THE B&O MODELER

Volume 8, Number 2 **Second Quarter 2014**

BACHMANN SPECTRUM CLASS EM-1 2-8-8-4 REVIEW
CLASS D-14AB COFFEE-SHOPPE – LOUNGE – DORMITORY – BAGGAGE CAR
PHIL BONZON'S STEAM LOCOMOTIVE KITBASHES
B&O MODEL PHOTOS FROM CENTRAL OHIO, RPM-EAST, AND RPM-VALLEY FORGE PROTOTYPE MODELERS' MEETS

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Cover Photos – Top, NKP Car Company HO scale Class D-14AB Coffee-Shoppe - Lounge - Dormitory - Baggage Car (Bob Chapman photo). Bottom, HO scale B&O Class E-27CA 2-8-0 kitbashed from a Bachmann model (Phil Bonzon photo).

AN INVITATION TO JOIN THE B&O RAILROAD HISTORICAL SOCIETY

The Baltimore and Ohio Railroad Historical Society is an independent non-profit educational corporation. The Society's purpose is to foster interest, research, preservation, and the distribution of information concerning the B&O. Its membership is spread throughout the United States and numerous foreign countries, and its scope includes all facets of the B&O's history. Currently the Society has over 1300 registered members.

Members regularly receive a variety of publications offering news, comments, technical information, and in-depth coverage of the B&O and its related companies. Since 1979, the Society has published a quarterly magazine, *The Sentinel*, dedicated to the publication of articles and news items of historical significance. Other Society publications include monographs, calendars, equipment rosters, and reprints of original B&O source material. Their purpose is to make otherwise unobtainable data available to the membership at reasonable cost.

Membership in the Society is a vote of support and makes all of the Society's work possible. It provides those interested in the B&O with a legitimate, respected voice in the railroad and historical communities. By working together, B&O fans are able to accomplish much more than by individual efforts. No matter how diverse your interests or how arcane your specialty, others share your fascination with America's most historic railroad. We invite your participation. Several classes of annual memberships are available, Regular memberships are only $35.00. If you would like to join, visit the website, http://www.borhs.org/membership/index.html to fill out a membership application, print a copy and mail it to:

B&ORRHS
ATTN: Membership
P.O. Box 24225
Baltimore, MD 21227-0725

FROM THE EDITOR

Pre- and Post- Steam-to-Diesel Transition Era Content and Modeling in Scales Other than HO

We're fortunate in having several contributors who share their steam-to-diesel transition era projects, particularly the models of Jon Vogel and Bob Chapman. However, we are constantly in search of quality content. Topics that have received little coverage include pre-1920, post-1964, Chessie System, and CSX content, as well as projects in other scales besides HO. If you have a project that you'd like to share with the B&O community, please contact the editorial staff and we'll be happy to help you with turning it into an article for *The B&O Modeler*. --Ben Hom

In Memoriam: Larry Kline
By Tony Thompson

Larry Kline passed away suddenly in Pittsburgh on April 17, 2014 from a massive stroke. He was 71 years old. An internationally recognized expert on plasma physics, artificial intelligence and computer simulations modeling and analyzing complex physical situations for engineering applications, Larry was an active model railroader his entire life, and was continuing to work on his home layout. He was an outstanding modeler in O scale, with particular interest in trolley cars. He was a skillful scratchbuilder and had completed a number of ambitious projects, some of which won national contest recognition.

Larry's home layout was set to model the Pittsburgh area, allowing him to include a number of railroads: Western Maryland, Baltimore & Ohio, Pennsylvania, Pittsburgh & West Virginia, and Pittsburgh & Lake Erie (P&LE). Larry was especially active in the P&LE Historical Society and had edited its magazine, "The Little Giant," for a number of years. He was also active in the National Model Railroad Association at both the local and national level. He often presented talks on both modeling and prototype railroad topics at local and national meetings, including the Prototype Railroad Modelers (RPM) meets around the country. He was co-chair of the recent series of RPM-East meetings, held in alternate years in the Pittsburgh and Philadelphia areas.

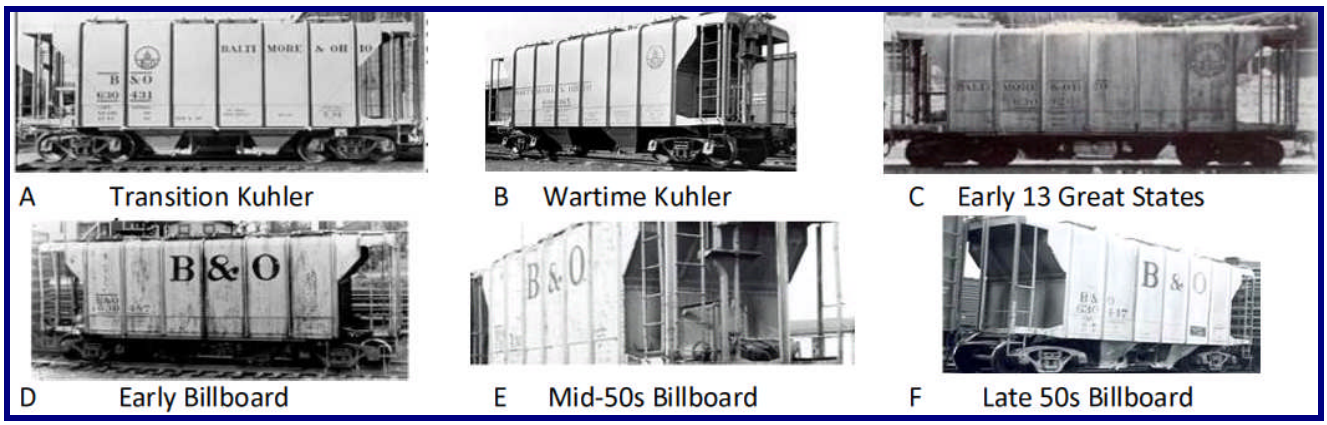
Larry was always generous in sharing information and modeling approaches with others, and wrote numerous articles for hobby publications. He also contributed regularly to several on-line discussion groups. There is no question he will be missed by many.

--Tony Thompson

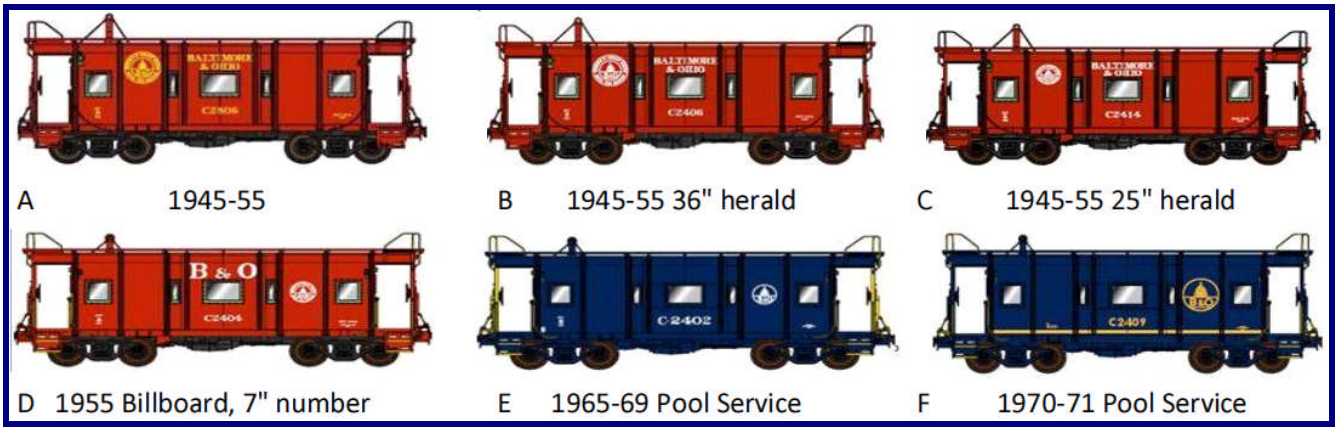
NEWS FROM THE COMPANY STORE

BY CRAIG CLOSE

Spring Mills Depot HO Scale B&O N-34 Covered Hoppers, Company Store price $49.95, are now ready for advance orders. These covered hoppers are expected for delivery in December 2014. The first 100 N-34 Covered Hoppers (630400-630499) were built in the Spring of 1940. The second batch (630300-630399) were built in the Summer of that year. All N-34s were retired by the 1970s. There are 6 known schemes, which are presented in this run. All models are RTR HO scale with etched metal roofwalks, wire grabs, metal wheels, and Kadee couplers. To reserve your model, download the order form at http://www.borhs.org/Shopping/store/Flyer-Sale-N34-Covered-1.pdf, fill it in, and mail it in to the company store.



Spring Mills Depot HO Scale B&O I-12 Wagontop Cabooses Second Run, Company Store price $59.95. The first 100 I-12 wagontop cabooses (2400-2499) were built by the B&O Keyser Shops in 1941. The second batch of 25 cars (2800-2824) were built in 1945 also at the Keyser Shops. All I-12s had all-steel underframes, Duryea draft gear, and steel bodies. These models are ready to run in HO scale with wire grabs, metal wheels, and Kadee couplers. This is the second run of these outstanding Spring Mills Depot cabooses. The first run sold out quickly. Do not wait. Get your order in as soon as you can. Download the order form at http://www.borhs.org/Shopping/store/Flyer-Sale-I12-Caboose-2.pdf, fill it in, and mail it in to the company store.



Intermountain N Scale 53' 6" 70-ton AAR flat cars (B&O Class P-31 and P-25D), Company Store price $22.95. N scale RTR models; Class P-31 flat cars built 1953, reweighed 1965 (six numbers available, 8405, 8417, 8442, 8451, 8476, 8488); Class P-25D bulkhead flat cars built 1951, reweighed 1965 (six numbers available, 8805, 8818, 8840, 8854, 8866, 8879). Order online at the Society website at http://www.borhs.org/shopping/index.html.

UPCOMING SOCIETY AND PROTOTYPE MODELERS' MEETS

January 8-10, 2015: Prototype Rails, Cocoa Beach Hilton Waterfront, Cocoa Beach, FL. POC: Mike Brock, brockm@cfl.rr.com
http://prototyperails.com/

March 27-28, 2015: RPM-East Prototype Modeler Seminar, Ramada Inn, Greensburg, PA. POC: Eric Hansmann, eric@hansmanns.org
http://hansmanns.org/rpm_east/index.htm

April 23-25, 2015: Central Ohio Railroad Prototype Modelers Meet, Marion Union Station, Marion, OH. POC: Denis Blake, dblake7@columbus.rr.com
https://www.facebook.com/groups/438383252883060/

May 16, 2015: B&ORRHS Western Mini-Con, in or around Geauga County (east of the Cleveland metro area). POC: ohiominicon@borhs.org
http://www.borhs.org/events/events.html

May 29-30, 2015: New England/Northeast Railroad Prototype Modelers Meet, Canton Community Center, Collinsville, CT. POC: Dave Owens, neprotomeet@gmail.com
http://www.neprototypemeet.com/Welcome.html

August 7-8, 2015: Gateway Convention Center, One Gateway Drive, Collinsville, IL. POC: John Golden, Golden1014@yahoo.com or Lonnie Bathurst at bathurst@litchfieldil.com
http://icg.home.mindspring.com/rpm/stlrpm.htm

August 8, 2015: B&ORRHS Eastern Mini-Con, St. John's United Methodist Church, Ivyland, PA. POC: eastminicon@borhs.org
http://www.borhs.org/events/events.html

September 25-26, 2015: Mid-Atlantic Railroad Prototype Modelers Meet, Wingate by Wyndham Hotel, Fredericksburg, VA. http://www.marpm.org
https://www.facebook.com/groups/MARPM/

October 22-24, 2015: RPM Conference 2015, Sheraton Lisle-Chicago Hotel and Executive Meeting Center, Lisle, IL. POC: Joe Delia, PO Box 2701, Carlsbad, CA 92018.
http://www.railroadprototypemodelers.com/naper_meet.htm

TBD 2015: B&ORRHS Annual Convention, Cleveland, OH.

B&O IN THE HOBBY PRESS

Brooks Stover, "Modeling B&O's EL-3 in S Scale", *NMRA Magazine*, April 2014.

"Point of Rocks to Martinsburg via the B&O!", *The Railroad Press*, April/May/June 2014.

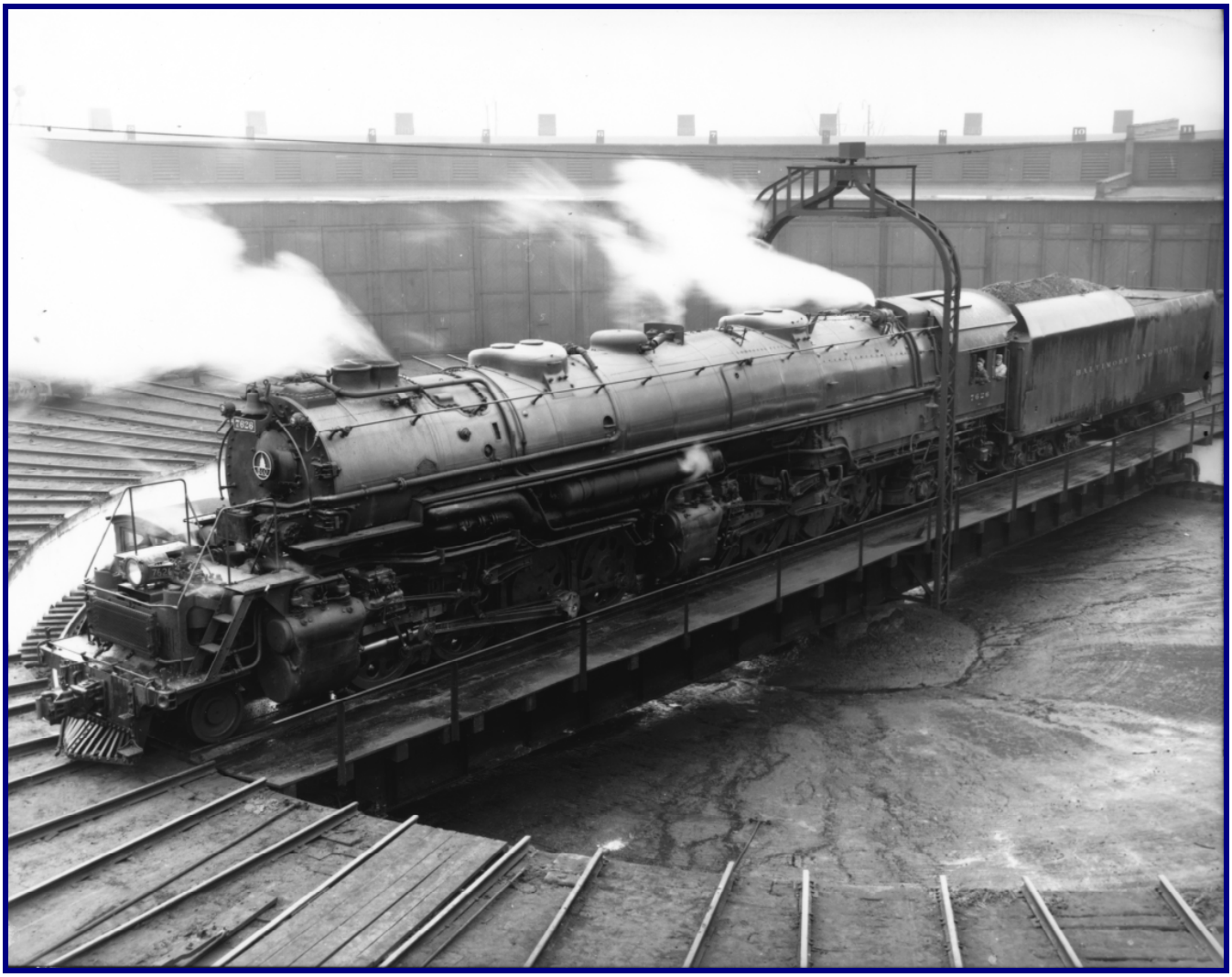
Louis Gomes, "From Parlor Car to Coach: The B&O A-21 Coach", *Railroad Model Craftsman*, July-October 2014.

