The Bulletin

Electric Railroaders' Association, Incorporated

Vol. 59, No. 10 October, 2016

The Bulletin

Published by the Electric Railroaders' Association, Incorporated, PO Box 3323, New York, New York 10163-3323.

For general inquiries, or *Bulletin* submissions, contact us at bulletin@erausa.org. ERA's website is www.erausa.org.

Editorial Staff:
Editor-in-Chief:
Bernard Linder
Tri-State News and Commuter Rail Editor:
Ronald Yee
North American and World News Editor:
Alexander Ivanoff
Contributing Editor:
Jeffrey Erlitz

Production Manager:
David Ross

BROOKLYN PCC CARS' 80TH ANNIVERSARY
by Bernard Linder

BMT started operating Smith-Coney Island PCC cars on October 1, 1936. Before the cars entered revenue service, there was a ceremony at Park Row. Mayor LaGuardia cut a white ribbon at 11 AM and BMT's President, William S. Menden, paid a five-cent fare. After the ceremony, BMT and city officials rode in a procession of five PCCs led by 1009. Cars were routed via the Brooklyn Bridge, Court Street, Livingston Street, Flatbush Avenue, and Prospect Park West to Bartel-Pritchard Square.

As soon as cars were available, PCC operation began on the following lines:
October 1, 1936 — Began PCC operation on Smith-Coney Island
December 14, 1936 — Complete operation with PCCs on Smith-Coney Island; began operation with PCCs on McDonald-Vanderbilt
January 11, 1937—Complete operation with PCCs on Seventh Avenue
January 18, 1937 — Began PCC operation on the Erie Basin Line

After the PCCs provided regular service, revenues increased. Between October, 1936 and September, 1937, revenues on the Smith-Coney Island Line increased 33 percent. The new cars were 14 percent faster than the old cars. BMT found that the new cars paid for themselves because the quiet and smooth operation helped increase ridership.

Two years later, the company decided to order 500 additional PCCs, which would have provided a fleet of modern cars. In early 1938, BMT applied to the Federal Reconstruction Finance Corporation for a loan to buy the 500 PCCs. RFC agreed to finance 80 percent of the cost of the cars, $1,500 or $1,600 each. RFC financing would be 4 percent. Because the city was negotiating for the purchase of BMT and B&QT, LaGuardia informed the company that the city would not pay for the PCCs. Unfortunately, the offer was canceled and the company was unable to modernize its fleet, which was sold to the city at Unification, June 1, 1940. This 1,269-passenger car fleet included 835 modern cars and 285 obsolete wooden cars built in the early 1900s. Also purchased were cranes, sweepers, and snow plows.

Just before Unification, BMT engineers recommended retaining 28 busy trolley lines, converting 12 to trolley coach, and substituting buses on lightly traveled lines. This report was ignored after Unification. Buses were ordered promptly, and they replaced trolley cars on 7 lines in 1941 and early 1942. This program ended abruptly on March 29, 1942 when the Office of Defense Transportation ordered a halt to further motorization during World War II. Companies were ordered to conserve gasoline and rubber. On November 29, 1942, Putnam Avenue trolley cars replaced buses that were running since September 21, 1941. When the Board of Transportation attempted to resume operation of Gates Avenue trolley cars, where buses were running Since October 5, 1941, LaGuardia did not allow it. The overhead remained in place and was energized until the war was over.

During the war, many cars were out of service because parts were not available. Mileage was reduced by rerouting and discontinuing several lines, as shown in the following table:

(Continued on page 4)

NEXT TRIP: WEEKEND TRIP TO ROCHESTER/CLEVELAND/BUFFALO — OCTOBER 15-17

FROM RECOGNITION TO DOMINANCE: THE NEW YORK CONNECTING RAILROAD (BRIDGING THE BAY AND CONNECTING THE PIECES)

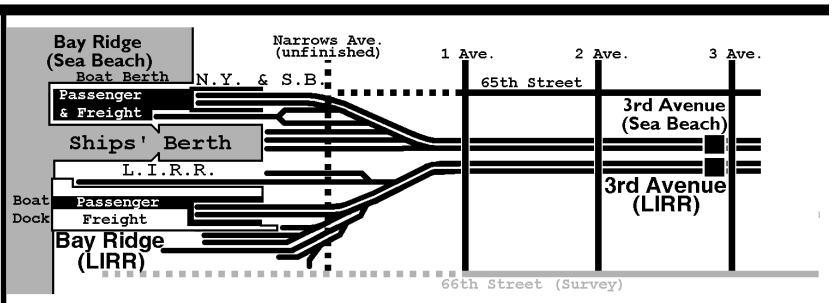
by George Chiasson

(Continued from September, 2016 issue)

The Evolution of Bay Ridge

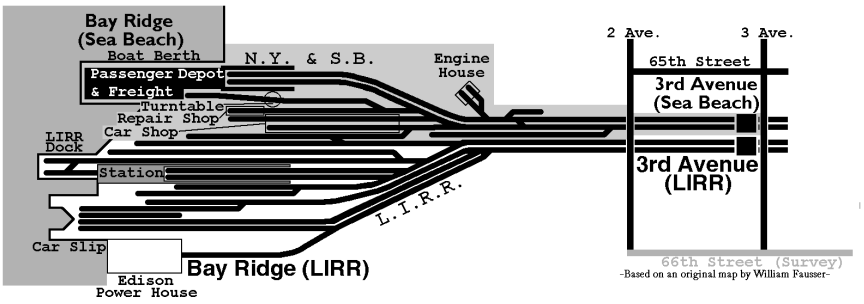
Map 65a: Long Island R.R. Bay Ridge Terminal

