The Bulletin

Electric Railroaders' Association, Incorporated

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The Bulletin

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CONTRACT 4 SUBWAY CONSTRUCTION CONTROVERSY (Continued from April, 2015 issue) by Bernard Linder

As soon as Gerhard M. Dahl was appointed BMT's Chairman of the Board in 1923, he requested the City to live up to Contract 4, which was signed March 19, 1913, and complete subway construction. He published a book, ***Transit Truths***, in which he discussed BMT's problems. We published excerpts from his book in the April, 2015 issue and we will continue this series in the current and future issues.

Mr. Dahl explains how the company was able to remain solvent while maintaining a five-cent fare during the post-World War I inflation.

"The cost of material and wages were 100 percent higher in 1923 when the BMT was organized than they were in 1913. In the Way and Structures Department (Surface Lines) men who received 20 cents an hour in 1913 were receiving 47 cents an hour. Motormen on rapid transit lines had their wages increased from 35½ cents an hour in 1913 to 78 cents an hour in 1923. Wages in the power plant jumped from 28 cents an hour in 1913 to 65 cents an hour in 1923.

"Modern steel subway cars which cost $15,000 fully equipped in 1913 cost $85,000 in 1923. Rails for surface lines which were $39 a gross ton in 1913 were costing $48 when BMT began business."

Mr. Dahl discusses the company's finances and explains how the company remained solvent during the post-war inflation.

"The car rider is suffering daily. During the past ten years no adequate measures have been taken for his relief. The taxpayer has contributed to the cost of transporting the car rider. The city has invested in our (BMT) rapid transit lines $150 million and in the lines of the Interborough (IRT) $100 million on which it is not getting one cent of return. The taxpayer is paying the interest on $250 million of bonds issued to produce the cash used for building subways.

"During all of this time the car rider paid five cents. If he had paid 7.31 cents, it would have produced 6% on the company's investment and actual interest on the city's investment. The car rider, therefore, in the past ten years has been getting a ride for five cents which costs 7.31 cents.

"The investor recognizes the fact that the car rider needs more and better service; he cannot give 7½ or 8-cent service for 5 cents. The BMT can live on a 5-cent fare because it is the reorganized product of the old BRT. The stockholders have raised $26 million in order to protect their interests."

Improvements made during Mr. Dahl's first year include the following: On August 30, 1923, the company conducted the Brighton Ballot, a referendum among passengers regarding a proposed schedule change, which was approved.

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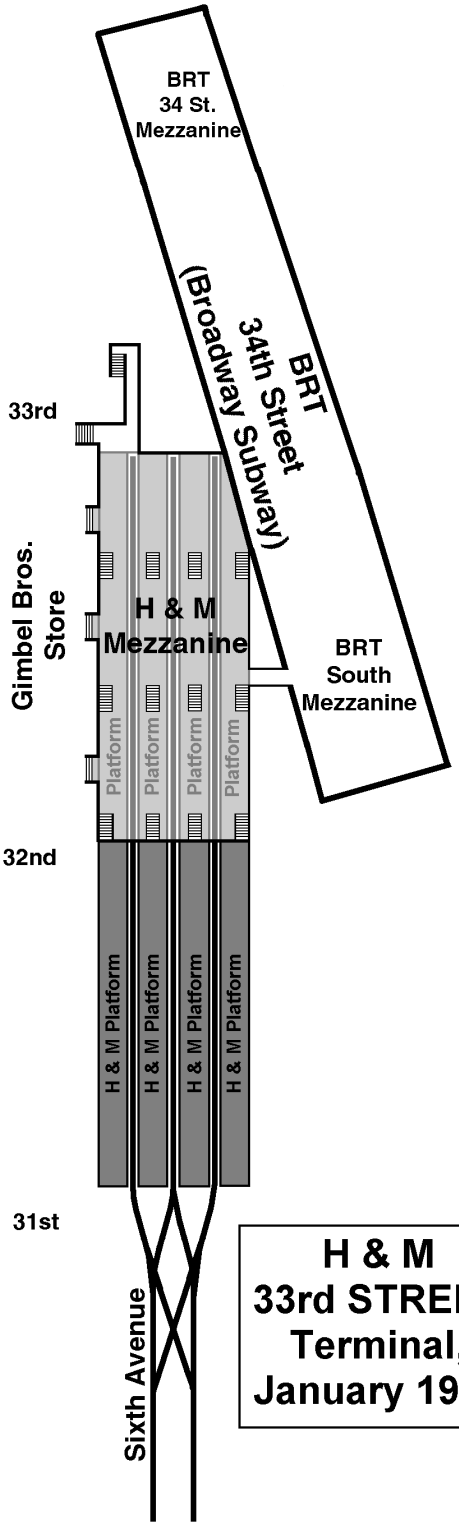
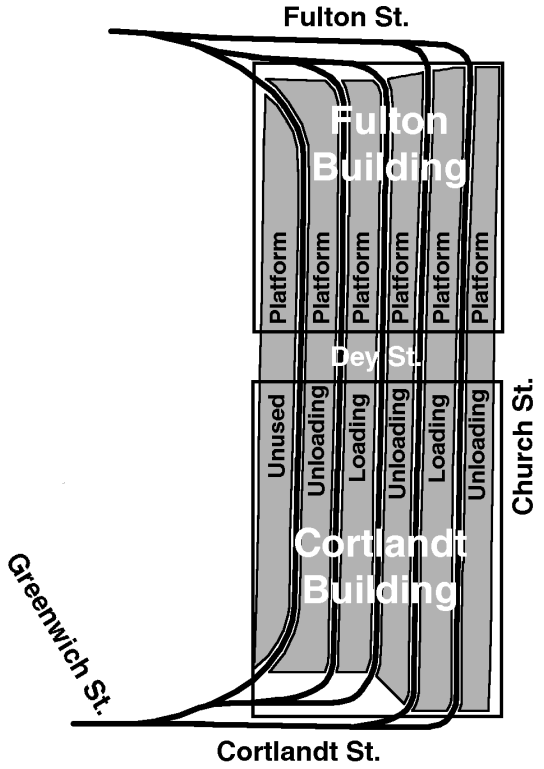
NEXT TRIP: PENNSYLVANIA WEEKEND, SATURDAY-SUNDAY, OCTOBER 24-25

RAILS UNDER THE RIVER REVISITED — THE HUDSON & MANHATTAN
by George Chiasson
(Continued from September, 2015 issue)



H & M 33rd STREET Terminal, January 1918



H & M HUDSON TERMINAL, May 1920

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Rails Under the River Revisited

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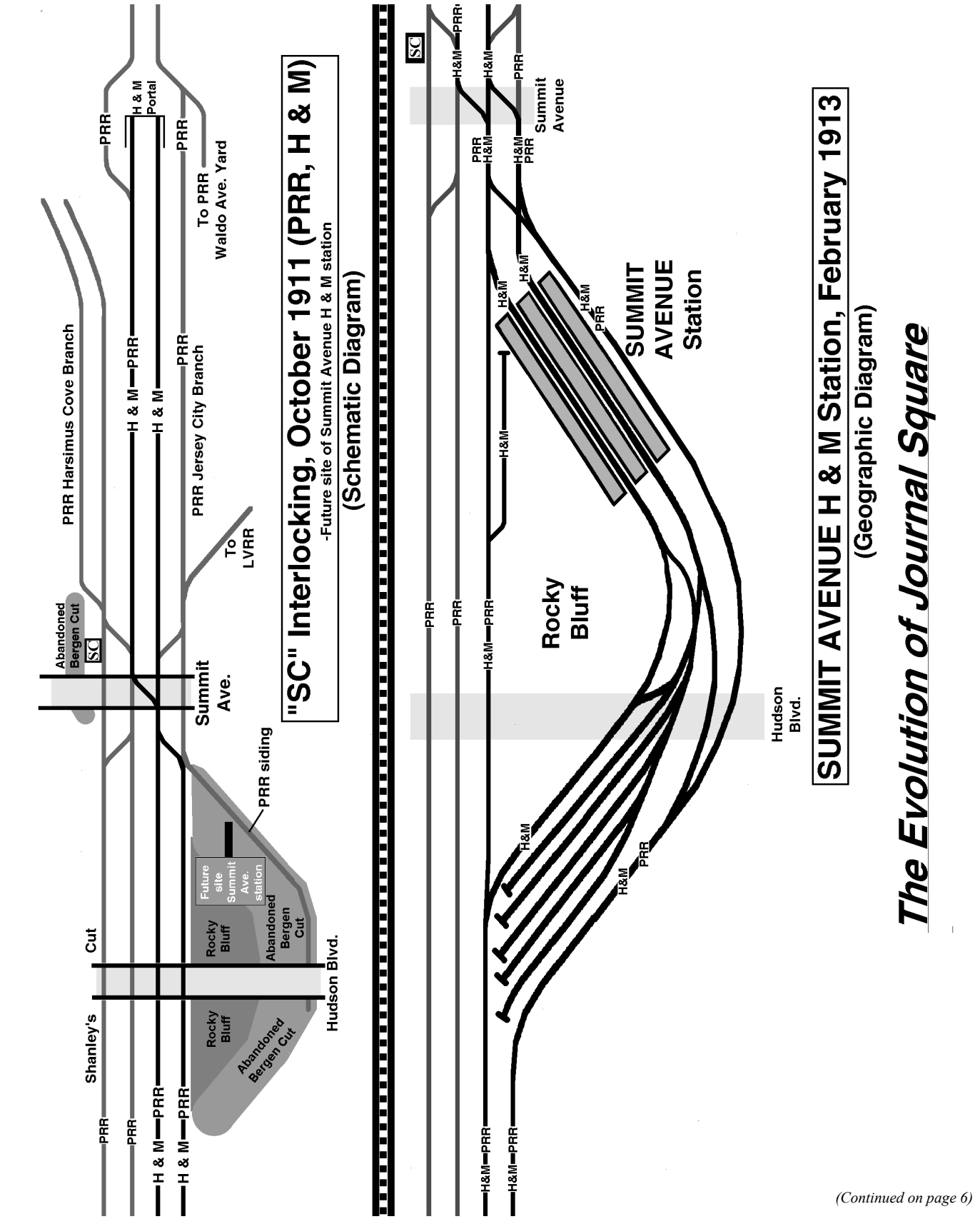