Bob Sprague, "Two Plans for a Modern-Era Secondary Line" (CSX Indianapolis Subdivision), *Model Railroader*, November 2014.

PRODUCT REVIEW
BACHMANN SPECTRUM HO SCALE CLASS EM-1 2-8-8-4

BY: GREG SMITH

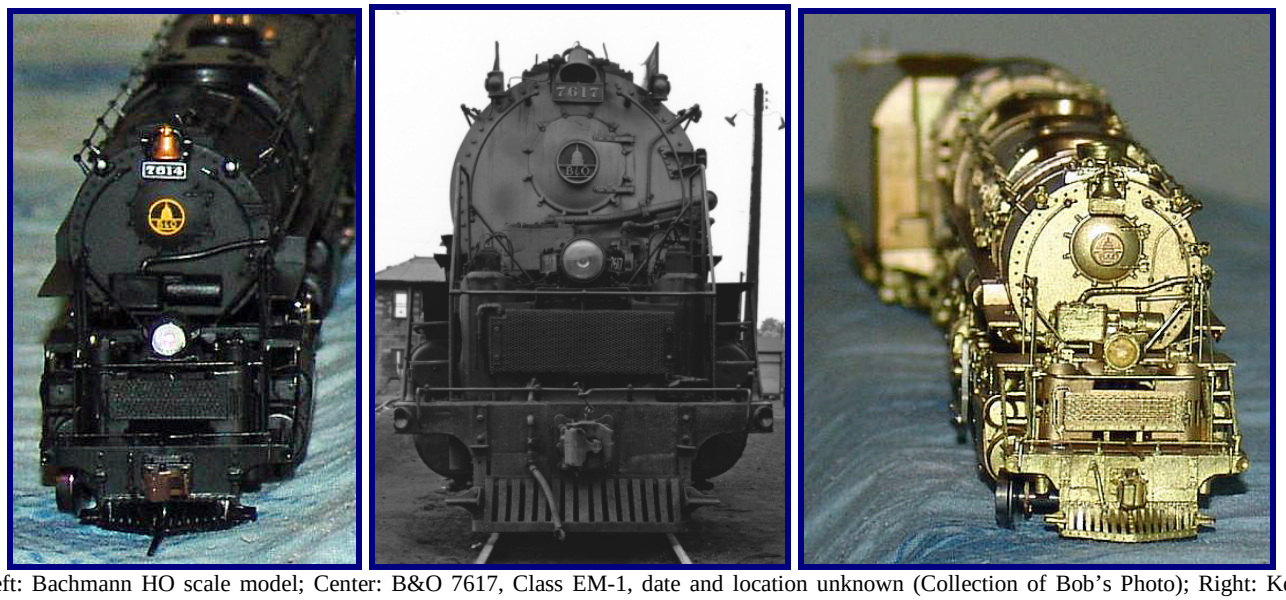
PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.



B&O 7626, Class EM-1, Cumberland, MD, December 11, 1945 (B&ORRHS collection).

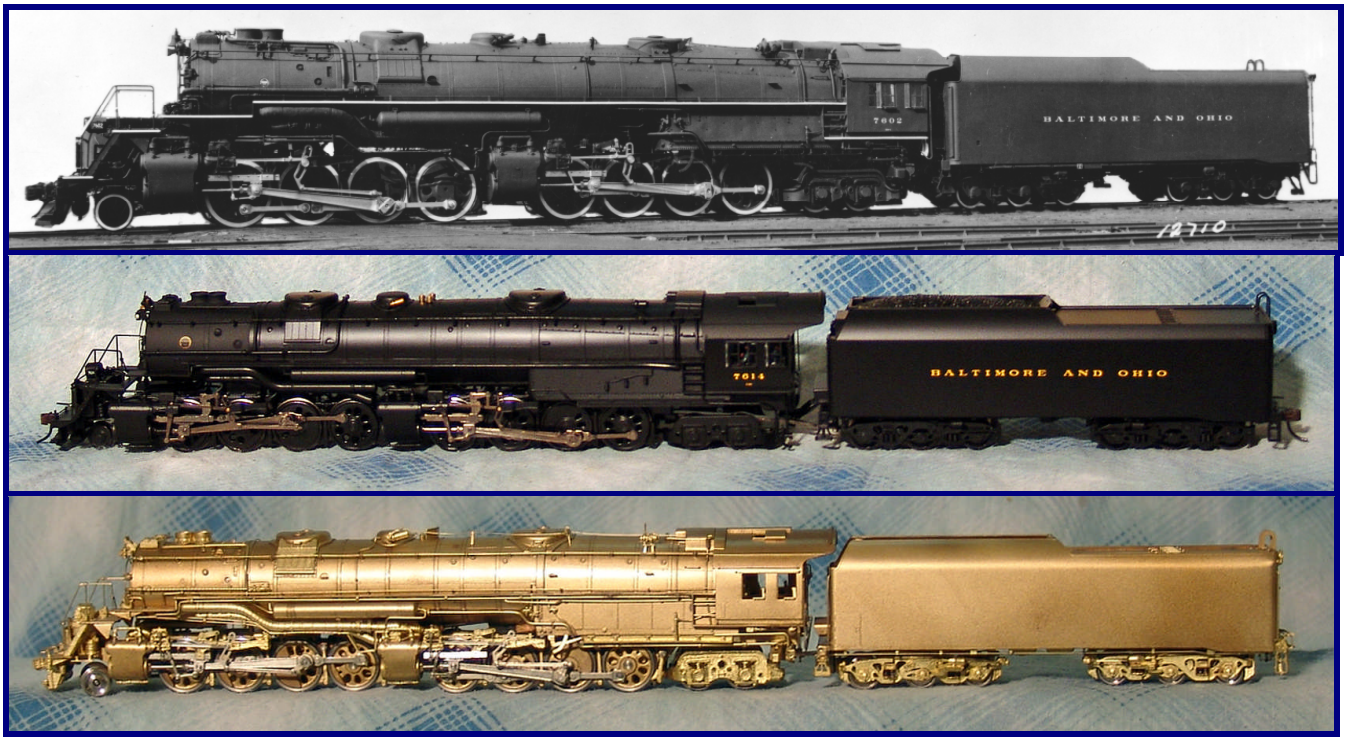
The B&O's Class EM-1 2-8-8-4 by Bachmann is an exciting new locomotive that fills the needs of steam operators right out of the box without having to invest in brass. The boiler and tender appear in the correct proportions for the HO scale model and the engine has a smooth and quiet drive, while weighing in at just over 1.5 pounds. An extensive evaluation of its operating performance will have to wait until I complete modifications to my railroad. I've only run the locomotive on 20 feet of clear track with 42-inch radius, but the engine performed well. It is important when judging operating performance to consider the grades, curvature, type of switches, and type of cars (weight, plastic wheels, metal wheels, and couplers) before truly judging the performance of a locomotive.

As the attached photos show, this model is accurate for those who just want to "play" trains. For the more serious modeler improving the casting and including missing details may be required. Here are some obvious missing details:



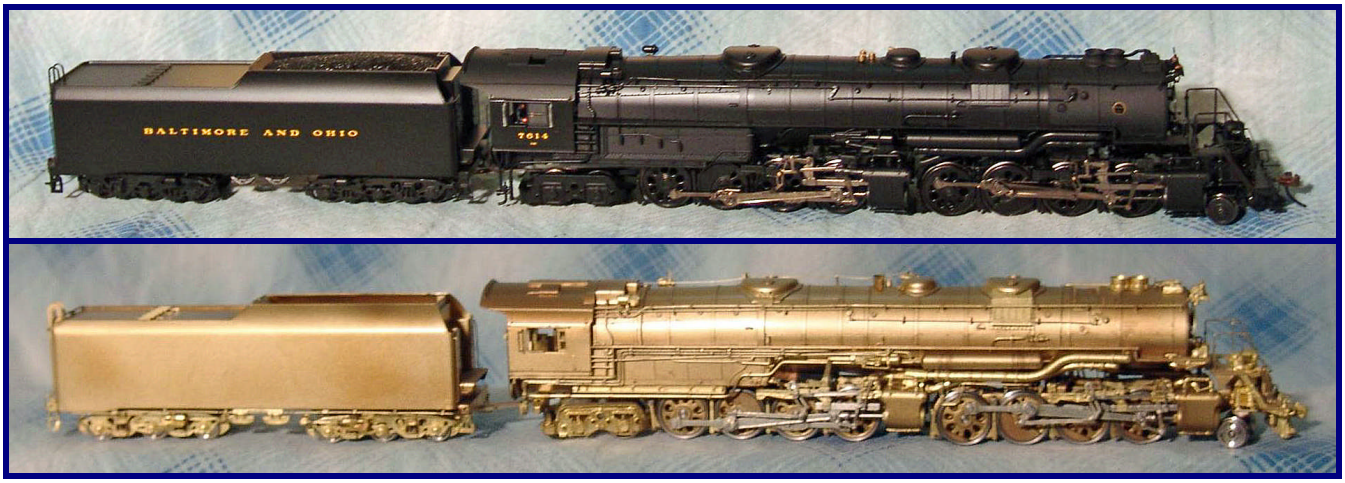
Left: Bachmann HO scale model; Center: B&O 7617, Class EM-1, date and location unknown (Collection of Bob's Photo); Right: Key Imports HO scale model.

Fireman's (Left) Side: The support beam for the trailing truck is missing but can be fabricated easily and attached. The generator is lacking in detail, but can be replaced with a brass casting from Cal-Scale or Precision Scale. The shaker is missing on the front of the firebox and a step is missing just under the compressor on both sides. There is no whistle crank and rod assembly which would have to be scratchbuilt unless someone comes out with the appropriate part. Finally, there is no door on the bottom left side of the tender for servicing the stoker.



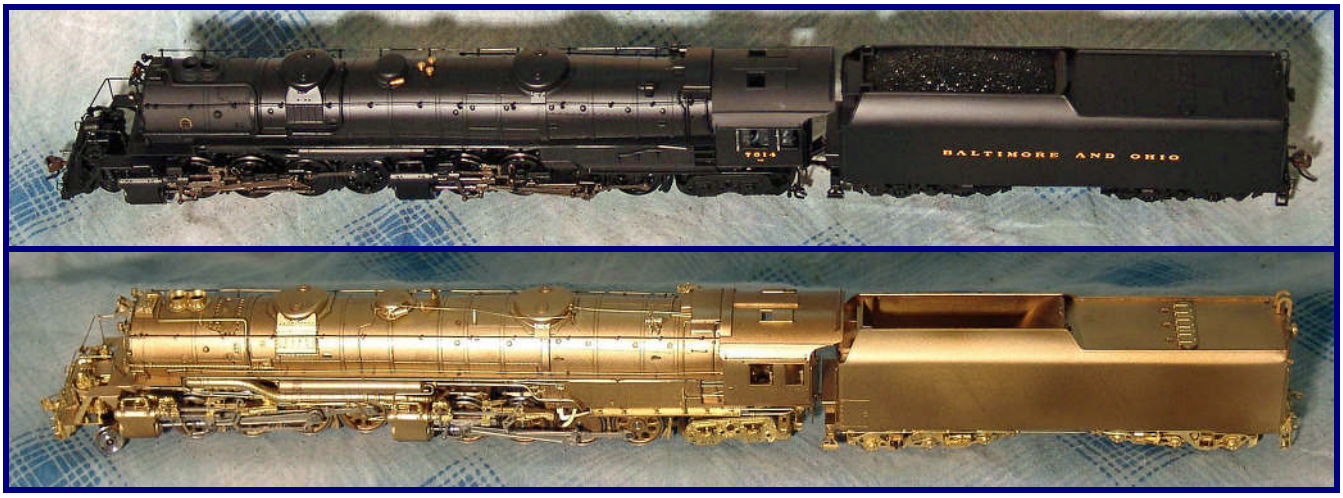
Top: B&O 7602, Class EM-1 Builder's Photo, Eddystone, PA c. 1944 (Baldwin Locomotive Works, B&ORRHS collection).
Middle: Bachmann HO scale model; Bottom: Key Imports HO scale model.

Engineer's (Right Side): The boiler check valve is in the wrong location and must be moved to the course in front of the front sandbox. The support beam for the trailing truck under the cab needs the same modification as the left side.



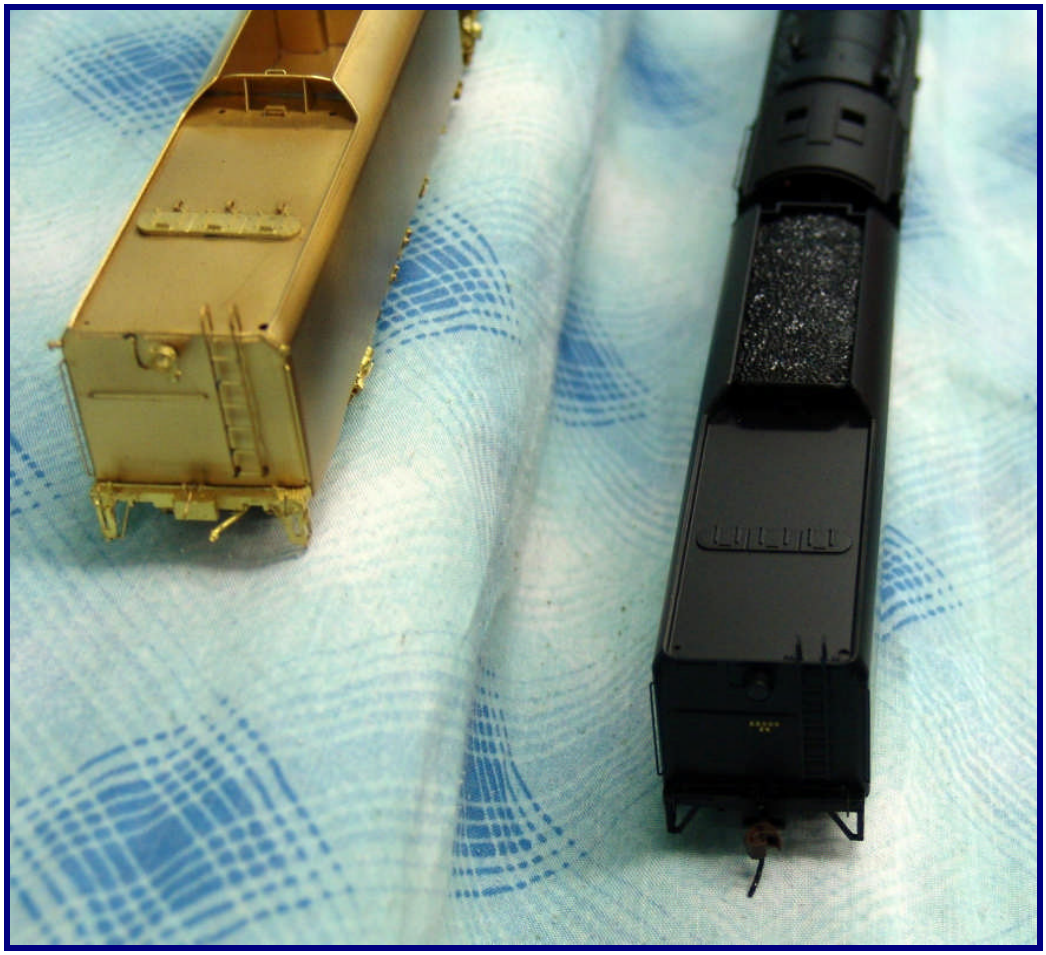
Top: Bachmann HO scale model; Bottom: Key Imports HO scale model.

Top of Locomotive: The pop valves on some of the locomotives had a shield behind them, while others did not. Check your prototype photos before applying this detail. The check valve on the top of the boiler is correct for the B&O's modifications after the first batch of EM-1's. The second order from 1945 came with the check valve on top of the boiler.



Top: Bachmann HO scale model; Bottom: Key Imports HO scale model.