Circa 1890

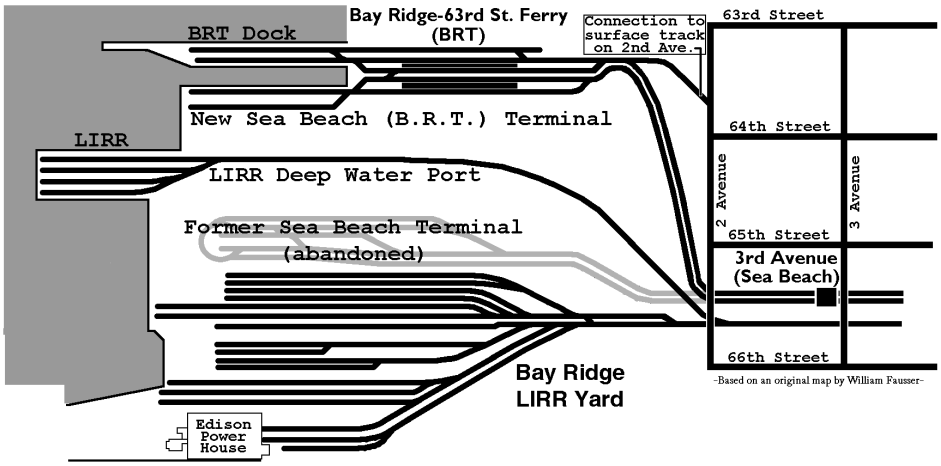


Map 65b: Long Island R.R. Bay Ridge Terminal

Circa 1895



Map 65c: L.I.R.R. Bay Ridge Terminal

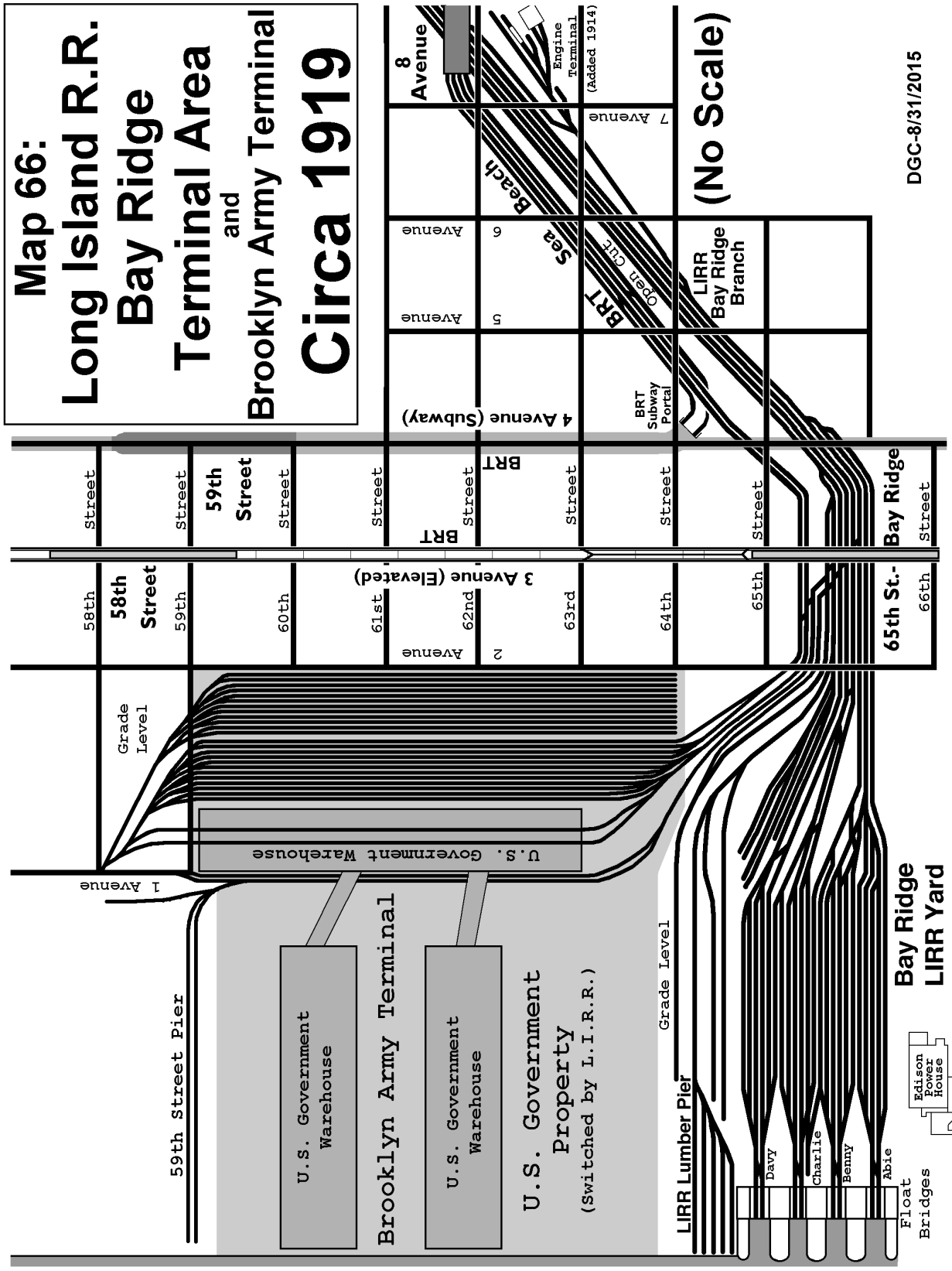


Circa 1907

(Continued on page 3)

From Recognition to Dominance

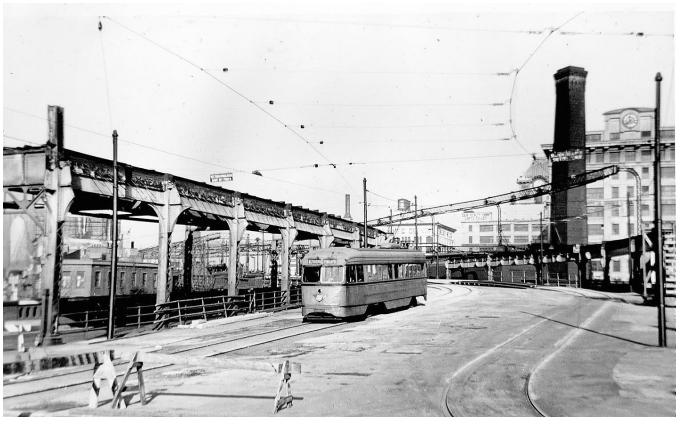
(Continued from page 2)



(Continued on page 6)

Brooklyn PCC Cars' 80th Anniversary

(Continued from page 1)



Brooklyn end of the Brooklyn Bridge.
Bernard Linder collection

PCC 1091 on the Brooklyn Bridge.
Bernard Linder collection

PCC 1002 coming off the Brooklyn Bridge on the Brooklyn side.
Bernard Linder collection

PCC 1012 at McDonald Avenue and Cortelyou Road.
Bernard Linder collection

PCC 1097 approaching terminal west of W. 5th Street.
Bernard Linder collection

PCC approaching terminal at W. 5th Street.
Bernard Linder collection

(Continued on page 5)

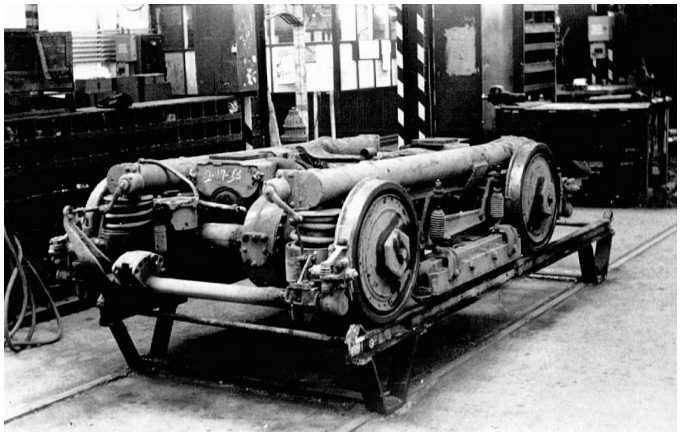
Brooklyn PCC Cars' 80th Anniversary

(Continued from page 4)

Car 1000. Note standee windows.
Bernard Linder collection

Interior of car 1000 at Ninth Avenue Depot, February 18, 1955.
Bernard Linder photograph

Ninth Avenue Depot, December 28, 1955.
Bernard Linder collection



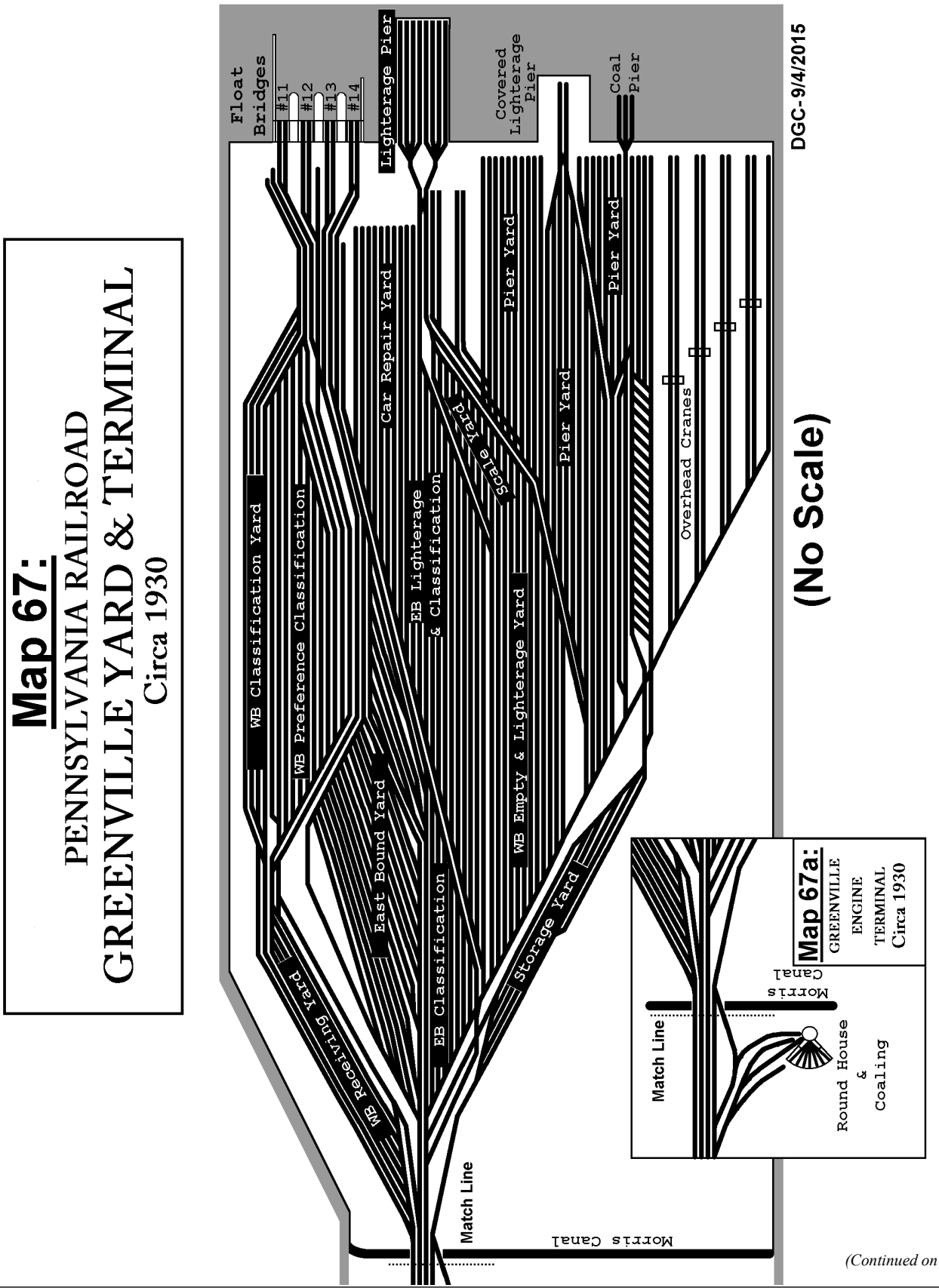
PCC truck at Ninth Avenue Depot, February 18, 1955.
Bernard Linder photograph