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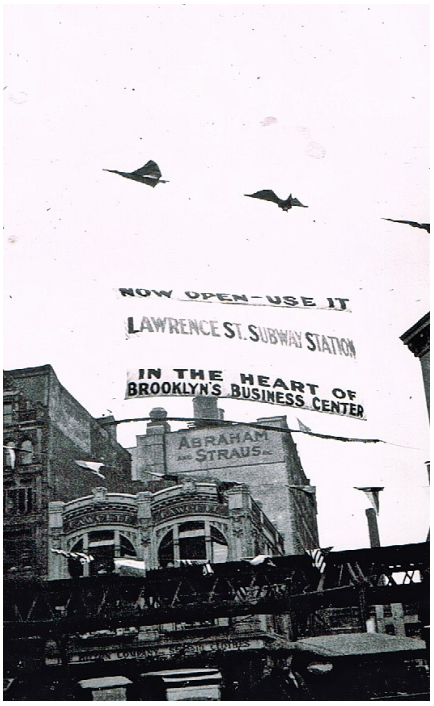
Contract 4 Subway Construction Controversy

(Continued from page 1)

Willoughby Street near Lawrence Street, looking west, during station construction.
Bernard Linder collection

Lawrence and Willoughby Streets, looking north, on opening day, June 11, 1924.
Bernard Linder collection

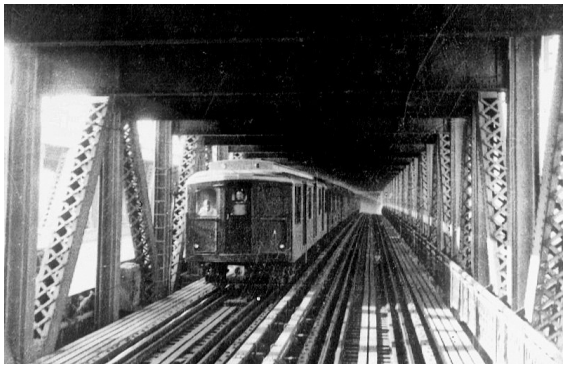


Lawrence and Fulton Streets, looking south, believed to be on opening day.
Bernard Linder collection

Lawrence Street south of Willoughby Street, looking north, on opening day.
Bernard Linder collection

Lawrence and Willoughby Streets, looking south, on opening day.
Bernard Linder collection

NX train at 57th Street on last day of operation, April 12, 1968.
Bernard Linder collection



A-Type on the Manhattan Bridge.
Bernard Linder collection

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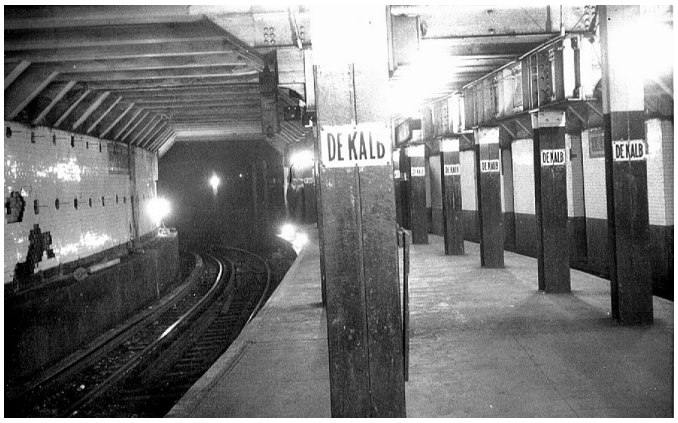
Contract 4 Subway Construction Controversy

(Continued from page 4)



DeKalb Avenue, northbound platform, looking south, October 3, 1956.
Bernard Linder collection

DeKalb Avenue, February 10, 1969.
Bernard Linder collection

Myrtle Avenue, north mezzanine, June 25, 1956.
Bernard Linder collection

Myrtle Avenue, southbound platform, June 25, 1956.
Bernard Linder collection

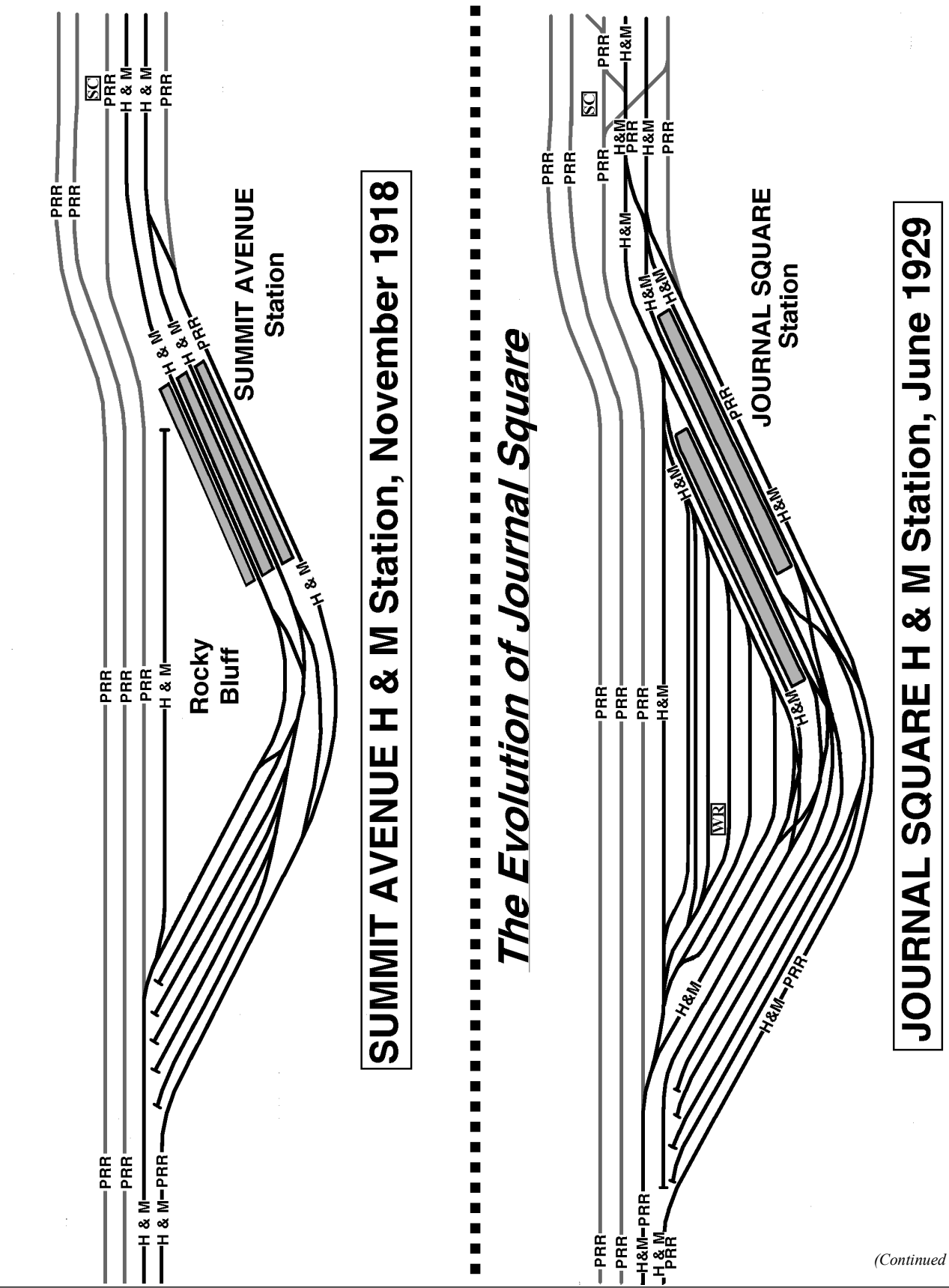
Whitehall Street station under construction.
Bernard Linder collection

