making those cars more readily available for service.

[NJ TRANSIT PRESS RELEASE](#), September 6

### **40th Anniversary Celebrated**

On Saturday, September 30, NJT, in partnership with the United Railroad Historical Society of New Jersey (URHS), operated a special excursion train to celebrate the agency's



**The 40th Anniversary Express is seen here crossing the Manasquan River into Point Pleasant.** Rich Taylor photo

founding. Titled the “40th Anniversary Express,” the train operated from New York–Penn Station to Bay Head Junction and then returned to Hoboken in the late afternoon.

Leaving New York with ALP-46 4636, the Pennsylvania Railroad heritage unit, the train stopped at South Amboy where an engine change from electric power to diesel was performed. A pair of F40PH-2CAT locomotives, 4120 and 4119, which were representative of the first diesels that NJT purchased, were tacked on to take the train on to Bay Head.

In addition to NJT coaches, four “private” cars were operated on the end of the train. These were Juniata Terminal Company’s ex-Pennsylvania Railroad business car 120 and ex-Southern Pacific parlor car Warrior Ridge and URHS’s ex-New York Central tavern-lounge car 43 and tavern-lounge-observation car Hickory Creek.

After the train’s arrival in Bay Head, passengers were allowed to ride the train around the loop, an operation not normally available to the riding public.

Proceeds from the excursion benefited the URHS.



**GP40PH-2B 4210 (EMD, 10/1968) on display at NJT’s Family Days gathering at the Meadowlands Maintenance Center on October 7. This unit started out as Penn Central GP40 3182. It kept its number after being transferred to the Conrail roster.** James Mardiguian photo

The following day, October 1, NJT displayed all of their historic locomotives at Hoboken Terminal. Included in this display was freshly-painted GP40PH-2B 4210, resplendent in the former Erie Railroad’s “freight” paint scheme of black and yellow.

[NJ TRANSIT PRESS RELEASE](#), August 21

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## **HUDSON-BERGEN LIGHT RAIL (HBLR)**

### **Northern Extension Difficulties**

The Federal Transit Administration (FTA) is rescinding a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for NJT’s Northern Branch Corridor Project, an extension of HBLR.

The NOI, which dates back to October 2007, involves a previous proposal for the restoration of rail service in the Northern Branch Corridor Project from North Bergen to Englewood in Hudson and Bergen Counties. Six years ago, the FTA and NJT published the NOI in the Federal Register to prepare an EIS to study passenger service restoration on the branch between North Bergen in Hudson County and Englewood in Bergen County.

After reviewing the project, FTA has rescinded the NOI because of changes to the project design and environmental impacts in the following areas: floodplains, stormwater management, cultural resources, hazardous materials, traffic and parking, and air quality, all of which have occurred since 2007.

Northjersey.com reported that FTA’s move has made local lawmakers furious as there is now another delay in the HBLR extension into Bergen County. The project is now delayed at least two more years. New Jersey Assemblywoman Shama Haider has been working on the expansion into Bergen since 2021 and has been sending letters to NJT officials for updates and calling into the agency’s monthly board meetings to keep the project top-of-mind.

Other Bergen County officials commented on their frustration, saying that NJT, the FTA and others should step up and commit the immediate funding required to keep this project on track. They stated that they cannot afford to let bureaucracy and indecision derail the progress that their residents need.

The decision to rescind the NOI is surprising because it was only earlier this year that NJT officials assured lawmakers inquiring about the project that the agency planned to send up dated information later this year for its first environmental report, first submitted to the FTA in 2018. In April, the FTA had said it paused the environmental review because there was no financial commitment.

Now, the plans and construction timelines for the HBLR extension into Bergen County will need to be redone. NJT stated that the agency has directed its consultant, Jacobs Engineering, to begin immediately developing a new scope of work and updated construction and completion timelines for the HBLR extension into Bergen County. Fortunately, much of the information in the original SDEIS (Supplemental Draft





Environmental Impact Statement) is still relevant and can be used as a starting point in a new EIS process. The process, which should take about 24 months once started, will reevaluate existing conditions, including flood plain and resiliency mitigation, project alignment and public engagement. While that timeline estimate is very preliminary at this point in the process, NJT is exploring all potential avenues, including constructing the extension in phases, while identifying funding options such as the Infrastructure Investment and Jobs Act of 2021 to advance this critical project.

[RAILWAY AGE](#), September 1

## Other U.S. Systems

### ATLANTA

#### BeltLine Corridor

Atlanta BeltLine, Inc. announced September 11 that it is launching a transit planning study for a 13.6-mile portion for the rail corridor around the 22-mile BeltLine loop.

The study, funded by the Federal Transit Administration (FTA), will identify the preferred Atlanta BeltLine transit alignment and station locations in the northwest quadrant and will solidify the preferred station locations in the southwest and southeast quadrants where the transit alignment has already been determined. Metropolitan Atlanta Rapid Transit Authority (MARTA) has already completed a study that defines alignment in the northwest quadrant.

According to Atlanta BeltLine, Inc., rail transit in the BeltLine corridor will complement and connect to MARTA's existing heavy rail and bus networks and an extensive network of multi-use trails. This, the urban redevelopment program says, will create a more robust and equitable transportation system for Atlanta, making the BeltLine more accessible to people, regardless of weather, ability, or geography.

The study builds upon previous reports, including the Atlanta BeltLine/Atlanta Streetcar System Plan (adopted by City Council in 2015), Record of Decision (published by FTA and MARTA in 2012), and MARTA's study of BeltLine eastside corridor from Lindbergh to I-20 (completed in 2021).

Kimley-Horn & Associates will conduct the study, which will take 24 months from kick-off to final deliverables. Activities will include field investigation, consolidation of previous studies, stakeholder and public outreach, environmental screening, equity considerations, service planning, ridership forecasting, and financial planning. The project will specifically look at connectivity between the regional transit network and the regional trail network.

According to Atlanta BeltLine, Inc., light rail transit is essential in a layered infrastructure approach to address current and future mobility needs due to the influx of people anticipated to move to Atlanta in the next few decades. Between April 2022 and April 2023, 66,730 people moved to metro Atlanta, bringing the population to 5.16 million.

The Atlanta Regional Commission forecasts the 21-county Atlanta region will potentially add 2.9 million people by 2050, reaching a total population of 8.6 million.

The planning area for the northwest segment of the Atlanta BeltLine transit corridor is from Lindbergh Center MARTA Station on the north side of the BeltLine loop to Bankhead MARTA Station on the western side. The study continues along the southwestern and southeastern quadrants of the BeltLine loop to Glenwood Avenue.

[RAILWAY AGE TRANSIT BRIEFS](#), September 12

### CHICAGO

#### Red Line Extension Update

Chicago Transit Authority (CTA) has released a Request for Proposals to the three pre-selected contracting teams that demonstrated the ability to design and build its \$3.6 billion Red Line Extension in a Request for Qualifications process that began last year.