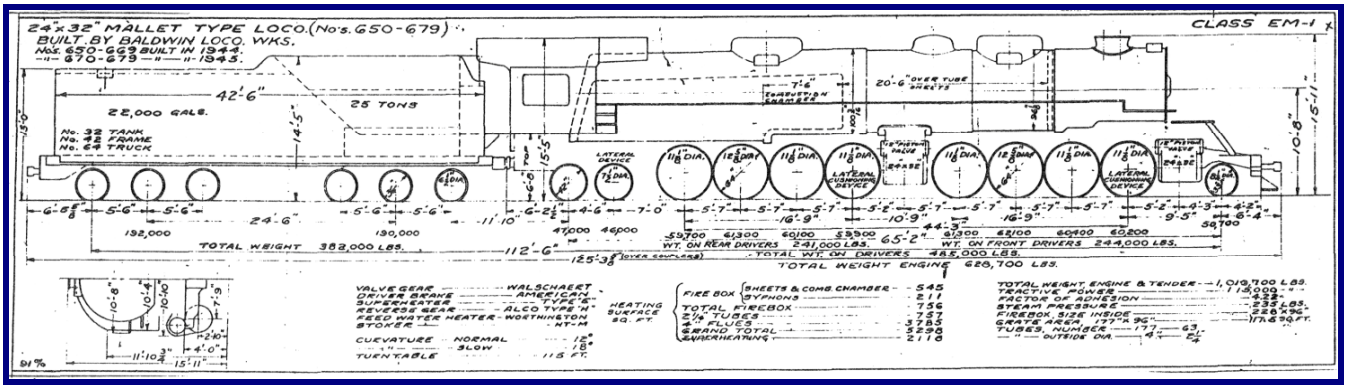
Tender: The tender deck is missing three supports in front of the tender hatches. These supports kept the hatches from hitting the deck and made it easier for the firemen to lift the hatch for closing. You can quickly correct this deficiency using .015 wire or Detail Associate lift rings. The backup light is completely wrong, but Bachmann designed it this way to hide a LED light. If you're really picky, you can replace the backup light with a Pyle National switcher lamp from Cal-Scale or Precision Scale. If you're not happy with the way the model appears, then add these missing parts. By checking prototype photos and doing a little research, you can produce a model you will be proud to operate and show. Bring it to the 2015 convention for Show and Tell.



Left: Key Imports HO scale model; Right: Bachmann HO scale model.

This is a great looking, smooth operating model with a sound system that hopefully will be fun to operate, and is a welcome addition to the family of B&O modeled locomotives. Maybe in the near future we might see an updated S-1A, a new Q-4B, or maybe a T-3. If we are to continue seeing B&O equipment in the future we must support the manufacturers. And as a Society we must, as a collective group, be willing to give said manufactures accurate and truthful information that will, in turn, sell quality models.

More information on the EM-1 can be found in the Fourth Quarter 2011 issue of *The Sentinel*. Additionally, the Society's 2014 calendar contains several Herbert Harwood, Jr. EM-1 photos that provide information for detailing models.



Class EM-1 Clearance Diagram U-70013 Revision H dated 1-11-1957 (B&ORRHS collection).

MODELING B&O'S CLASS D-14AB
COFFEE SHOPPE – LOUNGE – DORMITORY - BAGGAGE CAR

BY BOB CHAPMAN
PHOTOS BY AUTHOR UNLESS OTHERWISE SPECIFIED.

NKP Car's HO scale D-14ab combine kit builds into a fine B&O prototype model.

[Author's Note -- It was a very good day when NKP Car announced its B&O class D-14AB and D-15 combines. My "Diplomat" consist was in serious need of a D-14AB, and in front of me was the perfect solution.]

B&O's Class D-14 Combines

From the beginnings of passenger service, passengers traveled with baggage, and the railroads experienced the challenge of dealing with it. The earliest railroad carriages accommodated baggage lashed to their roofs, while second-generation coaches incorporated cabinetry for baggage in a sowbelly under the floor, not unlike today's intercity buses.

As passenger trains grew longer, the need for baggage space increased, but fell short of requiring a dedicated car. The solution was the combination passenger-baggage car, or "combine".

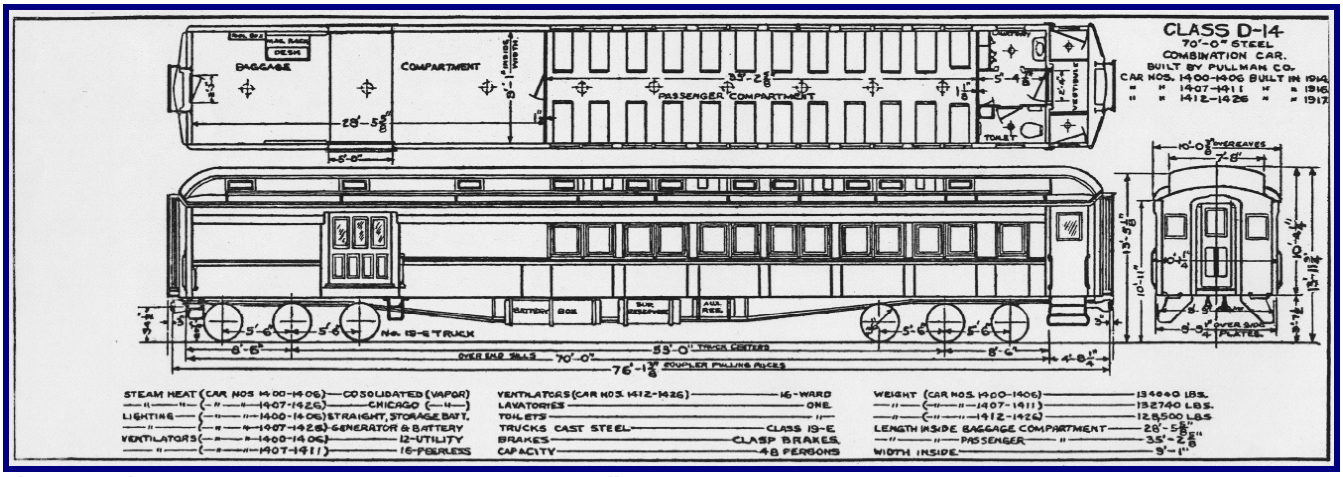
In many trains, combines assumed an additional function as a male retreat – a hideaway from wife and family where a man could enjoy a good cigar and hearty conversation with other men.

The combine was known by a variety of names in B&ORR diagrams, consist books, and timetables, but was seldom called a "combine". In some cases the same car was designated by different names among these sources, and in some cases the same car was known by different names in different eras. For our purposes, we'll use the names attached to the cars on the B&ORR diagrams.

Also, before we describe the various combine classes, a disclaimer – the B&O was notorious for within-class passenger car variations. While the B&ORR diagrams are usually correct for many of the cars in a class, photographic evidence often spotlights interesting differences, such as a window or door plated in a diagram and not plated in a photo (or vice versa). For our purposes, we'll rely on the B&ORR diagrams for our carbody descriptions, but the modeler is well advised to model his car from a photo wherever possible.

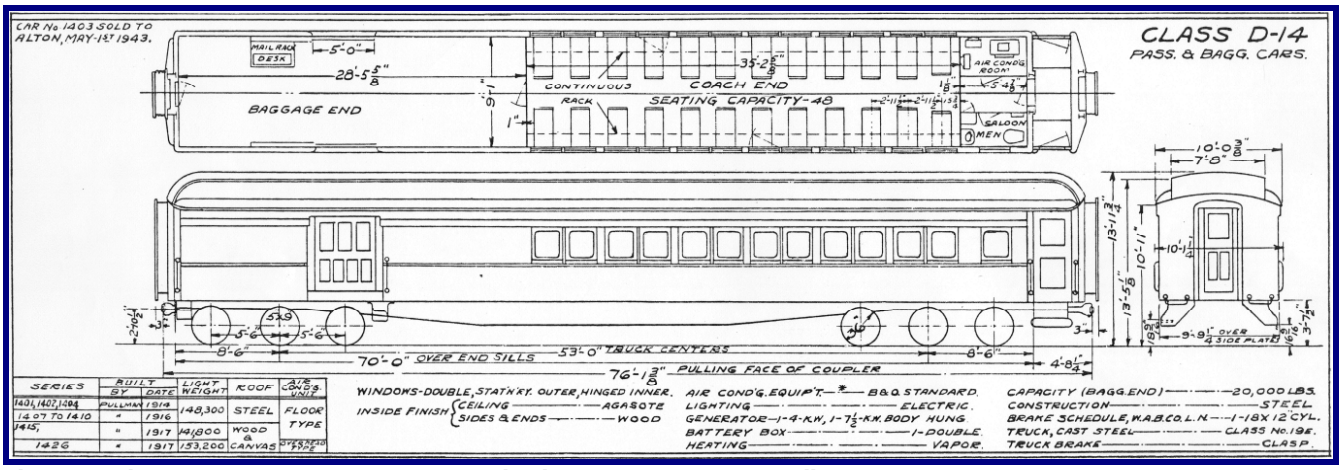
The class D-14 was B&O's first steel Passenger & Baggage car, built by Pullman in three batches in 1914, 1916, and 1917. A total of 27 cars was built, numbered in the #1400-1426 series.

The carbody shared space between a passenger compartment and a baggage compartment. The passenger compartment seated 48 passengers; a single restroom facility resided just inside the vestibule, with small toilet and washbasin compartments separated by the center aisle. A 28'6" baggage compartment occupied the opposite end of the car.



Class D-14 Clearance Diagram T-42109 c. 1923 (B&ORRHS collection).

B&O's 27 D-14's operated without modification for about 20 years until 1936-37, when 22 of them received B&O's standard York air-conditioning at the road's Mt. Clare shops. To create a room for the air-conditioning equipment, the washbasin was squeezed into the toilet compartment and the window in the resulting equipment room blanked.

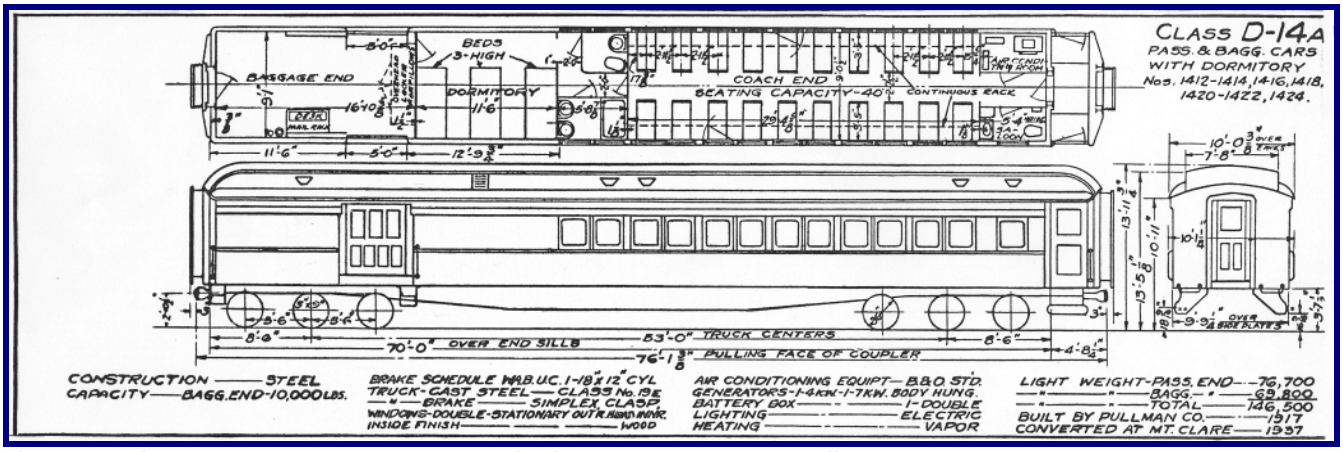


Class D-14 Clearance Diagram T-63356 Revision H dated 2-07-1958 (B&ORRHS collection).

Concurrent with this change, nine cars were selected for further modification as Class D-14A Passenger & Baggage Car with Dormitory, for use in B&O's primary overnight trains. A nine-bunk crew dormitory with toilet facilities was added in the center of the carbody. To make room, the passenger compartment was shortened from 48 to 40 seats, and the baggage compartment shortened from 28'6" to 16'10". The cars retained their original numbers after the modification.

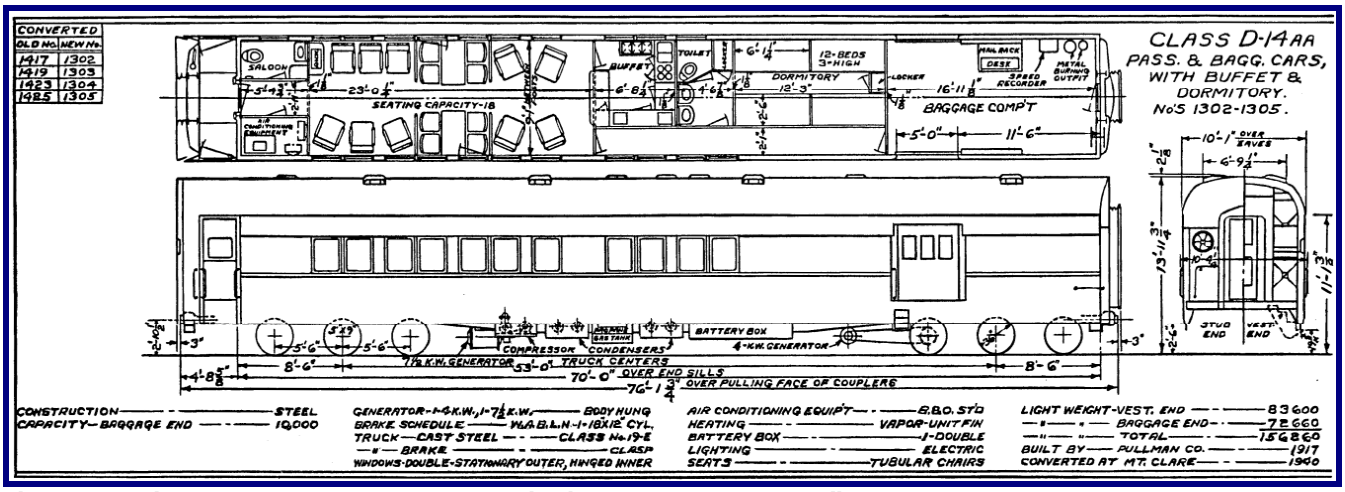
In June/July 1940, four of the remaining D-14s would return to Mt. Clare for complete makeovers, emerging as class D-14AA Coffee Shoppe-Lounge-Dormitory-Baggage cars for service in the all-streamlined *National Limited* trainsets. [*For more information on the* National Limited, *see Frank Wrabel's article in the upcoming First Quarter 2015 issue of* The Sentinel. – *Ed.*] Their exterior appearance nearly matched that of the latest lightweight cars with full-length skirts, a streamline-profile roof, and a full-width diaphragm on the car's trailing end, but retaining their vintage narrow windows.

Their interior was also extensively modified. An 18-seat lounge with comfortable chairs replaced the 48-seat passenger compartment, serviced by a small buffet kitchen nestled near the center of the carbody. Gone was the lavatory, replaced by a food storage locker in support of the kitchen; a second storage locker was placed in the right rear vestibule, resulting in the door being blanked. Beyond the kitchen was an expanded 12-bed dormitory with toilet facilities. Rounding out the carbody was a 16'11" baggage area, the same as on the D-14A.