PCC 1001 interior at Ninth Avenue Depot, showing stanchions near every seat on left side.
Bernard Linder collection

PCC 1066 on Coney Island Avenue Line.
Bernard Linder collection

From Recognition to Dominance

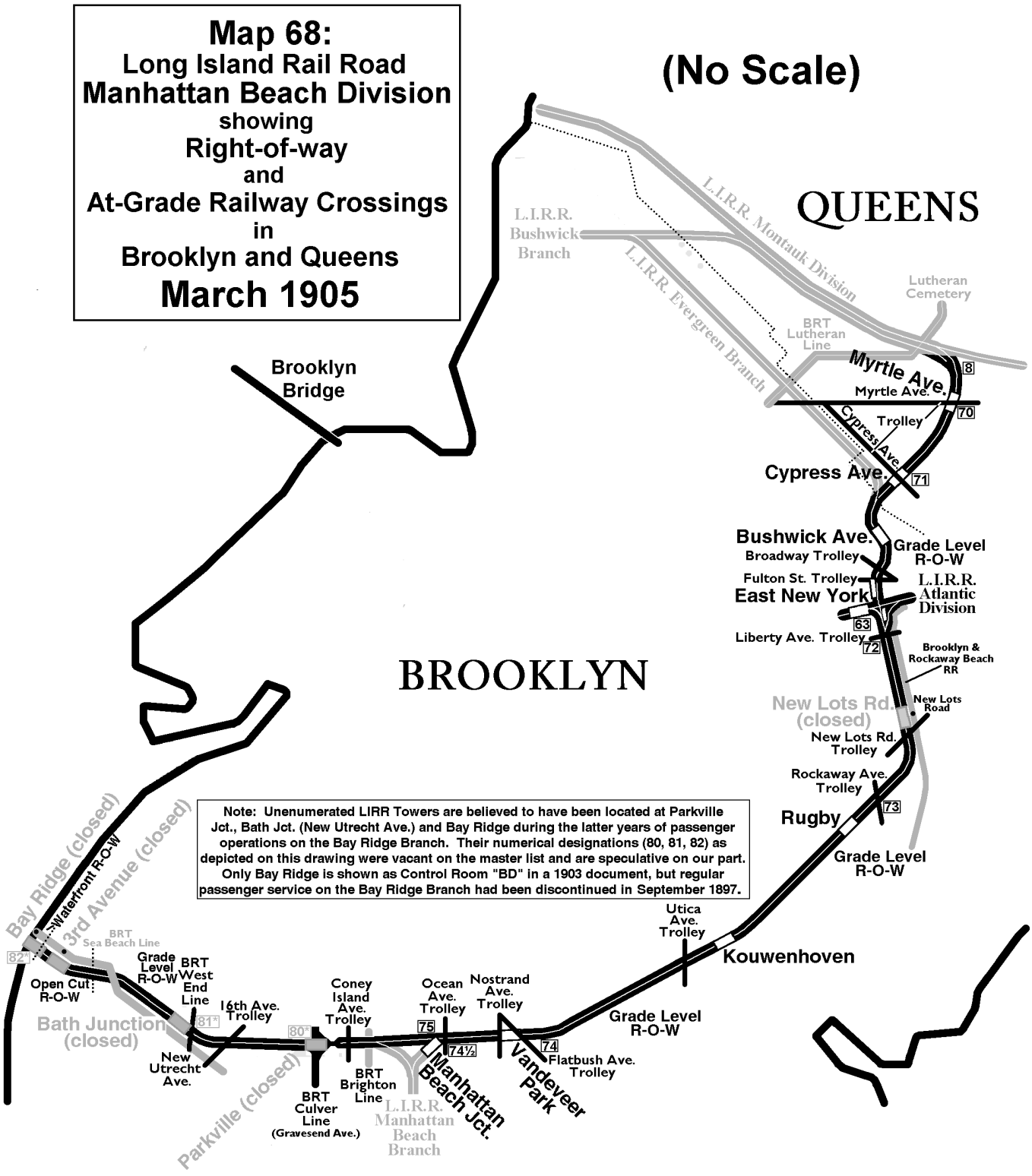
(Continued from page 3)



(Continued on page 7)

From Recognition to Dominance

(Continued from page 6)



(Continued next issue)

NEW YORK CITY SUBWAY CAR UPDATE

Subdivision "A" News

The final set of R-142As destined for reconfiguration at Kawasaki in Yonkers (7581-90) was removed from 6 on March 18. 5-car sets 7566-85 were transported northward by the end of March, followed at last by 7586-90 in early April. To clarify the previously-mentioned use of 4 equipment on 6 (R-142, R-142A/R-142S), one (long) run is indeed scheduled to start and end at Mosholu Yard with two round trips to Pelham Bay Park as a 6. Its operation may be concluding late this year after the Pelham-based fleet is again stabilized at its pre-changeover level of 460 cars. The one R-142S link from 4 that was farmed outright to 6 in December, 2015 (7746-50) was back home as of May 31. As the R-188 acceptance program concluded in late July there were 65 R-142As left over to serve 6 (7591-7655), which should remain the case for some time to come. Minor R-142 fleet adjustments were carried out ahead of the Subdivision "A" pick that went into effect on June 12, with unit 7081-5 moving over from 4 to 5 on June 6, perhaps in response to the return of the R-142S link mentioned above.

R-188 (C) and (C1) deliveries were wrapped up in the second quarter of 2016, with 7536-50 plus 7931 and 7932 arriving in March; 7551-65 plus 7933 in April; 7566-80 plus 7934 and 7935 in May; and, finally, 7581-90 plus 7936 in June. As disclosed previously, the very last unit of the final 6-car link (7586/87/88/89/7936/7590) gained home NYCT rails from its flatbed trailer at 239th Street Shop on June 14. Also as earlier predicted, cars 7511-7530 plus 7929 and 7930 were ultimately set up in two consecutively-numbered consists (7511-20 plus 7929 and 7521-30 plus 7930) on March 7 as they were placed in service. The balance of the "R-188" fleet (really R-142A conversions) then started 7 service as follows: 7531-40 plus 7931 on April 1; 7541-50 plus 7932 on April 18; 7551-60 plus 7933 on May 26; and 7561-70 plus 7934 on June 13. "New" cars 7571-5 were independently set loose in mixed company on Independence Day as 7 feverishly coped with waves of crowding for Mets' baseball and fireworks festivities, while 7576-80 plus 7935 did not follow until July 10, also combined with one-time R-188 (C) pilot set 7211-5. Last but not least were the introduction of 7581-90 plus 7936, which completed the overall acceptance process of 506 CBTC-compatible R-188 cars on 7 as foreseen six years earlier, on July 22, 2016. Even so, installation of the necessary automated cab signal equipment in the new and reconditioned cars continues across the board and will likely not finish until sometime in 2017, which leaves a small opportunity for the ongoing use of a remnant R-62A fleet on 7.

About June 10, eleven of the "converted" R-188s (7501-10 plus 7928) had received a prototype set of entirely new LED side-window "route" signs, designed to display green circles or red diamonds denoting "local" or "express" over a numbered routing (i.e. 7 and ◆7). Similar but much larger (and perhaps cruder) devices were placed on Corona's R-62A fleet in the 2008-9 era which supplemented the existing route indications, and most of them have survived that equipment's relocation to Westchester where schedules on 6 are similarly changeable in nature. This circumstance is evidently rooted in the diversity of languages through which 7 roams, where many customers rely on the (unchanging and standardized) number to know their train but are not always able to read the electric "flip-matrix" indications, which reveal destination and routing variations only in English (i.e. "Flushing Lcl"). Further, the circle or diamond that is automatically set up on the end of train signage may not always be visible, particularly at the terminals.