Whitehall Street station under construction: transformer being lowered into subway.
Bernard Linder collection

(Continued next month)

Rails Under the River Revisited

(Continued from page 3)



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Rails Under the River Revisited

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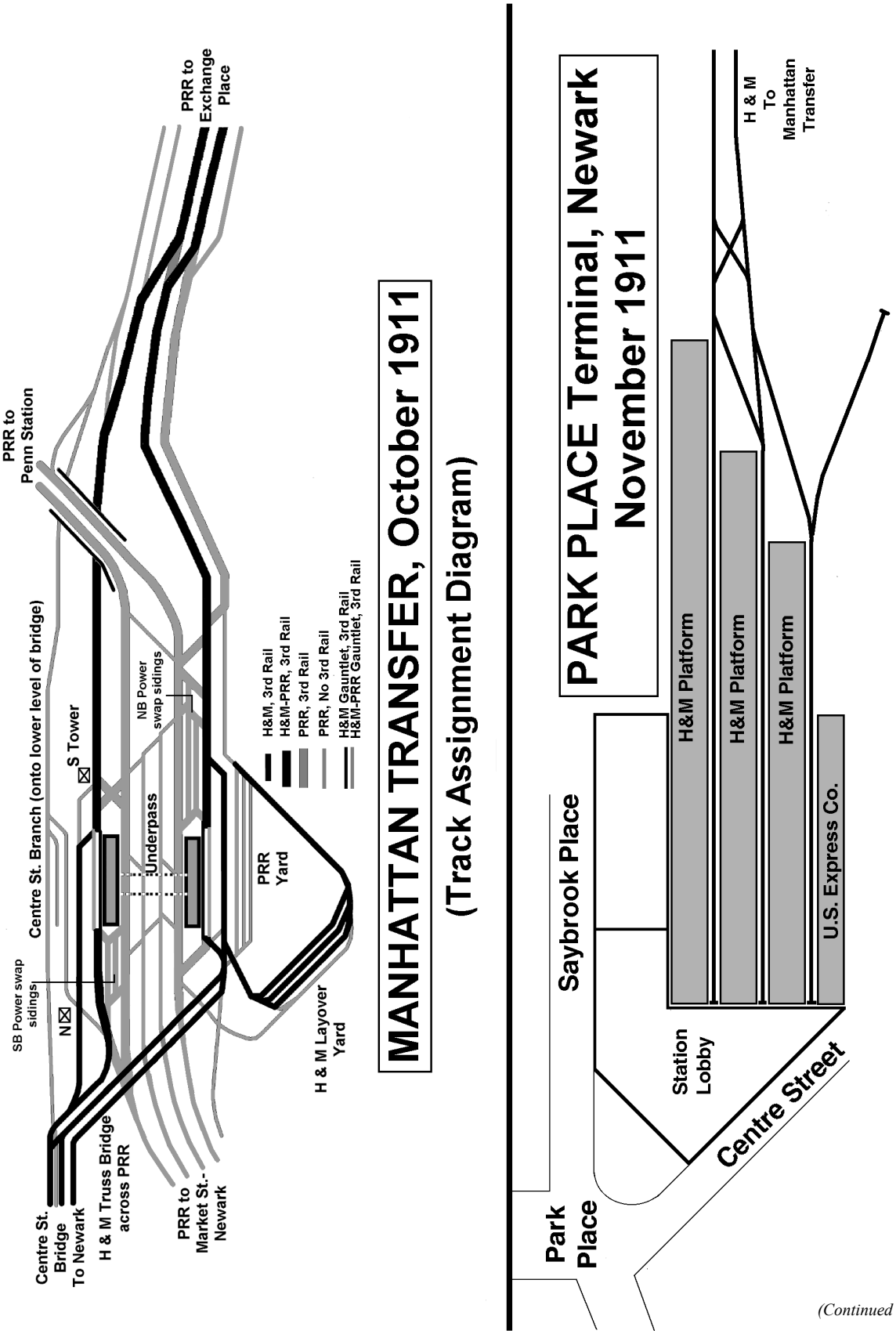

(Continued next month)

Commuter and Transit Notes

No. 323

by Ronald Yee and Alexander Ivanoff

MTA Metro-North Railroad

New Haven Line ridership continues to grow, increasing by 1.6% during the first six months of 2015 as the line's on-time performance improved to 93.6% during the month of July. Overall, Metro-North recorded an overall on-time performance of 95.7% during that same month. (***Hartford Courant***, August 25)

Metro-North received a $20 million Federal Transit Administration grant to upgrade the infrastructure along the Hudson Line, protecting vital components such as switch and signal systems as well as power supply systems from floods and storm surges from future hurricanes. The monies come from the Disaster Relief appropriation Act of 2013, which was aimed at helping local transit agencies "fix and fortify" their infrastructure in the wake of Superstorm Sandy in 2012. (Metro-North website, August 20)

Metro-North re-issued its New Haven Line schedule folder with the same dates, April 26 through October 3, with a simple note on its front page stating that it was a "Revised" edition. A cursory comparative side-by-side review of the two schedules by Editor Ron Yee revealed no apparent differences and New Haven Line train crews spoken to reported no changes in their employee operating timetables. (Ron Yee, August 25)

Metro-North was to operate three extra trains to accommodate the crowds expected for Pope Francis' visit to New York City on Friday, September 25. One additional Hudson Line train would operate out of Poughkeepsie at 10:37 AM, making select station stops until reaching Croton-Harmon and then running express to Grand Central Terminal (GCT). The Harlem Line was to see an added departure from Southeast at 10:08 AM, making select stops until White Plains and running express to GCT. The New Haven Line was to have an 11 AM departure from New Haven making select stops to Stamford and operating express to GCT. To provide the equipment sets to operate the three Papal Specials, three regularly scheduled peak period trains (Hudson Line train #832, a Poughkeepsie through Beacon zone express to GCT; Harlem Line train #612 from Southeast through Mt. Kisco; and #1523, a New Haven through Bridgeport super-express) were cancelled. As a means to prepare for above forecast crowds, extra equipment and crews were to be positioned in GCT as well as at select outlying yard locations on standby to operate additional trains if necessary both before and after the Central Park motorcade and Papal Mass at Madison Square Garden. As the Pope was scheduled to arrive in New York City from Washington, D.C. after 5 PM on September 24, only holding an evening prayer service at St. Patrick's Cathedral which is a limited capacity venue) at 6:45 PM, and depart New York City for Philadelphia at 8 AM September 26, no additional train services were scheduled to be operated on those two days. (Metro-North website, September 20)

Metro-North will issue new timetables on Saturday, October 3 for the Hudson Line and on Sunday, October 4 for the New Haven Line. On the New Haven line, the temporary "Devon Transfer" station where the Waterbury shuttle trains connect with mainline services to Grand Central Terminal and New Haven will continue in service beyond its planned expiration date of October 3 due to some delays associated with the structural and track work on the adjacent Devon Bridge. It is expected that this station will be decommissioned November 15 upon completion of the bridge work. Passengers seeking to reach Greenwich, Connecticut on Train #1633, a Shore Line East train from New London, Connecticut, will now be able to get off at Stamford at its current arrival time at Stamford of 8:03 AM and transfer to Train #1735 at 8:14 AM, which will have a Greenwich stop added to its schedule. To accommodate this added statin stop, the schedule of #1735 will be moved up by two minutes. Weekend service on the Hudson Line will be significantly changed for seven weekends to accommodate the renewal of a critical interlocking near the Yankees-E. 153rd Street station. Two of the three tracks will be out of service to accommodate the needs of this project. Train operations will be dramatically altered to accommodate a single-track operation between Marble Hill and Harlem-125th Street. All diesel-powered service north of Croton-Harmon will be provided by shuttle trains operating only between Croton-Harmon and Poughkeepsie and require passengers traveling south of Croton-Harmon to make an across-the-platform transfer. The local train service south of Croton-Harmon operated with electric multiple unit (EMU) equipment will continue to operate on their current schedules. However, the semi-expresses will only operate as far as Marble Hill. Anyone desiring to travel south of there will have to transfer to the local. Travel times for these passengers will increase by six minutes for the duration of this project. Trains #8822, 8826, 8846, 8841, 8845, and 8849 will not operate for the duration of this seven-weekend project. A November 16 timetable will be issued for the Hudson and New Haven Lines to return the schedules to normal service patterns. On the Harlem Line, Bedford Hills stops added this past spring to Trains # 9644, 9648, and 9652 will be discontinued with the new schedules effective October 4, 2015 due to their interference with essential track maintenance work. While not mentioned in the website, it can be assumed that the Harlem Line will have a new schedule issued on October 4 and probably November 16 for the holiday season. (Metro-North Railroad Press Office, September 21)