The teams — FH Paschen, Ragnar Benson, Milhouse and BOWA Joint Venture; Kiewit Infrastructure; and Walsh VINCI Transit Community Partners — will submit proposals for extending the Red Line 5.6 miles from 95th Street to 130th Street and for adding four new, fully accessible stations near 103rd Street, 111th Street, Michigan Avenue and 130th Street, and multi-modal connections at stations, including bus, bike, pedestrian and park and ride facilities. (A new rail yard and maintenance shop near 120th Street will be delivered under a separate project contract.)

According to CTA, the proposals will be considered on a variety of criteria, including experience, price, workforce programs, inclusion of Disadvantaged Business Enterprise-certified firms and other minority owned firms in the project and other factors. CTA said it expects to award a contract in 2024. Major construction for the project is slated to begin in 2025 pending federal approvals, and pre-construction (property demolition and advanced utility relocation) work is anticipated to start in 2024.

[RAILWAY AGE TRANSIT BRIEFS](#), September 15

### MINNEAPOLIS

#### Funding Agreement for the Blue Line

Metropolitan Council members and the Hennepin County Board of Commissioners in Minnesota have approved a grant agreement that will provide \$75.3 million in county funds to keep work going through 2024 on the Metro Blue Line Extension light rail project.

The funding will allow the project to continue the engineering and consulting services necessary to advance design and environmental analysis; continue outreach and engagement efforts; advance implementation of strategies to build community prosperity and prevent displacement; update ridership projections; prepare an updated cost estimate and schedule; and



prepare plans and other technical information required to seek municipal consent from cities along the corridor.

The Metropolitan Council also reported that the project team can now advance design plans and complete the municipal consent process beginning in summer 2024 to confirm the final route.

Separately, the Metropolitan Council reported that the Blue Line Extension Corridor Management Committee has signaled their support for advancing the analysis of the staff-recommended light rail track route and general station locations for the Blue Line Extension light rail project.

The advisory body of elected officials and non-elected community representatives passed a resolution September 14 in support of the Metropolitan Council and Hennepin County continuing to advance the route and stations through the federal environmental review process. The route will be further studied through preparation of a Supplemental Environmental Impact Statement.

First introduced at the August Corridor Management Committee meeting, the proposed route extends the existing Metro Blue Line 13.4 miles northwest from Target Field Station connecting north Minneapolis, Robbinsdale, Crystal, and Brooklyn Park and serving surrounding communities.

The Supplemental Draft Environmental Impact Statement (SDEIS) will identify potential project impacts associated with the proposed route. These include business and transportation impacts; impacts to historic properties; land use changes and parks; visual impacts, safety; impacts to soils, water and geological resources; and noise and vibration.

According to Metropolitan Council, updated ridership projections are expected in early 2024; the SDEIS is anticipated in Spring 2024; the municipal consent process will begin to confirm final route in summer 2024; an updated cost estimate is slated for 2024; the final design is expected for 2024-2025; construction is slated to start in 2026-2027; and the opening is anticipated for 2030.

[RAILWAY AGE TRANSIT BRIEFS](#), September 15

## SAN FRANCISCO

### End of Paper Ticket Sales

Beginning Saturday, September 30, BART will no longer sell magnetic stripe paper tickets at SFO. Only Clipper cards will be available at SFO vending machines and riders will continue to be encouraged to add Clipper card to their phone for a card-free option.

This change is occurring as BART begins to roll out new state-of-the-art fare gates, which will not accept paper tickets and as Clipper prepares for the launch of the next generation of Clipper.

BART began offering paper tickets at SFO in October 2022 in response to global supply chain issues impacting the region's plastic card inventory. BART says it now has an adequate supply of cards and will eliminate the sale of all paper tickets. This includes the sale of red tickets at the

Customer Service window at Lake Merritt Station for RTC applicants waiting for their Clipper card to arrive and paper tickets for group sales.

While BART will eliminate the sale of all paper tickets, riders are still able to use the paper tickets they already have on hand, including weekend promotion tickets, to enter and exit through most fare gates until November 30.

Paper tickets balances cannot be transferred onto a Clipper card. BART offers paper ticket refunds for tickets with a remaining value greater than \$1.00.

[RAILWAY AGE TRANSIT BRIEFS](#), September 12

## WASHINGTON

### Metro Service Increase

Washington Metropolitan Area Transit Authority (WMATA) announced that beginning Monday, September 11, the agency will roll out its eleventh service increase since last summer.

According to WMATA, while ridership continues to grow, it remains below pre-pandemic levels, therefore the agency says it will monitor ridership trends and continue to assess the need for any future service adjustments based on ridership demand.

With ridership trending higher during the morning and evening commuting hours, WMATA will boost peak service on the Red, Blue, Silver, Green, and Yellow Lines to meet demand and ridership growth as more riders return to the office and other activities. Trains on those lines will run more frequently from approximately 7 AM to 9 AM, and from approximately 4 PM to 6 PM. Exact times of peak service will vary by station.

Orange Line trains will continue operating every 10 minutes all-day, seven days a week, and every 15 minutes after 9:30 PM.

WMATA is now running more train service than at any time in its 47-year history.

Service frequencies (in minutes) beginning Monday, September 11:

Line	Peak	Midday	Weekend	After 9:30 PM
Red	5	6	8	10
Green	6	8	8	8
Yellow	6	8	8	8
Blue	10	12	12	15
Silver	10	12	12	15
Orange	10	10	10	15

The service increases will add more than 6 percent more train trips than today, and 60 percent more daily train trips than at this time last year. Additionally, this service change represents the agency delivering 89 percent of budgeted FY24 service levels.

[RAILWAY AGE TRANSIT BRIEFS](#), September 8

### Automatic Train Operation (ATO) Delayed

WMATA officials reported that they will move more slowly to automate portions of the rail system in the coming months to ensure each step meets safety standards and has approval



of the Washington Metropolitan Safety Commission, its regulatory agency.

WMSC officials last month said WMATA wasn't on track to meet its own ATO safety standards or to obtain the commission's approval for the changes. System-wide ATO rollout had been planned for late 2023; it has now been moved to first-quarter 2024.

The transit authority will start conversion to ATO this fall on the Red Line with the reactivation of the automatic door opening system.

When WMATA opened in 1976, it ran using ATO until a fatal collision in 2009. The system has never returned, despite multiple investigations determining it didn't play a role in the crash that killed nine people and injured 80 in Northeast Washington. Bringing the system back would lead to fewer delays, a smoother ride, energy savings and improved safety by reducing human error. Metro [WMATA] officials also say it would modernize train operations and lure new customers after losing nearly half of daily ridership during the pandemic. It is also slated to save WMATA up to \$10 million annually.