The movement of 65 additional R-62As from 7 to 6 was completed through the first half of 2016, though transfers were not necessarily associated with each acceptance of a corresponding "new" train. As of August 15, Westchester sports a mixed fleet of 395 of the latter-day SMEEs, while 34 remain behind at Corona for limited use on 7. The 20 R-62As assigned to S-42nd Street Shuttle are still unchanged, as are 375 of the 385 that were running on 1 when some were shifted to 6 to shore up the fleet at Westchester beginning in May, 2014. Initial preparation for this "final" round of transfers encompassing 2016 was actually begun with the grouping and withdrawal of single units 1911-5 from 7 on January 20, though that set was not actually reassigned to 6 until March 11, after the acceptance of "R-188's" 7511-30, 7929, and 7930. Linked cars 2141-5 had otherwise been anonymously relocated to Westchester on February 4, even later being joined by 2041-5 and former "flagship" cars 2151-5 on March 22. It is worth noting that 2155, specifically, was once the single-unit "pilot" R-62A that was moved to 7 (then the *original* Corona facility) from its first home on 3 on August 21, 2001. Links 2101-5 and 2131-5 were also sent to the Bronx on April 22, following the acceptance of cars 7541-50 plus 7932 on 7. This was succeeded by the transfers of 2066-70 and 2076-80 on May 23, then 2106-10 along with 2116-20 on May 31, the latter following the introduction of R-188s 7551-60 plus 7933 in Queens. With the addition of one last grouped set of single-unit R-62As on July 8, 2016 (1943, 1944, and 1947-9) the overall fleet at Westchester that is assigned to daily 6 service again stabilized at 460, the quantity it had been for some time prior to the exportation of R-142As to Kawasaki Rail Car's plant in Yonkers that started with the trucking of cars 7216-20 back in November of 2010.

Another range of equipment moves also occurred between the 240th Street and Westchester facilities (that

(Continued on page 9)

New York City Subway Car Update

(Continued from page 8)

is, West Side and East Side Locals) during the last several weeks of the R-188 acceptance period, as spares at both barns continued to be thin. The first involved "loaning" 2241-5 from 1 to 6 as of April 1, an act that was repeated on April 28 when 2196-2200 followed suit, after grouped single units 1911-5 and 5-car unit 2136-40 were correspondingly swapped from 6 to 1 on April 25. There they stayed together as a solid train for a month before going back to 6 on May 27. The reversion of R-62A assignments between the two routes finally began on May 16 when 2196-2200 were returned from 6 to 1, followed by the homecoming of 2241-5 along with 2306-10 on May 31. The most recent set of wandering R-62As to be brought back to 240th Street from Westchester was 2156-60 and 2326-30, which took place on June 13. Ten unitized cars that are actually part of the Broadway (1) contingent remain on 6 (2221-5 and 2346-50), while several of the functional single units (specifically 1903, 1904, 1907, 1908, and 1939) have been cycling through refuse train and other utility duties based at Corona, 239th Street, and 207th Street. Additional transfers and fleet changes would appear to be in the offing at a future date, though further unitization would again be contingent on maintaining some cars as independent units (including those fitted with 4 trips) and consolidating those now randomly assigned to both 7 and S-42nd Street Shuttle. Meanwhile, one or two R-62A trains can still be found on 7 any weekday (now rarely, if at all on weekends) and this should also continue until the blossoming R-188 fleet becomes CBTC-functional by some time in 2017.

While some of its R-62As were helping out on 6, the 15 R-62s used on 1 at the beginning of 2016 (1351-5, 1431-4 and 1438, and 1456-60) were buttressed by 1406-10 on February 16, then 1541-5 on February 26. On or about April 1, even more 10-car R-62 trains from 3 began turning up in rush hour 1 service, though in different consists from day to day. There were as many as four R-62s on April 6, after which this phenomenon subsided, though one or two might still have appeared as they were needed through August 15. There was a also a brief report that one "mixed" train of R-62 and R-62A cars (2406-10 and 1431-34 plus 1438) had actually made a trip or two on 1 March 18 before it was weeded out and separated. *(Note: The two classes are operationally compatible but have entirely different controllers and control groups.)*

1-"assigned" R-62s 1351-5 along with 1541-5 were sent home to Livonia (3) on July 5. The former link and 1456-60, which was also brought back to Brooklyn as of August 1, had been on hand since being "loaned" to 1 in May of 2014. As of August 12, the second R-62 train running on 1 consisted of 1491-5 with 1536-40, which was being temporarily borrowed from Livonia. None of this has had a major impact on 3 itself, which ostensibly utilizes 250 of the 295 R-62s remaining at Livonia to fulfill its peak requirements. Even so, as with the entire New York City subway fleet, maintenance remains intense on Subdivision "A"'s oldest cars as they pass their 30-year mark, with unit 1616-20 in particular missing in action for about a year (June, 2015 to June, 2016) to undergo extended repairs at 207th Street.

There is renewed promise that three of the four prototype R-110A "A" (cab) cars, which have been retired for years, will finally be converted to a third pump train (joining P8002-3-4 and P8007-8-9) in the not-too-distant future. Proposed for reuse are 8001, 8005, and 8006, which will leave 8010 as the sole surviving example of New York's very first new technology (then called "Millennium") generation of rolling stock. A handful of their unique 67-foot-long counterparts, the R-110Bs, also continue to slumber through eternity at various yard facilities.

Subdivision "B" News

Phase I R-32s are undergoing a long-term truck replacement program in mid-2016, as part of a package aimed at their life extension through at least 2022 in answer to NYCT's challenge to meet ever-increasing ridership. Otherwise there were no assignment changes involving that class between East New York (JZ, 112 cars) and 207th Street (C, 110 cars) through August 15.

In a similar vein, SMS also continues at Coney Island on the 50 active Morrison-Knudsen R-42s assigned to East New York for JZ, though they are definitely slated for eventual retirement once the anticipated R-179s show up in 2017-8.

The Morrison-Knudsen R-42s are also still being joined by Staten Island Rapid Transit's 63-car "R-44SI" fleet as it cycles through the Coney Island Overhaul facility. Those are receiving heavy-duty attention once again (as they did in the 2008-10 timeframe), with an objective of lengthening their usefulness by about seven years until such time as new equipment can be delivered to replace them. This action is one of the proposed facets of the evolving R-211 contract.

By July 8, R-46s 5742-5 had been restored to service at Jamaica for F and R. This set had received a fair amount of surface body and a little bit of structural damage when it derailed on the Queens Boulevard Line near 65th Street on May 2, 2014. Its return brought the active (and, it appears, final) quantity of R-46s back up to 750. Some of the R-46s are currently marking their 40th anniversary of service at Jamaica in 2016, where all 754 of the original 75-foot cars were delivered by Pullman-Standard between 1975 and 1978 and 340 of them remain. Two R-46s (941 and 1054) were retired after a fatal accident at the 179th Street relay in 1987, while oddball "open-ender" (A-B couplet) 6206/7 has been sidelined since 2011.

As of August 15, R-68 link 2900/1/3/2 is undergoing body repair at Coney Island in the manner of 5742-5 following its September, 2015 derailment while on G, caused by a bench wall collapse near Hoyt-

(Continued on page 10)

New York City Subway Car Update

(Continued from page 9)

Schermerhorn Streets. As of July 25, R-68s 2860-3 are roaming G with a prototype Automated Announcement System installation, provided by mega-car builder China Railway Rolling Stock Corporation. Programmable only in terms of general routing, it is not yet set up to actually "announce" individual stations but silently displays route (a green G), and date and time in red, as well as scrolling "Thank You For Riding With MTA New York City Transit!" The test is slated to last for one year prior to any proposed fleet-wide implementation, during which only supervision is authorized to set the device up. On New Technology Trains (R-142s, R-143s, and R-160s) the Automated Announcement System uses a wheel-rotation program to calculate its distance traveled and location of its nearest station, but going forward it so far remains unclear if this will be the method incorporated on the SMEEs, or some kind of alternative transponder-computer interface technology will perhaps be utilized as is the case on other properties, most notably Chicago.

R-160As 8313-6 and 8377-80 will probably remain as a CBTC test train and thus not to be seen on the East New York routes (J/Z, L, M) for some time to come. R-160Bs 8738-42, which had been electrically damaged by the flood waters of Hurricane Sandy, was finally put back in good order and returned to routine use on N and Q in May of 2016.

Assignment exceptions continue as they have been for several years now, really since the R-44s were withdrawn in 2010. Varying in quantity from day to day but generally there to be witnessed, they include trains of R-46s on F and R-160s on R (Jamaica); R-68As on G and R-68/68As on N (Coney Island); and R-143s, or these days even R-160As, on J/Z (East New York). In the latter case, though the R-160As have been running on J/Z continuously since they were contentiously introduced to that route in 2008, their numbers have declined almost to the point of extinction since the mass exportation of 92 cars to C occurred in 2015.

Notable Subdivision "B" observations during the past several months include Q trains composed of R-68As on January 25 and July 11 and the appearance of a mixed R-68/68A consist (5152-3-1-0/2788-7-5-6) on June 11 and July 15, when it was spotted on B, and on July 11, when it made its way along N. On August 1, a Coney Island-assigned train of Siemens-equipped R-160Bs (9062-1-0-59-8/9057-6-5-4-3) was "borrowed" for an F job that put into service at Kings Highway for the PM rush. This was the first known instance of such an occurrence.