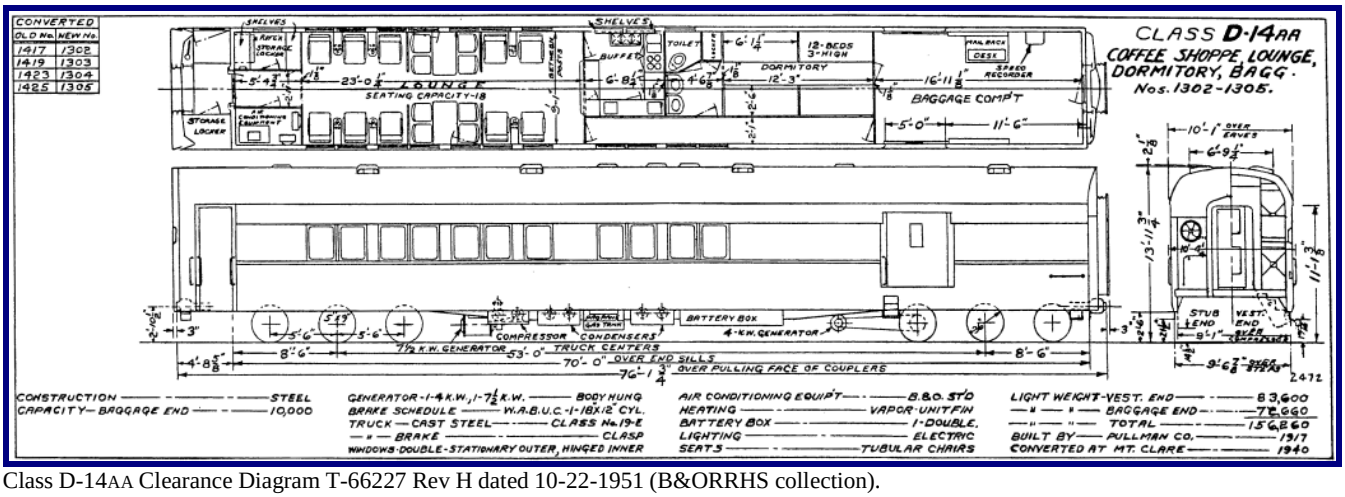


Class D-14A Clearance Diagram T-63052 Revision B dated 11-30-1937 (B&ORRHS collection).

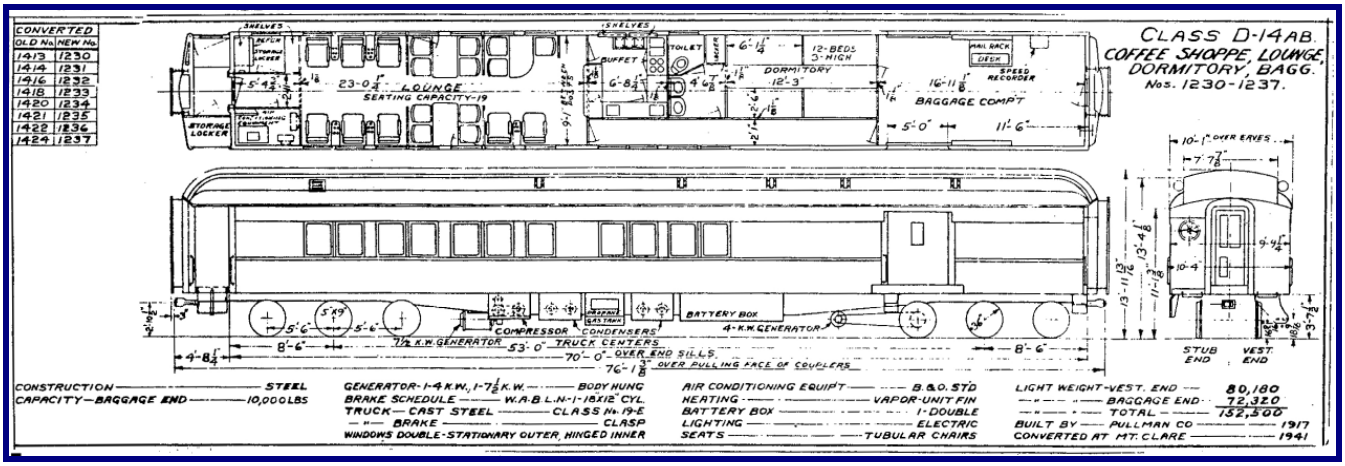
The D-14AA cars were repainted from dark green to B&O's new blue-gray paint scheme, and as the lead car in the *National's* consist, wore a distinctive version of it. The gray window band originated with a semicircle almost halfway along the carbody. Between the window band and the baggage door was a plate featuring the B&O capitol emblem in brass; on the opposite side of the baggage door was a rectangular plate with the train name in brass script. Originally numbered as D-14s #1417, 1419, 1423, and 1425, the D-14AA combines were renumbered #1302-1305.



Class D-14AA Clearance Diagram T-66227 Revision A dated 4-26-1940 (B&ORRHS collection).



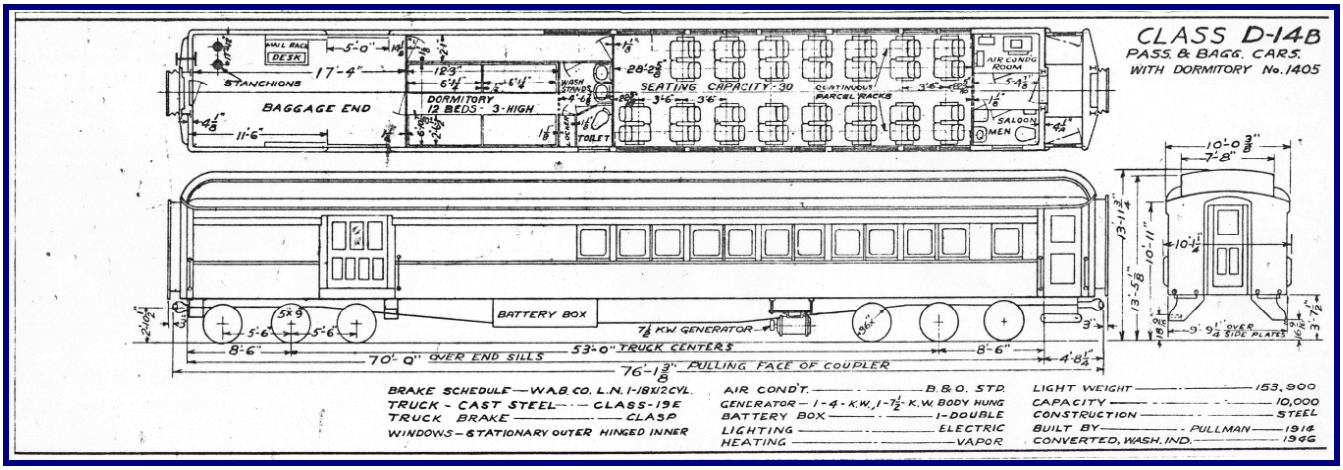
Class D-14AA Clearance Diagram T-66227 Rev H dated 10-22-1951 (B&ORRHS collection).



Class D-14AB Clearance Diagram T-67303 Revision C dated 9-28-1948 (B&ORRHS collection).

A year later in June/July 1941, all but one of the D-14A combines received a second rebuilding to become class D-14AB Coffee Shoppe-Lounge-Dormitory-Baggage cars. While their interior was modified to a near-match to the *National's* D-14AA class, their exterior was left largely untouched. With the modification, the cars were renumbered into the #1230-1237 series; the lone surviving D-14A retained its original number, #1412. The D-14AB cars were most often assigned to the *Diplomat* and *Shenandoah.*

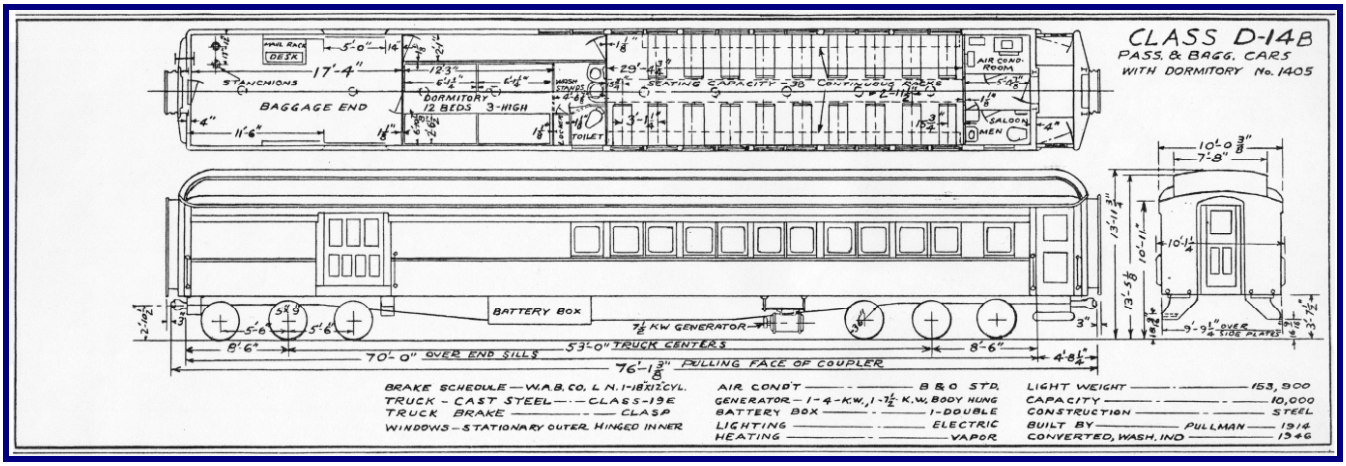
A final conversion took place in July 1946, when D-14 #1405 was modified to Passenger & Baggage Car with Dormitory in a new class, D-14B. Seating was reduced from 48 to 38, the baggage area from 28'6" to 17'4", and a 12-bed crew dormitory and lavatory added. The modifications made the car a near-twin of the lone remaining D-14A #1412, and the two cars served as opposites on the *Washington Express* and *Chicago Express*.



Class D-14B Clearance Diagram T-71545 Revision A dated 11-05-1947 (B&ORRHS collection).

A final note – D-14 #1401 received distinction as a communications car assigned to Presidential specials. Unmodified except for air-conditioning and a radio antenna, the car was leased by the U.S. Government in 1942 with its B&O lettering removed, and was retired in 1950.

The D-14s and their modifications led long and productive lives, in some cases serving over 50 years. As the cars progressed through their service lives, many would receive rounded-corner Thermopane windows and replacement single-window baggage doors. Last to leave the roster were D-14AA #1302 and 1303, and D-14AB #1235, all in 1969.



Class D-14B Clearance Diagram T-71545 Revision B dated 9-23-1948 (B&ORRHS collection).

The following table was largely compiled from information presented in a 1985 B&ORRHS data sheet developed by Ralph L. Barger:

Table 1: B&O Class D-14 Roster and Evolution

			Rebuild #1			Rebuild #2					
Car No.	Date Blt.	Date A/C	To Class	Date	Car No.	To Class	Date	Car No.	9/24/50 Assign.	Date Ret.	Comment
1400	6/14	None								9/57	
1401	6/14	3/37								6/50	Leased to US Govt 6/42
1402	6/14	None								6/60	
1403	6/14	None									Sold to Alton 5/43
1404	6/14	4/37								4/59	
1405	6/14	4/37	D-14B	7/46	1405				9-10	?/64	
1406	6/14	None								7/53	
1407	3/16	4/37								12/59	To X-4444
1408	3/16	5/37								6/60	
1409	3/16	8/36								6/60	
1410	3/16	5/37								2/58	
1411	3/16	None								12/57	
1412	10/17	4/37	D-14A	4/37	1412				9-10	?/64	
1413	10/17	4/37	D-14A	4/37	1413	D-14AB	7/41	1230	5-6	?/64	
1414	10/17	4/37	D-14A	4/37	1414	D-14AB	6/41	1231		6/60	
1415	10/17	7/36								6/60	
1416	10/17	4/37	D-14A	4/37	1416	D-14AB	6/41	1232	3-4	?/65	
1417	10/17	7/36	D-14AA	6/40	1302				1-2	?/69	To Cent. NY NRHS
1418	10/17	7/36	D-14A	7/36	1418	D-14AB	6/41	1233		6/60	
1419	10/17	6/36	D-14AA	6/40	1303				1-2	?/69	
1420	10/17	4/37	D-14A	4/37	1420	D-14AB	6/41	1234	3-4	?/61	
1421	10/17	7/36	D-14A	7/36	1421	D-14AB	6/41	1235	3-4	?/69	
1422	10/17	7/36	D-14A	7/36	1422	D-14AB	7/41	1236	7-8	6/60	
1423	10/17	6/36	D-14AA	7/40	1304				1-2	?/63	
1424	11/17	7/36	D-14A	7/36	1424	D-14AB	7/41	1237		?/65	
1425	11/17	8/36	D-14AA	6/40	1305				1-2	10/56	
1426	11/17	4/36								6/60	

Reference: Data Sheet, Class D-14 Pass.-Bagg., Number Series 1400-1426, Ralph L. Barger, B&ORRHS, January 1985.

About the D-15s

While our modeling focus will be the D-14AB, some words about the D-15 class are in order, since in some cases the D-15s matched the appearance and function of the D-14s, and sometimes shared assignments with them.

The 30-car D-15 class, numbered #1427-1456, arrived in 1926-27, nine years after the delivery of the final D-14. As built, the D-15s were nearly identical to the D-14s in dimensions, capacity, and appearance.

As time passed, the evolution of the D-15 class was remarkably parallel to that of the D-14s. As with the D-14s, several of the class received York air-conditioning in 1936-37. At the same time, four of

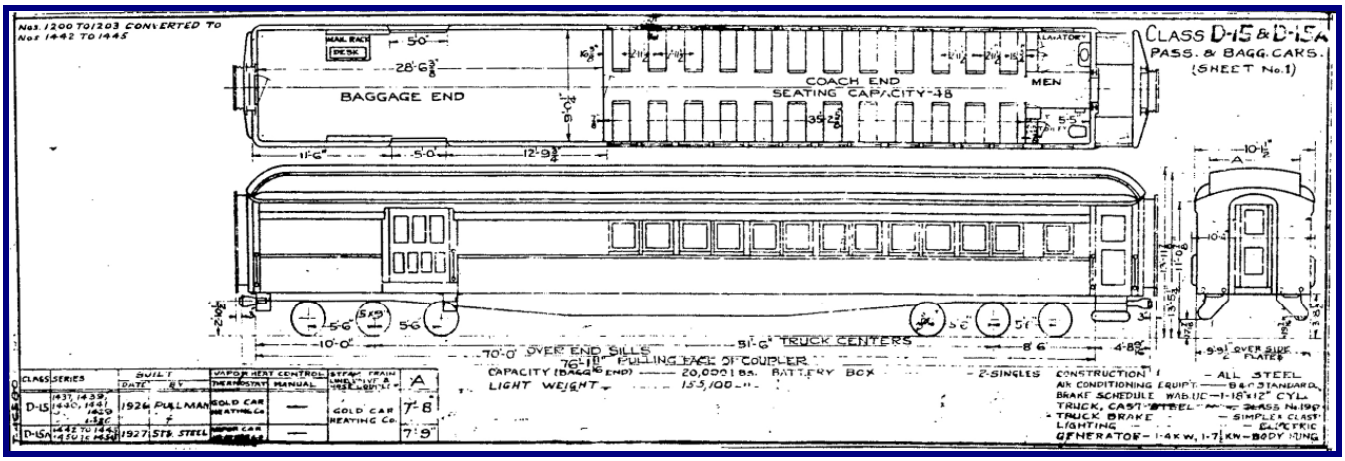
the series (#1446-1449) received reclining seats and a new class designation – D-15A.

In 1937, a pair of D-15s (#1432, 1434) was modernized to class D-15C and renumbered to #1300-1301 for service on the *Royal Blue*. The standard carbody was streamlined with full skirting, a streamline-profile roof, and full-width diaphragms. The interior changes were modest, with air-conditioning equipment rooms added just inboard the toilet and lavatory compartments on either side of the aisle; the baggage area was unchanged, and no crew dormitory was required for the *Blue's* daylight run. These cars would set the standard for later similar D-14 and D-15 conversions for such trains as the *National Limited* and *Capitol Limited.*

Also in 1937, class D-15 #1433 was converted from the standard D-15 interior to Passenger & Baggage Car with Dormitory configuration, and reclassified D-15D. The resulting changes made the car almost identical to the nine D-14A conversions of the same year.