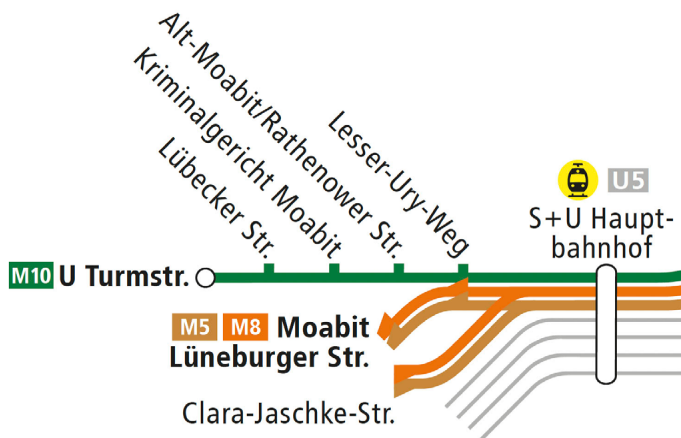
[RAILWAY AGE TRANSIT BRIEFS](#), September 15

## International

### BERLIN

#### Tramway Extended

A 2.2-kilometer extension of Berlin tram route M10 from Hauptbahnhof to Turmstraße U-Bahn station on Line U9 opened for revenue service on September 9, restoring tram services to the Moabit district after an absence of around 60 years.



Detail of Berlin's tramway network map showing the extension of the M10 route to Turmstraße. BVG map

The extension required 1½ kilometers of new line beyond the turning loop at Lüneburger Straße, and has five stops at Lesser-Ury-Weg, Alt-Moabit/Rathenower Straße,

Kriminalgericht Moabit, Lübecker Straße and Turmstraße.

Operator BVG anticipates that the extension will attract more than 10,000 passengers per day, with services operating at intervals of five to 10 minutes.

Route M10 now provides an east-west connection across the city, starting from Warschauer Straße and running via Frankfurter Tor, Eberswalder Straße, Nordbahnhof and Hauptbahnhof.

The line has taken around two years to build, following a groundbreaking ceremony in August 2021. The €33 million project was funded by the Berlin Sustainable Development Program, with co-financing from the European Regional Development Fund and the Land of Berlin.

[METRO REPORT INTERNATIONAL](#), September 19

#### Class 483/484 EMU Order Completed

The new Berlin S-Bahn fleet has been completed and all 106 trains of the new series are now in service. The trains, equipped with air conditioning, state-of-the-art passenger information systems and cameras for greater security, offer passengers a new level of comfort and convenience. The new fleet also increases the transport capacity in parts of the city's S-Bahn network, thus expanding services. In the course of replacing the older trains, the number of cars per train was also increased. For riders, this has specific benefits: longer trains operate on the Ring lines S41/S42 as well as the S8 line, and the S8 line is extended to Wildau during peak hours. The new S-Bahn fleet now offers a total of around 18,000 seats. The new trains have entered service successively since the beginning of 2021, and have been operating on lines S41, S42, S46, S47 and S8 since then.



Class 483 005 (Stadler/Siemens, 2020) at Berlin-Köpenick Station on September 20, 2022. Operating as an S3 short-turn, it is bound for Friedrichshagen. Regular S3 trips terminate three stops further east at Erkner. Jeff Erlitz photo

Representatives from politics, business, the Berlin-Brandenburg Transport Association and the Berlin S-Bahn gathered at the Charlottenburg S-Bahn station for the ceremonial delivery of the last train in this order. The states of Berlin and Brandenburg financed the purchase of the trains, which were manufactured by a consortium of Stadler and Siemens.

The 483/484 series trains are part of the transport contract for the Ring subnetwork. At the same time, S-Bahn Berlin is continuing to implement its Class 481 longevity program. More than 300 of the 500 trains in the 481 series (built between 1996 and 2004) have already been rebuilt. Every day, around 1.4 million people use the S-Bahn Berlin trains, which operate on 16 lines in the capital and the state of Brandenburg. [GLOBAL RAILWAY REVIEW](#), September 18

## CHINA

### Another High-Speed Railway Opens

China celebrated the opening of the remaining 307-kilometer Nanning-Libo section of the 482-kilometer Nanning-Guiyang Guinan High Speed Railway on August 31.

The inaugural Fuxing EMU departed Nanning East station at 7:33 AM, continuing for one hour and 12 minutes to Huanjiang. China Railways (CR) opened the initial 175-kilometer Libo-Guiyang section of the new railway on August 8.

The Nanning-Guiyang high-speed line is an important part of China's network of eight north-south and eight east-west high-speed lines, forming part of the north-south corridor from Baotou, Yinchuan, to Haikou.

The line has 13 stations, including six on the Guiyang-Libo section. Construction of the railway began in December 2017.

CR expects to offer a mix of daily, weekend and peak services during the initial period of operation. This will see a maximum of 56 trains operated on the line every day, including direct trains from Nanning to Guiyang, Chengdu and Chongqing among other cities.



**Train D6171 pulls out of Guiyang North Railway Station in Guiyang, southwest China's Guizhou Province, on August 8, 2023.** Xinhua photo

Opening of the new 350 kph line has reduced journey times from Nanning East to Guiyang East from more than five hours to a maximum of two hours and 53 minutes. The fastest journey time from Nanning East to Chengdu East is now six hours 51 minutes, and five hours 17 minutes to Chongqing West.

The new railway serves regions populated by more than 30 ethnic groups and the line will provide much improved rail

connectivity in southern and southwest China, helping to accelerate the development of tourism and other industries. [INTERNATIONAL RAILWAY JOURNAL](#), September 1

## COPENHAGEN, DENMARK

### First Tram Arrives

The first of 29 LRVs for the Hovedstadens light rail project has arrived in the Danish capital.

Built by Siemens, the low-floor Avenio LRV traveled around 800 kilometers by road to Denmark from the manufacturer's test facility in Wildenrath, Germany, including a ferry crossing from Puttgarden to Rødby.



**The first Siemens Avenio tram is seen at the Letbane's maintenance facility in Glostrup.** DOT photo

The vehicle's destination was the new light rail line's control and maintenance center, where it will undergo a series of tests, including on the two kilometers of track at the site, ahead of the start of trials on a section of the new line in 2024.

The LRVs are due to enter service in 2025 on the 28-kilometer line, which runs from Ishøj in the south to Lundtofte, north of Lyngby. The Siemens-Aarsleff consortium is delivering the transport systems component of the project, comprising both infrastructure and rolling stock. Currently, 13 LRVs are in production with manufacturing of another LRV commencing every three weeks. Metro Service, Copenhagen's metro operator, will operate and maintain the line under a 15-year contract.

The 36.9-meter-long, 2.65-meter-wide vehicles have a top speed of 70 kph and 64 seats, with capacity for up to 260 passengers. The new LRVs offer step-free access throughout and there are four areas designated for bicycles, strollers and wheelchairs.

Services will operate every five minutes on weekdays and at 10-minute intervals at weekends on the line, serving 29 stops and completing a journey on the entire length of the line, which mainly follows the city's Ring 3 highway in a dedicated alignment, in around an hour. The line will interchange with six S-Bane (commuter rail) lines and up to 14.7 million people are expected to use the service annually by 2030.