MTA Long Island Rail Road

Service between Mineola and Hicksville was disrupted

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for two days by the derailment of a New York & Atlantic Railway freight train on the afternoon of September 15 that resulted in one car of trash and construction rip-rap ending up on its side, completely blocking the westbound track and damaging about 200 feet of rail and third rail. A "bus bridge" between Mineola and Hicksville was set up to transport riders on the Port Jefferson and Ronkonkoma Branches around the wreck site while crews worked to remove the derailed car and repair the tracks. As the eastbound track was not affected or fouled by the derailed freight car, that track was permitted to be open for peak period service that would have presented real difficulties if most passengers boarded a bus in the peak direction seeking to reach home or get to their jobs. While it provided a transportation link between those two locations, it resulted in major delays and commuting headaches, some delays exceeding two hours. Service was suspended in both directions while LIRR crews worked to remove the derailed freight car and repair the track and third rail that had been damaged. Service was restored in time for the morning rush hours on September 17. (***Metro***, September 16; CBS News, September 17)

LIRR issued new schedules for the Fall season dated September 8 through November 15. Of interest is the retention of the usually summer season Friday-only *Cannonball* through train service from Penn Station to Montauk Point. In short, the Oyster Bay branch had the two weekend trains restored that had been cut during the 2010 financial crisis at MTA. They are the 7:19 AM out of Oyster Bay to Jamaica and the 1:46 AM train out of Jamaica to Oyster Bay on weekends. On the Port Jefferson Branch, the 8:19 AM out of Jamaica added a stop at Mineola at 8:30 AM to better serve reverse direction commuters. To allow for the Mineola stop, the departure time from Jamaica was moved up to 8:18 AM. Finally, the Atlantic Branch schedules are being entirely overhauled to permit the operation of many trains filled with attendees of the various events that the Barclay's Center is expected to host. Trains to the events there will be timed to arrive 30-50 minutes prior to the games and the two trains operated to Babylon will be scheduled to depart Atlantic Terminal back to Long Island around 20 minutes after the conclusion of an event at the Barclays Center. There were also a few minor schedule changes to better accommodate construction and repair work. (LIRR website, September 7)

To accommodate the crowds expected for Pope Francis' visit, LIRR was to operate eight extra westbound trains to Penn Station on September 25, 2015: three from Babylon at 12:20, 12:43, and 1:20 PM; three on the Port Jefferson Branch out of Huntington at 12:19 and 1:19 PM and Hicksville at 1:07 PM; and two departing Ronkonkoma at 12:40 and 1:40 PM. Extra trains were to operate outbound from Penn Station on an as-needed basis at the conclusion of the Papal Mass at Madison Square Garden. *(Editor's Note by Ron Yee: It is interesting how LIRR scheduled its extra train service to arrive in Manhattan 1-2 hours later than at its sister commuter line, Metro-North Railroad. It is also interesting how New York City had addressed the potential crowds for the Pope's visit on a Friday versus the manner in which the Philadelphia area handled the anticipated crowds over a weekend with a severely limited option ticketing lottery and offering of service on their entire commuter rail network aimed solely at accommodating papal crowds to and from downtown Philadelphia while totally ignoring the needs of its regular customer base.)*

NJ Transit

NJ Transit placed new schedules into effect on September 13 for the Pascack Valley, Main-Bergen County, Montclair-Boonton, Morris and Essex, and North Jersey Coast Lines. The Raritan Valley, Northeast Corridor, and Atlantic City schedules remain unchanged but new schedule folders were reprinted with updated fare tables to be effective October 1. On the Pascack Valley Line, Trains #1636 and 1647's schedules were revised and Train #2101/1601 will only operate on Friday, Saturday, and Sunday as well as the night before major holidays. On the Main/Bergen County line, Trains #64, 66, and 49 have revised schedules with #49 replaced by train #99 on holiday getaway days. A new westbound train, #47, was added. On the Montclair-Boonton Line, shuttle train #1043 linking Montclair State University with train #6201 will no longer operate. Ditto for train #405/701 on the Gladstone Branch of the Morris and Essex Lines. On the Morristown Line, Train #6684 will no longer operate, Trains #6603/6909 will only run on Saturday, Sunday, and holiday nights and #6601/6907 will add a stop at Highland Avenue. On the North Jersey Coast Line, summer service 7300-series trains will cease operations and weekend Bay Head shuttles will operate every two hours with trains #4388 and 4389 being eliminated and trains #4305/4705 only operating on Saturday, Sunday, and holiday nights. (*Editor's Note by Ron Yee: While the NJ Transit budget called for some cuts in service along with a fare increase slated for October 1, it was originally believed that the changes would be concurrent. Apparently not, as the service cuts went into effect over two weeks before the fare increase.)* (NJ Transit website, September 13)

NJ Transit operated an early getaway service on the Pascack Valley line in advance of the Yom Kippur holiday. Train #1663 was renumbered to #9653 and extended beyond New Bridge Landing to Spring Valley, making added stops at River Edge, Hillsdale, Pearl River, Nanuet, and Spring Valley. (NJ Transit website, September 18)

Four NJ Transit Conductors were arrested following the conclusion of an internal audit investigation into a case of ticket fraud. As these Conductors went about their normal routines, they simply did not cancel the one-way tickets they collected from passengers, pocketed them, and resold them at a deep discount to monthly commuters whom they felt could be entrusted with knowledge of the secret scam, which benefitted both parties financially. The Conductors made extra money

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by reselling the tickets and the commuters rode at a lower monthly cost than if they were to buy a regular monthly commutation pass ticket. One Conductor had already retired and the other three were arrested at their homes or while on the job. NJ Transit Spotters, professional observers who ride trains and observe the performance of the crews in terms of revenue collection, detected a pattern where passengers who normally use monthly tickets were paying for their rides with one-way tickets. This prompted the investigation that uncovered the scam. (***The New York Times***, July 31)

AMTRAK

The Pennsylvania Department of Transportation has requested that Amtrak operate a second train frequency on the route of the *Pennsylvanian* between New York City and Pittsburgh. Amtrak is studying the idea for feasibility with its current equipment and fleet cycling and its agreement with host railroad Norfolk-Southern to see if another passenger train timeslot could be accommodated on its busy mainline. A 2014 study by the Pittsburgh Downtown Partnership concluded that operating three daily round trips between Pittsburgh and New York could potentially almost double the ridership on the existing *Pennsylvanian* run from 218,000 to 414,000 yearly riders as a second train frequency could make a day round-trip possible where the current schedule does not. Current Amtrak ridership into and out of Pittsburgh was 149,000 in 2014. (***Pittsburgh Tribune Review,*** September 16)

In response to the looming deadline of December 31 for the implementation of Positive Train Control (PTC) covering all rail lines carrying passenger trains and freight trains with select hazardous materials, BNSF, CSX, and Amtrak have both begun to hint at a suspension of such train operations if the deadline is not extended and penalties for non-compliance suspended until the railroads can actually comply with the regulation, most likely by December 31, 2018. The potential for such a shutdown or curtailment of service first came to light in a letter to U.S. Senator John Thune (R-South Dakota) from the Surface Transportation Board (STB) Chairman Daniel Elliott admitting such a possibility. This could result in a suspension of most Amtrak service as well as snarl the nation's freight traffic with the railroad's refusal to carry the hazardous cargos that require PTC. Amtrak's Northeast Corridor is on schedule for full PTC implementation by the Congressionally mandated deadline as are certain sections in Michigan**.** *(Editor's Note by Ron Yee: The Washington, D.C.-Boston Northeast Corridor will have one glaring gap in PTC, the 57-mile section on MTA Metro-North Railroad between New Rochelle and New Haven. That section is not due to be brought into compliance for another 1-2 years, the current timetable MTA has for its two commuter railroads, Metro-North Railroad and the Long Island Rail Road.)* (CNBC, September 10)

OTHER TRANSIT SYSTEMS

BOSTON, MASSACHUSETTS

Ground was broken for the construction of a new $95 million railcar manufacturing plant at the former Westinghouse plant in Springfield, Massachusetts. The China Railway Rolling Stock Corporation expects this facility to be fully operational by 2018, producing new rapid transit cars for Boston's MBTA, 152 cars for the Orange line and 132 cars for the Red Line, for a total of $566 million. The first cars are expected to arrive at MBTA in early 2019. (Editor's Note by Ron Yee: Given the issues MBTA had during this past winter's record-breaking snowfalls, the aging carfleets of these two lines, especially the badly rusting Orange Line cars, will have to soldier on at least another four possibly five winters. These new cars cannot come soon enough. (***Boston Globe, Railway Gazette****,* September 3-4)

PHILADELPHIA, PENNSYLVANIA

PATCO mechanics are unable to repair or even maintain the cars that have been rebuilt by Alstom because they have not received proper training or instruction. Currently, six Alstom technicians are performing almost all of the tasks required to keep these cars in service and serve as advisors to the Operators who are troubleshooting the cars on the road. While the union representing the 39 mechanics and electricians who perform maintenance and repair functions at PATCO has expressed concern that the agency is planning to outsource their work to Alstom, PATCO has assured them that they will receive the proper training to take over the maintenance of these cars once instruction manuals are produced for the cars. PATCO employees will be expected to assume the maintenance of the rebuilt cars once they are off their two year warranty. *(Editor's Note by Ron Yee: this is a common practice in this industry — the Bombardier M-7 commuter cars and General Electric Genesis dual-mode locomotives went through a similar hand-off process from the manufacturer when the warranty ran out. If anything went wrong with one of the new cars or locomotives, Metro-North staff were told NOT to do anything that could void the warranty.)* Because of the extensive delays in getting the pilot set of these cars in service, Alstom did not have time to produce a maintenance manual. During the Pope's visit, Alstom technicians were to ride the rebuilt trains to insure that issues that arose would be resolved quickly and effectively. (***Philadelphia Inquirer***, August 27)

FLORIDA

All 50 commuter railcars on Tri-Rail are now equipped with free Wi-Fi. Work on installing Wi-Fi at the stations is now underway along with the development of an app that coordinates with GPS signals and informs users of train status and location with up-to-the-minute accuracy. The complete Internet package is expected to be completed by the end of 2016. The Miami Metro-Rail rapid transit system already has offered free Wi-Fi for a number of years with very positive feedback from passengers. (***Miami Herald****,* September 14)

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Texas

A federal study has endorsed the so-called utility corridor for the proposed Houston to Dallas high-speed rail.