In 1941, the *Columbian* required an additional Coffee Shoppe-Lounge-Dormitory-Baggage car to supplement the pair of similar but somewhat longer class D-35A cars (#1317-1318) rebuilt by Pullman in 1938. To meet this need, the *Royal Blue's* D-15C #1300 was converted a second time to D-15CA #1306. Most of the changes were on the interior, with a 19-seat lounge with buffet replacing the 36-seat passenger compartment, the elimination of the restrooms, the addition of a 12-bed dormitory, and the shortening of the baggage compartment from 28'6" to 16'11". As a result of the interior changes, the exterior window arrangement was modified.

Next in 1944 was the conversion of D-15 #1427 to D-15E Passenger & Baggage with Dormitory. The D-15E retained both its toilet and lavatory compartments, but was otherwise identical to the single D-14B conversion which was to follow in 1946.



Class D-15 & D-15A Clearance Diagram T-46580 c. 1927 (B&ORRHS collection).

In 1946, the most aggressive conversions to-date took place – a pair of D-15s (#1307-1308) to class D-15F #1435 (*Eden Park*) and #1436 (*Hyde Park*) for service in the new all-streamlined modernized heavyweight *Cincinnatian* consist. In addition to full-length skirting, a streamline-profile roof, and full-width diaphragms, the cars received wide streamliner-style windows and a roof antenna for radio service.

The interior featured a comfortable 24-seat lounge served by a small buffet, a crew locker room and lavatory (no bunks were needed for the *Cincinnatian's* daylight run), and a 20'0" baggage compartment. The toilet and lavatory compartments were displaced by a conductor's room and an air-conditioning equipment room. Painted in dark blue with the gray window band beginning in a semicircle near the baggage door, the cars were a striking addition to the train's consist.

To solve an ongoing chronic shortage of Lounge-Buffet-Dormitory-Baggage cars on the B&O, in 1947 a pair of D-15s (#1428, 1431) was converted to class D-15EA #1239-1240. These cars were near-duplicates of the D-14ABs of 1941, and served interchangeably with them on such trains as the *Shenandoah* and *Diplomat*.

A final D-15 conversion, perhaps the greatest of all, took place in 1949 when D-15 #1438 was rebuilt to D-15G Coffee Shoppe-Lounge-Dormitory-Baggage car #1309. On the interior, the D-15G was similar to the D-15EAs, with a lounge, buffet, 12-bed dormitory, and 17'4" baggage compartment. The exterior was very similar to the D-15F *Cincinnatian* cars with their streamliner features and picture windows. Intended for the *National Limited*, the car wore a rectangular plaque with the train's name in brass script, which it continued to carry into later assignments to such other trains as the *Capitol Limited*, and later the *West Virginian* and *Tri-Stater*.

Of the thirty D-15s, thirteen would receive modernization conversions, with one car being converted twice. The unconverted D-14s and D-15s remained journeymen, pooled for assignment to B&O's secondary and accommodation trains.

NKP Car Company's Combine Kits

NKP Car Company's D-14ab and D-15 combines, models unlikely to be mass-produced in styrene, are very welcome additions to their already impressive assortment of B&O passenger car kits. The sides are photoetched brass, and precisely represent the B&O prototype with correct window arrangements and scale-sized rivets. Common to both models is a custom-molded cast resin roof based on the B&O prototype, which nicely represents such features as B&O's signature wide (7'8") clerestory, and accurately rendered transverse seams.

Fleshing out the carbody are aftermarket ends – a vestibule end from Eastern Car Works, and a baggage end of different style from Bethlehem Car Works. Supplied with both models is a modern single-window steel baggage door, a 1950s upgrade on many of the prototype cars replacing the original three-window wood-panel doors. Custom cast resin York air-conditioning underbody components are provided, along with the more standard brake, electrical, and water system appurtenances. Correct free-rolling six-wheel trucks from Branchline are included with the kit.

The two models differ in window style and arrangement. The D-15 represents a car with minimal modification. The window sashes are the original square-corner style, and the lavatory window in the right side is blanked, representing redeployment to an air-conditioning equipment room.

The prototype D-14AB appeared in several variations – with and without the lavatory window blanked, and with and without rounded-corner Thermopane windows. NKP's D-14AB includes several modernization touches, such as Thermopanes, additional blanked windows representing more extensive interior modifications, and a blanked vestibule door in the right side.

The sides on my D-14AB were severely convex, a problem I elected to live with.

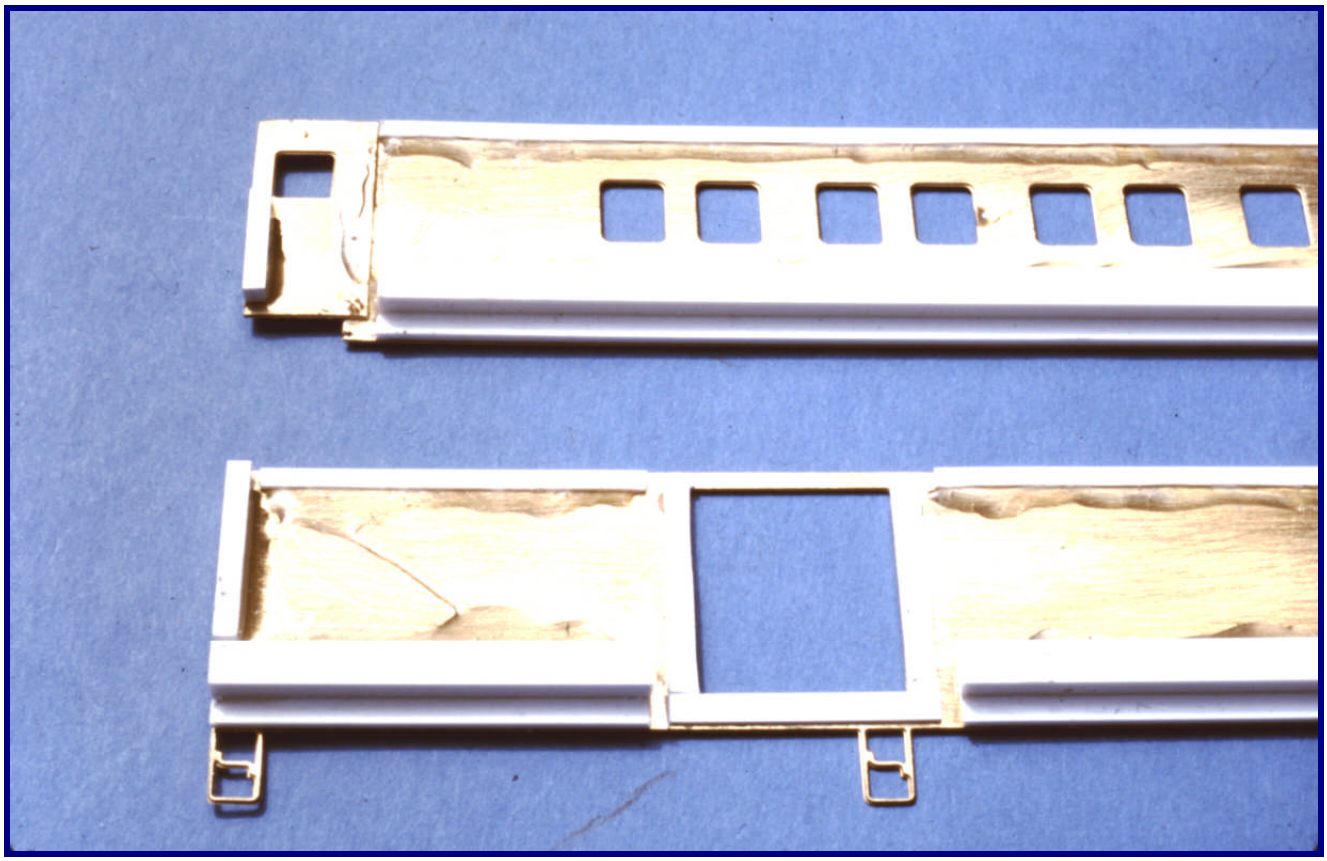
Note that according to B&ORR diagrams, the D-15 kit can also be used to model an air-conditioned D-14 and D-14A. The D-14AB kit will also model a Thermopane-upgraded D-15CA, D-15EA, and by adding a streamline-style roof, the D-14AA.

With all these positives, the kit is not perfect. The sides on my D-14AB were convex rather than flat, with a 3/32" deflection from bottom to top. Trying to bend out the deflection would only make matters

worse, so I elected to live with the problem. Fortunately, the attractive blue and gray paint scheme largely distracts the eye from this shortcoming.

Another gripe common to many of NKP Car's kits is the instructions, which are highly summarized and add an unnecessary challenge for the modeler. Compounding the potential for confusion, the same instruction sheet covers both classes of combines as well as the dissimilar F-4BM and F-4BN dining cars. I found it helpful to cross out instruction steps pertaining to the diners before beginning assembly of my D-14AB. On a positive note, included is a diagram showing placement of the underbody devices (although missing from it are the crossbraces and large air reservoir), as well as a top-down photo of the model roof showing location of roof detail. No prototype photos were included with the instructions.

None of these problems is a show-stopper, and with care and patience, the kit is buildable into a fine model which accurately represents its prototype.



Interior carbody framing; note the spacer strips surrounding the baggage door. The fillet of five-minute epoxy will strengthen the joint between the sides and the framing.

Build the Carbody

I elected to base my model on D-14AB #1235, a car where I had access to prototype photos of both sides.

Begin by test-fitting the roof, sides, and ends. In doing this, I found the roof to be .040" too short relative to the sides. There are two solutions to this – shorten the sides, or make the ends thinner. I chose a combination of both, starting with sanding the backs of the ends on medium sandpaper placed on a flat surface, then shortening the sides to make up the remaining difference.

In assembling the model, you'll want to assure good adhesion between the mirror-finish of the backs of the sides and the remaining carbody components. I'm a bit paranoid on this, having had a bad experience with a previous model, where regluing a loosened joint resulted in damage to an otherwise nice paint job. By roughening the backs of the sides and reinforcing the glue joint, one can improve his odds.

For the sides, I scarified them by dragging coarse sandpaper across their backs, making tiny grooves to give the glue "tooth" to adhere to. Next, drill (#76) the sides for the grabs, using the locator dimples on their backs as a guide.

On the prototype, the baggage doors are inset, allowing them to slide open behind the carbody side structure. Simulate this on your model with .020" x .100" styrene strip spacers glued around the border of the door opening; for each door, you'll need a pair of side strips 6'4" long, and a bottom strip 6'6" long (I omitted the strip at the top). Drill the grab holes through the styrene. To simplify a tough masking challenge, I installed the doors after painting.

Drill holes for the grabs in the vestibule doors, using the locator dimples as a guide. Temporarily insert Detail Associates #6605 grabs through the holes drilled in the sides and into the holes drilled into the doors; this will perfectly locate the doors relative to the sides. Note that the car's left side contains the door with the window, and the right side the plain blanked door.

On my model, the convex sides and flat doors presented a gluing challenge. Begin by running a small amount of CA glue across the joint at the bottom of the door and sides. Once this has dried, clamp the top of the door to the side and run a bead of glue across the joint, securing the joint until the glue has dried.

The interior of the side must be framed with styrene strips to properly space the side relative to the edge of the roof at the top, and to provide a L-shaped ledge for a removable floor at the bottom.

To form the L-shaped member, on a flat surface such as a plate of glass, glue two .100" x .156" strip to a .040" x .250" strip, top edge flush; use the photos as a guide for proper orientation of the strips. Cut the strips into a pair of 51'0" lengths to fit between the vestibule and baggage doors on the sides, and a pair of 10'8" lengths to fit between the baggage door and end. With CA, glue the strips to the sides, bottom edges flush (see photo on page 17).

The top framing is .020" x .080" styrene glued flush with the top of the sides, leaving gaps for the doors. Complete the framing with short vertical .080" x .080" strips glued flush with the ends of the sides. When the CA joints have dried, I like to further strengthen them by running a narrow fillet of five-minute epoxy into the angle formed by the styrene strips and the brass sides; this adds some insurance that the joint will not later separate.

With a file, shape the tops of the ends to match the interior curvature of the ends of the roof casting. Spot-tack the sides to the roof with contact cement. Glue the ends to the interior bracing of the sides with solvent glue, and make final adjustments in the positioning of the sides and ends. When satisfied that everything is properly aligned, run a bead of CA along the joints of the sides, ends, and roof. When dry, add an optional strengthening fillet of five-minute epoxy along the joints. It's starting to look like a passenger car!

Build the Floor

The removable floor will nest inside the L-shaped framing members glued to the bottoms of the sides. Rather than use the extruded floor supplied with the kit, I like to start fresh with a floor cut from .060" styrene sheet. For my model, the correct floor dimensions were 72'3" x 9'0".

Draw a centerline the length of the floor. Per the B&ORR diagram, the trucks were centered 53'0" apart. Since the mounting holes in the Branchline trucks are offset by 1'4", we'll need to add 2'8" to the diagram dimension, making it 55'8". Note also that the trucks are not centered on the carbody, but are offset towards the baggage end. Thus, to locate the placement of the bolsters, draw a line across the floor 9'6" from the vestibule end of the carbody, and a second line 55'8" from the first line.

At each end of the floor glue coupler pads cut 2'6" long from .060" x .250" styrene strip. Between the coupler pads glue a centersill spacer strip of .125" x .188" styrene strip; make sure it is centered on the width of the floor.

Trim the kit centersill beams equally at each end so that their resulting length is 45'0"; we have intentionally cut the centersill beams a bit short in order that they clear the trucks. Glue the centersill beams to each side of the centersill spacer. Flanges are a nice detail atop the centersill beams; glue a flange of .010" x .080" styrene to each, flush with the inside edge of the beam. Glue four crossmembers along each side of the centersill; locate them at the centersill shape inflection points (see photos). Glue a flange atop of each, centered on the crossmember.

At each bolster location, glue a pad of 3/16” x 3/16” x .030” styrene to the centersill spacer, and drill (#50) through its center for the trucks. Temporarily place the floor in the carbody, and using the coupler boxes as a template, mark the location of the coupler box mounting holes the coupler pads; the end of the coupler box should be flush with the outsides of the end of the carbody. Drill for the coupler screws. Assemble the trucks and test-fit them to the floor, pivoting them to make sure there is no interference with the centersill.

Add Underbody Details

To locate the underbody appliances, I used NKP Car’s diagram, which for the most part agreed with the prototype photo of D-14AB #1232 appearing on page 75 of Harry Stegmaier’s book *Route of the Capitol Limited*. Install the battery box, condensers, compressor, water tanks, brake cylinder, brake valve, large reservoir, steam traps, and vestibule steps.

Using the diagram in the instruction sheet, a .330” x .375” propane carrier can be fabricated from styrene strips. The .040” x .156” strip should be cut to a length of 2’3”, and mounted 9” from the bottom.

A second large reservoir is prominent in the photo, and can be modeled using a reservoir from the Bethlehem Car Works #12 brake system. Mount the reservoir on .030” x .156” x 2’6” struts to clear the crossmember; be sure it also clears the truck.