Moving on...After a considerable number of delays and related controversy, the first ("pilot") train of new R-179s is presently anticipated to be delivered in October of 2016. Consisting of two 5-car links, they represent the first of 40 such cars (3010-49) to be delivered by the third quarter of 2017 to provide for initial opening of the Second Avenue Subway (an event currently projected for December, 2016). Early plans had this equipment slated for assignment to A out of Pitkin, while 260 companion 4-car sets (3050-3309) would be divided between C (207th Street) and J/Z and M (East New York), where they would replace the surviving Morrison-Knudsen-overhauled R-42s and about half of the Phase I R-32s. Best intelligence from the Plattsburgh production facility of builder Bombardier suggests that the R-179 pilot train was at last approaching completion as of early August, along with about a dozen companions which were as yet indefinite as to their delivery status. Assuming there are no unforeseen calamities along the way, the present timeline for deliveries of the R-179 fleet call for production cars to begin arriving on the property in June, 2017, with deliveries to be completed by November of 2018. These milestones will in turn bump against two major Subdivision "B" reconstruction projects which loom over the next five years (Myrtle Avenue Viaduct on M in 2017-8 and the "Canarsie" (14th Street) Tunnel on L in 2019-22), each of which stands to have a further impact on operations and fleet requirements. What is more, all of this is in advance of the projected arrival of even newer R-211 cars early in the next decade, which will be used to finish off the rest of the Phase I R-32s and replace the entire R-46 fleet.

Around New York's Transit System

(Continued from page 20)

Saratoga Avenue and Pennsylvania Avenue Stations Reopen

NYCT reopened the Saratoga and Pennsylvania Avenue stations on 3 (late night 4) on Monday, September 19. These stations had been closed since April 11, 2016 for an $88 million full rehabilitation. During the five months, new windscreens, lighting, platform edges, tactile warning strips, a full repainting, new trash receptacles, new mezzanine flooring, and a total reconfiguration of the fare control area were completed. The rehabilitation work is still underway, with new windows and station facade still to be installed, but those items can be done with the station in service. Continuing the project to improve all of the stations along this portion of 3, the Sutter Avenue-Rutland Road and Junius Street stations will close on October 3 for five months until Spring, 2017 for similar work. Free bus shuttles will be offered to customers using those stations.

Commuter and Transit Notes

No. 335

by Ronald Yee and James Giovan

MTA Metro-North Railroad

Connecticut Governor Dannel P. Malloy announced that Connecticut, in conjunction with funding from New York State, will order 60 additional M-8 electric multiple unit commuter rail cars from Kawasaki and that 10 of these cars will be retrofitted as traditional bar cars. Connecticut will borrow $200 million and New York's Metropolitan Transportation Authority will contribute $108 million as its share for the purchase of the new cars, which are scheduled for delivery from September, 2019 through March, 2021.

Artist's conceptions indicate that instead of the mini-bar located at the "B" (non-cab) end of the car originally envisioned as a means to provide a bar section while only sacrificing a minimal number of seats, it appears that the bar cars will be configured much like the M-2 bar cars they will replace with the entire center section being a bar lounge area. There will be handholds in the form of wall railings and poles as well as small ledges to place drinks or bar snacks. Like the M-2s, there will be no seating areas at the bar. *(Editor's Note by Ron Yee: Capital and operating expenses for the New Haven Line are apportioned between New York and Connecticut based upon passenger ridership counts: approximately 60% Connecticut and 40% New York. In all likelihood, these cars will enable the full retirement of the small fleet of M-2s that were retained and are currently filling in for M-8 fleet shortages occasionally caused by a higher than normal "shop count" and more recently, by service improvements that have exceeded the current 405-car M-8 fleet's ability to cover. With the advent of the electrification of Shoreline East services to Old Saybrook and the realignment of the current diesel-powered push-pull fleet to Hartford/Springfield services in 2017, plus the eventuality of through services operating over Amtrak's Northeast Corridor between New Rochelle and Penn Station servicing high volume areas such as Co-Op City, this car order is desperately needed as this new Metro-North line will likely open concurrent with LIRR moving a number of its trains to the new Grand Central Terminal East Side Access station that is due to open in 2022.)* (***New Haven Independent***, September 13)

Amtrak

Amtrak operated a special train to transport the New York Yankees baseball team from Yankee Stadium to Boston over Metro-North Railroad tracks to New Rochelle and then onto the Northeast Corridor. The special was powered by P-42-DC 104 and three cars: Amfleet Café/Dinette 48191, Amfleet Business Class Coach 81530, and Conference Car 9800 (converted from a former *Metroliner*). The train deadheaded from Boston to New Rochelle on the Northeast Corridor and then over Metro-North tracks to Yankee Stadium via the New Haven Line to Woodlawn, the Harlem Line to Mott Haven Junction, and the Hudson Line to its designated layup location at Highbridge Yard, where it awaited the end of the 1 PM game that was in progress. While there, it received catered food and drink and once the team was ready to travel, the train made its way to the Yankees-E. 153rd Street station, where the team boarded and made an evening run to Boston. (Ron Yee, August 7)

Amtrak will use a $2.45 billion federal loan announced by U.S. Vice President Joe Biden to finance the replacement of its aging *Acela* fleet of 20 trains. The railroad awarded a $2 billion contract to acquire 28 new trainsets capable of 186 mph from Alstom (makers of the French TGV with an already established manufacturing plant in Hornell, New York) and expects to place them into service by 2021. The increase in the number of trainsets will enable improved service frequencies to hourly between New York City and Boston and half-hourly between New York City and Washington, D.C. These new trains, dubbed the "Avelia Liberty," will be lighter in weight and more aerodynamic, reducing propulsion energy consumption levels by 20% and have state-of-the-art amenities such as personal power outlets and USB ports, improved at-seat adjustable lighting, and Wi-Fi access, exceed all standards for ADA access, upgraded interior design, enhanced food service car, and improved suspension systems for a smoother, world-class ride quality. Each trainset is expected to offer a 35% increase in capacity, carrying over 400 passengers. However, current plans for track, signal, and power infrastructure improvements on the Northeast Corridor (NEC) will only allow a maximum of 160 mph *(Editor's Note by Ron Yee: this was the original design speed of the 1967-vintage Budd* Metroliners *and the NEC is unlikely to support 186 mph operations before these new trainsets themselves are replaced by a third-generation* Acela *sometime in the middle of the 21st century.)* (Amtrak press release, August 29)

Miscellaneous

Electric Railroaders' Association's 2016 Convention

The Electric Railroaders' Association held its annual national convention over the Labor Day weekend, this year based in Washington, D.C. The convention covered Norfolk, Virginia's TIDE light rail and Washington, D.C.'s "DC Streetcar." Both are relatively new lines; Norfolk opened on August 19, 2011 and the DC Streetcar opened earlier this year, on February 27. ERA also visited the National Capital Trolley Museum and the Baltimore Streetcar Museum, where most of the operable equipment were rolled out for us to photograph and ride. The convention also toured the Washington Metro's new Silver Line, rode Maryland MTA's Baltimore light rail from Baltimore-Washington International Airport to its northern terminus at Hunt Valley, the Camden Line of MARC's commuter rail system from Camden Yards in Baltimore to Washington Union Station, and a short ride

(Continued on page 12)

Commuter and Transit Notes

(Continued from page 11)

on Virginia Railway Express (VRE) from Washington Union Station to Crystal City, where the convention was based.

Day One provided an opportunity to ride and photograph Norfolk's TIDE light rail line. Everyone was issued a day pass, which, in addition to the light rail line, also covered the city bus network and the local ferryboat system. While the hard-core railfans spent the entire time trolling up and down the line for the best photos and videos, some attendees rode TIDE as well as the ferry, which afforded scenic views of the harbor and of some of the U.S. Naval vessels docked and undergoing maintenance while in port. ERA surprised everyone with an included dinner at a restaurant named Keagan's located in what appeared to be a planned suburban community located in the outskirts of Richmond as the group traveled back to its base at the Crystal City Marriot Hotel.