Overall, the Dkr 6.2 billion (\$US 892 million) project will connect eight of the city's municipalities and is supported financially by 11, which together are contributing 34 percent to the cost of the project. The Danish government is providing 40 percent while the capital region is putting up the remaining 26 percent.

[INTERNATIONAL RAILWAY JOURNAL](#), September 6

### Three Bidders for Automated S-Bane Fleet

Danish State Railways (DSB) has announced that three bidders have been prequalified for its tender to supply the new fleet of fully-automated trains for the Copenhagen S-Bane network.

Alstom Transport Danmark, CAF and a consortium of Siemens Mobility and Stadler are now competing for the contract to supply a minimum of 226 trains equipped to operate at Grade of Automation 4 (GoA4).



An example of Copenhagen's current fleet of S-Bane train sets, which is that city's fourth generation of suburban rail cars. This particular unit, Class SA #8205, was the last set delivered to DSB and was built by Alstom in 2005. Operating on Line F (the Ringbane), this train is headed north to Hillerup and is seen here at Flintholm, a major inter-modal transfer point between the S-Bane, the Metro (seen right above the train) and local buses. There are 105 of these eight-car articulated train sets and the fleet was built between 1995 and 2005. There are also 31 Class SE four-car train sets, built by Alstom in 2004 and 2005.

Jeff Erlitz photo

Expected to be worth €3.5 billion, the contract will include maintenance over 30 years and an option for up to 100 additional trains. There will be a further option to install driver's cabs in the new fleet.

DSB is conducting procurement by means of a competitive dialogue, which it says will enable it to develop tender specifications with the bidders in order to provide the best and most robust solutions for the future S-Bane fleet.

The Danish national operator expects to be able to award the contract during the first half of 2025, with the first new trains entering service on the Ring Line around 2030.

[INTERNATIONAL RAILWAY JOURNAL](#), September 11

## EAST AFRICA

### Electrified Railway Proposed

A bilateral agreement to build a new 3,000 kilometer electrified standard gauge railway from Lamu Port in Kenya to the Ethiopian capital Addis Ababa has been signed by Kenya's and Ethiopia's cabinet secretaries for transport.

The new line forms part of the project to develop the Lamu Port-South Sudan-Ethiopia (Lapsset) transport corridor, centered on the new port of Lamu. From Lamu, the railway would run to Isiolo, 200 kilometers northeast of Nairobi, then divide into three branches running to Nairobi, Addis Ababa and Juba, the capital of South Sudan.

Construction of the new line is expected to start in 2025 and would cost \$US 13.8 billion. According to Kenya's Lapsset Corridor Development Authority, the forecast internal rate of return for the project is over 12 percent.

Kenya and Ethiopia are now working together to seek funding for the project. Kenya is seeking \$US 9 million from the African Union Infrastructure Fund for studies to determine the technical and economic feasibility of building the new line.

Three berths have recently been completed at Lamu at a cost of \$US 400 million, and Kenya is keen to develop the new port to handle imported goods destined for southern Ethiopia.

[INTERNATIONAL RAILWAY JOURNAL](#), September 6

## FRANCE/ITALY

### Cross-Border Service Suspended Until November

Trenitalia France does not expect to resume operation of its cross-border Paris-Milano service until November 1 following a significant landslide at Maurienne on the line between Modane and St-Michel-Valloire in the French Alps on August 27.



SNCF Network has worked with local authorities to establish the extent of the work required to reopen the line. SNCF Network photo

Trenitalia has restored four of its Paris-Lyon services, with the remaining two not expected to resume until September 25.

The Italian operator says its fleet of Frecciarossa 1000 high-speed trains have to regularly visit a maintenance facility near Milano, which is no longer possible following the closure of the line. Trenitalia says it managed to mobilize a team of experts from Milano to carry out part of the maintenance for the Frecciarossa fleet in France, enabling it to offer a limited service between Paris and Lyon.

The landslide blocked both rail and road access to the Fréjus tunnel. SNCF Network stated in a social media post on September 1 that it does not expect to resume rail traffic between Saint-Michel-de-Maurienne and Modane for at least two months.

Trenitalia France launched operation in competition with incumbent, French National Railways (SNCF) on the Paris-Lyon route, in April 2022.

[INTERNATIONAL RAILWAY JOURNAL](#), September 14

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## GERMANY/AUSTRIA

### Cross-Border High-Speed Services Expand

German Rail (DB) and Austrian Federal Railways (ÖBB) have announced plans to increase the number of cross-border long-distance passenger services with the start of the new timetable on December 10.

The two railways say that traffic between Germany and Austria is growing fast and that by the end of this year, they predict that around 40 percent more passengers will be using cross-border services than five years ago.



A German ICE trainset (left) is seen alongside an Austrian Class 1119 Railjet at Vienna's Main Station (Hauptbahnhof) on September 18, 2022. Jeff Ertlitz photo

In December, a second daily ICE service will be introduced between Hamburg, Berlin, Nuremberg and Vienna. DB and ÖBB will also increase the frequency of the ICE service from Berlin via Frankfurt am Main and Stuttgart to Innsbruck to daily instead of only at weekends.

In the future, long-distance trains will run every hour between Munich and Salzburg from around 6:00 AM to

9:00 PM. Currently, trains operate roughly every two hours, supplemented by five round trips per day by open-access competitor Westbahn. The Munich-Innsbruck service will continue to operate every two hours.

To improve service quality, DB will introduce its ICE 4 trains on the Frankfurt am Main-Munich-Salzburg-Klagenfurt route while ÖBB will gradually introduce its new generation of Railjet trains on the Munich-Innsbruck-Italy service from April 2024, replacing traditional locomotive-hauled trains.

ÖBB and DB are also expanding their cooperation on overnight services. A new Nightjet service will be introduced in December from Berlin and Vienna to Paris and Brussels, initially operating three times a week and then daily from autumn 2024.

ÖBB plans to introduce its new 230 kph Nightjet trains being supplied by Siemens from the end of this year. Initially they will operate on the Hamburg-Vienna and Hamburg-Innsbruck routes. The new trains will then enter service on other overnight routes linking Austria, Germany and Italy during 2024.

[INTERNATIONAL RAILWAY JOURNAL](#), September 7

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## ISTANBUL, TURKEY

### T5 Tram Line Extended

Istanbul's T5 tram line was extended by one kilometer on August 30, from its former southern terminal at Cibali to a new terminal at Eminönü (Spice Bazaar), where direct transfer is available to Line T1 and cross-Bosphorus ferry services. A short walk away is the Sirkeci Marmaray regional metro station.

The intermediate station at Küçükpazar provides interchange with north-south metro Line M2.

Line T5 runs mostly alongside the west bank of the Golden Horn (Haliç in Turkish), an inlet off the Bosphorus which extends into the European side of Istanbul. An initial nine-kilometer section opened on January 4, 2021 between Alibeyköy Cep Otogarı and Cibali.

