

The Sentinel

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President's Report to Members

Fellow Historian:

The end of 2023 is approaching. Since my last writing, we have had a successful Eastern Mini-Con in July and Annual Convention in Cincinnati, Ohio in early September. Both were well attended, and the clinics were outstanding. The Western Mini-Con has now been rescheduled to October 21st; details are posted on our website and Facebook page. Starting shortly, we will begin sending e-mail news flashes to keep members informed of upcoming events and sales items. Please make sure we have your current e-mail on file.

If you have not heard, John Greene from Bethlehem Car Works passed away several weeks ago. John was a member of the society and rarely missed an Eastern

Mini-Con. Working with John Greene we had the C-10 horse car in production and we placed our order with him at the Eastern Mini-Con in July. After a couple of attempts to communicate with John, his wife answered the phone and informed me of his rapidly deteriorating health, and took my contact information. We are in the process of getting the order completed.

The building expansion project has taken a new direction. After evaluating the architect's plans and cost, we shelved the addition proposal. We are investigating the idea of a stand alone building on our back parking lot. Conversation with Carroll County Zoning Office and the Inspection Office appears good. Next step is through the county's Development

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NOTE: The third installment of *B&O Hotels* will be included in the 1st Quarter 2024 *Sentinel*.

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On the Covers

FRONT COVER: [TOP] B-92A 484749, Brunswick, Maryland, March 5, 1983. Photo by Kenneth Lehman. The car has been repainted in the blue Chessie System livery and was last reweighed at C&O's Raceland, Kentucky car shop (RA) in February 1981. The ACI KarTrak label has been removed. (B&ORRHS Archives)

[BOTTOM] Color view of B-92A 484849. The car is painted mineral red with an Automatic Car Identification (ACI) KarTrak label applied below the B&O Capitol Dome stencil. The Association of American Railroads (AAR) required these colored barcodes on all rail cars starting in 1967. The lubrication stencil just to the left of the bottom of the ladder indicates that this car was completed on December 19, 1969. (B&ORRHS Archives)

BACK COVER: Celebrating its 100th birthday in October 2023, B&O caboose C1411 is the focal point of a new railfan viewing area at McCord Park in Worthington, Ohio. A project of the Parks and Recreation Department, the beautifully landscaped area was designed by a local architectural firm and is handicapped accessible. Attendees to the October Mini-Con will have the opportunity to see and inspect the caboose, and hear a presentation on the car's interesting 100-year history. See story on page 18. Photographed September 14, 2023. (Photograph by Dwight Jones)

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B-92A 484818, built in December, 1969 at Jessup, Maryland. (Jim Rogers photo, courtesy of Jim Rogers)

B&O's Pullman-Standard Waffle-Side Box Cars

By Brian Rochon

In the late 1960s and early 1970s, the Baltimore and Ohio Railroad (B&O) acquired three classes of box cars from the Pullman-Standard Car Manufacturing Company (P-S) with unique patterns embossed into their side sheets. These patterns were designed to allow the installation of segments of belt rails on the interior of the side sheets.

In the 1950s, the Evans Products Company developed their "Damage Free" or DF line of belt rails and fixtures. These were intended to restrain the lading, preventing damage during transit. Pullman-Standard's embossed "waffle" pattern allowed the belt rails to be recessed into the car sides.

The first waffle-side cars may have been built by the Chicago, Burlington, and Quincy Railroad at their Havelock, Nebraska shops in 1966 using prefabricated sides from the Youngstown Steel Car Company. The design was patented by P-S and received the trademark "waffle-side," with their first cars produced in 1967 for the Seaboard Coast Line. ACF Industries, Inc.

and Berwick Forge and Fabricating Corporation also built similar cars. There were many variations in the number of rows of waffles, providing more or fewer belt rails.

The first of these cars for the B&O were 550 cars in class B-92A, series 484650 to 485199, built by P-S at their Michigan City, Indiana plant in November and December 1969 as Lot 9422. These cars were 50'-6" in length and featured 10' Youngstown single sliding doors, National nailable steel floors, four Evans Products Company DF-2 belt rails, rigid underframes, American Steel Foundries (ASF) A-3 Ride Control 70-ton trucks, continuous lading strap anchors, and a capacity of 5,005 cubic feet. Some were later equipped with Hennessy Slide-well power assist door openers.

As delivered, the cars were painted in mineral red (standard for cars without cushioned underframes at this time) and featured the Capitol dome herald. These cars were used for general merchandise and there were still 537 in service as of January 1, 1978. They were subsequently

repainted in blue Chessie livery and eventually renumbered as CSXT 502249 to 502594, although some may not have received the new number.

In early 1972, the B&O acquired 36 60-foot waffle side cars from P-S in two classes. These cars were used in auto parts service. Their dimensions exceeded the Association of American Railroads (AAR) Plate C standard clearance diagram and they were stenciled accordingly. In their normal assignments serving the automobile industry, these cars traveled specific routes for which they had been cleared in advance.

These cars were built to a special B&O/C&O clearance outline. At the time these cars were constructed, P-S was using a "ZU" side plate on their cars with a resulting overhanging roof. In order to meet the special clearance outline, P-S reverted to the older "W" side plate (or top chord, i.e., the horizontal member where the sides and roof meet), resulting in a flush roof, much like the earlier PS-1 design from the late 1940s to the early 1960s.