The United States Department of Transportation and Federal Railroad Administration released a report August 10 supporting Texas Central Railway's decision to use that pathway for the 240-mile line. The corridor to be used will follow existing high-voltage electrical transmission lines.

Essentially, this would prevent TCR from having to condemn more land, since utility rights-of-way already exist, than it would if it had to go through the Interstate 45 corridor, for example.

The utility corridor goes through Dallas, Ellis, Navarro, Freestone, Limestone, Leon, Madison, Grimes, Waller, and Harris Counties, while bypassing Montgomery County. The only two alternative corridors that go through Montgomery County are the Interstate 45 and BNSF options.

Only four options passed the "purpose and needs" test, which were the BNSF, UPRR, Interstate 45 Greenfield, and Utility corridors. However, BNSF and UPRR, two railway lines, declined to allow TCR to use part of their rights-of-way. It also would be cost-prohibitive due to the extra safety measures, or the amount of land that would be needed to purchase from private land owners. Therefore, FRA described those options as "infeasible."

The Interstate 45 Greenfield corridor, which would run through the Sam Houston National Forest, would be "anticipated to create significant impacts to recreation resources and managed habitat," thus making that corridor routing unsuitable.

The report notes the utility corridor does not have "adequate high-speed rail" rights-of-way, although it would be able to parallel for more than 70 percent of the electrical easements.

The utility corridor will go on to a second, more detailed screening analysis.

In July, Montgomery County and the city of Magnolia formed a regional planning commission to monitor and work against any high speed rail projects that may cut through western Montgomery County.

The county and area communities have expressed concerns about Texas Central Rail's proposal to build a high-speed rail line from Houston to Dallas; initially, one of the proposed routes would have taken the train through the western portion of Montgomery County, potentially cutting through large tracts of privately owned land.

That route has since been rejected in favor of another alternative west of Montgomery County, but the county and Magnolia decided to form a regional planning commission in the event Texas Central Railway changes its options and reverts to the Montgomery County route. (***Your Houston News***, August 29)

Las Vegas, Nevada

A unit of CCRC, China's largest train maker, has signed a deal to help build a high-speed bullet train railway linking Las Vegas and Los Angeles, a proposal that was thought to be dead after a federal loan application was rejected.

China Railway International USA inked an accord for the project with XpressWest, a venture set up by Las Vegas-based hotel and casino developer Marnell Companies.

XpressWest and the Chinese firm said in a joint statement that the agreement would accelerate the plan for a 230-mile high-speed line between the two cities, with construction expected to start in September, 2016. Finer details and financial terms were not disclosed, though the statement said the project had initial capital of $100 million. No completion date was announced.

The high-speed railway project would have stations in Las Vegas, Nevada, Victorville and Palmdale, California, and service throughout Los Angeles.

XpressWest said the trains would travel at speeds of up to 150 mph, getting passengers from Las Vegas to Los Angeles (and vice versa) in one hour 20 minutes, versus about four hours by car. The deal was announced just days before China President Xi Jinping's visit to the United States. (NBC News, September 17)

Portland, Oregon

Portland added a fifth line to its light rail network on September 12 with the start of service on the MAX Orange Line from Portland State University (PSU) to SE Park Avenue in Milwaukie.

The 7.3-mile line is effectively an extension of the Yellow Line serving two stations on the west side of the Willamette River and eight on the east side and linking Portland City Center with the South Waterfront, Milwaukie, and northern Clackamas County. The line crosses the river on the Tilikum Crossing, which at 1,706 feet is one of the longest transit-only bridges in the United States. The Orange Line shares the bridge with the Portland Streetcar, buses, bicycles, and pedestrians.

Service is operated by 18 Siemens S70 LRVs, which are equipped with Sitras SES onboard energy storage systems. Ten bus lines have been revised to feed into the Orange Line and there are 446 new bicycle parking and 719 car parking spaces, including nine with electric vehicle charging points.

The total budget for the project was $1.49 billion, although Portland transit authority TriMet says it has achieved savings of $48 million during construction. Around $65 million was invested in new or improved pedestrian and bicycle infrastructure as part of the project.

Average weekday ridership is forecast to reach 22,765 by 2030, when approximately 22,000 households and 85,000 jobs will be located within walking distance of the line's stations.

The completion of the Orange Line expands the MAX light rail network to nearly 62 miles and 97 stations. (***Railway Age***, September 14)

Sacramento, California

On September 10, Sacramento RT commenced oper-

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ation of the first of 21 refurbished light rail vehicles (LRVs) it had acquired from the Santa Clara Valley Transportation Authority (VTA) in San Jose, California in 2003. A $7.1 million assist from the American Recovery and Reinvestment Act of 2009 went toward the rehabilitation of these 21 LRVs, costing RT a fraction of what it would have cost to purchase new LRVs. The cars will be used to increase capacity with the expansion of the RT system with the opening of the Blue line extension to Cosumnes River College and enable RT to maintain current service levels throughout the system. The refurbishment work is being conducted by Siemens at its nearby manufacturing facility in Sacramento as well as at the RT maintenance facility and involves an overhaul of the trucks and support structures, installation of event recorders, and upgrading of the communications systems as well as the heating, ventilation and air-conditioning systems (HVAC). Cosmetic repairs and upgrades to the exterior surfaces included a repainting to the RT paint scheme. The overhaul is expected to enable them to operate on RT for around 15 years. (Editor's Note by Ron Yee**:** These LRVs were originally built by UTDC and placed into operation in 1987 in San Jose but were sold to Sacramento when VTA acquired a new fleet of 99 Kinki-Sharyo low floor LRVs in 2002-4 to provide service on its greatly expanded rail network. Rather than have two types of non-compatible equipment, the older class of LRVs not compliant with accessibility requirements, VTA sold off its entire UTDC fleet at a relatively young age of 15 years. UTDC LRVs 830-850 were sold to Sacramento RT, 802-829 were sold to UTA/TRAX Light Rail in Salt Lake City, Utah and 801 was converted into a diesel-powered tow engine/wrecker. (***Metro Magazine,*** September 9)

San Francisco, California

San Francisco Municipal Transportation Agency (MUNI) adopted a new format transit map co-created by David and Primus Wiggins that uses graphics such as the thickness of a line designating a route to convey to a user that the line offers more frequent or less frequent service. The thinner the route, the less frequent the scheduled service. Light Rail lines are in bold red color while the historic E and F lines are in yellow. Lines tracing each route as it courses through the city maintain separation from other lines it may share a street with to prevent users from losing track of where a particular route runs to in common with another or several other routes. While this rider-friendly map has been lauded by most transit managers, advocates, and users alike, there are some who fear that such maps will further discourage people from using the less frequent routes and result in such routes losing what little ridership they have, possibly resulting in ever poorer service levels to the point of route abandonment. The maps were officially adopted as the official MUNI system map in April, 2015 and are already being revised and re-issued this month to reflect some service updates that had been placed into effect since the initial printing of the innovative map. (***Atlantic Media CityLab***, September 8)

Los Angeles, California

In a surprise move, MetroLink announced that it will position a leased BNSF locomotive in front of the Rotem-built cab control coaches out of concern that these coaches may have a design flaw endangering crews and passengers in the event of another grade crossing collision such as the one that killed the Engineer of a MetroLink commuter train that hit a pick-up truck and flipped over after the impact. While the Rotem coach's design likely saved many lives in this wreck, many questions are now being raised as to the overall safety of push-pull operations on passenger trains. Also in question is how the couplers did not keep the derailed cars together and why the railcars tossed so many passengers around during the wreck. While no other commuter rail operation seems to have had such issues, the overall question regarding the ultimate safety in push-pull operations in passenger rail operations is being raised yet again. Locomotive Engineers and their labor organizations have been touting the practice as inherently unsafe and their concerns are being brought out into the spotlight once again. For the time being and probably for a year-long period while the issue is being studied and evaluated, all 57 Rotem cab coaches will not be used as head end cars in the push mode. (***Los Angeles Times***, September 3)

Toronto, Ontario, Canada

Infrastructure Ontario and regional transport authority Metrolinx have issued a request for qualifications seeking interest in the estimated C$1 billion contract to design, build, finance and maintain the Finch West Light Rail Transit project in Toronto.