Day Two saw the group visit the National Capital Trolley Museum, where two pieces of equipment were operated for the group: a tram from The Hague that was

Norfolk TIDE Siemens S-70 class LRV at Ingleside Road outbound.
Ron Yee photograph

built in 1971 as one of the last PCCs ever produced worldwide and a Boat Tram that formerly operated in Blackpool, England. An A-8 class Toronto PCC manufactured by CCF in 1951 was also rolled out for the group to photograph but not ride. Unfortunately, the week before, a powerful storm swept through the area and caused a tree to topple onto the tracks and tear down around 300 feet of trolley wire near the outer end of the line. As a result, all operations had to be truncated at a passing siding located near the halfway point of the line. Because the loop at the end of the line was inaccessible, all cars had to operate in reverse upon reaching the temporary turnaround point, limiting operations to the two cars that could safely operate in reverse, the Blackpool car (having a trolley pole that could be swung all the way around) and the Hague car, which was equipped with a pantograph. The Toronto PCC had a fixed direction trolley pole. While it can be operated in reverse in an emergency, it is quite risky as the pole could come off the wire, spring up, and get tangled up in the overhead wires and supports, causing even more damage to infrastructure. A lunch stop was held at Washington Union Station and this author took the opportunity to head outdoors and photograph the DC Streetcar in noontime sunlight. After lunch, the group was hosted by two WMATA Metro representatives, who led the group on a ride and tour of the new Silver Line to the current terminus at Wiehle-Reston East. It was plainly evident that work was proceeding onward to its ultimate destination, Dulles International Airport. Ground had already been cleared and graded in the median of the highway beyond the bumping posts.

Day Three had the group take a ride on the DC Streetcar, riding the entire line from Union Station to Oklahoma Street at Benning Road. There was an hour's delay

National Capital Trolley Museum PCC 1101.
Ron Yee photograph

when one of the two chartered buses suffered an air-conditioning failure and needed to be replaced. Some folks took advantage of the delay and made the most of it. The Yellow Line of the Metro passes by on an elevated structure affording backlit views of the trains passing in front of RFK Stadium and a perfectly sunlit view from the opposite side of the elevated from an empty parking lot. Afterward, the buses took the group to BWI Airport where they boarded the Baltimore MTA light rail and rode 80 minutes to Hunt Valley for a lunch stop. After lunch, the buses met the group and took them to the Baltimore Streetcar Museum, where ERA was given the red carpet treatment. ERA was given a rare treat, a ride and photo opportunity with two cars (417, an 1895-vintage Baltimore City Railway; and 4533, a United Railways and Electric Company car) that normally do not operate except for very special occasions. I guess ERA's visit was considered such an occasion. Baltimore PCC 7407 (built 1944), Peter Witt 6119 (built 1930 by the J.G. Brill Company), and 12-bench open-sided car 1164 from the United Railways and Electric Company (built 1902) were also operated for the group. Unfortu-

(Continued on page 13)

Commuter and Transit Notes

(Continued from page 12)

nately, liability restrictions precluded the large group from entering the trolley barn, but we could photograph the cars with a good zoom lens. Finally, the group rode the chartered buses to the Camden Yards station, where it rode the MARC Camden Line back to Washington, D.C., passing over the famous Thomaston Viaduct. A brief ride on Virginia Railway Express (VRE) from Union Station to Crystal City topped off the convention as attendees returned to their hotel base.

DC Streetcar 203 eastbound at H and 3rd Streets. The car was built by United Streetcar in 2013.
Ronald Yee photograph

The 2016 ERA convention was a great success, well-run, and accomplished all of its goals for the attendees. Kudos to Bob Newhouser and Mike Glikin for planning and operating such a well-run convention. Even Mother Nature cooperated — Tropical Storm Hermine stayed far north enough from the D.C. area and was not a weather factor during the convention; any stray sprinkles moved away from Norfolk just as we arrived in town. (Ron Yee, September 8)

Ron Yee's London and Paris Trip Report

One observation during my travels on the London Underground is that there are still a few of the D surface stock still in service. While the S-Stock has replaced all of the A-Stock on the Metropolitan Line and all of the C-Stock on the District and Circle Lines, a friendly Train Operator told me that around 12 sets of the D-Stock are still in service, but are all expected to be withdrawn from service (retired) by year's end as the S-Stock order is completed. (London Underground uses the term "stock" while the most other places around the world uses the word "class" or "type"). Speaking of friendly staff, I had no issues with photography in the London Underground and Paris Metro as well as at Victoria and Paddington Stations and at Slough and Windsor. The only location I encountered any issues was at the *Eurostar* terminal at St. Pancras. I had just finished photographing the new Siemens E-320 class *EuroStar* train that I was to ride aboard to Paris and saw a photo opportunity to capture an image of old and new from the next platform over by walking around the open platforms that wrap around the bumping posts. Apparently, even though it looked open to the public to simply walk over, that is not allowed since I had already gone through passport control en route to France and had technically left the United Kingdom. By simply walking over to another platform, I was illegally re-entering the United Kingdom. I quickly took my picture and scurried back to the "French zone" amidst some very animated yelling by a security guard.

D-Stock train at High Street Kensington.
Ronald Yee photograph

S-Stock train at Notting Hill Gate.
Ronald Yee photograph

In Paris, the Metro utilizes both rubber-tired as well as standard steel-wheeled equipment. In terms of car equipment classes, the prefix MF indicates that the cars are steel wheels on steel rails (the "F" representing "Fer," the French word for iron) while the prefix "MP" indicates the car type operates with rubber tires on concrete guideways. (the "P" standing for pneumatic). Surprisingly, the tires of the MP-Class cars emitted a lot of noise as the trains accelerated out of a station. Lines 1 and 14 are totally automated with no Operator's cab, the latter a relatively new line. The Bastille station on Line 1 offers an outdoor photo opportunity for the MP-05 cars.

(Continued on page 14)

Commuter and Transit Notes

(Continued from page 13)

Clear glass platform gates lining the edge of each station on the automated lines 1 and 14 are just under 6 feet tall, enabling railfans to put the camera over the top to photograph the trains on the opposite track. However, the close clearances make this a risky move as one's hands and camera run the risk of being struck by the driverless trains entering the station, In addition, security would also take a very dim view of such actions. Line 4 has apparently inherited the class MP-89-CC cars that formerly operated on Line 1 a few years ago before being replaced by the current MP-05-Class cars with air-conditioning and a full-width glass front for passengers to view the tracks as the train proceeds along the line (similar to the Port Authority of New York & New Jersey's JFK AirTrain).

Paris RATP Line 4 MP-89-CC class cars outbound at Cité.
Ronald Yee photograph

RATP Line 2 MF-2000 at Charles de Gaulle Etoile with vending machines.
Ronald Yee photograph

The newest steel-wheeled equipment is the MF-2000, which is air-conditioned and has a continuous corridor/open gangway design featuring no doors between cars of the unitized consist. All other car classes on the Paris Metro are not air-conditioned. While riding the T-3a tram westward out of Porte de Vincennes (second last stop of Metro Line 1), it was discovered that the tram line passed over the mainlines of the RER Lines C and D and the SNCF yards and shops for the standard intercity trains a well as the TGV's. Line 1's automated trains can be photographed in outdoor daylight at the Bastille station.

Other Transit Systems

United States (Nationwide)

The Federal Railroad Administration has awarded $25 million in grants to improve safety on railroad crossings throughout the United States. The grant will also fund increased safety at train stations and tracks around the country. The funding will cover 23 different projects in 14 states. Unfortunately, over $67 million had been requested through 40 different project applications, meaning the FRA funding is only enough to cover a fraction of requested safety upgrade projects.

Winners of the grant funding included the New York State Department of Transportation, Amtrak, and the Southeastern Pennsylvania Transportation Authority, among other transit networks. The New York State Department of Transportation is planning to use funds to install CCTV cameras to improve safety at MTA Metro-North Railroad crossings. Amtrak will use funds to make improvements to safety at its Washington Union Station. The Southeastern Pennsylvania Transportation Authority is planning to use funds for safety improvements at its Lawndale station in Philadelphia. These are just some examples of the many improvements to come thanks to the FRA grant.

Maryland

Thanks to a $2 million contribution from Japan, the state of Maryland may be able to conduct a new maglev train study. A document signing ceremony took place at the end of August with Maryland Governor Larry Hogan and Japanese Ambassador to the United States Kenichiro Sasae. They signed off on a cooperative agreement to assist the United States and Maryland with trade. The agreement additionally offered funding to determine the feasibility of constructing high-speed maglev rail service between Baltimore and Washington, D.C. According to the Associated Press, the funding will support Maryland in meeting a 20 percent match requirement that was built into a grant received from the Federal Railroad Administration last November for the study. The United States government has supplied $27.8 million for planning and engineering work.

In 2014, Governor Hogan rode a maglev train that traveled over 300 miles per hour while on a trip in Japan, an experience that led him to support constructing such trains in the United States. According to supporters for the project, the cost of constructing the line would be divided between United States taxpayers, a private company, and the Japanese government. (***Trains*** Magazine, August 30)

(Continued on page 15)

Commuter and Transit Notes

(Continued from page 14)

Detroit, Michigan

A new streetcar line in Detroit is beginning to take shape as the Brookville Equipment Corporation has delivered the first of six light rail vehicles that will operate on the new line. The new line will travel down a 3.3-mile route along Woodward Avenue and the bright red streetcars that will run on it have begun arriving out of the factory two months ahead of schedule, an impressive accomplishment. According to Brookville President Marion Van Fosson, "The early delivery of this QLINE streetcar vehicle is a product of the outstanding working relationship we have experienced in our partnership with M-1 RAIL."