[LEFT] Builder's photo of B end of Class B-92A 484799, Michigan City, Indiana, December 1969. (B&ORRHS Archives)

[ABOVE] Builder's photo showing interior of B-92A 484799, Michigan City, Indiana, December 1969. The interior was painted white to improve visibility during loading and unloading. The stencil on the left reads "THIS CAR IS EQUIPPED WITH NAILABLE STEEL FLOOR USE 16 (3½" LG) OR 20 (4" LG) PENNY NAILS TO SECURE BLOCKING BY NAILING INTO GROOVES." The belt rail segments for the four Evans DF belt rails can be seen in the waffle recesses in the side sheets. (B&ORRHS Archives)

As a result, the limiting height (the top of the roof seam cap near the outside corner of the car) moved inward several inches allowing the car height to be increased by about six inches. A review of P-S builder's photos by Jim Kinkaid indicates that the B&O and C&O cars seem to be the only ones built this way.

P-S built 34 Class B-106 cars, series 489965 to 489998, at their Bessemer, Alabama plant in April 1972 as Lot 9589. These cars had an interior length of 60'-10.5" and featured 10' Youngstown single sliding doors, National nailable steel floors, three Evans one-piece movable bulkheads with steel rub rails, two Evans DF-2 belt rails, HydroFrame-40 cushioned underframes with 20" travel, Barber S-2-C 65-ton trucks, and a capacity of 6,509 cubic feet. Their side sheets featured nine rows of waffles.

A July 1972 C&O/B&O Commercial Development Department document stated:

"These new 60-ft. cushioned boxcars are the first to offer both bulkheads for longitudinal restraint plus belt rails for double-decking. They feature a completely flush

interior with a double steel surface along the bottom 12 inches to protect against forklift prong damage. Their additional ten feet of loading length and generous interior height (11'-5") enable the shipper to load more into each car, helping to achieve rate minimums and reducing the number of cars needed to handle a given tonnage.

"Three bulkheads provide longitudinal load restraint. They have a full smooth skin for lading protection and an inching chain for easy placement against the load. The nailable steel floor can support large forklift trucks while the smooth plywood lining provides protection for boxes and bags.

"Two DF-2 belt rails at mid-height permit payloads of fragile commodities to be doubled by using crossbars to support the second deck. Door posts are punched for locking in door bars at mid-height. Loading and unloading is facilitated by a white interior for good visibility and wide 10 ft. doors for easy entry and exit."

Note: Door bars are horizontal bars that lock into the doorway posts allowing double or (rarely) triple stacking to continue into the door opening.

All 34 cars remained in service as of January 1, 1978 and there were still 13 as of April 1987. CSX Corporation planned to renumber the remaining cars as CSXT 172391-172423; however, it is unclear if all were, in fact, renumbered.

The B&O received two Class B-107 cars, 490500 and 490501, from the P-S Bessemer, Alabama plant in March 1972 as Lot 9588B. These cars had an interior length of 60'-10.5" and featured 10' Youngstown single sliding doors, Durawood floors, 14 Evans DF-2 belt rails, HydroFrame-40 cushioned underframes (another P-S trademark) with 20" travel, Barber S-2-C 85-ton trucks, and a capacity of 6,547 cubic feet. Their side sheets featured nine rows of waffles.

The average load limit was increased to 176,700 lbs., compared to the 126,400 lbs. of the B-106 class, through the use of larger axle journals and increased truck wheelbase. These cars remained in service until the end of the B&O in 1987 and CSX probably renumbered them as CSXT 166178 and 166179.

Eighty similar 60'-10.5" cars were built for the C&O, 40 B-106, 494300 to 494339



Three-quarter view of B-92A 484849, built by P-S at Michigan City, Indiana in December 1969. The car is stenciled “WAFFLE SIDE” on the side sill just to the left of the gusset for the door. (B&ORRHS Archives)


Table 1. B-92A/B-106/B-107 ORER Summary

Class	Series	July 1973	July 1975	October 1977	July 1979	April 1981	May 1983	January 1985	April 1987
B-92A	484650-485199	546	527	527	512	505	481	522	175
B-106	489965-489998	34	34	34	23	23	23	33	13
B-107	490500 & 490501	2	2	2	2	2	2	2	1

(Lot 9588); and 40 B-107, 490502 to 490541 (Lot 9588A), in March and April 1972.

The B&O also purchased waffle side box cars from ACF (Class B-97, series 485200 to 485313) and Berwick (Class B-108, series 486200 to 486999) but that is a story for another time. I would like to thank Jim Kinkaid, Jim Rogers, and Mike Shylanski for their assistance on this article.

SOURCES

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- *Freight Cars of The Baltimore and Ohio Railroad Volume I Box Cars and Cabooses* October 1, 1970, B&ORRHS Publication 74170
- *Chessie System Railroads Freight Car Equipment Diagrams Issued January 1, 1977 Volume II Box Cars*, B&ORRHS Publication 74178 



End view of B-106 489985, April 1972. A 1966 Federal ban on running boards followed by a 1967 ban on high-mounted hand brakes resulted in the short ladders, low-mounted Ajax brake wheel, and brake step seen here.

(Pullman-Standard photo, courtesy of Jim Kinkaid)



Interior view of B-106 489985, April 1972. One of the Evans Products Company movable bulkheads is shown. The bulkhead rode on two tracks located at the top of each side sheet. The stencil in the box reads "IF YOU NEED THIS TYPE OF CAR IN YOUR BUSINESS WHEN EMPTY LOCK ALL EXTERIOR EQUIPMENT IN PLACE LOCK ALL DOORS KEEP THIS CAR ROLLING, NOT IN THE REPAIR SHOPS."

(Pullman-Standard photo, courtesy of Jim Kinkaid)



Builder's photo of B-106 489985, April 1972. Stencils advertise the cushion underframe and the DF movable bulkheads, to the left of as well as on the door. A stencil warning that the car exceeds Plate C is just to the right of the reporting marks.

(Pullman-Standard photo, courtesy of Jim Kinkaid)