The project includes 11 kilometers of segregated light rail line along Finch Avenue West between Humber College and the future Finch West station at Keele Street on the Toronto York-Spadina subway extension. There would be 18 surface stops and an underground interchange with the metro, plus a depot to maintain up to 75 LRVs for the Finch West and future Jane LRT lines.

Announcing the RFQ on September 8, Ontario's Ministry of Transportation said the aim is to "help transform Finch Avenue West into a vibrant community, accessible to motorists, transit riders, cyclists, and pedestrians." The light rail service would be "faster, more frequent and reliable" than the existing bus service, which includes some of the city's busiest routes.

The project is to be undertaken through Infrastructure Ontario's Alternative Financing & Procurement model, which aims to transfer "appropriate" design, construction, financing, and maintenance risks to the private sector. The line is to be publicly owned, and will be operated by the Toronto Transit Commission (TTC).

Responses to the RFQ will be evaluated on the basis of relevant design and construction experience and capacity to finance and deliver a project of the required size and complexity. Pre-qualified groups will then be invited to respond to a request for proposals.

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Commuter and Transit Notes

(Continued from page 12)

Financial close and the start of construction are planned for 2017, and opening in late 2021. Ridership is predicted to be 2 250 passengers/hour in the peak direction by 2031. (***Railway Gazette***, September 10)

England

A test bodyshell for the Class 345 electric multiple-units ordered for London's Crossrail project has been assembled at Bombardier Transportation's Derby plant, where it is being used to refine the design and manufacturing techniques ahead of full production of the 594 cars for 66 nine-car trainsets.

Transport for London and Bombardier are working with designers Barber & Osgerby on the styling of the EMUs, which is to be unveiled later this year.

Part of Bombardier's Aventra family, the 25,000-volt, 50-Hertz EMUs will be more than 200 meters long, with wide interconnecting gangways and capacity for up to 1,500 passengers. There will be three double doors per car side to facilitate rapid boarding and alighting at the busy central London stations.

The new EMUs are scheduled to enter service on the existing lines between London Liverpool Street and Shenfield starting in May, 2017, with the Crossrail tunnels through central London opening in December, 2018 and the full service from Reading and Heathrow in the west to Shenfield and Abbey Wood in the east starting in December, 2019.

Bombardier beat bids from Hitachi and CAF to win the £1 billion, 32-year Crossrail rolling stock supply and maintenance contract in February, 2014. According to Transport for London, the manufacture and delivery of the trains and depot is supporting 760 United Kingdom manufacturing jobs and 80 apprenticeships. (***Railway Gazette***, September 10)

Liverpool regional transport authority Merseytravel is to procure a new fleet of electric multiple-units to replace the 59 three-car Class 507 and 508 EMUs used on Merseyrail services, which are now approaching 40 years old.

The higher availability and improved reliability of modern EMUs is expected to enable a smaller fleet of around 52 units to be procured, while more standing room would enable capacity to be increased from 303 to 480 passengers per unit.

The Merseytravel Committee was expected to approve the start of the procurement program at its meeting on October 1. The aim is to select a preferred bidder in around 12 months, with the new EMUs to enter service starting in the early 2020s.

The 750-volt d.c. third-rail EMUs would be suitable for easy modification to use 25,000-volt, 50-Hertz electrification, reflecting long-term ambitions to extend services beyond the current Merseyrail network.

Merseytravel intends to buy the EMUs directly, rather than through a leasing company. The estimated cost of £400 million including associated depots and infrastructure works would be financed with £65 million from its reserves plus public-sector borrowing and EIB loans. (***Railway Gazette***, September 10)

The Department for Transport announced on September 11 that it would undertake public consultation on proposals to secure the future of the 13.5-kilometer isolated line on the Isle of Wight by turning it into "a separate and self-sustaining business" during the life of the next South Western franchise, which is expected to begin in 2017.

Island Line is operated within the South Western franchise, and carries around 1.1 million passengers/year on a fleet of small-profile ex-London Underground trains dating back to 1938.

According to DfT the line "currently costs £4 million a year to run, against an income of £1 million." Bidders for the next franchise will be asked to develop proposals to reduce costs, which could involve securing an investment partner or setting up a social enterprise to take over running of the line. Network Rail would be responsible for maintaining and upgrading the infrastructure. (***Railway Gazette***, September 11)

Russia

Yaroslavl tram operator Yargorelektrotrans has announced plans for two fast tram lines. A feasibility study is expected to be completed soon.

One route would link the main line station to the airport, southeast of the city. The other would be a north-south route intended to serve the city's busiest tram corridor, which currently carries 40 million passengers per year. This would involve the reconstruction of 6.8 kilometers of existing line as well as building 13.7 kilometers of new alignment. Trams would travel at average speeds of 30 kilometers/hour, taking 80 minutes to complete the end-to-end journey.

As part of the plans, Yargoelektrotrans plans to buy 30 modern trams. (***Railway Gazette***, September 16)

China

Bombardier announced on September 2 that its Bombardier Sifang Transportation (BST) Chinese joint venture has secured a Yuan 2.4 billion ($US 381 million) contract to supply 15 additional CRH380D high-speed trains to China Railway Corporation (CRC).

The 350 kilometer/hour CRH380D is formed of four trailers and four motor cars with a maximum output of 10 megawatts. It has a maximum design speed of 380 kilometers/hour and has achieved 420 kilometers/hour during tests on the Chinese high-speed network. The lightweight vehicles have aluminum bodyshells and an axle load of 17 tons.

Each set is 215.3 meters long and 3358 millimeters wide, which permits three-plus-two seating in second class and two-plus-two in the single first-class coach, which has 28 seats. Each train seats 518 passengers in second class and 10 in a VIP area.

BST received an initial order in September, 2009 for 70 CRH380Ds, the first of which was delivered to CRC this March. Engineering and assembly is taking place at BST's facility in Qingdao with Bombardier's European plants providing project management support and components. (***International Railway Journal***, September 2)

Around New York's Transit System

(Continued from page 20)

At around 10:30 am Sunday September 13, the official ribbon-cutting ceremony was held at the new station, attended by New York City Mayor Bill de Blasio, MTA Chairman Tom Prendergast, NYCT Interim President James Ferrara, MTA Capital Construction President Michael Horodniceanu, U.S. Senator Chuck Schumer, and other officials and dignitaries. Two and a half hours later, amidst great fanfare and enthusiasm from the riding public and transit enthusiasts, the first revenue service train to the new station made up of an R-188 trainset with 7877 on the south end and 7887 on the north end departed Times Square at around 1:03 PM (about 5 minutes late due to crush load conditions in the first car of the train — this author being one of the guilty folks contributing to the beyond-crush load factors in that car — resulting difficulties in getting the doors closed) and arrived at around 1:08 PM at 34th Street-Hudson Yards. As this train operated toward the new terminus, another trainset, with 7843 on the south end and 7853 on the north end, departed 34th Street-Hudson Yards toward Times Square at around 1:04 PM, consist reported by some ERA members who elected to ride the first revenue service train to depart from the new station. This new line extension goes beyond the former bulkhead located several hundred feet west of the Times Square station that isolated it from the lower level of the Eighth Avenue Line, cuts across that track (forever rendering that unused lower level station at 42nd Street-8th Avenue useless) and continues in a deep tunnel bored under W. 41st Street beyond 10th Avenue where it curves southward under 11th Avenue to the new station at 34th Street with two tracks and an island platform. Double crossover switches are located north and south of the station to provide maximum operational flexibility. The two-track tunnel continues southward under 11th Avenue to W. 26th Street, providing space for the storage of two trains on each track, an added bonus that will enable the storage of more train sets underground during inclement weather such as snow, ice, or extreme cold. When the "pocket tracks" south of 34th Street are empty, this also allows trains to enter the 34th Street station at full track speed rather than be slowed for hundreds of feet on the approach by timed signals leading to a bumping post as is the case at the other end of the line at Main Street-Flushing, which is subject to delays from slow-moving trains. This minimizes turn-around times at the terminal station, a very important requirement of this high-frequency service line with some of the shortest scheduled headways at NYC Transit. When CBTC becomes effective on the line around the end of 2017, 7 will be capable of two-minute service headways, perhaps less for a short period of time during peak of the peak periods. *(Editor's Note by Ron Yee: It should be noted that the service on this line was scheduled for 90-second headways during the 1964-5 World's Fair using the standard wayside signals and trip arm stops currently in use. With all of the "progress" in signalization made since that era (speed enforcement through the installation of additional timer sequenced signals at more locations today than were in existence 50 years ago), the absolute minimum headway today is two minutes, with 2.5 to 3 minutes being more the sustainable norm during the peak 30-60 minutes of the rush hour period without generating cascading delays.)*

One of the five escalators linking the lower mezzanine to the upper mezzanine at the brand new terminal was removed from service the day after the station opened. Contractors were working to correct the problem involving the tension settings on the moving handrails, which had come off their track. The escalator was expected back in service on Wednesday September 16. NYCT officials chalked it up as simply "breaking-in" issues frequently seen with new equipment. It was also reported that two transit employees had to be rescued by the Fire Department from a stuck elevator an hour before the official opening to the public.