TODAY'S RAILWAYS EUROPE, October 2023

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## JAKARTA, INDONESIA

### Light Metro Line Opens

The president of Indonesia officially opened the 42.1-kilometer Jabodebek LRT on August 28, a new light metro, which serves central Jakarta and the satellite cities of Depok and Bekasi in West Java province.

More than 28,000 passengers used the new line in its first two days of operation, including 23,705 on August 30. However, some early teething troubles resulted in the evacuation of the station in Bekasi on August 30 following a train failure. This was caused by a door problem.

The line runs for 9.9 kilometers from Dukuh Atas in the center of Jakarta to Cawang, shortly after which it divides into a southern branch running to Harjamukti which is 14.6



kilometers long, and a 17.5 kilometer eastern branch to Jati Mulya. The line serves a total of 18 stations.

The operator is currently providing 158 daily services using a fleet of 12 six-car trains built by domestic manufacturer PT Inka, each with capacity for up to 1,300 passengers. Up to 31 trains will eventually be available to provide more than 400 daily services.

The project cost Rupiah 32.6 trillion (\$US 2.6 billion), considerably more than the Rupiah 20 trillion estimate when ground was broken in 2015. The owner of the line, Kereta Api Indonesia, received a direct cash injection from the government along with syndicated loans from mostly local banks to fund construction. It is hoped the line will help to ease the traffic congestion crisis engulfing Jakarta. The city was recently found to be the world's most polluted major city, according to an assessment by IQAir, Switzerland.

It will be difficult to attract commuters to use the service due to the line's limited catchment area. This has also been the case with Jakarta's first mass transit line, the 15.7-kilometer metro from Lebak Bulus to Bundaran HI in central Jakarta, which is used by 80,000 people per day. This is well short of its capacity for up to 180,000 passengers a day.

A 5.8-kilometer light metro, which is operated with two-car trains supplied by Hyundai Rotem, also opened in 2019, running from Velodrome to Kelapa Gading Mall in the northeast of the city.

[INTERNATIONAL RAILWAY JOURNAL](#), September 4

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## MEXICO CITY

### First LRV Completed

The first two-car LRV for Mexico City's Xochimilco light rail line, operated by Electric Transport Service (STE), has rolled off the assembly line at CRRC Zhuzhou Locomotive's plant in Hunan province, China.

STE placed the Pesos 600 million (\$US 34.8 million) order for six new LRVs, which will serve the 13-kilometer line in the southern suburbs of Mexico City, in 2022. There is an option to extend this order to nine vehicles.

The new bidirectional LRVs offer capacity for 483 passengers and can run in multiple.

The articulated LRVs will supplement the existing fleet of 10 Bombardier/Siemens LRVs, which were assembled in Mexico by Concaril. Introduction on the network will support the provision of four-minute headways during the day. 14 of the original fleet introduced between 1991 and 2014 are no longer in service. A \$US 37.5 million rehabilitation project on the line was completed in 2021 and enabled journey times between Xochimilco and Tasqueña to be reduced from 55 to 33 minutes.

[INTERNATIONAL RAILWAY JOURNAL](#), September 14



The first of Mexico City's new LRVs is unveiled at CRRC's Zhuzhou Locomotive plant. CRRC photo

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## NETHERLANDS

### Railways Go Green

Netherlands Railways (NS) has awarded a three-year contract for the provision of sustainable energy for rail operations across the Dutch network to PZEM and Shell.

From January 1, 2025, PZEM will supply electricity and Shell the certification guaranteeing that this comes from renewable sources. The deal continues climate-neutral train operations in the Netherlands, with all traction electricity sourced from solar and wind.

NS led negotiations for the contract as the largest member of the Vivens group, which is made up of all rail operators in the Netherlands. Members each conclude a contract with Vivens, which purchases the Guarantees of Origin for the green electricity.

Vivens had originally intended to secure a longer-term contract. However, the turbulence in the energy market prevented this due to continuing concerns over supply and fluctuations in price.

[INTERNATIONAL RAILWAY JOURNAL](#), September 8

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## ROMANIA

### New EMUs Ordered

Romania's Railway Reform Authority (ARF) has selected Pesa to supply 20 three-car EMUs for use on medium and long-distance services. The Polish manufacturer is also the front-runner for a second contract to supply up to 62 regional EMUs following the opening of bids.

Pesa says the contract for the long and medium distance EMUs is worth more than Złotys 1 billion (\$US 230 million) and includes 15 years' maintenance as well as options for an additional nine vehicles and another 15 years' maintenance. ARF estimates the total value of the order to be worth Lei 1.2-2.3 billion (\$US 260-490 million) excluding VAT.

The 160 kph, 25kV AC EMUs will be equipped with Romania's PZB 90 signaling system. Pesa says the trains will be based

on the Pesa 655-3 design delivered to Czech private operator RegioJet, and will be designated 655-5 and 655-6. They will offer 192 seats across first and second-class accommodation.

Pesa is competing with Alstom for the second contract and says it has submitted the best offer. In total both orders are worth in excess of Złoty 4 billion and contracts for both orders are expected to be signed by the end of the year.



Rendering of Romania's new EMUs. Pesa

Pesa says the orders for up to 91 vehicles is the company's largest and strengthens its presence in the Romanian market.

Financing for the medium and long-distance fleet order is provided through the National Recovery and Resilience Plan and the budget of the Romanian Ministry of Transport and Infrastructure.

ARF confirmed that the new long and medium-distance trains are expected to be deployed on the following routes:

- Cluj Napoca-Sighisoara-Brasov
- Cluj Napoca-Alba Iulia-Simeria- Târgu Jiu-Craiova
- Braşov-Ploiesti-Buzău-Focşani-Bacău-Paşcani-Iaşi/Suceava
- Galati-Mărăşeşti-Bacău-Paşcani-Iaşi/Suceava
- Galati-Brăila-Făurei-Feteşti-Constanţa (Mangalia)
- (Mangalia)-Constanţa-Feteşti-Brăila-Mărăşeşti-Bacău-Paşcani-Iaşi/Suceava, and
- (Giurgiu) Bucharest-Ciulniţa-Călăraşi.

The European Commission has allocated more than €52 million from the European Regional Development Fund to support the purchase by ARF of 37 EMUs from Alstom. A €290 million contract for an initial 20 six-car Coradia Stream EMUs was awarded in March 2022 with an agreement worth €220 million for an additional 17 sets added to the order in September 2022. The deal includes 15 years' maintenance.

[INTERNATIONAL RAILWAY JOURNAL](#), September 15

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## SARAJEVO, BOSNIA AND HERZEGOVINA

### New Trams Unveiled

At the 15th Trako trade fair in Gdańsk, Poland (Poland's largest rail transport trade fair and second only to the

gigantic InnoTrans exposition in Berlin), Stadler presented a new tram for Sarajevo, a Tango NF3 LRV.

Stadler signed a contract in September 2021 with the Sarajevo Canton Ministry of Transport for the supply of a fleet of Tango LRVs, the first new vehicles for the network that opened in 1885 that has previously relied on second-hand rolling stock.