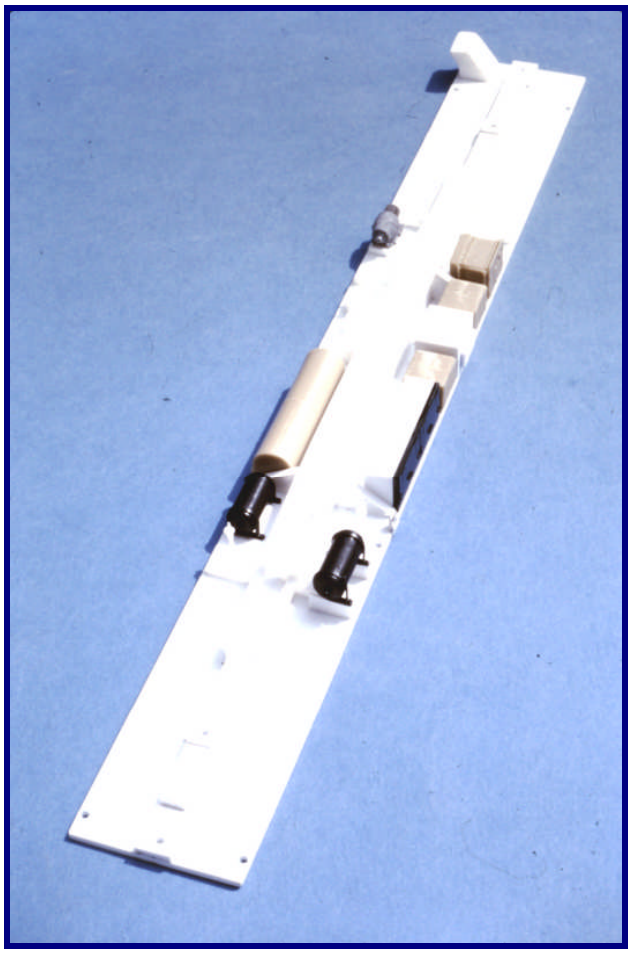
At the location of the blanked door, the photoetched stirrup proved fragile; I replaced it with a wide stirrup from Bethlehem Car Works set #87.

For strength, the receptacles are best glued into notches filed in the edge of the floor. One of my receptacles took a dive to the floor before assembly; I’ll install it if I ever find it!

Install the small tanks near the brake cylinder. In mounting the generator, I substituted a strip of .060” x .188” x 2’9” styrene in place of the supplied .040” x .250” pad.

When I finished detailing the floor according to the kit diagram, I had a few parts left over which went into the scrapbox.

The floor is secured to the carbody with three 0-80 x 3/16 screws along each side. Place the floor in the carbody, and drill (#55) three holes on each side through the floor and into the L-shaped supports. Remove the floor and enlarge the holes (#51) in it for clearance.



Completed underbody.

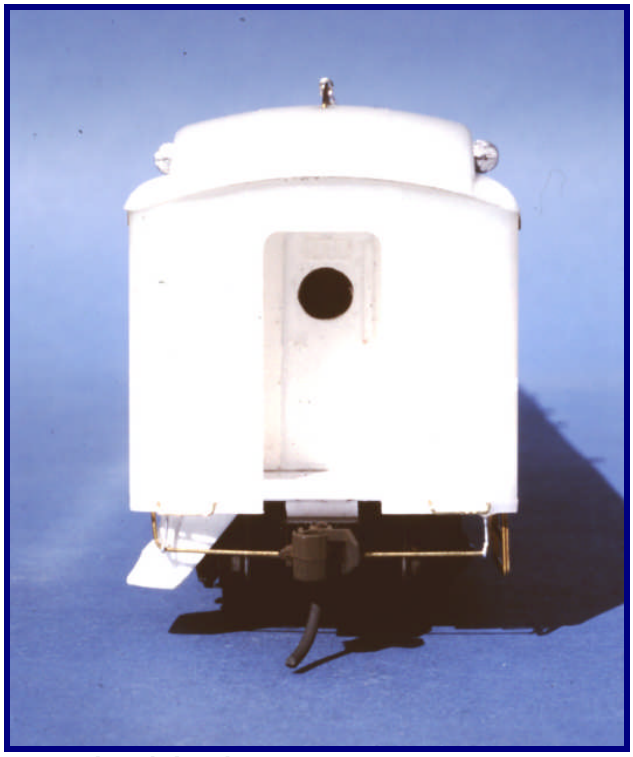
Detail the Ends

The end detail differs markedly between the two ends; the vestibule end has little detail, while the baggage end is bristling with it.

We’ll start with detail items common to both ends. Drill (#76) for Westerfield 18” drop grabs at the bottom of the ends on either side of the diaphragm opening. With Westerfield recently retired from the business, Tichy #3015 grabs can be substituted. Install the grabs.

At the edge of both ends on both sides, drill for a Detail Associates #6605 36” grab; match the height of the holes with the holes previously drilled in the brass carbody on the opposite side of the vestibule door. Install the grabs after painting.

Unpainted baggage end; to simplify masking, I elected to mount the brakewheel and upper grabs after painting.



Unpainted vestibule end.

Also on both ends, drill underneath the ends near the corners for Detail Associates #2222 long eyebolts, which will support the uncoupling levers. Glue the eyebolts in place, and using the photos as a guide, bend uncoupling levers from .016 wire and install them in the eyebolts.

Remove 8" from the tops of the kit-supplied diaphragms; glue the leaf spring behind the diaphragm top, and set the assembly aside until after painting.

Complete the vestibule end by gluing the cast resin interior partition to the floor 2'6" from the end of the floor.

Moving to the baggage end, I noted that the cloverleaf-style brakewheel supplied with the kit is incorrect for the B&O, and replaced it with a Precision Scale #31118 brakewheel. A scrap of styrene can serve as a spacer between the brakewheel and end. Note that I waited until after painting to add the brakewheel and the following grabs to simplify masking.

The L-shaped grabs at the bottom of the baggage end are Detail Associates #6504 caboose grabs, which I slightly modified to fit the ends (see photo on page 22). Mount Westerfield #1198 (or Tichy #3021) 18" straight grabs in the top panels of the end – a vertical one next to the brakewheel on the left and a horizontal one on the right. A pin representing the doorknob on the end door is a nice finishing touch.

Detail the Roof

Detail to be added to the roof includes several barrel-shaped Gold vents, a pair of box vents, a kitchen vent, an antenna, and drip edges above the baggage doors.

The model roof photo included with the instructions shows seven vents per side arranged in a mirror image, while the B&ORR right side diagram shows but six (there is no left-side diagram). I went with the arrangement shown in photos of D-14AB #1232 – seven vents on the left, and six on the right. Note that each side includes a single box vent mixed in with the Gold vents.

Drill (#52) the clerestory side for the vents, using the photos as a guide for placement; the seams in the roof are handy for assuring proper cross-roof alignment. Install the box vents first, then fill in the Gold vents in the remaining holes. Using the instruction photo as a guide, glue the kitchen vent to the roof.

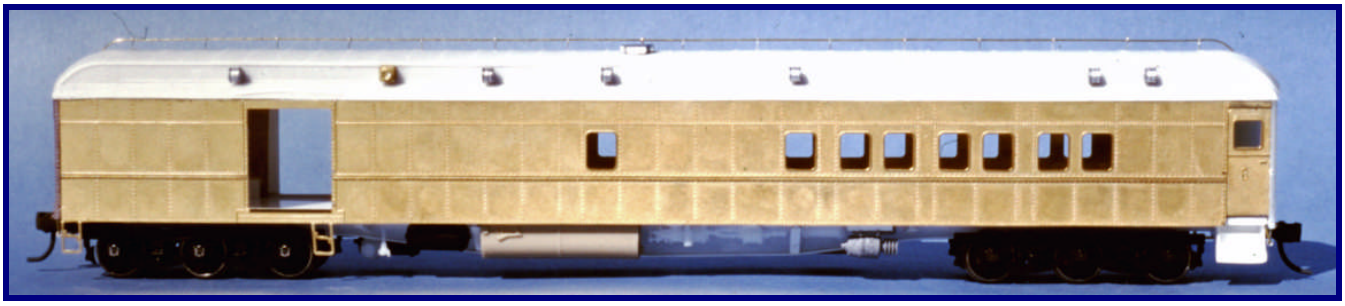
The instructions suggest an offset placement for the antenna, a positioning I was unable to confirm. Since most other B&O radio cars have their antennae centered, I opted to center the antenna on my model.

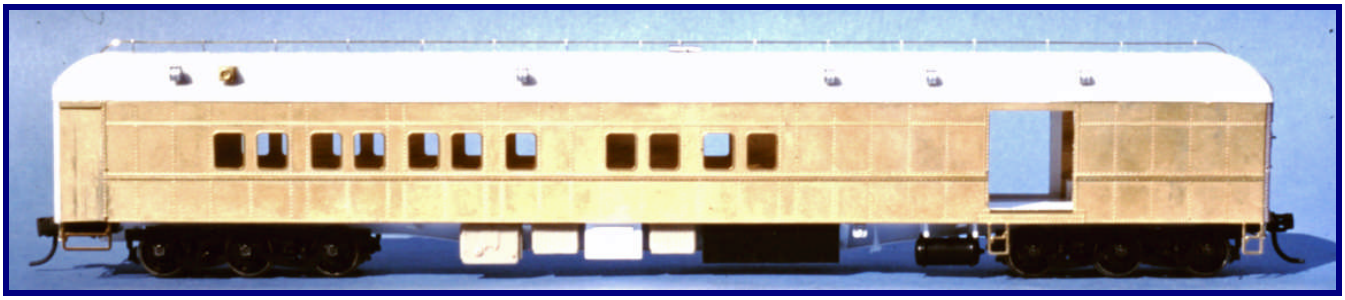
The instructions specify 15 antenna posts, but I went with 16 as shown in the prototype photos of #1232. The posts are spaced 4'6" apart, except for posts 8 and 9 which are more closely spaced. Draw a centerline on the roof, and locate the position of the posts; a divider is helpful here. Drill (#78) for the posts.

Install Detail Associates #2222 long-shank eyebolts. To achieve consistent height, thread the antenna of .016 wire through the eyebolts before gluing them, and use a spacer of .080" styrene to space the antenna wire above the roof while gluing the posts from underneath the roof.

Complete the roof with drip edges of .020" x .020" styrene 6'6"long. Glue them in a gentle arc above the baggage doors, using tiny amounts of glue. File away the molded drip edges from both sides near the end of the baggage end of the roof.


Completed roof detail.


Completed unpainted model, left side.


Completed unpainted model, right side.

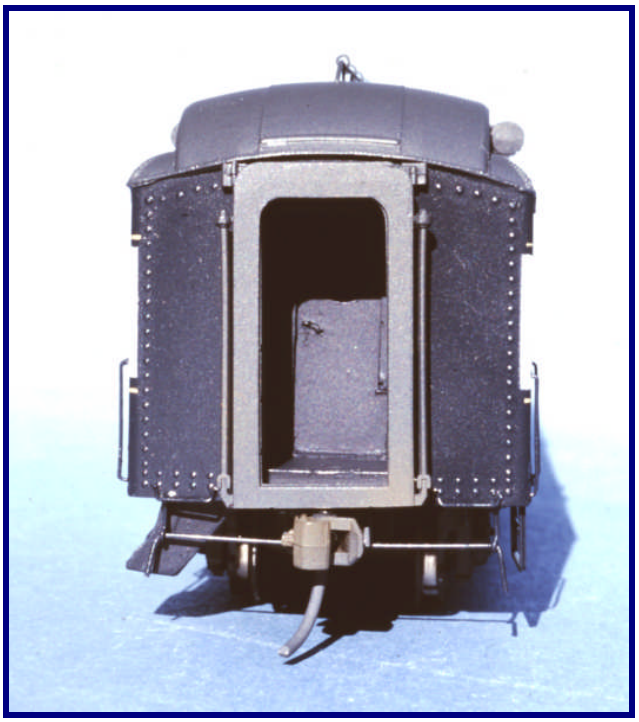
Completed model, left side.

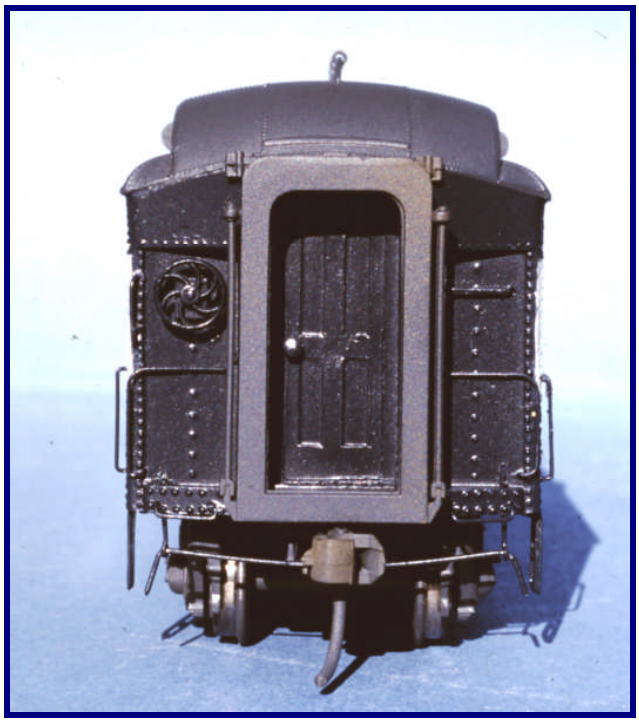
Painting and Lettering

I painted my model with Floquil B&O Royal Blue, no longer available, and Reefer Gray, and lettered it with Champion decals and stripes, also no longer available. A thorough discussion of other paint and lettering options for B&O passenger car models appears in the July-August 2008 issue of *B&O Modeler*.

The color separations between the blue and gray occur below the windows between the two halves of the belt rail, and above the windows at the horizontal seam. The top of the lower stripe should touch the bottom of the belt rail, and the bottom of the upper stripe should touch the line of rivets above the windows.

Paint the roof black, and the underbody appurtenances, trucks, and diaphragms a grungy black.


Completed vestibule end.


Completed baggage end.

Final Assembly

Glue the diaphragms, brakewheel, baggage doors, and grabs to the carbody. Install your favorite window material. Window shades add a nice touch; I cut mine from an olive green Pendaflex file folder. Add weight as needed; the NMRA recommends a total weight of 6 1/4 ounces for a car this length. Install the floor, add trucks and couplers, and she's ready to roll!

Elevated view, left side.

Bill of Materials

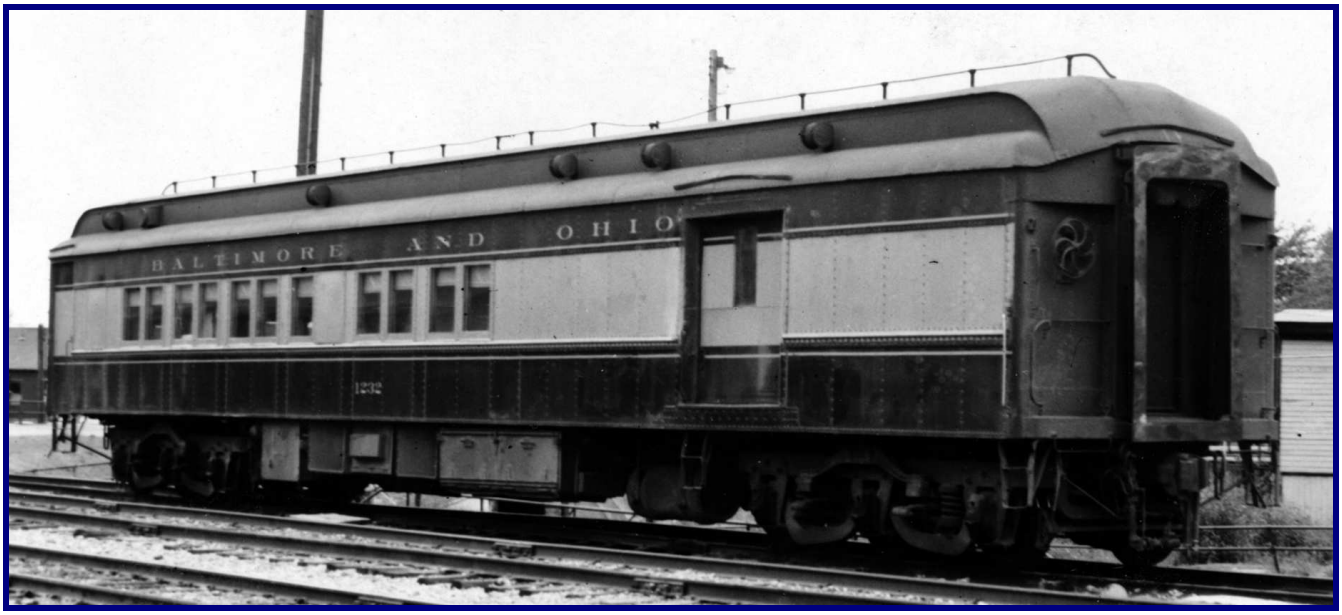
Manufacturer	Part Number	Description
NKP Car Company http://www.nkpcarco.com/		D-14AB Combine Kit
Bethlehem Car Works http://www.bethlehemcarworks.com/	12 87	UC Brake Set Stirrups
Detail Associates	2222 6504 6605	Eyebolts, Long Grabs, Caboose Grabs, 36”
Evergreen Scale Models http://www.evergreenscalemodels.com/	104 120 125 137 158 159 164 188 9060	Styrene Strip, .010” x .080” Styrene Strip, .020” x .020” Styrene Strip, .020” x .100” Styrene Strip, .030” x .156” Styrene Strip, .060” x .188” Styrene Strip, .060” x .250” Styrene Strip, .080” x .080” Styrene Strip, .125” x .188” Styrene Sheet, .060”
Precision Scale	4869 31118	Wire, .016” Brakewheel
Tichy Train Group http://www.tichytraingroup.com/	3015 3021	Grabs, 18” Drop Grabs, 18” Straight
Various		Screws, 0-80 x 3/16” (6) Screws, 2-56 x 1/4” (4)
See Text		Paint Decals

Acknowledgments
Al McEvoy, Nick Fry.