The new streetcars will be unique because they will run without electrical wire contact for over 60% of their route and will therefore rely on on-board battery power to travel for a significant distance. The streetcars will also include a 70% low floor area and enough capacity to comfortably carry up to 125 passengers. (***Metro*** Magazine, September 15)

Chicago, Illinois

Chicago's Metra took delivery of its first rebuilt F-40-PH from Progress Rail Services of Patterson, Georgia in early September. Locomotive 175 sports a new paint scheme designed by a Metra locomotive Engineer which will be applied to all new acquisitions and rebuilt units including F-59-PHs 97-99. A total of 42 F-40-PHs and F-40-PHM-2s will be rebuilt for Metra and feature a new EM2000 microprocessor control system and remanufactured prime movers compliant with EPA Tier 0+ emission standards. (Al Holtz, September 6)

Dallas, Texas

Dallas Area Rapid Transit (DART) opened the extension of its Dallas Streetcar line to Oak Cliff in the Bishop Arts District on Monday, August 29. The extension is just under a mile long and has two new stops, Zang Boulevard at 6th Street and Bishop Arts between Davis and 7th Streets. Service hours are still 9:30 AM to midnight, but the service has been improved with headways now reduced from 30 down to 20 minutes on the 2.4-mile line. (DART press release, August 15)

Canada (Nationwide)

VIA Rail Canada's second quarter financial review has revealed that approximately 26,000 extra passengers rode on VIA trains between April and June of 2016 compared to the same time period last year. That is a ridership increase of almost 3% vs. 2015. Because of this increase in ridership, revenues have also gone up. Revenue increases spiked at 7% higher for the April to June, 2016 period.

According to VIA Rail President and Chief Executive Officer, "Over the past two years, VIA Rail has made a big shift to become a more customer-focused organization. This change has been a key part of VIA Rail's modernization and is at the heart of our recent successes." During this time period of growth and success, VIA Rail has introduced significant improvements to service by creating a better summer train schedule and creating new menu options in the Quebec City-Windsor corridor, in addition to other upgrades to service. (***Trains*** Magazine, September 2)

Toronto, Ontario, Canada

A new construction milestone has been reached for a future light rail service in Toronto. Two tunnel boring machines have wrapped up work underground on a new Eglinton-Crosstown Line after having traveled 6.2 miles and installing over 26,000 concrete tunnel segments. The line is expected to carry over five thousand riders every hour during peak ridership times after the line is scheduled to open in September of 2021. The project was funded by a $5 billion investment from the Ontario government and the new line will connect with 25 stations, allowing for easy access to many subway stations and GO Transit. (***Trains*** Magazine, August 19; citynews.ca, August 17)

Ottawa, Ontario, Canada

Alstom has been chosen by Canadian transit leaders to maintain Ottawa's light rail network. Alstom will handle maintenance of all aspects of the system including track, signaling, power, operating control systems, and communications. Alstom's $138 million contract is set to last for the next thirty years. The light rail line is 7.7 miles long and will commence full revenue service sometime in 2018. This new contract is an addition to one previously awarded to Alstom for the building of 34 light rail vehicles for the route, which are currently being constructed in Ottawa at Alstom's Belfast Yard. (Alstom press release, September 1)

Edmonton, Alberta, Canada

Flywheel technology may be the wave of the future for light rail. According to University of Alberta Mechanical Engineering Professors Pierre Mertiny and Marc Secanell, "The flywheel is an old technology, but that's partly what makes it so sensible. Fundamentally, it's a really simple technology. We already have everything we need." The Professors have estimated that using flywheel technology to help light rail transportation in Edmonton could help the system use 31% less energy, which would reduce operating costs by 11%.

A flywheel is a disk that rotates and increases in rotational speed as it receives electricity. The rotational energy created can afterwards be converted back to electrical energy at any time. Simply explained, it is a bit like a mechanical battery. High-capacity flywheels are already used to improve efficiency of transit systems in New York, Massachusetts, and Pennsylvania. (***Metro*** Magazine, September 7)

London, England

The recently opened *Thameslink* concourse of the London Bridge rail station has left riders underwhelmed and confused by its odd architectural design. After undergoing a £1 billion (approximately US$1.1 billion) makeover, the second out of three phases of construction has been completed at the station. Rowan Moore of

(Continued on page 20)

SWITZERLAND IN THE LATE SUMMER
by Jack May
(Photographs by the author)
(Continued from September, 2016 issue)

We could not sleep in as we had a great deal of work to accomplish. Even though it had dawned cloudy I took some photos of the rail operations in the station forecourt from one of our windows, as we would soon have to give up our room, our hotel reservation being only for the previous evening, as there was "no room at the inn" for the two remaining nights we were going to spend in Brig. As a result we had reserved a room for the remainder of our stay at a Bed and Breakfast in the town of Naters, on the other side of the railroad tracks and the Rhone River. After a fine Continental breakfast, we inquired if we could leave our luggage at the hotel and pick it up in the late afternoon after our return from Zermatt, explaining the situation. The hotel manager said certainly, but added that he would be happy to transfer our bags to the B&B for no charge! The Swiss certainly know how to be hospitable.

Our travels for the next two days would be on the meter-gauge trains of the Matterhorn Gotthard Bahn, leaving from the station's forecourt. After using a nearby ATM to acquire Swiss Francs (we had paid our hotel and restaurant bills by credit card), we were on our way. We caught the 8:52 MGB train to Zermatt, which consisted of MU cars that were virtually empty — until we reached the next station, Visp. Paralleling the standard-gauge line all the way, we stopped inside the trainshed, at 9:03. Then all hell broke loose as a huge number of passengers boarded, mainly Swiss sportsmen and hikers, carrying lots of gear. We did not finish loading until 9:10, and then pulled out with a number of standees.

With the opening the Lotschberg Base tunnel in 2007, Visp replaced Brig as the main transfer point between trains from the central and western portions of Switzerland and the resort of Zermatt. We would not ride through the new tunnel until the end of our stay, so more about that later. Soon we were attached to the rack and were climbing into snow-covered mountains. About halfway along the route the sun came out and the clouds gradually disappeared, much to our elation. We soon passed Tasch, the location of a huge parking garage, 5 miles before Zermatt, an automobile-free town. The MGB operates frequent shuttle service (3 trains per hour) between Tasch and Zermatt for motorists, a 12-minute trip. The distance between Brig and Zermatt is a mere 30 miles, and trains like the one we rode take almost an hour and half to make the run, but the time passes quickly due to the lovely scenery. We arrived at 10:16 (13).

After a couple of photos we walked a short distance through the quaint tourist-oriented town to the terminal of the Gornegratbahn, the MGB-owned rack-operated narrow-gauge railway that climbs from Zermatt to Gornergrat, the highest you can get by rail in this area, at over 10,000 feet. We glimpsed a partial view of the Matterhorn along the way, which whetted our appetite for our planned activities for the day. We had been to Zermatt once before, decades ago, and at that time thought that the town was overly cute, with its horse-drawn carriages and expensive hotels and restaurants. Little appears to have changed. On that trip we rode up the Gornergrat, but did not see the Matterhorn, as it was socked in by clouds. At that time we were younger and fitter, and did manage to walk down about halfway from the top, stopping for refreshment at one of several cafes/watering holes along the way. After tiring we rode the railway the remainder of the way back down, and just before boarding our return train, saw the Matterhorn suddenly emerge from the clouds for maybe 30 seconds — long enough for me to get a slide. (I have to find it.)

Anyway, because we lingered a bit, we got to the mountain railway's station complex after most of the others from our train, and found that the next trip up the mountain, at 10:24, was sold out. No problem, service operates every 24 minutes, and so we bought tickets (half fare because of our Swiss Passes) for the next one. As it turned out, this would be a very busy day for the mostly single-track rack railway, and a number of trips were platooned, with one train following right behind another, squeezing together to fit into the length of passing sidings.

The Gornergratbahn is a rack railway, running for about 5.8 miles from Zermatt, at an altitude of 5,266 feet, to Gornergrat, at 10,135 feet. Thus it is steep, with an average grade of 15.9 percent and a maximum of about 20 percent. Built to serve tourists and sportsmen, the mostly single-track meter-gauge line dates back to 1898. It was electrified from the start, with 725-volt three-phase catenary. The trains do not go fast, running at a maximum of 18.6 miles per hour uphill and between 13 and 17 downhill. Running time from end to end can be as long as 44 minutes in tourist seasons, when there are long dwell times at the 4 intermediate stations along with scheduled waits at passing sidings. Immaculately maintained rolling stock ranges in age from 8 to 50 years.