New Tango NF3 tram for Sarajevo. Stadler photo

Stadler says the new LRVs will enhance passenger comfort and provide better facilities for passengers with reduced mobility. The Tango NF3 LRV features air-conditioning, a modular design and an ergonomic driver's cab. The uni-directional, three-section LRV is 31.1 meters long, 2.4 meters wide and 3.6 meters high, with capacity for 180 passengers including 79 seated.

[INTERNATIONAL RAILWAY JOURNAL](#), September 22

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## SERBIA

### New EMU Unveiled

The other vehicle introduced by Stadler at the 15th Trako trade fair in Gdańsk, Poland (see above), was a Flirt EMU ordered by Serbian Railways (SV). Stadler and SV signed an agreement for 18 Flirt EMUs at the end of 2021, following a contract for 21 Flirt EMUs finalized in 2014 and three Kiss EMUs in 2015.

Stadler says the Flirt EMU for Serbia features a lightweight aluminum structure, and its design puts the emphasis on low energy consumption and ease of operation. It is equipped with air-conditioning, interior and exterior closed-circuit TV, as well as visual and audio passenger information systems.

[INTERNATIONAL RAILWAY JOURNAL](#), September 22





Stadler's new Flirt EMU for Serbia. Stadler photo

## SPAIN

### High-Speed Service Increased

Spanish national operator Renfe increased the frequency of its AVE high-speed service between Barcelona and Lyon in France to daily on September 1, having operated the new service from Friday to Monday since it began on July 13.

Barcelona-Lyon was the first cross-border route to be operated entirely by Renfe rather than in partnership with French National Railways (SNCF), which unilaterally pulled out of the Elipos joint venture with the Spanish national operator in 2022.

Renfe introduced its second route to France, running from Madrid to Marseille, on July 28. The frequency of this service, currently operating from Friday to Monday, will also increase to daily on October 1, offering a total of 28 trains a week between Spain and France.

Over 120,000 tickets have been sold for travel on the new cross-border high-speed services, and Renfe reports that they have carried over 68,000 passengers.

Demand has been high, it says, with the average train occupancy rate being over 80 percent and services fully booked on the busiest days.

The Lyon service departs from Barcelona Sants at 8:22 AM, calling at Girona, Figueres Vilafant, Perpignan, Narbonne, Montpellier Saint Roch, Nîmes and Valence TGV to arrive at Lyon Part Dieu at 1:20 PM.

The return service leaves Lyon at 2:35 PM to arrive in Barcelona at 7:32 PM.

[INTERNATIONAL RAILWAY JOURNAL](#), September 5

### New Line Completed

Spanish infrastructure managers Adif and Adif AV have

completed a project to build a new 46-kilometer single-track Iberian-gauge line between Xàtiva and La Encina south of Valencia.

The line officially opened on September 9 and will host diverted traffic from the existing Iberian gauge line between Xàtiva and La Encina while this is upgraded to a double-track standard-gauge high-speed line under the €245 million second phase of the project. This work will continue the extension of the TEN-T Mediterranean Corridor to the southeast of Spain.

The infrastructure managers have invested €505 million to build the new electrified Iberian-gauge alignment between Xàtiva and La Encina, which has two tunnels, seven viaducts, two overbridges and three underbridges.

CAF Signaling was responsible for supplying signaling, including five Quasar Q4e interlockings, four object controllers, and two Q4e block controllers as well as LED signals, the Asfa Digital train protection system and train detection based on axle-counters. The supplier also upgraded signaling at Xàtiva station.

CAF says that it will also equip the new line with ERTMS Level 1 and that interlockings will be renewed between Poble Llarga and Alfafar on the line between Xàtiva and Valencia, as part of the government's investment plan for the Valencia commuter network.

Under the second phase of the Xàtiva-La Encina project, the two existing Iberian gauge tracks will be replaced with standard gauge track for use by high-speed and freight trains, while new 25kV AC electrification will be installed as well and as ERTMS Level 2.

[INTERNATIONAL RAILWAY JOURNAL](#), September 18

## STUTT GART, GERMANY

### Stuttgart 21 Tunneling Complete

GERMAN Rail (DB) has completed the more than 56 kilometers of tunneling required for the Stuttgart 21 project.

The milestone was marked with a ceremony on September 14, attended by a number of dignitaries including representatives from DB, federal, state and local government, the European Commission (EC), Stuttgart Airport and construction partners.

The Stuttgart 21 project includes the construction of a new underground main station beneath the historic terminus, which is on course to open in December 2025, along with a complex network of new lines, mostly underground, to connect the new station to lines radiating from Stuttgart.

Tunneling began on December 4, 2013, with eight mostly twin-bore tunnels now completed:

- Bad Cannstatt tunnel
- Feuerbach tunnel
- Airport tunnel
- Filder tunnel
- Obertürkheim tunnel
- the S-Bahn tunnel between Mittnachtstrasse station and Stuttgart main station S-Bahn station

- Rosenstein S-Bahn tunnel, and
- Untertürkheimer Kurve tunnel.

More than 60 kilometers of slab track has already been laid in the tunnels. Tunneling was completed using tunnel boring machines and traditional tunnel construction methods, at a rate of up to one kilometer a month.

[INTERNATIONAL RAILWAY JOURNAL](#), September 18

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## TORINO, ITALY

### New LRVs Entering Service

Torino Transport Group (GTT) introduced an initial fleet of 30 LRVs being supplied by Hitachi Rail on September 11.

Hitachi Rail was awarded a framework contract for 70 LRVs in Spring 2020. The remaining batch of 40 vehicles will be delivered by 2024. The framework agreement is being financed by Italy's Ministry of Transport through an agreement with the City of Torino aimed at boosting rail transport in large cities.



The first of the new LRVs for Torino. Hitachi Rail photo

Each 28-meter-long LRV has a maximum speed of 60 kph and can accommodate up to 218 passengers.

The LRVs have an innovative air-conditioning system which provides a continuous exchange of air from the outside. The vehicles have large windows with transparent sides to the roof to provide a high level of light inside and good visibility outside.

The units have two areas for passengers with reduced mobility and are designed to provide easy access and good maneuverability for wheelchairs. External information displays are positioned so that they are visible to passengers in wheelchairs.

[INTERNATIONAL RAILWAY JOURNAL](#), September 6

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## TORONTO

### Transfer Connection to Be Constructed

Metrolinx has awarded a contract for the construction of a pedestrian connection between the Bloor GO/UP Station and Dundas West TTC Station to Kenaidan Contractors Ltd. Work is expected to start this fall.

Once complete, the Bloor-TTC connection will provide a convenient connection between GO Transit, UP Express and

TTC services (subway, streetcar and bus).

The new pedestrian tunnel will be weather-proof and will shorten the distance to just 100 meters, which can be walked in two minutes.

The new tunnel will also make it easier and safer for users with mobility challenges or traveling with luggage to get around.