References
Chapman, Bob, “Modeling B&O’s Class B-21 Baggage Cars,” *The B&O Modeler*, July-August 2008, p. 8.

Stegmaier, Harry, *Baltimore & Ohio Passenger Service, 1945-1971, Vol 2 – The Route of the Capitol Limited*, TLC Publishing, Forest VA, 1997.

PHOTO STUDY: CLASS D-14AB
COFFEE SHOPPE – LOUNGE – DORMITORY - BAGGAGE CAR
FROM THE BARNARD-WOLFORD COLLECTION AT THE B&O RAILROAD HISTORICAL SOCIETY ARCHIVES



B&O 1232, Class D-14AB, Willard OH, September 16, 1964 (J. W. Barnard photo). Originally Class D-14 #1416 built October 1917, rebuilt into Class D-14A April 1937, rebuilt into Class D-14AB June 1941 and renumbered #1232, retired 1965.

B&O 1232, Class D-14AB, Baltimore MD, June 12, 1965 (J. W. Barnard photo).

B&O 1235, Class D-14AB, Willard OH, December 18, 1964 (E. J. Wolford photo). Originally Class D-14 #1421 built October 1917, rebuilt into Class D-14A June 1936, rebuilt into Class D-14AB June 1941 and renumbered #1235, retired 1969.

B&O 1235, Class D-14AB, Baltimore MD, June 12, 1965 (J. W. Barnard photo).

Acknowledgments
Al McEvoy, Nick Fry.

KITBASHING ENGINES TO MATCH OR RESEMBLE PROTOTYPES

BY PHIL BONZON
MODEL PHOTOS BY AUTHOR

Have you found a lack of models for your prototype? Oh, maybe there were some available in brass forty years ago and you might find one on eBay today or there are engines available with your prototype's name, but that and the wheel arrangement are all that matches the prototype. Well, that really is not a problem. If you can assemble a car or building kit, you can modify a steam engine to match a prototype or at least make a reasonable replica of one. It is not that difficult and you will have the satisfaction creating something unique and special for your layout.

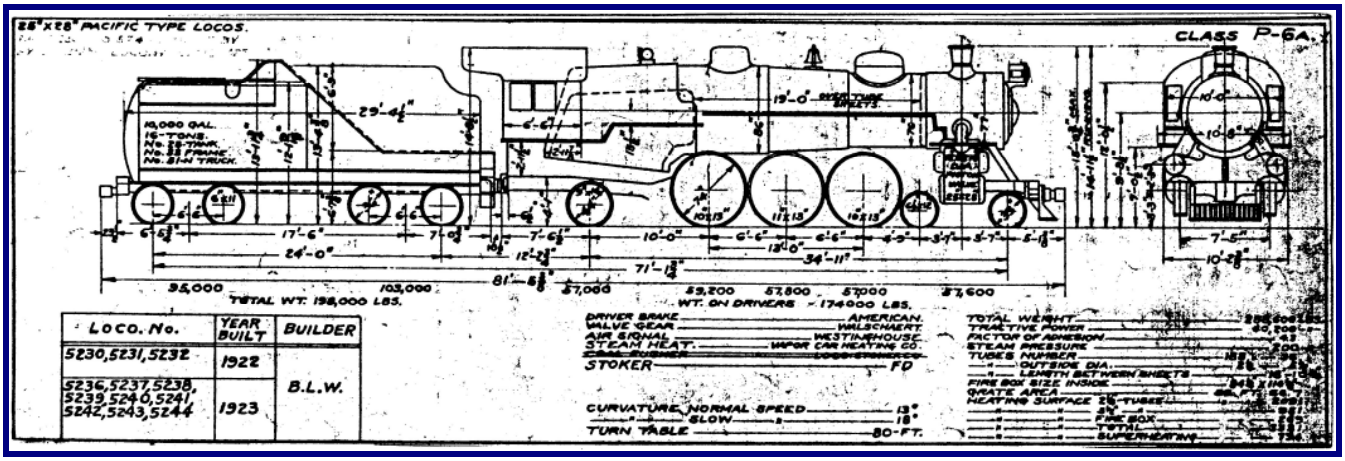
First thing to do is select which prototype engine you want to model and compare it to models that are available. With the Internet, you can search both for prototype photos at http://www.american-rails.com/index.html and/or http://www.northeast.railfan.net/home.html and for models that are similar to the prototype. Depending on the models available and how much modification you feel like doing, you can either just capture the principal characteristics of the prototype or make a very close copy.

Now let me show four examples of HO scale engines that I won on eBay, at a considerable discount, and modified to follow examples of B&O steam engines. In my efforts to capture the character of the prototypes, I made modifications that run from very minor to rather extensive. And, all of the engines were hard-wired for DCC and Sound, which is another story.

B&O 4-6-2 Class P-6A #5230

Very minor modifications were required to this brass Akane USRA 4-6-2 to capture the appearance of the B&O engine. The headlight was raised from the center of the smokebox to the high position and a Cal-Scale B&O Capitol plate was installed at the center of the smokebox. The USRA trailing truck was replaced with a Delta truck kit from Precision Scale. Last, an engineer and fireman were added to the cab. Class P-6A used both USRA and Vanderbilt tenders, and I have now scratchbuilt a Vanderbilt tender to replace the USRA tender, but that is a future story.

Using an airbrush, the engine was given a glossy coat of Floquil Engine Black to represent an engine that was recently repainted and that had accumulated a light coat of soot (Floquil Grimy Black) and road grime (Floquil Grime). Besides adding DCC and sound, the open-frame motor was replaced with an insulated can motor.



Class P-6A Clearance Diagram T-61659 Revision B dated 10-26-1953 (B&ORRHS collection).

B&O 5230, Class P-6A, Chicago IL, August 3, 1947 (LaMar Kelley collection, courtesy B&ORRHS). Baldwin Locomotive Works builder's #55717 built October 1922, retired 1955.


B&O 5230, Class P-6A, Vincennes IN, March 20, 1948 (Richard H. Payne photo, Charles E. Winters collection, courtesy B&ORRHS).

B&O 2-8-2 Class Q-4B #4478

Starting with an Athearn USRA 2-8-2, the first change was just replacing the Athearn USRA tender with a Rivarossi Vanderbilt tender that I had.

To capture the B&O's appearance, the stock headlight was removed from the center of the smokebox and replaced with a Cal-Scale B&O Capitol plate; the classification lights were lowered and a Cal-Scale Pyle headlight and bracket were installed in the high position. The interior of the Pyle headlight was ground out using a Dremel tool to accept a light bulb. Pieces of styrene were fabricated to simulate the frame members above the pilot. The Athearn bell was relocated to match the prototype and an engineer and fireman were added to the cab.

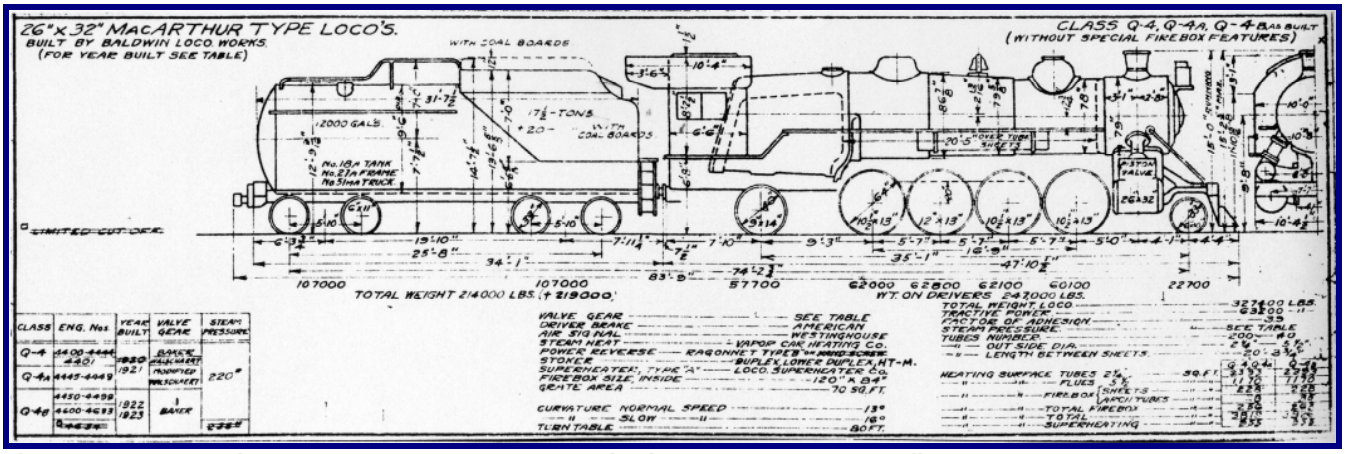
The B&O 2-8-2s used both single and dual air pumps, I choose to model mine with dual air pumps.

Some of the B&O engines had a unique head brakeman's cab as an extension of the fireman's cab. The brakeman's cab extension was made from sheet styrene and added behind the fireman's cab.

The Rivarossi tender's six-wheel trucks were replaced with four-wheel trucks set on new bolsters at the correct wheelbase. The top of the coalbunker was extended with .010-styrene and edged with .020-annealed brass wire and bonded together with CA adhesive.

The coal load was removed to gain access into the tender for installation of DCC and sound. A removable coal load was made with holes drilled in it to allow the sound out.

To replicate years of hard service, the engine was airbrushed with Floquil Grimy Black, then Engine Black, to replicate soot and Grime for road grime and dirt. Floquil Rust was used to highlight rusty areas and a wash of Rustall Rust was applied overall, as well as multiple washes of India ink. Finally, the tender was given a load of coal, with a little spillage and some Testors clear gloss was applied to represent water overfill.



Class Q-4, Q-4A, Q-4B Clearance Diagram T-55067 Revision E dated 1-27-1954 (B&ORRHS collection).

B&O 4478, Class Q-4B, Pittsburgh PA, August 10, 1947 (R. H. Payne photo, Charles E. Winters collection, courtesy B&ORRHS). Baldwin Locomotive Works builder's #55775 built November 1922, renumbered to B&O 451 in 1957, retired August 1957.

B&O 2-10-2 Class S-1A #6204

I have wanted a B&O class S-1A 2-10-2 for some time. Westside imported a brass model of it in the 1970's as did AHM import a plastic model, also at that time, but nothing has been available since then.

Bachmann makes several versions of the USRA 2-10-2 to replicate the variations used by different railroads. Unfortunately, they do not make the B&O version, but comparing their Seaboard model to B&O prototype photos, the Seaboard would make a good starting point because of the numerous similarities to the B&O.

First change was the easy one; I just swapped the USRA tender for a Bachmann long Vanderbilt tender.

Popped out the smokebox front; moved the bell to the off-center position; lowered the classification lights; moved the headlight and bracket from the center to the high position and added the B&O Capitol plate to the center of the smokebox front.

Next, things got a little more complicated; everything was removed from the boiler except the smoke stack and the steam dome. All details were replaced with brass wire and/or Cal-Scale brass casting.

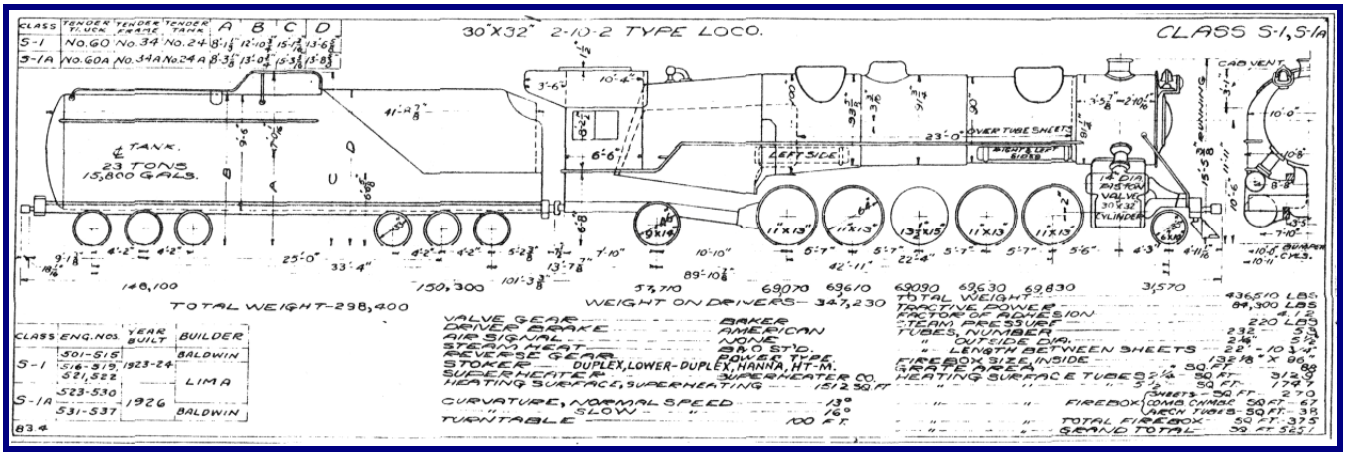
The S-1A's sand domes are unique, in that they are split on the boiler centerline giving them four separate domes. Making new sand domes turned out to be very easy. To make the pattern, I carved a piece of balsa wood to match the prototype's sand dome; coated it with CA adhesive to harden the surface; after drying, applied a coat of Testors gloss enamel. Latex rubber was used to make the mold, silicone spray as the release agent and 5-minute epoxy for casting the sand domes. The bottom of the castings was touched- up with a half-round file to match the profile of the boiler. Pinholes in the castings were filled with plastic putty. CA adhesive was used to attach the castings and all other parts to the boiler.

The running boards over the cylinders were removed with a razor saw, as was one step on each side; then lowered and bonded in place with CA adhesive. A section of the running board over the air pumps was removed and a replacement made from styrene sheet was added in a raised position over the new dual air pump casting.

Cylinder cock castings, air hoses and exposed frame members over the pilot were added.

The brakeman's cab extension was made from sheet styrene and added behind the fireman's cab.

B&O 6204 was built in 1926 and was still in service in the late 1950's. My #6204 was painted and weathered to replicate those long hard years of service. To accomplish this, I used the same method as was used on the preceding Class Q-4B, except it was more heavily weathered.



Class S-1, S-1A Clearance Diagram T-44622 Revision I c. 1957 (B&ORRHS collection).

B&O 6204, Class S-1A, Cumberland MD, July 2, 1948 (D. L. Hennon photo, Charles E. Winters collection, courtesy B&ORRHS). Baldwin Locomotive Works builder's #59115 built April 1926, retired 1955.