G Train Derailment

The lead axle of the first car of a southbound G train derailed around 700 feet north of the Hoyt Schermerhorn station at 10:34 PM Thursday, September 10 after striking debris from a collapsed benchwall located along the side of the tunnel. Fortunately, there were no serious injuries, although three passengers did sustain minor injuries. Around 84 passengers had to be evacuated and G service was suspended between Bedford-Nostrand Avenue and Church Avenue with very limited service between Court Square and Bedford-Nostrand Avenue. Free transfers were made available for G passengers at Broadway to J M at Lorimer Street. At press time, the cause of the collapse was under investigation, although there are reports that this particular section of benchwall had just been repaired from damage related to water leakage with stabilizer brackets. As there was no damage to the track, third rail, or signal system, service was restored after just prior to Friday evening's rush hour after the damaged subway car and loose debris was removed from the scene and the tunnel benchwall was secured.

Straphangers Campaign Annual Survey Results

The Straphangers Campaign, a transit advocacy group, released its annual survey rating the subway lines. 7 scored the highest with 5 and B receiving the worst marks. Chief complaints are frequent breakdowns of equipment causing service delays, poor service frequency, and garbled PA announcements on B and irregular service and overcrowding on 5. 7 ranked the highest in service frequency, service reliability and train cleanliness. NYC Transit did not agree with these findings, citing other mitigating reasons for the poor grades issued to the poorest performing routes.

TOUR OF TURKEY
by Jack May
(Photographs by the author)

My wife Clare and I visited Turkey on two previous occasions, in April, 2001 and April, 2006, and enjoyed those trips so much that we decided to do it again in April, 2011. Part of that decision was based on the advancement of the light rail revolution, which had come to North America and Europe earlier, but is at full strength in Turkey. We had seen its birth on our previous visits, but since 2006 no less than five more cities opened new light rail or light metro systems. *(Editor's Note: It should be pointed out that this report is almost 5 years old, and there have been more new lines and extensions to the rail transit systems in this country since it was written.)* Thus we would visit these five cities, as well as some of our previous favorites.

Because the localities are spread throughout the Asian portion of the two continents that house Turkey, we had to figure out how best to reach them. First choice was rail, but trains do not serve all the cities, and of those that are on rail lines, some can be reached only by circuitous routes with a number of transfers. The advent of High-Speed Rail in Turkey was also upon us, so it became incumbent to sample that country's version. As a result we chose to use the rails as much as possible, but we also had to settle on air for two legs of our journey and a rental auto on another. The ability to drive also allowed us to visit some interesting archaeological sites.

After arriving at Ataturk Airport in Istanbul in pouring rain, we retrieved our bags and easily found the underground terminal of the Hafif Metro, now line M1, and I bought *jetons* (plastic tokens) for the turnstiles from a vending machine. We stayed at the Lausos Hotel in the Sultanahmet neighborhood on the European side, a short walk from Istanbul's mainline tramway, now numbered T1. However, we did not want to take our luggage aboard a low-floor streetcar, because we knew they can be extremely crowded. Instead we rode a roomy M1 metro train to the inner end of the line at Aksaray, and then took a waiting taxi at the exit of the underground station to our hotel, a relatively short distance (about 4 tram stops). The Lausos is on a very narrow street in a mostly pedestrianized area, and we could not be let off directly in front of the door, because of traffic congestion. So despite no more than 100 feet of walking, we got drenched. Fortunately, that was the last rain we saw in Turkey.

As mentioned earlier, we visited Istanbul in 2001 and 2006, and with this trip, we have now observed a decade of changes in transit operations in this city of over 13 million. Here is a brief description of the urban rail system, among the most interesting I've ever come across, with a combination of subways, light rail, streetcars and funiculars--as well as suburban commuter service. For a map see: http://upload.wikimedia.org/wikipedia/commons/3/30/Istanbul_Rapid_Transit_Map.png.

T1, the tramway. The tramway (called the Tramvay) is the spine of public transportation in Istanbul. Since its inauguration in 1992 it has been extended on both ends. This was a gradual process, so we observed only "snapshots" of the line on our three visits, as opposed to witnessing a continuum of change.

In 2001 the stations had high-level platforms and were served by rolling stock built by ABB in Sweden, which had been shared with the Hafif Metro (now the M1), which opened in 1989. The T1 was brought up to modern standards in 2003, when station platforms were lowered and 55 Bombardier Flexity Swift 100-percent low-floor units were placed in service. Meanwhile the M1 was being extended, so the ABB cars released from the T1 found immediate use. As the tramway was further lengthened, additional cars were required, and before the first of 37 new Alstom low-floor Citadis LRVs were added (starting in 2010) the line received some used Stadtbahn B cars from Koln (in 2007).

Unlike the earlier cars, which were painted blue, the new Alstom units are red. They are known as the "low-floor" cars, as the Bombardier LRVs have a slight step inside. Unlike the Bombardier units, the railfan seats in the front of the Alstoms are a little too low for good forward viewing. Similar to San Francisco LRVs, the Duewag-built (1976) ex-Koln units can be loaded from either low-level or high-level platforms, and operate in small numbers on today's M1, T1, and T4 lines.

Four stations were added to the eastern end of the tram line in 2005, extending its route across the Galata Bridge into the Golden Horn. Thus, after walking across the structure in 2001, I was able to ride a streetcar between the same points in 2006. The western extension of the line, some 8 stations long, was built in two sections, with the outer end coming first, in late 2006 (a few months after our visit). Until a long curving viaduct connecting the two sections was finally placed into service at Zeytinburnu (a few months before our current visit), the outer portion of the line was designated T2, but the entire route is now the T1. It is currently a little over 12 miles long and has 31 stations.

The T1 is crowded all the time. Running with a 6-minute base headway from end to end, service is augmented with tripper cars over the busiest portions of the route. Since its inauguration, the line has employed station fare collection, requiring passengers to purchase plastic tokens and enter paid platform areas via turnstiles. Earlier these were sold in manned booths, but now token vending machines do the job. And the turn-

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Tour of Turkey

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stiles have been equipped with electronic readers for Istanbulkart smart cards. This works very well and the line's 2-car trains swallow their loads very quickly.

Most of the T1's infrastructure consists of reserved track, free from automobile interference. Much is in pavement, with just short distances grassed in or ballasted. There are three places where the line operates in mixed traffic, one, about midway, is very short but highly congested. Automobiles also share the track at the western end of the line, where only security personnel prevent riders entering station platforms from tracks in the center of the street to avoid paying fares.

I rode the entire line on Friday, and much of it again on Saturday afternoon, getting a number of good slides, especially from some overpasses. The cars pass many mosques, which make excellent backdrops for photography. At Zeytinburnu an overpass connects the streetcar platforms with a station of the M1, Istanbul's Light Metro.

M1, the Hafif Metro. This line, which starts downtown at the Aksaray underground terminal, was extended to the airport in 2002. The grade-separated system, which also includes a short one-stop branch to a station adjacent to its shops, is about 13 miles long and has a total of 18 stations, of which six are underground. Its initial portion opened in 1989, about two years before the streetcar line, although both used identical ABB-built rolling stock until the Tramvay was reequipped in 2003. The only difference I saw between the squarish high-platform single-articulated cars used on both lines at that time was that those in streetcar service operated with their skirts removed. Now, as further extensions are coming to fruition, the surplus cars released from the Tramvay are used to expand service. A five-station addition to the stub branch is currently under construction, and has been given the route number M3. A further extension will be the M5. Service operates every 7.5 minutes with most of the trains consisting of four blue and orange units. We rode the entire line from the underground airport station to Aksaray upon or arrival in Istanbul. I also briefly rode it on Saturday for a few photos.

M2, the subway. I did not ride the M2 on this trip. It is entirely underground, running to the northeast with 13 stations along a 13-mile route. Its southern end was extended one station beyond Taksim Square in 2009, and construction is proceeding to bring it to the city center in the Yenikapi area, where it will connect with a one-station extension of the M1, suburban rail service, and various ferries. *(Editor's Note: This extension went into service on February 15, 2014.)* The current rolling stock, built by Alstom for its 2000 opening, is very much like the cars operating in Caracas. New equipment for the extension is being built by Eurotrem, a joint venture of local interests with Hyundai-Rotem.