The project includes:

- Constructing a new concourse in the lower level of The Crossways' building (within the parking structure) and providing elevator access to the TTC platform level;
- Building two elevators and a stairwell connecting GO's existing Bloor tunnel and the new TTC concourse;
- Creating a new electrical room with an upgraded emergency back-up and life-safety systems to help keep riders safe in case of power outages.

At the moment, Metrolinx estimates that approximately 600 transfers occur between Dundas West TTC Station and Bloor GO Station each day, making both stations busy transit hubs.

With the GO Expansion program in the works and even more development anticipated for the area, the Bloor-TTC Connection will help accommodate even more riders and support the development of a regional rapid transit network that offers seamless connections to more stations and faster trains.

[RAILWAY AGE TRANSIT BRIEFS](#), September 1

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## VIENNA

### Additional Metro Trains Ordered

The city of Vienna and Wiener Linien have exercised an option for 10 additional six-car Type X metro trains from Siemens Mobility, adding to the 34 trains originally ordered.

The first Type X train entered service on the Vienna U-Bahn on June 16 (see July *Bulletin*, page 21) and has since successfully covered more than 8,000 kilometers on Line U3. The new trains will replace older "Silver Arrow" (Type V) trains and will enable fully automated metro operation for the first time in Vienna on Line U5 line starting in 2026.

Siemens Mobility and Wiener Linien collected volumes of data and feedback from the initial Type X car operation. That was then analyzed and optimizations were undertaken where needed. The new train has proven to be highly reliable, and feedback from passengers has also been especially positive.

A second trainset was scheduled to enter service on Line U3 between Simmering and Ottakring on September 25, and three more trains are expected to be operating later this year. Production of the Type X fleet will ramp up next year and the they will be introduced on Line U2. Delivery is expected to be completed in 2030.

The maintenance contract signed between Wiener Linien and Siemens Mobility covering all Type X trains took effect when revenue passenger service began. Train maintenance will be carried out by specially trained Wiener Linien staff in cooperation with experts from Siemens Mobility.

[INTERNATIONAL RAILWAY JOURNAL](#), September 21



## Book Review

By Paul Grether

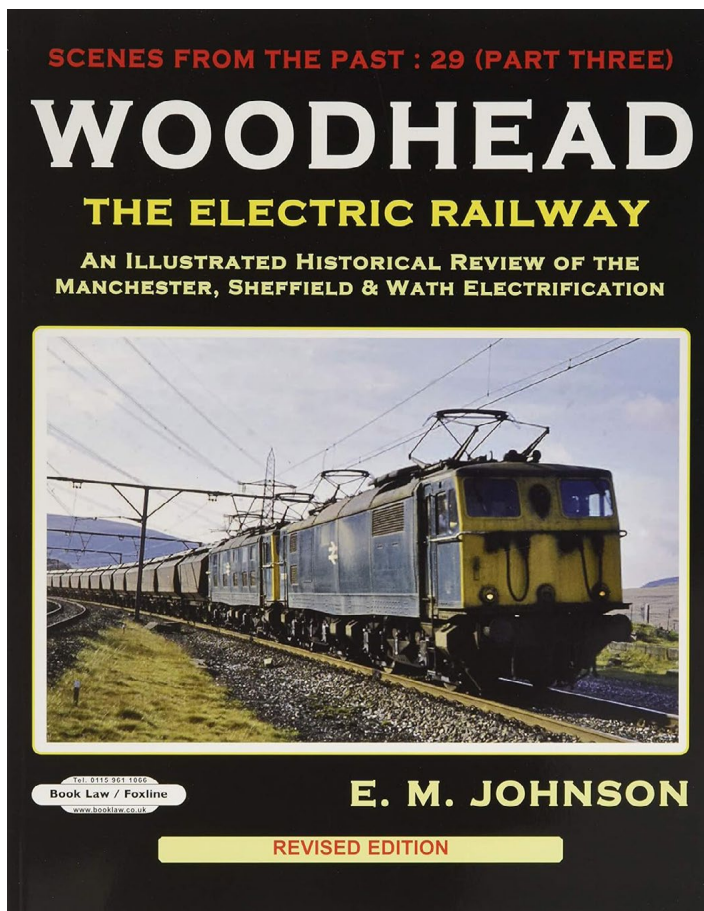
**Woodhead: the Electric Railway (Scenes from the Past : 29 Part Three)  
an Illustrated Historical Review of the Manchester, Sheffield & Wath  
Electrification**

by E. M. Johnson, published by Booklaw Publications, Nottingham, U.K.  
in 2018 [third edition], softcover, 194 pages, black & white. ISBN 978-1-  
909625-82-2

Much has been written about the early railway electrification schemes in the United Kingdom. These included London and suburban services such as the Metropolitan Line (later London Transport) lines. There was also one of the “Big Four” that invested in early electrification - the huge 660V DC third rail network of the Southern Railway. Following nationalization in 1948, British Rail (BR) retained steam power much longer than many peer countries and then invested heavily in diesel. It wasn't until the 1970s that the incremental investments led to the 25 kV AC at 50 Hz catenary system fully opening on the West Coast Main Line.



**British Rail EM1 electric locomotive in the National Railway Museum in York, U.K., March 25, 2010.** Paul Grether photo



Leading up to nationalization there was a little known electrification proposal of another of the “Big Four” — the London & North Eastern Railway (LNER) Manchester to Sheffield mainline. The LNER started the work to electrify this hilly mainline with

1,500V DC catenary in the 1930s with interest free government loans. Completion was by BR in the 1950s. Abandonment of the line by BR occurred in the early 1980s.

Johnson's work is a profusely illustrated survey of the history of the line including many technical and operational details. There is a detailed history of the planning and construction, including the many trials and tests required to establish a new electrical railway system. The development of the rolling stock (initially EMUs and later the EM1 and EM2 locomotives) is covered, as well as the civil construction of the line including tunnels, workshops and the traction power distribution and control system with interesting documents and industry advertisements as illustrations. The majority of the book is a captioned photo survey of the line organized geographically with topics of relevant interest covered by location in the text. The book closes with a description of the loan of L&NER 6000 to the Nederlandse Spoorwegen (NS — Dutch State Railways) after World War II as the Dutch system was also 1,500V DC for testing, and then the eventual sale of the EM2 class to NS in 1970 after abandonment of passenger services by BR. The Dutch would attach a plaque to 6000 when it was sent back to the UK with the name “Tommy” for the locomotive, the Dutch nickname for British soldiers who had helped liberate the country.

The layout and design of this book is well done. Photos are sharp, caption information and text are detailed and well researched. This will appeal to those interested in a unique small facet of British/European rail history, mainline railway electrifications and drawing comparisons between the limited British railway electrification experience and the USA or continental Europe.