The highlight of a trip on this railway is the scenery, which includes inspiring views of the Matterhorn, the iconic craggy mountain with very sharp faces that rises to a height of 14,692 feet. We were lucky, as there were few clouds in the sky until about 14:00. After taking a few photos of the Matterhorn from the clean picture windows of our car, we alighted at the second stop, Riffelalp, at 11:03. We chose this station because of the short battery-operated tramway that connects it with the

(Continued on page 16)

Switzerland in the Late Summer

(Continued from page 16)

5-star Riffelalp resort hotel. An illustrated description of the tramway and hotel constitutes the next section of the trip report.

After our visit to the Riffelalp, we rode the 12:39 to the end of the line at Gornergrat (12:57), a location that is engulfed by tourists and a large number of food and souvenir shops. We spent more than a half-hour here finding good spots for a series of photos. Having discovered the paths leading downward from the top are very steep, we rode the 13:50 one stop to Rotenboden, a 5-minute trip.

Here at Rotenboden we began our downward trek, one station's worth to Riffelburg. It's a 10-minute trip by train, and the trail is marked for 30 minutes by foot, but it took us a whole hour because the path was rocky and narrow in places, and of course I had to stop for photos. I recall that decades ago the walk was easy, so it is clear that age has taken its toll, not to mention the fact that since her accident in Turkey in 2011, Clare uses a cane when outdoors.

The 14:58 took us back to Zermatt, following an extra, or advance section that started at Riffelburg. By that time clouds had drifted in, obscuring the Matterhorn, so we were happy we had gotten an early start that morning. All in all we covered the entire line, riding and photographing many of the railway's different types of rolling stock, using half-fare tickets (because of the Swiss Pass), which were in effect day passes.

We rode the MGB's 15:39 back to Brig, emerging in sunshine soon after we left Zermatt. Although we ran a little late due to waiting at a siding for a passing train, the ride was uneventful. Now the traumatic part of the day started.

We walked across the Rhone River bridge to Naters and found our way to the address of our night's accommodation. It was a tall modern apartment house with a large directory of names and buttons adjacent to the front door. But we couldn't find the name, Aurelia B&B, next to any of them. And the streets were empty. But in the distance, a couple of blocks away, we saw the sign for a pizzeria and walked over. It actually was a neighborhood restaurant, where we inquired of the waitresses and bartender, as well as some of the patrons, about the B&B, but nobody ever heard of it. Finally the proprietor arrived and he called the phone number we had listed on our itinerary. It was answered and then we were escorted back to the apartment house, where we saw that there was a tiny reference to a B&B next to one of the buttons.

The B&B turned out to be a bedroom with an attached private bathroom inside the flat, equipped with all the accoutrements of a hotel room. The owner was quite nice, spoke good English, and indicated it was her son's room, and he is now off to college. It was clean and spacious, but not what we expected. The two breakfasts consumed on successive mornings came right out of the kitchen's cabinets, with eggs, bacon, toast, cereal, and tea/milk made to order. All in all, we were quite satisfied. We had dinner in the friendly restaurant down the block on both evenings: one from the Italian menu and the other standard Swiss fare.

Much of the Zermatt station of the Matterhorn Gotthardbahn is underground, but the platforms are long enough to obtain views of several long interurban trains in the open.

(Continued on page 18)

Switzerland in the Late Summer

(Continued from page 17)

The emblem of the Gornergrat Railway includes a stylized drawing of its main attraction, the Matterhorn, and is displayed prominently on the side of the company's rolling stock. My first good view of the "real thing" from the windows of a train is shown in the photo on the right.

An inbound train is shown loading passengers for the trip down the mountain from the Riffelalp station to Zermatt. These twin sets were built between 1965 and 1975, and interestingly, are not the oldest units in regular service.

Two views at the Gornergrat station, the summit of the rail line, 10,135 feet above sea level. Car 3053, shown in the left photo, is one of a series of articulated railcars built in 1993. Alongside it in the photo on the right is car 3020, one of the oldest in regular operation, part of a group of single cars that was constructed between 1947 and 1961.

(Continued on page 19)

Switzerland in the Late Summer

(Continued from page 18)

The terrain surrounding the Gornergrat terminal is steep, but is well worth traversing for interesting views of the railway. Here one of the 1993 cars crosses a short trestle where photographers can shoot the mountain range below the right-of-way.

Two views from the path alongside the railway between Rotenboden and Riffelberg. The roughly mile-long walk (actually 0.9 mile) involves a descent of some 750 feet. Both photos show 1993-built cars, but the left one includes the Matterhorn in the background.

Our last view in the same area between Rotenboden and Riffelberg, shows the newest Gornergrat rolling stock, 70-percent low-floor cars built in 2006. The wide variety of equipment and scenery makes the Gornergratbahn a must ride for railfans visiting Switzerland.

(Continued next issue)

Around New York's Transit System

B-Type/D-Type Excursion to the Rockaways

Member Ron Yee reports that on Saturday, August 27, the New York Transit Museum operated a combination vintage BMT train made up of three B-Type Standards (2390-1-2) and one D-Type articulated Triplex subway car (6112ABC) on an excursion train from the Transit Museum to Rockaway Park. This was the first time to our knowledge that these cars have operated over the former LIRR, now NYCT Rockaway Line in around 35 years since the days of the "Nostalgia Trains" operated by the Transit Museum in its early years. Although three round trips between Rockaway Park and Rockaway Boulevard were scheduled after the initial drop-off of passengers at Rockaway Park, an opening of the Broad Channel moveable bridge for marine traffic created service delays on the Rockaway Line and limited the "railfan" round trips to just two.

(Continued on page 10)

Commuter and Transit Notes

(Continued from page 15)

The Guardian has reported that the station's new concourse is "broad and elegant," yet lacks a sufficient amount of "wow factor" to justify the hefty price tag. The station concourse features large concrete and steel arches that jut upwards from the ground to the ceiling at harsh angles within the center of the space. This design is a far cry from the old Victorian railway vaults that used to exist in the space.

On the bright side, the new renovation will help to accommodate an increase in capacity for the station from 56 million to 70 million passengers per year. This will enable the new *Thameslink* service to operate out of the station. The station features extra platforms and a new layout intended to help with passenger flow throughout the station. The station is the fourth busiest in the United Kingdom and keeping the station up and running during construction work was a challenging feat. Work on the station is scheduled to be completed in its entirety by 2018. (***The Guardian***, September 4)

A new pilot program has been created by Transport for London in order to attempt to offer some relief to passengers in need of seats. Eligible passengers were selected to participate in a trial where they received special blue badges to designate themselves as needing priority access to seats on public transportation. The "please offer me a seat" tags are being tried out for a month with passengers who have a particularly difficult time at getting a seat when they need it.

Transport for London recruited over 1,000 riders to participate in the six-week trial that began in mid-September to determine how effective the technique would be in helping riders, especially those who have disabilities that are not clearly visible to other passengers. If the trial is successful, TfL customers will be able to request badges later in the year when the trial period has concluded. (***Mass Transit*** Magazine, August 31)

ITALY

Alstom and Italy's NTV have reached an agreement to purchase four new high speed Pendolino trains and maintenance service for the new rail cars. There will also be an extension of maintenance service for NTV's existing rail fleet of train cars. This is part of an agreement that was originally put together last October as an order for eight new trains. The first of the new trains are currently being built in Savigliano in northern Italy and will be completed in late 2017 in time to enter service by the following year. (***Metro*** Magazine, September 7)

Brooklyn PCC Cars' 80th Anniversary

(Continued from page 5)

DATE	LINE	REASON FOR CHANGE
November 23, 1942	Canarsie Shuttle Right-of-Way	Discontinued —Duplicate Service
November 1, 1943	Sumner-Sackett	Discontinued —Duplicate Service
November 1, 1943	Bergen Street	Rerouted from Borough Hall to Hamilton Ferry
March 4, 1944	Erie Basin	Discontinued — Duplicate Service
October 28, 1945	Franklin Avenue and Nassau Avenue	Replaced by Lorimer Street and Crosstown
October 28, 1945	Lorimer Street	Rerouted from Nostrand Avenue to Franklin Avenue and Box Street to Nassau Avenue
November 19, 1945	Greenpoint	Discontinued — Low Ridership
December 1, 1945	Union Avenue	Discontinued — Low Ridership
June 29, 1947	West End	Discontinued — Duplicate Service
September 2, 1947	Bushwick Avenue	Discontinued—Low Ridership

McDonald-Vanderbilt PCCs, Flushing Avenue 5000s, Graham Avenue 5100s, and Crosstown 6100s transported me and thousands of other Navy Yard workers 24/7. A few years later, buses replaced all the trolley cars.