B&O 2-8-0 Class E-27CA #2752

Wanting another B&O E-27 to go with the brass E-27 that I purchased in the 1970's, I found that nothing had been made since then that really matched the B&O. Having two Bachmann 2-8-0's that I modified to resemble the Buffalo Creek and Gauley's #4 and #13, which I also model along with the W. M. Ritter Lumber Company, I took another look at the Bachmann model. Bachmann lettered one of its 2-8-0s as B&O. This was a case of the road name and the wheel arrangement being the only things that were B&O. The biggest discrepancy was the placement of the domes; if this could be corrected, then the rest of the changes would be minor.

After removing the boiler, I found that the domes had a flange on the inside to hold them in place. Using a combination of a Dremel tool with a milling bit and an X-Acto knife, I removed the flanges and popped the domes out. The remaining holes were filled in with multiple layers of .010-styrene sheet, which were very easy to bend, and bonded them together with plastic solvent adhesive. Small gaps around the

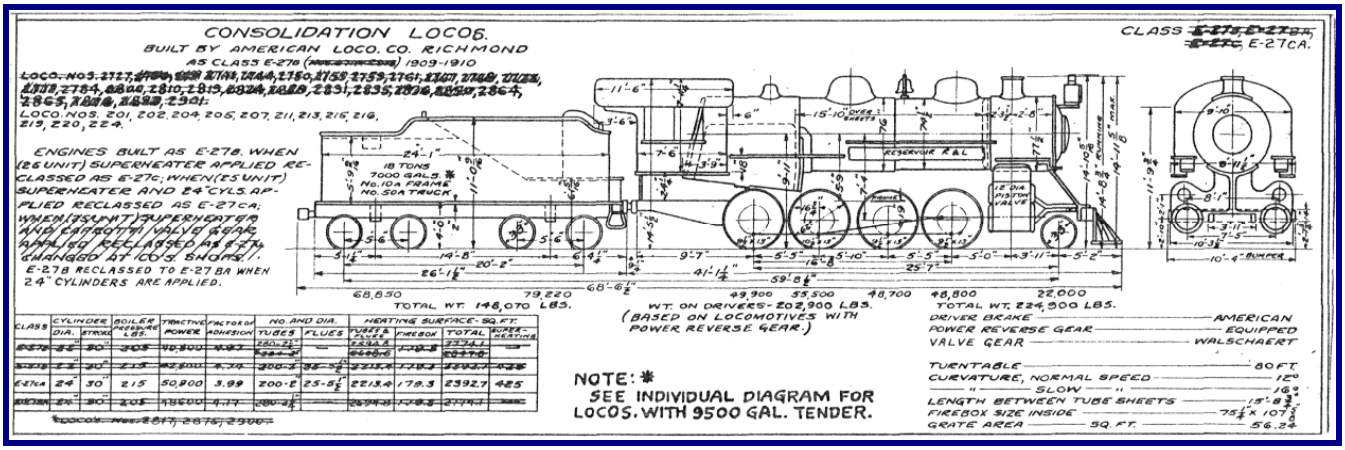
edges were filled with plastic putty and sanded smooth when dry. Two lagging straps were replaced with scale 1' x 2' styrene strips. The bottoms of the domes were cleaned up with a half round file to match the boiler profile, bonded in place with CA adhesive and the wire sanding pipes were reused in their new locations.

The bell, generator and whistle were relocated. The old classification lights on top of the smokebox were discarded and new Cal-Scale classification lights were added to the front of the smokebox. The headlight and bracket were moved from the center of the smokebox to the high position and an LED was reworked to fit inside the headlight. A Cal-Scale B&O Capitol plate was added to the center of the smokebox. The running boards over the cylinders were removed with a razor saw, as was one step on each side; then lowered and bonded in place with CA adhesive. Wire braces and a train control box were added to the pilot. Cal-Scale's Nathan injectors and piping were added to both sides of the firebox.

The center roof hatch and the side vents on the cab were removed with an X-Acto knife and the edges of the roof reshaped to match the prototype. An engineer and fireman were added to the cab.

A cut lever, air hose and a flush backup light were added to the tender, as well as the usual coal load.

My B&O #2752 was painted and weathered in the same fashion as my Class Q-4B.



Class E-27CA Clearance Diagram T-65945 Revision G dated 2-11-1957 (B&ORRHS collection).

I hope these short stories will encourage you to consider and actually try some engine kitbashing. I have really enjoyed it, as well as all other aspects of model railroading, whether it be research, operations, building cars, buildings, scenery or laying track…I enjoy it all.

Acknowledgments
Al McEvoy, Nick Fry.

References

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Sagle, Larry (Staufer, Alvin, Editor), *B&O Power*, Alvin F. Staufer Publishing, 1964.

B&O 2752, Class E-27CA, Cincinnati OH, March 20, 1948 (Richard H. Payne photo, Charles E. Winters collection, courtesy B&ORRHS). ALCo builder's #47130 built February 2010 as Class E-27B, reclassified E-27CA after superheater and 24" cylinders applied, sold for scrap February 1953.

CENTRAL OHIO, RPM-EAST, AND RPM-VALLEY FORGE PROTOTYPE MODELERS' MEETS B&O MODEL PHOTOS

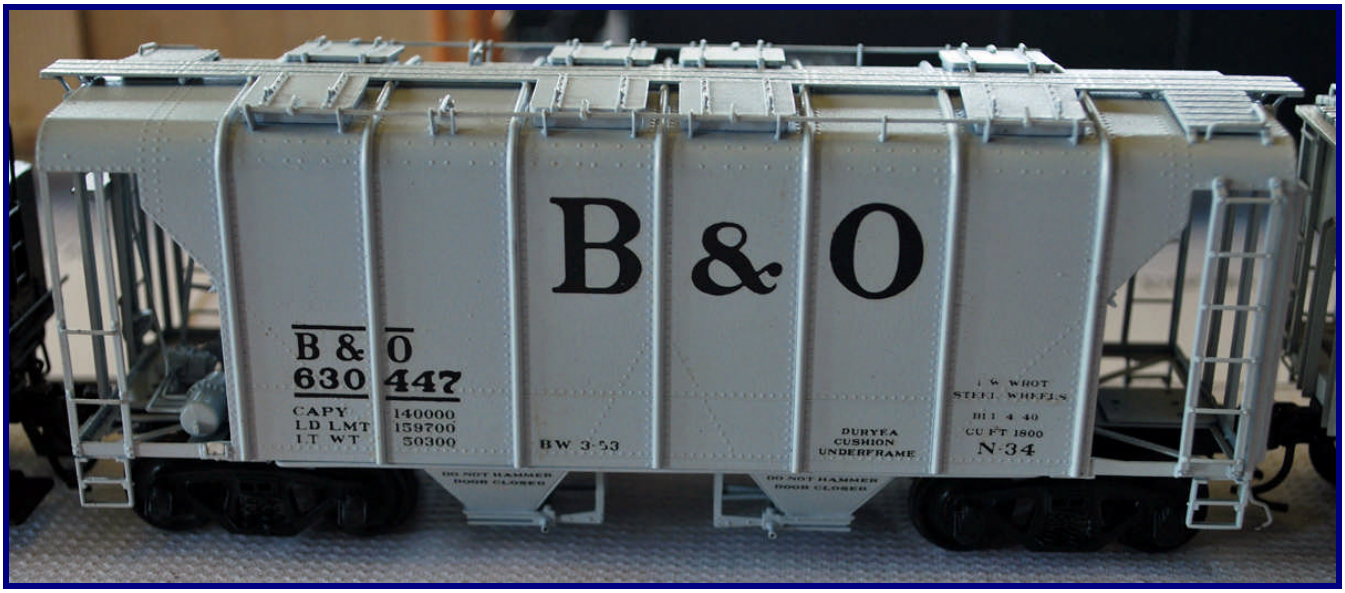
B&O 3684, GP40, HO scale model by Brian Everett, Central Ohio 2010, Marion Union Station, Marion OH. (Eric Hansmann photo).

B&O 1812, Class C-17, HO scale model by Tom Harmon, Central Ohio 2010, Marion Union Station, Marion OH (Eric Hansmann photo).

B&O 46, Class H-11, HO scale model by Tom Harmon, Central Ohio 2010, Marion Union Station, Marion OH (Eric Hansmann photo).

B&O 3584, Class A-20D, HO scale model by Tom Harmon, Central Ohio 2010, Marion Union Station, Marion OH (Eric Hansmann photo).

B&O 381794, Class M-53, Overland Models S scale brass import painted and lettered by Edwin Kirstatter, Central Ohio 2010, Marion Union Station, Marion OH (Eric Hansmann photo).



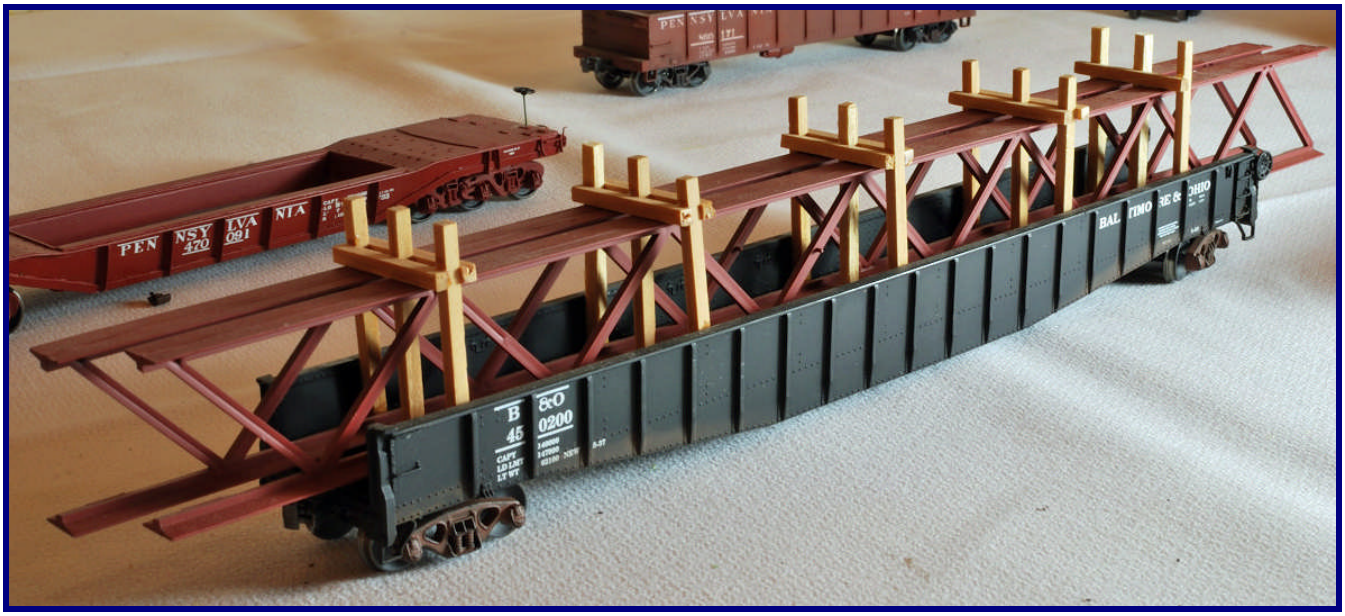
B&O 630447, Class N-34, River Raisin Models S scale model by Edwin Kirstatter, Central Ohio 2010, Marion Union Station, Marion OH (Eric Hansmann photo).

B&O 249000, Class O-27F, Auburn S scale model kitbashed by Edwin Kirstatter, Central Ohio 2010, Marion Union Station, Marion OH (Eric Hansmann photo).

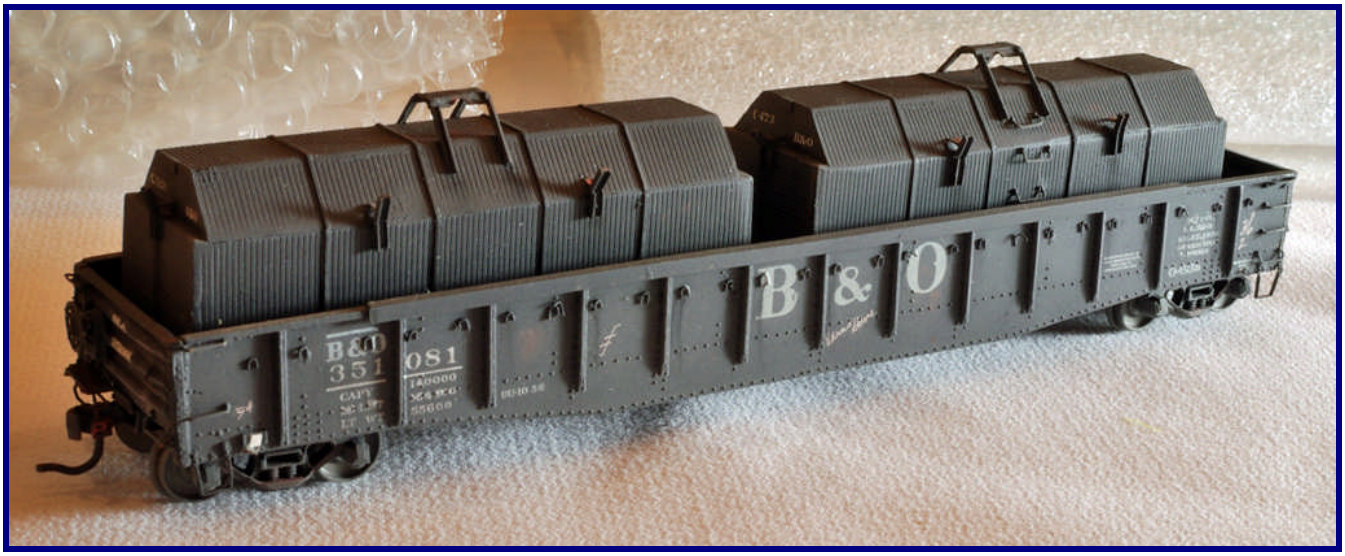
B&O HO scale tower models by Bruce Elliott. From left to right: P Tower (Piedmont WV); FN Tower (Patterson Creek WV), J Tower (Mt. Savage Jct. MD). P Tower was kitbashed from the smaller of the two Webster Classic Model interlocking towers that were available back in the early 1990s. FN Tower and J Tower were kitbashed from IHC styrene kits that were based on the Alexander Models kit of the early 1960s. RPM-East 2011, Greensburg PA (Eric Hansmann photo).

B&O HO scale towers models by Bruce Elliott. From left to right: GN Tower (Laughlin Jct. PA); KG Tower (Point of Rocks MD); RO Tower (Wellsboro IN). GN Tower and KG Tower were kitbashed from IHC styrene kits that were based on the Alexander Models kit of the early 1960s. RO Tower is a heavily detailed model using the Alexander kit, with a lot of extra detail not provided in the kit and technology and parts from the 1990s. RPM-East 2011, Greensburg PA (Eric Hansmann photo).

B&O 1035, Class F-4D, O scale model owned by Allen Young built by Ed Bommer, RPM-Valley Forge 2012, Malvern PA (John McCluskey photo).



B&O 450200, Class O-60, HO scale model by John Gallagher, RPM-East 2013, Greensburg PA (Eric Hansmann photo).



B&O 351081, Class O-63D, HO scale model by Jim Kubanick, RPM-East 2013, Greensburg PA (Eric Hansmann photo).

B&O Rolling Stock, HO scale models by John Schletzer, RPM-East 2013, Greensburg PA (Eric Hansmann photo).

B&O Rolling Stock, HO scale models by John Schletzer, RPM-East 2013, Greensburg PA (Eric Hansmann photo).

B&O Rolling Stock, HO scale models by John Schletzer, RPM-East 2013, Greensburg PA (Eric Hansmann photo).

Acknowledgments
Denis Blake, Paul Backenstose, Ed Bommer, Ken Braden, Joe Nevin, Bruce Elliott.

WB Tower (Brunswick MD), c. 1950s with stair and top landing entryway. Tower operator Andy Brunk is on the landing. HO scale model kitbashed from IHC kit by Bruce Elliott, RPM-East 2011, Greensburg PA (Eric Hansmann photo).

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