Link to book information: [www.libib.com/u/grether?solo=106067540](http://www.libib.com/u/grether?solo=106067540)



## Travels with Jack May

### Britain and the Baltics — Part XX

By Jack May (Photographs by the author)

#### Wednesday, August 23

The group would leave for its 150-mile bus ride to Daugavpils at 8:00 AM, but Karl-Heinz, Julien and I had to be on the road earlier, as we were traveling to Latvia's second city by rail at 7:40. After breakfast, we wandered over to the railway station, and once we were satisfied with our photos, boarded our three-car DMU train, which consisted of a motor pulling two matching trailers. The train departed on time and then traveled under 3000v DC wire to the end of suburban electric service at Aizkraukle (some 55 miles), from which we continued for another 90 or so miles beyond, at good speed, still paralleling the Daugava River, which only occasionally was in view. For the most part we saw forests, fields and streams.



The clock tower atop Riga's railway station indicated we had only 13 minutes to catch our train to Daugavpils. Although there is only one long-distance train using the facility, which carries compartment sleeping cars for both St. Petersburg and Moscow, the station has a full array of amenities, including ticket windows, travel information agencies, snack bars, news kiosks and even a supermarket. It serves mostly suburban riders along five electrified lines that radiate from the city. The current building was completed in 1965, on the same site as an original 1861 structure.

We arrived in Daugavpils on time at 11:07 (average speed with stops about 40 mph), and actually beat the group's bus, which rolled into the station's forecourt about 10 minutes later. During the interim we bought our return tickets to Riga (€7.05 each way), now knowing from experience that the train would definitely be preferable to a bus ride. Daugavpils, in the south-eastern corner of Latvia and with a population of just under 100,000, is located close to the borders of Lithuania, Belarus and Russia, and thus is a crossroad of commerce. This would be my second visit to the city, which I managed as a day trip from Riga in 1997, virtually on the same schedule as today's excursion. I also passed through it (without stopping over)



Our Latvian Railways three-car DMU is shown ready to leave for Daugavpils. The RVR logo on the face of the DR1A motor unit indicates the equipment was built by Rigas Vagonbuves Rupnica, Latvia's largest manufacturer, which in Soviet times also built thousands of iconic PCC-like RVZ-6 trams (one of which we would ride today in Daugavpils). This three-car unit was among a large number constructed in the 1970s for operation in all corners of the Soviet Union.

on a 2005 train ride from Vilnius (where I had a very short connection from Kaliningrad) to St. Petersburg, and spied a streetcar from the window of my sleeping compartment. I liked the city very much, especially in terms of the tramway, because it traverses extremely quaint neighborhoods as well as a series of architecturally splendid churches along its main traffic artery, 18 Novembra iela. Of course the system's use of trolley poles is instrumental to the equation. In fact one could say that the only portions of the city that are visually unappealing from the windows of a tramcar are buildings constructed during Latvia's Soviet period (1945–1989).

Historically, Daugavpils has had many names, depending upon whom its rulers were, including Dvinsk (Russian) and Dunaburg (German and Yiddish). Its current name was established relatively recently when it became part of an independent Latvia in 1920. The majority of its population (over 50 percent)\* is ethnically Russian and that language is ever present, but the use of the Cyrillic alphabet on signs is discouraged — a sign of Latvian nationalism and a lack of trust of its behemoth of a neighbor. All in all however, Daugavpils does not look prosperous. Most of our tourmembers referred to the city as Dunaburg.

*\*According to a recent census, Russians are 53.6 percent of the population, with Latvians coming in second at 19.8. The remaining quarter are made up of Poles, Belarusians, Ukrainians, Lithuanians, etc. Until the German occupation, Jews made up as much as 45 percent of the population. On my 1997 trip I saw*





**Snowplow GS 4 at the rear of the carhouse. It is not clear why Cyrillic letters are used to identify the car.**



**Sweeper S-37 was also in the back of the carhouse, probably similarly lettered in Cyrillic (the Cyrillic 'С' corresponds to the Latin alphabet's 'S'). One of the tramway's ČKD-Tatra T3 PCCs in dead storage rests behind the work car.**



**A string of ex-Schwerin Tatra-built T3 PCC cars is located in the far reaches of the carhouse. They look like they're still in pretty good condition.**

*swastikas graffitied on what may have been Jewish-owned businesses and storefront schools.*

As it turned out there was little time to explore the city outside of the tram lines, mostly due to the weather. In fact our two charters didn't even cover the entire tram network. While it was partly cloudy when we arrived at the Riga station, by the time we got to our first destination it had become dark and overcast, and soon it began raining, the degree varying from light to steady, with only short lulls. In fact, in order to see anything, we continually had to wipe the windows of our trams with our sleeves or handkerchiefs, as they were constantly steaming up. But the streetcars we rode certainly protected us from the elements, although as a result, many of our photo stops were shortened by a desire to get back into the shelter of our tramcars as quickly as possible.

The tramway has three routes, with some 37 stops covering about 16 miles. It was not built until 1946, and of course, it's Russian five-foot gauge. And like most tramways that were under Soviet influence, it has loops at the ends of all its lines and uses single-ended equipment. The system was extended to its current size in about five separate steps, the most recent being in 1990. Sections of single track have a detrimental effect on headways. While route 1 has frequent service (cars seemed to run every eight minutes), the other two lines operate at frequencies just under every half hour. Most of the track appeared to be in excellent condition, and it also seemed that money had been (and is being) spent to upgrade the system's overhead and line poles.

The tour bus took us to the carhouse and shop, which is located at Butjerova iela, the northern terminal of routes 1 and 2 (see <http://www.urbanrail.net/eu/lv/dauga/daugavpils.htm> for a map). Thus we could observe plenty of action with cars constantly looping during the substantial amount of time we spent exploring the grounds. In addition to seeing trams that were not in service on this day, we also were able to photograph work cars and many pieces of rolling stock that had been withdrawn from the active roster. The latter were way in the back of the facility, where long strings of equipment seemed to be rusting away — it looked like the organization has rarely ever scrapped anything.

The roster is interesting and relatively compact. All service at this time is provided by cars manufactured in Ust Katav, Russia, with the newest, built in 2014, consisting of eight four-axle PCC-like KTM-23 units and four three-section 70 percent low-floor KTM-31 cars. They operate on the busy route 1, while routes 2 and 3 get older four-axle KT-5s (1990-91) and the single KT8 (1994). There are a few other cars on the roster that could be placed into service if necessary, including a pair of RVZ-6s and some Tatra T3 PCCs, the latter having been purchased second-hand from the Schwerin tramway in Germany.

Photos and a description of our excursions are the subject of the report's next segment, Part XXI.





**Ust-Katav built KTM-23 No. 007 is in service on route 1 and is shown laying over on the loop at the carhouse. Although it is not apparent, the 2014-built unit is equipped with a low floor in the center.**



**No. 011, a pole-equipped Ust-Katav KTM-31, was spotted on one of the many tracks at the carhouse. The three-section low-floor articulated car was not in service on this Wednesday--in fact none of these cars were being operated. Perhaps the four units on the roster are allergic to heavy rain.**



**KTM-23 No. 008, painted in advertising colors, is shown operating inbound on route 1, along side-of-the-street reservation on 18 Novembra iela after having left the Tukuma iela stop.**