T4, the light rail line. This is a brand new line, opened in 2007. Even though it carries a "T" tramvay designation, I am reluctant to call it a streetcar line, as it employs high-platform cars and is entirely on private right-of-way (similar to Calgary and St. Louis). It is similar in many respects to the M1 line, with three underground sections containing a total of seven stations, but it differs by having grade crossings. Hyundai-Rotem built the rolling stock for the T4, but the line also uses some of the 1989 ABB cars and 1976 ex-Koln Duewag units. It connects with the T1 line at Topkapi station (nowhere near the Topkapi Palace), and first runs along the ancient walls of Istanbul, parallel to a highway. The nine-mile-long line has 22 stations, with the outer end traversing a very busy, but somewhat rundown neighborhood. Cars operate in the fenced center reservation of an arterial road that has very few pedestrian crossings between cross streets. The median is so slender that the platforms of most stations would be too narrow to safely serve passengers in both directions, so they're offset on either side of intersections. And the street is so congested that it is difficult to get photos without traffic in the way. Unfortunately the line is not very fast. Of interest was the employee with a switch-iron controlling movements at the crossover just short of the inner terminal. The line is being extended for one more station at its outer end. I rode it first thing on Friday morning.

Most service on the T1 is provided by low floor cars. One of the 37 Alstom Citadis cars built in 2010 is shown at left in both photos, while one of the 55 Bombardier Flexity Swift units, built in 2003, is at right. Quite a difference in their profiles.

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Tour of Turkey

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The other cars running on the T1 are Stadbahn B LRVs, built by Duewag for Koln in the 1970s and acquired by Istanbul in 2007. These cars are limited to tripper service over the heaviest part of the T1. 227 is shown running inbound in the center median of Turgut Ozal Cd approaching the Findikzade stop.

The outer (western) portion of the T1 line runs in the street, where the trams are mixed with motor traffic. The flower garden, to the left of the Flexity unit, is small by Istanbul's normal standards.

After leaving the street the inbound Bombardier car approaches the Mehmet Akif station in the center median of a short viaduct that had burst out in color. Goldenrods on the T1?

The outer portion of the T1 reaches the Zeytinburnu station, the original end of the line and a transfer point to the M1, via a long curving viaduct.

A view of a two-car train of Alstom Citadis cars, which has just left the Findikzade station, from one of several pedestrian over-passes that cross Turgut Ozal Cd. and other arterial roads along the T1 line.

Mosques are pervasive along the busy T1 route. This view of a Bombardier Flexity train is just east of the market, near the beginning of the touristy Sultanahmet neighborhood. From this point to the Sirkeci station, the line runs in a paved street that is only open to tour buses, taxis, and official vehicles.

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Tour of Turkey

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Left: Duewag-built ex-Koln car 204 is shown on Alemandar Cd. between the T1's Gulhane and Sultanahmet stops. Right: A westbound Alstom Citadis car along the flower bedecked median in the center of Ragip Gumuspala Cd. This congested road is the main thoroughfare for motor traffic using the Galata Bridge over the Golden Horn to reach Beyoglu, the tourist area containing Taksim Square. The T1 Tramvay serves a group of ferry terminals between its Sirkeci and Eminonu stops, and one of the many ferries that take passengers across the Bosphorus from the European side of Istanbul to the Asian side can be seen in the background.

Left: Zeytinburno is a way station between the center of Istanbul and the Airport, and is a major transfer point between the M1 Hafif Metro and Tramvay line T1. As mentioned above, until 2003 the tramway was equipped with the same cars, although they operated on Istanbul's streets with skirts. The M1 contains a number of underground sections but also emerges to the surface at several points. Right: A pedestrian overpass just outside the Bayrampasa Maltepe station is a good place to photograph M1 service.

The next two photos illustrate the similarity of the operating infrastructure of the M1 Hafif Metro and T4 Tramvay lines, as they show the ABB cars depicted in the photos right above. However, when used on the T4, which has a section in the center reservation of a street, the cars operate with skirts covering their wheels.

A train of ABB equipment approaches the Fetihkapi station of the T4 light rail line on an inbound trip to Topkapi. Note that the cars' skirts are attached, in contrast with the first photo (above) of this series.

Another train of these 1989-built ABB cars, proudly displaying their skirts, this time painted in an attractive white and orange color scheme, approaches the Vatan station of the T4 line.

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Tour of Turkey

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A second view of the elevated Vatan station, with an outbound train of Hyundai-Rotem cars. 34 of these cars were built in 2007 for the opening of the line, and provide the bulk of the service. Vatan is a transfer point to the M1 line, with the latter running in a subway at this point.

224 is one of the 1976 Duewag-built ex-Koln cars, which is set for high-level platform loading when used on the T4. It is shown on the tail track just beyond the temporary terminal of the light rail line at Mesoid-I Salam, on the outer section, where the line runs in a fenced-in center reservation in the middle of an arterial street.

RET2000, a one-of-a-kind locally-built experimental car from 2010, is shown leaving the Fetihkapı station of the T4 line.

An inbound train of 2007-built Hyundai-Rotem cars approaches the Fetihkapı station of line T4, one stop before the Topkapi terminal of the line.

An outbound train of Hyundai-Rotem cars pauses at the Metris station in the center of a busy arterial road.

(Continued next month)

Around New York's Transit System

Flushing Line Extension Opens

After an almost two-year delay, NYC Transit opened the 1.5-mile-long, $2.42 billion extension of the Flushing Line from Times Square to its new terminus at 34th Street-Hudson Yards. It is the system's 469th station and features three levels that are open to the public. Planning began in 2007 and it is the first line extension to be totally financed by the City of New York. Located 125 feet below the ground, the actual station is a two-track, center island platform accommodating 11-car trains with around 15 feet of additional platform length on either end of the station. Directly above the station and connected by eight sets of staircases and one elevator is a lower pedestrian mezzanine 109 feet below street level that stretches the entire length of the platform below and provides access points to the five escalators and two inclinators to the upper mezzanine and fare control area, which is 27.6 feet below street level. Another bank of four escalators, an elevator, and two staircases connect this mezzanine to the street level entrance, which features a glass-roofed "head house" located just west of 11th Avenue in a park-like setting. The upper mezzanine features a domed ceiling beautifully adorned with a glass mosaic art work by Xenobia Bailey. She has another similarly themed mosaic on the ceiling overlooking the stairway and escalators from the street level that presents itself to passengers entering the station. An "air tempering" system is designed to keep the station's platform level at a constant 72-78°F and emergency ventilation fans are capable of evacuating smoke and fumes from any fire or smoke condition that may occur in the station complex. The station is expected to serve 32,000 entries and exits on an average weekday with a capacity of 25,000 during a peak hour and serve as a rail transit anchor for the new Hudson Yards development zone around this station as well as the Jacob Javits Convention Center, the High Line, and the newly opened Hudson River Park, connecting it with 18 other subway lines. While not yet equipped, Wi-Fi and cellular phone service is expected to be installed soon after the station opens. A link to a three-minute video of the new station and the surrounding neighborhood which it will serve can be found at: http://www.nytimes.com/video/nyregion/100000003908776/no-7-train-opens-on-manhattans-west-side.html?.

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Contract 4 Subway Construction Controversy

(Continued from page 1)

LINE	FROM	VIA	MANHATTAN ROUTE	TO
PREVIOUS SCHEDULE				
Brighton Local	n/a	Bridge	Express	n/a
Brighton Express	n/a	Tunnel	Local	n/a
EFFECTIVE ABOUT OCTOBER 1, 1923				
Brighton Local	Coney Island	Tunnel	Local	57th Street
Brighton Express	Brighton Beach	Bridge	Express	Times Square

In anticipation of the early completion of the 14th Street Line, the company spent approximately $500,000 third-tracking the Myrtle Avenue Line from east of Broadway to Wyckoff Avenue and building an express station at Wyckoff Avenue for convenient transfer to the 14th Street Line.

The middle track was tested on January 9, 1919 and Chambers Street express service began on April 2, 1923. We do not know if these trains ran on the middle track or when this service was discontinued. Because expresses save only ½ minute for each station they skip, this service probably saved only one minute. When we rode there in 1936, portions of the middle track had been removed.

The Lawrence Street station opened at 12:30 PM June 11, 1924. A special train took the committee to Prospect Park, then to DeKalb Avenue, where they boarded a regular train.

Transit Truths contains lots of information about subway construction and municipal operation of Williamsburg Bridge trolley cars, which will be published soon.

SUBDIVISION "A" CAR ASSIGNMENTS

CARS REQUIRED SEPTEMBER 13, 2015

LINE	AM RUSH	PM RUSH	LINE	AM RUSH	PM RUSH
1	10 R-62, 310 R-62A	10 R-62, 290 R-62A	5	340 R-142	340 R-142
2	340 R-142	320 R-142	6	260 R-62A, 130 R-142A	260 R-62A, 140 R-142A
3	250 R-62	250 R-62	7	99 R-62A, 297 R-188	88 R-62A, 275 R-188
4	220 R-142, 130 R-142A	210 R-142, 120 R-142A	S (42nd Street)	10 R-62A	10 R-62A